Vote World's Most Popular Orchestra

Radio Digest

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NOVEMBER, 1927 Title Reg. U. S. Pat. Off. & Dom. of Canada TWENTY-FIVE CENTS

DOLORES COSTELLO

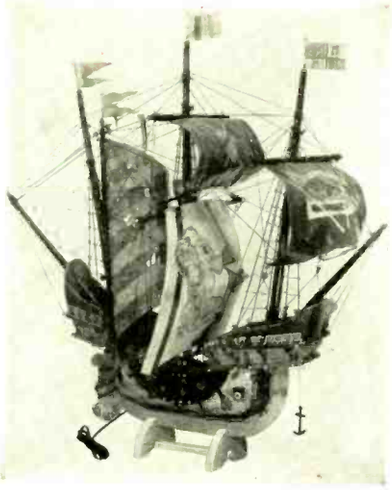
Official Call Book and Log
Complete This Issue

Conference Notes; WCSH Service; Bill Hay's Qui ; Three Little Flirts; Jeanette Vre
Flying by Beacon; Goldwyn Chain; Electric Six; Nine in Line; Phillips Carlin; Battery

BUILD A SHIP MODEL LOUD SPEAKER

$12.50

A combination of a beautiful ship model and a loud speaker that is easily worth $100. You can build it yourself in a few spare hours with no other tool than a small tack hammer.



$12.50

Size: 26 inches high; 12 inches wide; 27 inches long (overall). The La Pinta, a reproduction of one of the famous Fifteenth Century ships.

The famous Melody Ship which has met with instant approval everywhere it has been shown and played can now be purchased in knock down form at the startlingly low price of $12.50. This remarkable speaker combines

Perfect Tone - - - Plenty of Volume - - - No Distortion

No doubt you have often admired ship models and yearned to possess one but could not do so because the price was too high. Now it is possible to own a beautiful ship model and loudspeaker combined at a small cost. Let the WORLD'S LARGEST BUILDERS OF SHIP MODELS AND SHIP MODEL LOUD SPEAKERS supply you with all the necessary parts, cut to fit and ready to assemble from which you can build a beautiful model of the historic Mayflower, the Santa Maria or the La Pinta in a few hours. To all outward appearances the completed model is a beautiful ship model but upon closer observation a loudspeaker can be seen cleverly incorporated into the mainsail.

The loud speaker unit is of the Electro Magnet type. Power amplification is not needed to force the low tones through. They come through with perfect ease and do not interfere with the high notes, giving faithful reproduction at all frequencies. The mainmast, upon which the unit is securely fastened, is seated two inches deep in a three and a half pound solid wood hull, making it impossible for counter vibrations to affect the perfect reproduction of the Melody Sail. The driving pin is attached to our super-vibrating, especially prepared Melody Sail. The installation of the Melody Sail does not change the appearance of the model in any way. Melody ships come in three beautiful models, the Mayflower, the Santa Maria and the La Pinta, with parts cut to fit and ready to assemble. No tool needed but a small hammer.

You need not know anything about ship building or carpenter work in order to build one of these ships. No special knowledge of ship model building is necessary either. We will supply all the parts from the hull down to the smallest piece of rigging, all cut to fit and ready to assemble. You cannot go wrong. Diagrams and plans of parts that are included with each kit tell exactly what to do with each part.

These plans show you step by step just how the model is constructed. Everything is made so simple that even a small child can build a beautiful model.

All you need is a small hammer to tap the parts into place. Here is a part of the instructions copied word for word from the diagram and instruction sheet that goes with the kits. "Take part No. 57, place it in front end of part No. 56 and tap lightly with a hammer. Next take part No. 58 and place it up against No. 57 and tap it with a hammer to bring it into place."

Easy. Nothing simpler. The instructions are like that from beginning to end. Do this and that and before you realize it a beautiful ship model has grown before your eyes.

Write for our free beautifully illustrated catalog which contains photographs of all our models together with complete details and price of each. We will send this catalog without obligation to you. Fill in the coupon below and we will act upon it immediately.

Models without loud speakers, $4.98

If, after assembling the model according to our instructions you do not think it worth many times the purchase price, return it to us in good condition and we will gladly refund your money.

MINIATURE SHIP MODELS, Inc.

3818-20-22-24 Baring St. Philadelphia, Pa.

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Canadian Prices Slightly Higher. Send all Canadian Orders to Canadian Office.

MINIATURE SHIP MODELS, Inc., Dept. M
3818-20-22-24 Baring St., Phila., Pa.

Please send me complete parts, cut to fit and ready to assemble for the Melody Ship.....for which I agree to pay postman $12.50, plus postage.
Models without loud speakers, $4.98.

PLEASE PRINT NAME AND ADDRESS PLAINLY

Name.....

Street or R. F. D.....

City.....

State.....

Want More Money?

You Can Increase Your Earning Power By Learning More About Radio

If you're making a penny less than $50 a week, you're not getting what you ought to get out of a Radio.

Thoroughly trained men—men whose knowledge of Radio is completely rounded out on every point—earn all the way up to $250 a week.

Radio is a new industry with plenty of good positions unfilled. There are countless opportunities in Radio for a man to earn a splendid salary. But there are not opportunities as far as you are concerned, unless you're fully qualified for them.

The only way to qualify is through knowledge—training—**Practical,** complete training, that fits you to get and to hold a better position in the Radio field.

See If This Free Book Can Do You Any Good

I publish a 64-page book, printed in two colors and filled with facts and photos relative to Radio and its opportunities.

I don't say this book will help you, but it **does help** such a large percentage of those who read it that I can afford to send it to all who ask for it—free. You may get only a single idea out of this book that will be of any value to you. Or every line of it may give you a message.

At any rate, fill in the coupon below and look it over. It costs you nothing but a two-cent stamp, and you place yourself under no obligation. I won't even send a salesman to call on you. And there's always a chance that that two-cent stamp may make quite a difference in your future.

A message to men now in the Radio business. And another to men who would like to be in.

I have helped all sorts of men to advance themselves in Radio.

Lots of them, men who knew absolutely nothing about Radio when they first wrote me. Some who didn't know the difference between an ampere and a battle-axe.

Others, graduate electrical engineers who wanted special work in Radio. Licensed sea operators who were way behind on the "BCL stuff." "Hams" by the score.

Last but not least, the service and repairman or salesman who wanted to advance or go into the Radio business on his own. And the man already in on his own, who wanted to look forward to a more solid and permanent Radio future.

My free Book—see coupon below—tells about my helpful methods, and cites the experiences of a hundred men—giving photos and addresses.

What My Radio Training Is

Under my practical system, a man can study at home in his spare minutes, and get a thorough, clear, practical and expert knowledge of Radio in from 4 to 12 months. The time required depends on his previous knowledge, his ability, and the time he can spare for study. He keeps right on with the job he has—no necessity for his leaving home or living on expense.

Then as soon as he's ready for a better position I'll help him to get it and to make a success of his work.

This proposition is open to anybody who is not satisfied with his job, his prospects, or his Radio knowledge. Regardless of how much you know already (or if you don't know the first thing about Radio technically) I'll fit my methods to suit your needs.

If you want to enter into any correspondence about your own situation, anything you write will come directly to me and will be held strictly confidential.

Tear the coupon off now before you turn the page, and mail it today.

J. E. Smith, President

National Radio Institute

Washington, D. C.

[Oldest and Largest Radio Home-Study School in the World . . . Originators of Radio Home-Study Training . . .]

J. E. SMITH, President,
National Radio Institute,
Dept. O-96, Washington, D. C.

Please send me your free book about the bigger opportunities awaiting the thoroughly-trained Radio man. At present I (am) (am not) in the Radio business.

Name .....

Address .....

Town .....

State .....

assemble the Ensco

"THE WORLD'S FINEST LOUD SPEAKER"

in less than an hour

at a fraction of the cost!

WHY pay a high price for a manufactured speaker when you can buy an "Ensco" Kit and assemble the "World's Finest Loud Speaker" at a fraction of the cost. No manufactured speaker, regardless of price, will give you any better reproduction.

The Simplest Cone to Assemble

The "Ensco" Single Cone is by far the simplest cone to assemble, no mechanical or radio knowledge is necessary. If you can use a pair of scissors, a screwdriver and a pair of pliers, you can build the "Ensco" as perfectly as an expert mechanic. Within an hour from the time you start work, you will be enjoying music the like of which you never thought possible.

Absolutely Guaranteed

The "Ensco" is backed by a guarantee that means something. All "Ensco" units are guaranteed to give satisfaction. After purchasing the "Ensco" Kit, you have ten days' trial in which you may test the speaker and return it if not satisfactory. Your money will be promptly refunded.

The Art Models

The first in the field, the "Ensco" is naturally the first to bring out Art Models. The beautiful pedestals must be seen to be appreciated, no picture could do justice to the handsome polychrome finishes. The "Ensco" is now available in two and three foot pedestals, which will make any woman glad to have them in her living room.

Compare—Let your Ear be the Judge

Don't take our word for it. Go to your dealer, or any of the offices listed below. Hear the "Ensco" in competition with any speaker, no matter what the price. Then, and only then, will you know the difference between ordinary and "Ensco" reproduction.

The bass notes, the foundation of all music, come booming through in their true relation. The higher notes are equally free from choking or distortion. The tone is clear as a bell, without the slightest trace of mechanical noise.

The "Ensco" Unit

This is the heart of the "Ensco" speaker. It is the only direct-drive unit, which satisfactorily operates a 3-foot cone. It has no transmission arms or levers to reduce the motion of the armature.

The "Ensco" Unit is fully patented. Can be used with up to 250 volts without protection and up to 500 with an output system.

Go to Your Dealer

Ask your dealer for a demonstration, then let your ear decide for you. If your dealer has not been supplied, you can order direct from us by using the coupon. You are fully protected by our guarantee.

If your dealer has not been supplied—Send this coupon

ENGINEERS' SERVICE CO.

Send to nearest office

	U. S. Prices	Canada Prices
2-foot Standard Kit	$10.00	$11.50
3-foot Standard Kit	10.00	11.50
2-foot Wall Kit	11.00	12.50
3-foot Wall Kit	11.00	12.50
2-foot Pedestal Kit	13.50	17.50
3-foot Pedestal Kit	17.50	22.50

I am enclosing
Check
Money Order
Cash (registered letter)
Send C.O.D.
(All shipping charges paid on Standard and Wall Kits only)

Name.....

Address..... State.....

City.....

The Two-Foot Pedestal

Equally as well made and as beautiful as the three-foot model, but smaller. Can be used on top of the set or on any other piece of furniture. Complete Kit, including pedestal. Polychrome finish.

Model F-135-24.....$13.50
In Canada..... 17.50

The Three-Foot Pedestal

This new art model is beautifully finished in polychrome with a heavy metal base, making it practically impossible to tip over. Complete Kit, including pedestal. A practical, beautiful floor model.

Model F-175-36 .....$17.50
In Canada 22.50

The Standard and Wall Models

Two or Three Foot

The wall model kits are furnished with a hard wood wall frame for easy mounting. Made in two and three foot sizes.

The standard Kit is used for making console models and roll or book type speakers as described in instruction book—same as wall Kit, but without frame. You can make your own wall frame if desired.

Standard Model, 2 or 3 Feet
Either Size $10.00
In Canada 11.50

Wall Model 2 or 3 Feet
Either Size.....$11.00
In Canada 12.50

ENGINEERS' SERVICE COMPANY

25 Church St., NEW YORK — **28 E. Jackson Blvd., CHICAGO** — **73 Cornhill, BOSTON** — **331 Bay St., TORONTO, ONT.**

Phillips Carlin—Eyes for WEAF Listeners

THESE two eyes, under that heavy brow, are the two eyes that see the outstanding Eastern football games this season for millions of Radio listeners in various parts of the country.

They are the eyes of Phillips Carlin, manager and announcer extraordinary for the mother station of the National Broadcasting company's Red Network, WEAF, New York.

Carlin is a born orator. He has the gift of language and the gift of expression. That with which Nature endowed him has been polished and developed through training and a course at New York University. He finds this faculty greatly to his advantage in running a first-class New York broadcasting station.

There was a time not so very long ago when Phillips Carlin did not exactly know just how he was going to use this unusual propensity in the way of a career. The World War came along and he joined the navy. He left the service a junior lieutenant. Finally he found his opportunity at WEAF. He has made rapid progress since his affiliation with that station. A brief story of that experience is found on page 11, this issue.

His hours at the studio are from ten to ten (time off for lunch if he can get it). He personally supervises most of the detail in arranging programs and rehearsals. He even looks after getting the right sort of "properties" for noise effects.

When he gets a chance to announce football games he considers it a lark.

NUMBER 1

COUPON BALLOT

World's Most Popular Orchestra Contest

POPULAR ORCHESTRA Editor, Radio Digest,
510 North Dearborn Street, Chicago, Ill.

Please credit this ballot to:

.....of Station.....
(Orchestra's Name) (Call Letters)

Signed .....

Address .....

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

11-27

JOHN F. DILLON 1866-1927

LIEUT. COL. JOHN FRANCIS DILLON, one of the three members of the Federal Radio Commission who was confirmed at the last session of Congress, representing the Fifth or Pacific coast zone, died at his hime in San Francisco on October 9 after quite a long illness brought on in part by the strenuous work he did in connection with the organization of the commission.

Colonel Dillon, who was born in Bellevue, Ohio, March 6, 1866, had had much experience in Radio and was appointed as a member of the commission while supervisor of Radio in San Francisco under the Department of Commerce. He served in the signal corps of the army during the Spanish-American war and was master electrician in the signal corps from 1904-1912. He was also in charge of the electrical laboratory of the signal corps, engaged in Radio, telegraph and telephone experiments and he helped with the development of the field Radio equipment of the army.

In 1912 Colonel Dillon was appointed a Radio inspector of the department of commerce and he served in this capacity until 1917 when he enlisted in the army during the World War, serving in the signal corps again as captain and later major. He was reinstated in the department of commerce in 1919 and appointed in charge at San Francisco. He was later, in 1923, made supervisor for the Sixth district, at San Francisco, which position he occupied until last year when he was appointed a member of the commission.

Upon learning of the death of Colonel Dillon the Radio commission passed the following resolution:

"Whereas, The federal Radio commission has in the death of Lieut. Col. John Francis Dillon lost one of its five original members, a gallant soldier, a skilled engineer, long and intimately concerned with the problems of Radio communication, a public servant devoted to the interests of the people of the United States, a tireless worker, and a courteous, kindly and generous comrade, be it therefore,

"Resolved: That the federal Radio commission hereby places on its permanent records these words:

"In memory of Lieut. Col. John Francis Dillon, to whom the art of Radio communication in America owes an enduring debt for his wise counsel, his clear vision and his devoted labor as the first member of the federal Radio commission from the Fifth zone."

WBZ GRANTED FIRST BROADCAST LICENSE

EVER and anon recurs the old question, "Which was the first broadcasting station?"

Robert D. Heinl, correspondent of the Milwaukee Journal writes to his paper as follows:

"The first program broadcasting license in this country was granted to Station WBZ of the Westinghouse Co. at Springfield, Mass., Sept. 15, 1921; the second to WDY of the Radio Corporation of America at Rochelle Park, N. J., Sept. 19, the same year; the third to WJZ of the Westinghouse at Newark, N. J., and the fourth to KDKA of the Westinghouse at Pittsburgh, Nov. 7. However, to KDKA goes the distinction of being the pioneer station inasmuch as it was broadcasting programs experimentally long before it or the other stations were granted government licenses."

NOMINATION BLANK

World's Most Popular Orchestra Contest

POPULAR ORCHESTRA
Editor, Radio Digest,
510 N. Dearborn St., Chicago, Ill.

I Nominate.....
(Orchestra's Name)

of Station.....
(Call Letters)
in the World's Most Popular Orchestra Contest.

Signed .....

Address .....

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

11-27

COMMISSION ACTS ON HOOSIER KICK

Upheaval Follows Complaint That Indiana Radio Rights Were Slighted

PROTEST from Indiana that it was not getting its just share of wave allocations as provided for by the Radio law of 1927, has opened the way for better conditions for WFBM, Indianapolis, and other Hoosier stations.

Station WFBM asked for 1,090 kilocycles, already shared by six stations. Two of these stations were WORD, 5,000 watts, and WTAS, 3,500 watts, both in the Chicago area.

Arguments, and by quoting of the law at Washington, resulted in something of an upheaval by which WFBM was pried out of its slough. WORD was temporarily shifted into the time and frequency shared by WHT and WIBO, casting these two Chicago stations into a most distressing conflict as the result of peremptory orders by telegraph from the commission. The controversy is still at high ebb at this writing.

However, WFBM got its new frequency, a construction permit and more power. The privilege is shared by a sister station, WKBF, of the Hoosier Athletic club at Indianapolis. The former station is owned by the Indianapolis Light & Power company, which will build a new 1,000-watt station about five miles from the city.

A third Indiana station to benefit by the Washington campaign was WOWO at Fort Wayne, which was authorized to increase its power from 1,000 watts to 5,000 watts during the daytime and 2,500 watts during the evening. Gary also was allotted a brand new station. Indiana is now on the boards for a general expansion of its Radio broadcast activities.

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Looking Ahead

Story of Sam Pickard, the new member of the federal Radio commission, is 32 years old but he has had a remarkable career which will be told in the next Radio Digest.

Trying Out a New Set has kept the technical staff of Radio Digest busy for days. Results of the tests are a mystery but from gleeful expressions around the shop something exceptionally good may be anticipated.

Scores of Wonderful Pictures have been received by Radio Digest recently, introducing new broadcast artists in studios throughout the country. Some of them you may have already heard. You stand a good chance to see the pictures in our next issue.

Special articles about broadcasting stations and artists, with photographs, are desired. No manuscripts accepted unless typewritten and prepaid, or returned without return postage being inclosed. All manuscripts are sent at owner's risk.

SHORT WAVES

By Marcella

Farm Girl WAMD Program Director; Jerry Back at WSBC; Hortense Does the Black Bottom; Norman White Fancy Free; Fred and Nate Change Places; Bobby Griffin Discovered.

IT'S GOING to be awfully hard to satisfy us girls with men since we listened to that perfectly gorgeous fight. Wouldn't you love to have been there? What I can't understand is how all the boy friends liked Dempsey best. Why I almost got sick eating the chocolate sodas I won on that fight and there wasn't any question about Tunney's being the best fighter. He is so goodlooking and a regular he-man, even if he is intellectual.

• •

You certainly have good taste, Dick, in picking out Arlie Maxwell to admire. This lovely young thing is only twenty years old and is as attractive as they are made with the blackest of black hair and the bluest of blue eyes. She is medium height, weighs just 120 pounds and isn't married either. She was born and brought up on a farm, and listened a long time to WAMD before she got her courage to try out as a reader. Now look at her! Not only does she entertain, but she directs the programs. She has a kind heart because she takes the artists from WAMD out to Fort Snelling once a week and puts on a two-hour program for the World War Veterans.

• •

Chi-caw-go! What does that make you think of, Rubie? You asked me a long time ago where your favorite, Jerry Sullivan, was. He was on the Orpheum circuit all summer and has just returned to WSBC. He sends you a special invitation to tune in his famous Koffee Klatche club this Saturday afternoon.

• •

Dear Margaret and Ruth, I was more successful than you were and received a letter from the Maids of Melody themselves. You will find their picture on the picture pages. Hortense Rose is the brunette of the team, a brunette of the Irish type with dark blue eyes. Don't you adore that kind of a girl? They usually have such lovely white skin and the black hair makes it look so luscious. Hortense is the pianist of the team, single and very vivacious. In fact she admits that she loves to dance the Black Bottom. Tut, tut, if only television were here! The blond Maid of Melody is Grace Donaldson and, of course, her hair is light and her eyes blue. She does the singing. The girls get along awfully well together. When they are not broadcasting, they are golfing, playing tennis or running about in their little old Chevrolet. They intend to drive to New York this month or next and broadcast there.

• •

Awfully glad to hear from you again, Miss South Richmond. When are you going to tell me about your visit to WMBG? But I can see you are a fickle young woman, because you ask me about Norman White of WJR. You want to be careful how you approach Norman, because he is one of those firey and temperamental red heads. But Mr. Patt says he is usually in the very best of humor. He is short and slight and has the loveliest of soft brown eyes and curly hair. Although he is twenty-five, high time for a man to settle down, he is unmarried. Here's his entire name, Norman (Leo Joseph Peter Arthur) White.

• •

Jean Sargent, formerly of WHT, left a lot of friends behind her when she left the air. At the present time, Madame Melba, Miss Sargent is the hostess of a large department store in Chicago. She may be on the air this winter in this capacity.

• •

Ralph Waldo Emerson came back from his honeymoon and is playing the organ again at WLS. I can't tell you, Question Box, why Elsie Mae Look Emerson is no longer playing with him. She is probably content to keep house for her husband.

• •

If these announcers aren't like fleas! It was just last issue that I had Nate Caldwell settled comfortably in Milwaukee and then before you ever received your magazine, Virginia, Nate comes back to his old stamping ground, WBBM, and plans to stay for the winter. Fred Jeske, meantime, goes up to Milwaukee. Guess who's the running mate of Nate now? You never can, so I'll have to tell you, Bobbie Griffin. He announces from WBBM's sister station, WJBT.

(Continued on page 47)

CHOOSE WORLD'S BEST ORCHESTRAS

PRESIDENT GREETS FOREIGN VISITORS

HOPEFUL OF FUTURE AT AIR CONGRESS

International Radio Conference Finds Uncle Sam Host to Nations from Distant Lands

By L. M. Lamm
Washington Correspondent, Radio Digest

WORK is progressing slowly but surely on the many problems which have confronted the International Radiotelegraph Conference which convened in the Nation's Capital on October 4 and which it is hoped will adjourn about the middle of November having reached an agreement on a new convention to replace the old agreement reached in London in 1912, the time of the last conference.

It is practically impossible at the time of this writing to predict what the net result of the conference will be, but those who are in closest touch with the situation seem to be of the opinion that when the conference has closed its doors it will probably have written a convention which brings into law, when ratified, the conditions in Radio which have been worked out as common usage during the years from 1912 to the present, but on which there has been nothing but a gentleman's agreement.

Opened by President

What the actual effect of this agreement will be to the listeners-in in the United States is hard to say, but in the long run it will probably affect him in one way or another. The convention does not become official until it is ratified by the legislature of the various countries who are parties to it.

Considerable comment was circulated to the effect that Russia, the only large country not formally represented, had established an understanding with the German conferee.

The conference itself was opened on October 4 in a very formal way by President Coolidge, who appeared before the foreign delegates with his military and naval aides, and who in a short speech bade welcome to all of the delegates. He was followed by Secretary of Commerce Hoover, the latter having been unanimously elected President of the Conference. While there have been some so called plenary or public meetings, the majority of the work of the conference has been done in executive committee meetings.

The President in his address of welcome expressed the hope that the facilities of Radio might be internationally regulated so that all countries and all peoples may benefit. After having called attention to the shortness of the history of Radio, President Coolidge recalled that "within the past five or six years has come the enormous popular development which has brought the Radio receiving set into such general use in the home and the construction of so many privately controlled broadcasting stations."

Co-Operation Keynote

"In many fields our country claims the right to be the master of its own dependent development," continued the President. "It cordially concedes the same right to all others. But in the Radio field the most complete development, both at home and abroad, lies in mutual concession and co-operation."

Secretary Hoover in his talk went back over the history of Radio and the various agreements which have been reached internationally up to this time. In predicting that the Radio progress is not yet ended the Secretary said:

Bigger Things Ahead

"Although we take merited pride in the advance of Radio since 1912, and marvel at the change from birth to present development, let us not for a moment assume that growth has ceased. It may well be that progress in the next score of years will equal or exceed that of those just passed. There is no limitation on human genius. Just as the London Convention, the product of the best minds and the highest training of a half generation ago, is already found obsolescent, so perhaps will our efforts here be wholly inadequate to meet conditions a few years hence."

One of the interesting side lights of the present conference has been the difficulty of the American delegates to get the foreign representatives to realize the difference between their problem and that of the United States. This is one of the very few countries of the world that has on the one hand the government and on the other independent Radio companies or

(Continued on page 47)

"MECANICAL MAN" ANSWERS TO VOICE

A MACHINE that performs with almost human intelligence, answers telephone calls and obeys orders by voice has been invented by R. J. Wensley, Westinghouse engineer. By means of a "televox" system the dispatcher of an electric power plant can call up any unattended power plant or substation and receive reports on the status of any machine in the station. It will open and close switches as the result of voice vibrations. A demonstration was recently made at the Westinghouse laboratories.

It is claimed that the housewife will soon be able to leave her home, and later call up the "mechanical maid."

2 Pins! For Ford and Glenn Woodshed Show

FORD AND GLENN have opened their new woodshed theater at WJR, Detroit, and presented their first show, which was Cinderella. Tickets have been printed and all the 500,000 children who sent pins for admission either at WLS, Chicago, or WLW, Cincinnati, are invited to "come" to the new woodshed in Detroit.

All the pins received from the WLS woodshed show filled five sugar barrels, it is said. One pin—the largest—was made from an axle of an automobile. Other pins were made from curious objects. Children are supposed to hold their tickets above their heads in front of the loud speaker when the Woodshed Boys announce the curtain is up.

THEY SING "THOSE BLUE NET BLUES"

Two perfectly good reasons for tuning in the Blue Net on sundry occasions are shown above. They are the Ponce sisters, Ethel and Dorothea, favorites at WJZ.

Ohio Boy Logs Three Arctic Expeditions

WHEN David McFarlin of Youngstown, Ohio, starts exploring the ether ranges, he goes after explorers. He has succeeded in logging three different Arctic exploring expeditions recently. He operates on a 20 meter wave.

Donald B. McMillan was one of the first of the explorers to respond to McFarlin's call. Several messages were exchanged. Communication then was established with the Putnam Baffin Island expedition, and messages relayed to families and the United States government.

The third expedition was located in Hudson Bay and was identified with the Canadian government. McFarlin learned the expedition consisted of two ships and five airplanes engaged in a survey of the surrounding territory in an effort to establish a new shipping route to Europe.

Conference Confirms Standing Committee

THAT the United States does not necessarily sway the decisions of the International Radio conference in Washington is indicated by the decision of that body to establish a permanent international Radio committee. The plan was opposed by the United States, Canada and two other countries. The body is to act in purely a consultative capacity, dealing particularly with interpretations and definitions of Radio terms.

Objections stated by officers of the United States army were that individual initiative and research might be hampered under the restrictions that might be placed in the hands of an international committee.

The final vote for the establishment of the committee indicated that the objections were not considered to be of consequence.

RADIO FANS WILL AWARD THE HONORS

All-American Poll Sponsored by Radio Digest to Decide Those Who Win

Exquisite Plaque Prizes

Six Districts in United States and Canada Invited to Nominate Favorite Organizations

THE World's Most Popular Orchestra? In a mammoth voting contest, starting this issue, the readers of Radio Digest will be given an opportunity of answering this mooted question. By means of their ballots the listeners will determine just what orchestra is the WORLD'S MOST POPULAR. In recognition of this popular acclaim in the way of ballots the winner will be given a trophy of marvelous workmanship. It will be a golden plaque of a full sized microphone in bas-relief, supported on a specially built stand with shadow lights to be proudly displayed as a world's triumph for the winning orchestra. The design will be mounted on a mahogany shield with a tablet of raised letters indicating the occasion of the trophy, the name of the orchestra and all the members. In the center of the microphone will be a cameo relief profile of the orchestra leader.

Other Awards Given

A silvered plaque of similiar design will be presented to each of the runnerups in the various sections of the country in recognition of being voted the Far West's Most Popular Orchestra; The West's Most Popular Orchestra; The Middle West's Most Popular Orchestra; The East's Most Popular Orchestra; The South's Most Popular Orchestra, and finally Canada's Most Popular Orchestra. The organization receiving the highest number of votes in each district, after the grand prize winner will each be given a silver plaque and the title of most popular for their section of the country.

A great deal of study was undertaken by the Radio Digest staff to originate a worth while prize—something out of the ordinary and exceedingly desirable. A trophy was sought that would remain forever an enduring tribute to the winner.

Artists and sculptors were called into consultation by Radio Digest to work out these marvelous trophies, unique and significant. The winning orchestras will have prizes characteristic and distinguished—something as a personal tribute to each individual member of the organizations. The plaques will serve as precious memorials of the esteem of the invisible audience—a mark of achievement, skill and artistry.

Spirited Contest

The contest will give everyone an opportunity to show his appreciation for the enjoyment derived from the music of his chosen musical organization. It will serve as applause and be a tremendous stimulation to orchestral music.

The handsome awards and recognition accorded the winning organizations guarantee a spirited competition. Voting will be by means of ballots clipped from each issue of Radio Digest and by votes given on paid-in advance subscription to this magazine.

All that is necessary for you to do to place your favorite orchestra in nomination is to clip the nomination coupon on the fourth page of this issue and mail it to Radio Digest. This places the organization of your fancy in nomination and insures immediately the active support of thousands of other admirers in the listening audience.

Voting by Ballots

A voting ballot will be found in each issue of Radio Digest on page four, starting with this November number, and continuing until the April edition. They will be numbered consecutively from one to six. The ballots clipped from the Digest will count for more if they are saved and turned in at the end of the contest. If they are turned in singly they will count for only one vote. A bonus of five votes is given for two consecutively numbered ballots sent in at one time; a bonus of fifteen votes for three consecutively numbered; a bonus of twenty-five votes for four consecutively numbered; thirty-five for five consecutively numbered ar

(Continued on page 45)

PICTURING BROADCAST ACTIVITIES

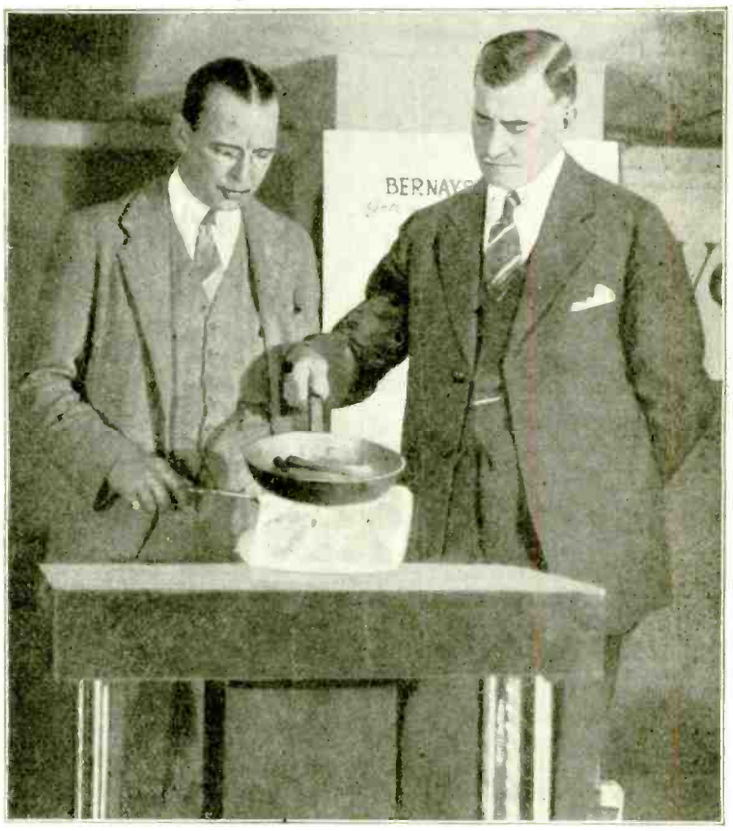
MISS MARIGOLD CASSIN, pictured above as Miss WOC, has grown up with the Davenport station, and she's still growing. Sings, plays and serves as general utility.

"A LA CARTE" a la Radio was served to eager listeners by the three Giersdorf sisters, who have a tuneful bit in that merry roundelay. The first presentation was made over WGBS. They also were quizzed in a Radio interview at the Gimbel station.

IN the evening when the mocking birds and thrushes have tucked their heads under their wings this Florida lassie, Miss Alta Turney, helps to shower music from the skies through WFLA, Clearwater.

"WHAT are little girls made out of?" These two are "Maids of Melody" at WSAI, Cincinnati. Names? Hortense and Grace.

THEY generally call him simply "J. V." at WFI, Philadelphia. His full name is John Vandersloob. Pennsylvania Dutch, for sure.



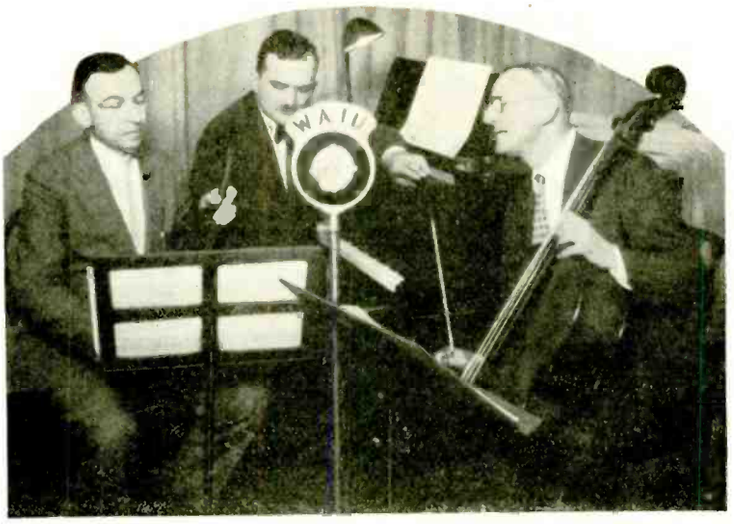
IN the Wireless Theater of Wonders at New York and Chicago Radio shows these gentlemen performed the miraculous feat of making hot dogs hot over a cake of ice. Then they made the ice burn up.

HERE'S one of those psychological test pictures for association of ideas—are you ready for the instantaneous answer? "Smocks and tams?" You answer: "Artists" and you score 100, for that is what they are, every one. They are the Totem Broadcasters of KOMO, Seattle. That little decoration is the Annihoots.

IT takes a high caliber brain to run a high caliber broadcasting station, so they have Miss Bertha Brainard (above) for that job at WJZ. The beauty simply comes extra.

RADIO PERSONALITIES AND EVENTS

HIS vibrant tenor voice has held many a dial to a Blue net station during the Philco hour—Mr. Charles Harrison of the NBC staff.



MEMBERS of the Telling Trio at WAIU, Columbus, Ohio, telling each other how they respectively think a modern composition should be interpreted. They agree on this between themselves beforehand.

ETHEL PARK RICHARDSON (above) knows her Tennessee "mountings" and folk lore when she entertains WDOD, Chattanooga, listeners.

S. F. RENDINA, pianist-director of the K. C. Artist Trio, seems to have discovered an interesting tid-bit. Anthony Guerra, cellist, and Charles Tiabe, violinist. Hear Them Over WHB.

BOB and Anita Hall at KOIL, Council Bluffs, Ia., photographed just outside the studio.

KINGS, queens and presidents have posed for Manuel Rosenberg's sketches. He lectures to WLW listeners.

MISS MYRA BENDER is described as a "Radio find" at WSM, Nashville. She is equally at home with an operatic aria or the latest in the popular line.

DELL LAMPE and his popular Trianon orchestra are the favorites with the WOK listeners. They lost their long wave but they have 5,000 watts of power and take the air on 1190 kilocycles. "World's Most Beautiful Orchestra in the World's Most Beautiful Ballroom." WOK shares time with WMBB, originally located at the Trianon.

NEW CHAIN FORGED BY FILM COMPANY

METRO - GOLDWYN - MAYER CO. BACKS PROJECT

Reported That 60 Broadcast Stations Have Been Tentatively Linked in Proposed Circuit

A NATIONAL broadcast circuit, stretching from the Atlantic to the Pacific, as an enterprise of the Metro-Goldwyn-Mayer motion picture corporation is in immediate prospect as these lines are written. Specific details, however, have not yet been revealed for publication.

As motion pictures have developed the super production and the super theater, so this latest development of the chain system is said to comprise a super circuit of sixty stations, with new ideas for entertaining the Radio public. A hint, dropped some time ago during the visit to this country of the Scotch inventor of television, J. L. Baird, suggested that the ultimate objective of this powerful motion picture corporation would be the projection of motion pictures on the air.

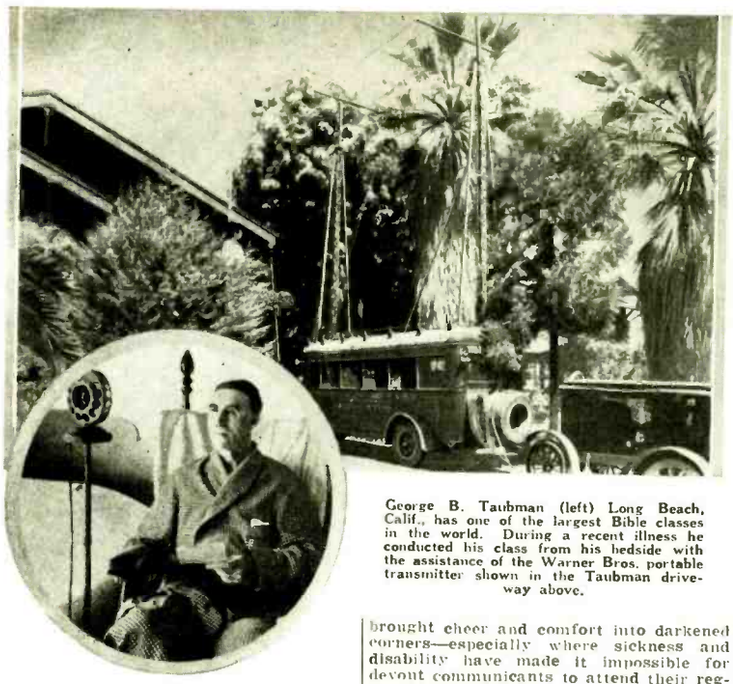
One of the recent fads of the set builder has been to convert the phonograph cabinet into a machine for receiving photographs by Radio. The question has been asked, "can a television screen be put in the phonograph cabinet?"

Officials of the Metro-Goldwyn-Mayer company refuse to make any comment except to admit that the project of organizing the chain is under way, and it has been stated that the first programs may be broadcast by the first of November. There will be advertising but "it will take a different turn," according to the informal announcement.

Programs to be heard simultaneously in Los Angeles, Chicago and New York are a definite part of the plan, it is said "and there will be a new method in the way of announcing." What that method will be affiant sayeth not. No hint has, at this time, been given as to any one of the broadcasting stations to be included in the national circuit: nor has any information been made available as to where the key stations will be located; but it is presumed there will be key stations both in New York and Chicago.

Will the telephone company carry the land wires, or short waves? That is another conjecture being asked by those who are curious to know. By the time these lines are in print, however, it is possible the daily newspapers will already have published the answers.

BIBLE CLASS LEADERS AND MINISTERS TEACH CONGREGATIONS BY RADIO



George B. Taubman (left) Long Beach, Calif., has one of the largest Bible classes in the world. During a recent illness he conducted his class from his bedside with the assistance of the Warner Bros. portable transmitter shown in the Taubman driveway above.

PROBABLY the greatest audience that ever listened to a single broadcast was that which tuned in the Tunney-Dempsey fight in Chicago. But a recent survey by Radio Digest as to what most interested the greatest number of people over the air indicated that religious services stood well up to the front.

Americans from colonial days are and have been spiritual and of a religious nature. The constitution is founded on a reverence for the Divine authority. Higher education may have changed, in recent years, some of the original concepts of religious beliefs, but the fundamentals remain and the mass majorities cling to the shelter of the community church and live according to the standards laid down by the fathers.

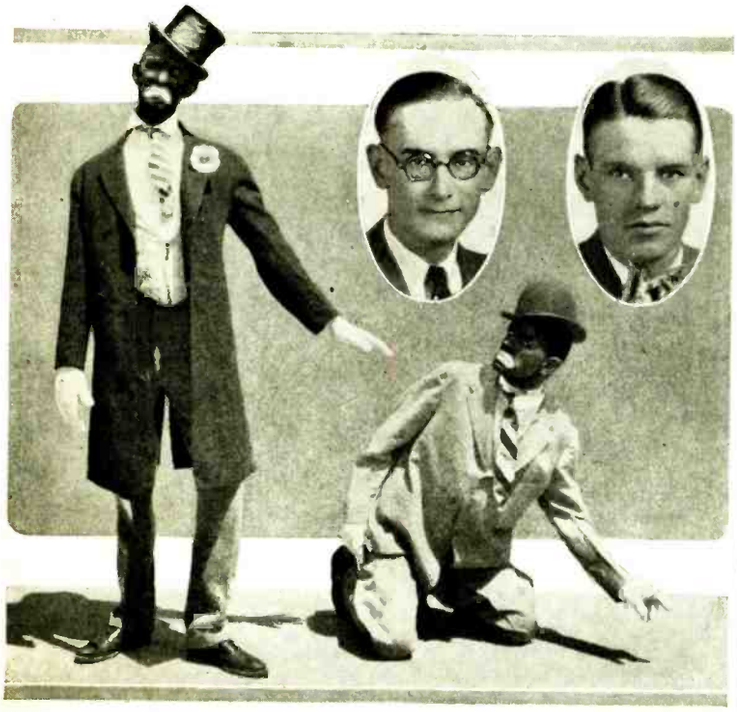
Radio broadcasting today is proving a strong factor in welding this elemental sentiment into greater strength and influence. Sacred reading comes into many homes where the Bible of late has been left to gather dust. Inspiring sermons come to many who have faltered or felt themselves at a perplexing crossroads. Old time religious songs and modern hymns have brought cheer and comfort into darkened corners—especially where sickness and disability have made it impossible for devout communicants to attend their regular church services.

Lesson From Bedside

Sometimes the leader himself is the one confined to his room by illness. Again Radio saves the day. Such was the case when George P. Taubman, leader of the Taubman Bible class, said to be the largest of its kind in the world, was held to a sick room. In order not to disappoint the large audience that assembled in the municipal auditorium and the larger audience listening over the Radio a microphone was brought to his bedside. He then presented the Bible lesson in the usual intelligent and forceful manner. The words sprayed out from the antenna of the portable transmitter, 6X53, stationed in the driveway; were caught up and retransmitted through KFWB over a vast area. The audience heard him from a loudspeaker as clearly as though he had been visibly present in the room.

The distant listeners, dependent upon their receivers, felt that they had double reason to be grateful for the benefits of Radio.

TWO CULLUD GENTS, "MOSE AND CHOLLY"



HEAH yo' is, folks, Mose and Cholly, de two well known aristocrats of Sootcenter, who appeah befoah de distinguished ladies an' gen'lemen listhin' to KOIL, which am located on de toppest bluff ob de Councilation Bluffs in de state ob Iowa. Yaas sah, Boss ee-yah-ha! Ha! Ha! Yo' all shuah done heard us play de ol' banjo and sing dem plantation songs? Yee-ah? White folks done call us by sich names as Harold Hughes, who am peekin' fru de hole in de left side of de canvas and Joe Simonson, who am stickin' he haid' up on de udder side. Ef yo' all ain't done heerd us yet, tuhn yo' dials on KOIL any ol' Monday night 'bout 10 o'clock. Dass all!

French Farmers Best Radio Fans

Parisian Not Sold on Broadcasting for Entertainment—Artists and Directors Unknown

RADIO has not yet achieved a deep seated popularity in France, according to Major Herbert H. Frost, who returned recently from a trip of inspection.

"There seems to be no great amount of interest, at least on the part of the ordinary Frenchman in Paris," he said. "In the rural districts it is accepted more as a utility than an instrument of entertainment. It has been used by produce growers to great advantage through the broadcasting of market reports and conditions of supply and demand. The French farmer has found this valuable in bringing him prosperity.

"This situation is resented by the Paris Frenchman, who lets it be known in no uncertain terms that all the Radio has done is increase the cost of living.

"The ever increasing number of English speaking visitors to France has made a knowledge of the language one of the Frenchman's most valuable assets and a series of English lessons put on by a Paris station has done much to make the Radio better known.

"There is little or no desire on the part of the French people to hear American programs as broadcast across the Atlantic.

No Broadcast Glamor

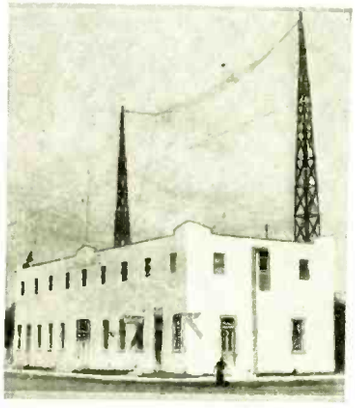
"Very little glamor or publicity is attached to broadcasting. Program directors, station announcers, artists, etc., are unknown by name and are regarded more or less mechanically. With the exception of market reports, all broadcasting is intended for Paris consumption. The programs are quite diversified and consist chiefly (in addition to English lessons) of orchestras, opera and vocal selections. The opera is a state affair, operated on a non-profit basis, and is not the 'drawing card,' from a Radio standpoint, that might be supposed.

"There is no sale of time in the air and no likelihood of anything of this kind, at least in the near future.

"Many Frenchmen consider the best foreign programs come from Rome and Brussels. However, many condemn the programs as inferior to Paris stations.

"A very small percentage of the sets in France are capable of receiving these or any other distant stations."

OPEN NEW STUDIOS FOR CYE, TIAJUANA

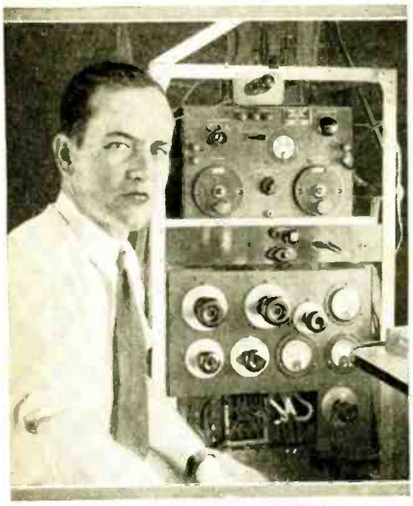


It may be the climate, or it may be the nature of the country, but whether you are in Italy or Mexico you find a music-loving people. And whether you are in Mexico City or Tiajuana you need not be surprised if you hear the most humble laborer at his task by the roadside singing or whistling airs from Il Trovatore, Monte Cristo or the beloved Carmen. One of the biggest Radio hits of a few seasons ago was the Mexico City Police Band broadcasting from the Edgewater Beach hotel, Chicago, over WEBH. They did not play jazz, but there was exquisite harmony in the glorified folk songs arranged by the leader. Climatic conditions have made it difficult for Americans to hear the Mexican broadcasts. Recently, however, a new station has been launched just across the California border under the Mexican call letters, CYE, at Tiajuana. Already the programs from this station have been heard up and down the Pacific coast and the states west of the Rockies. The station upholds the Mexican standard for quaint and alluring music.

Can Radio Beacon Solve Flying Peril?

Veteran War Pilot Describes Operation of Latest Device to Guide Aircraft over Dangerous Flights

This airplane type Radio outfit at which Ensign S. V. Edwards, U. S. N., is seated, weighs but 25 pounds and is typical of those installed on long-flight monoplanes.
Henry Miller N. P. Service, Inc.



Many an American pilot who sailed across the German lines during the World War learned first to take up his ship under the skillful instructions of the officer who signs this article as "Lieutenant Aerial." The author is now a well known Radio engineer, but he knows the ways of the air and the field of which he writes. You will like this first hand observation.—EDITOR.

By Lieutenant Aerial

NOTHING below but the phosphorescent gleam of never-ending rollers on the broad Pacific. Above, darkness—with now and then a star peeping through as the clouds open for a moment. The shrill whistle of the wind provides eerie music for ghostly wisps of clouds that race by the windows on each side of the cramped cock-pit. Indomitable young America is out on a U. S. to Hawaii flight.

Stiff from long hours of sitting in their tight quarters, two young men watch the needles of many instruments before them, dials gleaming softly in the light of small shaded bulbs. Within the cock-pit, one seems still in close touch with the every-day world—the motors have a roar that speaks of mighty power and safety. Yet on looking out of the window for but a few moments, it is brought home most forcibly that this mass of several tons hurtling through space is but a small speck in a vast area of raw, untamed Nature.

Rushing on and on, hour after hour, one wonders how these men can hope to reach any predetermined place. The compass shows that they are driving westward, the altimeter registering an altitude of 2,000 feet. Yet no instrument devised by man can show the intrepid flyer on a trans-oceanic flight how much he is drifted sideways by winds blowing at right angles to his intended line of flight.

By reason of this drift it is necessary to "crab" sideways, the angle of crabbing being determined by the pilot's guess as to the wind direction and velocity. That Lindbergh and others ever arrived within a hundred miles of their intended landing fields can be attributed only to luck and a peculiar "air sense" given to but very few and certainly not to the average mortal.

But these young men whose flight we are watching, are, it seems, not only observing instruments, but listening. Listening to what? Surely not to the whistle of the wind on wires and struts, nor the monotonous drone of the motors. There is nothing in these two sounds that would help one get anywhere. Ah! The source of the sounds that so hold their attention lies in the helmets, special flying helmets with built-in telephone receivers — the same type of headphones with which the broadcast listener was so familiar before the advent of the loud speaker. Repeated over and over again, the pilots hear a single dash, representing, in the code of the Radio operator, the letter "T." As we watch and listen, an almost imperceptible change in the sound takes place. Before each dash there seems to be the whisper of a short dot. Now this is stronger and there is no question but that the signal has changed to a dot and a dash, representing the letter "A." Our pilot moves his control stick ever so little and we feel the ship swing slightly to the right. The dot gradually disappears from in front of the dash and again only a string of "Ts" is heard. The compass needle now shows our course almost due west, whereas it was a little south of west.

An hour goes by. It is getting lighter outside; apparently the clouds have broken up and a half moon is flooding plane and ocean in an intense whiteness. But listen! A suggestion of a dot has again made itself apparent in the headphones; now it is after the dash. That forms the letter "N" of the code, and now the pilot pushes lightly with his right leg and shifts his control stick in the other direction. The compass needle swings over and the course has been altered to the left—to SSW.

Meaning of Signals

Where do the signals come from? How is it that the letter "T" is heard over such a narrow band, with the warning "As" and "Ns" to advise that the straight line between San Francisco and Hawaii is not being followed? How does it happen that one of the young men, acting as navigator, does not have to listen to several stations, one after the other, and plot many lines on a map to determine the plane's position? That is the usual procedure—this must be something new—very new!

For the source of these signals which are proving so helpful we must go back to the starting point of the flight, Crissey Field, San Francisco, and to the intended finishing point, the town of Paia on the Island of Maui, Hawaiian Islands. At each we find antennas of a type not used outside of the Air Service. Two huge triangular loop aerials cross each other at right angles, each being 72 feet high at the peak and 300 feet along the base line.

Near this pair of loops is a powerful transmitter capable of generating 5 kilowatts of Radio energy—5,000 watts, as the broadcaster would put it. One pair of loops and transmitter sends its wave of 1,030 meters directly toward Paia, the other group of apparatus directs its beam, on the same wavelength, toward San Francisco. In mid-Pacific, both can be heard; otherwise only the nearer.

Five Years' Work

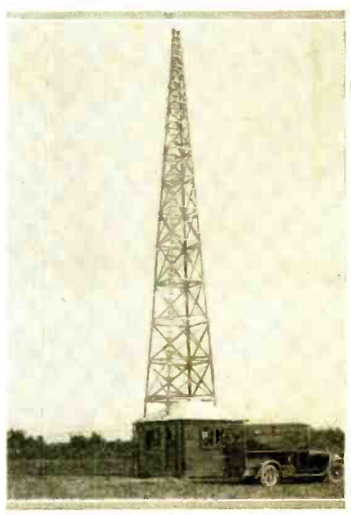
This latest achievement of Radio science is the result of 5 years of work by the Signal Corps and the Air Service at Dayton, Ohio. Prior to this development, aerial navigation by Radio was conducted in two ways. A loop aerial could be installed in the plane so that it might be rotated and signals picked up from land stations whose position was known. Several such stations could be picked up by rotating the loop and careful tuning, then the position of the plane determined by triangulation.

Another method was to install a loop in a fixed position, its edges fore and aft, with another loop mounted at right angles to it. By this latter system, the navigator could, with fair accuracy, determine whether the plane was flying toward the station heard, but could not work out his position. Both methods, it can be seen, required unusual equipment and a trained navigator-operator.

(Continued on page 10)

The army has detailed Lieut. R. B. Brookins of the Air Corps, and a staff of technical men, to carry on experiments with two way Radio telephony between planes and the ground over a radius of 150 miles.
Underwood & Underwood

Here we have the first directional Radio beacon developed by the Bureau of Standards being inspected by a group of scientists: E. Z. Stowell, P. W. Dunmore, H. Pratt, C. B. Hempel and Dr. J. H. Dellinger.
Underwood & Underwood



Antenna supporting tower of the type used by the Bureau of Standards at its Radio beacons which will guide planes on the new system of civil airways.
Underwood & Underwood

FLY BY RADIO BEACON

(Continued from page 9)

In the case of transoceanic flights, heavy apparatus and an operator cannot be considered, so this new method, by which a small, standard receiver can be used, was evolved by the experts at Dayton. The receiver need only be tuned to the beacon transmitters, locked, and the signals listened to.

Can Change Direction

The direction along which this new beacon can transmit, may be shifted at will since the great loops are coupled to the transmitter through a device called a goniometer. By varying the coils of this goniometer, the relative current strength in each loop may be varied, which shifts the direction in which the resulting radio field is radiated. The transmitters used for the U. S. to Hawaii flight beacons were formerly spark sets, shipped to Dayton, remodeled into powerful tube transmitters and then shipped to San Francisco and Hawaii.

The sides of the beam transmitted, and which carries the letter "T," are not exactly parallel but more like a long narrow shaft of light such as a flashlight produces. This beam broadens in width, as one goes away from the station, at the rate of 1½ miles to each 100 miles outward. At the mid-point of such a flight, the beam from Crissey Field is about 15 miles wide and that from Paia is about the same.

From mid-point to Hawaii, the flyer is, therefore, on a converging beam and should come in directly over the station. Through night, fog, rain and high winds, these invisible beams give a true "great circle" course to the flyers willing to gamble with motors, fatigue, hurricane and control wires. Danger there may be, but not that of losing one's way. Surely and at top speed a plane can travel from beacon to beacon, positive that, can it but stay aloft, it will reach its destination.

By means of the direction finder, Radio provides the true guide posts of the skies, defining the aerial highways. Indeed, commercial aviation, in passing from the stunt stage to the commercial stage, can progress only so fast as Radio beacons shall dot the great air routes of tomorrow. Whatever Radio means to the navigator and his fares at sea, it must soon come to mean as much or more to the airman and his passengers, when flying over the trackless ocean or across the black and foggy countryside—not as a spectacular feat, but rather as a matter of routine. To the aerial navigator, Radio offers a ready means of communication with those below.

New Era of Aviation

So far as the technique of aircraft Radio is concerned, the means for entirely satisfactory service are at hand. The recent transatlantic flight of Commander Byrd in particular, as typified by the constant bulletins from the "America" to the world at large during the passage, proves the value of Radio communication to the airman. It is no stretch of the imagination or of enthusiasm to say that the carrying of Radio by the transoceanic flyer spells the difference between some measure of safety and a complete gamble. At the cost of a few pounds, and perhaps two cubic feet of their valuable space and competent operation, the intrepid airmen who have been lost in the ocean wastes of the Atlantic and Pacific, during the past few months, might still be counted among the living.

Some may say that Radio aboard did not do the "Spirit of Dallas" any good. This brave ship and its crew set out to find those who had not reported during the Dole race to Hawaii. Something mysterious happened to the Spirit of Dallas—something that may not be ascertained for many years, if ever. In the upper air over the heaving Pacific some peculiar meteorological condition caught this plane and swept it down in a tail-spin. A good sound plane, such as this was, with an experienced pilot, does not go into tail spins, unable to right itself.

Struck a Tornado

If you followed the press at that time, you will recall that a first message was received stating that they had gone into a spin but had righted themselves and were again alright. Suddenly the listening land operators heard "We are in another terrific spin," and not another word was heard from it. Nor was it found. Was it the start of a tornado in the upper air that wrenched this plane and hurled it down? That is the writer's opinion. No, the case of the Spirit of Dallas cannot be taken as derogatory to the value of Radio. What it ran into, would not be run into probably, in one flight out of a thousand.

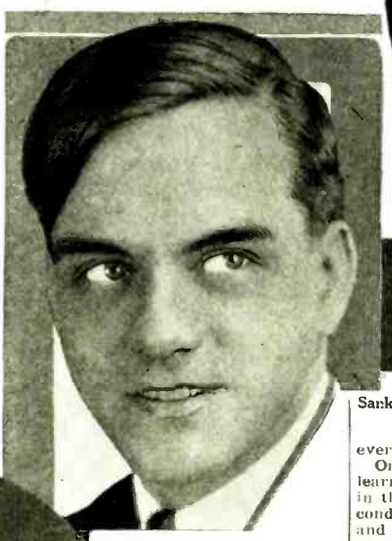
Typical of the special equipment developed for airplanes may be mentioned the installation aboard the ill-fated "American Legion" of Commander Davis, which crashed prior to its proposed trans-Atlantic flight. Weighing less than 65 pounds and occupying an absolute minimum of space, this equipment included two transmitters and a receiver, with an effective working range of over a thousand miles!

One transmitter was intended for short wave operation on 45 meters, and included a crystal quartz oscillator to hold the signals steady for easy interception at distant points. The other transmitter was intended for communication with ships and marine land stations, with a wave length range of from 550 to 850 meters.

Just as Radio beacons are beginning to dot the various coasts as an infallible guide to seafarers, so must aviation Radio beacons soon dot the great air routes. By means of the Radio direction finder, as outlined above, the airman can aim his ship for a given point with the accuracy and certainty of a marksman pointing his rifle. Fog and the blackness of the night cease to hold terror for the airman working with Radio beacons.

WEAF ADDS ARTISTS AND FEATURES TO NET IN PROGRAM OF EXPANSION

Sanka, the Seer, and the Musical Sanka Mystics, working Oriental magic for WEAF listeners and the Red Net audience.



David Buttolph (above) conductor of National Concert Orchestra. At left, "Mother" Stoner and Master David Vivian, harpist.

CROWDED by new chains and keener competition old WEAF of the National Broadcasting company has been expanding, increasing its power, adding many new artists and creating new features.

On this page is shown some of the new features which have been received with wide commendation on the part of the listeners. Sanka, the Seer, and the musical Sanka Mystics present an appropriate Arabic demi-tasse calculated, with considerable success, to afford that comfortable post prandial satisfaction with which one sits back and enjoys an hour of easy fluent music.

The director instills a spirit of realism by garbing the mystics in appropriate costumes. Feeling the part, the artist is believed better able to transmit it through his instrument. This particular program is broadcast every Thursday at 7:30 o'clock.

One may be somewhat surprised to learn that the bright eyed young man in the center photo is a concert orchestra conductor. But this is the day of youth and Mr. David Buttolph imparts that magic quality into the renditions of the National concert orchestra.

On Friday afternoons the listeners may hear very creditable work from the golden haired little cherub who masters the harp, pictured at the lower left. Beside him stands "Mother" Stoner, known to all the younger listeners of the Red network. Master David Vivian lives, breathes and radiates music. His harp is a living part of his life and that may account for his unusual success. He saunters into the WEAF studio about 4:30 and is heard on the Royal Rhythmic Rhyme and Reason program scheduled for 5 o'clock Eastern time. This boy is never late.

Cincinnati Scientist Makes Precise Tests for Lost Broadcast Vibrations

Ralph Langley Conducts Interesting Experiments Before Electric Club to Check Errant Waves Missing in Transit from Studios to Receivers

TESTS, interesting and instructive, recently were conducted to compare tone values for variations that may take place between the broadcast studio and the distant receiving set by Ralph H. Langley, assistant to the president of the Crosley Radio corporation at Cincinnati.

Each note, it was explained, has a fundamental frequency of vibration. To make the tests, many receivers were displayed in the Hotel Alms under the direction of the Cincinnati Electric club. At half-hour intervals single notes on piano or violin were played into a microphone. Mr. Langley checked the vibrations emitted by the receivers.

"Not only must the fundamental note be reproduced accurately," he said, "but the loud speaker must pick up the harmonics of the note which give it tone color. For instance, the fundamental vibration of the same note played on the violin, the flute or the piano may be identical, but the harmonics of the note are different in each instrument and the loud speaker must distinguish that difference.

"A loud speaker may give a perfect reproduction of the middle notes of the piano register and yet fail in picking up the high notes. On the other hand another reproducer may have no difficulty with the high frequencies of a piano note and yet distort the middle range of the organ."

Tests also were made to show that programs could be received from both the WLW and the WSAI stations without the interference of static.

"I think Mr. Langley is to be complimented for the success of these experiments," said Powell Crosley, Jr., who had been a close observer, "and this analysis should be useful in further perfection of all Radio reception."

Powel Crosley, Jr., at left, examining testing device used by Ralph H. Langley, right. Obviously the manufacturer is pleased with the results.

JUNIOR LIEUTENANT CLIMBS TO SUCCESS

PHILLIPS CARLIN DEPARTS NAVY FOR RADIO

Shapes New Career After War Had Changed His Original Plans Manager of WEAF

THE war was over and the ship was sailing home. The dear old girl at the mouth of the harbor would be visible with the first streaks of dawn.

New York and home!

The young lieutenant, free from duty for a while, stood on the deck, facing West, and hoping he could catch some glimmer, some familiar sign—but dim stars and a shadowed sea were all that he could see.

Back home in the morning! In a few days the uniform would be folded up and put away. He would be a civilian once more. What kind of a civilian? It was like starting all over again. All his life had been spent in New York until the war came. He had gone through DeWitt Clinton high with flying colors and finished New York university with Phi Beta Kappa honors. As a member of the university debating team he had taken the highest awards.

And now he was puzzled as to what New York would afford him for a career. Once he thought he would go into the silk industry, but the war had changed his

Jesse Pendry, 12-year-old baritone, featured at KDYL, Salt Lake City.

ideas about that; besides the opportunity that he had had before probably would not be available now.

Anyhow New York has always shown a kindly spirit to the ambitious and industrious, and he was not afraid. He would get a job and work up. . . .

So the young lieutenant put away his uniform and became Phillips Carlin, citizen, U. S. A., and New York in particular. He soon became attached to a payroll as a salesman, until the real opportunity could be obtained. This did very well until, he made up his mind that Radio broadcasting was the big thing of the future. He shaped his path in that direction. Finally, day of all days, he landed in the big new broadcastng staton, WEAF! He had successfully passed the tests as an announcer.

From small duties to larger duties he quickly proved his worth and ability. His knowledge of the classics, his ability to take initiative and win others, his general versatility, took him up the ladder until—not so very long ago, when WEAF took its place at the head of a chain of stations—Phillips Carlin was promoted to be manager of the entire station. Now he fits in anywhere, directs, negotiates, supervises. His voice is known to millions. Probably his greatest range was during the broadcast of the Colonel Lindbergh reception at Washington. But he was heard during the world's series and now he is often at the "mike" during the big football games in the East.

Career?

What chance for a junior lieutenant in the U. S. navy at the great demobilization?

Ever hear of Phillips Carlin?

Yes, and don't forget, he has a happy little home with wife and baby, too!

THIS MISS CHARMS EYE AND EAR

A GREAT deal has been said and written concerning the frequent disparity between brains and beauty in the same feminine person. Miss Elaine Ticknor is the gifted exception. She possesses a remarkable singing voice besides her beauty and intelligence. She sings at KFRC, San Francisco.

WCSH, Voice of Portland, Maine

Between Mountains and Sea This Brave Station Serves a Wide Community —Heard Across Atlantic

AWAY up in the northeastern part of these United States lies Maine, summer playground of the East and winter seaport for the Maritime provinces of Canada. And in Portland, Maine, is located Station WCSH, eastern terminus of the Red network.

This station is probably unique in the disposition of its operating room and studio in that, contrary to rule, the studio is absolutely closed to visitors while the operating room is the "show" part of the installation. This room is actually a sun-parlor and is used as such by the guests of the Congress Square Hotel.

From its windows may be seen the lofty snow-capped White Mountain chain to the West; to the East lies Portland Harbor and the open sea. All four sides of the room are glass so that the operators on duty have the world at their feet. It is from this vantage point that they gave out the news of the burning of the Edward J. Lawrence, the world's last six-masted schooner. As the doomed vessel lighted the sky for miles about, bulletins were issued from time to time. For weeks afterward inquiries drifted into the station concerning the event.

Talked to the Bowdoin

From this point, also, they watched the tremendous seas crashing against the light-houses and shores of the myriad islands in the harbor, the rolling waste of water upon which tossed the ship Bowdoin, freshly returned from the Arctic region. Donald B. MacMillan and his crew were marooned at Monhegan Island. That day MacMillan and his men listened to the voices of their friends talking at WCSH, the first communication of the kind they had enjoyed for many months. Incidentally this was the first, and perhaps only time a broadcasting station received permission for direct communication. The signals of the Bowdoin "swung" badly, but the experiment was successful in every sense of the word.

And in winter the work goes on just the same from this aerie. One day last winter when snow was swirling by the windows so thick and fast that vision was limited to less than twenty feet, out in the grayness beyond, the power stations of the country were receiving their orders from the microphone. No other means of communication was possible. For fourteen hours this service was continued by the crew, who snowshoed to work, and WCSH won another service star.

In addition to the usual service to police, WCSH also has the opportunity to be of service to the fishing fleets. More than once when men of the fleets, storm-worn and weary, have finally reached the home port safely, it has been the station's privilege to inform worried families with whom other communication was impossible.

First Radio Parish

As Portland, Maine, brought prohibition, the Christian Endeavor and municipal organs into being, WCSH has risen to the occasion and brought into being the first Radio Parish in the country. This parish is a Radio church in every sense of the word. It has no other congregation, the minister has no other duties, he visits his Radio parishioners and is supported by his Radio congregation, together with a few interested committeemen. In addition to this is the known fact that many little towns which cannot support a minister enjoy their worship none the less, because of the fact that a loud-speaker occupies the pulpit.

WCSH has received applause let[ter] from Catalina Island to London, Engl[and]

View of the lofty WCSH studio, Portland, Maine, as it looks out to sea.

Independents to Fight Monopoly

Fifty-Two Manufacturers Organize to Give Set Buyers Freedom in Selection of Tubes

AT a meeting called by the Radio Protective association in the Hotel Astor, the early part of October, a resolution was passed declaring war on the Radio Corporation of America for compelling licensees to use RCA tubes. The resolution was as follows:

"Be it resolved that fifty-two eastern Radio manufacturers in attendance at a meeting of the Radio Protective Association held at the Hotel Astor, New York City, on Tuesday evening, October 4th, do hereby unanimously request the Federal Trade Commission to take aggressive and prompt action on the petition of Arthur D. Lord, Receiver-in-equity of the De Forest Radio Company, that a complaint be issued against the Radio Corporation of America in respect to the 'tying clause' in the license agreements between the Radio Corporation of America and various Radio set manufacturers under which these manufacturers are compelled to equip and sell their sets with R. C. A. tubes and none other, and, furthermore, that the members of the Radio Protective Association representing all branches of the Radio manufacturing business, including sets, socket power equipment, loudspeakers, tubes and other accessories do hereby represent that this tube clause No. 9 is designed and calculated to give the Radio Corporation of America a monopoly of the tube business, and that a monopoly of the tube business would aid and abet the Radio Corporation of America in carrying out their plan to monopolize the entire Radio industry."

MISS BERNICE YANACEK (above), a pianist whose presence and melodies are in demand by various Chicago broadcasting stations. You have heard her in solos and in very clever stringed trios, one of which was the Subantenna Crusaders.

"What do You Know?" Announcers in Question Series Ask Radio Fans

Listeners May Test Knowledge of What They Have Learned Over the Air by Answering Quiz on Music and Broadcast Bill Hay, WGN, "Wants to Know?"

WHAT do you know about the people and the music that you hear over the air? What have you learned?

Many consistent listeners are acquiring not only a liberal education on musical subjects but a storehouse of miscellaneous knowledge broadcast incidental to the day's programs at many of the leading stations.

Are you taking advantage of this opportunity? What have you learned? Would you like to check yourself? Radio Digest is planning to run a series of questions that may help you. The questions will be originated by one of the well known announcers, a different station for each set. The first man asked for a set of questions was Bill Hay, director - manager - announcer of WGN, the Chicago Tribune station on the Drake hotel.

Bill Hay, WGN-WLIB.

Here are the questions he submits:

1. Who was the composer of "The Gypsy Love Song" and "Kiss Me Again?"
2. What composer had twenty-one children?
3. What composer is noted for his oratorios, which include the "Messiah?"
4. What popular song writer of the present day rose from a waiter in a cafe on the East Side of New York?
5. Who composed "A Russian Lullaby?"
6. How many people were estimated to have heard the Tunney-Dempsey Championship fight by Radio?
7. In behalf of what disaster did Al Jolson make an appeal to listeners for their help, appearing for the first time before a microphone?
8. What was the occasion of the first Radio appearance of the Prince of Wales on this continent?
9. What presidential inauguration was the first to be broadcast in the history of our country?
10. What station was the first to broadcast the voice of Premier Bendito Mussolini.

There they are. Sit down and write the answers to the best of your knowledge, just for your own satisfaction. Do not expect to be awarded any gold cups or cash money. If you have the facts in your mind for keeps, you have gained something that money cannot buy. When you think you have answered every question turn to the back pages of this issue and you will find the answers as supplied by Mr. Hay. But don't be in too big a hurry to find the printed answer until you have at least tried to answer every question yourself.

And here's our question: What do you know about Bill Hay?

Bill is such a nice, dignified maestro it seems like lese majeste to call him "Bill." He was born in Dumfries, Scotland, a quaint wee town, the charm of which inspired Bobbie Burns to put its glories in immortal poetry. Bill absorbed some of the romance and rugged character of his early surroundings. He also acquired the inimitable Scotch burr that transmits so eloquently over the air.

Seventeen years ago he left bonny Scotland for America and made his first home in Chicago. The West beckoned him

(Continued on page 26)

BEWARE OF THESE CAMPUS FLIRTS, WHO STROLL AND SING ALONG WLS ETHER LANES

These are the alluring co-ed charmers who intrigue listeners to the WLS party. Left to right: Peggy Forbes, U. of C.; Claudia Carter, U. of I.; Edna Cunningham, U. of I.

FLIRTS they are—three rosy, posy darling little flirts, and with ne'er a blush of shame they admit it—broadcast it!

Most assuredly, my dear fellow. You have but to listen over the WLS Sears Roebuck station of a Wednesday night to hear them announced. (Just wouldn't you like to be the announcer though!) It's something like this:

"Ah! Here they come . . . three of 'em, saucy, pretty and . . . don't look up . . . pretend you don't see 'em . . . they're the Campus flirts . . . listen . . . in two minutes you'll be keeping step with them . . . but watch the step you keep . . . here they come . . . listen . . ."

By this time your ears are hanging straight out from your head. You catch a bird-like murmur, then a treble of dainty, throaty trills, sweet, irrisistible—hey, wait a minute. Naughty man, how dare you!

Really, Truly Co-eds

But the campus girls are really honest-to-goodness university students—as for being flirts, don't be silly. But the story begins without an introduction, an informal serenade in the purple shadows of the mountains at Estes park where Miss Peggy Forbes of the School of Commerce, University of California, met Miss Claudia Carter and Miss Edna Cunningham, both of the University of Illinois.

Carl Hoefle, pianist and arranger for a big music publishing house, also happened to be spending his vacation at Estes park. The sun, nestling down in the western sky, was turning a distant peak to molten gold. Peggy, Claudia and Edna were perched on a fallen tree, awed by the magnificent sight.

"At sundown, at sundown . . ." warbled black-eyed Edna, wisps of soft raven hair blowing about her temples . . .

"Every little bird . . ." echoed sunny haired Claudia in honey-sweet soprano, dark shadows creeping into her deep blue eyes.

"Every little breeze . . ." sighed pretty Peggy, dark and delectable, swinging a pair of dainty ankles over the rough, shaggy bark.

In a moment they were singing in treble, unaware that an enthralled young man with a trained ear for harmony was listening but a few feet away.

That was the first time on record of their getting together and luring a man out of his accustomed path of dignified decorum. But they did it.

Enchanted he stood almost breathless hearing them sing one song after another with never a thought that their fate and their future were at that moment taking a definite shape and trend.

Twilight came and presently the three little serenaders to the sundown began to show signs of departure. Carl was desperate. He could not lose such a precious trio—and yet there was no other person near through whom he might present himself, so he first betrayed his presence by attempting to clear his throat.

"Ooooh! A bear! A bear!" chorused three frightened feminine voices.

"Fear not, 'tis I," or something like that answered Mr. Hoefle, stepping from behind a clump of oak underbrush and smiling broadly.

"Worse, a man!" warned Edna in a hoarse whisper.

"You made me speak to you . . . your singing, you know."

"Was it so bad as all that?" asked Claudia.

Thought of Angels

"Stop teasing," answered Mr. Hoefle, "everything seems so heavenly around here—so beautiful, and then the voices; I was thinking of the angels—"

Giggles, very mundane giggles answered him.

Well, the upshot of it all was that Mr. Hoefel signed the three vacationing co-eds up for a try-out in Chicago. They were found to be especially adaptable to the microphone, and that is how Edgar Bill found them and engaged them for special features over WLS. They may be heard there regularly on Wednesday nights and sometimes on other nights as well. Mr. Hoefle, still has them in charge and we are going to hear a whole lot more about them in the very near future, he says.

"SHORT, SWEET AND SO PETITE!"

MISS DOROTHY GALLAND (above) recently was announced to WBZ-WBZA, Boston, listeners as "short and sweet," but she was not too sweet to prove that Radio announcers are not all prevaricators when it comes to personality encomiums.

DONALD BRIAN BACK FOR WJZ'S SPECIALTY

Star of Original Merry Widow Heard on Blue Net

ONE of the great musical treats in the glorious month of Radio, just passed, was the revival of The Merry Widow by WJZ and the Blue Net. The most notable feature was the fact that Donald Brian, who played the male lead in the operetta when it was first introduced to America twenty years ago, was heard again as Prince Danilo.

The Merry Widow was presented as the first of a new series in the Phileo hour. Many past successes of the musical comedy stage have been arranged for the series which will be carried through until January, and perhaps longer. The Merry Widow, by Lehar, was first presented in Vienna in 1905. It at once became a hit, but played the European capitals two years before it was introduced to America. With Mr. Brian the stellar role was played by Ethel Jackson.

Another sensational revival of the month over the WJZ chain was The Beggar's Opera, said to have been a favorite of George Washington. It was written over 200 years ago by John Gay as political satire of the times. Old American records show that the historic duel between Alexander Hamilton and Aaron Burr, in which the former was killed, was precipitated by the "Polly Peachum," then playing in the opera.

WOODSHED BOYS AT WJR FOR NEW HOME

FORD AND GLENN, famous Radio stars who have endeared themselves to the children of the middle western states, are announced by Leo Fitzpatrick as having been adopted by WJR, Detroit. They still are within range of their former haunts at WLS, Chicago and WLW, Cincinnati. One of their favorite amusements is the woodshed show for little folks.

Denver Girl Relates Experiences in Broadcasting from Eastern Studios

Jeannette Vreeland Thinks Radio Opens Opportunities for New Talent —Popular Lyric Soprano Tells Hints for Beginners—How It Feels to "Go on the Air" for First Time

By Gertrude Bower

"IN Radio I see an unlimited future for both art and the artist," stated Miss Jeannette Vreeland, lyric soprano of the Minneapolis Symphony orchestra, whose voice is frequently broadcast from New York, Boston and other eastern cities.

New York was the scene of her first broadcasting which occurred in 1922. Regarding her first experience, she said:

"Audience? Yes, I thought of the listeners before the dials, but at the moment my one overwhelming desire was to put my best into the microphone, and as it was my first experience with that small but powerful disk, I had little time for conjectures as to who the gods that turn the dials might be.

"And getting your best over to those outside the studio is not so simple, even for the finished artist, if unfamiliar with conditions of broadcasting. When there is no preliminary training or experience in broadcasting, the singer is apt to be somewhat confused if the microphone is pulled away and then pushed toward her as she ascends and descends the scale. This is done in some studios.

"The ideal studio is one which has both the interest of the performer and her audience in mind and accordingly provides a rehearsal period.

"There is one studio which has a receiving apartment not far from the broadcasting room. In the former the listener carefully notes all defects caused by unfamiliarity with the microphone. After the trial program, he carefully checks up with the artist. As a result, when the entertainer 'goes on the air,' she knows when to approach and when to recede from the microphone without the doubtful assistance of a second person. Also she enjoys a degree of confidence impossible to obtain without the rehearsal."

Miss Vreeland's home is in the West. Although born in Los Angeles, she has spent most of her life in Denver, where her parents are now living. With true Western spirit, she loves adventures. In 1922 she gladly took the opportunity of being the first artist to broadcast from an airplane.

As the wife of Percy Rector Stephens, vocal teacher in New York City, she is also a home keeper, yet at the same time continues her professional work. They are both enthusiastic motorists, even to the extent of smiling about engine trouble—afterwards. This summer they made an extensive western trip on which they included a visit to Yellowstone.

Lovely Lee Morse, heard with the Ted Lewis program over the Columbia system, October 12.

Elsie Thiede (above) Columbia concert soprano and star in a number of the recent classical programs presented over the Columbia system.

MISS JEANNETTE VREELAND, lyric soprano with Minneapolis Symphony who is often heard over WEAF—WEEI—WTAM—WGN and other stations.

NBC Ready With Chicago Studios

Combine Central and Southern Units in Time Zone to be Called "Midwest Network"

"MIDWEST NETWORK" will be the name of the new National Broadcasting company unit scheduled to open headquarters in Chicago about November 1. Staff engineers have been engaged since last May making installations and perfecting the studios located in the Lake Michigan building, 180 North Michigan avenue. The studios are in the heart of the new skyscraper development approaching Wacker drive and the boulevard bridge.

Four of Chicago's most powerful stations will be aligned with the new "central" of the NBC. They are: KYW, Chicago American; WEBH, Herald and Examiner; WGN, Chicago Tribune, and WLIB, the Liberty Weekly. When all plans are completed the company has announced that its Chicago programs will be on a par with those issued from the New York studios.

The stations which are in the Central Time Zone chain are: WOC, Davenport, Iowa; WHO, Des Moines, Iowa; WOW, Omaha, Neb.; WDAF, Kansas City, Mo.; KSD, St. Louis, Mo.; KVOO, Bristow, Okla.; WFAA, Dallas, Texas; WCCO, Minneapolis-St. Paul, Minn.; WTMJ, Milwaukee, Wis., and WLW, Cincinnati. The stations of the NBC's Southern Network, also located in the Central Time Zone and to be included with the Midwest Network in occasional programs, are: WHAS, Louisville, Ky.; WSM, Nashville, Tenn.; WMC, Memphis, Tenn.; and WSB, Atlanta, Ga.

AUSTRALIA LISTENS TO CHICAGO BATTLE

AUSTRALIA listened in during the Tunney-Dempsey fight through WLW. The Cincinnati station sent the fight of the century hurtling through the ether and half way around the world over its 52.2 meter short wave transmitter. The following morning a cable was received from the Australian station 2-FC stating that the fight had been rebroadcast through their station on 5,000 watts. It was sent to Australia with 250 watts. Messages afterward were transmitted through a relay between Robert Burrows, 3107 Durbin st., Cincinnati and Thomas R. Gentry, 113 S. Eaton st., Dallas, Tex., to the Australian amateur OA-2RX.

Ted Lewis and his famous jazz band stirred up the ether across the continent the night of Oct. 12, for the Columbia Phonograph hour.

EACH presentation by the new Columbia broadcasting system has entrenched the organization into the affections of the listeners throughout the country where the sixteen associated stations are located. Early promises are being fulfilled with the scheduled appearance of stars brought under the Columbia artist banner. One of the big successes of October was the Ted Lewis program, the night of October 12. Ted Lewis and Lee Morse proved special favorites.

TEXAS STATION HOPS OFF ON SUPER-POWER

WBAP Launches Fall Season with New Transmitter

THE month of October proved to be the beginning of a very full and interesting season for WBAP, one of the Southwest's most popular Radio stations. It marked the formal opening of a new super-power transmitting station, located seven and one-half miles from Ft. Worth on what is known as the Lake Worth Road, and of their new studios in the Star-Telegram and Record-Telegram Building situated in the heart of the city.

The construction of the new WBAP transmitter is in accordance with the policy of the Federal Radio Commission in having stations located outside the city limits, so that listeners may tune out local stations if desired.

The antenna masts are two hundred feet high and three hundred and eighty feet apart. The antenna itself is two hundred and eighty feet long. The telephone lines and power lines enter the station underground and a copper network of ground wires buried several feet into the ground radiate in all directions from the plant and give the important ground contact to the instruments. In addition to this a large counter-poise is used. Forty horse power is used in the transmission, the current being brought in on a 12,000 volt line, which is sufficient to supply the average small town with power. The speech amplifier which consists of three stages of push-pull amplification, requires three horse power for its supply and is of the newest design for natural reproduction.

The opening of the new station marks the return to the air of some of the feature stars of WBAP. The Sun-Flower Girl is back, the Superior Quartette which was heard each Tuesday evening last winter and spring has returned, and the voice of the Hired Hand with its ever ready quip, crackles out from the antenna. The Hired Hand was off the air all summer for he has been kept quite busy cleaning out the boilers for the long hard winter just approaching, and when he had any time to spare he was needed to help in the construction of the new station. He thinks now though that he can find time a few nights each week to meet his many friends on the air.

Attention is called to the new wave length, 499.7 meters (600 kilocycles). The new schedule went into effect with the opening of the new station on October 3rd. It will be found elsewhere in Radio Digest.

YES, THEY HAD NO MATCHES, SO G. IRWIN AND HERRMANN COOK BREAKFAST BY AIR

MATCHES were unavailable, although the "makings" were gloriously present when G. Clayton Irwin and U. J. Herrmann, famous Radio show impresarios, decided to have breakfast on the roof of the Hotel Astor, a few weeks ago.

"You know we are camping here and we have to do our own cooking," explained Mr. Herrmann to Miss Clody Head and three of her young friends of the "My Maryland" company who had called. "I say, Mr. Irwin, may I trouble you for a match? We have to fry the eggs and make toast, you know." Mr. Irwin searched his pockets in vain.

"Sorry, Sport, I think we'll have to import a little heat from the air over the set. Just slice the bread, please—and you might begin breaking the eggs. I'll see what I can do." Mr. Irwin turned to the dials.

"Now, do please let me help," insisted Miss Head.

"Don't forget me," chimed in Miss Isabel Beoned, reaching for a chafing dish.

"Oh, Mr. Herrmann, you are spilling the shells! Let me show you," exclaimed pretty Mildred Saunders.

"The slices are ready," laughed Miss Maybeth Conley.

"Well, well," welled Mr. Herrmann, "and I was supposed to be the chef. How about your fireless stove, Irwin?"

"Ready for business. Bring on your victuals."

And, marvels and miracles! The pan began to sizzle and the toast began to brown—and it was all done without a match or a connecting wire—just Radio, right out of the air!

If you don't believe it, look at the picture, taken on the spot, by a Keystone photographer. That's Mr. Irwin on the left, and Mr. Herrmann just above your thumb. The girls, from the left are: Clody, Isabel, Mildred and Maybeth. And the breakfast?

"Exquisite," smacked Mr. Irwin.

"Dee-licious," gurgled Clody.

"Yum-yum," yummed Mr. Herrmann.

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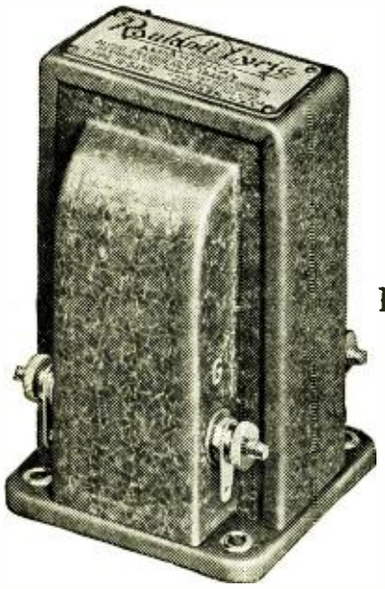

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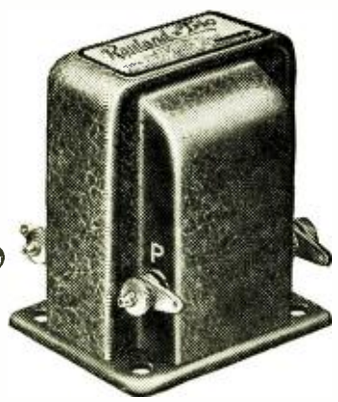

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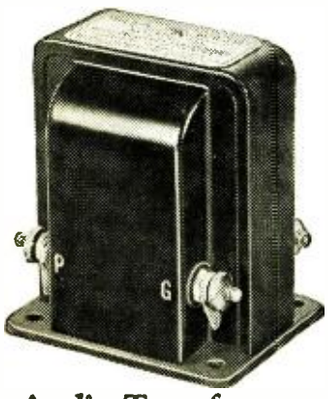

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Tunney-Dempsey Battle, Blow-by-Blow

Verbatim Report of Championship Fight as Broadcast by Famous Sports Announcer—"Best Man Won"

By Major J. Andrew White

ANTICIPATING a record breaking interest in the broadcast of the Tunney-Dempsey fight for the world's championship in Soldier Field, Chicago, Radio Digest stationed expert stenographers to take down every word spoken by Major J. Andrew White from the moment he opened the key to his microphone at the ringside. A transcript of that verbatim report is published below. It will be of special interest to those who were disappointed in not hearing him over the Columbia chain.

—EDITOR.

MAJOR J. ANDREW WHITE: Hello from the ringside. This is White speaking. Jack Dempsey comes into the ring in a brand-new outfit. I've never seen him wear anything like this. He is all broken out in a flannel bathrobe. The famous white sweater is underneath the bathrobe, and we have got a J. D. in black letters on the flannel robe.

Jack as usual is doing his little bouncing step which is very familiar to all of you who have seen him in his previous ring battles. He has been taken over to his corner and stands in the usual manner, working out the tendons and flexing the muscles of his legs. The reason for that is that Jack depends a great deal upon his footwork. Those of you who have seen him are familiar with the peculiar stance he takes. Probably no other fighter in the history of the ring ever spread his feet as widely apart as Jack Dempsey does. For that reason he always goes through this little bouncing up and down exercise which he keeps up continuously until almost the time when they call for the photographs.

That is your picture—all the officials in the ring, Jack Dempsey over in his corner, which is the opposite corner from us, very closely chaperoned by Leo Flynn, who is in white flannels and all tricked out for the occasion, and Jack Dempsey with the two letters of his name on the back of his sweater. Jack is smiling. He seems to be very comfortable. He has just recognized a friend at the ringside and given the traditional handshake which they give by shaking their own hand by way of greeting. He is now talking to somebody and goes over to the corner of the ring to give a special greeting to some particular friend. I can't see who it is. I don't recognize the man. He is ruddy faced, and smiling, a man in a green suit who will now become famous if we can get his name. Nobody seems to know him. Apparently he is some special pal of Dempsey's.

Still the bouncing continues, and we are waiting for the champion. The ring has been cleared of officialdom now. I hear some shouts coming from the back; perhaps they are coming right over the microphone to you. Undoubtedly, Tunney is arriving.

Here is Jim Jeffries climbing into the ring, crawling through the ropes and shaking hands with Dempsey. Jim looks very good; he holds his age well. It is rather interesting to note that he tests out the resiliency of the ring, bouncing on his toes, and totally unconscious of it. When he takes off his hat we see him with his bald head and gray hair.

Jack Sharkey has just climbed into the ring. Jack is embarrassed in his usual way. Jack Sharkey stands over by Dempsey's corner; Dempsey has not recognized him yet. Jack is smiling, all ready to shake hands with him. He has just called out hello to some man whom I don't recognize, and goes over to talk to Jerry, the Greek. He is within two feet of Dempsey, and Dempsey still has his back turned to him. I don't think that is anything purposeful, but just that Dempsey is like a race horse always before a fight and doesn't recognize anybody on account of his nervousness. Sharkey looks good; he is full of smiles. Dempsey has turned around and is leaning against the rope. He has suspended the incessant bouncing. Now we see Dempsey's real fighting face. Up to this he has been too jolly. Now the mouth is beginning to set, he is beginning to work his arms in the familiar swinging fashion.

Tunney is arriving—listen at this ovation. Before Gene gets through the ropes Jack has bounced across the ring to shake hands with him. Tunney comes in with his familiar marine bathrobe with its red lining and its red piping on the blue and the red tassel which contributed something to the high lights when he made history in Philadelphia last year. They are still trying to get quiet in this crowd, without much results. Tunney is standing where I am talking. His corner is here. He seems easy. I am told that when Tunney came in, Dempsey gave him both hands in a warm greeting. He has yet to recognize Sharkey. I have seen him glance toward him. Sharkey has just spoken to Gene. Gene has smiled and bowed back. There is quite a contrast between these two men. Gene is easy and swinging from foot to foot—just enough to keep his blood in circulation, and facing outward into the center of the ring, smiling easily, whereas Dempsey's nervous, drawn-down corners of the mouth are already set.

Tunney comes back to his corner, having examined the gloves. He is very easy in his manner and bearing, not the least bit nervous. In his corner now they are taking precious good care that there are no leaden weights put in these gloves. He is getting ready to put them on. The bandages have already been put on and have been examined.

ARROW points to Major J. Andrew White at ringside as he says, "We are trying to get the microphone into the ring. . . . We will get Gene a little later. . . . Now they are all climbing into the ring."

Now we come to the dramatic moment which Chicago has waited for so long. The gloves are now being put on both contestants and it will be just a few minutes before we hear the gong and the start of the big shindy.

Both Dempsey and Tunney have risen to their feet. The gloves have been adjusted. It will be just a minute or two before the ring is cleared. Tunney looks very good, in fine condition. He has slipped off his bathrobe with the marine emblem on the back and just has it thrown over his shoulders. He is wearing white satin trunks.

Dempsey still has his flannel outfit on and we can't see how he is garbed. They are now in the center of the ring receiving their instructions from the referee, Dave Barry, while their handlers softly massage their backs. As these instructions are the usual ones and could not be overheard anyhow, I may take this opportunity to tell you that the style of these two men is just about as opposite as any two fighters could be. Dempsey ordinarily is a slashing, rushing, willy-nilly puncher. He used to be very much on his toes. His last few fights he settled down hard on the heels.

Tunney is a supremely good boxer. There's the bell. The big fight is on.

ROUND 1

They go to the center of the ring. Dempsey leads first, he misses with a left. Tunney catches him with a soft left chop to the face. They clinch in the corner. They break on instructions from the referee. Now they are in the center of the ring. Dempsey misses again, goes in close, does not strike an effective blow. In a light clinch in the corner both slap each other ineffectively on the neck with lefts. Out of the clinch, the referee going between them. They are sparring. Dempsey is short with a left lead for the body. Gene's counter is short. Gene lands a light left jab to Dempsey's face. Dempsey's overhand left just scrapes by the jaw of Gene. Once again they are broken from a light clinch, right directly in the center of the ring. This fight starts exactly as the one in Philadelphia, with Dempsey forcing, Gene not giving ground an inch. He is just taking the center as they circle about. Not a blow struck during this time yet, waiting for an opening. Gene's lead is short, and they go into another light clinch without a blow being struck. They pull out of that. Get your picture; two men feeling each other out, Dempsey slowly circling around the champion looking for an opening, Gene well on his guard. Dempsey's left goes through lightly. Gene crosses an overhand right, a short hook which catches Dempsey on the jaw. Not a damaging punch. Nicely delivered, well timed and snappy. That is the first clean punch of the fight and the first one that amounted to anything at all.

They are sparring wide apart, Dempsey looking for an opening, Gene ready for the quick counter. Gene starts to lead, he sees no opening and pulls his punches back. They go into a clinch on Dempsey's lead for the body which Gene easily blocks. They are out of the clinch. The same thing, Dempsey slowly circling around. Tunney gets through with a light right to Dempsey's ear and once more they clinch. They go over to the ropes slowly and the referee parts them. Both boxers are very courteous.

Sparring now. Dempsey's left for the body is short, Gene easily backed away from it. Dempsey outsmarted Tunney then and slipped by on the ropes without a punch being struck. Dempsey just took a light right on the face from a hook which Gene crossed over. Then Gene drove Dempsey to the ropes slowly and Dempsey landed two light rights on the back of Gene's neck. They were not damaging and of no consequence.

They are sparring again in the center of the ring. Tunney overshoots a right and they go into a light clinch. His left lead was blocked and Dempsey slip-shouldered under a right punch, the same trick he pulled on Sharkey. We will probably have an interesting exhibition of boxing. Into a light clinch with not an effective blow being struck, both landing rights on the gloves of each other. In the corner now, both men are just as fresh as if they had just started. That entire round which was the first round of the world's heavyweight championship fight between Jack Dempsey and Gene Tunney was a feeling-out process. The round belonged to nobody. There was nothing of consequence done. The best punch was struck by Tunney, but that was not in any sense a damaging punch. It was one to admire because it was well timed and snappy and landed clean, but everything else was of no consequence in that round and was merely a warming-up process.

As I say, both men are just as fresh as if they had just started. Dempsey is flat-footed again tonight as we saw him in his last fight against Sharkey, but very active and aggressive. Gene is not quite so aggressive.

ROUND 2

Here we go for the second round. They are already in the center of the ring. We see Dempsey circling around. Dempsey tries to go in but Tunney easily slaps him away. Dempsey is short with a left lead for the body. Tunney got away from him once more. Dempsey then attempts to bore in for some in-fighting. Tunney ties him up beautifully. This magnificent defensive left of Tunney's is very much in evidence already. There goes a left to the heart; it was a straight punch, but Tunney took it going away. They are sparring. Tunney shoots over a straight right to the jaw, nice punch, clean, right on the jaw of Dempsey. They go into a light clinch, now they are out of it. Sparring. Still three or four feet apart, same process. Dempsey smacks over a terrific left on Tunney's jaw, another left to the body. He brings up a one-two and catches Tunney again on the jaw and Tunney is very glad to hold. They hold on the ropes for an instant. They now are apart and in the center of the ring again. Tunney retaliates now with a straight overhand right which caught Dempsey on the neck. Dempsey just ducked out of the way of that one in time. It was a well-delivered punch. Dempsey has the advantage of this round so far. Dempsey just pulled away from that punch, the crowd hollered, but it was of no consequence. Then he takes a light left jab in the face from Tunney. Jack doesn't mind these things at all. I have seen him take dozens of them. He will do that to get in for body punching. The crowd is hollering because the champion hit him.

There goes a right from Tunney, nicely delivered. Once again on the jaw. As they come in close Tunney's left gets into Jack's ribs, but it is light. Now they are sparring. Looking for an opening, just sparring, still at it. Not a blow yet. Dempsey gets through with a little ice cream soda left to the body of Tunney. It meant nothing at all. They go into a light clinch. On the break, Jack gets over a right hook. Not very tough, but hitting Tunney smack on the jaw. Going away, Dempsey takes a light left to the face. He tries to go in for body punching, but Tunney with his masterful defense ties him up. On the break, Jack tries to slip through one. Tunney gets in a light right to the face. The punch was of no consequence, but showed a superior skill in the boxing. Now they are sparring. Still sparring. Jack overshoots a left lead for the body and in the return, Tunney clipped him on the jaw with a light right as the bell rang.

That is the end of the second round with the round even, possibly a shade in favor of Dempsey on account of the flurry of punches over against the ropes early in the round. I would give the round to Dempsey by a shade.

Thus far in the fight, we see these two men getting down to business. It is a far better second round than Dempsey showed at Philadelphia. Unquestionably his fight with Sharkey did him a lot of good. He is more accurate. He is not missing and he is fighting a heady fight. Tunney, the champion, however, is still the master boxer, who in his usual form prefers to counter rather than lead.

Now we are going into the third round. We will wait for the bell. There it is.

ROUND 3

They both come out of their corners slowly and start once again the same thing. Dempsey slowing, circling around Tunney. Dempsey's left lead for the body is short, but as they go into a light clinch he gets through two rights to Tunney's ribs. They are of no consequence. They are still clinched, and they break out of it. Dempsey viciously pulling away, but Tunney covering well and not landing anything. Now they are sparring. We are waiting for one to lead. They are still sparring, not a blow yet, bouncing up and down, both of them.

Tunney started to come in then, but he had timed his blow wrong. The crowd hollered at that one. It landed on Jack's glove. It didn't mean a thing. On the in-fighting Jack gets through three light rights to the ribs and about five little baby taps to Tunney's ear and a sixth one. Tunney shows how clearly he understands Dempsey's ability at in-fighting. He just shot over a pretty right at Dempsey. Dempsey always was a chump for that one-two punch.

On a left lead Dempsey got one over. They are in the center of the ring now. Tunney's left lead is short. Jack Dempsey gets in for three smacks on the ribs

(Continued on page 18)

ARCTURIZE YOUR RADIO

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259 Sherman Avenue, Newark, N. J.

Morgan L. Eastman, First Chicago Broadcaster, Heads Edison Group

First on the Air in Midwest He Continues to Direct Radio Broadcast Activities for Big Independent Local Interests —Retains Same Artists

IN THE memory of Chicago citizens still under the voting age the newspapers of the city made a first page story of the fact that the voice of a man at a Radio transmitter had been heard in Milwaukee. That sensation had scarcely subsided before further announcements were published that arrangements had been made to send out music over the ether waves, and those enthusiastic experimenters fortunate enough to possess Radio receivers would be able to hear the music at regular intervals.

Morgan L. Eastman.

Then came the opening of the Westinghouse broadcasting studio in the Edison building, under the supervision of Morgan L. Eastman, conductor of the Edison Symphony orchestra. The writer remembers the wide interest aroused at that announcement and supervised the taking of a motion picture of the occasion for one of the national newsreels.

Morgan L. Eastman is the pioneer broadcaster of the midwest and western area. He is still broadcasting but he has outgrown the rather cramped quarters in the old muffled-in cubicle office building. With all the Edison artists he has moved to the palatial suite in the new Straus tower on the Michigan avenue lake front. And he is no longer under the Westinghouse banner, as that station is now identified with the National Broadcasting company.

But Morgan L. Eastman is marching on. With the powerful Insull interests behind him the Great Lakes Radio Broadcasting company was organized. Stations WENR and WBCN have been taken over and between the two stations, operating on the same wave, Mr. Eastman is presenting twelve hours of entertainment and service each day.

All the twelve hours of broadcasting are linked together like a symposium, taking the listener by easy stages from one mood and mental diversion to another without clashes of jarring contrasts. There are two ideally constructed studios so that one presentation can follow another without tiresome delays.

Arthur Wellington, bass, heads the announcing staff and is at the "mike" through the sublime to the frolics. Associated with him as announcers are Oscar Heather, tenor, who introduces every sort of musical number, instrumental and vocal; and Everett Mitchell, baritone, who just now is on the books for a special celebration November 4 in honor of his second anniversary with the Edison studios. He is especially noted for his informal announcing. With the exception of Audrey Call, who has gone to Europe to study, and Lillian Rehberg, cellist, practically all of Mr. Eastman's former staff of artists are still with him. A new station with 5,000 watts power is expected to be ready for operation by the first of the new year.

THRILLS OF SHOOTING MOUNTAIN MOVIES TOLD TO KOA FANS BY DIRECTOR BROWN

IT'S cold almost any time 12,000 feet above sea level and Clarence Brown told KOA listeners the chilly thrills of making a picure drama that high in the Rocky mountains.

NEW RADIO BEACONS DIRECT LAKE SHIPS

FOUR new Radio beacons, which automatically send bearings from shore to the Radio compasses on vessels, have been placed in operation on Lake Michigan by the federal government. This makes fifteen Radio beacons in service on the Great Lakes. The United States has more Radio beacons now in service along its coasts than all other countries combined. The Radio compass was invented by Dr. F. A. Kolster, for ten years chief of the government Radio Laboratories.

GERMAN SLUG GAVE ARTIST HIS CHANCE

ONE seldom begins a public career at six, but that is excusable when one is not gifted with a voice such as nature endowed John Wilburn, staff ballad singer and assistant manager at WBAL, Baltimore. His earliest critics complained that he had plenty of volume but poor control. All this passed away during the first six years—always the hardest—and then he was introduced to the congregation of the Old St. Paul's P. E. church. They had to make him a special surplice but he held to the key with the other little sopranos and he grew. His range was considered remarkable for one so young.

Then came that critical age when so many boys trade young voices for old ones, and make bad bargains. But luck was with John Wilburn and his first training stood him all in good stead.

"John, God gave you a voice, don't neglect it," said a fatherly old parishioner, putting a kindly hand on the boy's shoulder. He hadn't intended going in for music for a career. Now he started thinking about it. He completed a scholarship in the Peabody Conservatory of Music in time to put on a uniform for the World War.

A piece of "Heinie" shell in the bloody Argonne Forest decided the whole matter for John Wilburn, because when he got out of the hospital his right hand was paralyzed and Uncle Sam took him in charge. Through government aid he completed his vocal culture and soon became recognized as one of the best tenors in Baltimore. Frederick R. Huber, director of WBAL, considered it a happy day when, in November, 1925, he signed up the young war hero as one of the regular entertainers at this popular Maryland station.

PASADENA SINGER

WHATEVER frivolities and cute capers may be found in other studios 'round about the environs of Los Angeles, George Frenger of KPSN, Pasadena, keeps the Pasadena Star-News station to a high level of dignity and quality. One of the prize artists of his staff is Ruth Patterson Miller, dramatic soprano, whose picture appears herewith. Only words of highest praise are heard of Miss Miller's voice, as she has especially trained herself to sing through the microphone.

Mrs. Richardson's Realism Comes from Contact and Real Experience

Chattanooga Woman Brings Quaint Old Songs and Folk Lore Out of Tennessee Mountains, Where She Lived Among Secluded Hill People

"DON'T marry an old man. . ." Remember when you first heard that song come drifting down out of the air a few months ago—so old fashioned, so quaint, and yet so graphic and bold it gripped you with a feeling that you were getting a new kick out of your Radio program?

Then there came other songs of a similar nature—odd and elemental, fragrant of mountain pine, smoldering leaves and wild flowers. It was a new note in American harmony. Now you hear it everywhere—not the Negro spiritual—a primitive, proud and distinctive character all its own.

We heard these songs first from the southern stations. They swept through the country until the wave touched New York and then reverberated back with a rush over the membrane of chain stations. From Broadway to Main Street these curious new-old melodies come rolling out to you from the loudspeakers over the music stores or from your own fireside Radio.

Who Discovered Them?

Where did they originate? Who brought them out? Are there any more? What is being done about it?

It may be just one of those freakish turn-overs of musical America, always quick to catch something new to add an extra heart-beat or another moment of intensive pleasure.

Frank S. Lane, program director of one of the pioneer broadcasting stations of the country, WDOD, at Chattanooga, thinks Ethel Park Richardson of his town deserves a share of the credit. Mrs. Richardson he describes as an artist to the core. She had the urge, the overwhelming desire that gifted persons have of wanting to give the world something to think about and enjoy. She did not crave the inspiration to be found in the academies and museums of the great metropolitan centers. She found art at her own back door.

In the mountains of Tennessee there lives a race of people who love peace, but who are so thoroughly strong in character that if there must be war they produce a man like Sergeant York, the greatest hero of the World War. They love their country, but for a hundred years or more they have lived largely by themselves and on their own resources.

Mrs. Richardson's inspiration led her up the mountain trails to the little cabins above the motor highways. She put on calico and cotton stockings and a sunbonnet. She drank from a hollowed gourd and ate from a homemade table. She did not do it all in a day. She took years. At evening she sat on the worn door sill while old Ben sang and thrummed a song he had learned from his granddaddy a couple of generations ago—a song that had come down from colonial days and Valley Forge.

Gradually she won her way into their hearts, singing their songs and striving to live as they lived. She entered the circle of their ceremonials, laughed at their amusements and wept when they wept. It brought her into a world hard for an outsider ever to attain.

Came Home Enriched

When she came back to Chattanooga she felt more enriched than she would have felt had she studied all the old masters of Europe. The warp and the woof of the thing she had sought was woven in the fabric of her own life. Frank Lane declared her a find when he announced her over WDOD. Her listeners became enthused. She was giving the Radio world something new. Her fame spread across the country. A song publisher in New York sought her out. And now the songs she has assembled are to be made into a book. An entertainment booking company has arranged a tour that will carry her across the continent and back.

Perhaps Mr. Lane is right and we Radio listeners owe Mrs. Richardson of Chattanooga a rising vote of thanks for bringing us that always-to-be-desired "something new on the air."

A picture of Mrs. Richardson, in her mountain costume, will be found on page 7 of this Radio Digest.

TUNNEY-DEMPSEY FIGHT

(Continued from page 15)

with his left. They are broken out of a clinch by the referee and are in the center of the ring again, sparring, Jack still circling around looking for an opening. They are wide apart. Duck and dodge and bounce.

Tunney overshoots a right and once again takes some body punching, three lefts from Jack to the body. The punches were light and short. The blow was low from Dempsey, unintentionally, just below the belt. There are two rights on the ribs, three on the ear from Dempsey, but they are those little short punches in a clinch without any damage being done. Now they are apart, sparring in the center of the ring. Dempsey is short with a left lead for the body. Tunney is short with a left lead for the face. A flurry of motions without a blow being struck. Jack missed again. The crowd is howling, but Jack is missing. His uppercuts shot with a right miss. There goes a left through to Gene's body from Jack. That one landed and was a nice blow. The crowd senses great excitement here, but from our unusual point of vantage these blows are not landing. Jack just took three light jabs on the face, once again came over. In the in-fighting Dempsey landed three rights on Tunney's ear. Dempsey took two on the face then to get in and deliver a light left to the ribs of Tunney as the round ended.

There is a lot of protest from Tunney's corner on the question of the rabbit punch, whether Dempsey is using the rabbit punch, which as a matter of fact is a barred punch, but this so-called rabbit punch which they are attempting to inject into it is in no sense the one that is barred out by a foul. Jack is merely hitting in the clinches, as I explained to you. These light rights to Tunney's ear are nothing more nor less than short hook punches that travel three or four inches and are not damaging. We are between the third and fourth rounds. We will be coming up for the fourth. You hear the warning whistle. We will listen for the gong. Thus far the fight has gone just a shade in favor of Dempsey.

ROUND 4

Here they come out. The same thing, center of the ring, sparring. Jack leads first, short with a left for the body. Jack took a left and a right to the face then from Tunney, landed clean. They both miss left leads. Tunney lands a grazing left on Jack's face. He misses with another left lead. The crowd thought it landed and are howling, but it didn't. Jack is short with a left for the body. Tunney overshoots a hard, vicious right for Jack's ear. Tunney is settling down now to his pace. His whole expression has changed.

They are in a light clinch, now they are broken out of it. Now Tunney is ready to go out and do his fighting. Now we see a magnificent piece of boxing where Tunney ties up Dempsey so that he might just as well have been chained. Dempsey was trying to get into the champion's body and Tunney tied him up beautifully between the elbows and gloves.

Tunney overshot a right for the jaw and bumped Jack with his shoulder as they came into a light clinch which they immediately broke out of. Jack slipped over a right hook then on the in-fighting, which landed high on the ear of Tunney and did no damage. They are sparring now in the center of the ring. Tunney is pulling away easily from these left leads of Jack's. Jack just took a light left and right on the ear, but Tunney just overshot a vicious right, Jack getting right in under the punch and going into a light clinch. The Tunney right was aimed for the head. Now they are sparring.

Tunney just scraped Jack's face with a left and a right. As I have told you, Jack will take a hundred of them to get one body punch in. Tunney got over a good one, a straight right to Jack's jaw; in a light clinch. Jack reaches Tunney's ribs with two rights and smacks him lightly once again with three rights to the face. There's a beauty, a left lead from Tunney, followed by a right, a left and a right, all on Dempsey's face. A left and a right, a one-two punch again, Jack's guard is down in his usual careless way, and Tunney is beginning to sharpshoot now, nicely delivered punches, all of them. There go two more lefts, two lefts in succession right to Jack's jaw. There goes a right hook, another right hook and a left. He has driven Jack up against the ropes. Jack Dempsey had no defense at all. There are one or two punches to the jaw. Jack looks groggy. There goes a right to the ear from Tunney. Jack is in a light clinch. I think Jack is almost out on his feet. That last right to the jaw; Jack's defense is down; he is clinching on the ropes. The bell saved him that time, I'm sure.

That fourth round was 100 per cent Tunney's. We almost saw Dempsey go out. The particular punch which made the birdies sing for him was a vicious right to the jaw. Tunney started, as I called it then, sharpshooting, which is probably the best designation, because as I told you at the beginning, he is a master boxer. Dempsey simply has no defense at all for the terrific speed at which these face punches come over.

Now they are in their corners and we are waiting for the fifth round. That was Tunney's round by a mile. He has three thus far. Dempsey looks freshed up considerably, but while we don't like to predict anything, the champion is outboxing him by a mile. He has a big lead now.

ROUND 5

Now they are on the ropes. Tunney lands the first right to the jaw. Dempsey once again could not get his left up in time for that quick, snappy, straight right punch of the champion's. They are both short with left leads. Jack tries to bore in and takes a scraping punch on the ear from Gene's left. Again he tries to go in. Gene blocks the body punches easily. Dempsey goes in on the in-fighting. Tunney knocks the blow down. Tunney has just shot an overhand right to Jack's ear, and as they are on the ropes Jack once again taps him with those three light rights to the neck, of no consequence.

Now they are sparring. Dempsey looks a little fresher than he was last round. Let's hope so, because he wouldn't last long if he didn't.

Tunney tries to repeat his performance of the lefts and rights to the face but couldn't land them. Jack skillfully covered on the ropes by ducking. His guard is low, as usual. He has no defense for the left of Tunney, which just caught him another clip on the ear, and all Jack is using is light right taps to the ear which mean nothing at all. They were left taps, it so happens that time.

There is an exchange of lefts, Tunney having the advantage as his left to Jack's jaw was harder than Dempsey's left to his body. Now they are coming out of a light clinch. Tunney sticks his left in for two light jabs to Jack's face. There is a stiffer left jab, a nice one right on the jaw. There's an overhand right which lands on the ear and a light left hook which catches Dempsey. Dempsey shoots a straight left into Gene's jaw and he bent his neck. It was a peach. It looked like the old-fashioned Dempsey punches. Gene was very glad to clinch for a moment, but the referee separated them.

Now they are sparring. They are apart now. Jack just took three, three in terrific speed came over, a left and two rights. There's another right from Tunney; there's another right from Tunney, all on the face, short hooks. There's a vicious hook and a right hook and he hrings up his left, and once again they clinch.

Billy Gibson is hollering his head off, "rabbit punch," over here. The referee is paying no attention to it. Now they are sparring. Gene has a big lead in this round, although Jack delivered one beautiful punch. Jack just took a grazing left on the jaw, and they are in a clinch over on the ropes. The referee has just parted them. They are in the center of the ring. Gene overshoots a right and Jack blocks his left for the head. Now they spar. Gene lands a right, a pretty one. Dempsey knew he got it, and was glad to hold at the bell. Tunney's round by a big margin. Thus far Dempsey is not making any kind of a showing at all. Far better than Philadelphia, it is true, but he is not holding up to the way he started. In the second round he looked like something; in the first round it was an even thing. Tunney perhaps might have been given a shade. The second round was Dempsey's when he looked as good as he did against Sharkey, but the third, fourth and fifth rounds have been Tunney's by a very big margin.

Now as Dempsey is in his corner, Leo Flynn is giving him some advice. Whatever it is, Jack is not inclined to take advice ordinarily; he has made a reply to this. We are waiting for the bell for the sixth round of the heavyweight championship with Tunney way out in front and half the fight over.

ROUND 6

There they go. They are in the center of the ring. They are sparring again, still wide apart, waiting for a lead. There is nothing doing yet. Nothing yet, just motions, just motions. Oh! a beautiful right, a beauty on Jack's jaw. Tunney shot a lovely overhand right and as they came in close there was a light exchange of rights and lefts between the boxers. No damage done. Jack just reached Tunney with a light left to the body. Tunney took it going away. Jack crosses a nice left to Tunney's face, a left hook, and now they are sparring. Tunney easily gets away from Jack's left lead to the body. He overshoots a right to Jack's head. They go into a clinch, and the referee parts them. Probably you can hear the screams of rabbit punch, which is applesauce.

A left and two rights to the face of Dempsey, and in the in-fighting Gene has the better of it. He slapped Dempsey with a left to the ribs and a right to the heart, showing that Dempsey is slowing down or he would never permit that. That is his specialty, in-fighting.

Now they are hugging each other. There's a clinch over on the ropes. The referee takes them out of that. Now they are wide apart and sparring. Oh! a beautiful left to Jack's ribs from the champion. Oh! what a smacker that was. That's the kind of a punch that the crowd doesn't appreciate and yet hurts the fighter tremendously. Hear the crowd yelling? As a matter of fact, Tunney never hit him; he missed him by a fraction of an inch with two rights and a left for the head. Now they are apart out of a clinch and sparring. Tunney overshot his right for Jack's head again, once again he did it, and Jack caught him going away with a light left to the body. There is a nice interchange with Tunney landing a right and a left on Dempsey's face, light ones, and driving Jack across the ropes following Jack's left lead catching Tunney with a good smack on the body.

Now they are in the center of the ring again. There's a nice interchange of blows, Jack getting a hard left to Gene's body as Gene reached him with a left to his face. On the in-fighting nothing happens, except that Dempsey overshoots. Five swings there and not a blow, I mean not a blow landed. They are both boxing extremely well. Now they are in a light clinch, coming out of it.

Jack is—there's a low one, but it was unintentional from Tunney because Dempsey struck it down as it was aimed for the body.

I would say that round was even. Both men are in their corners. While they are taking a rest, I'm going to try to get a match. You don't mind if I smoke, I hope. The Chicago audiences have no objection to that.

We have had six rounds of the world's heavyweight championship for which we have waited so long, and we find Tunney way out in front.

Here comes the bell. Now you will hear the gong in a moment for the seventh round.

ROUND 7

Here they go, neither one in a hurry. They are out in the center of the ring, sparring now. Same thing, duck, duck and weave from Dempsey, and straight up bounce from Tunney. Tunney leads first. He is short with a left and right. They go to the ropes in a light clinch. They are immediately out of it. Now they are looking for an opening. There goes Tunney's left to Jack's mouth, but it was a very light one, straight left. He can't reach Jack's face in three tries, but he did shoot a light left just as I said that into Jack's mouth again. Jack knocked over a left lead then. He's got Tunney going down! Tunney's down! Two, three, four, the count has started, three, four, five, six, seven, eight, nine, Tunney's up on his feet, he's groggy, backing away from Dempsey. Dempsey lands with a left hook on the ear, he misses, two lefts for Tunney's face, Tunney has smartened up. He crashes over a right to Jack's jaw. Tunney is getting his bearings now. His eyes are a little starey but he is on his feet. They are in a light clinch. Jack just reached him with a short left to the face. Tunney is backing away; he's freshening up every second. He is trying to keep out of range, waltzing around now. Dempsey has waited too long. He could have dropped him if he had got him when he first got up when Tunney rose on the count of nine. Tunney is freshening up every second now, and Dempsey has not landed a punch. Tunney shoots over another right and stops Dempsey's rush. Dempsey is boring for the body. One goes low on Tunney, right on the belt line, with a left to the body. Tunney is dancing away for dear life, but he shoots in with a left enough to stop Dempsey's. He shoots again with a right to keep Dempsey away from him. Tunney took some terrific punishment. Jack can't seem to get going. Jack stopped still in the middle of the ring, searching for an opening. He's letting Tunney freshen up. Jack said, "Come on and fight." Jack just beckoned to him, but Tunney is too smart. Why should he? Now Jack is going after him. Tunney skillfully boxes four leads for the head, two lefts and two rights. Tunney is doing the smart thing in spite of the crowd booing and telling Jack to finish him. That's the thing for him to do, to keep out of range until he gets his bearings.

Now they are in the center of the ring. They go into a clinch on right leads for the head being short. I will describe that knock-down a little later. I remember it. Now they are in a clinch; they have just come out of it. Now on the in-fighting not an effective blow is struck as the bell rings.

If that crowd will give me a chance to talk for just a second I want to explain two things. I gave you two counts. One was the excitement of the timekeeper starting to count without word from the judges, and I picked up his count and the referee called for a new count, so Tunney really got about a thirteen count. It was up to four, as I remember it, when I picked up the new count. Tunney was sitting on his haunches with one hand on the floor listening to the count and got up on the count of nine. What he went down under was a flurry of punches of fury. There were three lights, three right hooks and a left hook in rapid succession from Dempsey. Now we come into the eighth round with the complexion of the fight completely changed and Dempsey way out in front.

This is a battle now. Let's see what happens.

ROUND 8

They start off the same way, out in the center of the ring, sparring. Not a blow yet. Still shift and dodge. Tunney leads first. His left is ineffective and grazes Jack's jaw. He overshot a right. Jack couldn't get in to the body although he bored in. Now they are apart and sparring. Same thing. Still sparring. Dance, dance, dance. Jack sticks his left into Tunney's face, but it is ineffective; it was a left lead trying to get in a body blow, which didn't count.

Once again Tunney takes two light lefts on the back of the neck and there are screams of rabbit punch. That howl from the crowd was on Dempsey's miss, as a matter of fact. They probably thought it landed, but it was a left hook which missed Tunney's jaw by perhaps two inches. Tunney just jolted Jack on the jaw with a short left. Jack doesn't mind those, however. Now they are sparring and are wide apart, right in the center of the ring. In an interchange where both overshot lefts, Jack had the advantage in landing two rights to Tunney's ear. They were very short and soft and a little better left, but none of them damaging punches. In a clinch, once again Dempsey smacks over two short rights. Dempsey is trying to get in to the body. Tunney won't let him. Tunney just crossed Dempsey then with a right to the jaw, a grazing right. Dempsey landed a lovely right to the heart, drove Tunney against the ropes with a hard right under the heart and Tunney countered with a vicious right hook. Dempsey's right eye now is bleeding, it is cut, but slightly.

Tunney just drove a good stiff left to Dempsey's body. Dempsey is down on a left to the jaw, but immediately arose without a count, and they go into a clinch. A beautiful left to the jaw dropped Dempsey forward on one knee. He bounced up and they are in the center of the ring. Now Dempsey has been driven to the ropes right above my head by Gene. Gene shoots a straight right to his face. Dempsey goes in to the body and they wind up in a clinch with the referee now separating them. Now they are sparring. They are both short with leads for the face, but Tunney connects with two lefts to the face and a light right. Tunney connects with a stiffer right and a light left to the face, and they go into another clinch. This is nice, this is fighting every second. They are sparring right now, though, but even that is fighting, because they are really seeking openings; they are not standing flat-footed.

Now we have the eighth round with the thing switching once again, Dempsey staging a comeback and Tunney taking the eighth round from Dempsey because he knocked Dempsey down. I wouldn't call it a slip. The punch landed clean. It didn't have enough shock to knock him down for a count, but it knocked him off his pins and forward. The fact that he fell forward indicated that it was the punch that dropped him. Had he slipped he would have gone to one side or backward.

With two more rounds to go, we have about as even a fight as ever was fought for the world's heavyweight championship. Who the winner of this bout will be you can take your pick right now. I don't know and nobody but a soothsayer could say what will come out of this. There's the warning whistle. We will wait for the ninth round. Every minute now is of vital importance as to who the new champion will be.

ROUND 9

They meet in the center of the ring. Dempsey rushes first, but he is short with his left lead for the head. They are in a clinch now, and once again Jack is pounding on Tunney's ear with three short rights. They are broken out of the clinch, sparring in the center of the ring again. They are wide apart now. Same old thing. Tunney overshoots a right and they go into another clinch on the ropes. Not an effective blow struck. The only one struck, as a matter of fact, was a light right from Dempsey to Tunney's body. Now they are sparring, dancing about once again. Jack slips under the right hook of Tunney as they go into a clinch. Tunney slaps Jack twice with two little left taps that meant nothing at all.

Now they are sparring again. Jack pulled away from a left uppercut then. He also blocked a left lead for the face with his shoulder. Jack comes in and takes one on the face from Gene's right to get in. He was not successful, as Gene tied him up right away and they come out of the clinch. Now Jack is bleeding from a cut, apparently on the forehead. Now Gene has just reached him with some grazing jabs, three of them, to the face; not hard punches. There's a pretty jab right in the mouth, short and snappy, and a hard right came over from Tunney, Dempsey being the receiver of all three punches described. Dempsey is bleeding hard. He has just taken two hard rights to the face.

(Continued on page 45)

Fight Leaves McNamee Gasping for Air

Declares "Sheer Drama" of Soldier Field Took His Breath Away—Marked High Point of His Career

GRAHAM McNAMEE writes in the New York Telegram of October 1 a most graphic account of his own personal reactions to the broadcast he made of the great Tunney-Dempsey fight in Chicago. As the article may have escaped many Radio Digest readers in localities distant from New York it is reproduced herewith. As McNamee listened to a dictaphone record of his broadcast the Evening Telegram Radio editor said: "The tense and keenly alert picture every fan got of him over the Radio was then visible to the eye. He actually began to perspire." —EDITOR.

FOR nearly five years, now, I've had the opportunity to sit in on all the big events and tell you and your families just what was going on as I saw it, but the match between Gene Tunney and Jack Dempsey at Soldier Field, in Chicago, last week topped them all in my opinion for real action and honest-to-goodness scrapping. It was one beautiful fight!

I'd seen them swing lefts and rights into each other before in Philadelphia and had watched Dempsey interfere, temporarily at least, with Jack Sharkey's plans, but nothing they had done before left me gasping as I was in Chicago last week. Jack knocked Gene down in the seventh round, and Gene had Dempsey wabbly when it was all over, but their little show knocked me out completely, and for two nights afterward I couldn't sleep a wink.

And that's quite an admission from one who helped describe Colonel Lindbergh's return to America. There were moments in Washington when I felt the going pretty stiff, talking while my eyes were viewing the simple impressiveness of the greeting —for there are times when words just won't come; they don't fit, somehow—but that occasion didn't keep me gasping as Jack and Gene did.

Still Gets "Kick"

Having seen just about everything worth while that has occurred in these United States from a seat right up in front for several years past, it may seem to some of you that I wouldn't get a kick out of anything, but any old time Messrs. Gene Tunney and Jack Dempsey face each other in a ring I want to be there prepared to tell the whole world about it, for they are some sweet scrappers.

I know some of you folks think my job's a cinch, seeing everything from a close-up and chatting with the big boys before and after their gymnastics, but did you ever figure how it would be to see Babe Ruth bang out a long, beautiful homer, and, instead of shouting out your glee in a genuine war whoop and tossing the old straw bonnet in the air, you must keep grip enough on yourself to say something intelligible so those listening in will know that the Babe has knocked the ball out of the park and is legging it for home?

Believe me, it's hard on the constitution to keep the war whoop inside. And that's just the way I felt while watching Gene and Jack pummelling each other.

Flew to Fight

The morning of the big tussle I was in St. Louis, from where I "hopped" by plane to Chicago. As we whirled along between earth and sky I didn't have much but my thoughts. It's a queer sensation—this flying. You're not conscious of the tremendous speed, and the motor's roar makes conversation impossible. It makes you feel as if you're all alone in the world, dwarfed and pygmy-like.

The boys of the National Broadcasting company staff in Chicago seemed worried when I finally arrived. Phil Carlin had already gotten there, but not having heard from me they seemed to think I would become careless enough to miss that fight. Nothing like it. I know my scrappers, and I was looking for action. You couldn't have kept me away if all traffic had been suspended.

When I got to Soldier Field it was jammed. That sea of at least 150,000 people was a spectacle to be remembered in itself. And without the aid of field glasses you couldn't see any folks outside the "ringside" sections. It had been raining a fine mist earlier in the evening, but as the preliminaries wore on this stopped. And "wore on" is just about the way those earlier bouts appeared to me. The crowd was not interested in them, although, for the most part, they gave splendid exhibitions, and had they not been eclipsed by the big bout that was soon to come it would have been one grand little show. But I simply couldn't warm up to them. Like the rest of you, I was athirst for the giants, the piece de resistance.

Carlin's Statistics

Phil had conscientiously gathered some statistics concerning the number of lip sticks, cigarette cartons and soft drink bottles used by the spectators. Before the Soldier Field engagement the National Broadcasting company, wishing to be prepared for any emergency, including angry skies, had arranged for our network of seventy-odd stations to link up at 10 o'clock, Eastern daylight saving time. The weather being clear enough, it was just a few minutes to 11 o'clock, Eastern daylight time, when Jack Dempsey pushed his way through the crowd and climbed into the ring.

As I announced, he looked good, but not quite up to what the sports writers' descriptions had led most of us to believe. But he stood out even beyond their predictions later. Jack wasn't exactly nervous, but he appeared to be on edge, like a thoroughbred horse eager for the barrier to be sprung in a race. The crowd gave him a rousing cheer and made plenty of noise for the next few moments.

Finally Gene climbed into the ring, but I couldn't tell much about him then. He was quiet and businesslike. Jack glanced over his way several times, but, as he did in Philadelphia, Gene did not deign to glance in Dempsey's direction, excepting when they shook hands and were being given instructions by the referee.

Then, before many of us quite realized it, they were at it. In the first round they appeared to be feeling out each other, and it didn't push me any to explain the action. They were stepping fast, but I could keep up with them; it was quite a contrast to the rush from the first bell when Dempsey met Jack Sharkey in New York two months before. In the next round they settled down to action, and the pace was faster and with less caution. How they did sock each other!

In the fourth round it looked all Gene's. The bell was just about all that saved Dempsey—and how he weathered the punishment! It was a swift round at a killing pace, and it was then my gasping just about got me. It was all I could do to tell Phil to take the "mike." Man, they were at it!

But Dempsey was not satisfied. In the fifth round he came back like a wildcat. He was breathing harder, Gene hardly at all, but of the three I was nearly gone. Some of you folks may not have appreciated those gasps, but it took just about all I had to keep my voice in shape to talk into the "mike," much less pitch it properly. The crowd was yelling and shouting, and excitement was at a peak, and I couldn't do more than stutter a few words into the "mike."

The Seventh Round

In the seventh round, when Gene was knocked off his feet, I almost forgot where the "mike" was. Dempsey had promised to come back, and here he was almost doing it. For several seconds it looked as if he had made good his boast, but for only a short time. Tunney's eyes were like plate glass and his mouth was open—a bad sign. But on the count of "four" his eyes cleared and his mouth snapped shut.

About the so-called long count, I cannot say, for in the excitement time did not matter to any of us—excepting Dempsey and Tunney. But after that fourth count I believe Gene could have gotten up whenever he wanted to. But that is only my opinion; don't settle any lingering bets on that. I was in a pretty position to see Gene while he was on the floor, and while his mouth was open it looked bad, but the moment it snapped shut to me it appeared he was clear headed again.

And when he was up he was away from Dempsey, just out of reach of his punches. Wherever before has another fighter in a big bout stopped still in the center of the ring and laughingly begged the champion to come in and fight? That's what Dempsey did when he was unable to catch Gene after the knockdown. What a fight and what fighters!

The next three rounds were agony for Dempsey. But great fighter that he is, he stood up and took it all; once in the eighth he went down, but only for a moment, and he was up to face another pitiless barrage of lefts and rights that shook him from head to foot.

Coming out for the tenth, Tunney looked mad and almost eager for a knockout, and he gave Dempsey another terrific lacing. The ex-champion struck back viciously, but, blinded by the blood from cuts over his eyes and weakened by the fast pacing of the earlier rounds, he could not hurt his man.

Better Man Won

In my opinion the better man won, but he did work, and mighty hard, to prove it. And what a feast it was for the spectators! And did you notice Tunney's voice when he addressed the Radio audience? Not a gasp, nor was he breathless.

When it was over I was as weak as a kitten. I hadn't gotten as much kick out of a fight since my first broadcast outside the studios, when I reported the Wilson-Greb bout for the middleweight championship, which was fought at the Polo Grounds in New York. That bout and the new experience had me panicky from "mike fright," but this Soldier Field scrap left me gasping from the sheer drama of the exhibition.

When the actual fighting was over my voice cleared up enough for me to give my tally of the rounds credited to Gene and Jack, but it was two days before I was myself again. And yet just let me know when they are going to meet again and you can bet I'll be there to do it all over again. You can't beat it—ever.

RADIO "twins" are becoming more popular each season. Where at first they came "knocking at the door" they now are being sought. Russ Wildley and Bill Shechan, the Ray O Vacs, in four jumps during the past six weeks were reported from KFWB, Los Angeles; WSM, Nashville; Chicago Radio show and at the last minute a telegram from George L. Sutherland states that they are to be at WSEA, Norfolk, November 7, 8 and 9. Photo shows Solemn Old Judge at WSM, giving Russ and Bill the Big Steamboat "Toot."

Excitement Causes 12 Fight Fans to Drop Dead During Tense Description

Radio Listeners Get Bigger "Kick" from Ringside Announcements than Many Spectators in Forty Dollar Seats—No Casualties Reported Among Those at Arena

BESIDES the record of an audience that literally circled the globe, listening in to the championship fight, another less pleasing record was established. Last reports indicate that twelve persons died either of heart failure while listening to the blow-by-blow announcement or incidental to the listening.

Among the first reported were the following:

Theodore J. Carren, 66, and Henry Koenig, 64, Detroit, Mich.; Spencer W. Crowell, for many years a public official, Algona, Iowa; Charles F. Brown, 64, Watertown, N. Y.; Joseph M. Deegan, 33, Bridgeport, Conn.; Richard W. O'Connell, Troy, N. Y.; Reuben J. Glick, county attorney, Shamokin, Pa.; William J. Reardon, 75, a merchant, Valley Falls, N. Y., and George A. Johnson, 71, former mayor, Benicia, Calif.

James J. Dempsey, 54, a factory worker in Detroit, fell dead while arguing the contest. Another man fell dead while arguing about the contest. The seventh round, when Tunney was floored, was the fatal one, according to some of the dispatches.

In Chicago a group of women got into an argument while listening to the broadcast at one of the homes. While the men admonished them to keep quiet, they went into another room and an argument led to blows. One of the women was killed during the squabble.

Newspapers throughout the country have commented on this tragic sequence of the great battle. The fact that not one person who actually saw the fight is known to have expired from the excitement or even to have fainted has led to the question of whether or not the trained announcer did not communicate a keener appreciation of the recurring dramatic values than was experienced by the casual spectator. Radio announcers seemed most visibly effected by emotion.

Daylight Saving Tricked Referee

Hired Hand Tells Texas Fans Jack Lost Fight by Mixup in Sun and Standard Time

"FORGIVE and try to forget," declared the Hired Hand of WBAP, in writing home about his experiences in Chicago and Lake Geneva, Wis., where he was a party guest of Sydney Smith and the Andy Gump family after the Tunney-Dempsey fight. Graham McNamee must have missed the real low-down concerning the fateful seventh round. According to the Hired Hand in the Forth Worth Star-Telegram it was like this:

"When it comes to fights my motto is forgive and try to forget.

"The general bulk of the customers seem to agree with the Chicago newspapers that Tunney was "resting" for about 15 seconds. But what of it? Tunney will take his title and a million and go East. Why fuss about being down for 15 seconds? Why, I know a bird who will be down for 15 months. The real low-down inside fact about the delay in this start of the count by the referee is nothing more than that he is just like the rest of us strangers—he could not tell what sort of time to use. He didn't know whether to tick off Central Standard, Daylight Savings, Railroad Time, Twilight Sleep or Canada Special, as they use them all in Chicago. Yes, they save every kind of time here except time to sleep. Watches are useless because after you look at your timepiece you have to consult a Lydia Pinkham almanac, then phone the weather bureau, which will call a statistician to calculate it for you.

"So that was what was wrong with the referee. He had to wait and ascertain what style of time was proper to use in the situation and by the time he had found out, Tunney had mounted his bicycle. All very simple when you use your noodle."

$55.

At this price the Crosley Bandbox is Radio's most astonishing success, *not* because the price is low, *but* because the set is magic!

The ability of the new Bandbox is amazing. Its simple operation is easily understood and its wonderful performance is at the command of any hand that can turn the dial.

Millions are making up their minds today to buy a radio.

Millions will replace obsolete sets with new, up-to-date receivers this fall.

Experienced radio owners will look first for 3 fundamental points and to every set they consider will address these questions:

1. Is it selective?
2. Is it sensitive?
3. Is it easy to operate?

Satisfied on these points they will look for:

1. Single dial control.
2. Illuminated dial.
3. Volume control.
4. Single cable leads.
5. Console installation adaptability.
6. Reasonable price.

Millions will look at the Crosley Bandbox. This amazing little set is now displayed by more than 16,000 dealers.

One dealer, alone, expects to sell a million dollars worth of Bandboxes this season.

Crosley dealers from Maine to California have this wonderful receiver hooked up for immediate demonstration and will explain its matchless performance in a manner somewhat like this:

The Crosley Bandbox is a 6-tube receiver.

The circuit of this set is of the excellence you would expect from a group of skilled engineers suddenly given the pick of the world's radio patents to work with.

Crosley has always given the radio world its biggest value for its dollar. Contemplate the perfection possible when the doors of the research and development laboratories of the Radio Corporation of America, The General Electric Co., The Westinghouse Co., The American Telephone & Telegraph Co., and the Hazeltine and Latour Corporations were thrown open.

Licensed under their patents!

Tremendous! Wonderful! Significant!

Simply it means that millions will possess the best radio performance possible at the low prices for which Crosley is already famous.

The Crosley Bandbox is totally and completely shielded. Every element is absolutely separated from every other element by solid shielding. Coils are covered with copper. This could have been done cheaper but efficiency would have been sacrificed. Condensers are housed in cadmium-plated steel. All wiring is separated and shielded from all other parts of the receiver. Solid, sturdy, substantial, the entire set is assembled on a heavy metal chassis.

Musicone Tilt-Table $27.50

The tuned radio frequency amplification stages have been absolutely balanced through use of the Neutrodyne principle. The set is a genuine Neutrodyne!

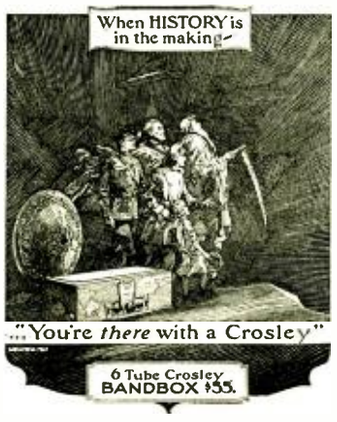
To the initiated this means much. To the layman it manifests itself only as a radio receiver that does not squeal or howl when you are trying to get a station.

The foregoing answers for the Crosley Bandbox the three fundamental questions set forth in the fourth paragraph, which the experienced radio owner is asking of every set he sees this fall.

The shielding makes the Bandbox highly selective—the circuit, acutely sensitive and the design, extremely easy to operate.

The Bandbox is operated with a single station selector (one dial).

In most localities and in most owners' hands the single station selector will find all the programs anyone could possibly wish. But there are some owners who demand greater ability like the possessors of 90 horse power motor cars who may never step on it but like to be conscious it's there. For such have the Acuminators been designed. Far away stations of weak power but perhaps good music are captured by the use of these little auxiliary tuners. Their function is best likened to to a pair of field glasses. As the lens bring the distant scene to nearby aspect, so do the acuminators bring the remote station signals up to room filling volume. Ordinary one dial radios can never perform like this. Hair line tracking of the condensers together is difficult—but the Acuminators, little secondary adjustments *exclusive* to Crosley give the Bandbox a substantial command of the air and *all* that is in it.



The dial of the Bandbox is illuminated. A detail! A refinement added but not as an excuse to raise the price. For shadowy corners and dim eyesight it recommends itself.

Volume Control is necessary on good radio today. Nearby and high powered stations send terrific impulses into the receiver. Detuning has been a favorite method of softening this loud reception but with stations closer and closer together on the dial detuning particularly in large cities creates an overlapping of programs. The ear like the eye is only good for one thing at a time. Under the towers of the heaviest stations the volume control of the Bandbox cuts the loudest blast down to a veritable whisper. No distortion whatsoever!

A single cable leads all outside and power connections from the Bandbox. In this brown fabric covered cable lies each lead covered with colored rubber for protection, accuracy and easy assembly. Tidy housewives appreciate it.

The adaptability of the Bandbox to installation in all types of cabinets is a feature. The metal case of the Bandbox lifts off the chassis. This leaves the closely grouped dial, switch and volume control shafts to be stuck through holes in the panel of any sort of cabinet. The escutcheon is quickly screwed over them and the console installation is not only complete but has no earmarks of a makeshift.

Much has influenced the $55 price of the Bandbox.

First, an ideal and an idea.

Then, a working out of the idea.

And now, the constant possession of the ideal.

Back before radio became the entertainment force it is today Powel Crosley, Jr., held an ideal that the things which give people pleasure should be made to sell at low prices so that millions may enjoy them.

When radio was a bundle of hair pins turned with the knobs from typewriter carriages, he had the idea that if he could make radios in sufficient quantities, he could supply millions with a means of enjoying this new source of pleasure at moderate prices.

Every radio year has been a year of mass production experience to Crosley. This year saw an investment of over half a million dollars in equipment that a fine radio might be made at such speed and in such quantities that a price of nearly half a hundred dollars could be maintained.

Throughout the country millions examine the Bandbox today. They see it the achievement of an organization who began its development when radio as we know it today began. Its success has been tremendous if clamorous demands from dealers are any indications. Skeptics, the unbiased and the radio wise have pronounced it GREAT. Even at any price it would be a sensation, for its performance ranks with the most expensive and fanciest radio receivers on the market.

An AC model Bandbox takes its power from the electric light.

Former power supply with its constant annoyance and expense is entirely eliminated.

The new R. C. A. AC tubes provide clear, smooth and loud reception comparable in every way to the most efficient wet storage battery power.

Power Converter $60

Alternating current ripple is smoothed out in the compact little power converter which is sold with the AC Bandbox. This device needs no attention—is half the size of an ordinary storage "A" battery and matches the Bandbox in finish and color.

The AC Bandbox is $65
The Power Converter is $60

This gives you a complete, direct AC radio adaptable to any type of installation you may choose—bookcase, console, desk, cabinet, arm-chair or tuck it away on the corner of the table—for $125.00.

THE CROSLEY MUSICONES ARE AS OUTSTANDING IN THEIR FIELD AS THE BANDBOX IS IN ITS

Back in early 1925 radio's audibility above the single telephone ear unit depended upon a horn. Unnatural and harsh it laid a handicap on a fast developing industry. Only at great cost could its limitation be surmounted. Suddenly Crosley offered the radio world a cone speaker at $17.50. Instantly the demand exceeded the supply. Promptly loud speaker sales were gauged by the leadership of the Musicone.

Today that position is still maintained. The cause is plain. Mechanical refinement and improvements of the Musicone since its inception have been constant and considerable.

Price of the Musicone has shown a steady downward trend from $17.50 in 1925 down to $9.75 at the present time.

Only a national acceptance could make this possible and only a remarkable value could create such a national acceptance.

Today the Musicone is a perfect reproducer thru—

1. A new metallurgical discovery giving many times the vibrating capacity of the actuating unit as formerly.
2. Bakelite coil cores impervious to moisture.
3. Secretly coated wire that does not permit deterioration in damp climates.

Crosley owners find a perfect affinity between the Bandbox and the Musicone aside from their physical appearance.

The Musicone is sold in two sizes:

The Ultra Musicone (12-inch)..... $ 9.75

The Super Musicone, as illustrated (16-inch)..... $12.75

APPROVED CONSOLES

"I want the public to have as great a value in consoles this year as I have given them in the Bandbox," said Powel Crosley, Jr.

Prominent furniture manufacturers thru their long experience promised beautiful cabinets at moderate prices. Designs submitted were admired, praised, tested, approved! The Musicones were built in. Crosley dealers now sell them. Purchasers may know they are best suited for Crosley radio by looking for the "approved label" in each one. Crosley dealers get these cabinets only from The H. T. Roberts Co., located at 1340 S. Michigan Ave., Chicago, Sales representative for The Showers Brothers Co., Bloomington, Ind., and The Wolf Manufacturing Industries, Kokomo, Ind.

Write Dept. 49 for descriptive literature.

CROSLEY RADIO

THE CROSLEY RADIO CORP.
Powel Crosley, Jr., Pres.
Cincinnati, Ohio

Crosley is licensed only for Radio Amateur, Experimental and Broadcast Reception.

Montana, Wyoming, Colorado, New Mexico and West prices slightly higher.

Broadcasting of Interest to Home Makers

Aunt Sammy's Menu for Thanksgiving Day Dinner

As Thanksgiving Day is a national holiday, Aunt Sammy is plainly the person to plan the Thanksgiving dinner. Her menu and the main recipes for the meal are given below.

Thanksgiving Menu
Fruit Cup
Roast Turkey or Roast Chicken with Stuffing
Giblet Gravy
Mashed Potatoes or Candied Sweet Potatoes
Brussels Sprouts, Cauliflower, or Spinach
Cranberry Jelly
Lettuce Salad with Russian Dressing
Celery Nuts
Bread and Butter
Pumpkin or Squash Pie

Fruit Cup

Many combinations of fruit, fresh or canned, may be used for fruit cup. Use colors that blend, and combine acid fruit with sweet. Grapes, oranges, grapefruit, canned pineapples and white cherries are attractive. Mix the fruit and chill for about one-half hour before serving.

Roast Turkey

Draw and singe the turkey. Remove the oil sac and all pinfeathers. Cleanse thoroughly and wipe dry. Rub the surface over with butter and a little salt. Stuff with a dressing made as follows:

6 cups finely broken stale bread.
2 teaspoons salt.
⅔ teaspoon pepper.
¼ teaspoon thyme.
½ teaspoon ground sage.
1 teaspoon baking powder.
¼ pound butter or an equal amount of turkey fat.
½ onion, grated, or more if desired.
4 stalks celery, cut up small.
½ cup boiling water.

Scissors may be used to cut up the stale bread. Cook the celery and onion in the butter five minutes. Mix with the bread, baking powder, seasonings and hot water. Fill the cavity of the turkey. If a moist and fluffy rather than a dry dressing is preferred, use more water. If there is any surplus, it may be cooked in a separate dish, basted with the drippings from the pan and served with the dinner.

The turkey may be started in a hot oven (400° F.) if a double roasting pan is used. If the turkey is young and tender, it will be done in 1½ hours during the latter part of which the temperature may be slightly reduced. A large, heavy, or old bird will require considerably longer baking. Keep the bottom of the roasting pan well covered with water during roasting, so that the meat will not dry out.

Miss Ada Bessie Swan, WAAM, and her soup strainer microphone.

DO not be surprised if the voice of Miss Ada Bessie Swann, head of the home economics department of the Public Service company of Newark, N. J., should seem a trifle strained as she speaks through the WAAM broadcasting station. As usual, there's a reason.

Elmer F. Lewis, chief engineer of the station, likes pie; and it's an old story about the way to man's heart. Miss Swann's culinary accomplishments are easily qualified as expert. And when it comes to pies—say, let the good housewives who have taken lessons from her over the air tell you how good she is. And, of course, one must actually make a pie to demonstrate. When the last admonition and word of advice has been given for the making of the perfect pie, the demonstration pie still remains. It cannot be broadcast.

That's where Mr. Lewis and the strained voice come in. Mr. Lewis got the pie and Miss Swann—well, the mind of a Radio engineer takes a definite trend in the direction of his profession. He thinks in terms of currents, gooseberries—that is, watts, ohms, oscillators, condensers, microphones—what could he do to express his appreciation for Miss Swann's pie? He could make her a special microphone!

How to combine the arts, that was the question. He bought two soup strainers, good ones, high resistance and all that. Then he bought other kitchen hardware of copper, steel and tin, not overlooking a couple of potential pie tins. Out of the conglomeration he constructed a microphone, technically perfect and efficient to the Nth degree. This he presented to Miss Swann for her personal and exclusive use. It is mounted on a telephone pedestal and stands on her desk, the brightly lacquered soup strainers emblematic of shining cleanliness and the pie tins serving as a constant memorial of favors past, and, possibly, hints for favors to come.

Miss Swann's voice, rippling through the soup strainers, may seem slightly strained but there are pie, and cake and cookies in it to give flavor and sweetness more musical than a serenade.

Giblet Gravy

Save the giblets—heart, liver and gizzard—for the gravy. Bake in the pan beside the turkey or put through the meat chopper and simmer in a quart of water while the turkey is baking. Measure the liquid. To thicken it, use 2 tablespoons of flour blended with an equal quantity of turkey fat to each cup of liquid. Stir gradually into the hot liquid. Add salt and pepper according to taste.

Candied Sweet Potatoes

Select 6 medium-sized sweet potatoes, uniform in size if possible. Partially cook the unpeeled sweet potatoes in boiling water. Cool and skin. Cut the potatoes in halves lengthwise, or in three pieces if the potatoes are large enough. Put in a greased baking dish large enough for just one layer, not packing too closely. Make a sirup by boiling one cup of corn sirup, ¼ teaspoon salt, 2 tablespoons or more of butter, and ½ cup brown sugar. The sirup should be fairly thick. Pour the sirup over the potatoes and place them in the oven to brown. Turn them very carefully. The potatoes may be served in the baking dish.

Cranberry Jelly

Perfect cranberry jelly depends on several fine points. First, use only sound firm berries. Discard any berries that are soft or withered. Second, use the right amount of hot water—2 cups to each quart of berries—no more. Third, boil the cranberries rapidly until they burst, but no longer, or you will destroy the pectin that makes the jelly "jell." Fourth, press the fruit through a fine sieve, rather than through a colander, to remove seeds as well as skins. Allow 2 cups of sugar to each quart of cranberries. Add it to the strained pulp. Cook about a minute, or until the jelly sheets from the spoon. Mold in small bowls holding about the right quantity for one meal.

Russian Salad Dressing

One cup of mayonnaise dressing and ½ cup of chili sauce or catsup. If you wish, add a little chopped celery or green pepper, or pickle, if you use catsup.

Squash Pie

This recipe can be used for either squash or pumpkin pie. The ingredients are:

1½ cups squash, thoroughly cooked (canned squash may be used).
1 cup milk.
½ cup sugar.
1 teaspoon cinnamon.
½ teaspoon salt.
½ teaspoon allspice.
¼ teaspoon mace.
2 eggs.
1 tablespoon butter.

Put all the ingredients except the eggs and the butter in the double boiler. Bring to the scalding point. Beat the eggs well; add them to the hot mixture. Stir until it starts to thicken. Add the butter. Bake the empty crust to a very light brown. Pour the hot filling into the prebaked crust without removing it from the oven. Bake the whole pie in a moderately hot oven until the filling sets.

WOMAN'S PROGRAM INDEX

(Daily Unless Indicated)

Household Economics, Women's Hour, Etc.

Eastern	Central	Mountain	Pacific
9:30 a. m.	8:30	7:30	6:30

WWJ (352.7m-850kc), Tonight's dinner.

10	9	8	7

WBAR (270.1m-1110kc), Modern Housekeeping hour, less work in the American home.
WCSH (428.3m-700kc), ex Sat.
WHT (416.4m-720kc), Home hour.
WIP (508.2m-590kc), Tues., Thurs., Sat., menu.
WLW (428.3m-700kc), Woman's hour.

10:15	9:15	8:15	7:15

WLW (428.3m-700kc), Cooking chats.

10:30	9:30	8:30	7:30

WFBL (405.2m-740kc), Homekeeper's hour.
WNAC (288.3m-1040kc), Woman's club.
WRC (468.5m-640kc), Mon.
WTAG (516.9m-580kc), Wed., Fri.

10:45	9:45	8:45	7:45

WBZ (333.1m-900kc), Radio Chef.
WLS (344.6m-870kc)
WTIC (535.4m-560kc), Wed., Fri.

11	10	9	8

WAAM (348.6m-860kc), Cooking, Tues., Fri.
WEAF (491.5m-610kc), Tues., Thurs., home management.
WOI (265.3m-1130kc), Tues., Thurs., homemakers' hour.
WSB (475.9m-630kc)

11:15	10:15	9:15	8:15

KDKA (315.6m-950kc), Housekeeper's period, Tues., Thurs.

11:45	10:45	9:45	8:45

WREN (254.1m-1180kc)

12	11	10	9

WEBH (365.6m-820kc), Prudence Penny.
WTMJ (293.9m-1020kc), Household hints.

12:30 p. m.	11:30	10:30	9:30

KYA (309.1m-970kc), Shopping service, Mon., Fri.
WEBH (365.6m-820kc), Prudence Penny.
WMAK (545.1m-550kc), Tues., Sat.
WMAQ (447.5m-670kc), Cabinet hour.

12:45	11:45	10:45	9:45

WSM (340.7m-880kc)

1	12	11	10

KEX (239.9m-1250kc)
KGW (491.5m-610kc), Household helps.
KFO (422.8m-710kc)

1:30	12:30	11:30	10:30

KOMO (305.9m-980kc), Totem cooking school.
WGY (379.5m-790kc), Economics talk.

2	1	12	11

KFRC (454m-660kc), Mon., Wed., Fri.
KOIN (319m-940kc), Housewives' hour.
WGHP (319m-940kc), Home hour.

2:05	1:05	12:05	11:05

WJZ (454.2m-660kc), Daily menus.

2:15	1:15	12:15	11:15

KOIL (277.6m-1080kc), Shoppers' aid.

2:30	1:30	12:30	11:30

WGY (379.5m-790kc), Tues.

3:30	2:30	1:30	12:30

WLS (344.7m-870kc), Homemakers' hour.

Eastern	Central	Mountain	Pacific
4	3	2	1

WOC (352.7m-850kc), Aunt Jane.

4:30	3:30	2:30	1:30

KFOA (447.5m-670kc), Daily ex Sun., Mon.

6:30	5:30	4:30	3:30

KOA (325.9m-920kc), Question box, culinary hints, Tues., Fri.

8:45	7:45	6:45	5:45

WHA (319m-940kc), Home economics.

"Aunt Sammy"

Eastern	Central	Mountain	Pacific
10 a. m.	9	8	7

WJR (440.7m-680kc), Mon., Wed., Fri.

10:30	9:30	8:30	7:30

WCSH (428.3m-700kc), WHO (535.4m-560kc), WIBX (238m-1260kc)

11	10	9	8

WEAO (282.8m-1060kc)
WEW (352.7m-850kc)
WKBH 220.4m-1360kc)
WOS (422.3m-710kc)
WSB (475.9m-630kc)

11:30	10:30	9:30	8:30

KUOA (296.9m-1010kc),

11:30	10:30	9:30	8:30

WOS (422.3m-710kc), Mon., Tues., Wed., Thurs., Fri.

12	11	10	9

KFSD (440.9m-680kc)
KOV (352.7m-850kc), Mon., Wed., Fri.
WRVA (254.1m-1180kc), Wed.

12:15 p. m.	11:15	10:15	9:15

WAMD (243.8m-1230kc)

1:45	12:45	11:45	10:45

WDAF (370.2m-810kc)
WDAG (263m-1140kc)

2	1	12	11

KOIL (277.6m-1080kc)
KUOM (461.3m-650kc)
WASH (256.3m-1170kc)

3:30	2:30	1:30	12:30

WHK (265.3m-1130kc).

4	3	2	1

WOC (352.7m-850kc)

4:10	3:10	2:10	1:10

WEBG (280.2m-1070kc),

4:15	3:15	2:15	1:15

WDAY (361.2m-830kc)

4:30	3:30	2:30	1:30

KOIL (277.6m-1080kc)
WOS (422.3m-710kc), Thurs.

6:30	5:30	4:30	3:30

KMA (394.5m-760kc)

Fashions and Sewing

Eastern	Central	Mountain	Pacific
11:30 a. m.	10:30	9:30	8:30

WCAE (516.9m-580kc), Styles, Tues., Fri.

1:30 p. m.	12:30	11:30	10:30

KFWI (267.7m-1120kc), Fashion hints, Mon., Thurs.

Eastern	Central	Mountain	Pacific
1:35	12:35	11:35	10:35

KPO (422.3m-710kc), Fashion critic, Fri.
WCBS (349m-860kc), Dressmaking lessons, Fri.

5	4	3	2

WOS (422.3m-710kc), Wed.

6:45	5:45	4:45	3:45

KOA (325.9m-920kc), Fashion review, Tues.

Health and Beauty

Eastern	Central	Mountain	Pacific
10 a. m.	9	8	7

WCBS (349m-860kc), Lessons in loveliness.

10:15	9:15	8:15	7:15

WCAE (516.9m-580kc), Health talk.

10:30	9:30	8:30	7:30

KDKA (315.6m-950kc), Tues., Beauty hints.

10:45	9:45	8:45	7:45

WLW (428m-700kc), Beauty talks, Tues., Fri.

11	10	9	8

WEEI (447.5m-670kc), Mon., Thurs.

1 p. m.	12	11	10

KMTR (526m-570kc), Beauty talks, Tues.

1:30	12:30	11:30	10:30

KFON (241.8m-1240kc), Physiology of beauty.
KFWI (267.7m-1120kc), Beauty hints, Tues., Fri.
KYA (288.3m-1040kc), Diet and Health, Tues.
WTAM (399.8m-750kc), Beauty talk, Tues.

2:30	1:30	12:30	11:30

KJR (348.6m-860kc), Health talk.

3:40	2:40	1:40	12:40

KGA (260.7m-1150kc), Dietetic talk, Wed.

10:40	9:40	8:40	7:40

KHJ (416.4m-720kc), Dr. Philip M. Lovell.

10:45	9:45	8:45	7:45

KNX (336.9m-890kc), Dr. Robert T. Williams, Tues.

Interior Decoration

Eastern	Central	Mountain	Pacific
9:30	8:30	7:30	6:30

WWJ (352.7m-850kc), Sat.

10:30	9:30	8:30	7:30

WLW (428m-700kc), Furniture talks.

2	1	12	11

KYW (526m-570kc), Tues.

Gardening

Eastern	Central	Mountain	Pacific
11:55 a. m.	10:55	9:55	8:55

WCAE (516.9m-580kc), Garden bulletin.

1:20 p. m.	12:20	11:20	10:20

KFI (468.5m-640kc), "How and What to Plant."

1:30	12:30	11:30	10:30

WGBF (236m-1270kc)

4:15	3:15	2:15	1:15

WIP (508.2m-590kc), Home Gardening, Mon.

5	4	3	2

KHJ (405.2m-740kc), Garden talk.

News

Eastern	Central	Mountain	Pacific
10 a. m.	9	8	7

WGN (305.9m-980kc)

10:30	9:30	8:30	7:30

WEBH (365.6m-820kc)

10:35	9:35	8:35	7:35

WCCO (405.2m-740kc)

11:15	10:15	9:15	8:15

WBZ (333.1m-900kc),

11:30	10:30	9:30	8:30

WHAS (461.3m-650kc)

11:55	10:55	9:55	8:55

WTIC (535.4m-560kc)

12	11	10	9

WTAG (516.9m-580kc)

12:45	11:45	10:45	9:45

KOIL (277.6m-1080kc)

1	12	11	10

KGW (491.5m-610kc)

2	1	12	11

WTAG (516.9m-580kc)

2:30	1:30	12:30	11:30

KFON (241.8m-1240kc)
WGBF (236.1m-1270kc)

3:30	2:30	1:30	12:30

WFAA (499.7m-600kc)

3:40	1:40	12:40	11:40

WCAE (516.9m-580kc)

3	2	1	12

KGA (260.7m-1150kc)

5	4	3	2

WGY (379.5m-790kc)
WHAS (461.3m-650kc)

6:50	5:50	4:50	3:50

KOIL (277.6m-1080kc)

7	6	5	4

KFON (241.8m-1240kc)
KOA (325.9m-920kc)
WTAG (516.9m-580kc)

7:15	6:15	5:15	4:15

WCSH (428.3m-700kc)

7:30	6:30	5:30	4:30

KFOA (447.5m-670kc)

7:40	6:40	5:40	4:40

WDBO (288.3m-1040kc)

8	7	6	5

KOA (325.9m-920kc)

9	8	7	6

KOIN (319m-940kc)
KOMO (305.9m-980kc)
WTAG (516.9m-580kc)

9:20	8:30	7:20	6:20

KOA (325.9m-920kc)
KJR (348.6m-860kc)

10:50	9:50	8:50	7:50

KFWB (361.2m-830kc)

11	10	9	8

WEBH (365.6m-820kc)
WTIC (535.4m-560kc)

The great improvements in radio power *have been made by* Balkite

Licensed under Andrews-Hammond patent

Balkite "A"

Contains no battery. The same as Balkite "AB," but for the "A" circuit only. Enables owners of Balkite "B" to make a complete light socket installation at very low cost. Price $35.00.

Balkite "B"

One of the longest lived devices in radio. The accepted tried and proved light socket "B" power supply. The first Balkite "B," after 5 years, is still rendering satisfactory service. Over 300,000 in use. Three models: "B"-W, 67-90 volts, $22.50; "B"-135,* 135 volts, $35.00; "B"-180, 180 volts, $42.50. Balkite now costs no more than the ordinary "B" eliminator.

Balkite Chargers

Standard for "A" batteries. Noiseless. Can be used during reception. Prices drastically reduced. Model "J,"* rates 2.5 and .5 amperes, for both rapid and trickle charging, $17.50. Model "N"* Trickle Charger, rate .5 and .8 amperes, $9.50. Model "K" Trickle Charger, $7.50.

**Special models for 25-40 cycles at slightly higher prices. Prices are higher West of the Rockies and in Canada.*

FIRST noiseless battery charging. Then successful light socket "B" power. Then trickle charging. And today, most important of all, Balkite "AB," a complete unit containing no battery in any form, supplying both "A" and "B" power directly from the light socket, and operating only while the set is in use. The great improvements in radio power have been made by Balkite.

The famous Balkite electrolytic principle

This pioneering has been important. Yet alone it would never have made Balkite one of the best known names in radio. Balkite is today the established leader because of Balkite performance in the hands of its owners.

Because with 2,000,000 units in the field Balkite has a record of long life and freedom from trouble seldom equalled in any industry.

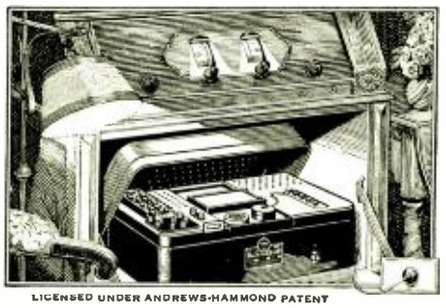
Because the first Balkite "B," purchased 5 years ago, is still in use. Because to your radio dealer Balkite is a synonym for quality.

Because the electrolytic rectification developed and used by Balkite is so reliable that today it is standard on the signal systems of most American as well as European and Oriental railroads. It is this principle that does away with the necessity of using tubes for rectifying current—that makes all Balkite Radio Power Units, including the new Balkite "A" and "AB," permanent equipment with nothing to wear out or replace.

Balkite has pioneered—but not at the expense of the public.

Radio power with batteries or without

Today, whatever type of radio set you own, whatever type of power equipment you want (with batteries or without) Balkite has it. And production is so enormous that prices are astonishingly low. *Your dealer will recommend the Balkite equipment you need for your set.*



LICENSED UNDER ANDREWS-HAMMOND PATENT

Balkite "AB" *Contains no battery.*

A complete unit, replacing both "A" and "B" batteries and supplying radio current directly from the light socket. Contains no battery in any form. Operates only while the set is in use. Two models: "AB" 6-135,* 135 volts "B" current, $64.50; "AB" 6-180, 180 volts, $74.50. Special model for Radiola 28, $63.50.

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FANSTEEL

Balkite *Radio Power Units*

How to Build Electric-6 for Perfect Tone

Single Dial—Series Filaments—New Type Speaker

By William P. Lear

IN this receiver we have combined five of Radio's most modern improvements to give a receiver that is extremely easy to tune, free of all batteries and their grief, and capable of giving a quality of reproduction obtainable only from the very highest priced manufactured sets. In the Electric-6 one finds these features: (1) single dial tuning through a drum dial, (2) filaments connected in series and lighted from a power supply tube, (3) a combination of transformer and impedance coupled audio frequency amplification combining the best features of both, (4) a type 210 power tube in the last stage to handle the great energy in low musical notes and (5) the electro-dynamic cone speaker which gives equal emphasis to all notes, favors none and will handle the maximum output of the 210 tube.

Due to the congested state of the air during the last two years, most of the development work in Radio has been along the lines of selectivity. True, there have been sets brought out with series filaments—there have been power supply and amplifier combinations using the 210 tube—and there have been impedance coupled audio amplifiers—but each of these very desirable advances has been given but sporadic attention and such selectivity features as stage shielding, total shielding and balancing got most of the research work.

It is time we got back to making Radio sets what they should be—easily operated sources of entertainment, free of "grief" and able to reproduce music with all the full roundness and clearness of the latest phonographs. This receiver's tone quality is really remarkable and there is a touch of power and "mightiness" in its handling of a full orchestra that produces a feeling of awe until one gets used to it.

To get realism in reproduction, the amplifying apparatus and speaker should be able to handle notes in the musical scale which have a frequency of vibration as low as 50 per second. Now the energy contained in such a note, when reproduced in correct relationship to a very high note of about 5,000 frequency, is over 100,000,000 times the energy to be found in the high note. Your amplifiers and tubes, up until very recently, have been unable to handle any of the frequencies and energies of low notes. These notes were either lost or tended to blur the reproduction when anything like pleasing volume was wanted. Compared to the reproduction of 1922 and 1923, it has seemed very wonderful but you have not been getting anything like the entertainment of a Panatrope or Electrola.

Handling Capacity

There is a distinct difference between handling capacity and amplifying ability. With 135 volts on the plate of a 201-A tube in the last stage of a receiver, it is possible to get an undistorted power output of 50 to 60 milliwatts. Now consider a 210 tube with 425 volts on its plate, and the power output is around 1,550 milliwatts (1.55 full watts) which is ninety times better than the 201-A tube. The amplifying ability of the two tubes is the same and on very weak signals the volume would be about equal. On a stronger program, where the low notes would require energy handling capacity of 400 to 700 milliwatts, the volume from the 201-A would be much less as the energy-carrying low notes just wouldn't be there.

Genuine enjoyment of Radio lies in listening to stations that will give sufficient volume to achieve realism, not in performing long distance "stunts" during which one sits with the ear against the loud speaker and picks out snatches of music between static crashes. Putting in audio amplification systems that will pass the 50 to 5,000 cycle band of musical notes is not, by itself, sufficient; there must be a tube such as the 210 and a speaker that will not chatter and distort with the energy of low notes. What we have given you in this outfit is that enjoyable realism that you will not grow tired of and with which you can truly entertain guests. This is not a set for the "stunter."

Getting now to the elimination of batteries. You are accustomed to using 201-A type tubes with their filaments connected in parallel across a storage battery, or an "A" supply unit giving six volts. Most set builders design their outfits around 201-A tubes, ignoring the 199 type, presumably under the impression that because it is larger in size the 201-A is a better tube. This point is open to much discussion but it is significant that the originators of both types, the R.C.A., equip their own sets with 199's. Presumably, for the moment, that the tubes are practically equal in performance, let us look into the current requirements of the filaments of both tubes. The 201-A requires ¼-ampere to heat it properly, which is 250 milliamperes. The 199 needs but .06 of one ampere or 60 milliamperes.

Now the 201-A tube filaments can be connected in series with a total current draw of but 250 milliamps and operated supply tube but this does not seem to be necessary or desirable here. This set seems to work just as well with 199 tubes connected in series and furnished with power from an 85 milliamp power supply tube. Five 199 tubes with their filaments in series require 60 milliamperes and 15 volts. You see when you want them in series you multiply the voltage by the number of tubes, rather than the current, as you do when tubes are in parallel.

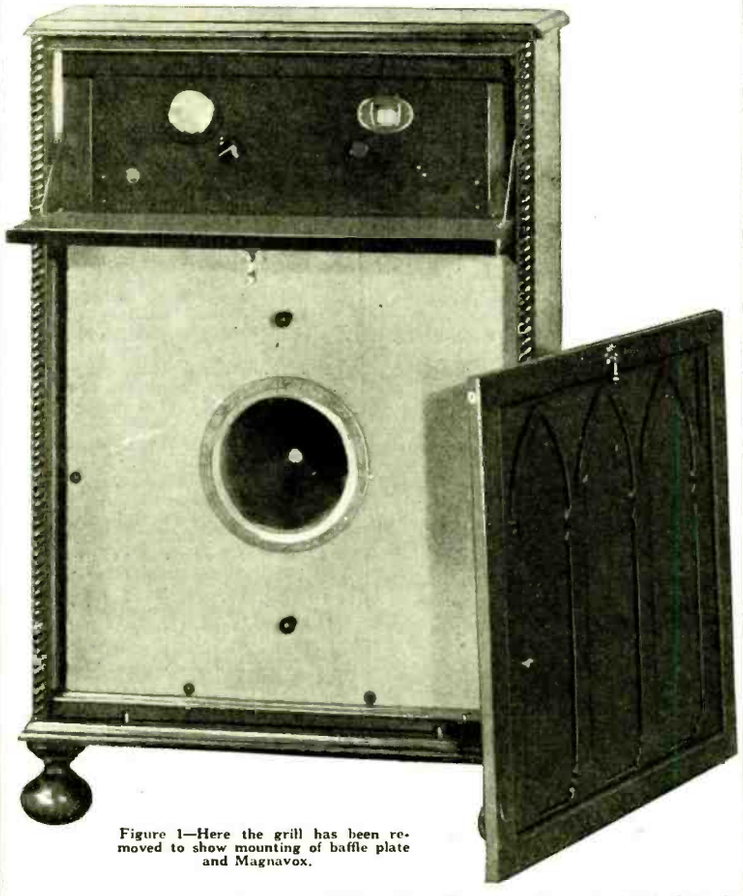


Figure 1—Here the grill has been removed to show mounting of baffle plate and Magnavox.

Rectifier Tube Does All

In the Electric-6, we light the series-connected filaments, get "B" supply and secure all necessary grid biasing (C power) from the output of a Q.R.S. 85 mil. rectifier tube. There is no recharging of batteries, no testing, no filling with water, no uncertainty of condition, no danger to fine rugs and furniture and no odor. Construction of the receiver is simplified and far more reliable operation is secured. There is nothing new about the circuit of the receiver because, as mentioned above, this is not a stunt set. It is a standard six tube hook-up with the exception of the filament circuits.

Because of the use of the 210 stage, the power supply, the Magnavox electro-dynamic speaker, and its requirements as to a baffle board, we have chosen a popular, easily secured cabinet, Excello R-28, and designed the set for that particular cabinet. The experienced set builder might be able to alter the layout to some other form but we feel that the odds are much against success. On the upper deck are the two Radio frequency stages and the detector while the lower deck, usually reserved for power supply units, contains the three stages of audio frequency amplification and the power supply. The speaker is placed behind the grill on a heavy baffle plate.

Why Parts Were Chosen

Since it seems to be the regular policy of Radio Digest writers to explain why the different parts are put into a set, it may be wise to go over this right here. This seems a rather wise policy as in this way, readers can learn to pick apparatus for designs of their own and will understand the receiver a lot better after it is completed.

You are going to like the Remler Drum Dial used. There is a clean, business-like solidity to its construction that strikes one favorably in looking at it, and this is reflected in its performance which is smooth, even and makes for close tuning. Its 15 inches of scale provides 200 divisions that are well spaced and the numbers are easily read. Its companion piece, the Remler triple condenser, is compact, solid and possessed of a lot of features you do not find anywhere else. For example, its geared construction allows the use of the 360 degree drum. Both sets of plates move, each set moving only half the necessary distance to clear, and compactness results. Each unit has a small adjustable fixed condenser to enable one to get all three "running exactly alike." Important in this case, is the fact that each set of plates is insulated from all of the others enabling us to use the circuit shown.

The Bodine Twin-Eight Radio frequency transformer is a remarkable coil that is a distinct advance in efficiency. It combines a very limited magnetic field with low losses and high amplification. Since the field of the Twin-Eight is practically self-contained, due to its unique construction, there is no interaction between coils and amplification per stage can be built up far higher than when ordinary coils are used. Volume is greater, the set is more sensitive to distant signals, and there is no distortion due to regeneration not under exact control. In Electric-6 the Twin-Eights are widely spaced and regeneration is under exact control at all times.

Benjamin Sockets Float Tube

Sets come and go but the "build your own" designers nearly always specify Benjamin sockets and they are certainly THE socket. The four springs "float" the receptacle and absorb shocks and jars. There are no joints between soldering lug and tube contact. A better socket it would be hard to imagine. Then too, this remarkable construction is available in a type for sub-base mounting and a type for top-of-baseboard mounting. The Benjamin brackets are so designed that a sub-base is held sufficiently high to permit of small parts and wiring underneath, yet not too high that any radio units mounted on the sub-base go beyond the top of a seven inch panel. There was no hesitancy when it came to choosing sockets and brackets.

The set designer who is keeping pace with every trend of Radio finds the Carter Radio Company always ready with just the resistance and condenser units needed to utilize each new discovery in circuits and power supplies. Probably no other maker of these units has a line so complete with items that are needed for this year's sets. Therefore we have specified Carter all the way through on these items, certain that they are good and knowing that you can easily get them.

On the lower deck we find the All-Ameri-can audio units, Rauland-Lyric and Rauland-Trio. The performance of the Lyric has long since put it high in the estimation of engineers and set designers. The advantages of impedance coupling are well-known; however, three stages of impedance coupled amplification do not have much "kick" so we have combined one Lyric with two Trio impedance units to get a fidelity that is unsurpassed. These units are well made, as we've seen the insides, and are beautifully finished. Terminals are so placed by smart design as to facilitate wiring.

(Continued on next page)

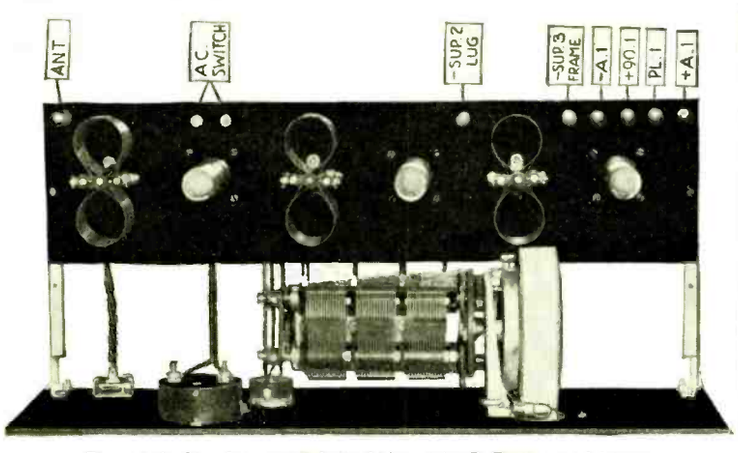


Figure 2—Looking down on sub-base which contains R. F. stages and detector.

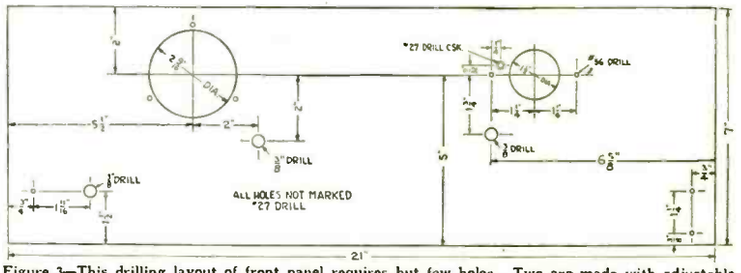


Figure 3—This drilling layout of front panel requires but few holes. Two are made with adjustable panel cutter.

BUILDING ELECTRIC-6

(Continued from page 23)

The Thordarson twins for 210 power supply are Transformer T-2098 and Twin Choke T-2099. We don't have to give you any of the reasons why they are chosen. Thordarson's reputation in this line is so unquestioned that one unconsciously puts them in without thought that there might be others. Thordarson have built the transformer secondary to supply 550 volts each side of center to allow of voltage drop through the filter and that's what counts here. The Twin Chokes are of heavy wire to carry 85 mils at this high voltage and have ample cores with the result that practically perfect filtering is secured and a most pleasant freedom from hum.

There is but one preliminary adjustment to be made before operation and once set, it is left alone. This setting, however, is important and must be made by meter, so what more fitting than a Jewell Pattern 53. Jewell have been making instruments for many years, long before Radio came into its broadcasting use, and the Jewell reputation for reliability and sturdiness is unquestioned. Then too, they have kept abreast of Radio's fast development and for every specific need in Radio there is a Jewell meter, and a good one. For the panels, we have chosen Formica because of its uniformity of quality and consistent beauty of finish. One can be assured that in specifying it, every reader will get just as attractive a panel as did the original set designer.

Assembly of Upper Deck

An excellent view of the front of the receiver, not only the entire cabinet, but the control panel as well, is given by Figure 1. The only parts to be mounted on the front of this panel are the Remler Drum Dial, the Pattern 53 Jewell Meter and the Carter 110 volt "On-Off" Switch. That certainly is simplicity. The layout for drilling the holes is shown in Figure 3. Laying out and drilling this is not the task it used to be and this panel has the very minimum possible number of holes.

A top view of the sub-base which mounts on Benjamin brackets behind the front panel is shown by Figure 2 while its drilling diagram is presented in Figure 4. Here too, we have but very few holes. This work can be much simplified by measuring off the panel size on a piece of paper, getting the socket centers located and pasting the socket templates (found in socket boxes) right on your large template. The single hole at the rear left corner is for the antenna binding post, the two to the right are switch connections, while the others in the rear right corner are for connections to the power and audio amplifying panels below. Figure 5 is a bottom view of the upper deck sub-panel to give you an idea of the placing of the Carter bypass condensers, the Samson choke and the wiring.

In Figure 6 you have a top view of the audio panel on which we place the three All-American units, the Carter No. 101 voltage divider kit, two socket for 199's and the 210 power tube. Since these parts are screwed down to a wooden baseboard and all wiring is on top, no bottom view is required. This audio baseboard is 9½ by 11½ inches, no bigger, and you will find that by following Figure 6 carefully there will be no difficulty in placing the parts.

The power baseboard is shown in Figure 7 and it is so arranged that its binding posts come opposite those on the audio board, where there is to be a jumper across. This power board includes the Thordarson Transformer T-2098, the buffer condensers with Carter number 1110, the socket for the Q.R.S. 85 mil. tube, the grid biasing for the power tube and Thordarson Choke Unit T-2099. Placing the parts here is easy also, the baseboard being 9½ by 12 inches.

The composite wiring diagram is shown in Figure 8 with the three groups of equipment so placed that they are easily understood. In connecting from upper deck down to the lower units, connect PL-1 down to PL-2, then connect negative A-1 above down to negative A-2 on audio board. Plus A-1 of the upper deck goes to Plus A-2 on the audio section, while Plus 90-1 of the top section is led to Plus 90-2 on audio board.

Connecting Lower Panels

Connecting across the two wooden baseboards, 210 Fil connects straight over to its corresponding 210 Fil and the second 210 Fil on power board goes directly across to its corresponding 210 Fil. Plus Supply-1 connects over to Plus Supply-2. Now here is a point to be especially careful on. We are lighting the Dial Light by inserting it in the Minus B lead so connect as follows. Minus Supply-1 on the power board is brought up to Minus Supply-2 on upper deck, while Minus Supply-3 of upper deck comes down to Minus Supply-4 of audio panel.

The baffle plate on which we mount the Magnavox Power Cone is made of ½" Insulate, Celotex, 5-ply veneer or double Beaver Board. It is cut 23⅞ inches wide and 23⅞ inches high. In both upper corners we cut out a piece one inch square to permit of placing in the console. In the exact center, which can be found by drawing diagonal lines across the board, cut a hole 7¾ inches in diameter.

The cleats which must be placed on the top, sides and bottom of the lower compartment for securing the baffle plate, are ⅞ inch thick and 1⅝ inch wide. That which goes across the top, and that placed across the bottom are full width; those on the sides are made 20 inches long. Considering now the lower compartment of the console, you will find that on its "ceiling," in front, there is strip which goes back only two or three inches. The cleat for the top support of out baffle plate is placed ½ inch back from the edge of this which permits the upper edge of baffle plate to fit in between the two.

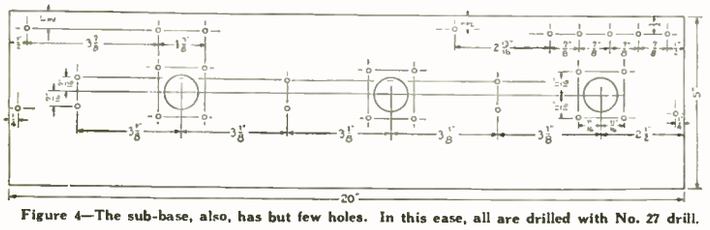


Figure 4—The sub-base, also, has but few holes. In this case, all are drilled with No. 27 drill.

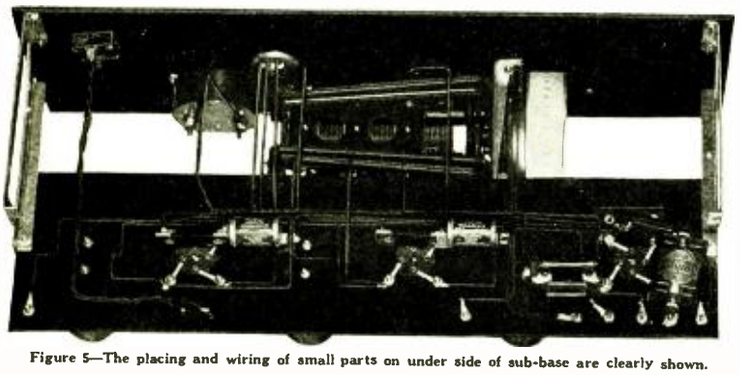


Figure 5—The placing and wiring of small parts on under side of sub-base are clearly shown.

List of Parts Used in Electric Six

Bodine Electric Co.,
2254 W. Ohio St., Chicago:
3 Type T35-199 Tuned R. F. Coils @ $2.00 ..... $6.00
Gray & Danielson Mfg. Co.,
260 First St., San Francisco; 160 N. LaSalle St., Chicago:
1 Type 633 3-in-Line Remler Variable Condenser Unit $15.00
1 Type 110 Remler Drum Dial 4.50
Benjamin Electric Co.,
120 So. Sangamon St., Chicago.
4 Sockets, type 9040 @ $0.75 ..... $3.00
3 Sockets, type 9044 @ $0.50 ..... 1.50
1 Pair Brackets, type 8629 ..... 0.70
Thordarson Elec. Mfg. Co., 500 W. Huron St., Chicago.
1 Transformer, type T2098 ..... $20.00
1 Choke Unit, type T2099 ..... 14.00
Samson Electric Company, Canton, Mass.:
1 Samson No. 85 Choke $2.00
Jewell Electrical Instrument Co.,
1640 Walnut St., Chicago:
1 Pattern 53 Milliameter, Range 0 to 100 mils $7.50
The Q. R. S. Company,
306 S. Wabash Ave., Chicago:
1 Rectifier Tube; capacity, 85 milliamperes $4.50
Formica Insulating Co.,
Cincinnati, Ohio:
1 Walnut Panel, 7x21x3/16 ..... $3.44
1 Black Panel 5x20x3/16 (cut down from 6x20) 2.81
Carter Radio Co.,
300 S. Racine, Chicago:
1 Code No. 110 Imp. Power Switch ..... $ 0.75
1 Code No. 100 kit (4 items) 4.75
1 P300-60 Resistor ..... .40
1 P-500-60 Resistor ..... .50
1 P400-60 Resistor ..... .45
1 P-600-60 Resistor ..... .60
1 MW-5000 Potentiometer 1.50
1 A-1000 Condenser Block 30.00
1 Code No. 1110 Buffer Condenser Pair 3.75
4 Code No. 105 Condensers @ .90 ..... 3.60
1 Code No. 110 Condenser 1.25
1 Fixed Condenser .00025 with clips ..... .50
1 Fixed Condenser .002 ..... .50
All-American Radio Corp.,
4201 Belmont Ave., Chicago:
1 R-500 Rauland-Lyric Audio Transformer $9.00
1 R-300 Rauland-Trio Impedance Unit 6.00
1 R-310 Rauland-Trio Impedance Unit 6.00
The Magnavox Company, Oakland, California:
1 Type R-5 Magnovox Electro-Dynamic Cone $55.00
Excello Products Corp.,
4820 W. 16th St., Chicago:
1 Style R-28 Walnut Console, 41x27x16 in. (Without tone chamber) $60.00
The Carborundum Co.,
Niagara Falls, N. Y.:
1 No. 77 Grid-Leak Value 3 Megohms $0.50
Miscellaneous Items (Approx.) 5.00
This includes wooden baseboards, binding post strips, baffle plate, bus bar, 27 binding posts, etc.

(The Radio Digest Shopping Service will purchase all or any of the above specified parts, at the prices listed, for builders of the Electric-6 who may be located in isolated communities or unable to obtain the parts from local dealers. Address: Shopping Service, Radio Digest, 510 N. Dearborn St., Chicago, and enclose express or postal money order covering total cost of parts ordered.)

The lower cleat is mounted as follows. There are two bottoms to the console, and it is so arranged that the grill front sets against the front edge of the upper or inner bottom. The lower cleat is placed 25/16 inches back from the front edge of this inner bottom. The side cleats can now easily be lined up so their front edges are even with the front edges of top and bottom cleats. All cleats are screwed into place with two screws. The baffle plate is then screwed down to them with one screw on each side edge and two in bottom edge. If you are going to move the set around much, be sure and screw down the two wooden baseboards to the bottom of the lower compartment.

The proper adjustment of current supply is made on the top strip of the Carter 101 unit on the audio baseboard. This is moved back and forth until the meter on front panel reads 60 milliamperes which is the correct current for the 199 tube filaments. This being done, one can close up the lower section and leave it alone.

If it is found that the meter reading cannot be brought up to 60 milliamperes by any adjustment of the slider, move the slider back to that end at which lowest reading is obtained and connect a wire across from terminals 5½ and 6 on Carter 101 unit, shorting-out that resistance wire in between them. It will now be found easy to get a reading of 60 mils.

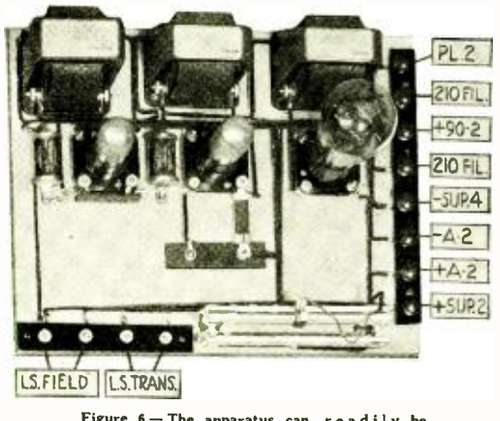


Figure 6—The apparatus can readily be mounted from study of this photo. All terminals are easily reached.

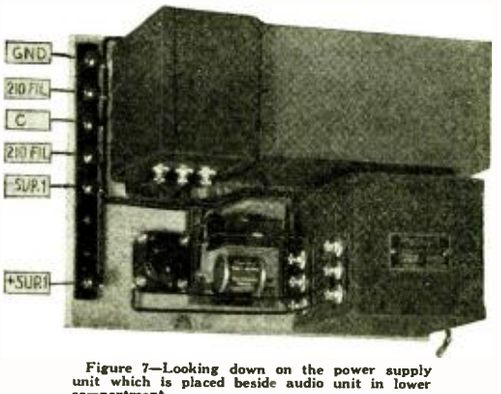


Figure 7—Looking down on the power supply unit which is placed beside audio unit in lower compartment.

Putting into Operation

To put the Electric-6 into operation, make all connections as outlined earlier in the article, cut one wire of the twisted pair leading to the transformer and run twisted wires from the cut ends up to the switch binding posts on upper deck, insert all tubes and turn on the light current.

To adjust the three condensers to resonance at all wave lengths and get the first tuned circuit "in step" with the others we now direct our attention to the little "trimming" condensers located under the movable plates on the Remler triple

(Continued on page 26)

Simple Story of "A" Socket Power Unit

Functions Explained in Plain Language

By James McDonald

HISTORY will record 1927 as Socket Power Year. Observing the interested throngs at the radio shows and listening to the inquiries in the shops of leading dealers, one has this fact brought home very forcibly. Everywhere it's "How many tubes will this run?" and "Can I get rid of all batteries with that?"

Each year has seen some distinct advance in Radio's development toward its ultimate goal of being a trouble-proof source of ever-varying entertainment. 1922 saw the advance and simplification of audio frequency stages of amplification, in 1923 came regeneration, while 1924 saw the repudiation of it because of its squeals and howls. In its place was substituted tuned Radio frequency.

In 1925, Radio saw various methods of neutralization, compensating and balancing put into practice. 1926 was selectivity year because of the congestion of the air lanes. Stage shielding and total shielding were put in. This year we apply various forms of light socket power.

Profusion of Units Is Confusing

To the public, the array of socket power units must be confusing. The puzzled frowns as fans read over the attractive folders, and the barrage of prospective-buyer questions, would make it apparent that "rectifiers," "relays" and "filters" are but new terms in the already difficult language of Radio.

It is the purpose of this article to attempt to clean up some of the puzzling angles to power units so that set owners, and prospective set owners, may have some understanding of what is in the black lacquered and crystalline finished boxes on display.

Power units that furnish "B" current such as one gets from the well known "B" battery, were available last year and a great many readers of Radio Digest are fairly familiar with the more popular types. So, we will consider here, only those units intended to replace the good old storage battery and its charger as an "A" supply. I can use the term "good old" and not hurt anyone's feelings as every battery manufacturer that I can think of is now marketing an "A" power unit.

The term "A" is applied, not because the electricity supplied by battery or "A" power unit is any different from "B" or "C" current, but because of its purpose. "A" current, regardless of its source, is utilized to heat the filaments of the tubes in a receiver. AC tubes have recently made their appearance but the power supplies to be discussed are not for them. These "A" current sources are for tubes of the 200-A, 201-A, 240, 112, 171, 199 and 120 types only.

There Are Two Groups

Before getting into construction, we must first divide "A" units into two groups. There are those which contain a storage battery, a charger and a relay to throw the current from set to charger or vice versa, and those which change the form of the current and feed it immediately into the set. Since there seem to be more of this latter variety, let's look into them at this point.

Since the purpose of an "A" power unit is to change 110 volt, 60 cycle (some places, 40 cycle) alternating house lighting current into 4 or 6 volt direct current, it is but natural that all of the units of this type on the market should have certain basic elements in them (see Figure 2), the difference in units lying only in the methods of accomplishing the various changes that must be made in the current. The basic elements required are, first, a transformer to bring down the voltage, then a rectifier to change alternating to direct current and, third, a filtering system to remove pulsations and make the output a steady, unvarying flow of power.

Power units to supply "A" or filament lighting circuit, vary chiefly in their rectifiers. Alternating house lighting current travels in one direction for an instant, then reverses and goes the other way. This it does 60 times a second if the power company says they supply "60 cycle" electricity. The rectifier must either block off the current going one way or must cause it to travel in the same direction with that going the other.

A rectifier which blocks is called a "half wave rectifier;" that which causes both halves of the current to travel in the same direction is a "full wave rectifier." Remember those terms as you'll see them in ads, folders and articles and hear them in Radio conversations. The first utilizes but half the current; the second makes use of it all. The output from either type can be successfully filtered to make it suitable.

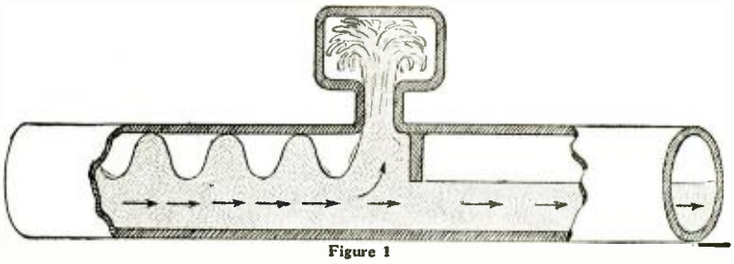


Figure 1

How and Why of Filtering

Having gotten the current into a series of pulsations or surges, either 60 per second or 120 per second, depending on the rectifier, it must be "smoothed out." The smoothing out process consists of holding back part of each surge and releasing this part between the surge from which it was taken and that which follows. The more evenly a filter does this, the more successful it is considered to be.

"But," some readers will say, "sixty, or one hundred and twenty, of anything per second is too fast to count—too fast to make any difference. Ripples coming that rapidly are a steady stream as far as I'm concerned." But that's where you're wrong. Either 60 or 120 impulses of current per second when fed into a loud speaker make a nice steady low musical note. Radiolly speaking, this is "AC hum." It is loud, monotonous and totally ruins reception if present.

Filters to remove this hum usually contain a large coil of wire wound on an iron core which is known as a "choke," and a unit that will provide two large areas of metal or foil placed closely parallel but insulated from each other—this being termed a condenser. It has "capacity" for storing electricity, not chemically as a battery does, but keeping the electricity in the same form in which it flows through the wires.

Some of you may, right now, see the action of the filter. The current coming in as a series of sharp surges hits the "choke," the action of which is just what its name implies. A parallel to this action would be to place a 6-inch gate in a 12-inch water pipe. A stream 6 inches in diameter gets through and the rest piles up.

Now we get the action of the condenser. If, just ahead of the 6-inch gate, we put in a 6-inch pipe coming into the 12-inch pipe from the top (see Figure 1), with a tank on this branch, the piled up water is going up into the tank. The moment the pressure drops between surges, however, this water is coming down into the main pipe and through the gate as a 6-inch stream. Then comes another surge and the action is repeated—over and over—the result being a steady stream.

Some "A" Powers have one good size choke and a medium large condenser—that's one combination. Others have a very large condenser and a smaller choke. A third combination is a moderate condenser and a whale of a big choke, while yet a fourth group have double combinations—two medium chokes and two medium condensers. And, strange to say, if good materials—and ample materials—are used, they all work pretty well.

Builders cannot skimp in an "A" supply and get satisfactory performance. "B" supplies handle very small amounts of current at a higher voltage, and smaller sizes of wire, smaller cores and smaller condensers can be used. That's why some (but not all) that sell rather low in price will satisfactorily supply "B" power on sets of a moderate number of tubes. The "A" supply maker cannot do this as the current is around 2 amperes; large sizes of wire, large cores and large condensers are a necessity.

There Are Six Rectifiers

The available rectifying units that manufacturers of "A" power units can put into their equipments seem to total about six. There is the long-familiar Tungar (or Rectigon) bulb, heretofore used only in battery chargers and now put to a new use. The Tungar bulb contains a filament, lighted by one winding of the transformer in the "A" power, and a plate to form the other element in the tube. When properly connected in an alternating current circuit, that half of the cycle which tends to flow from the filament to the plate can pass, but that which tries to go from plate to filament is blocked. Yes, it is similar to the action in a regular vacuum tube but there is no grid, and it is a "half wave rectifier" capable of handling 2½ amperes of current. An example of "A" power unit using the Tungar bulb as rectifier is that made by Julian M. White.

The electrolytic rectifier which contains an aluminum rod and a rod of another metal has long been used in battery chargers and in "B" eliminators, the Philco units being examples. Now we find it serving to supply "A" current in the A-Box power unit. The Balkite is another form of electrolytic rectifier which is rather well

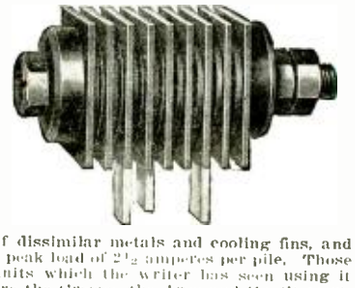
known because of the widespread advertising and distribution given to the power units of that name. It is now available in an "A" supply unit under the name Balkite.

Dry Rectifiers

The three just mentioned are not new rectifiers, except in their application to "A" power supplies. The next three are all comparatively new. The chief reason for their being brought out is that they are "dry" and give off no light and but little heat. The first which this writer recalls seeing mentioned in print is the Elkon. The Elkon secures its rectifying action from the fact that if small discs of different metals are placed against each other and alternating in the metals used, current can pass through the pile of discs in one direction but not the other.

A small quantity of heat is developed, for the radiation of which fins are provided, but this is only natural since no device which transforms the character of power can be 100% efficient. Like the Tungar bulb, the current passed without there being a voltage drop below six, is 2½ amperes. Of the "A" units available using the Elkon rectifier, might be mentioned the Elkon, the Triple-A and the Sentinel.

Another type of dry, disc rectifier which is being incorporated in a number of units is the Marathon. Here also we have a pile



of dissimilar metals and cooling fins, and a peak load of 2½ amperes per pile. Those units which the writer has seen using it are the Greene, the Arco and the Stewart. It should be stated quite clearly at this point that power units mentioned for any type of rectifier are not being listed in any order either of preference or efficiency. Neither are certain makes being given as examples of the use of a type of rectifier because they are any better than other makes using that rectifier and not listed. These makes are named only because each has been examined and the writer is sure of their contents. Nor are they all advertisers in Radio Digest. This is just a frank general discussion.

The Raytheon type A cartridge is the sixth rectifier found. With Raytheon tubes for "B" eliminator work, most of us are familiar, but this current changing unit is not a tube. It looks more like a fuse cartridge such as one puts in power supply lines leading to motors. It seems to lend itself to variation in application very well as we find one in the Valley "A" unit, two in the Webster "A" unit and four in the Bosch "A" unit. It has a life of about 750 hours of actual use at full load, and somewhat longer if the tubes do not draw a full 2½ amperes of current. To make up for its having a "life" it is not expensive to replace and 750 hours is more than a year's average service.

The makeup of the filters is harder to ascertain than are the rectifiers. Data is available on but few of the makes nationally distributed. Of the Triple-A, the Julian M. White, the Valley and the A-Box it can be said that they use a large electrolytic condenser of tremendous capacity, known as the A-Box type of condenser because first sponsored by that company, and presumably a relatively small choke. With a condenser this large, a large choke is not needed.

Battery and Charger Units

We now come to that type of "A" power supply which incorporates a storage battery, a relay and an "automatic" type of high rate charger which tapers off the current as battery nears full charge and stops when battery is full. We find the Marathon dry disc rectifier used in the Arco Automatic "A," and the Raytheon type A cartridge in the Basco "A" unit. These power relays are so arranged that when the receiver switch is turned on, the charger is cut off and there can be no question of hum since one is then drawing current from the battery.

A small magnet is placed in the leads from the battery, and closing the receiver switch to listen-in allows current to energize this magnet. The magnet draws down an arm which is really a switch in the 110 volt circuit leading to the charger and cuts it off. When one turns off the set the magnet loses its energy and the arm flies back, re-connecting the charger to the battery to replace current drawn off. These "high charge automatics," however, are

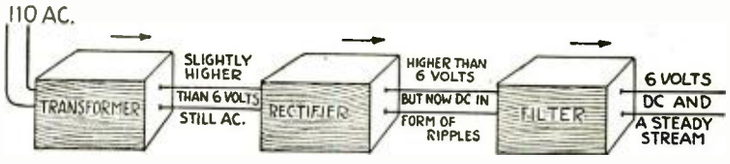


Figure 2

not trickle chargers but charge at from 2½ amperes tapering to "off."

On the other hand we have some equally good units which make use of the trickle charger, a relay and a battery. There is the Westinghouse Autopower which incorporates a dry rectifier that they call Rectox; the Gould Unipower build around

a Balkite rectifier; and the Vesta "A" Socket Power using the Vertrex electrolytic rectifier. These differ from the "automatics" in that the charger feeds current to the battery at rates from ⅝ to 1¼ ampere. This charging rate, once set, is steady and without taper but it is not high enough to injure the battery. Like the "automatics," the charger cuts off when the set switch is turned on.

Make Up Your Own "A" Power

Now presuming you have a storage battery, still in fairly good shape, and you see no reason why you should discard a rather expensive item to put into use one of the complete "A" powers. In that case you have three choices of methods of converting your battery into an "A" power

(Continued on page 26)

BUILDING ELECTRIC-6

(Continued from page 24)

unit. A wooden screw-driver is furnished for the purpose of setting these.

A station of moderate or weak strength is tuned in, preferably one out of town. It will be found that adjusting the "trimmer" under the condenser nearest the drum will bring up the strength considerably and this puts tuned circuit 3 in resonance with circuit 2. The first tuned circuit is affected by being coupled to the antenna circuit so will require a little more attention. It may be found that while one setting of first "trimmer" gives maximum response on a low wave station, a slightly different setting is better on high wave programs. A compromise between the two must be used.

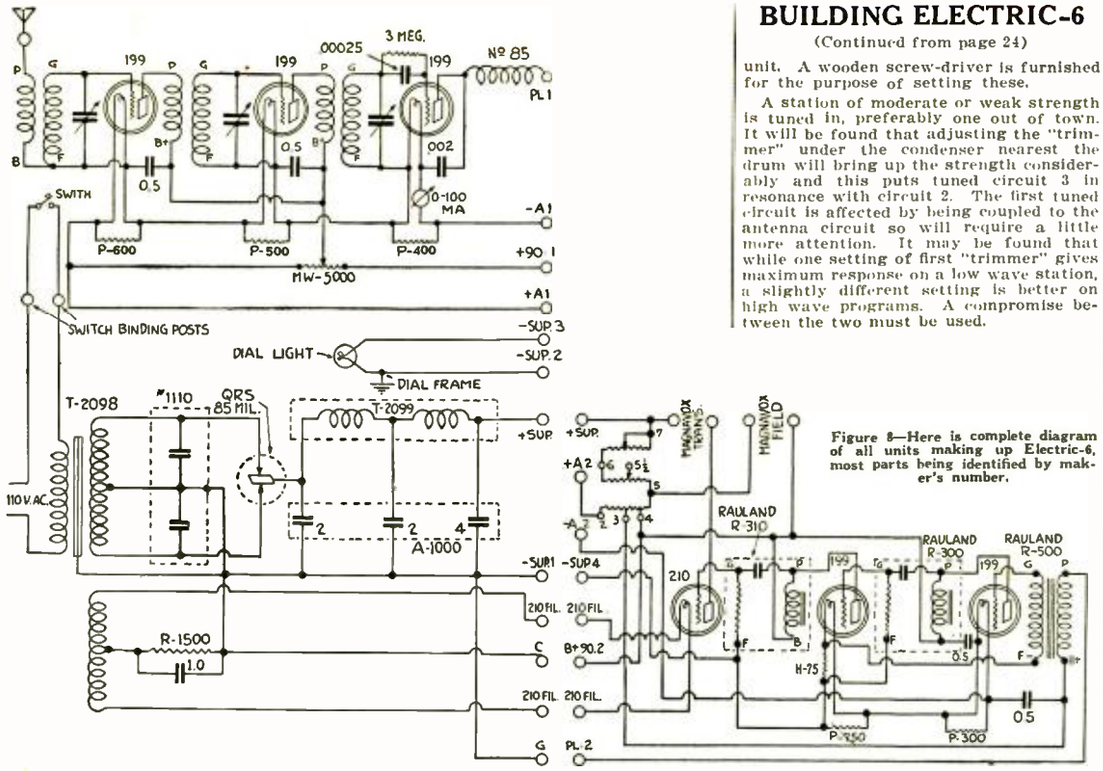


Figure 8—Here is complete diagram of all units making up Electric-6, most parts being identified by maker's number.

One Type of Tube For Same Receiver

Mixing Styles from Various Makers Results in Low Grade Efficiency

An examination of a large number of vacuum tubes to determine the capacities between the grid and filament, the grid and plate and the plate and filament showed a great similarity between tubes of similar types, but an appreciable difference between tubes of different types.

This fact, when applied to single or dual controlled multi-stage tuned Radio frequency receivers, shows the reason for the lack of sensitivity with many such receivers. Many fans utilize a number of tubes in the radio frequency systems of the receiver which are of different types and wonder why the receiver does not produce the expected distance-getting ability. The local stations are received with good intensity, but the distant stations are either weak or lacking in number.

Laboratory Tests

A series of tests, in the laboratories of one of the well known tube makers, upon the resonance settings of tuned circuits with various tubes in the sockets and a constant tuning condenser setting showed variations ranging from 4 to as high as 18 meters on wave lengths above 350 meters when tubes of different type were used in the radio frequency amplifier. In a well-stabilized radio receiver such variances prove to be the reason for the lack of satisfactory reception of many stations between 210 and 300 meters. The solution to the problem is the use of tubes of similar type in all the sockets in the radio frequency amplifier. The better companies, in the construction of their tubes, take particular care to see that the capacities are alike in all tubes of similar type.

Variances in the grid plate and grid filament capacities do not make any difference in audio frequency amplifying systems, but in radio frequency amplifiers they manifest a decided effect upon the tuning.

"A" SOCKET POWER

(Continued from page 25)

supply that operates from the house lighting current. One method is the "automatic" high rate charger, which charges the battery at a rate of about 2½ amperes tapering off to 1¾ amperes, shuts off when battery is full and includes a relay to throw charger on and off depending on the position of the set switch. The relay will also throw a "B" eliminator on and off. Examples of this type are the Arco using a Marathon dry rectifier and the Bat-A-matic using the Raytheon A cartridge.

Your second choice is the trickle with various charging rates and a relay to throw the charger on and off and which will also throw a "B" power in and out of the circuit. The charging rates average around ½ to 1 ampere and examples of this type are the Apco using a Westinghouse Rectox rectifier, the Sarvas which also incorporates a Rectox dry disc unit, and the France, another dry.

The third possible arrangement is a charger purchased as one unit and the power relay as another. There are many power relays on the market and every dealer carries one or more makes. They are inexpensive and cost but $3.00 or $4.00.

"Automatic" chargers without relays are Arco V with Marathon dry disc rectifier and Basco with Raytheon cartridge. Remember, "automatics" are the kind that taper, and cut off when full. The Vesta is typical of the trickle chargers without relay and the Vesta is available with either a Balkite electrolytic or a Vertrex electrolytic. Hook it up, with a relay, to your battery, and power is restored gradually while set is not in use.

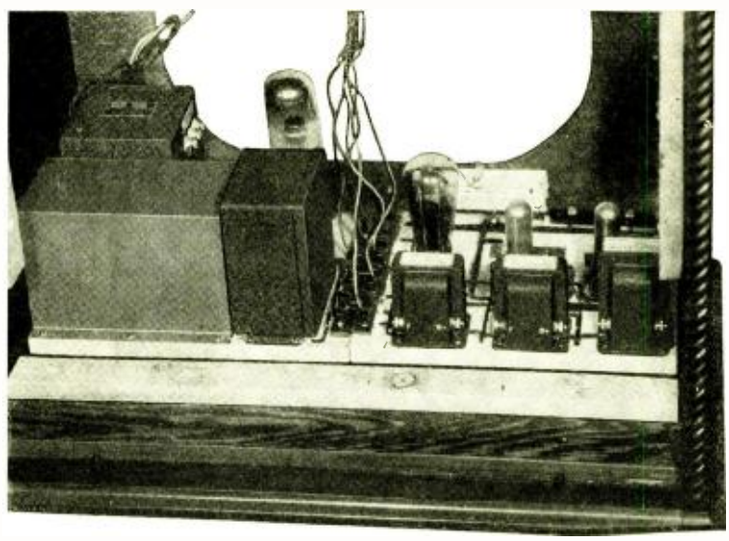
There you have just about all the power supplies complete, and combinations, that you may run into. Naturally, the complete battery-less, and very new, power units average the highest in price. Then but slightly lower are the battery and charger combinations in one case. Finally you have the combinations which you can make up yourself around your present battery at much smaller outlay. As far as that goes, when placed out of sight in the lower part of a console cabinet, there is no difference between having your battery, charger and relay in one metal cabinet and having them as three separate units connected together.

Please Don't Ask Comparisons

Naturally in an article of this sort one is not permitted to quote prices, dimensions or manufacturers' full names and addresses. Nor is one in a position to make comparisons. These makers of power units are all friends of mine and a radio writer should be unbiased. Please do not write in and ask which one is the better. I like them all—any manufacturer that cared to place one of the above-mentioned

units on one of my super-hets could do so and it would not be replaced in favor of data on any of these outfits, drop me a line and I'll see that you get the information. Makers are always glad to forward any other make. However, if you want full literature.

Figure 9—Here are audio and power units of Electric-6 in place in lower compartment of Excello Cabinet No. 28. The baffle plate and cone have been lifted out.



George Lewis Promoted to New Arcturus Office

Wide Experience Qualifies Him for Vice-Presidency

GEORGE LEWIS, formerly president and general manager of Kenrad, Radio executive and engineer of long experience, has been made vice-president of Arcturus Radio company of Newark, N. J., manufacturers of A-C tubes

There is probably no executive in the field today whose Radio activities antedate those of Mr. Lewis, or whose commercial associations are so adequately supported by extensive engineering experience.

The first commercial operator's license issued by the United States government was made out to George Lewis. His prominence in Radio, attained as an American delegate to the First International Radio Conference at Geneva in 1913, has been maintained in subsequent activities.

Prior to association with commercial Radio development, Mr. Lewis was in charge of important engineering work with the navy. He was Radio expert aid under Admiral Bullard, for a number of years in charge of Radio engineering design at the New York navy yard.

The end of the war found him in charge of the Radio design division at the bureau of engineering of the naval department in Washington.

In 1923 Mr. Lewis joined Crosley as assistant to the president, going to Kenrad three years later.

Mr. George Lewis has at various times been a manager of the Institute of Radio Engineering, of which he is a member. His standing as an engineer has drafted him for various important duties as a Radio legislator. He is chairman of the vacuum tube committee of the R. M. A. and chairman of the National Electrical Manufacturers association, vacuum tube section.

WHAT DO YOU KNOW?

(Continued from page 12)

on, and after he had finished a course in music, specializing in voice culture, he went to Hastings, Neb. Fate kept an eye on the young man even after he had left the center of larger activities. And Hastings was the spot selected by the Westinghouse Electric company to locate a high powered broadcasting station. Who could be more logical to direct the Hastings' talent for KFKX, the new station, than our Bill Hay?

Then it became a habit to "get Hastings." In all parts of the country the DX fans never were satisfied until their dials had snapped into the KFKX and the pleasant, clearly enunciated voice of Bill Hay. He became a national celebrity. In those early days no set was considered much of a set that couldn't tune in Bill Hay at Hastings.

Later, when the Chicago Tribune inaugurated its super station and began broadcasting on a nation-wide scale, the owners considered no one else but Bill Hay to take the helm of their entire Radio craft.

Bill takes his responsibilities seriously at WGN and WLIB. He is constantly alert to keep both stations just one step ahead of the latest in the way of service. He has broadened the scope into the educational field, and where he formerly taught a score or two in Hastings his music lessons now reach hundreds of thousands over the air. He has even taught piano playing over the air from the Chicago station.

Now, go over those questions again that Bill Hay has asked. How many can you answer without cribbing?

Henley's New Book Out

ALTHOUGH by no means a Radio Book, the new edition of Henley's Twentieth Century Home & Workshop Formulas contains many interesting suggestions for the individual who likes to tinker with tools, especially the set builder. It affords information on how to make many things hitherto held as secret processes.

Smooth Control

CENTRALAB Radiohms are in great demand by Radio set manufacturers who are anxious to obtain a variable resistance in the plate circuit of the tuned radio frequency amplifier that will control both volume and oscillation. The Radiohm gives smooth and gradual control of the electric pressure applied to the radio frequency tubes. This control permits reception on all wave lengths at the sensitive position just preceding the oscillation point. This is where oscillation has built up enough energy to counteract the natural resistance in the circuits of the set and is therefore the point which has the greatest distance, volume and selectivity.

9-in-Line: Last Word in Selectivity

Drilled Panels Make Building Easy

By Jacques Fournier

BACK again, readers. This time with a receiver that is the peer of anything we ever dreamed of two years ago when I was in Radio Digest more often, and, considering all features such as selectivity, tone, ease of tuning, refinements and ease of construction, a better set than any I've seen presented this year. That's saying a lot because the 1927-28 group of build-yourself superheterodynes have brought this type of circuit to a most advanced stage.

You can build them with two stages of tuned R. F. in front, with either three or four intermediate stages, with either grid or plate detection in the second detector, with transformer or impedance audio, and with power tube outputs. Nine-in-Line seems to combine the best of all these features into a good-looking sturdy assembly that is surprisingly easy to put together.

Now, personally, the point that appealed to me was the selectivity. Although conditions are somewhat better than before the Radio Commission rearranged things, there still are many spots in the broadcast range where powerful out-of-town broadcasters tune unpleasantly close to equally powerful locals, and, too close for clean reception, to less powerful faraway stations.

The super-heterodyne has been the most popular circuit for a number of years because it will separate these closely grouped stations just a little better than will anything else. And, strange to say, it will do this with less tuning controls than anything else. Single dial sets do not compare with it in sharpness; those that approach it in selectivity have three to four dials.

The "How" of the Super

Broadcasting is done on wave lengths between 200 and 550 meters. Within the super, we create a very narrow gateway on a much higher wave length and alter the incoming program to this higher wave. If we do not alter the program to exactly the wave length of our gate, it does not get through. That's where the selectivity comes in. The station we choose to alter goes sailing through but those not wanted do not mix properly with our altering arrangements and go up against an unresponsive wall to finish right there.

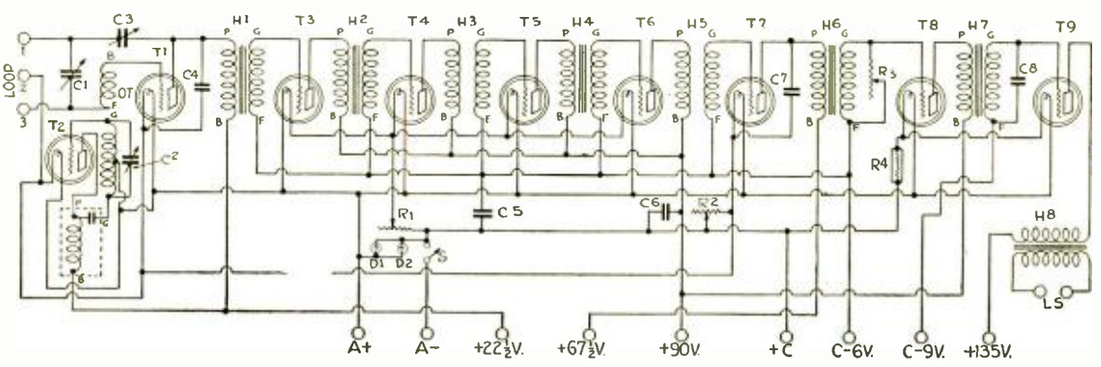
Having thus picked out the desired program, we give it tremendous amplification at the new high wave length in what are called the intermediate stages. The original reason for the creation of the super lay in the fact that a tube amplifies far more efficiently at higher wave lengths than at those within broadcast limits. Three or four stages of intermediate amplification give more power to a signal than do an equivalent number of tuned R. F. stages.

Since we have this greater amplification, we can use a much smaller antenna system to pick up programs. The overhead aerial, the lead-in, the lightning arrestor and the inconvenient ground wire are eliminated. In their place we use a small framework, wound with wire, known as a loop antenna. It can be set on top of the set, beside it or in the rear. It only requires that one edge be pointed approximately toward the station desired. A loop will pick up far less static and locally generated interference such as signs, telephones, street cars and power stations give off.

9-in-Line Has All Good Features

Now getting back to the Nine-in-Line, let us see what it has in the way of unusual advantages over other supers. First of all, it uses four intermediate stages of amplification, making necessary five long wave transformers. The first two of these are not sharply tuned but give tremendous amplification to the signal favored by our altering (heterodyning) process. The third forms the first narrow gate and waves going through are narrowed down to but a chosen few. The fourth is unsecond identical with the first? The result is immediately apparent in tuning. As we turn the loop tuning dial and the altering (oscillator) dial, it is plain that unless they are kept under precision control, we're going to go right by stations and never even hear them. But that's exactly what we want. Something that will slice off stations sharply, confining even locals and 10 kilocycle separation stations to two degrees.

Nine-in-Line includes regeneration in the loop circuit which is essential to "threshold" sensitivity and sharp tuning of the loop circuit. If the set were not sensitive on its first or input tube, programs would never get to the altering point for high wave amplification. Nine-in-Line includes audio transformers ample in size to give low note reproduction and to pass the full range of musical notes in correct relation to each other.



There are drum dials which are certainly much better looking than the older disc type. There also is the pleasing feature of illumination of the dials for easy tuning when one wishes a soft, subdued (and romantic?) lighting of the room. At the output end of the set, there is an output transformer to keep high voltage B current out of the loud speaker. Also, practically no wiring shows when looking down into the set.

But here's the feature that should particularly appeal to the set builder. Nine-in-Line panels, both front and sub-base, are on the market, drilled, ready for use. The front panel is decorated and controls are identified. When one had to drill and engrave one's own panels, it meant a vast amount of work and long delay sending the front panel off to be engraved. This way, you have only to remove the various units from their boxes, insert machine screws in the mounting holes and tighten the nuts. From nothing to a completely assembled receiver in less than an hour is certainly "something" as Sam 'n' Henry would say.

Why Various Parts Were Chosen

The basic elements of Nine-in-Line are, of course, in the group of units made by High Frequency Laboratories, called, for briefness, H F L. They are compact, well made and technically correct to the last detail. Each unit is entirely enclosed and sealed, tested and matched before shipping. The three H 210 transformers have iron cores for high amplification which is so gauged that the best efficiency is obtained between 32,000 and 42,000 cycles with the top of the curve at 37,000 cycles.

The two tuned units, H 215, are air core, that is, they contain no iron and they are peaked in tuning for best results at 37,000 cycles which is just a little higher than 8,000 meters wave length. On each unit is found the exact peak as shown by the final laboratory check, and two with the exactly same rating are used together. The C 16 audio transformer, of which two are used, is a comparatively recent development of H F L and shows that a lot of work went into its design. The highest grade silicon steel is used for the core, and plenty of it. In conjunction with this core, a correctly designed primary is used, with sufficient impedance to assure full amplification of the low notes. C 16 is a nice job. So is C 25, the output transformer which will handle the output of power tubes and pretty closely match the impedance of the average loud speaker.

Remler Twin-Rotor condensers should need little introduction. They've been on the market for quite a while and no other make has been able to cut into their popularity very much. They are unique in that both sets of plates move and the plates are almost rectangular in shape. Their construction requires that the dial rotate through a full 360 degrees which gives much greater separation of stations on the scale than is possible with 180-degree rotation.

Remler Drum Is Attractive

The Remler drum is one of the most practical dials of this type that has made its appearance. It mounts readily, permits fine tuning and looks well. Then too, it has a socket and small lamp for illumination of the scale. This scale, incidentally, is 15 inches long, divided into 200 divisions, two for each of the 100 channels arranged by the Radio Commission. Like all drums, it requires a large round hole for mounting that might cause some set builders trouble, but who cares when the panels are bought all drilled.

The odds and ends, such as fixed condensers, rheostats, switch and tip jacks are Carter. The "Midget" series of rheostats are a nice example of clever design wherein sturdiness, current carrying capacity and appearance have been combined with good looks. The combination of a filament circuit switch with one of these eliminates a unit from the panel and puts the switch where it belongs. Carter condensers are formed in molded bakelite against moisture, dust and rough handling and are found to be close to rated capacity. The bypass condensers are non-inductively wound.

No better method of making connections is to be found than the Jones, type B M, multiplug with its connecting cable. Connections can be permanently made at one corner of the sub-base, yet one light jerk on the detachable half of the plug arrangement and all power is off the set. This beats binding posts a mile.

Formica Makes the Panels

Formica you are all familiar with. Radio Digest has preferred it for a long time and practically all sets carried in this paper specify it. Formica panels run uniform in quality and are cut to exact sizes which cannot be said for all of them. This company has always been on the alert to improve its product and were, I believe, the first to bring out drilled and engraved panels for well-known receivers. The process used is not exactly engraving but seems to be some sort of application of gold that sticks and permits of considerable beauty in lettering.

For use with this receiver I am going to suggest the same loop as I see John Ryan did last month for his AC-Super, the Bodine. It has all that is known about loop construction of this time in the way of efficiency in winding but has gone most of the others one better in a good looking design. The DeLuxe loop comes all set up, there is no assembly or straightening of cross bars. One needs only to set its base plug in the base and there you are.

There should be little difficulty with the assembly when one has Figures 4 and 5 to

LIST OF PARTS FOR NINE-IN-LINE

High Frequency Laboratories, 151 N. Wells St., Chicago:

3 HFL Intermediate Transformers, No. H 210, @ $8.00	$24.00
2 HFL Intermediate Transformers, No. H 215, @ $8.00	16.00
1 HFL Oscillator Coupler, No. L 430	5.50
1 HFL Choke Coil Unit, No. L 425	5.50
2 HFL Audio Transformers, No. C 16, @ $8.00	16.00
1 HFL Output Transformer, No. C 25	8.00

Benjamin Electric Company, 120 So. Sangamon St., Chicago:

9 Sub-panel type Sockets, No. 9044 @ $0.50	4.50
1 Pair Brackets, Type No. 8629	.70

Carter Radio Company, 300 S. Racine Ave., Chicago:

1 Rheostat, 6 ohm Type MS-6	1.00
1 Rheostat, 6 ohm Type M-6	.50
2 Condensers, 1 mfd. Code No. 110 @ $1.25	2.50
2 Condensers, .002 mfd. Fixed Mica @ $0.50	1.00
1 Condenser, .0005 mfd. Fixed Mica	.40
8 Tip Jacks, Code No. 10 @ $0.10	.80
1 Variable Resistance, Code No. 2	$ 2.00

Gray & Danielson Mfg. Co., 260 First St., San Francisco and 160 N. LaSalle St., Chicago:

2 Remler SLF .0005 mfd. Variable Condensers @ $5.00	10.00
2 Remler Drum Dials @ $4.50	9.00

Formica Insulating Co., 4600 Spring St., Cincinnati:

1 Nine-in-Line Front Panel, Drilled-Decorated	6.90
1 Nine-in-Line Base Panel, Drilled	5.65

Hammarlund Mfg. Co., 424 W. 33rd St., N. Y. C.:

1 Midget Condenser, Capacity .000045 mfd.	1.50

Radiall Company, 50 Franklin St., N. Y. C.:

1 Amperite Unit, Capacity ¾ ampere	1.10

Howard B. Jones, 618 So. Canal St., Chicago:

1 Multiplug, type B M, 4 foot complete	2.50

Acme Wire Company, New Haven, Conn.:

10 Celatsite 30 inch lengths, black, @ $0.10	1.00

Bodine Electric Co., 2254 W. Ohio St., Chicago:

1 DeLuxe Loop Aerial, Model L-500	12.00

(The Radio Digest Shopping Service will purchase all or any of the above specified parts, at the prices listed, for builders of the AC-Super Receiver who may be located in esolated communities or unable to obtain the parts from local dealers. Address: Shopping Service, Radio Digest, 510 N. Dearborn St., Chicago, and enclose express or postal money order covering total cost of parts ordered.)

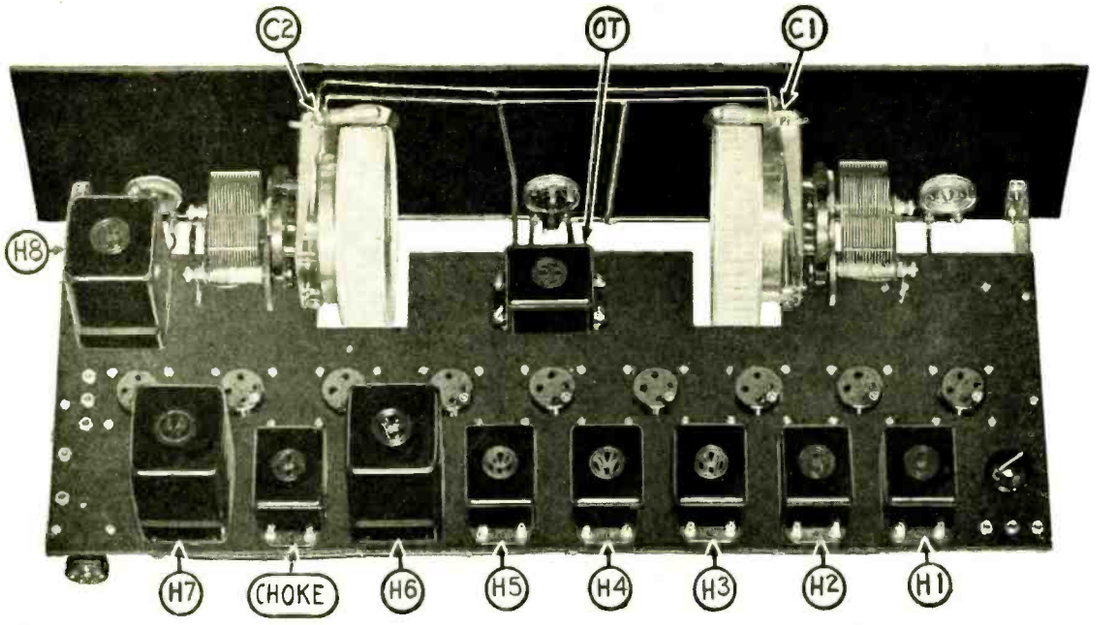


Figure 4—The sockets are 9, 8, 2, 7, 6, 5, 4, 3 and 1 reading from left to right in this picture. Only the dial wiring shows looking into the set.

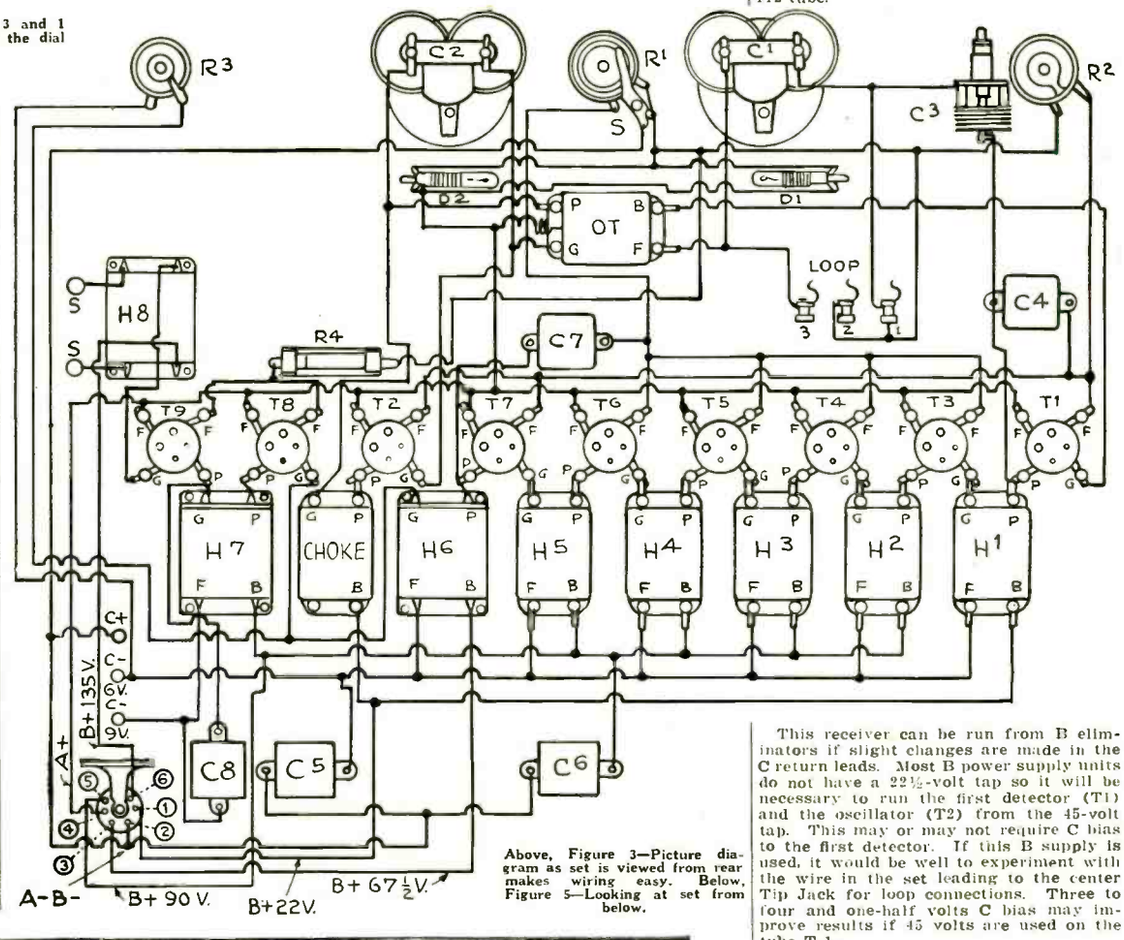
go by. In connection with the front panel, it should be remarked that the Carter M-6, six-ohm rheostat, is placed at the left end, the Carter MS-6 combination rheostat and switch in the middle and the Carter Code No. 2 unit of 200,000 ohms, at the right. This as viewed from the front.

On the sub-panel, be sure all sockets are mounted with P and G terminals to the rear. In connection with the OT (Oscillator Transformer) unit, mounted close to the front in the center, see that P and B are at the front; the H F L output transformer, T8, is to be placed with P and B to the left and S and S to the right, considered from the front. All the rest of the H F L units are mounted with F and B to the rear. Referring to the top view photo, Figure 4, the three Tip Jacks at the rear left corner (viewed from the front) are for the loop connections; the two on the right edge near the back are for the speaker cord, while the three a little further forward and near the right edge are for C battery connections. The three wires from the C batteries can easily be fitted with Carter Imp Plugs costing 15c each.

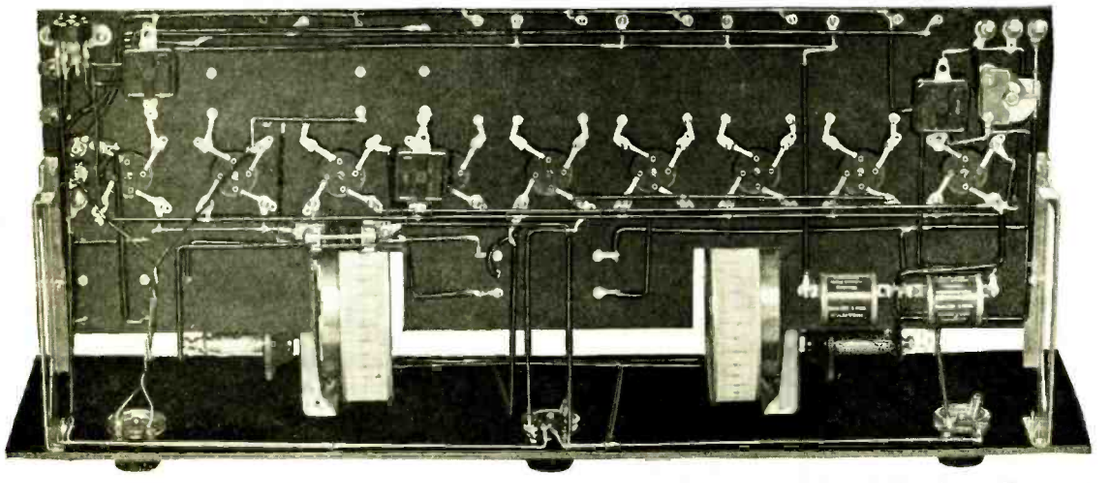
Wiring Follows Picture Diagram

By following picture diagram Figure 3 and the bottom view photo Figure 5, you should have no difficulty with the wiring. When you come to the Multiplug connections, wire as follows: No. 1 Green is for 22½-volt connection, No. 2 Black is for A battery minus and B battery minus, No. 3 Brown is for 67½-volt lead, No. 4 Red is for A battery plus, No. 5 Pink carries the 90 volts, while No. 6 Yellow is for the 135-volt connection.

Of the three C battery Tip Jacks, that nearest the front is for C plus, that in the middle gets C 6, while that toward the rear is for C 9 minus. In the bottom view photo, Figure 5, the fixed condenser of .002 mfd. value identified as C 8, is found in the corner near the Multiplug; that of .002 mfd. value and called C 7, is near the center; that of .0005 mfd. capacity and shown as C 4, is beside the midget variable condenser. Of the two round 1 mfd.



Above, Figure 3—Picture diagram as set is viewed from rear makes wiring easy. Below, Figure 5—Looking at set from below.



bypass condensers, that nearest the edge of the sub-base is C 5 while that next to it is C 6.

The two wires leading to the 200,000 ohm resistor on the panel are twisted to avoid interaction with other leads and should be made either with twisted light cord, bare flexible wire sphagetti covered, or with flexible Celatsite. There is not much to be added due to the clearness of the photos and the picture diagram, except that you will find it much more convenient to wire the sub-panel unattached to the front panel, then connect them through the Benjamin brackets, and carry over the few wires necessary to the front panel instruments.

Connecting the Batteries

When connecting the batteries to the end of the Multiplug cable, connect the Black wire to the minus of the storage battery, and another short wire from this minus on the battery to the minus terminal of one of the three B batteries. The other (plus) end of this B block is connected to the minus of a second B unit. The plus end of the second B is connected to the Pink covered wire and to the third B minus. The plus end of this third B is connected to the Yellow cable wire. Now go back and connect the Green wire to the 22½-volt post on B unit number 1, and the Brown wire to the 22½ on B unit number 2. The last wire to be put in is the Red wire which goes to plus on the storage battery.

The two end posts on the Bodine loop go to the two end Tip Jacks of the three, while the center tap post on the loop goes to the middle of the three Tip Jacks. A 7½-volt and a 4½-volt C battery are needed, presuming you will have a 112 type tube in the last socket. The plus end of the 7½-volt battery is plugged into the front Tip Jack provided for C connections. From the 6-volt post run a wire to be plugged into the center C battery Tip Jack. Now connect the 7½-volt post on this C battery to the minus 3 clip on the 4½-volt C battery, and from the minus 4½-volt post on this second C unit, run a wire to go in the rear of the three C battery Tip Jacks. This puts 9 volts C bias on the 112 tube.

This receiver can be run from B eliminators if slight changes are made in the C return leads. Most B power supply units do not have a 22½-volt tap so it will be necessary to run the first detector (T1) and the oscillator (T2) from the 45-volt tap. This may or may not require C bias to the first detector. If this B supply is used, it would be well to experiment with the wire in the set leading to the center Tip Jack for loop connections. Three to four and one-half volts C bias may improve results if 45 volts are used on the tube T 1.

Since there is no 67½-volt post on most B powers, it will be necessary to run the second detector, tube T 7, from the 90 volt post. On my set it was not necessary to change the grid bias to this tube as it worked just as well with 6 volts on it as with 7½. This is not critical, but due to variations in tubes, you might try running a separate C voltage of 7½ for this and, if it works better, but in another Tip Jack for this lead from the C battery.

If you want a type 171 power tube in the last socket, you will need another 45-volt B battery or a B power unit with 180 volt tap. If it is a Raytheon type unit, the new Raytheon BH tube capable of supplying 125 milliamperes is recommended. With a type 171 tube and 180 volts plate current, 40.5 volts of C battery are needed between the front and rear C battery Tip Jacks. Some B Power units, such as the Webster and Cornell, supply such a C voltage in addition to the required B voltages.

Cloverleaf Records

One of the cleverest souvenirs of the Chicago Radio show was a small phonograph record presented to lady visitors by Cloverleaf Manufacturing Company. The Crusader quartet sang "Annie Laurie" on one side of the record and the Subantenna song on the other. An announcement was made by John Clark, KYW, Chicago.

How to Build Three-Foot Cone Speaker

Full Instructions For Making Reproducer

By Paul DeKneff

FOR the past two years the chief property most sought after in Radio reception has been tone quality. Set manufacturers have been improving the audio amplifying systems until today practically any of the manufactured sets will reproduce tones as low as 60 cycles without audible distortion. The amateur set builder using specially fine transformers or impedance or resistance coupling can reproduce tones much lower. A properly

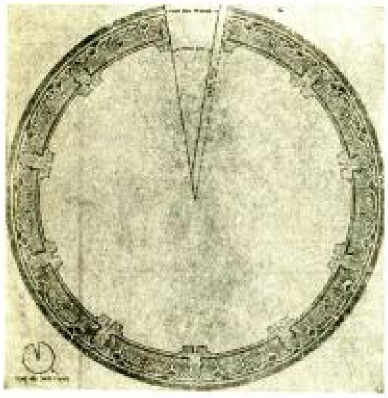


Figure 1

designed resistance coupled amplifier will reproduce frequencies as low as 25 cycles.

Why a 3-Foot Cone?

The one real problem has been to find a loud speaker which would reproduce the tones delivered to it by the set. Laboratory tests have proved that the one type of speaker which will faithfully reproduce all of the audible tones is the large cone speaker three feet in diameter. Only with a three-foot speaker is it possible to reproduce all of the tones which a good audio

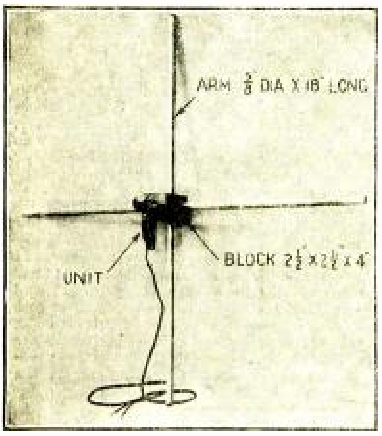


Figure 3

amplifier delivers to the speaker. In the past year there have been many speakers of this type placed on the market. The cost of a manufactured three-foot speaker is beyond the means of the majority of Radio enthusiasts and for this reason we are describing in this article a three-foot cone speaker, which can be built for $10.00.

Less Than an Hour

The "Ensco" Kit, first put on the market

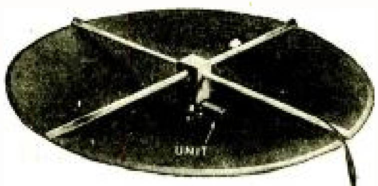


Figure 2

about a year ago, has done much to popularize the three-foot cone. By putting it out in kit form the manufacturers are able to sell it at a price which every one can afford to pay. By using the kit form, the assembly cost and excessive packing and shipping charges are eliminated.

The assembly requires no mechanical or Radio knowledge whatever.

The kit contains:

1 Ensco Unit completely assembled.
1 Sheet of decorated and marked Alhambra Fon-O-Tex paper.
2 Metal apexes.
1 Wall frame.
1 Adjustment wrench.
1 Extension pin.

Figure 1 shows the square piece of cone material ready for cutting. Full directions are plainly marked on the paper itself. This applies to either the 24 or 36-inch size. Lay the sheet on a flat surface. Cut out the circle on the marked outer line. Then cut out the segment as shown. This leaves a flap for pasting in the cone in shape. When the cone is ready to paste, take a blunt instrument such as the back of a knife and score the line marked "Bend on this line." This allows the edge to be turned back when the cone is completed. Now pull the cone gently into place so that the edge fits over the space marked "glue here." Spread a thin coating of glue. Be

sure to pull the cone into shape with due regard to the style to be used. If a console type, the design must be on the inside or concave side of the cone. If the wall or pedestal type, the design should be on the outer or convex side of the cone. Turn the sheet with the design downward and proceed to paste by spreading glue on the blank side. Now paste the edges together by pressing gently on the same, starting at the inner apex and working outward. Allow the cone to dry for a few minutes and then paste in the small cone which is cut from corner of sheet as shown in Fig. 1. This small cone goes on the inner apex when pedestal or wall cone is made and on the outer apex when console type is made. The small cone makes the large cone rigid. When cone is completed, lay it face down and bend back the edge on the scored line.

The "Ensco" engineers have proved that the only advantage of the double cone is to make it rigid enough to ship a manufactured speaker. The single cone offers no obstructions to the music, as in many other types, and as the "Ensco" is a kit it is not necessary to consider the shipping feature. The single cone is far more simple to assemble than the double.

Wall or Ceiling Types

Fig. 2 shows the rear view of a completed wall type speaker. The "Ensco" kit contains a mounting frame consisting of four dowels matched to a block. Fig. 3 shows the detail of the frame. The four dowels are inserted in the block and glued in place so that each leg is the same length. By inserting the opposing sticks first and sighting through the other two holes the two can be brought to the exact center and glued. The other two will then match perfectly. The unit is mounted as shown and fastened by two screws through the mounting plate. For ceiling mounting a suspension cord is used. For wall mounting a cord is attached to two dowels about half way to the center. When mounting the unit be sure that the drive pin is in line with the center of the cross stick. Next attach the drive pin extension and mount the cone. The cone is clamped to the drive pin extension with the two metal apexes and two nuts. One apex is placed on each side of the main cone apex. The cone should be mounted in such a way that the bent-up flange rests lightly on the arms of the frame, without placing any strain or tension on the pin. The flange of the cone is now attached to the arms of the frame with four thumb tacks.

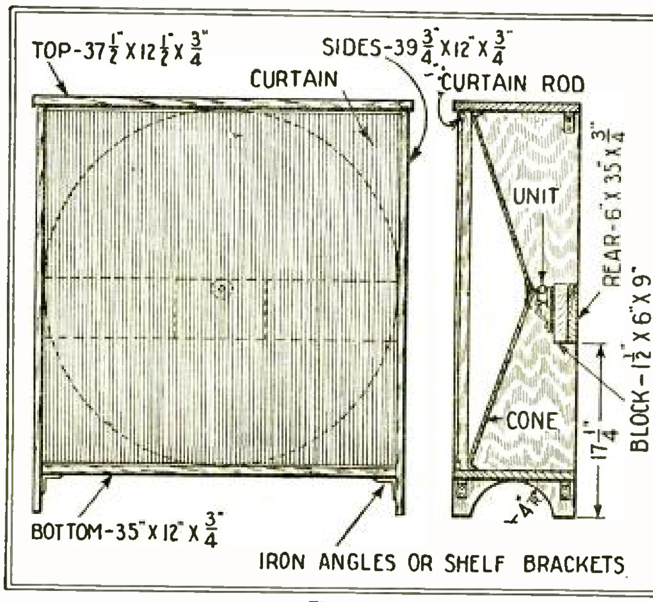


Figure 4

The Console Speaker

Even better results will be obtained with the console speaker which is illustrated in Fig. 4. With the single reversed cone (concave side out) and the unit mounted on the heavy back board of the cabinet, ideal acoustical conditions prevail. By placing the batteries and other accessories on the lower shelf behind the cone, and the set on top, the speaker serves a dual purpose, taking the place of a Radio table. Silk curtains to harmonize with the room furnishings hide the big cone and add to the appearance. Simply follow the dimensions shown in Fig. 4.

Fig. 5 shows the famous "Ensco" Unit, the only direct drive unit which will operate a three-foot cone. The single magnet of the "Ensco" unit is made of the highest grade of tungsten steel, powerfully magnetized. There are no transmission arms or levers to reduce the motion of the armature and so distortion in the unit itself is negligible. The air gap of the unit is located at the center of the coil, where it should be. Magnetic leakage is thereby reduced with a consequent increase in efficiency.

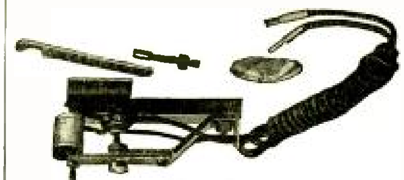


Figure 5

The only adjustment necessary is to regulate the air gap. If the cone chatters, the gap is too small. A slight turn of the nut in a clockwise direction facing the back of the speaker will open it. If the gap is too wide the volume will be low. The nut is then turned about ⅛ turn in the opposite direction.

High Voltages

The "Ensco" speaker will operate on any set using 90 volts of "B" battery or more with or without a power tube. It may be used with any of the modern receiving tubes of the following types, 201-A, 112, 171 or 210. Voltages up to 250 may be safely applied without fear of damaging the well insulated coil. On higher voltages use an output filter or transformer.

Centralab Resistors for "B" Eliminator Circuits

Any "B" Eliminator is made up of 4 essential parts: the transformer that steps the lighting current of 110 volts up to whatever secondary voltage is desired, the rectifier to change the alternating current to direct current impulses that can be used by the set, the filter, made up of choke coils and condensers that filter out the AC hum, and the resistances that divide the single output voltage into several voltages as needed by the Radio set. Proper resistances are just as essential to the proper operation of a "B" Eliminator as any of the other essential parts. Since the resistors are the only parts where much change is possible, however, a wide variety of methods are used to obtain output voltages, and some of these are not at all productive of good results when the Eliminator is attached to the average Radio set.

Centralab heavy duty Variables have received special commendation by many engineers not only for their absolute dependability in "B" power circuits but because of their qualifications to make resistance arrangements to insure better than ordinary Radio reception. Diagrams are shown by the manufacturers illustrating how these various arrangements can be made.

New Tubes at Show

One of the most interesting exhibits at the Chicago Radio show was that of the CeCo tubes. The half wave and full wave rectifiers, as described by James McDonald on page 25, were demonstrated as well as the AC amplifier and the AC detector.

The CeCo tubes are specified by the Browning Drake, Arthur H. Lynch, Lawrence M. Cockaday, Gerald M. Best, Kenneth Harkness, Volney Hurd, Herman Bernard, Keith Henney and James Millen, which might be considered something of an endorsement.

The C. E. Manufacturing Co., Inc., of Providence, Rhode Island, is said to be the largest exclusive Radio tube manufacturer in the world.

New Steinite Laboratory

A very interesting Radio research [illegible] oratory has been completed recent[illegible] Atchison, Kansas, by the Steinite [illegible] tories. The laboratory, which [illegible] in a steel structure 20 feet [illegible] feet above the level of the [illegible] and 125 feet above the ground [illegible] ite Company plans to conduct unusual experiments in this [illegible] oratory.

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We Thank You, Mr. President

BY THE removal of Henry L. Bellows as a member of the Federal Radio Commission President Coolidge has performed for broadcasting the same signal service that he did for the Federal Reserve Board. Only in the case of the Radio Commission his duty is not yet done.

There are still two members of the commission—one at least—who should feel the ax. If a working Republican majority is to be sustained two other resignations should be demanded by the President. Then the President can use the same rare judgment he did in two prior cases; first, in the original selection of Lieut.-Col. John Francis Dillon, now deceased, who up to his death was the only thoroughly experienced Radio man on the Commission; second, in the election of Sam Pickard, who really has functioned as the Radio brains of the commission in the absence of Lieut.-Col. Dillon, to fill the shoes of the resigned Mr. Bellows—significantly named.

The President must realize that it takes big men of brains and unquestioned integrity to be Radio Commissioners. Men big enough to withstand the tremendous pressure brought to bear upon them by the sinister interests—both political and commercial—who are striving to monopolize the air. The drastic action in removing Bellows and the appointment of the able Sam Pickard indicates the President is aroused to the danger that menaces broadcasting.

Remember Way Back, When!

REMEMBER way back when you were taught to say "thank you" and "You're welcome"? Have you forgotten the manners your mother so carefully taught you? Those who try to please you over the air would have a right to think you had never been "brung up" right. You setting on your hands at a theater would be very much like the writer's cramps you are not now getting from writing applause cards or little letters of appreciation to the folks at the broadcasting stations who nightly try to please you. Now frankly, aren't you really ashamed of yourself!

Let's kind of reform and see if we can't show we got manners, like we did way back. And write or wire your "thank you" to your favorites from out of the night.

The pooling of Radio patents as recommended by the R. M. A. is love's sweet dream with Davy at the receiving end of twenty-three seven-and-a-half-percents. What the Radio industry needs is a man with the courage of a Ford.

Doubling in brass has nothing on the Stations who are straddling two stations with one plant to clinch an exclusive wave length. Listen in while WGN metamorphoses into WLIB some evening.

The politicians better give their prospective candidate tryouts before the microphone. The McNamees of the future may be our presidents.

Good piano tuners must have gone into bootlegging judging by some of the broadcasts we hear. But when the piano playing don't suit you think of it: You used to put a quarter in the piano for worse.

Wave lengths will be longer soon with the new marcels.

Leaving the heir: "Keep smiling, my boy, keep smiling.

THE READER'S VIEW

Major Mott Gets Hot

ALTHOUGH writing is my profession, I but rarely "take pen in hand" to appear in the letter columns of our erudite press; but a communication in your issue of October has somewhat aroused my ire, and with your permission these lines, also for publication, in rebuttal, as it were.

The writer of the letter—a person by the name of L. S. J. Cranse, hailing from Summit, New Jersey, sets himself down for all and sundry to look at as that type of human being that is, perhaps, the most absurd, and gangway-blocking—as we say at sea—of all fault-finders!

It is SO . . . easy to tear down—to carpingly criticize—to fling mud! The gentleman from the notoriously wet state assumes—**arrogates**, is the better word—the right to string a lot of more or less assinine questions together, then—I suppose—he sits back in fortuitous and self-complacent ease—fondly hoping that he has set the Radio world aflame!

HE HAS NOT! But he has so unusually stirred me that I am asking the Hon. Gentleman from New Jersey . . . what would HE do—were he, shall we say (and God forbid!) the chairman of the Radio commission? I suppose that by a single wave of a mysterious wand . . . the airs that do blow would be perfect—from a broadcast sense—and instanter!

It is this type of a ceaselessly-knocking mind—much like an antiquated motor car—that is most annoying to thinking men—men who realize, full well, the tremendous difficulties under which the Radio Commission has had to labor—with practically no precedents—a law, but only one "of sorts"—no power to put off the air the cast number of parasitic stations of from 5 to 100 watts, whose fearful emittings "fill the air with horrid sound," in all truth, a commission that has earnestly and loyally done it's best under the circumstances.

WHY the gratuitous insults—or implied insults—that have appeared from time to time in your pages, Mr. Editor—with the HINT therein that the Radio Commission is "in cahoots" with the National Broadcasting company, and other great firms—without whose original efforts there would be no Radio at all—this day and age?!

I have been, as I said at the beginning of this epistle, a writer all my life; city editor of one of our greatest New York City sheets, Associated Press correspondent for many years—in the Far East—and so on—and, to me, the publication that "leans" toward suggested insults toward men of such integrity as Admiral Bullard and the other commissioners of Radio . . . savors STRONGLY of being not **quite** "on the level"—either.

'Tis the SMALL-witted person—such as, for instance, our esteemed New Jersey friend—who clog matters with their doleful whinings and yappings—reminding me of impudent little sky terriers, or similar wee beastie, yapping at the ponderous heels of a dignified St. Bernard—and having just about as much effect as a drop of water would, falling into the Atlantic ocean!

The world welcomes SOUND criticism—**always!** But this 'Jersey person is muchly akin to the mosquitoes that—once upon a time—swarmed in that State, if history is to be believed—infernal nuisances, yes—but not at all dangerous—**and:** they were got rid of—be it noted!

Cordially yours, LAWRENCE MOTT,

Major, Signal Corps, O. R. C., U. S. A., Institute of Radio Engineers, U. S. Deputy Game Warden.

And by the Same Mail!

ALLOW me to congratulate your editor, as well as John Shepard of WNAC and L. S. J. Cranse of Summit, N. J., for what seems to me very just criticism of the so-called federal Radio commission.

Montana, I believe, stands second or third in the number of Radios per 1,000 population in the United States. And I believe it stands first in the number of dollars invested per machine, on the basis of population.

Montanans, no doubt, got their money's worth the past two winters in fine programs from Central- and Pacific-time stations. However, since the Radio commission began exercising its authority, our Radio receiving sets are little more than an annoyance.

Programs from KPO, KFI, KJR, KHQ, KOMO, WLIB, WCBD, WCCO, WLS, WOC, KLDS, the Kansas City stations and others in the Central time area were quite a treat in the past. Today they are just an irritation, as not one of them can be singled out at night. I don't know, of course, what improvements have been made regarding interference troubles in the East, but I do know that the commission has rendered useless about a million dollars' worth of Radio receiving sets in the West.

Unless hours of broadcasting and wave lengths are regulated or changed before long, Radio programs out here have passed into history. I know nothing of the favoritism that may be played by the commission, but they are either partial or entirely incompetent.

Our suggestion is that control be returned to Hoover. When more stations were on the air than are operating at present they seemed to adjust themselves much better than the commission has done for them. WLIB and KOMO, as an example, are on identical wave lengths and operate the same hours.

Then we have KFI on a frequency of 640 and KFNF on 650 and KRLD also on 650. Along about the 800 frequency there are a half a dozen. WLS and KJR are almost identical. KPO and WLW chime in on each other.

It is possible that with the six and seven-tube sets necessary in the West interference is much worse than in the Central and Eastern time areas, where smaller sets with less volume answer the purpose.

We trust the Digest will not drop the fight for more impartial control over Radio.

B. B., Daniels County, Mont.

RADIO INDI-GEST

The Radio Announcer

Valued servant, he knows howski
People should pronounce Tchaikowsky,
Ponders deeply, forehead moppin',
On some words to say of Chopin,
Or explains to us the theme
Of the lovely *La Boheme*
Though he may miss out on *Thais*
His dispatch deserves our praise.

Parke Cummings
The Forum

Phone Service Par Excellence

GRAHAM McNAMEE received a letter from J. B. Mixson, Florence, S. C., a few days ago telling how the announcer had unwittingly called a local telephone number while broadcasting the world series in Pittsburgh. The letter says:

"During the series, finished this afternoon, we received your every word and laugh, in addition to hearing the swats and hard catches back of the batter, thanks to the WGY short wave and 2XAD. I was eating a hot dog with you, as I also missed my regular dinner today; and when you called for some kind of a signal from the apartment house with the yellow water tank three miles away I waved you a signal, too. You did not know that you called a Florence telephone number about then, but you did. I had my phone hung down, the mouthpiece toward the loud speaker, for the gang at the hotel to hear. You had just said, 'Lloyd Waner at bat,' when in comes Central asking, 'Number, please?' and your voice over the Radio seemed to reply, 'Three and two, that's all I know about it,' and Central said, 'Thank you, ringing three and two.' She did it and we all missed several plays before we could get the telephone connected back to 1090 again for the gang at the hotel."

Simply can't get over talking about that marvelous fight at Soldier Field. Greatest sensation Radio ever had. If you don't believe it read this letter from what the New York Telegram calls "The Perfect Wife."

I'd just like to have you here today to help me clean up the mess. My husband had his gang in to a Radio fight dinner. They burnt a hole in the davenport; broke an unmatchable goblet; swore until I had to park Junior with the neighbors, who are too deaf to hear a Radio, and then went home with half my household allowance for the year to come.

Wouldn't have missed it for a million dollars. Heard everything.

(MRS.) HELEN BURKE,
P. O. Box 1132, Tacoma, Wash.

Providence Wins Steeplechase

Leon H. Follett, Jr., 18 Sprague st., Providence, R. I., is the lucky winner of the Blue Jelly Bean, first prize in the word steeplechase that hopped off to the wide, wide world from this column in October. The words to be hurdled were:

Director
Wattle
Bitter
Music
Laughter

Leon took his obstacles in the following order:

"Sambo, yo' am lookin' pow'ful white today, a music?"

"No, Bones, yo' see I duhn took assay laughter an' automobile ride, so ah's shook up."

"Oh! huh-huh!"

"Say, Sambo, ain't dat director ob de church over dar?"

"Shuah am, Bones, dat's him an' his wife and dat dog what bitter. Wattle be next?"

All in favor of Mr. Follett getting the Blue Jelly Bean passedunanimously.

More Jelly Beans for the next Great Word Steeplechase. Here's the course:

Transmitter, Studio, Solo, Piano, Cornet.

Get on your marks, get set . . . Go!

High Points in Six Years of Radio History

CIVILIZATION is becoming used to magic by science and yet there is much that causes the most blasé observer to pause and wonder in the marvelous growth of Radio broadcasting within the brief period since the first Radio telephone entertainment since 1920.

Although the Westinghouse station, KDKA, at Pittsburg is generally credited with being the first station to carry on consistent broadcasting the first federal license for this purpose was issued to WBZ, a station owned by the same company at Springfield, Mass.

Then came the mad rush for building receivers. The public raced way ahead of the manufacturers. Many a fan with crude facilities manufactured some of the most intricate parts to those early receivers. Broadcasting stations began to sprout up throughout the country. Soon historic events were made a matter of broadcast record.

Historic Highlights

The following highlights have been chronicled by the Milwaukee Journal as outstanding events since that time:

Harding-Cox presidential returns announced by Station KDKA, Nov. 4, 1920.

The Dempsey-Carpentier fight, July 4, 1921.

Beginning of broadcasting of world series baseball games in October, 1921.

Funeral service of former President Harding, August, 1923.

Blow by Firpo, "the wild bull of the Pampas," knocking Jack Dempsey out of the ring at the Polo Grounds in New York City, Sept. 14, 1923, caught by ringside microphone and heard a thousand miles away.

Last public appearance of former President Wilson at the Armistice day celebration in the Arlington National cemetery, Nov. 11, 1923.

Funeral services of former President Woodrow Wilson from Washington cathedral, February, 1924.

National Conventions

Republican and Democratic National conventions in 1924.

Addresses of Coolidge, John W. Davis and La Follette, candidates for the presidency in the political campaign of 1924.

Gen. John J. Pershing, on the eve of his retirement, was heard by listeners on a two-way hookup talking back and forth with his generals in all parts of the country on National Defense Test day, Sept. 12, 1924.

Program incident to the inauguration of President Calvin Coolidge, March 4, 1925.

Announcement of the death of William J. Bryan, who died in Dayton, Tenn., July 26, 1925, was made over the Radio.

Pleas for aid which was promptly forthcoming were broadcast from many stations in the middle west in March, 1925, when the cyclone destroyed towns in Missouri, southern Illinois and Indiana and again in May, 1927, when the Mississippi river overflowed its banks in one of the worst floods in the history of the country. Dramatic appeals from Secretary Hoover at the scene of the flood, and Al Jolson, the comedian, in Chicago.

Hearing England

"Big Ben," famous clock in house of parliament tower, distinctly heard in New York and stations in eastern portion of the United States, when a London program was relayed to this country in September, 1925. England has previously attracted world wide attention by the miraculous broadcasting of the notes of a nightingale.

The phonograph records of the voices of former President Theodore Roosevelt, Warren G. Harding, Woodrow Wilson and William Howard Taft, the only living member of the quartet, now chief justice of the supreme court, were broadcast by Station WGN, Chicago, on July 4, 1926.

National Broadcasting Co. made its debut on Nov. 15, 1926, Walter Damrosch and the New York symphony orchestra; Harold Bauer, pianist, and Weber and Fields heard from New York; Mary Garden from Chicago, and Will Rogers from his theater dressing room in Kansas.

Chicago opera company performances was given national presentation in the spring of 1927.

President Coolidge's speech from the capitol on Washington's birthday, 1927, was carried over the entire nation by a hookup of 42 stations.

Col. Lindbergh's Return

Reception to Col. Charles Lindbergh, in Washington, D. C., June 11, 1927, and in New York two days later, broke all previous hookup records with 50 stations in the network. Most conspicuous example of Radio news reporting, announcers being stationed in the dome of the capitol, at the top of the Washington monument and along Broadway, describing Lindbergh's progress. Actual cheering of crowds and New York harbor whistles heard.

A little over a month later, July 21, 1927, the Dempsey-Sharkey bout from the Yankee stadium in New York City was put on the air by 52 stations, tied in with WEAF, the key station in New York City.

The following Sunday, July 24, 1927, this country joined with a Canadian broadcast for the first time and again all records were shattered—53 stations simultaneously transmitting a religious program.

During the ceremonies incident to the opening of the international peace bridge at Buffalo, the voice of the Prince of Wales was broadcast in the United States, Aug. 7, 1927.

Announcement made Aug. 31, 1927, that during the coming winter the first act of 16 Broadway musical productions will be broadcast direct from stage of theater, using 15 microphones.

National Radio day, September 21, with the speech of Rear Admiral William H. G. Bullard, chairman of the federal radio commission and more than 400 artists on a chain of 87 stations.

And finally the Dempsey-Tunney fight, September 22, from Soldiers' Field, Chicago, with a nation-wide network of 70 stations giving listeners everywhere "earside seats."

A complete chapter could be written on the evolution of the old type of receivers to the modern electric; the old tin horn loud speaker to the modern decorative instrument with its life like reproduction; and more could be written concerning the greater efficiency and range of Radio—the commercial transoceanic systems.

Every Radio show is a demonstration of the historic strides of the industry and the art of Radio broadcasting. Does the interest wane, now that the public finds it easy to buy a complete set and accessories without perforce bothering himself with a mass of perplexing wires, coils, transformers, spaghetti? The records of the shows indicate that 1927 has broken all records for attendance.

Radio Engineer Permits 2,200 Volts to Pass Through His Body—Laughs!

Bernays Johnson Jests as He Is Strapped in Electric Chair and Instructs Operator to Switch on Current That Melts Steel

ONE of the greatest sensations in the history of any of the Radio shows was the demonstration by Bernays Johnson, Radio engineer, that the electric chair need not necessarily cause death when used as an instrument for execution.

He submitted to a test before the thousands present at both the Radio World's Fair in New York and the Chicago Radio show, using more than double the amount of current ordinarily applied to destroy a condemned criminal. It made him sick but he was able to smile acknowledgment to applauding audiences. Mr. Johnson permitted 2,200 volts and 350 amperes of current to pass through his body.

"I will hold a small bar of steel between my teeth," he explained from the balcony in Chicago as he was about to be strapped in the black and doleful looking "death chair." "I am going to sit tight until the bar melts. If it does not melt, I melt."

His assistant adjusted the metal cap to his head, then gave the signal. The generator hummed, Johnson's body strained at the straps, and almost instantly the steel between his teeth sputtered and flashed. The current was stopped in sixty seconds. Johnson sagged in his seat but was assisted to his feet, swayed and toppled into the arms of an attending physician. In a moment he was able to smile. He bowed and retired behind a screen where he collapsed and remained unconscious for ten minutes.

Dr. Herman Bundesen, head of the Chicago department of health, witnessed the feat and was astounded that Johnson was not more seriously injured. Johnson explained that he had been "in training" and could survive a greater electrical shock than any other man alive.

BIRTHDAY PARTIES OF WBAL ANI

HIGH LIGHTS OF THE AIR

A SECOND birthday is not as important as the first one, therefore WBAL, Baltimore, will be more conservative this year than last. From 6 to 12 midnight on November 1 a special celebration will take place. The Municipal band of Baltimore is one of the features and Mayor William F. Broening another.

Almost a twin of Station WBAL is WRVA, Richmond. The second birthday of this broadcaster occurs November 2. The Gypsy Nomads, Fireside quartet, Ye Olde Time singers, Country Fiddlers and Banjo quartet are only a few of the features appearing on this special program.

The brilliant Chrysanthemum ball, the feature event of the Southeastern Flower show being held at Asheville, N. C., will be broadcast through WWNC, November 10. A special Armistice Day program will be given November 11 by the same organization. In fact martial tunes reminiscent of the great war will be heard throughout the air.

The voices of four past presidents of the United States will mark the celebration of KOA's Armistice Day program. These addresses are taken from records made by Theodore Roosevelt, William H. Taft, Woodrow Wilson and Warren G. Harding. This is one of the few times a station has attempted to broadcast famous voices out of the past.

Brown and Craig, Chicago's Favorite Black Face Comedians, are the 9 o'clock feature from WSBC, each Wednesday. The two boys are of the old school and have entertained the American public from the vaudeville stage for a great many years and, being real artists, cannot keep away from it.

Please notice the long list of stations broadcasting football games each Saturday. These are given under the Saturday and under Thanksgiving day Headliners.

TUESDAY, NOVEMBER 1

Headliners

Eastern	Central	Mountain	Pacific
6 p. m.	5	4	3

WBAL (285m-1050kc) WBAL's Birthday party.

7	6	5	4

WLS (344.6m-870kc) "Kernels from the Corn Belt."

7:30	6:30	5:30	4:30

WJZ (454.3m 660kc) Cook's travelog, "Ceylon."

8	7	6	5

WCCO (405.2m-740kc) Minneapolis Civic & Commerce Assn.

WEAF (491.5m-610kc), WFI (405.2m-740kc), WRC (468.5m-640kc), WTAM (399.8m-750kc), WWJ (352.7m-850kc), KSD (545.1m-550kc), WOC (374.8m-800kc) Great Moments in History, "Daniel Boone."

WGHP (319m-940kc) Bush and Lane Tuesday Evening musicale.

WSUI (475.9m-630kc) "Early Iowa History", Prof. Bruce E. Mahan.

8:30	7:30	6:30	5:30

WLS (344.6m-870kc) Personalities in music.

8:32	7:32	6:32	5:32

WFLA (288.3m-1040kc) Mrs. Frank Delemater, contralto.

9	8	7	6

KLDS (270.1m-110kc) Program. Mrs. Herbert Spokesfield.

KOIL (277.6m-1080kc) Katherine Cheyne Lemen, contralto.

WBAP (499.7m-600kc) "Percy Pinkpants", "Mary Prim".

WCBD (344.6m-870kc) Annual seasonal opening concert.

WJZ (454.3m-660kc), WBZ (333.1m-900kc), KDKA (315.6m-950kc), KYW (526m-570kc), WJR (440.9m - 680kc), W H A M (277.6m - 1080kc), WBAL (285.5m-1050kc) Continentals.

WTIC (535.4m-560kc) Manning-Bowman concert.

9:30	8:30	7:30	6:30

KFKC (454.3m-660kc) The Cecilians.

10	9	8	7

WDOD (245.8m-1220kc) Alhambra Shrine band.

WFAA (499.7m-600kc) Mrs. Walter J. Fried, violin.

WJZ (454.3m-660kc) Gamboliers.

WWJ (352.7m-850kc) String Pickers.

10:30	9:30	8:30	7:30

WDAF (370.2m-810kc) Folgers' Serenade with Martin and Taylor.

11	10	9	8

WFAA (499.7m-600kc) Mrs. Albert E. Smith, soprano; Mrs. Howard R. Parks, contralto.

11:30	10:30	9:30	8:30

KGW (491.5m-610kc) Bridge games.

12 mid.	11	10	9

WFAA (499.7m-600kc) Dance music by Parrino-Sparkman orchestra.

Regular Tuesday Features

Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 8-10 p. m. WJZ; 11:35, Grand theater.

WBAL, Baltimore, Md. (285.5m-1050kc) 6:30-7:30 p. m., dinner music; 7:30, quartet; 8, WJZ; 9, WJZ; 10, dance music.

WBT Charlotte, N. C. (258.5m-1160kc) 7 p. m. WEAF.

WBZ Springfield, Mass. (333.1m-900kc) 7:03, orchestra; 7:30, ensemble; 8, WJZ; 9, WJZ; 10, musicale; 10:30, dance music.

WCAE Pittsburgh, Pa. (516.9m-580kc) 6 p. m. dinner concert; 8, musicale; 8:30, WEAF; 9, WEAF; 12, dance music.

WCAU (260.7m-1150kc) 6 p. m. This and That revue; 8, minstrels; 10:15, variety program; 10:30, orchestra.

WCSH Portland, Me. (428.3m-700kc) 8 p. m. Strand theater; 9, WEAF; 12, Lions Club.

WEAF New York, N. Y. (491.5m-610kc) Sealy Air Weavers, WFI, WGY, WGR, WCAE, WTAM, WWJ, WLIB, KSD, WDAF, KVOO, WFAA; 9, Eveready hour, WEEI, WJAR, WGR, WFI, WRC, WCAE, WTAM, WWJ, WSAI, WGN, KSD, WOC, WCCO, WGY, WHAS, WSM, WSB, WMC, WDAF; 10:10, Cavalcade, WGR, WFI, WRC, WCSH, WCAE, WTAM, WWJ, WGY, WDAF; 11, orchestra, WRC, WWJ, WFI.

WEEI Boston, Mass. (461.3m-650kc) 7:30 p. m. musicale; 9, WEAF; 10, cruising the air.

WFI Philadelphia, Pa. (405.2m-740kc) 6:30 p. m. orchestra; 8:30, WEAF.

WFLA Clearwater, Fla. (288.3m-1040kc) 8:30 p. m. studio program; 9:05, organ; 10, dance program.

WGBS New York, N. Y. (349m-860kc) 7:30 p. m. orchestra; 8:15, artists; 11:30, orchestra.

WGHP Detroit, Mich. (319m-940kc) 8-10 p. m., musicale.

WGR Buffalo, N. Y. (302.8m-990kc) 6:30 p. m. orchestra; 7:45, science news; 8-11, WEAF.

WGY Schenectady, N. Y. (379.5m-790kc) 7:45 p. m. musicale; 8, Beech-Nut program; 8:30, WEAF; 9, WEAF; 10, WEAF.

WHAR Atlantic City, N. J. (272.6m-1100kc) 7:45 p. m. book talk; 8-9, evening concert.

WHK Cleveland, O. (265.3m-1130kc) 6:30 p. m. program; 9, musicale; 10, orchestra.

WIP Philadelphia, Pa. (508.2m-590kc) 8 p. m. recital; 10, weekly movie; 10:30, orchestra.

WJAX Jacksonville, Fla. (336.9m-890kc) 8 p. m., Just Florida Folks; 9, recital; 10, dance music.

WJR-WCX Detroit, Mich. (440.9m-680kc) 7 p. m. orchestra; 8, WJZ; 9, Manuel Girls; 9:30, orchestra; 10, Red Apple Club.

WJZ New York, N. Y. (454.2m-660kc) 7 p. m. dog talk; 7:15, orchestra; 7:30, Cook's travelogs; 8, Stromberg-Carlson hour, WBZ, KDKA, KYW, WJR, WHAM, WBAL; 9, Continentals, WBZ, KDKA, KYW, WBAL, WJR; 10, time, WBZ, KDKA, KYW, WBAL, WJR; 10, artists; 10:30, orchestra.

WKRC Cincinnati, O. (333.1m-900kc) 6 p. m. organ; 9, dance program; 11, entertainers.

WLW Cincinnati, Ohio (428.3m-700kc) 7:30 p. m. organ; 9, Formica concert; 11, dance music.

WMAK Buffalo, N. Y. (545.1m-550kc) 6:15 p. m. movie club; 8, theater program; 10, program.

WMCA New York, N. Y. (370.2m-810kc) 6:25 p. m. baseball; 6:30, orchestra; 10, Italian hour of song; 11, Hotel McAlpin orchestra.

WNAC Boston, Mass. (288.3m-1040kc) 7:30 p. m. program; 8:30, Op'ry House; 9:45, quartet; 10:15, symphony; 11:05, dance music.

WOR Newark, N. J. (422.3m-710kc) children's hour; 6:15-11:05 p. m. musicale.

WPG Atlantic City, N. J. (272.6m-1100kc) 6:45 p. m. organ; 8:15, concert; 10:30, Marcele duo; 11, dance orchestra.

WRC Washington, D. C. (468.5m-640kc) 6 p. m. N. B. C.; 7, orchestra; 8-11, N. B. C.

WSAI Cincinnati, Ohio (361.2m-830kc) 7 p. m. children's hour; 7:30, talk; 8:30-11:30, WEAF.

WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner concert; 8, musicale; 10, dance music.

WTAG Worcester, Mass. (516.9m-580kc) 7:30 p. m. studio program.

WTAM Cleveland, Ohio (399.8m-750kc) 6 p. m. State theater vaudeville program; 7, orchestra; 8, WEAF; 10, Neapolitans; 11, orchestra.

WTIC Hartford, Conn. (535.4m-560kc) 7:30 p. m. Anvileers; 9, concert; 9:30, Harmony Bells; 10:30, orchestra.

WWJ Detroit, Mich. (352.7m-850kc) 6 p. m. dinner concert; 8, WEAF; 10:30, organ.

WWNC Asheville, N. C. (296.9m-1010kc) 7 p. m. dinner music.

Central Time Stations

KFAB Lincoln, Neb. (309m-970kc) 7 p. m. Good Will program; 7:30, U. of Neb.

KMA Shenandoah, Ia. (394.5m-760kc) 6 p. m. talk; 7, Twins; 8, Dixie Girls.

KOIL Council Bluffs, Ia. (277.6m-1080kc) 7 p. m. program; 8, Warner Brothers program; 11, orchestra.

KPRC Houston, Texas (296.9m-1010kc) 7:30-9:30 p. m. studio concert.

KSD St. Louis, Mo. (545.1m-550kc) 7-9 p. m. musicale.

KTHS Hot Springs National Park, Ark. (384.4m-780kc) 8 p. m. program.

KYW Chicago, Ill. (526m-570kc) 6:32-7 p. m. dinner program; 7, WJZ; 9-10:55, musicale.

WAMD Minneapolis-St. Paul, Minn. (225.4m-1330kc) 7:01 p. m. musicale; 10, dance program; 10:30, Sarge; 11:15, organ novelty.

WBAP Fort Worth, Tex. (499.7m-600kc) 6 p. m. orchestra; 8, Uncle Superior.

WBBM Chicago, Ill. (389.4m-770kc) 7-10 p. m. program, 10, minstrel.

WBCN Chicago, Ill. (288.3m-1040kc) 7 p. m. popular program.

WCBD Zion City, Ill. (344.6m-870kc) 8 p. m. chorus, celestial bells.

WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 7 p. m. WEAF; 9, program; 9:30, musical program.

WCFL Chicago, Ill. (483.6m-620kc) 6 p. m. labor hour; 7:15, program; 10:15-12, Granada Theater stage show.

WCOA Pensacola, Fla. (249.9m-1200kc) 10 p. m. Footwarmers.

WDAF Kansas City, Mo. (370.2m-810kc) 7:30, WEAF; 9, program; 11:45-1, Nighthawk frolic.

WDOD Chattanooga, Tenn. (245.8m-1220kc) 7-10 p. m., musicale.

WEBH Chicago, Ill. (365.6m-820kc) 7-8 p. m. orchestra, artists; 9-11, Uptown theater stage presentation.

WENR Chicago, Ill. (288.3m-1040kc) 6 p. m. organ; 8, classical program; 9:30, popular program.

WFAA Dallas, Tex. (499.7m-600kc) 7 p. m. orchestra; 7:30, WEAF; 9-11, program; 11-12, theater hour.

WGN Chicago, Ill. (305.9m-980kc) 6:10 p. m. Punch and Judy; 6:50, old fashioned almanack; 8, WEAF; 9, musicale; 9:30, recital; 10, Sam 'n' Henry; 10:10, music box; 10:20, musicale; 10:50, concert.

WHAS Louisville, Ky. (461.3m-650kc) 7:30 p. m. music; 8-10, WEAF.

WHB Kansas City, Mo. (336.9m-890kc) 7 p. m. dinner concert; 8, evening concert.

WHO Des Moines, Iowa (535.4m-560kc) 6:30 p. m. orchestra; 8:30, string trio; 10, Victorians.

WHT Chicago, Ill. (416.4m-720kc) schedule being revised.

WIBO Chicago, Ill. (416.4m-720kc) schedule being revised.

WJAZ Chicago, Ill. (263m-1140kc) 7 p. m. orchestra; 9, studio program.

WJJD Chicago, Ill. (365.6m-820kc) 6-7 p. m. dinner concert; 8-9, Mooseheart hour; 11-1, Palmer House Victorians; Carroll and Grady.

WLAC Nashville, Tenn. (226m-1330kc) 9 p. m. soprano; 10, studio program.

WLIB Chicago, Ill. (306m-980kc) 7 p. m. dinner concert; 11-12:15, frolic.

WLS Chicago, Ill. (344.6m-870kc) 6:30 p. m. orchestra; 7:20, Duo; 7:30, Don Malin.

WMAQ Chicago, Ill. (447.5m-670kc) 7 p. m. orchestra; 8, program; 12, popular program.

WMBB Chicago, Ill. (252m-1190kc) 6 p. m. dinner music; 7, artists; 8:30-10:30, musicale.

WMC Memphis, Tenn. (516.9m-580kc) 8 p. m. WEAF; 9, Cotton and Morpheus; 11, midnight frolic.

WOAI San Antonio, Tex. (319m-940kc) 8:30 p. m. players.

WOC Davenport, Ia. (374.8m-800kc) 8 p. m. WEAF; 9, musicale.

WOK Chicago, Ill. (252m-1190kc) 11-12:30 a. m. popular program.

WOW, Omaha, Nebr. (508.2m-590kc) 6 p. m. classical program; 6:50, Randall's Royal Fontenelle orchestra; 9, popular and old time music.

WSB Atlanta, Ga. (475.9m-630kc) 7:30 p. m. WEAF; 8, WEAF; 10:45, orchestra.

WSBC Chicago, Ill. (232.4m-1290kc) 5-7 p. m. Hugh Swift and his Serenaders; dinner concert; 9-1 a. m., popular program.

WSM Nashville, Tenn. (340.7m-880kc) 7:15-8 p. m. dinner concert; 8, WEAF; 9, program.

WTMJ Milwaukee, Wis. (293.9m-1020kc) 7-12 mid., program.

Mountain Standard Time Stations

KOA Denver, Colo. (325.9m-920kc) 7:30 p. m. farm question box.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 6 p. m. program; 7, concert trio; 8, studio program; 10, dance music.

KFI Los Angeles, Calif. (468.5m-640kc) 7-8 p. m. serenaders; 8-9, program; 9-10, orange network; 10-11, orange network.

KFRC San Francisco, Calif. (454.3m-660kc) 6:30 p. m. dinner concert; 8, movie club; 9, studio program; 10, dance program.

KFWB Hollywood, Calif. (361.2m-830kc) 4:45-12 midnight, program.

KGO Oakland, Calif. (384.4m-780kc) 6-6:55 p. m. Stanislas Bem's Little Symphony; 8-9, H M and J P; 9-10, National Broadcasting Company; 10, Vagabonds, N. B. C.

KGW Portland, Ore. (491.5m-610kc) 8-9 p. m., educational program; 9, National Broadcasting Company; 10, orchestra.

KHJ Los Angeles, Calif. (416.4m-720kc) 6:30-7:30 p. m. children's hour; 8-10, new artists.

KJR Seattle, Wash. (348.6m-860kc) 8 p. m. studio program; 10-11, orchestra.

KNX Hollywood, Calif. (336.9m-890kc) 8 p. m. program; 9:30, musicale; 10, frolic.

Capitol theater entertainers are the three art Rooney, Marion Bent and Pat Rooney III are the this theater gives over the Red chain. Maurice G one day for a tryout and is now one of the most hits have been written by him. On the right is Ji Fandango

KPO San Francisco, Calif. (422.3m-710kc) 6:30-7:30 p. m. orchestra; 8-9, program; 9-10, orange chain; 10-11, orchestra.

Tuesday silent night for: CFCA, KFH, KLX, WLIT, WOS, WSMB.

WEDNESDAY, NOVEMBER 2

Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WSUI (475.9m-630kc) Current Events, Prof. Frank E. Horack.

7	6	5	4

WBAP (499.7m-600kc) The Seven Aces, "All Eleven of 'Em".

7:30	6:30	5:30	4:30

WBAP (499.7m-600kc) "Capt. Appleblossom" and "Skipper Moonshine".

WGY (379.5m-790kc) Remington Band, direction of Edwin L. Daniels.

8	7	6	5

WSUI (475.9m-630kc) Elementary French, Prof. A. J. Dickman.

8:15	7:15	6:15	5:15

WCCO (405.2m-740kc) The Amateur Philosopher.

8:30	7:30	6:30	5:30

WHAS (461.3m-650kc) Virginia Vetter's entertainers.

8:32	7:32	6:32	5:32

WFLA (288.3m-1040kc) Tuesday Morning Music Club.

9	8	7	6

WCOA (249.9m-1200kc) Weekly bridge lesson.

WLS (344.6m-870kc) J. Walker Sap in District of Columbia.

9:15	8:15	7:15	6:15

KQA (325.9m-920kc) Music from the French-Canadian country; poems of Henry Drummond.

9:30	8:30	7:30	6:30

WCOA (249.9m-1200kc) Frances Keen Villar, Lilting Melody Girl of WCOA.

WDOD (245.8m-1220kc) Organ recital.

10	9	8	7

KOIL (277.6m-1080kc) Prof. Herr Heinrich Schultzenheim and his Boys.

WHO (535.4m-560kc) Four Horsemen quartette.

WIZ (454.3m-660kc) New Record Boys.

WLS (344.6m-870kc) U. of Chicago choir.

WCOA (249.9m-1200kc) Mr. Olive Jubilee singers, spirituals.

10:30	9:30	8:30	7:30

WCOA (249.9m-1200kc) Pursell & Wilkerson, "The Fiddler and the Dude".

WCCO (405.2m-740kc) Gold Medal concert chorus.

WGN (306m-980kc) Somewhere in Chicago.

WHO (535.4m-560kc) Velma Kyes, popular pianist.

10:45	9:45	8:45	7:45

KGW (491.5m-610kc) Catholic Truth Society lecture.

11	10	9	8

KGW (491.5m-610kc) White King orchestra.

WCOA (249.9m-1200kc) Don San Francisco Hernandes, concert violinist.

12 mid.	11	10	9

KOIL (277.6m-1080kc) Ambassadors from Peacock Inn.

12:45 a. m.	1:45	10:45	9:45

WBAP (499.7m-600kc) John Josey, organist.

Regular Wednesday Features

Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 7:30 p. m. program; 8, WJZ; 9, WJZ.

WBAL Baltimore, Md. (285.5m-1050kc) 7:30 p. m. vocal recital; 8, ensemble; 9, WJZ; 10, dance music.

WBT Charlotte, N. C. (258.5m-1160kc) 7:30 p. m. dinner music; 8, WJZ; 9, music.

WBZ Springfield, Mass. (333.1m-900kc) 6:30 p. m. ensemble; 8, WJZ; 8:30, trio; 9, WJZ; 10, artists; 10:30, orchestra.

WCAE Pittsburgh, Pa. (516.9m-580kc) 6 p. m. dinner concert; 7:30, WEAF; 9, WEAF; 11, orchestra.

WCAU Philadelphia, Pa. (260.7m-1150kc) 7 p. m. program; 9:30, musicale; 11, Cheer-up club.

WCSH Portland, Me. (428.3m-700kc) 8 p. m. WEAF.

WEAF New York, N. Y. (491.5m-610kc) 7:30 p. m. light opera, WJAR, WTAG, WLIT, WRC, WCAE, KSD; 8:30, organ masters, WEEI, WTIC, WLIT, WRC, WGY, WGR, WCAE, WTAM, WWJ, WSAI, WLIB, KSD, WCCO, WOC, WDAF; 9, time, WEEI, WJAR, WRC, WLIT, WCAE, WTAM, WWJ, WSAI, KSD, WGY; 9, Ipana Troubadours, WEEI, WGR, WRC, KSD, WCCO, WGY; 9:30, Goodrich Silvertown Cord orchestra, WEEI, WJAR, WTAG, WGR, WCSH, WCAE, WTAM, WWJ, WSAI, WGN, KSD, WOC, WCCO, WHAS, WSM, WSB, WMC, WLIT, WDAF; 10:30, Campus Carollers, WRC, WSAI; 11, orchestra, WRC.

WEEI Boston, Mass. (461.3m-650kc) 8 p. m. program; 8:30, WEAF; 10:30, cruising the air.

WFI Philadelphia, Pa. (405.2m-740kc) 7:15 p. m. questions; 8:30-11:30, WEAF.

WFLA Clearwater, Fla. (288.3m-1040kc) 8:30 p. m. open house; 10, dance program.

WGBS New York, N. Y. (348.6m-860kc) 6:30 p. m. entertainers.

WGHP Detroit, Mich. (319m-940kc) 6 p. m. dinner concert; 9, Columbia chain.

WGR Buffalo, N. Y. (302.8m-990kc) 7:45 p. m. piano lessons; 8, orchestra; 9, WEAF; 11:05-12 mid., music.

WGY Schenectady, N. Y. (379.5m-790kc) 8:30, WEAF; 9:30, coffee hour.

WHN New York, N. Y. (394.5m-760kc) 6:30 p. m. orchestra; 11:30, Silver Slipper orchestra.

WHK Cleveland, O. (265.3m-1130kc) 6 p. m. serenaders; 8, music; 10:15, orchestra.

WJAX Jacksonville, Fla. (336.9m-890kc) 9, WJZ, recital; 10, dance orchestra.

WJR-WCX Detroit, Mich. (440.9m-680kc) 7 p. m. travel hour; 9, dance orchestra; 10:30, Ford and Glenn; 11:30, orchestra.

WJZ New York, N. Y. (454.2m-660kc) 8 p. m. Champion Sparkers, KDKA, KYW, WLW, WJR; 8:30, Sylvania Foresters, WBZ, KDKA, KYW; 9, Spotlight hour; 10, Record Boys; 10:30, orchestra.

WLW Cincinnati, Ohio (428.3m-700kc) 7:30 p. m. farm radio council talk; 8, program; 10, trio; 11, organist.

WMAK Buffalo, N. Y. (545.1m-550kc) 6:15 p. m. dinner music; 8, band; 9, Columbia chain.

WMCA New York, N. Y. (370.2m-810kc) 6:30 p. m. orchestra; 10, musicale; 12:30, frolic club.

WMSG New York, N. Y. (236m-1270kc) 9-11:30 p. m. program.

WNAC Boston, Mass. (288.3m-1040kc) 7:30 p. m. program; 9, Columbia chain; 11:05, dance music.

WOO Philadelphia, Pa. (508.2m-590kc) 7:30 p. m. musicale; 8:30, music; 9:25, orchestra.

WOR Newark, N. J. (422.3m-710kc) 6:15 p. m. program; 9, Columbia chain; 11, orchestra.

WPG Atlantic City, N. J. (272.6m-1100kc) 7:05 p. m. dinner music; 7:35, minstrels; 9:10, studio program; 10, band; 11:15, dance music.

WRC Washington, D. C. (468.5m-640kc) 7:30-10:30, WEAF; 10:30, orchestra.

WRVA Richmond, Va. (254.1m-1180kc) 8 p. m. musicale.

WSAI Cincinnati, Ohio (361.2m-830kc) 7 p. m. chimes; 7:30-9:15, WEAF; 9:15, studio program; 9:30, WEAF; 10:30, WEAF.

WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner concert; 10, dance music.

WTAG Worcester, Mass. (516.9m-580kc) 7:30 p. m. WEAF; 8:30, musicale; 9, program; 9:30, WEAF; 10:30, dance orchestra.

WTAM Cleveland, O. (399.8m-750kc) 6 p. m. orchestra; 7, talks; 8:30, WEAF; 10:30, studio program; 11, orchestra.

WTIC Hartford, Conn. (535.4m-560kc) 7-11 p. m. program.

WRVA OPEN MONTH'S FESTIVITIES

...oking coyly out from the middle of the page. Pat ...es. They may be heard on the Sunday night program ... left, is one of KPO's new discoveries. He walked in ...r ballad singers of this station. Many of the new song ...Pentecost who co-stars with Lynn Peal in the Spanish ...e at WDAD.

Mountain Standard Time Stations

KOA Denver, Colo. (325.9m-920kc) 8 p. m. Scheuerman's Colorado orchestra; 8:15, studio program.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 7 p. m. trio; 8, organ.
KFI Los Angeles, Calif. (468.5m-640kc) 7:30 p. m. Nick Harris; 8-9, program, California Petroleum corp.; 9, orange network; 10, classic music.
KFOA Seattle, Wash. (447.5m-670kc) 7 p. m. entertainers; 9, N. B. C.
KFRC San Francisco, Calif. (454.3m-660kc) 6:20 p. m. program; 8, WJZ; 10-12 mid. dance program.
KFWB Hollywood, Calif. (361.2m-830kc) 6-7 p. m. dinner hour; 7:50, news; 8-9, features; 9-10, orchestra; 10-11, Rainbo orchestra.
KGO Oakland, Calif. (384.4m-780kc) 6-6:55 p. m. dinner concert; 8, vaudeville; 9, National Broadcasting company; 10, orchestra.
KGW Portland, Ore. (491.5m-610kc) 8-9 p. m. concert; 9-10, National Broadcasting company.
KHJ Los Angeles, Calif. (416.4m-720kc) 6:30-7:30 p. m. children's hour; 8:15-10, musicale.
KJR Seattle, Wash. (348.6m-860kc) 6:30 p. m. dinner concert; 8-12 mid. studio program.

FARMERS' PROGRAM INDEX

Special Farm Features

Weather

Local Time

KDKA, 10:10 a. m., 10 p. m.
KFH, 8:30 p. m.
KFNF, 7:30 a. m., 12:40 p. m.
KFOA, 4:30 p. m.
KFWI, 10:30 a. m.
KGA, 6 p. m.
KGO, 12:30 p. m., 7:03 p. m.
KGW, 10 a. m., 7:30 p. m.
KJR, 12 n.
KMMJ, 9:30 a. m., 12:30 p. m.
KMOX, 1 p. m.
KOA, 11:45 a. m.
KOIL, 11:45 a. m., 5:45 p. m.
KOMO, 12:15 p. m., 8 p. m.
KPO, 12 n.
KYW, 10:55 a. m., 11:55 p. m.
WABC, 11:55 a. m., 11 p. m.
WBZ, 11:25 a. m., 10:30 p. m.
WCAE, 3:40 p. m.
WCSH, 7:10 p. m.
WCCO, 9:45 a. m., 10 p. m.
WDAF, 5:45 p. m.
WDBO, 7:40 p. m.
WEEI, 11:10 p. m.
WFAA, 10:30 a. m., 9:30 p. m.
WGY, 12:06 p. m.
WHAD, 10:30 a. m., 2 p. m.
WHO, 10 a. m.
WIP, 1:30 p. m.
WJZ, 2 p. m.
WLW, 11:15 p. m., 12.
WOAI, 10 a. m.
WOC, 12:30 p. m.
WOI, 10:30 a. m.
WOO, 11:30 a. m., 10:05 p. m.
WOI, 10:30 a. m.
WSM, 11:45 a. m.
WTAG, 12:59 p. m.

Monday

Eastern	Central	Mountain	Pacific	
9 a. m.	8	7	6	KMMJ (285.5m-1050kc), Poultry talks.
12	11	10	9	WHK (265.3m-1130kc), Farm Flashes.
12:20 p.m.	11:20	10:20	9:20	WJR-WCX (440.9m-680kc) U. S. Farm service.
1	12	11	10	WHB (336.9m-890kc), Farm flashes.
				WKAR (230.6m-1300kc), Farm talks.
				WKBH (220.4m-1360kc), U. S. Farm talks.
				WRHM (260.7m-1150kc), U. S. Farm talks.
1:10	12:10	11:10	10:10	WMAQ (447.5m-670kc), Prairie Farmer.
1:15	12:15	11:15	10:15	WTAW (483.6m-620kc), Farm talks.
1:20	12:20	11:20	10:20	WEAO (282.8m-1060kc), Timely hints to farmers.
	12:30	11:30	10:30	WFAA (499.7m-600kc), Farmers' hour.
1:35	12:35	11:35	10:35	KSAC (333.1m-900kc), Farm talks.
1:45	12:45	11:45	10:45	WOI (265.3m-1130kc), Animal Husbandry
2:05	1:05	12:05	11:05	WDAY (361.2m-830kc), U. S. Farm talks.
6:20	5:20	4:20	3:20	WDBO (288.3m-1040kc), Farm flashes.
6:50	5:50	4:50	3:50	WSEA (263m-1140kc), U. S. Farm school.
7:55	6:55	5:55	4:55	WAMD (225.4m-1330kc), U. S. Farm talks.
8	7	6	5	KSAC (333.1m-900ks), Farm courses.
				WCSH (428.3m-700kc), Farm feature.
8:10	7:10	6:10	5:10	KUOA (296.9m-1010kc), U. S. Farm school
8:20	7:20	6:20	5:20	WOS (422.3m-710kc), U. S. Farm school.
8:30	7:30	6:30	5:30	WHB (336.9m-890kc), Poultry talk.
9:20	8:20	7:20	6:20	KQW (296.9m-1010kc), U. S. Farm talks.

Tuesday

Eastern	Central	Mountain	Pacific	
9 a. m.	8	7	6	KMMJ (285.5m-1050kc), Poultry talks.
11:20	10:20	9:20	8:20	WCSH (428.3-700kc), Farm features.
12	11	10	9	WHK (265.3m-1130kc), Farm flashes.
12:20 p. m.	11:20	10:20	9:20	WJR-WCX (440.9m-680kc), Farm service.
12:45	11:45	10:45	9:45	WSM (340.7m-880kc), Farm talk.
1	12	11	10	WCCO (405.2m-740kc), Farm hour.
				WHB (336.9m-890kc), Farm flashes.
				WKBH (220.4m-1360kc), U. S. Farm talks.
				WLS (344.6m-870kc), Dinner bell program.
1:30	12:30	11:30	10:30	WFAA (499.7m-600kc), Farmers' hour.
1:35	12:35	11:35	10:35	KSAC (333.1m-900kc), Farm talks.
1:40	12:40	11:40	10:40	KFJF (270.1m-1110kc), State farm talks.
1:45	12:45	11:45	10:45	WOI (265.3m-1130kc), Plant pathology.
3	2	1	12	KOMO (305.9m-980kc), Garden talk.
6:20	5:20	4:20	3:20	WDBO (288.3m-1040kc), Farm talks.
6:50	5:50	4:50	3:50	WSEA (263m-1140kc), U. S. Farm school.
7:55	6:55	5:55	4:55	WAMD (225.4m-1330kc), U. S. Farm talks.
8:30	7:30	6:30	5:30	WFBG (280.2m-1070kc), U. S. Farm school.
9:20	8:20	7:20	6:20	KQW (296.9m-1010kc), U. S. Farm talks.
9:30	8:30	7:30	6:30	KOA (325.9m-920kc), Farm Question box.

Wednesday

Eastern	Central	Mountain	Pacific	
11:40 a. m.	10:40	9:40	8:40	WCSH (428.3m-700kc), Farm feature.
12	11	10	9	WHK (265.3m-1130kc), Farm flashes.
				WRVA (254.1m-1180kc).
12:20	11:20	10:20	9:20	WJR-WCX (440.9m-680kc), Farm service.
12:45	11:45	10:45	9:45	WHK (265.3m-1130kc), U. S. Farm flashes.
				WSM (340.7m-880kc), Farm talks.
1	12	11	10	WHB (336.9m-890kc), Farm flashes.
				WLS (344.6m-870kc), Dinner Bell program.
				WKBH (220.4m-1360kc), U. S. Radio farm talks.
				WRHM (260.7m-1150kc), U. S. Farm talks.
1:10	12:10	11:10	10:10	WMAQ (447.5m-670kc), Prairie Farmer.
1:15	12:15	11:15	10:15	WEAO (282.8m-1060kc), Farm flashes.
				WTAW (309.1m-970kc), Farm flashes.
1:30	12:30	11:30	10:30	WFAA (499.7m-600kc), Farmers' hour.
1:35	12:35	11:35	10:35	KSAC (333.1m-900kc), Farm talks.
1:45	12:45	11:45	10:45	WOI (265.3m-1130kc), Poultry talk.
6:50	5:50	4:50	3:50	WSEA (263m-1140kc), U. S. Farm talks.
7:30	6:30	5:30	4:30	WLW (428.3m-700kc), Farm Federation bureau.
7:55	6:55	5:55	4:55	WAMD (225.4m-1330kc), U. S. Farm talks.
8:20	7:20	6:20	5:20	WOS (422.3m-710kc) Farm talk.
8:27	7:27	6:27	5:27	KOA (325.9m-920kc), Farm talk.
8:30	7:30	6:30	5:30	WFBG (280.2m-1070kc), U. S. Farm school.

Thursday

Eastern	Central	Mountain	Pacific	
12	11	10	9	WHK (265.3m-1130kc), Farm flashes.
12:20 p. m.	11:20	10:20	9:20	WCSH (428.3m-700kc), Farm program.
				WJR-WCX (440.9m-680kc), Farm service.
12:45	11:45	10:45	9:45	WHK (265.3m-1130kc), U. S. farm flashes.
				WSM (340.7m-880kc), Farm talks.
1	12	11	10	WHB (336.9m-890kc), Farm flashes.
				WKBH (220.4m-1360kc), U. S. farm talks.
				WLS (344.6m-870kc), Dinner bell program.
1:15	12:15	11:15	10:15	WTAW (309.1m-970kc), Farm programs.
1:30	12:30	11:30	10:30	WFAA (499.7m 600kc), Farmers' hour.
1:35	12:35	11:35	10:35	KSAC (333.1m-900kc), Farm talks.
1:45	12:45	11:45	10:45	WOI (265.3m-1130kc), Farm crops.
3	2	1	12	KOMO (305.9m-980kc), Poultry talk.
8:10	7:10	6:10	5:10	KUOA (296.9m-1010kc), U. S. Farm school.
8:30	7:30	6:30	5:30	WFBG (280.2m-1070kc), U. S. Farm school.
9:20	8:20	7:20	6:20	KQW (296.9m-1010kc), U. S. Farm talks.
9:30	8:30	7:30	6:30	KOA (325.9m-920kc), Farm question box.
11	10	9	8	KUOM (461.3m-650kc), Radio Farm school.

Friday

Eastern	Central	Mountain	Pacific	
12	11	10	9	WHK (265.3m-1130kc), Farm flashes.
				WRVA (254.1m-1180kc), Farm flashes.
12:20 p. m.	11:20	10:20	9:20	WJR-WCX (440.9m-680kc), Farm service.
12:45	11:45	10:45	9:45	WHK (265.3m-1130kc), U. S. Farm flashes.
				WSM (340.7m-880kc), Farm hour.
1	12	11	10	KTHS (319m-940kc), Farm talks.
				WCCO (405.2m-740kc), Farm hour.
				WHB (336.9m-890kc), Farm flashes.
				WKBH (220.4m-1360kc), U. S. Farm talks.
				WLS (344.6m-870kc), Dinner bell program.
1:10	12:10	11:10	10:10	WMAQ (447.5m 670kc), Prairie Farmer.
1:15	12:15	11:15	10:15	WTAW (309.1m-970kc), Farm program.
1:30	12:30	11:30	10:30	WFAA (499.7m-600kc), Farmers' hour.
1:35	12:35	11:35	10:35	KSAC (333.1m-900kc), Farm talks.
1:45	12:45	11:45	10:45	WOI (265.3m-1130kc), Soils.
5:30	4:30	3:30	2:30	
6:50	5:50	4:50	3:50	WSEA (263m-1140kc), U. S. Farm school.
7:55	6:55	5:55	4:55	WAMD (225.4m-1330kc), U. S. Farm talks.
8:20	7:20	6:20	5:20	WOS (422.3m-710kc), U. S. Farm talk.
7	6	5	4	WTIC (535.4m-560kc), Agri. talks.
8:30	7:30	6:30	5:30	WFBG (280.2m-1070kc), U. S. Farm school
9	8	7	6	KOA (325.9m-920kc), Aggie Kickoffs.
9:20	8:20	7:20	6:20	KQW (296.9m-1010kc), U. S. Farm talks.
9:05	8:05	7:05	6:05	WOS (422.3m-710kc), Missouri State Board of Agriculture.

...CING
Time
...day
9, Wjar. ... Wahg: 10, Wgr, Wnyc. Wor: 10:30. ; 11, Kgw. Wocp, Wgr. Wjaz: 11:45. ...nz, Kpo.
...day
;10:30, Kths. Wsb: 11. Whn, Wjaz; ; 12, Kgw. Kpo, Wdaf. ...d.
...esday
:9:30, Whan. ...10, Wbap. ...ou, Wgcn. 10:05, Wcco; . Whn: 11, Kpo, Webh. Wgr, Whn. , Wdaf: 12. Kpo, Wjaz.
...sday
Webh, Weei. Wmbb, Wsai. Wbz, Wip; Wgy, Whn; ; 10, Kths. ...eaf, Wgbu. , Wpg, Wqj; Whn, Webh. ; 11:45, Kgo, Khj. Wjjd.
...day
Wcx, Webb. ...bu, Wgcp. Weau, Whn; Kths, Wgbu. Wgr, Wqj.
...rday
Wjaz, Wmbb. ; 9:10, Kths. Kths, Wgbs. 10, Kmox. Weaf, Wgn. Wmca, Wnyc. Wtam: 10:05. ;30, Wamd; ...s; 11, Kfwb. Wfaa, Who. 11:30, Kfoa; ...f; 12, Kgo. Wjaz, Wjjd.

WWJ Detroit, Mich. (352.7m-850kc) 6 p. m. dinner concert; 7:30, musicale; 8, WEAF; 9, WEAF.
WWNC Asheville, N. C. (296.9m-1010kc) 7 p. m. dinner music.

Central Standard Time Stations

KFAB Lincoln, Neb. (309.1m-970kc) 5:30-6:30 p. dinner concert; 8:30-10:15, orchestra.
KMA Shenandoah, Ia. (394.5m-760kc) 7 p. m. s... hour; 8, program.
KOIL Council Bluffs, Ia. (277.6m-1080kc) 6 p. m. ...gram; 8, musicale; 9, musicale; 11, Ambassadors
KPRC Houston, Tex. (293.9m-1020kc) 7:30 p. Jack Willrich's dance orchestra.
KSD St. Louis, Mo. (545.1m-550kc) 7 p. m. WE...
KTHS Hot Springs, Ark. (384.4m-780kc) 8:30 p chamber music; 9:30, frolic.
KYW Chicago, Ill. (526m-570kc) 7-9 p. m. WJZ; musicale; 10:32, Congress carnival.
WAMD St. Paul, Minn. (225.4m-1330kc) 7:15 p. m. musicale; 10, dance program; 11:15, organ.
WBBM Chicago, Ill. (389.4m-770kc) 7 p. m. dinner concert; 8-11, popular program.
WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 7:30 p. m. WEAF; 9:30, trio.
WCFL Chicago, Ill. (483.6m-620kc) 7:15-12 mid. program.
WCOA Pensacola, Fla. (249.9m-1200kc) 8 p. m. program.
WDAF Kansas City, Mo. (370.2m-810kc) 7:30-9:30 p. m. WEAF; 9:30, Cavaliers; 11:45-1 a. m., Nighthawk frolic.
WDOD Chattanooga, Tenn. (245.8m-1220kc) 7-10 p. m. music.
WEBH Chicago, Ill. (365.6m-820kc) 7 p. m. orchestra; 9-11, program; 12, revue.
WGN Chicago, Ill. (305.9m-980kc) 8:30 p. m., WEAF; 9:30, musicale; 10, "Sam 'n' Henry"; 10:20, Music Box; 10:40; melody time.
WHAS Louisville, Ky. (461.3m-650kc) 7:30 p. m., program; 8, WEAF; 8:30, concert.
WHB Kansas City, Mo. (336.9m-890kc) 7-8 p. m. string trio.
WHO Des Moines, Ia. (535.4m-560kc) 6:30 p. m. Little symphony; 8:30, Harmony Twins; 9:30, orchestra; 10, Serenaders.
WHT Chicago, Ill. (416.4m-720kc) schedule being revised.
WIBO Chicago, Ill. (416.4m-720kc) schedule being changed.
WJAZ Chicago, Ill. (263m-1140kc) 7 p. m. program; 9, studio concert.
WJJD Chicago, Ill. (365.6m-820kc) 8-9 p. m. children's musical hour; 11-12, Victorians.
WLAC Nashville, Tenn. (226m-1330kc) 7 p. m. classical program; 8, popular music.
WLIB Chicago, Ill. (306m-980kc) 7-8 p. m. string quintet.
WLS Chicago, Ill. (344.6m-870kc) 7:30 p. m. orchestra; 9, choral music; 10:30, Hodge Podge; 11-12, popular program.
WMAQ Chicago, Ill. (447.5m-670kc) 7 p. m. Northwestern university; 8, Columbia chain; 10, Stevens hotel orchestra.
WMBB Chicago, Ill. (252m-1190kc) 6 p. m. dinner music; 7-10:30, program.
WMC Memphis, Tenn. (516.9m-580kc) 8 p. m. WJZ; 9, WEAF.
WOAI San Antonio, Tex. (319m-940kc) 8:30-9:30 p. m. Kelvinator hour.
WOC Davenport, Ia. (374.8m-800kc) 7:30 p. m. WEAF; 8:30, musicale.
WOS Jefferson City, Mo. (422.3m-710kc) 7 p. m. Farm school; 8, program.
WSB Atlanta, Ga. (475.9m-630kc) 7 p. m. program; 8-10, WEAF; 10:45, concert.
WSBC Chicago, Ill. (232.4m-1290kc) 9-11 p. m. program.
WSM Nashville, Tenn. (340.7m-880kc) 7:15 p. m. dinner concert; 9, WEAF; 9:30, music.
WSMB New Orleans, La. (32.4m-930kc) 8:30-10:30 p. m. Public School of the Aair program; features.
WTMJ Milwaukee, Wis. (293.9m-1020kc) 7 p. m. WJZ; 8, WJZ; 10:30, dance music.

KLX Oakland, Calif. (508.2m-590kc) 6:30-7 p. m. Athens Athletic club orchestra; 8-9, educational program; 9-10, program.
KNX Hollywood, Calif. (336.9m-890kc) 7-10 p. m. features; 11, Hotel Ambassador.
KPO San Francisco, Calif. (422.3m-710kc) 6:30-7 p. m organ; 8-9 Atwater Kent artists; 9-10, orange network; 10-11, States Restaurant orchestra.

Wednesday, silent night for: WBAP, WCBD, WFAA, WFI, WGBF, WGBS, WIP, WOW, WRR.

THURSDAY, NOVEMBER 3

Headliners

Eastern	Central	Mountain	Pacific	
6:30 p. m.	5:30	4:30	3:30	WSUI (475.9m-630kc) "Art", by Dr. Raymond S. Stites.
6:50	5:50	4:50	3:50	WGHP (319m-940kc) Gerald Marks' Hotel Tuller orchestra.
7:30	6:30	5:30	4:30	WGY (379.5m-790kc) Union College speaker.
8	7	6	5	KLDS (270.1m-1110kc) Children's stories, Cousin Hazel.
				WSUI (475.9m-630kc) "Appreciation of Literature", Prof. Frank L. Mott.
8:30	7:30	6:30	5:30	WLS (344.6m-870kc) The Story of the Accordion.
8:32	7:32	6:32	5:32	WSUI (422.3m-710kc) "Appreciation of Litera Mrs. H. A. Carlton, contralto.
9	8	7	6	WCBD (344.6m-870kc) Mixed quartet; organ; bells; vocal trio.
9:30	8:30	7:30	6:30	WCCO (405.2m-740kc) Levin Craftsmen, Levin Bros., Inc.
10	9	8	7	KGW (491.5m-610kc) Good Humor orchestra.
10	9	8	7	WFAA (499.7m-600kc) Dr. G. Haydn Jones and other Dallas musicians.
				WHO (535.4m-560kc) Gwen Howard, soloist.
				WSM (340.7m-880kc) Mrs. Daisy Fentress, contralto.
10:01	9:01	8:01	7:01	WLW (428m-700kc) Crosley Cossacks.
				WGY (379.5m-790kc) Organ recital, Strand Theatre.
				WPG (272.6m-1100kc) The Dove and Swallow.
				WSM (340.7m-880kc) F. Arthur Henkel, organist.

Regular Thursday Features

Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 7:30, sketch; 8, WJZ; 9, concert; 9:30, WJZ.
WBAL Baltimore, Md. (285.5m-1050kc) 6:30 p. m., dinner orchestra; 7:30, musicale; 8, WJZ; 9, dance orchestra; 10, dance orchestra.
WBT Charlotte, N. C. (258.5m-1160kc) 8 p. m. Bible Students program; 8:30, program.
WBZ Springfield, Mass. (333.1m-900kc) 8 p. m. N. B. C.; 9, musicale; 10:30, orchestra.
WCAE Pittsburgh, Pa. (516.9m-580kc) 6 p. m. dinner concert; 9, WEAF; 10, WEAF; 11, club revue.
WCAU Philadelphia, Pa. (260.7m-1150kc) 6:30 p. m. orchestra; 10, period; 11, revue.
WCSH Portland, Me. (428.3m-700kc) 7:30 p. m. WEAF.
WDBO Orlando, Fla. (288.3m-1040kc) 9:30 p. m. dance program.
WEAF New York, N. Y. (491.5m-610kc) 7:30 p. m. Coward Comfort hour, WEEI, WTIC, WJAR, WTAG, WCSH; 8, half hours with great composers, WFI, WRC, WGR, WSAI, KSD, WHO, WOW, WDAF; 8:30, Hoover Sentinels, WEEI, WFI, WRC, WGY, WCAE, WTAM, WWJ, WSAI, WGN, KSD, WCCO, WOC, WHO, WOW, WDAF, KVOO, WFAA, WHAS, WSM, WMC, WSB; 9, Eskimos, Red chain; 10, Smith Brothers, chain; 11:30, orchestra.
WEEI Boston, Mass. (461.3m-650kc) 7:30 p. m. WEAF; 10, WEAF; 11:05, weather.
WFLA Clearwater, Fla. (288.3m-1040kc) 8:32 p. m. music; 10, dance program.
WFI Philadelphia, Pa. (405.2m-740kc) 8 p. m. WEAF.
WGBS New York, N. Y. (348.6m-860kc) 7:30 p. m. orchestra; 8:50, program; 10:30, dance orchestra.
WGHP Detroit, Mich. (319m-940kc) 8 p. m., organ; 9, program; 9:30, orchestra.
WGR Buffalo, N. Y. (302.8m-990kc) 8-9 p. m. ensemble; 9:30, concert; 11:05, supper music.
WGY Schenectady, N. Y. (379.5m-790kc) 7:30 p. m. college lecture; 8:30, WEAF; 9, WEAF; 10, program; 11, WEAF; 11:30, organ.
WHAR Atlantic City, N. J. (272.6m-1100kc) 7:45 p. m. talk; 7:55, trio.
WHK Cleveland, Ohio (265.3m-1130kc) 6:30 p. m. dinner orchestra; 7:30, I. B. S. A. program; 9:45, banjoists; 10, program.
WHN New York, N. Y. (394.5m-760kc) 6:20-12 mid. program; 12, Cotton club orchestra.
WIP Philadelphia, Pa. (508.2m-590kc) 8 p. m. program; 11:05, orchestra.
WJAX Jacksonville, Fla. (336.9m-890kc) 8 p. m. markets.
WJR Detroit, Mich. (440.9m-680kc) 6:30 p. m. Petite symphony; 8, WJZ; 10, Ford and Glenn; 11, orchestra.
WJZ New York, N. Y. (454.3m-660kc) 7-12 mid. Bill Whipple; R. C. A. Radiotrons; Maxwell House hour; Balkite hour; hotel orchestra.
WLW Cincinnati, Ohio (428.3m-700kc) 7 p. m. orchestra; 10, Crosley Cossacks; 10:45, Tommy and Irene.
WMAK Buffalo, N. Y. (545.1m-550kc) 6:30 p. m. dinner music; 10:30, musicale.
WMCA New York, N. Y. (370.2m-810kc) 6:30 p. m. orchestra; 11, orchestra; 12, Broadway nite.
WNAC Boston, Mass. (288.3m-1040kc) 6:30 p. m. dinner concert; 9:15, Metropolitan theater; 10:15, dance music; 11:05, orchestra.
WOR Newark, N. J. (422.3m-710kc) 6:15 p. m. ensemble; 11, orchestra.
WPG Atlantic City, N. J. (272.6m-1100kc) 7:05 p. m. dinner music; 10, movie broadcast; 11, dance music; 11:30, dance orchestra.
WRC Washington, D. C. (468.5m-640kc) 7 p. m. WJZ; 8-11, WEAF; 11, band.
WRVA Richmond, Va. (254.1m-1180kc) 8 p. m. program; 11:30, Carry Me Back to Old Virginny.
WSAI Cincinnati, Ohio (361.2m-830kc) 7 p. m. poems; 7:25, talk; 7:45, music; 8-9, WEAF; 9, program; 10:30, WEAF; 11, orchestra.
WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner music; 8, studio recital; 10, orchestra.
WTAG Worcester, Mass. (516.9m-580kc) 8 p. m. travel talk; 9, WEAF; 10, WEAF.
WTAM Cleveland, Ohio (399.8m-750kc) 6:15 p. m. orchestra; 8, studio program; 11, orchestra.
WTIC Hartford, Conn. (535.4m-560kc) 6:30 p. m. trio; 7, organ; 7:30, WEAF; 8:30, orchestra.
WWJ DETROIT, Mich. (352.7m-850kc) 6 p. m. dinner concert; 8, WEAF.
WWNC Asheville, N. C. (296.9m-1010kc) 7 p. m. dinner concert; 8:30, talk; 9:15, orchestra.

CHRYSANTHEMUM RADIO BALL AT WWNC

Central Standard Time Stations

KMA Shenandoah, Ia. (394.5m-760kc) 6 p. m. music; 8, Dixie Girls.
KMMJ Clay Center, Nebr. (285.5m-1050kc) 6 p. m. ensemble; 8, musicale; 9, gram.
KOIL Council Bluffs, Ia. (277.6m-1080kc) 6 p. m. program; 7:30, program; 11, orchestra.
KPRC Houston, Tex. (293.9m-1020kc) 7:30-9:30 p. m. studio concert.
KSD St. Louis, Mo. (545.1m-550kc) 6 p. m. WEAF
KTHS Hot Springs National Park, Ark. (384.4m-780kc) 8:30-9:30 p. m. feature program; 9:45, program.
KYW Chicago, Ill. (526m-570kc) 7-8 p. m. program; 8-9:30, WJZ; 9:30, program; 10:32, Congress carnival.
WAMD St. Paul-Minneapolis, Minn. (225.4m-1330kc) 7:30 p. m. program; 10, dance music; 10:30, popular entertainers; 11:15, organ.
WBAP Fort Worth, Tex. (499.7m-600kc) 6 p. m. orchestra; 8, program; 10, Sam Losh; 10:45, Apple Blossom; 11:15, organist.
WBBM Chicago, Ill. (389.4m-770kc) 7-11 p. m. program; 11, Hank and His Gang.
WBCN Chicago, Ill. (288.3m-1040kc) 7 p. m. program.
WCBD Zion, Ill. (344.6m-870kc) 8 p. m. Cornet quartet, vocal solos, trio.
WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 7:30 p. m. WEAF; 9, WEAF; 9:30, quartet.
WCFL Chicago, Ill. (483.6m-620kc) 6 p. m. labor hour; 7, trio; 8, classical music; 8-12, popular hour.
WDAF Kansas City, Mo. (370.2m-810kc) 6 p. m. School of the Air; 7:30, WEAF; 11:45-1, Nighthawk frolic.
WEBH Chicago, Ill. (365.6m-820kc) 7-8 p. m. WJZ; 9, orchestra.
WENR Chicago, Ill. (288.3m-1040kc) 8, orchestra, artists; 9:30, popular program.
WFAA Dallas, Tex. (499.7m-600kc) 7 p. m. Girl Scouts 7:30, WEAF; 9, program.

KFOA Seattle, Wash. (447.5m-670kc) 7:30-8, program; 9-10, chain program.
KFWB Hollywood, Calif. (361.2m-830kc) 6-7 p. m. dinner concert; 7:50, news; 8-9, features; 9-10, program; 10-11, frolics.
KGO Oakland, Calif. (384.4m-780kc) 6-6:55 p. m. Stanislas Bem's Little symphony; 8, drama hour; 9-10, orange network; 10, orchestra.
KGW Portland, Ore. (491.5m-610kc) 6-7 p. m. dinner concert; 7:45-8, lecture; 8-9, vaudeville; 9-12, National Broadcasting company; 10-12, dance band.
KHJ Los Angeles, Calif. (416.4m-720kc) 6:30-7:30 p. m. children's hour; 8-10, string quartet, 10-11, Varsity Four.
KJR Seattle, Wash. (348.6m-860kc) 6:30 p. m. dinner hour; 7-10, studio program; 10, orchestra.
KNX Hollywood, Calif. (336.9m-890kc) 7 p. m. records; 8, program; 9-10, features; 11, Hotel Ambassador.
KPO San Francisco, Calif. (422.3m-710kc) 6:30-7 p. m. organ; 8-9, program; 9-10, music; 10-11, music.

Eastern	Central	Mountain	Pacific
11	10	9	8

KGO (384.4m-780kc) "Composer's Birthday Night." Rembrandt trio and KGO mixed quartette.
KGW (491.5m-610kc) Magic Theater party.
WBAP (499.7m-600kc) Concert by Fine Arts Department of Texas Woman's College.

11:40	10:40	9:40	8:40

WGN (306m-980kc) Edwin Kemp, tenor.

1:30 a. m.	12:30	11:30	10:30

KGW (491.5m-610kc) Hoot Owls.

Regular Friday Features

Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 8, WJZ; 8:30, WJZ; 10:01, R. V. B. trio; 11:30, dance program.
WBAL Baltimore, Md. (285.5m-1050kc) 7:30-8 p. m. recital; 8:30, WJZ; 9, ensemble; 10, Municipal band of Baltimore.
WBT Charlotte, N. C. (258.5m-1160kc) 8 p. m. WJZ.
WCFL Chicago, Ill. (483.6m-620kc) 6 p. m. labor hour; 7, trio; 10:15-12 mid. Stage show.
WCOA Pensacola, Fla. (249.9m-1200kc) 8 p. m. program.
WDAF Kansas City, Mo. (370.2m-810kc) 7 p. m. WEAF; 8, program; 8:30, WEAF; 9, WEAF; 11:45-1 a. m. Nighthawk frolic.
WDOD Chattanooga, Tenn. (245.8m-1220kc) 7-10 p. m., music.
WEBH Chicago, Ill. (365.6m-820kc) 7-8 p. m. artists; 8:30, WEAF; 9-11, orchestra.
WENR Chicago, Ill. (288.3m-1040kc) 6 p. m. organ; 8, classical program; 9:30, studio program.
WFAA Dallas, Tex. (199.7m-600kc) 7 p. m. music; 9, program.
WGN Chicago, Ill. (305.9m-980kc) 6:50 p. m. Old Fashioned almanack; 8:30, Paul Ash; 9:30, baritone; 10:10, Sam 'n' Henry; 10:20, Music Box; 10:40, program; 10:50, orchestra.
WHAS Louisville, Ky. (461.3m-650kc) 7:30 p. m. studio concert; 8, WEAF.
WHB Kansas City, Mo. (336.9m-890kc) 7-8 p. m. talk.

AT the right you are face to face with the celebrated banjo orchestra of WRVA, Richmond, Va., Mr. Hoelzel, director, himself in the center. During the twilight hour there is nothing sweeter on the air than the mellow strains from the WHK pipe organ with Roy S. Crocker at the keys. The organ also is a favorite Sunday feature.

WBZ Springfield, Mass. (333.1m-900kc) 6:15 p. m. orchestra; 8:30, WJZ; 10, orchestra.
WCAE Pittsburgh, Pa. (516.9m-580kc) 6 p. m. dinner concert; 8:30, WEAF; 11, orchestra; 12, night club.
WCAU Philadelphia, Pa. (260.7m-1150kc) 7 p. m. orchestra; 11, Architects.
WCSH Portland, Me. (428.3m-700kc) 8 p. m. Treasure Hunters.
WEAF New York, N. Y. (491.5m-610kc) 8 p. m. Cities Service, Red chain; 9, Musical Miniatures, WTAG, WLIT, WRC, KSD, WOC, WTIC; 9:30, La France orchestra, WGR, WLIT, WCAE, WTAM, WWJ, KSD, WOC, WDAF, WEBH; 10, Whittall Anglo-Persians, WEEI, WJAR, WTAG, WGR, WLIT, WRC, WCAE, WTAM, WWJ, WGN, KSD, WOC, WCCO, WDAF, WGY; 11, orchestra.
WEEI Boston, Mass. (461.3m-650kc) 7:30 p. m. Merry Milkmen; 8, WEAF; 9, Neapolitan Dutch Girls; 9:50, musicale; 10, cruising the air; 10:10, news; 10:15, organ.
WFLA Clearwater, Fla. (288.3m-1040kc) 8:30 p. m. organ and artists; 9:10, dance program.
WGBS New York, N. Y. (348.6m-860kc) 6:30-7 p. m. orchestra.
WGHP Detroit, Mich. (319m-940kc) 6:30 p. m. orchestra; 7:45, Lady Moon; 8, organ; 9, Columbia Chain program.
WGR Buffalo, N. Y. (302.8m-990kc) 6:30-7:30 p. m. dance orchestra; 8-11:30, WEAF.
WGY Schenectady, N. Y. (379.5m-790kc) 7:30 p. m. dinner music; 9, WGY players; 10, WEAF.
WHAR Atlantic City, N. J. (272.6m-1100kc) 7:45 p. m. sport talk; 8, evening concert.
WHK Cleveland, Ohio (265.3m-1130kc) 6:30 p. m. program; 10, program.
WIP Philadelphia, Pa. (508.2m-590kc) 7 p. m. bedtime story.
WJAX Jacksonville, Fla. (336.9m-890kc) 8 p. m. popular program.
WJR-WCX Detroit, Mich. (440.9m-680kc) 8 p. m., WJZ; 8:30, WJZ; 10, Ford and Glenn; 11, dance music.
WJZ New York, N. Y. (454.2m-660kc) 8:30, Royal Stenographers, WBZ, Mediterraneans, WHAM, KDKA, KYW, WJR; 10, time, WBZ, KDKA, KYW; 10, Around the piano; 10:30, orchestra, WRC.
WLIT Philadelphia, Pa. (405.2m-740kc) 8 p. m. WEAF; 9:30, WEAF; 11, orchestra.
WLW Cincinnati, O. (428m-700kc) 8:05 p. m. dance music.
WMAK Buffalo, N. Y. (545.1m-550kc) 6:30 p. m. dinner music; 7:15, news; 9, Columbia chain; 11, dance program.
WMCA New York, N. Y. (370.2m-810kc) 6:30 p. m. orchestra; 10, music; 11, Parody club.
WNAC Boston, Mass. (288.3m-1040kc) 7 p. m. dinner concert; 8, organ; 9, Columbia chain; 11:05, dance music.
WOO Philadelphia, Pa. (508.2m-590kc) 7:10 p. m. WOO trio; 8:30, address; 9, modern program.
WOR Newark, N. J. (422.3m-710kc) 6:15 p. m. songs; 9, Columbia chain; 11, orchestra.
WRC Washington, D. C. (468.5m-640kc) 6 p. m. N. B. C.; 8, N. B. C.; 10:30, dance orchestra.
WRVA Richmond, Va. (254.7m-1180kc) 7 p. m. program; 11, orchestra.
WSAI Cincinnati, Ohio (361.2m-830kc) 8 p. m. WEAF; 9, time.
WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner concert; 9, orchestra; 10, organ; 11, studio program.
WTAG Worcester, Mass. (516.9m-580kc) 8:30 p. m. musicale; 9, WEAF; 9:30, musicale; 10:30, news.
WTAM Cleveland, Ohio (390.8m-750kc) 6 p. m. orchestra; 7, WEAF; 8, WEAF; 11, orchestra.
WTIC Hartford, Conn. (535.4m-560kc) 7 p. m., talk; 8-9:30, WEAF; 9:30, music; 11, orchestra.
WWJ Detroit, Mich. (352.7m-850kc) 6 p. m. concert; 8-11:30, WEAF.

Central Time Stations

KFAB Lincoln, Nebr. (309.1m-970kc) 5:30-6:30 p. m. Hotel Lincoln orchestra; 8-10:35, program.
KMA Shenandoah, Ia. (394.5m-760kc) 6 p. m. music; 7, popular; 8, dance orchestra.
KOIL Council Bluffs, Ia. (277.6m-1080kc) 6 p. m. Boy Scouts; 8, Billy and Helen; 11, Ambassadors.
KSD St. Louis, Mo. (545.1m-550kc) 6 p. m. WEAF; 8:30, dance music; 11, orchestra.
KTHS Hot Springs National Park, Ark. (384.4m-780kc) 8:30-9:30 p. m. novelties; 9:30-10:15, orchestra.
KYW Chicago, Ill. (526m-570kc) 7-9 p. m. WJZ; 9-10:30, carnival; 10:30-11:55, musicale.
WAMD St. Paul-Minneapolis, Minn. (225.4m-1330kc) 7:15 p. m. musicale; 10, dance program; 11:15 organ.
WBAP Fort Worth, Tex. (499.7m-600kc) 6 p. m. orchestra; 8, orchestra; 10, program; 11, popular music.
WBBM Chicago, Ill. (389.4m-770kc) 7-11 p. m. musicale; 12, organ.
WBCN Chicago, Ill. (283.3m-1040kc) 7 p. m. popular program.
WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 7 p. m. WEAF; 9, WEAF; 10:05, dance orchestra.
WHO Des Moines, Ia. (535.4m-560kc) 6:30 p. m. orchestra; 8:30, string trio; 9:30, soloists.
WIT Chicago, Ill. (416.4m-720kc) schedule being changed.
WIBO Chicago, Ill. (416.4m-720kc) schedule being changed.
WJAZ Chicago, Ill. (263m-1140kc) 7 p. m. dinner concert; 9, studio program.
WJJD Chicago, Ill. (365.6m-820kc) 8-8:30 p. m. musical hour; 11-1 a. m., Victorians.
WLIB Chicago, Ill. (305.9m-980kc) 7 p. m. WEAF.
WLS Chicago, Ill. (344.6m-870kc) 7:20 p. m. Duo; 10, Showboat; 11-12, popular.
WMAQ Chicago, Ill. (447.5m-670kc) 6 p. m. chimes; 8, Columbia chain; 12, popular program.
WMBB Chicago, Ill. (252m-1190kc) 6 p. m. dinner concert; 7, ensemble; 8:30, Trianon orchestra.
WMC Memphis, Tenn. (516.9m-580kc) 8:30 p. m. program.
WQJ Chicago, Ill. (447.5m-670kc) 10 p. m. orchestra.
WOAI San Antonio, Tex. (319m-940kc) 8:30 p. m. program.
WOC Davenport, Ia. (374.8m-800kc) 7 p. m. WEAF; 8:30, WEAF; 9, WEAF.
WOS Jefferson City, Mo. (422.3m-710kc) 7 p. m. U. S. Radio farm school; 8, program.
WOW Omaha, Nebr. (508.2m-590kc) 6 p. m. Hugo Heyn, marimba; Emil Hofmann, pianist; 9, classical; 10, Ortho-Sonic hour.
WSB Atlanta, Ga. (475.9m-630kc) 8 p. m. program; 10:45, concert.
WSBC Chicago, Ill. (232.4m-1290kc) 9 p. m. to 1 a. m. popular program.
WSM Nashville, Tenn. (340.7m-880kc) 8 p. m. WEAF.
WTMJ Milwaukee, Wis. (293.9m-1020kc) 7 p. m. classical program; 8, hour of classics; 10, WEAF.

Mountain Standard Time Stations

KOA Denver, Colo. (325.9m-920kc) 7:30 p. m. S. S. lesson; 8, flying lessons; 8:15, program.
KOB State College, N. M. (394.4m-760kc) 7:30 p. m. orchestra.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 6:30 p. m. program; 8:40, studio program.
KFI Los Angeles, Calif. (468.5m-640kc) 7 p. m. organ; 8, program; 9, orange network; 10, orange chain.
KFOA Seattle, Wash. (447.5m-670kc) 9-10, chain program; 10:30-12, KGW.
KFRC San Francisco, Calif. (454.3m-660kc) 6:30 p. m. program; 9, studio program; 10, dance music.
KFWB Hollywood, Calif. (361.2m-830kc) 7 p. m. orchestra; 7:50, News; 8-11, program.
KGO Oakland, Calif. (384.4m-780kc) 6-6:55 p. m. dinner concert; 8-9, feature; 9-10, National Broadcasting company orchestra; 10, orchestra; 11, orchestra.
KGW Portland, Ore. (491.5m-610kc) 6-7 p. m. dinner concert; 8-9, concert; 9, National Broadcasting company; 10, Jubilee players; 10:30, Hoot Owls, KMO, KFOA, KHJ.
KHJ Los Angeles, Calif. (416.4m-720kc) 6:30-7:30 children's hour; 8-10, popular program.
KJR Seattle, Wash. (348.6m-860kc) 6:30 p. m. dinner hour; 8-10, program; 10-12, dance orchestra.
KLX Oakland, Calif. (508.2m-590kc) 8 p. m. special program; 9:30-10:30, Athens Athletic club orchestra.
KNX Hollywood, Calif. (336.9m-890kc) 7 p. m. feature; 8, 9, 10, features; 11, Hotel Ambassador.
KPO San Francisco, Calif. (422.3m-710kc) 6:30 p. m. States Restaurant orchestra; 8-9, orchestra; 9-11, orange chain.

Friday, silent night for: KPRC, KPSN, WCBD, WFI, WIP, WLAC, WLIT, WPG, WSM, WSMB.

SATURDAY, NOVEMBER 5
Headliners

Eastern	Central	Mountain	Pacific
8 p. m.	7	6	5

WHO (535.4m-560kc) Bankers Life little symphony.
WMAQ (447.5m-670kc) Astronomy talk, Mrs. Theron Colton.

8:30	7:30	6:30	5:30

WHAS (461.3m-650kc) Arthur Findling, baritone.
WLS (344.6m-870kc) National barn dance.

9:30	8:30	7:30	6:30

WMAQ (447.5m-670kc) Ruth Ray, violinist.

10	9	8	7

WFAA (499.7m-600kc) Harry F. Hassall, cello.
WSM (340.7m-880kc) Barn dance.

10:30	9:30	8:30	7:30

WDAF (370.2m-810kc) The Great Western Chefs.

11	10	9	8

KFRC (454.3m-660kc) Anson Weeks' Hotel Mark Hopkins dance orchestra.

11:45	10:45	9:45	8:45

WSB (475.9m-630kc) Charlie Trout melody artists.

12:30 a. m.	11:30	10:30	9:30

WFAA (499.7m-600kc) Palace Theater features in stage presentation.

WGN Chicago, Ill. (305.9m-980kc) 6:10 p. m. Punch and Judy; 6:50, old fashioned almanack; 8, WEAF; 10, Sam 'n' Henry; 10:20, Music Box; 10:40, Cornell and Gosden.
WHAS Louisville, Ky. (461.3m-650kc) 7:30 p. m. WEAF; 8, studio concert.
WHB Kansas City, Mo. (336.9m-890kc) 7 p. m. dinner hour organ; 8, evening concert.
WHO Des Moines, Ia. (535.4m-560kc) 6:30 p. m. dinner concert; 8, WJZ; 9, program; 9:30, WEAF; 10, Little symphony.
WHT Chicago, Ill. (416.4m-720kc) schedule being revised.
WIBO Chicago, Ill. (416.4m-720kc) schedule being revised.
WJAZ Chicago, Ill. (263m-1140kc) 9:30 p. m. studio program.
WJJD Chicago, Ill. (365.6m-820kc) 8-9 p. m. children's hour; 11-12, Victorians.
WLAC Nashville, Tenn. (226m-1330kc) 9 p. m. program; 10-11, orchestra.
WLIB Chicago, Ill. (305.9m-980kc) 7 p. m. ensemble; 11-1 a. m. organ.
WLS Chicago, Ill. (344.6m-870kc) 7:30 p. m. Supertone hour.
WMAQ Chicago, Ill. (447.5m-670kc) 7:10 p. m. U. of Chicago lecture; 8, orchestra; 9, WMAQ players; 10, Chicago theater.
WMBB Chicago, Ill. (252m-1190kc) 6 p. m. dinner concert; 7, Trianon ensemble; 8:30, Trianon orchestra.
WMC Memphis, Tenn. (516.9m-580kc) 7:30 p. m. WEAF; 8:30, Love concert.
WOC Davenport, Ia. (374.8m-800kc) 7:30 p. m. WEAF; 9, musicale.
WOW Omaha, Neb. (508.2m-590kc) 6 p. m. organ; 7, WEAF; 7:30, WEAF; 8, Sunshine program; 9, orchestra.
WQJ Chicago, Ill. (447.5m-670kc) 11:30 p. m. orchestra.
WSB Atlanta, Ga. (475.9m-630kc) 8 p. m. musicale; 10:45, organ.
WSBC Chicago, Ill. (232.4m-1290kc) 5-7 p. m., artists; 9:30-1, program.
WSM Nashville, Tenn. (340.7m-880kc) 7:30, WEAF; 8, studio program; 10:30, pipe organ.
WSMB New Orleans, La. (322.4m-930kc) 8:30-10:30 p. m. program.
WTMJ Milwaukee, Wis. (293.9m-1020kc) 7:30 p. m. popular hour; 8:30, program; 9:30-12, frolic.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 7 p. m. concert trio; 9, studio program; 10, music.
KFI Los Angeles, Calif. (468.5m-640kc) 7 p. m. University of S. C.; 8, drama hour; 8:30, program; 9, orange network; 10, musicale.

Thursday, silent night for: KFAB, KLX, KOA, WDOD, WEAO, WEMC, WLIT, WUO, WOS.

FRIDAY, NOVEMBER 4
Headliners

Eastern	Central	Mountain	Pacific
7:15 p. m.	6:15	5:15	4:15

WTIC (535.4m-560kc) Piano selections, Lantra C. Gaudet.

7:45	6:45	5:45	4:45

WGHP (319m-940kc) Lady Moon.

8	7	6	5

WGY (379.5m-790kc) Fro-Joy hour.
WSUI (475.9m-630kc) Elementary Spanish, by Prof. M. R. Gonzales.

8:30	7:30	6:30	5:30

WHAD (270.1m-1110kc) Talk, Rev. Edward F. Gareselie.
WHO (535.4m-560kc) Four Kings of Harmony quartette.

8:32	7:32	6:32	5:32

WFLA (288.3m-1040kc) Rex Dantzler, tenor.

9	8	7	6

WBAP (499.7m-600kc) Music Masters.

9	8	7	6

WCOA (249.9m-1200kc) L. A. Whidden and his Musical Handsaw.
WDAF (370.2m-810kc) "Ike and Mike", the Katz boys.
WJS (344.6m-870kc) Little Symphony orchestra.
WTIC (535.4m-560kc) Bassett Pianoflage.

9:15	8:15	7:15	6:15

KOA (325.9m-920kc) Irish music.

9:30	8:30	7:30	6:30

WCOA (249.9m-1200kc) Madame Adrienne Miller, concert pianist.
WGN (306m-980kc) Paul Ash and his Merry-Mad musical gang.
WSB (475.9m-630kc) Atlanta Junior music club.

10	9	8	7

WCOA (249.9m-1200kc) Mrs. Benn's Young Ladies sextette.
WFAA (499.7m-600kc) Philip E. Hayes, baritone; Virginia Anderson, soprano.

10:30	9:30	8:30	7:30

WCCO (405.2m-740kc) Wheaties quartet.
WCOA (249.9m-1200kc) Babe & Hopkins, WCOA Premier string duo.
WGN (306m-980kc) Phantom violin.

PRESIDENTS WILL TALK ARMISTICE DAY

NOVEMBER 5
Football

Alahama-Kentucky at Birmingham, WAPI (319m-940kc).
Alahama Poly-Tulane at New Orleans, WAPI (319m-940kc).
Dartmouth-Brown at Providence, WBZ (333.1m-900kc).
Grinnell-Wisconsin at Madison, WHA (319m-940kc).
Iowa-Illinois at Iowa City, WSUI (422.3m-710kc)
Iowa State-Drake at Des Moines, WOI (265.3m-1130kc).
Marquette-St. Louis at St. Louis, WSOE (270.1m-1110kc), WGWB (218.8m-1370kc).
Michigan-Chicago at Chicago, KYW (526m-570kc), WJJD (365.6m-820kc), WLS (344.6m-870kc), WMAQ (447.5m-670kc), WMBB (252m-1190kc).
Minnesota-Notre Dame at South Bend, WAMD 225.4m-1330kc), WGN (305.9m-980kc), WCCO.
Nebraska-Kansas at Lincoln, KFAB (309.1m-970kc).
Ohio State-Princeton at Princeton, WJZ (454.3m-660kc) and chain, WEAO (282.8m-1060kc).
Ohio Wesleyan-Syracuse at Syracuse, WFBL (258.5m-1160kc).
Penn.-Harvard at Philadelphia, WEAF (491.5m-610kc) and chain.
Stanford-Washington at Seattle, KFI (468.5m-640kc), KPO (422.3m-710kc), KOMO (305.9m-980kc).
William and Mary-Chattanooga at Norfolk, WDOD (245.8m-1220kc).

Regular Saturday Features
Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 7:30 p. m. concert; 8, WJZ.
WBT Charlotte, N. C. (258.5m-1160kc) 7 p. m. farm school; 9, WJZ.
WBZ Springfield, Mass. (333.1m-900kc) 7:30 p. m. musicale; 8:10, Boston symphony.
WCAE Pittsburgh, Pa. (516.9m-580kc) 7:30 p. m. WEAF; 10:30, orchestra.
WCAU Philadelphia, Pa. (260.7m-1150kc) 6:30 p. m. orchestra; 9, musicale; 10:30, Parolians.
WEAF New York, N. Y. (491.5m-610kc) 6-12 mid. High-Jinkers; Old Gold on Broadway; orchestra.
WGBS New York, N. Y. (349m-860kc) 7:30-11:15 p. m. program; 11:15, ensemble.
WGR Buffalo, N. Y. (303m-990kc) 8 p. m. WEAF; 9:30, WEAF; 11:05, supper.
WGY Schenectady, N. Y. (379.5m-790kc) 7:30 p. m. WEAF; 11, dance music.
WHK Cleveland, Ohio (265.3m-1130kc) 8 p. m. program.
WHAR Atlantic City, N. J. (272.6m-1100kc) 8 p. m. Seaside hotel trio.
WIP Philadelphia, Pa. (508.2m-590kc) 7 p. m. bedtime story; 8, recital; 9, concert; 10, orchestra; 11:05, organ.
WJAX Jacksonville, Fla. (336.9m-890kc) 8:05 p. m. program.
WJR-WCX Detroit, Mich. (440.9m-680kc) 7 p. m. orchestra; 7:15, Woodshed theater; 8:30, WJZ; 10, Ford and Glenn; 10:15, Cotton Pickers; 11:30, orchestra.

WHEN genial Dick Haller isn't regaling KGW audiences at the microphone Portland, Ore., listeners have a chance to get acquainted with smiling announcer Hugh Walton (right). Above are Miss Virginia Curtis and Miss Margaret Siracusa, WPG, Atlantic City, who make a specialty of Italian folk songs. Another delightful KGO entertainer is Miss Dorothy Dukes Dim, the cellist at left. She is one of the Wharry Lewis Quintette.

WJZ New York, N. Y. (454.2m-660kc) 7 p. m. Hotel Astor orchestra; 8, Ed Smalle, WHAM; 8:30, United States Army band, WRC, WHAM; 9, Philco hour, KDKA, KYW, WHAM, WJR, WLW, KSD, WOC, WHO, WOW, WDAF, KVOO, WHAS, WSM, WSB, WSAI, WBT, WJAX, WTMJ, WBAP; 10, Keystone duo; 10:30, orchestra.
WLW Cincinnati, O. (428m-700kc) 7 p. m. Mona Motor hour; 8, Happy Harmony Boys; 9, WJZ; 10:30, organ; 11, orchestra.
WMAK Buffalo, N. Y. (545.1m-550kc) 7:30 p. m. Musicale; 8:30, program; 9:30, musicale.
WMCA New York, N. Y. (370.2m-810kc) 6:30 p. m. orchestra; 8, musical extravaganza; 9, boxing bouts; 11, entertainers.
WNAC Boston, Mass. (288.3m-1040kc) 6:30 dinner music; 9:30, dance music; 10, orchestra; 11:05, dance music.
WOR Newark, N. J. (422.3m-710kc) 6:15 p. m. ensemble; 9:30, orchestra; 10:55, news; 11, orchestra.
WPG Atlantic City, N. J. (272.6m-1100kc) 7:45 p. m. dinner music; 10, studio program; 11:30, dance orchestra; 12, orchestra.
WRC Washington, D. C. (468.5m-640kc) 7 p. m. Bible talk; 8, U. S. Army band; 9, WJZ; 10, orchestra.
WSAI Cincinnati, Ohio (361.2m-830kc) 7:30 p. m. program; 10, WEAF.
WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner concert; 8, recital.
WTAG Worcester, Mass. (516.9m-580kc) 8 p. m. orchestra; 10, orchestra.
WTAM Cleveland, Ohio (399.8m-750kc) 6 p. m. orchestra; 7, studio concert; 8, WEAF; 10, minstrel; 11, dance orchestra.
WWNC Asheville, N. C. (296.9m-1010kc) 7 p. m. dinner concert.

Central Standard Time Stations

KFAB Lincoln, Nebr. (309.1m-970kc) 5:30-6:30 p. m. Hotel Lincoln orchestra; 8:30-9, Buick Little symphony; 9-10, Chamber of Commerce program.
KMA Shenandoah, Ia. (394.5m-760kc) 6 p. m. sacred songs, 7, trio; 8, singers.
KPRC Houston, Tex. (293.9m-1020kc) 7:30 p. m. studios concert.
KTHS Hot Springs National Park, Ark. (384.4m-780kc) 6:30 p. m. dinner music; 8:30 musicale; 9, dance concert.
KYW Chicago, Ill. (526m-570kc) 6:32-7 p. m. dinner concert; 8-9, WJZ; 9-10:32, Congress Carnival; 10:32-10:55, orchestra.
WAMD St. Paul-Minneapolis, Minn. (225.4m-1330kc) 8 p. m. musicale.
WBAP Fort Worth, Tex. (499.7m-600kc) 6 p. m. orchestra; 8, WJZ.
WBBM Chicago, Ill. (389.4m-770kc) 7 p. m. orchestra; 10, studio program; 12, jazz program.
WBCN Chicago, Ill. (288.3m-1040kc) 7 p. m. classical program.
WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 6:15 p. m. dinner concert; Wesley Barlow's Nicollet hotel orchestra; 8, WJZ; 10:05, dance program.
WCFL Chicago, Ill. (483.6m-620kc) 6-12 mid. entertainment.
WDAF Kansas City, Mo. (370.2m-810kc) 8, WJZ; 9-10, popular program; 11:45-1 a. m., Nighthawk frolic.
WEBH Chicago, Ill. (365.6m-820kc) 7 p. m. classical hour; 11-12, orchestra.
WENR Chicago, Ill. (288.3m-1040kc) 6 p. m. organ; 8, classical program; 9:30, popular program.
WFAA Dallas, Tex. (499.7m-600kc) 7-8 p. m. artists; 9-11, musicale; 11-11:30, orchestra; 11:30-12:30 a. m. Palace theater feature; organ recital.
WGN Chicago, Ill. (305.9m-980kc) 6:10 p. m. Punch and Judy; 6:35, ensemble; 6:50, Old Fashioned almanack; 8:30, recital; 10, Tomorrow's Tribune; 10:10, Sam 'n' Henry; 10:20, Music Box; 10:30, vocal music; 10:40, Melody time.
WHAS Louisville, Ky. (461.3m-650kc) 7:30 p. m. program.
WHB Kansas City, Mo. (336.9m-890kc) 7-8 p. m. organ; 8-10, concert.
WHO Des Moines, Ia. (535.4m-560kc) 6:30 p. m. dinner concert; 8, WJZ; 9, Four Horsemen quartet; 9:30, Velma Kyes, pianist; 10, sextet.
WHT Chicago, Ill. (416.4m-720kc) schedule being revised.
WIBO Chicago, Ill. (416.4m-720kc) schedule being revised.
WJAZ Chicago, Ill. (263m-1140kc) 7 p. m. dinner concert; 9, studio.
WJJD Chicago, Ill (365.6m-820kc) 6 p. m. symphony; 8-11, Palmer House program.
WLAC Nashville, Tenn. (226m-1330kc) 7 p. m. children's period; 8-9, program.
WLS Chicago, Ill. (344.6m-870kc) 7:30-1 a. m. barn dance.
WMAQ Chicago, Ill. (447.5m-670kc) 7 p. m. dance music; 8, photologue; 9, song cycle; 1, popular program.
WMBB Chicago, Ill. (252m-1190kc) 6 p. m. dinner concert; 7-8:30, Trianon ensemble; 8:30-10, popular concert.
WMC Memphis, Tenn. (516.9m-580kc) 8 p. m. WJZ.
WOC Davenport, Ia. (374.8m-800kc) 7-8 p. m. musicale; 8, WJZ.
WOW Omaha, Neb. (508.2m-590kc) 6 p. m. program; 8, literary period; 9, program.
WQJ Chicago, Ill. (447.5m-670kc) 9:45 p. m. popular program.
WRR Dallas, Tex. (352.7m-850kc) 6-7 p. m. musical program; 8-9, classical program.
WSB Atlanta, Ga. (475.9m-630kc) 8 p. m. WJZ; 10:45, concert.
WSM Nashville, Tenn. (340.7m-880kc) 8-11 p. m. barn dance.
WSMB New Orleans, La. (322.4m-930kc) 8:30-10:30 p. m. Public School of the Air program; organ solos.
WTMJ Milwaukee, Wis. (293.9m-1020kc) 8 p. m. WJZ; 9, Eagles.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 6:30 p. m. news; 7, trio; 8, program; 10, dance music.
KFI Los Angeles, Calif. (468.5m-640kc) 7:30 p. m. program; 8-9, orange network; 9-10, classical program; 11-12 a. m. KFI midnight frolic.
KFOA Seattle, Wash. (447.5m-670kc) 8-9 p. m. National Broadcasting company.
KFRC San Francisco, Calif. (454.3m-660kc) 6:30-7 p. m. Cecilians; 8-10, orchestra; 10-12, dance music.
KFWB Hollywood, Calif. (252m-1190kc) 6-7 p. m. Pontiac dinner hour; 8-9, program, Mona Motor Oil Company; 9-10, musicale; 10-11, program.
KGO Oakland, Calif. (384.4m-780kc) 8 p. m. National Broadcasting company; 9, concert; 10, band.
KGW Portland, Ore. (491.5m-610kc) 6-7 p. m. dinner music; 8-9, National Broadcasting company; 10-12, dance music.
KHJ Los Angeles, Calif. (416.4m-720kc) 6:30 p. m. children's hour; 8-10, varied program.
KJR Seattle, Wash. (348.6m-860kc) 7-10 p. m. studio program; 10-12, dance orchestra.
KNX Hollywood, Calif. (336.9m-890kc) 7:30 p. m. features; 10, Hotel Ambassador; 11, Saturday night frolic; 12, midnight express.
KPO San Francisco, Calif. (422.3m-710kc) 6:30 p. m. States Restaurant orchestra; 8, National Broadcasting company; 9, orange network; 11, orchestra.

Saturday, silent night for: KFDM, KGA, KLX, KOA, KOB, KOIL, WBAL, WCBD, WCSH, WFLA, WGBF, WGHP, WICC, WJAR, WOAI, WOS, WRVA, WTIC, WWJ.

SUNDAY, NOVEMBER 6
Headliners

Eastern	Central	Mountain	Pacific
1:30	12:30	11:30	10:30

WGN (305.9m-980kc) Prof. Football, Chicago Bears-Providence.

6:30 p. m.	5:30	4:30	3:30

WTIC (535.4m-560kc) Capitol Theater organ, "Melodies for the Folks at Home," Walter Dawley.

Eastern	Central	Mountain	Pacific
7	6	5	4

WLS (344.6m-870kc) WLS Little Brown church.

8	7	6	5

WMAQ (447.5m-670kc) Chicago Sunday Evening Club; speaker, Dr. Wickham Steed.

8:30	7:30	6:30	5:30

KOIL (277.6m-1080kc) Uncle Jack's Kiddie Club trip.

9	8	7	6

KFRC (454.3m-660kc) "Looking at the World," Dr. Frederick W. Clampett.

10	9	8	7

WSUI (422.3m-710kc) Familiar hymns, Mrs. L. G. Lawyer.

10:30	9:30	8:30	7:30

WHAP (499.7m-600kc) The Seven Aces, "All Eleven of 'Em," popular request numbers.

11:30	10:30	9:30	8:30

KFRC (454.3m-660kc) Walter Krausgrill's Balconades Ballroom orchestra.

12 mid.	11	10	9

WFAA (499.7m-600kc) La Mariquita and her Castilian orchestra.
WLIB (306m-980kc) Hoodlums.

Regular Sunday Features
Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 7 p. m., service; 8:15, WJZ; 9:15, WJZ.
WBAL Baltimore, Md. (285.5m-1050kc) 6:30-7:30 p. m. WJZ; 7:30, concert.
WBT Charlotte, N. C. (258.5m-1160kc) 7:30 p. m. service; 9:15, WEAF.
WBZ Springfield, Mass. (333.1m-900kc) 2 p. m. WJZ; 7:50, Hotel Statler ensemble; 8:15, WJZ; 9:15, program.
WCAE Pittsburgh, Pa. (516.9m-580kc) 9:30 a. m. church; 5:30, WEAF; 6:30, dinner concert; 7:18, WEAF; 9:15, WEAF.
WCSH Portland, Me. (428.3m-700kc) 10:30 a. m. church; 7:30, church; 9:15, WEAF.
WEAF New York, N. Y. (491.5m-610kc) 3 p. m. service; 5:30, Crosley program; 7:20, Capitol theater, WJAR, WTAG, WRC, WCAE, WWJ, KSD, WHO, WOW, WDAF, KVOO, WFAA, WSM, WMC, WSB, WBT; 10:30, cathedral echoes, WRC, WSAI.
WEEI Boston, Mass. (461.3m-650kc) 7:30 p. m. musicale; 9:15, WEAF; 10, cruising the air; 10:20, Keith's Radio revue.
WFI Philadelphia, Pa. (405.2m-740kc) 4:30 p. m. chapel; 5:30, WEAF; 9:15, WEAF.
WGBS New York, N. Y. (349m-860kc) 8:30 p. m. program.
WGHP Detroit, Mich. (319m-940kc) 3 p. m. Columbia chain; 9-11, Columbia chain.
WGR Buffalo, N. Y. (302.8m-990kc) 10:45 a. m. service; 9:15 p. m. WEAF.
WGY Schenectady, N. Y. (379.5m-790kc) 11 a. m. service; 4, organ; 9:15, WEAF.
WHN New York, N. Y. (394.5m-760kc) 10 p. m. program; 12, Frivolity club.
WIP Philadelphia, Pa. (508.2m-590kc) 10:45 a. m. service; 9:30 p. m., WGBS, or 7:15 p. m. service.
WJAX Jacksonville, Fla. (336.9m-890kc) 6:30 p. m. dinner music; 8, service; 10, organ.
WJR-WCX Detroit, Mich. (440.9m-680kc) 10 a. m. First Baptist church; 2, WJZ; 6, twilight hour; 8:15, WJZ; 10, song service, First Baptist church of Pontiac.
WJZ New York, N. Y. (451.2m-660kc) 9 a. m. children's hour; 1 p. m. Mediterraneans, WRC; 2, Roxy, WHZ, KDKA, KYW, WRC, WOC, WJR; 5:30, vespers; 7, organ, 7:30, singers, WBAL; 8:15, Collier hour, WBZ, KDKA, KYW, WJR, WCCO, WDAF, KSD, WLW, 9:15, Vibrant Melodies; 9:45, Utica Jubilee singers; 10, time, WHZ, WHAM; 10:15, Don Amaizo, KDKA, KYW, WTMJ.
WLIT Philadelphia, Pa. (405.2m-740kc) 11 a. m. service; 2 p. m. orchestra.
WLW Cincinnati, Ohio (428.3m-700kc) 7:15 p. m. service; 8:15, WJZ; 9:15, orchestra.
WMAK Buffalo, N. Y. (545.1m-550kc) 7:50 p. m. service; 9, Columbia chain.
WMCA New York, N. Y. (370.2m-810kc) 7-12 mid. program; 12, orchestra.
WNAC Boston, Mass. (288.3m-1040kc) 7:30 p. m. service; 9, Columbia chain; 10, Columbia chain.
WOO Philadelphia, Pa. (508.2m-590kc) 10:45 a. m. service; 2:30 p. m. exercises; 6, organ.
WOR Newark, N. J. (422.3m-710kc) 3-5 p. m. Columbia chain; 7:45, Sunday evening musicale; 9, Columbia hour.
WPG Atlantic City, N. J. (272.6m-1130kc) 4:15 p. m. community recital; 5:15, twilight hour; 9:10, evening program; 10, Sunday evening musicale.
WHO, WOW, WHAS, WSM, WSB, WMC, WBT; 9:15, time, WEEI, WJAR, WRC, WCAE, WWJ, WSAI, KSD, WOC, WGY; 9:15, Atwater Kent radio hour, WEEI, WFI, WTAM, WGR, WRC, WCAE, WWJ, WSAI, WFIN, KSD, WTCO, WOC, WGY, WHO, WOW, WDAF, KVOO, WFAA, WSM, WMC, WSB, WBT; 10:30, cathedral echoes, WRC, WSAI.

WRC Washington, D. C. (468.5m-640kc) 11 a. m. service; 1 p. m., WJZ; 2-3, WEAF; 4, Washington cathedral; 7:20, WEAF; 9:15, WEAF; 10:30, WEAF.
WSAI Cincinnati, O. (361.2m-830kc) 7:45 p. m. chimes; 8:15, time; 8:15, WEAF; 8:45, Congress string quartet.
WSEA Norfolk, Va. (263m-1140kc) 8:30, variety concert.
WTAG Worcester, Mass. (516.9m-580kc) 7:30 p. m. studio program; 10, dance orchestra.
WTAM Cleveland, O. (399.8m-750kc) 3 p. m. musicale; 6, orchestra; 7, Park theater program; 8, service; 9:15, WEAF; 10:15, orchestra.
WTIC Hartford, Conn. (535.4m-560kc) 4:30 p. m. Howard Radio hour; 5:30, ensemble; 6:30, Melodies for Folks at Home.
WWJ Detroit, Mich. (352.7m-850kc) 10:30 a. m. services; 7:20, WEAF; 9:15, WEAF.
WWNC Asheville, N. C. (296.9m-1010kc) 7:30 p. m. service.

Central Time Stations

KFAB Lincoln, Neb. (309.1m-970kc) 11 a. m. service; 9 p. m., symphony.
KLDS Independence, Mo. (270.1m-1110kc) 8:30 a. m. Bible study; 11, studio service; 2 p. m. KLDS string quartet; 3, Radio church; 6:30, vespers, sermon; 9:15, services, choir.
KOIL Council Bluffs, Ia. (277.6m-1080kc) 11 a. m. service; 2 p. m. Columbia chain; 7:30, children's hour; 11, Ambassadors.
KPRC Houston, Tex. (293.9m-1020kc) 7:30 p. m. services; 9:30, concert.
KSD St. Louis, Mo. (545.1m-550kc) 6:20 p. m. WEAF; 8:15 WEAF.
KTHS Hot Springs National Park, Ark. (384.4m-780kc) 11 a. m. services; 8:30-9:30, Music Lovers' hour, soloists.
KYW Chicago, Ill. (526m-570kc) 2 p. m. WJZ; 7:15-8:15, WJZ; 8:17, good reading.
WAMD St. Paul-Minneapolis, Minn. (225.4m-1330kc) 6:15 p. m. tenor; 10:45, orchestra.
WBAP Ft. Worth, Tex. (499.7m-600kc) 11 a. m. services; 12:30-1:30 p. m. Kiddies' hour; 9:30-11, sacred concert.
WCBD Zion, Ill. (344.6m-870kc) 8 p. m. trios, mixed quartet, Zion choir.
WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 9:45 a. m. services; 10:50, services; 4:10 p. m. House of Hope Presbyterian church; 7:15, WJZ; 8:15, WEAF.
WCFL Chicago, Ill. (483.6m-620kc) 7:45 p. m. service; 9:30, program.
WCOA Pensacola, Fla. (249.9m-1200kc) 8 p. m. service.
WDAF Kansas City, Mo. (370.2m-810kc) 7:15 p. m. WEAF; 8:15, WEAF.
WDOD Chattanooga, Tenn. (245.8m-1220kc) 11 a. m. service; 5, Bible forum; 7:30, service; 9:30, concert.
WEBH Chicago, Ill. (365.6m-820kc) 10:30 a. m. Seventh Church of Christ, Scientist; 6-7 p. m. organ; 7:30, Edgewater Beach hotel orchestra.
WENR Chicago, Ill. (288.3m-1040kc) 6-7 p. m. music; 9:30-11, classical program.
WFAA Dallas, Tex. (499.7m-600kc) 2:45 p. m. Farmers' hour, musical; 6-7, Bible class; 8:15, WEAF; 11:12, orchestra.
WGN Chicago, Ill. (305.9m-980kc) 6:10 p. m. Punch and Judy; 6:50, string quintet; 8, Auld Sandy; 8:15, WEAF; 9:15, Our Music Room; 10:10, Sam 'n' Henry; 10:30, organ.
WHAS Louisville, Ky. (461.3m-650kc) 10 a. m. services; 6:20, WEAF.
WHB Kansas City, Mo. (336.9m-890kc) 7 p. m. Radio service; 11:15, organ.
WHO Des Moines, Iowa (535.4m-560kc) 11 a. m. services; 6:20 p. m., WEAF; 8:15, WEAF.
WHT Chicago, Ill. (416.4m-720kc) schedule being revised.
WIBO Chicago, Ill. (416.4m-720kc) schedule being revised.
WJAZ Chicago, Ill. (263m-1140kc) 7-9 p. m. studio program.
WJJD Chicago, Ill. (365.6m-820kc) 9 p. m. opera company.
WLAC Nashville, Tenn. (226m-1330kc) 9:15 p. m. sacred music.
WLIB Chicago, Ill. (305.9m-980kc) 5-5:30 p. m. musicale; 5:30, songs; 5:50, songs, Tommy Coates; 6, string quintet.
WLS Chicago, Ill. (344.6m-870kc) 10:45 a. m. U. of C. church service; 12:15 p. m. organ concert; 1:30, chapel service; 6, WLS Little Brown church.
WMAQ Chicago, Ill. (447.5m-670kc) 7 p. m. Chicago Sunday Evening club; 9:15, Columbia chain; 10, Reserie hour.
WMBB Chicago, Ill. (252m-1190kc) 3-6 p. m. orchestra; 7:40, Fifth Church of Christ Scientist; 9, popular program.
WMC Memphis, Tenn. (516.9m-580kc) 6:20 p. m. WEAF; 8:15, WEAF.
WOC Davenport, Ia. (374.8m-800kc) 7 p. m. service; 8:15, WEAF.
WOW Omaha, Neb. (508.2m-590kc) 9 a. m. services; 6:20 p. m., WEAF; 8:15, WEAF; 9:15, music.
WSB Atlanta, Ga. (475.9m-630kc) 5 p. m. vesper; 6:20, WEAF; 8:15 WEAF.
WSM Nashville, Tenn. (340.7m-880kc) 6:20 p. m. WEAF; 8:15, WEAF.
WTMJ Milwaukee, Wis. (293.9m-1020kc) 6 p. m. dinner concert; 7, organ; 9:15, WJZ.

Mountain Standard Time Stations

KOA Denver, Colo. (325.9m-920kc) 11 a. m. church service; 5:30, organ; 7:45, service.

Pacific Standard Time Stations

KEX Portland, Ore. (239.9m-1250kc) 6:30 p. m. trio; 8:30, organ; 9, Bible School program.
KFI Los Angeles, Calif. (468.5m-640kc) 7-8 p. m. organ; 8-9, classic hour; 9-10, orange network; 10-11, Packard Six dance orchestra.
KFRC San Francisco, Calif. (454.3m-660kc) 5 p. m. organ; 6:30, twilight recital; 8:30, orchestra.
KGO Oakland, Calif. (384.4m-780kc) 11 a. m. service; 7:35, service; 9-10, orange network.
KGW Portland, Ore. (491.5m-610kc) 11 a. m. church; 7:30-9 p. m. church; 9-10, symphony orchestra; 10-11, symphony.
KHJ Los Angeles, Calif. (416.4m-720kc) 7-8 p. m. service, First M. E. church; 8-10, program.
KJR Seattle, Wash. (348.6m-860kc) 11 a. m. service; 7:45 p. m. organ; 8, service; 9:15, studio program.
KNX Hollywood, Calif. (336.9m-890kc) 6:30 p. m. service; 9, features.
KPO San Francisco, Calif. (422.3m-710kc) 6 p. m. States Restaurant orchestra; 6:35, Palace hotel concert orchestra; 8:30, organ; 9, orchestra.

Sunday, silent night for: KSFD, KLX, KMA, KOB, WFLA, WSMB, WRVA, WTAG.

MONDAY, NOVEMBER 7

Headliners

Eastern	Central	Mountain	Pacific
8 p. m.	7	6	5

WSEA (263m-1140kc) Ray-O-Vac Twins.
WSUI (422.3m-710kc) "Political Parties in the United States," by Prof. Kirk H. Porter.

8:32	7:32	6:32	5:32

WFLA (288.3m-1040kc) Jessie Pamplin studios.

9	8	7	6

CKNC (365.6m-820kc) Eveready symphony orchestra.
WBAP (499.7m-600kc) "The Sunflower Girl."
WDOD (245.8m-1230kc) Harvey Hawaiian trio.
WHAS (461.3m-650kc) Myron Schulz and his Royal Peacock orchestra.
WSEA (263m-1140kc) Ray-O-Vac Twins.

9:30	8:30	7:30	6:30

WCOA (249.9m-1200kc) John W. Borjes, concert violinist.

10	9	8	7

KOIL (277.6m-1080kc) Frolic with Shep's Barnyard Twins and Uncle Josh.
WCOA (249.9m-1200kc) Mrs. C. M. Kelley, soprano soloist.
WDOD (245.8m-1220kc) Moore trio.

10:15	9:15	8:15	7:15

KOA (365.6m-820kc) Calvary Baptist Church choir and soloists.

10:30	9:30	8:30	7:30

WCOA (249.9m-1200kc) Florida Footwarmers orchestra, dance frolic.

11	10	9	8

KOIL (277.6m-1080kc) Mose and Charlie.
WBAP (499.7m-600kc) "The Sunflower Girl."

12:30 a. m.	11:30	10:30	9:30

WBAP (499.7m-600kc) The Majestic Theater entertainers.

(Continued on page 38)

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The Unitune brings in stations very clearly and with a selectivity that is amazing when you take in consideration the mass of stations on the air at the same time. I have heard three and four stations that were on almost same wavelengths at the same time and was able to tune out one after the other without the least interference.—W. L. BROBACK, San Francisco, Calif.

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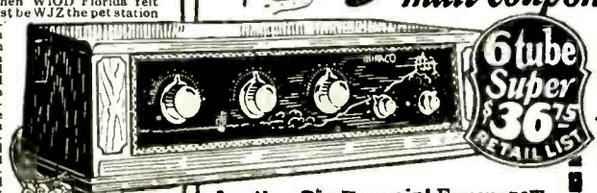

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(Continued from page 36)

Regular Monday Features

Eastern Time Stations

KDKA Pittsburgh, Pa. (315.6m-950kc) 7:30 p. m. WJZ; 9, WJZ.

WBAL Baltimore, Md. (285.5m-1050kc) 6:30 p. m. dinner orchestra; 7:30, WJZ; 9, staff program; 10, dance orchestra.

WBT Charlotte, N. C. (258.5m-1160kc) 7:30 p. m. WJZ; 9, Movie club.

WBZ Springfield, Mass. (333.1m-900kc) 7:30 p. m. WJZ; 9, band; 9:30, musicale; 10, orchestra.

WCAE Pittsburgh, Pa. (516.9m-580kc) 6 p. m. dinner concert; 8, song recital; 9:30, grand opera; 11, orchestra.

WCSH Portland, Me. (361.2m-830kc) 7:30 p. m. farm feature; 8:30, WEAF; 9:30, WEAF.

WEAF New York, N. Y. (491.5m-610kc) 7:30 p. m. chamber music; 8:30, time; 8:30, A. & P. Gypsies, WEEI, WJAR, WLIT, WRC, WCSH, WCAE, WTAM, WSAI, WDAF, WTMJ, WTIC, WOC, WWJ, WHO; 9:30, opera, WTIC, WRC, WCSH, WCAE, WDAF, WWJ, WLIT, WSAI, WHAS, WTMJ; 11, orchestra, WRC, WTIC.

WEEI Boston, Mass. (461.3m-650kc) 8 p. m. minstrels; 8:30, WEAF; 10, cruising the air.

WFLA Clearwater, Fla. (365.6m-820kc) 8:30 p. m. studio musicale; 10, dance orchestra.

WGBS New York, N. Y. (348.6m-860kc) 6:30 p. m. program.

WGHP Detroit, Mich. (319m-940kc) 6:50 p. m. orchestra; 8, organ; 9, Columbia chain.

WGR Buffalo, N. Y. (302.8m-990kc) 8-8:30 p. m. Hawaiian ensemble; 9, WEAF; 11:05, orchestra.

WHAZ Troy, N. Y. (545.1m-550kc) 8 p. m. program.

WHK Cleveland, Ohio (265.3m-1130kc) 7:30 p. m. I. B. S. A. program; 8:30, specialty program; 10, serenaders.

WHN New York, N. Y. (394.5m-760kc) 6:30 p. m. program; 12, Silver Slipper orchestra.

WHAR Atlantic City, N. J. (272.6m-1100kc) 7:45 p. m. book talk; 8, evening concert.

WJAX Jacksonville, Fla. (336.9m-890kc) 8 p. m. symphony orchestra; 11, organ.

WJR-WCX Detroit, Mich. (440.9m-680kc) 7:30 WJZ; 9, Ford and Glenn; 9:30, studio program; 11:30, dance music.

WJZ New York, N. Y. (454.2m-660kc) 7 p. m. Shoemakers; 7:30, Roxy and his gang, WBZ, KDKA, KYW, WRC, WSB, WSAI, WBAL, WJR, WHAM, WBT, WTMJ 9, Nuerity hour, KDKA, WHAM; 10, time, WBZ, KDKA; special hour; 11, orchestra.

WLIT Philadelphia, Pa. (405.2m-740kc) 7 p. m. WEAF; 9, grand opera.

WLW Cincinnati, Ohio (428.3m-700kc) 7 p. m. orchestra; 9, program.

WMAK Buffalo, N. Y. (545.1m-550kc) 7:30 p. m. violin; 9, Columbia chain; 11, dance program.

WMCA New York, N. Y. (370.2m-810kc) 6:25 p. m. baseball; 6:30, orchestra; 12:30, frolic club orchestra.

WNAC Boston, Mass. (288.3m-1040kc) 6 p. m. program; 8, musicale; 9, Columbia chain; 11:05, orchestra.

WOO Philadelphia, Pa. (508.2m-590kc) 7:30 p. m. dinner music; 9:25, organ.

WOR Newark, N. J. (422.3m-710kc) 7:30 p. m. orchestra; 9, Columbia hour; 10:07, orchestra.

WPG Atlantic City, N. J. (272.6m-1100kc) 6:45 p. m. organ; 9, program; 10:30, orchestra.

WRC Washington, D. C. (468.5m-640kc) 6-10:30 p. m. WEAF; 10:30, Syncopators.

WRVA Richmond, Va. (254.7m-1180kc) 8 p. m. orchestra; 9:10, musicale.

WSAI Cincinnati, Ohio (361.2m-830kc) 7:30 p. m.-12 mid. WEAF.

WSEA Norfolk, Va. (263m-1140kc) 7 p. m. dinner concert; 8, studio recital; 9, club.

WTAG Worcester, Mass. (516.9m-580kc) 8 p. m. program.

WTAM Cleveland, Ohio (399.8m-750kc) 6 p. m. orchestra; 8:30, WEAF, 10:30, studio program; 11:30, organ.

WTIC Hartford, Conn. (535.4m-560kc) 6:30 p. m. program; 8, New Departure orchestra; 8:30, WEAF; 10:30, orchestra.

WWJ Detroit, Mich. (352.7m-850kc) 5 p. m. dinner concert; 8:30, WEAF; 10:30, WEAF.

WWNC Asheville, N. C. (296.8m-1010kc) 7 p. m. dinner music; 8:45, entertainers; 11, theater frolic.

Central Time Stations

KFAB Lincoln, Neb. (309.1m-970kc) 5:30-6:30 p. m. Hotel Lincoln orchestra; 8:30-10:30, orchestra.

KMA Shenandoah, Iowa (394.5m-760kc) 6 p. m. trio; 7, music; 8, Dixie girls.

KOIL Council Bluffs, Ia. (277.6m-1080kc) 6 p. m. ensemble; 8, program; 11, program.

KPRC Houston, Texas (296.9m-1010kc) 7:30-9:30 p. m. studio concert.

KSD St. Louis, Mo. (545.1m-550kc) 9:30-10:30 p. m. music.

KSO Clarinda, Ia. (227.1m-1320kc) 7:30 p. m. orchestra.

KTHS Hot Springs National Park, Ark. (384.4m-780kc) 8 p. m. vocal numbers; 8:30 p. m. feature program.

WAMD St. Paul-Minneapolis, Minn. (225.4m-1330kc) 7:30 p. m. program; 11:15, organ.

WBAP Ft. Worth, Tex. (499.7m-600kc) 6 p. m. orchestra; 8, program; 10, program; 10:45, program; 11:45, theater.

WCCO Minneapolis-St. Paul, Minn. (405.2m-740kc) 6:30 p. m. dinner concert.

WCOA Pensacola, Fla. (249.9m-1200kc) 8 p. m. program.

WDAF Kansas City, Mo. (370.2m-810kc) 6 p. m. school of the air; 7:30-9:30 p. m., WEAF; 11:45-1, Nighthawk frolic.

WDOD Chattanooga, Tenn. (245.8m-1220kc) 7-8 p. m. dinner hour; 9, studio program; 10, popular music

WFAA Dallas, Tex. (499.7m-600kc) 7-8 p. m. orchestra; 9, quartet.

WHAS Louisville, Ky. (461.3m-650kc) 6:30 p. m. WJZ; 8, program; 8:30, N. B. C.

WHB Kansas City, Mo. (336.9m-890kc) 7-8 p. m. musicale; 8-9.

WHO Des Moines, Iowa (535.4m-560kc) 6:30 p. m. orchestra; 9:30, dance orchestra; 11, organ.

WMC Memphis, Tenn. (516.9m-580kc) 8 p. m. farm talk; 8:30, orchestra.

WOC Davenport, Ia. (374.8m-800kc) 7:30, WEAF; 8:30, organ.

WOS Jefferson City, Mo. (468.5m-640kc) 8 p. m. program.

WOW Omaha, Nebr. (508.2m-590kc) 6:30 p. m. WJZ; 8:30, WEAF.

WSB Atlanta, Ga. (475.9m-630kc) 6:30 p. m. WJZ; 8, farm program; 10:45, artists.

WSM Nashville, Tenn. (340.7m-880kc) 6:30 p. m. WJZ; 8, music.

WSMB New Orleans, La. (322.4m-930kc) 8:30-10:30 p. m. Sunday South syncopators, theater orchestras, Billy Broussard, Louis Boyer, popular songsters.

WTMJ Milwaukee, Wis. (293.9m-1020kc) 6:30 p. m. WJZ; 8, WEAF; 9, WEAF; 10:30, program.

Mountain Standard Time Stations

KOA Denver, Colo. (325.9m-920kc) 8 p. m. Scheuerman's Colorado orchestra; 8:15, studio program.

Pacific Standard Time Stations

KFI Los Angeles, Calif. (468.5m-640kc) 7-8 p. m. music; 8-9, orange network; 9-10, program, KPO; 10, program.

KFOA Seattle, Wash. (447.5m-670kc) 7:15 p. m. news; 8, orange chain.

KFRC San Francisco, Calif. (454m-660kc) 6:30 p. m. Cecilians; 8, Jamboree; 10, frolic.

KFWB Hollywood, Calif. (361.2m-830kc) 6-7 p. m. dinner hour; 8-9, program; 9-10, program; 10-11, frolic.

KGO Oakland, Calif. (384.4m-780kc) 6-6:55 p. m. orchestra; 8-9, orange network; 9, book chat.

KGW Portland, Ore. (491.5m-610kc) 8, National Broadcasting company; 9-10, concert.

KJR Seattle, Wash. (348.6m-860kc) 6:30 p. m. dinner hour; 7-10, studio program.

KLX Oakland, Calif. (508.2m-590kc) 8-9 p. m. studio program; 9-10, Lake Merritt Ducks.

KNX Hollywood, Calif. (336.9m-890kc) 7:30 p. m. playlet; 8, program; 9, feature; 10, feature; 11, frolic.

KPO San Francisco, Calif. (422.3m-710kc) 6:30-7 p. m. organ; 7-7:30, Rudy Seigers' Fairmont hotel concert orchestra; 8-9, orange chain; 9-10, studio program; 10-11, program.

Monday, silent night for: KFDM, KHJ, KLDS, KYW, WBBM, WBCN, WCBD, WCFL, WEBH, WENR, WFI, WGBS, WGN, WHT, WIBO, WIP, WJAZ, WJJD, WLIB, WLS, WMAQ, WMBB, WOAI, WOK, WORD, WQJ, WSAI.

(Continued on page 40)

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(Continued from page 38)

TUESDAY, NOVEMBER 8
Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WSUI (422.3m-710kc) Address, "Botany."
7 6 5 4
WTIC (535.4m-560kc) Trinity College Dialogue.
8 7 6 5
WSEA (263m-1140kc) Ray-O-Vac Twins.
WSUI (475.9m-630kc) Early Iowa History, by Prof. Bruce E. Mahan.
WWJ (352.7m-850kc) "Michigan Night."
8:20 7:20 6:20 5:20
KLDS (270.1m-1110kc) Walt Filkin, Missouri's Poet.
8:30 7:30 6:30 5:30
WLS (344.6m-870kc) Personalities in Music, Wagner.
8:45 p.m. 7:45 6:45 5:45
WLW (428m-700kc) Bud Kahn, Ray Dombardi.
9 8 7 6
WDOD (245.8m-1220kc) Texaco Salon orchestra.
WSEA (263m-1140kc) Ray-O-Vac Twins.
WTIC (535.4m-560kc) Manning-Bowman concert.
9:30 p. m. 8:30 7:30 6:30
WBBM (389.4m-770kc) Doings of the Brown Family.
WTIC (535.4m-560kc) Akay Harmony Belles.
10 9 8 7
WWJ (352.7m-850kc) String Pickers.
10:30 9:30 8:30 7:30
KOA (365.6m-820kc) Ernest Loomis and his Victor Recording orchestra.
11 10 9 8
KFOA (447.5m-670kc) Pantages theater feature act.

WEDNESDAY, NOVEMBER 9
Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WTIC (535.4m-560kc) Sea Gull Dinner Group.
7 6 5 4
WTIC (535.4m-560kc) Bryant and Chapman Early Birds.
7:10 6:10 5:10 4:10
WLW (428m-700kc) Ray Miller's orchestra.
7:30 6:30 5:30 4:30
WBAP (499.7m-600kc) "Capt. Appleblossom" and "Skipper Moonshine."
8 7 6 5
WSEA (263m-1140kc) Ray-O-Vac Twins.
WSUI (475.9m-630kc) Elementary French, by Prof. A. J. Dickman.
8:15 7:15 6:15 5:15
WHK (265.3m-1130kc) Famous choirs of Cleveland.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Mrs. R. Newell Turner and Elaine Turner, piano duets.
9 8 7 6
WCOA (249.9m-1200kc) U. S. Naval Air Station band.
WLS (344.6m-870kc) J. Walker Sap in Kansas.
WSEA (263m-1140kc) Ray-O-Vac Twins.
9:30 8:30 7:30 6:30
WWJ (352.7m-850kc) Gypsy Barons.
10 9 8 7
KOIL (277.6m-1080kc) Prof. Herr Heinrich Schultzenheim and His Boys.
WCOA (249.9m-1200kc) Mrs. W. A. Leonard, contralto soloist.
10:15 9:15 8:15 7:15
KOA (365.6m-820kc) Optimist club of Denver.
WCOA (249.9m-1200kc) Miss Margaret Reed, pianist.
10:30 9:30 8:30 7:30
WCOA (249.9m-1200kc) Christine O'Farrell, child soprano.
11:30 10:30 9:30 8:30
WWJ (352.7m-850kc) Dan Russo's orchestra.
1 a. m. 12 11 10
KGW (491.5m-610kc) Herman Kenin and his orchestra.

For Regular Features See Wednesday, November 2.

THURSDAY, NOVEMBER 10
Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WSUI (475.9m-630kc) Address, "Child Welfare."
7:30 6:30 5:30 4:30
WBAP (499.7m-600kc) Bob Sweeney, baritone; Aylene Hoffman, pianist.
8 7 6 5
WSUI (475.9m-630kc) "Appreciation of Literature."
8:30 7:30 6:30 5:30
KOIL (277.6m-1080kc) Marvel Boys.
WLS (344.6m-870kc) The Story of the Clarinet.
WTIC (535.4m-560kc) Capitol Theater presentation.
9 8 7 6
WWNC (296.9m-1010kc) Chrysanthemum ball.
10 9 8 7
WON (306m-980kc) Arabian Night's entertainment.
WOW (508.2m-590kc) Tracy-Brown's orchestra.
10:01 9:01 8:01 7:01
WLW (428m-700kc) Crosley Cossacks.
10:30 9:30 8:30 7:30
KGW (491.5m-610kc) Utility service.
11:30 10:30 9:30 8:30
WAMD (225.4m-1330kc) Sarge the Windjammer.
12 mid. 11 10 9
KFON (233m-1290kc) Long Beach opera company.

For Regular Features See Thursday, November 3.

FRIDAY, NOVEMBER 11
Headliners

Eastern	Central	Mountain	Pacific
6:30	5:30	4:30	3:30

WSUI (475.9m-630kc) Address, "Astronomy."
7:15 6:15 5:15 4:15
WTIC (535.4m-560kc) Piano selections, Laura C. Gaudet.
8 7 6 5
WSUI (475.9m-630kc) Elementary Spanish, by Prof. M. R. Gonzales.
WWNC (296.9m-1010kc) Armistice night, Southeastern flower show.
8:30 7:30 6:30 5:30
WHAS (461.3m-650kc) Studio concert under auspices of University of Louisville.
WLS (344.6m-870kc) Hockey game, Blackhawks-Detroit.
9 8 7 6
WBAP (499.7m-600kc) Music Masters.
WCOA (249.9m-1200kc) W. Hazlett Petty, tenor soloist.
WDOD (245.8m-1220kc) Armistice Day program.
WLS (344.6m-870kc) Special Armistice Day program.
WNAD (239.9m-1250kc) Debate, Cambridge-Oklahoma.
9:30 8:30 7:30 6:30
WCOA (249.9m-1200kc) Mr. and Mrs. L. L. Gerst, vocalists.
WGN (306m-980kc) Paul Ash and his Merry-Mad Musical Gang.
10 9 8 7
KOA (365.6m-820kc) Lessons in airplane flying, Cloyd Clevenger.
WCOA (249.9m-1200kc) Mrs. J. Wallace Lamar, violinist.
WLS (344.6m-870kc) Metropolitan choir.
10:15 9:15 8:15 7:15
KOA (365.6m-820kc) Armistice Day program.
10:30 9:30 8:30 7:30
WCOA (249.9m-1200kc) Mrs. Carol C. Webb, vocalist.
WLS (344.6m-870kc) Little Symphony pop concert.
WTIC (535.4m-560kc) Hotel Bond orchestra; Julie Wintz, director.
10:45 9:45 8:45 7:45
WCOA (249.9m-1200kc) Mrs. C. G. Meigs, pianist.
11:10 10:10 9:10 8:10
WEEI (447.5m-670kc) Frank Stevens, organist.
12 mid. 11 10 9
KFON (233m-1290kc) Dick Dickson, organist.
1:30 a. m. 12:30 11:30 10:30
KGW (491.5m-610kc) Hoot Owls.

Football

Carnegie Tech.-Western Reserve at Pittsburgh, KDKA (315.6m-950kc).

Idaho-State College at Pullman, KWSC (394.5m-760kc).
Michigan State-Albion at East Lansing, WKAR (285.5m-1050kc).

For Regular Features See Friday, November 4.

SATURDAY, NOVEMBER 12
Headliners

Eastern	Central	Mountain	Pacific
7 p. m.	6	5	4

WLW (428m-700kc) Herschel Luckie.
8 p. m. 7 6 5
WWNC (296.9m-1010kc) Southeastern Flower show.
9 p. m. 8 7 6
KLDS (270.1m-1110kc) Elsa Schutte, pianist.
10 p. m. 9 8 7
WSM (340.7m-880kc) Barn dance.
2 a. m. 1 12 11
KFON (233m-1290kc) Pacific Coast Club orchestra.

Football

Alabama-Florida at Montgomery, WAPI (319m-940kc).
Alabama Poly.-Miss. A. & M. at Birmingham, WAPI (319m-940kc).
Arkansas-Okla. A. & M. at Fayetteville, KUOA (296.9m-1010kc).
Chicago-Illinois at Champaign, WMAQ (447.5m-670kc), WRM (272.6m-1100kc).
California-Washington at Berkeley, KPO (422.3m-710kc).
Colorado-U. S. C. at Los Angeles, KFI (468.5m-640kc), KPO (422.3m-710kc).
Harvard-Brown at Cambridge, WBZ (333.1m-900kc).
Iowa State-Wisconsin at Madison, WHA (319m-940kc).
Marquette-Holy Cross at Milwaukee, WSOE (270.1m-1110kc), WGWB (218.8m-1370kc).
Michigan State Albion at East Lansing, WKAR (285.5m-1050kc).

Michigan-Navy at Ann Arbor, WEAF (491.5m-610kc) and chain.
Minnesota-Drake at Minneapolis, WAMD (225.4m-1330kc), WCCO (405.2m-740kc).
Missouri-Iowa State at Ames, WOI (265.3m-1130kc).
Northwestern-Indiana at Evanston, WEBH (365.6m-820kc), WIBO (416.4m-720kc).
Notre Dame-Army at New York City, WGN (305.9m-980kc).
Ohio State-Denison at Columbus, WEAO (282.8m-1060kc).
Oklahoma-Kansas at Norman, WNAD (239.9m-1250kc).
Southern College-Chattanooga at Chattanooga, WDOD (245.8m-1220kc).
Yale-Princeton at New Haven, WJZ (454.2m-660kc) and chain.
For Regular Features See Saturday, November 5.

SUNDAY, NOVEMBER 13 Headliners

Eastern	Central	Mountain	Pacific
1:30 p. m.	12:30	11:30	10:30

WGN (305.9m-980kc) Pro Football, Chicago Bears-Pottsville Independents.
6 5 4 3
WMAQ (447.5m-670kc) Chicago string quartette from the Cordon Club.
7:30 6:30 5:30 4:30
WDOD (245.5m-1220kc) Hotel Patten ensemble.
8 7 6 5
WMAQ (447.5m-670kc) Chicago Sunday Evening Club, speaker Dr John Herman Randall.
9:15 8:15 7:15 6:15
WLW (428m-700kc) Crosley Handbox hour.
10 9 8 7
WSUI (475.9m-630kc) Familiar hymns, First Presbyterian Church quartette.
10:30 9:30 8:30 7:30
WEAF (499.7m-600kc) The Seven Aces, "All Eleven of 'Em".
12 mid. 11 10 9
WLIB (306m-980kc) Hoodlums.
1 a. m. 12 11 10
KGW (491.5m-610kc) Little symphony orchestra.
For Regular Features See Sunday, November 6.

MONDAY, NOVEMBER 14 Headliners

Eastern	Central	Mountain	Pacific
7 p. m.	6	5	4

WLW (428m-700kc) Ray Miller's orchestra.
8 7 6 5
WSUI (475.9m-630kc) "Political Parties in the United States," Prof. H. Porter.
WTIC (535.4m-560kc) New Departure band, Ernest Becker, director.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Esther Kellogg, violinist; Bubby Tucker, pianist.
9 8 7 6
CKNC (365.6m-820kc) Eveready instrumental quintet.
WCOA (249.9m-1200kc) 13th Coast Artillery band.
WDOD (245.5m-1220kc) Harvey Hawaiian trio.
WHAS (461.3m-650kc) Myron Schulz and his Royal Peacock orchestra.
10 9 8 7
KOIL (277.6m-1080kc) Frolic with Shep's Barnyard Twins and Uncle Josh.
WCOA (249.9m-1200kc) Sybil McNair, popular pianist.
WDOD (245.5m-1220kc) 6th U. S. Cavalry Band.
10:30 9:30 8:30 7:30
WCOA (249.9m-1200kc) John E. Frenkel, "The Breezy Boy from the Gulf."
11 10 9 8
KOIL (277.6m-1080kc) Mose and Charlie.
WBAP (499.7m-600kc) "The Sunflower Girl".
WCOA (249.9m-1200kc) Don San Francisco Hernandez, concert violinist.
11:20 10:20 9:20 8:20
WBAP (499.7m-600kc) The Grapevine Fiddle Band.
12 mid. 11 10 9
KGW (491.5m-610kc) Venetian hour of Italian music.
12:15 a. m. 11:15 10:15 9:15
WSUI (422.3m-710kc) Pastime Theatre program.
12:20 11:20 10:20 9:20
WBAP (499.7m-600kc) Majestic Theatre entertainers.
1:30 a. m. 12:30 11:30 10:30
KFOA (477.5m-620kc) Coyotes' frolic.
For Regular Features See Monday, November 7.

TUESDAY, NOVEMBER 15 Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WSUI (475.9m-630kc) Address, "Engineering."
7 6 5 4
WLW (428m-700kc) Handbox boys.
WTIC (535.4m-560kc) Trinity College dialogue.
8 7 6 5
WLIB (306m-980kc) Blackstone string quintet.
WLS (344.6m-870kc) Tony's Scrap Book.
WSUI (475.9m-630kc) "Early Iowa History," Prof. Bruce E. Mahan.
8:30 7:30 6:30 5:30
WLS (344.6m-870kc) Personalties in music, Rossini.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Program arranged by Madam Mulligan.
9 8 7 6
KLDS (270.1m-1110kc) Robert Miller, organist.
KOIL (277.6m-1080kc) Warner Brothers Motion Picture Studio's program.
WBAP (499.7m-600kc) "Percy Pinkpants" and "Miss Prim".
WTIC (535.4m-560kc) Manning-Bowman concert.
9:30 8:30 7:30 6:30
WTIC (535.4m-560kc) Akay Harmony Belles.
10 9 8 7
WRBM (389.4m-770kc) Charlie Schultz, 80 lb. tenor.
WDOD (245.5m-1220kc) Alhambra Shrine band.
11 10 9 8
KFOA (447.5m-670kc) Pantages theater.
For Regular Features See Tuesday, November 1.

WEDNESDAY, NOVEMBER 16 Headliners

Eastern	Central	Mountain	Pacific
8:30 p. m.	7:30	6:30	5:30

KFAB (309.1m-970kc) U. of Nebraska.
WHAS (461.3m-650kc) Studio concert by K. & I. orchestra.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Mrs. Fred Larson, lyric soprano.
9 8 7 6
KFBK (233m-1290kc) Happiness and Harmony.
9:30 8:30 7:30 6:30
WCOA (249.9m-1200kc) Miss Elizabeth Moreno, piano recital.
WTIC (535.4m-560kc) Clements Show Book.
10 9 8 7
KOIL (277.6m-1080kc) Prof. Herr Heinrich Schultzenheim and his Boys.
WCOA (249.9m-1200kc) A. Morley Darby, popular baritone.
WLS (344.6m-870kc) U. of Chicago choir.

WLW (428m-700kc) Heermann instrumental trio.
10:30 5:30 8:30 7:30
WCOA (249.9m-1200kc) Harry T. Howland, Jr., banjo and vocal selections.
10:45 9:45 8:45 7:45
WCOA (249.9m-1200kc) Florida Footwarmers orchestra, dance music.
11 10 9 8
KGW (491.5m-610kc) White King orchestra.
For Regular Features See Wednesday, November 2.

THURSDAY, NOVEMBER 17
Headliners

Eastern	Central	Mountain	Pacific
7:30 p. m.	6:30	5:30	4:30

WLAC (225.4m-1330kc) "Economics in Salesmanship" by E. J. Eberling.
WLW (428m-700kc) Crosley Mandolin quintet.
8:30 7:30 6:30 5:30
KLDS (270.1m-1110kc) Jessie Wilson Towner, talk.
KOIL (277.6m-1080kc) Marvel Boys.
WLS (344.6m-870kc) Old Town duo.
WTIC (535.4m-560kc) Capitol Theatre presentation.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) High School quartette.
10 9 8 7
KGW (491.5m-610kc) Good Humor orchestra.
WGN (306m-980kc) Arabian Night's entertainment.
WOW (508.2m-590kc) Tracy-Brown's orchestra.
11 10 9 8
WBAP (499.7m-600kc) Weatherford orchestra and chorus.
11:30 10:30 9:30 8:30
WAMD (255.4m-1330kc) Sarge the Windjammer.
WSM (340.7m-880kc) F. Arthur Henkel, organist.
12 mid. 11 10 9
KFON (233m-1290kc) Long Beach Opera company.
WBBM (389.4m-770kc) Hank and his gang.
WJJD (365.6m-820kc) Palmer House string trio.
For Regular Features See Thursday, November 3.

FRIDAY, NOVEMBER 18
Headliners

Eastern	Central	Mountain	Pacific
7 p. m.	6	5	4

KOIL (277.6m-1080kc) KOIL Wigwam.
7:30 6:30 5:30 4:30
WTIC (535.4m-560kc) Austin organ recital, Esther A. Nelson.
8:30 7:30 6:30 5:30
WDOD (245.5m-1220kc) Brunswick half hour.
WHAD (270.1m-1110kc) Business talk, Dr. J. Freeman Pyle.
WLS (344.6m-870kc) Oriental male quartet.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Organ and artists recital from Peace Memorial Church.
9 8 7 6
KOIL (277.6m-1080kc) Billy and Helen.
WBAP (499.7m-660kc) Music Masters, concert orchestra.
WCCO (405.2m-740kc) Hamline University program.
WCOA (249.9m-1200kc) The Dark Horse and his crooning guitar.
WGY (379.5m-790kc) WGY players.
9:30 8:30 7:30 6:30
WCOA (249.9m-1200kc) Dr. C. J. Heinberg, violinist.
WGN (306m-980kc) Paul Ash and his Merry-Mad Musical gang.
WMBB (252m-1190kc) Trianon orchestra.
9:45 8:45 7:45 6:45
WCOA (249.9m-1200kc) Miss Naomi Dante, soprano soloist.
10 9 8 7
WBAL (285m-1050kc) Municipal band of Baltimore.
WCOA (249.9m-1200kc) Mrs. Robert Brocket, dramatic soprano.
10:35 9:35 8:35 7:35
WEEI (461.3m-650kc) Chimney Swallows.
11 10 9 8
KFON (233m-1290kc) Long Beach Municipal band.
WBAP (499.7m-660kc) Concert by School of Music of Texas Christian University.
1 a. m. 12 11 10
KFOA (4475m-670kc) Petunia Scrub Woman.
1:30 12:30 11:30 10:30
KGW (491.5m-610kc) Hoot Owls.

Football
NOVEMBER 18

New Mexico—New Mexico State at State College, KOB (394.5m-760kc).
For Regular Features See Friday, November 4.

SATURDAY, NOVEMBER 19
Headliners

Eastern	Central	Mountain	Pacific
7 p. m.	6	5	4

WOR (422.3m-710kc) Hotel Shelton ensemble.
7:15 6:15 5:15 4:15
WOW (508.2m-590kc) Popular songs.
8 7 6 5
WLS (344.6m-870kc) National Barn dance.
8:30 7:30 6:30 5:30
WDOD (245.5m-1220kc) Hotel Patten ensemble.
WLS (344.6m-870kc) National Barn dance.
8:45 7:45 6:45 5:45
WHAS (461.3m-650kc) C. H. Green, tenor solos.
9:30 8:30 7:30 6:30
WLAC (225.4m-1330kc) Alton E. Wheeler, the "Ivories Duster".
WMBB (252m-1190kc) Voris Worthley.
10:30 9:30 8:30 7:30
WLW (428m-700kc) Ervin Schenck, organist.
11:05 10:05 9:05 8:05
WCCO (405.2m-740kc) St. Paul Athletic Club orchestra.
11:40 10:40 9:40 8:40
WGN (306m-980kc) Melody time.
1 a. m. 12 11 10
KFON (233m-1290kc) Cloverleaf orchestra.
KGW (491.5m-610kc) Indian Grill.

Football
NOVEMBER 19

Butler-Michigan State at East Lansing, WKAR (285.5m-1050kc).
California-Stanford at Palo Alto, KFI (468.5m-640kc), KPO (422.3m-710kc).
Grinnell-Iowa State at Ames, WOI (265.3m-1130kc).
Harvard-Yale at Cambridge, WBZ (333.1m-900kc), WEAF (491.5m-610kc) and chain, WJZ (454.2m-660kc) and chain.
Kansas Aggies-Nebraska at Manhattan, KSAC (333.1m-900kc).
Minnesota-Michigan at Ann Arbor, WAMD (225.4m-1330kc), WGN (305.9m-980kc), WCCO (405.2m-740kc).
Missouri-Kansas at Lawrence, KFKU (254.1m-1180kc).
Northwestern-Iowa at Evanston, WEBH (365.5m-820kc), WIBO (416.4m-720kc).
Ohio State-Illinois at Columbia, WEAO (282.8m-1060kc).
Wisconsin-Chicago at Chicago, KYW (526m-570kc), WLS (344.6m-870kc), WMAQ (447.5m-670kc), WMBB (252m-1190kc).
For Regular Features See Saturday, November 5.

SUNDAY, NOVEMBER 20
Headliners

Eastern	Central	Mountain	Pacific
1:30 p. m.	12:30	11:30	10:30

WGN (305.9m-980kc) Chicago Bears—Green Bay Packers, Pro football.
6:30 5:30 4:30 3:30
WTIC (535.4m-560kc) "Melodies for the Folks at Home", Capitol Theatre organ.
6:38 5:38 4:38 3:38
WEEI (461.3m-650kc) Sam Curtis' Radio chat.
7 6 5 4
WLS (344.6m-870kc) WLS Little Brown church.
8:30 7:30 6:30 5:30
KGW (491.5m-610kc) Fields' Mixed quartet.
9:15 8:15 7:15 6:15
WLW (428m-700kc) Crosley Bandbox hour.
10 9 8 7
WMBB (252m-1190kc) Trianon ensemble.
10:30 9:30 8:30 7:30
WBAP(499.7m-660kc) The Seven Aces, "All Eleven of 'Em", popular dance music.
12 mid. 11 10 9
KOIL (277.6m-1080kc) Ambassadors from Peacock Inn.
For Regular Features See Sunday, November 6.

MONDAY, NOVEMBER 21
Headliners

Eastern	Central	Mountain	Pacific
7:30 p. m.	6:30	5:30	4:30

WLW (428m-700kc) Aviation chat.
6:50 5:50 4:50
WEEI (461.3m-650kc) Personality Portraits.
8:30 7:30 6:30 5:30
WCOA (249.9m-1200kc) Howland, Birks & Howland, instrumentalists.
9 8 7 6
KFON (233m-1290kc) Happiness and Harmony.
WBAP (499.7m-660kc) "The Sunflower Girl."
WDOD (245.5m-1220kc) Harvey Hawaiian trio.
WSEA (263m-1140kc) Stay With Us Club.
9:30 8:30 7:30 6:30
WTAG (516.9m-580kc) WTAG Little symphony.
9:45 8:45 7:45 6:45

WCOA (249.9m-1200kc) Uncle Philip and his mandolin, dialectician.
10 9 8 7
KGW (491.5m-610kc) Salon orchestra.
WCOA (249.9m-1200kc) Robert Reed, 13-year-old piano prodigy.
10:30 9:30 8:30 7:30
KFAB (309.1m-970kc) Van Sickle Four.
KFOA (447.5m-670kc) Under the Awning.
WCOA (249.9m-1200kc) William Knight, baritone.
10:45 9:45 8:45 7:45
WCOA (249.9m-1200kc) Mrs. George Turner, whistling.
11 10 9 8
KOIL (277.6m-1080kc) Mose and Charlie.
WJR (440.9m-680kc) Tin Pan Alley.
For Regular Features See Monday, November 7.

TUESDAY, NOVEMBER 22
Headliners

Eastern	Central	Mountain	Pacific
6:20 p. m.	5:20	4:20	3:20

KFON (233m-1290kc) Long Beach Municipal band.
7:30 6:30 5:30 4:30
WJR (440.9m-680kc) Dreamers.
WLAC (225.4m-1330kc) "How to Speak in Public," by L. B. Smelzer.
8:20 7:20 6:20 5:20
KLDS (270.1m-1110kc) Walt Filkin, Journal-Post Poet.
8:30 7:30 6:30 5:30
KFAB (309.1m-970kc) U. of Nebraska program.
WLS (344.6m-870kc) Personalities in music, Donizetti.
WLIB (306m-980kc) Mark Love, bass.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) H. A. Carlton, baritone; Mrs. H. A. Carlton, contralto.
9 8 7 6
KOIL (277.6m-1080kc) Katherine Cheyne Lemen, contralto.
WLW (428m-700kc) Formica concert orchestra.
WDOD (245.5m-1220kc) Texaco Salon orchestra.
WTIC (535.4m-560kc) Manning-Bowman concert.
9:30 8:30 7:30 6:30
WMBB (? 2m-1190kc) Eddie Wallace.
10 9 8 7
WOW (508.2m-590kc) Tracy-Brown's orchestra.
10:30 9:30 8:30 7:30
WCCO (405.2m-740kc) The Trustodians.
10:45 9:45 8:45 7:45
KGW (491.5m-610kc) Book chat.
For Regular Features See Tuesday, November 1.

WEDNESDAY, NOVEMBER 23
Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WTIC (535.4m-560kc) Sea Gull Dinner Group.
7:30 6:30 5:30 4:30
WBAP (499.7m-660kc) "Capt. Appleblossom" and "Skipper Moonshine."
WLAC (225.4m-1330kc) "Why a Knowledge of Business Is Essential," by R. L. Garis.
8 7 6 5
WLW (428m-700kc) Luke Minnich's Harmony Four.
8:15 7:15 6:15 5:15
WHK (265.3m-1130kc) Famous choirs of Cleveland.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Mrs. R. L. Rodgers, coloratura soprano.
9 8 7 6
WCOA (249.9m-1200kc) U. S. Naval Air Station band.
9:15 8:15 7:15 6:15
WCOA (249.9m-1200kc) Mount Zion Jubilee singers, spirituals.
9:30 8:30 7:30 6:30
WJJD (365.6m-820kc) Tivoli theater program.
10 9 8 7
KOIL (277.6m-1080kc) Prof. Herr Heinrich Schultzenheim and His Boys.
WCOA (249.9m-1200kc) Mrs. W. R. Helie, vocalist.
WLS (344.6m-870kc) Chopin male choir.
10:15 9:15 8:15 7:15
KFAB (309.1m-970kc) Milady Harmony Boys.
10:30 9:30 8:30 7:30
WJR (440.9m-680kc) Personality Girls.
WTIC (535.4m-560kc) Hotel Bond orchestra.
10:40 9:40 8:40 7:40
WEEI (447.6m-670kc) Frank Stevens, organist.
10:45 9:45 8:45 7:45
KGW (491.5m-610kc) White King orchestra.
WCOA (249.9m-1200kc) "The Merry Maids" in Melodious Moments.
WLS (344.6m-870kc) Hockey game, Blackhawks-Ottawa.
11:20 10:20 9:20 8:20
KFON (233m-1290kc) Long Beach Municipal band.
12 mid. 11 10 9
WLIB (306m-980kc) Hoodlums.
12:15 a. m. 11:15 10:15 9:15
WBAP (499.7m-660kc) John Josey, organist.
For Regular Features See Wednesday, November 2.

THURSDAY, NOVEMBER 24
Headliners

Eastern	Central	Mountain	Pacific
1:30 p. m.	12:30	11:30	10:30

WGN (305.9m-980kc) Chicago Bears-Chicago Cardinals, professional football.
7 6 5 4
WOW (508.2m-590kc) George Haupt, organist.
7:30 6:30 5:30 4:30
WLAC (225.4m-1330kc) "Economics in Salesmanship," by E. J. Eberling.
8 7 6 5
WMBB (252m-1190kc) Thanksgiving day program.
WOK (422.3m-710kc) Choir Invisible.
WTIC (535.4m-560kc) Fields Blue Boys.
8:15 7:15 6:15 5:15
WCCO (405.2m-740kc) "Common Sense in Religion," by Rev. Frederick M. Eliot.
8:20 7:20 6:20 5:20
WLS (344.6m-870kc) Old Town duo.
8:30 7:30 6:30 5:30
KOIL (277.6m-1080kc) Bowen-Shields program.
9 8 7
CKNC (365.6m-820kc) Charlie Bodley and his dance orchestra.
WHB (336.9m-890kc) Frederick Curth players.
9:30 8:30 7:30 6:30
WJR (440.9m-680kc) Joe Higgins's Old Time song review.
10 9 8 7
KGW (491.5m-610kc) Good Humor orchestra.
10:15 9:15 8:15 7:15
WJR (440.9m-680kc) Cotton Pickers.
10:45 9:45 8:45 7:45
WLW (428m-700kc) Tommy and Irene.
11:20 10:20 9:20 8:20
KFON (233m-1290kc) Long Beach Municipal band.
12 m. 11 10 9
WBBM (389.4m-770kc) Hank and His Gang.

Football

Alabama-Georgia at Birmingham, WAPI (319m-940kc).
Alabama Poly.-Georgia Tech. at Atlanta, WAPI (319m-940kc).
Columbia-Syracuse at New York, WHN (394.5m-760kc).
Kansas Aggie-Okla. Aggies at Manhattan, KSAC (333.1m-900kc).
Marquette-Iowa State at Milwaukee, WSOE (270.1m-1110kc), WCWB (218.8m-1370kc).
New Mexico Military-New Mexico States at State College, KOB (394.5m-760kc).
Oglethorpe-Chattanooga, WDOD (245.8m-1220kc.)
Penn.-Cornell at Philadelphia, WEAF (491.5m-610kc) and chain, WJZ (454.2m-660kc) and chain.
Pitt.-Penn. State at Pittsburgh, KDKA (315.6m-950kc).
For Regular Features See Thursday, November 3.

FRIDAY, NOVEMBER 25
Headliners

Eastern	Central	Mountain	Pacific
6:30 p. m.	5:30	4:30	3:30

WTIC (535.4m-560kc) Waldorf-Astoria dinner music.
7 6 5 4
WOR (422.3m-710kc) Commodore ensemble.
WOW (508.2m-590kc) Hugo Heyn, marimba soloist.
7:30 6:30 5:30 4:30
WGY (379.5m-790kc) Eastman theater program.
8 7 6 5
WBAP (499.7m-660kc) Music Masters, concert orchestra.
WMBB (252m-1190kc) Trianon mixed quartet.
8:30 7:30 6:30 5:30
KFAB (309.1m-970kc) U. of Nebraska.
WDOD (245.5m-1220kc) Brunswick half hour.
8:32 7:32 6:32 5:32
WFLA (288.3m-1040kc) Organ and artists recital from Peace Memorial Church.
9 8 7 6
WBBM (389.4m-770kc) Ned Miller and Chester Cohn.
WJR (440.9m-680kc) Mediterraneans.
WLS (344.6m-870kc) Little Symphony orchestra.
9:01 8:01 7:01 6:01
WEEI (461.3m-650kc) Neapolitan Dutch Girls' quintet.
9:30 8:30 7:30 6:30
WCOA (249.9m-1200kc) Monroeville, Alabama.
WGN (306m-980kc) Paul Ash and his Merry-Mad musical gang.
WRC (468.5m-640kc) Lord Calvert ensemble.
WTAG (516.9m-580kc) Hawaiian serenaders.
10 9 8 7
WBAL (285m-1050kc) Municipal Band of Baltimore.
WGBF (236.1m-1270kc) Radio Boys.
11 10 9 8
WLS (344.6m-870kc) Campus Flirts.
WTIC (535.4m-560kc) Ben Bernie and his orchestra.
11:40 10:40 9:40 8:40
WGN (306m-980kc) Edwin Kemp, tenor.
1 a. m. 12 11 10
KFOA (447.5m-670kc) Shiftless Sam.
1:30 12:30 11:30 10:30
KGW (491.5m-610kc) Hoot Owls.
For Regular Features See Friday, November 4.

SATURDAY, NOVEMBER 26
Headliners

Eastern	Central	Mountain	Pacific
7 p. m.	6	5	4

WOW (508.2m-590kc) Clara Kurtz and Perry Harding.

7:15	6:15	5:15	4:15

WJR (440.9m-680kc) Ford and Glenn.

7:20	6:20	5:20	4:20

WEEI (461.3m-650kc) Lido Venice orchestra.

8	7	6	5

WLS (344.6m-870kc) Tony's Scrap book.
WLW (428m-700kc) Happy Harmony Boys.
WMBB (252m-1190kc) Trianon ensemble.
WRC (468.5m-640kc) U. S. Army band.

9	8	7	6

WPG (272.6m-1100kc) Half hour with Morman Brokenshire.

9:30	8:30	7:30	6:30

WLAC (225.4m-1330kc) Buford Jones, ukelele and baritone.

10	9	8	7

KFAB (309.1m-970kc) Jr. Chamber of Commerce.

10:45	9:45	8:45	7:45

WMAQ (447.5m-670kc) Charity Ball of Sunbeam League, Stevens Hotel.

11	10	9	8

WJR (440.9m-680kc) Jesters.

11:05	10:05	9:05	8:05

WCCO (405.2m-740kc) Dick Long's orchestra, Curtis Hotel.

11:40	10:40	9:40	8:40

WGN (306m-980kc) Melody time.

1 a. m.	12	11	10

KGW (491.5m-610kc) Indian Grill.
WBBM (389.4m-770kc) Jazz Jamboree.

Football
NOVEMBER 26

Army-Navy in New York, WEAF (491.3m-610kc) and chain, WJZ (454.2m-660kc) and chain.
Boston College-Holy Cross at Boston, WBZ (333.1m-900kc).
Southern Calif.-Notre Dame at Chicago, WGN (305.9m-980kc), WJJD (365.6m-820kc), WMAQ (447.5m-670kc).

For Regular Features See Saturday, November 5.

SUNDAY, NOVEMBER 27
Headliners

Eastern	Central	Mountain	Pacific
4 p. m.	3	2	1

WGY (379.5m-790kc) Elmer A. Tidmarsh, organist.

7	6	5	4

WLS (344.6m-870kc) WLS Little Brown Church.

8:30	7:30	6:30	5:30

KOIL (277.6m-1080kc) Uncle Jack's Kiddie Club trip.

9:15	8:15	7:15	6:15

WLW (428m-700kc) Crosley Bandbox hour.

10	9	8	7

WJR (440.9m-680kc) Happy Half-hour of Heaven and Home.
WMBB (252m-1190kc) Bob Smith.
WPG (272.6m-1100kc) Sunday Evening musicale.

10:15	9:15	8:15	7:15

WGN (306m-980kc) Our Music Room.

10:20	9:20	8:20	7:20

WEEI (461.3m-650kc) Keith's Radio review.

10:30	9:30	8:30	7:30

WBAP (499.7m-660kc) The Seven Aces.

11:10	10:10	9:10	8:10

WGN (306m-980kc) Sam 'n' Henry.

1 a. m.	12	11	10

KGW (491.5m-610kc) Little symphony orchestra.

For Regular Features See Sunday, November 6.

MONDAY, NOVEMBER 28
Headliners

Eastern	Central	Mountain	Pacific
7:28 p. m.	6:28	5:28	4:28

WGY (379.5m-790kc) "Footnotes," T. Arthur Cohen

8	7	6	5

WEEI (461.3m-650kc) O'Leary's Irish Minstrels.
WLW (428m-700kc) Marjory Garrigus Smith, pianist.
WSEA (263m-1140kc) Harmony service hour.
WTIC (535.4m-560kc) New Departure band.

8:30	7:30	6:30	5:30

WCCO (405.2m-740kc) University of Minnesota hour.
WGBF (236.1m-1270kc) Gospel quartet.

9	8	7	6

WCOA (249.9m-1200kc) 13th Coast Artillery band.
WPG (272.6m-1100kc) Margaret Siracusa.
WSEA (263m-1140kc) Stay with Us Club.

9:10	8:10	7:10	6:10

WLW (428m-700kc) Happy Harmony Boys.

9:30	8:30	7:30	6:30

WTAG (516.9m-580kc) WTAG Little symphony.

10	9	8	7

KFAB (309.1m-970kc) A. C. Sextet.
KOIL (277.6m-1080kc) Barnyard Twins and Uncle Josh.

10:15	9:15	8:15	7:15

WCOA (249.9m-1200kc) David Lloyd, tenor soloist.
WCOA (249.9m-1200kc) Max J. Heinberg, violinist.

10:30	9:30	8:30	7:30

WJR (440.9m-680kc) Breeze Blowers.

10:45	9:45	8:45	7:45

WCOA (249.9m-1200kc) Wheeler "Doc" Johnston, vocal soloist.

12 mid.	11	10	9

KFON (233m-1290kc) Kiwanis frolic.
KGW (491.5m-610kc) Venetian hour of Italian music.

1:30 a. m.	12:30	11:30	10:30

KFOA (447.5m-670kc) Coyotes' frolic.

For Regular Features See Monday, November 7.

TUESDAY, NOVEMBER 29
Headliners

Eastern	Central	Mountain	Pacific
6:20 p. m.	5:20	4:20	3:20

KFON (233m-1290kc) Long Beach Municipal band.

7:30	6:30	5:30	4:30

KFAB (309.1m-970kc) Good Will program.
WLAC (225.4m-1330kc) "How to Speak in Public" by L. B. Smelzer.
WOW (508.2m-590kc) Randall's Royal Fontenelle orchestra.

8	7	6	5

WMBB (252m-1190kc) Trianon ensemble.

8:15	7:15	6:15	5:15

WLW (428m-700kc) Crosley Instrumental quintet.

8:30	7:30	6:30	5:30

WIBB (336.9m-890kc) Harmony Team.

9	8	7	6

WBAP (499.7m-660kc) "Uncle Superior", "Percy Pinkpants".
WLW (428m-700kc) Formica concert orchestra.
WOR (422.3m-710kc) Bamberger Little symphony.

9:10	8:10	7:10	6:10

WFLA (288.3m-1040kc) Arthur Kingsley, organist.

9:30	8:30	7:30	6:30

WMAK (545.1m-550kc) Old fashioned dance music.

10	9	8	7

WIBB (336.9m-890kc) Blackface Comedians.

10:30	9:30	8:30	7:30

WEEI (461.3m-650kc) His Elks Hotel orchestra.
WPG (272.6m-1100kc) Marcele duo.

12 mid.	11	10	9

WMAK (545.1m-550kc) Alex Taylor, organist.

1:30 a. m.	12:30	11:30	10:30

KGW (491.5m-610kc) Bridge game.

For Regular Features See Tuesday, November 1.

WEDNESDAY, NOVEMBER 30
Headliners

Eastern	Central	Mountain	Pacific
6:15 p. m.	5:15	4:15	3:15

WOR (422.3m-710kc) Parody club orchestra.

7:30	6:30	5:30	4:30

WCCO (405.2m-740kc) Northwest Boy Scout and Lone Scout organizations.
WLAC (225.4m-1330kc) "Why a Knowledge of Business Is Essential" by K. L. Garis.
WGY (379.5m-790kc) Remington band.

8	7	6	4

WIBB (336.9m-890kc) K. C. Artist trio.

8:15	7:15	6:15	5:15

WCCO (405.2m-740kc) The Amateur Philosopher, The Federal Schools.

8:40	7:40	6:40	5:40

WPG (272.6m-1100kc) World Wonder Excursions via Clark's.

9:30	8:30	7:30	6:30

WJJD (365.6m-820kc) Tivoli theater program.
WMBB (252m-1190kc) Radioweus.

10	9	8	7

KOIL (277.6m-1080kc) Prof. Herr Heinrich Schultzenheim and his Boys.
WCOA (249.9m-1200kc) City of Defuniak Springs, Florida; special program.
WJR (440.9m-680kc) Ford and Glenn.
WLW (428m-700kc) Heermann instrumental trio.

10:30	9:30	8:30	7:30

WBBM (389.4m-770kc) Harding theater.

11	10	9	8

KFAB (309.1m-970kc) Troutdale orchestra.
WSEA (263m-1140kc) Chadwick theater organ.

1 a. m.	12	11	10

KFON (233m-1290kc) Dick Dickson, organist.

1:45	12:45	11:45	10:45

KOMO (305.9m-980kc).

For Regular Features See Wednesday, November 2.

THERE was a time when colleges and universities limited their periods of instruction to the day time. The doors of the institution were locked at night, with the exception, perhaps, that the library remained open in order that students might prepare their lessons for the next day. Among the things the development of the Radio has done is to extend the periods of university instruction into the night. This extension of instruction not only permits more instructing to be done but affords unlimited enrollment in classes.

Audible contact of professors with home-study students who do not have the opportunity of meeting and seeing their instructors is being stressed in the Radio programs of the University of Arkansas this year, under the direction of Dr. A. M. Harding. The programs of the University of Arkansas Station, KUOA, are arranged to furnish educational information rather than entertainment.

Three Air Courses

The Radio-correspondence courses have been inaugurated as an activity of the general extension service of the university. While the Radio lectures are designed to supplement correspondence courses, they may be taken with or without university credit.

Three Radio-correspondence courses to date are being given as regular features under the new plan of broadcasting lectures from Station KUOA. A course in general astronomy is given by Doctor Harding, who also is professor of mathematics and astronomy as well as director of the general extension and director of the Radio station. Doctor Harding's astronomy lecture is broadcast as a regular Monday night feature at 8 o'clock. It is a course in which the question, "What's in the Sky Tonight?" is answered. The course consists of 24 weekly lectures, for which three semester hours of university credit are offered. In order that the lectures be of interest to the general public, each one of the lectures is of an elementary nature and easily understood by any one who listens in.

Another course, dealing with national government, is being broadcast from KUOA by H. C. Pepper, assistant professor of history and political science at the University of Arkansas. Professor Pepper is giving a Radio lecture on government each Thursday night at 7:30 o'clock for 16 weeks. Two semester hours of credit are offered upon completion of the course.

TUNNEY-DEMPSEY FIGHT

(Continued from page 18)

No other boxer in the universe would do that but Dempsey, but he is still seeking to get in to the body.

Tunney has jammed him up against the ropes now and they are in a clinch. The referee, Barry, has just pulled them apart, and they are sparring again. Dempsey is not a very pretty sight now. This cut is down into his eye and his nose and the blood has trickled down into his mouth. He is fresh, though. Oh! there's a peach. I think Dempsey heard the birdies that time; a straight left to the jaw, followed by two light rights. Tunney had Dempsey going then but he couldn't follow it up as Dempsey tied him up right away. They went to the ropes. Now they are in the center of the ring, apart, sparring again. What a fight this is! Jack is tiring fast. He showed it then when Tunney drove him back against the ropes and smacked over a hard right to the jaw. He is down flat on his heels now and Tunney just reached him with another left and right, and Jack was off balance. I don't think the crowd senses it yet, but it wouldn't take much to drop Dempsey. I don't know whether it is just bleeding, or what, but he has lost all his sense of direction and timing. He just took another left poke from Tunney on the jaw, and there is the bell. Tunney's round by a big margin again.

All the way through I would say that Tunney is ahead, but there is always the excitement whenever Dempsey is in the ring, because he cracks such a vicious wallop that almost any man will go out.

Ouch! We are getting a bath here. Mr. Tunney's seconds are soaking us almost as much as they are Tunney. We don't need it in the microphone.

They are going into the last round in just a few seconds. Here we go, here is the final one. This is the one that will tell the story. It is anybody's fight thus far because both men are very vicious. On points Tunney is ahead now. Let's see if Jack can come through.

ROUND 10

Jack leads with a beautiful left and Tunney goes down on a wrestle. The punch didn't drop him. The left caught him straight on the jaw and Tunney went down in the wrestling that followed. He is up again now, on his feet now. Dempsey is pulling a flash of his old fighting form; he just landed a left to Tunney's body. He has driven a hard right into Tunney's body. Oh, what a beautiful one. Tunney caught him with a grazing left on the jaw. Dempsey was smart enough to take it and bring in his two rights to the head in return.

Now they are sparring. This rabbit punch thing is annoying me. There's no rabbit punch at all. I'm getting peeved about it because it interrupts the progress of events. They are in a light clinch in the center of the ring. On a word from the referee they have parted. They are sparring. It is the same old thing. There goes a light left into Jack's face, another light left jab, another, four left jabs. Jack took all four to hook over his left cross, which didn't land flush. It just grazed Tunney's chin, typical of the Dempsey style of fighting to take light jabs to get in for an effective punch.

There go two rights to Jack's face, overhand rights from Gene Tunney, short and snappy and landing clean. Now they are sparring. There was no retaliation on the part of Dempsey then at all. Tunney just stuck his left into Jack's jaw, he stuck his right into Jack's jaw. Jack tried to come through with a vicious body attack. It was not effective at all.

Jack is by far the more tired of the two boxers right now. He has just taken, unguarded, two lefts to the face, trying to get in to the body, but Gene blocked his right drive for the body, which was Jack's purpose. Jack just took another light left jab, one of them to the cut eye, and two more. There's another one on the cut eye, Jack still trying to get in, without success.

Dempsey doesn't know what it is all about right now. He is not groggy, but he is very inaccurate, and his mouth is open and he doesn't show that he is fresh at all. He has just taken five light jabs in the face, for the reason, as I told you, of getting a hard punch into the body, but he is not getting the hard punches in, and I doubt if he has the steam to get them, because Dempsey has just been driven back against the ropes by Tunney's attack which was not too forceful.

They went into a light clinch. They are back in the center of the ring, sparring. Jack takes three to the face again, short ones. Jack shows that he doesn't know what it's all about. He is taking plenty of them on the face now, still trying to get in; he took two rights and a left to the face as the bell rang, and the fight is over.

We will wait for the decision, but from my description and from, I think, everything that you have understood, it is Tunney's fight by a big margin, and he still retains the championship. We will wait for the decision, however, and see what we get. They are collecting the slips now.

We are waiting for the decision. Both men are standing in the ring. Tunney is the winner. They are both in the center of the ring now talking and shaking hands. Now they are all climbing into the ring, congratulating Tunney.

We are trying to get the microphone into the ring, without success thus far. We will get Gene a little later and try to get him to say something to you. Tunney still remains champion of the world. He won that fight by a big margin all the way through. It was a good battle, however, and I think you know that; I tried to give you that impression of every blow struck.

I would like to know if you had a clear picture of what transpired. If you were not in doubt at any time, that is all we can expect to accomplish in describing a boxing bout.

Right now the crowd is in the ring, pushing Tunney about, and congratulations of all kinds are being given him. There is a lady who has climbed into the ring. We are trying to get Billy Gibson over here to tell the champion to come over and give you a moment's greeting. Everybody's in the ring, it seems, just milling about, doing nothing in particular. There is a little group about the champion. I don't know who the girl is; nobody seems to know who she is. They are ushering her out anyway; they are telling her she should be conspicuous by her absence. She doesn't seem to agree with that.

I am trying to get Gene Tunney to speak to you.

You just heard Gene Tunney send his greeting to you, that is I hope you did. Gene is ready to leave the ring. The crowd has not moved in its tracks. I don't think one person has left the arena yet.

Gene, fresh and happy, and hardly showing the strain of battle, is climbing right down now, shaking hands with his friends and admirers, with the usual slaps on the back.

If some of you have tuned in late and did not hear the progress of the ten-round bout, the whole answer is that with the exception of one round, or two rounds at the most, Tunney led all the way, although he took a count of nine at one stage of the bout. It wasn't a bum fight, in other words. It was a good scrap all the way through, and it was in doubt up to the finish simply because, as you know, Dempsey cracks a terrific wallop and is always dangerous. However, the champion showed his championship caliber unmistakably; he was able to handle the only contender who really amounts to anything, very effectively. The best man won. If Tunney still remains the heavyweight champion of the world, nobody should kick about it, because he won this battle all the way through.

POPULAR ORCHESTRAS

(Continued from page 5)

fifty bonus votes will be given if the entire series of six consecutively numbered ballots are turned in at one time. Votes will also be given for paid in advance subscriptions to Radio Digest sent in direct in accordance with the schedule given in the rules and conditions.

Now if you want to reward your favorite orchestra for the many pleasant hours it has given you turn to page four, clip the nomination coupon and mail it in to the contest editor—then save the ballots as they appear in each monthly issue until the end of the contest. This is your opportunity for some real applause.

Rules and Conditions

1. The contest starts with this issue of Radio Digest, November 1, 1927, and ends at midnight, April 10, 1928. All mail enclosing ballots must bear the postmark on or before midnight, April 10, 1928.

2. Balloting will be by means of coupons appearing in each monthly issue of the Radio Digest and by special ballots issued only when requested at the time of receipt of paid in advance mail subscriptions to Radio Digest when received direct and not through subscription agencies according to the schedule given in paragraph 4.

3. When sent singly, each coupon clipped from the regular monthly issue of Radio Digest counts for One vote. BONUS votes given in accordance with the following schedule:

For each two consecutively numbered coupons sent in at one time a bonus of five votes will be allowed.

For each three consecutively numbered coupons, a bonus of fifteen votes will be allowed.

For each four consecutively numbered coupons a bonus of twenty-five votes will be allowed.

For each five consecutively numbered coupons a bonus of thirty-five votes will be allowed.

For the complete series of the six consecutively numbered coupons, sent in at one time a bonus of fifty votes will be allowed.

4. Special ballots will be issued only when requested at the time of receipt of paid in advance mail subscriptions, old or new, to the Radio Digest when received direct and not through subscription agencies according to the following voting schedule:

1-year paid in advance mail subscription.....	$ 3.00	150 votes
2-year; two 1-year paid in advance mail subscriptions direct.....	6.00	325 votes
3-year; three 1-year; one 1 and one 2-year paid in advance mail subscriptions direct..	9.00	500 votes

(Continued on page 46)

New H.F.L. Transformers

RADIO fans will be greatly interested in two transformers which have recently been brought out by the H.F.Lab. These transformers H.F.L. C-16 and H.F.L. C-25 will work in any circuit.

H.F.L. C-16 is an Audio Transformer which carries signals at highest volume and lowest amplitude without blasting or developing harmonics. H.F.L. C-25, the Output Transformer, takes care of the voltage output of the power amplifying tubes. At the same time it matches the impedance of the average speaker to the tubes, thus protecting the loud speaker without reducing plate voltage.

The coils of the H.F.L. Transformers have been designed and treated in such a manner as to exclude moisture and withstand heavy electrical surges without breaking down. The complete magnetic shielding which avoids interstage coupling and the terminals which are brought out so as to insure short leads are among the outstanding mechanical features of these Transformers. Transformers C-16 and C-25 will work in any circuit.

Use Standard Socket Power

Complete data on their new Radio receiving sets announced by one hundred manufacturers in this country indicate that production of sets operated from the lighting circuit, will be increased materially in the coming season. Of the manufacturers who have come out with their 1928 specifications, thirty-four will include alternating current operated sets on their price sheets. Four manufacturers will market direct current light socket sets, in addition to their regular models of A. C. and battery operated units.

As during last season, the majority of the sets will employ from two to three stages of Radio frequency amplification and from two to three stages of audio. In other words, no important change in the circuits used is contemplated, and five and six tube sets again will predominate. The manufacturers are trying to produce sets that meet all of the fads and fashions of the day, and this accounts, in part, for the wide range of prices quoted. Prices announced show a range extending from $40 to $1,245 on regular models

RULES & REGULATIONS

(Continued from page 45)

4-year; four 1-year; two 2-year; one 3-year and one 1-year; paid in advance mail subscriptions direct..	12.00	750 votes
5-year; five 1-year; one 2-year, and one 3-year; two 2-year and one 1-year; one 4-year and one 1-year; paid in advance mail subscriptions direct..	15.00	1,000 votes
10-year; ten 1-year; five 2-year; three 3-year and one 1-year; two 4-year and one 2 or two 1-year; two 5-year paid in advance mail subscriptions direct.....	30.00	2,500 votes

5. For the purposes of the contest the United States has been divided into five districts. Canada will comprise the sixth district. District number one, known as the "EAST," will include the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and District of Columbia. District number two, known as the "SOUTH," will comprise the states of Virginia, West Virginia, North and South Carolina, Georgia, Florida, Louisiana, Mississippi, Alabama, Tennessee, Arkansas, and Kentucky. District number three, known as the "MIDDLE-WEST," will include the states of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri. District number four, known as the "WEST," will comprise the states of North and South Dakota, Nebraska, Kansas, Oklahoma, Texas, Montana, Wyoming, Colorado, and New Mexico. District number five, known as the "FAR WEST," will consist of the states of Idaho, Arizona, Utah, Nevada, California, Washington, and Oregon. District number six, known as Canada, will comprise the entire Dominion of Canada.

6. The orchestra polling the highest number of votes of all six districts will be declared THE WORLD'S MOST POPULAR ORCHESTRA and will be awarded a golden plaque. After the grand prize winner is eliminated the orchestra polling the highest vote in the district in which they are registered will be declared to be the MOST POPULAR of their district and each awarded a silver plaque. No orchestra is to receive more than one prize.

7. In the event of a tie for any of the prizes offered, prizes of identical value will be given to each tying contestant.

8. Any question that may arise during the contest will be decided by the Contest Editor, and his decision will be final.

Farrand Junior Speaker in Oval Style for 1927-28

One of the most popular models of the line of quality loud speakers produced by the Farrand Manufacturing Company has always been the Junior model, which contains all the advantages and constructional features of the larger models except the size.

The new Oval Junior, being distributed now for the 1927-28 season, is of exceptional value, embodying the new Laminated driving unit for tonal purity with the famous Farrand unlimited tone radius. That this purity of tone over the entire frequency scale is possible at maximum volume is truly an exceptional feature in a popularly priced model.

Approximately 13 by 19 inches, this model is by no means a midget in either size or performance. The beautifully proportioned oval in a rich leather motif is mounted on an elegantly proportioned bronzed base, and the beauty of the ensemble is enough in itself to make this model one of the "best sellers" of the Radio season.

INTERNATIONAL CONFAB

(Continued from page 5)

managerial interests. It is therefore going to be no easy matter to reach a definite convention which will meet all interests concerned. It is probable that the United States will have to accept the convention with some "reservations." Just what these will be cannot be forecast at this time.

Judge Stephen B. Davis, until recently solicitor of the Department of Commerce and the "right hand man" of Secretary Hoover in Radio matters, is filling a similar position in the conference as assistant to Secretary Hoover, and it was he during the early days of the conference who pointed out to the foreign delegates the two classes of Radio communications in the United States, namely the government and private ownership. The position of the American delegates all along has favored the division of regulations affecting Radio communication into these two classes.

Judge Davis pointed out that the communication systems of the United States are in the hands of private enterprise, and he asked that this situation be taken into consideration in the deliberations of the conference looking toward the formulation of a treaty or convention respecting the international uses of Radio to which practically all nations of the world using Radio are expected to adhere.

Out of the "side issues" of this conference may come a more definite agreement between the United States, Canada, Cuba and Mexico, which will more or less affect the listener-in of this country. Delegates being present at the conference from all of these countries the Federal Radio Commission has been holding conferences with the delegates from these countries in an effort to reach some kind of a definite agreement for the future policy of allocation of wave lengths.

While delegates to the conference refuse to discuss their attitude, except as set forth in the public discussions, it is generally understood that the American delegates feel, that while this country recognizes the need for detailed agreements in certain localities, they believe that it is more advantageous for all the nations concerned, as well as for scientific progress of Radio, to draw up a convention and regulations that are applicable to the world as a whole. Such a convention and its accompanying regulations would of necessity contain general principles only and would allow each nation to determine its own methods of applying such principles.

Delegates of the United States, it is believed, are in agreement with the majority of foreign nations in specifying 550 to 1,500 kilocycles for broadcasting. But this country is not in agreement as to the lower frequency bands proposed by many of the European nations. In fact, we do not desire to use those low frequency bands in the United States for broadcasting at this time. They are not suitable here for the purpose they are used in Europe, because distances here are too great. We would prefer to use high frequency relay broadcasting for international exchange of programs, as we believe that it would have a better chance of success. However, it is understood that the American delegates would not have any objections to regional agreements amplifying this convention provided the bands for fixed stations were used.

While, as already stated, it is too early to predict just what will be the outcome of this conference, it is sure that some kind of a convention will be drawn up which will be greatly in advance of that now in use, having been promulgated in 1912 when the Radio situation was so different from what it is today.

SHORT WAVES

By Marcella

(Continued from page 4)

John, for heaven's sakes, you can't fall in love with Marjorie Garrigus Smith even if you do find her the most attractive artist at WLW. She is the wife of Fred Smith, the Director. They met at WLW when she was a little music student in the Cincinnati Conservatory. He used to write me the nicest things about her, how lovely she was and how goodlooking and would I use her picture. Then all of a sudden they had a big Radio wedding and as near I know, they are still happy.

Al Schwerling, Helen, is a tall sheik with blue eyes and blond hair and quite a heart smasher from all reports. No, he isn't married yet. The boy is only twenty-three. Give him time. Although his official capacity around WLW is that of a Radio engineer, he reads the closing market reports in the afternoon. I must say, my dear, that he has some voice if he can make the market reports interesting to you. When Al is not working, he is studying Radio engineering and he intends to be a famous Radio engineer before he gets through.

* *

What a large order you give me, Mildred, asking me the names of the tenors and instrumentalists at the various state colleges and normals. Give me your station, at least, and I'll do the best I can for you. As for me, I once played a game of golf, 'nuff said. As for tea, not quite yet, nor the cat and parrot.

* *

If you have wondered where Eddie B. Husing has gone to, you will be glad to know that he is now announcing and doing all sorts of odd jobs in the studio of WHN. Mr. Husing is terribly good looking, the kind of man who has that slick black hair and looks so intelligent because he wears horn-rimmed glasses. Alas, girls, he is married. I saw a picture of him with his darling little daughter.

CORRECTION

The eleventh line in the October advertisement of the F & H Laboratories of Fargo, North Dakota, should have read "Several of the latest and foremost Radios have this principle incorporated in their 1928 models."

New Radio Books

Books described in this column may be purchased at the list price from the Service Bureau of the Radio Digest Publishing Co., 510 N. Dearborn street, Chicago.

A NUMBER of authentic books have appeared during the current season of interest to the Radio fan who delves into the why and wherefore of Radio; and concerns himself with the progress of its development.

Probably the most complete compilation of "non-technical reference work, easy to read and easy to use," may be found in Drake's Radio Cyclopedia. The fly leaf explains that it covers "over 1,500 subjects arranged alphabetically, including instructions for building, operating and testing receivers, power units and Radiophone equipment. Arranged for use of set builders and designers; service and repair men; dealers and salesmen; experimenters and students; set owners and operators. It is edited by Harold P. Manly of the Radiotechnic Laboratory, Chicago. The book contains 950 illustrations, circuit diagrams, constructional layouts and graphic curves." There are over 300 pages in the Cyclopedia and doubtless the book will receive a hearty welcome from persons who seek a convenient reference for all Radio technical terms and operations. Frederick J. Drake & Co., Chicago, $6.

THE Elements of Radio-Communication, by O. F. Brown, M. A., B. Sc., Oxford, is one of the outstanding books on fundamental Radio from England. A foreword by the British Admiral of the Fleet, Sir Henry B. Jackson, says: "It will appeal to the student intending to embark on the profession of a Radio engineer, to the electrical engineer who has not studied that branch of his profession, to science students who must have a theoretical knowledge of Radio work, and also to the public generally who wish to know how broadcasting works without having to study mathematical formulae." Oxford University Press, American Branch, New York, $3.50.

WIRELESS Pictures and Television, a practical description of the telegraphy of pictures, photographs and visual images by T. Thorne Baker, is a comprehensive work on the subject indicated. It traces the development of the electrically transmitted image up to the latest successes of Baird and Belin. It is predicted that within a very short time television will be almost as important a factor of modern life as the audio entertainment now is. Perhaps the next diversion for the inveterate set builder will be the installation of his own home-made television equipment. For such this book is the primer of his education along that line. D. Van Nostrand Co., New York. $2.50.

PROBABLY the first compendium of short stories woven from the theme of Radio and brought between two cloth covers has just been announced under the authorship of Paul D. Augsburg. "On the Air," is the title, which comes mighty close to the name of Mr. Graham McNamee's book of reminiscences. The stories are modern and vivid and among the best from the great flood of short fiction that has been written to interest Radio listeners. The most of them have already been published in one or another of the popular magazines. Published by D. Appleton & Co., $2.

AMERICAN farmers, who have found Radio an incomparable boon, will be interested in the novel employment of loud speakers by Gustav Schmitz, owner of a huge orchard near Hornburg, Germany. According to a dispatch in the Chicago Tribune, Schmitz was threatened with disaster by an unusual onslaught of fruit destroying birds.

Other efforts to discourage the birds from devastating his trees having failed, and labor being too expensive, he conceived the idea of installing several loud speakers among the branches. The scheme worked.

Zonta Organization Week

DURING the week of October 14th, Zontans were heard on the Radio from one end of the country to the other, setting forth the objectives and achievements of this fine group of women. Zonta it a classification club patterned after Rotary, having one outstanding woman in each line of business or profession.

There are chapters in most of the large cities. Zonta clubs everywhere are devoting their attention and their funds to vocational education for girls. Loan funds or scholarships for this purpose are maintained by all the clubs. Some clubs also do reclamation work and render assistance in civic work of various kinds. The national organization has its headquarters in Buffalo.

The president of the confederation of Zonta Clubs is Louise Gerry, director of the Larkin Co., Buffalo. Zontans in many cities use the Radio in their work. Miss Gudrun Carlson, for the Institute of American Meat Packers and Mrs. Rose Itraka Fowler, of the American Dietetic Association, give frequent Radio talks from Chicago stations, and Miss Aubin Chine for the National Dairy Council uses Radio in many parts of the country.

Many individual Zontans promote their own business by Radio. WMAQ, Chicago, has assigned 7:30, Tuesday, Nov. 15th, 1927, for Zonta talks.

MUSSOLINI BLOOPER BORDER STARTS ROW

ITALY'S ten o'clock curfew on Radio programs may result in serious international complications according to recent reports from European correspondents. In an effort to stamp out jazz, dancing and late hour excesses Mussolini recently decreed that these entertainments must end at 10 o'clock. But many danced to tune of Radio orchestras received in their homes from across the borders. Mussolini directed that government Radio stations should set up an interference to prevent such programs being received. This brought an angry protest on the part of the neighboring countries. No settlement has yet been agreed upon. The Duce maintains he has a right to enforce his dictates as best he can.

What Do You Know

Here they are! Thought maybe you couldn't find them, but the answers to Bill Hay's questions are as follows: 1, iVctor Herbert; 2, John Sebastian Bach; 3, George Handel; 4, Irving Berlin; 5, Irving Berlin; 6, 50,000,000; 7, The Mississippi Flood; 8, The Hundred Years Anniversary of peace between United States and Canada; 9, Calvin Coolidge In March, 1925; 10, WGN.

Watch the next issue of Radio Digest for another set of questions. Check up your batting average.

Miss WOC Goes West

MISS MARIGOLD CASSIN, charming secretary-hostess of WOC, recently returned from Denver where she was delegated as an ambassadress of the air as it exists around Davenport, Ia., and the broadcasting station at the Palmer school in particular. She was accompanied by two other young women of Davenport. The three were winners of a popularity contest conducted by the Davenport Ad club. Miss Cassin wore a purple and white satin costume as shown on page 6 as Miss WOC.

WILLETS RECOUNTS HISTORY OF "S O S"

The most universally known combination of letters in the world today . . . a never failing source of thrill for all who see it in flaring headlines across the morning paper proclaiming some dreadful disaster at sea.

Even to the multitude of "Sparks," themselves, it is both a hated and loved signal—but always, whether sent or heard—a thrill never to be forgotten.

It spells adventure and "plot" to the author—gripping drama to the editor. In every language and every clime its dread meaning is known. Its history is brief and interesting.

Reason for Change

Way back in the days of the wireless pioneers when Marconi's great discovery (not invention) was first given practical application to international mercantile interests, the first wireless call of distress was inaugurated—C. Q. D. (Meaning "Come quick, danger.") It was first made prominent when Jack Binns (Radio's pioneer here) flashed it from the sinking REPUBLIC. Things have changed since. You may ask yourself why the old call C. Q. D. has been changed to the S O S of today. The reason is quite simple.

The History of the S O S

The first dot and dash system of signalling over land wires was called the MORSE CODE after its author. It was only natural that it be used by Signor Marconi in his early demonstrations. However, as time passed, the MORSE code was found unfit for wireless use because of the many spaces in it which were often the cause of misunderstood messages due to the interference of static in the ether. The great TITANIC disaster awakened the world to the crying need for a new system for wireless signalling and after an international conference the CONTINENTAL CODE, used on all Continental land lines, was universally adopted. At that time, the distress call S O S was designated as the international signal of distress, asea or ashore.

Short and Snappy

The reasons for changing from C Q D to S O S were twofold: C Q D took too long to send in the International code and it was altogether too difficult to distinguish through Radio interference. It sounded like this:

"— — . — . — — . — . . . —"

Dash-dot-dash-dot; dash-dot-dash-dot; dash-dot-dot

S O S on the other hand has NO MEANING at all. Some think it means "Save our ship" or "Save our Souls," but they are all wrong. It was selected because it is the most easily recognized combination of letters in the continental code, consisting of three dots, three dashes and three dots, thus:

". . . — — — . . ."

It may be heard and understood by even the most inexperienced of operators instantly and through almost any kind of atmospherical or Radio interferences.

The practicability of the call has been proven on scores of occasions since its universal adoption by international authorities on the subject. It has never been changed and probably never shall.

Steamships in the transatlantic trade today are being equipped with automatic S O S transmitters which may be run by any layman in the event of disaster, the rescue ships utilizing the greatest modern invention, the Radio direction finder, to locate the exact position of the vessel sending out the call.

Call is Universal

The call has summoned aid to earthquake stricken areas, communities devastated by tornadoes, vessels sinking or in mutinous hands at sea, disabled air craft, dirigibles and amateur operators in great cities caught in blazing buildings.

There is no secret lodge signal nor proclamation of president or king that commands the altruistic, instantaneous response of the magnitudinous S O S.

Of late comes a surprise announcement of the International Aviation Congress in London to the effect that the letters P A N are to be used as the new distress call for broken down airplanes; except in cases of extreme distress when the regular S O S is to be used. The call, suggested by the French, is derived from the French word "Panne," meaning crumpled.

OFFICIAL CALL BOOK AND LOG

Corrected Every Issue

KDKA

E. Pittsburgh, Pa., 315.6m-950kc, 50,000 watts. Westinghouse Elec. & Mfg. Co. Daily ex Sun, 10 am, 12n., 3:05 pm, 4:35, markets, weather; 11:57, time; 2:30 pm, and every 30 min. baseball; 5, dinner concert; 6:20, road reports. Daily ex Sun, Sat, 7, WJZ. Tues, 6 pm, sacred songs; 10:35, Grand theater revue. Wed, 6:30 pm, power; 7:30, Homer Smith, concert. Thurs, 6:30, Fri, 10:30 pm, dance program. Sun, 1 pm, WJZ; 5:30, 6:30, baseball; 6, Midsummer Dream. KDKA Little symphony; 7:15, WJZ. Eastern.

KDLR

Devils Lake, N. Dak. 230.6m-1300kc, 15 watts. Radio Elec. Co. Announcer, Harold Serumgard. Daily ex Sun, 12-12:30 pm, weather, 6-6:30, markets. Mon, 9:30-11:30 pm. Wed, 8-9 pm, band. Sun, 11 am, church, 4:30-6. Founded Jan. 25, 1925. Central.

KDYL

Salt Lake City, Utah. 258-5m-1160kc. 100 watts. Intermountain Broadcasting Corp. Announcer, Philip G. Lasky. Slogan, "Out on the Great Divide." Daily ex Sun, 2-5 pm, 6-12 mid. Sun, 3-4:30 pm, 8-9. Mountain.

KELW

Burbank, Calif. 228-9m-1310kc, 250 watts. Earl L. White. Daily ex Sun, 11-2 pm, 5-10, Wed, 11:2 pm, 5-7 pm, 9-10. Last Sat, in month 10-1 am, frolic. Pacific.

KEX

Portland, Ore. 239.9m-1250kc. 2,500 watts. Western Broadcasting Co. Announcer, Jack Barnet. Daily ex Sun, 9:15-3 pm, 5:30-12 mid. Sun, 6:30-10 pm. Pacific.

KFAB

Lincoln, Nebr, 309.1m-970kc. 5,000 6am-7pm, 2,000 watts. Nebraska Buick Auto Co. Announcer, Gayle Grubb. Daily ex Sun, 9:30-9:55 am, weather reports; 3-4 pm. Mon, Tues, Wed, Fri, 10:30-11 am, home economics, 11:45-12:30 pm, 1:15-1:30 pm, talks; 3:30-4 pm, 5:30-6:30. Daily ex Thurs, 7:30-8 pm, 8. Sun, 11 am, 9-10 pm. Founded Dec. 4, 1924. Central.

KFAD

Phoenix, Ariz. 272.6m-1100kc. 500 watts. Electrical Equip. Co. Announcer, Arthur C. Anderson. Slogan, "The Voice of Phoenix." Daily ex Sun, Mon, 3-4 pm, 6-9, Wed, Sat, 10-11 pm. Sun, 11 am-12:30 pm, 8-10. Founded Oct. 30, 1921. Mountain.

KFAU

Boise, Idaho. 285.5m-1050kc. 4000 watts 6 am-6 pm, 2000 watts. Independent School Dist. of Boise. Mon, Tues, Wed, Thurs, Fri, 12:30-1 pm, weather, markets, U. S. program. Tues, 7:30-8 pm, children's hour; 8-10, music. Thurs, 8-10 pm. Sun, 3-4 pm, 7:30-9 pm. Founded Oct. 1921. Mountain.

KFBB

Havre, Mont. 275.1m-1090kc. 50 watts. F. A. Buttrey Co. Announcer, E. A. Baer. Daily ex Sun, 12:30-1:30 pm, music, markets, weather reports. Wed, 7:30-9 pm. Sun, 10:30 am, 2:30 pm. Founded 1921. Mountain.

KFBC

San Diego, Calif. 247.8m-1210kc. 100 watts. Balboa Theater Bldg. Daily ex Sun, 9:30-10:30 am, 12:45-1:45 pm, 5-10, Sun, 10-12 am, Bible lesson. Pacific.

KFBK

Sacramento, Calif. 535.4m-560kc. 100 watts. Sacramento Bee, Kimball-Upson Co., Mon. Announcer R. K. Clark. Mon, Sat, 7:30-10 pm. Thurs, 8-10:30 pm. Founded 1921. Pacific.

KFBL

Everett, Wash. 223.7m-1340kc. 50 watts. Lesse Bros. Tues, Thurs, Sat, 7-8 pm. Mon, Wed, Fri, 6:30-8 pm. Sun, 11-12n. Founded Sept. 1922. Pacific.

KFBU

Laramie, Wyo. 428.3m-700kc. 500 watts. Bishop N. S. Thomas. Announcer, F. C. Smith. Sunday services.

KFCB

Phoenix, Ariz. 243.8m-1230kc. 125 watts. Nielsen Radio Supply Co. Announcer, E. A. Nielsen. Slogan, "Kind Friends Come Back." Mon, Thurs, 8-9 pm. Sun, 12-2 am, 9:30-10:30 pm. Mountain.

KFCR

Santa Barbara, Calif. 211.1m-1420kc. 50 watts Santa Barbara Broadcasting Co. Daily ex Sun, 12-1 pm, 5:45-7, 7-7:20, 7:20-7:30. Mon, Tues, Wed, Thurs, 7:30-9:30 pm. Fri, 7:30-10 pm. Sat, 12-1 pm, 6:15-7:30 pm. Sun, 7:15-8:15 pm, 8:15-9:15. Pacific.

KFDM

Beaumont, Tex. 483.6m-620kc. 500 watts. Magnolia Petroleum Co. Announcer, Magnolene Mike. Slogan, "Kall for Dependable Magnolene." Tues, Fri, 12:30-12:55 pm, band concert; 8-10, concerts. Sun, 11-12 m, 8-9 pm. Founded Oct. 1, 1924. Central.

KFDX

Shreveport, La. 236.1m-1270kc. 250 watts. First Baptist church. Announcer, John S. Ramond. Wed, 9-10 pm. Sun, 10:50-12 n., 7:45-9. Founded 1922. Central.

KFDY

Brookings, S. D. 394.5m-760kc. 500 watts. State College of Agriculture and Mechanical Arts. Announcer, Albert Kranz. Daily ex Sun, 12:30-1:15 pm, Tues, Thurs, 7:30-9 pm.

KFDZ

Minneapolis, Minn. 215-7m-1390kc. 10 watts. Harry O. Iver-on. Sat, 8 pm. Central.

KFEC

Portland, Ore. 214.2m-1400kc. 50 watts. Meier & Frank Co., Inc. Announcer, R. E. Hartzog. Daily ex Sun, 12 m, weather reports; 4-5 pm, music, 6-7. Pacific.

KFEL

Denver, Colo. 247.8m-1210kc. 250 watts. Eugene P. O'Fallon, Inc. Announcer, J. H. Hathaway. Daily ex Sun, 7-15 am, gym; 10, 11, 2, 4, 5, 6. Tues, Thurs, 8 pm. Fri, 8 pm. Mon, 11 pm. Sat, 11 pm. Sun, 8:30 am, 9, 2:30. Mountain.

KFEQ

St. Joseph, Mo. 230.6m-1300 kc. 1000 watts. J. L. Scroggin. Announcer, Clarence Koch. Daily ex Sun, 5:30-7:30 am, music, 8:30, 10, 11, 12, markets; 2, music; 6:30-7:30, 8:30-10. Founded 1922. Founded Nov. 1921. Central.

KFEY

Kellogg, Idaho. 232.4m-1290kc. 10 watts. Non Union High School Station. Announcer, Walter C. Clark. Slogan, "Voice of the Coeur D'Alenes." Mon, Thurs, 7-8 pm. Sun, 11 am, 7:30 pm. Pacific.

KFGQ

Boone, Iowa. 209.7m-1430kc. 10 watts. Boone Biblical school. Founded April 1923.

KFH

Wichita, Kan. 245.8m-1220kc. 500 watts. Hotel Lassen. Announcer, J. L. Fox. Daily ex Sun, 8:30 am, 9, 10, 11, 1-2 pm, markets; 1:15, music, 7:30-9. Sun, 9:30 am, 7:30 pm. Founded Dec. 1, 1925. Central.

KFHA

Gunnison, Colo. 254.1m-1180kc. 50 watts. Western State College of Colorado. Announcer, E. Russell Wightman. "Where the Sun Shines Every Day." Tues, Fri, 7-9:30 pm. Founded May 1922. Mountain.

KFHL

Oskaloosa, Iowa. 212.6m-1410kc. 10 watts. Penn College. Announcer, Donald Haworth. Tues, Fri, 7 pm. Fri, 9:45 am. Sun, 4 pm. Central.

KFI

Los Angeles, Calif. 468.5m-640kc. 5000 watts. Earle C. Anthony, Inc. Announcer, Leslie Adams. Slogan, "A National Institution." Daily ex Sat, Sun, 5:30-11 pm. Sat, 5:30-2 am. Sun, 10-11 am, 6-11. Installed Spring, 1920. Pacific.

KFIF

Portland, Ore. 214.2m-1400kc. 50 watts. Benson Polytechnic School. Announcer, Albert Skei, Omar Bittner. Tues, 8:15-9:15 pm. Pacific.

KFIO

Spokane, Wash. 245.8m-1220kc. 100 watts. North Central High School.

KFIU

Juneau, Alaska. 225.4m-1330kc. 10 watts. Alaska Elec. Light & Power Co. Announcer, O. E. Schoembell. Mon, Wed, Fri, 6-7 pm. Alaskan time.

KFIZ

Fond du Lac, Wis. 267.7m-1120kc. 100 watts. Fond du Lac Commonwealth Reporter. Daily ex Sun, 5 pm, news, markets, weather. Central.

KFKX

Chicago, Ill. 526m-570kc. 2500 watts. Westinghouse Elec. & Mfg. Co. Daily 10:05 a. m. Daily ex Sun, 5:30 p. m., 10:55, Central.

KFKZ

Kirksville, Mo. 225.4m-1330kc. 15 watts. State Teachers College. Announcer, F. M. Henry. Mon, 8:30-9:30 pm. Thurs, 8-9 pm. Founded 1923. Central.

KFLV

Rockford, Ill. 267.7m-1120kc. 100 watts. Swedish Evangelical Mission Church. Announcer, A. T. Frykman. Mon, 8:15 pm. Founded Oct. 1923. Central.

KFLX

Galveston, Texas. 270.1m-1110kc. 100 watts. George R. Clough.

KFMR

Sioux City, Iowa. 232.4m-680kc. 100 watts. Morningside College. Daily ex Sun, Sat, 11:40-12:30 pm. Tues, Wed, Thurs, Fri, 7:30-8:30 pm. Founded 1924. Central.

KFMX

Northfield, Minn. 236.1m-1270kc. 500 watts. Carleton College. Daily ex Sun, 10:30 am, time. Fri, 8:15 pm, lecture, 8:45, 10. Sun, 7 pm. Central.

KFNF

Shenandoah, Iowa. 461.3m-650kc. 2000 watts. 6 am-7pm, 1000 watts. Henry Field Seed Co. Announcer, Henry Field. Slogan, "Friendly Station in a Friendly Town." Daily ex Sun, 6-8:30 am, 10-11, 12-2:30 pm; 3, rocking chair time; 5-7. Sun, 8:30-9:30 am, 10:45 am, 2 pm, 3-4, services; 6, Golden Rule, church service. Founded Feb. 1924. Central.

KFOA

Seattle, Wash. 447.5m-670kc. 1000 watts. Rhodes Dept. Store. Announcer, Arthur W. Lindsay. Mon, 10 am-10 pm. Tues, 12-10 pm. Wed, 10 am-11 pm. Thursday, 12-10 pm. Fri, 10 am-12 mid. Sat. 12n.-10 pm. Sun, 5:30-6:30 pm. Pacific.

KFQD

Anchorage, Alaska. 344.6m-870kc. 100 watts. Anchorage Radio Club. Announcer, Frank O. Berry. Mon, Fri, 8-10 pm. Sun, 7:30-9 pm. Alaskan time.

KFQU

Holy City, Calif. 249.9m-1200kc. 100 watts. W. E. Riker. Announcer, Arthur J. Landstrom. Daily ex Sun, 6:30-7:30 pm. Tues, Fri, 9:30-11 pm. Wed, Thurs, Sat, 9-10 pm. Sun, 11-12 n, 10-11 pm. Pacific.

KFQW

Seattle, Wash. 217.3m-1380kc. 100 watts. KFQW, Inc. Pacific. Daily ex Sun, 12-1 pm, 4:30-5:30, 5:30-6, 6-7, 8:30-10, 10-11. Sun, 10-12 n. Pacific.

KFQZ

Hollywood, Calif. 232.4m-1290kc. 100 watts. Taft Radio Company. Announcer, Allan Fairchild. Daily ex Sun, 12-1 pm, 5-6 pm, 6-11. Sun, 7-11 pm. Pacific.

KFRC

San Francisco, Calif. 454.3m-600kc. 1000 watts. Don Lee, Inc. Announcer, Harrison Holliway. Daily ex Sat, Sun, 7-9 am, 10-12 n., 12-1 pm, 4:30-12 mid. Sat, 7-9 am, 10-12 n., 12-1 pm, 4-12 mid. Sun, 12-1 am, 12-1 pm, 5-10:30. Pacific.

KFRU

Columbia, Mo. 249.9m-1200kc. 500 watts. Stephens college. Announcer, La Von Rall. Slogan, "Where Friendliness Is Broadcast Daily." Daily ex Sun, 8:30-11:15 am, 3 pm, 6:30. Wed, 7:30-10 pm. Thurs, 7:30-11 pm. Sun, 7:30 am, 9:20, 10:45, 4 pm, 5, 7:30. Founded October 25, 1925. Central.

KFSD

San Diego, Calif. 440.9m-680kc. 500 watts. Airfan Radio Corp. Daily ex Sun, 10-11 am, 6-10 pm. Sun, 11 am, 2-4 pm. Pacific.

KFSG

Los Angeles, Calif. 275.1m-1090kc. 500 watts. Angeles Temple. Daily ex Sun, Mon, 10:30-11:30 am, 1:30-12:30, organ; 2:30-3:30 pm, program; 3:30-4:30, vesper; 6:30-7:30. Tues, 7:30-9:15 pm. Wed, Fri, 7:30-9:30 pm. Thurs, 7:30-11 pm. Sat, 7:30-9:30 pm. Sun, 10:30 am, 2:30-4:40 pm, 6:30-9:30, 10-11. Pacific.

KFUL

Galveston, Texas. 258.5m-1160kc. 500 watts. Thomas Groggan & Bros.

KFUM

Colorado Springs, Colo. 282.8m-1060kc. 100 watts. Corley Mountain Highway. Announcer, Howard Brown. Mon, Thurs, 6:30-9:30 pm. Tues, 8-9:30 pm. Fri, 4-5 pm, 6:30-7:30 pm. Sun, 11-12:30 pm. Mountain.

KFUO

St. Louis, Mo. 234.2m-1280kc. 1500 watts 6 am-6 pm, 1000 watts. Concordia Theological Seminary (Lutheran). Announcer, Herm. H. Hohenstein. Mon, 8 pm. Wed, 9:30 pm. Sun, 9:15 pm. Thurs, 8 pm. Fri, 6:30-7:15 pm. Sun, 3 pm. Founded Dec. 14, 1924. Central.

KFUP

Denver, Colo. 227.1m-1320kc. 100 watts. Fitzsimons General Hospital, Educational and Recreational Dept. Daily ex. Sat, and Sun, 10-11 am. Tues, Thurs, Fri, 7:30 pm. Mountain.

KFUR

Ogden, Utah. 225.4m-1330kc. 500 watts. Peery Building Co. Tues, Thurs, Sat, 9:50-11:50 pm, dance music. Mountain.

KFUS

Oakland, Calif. 256.3m-1170kc. 50 watts. The Gospel Radio. Slogan, "The City of Opportunity." Mon, Wed, Fri, 10-11 am, Wed, Fri, 8-9 pm, Sat, 1:30-2 30 pm, 6:30-7:30. Sun, 9-10 am, 11-12n, 7:45-9 pm, Pacific.

KFUT

Salt Lake City, Utah. 499.7m-600kc. 50 watts. University of Utah.

KFVD

Venice, Calif. 208.2m-1440kc. 250 watts. W. J. & C. I. McWhinnie. Announcer, Mary Elizabeth Carter. Daily ex Sun, 9:30-12 n., 4:30-6 pm, 9-12 mid. Wed, 12-2 am. Founded April 1925. Pacific.

KFVE

St. Louis, Mo. 234.2m-1280kc. 2000 6 am-6 pm, 1000 watts. Greater St. Louis Broadcasting Corp. Announcer, Thomas Patrick Convey. Daily ex Sun, Thurs, 9:30 am-11 pm, shoppers' club; baseball, studio concert. Thurs, 9:30 am-6 pm. Sun, 11-9 pm. Central.

KFVG

Independence, Kan. 225.4m-1330kc. 50 watts: First Methodist Episcopal church. Announcer, R. W. Elliott. Slogan, "The Voice of Southeastern Kansas from Independence, the Buckle on the Oil Belt." Tues, 8 pm. Sun, 10:55 am, 7:30 pm. Founded Mar. 1925. Central.

KFVI

Houston, Texas. 238m-1260kc. 50 watts. KFVI Broadcasting Company. Announcer, Harry Waters. Daily ex Sun, 1-2 pm. Mon, Wed, Sat, 8-9:30 pm. Founded 1925. Central.

KFVS

Cape Girardeau, Mo. 223.7m-1340kc. 50 watts. Hirsch Battery & Radio Co. Announcer, W. W. Watkins. Slogan, "The City of Opportunity." Daily ex Sun, 12-15 pm. news, markets, 7:15, music. Founded July 1925.

KFWB

Hollywood, Calif. 361.2m-830kc. 500 watts. Warner Brothers. Announcer, William "Bill" Ray. Daily ex Sun, 12-2:30 pm. Mon, Tues, 5:15-11 pm. Wed, Sat, 4-11 pm. Thurs, 4:30-11 pm. Fri, 8-9 am, 12-3:30 pm, 5:15-11. Sun, 9-11 pm. Pacific.

KFWC

San Bernardino, Calif. 222.1m-1350kc. 100 watts. L. E. Wall. Announcer, Bert Elise Wall. Daily ex Sun, 4-6 pm, 7-11. Pacific.

KFWF

St. Louis, Mo. 214.2m-1400kc. 250 watts. St. Louis Truth Center. Slogan, "The Voice of Truth." Announcer, Rev. Charles H. Hartmann. Sun, Thurs, 10:45 am, 7:45 pm, 9. Founded 1925. Central.

KFWI

San Francisco, Calif. 267-7m-1120kc. 500 watts. Radio Entertainments, Incorp. Announcer, Clare Stixrood. Mon, Tues, Wed, Thurs, 8 am-12 mid. Fri, 7 am-12 mid. Sat, 7 am-2:30 am. Sun, 7:30-12 mid. Pacific.

CHALLENGE!

ONE DOLLAR will be paid to the Radio fan submitting the most errors in any one station's listing in this Official Call Book and Log. Letters must reach Radio Digest office not later than a month from date of issue corrected. Readers are not limited to correcting one station, but such corrections must be certified by the stations themselves, and NOT by comparison to other so-called accurate broadcasting directories and lists. Readers also must live in same state or province as stations corrected are located. Station verifications must accompany corrections. In case of tie duplicate awards will be paid.

That's just how sure Radio Digest is that this Official Call Book and Log is correct! To make the challenge fair for everyone, broadcasting stations and their employes are barred from this offer.

In this issue is a complete alphabetical arrangement according to wave lengths, a wave length index, and a state, city index of stations. The information contained in each station data listing is given in the following order: Call letters, city, state, watts antenna input, owner's name, announcer's name, slogan used, if any, name of listener in "club," schedule of operating hours, and kind of time used, as "Central," "Mountain," etc.

Each issue of Radio Digest gives one the most complete and accurate Call Book and Log obtainable. This service is original with this publication, and has been maintained from the start. Right of reproduction without permission of any or all of the data contained herein is forbidden.

KFJB

Marshalltown, Iowa. 247.8m-1210kc. 100 watts. Marshall Electric Co. Announcer, M. F. Easter. Slogan, "Marshalltown, the Heart of Iowa." Daily ex Sun, 10 am, 12-1:30 pm. Daily, 6 pm, 7. Tues, Fri, 8:30 pm. Sun, 11 am, 7:30 pm. Founded June 2, 1923. Central.

KFJF

Oklahoma City, Okla, 272.6m-1100kc. 750-1000 watts. National Radio Mfg. Co. Announcer, Tired Hand. Slogan, "Radio Headquarters of Oklahoma City—The City of Opportunity." Daily ex Sun, 9 am, music; 10:30, markets; 12-1:30, pm, music; 3-5, 7-10. Sun, 9 am, I. B. S. A.; 10, Men's class; 11, services; 8, services. Central.

KFJI

Astoria, Ore. 249.9m-1200kc. 15 watts. E. E. Marsh and Liberty theater. Announcer, E. E. Marsh. Wed, 11-11:30 pm, organ. Sun, 12:30-1:30 pm. Pacific.

KFJM

Grand Forks, N. D. 333.1m-900kc. 100 watts. University of North Dakota. Daily, 12n, 6 pm, 8. Founded Oct, 1923. Central.

KFJR

Portland, Ore. 282.8m-1060kc. 100 watts. Ashley C. Dixon & Son. Announcer, Ashley C. Dixon, Sr. Daily ex Sun, Sat, 5-6 pm, 7-8. Tues, 10-11. Thurs, 9:30-10:30 pm, 11-12. Fri, 12-1 am. Sat, 1:30-3 pm, 5-6. Founded May 18, 1925. Pacific.

KFJY

Fort Dodge, Iowa. 232.4m-1290kc. 100 watts. Tunwall Radio Co. Announcer, Carl Tunwall. Daily ex Sun, 10:30-11:30 am, 5:45-7 pm. Tues, 10-11:30 pm. Thurs, Fri, 8:30-9:30 pm. Wed, 3-4 pm. Sun, 11-12:30 pm. Founded Oct. 1923. Central.

KFJZ

Fort Worth, Texas. 249.9m-1200kc. 50 watts. W. E. Branch. Daily ex Wed, Sun, 10:01 am, 4-6 pm, 6:30-7, 8:30-9:30. Sun, 1-3 pm, 7-9:30 pm. Central.

KFKA

Greeley, Colo. 545.1m-550kc. 200 watts. Colorado State Teachers' College. Announcer, H. E. Green.

KFKB

Milford, Kan. 241.8m-1240kc. 2500-1500 watts. J. R. Brinkley, M. D. Daily ex Sun, 10:15-10:30 am, 12-1:30 pm. Daily ex Sun, Sat, 3-4 pm, 5:30-10. Sun, 8 am, 10, 6-12 mid. Central.

KFKU

Lawrence, Kan. 254.1m-1180kc. 500 watts. University of Kansas. Announcer, Ellsworth C. Dent. Mon, Thurs, 7-8 pm. Founded Dec. 15, 1924. Central.

KFON

Long Beach, Calif. 241.8m-1240kc. 500 watts. Nichols & Warriner, Inc. Announcer, Hal G. Nichols. Slogan, Piggly Wiggly Station. Daily and Sun, 9:30 am-12 mid. Founded March 1924. Pacific.

KFOR

Lincoln, Nebr. 217.3m-1380kc. 100 watts. Howard A. Shaman. Daily ex Sun, 12:30-1:30 pm, 2-3:15. Mon, Tues, Wed, Fri, 6:45-10 pm. Central.

KFOX

Omaha, Nebr. 258.5m-1160kc. 100 watts. Board of Education. Technical High. Daily ex Sun, Sat, 12-1:30 pm. Tues, 7:30-9 pm. Central.

KFOY

St. Paul, Minn. 285.5m-1050kc. 250 watts. Beacon Radio Service. Announcer, M. G. Goldberg. Daily ex Sun, 9 pm. Mon, 7 pm. Founded Mar. 1924. Central.

KFPL

Dublin, Texas. 275.1m-1090kc. 15 watts. C. C. Baxter, announcer. Mon, Thurs, 8 pm, Sat, 11 pm. Sun, 7:30 am, 1:30 pm. Central.

KFPM

Greenville, Texas. 230-6m-1300kc. 15 watts. The New Furniture Co. Announcer, Dave Ablowich, Jr. Slogan, "The New Furniture Co., the Home of Good Furniture." Located at Greenville, Texas, Where You Find "The Blackest Land, the Whitest People." Daily ex Sun, 1 pm, music. Mon, Wed, Fri, 8 pm. Sun, 11 am, services; 7:30 pm, irregularly. Central.

KFPR

Los Angeles, Calif. 232.4m-1290kc. 250 watts. Los Angeles Co. Forestry Dept. Irregular schedule.

KFPW

Carterville, Mo. 263m-1140kc. 50 watts. St. John M. E. church, S. Slogan, "Keeping Pace with Christ Means Progress." Daily ex Sun, 6:30-7 am, 1-2:30 pm, 2:30-3 pm. Sun, 1-2:30 pm. Central.

KFPY

Spokane, Wash. 245.8m-1220kc. 250 watts. Symons Investment Co. Announcer, E. B. Craney. Daily ex Sun, Sat, 9:45-11 am, 3-5 pm, 6-10:30. Sun, 7-12 mid. Pacific.

KFQA

St. Louis, Mo. 247.8m-1210kc. 50 watts. The Principia. Sun, 8 pm. Founded May 9, 1924. Central.

KFQB

Fort Worth, Tex. 333.1m-900kc. 1000 watts. Lone Star Broadcast Co. Announcer, Roland M. Perry. Daily ex Sun, 9:30-10:30 am, 12-1 pm, 7:30-10:30, Wed, 9:30-10:30 am, 12-1 pm. Sun, 11-12 n, 6-7 pm, 7:30-11. Central.

KFWM
Oakland, Calif. 236.1m-1270kc. 500 watts. 1000 6 am- 6 pm. Oakland Educational Society. Announcer, C. R. Pollock. Mon, Tues, Thurs, Fri, Sat, 8-10 pm. Thurs, 12-30-1:15 pm, 2-4. Tues, Wed, Fri, 2-3 pm. Tues, 12:30-1:15 pm, 2-3, Sun, 9:30-11 am, 12:30-2:30 pm, 7:30-9, 10-11. Pacific.

KFWO
Avalon, Calif. 299.8m-1000kc. 250 watts. Major Lawrence Mott-Signal Corp. Slogan, "Katalina for Wonderful Outings." Daily, 12:30-1:30 pm, 7:30-9. Tues, Fri, Sun, 5-6 pm. Pacific.

KFXD
Jerome, Idaho. 204m-1470kc. 15 watts. KFXD Inc.

KFXF
Denver, Colo. 282.8m-1060kc. 250 watts. Colorado Radio Corp. Announcer, W. D. Pyle. Slogan, "The Voice of Denver." Mon, Tues, 6-10 pm. Wed, 6-12 mid. Fri, Sat, 6-12 mid. Sun, 8 pm. Mountain.

KFXJ
Colorado, 215.7m-1390kc. 50 watts. R. G. Howell. Slogan, "America's Scenic Center." Daily ex Sun, 2-4:30 pm, 5:30-9. Sun, 7-7:30 pm. Mountain.

KFXR
Oklahoma City, Okla. 223.7m-1340kc. 50 watts. Exchange Ave. Baptist church. Mon, Wed, Fri, 8 pm. Sun, services.

KFXY
Flagstaff, Ariz. 205.4m-1460kc. 25 watts. Mary M. Costigan. Announcer, Cecil J. Walters. Tues, Thurs, Sat, 10:15-11:15 pm. Mountain.

KFYO
Breckenridge, Tex. 211.1m-1420kc. 15 watts. Kirksey Brothers Battery & Elec. Co. Daily ex Sun, 9-10 am, 12-1 pm, 8-10. Central.

KFYR
Bismarck, N. D. 239.9m-1250kc. 250 watts. 500 6 am-6 pm. Hoskins-Meyer, Inc. Announcer, C. F. Dirlam. Daily ex Sun, 12:30-1:30 pm, 6:30-8:30 pm. Tues, Thurs, 10-11 pm. Sun, 10-30-12 n, 1-3 pm. Founded Dec. 1925.

KGA
Spokane, Wash. 260-7m-1150kc. 2,000 watts. Northwest Radio Service Co. Daily ex Sun, 11 am; 12, news; 5:40, stocks, weather; 6, time; 6:20, 8, program. Sun, 11 am, 7:30. Pacific.

KGAR
Tucson, Ariz. 234.2m-1280kc. 100 watts. Tucson Citizen. Announcer, Harold S. Sykes. Daily ex Sat, 7-9 pm. Sun, 11 am. Installed June 1926. Mountain.

KGBS
Seattle, Wash. 202.6m-1480kc. 100 watts. Arthur C. Daily. Moore Hotel. Mon, Tues, Wed, Fri, 6:30-10 pm. Thurs, 6:30-10 pm. Pacific.

KGBU
Ketchikan, Alaska. 228.9m-1310kc. 500 watts. Alaska Radio & Service Co.

KGBX
St. Joseph, Mo. 288.3m-1040kc. 100 watts. Foster-Hall, Inc. Announcer, R. D. Foster. Daily ex Sun, 12-1 pm. Wed, 5-7 pm. Tues, Thurs, Fri, 6-10 pm. Founded August 11, 1926. Central.

KGBY
Columbus, Nebr. 202.6m-1480kc. 50 watts. Thelen and Laddiken. Tues, Sat, Fri, 12:35-1:15 pm, 8-9:15. Central.

KGBZ
York, Nebr. 212.6m-1410kc. 100 watts. Announcer. Dr. George R. Miller. Slogan, "Keep Your Hogs and Poultry Healthy." Mon, Wed, Thurs, Fri, Sat, 12:20 am, markets, music, 12:30, 2:30, 7:30. Thurs, Sat, 10:30-11:30 pm, music. Sun, 9 am, service; 3 pm, musicale; Alternate Sun, 5 pm. Opened Aug. 1926. Central.

KGCA
Decorah, Ia. 247.8m-1210kc. 10 watts. Bar Bear Clothing Company. Announcer, Charles Greenley. Daily, 12:30-1 pm. Wed, 7-8 pm. Sun, 2-4 pm. Central.

KGCB
Oklahoma City, Okla. 215.7m-1390kc. 50 watts. Wallace Radio Institute.

KGCH
Wayne, Nebr. 293.9m-1020kc. 250 watts. Wayne Hospital. Announcer Merrill Shum. Slogan, "Remember Us When U. R. Ill." Daily ex Sat, Mon, 6:30 pm. Tues, Thurs, 4-5 pm. Founded Aug. 1926. Central.

KGCI
San Antonio, Texas. 220.4m-1360kc. 15 watts. Liberty Radio Sales.

KGCL
Seattle, Wash. 230.6m-1300kc. 50 watts. Louis Wasmer, Archie Taft. Announcer, Herman Riece. Mon, Wed. Thurs, 6:30-7:30 pm, 8:30-11. Tues, Fri, Sat, 3-7:30 pm. Pacific.

KGCN
Concordia, Kan. 208.2m-1440kc. 50 watts. Concordia Broadcasting Co. Daily ex Sun, 12:30-1:30 pm, 7-9. Founded Aug. 1926. Central.

KGCR
Brookings, S. D. 208.2m-1440kc. 15 watts. Cutler's Radio Broadcasting Service, Inc.

KGCU
Mandan, N. D. 239.9m-1250kc. 100 watts. Mandan Radio Assn. Announcer, H. L. Dahners. Daily ex Sun, 12-1:30 pm, 6-7. Sun, 11-12n., 12:30-2:30. Mountain.

KGCX
Vida, Mont. 243.8m-1230kc. 10 watts. First State Bank of Vida. Announcer, E. E. Krebsbach. Daily ex Sun, 12n., Sun, 11 am. Mountain.

KGDA
Dell Rapids, S. D. 254.1m-1180kc. 6 am,-6 pm. 15 watts. Home Auto Co. Announcer, Marion Rollins. Sun, 1:30-5 pm. Central.

KGDE
Barrett, Minn. 205.4m-1460kc. 50 watts. Jaren Drug company. Daily ex Sun, 12:30 pm, musicale; news, weather, markets; 4:30-7, musicale. Sun, 10:30-3 pm, 6.8. Licensed Sept. 15, 1926. Central.

KGDJ
Cresco, Iowa. 202.6m-1480kc. 10 watts. R. Rathert.

KGDM
Stockton, Calif. 217.3m-1380kc. 10 watts. Peffer Co. Daily ex Sun, 10-11:30 am, 2-3 pm. Thurs, Sat, 8-10 pm. Central.

KGDP
Pueblo, Colo. 223.7m-1340kc. 10 watts. Boy Scouts of America. Tues, 8 pm. Thurs, 9 pm. Mountain.

KGDR
San Antonio, Texas. 202.6m-1480kc. 15 watts. Radio Engineers. Announcer, Joe B. McShane. Daily ex Sun, 4:30-5:30 pm. Thurs, 9-10 pm. Central.

KGDW
Humboldt, Nebr. 206-8m-1450kc. 100 watts. Frank J. Rist.

KGDX
Shreveport, La. 212.6m-1410kc. 250 watts. William Erwin Antony.

KGDY
Oldham, S. D. 206.8m-1450kc. 15 watts. J. Albert Loesch. Thurs, 7:45-11 pm. Central. Founded Dec. 26, 1926.

KGEF
Los Angeles, Calif. 263m-1140kc. 500 watts. Trinity Methodist church.

KGEH
Eugene, Ore. 201.2m-1490kc. 50 watts. Eugene Broadcast Station. Daily ex Sun, 9-10 am, 12:15-12:50 pm, 6:30-8. Pacific.

KGEK
Yuma, Colo. 263m-1140kc. 10 watts, 7 am-7 pm. Beehler Electrical Equipment Co.

KGEN
El Centro, Calif. 225.4m-1330kc. 50 watts. E. R. Irey and F. M. Bowles. Daily ex Thurs, Sun. 12:15-1:15 pm. Mon, Wed, Fri, 5:30-6:30 pm. Tues, Sat, 8-9 pm. Thurs, 10-11 pm. Pacific.

KGEO
Grand Island, Nebr. 205.4m-1460kc. 100 watts. Hotel Yancey. Mon, Wed, Sat, 8-9 pm. Tues, Fri, 12:25-12:55 pm. Sun, 2-4 pm. Central.

KGEQ
Minneapolis, Minn. 202.6m-1480kc. 50 watts. Fred W. Herrmann. Mon, 7-8 pm. Tues, 8:30-11:45 pm. Wed, 6:30-8:30 pm. Thurs, 8:30-10:30 pm. Fri, 6:15-9 pm. Sat, 3-5:30 pm. Central.

KGER
Long Beach, Calif. 215.7m-1390kc. 100 watts. C. Merwin Dobyns.

KGEU
Lower Lake, Calif. 227.1m-1320kc. 50 watts. Lotowana Lodge. Mon, Wed, Fri, 7-9 pm. Sun, 2:30-3:30 pm, 8-9. Pacific. Founded Dec. 1926.

KGEW
Fort Morgan, Colo. 218.8m-1370kc. 100-200 watts. City of Fort Morgan. Tues, Thurs, 8-10 pm. Sat, 12-1 pm, 8-10 Sun, 11-12 n, 2-4 pm. Mountain.

KGEY
Denver, Colo. 201.2m-1490kc. 250 watts. J. W. Dietz.

KGEZ
Kalispell, Mont. 205.4m-1460kc. 100 watts. Flathead Broadcasting Assn. Daily ex Sun, 12;30-1:30 pm, 6:30-7:30 pm. Sun, Thurs, 9-11 pm. Sun, 11 am. Mountain.

KGFB
Iowa City, Iowa. 223.7m-1340kc. 10 watts. A. G. Dunkel. Daily ex Sun, 12-12:30 pm, 6-6:30. Mon, Tues, Wed, Thurs, Fri, 11-12 mid. Central.

KGFF
Alva, Okla. 205.4m-1460kc. 25 watts. Earl E. Hampshire.

KGFG
Oklahoma City, Okla. 215.7m-1390kc. 50 watts. Full Gospel Church.

KGFH
La Crescenta, Calif. 223.7m-1340kc. 250 watts. Frederick Robinson.

KGFI
San Angelo, Tex. 220.4m-1360kc. 100 watts. M. L. Eaves. Daily ex Sun, 9 am, 12n., 3 pm, markets, weather, 8-11, entertainment. Central.

KGFJ
Los Angeles, Calif. 208.2m-1440kc. 100 watts. Ben S. McGlashan. Slogan, "Keeping Good Folks Joyful." Daily ex Sun, 6:30-9:30 am, 12-4:30 pm, 6-9. Pacific. Founded Jan. 18, 1927.

KGFK
Hallock, Minn. 223.7m-1340kc. 50 watts. Kittson County Enterprise. Mon, Wed, Fri, 12-1:30 pm. Agri, reports, news, music. Mon, Fri, 8-10:30 pm. Central.

KGFL
Raton, N. M. 222.1m-1350kc. 50 watts. Radio Trust Co.

KGFM
Yuba City, Calif. 211.1m-1420kc. 15 watts. George W. Johnson. Daily ex Sun, 9:30-10:30 am. Mon, Wed, Fri, 8-10 pm. Pacific.

KGFN
Aneta, N. D. 199.9m-1500kc. 15 watts. Haraldson & Thingstad.

KGFO
Terre Haute, Ind. 204m-1470kc. 100 watts. KGFO, Inc.

KGFP
Mitchell, S. D. 212.6m-1410kc. 10 watts. Mitchell Broadcast Co.

KGFW
Ravenna, Nebr. 296.9m-1010kc. 10 watts. Otto F. Sothman. Announcer R. H. McConnell. Slogan, "Catering to the Home Folks." Daily ex Sun, 8-9 am, 11:45-12:15 pm, 3:15-4:15. Central.

KGFX
Pierre, S. D. 254.1m-1180kc. 200 watts, 6 am-6 pm. Dana McNeil.

KGGF
Picher, Okla. 206.8m-1450kc. 100 watts. Dr. D. L. Connell. Daily ex Sun, 7:30-8:30 pm, 8:30-9:30. Central. On air Sept. 1, 1927.

KGGH
Cedar Grove, Ia. 212.6m-1410kc. 50 watts. Bates Radio & Elec. Co. Announcer, A. J. Bates. Mon, Wed, Fri, 7-9 pm. Central.

KGO
Oakland, Calif. 384.4m-780kc. 5000 watts. Gen. Elec. Co. Announcer, Howard I. Milholland. Daily ex Sun, 11:30 am, 1 pm, weather, stocks; 6-6:55, dinner concert; 6:55, reports. Daily ex Sun, Wed, Sat, 4-5 pm, concert, 5:30, kiddies club; M-9, grand opera, 9, time; Tues, 8-9 pm, Pilgrims; 9-10, Everready hour; 10-11, Hits and Bits. Wed, 6:35 pm, farm; 8-9, vaudeville; 9-10, drama; 10-12, dance music. Thurs, 5-6 pm, Boy's hour; 8-9, 9-10. Fri, 5:30-6 pm, 8-9, 9-10, 10-11, 11-12. Sat, 8-9 pm, 9-10, 10-11. Sun, 11 am, 7:30 pm, services; 4, vesper, 5:30-6:30, 9, 9-10. Pacific.

KGRC
San Antonio, Texas. 220.4m-1360kc. 50 watts. Gene Ruth & Co. Announcer, L. G. Weber. Daily ex Sun, 8:30-9:30 am, 2-3 pm. Mon, Sat, 8:30-9:30 pm. Wed, 9:30-10:30 pm. Fri, 7:30-8:30 pm. Sun, 12:30-1:30 pm. Central. Opened Jan. 31, 1927.

KGRS
Amarillo, Texas. 243.8m-1230kc. 150 watts. Gish Radio Service. Announcer, L. B. Cornelius. Daily ex Sun, 10 am, 7, 10, 11:45, 6:30 pm, 7, 8, Mon, Wed, Fri, 9 pm. Sun, 11 am, 8 pm. Central.

KGTT
San Francisco, Calif. 206.8m-1450kc. 50 watts. Glad Tidings Temple and Bible Institute. Daily ex Sun, 12:30 pm, scripture reading. Tues, Wed, Fri, 8-10 pm. Wed, 2:30-4 pm, Divine healing service. Sun, 2:30-3 pm, Sunday school. 3-5, service; 7:30-10, service. Pacific. Founded Nov. 1925.

KGU
Honolulu, Hawaii. 270.1m-1110kc. 600 watts. Marion A. Mulrony. Announcer, Homer Tyson. Daily ex Sun, Sat, 12-1:15 pm, 4:30-5:30. Thurs, 7:30-9:30 pm. Sat, 2-4:30 pm. Sun, 6-9:30 pm. 157½ meridian. 2½ hours earlier than Pacific.

KGW
Portland, Ore. 491.5m-610kc. 1,000 watts. Oregonian Publishing Co. Announcer, Dick Haller. Slogan, "KGW, Keep Growing Wiser." Daily ex Sun, 10-11:30 am, town crier, household helps; 6-7, concert, 7-10. Mon, 9-12 mid. Tues, 9:45-10 am, exercises; 2-3 pm, 7, travelog; 9-11 pm. Wed, 9-10 pm, 10-12. Thurs, 7:30-7:45 pm, amusement guide; 7:45-8, lecture; 9-10. Fri, 9:45-10 am, exercises; 7:30-8, 9-12 mid. Sat, 10-12 mid. Pacific.

KGY
Lacey, Wash. 243.8m-1230kc. 50 watts. St. Martins College. Announcer, Sebastian Ruth. Slogan, "Out Where the Cedars Meet the Sea." Sun, Tues, Thurs, 8:30-9:30 pm. Pacific.

KHJ
Los Angeles, Calif. 405.2m-740kc. 500 watts. Los Angeles Times. Announcer, John S. Daggett. Slogan, "Kindness, Happiness, Joy." Daily ex Sun, Mon, 6 pm, trio; 6:30, children's hour; 7:30, lecture; 8-10, music. Sun, 10 am,-12:30 pm, 7, 8-10. Pacific.

KHMC
Harlingen, Tex. 236.1m-1270kc. 100 watts. Harlingen Music Company. Daily ex Sun, 1-4 pm. Mon, Wed, Fri, 7:30-9 pm. Central.

KHQ
Spokane, Wash. 370.2m-810kc. 1000 watts. Louis Wasmer, Inc. Announcer, C. P. Underwood. Slogan, "I'm the Friendly City." Daily ex Sun, 12:30-1:30 pm, 3-4, Daily ex Sun, Wed, 5-6 pm, 6-7, 8-9, 9-10, 10-12. Wed, 9-10 pm, 10-12. Sun, 10 am, Bible hour; 11-12:30 pm, 2-3:30, 6-7:30, 7:30-9, 9-10. Pacific.

KIAF
Sihtipoc, Minn. 422.3m-710kc. 500 watts. Steele Co. Slogan, "Far from the Maddening Crowd." Mon, Wed, Fri, 7-8 pm. Sun, 2-3 pm. Central.

KICK
Atlantic, Iowa. 322.4m-630kc. 100 watts. Atlantic Automobile Co. Operated by Walnut Grove Products Co. Announcer, H. A. Marshall. Daily ex Sun, 11:50-12:30 pm, question box, markets. Daily ex Sun, 7:45-9 pm. Founded 1923. Central.

KJBS
San Francisco, Calif. 220.4m-1360kc. 50 watts. Julius Brunton & Sons Co. Announcer, Jack Smith. Daily ex Sun, 9-11:30 am, 2-4 pm. Tues, 8-12 mid. Thurs, 8-10 pm. Fri, 8-11 pm. Sun, 1:30-5 pm. Pacific.

KJR
Seattle, Wash. 348.6m-860kc. 2500 watts. Northwest Radio Service Co. Announcer, W. C. Gordon. Daily ex Sun, 10:30 am, shopping service; 11:30, music; 12 n, time; 5:40, stocks; 6, time; 6:10, box office; 6:20, news; 6:30, dinner concert; 8, studio concert; 10, time. Mon, 2 pm, Sun, 11 am, service; 6 pm, dinner concert; 7:45, organ; 8, service; 9:30, studio concert. Pacific.

KKP
Seattle. Wash. 265.3m-1130kc. 15 watts. City of Seattle. Daily ex Sun, 10 pm. Pacific.

KLCN
Blytheville, Ark. 285.5m-1050kc. 6 am-6 pm. 50 watts. Edgar G. Harris.

KLDS
Independence, Mo. 270.1m-1110kc. 1500 watts. Reorganized Church of Jesus Christ of Latter Day Saints. Midland Broadcasting Co. Announcer, Arthur B. Church. Tues, Fri, 6:30 am. Tues, 6:30 am, 4 pm, 8. Thurs, 4 pm, 8. Sat, 8 pm. Tues, Thurs, Sat, 7 pm. Sun, 8:30 am, 11, 2 pm, 3 pm, 6:30, 9:15. Central.

KLIT
Portland, Ore. 206.8m-1450kc. 10 watts. Lewis I. Thompson.

KLS
Oakland, Calif. 245.8m-1220kc. 250 watts. Warner Bros. Radio Supplies. Announcer, Ralph Moore. Slogan, "The City of Golden Opportunity." Sun, 10-11 am. Pacific.

KLX
Oakland, Calif. 508.2m-590kc. 500 watts. Oakland Tribune. Announcer, Charles H. Gabriel, Jr. Slogan, "Where Rail and Water Meet." Daily ex Sun, 6:30-7 pm, Music. Daily ex Sat, Sun, Brother Bob, 5:30-6:30 pm. Daily ex Sun, 7-7:30 pm, news. Sat, 2-5 pm, football. Mon, Wed, Fri, 8-10:30 pm. Pacific. Founded Nov, 20, 1922.

KLZ
Denver, Colo. 399.8m-750kc. 1000 watts. Reynolds Radio Co. Announcer, Julian C. Riley. Slogan, "Pioneer Broadcasting Station of the West." Daily ex Sun, 10-12n, 1-3 pm. Mon, Tues, Wed, 8-10 pm. Fri, 6:30-9 pm. Sat, 9-12 mid. Sun, 9:30-12n, 7-9:30 pm. Mountain.

KMA
Shenandoah, Iowa. 394.5m-760kc. 1000 watts. May Seed & Nursery Co. Announcer, Earl E. May. Daily ex Sun, 6-7 am, 9-10, 11-12:30, 2-4 pm, 6-7:30, 9-10:30, Sun, 8-9 am, 11, 12:15-2:30 pm, 4-6. Central.

KMBC
Kansas City, Mo. 270.1m-1110kc. 1500 watts. Midland Broadcast Central. Announcer, Arthur B. Church. Daily ex Sun, 12 n, 9 pm. Central.

KMED
Medford, Ore. 249.9m-1200kc. 50 watts. W. J. Virgin. Daily ex Sun, 10-11 am, 12:15-1:15 pm, 6:15. Mon, Tues, Wed, Fri, 10 pm. Thurs, Sat, 11 pm. Sun, 11-12 n, 8-9:15 pm. Pacific. Founded Dec. 22, 1926.

KMIC
Inglewood, Calif. 223.7m-1340kc. 250 watts. J. R. Couch. Mon, Tues, Wed, Fri, 7 am-8 pm. 10-12. Thurs, Sat, 7 am-12 mid. Sun, 11-12:15 pm. 8-9:15. Pacific. Founded Jan. 10, 1927.

KMJ
Fresno, Calif. 365.6m-820kc. 50 watts. Fresno Bee. Announcer, W. F. Bragg. Mon, Wed, Fri, 7:15-9:15 pm. Sat, 9:15-12 mid. Pacific. Founded Oct. 1, 1922.

KMMJ
Clay Center, Nebr. 285.5m-790kc. 250-500 watts. M. M. Johnson Co. Daily ex Sun, 7:30 am, 10, 11, 12:30, L. S. live stock market; 1:30 pm, 7, 8, Sun, 9 pm, Tues, silent. Founded 1925. Central.

KMO
Tacoma, Wash. 254.1m-1180kc. 250 watts. KMO, Inc. Announcer, Carl E. Haymond, Mon, Tues, Wed, Thurs, 10-11 am, 2-3 pm, Mon, 7-9:30 pm. Tues, 9-12:30 am. Wed, Thurs, Fri, 8-10 pm. Sat, 10-11 am, 2-3 pm, 6-7, 9-11. Fri, 10-11 am, 2-3 pm. Sun, 10-30-12 mid., 6-7, 7:30-9. Pacific. Founded Aug. 25, 1926.

KMOX
St. Louis, Mo. 299.8m-1000kc. 5000 watts. The Voice of St. Louis. Announcer, George Junkin. Daily ex Sun, 8:40 am, 1 pm, markets. Daily ex Sun, 2 pm, talks; 5:15, music; 5:30, farm talks; 6, children's club; 6:30, orchestra; 8, 9, 10, 11, 12-1 am, music. Sun, 5 pm, 6, 8, 9, 10, music. Central.

KMTR
Los Angeles, Calif. 526m-570kc. 500 watts. KMTR Radio Corp. Daily ex Sun, 7-7:30 am, exercises; 7:30-8, 8:45-9, time; 11:15-12:15 pm, 1:30-2:30, 2:30-3, 4:30-5, 5:30-6, 6-7:30, 10-11. Installed June 1925.

KNRC
Santa Monica, Calif. 374.8m-800kc. 500 watts. Keirulff & Ravenscroft Co. Daily ex Sun, Mon, 2:30 pm, band concert; 3, 3:15, 5, 6, 7, 8, 10. Tues, Sat, 2 pm. Sun, 10:45-11:45 am, 2:30-4 pm, 6:15-7, 7-8, 8-9, 9-10. Installed 1921. Pacific.

KNX
Los Angeles Calif. 336.9m-890kc. 500 watts. Los Angeles Evening Express. Announcer, "Town Crier." Daily ex Sun, 6:45 am, exercises; 8, prayer; 8:55, time; 9, news; 10, Town Crier; 10:30, economics; 1:30 pm, book talk; 2-4, 4:55, markets; 5, 5:30, music; 5:45, Town Crier; 6:30, dinner music. Mon, Tues, Wed, Thurs, Fri, 7-12 midnight. Sat, 7-2 am. Sun, 10-12:30 pm, church service; 12:45-1:45, 2-4, 6:30-9, 9-10:30. Installed Oct. 11, 1924. Pacific.

KOA
Denver, Colo. 325.9m-920kc. 5000 10000 watts, 6 am-7 pm, 5000 watt, General Elec. Co. Daily ex Sun, 11:45 am, weather, road reports, markets. Daily ex Sat, Sun, produce. Daily ex Sun, 12:05 pm, organ. Tues, Thurs, Fri, 4, housewives' matinee. Tues, Thurs, Fri, 3:30 pm. Daily ex Sat, Sun, 6 pm, stocks, markets, produce, news bulletins. Mon, 7:30 pm, Appreciation hour. Tues, farm question box. Wed, 7:30 pm, Tiny Town tales; Fri, 7:30 pm, S. S. lesson. Mon, Wed, Fri, 8 pm, orchestra; 8:15 pm, regular program. Sat, 7 pm, football. Sun, 11 am and 7:30 pm, service; 5:30 pm, music. Founded Dec, 15, 1924. Mountain.

KOAC
Corvallis, Ore. 270.1m-1110kc. 500 watts. Oregon Agricultural College. Announcer, W. L. Kadderly. Mon, Tues, Wed, Thurs, Fri, 7 pm. Pacific.

KOB
State College, N. M. 394.5m-760kc. 5000 watts. N. M. College of Agri. & Mech. Arts. Announcer, Robert Stewart. Slogan, "The Sunshine State of America." Daily 11:55-12:30 pm, time, weather, markets, road reports, news; 9:55-10:10, time, weather, road reports. Mon, 7:30-8:30, pm, farm program. Wed, Fri, 7:30-8:30 pm, music. Founded 1921. Mountain.

KOCH
Omaha, Nebr. 258.5m-1160kc. 250 watts. Central H. S. Announcer, C. H. Thompson. Mon, Tues, Thurs, 7-10:30 pm. Sat, 12 midnight. Sun, 3:30 pm. Founded 1922, Central.

KOCW
Chickasha, Okla. 252m-1190kc. 250 watts. Okla. College for Women. Tues, Thurs, 8 pm, music. Daily ex Sun, 12-1:30 pm, Sun, Mon, Wed, Thurs, 10:15 am, Mon, 10-1:30 am, musicale. Central.

KOIL
Council Bluffs, Ia. 277.6m-1080kc. 4000-2000 watts. Mona Motor Oil Co. Announcer, Bob Hall. Daily ex Sat, Sun, 11:45 am, music, talks; weather, markets; 12, music; 1, "Aunt Sammy." Daily ex Wed, Sun, 5:50, weather, news; 6-12 mid. Sat, 12-12:30 am, 1 pm. Sun, 11 am, service; 12:15, Uncle Jack; 7, 7:30, 11. Founded July 10, 1925. Central.

KOIN
Portland, Ore. 319m-940kc. 1000 watts. KOIN, Inc. Daily ex Sun, 11 am, 12 n, 3, 5:15 6, 7, 7:30, 8, 9, Sun, 6-7 pm, 7:50, 9. Pacific. Founded April 1926.

KOMO
Seattle, Wash. 305.9m-980kc. 1000 watts. Fisher's Blend Station, Inc. Announcer, G. Donald Gray. Daily ex Sun, 10 am-12:30 am, 10, inspirational; 10:15, health exercises; 10:30, home economics; 11, vocalists; 12 n, farm talks; 12:15, organ; 1:15, orchestra; 5:15, children's program; 5:45, stocks and bonds; 6, news; 6:15, orchestra; 9, N. B. C.; 10, program; 10:30, news; 10:45, dance orchestra. Sun, 10-12:30 am, 2-3 pm, 5:30-6:30, 7-9, 9-10. Pacific.

KOW
Denver, Colo. 247.8m-1210kc. 250 watts. The Associated Industries Broadcasting. Announcer, Lewis Grove. Daily ex Sun, 11 am-12 n, 1:30-3:30 pm, 6:30-10. Sun, 11 am, 6, service, Mountain.

KOWW
Walla Walla, Wash. 299.8m-1000kc. 500 watts. Frank A. Moore. Slogan, "The Valley They Liked So Well They Named It Twice." Mon, Thurs, 4-5 pm, 7-12. Tues, 4-5 pm, 7-8. Wed, 4-5 pm, 7-9:30. Fri, 4-5 pm, 7-10. Sat, 7-8 pm, 10-12. Sun, 11-12 n. Pacific.

KPCB
Seattle, Wash. 230.6m-1300kc. 50 watts. Pacific Coast Biscuit Co. Daily ex Sun, 11:15-11:30 am, recipe; 11:30-12 n, musicale. Mon, Wed, Thurs, 5:30-6 pm, 6-6:30 pm. Tues, Fri, 8:30-9:30 pm. Mon, 7:30-8:30 pm, 9:30-10:30. Tues, 9:30-10:30 pm. Wed, 7:30-8:30 pm. Thurs, 7:30-8:30 pm. Fri, 7:30-8:30 pm, 9:30-10:30. Sat, 7:30-10:30 pm. Pacific. Founded April 1, 1927.

KPJM
Prescott, Ariz. 214.2m-1400kc. 15 watts. Frank Wilburn. Irregular hours, news, sports.

KPLA
Los Angeles, Calif. 252m-1190kc. 500 watts. Pacific Development Radio Co. Daily 11 am-11 pm. Sun, 7-10 pm. Pacific.

KPNP
Muscatine, Iowa. 211.1m-1420kc. 100 watts. Central Radio Co. Wed, 10:15-11:15 pm. Central.

KPO
San Francisco, Calif. 422.3m-710kc. 1000 watts. Hale Bros. and the Chronicle. Announcer, Curtis Peck. Slogan, "The Voice of San Francisco, The City by the Golden Gate." Daily ex Sun, 6:45-7:15, 7:45, health drills; 10:30, utility features; 12 n, time, weather. Daily ex Sun, 1-7:30 pm, concert, talks. Mon, Tues, Wed, Thurs, Fri, 8-12 mid. Sat, 8-1 am. Fri, 12:45 pm, luncheon talks. Mon, 12-1 pm. Sun, 9:45-10:30 am, service; 5-6 pm, concert, 6-10. Pacific.

KPPC
Pasadena, Calif. 228.9m-1310kc. 50 watts. Pasadena Presbyterian church. Wed, 7-9 pm. Sun, 9:45-12:45 pm, 6:45-9. Founded Dec. 25, 1924. Pacific.

KPRC
Houston, Texas. 293.9m-1020kc. 500 watts. Houston Post-Dispatch. Slogan, "Kotton Port Rail Center." Announcer, Alfred P. Daniel. Daily ex Sun, 10:55 am, time; 11, weather, markets; 12 noon, entertainment. Daily ex Fri, Sun, 3-4 pm. Daily ex Sun, Fri, 7:30-9:30 pm. Sun, 11 am, 1 pm, 8 pm, services; 9:30-10:30 pm, music. Mon, Wed, Sat, 11 pm, frolics. Founded May 8, 1925. Central.

KPSN
Pasadena, Calif. 315.6m-950kc. 1000 watts. Pasadena Star-News. Announcers, George Frenger, P. C. Pryor. Daily ex Sun, 12:15 pm, 6 pm, news. Tues, Thurs, Sat, 8-9 pm. Sun, 10:30-12:30 am. Installed Nov. 23, 1925. Pacific.

KQV
Pittsburgh, Pa. 270.1m-1110kc. 500 watts. Doubleday-Hill Elec. Co. Announcer, Howard E. Clark. Mon, Wed, Fri, 4-5 pm, 6-9. Tues, Thurs, 4-5 pm, 6-7. Sun, 1-2 pm. Eastern.

KQW
San Jose, Calif. 296.9m-1010kc. 500 watts. First Baptist church. Daily ex Sun, 1-2:30 pm, music; 5-5:30, children's hour; 5:30-6, studio program; 6, Aunt Sammy; 6:20-6:30, U. S. D. A.; 6:40, U. S. Farm Radio school; 6:50, Farmers exchange; 7, news, weather, markets; 7:20, farm topics; 7:30, mail bag; 7:40, talk; 7:55, riddles; 8, program. Sun, 10 am, 7:30 pm. Pacific.

KRAC
Shreveport, La. 220.4m-1360kc. 50 watts. Caddo Radio Club. Announcer, Dr. Le Roy Scott.

KRE
Berkeley, Calif. 256.3m-1170kc. 100 watts. First Congregational Church of Berkeley.

KRLD
Dallas, Texas. 461.3m-650kc. 500 watts. KRLD, Inc. Announcer, Arthur W. Stowe. Slogan, "Where the Bluebonnets Grow. Daily ex Wed, Sun, 12:30-1:30 pm, 7-8:30, 9:30-10:30. Mon, 11-12 mid. Tues, 8-8:30 pm. Thurs, 8-8:30 pm. Sat, 11-12 mid, organ. Central. Founded Oct. 30, 1926.

KRLO
Los Angeles, Calif. 215.7m-1390kc. 250 watts. Freeman Lang, A. B. Scott.

KRSC
Seattle, Wash. 211.1m-1420kc. 50 watts. Radio Sales Corp. Announcer, William J. Calsamalia. Daily ex Sun, 9-10 am, 6-7:30 pm, 9-10:30 pm. Mon, Wed, Fri, 3:30-5 pm. Pacific.

KSAC
Manhattan, Kan. 333.1m-900kc. 500 watts. Kansas State Agricultural College. Announcer, Liste L. Longsdorf. Daily ex Sat, Sun, 9-9:55 am, 9:55, 12:35 pm, 6:30-8. Sat, 12:35 pm. Central.

KSBA
Shreveport, La. 267.7m-1120kc. 1000 watts. Shreveport Broadcasting Assn. Announcer, W. G. Patterson. Daily ex Sun, 9-10 am, 12:15 pm, 2:15, market, news, weather. Tues, Wed, Thurs, Fri, 6:30 pm, 8. Tues, 11 pm. Sat, 9 pm. Sun, 11 am, 8 pm, services. Central. Founded Mar. 14, 1922.

KSCJ
Sioux City, Iowa. 243.8m-1230kc. 500 watts. Perkins Brothers Co. Daily ex Sun, 9:45 am, 10:45, 12:15, stock, markets, weather; 11:30-12:30 pm, news, music; 1:45-3:45 pm. Mon, Tues, Wed, Fri, 6 pm, Sun, 11 am, 7:30 pm, service; 2-4, musicale. Central.

KSD
St. Louis, Mo. 545.1m-550kc. 500 watts. Pulitzer Pub. Co. Announcer, P. Corwin. Daily ex Sun, 9:40 am, 10:40, 11:40, 12:40, 1:40, 3:40, Mon, 9 pm, Tues, 7-9 pm, Wed, 10 am, 7-8:30 pm. Thurs 10 am, 7-9:30 pm, Fri, 10 am, 8-9:30 pm. Sat, 7-8 pm. Sun, 2-8:15 pm. Founded June 24, 1922.

KSEI
Pocatello, Idaho. 333.1m-900kc. 250 watts. KSEI Broadcasting Assn. Announcer, W. J. O'Connor. Daily ex Sun, 3-4 pm, 6-8, 9-11. Sun, 9-11 pm. Mountain.

KSL
Salt Lake City, Utah. 302.8m-990kc. 1000 watts. Radio Service Corp. of Utah. Announcers, Roscoe Grover, Ted Rogers. Daily ex Sun, 7-8 am, 10-11:30, 12n-1:30 pm, 4-5, Mon, Tues, Wed, 6-1:30 pm, Thurs, 6:30-11 pm, Fri, 5:30-11:30 pm, Sat, 6:30-12 mid. Sun, 11-1 pm, 1:55-3, 5-11:30. Mountain.

KSMR
Santa Maria, Calif. 272.6m-1100kc. 100 watts. Santa Maria Valley Railroad Company. Announcer, Sydney C. Peck. Daily ex Sat, Sun, 6:30-9:30 pm. Sat, 7:30 pm, markets. Pacific.

KSO
Clarinda, Iowa. 227.1m-1320kc. 500 watts. Berry Seed Co. Announcer, Joe Faassen. Slogan, "Keep Serving Others." Daily ex Sun, 6:30-8 am, 12-1 pm, music talks. Daily ex Sat, Sun, 6:30-9 pm. Sun, 11-12 n, 5-6 pm. Founded Nov. 2, 1925. Central.

KSOO
Sioux Falls, S. D. 209.7m-1430kc. 250 watts. Sioux Falls Broadcast Assn.

KTAB
Oakland, Calif. 280.2m-1070kc. 500 watts. The Associated Broadcasters. Announcer, Lytton Spaulding. Daily ex Sun, 8:45-9:15 am, prayer service; 9:15-10, shopping hour; 7-7:30 pm, shopping hour. Mon, Tues, Wed, Thurs, 6:30-7 pm, twilight hour. Mon, Tues, Wed, Thurs, Fri, 8-10 pm, entertainment. Daily ex Sun, Sat, 5-6 pm. Sun, 10 am, 11-7:45 pm. Pacific.

KTAP
San Antonio, Tex. 228.9m-1310kc. 20 watts. Robert B. Bridge, Alamo Broadcasting Co. Daily ex Sun, 6:30-8:30 am, 10:30-11:30, 12:30-2 pm, 6:30-8, 9:30-10:30. Mon, silent. Sun, 4-6 pm, 9:30-10:30. Central.

KTBI
Los Angeles, Calif. 288.3m-1040kc. 500 watts. Bible Inst. of Los Angeles. Announcer, H. P. Herdman. Daily ex Sun, 8:45 am, 2 pm, 7:15-9. Sun, 10:45 am, 6, 6 pm, 7:15, 9:30. Pacific.

KTBR
Portland, Ore. 282.8m-1060kc. 50 watts. M. E. Brown. Daily ex Sun, 6-7 pm, dinner program, markets. Mon, Tues, Thurs, Sat, 8-9 pm. Mon, 9-12 mid. Wed, 8-9:30 pm, 9:30-12. Fri, 8-10 pm, 10-12. Sun, 10:30 am, 2-4 pm, 7:30-9. Pacific.

KTCL
Seattle, Wash. 277.6m-1080kc. 500 watts. American Radio Telephone Co.

KTHS
Hot Springs National Park, Ark. 384.4m-780kc. 1000 watts. The Arlington hotel. Announcer, G. C. Armour. Slogan, "Kum to Hot Springs." Mon, Thurs, Fri, 12-1 pm, 8-10:30. Tues, 12-1 pm, 6-8:30. Wed, 8-10:30. Sat, 12-1 pm, 6-7, 8-10. Sun, 11-12:30 pm, 8-10. Installed Dec. 20, 1924. Central.

KTNT
Muscatine, Iowa. 256.3m-1170kc. 1000 watts. Norman Baker. Slogan, "The Home of the Calliophone and Voice of the Iowa Farm Union." Announcer, Adam Reinemund. Daily ex Sun, 6 am-8 pm. Mon, 8 pm, 9, 11. Tues, Wed, Thurs, Fri, 11 pm. Sun, 12 n, 2:30 pm, 8. Central. Founded 1924.

KTSA
San Antonio, Tex. 265.3m-1130kc. 2000 watts. Alamo Broadcasting Co.

KTUE
Houston, Tex. 212.6m-1410kc. 5 watts. Uhalt Electric, Announcer, Bill Arnold. Daily ex Sun, 5:15-6:15 pm. Tues, 8-9 pm. Sat, 8-9:30 pm. Central.

KTW
Seattle, Wash. 394.5m-760kc. 1000 watts. First Presbyterian church. Announcer, J. D. Ross. Slogan, "Hear Ye, Hear Ye, the Gospel." Sun, 11-12:30 pm, 3-4:30, 7-9:30, church service. Pacific.

KUJ
Seattle, Wash. 199.9m-1500kc. 50 watts. Puget Sound Radio Broadcasting Co. Mon, Wed, Fri, 6-9 pm. Sat, 6-12 mid. Pacific.

KUOA
Fayetteville, Ark. 296.9m-1010kc. 500 watts. University of Arkansas. Sun, Mon, 7:30-9 pm. Thurs, 7:30-9 pm. Central.

KUOM
Missoula, Mont. 461.3m-650kc. 500 watts. University of Texas. Mon, Wed, 8 pm. Fri, 8 pm. Sun, 9:15-10:30 pm. Pacific.

KUSD
Vermillion, S. D. 483.6m-620kc. 250 watts. University of South Dakota. Announcer, Garrett Breckenridge. Slogan, "South Dakota University for South Dakotans." Wed, 7:30-8:30 pm. Mon, 6:45-7:30 pm. Sun, 9-10 pm. Central.

KUT
Austin, Tex. 232.4m-1290kc. 500 watts. University of Texas. Mon, Wed, 8 pm. Fri, 8 pm. Sun, 11 am, 7:30 pm. Founded 1925. Central.

KVI
Tacoma, Wash. 234.2m-1280kc. 50 watts. Puget Sound Radio Boardcasting Co. Daily ex Sun, 8-10 am. Wed, Fri, Sat, 6:15-9 pm. Sun, 11-12:30 am, 1:30-3:30, 3:30-4:30, 4:30-5:30, 7:30-9. Pacific.

KVOO
Tulsa, Okla. 348.6m-860kc. 1000 watts. Southwestern Sales Corp. Daily ex Sun, 8-9 am, 11, markets, 11:30, 12:30, 1:30-2:30, 2:45, 3-4; 5:30, children's hour; 6-9, 12 mid, music. Fri, 11 pm, dance. Sun, 9:15 am, Bible class; 1-2 pm, music; 5-6, 6-7, 7-9, church service; 12 mid, music. Central.

KVOS
Bellingham, Wash. 209.7m-1430kc. 50 watts. Voice of Seattle.

KWBS
Portland, Ore. 199.9m-1500kc. 15 watts. Schaeffer Radio Co.

KWCR
Cedar Rapids, Iowa, 239.9m-1250kc. 250 watts. Announcer, H. F. Paar. Slogan, "The Voice of Cedar Rapids." Daily ex Sun, 6:30 am, 11:30, 4 pm, 5:30 pm. Mon, Wed, 9:15 pm. Fri, 10 pm. Sun, 11 am, 5:45 pm, 9:30. Central.

KWG
Stockton, Calif. 344.6m-870kc. 50 watts. Portable Wireless Telephone Co. Announcer, George J. Turner. Slogan, "Voice of the San Joaquin Valley." Daily ex Sun, 4-5 pm, news, concert, markets. 5-6 pm, 6-7:30, 8-10, concert. Wed, Thurs, Sat, 10-1 am, dance music. Sun, 9:30-10:30, organ. Pacific.

KWJJ
Portland, Ore. 228.9m-1310kc. 50 watts. Wilbur Jerman. Daily ex Sun, 3-4:30 pm, 6-8. Mon, 8-10 pm, 11:30-1:30 am. Tues, Wed, Thurs, 8-10 pm, 10-12. Fri, 8-10 pm, 10-11. Sat, 8-12 mid. Sun, 12-1 pm. Pacific.

KWKC
Kansas City, Mo. 222.1m-1350kc. 100 watts. Wilson Duncan Studios. Announcer, Elmer C. Hodges. Slogan, "Keep Watching Kansas City." Tues, Wed, Thurs, Fri, 7 pm, 9. Central.

KWKH
Shreveport, La. 394.5m-760kc. 1000 watts. Henderson Iron Works & Supply Co. Daily and Sun, 9-12 mid. Central. Founded Jan. 8, 1925.

KWLC
Decorah, Iowa. 247.8m-1210kc. 50 watts. Luther College.

KWSC
Pullman, Wash. 394.5m-760kc. 500 watts. State College of Washington. Mon, Wed, Fri, 7:30-9 pm, music, lectures. Pacific.

KWTC
Santa Ana, Calif. 352.7m-850kc. 5 watts. Dr. John Wesley Hancock. Mon, 6:30-7:45 pm. Tues, 6:30-10 pm. Wed, 6:30-7:30 pm. Thurs, 6:30-10 pm. Fri, 6:30-8 pm. Sat, 6:30-9:30 pm. Pacific.

KWUC
Le Mars, Iowa. 243.8m-1230kc. 1500 watts. Western Union College. Announcer, Rex Frolkey. Daily ex Sun, 9:30 am, 11:15, markets; 12:30-1:30 pm, 4-5, Daily ex Thurs, Sun, 7-8 pm. Sat, 10-12 mid. Sun, 4-5 pm. Central. Founded 1922.

KWWG
Brownsville, Texas. 277.6m-1080kc. 500 watts. Brownsville Chamber of Commerce. Slogan, "Kum to the World's Winter Garden." Daily ex Sun, 12 m, 6 pm. Mon, Thurs, 8:30-11:59 pm. Central.

KXL
Portland, Ore. 220.4m-1360kc. 50 watts. KXL Broadcasters. Announcer, A. R. Truitt. Slogan, "The Voice of Portland." Daily 9 am-4 pm; 5-11. Sun, 9 am-7 pm. Pacific.

KXRO
Aberdeen, Wash. 227.1m-1320kc. 50 watts. KXRO, Inc.

KYA
San Francisco, Calif. 309.1m-970kc. 500 watts. Pacific Broadcasting Corp. Announcer, Edward J. Ludes. Daily ex Sun, 10-12 n, 12:30-2 pm, 5:30-7:30, 8-10. Tues, Fri, 10:30 am, diet talk. Pacific. Founded Dec. 18, 1926.

KYW
Chicago, Ill. 526m-570kc. 2500 watts. 5000 after 10 pm. Westinghouse Elec. & Mfg. Co. Announcer, John Clark. Daily ex Sun, 10:55, time; 5:30 pm, baseball; 5:45, markets; 6, bedtime story; 6:30, dinner concert; 7-9, WJZ; 9-10:30, program; 10:30, weather; 10:35, orchestra, Congress Carnival; 11:55, time, weather. Sun, 10:25, time, weather; 1 pm, WJZ; 5:30, reading; 7:30, WJZ; 9:30-10:30, program; 10:30, weather; 10:55, weather, time. Central.

KZIB
Manila, P. I. 249.9m-1200kc. 20 watts. I. Beck, Inc. Daily, 8:30-10:30 pm.

KZM
Oakland, Calif. 245.8m-1220kc. 100 watts. Western Radio Institute (Hotel Oakland). Announcer, Elbert Cowan. Daily ex Sun, 6:30-7:30 pm. Sun, 8-10 pm. Pacific. Founded June 29, 1921.

KZRM
Manila, P. I. 413m-726.1kc. 500 watts. Radio Corp. of Philippines.

KZRQ
Manila, P. I. 400m-750kc. 500 watts. Radio Corporation of the Philippines. Slogan, "Radio Manila."

NAA
Washington, D. C. 434.5m-690kc. 1000 watts. United States Navy Dept. Daily 10:05 am, 3:45 pm, 10:05 pm. Daily ex Sun, Holidays, 11:55-12 n, weather; 9:55-10 pm, time. Fri, 7:45-8 pm, Public Health lectures. Eastern.

WAAD
Cincinnati, Ohio. 267.7m-1120kc. 25 watts. Ohio Mechanics' Institute. Sat, 9:45 pm. Eastern.

WAAF
Chicago, Ill. 389.4m-770kc. 500 watts. Chicago Daily Drovers Journal. Announcer, Carl Ulrich. Daily ex Sun, 8:45 am, 10:50, 11, 12:50 pm. Daily ex Sun, Sat, 4:30, live stock and weather reports. Central. Founded May 22, 1922.

WAAM
Newark, N. J. 348.6m-860kc. 500 watts. I. R. Nelson Company. Announcer, Jack Van Riper. Daily ex Sun, 7-8 am, 11-1:30 pm, 4-6. Mon, Wed, Fri, 7-12:30 am. Tues, Thurs, Sat, 6:30-7:30 pm. Eastern. Experimental call 2XBA 65.18m.

WAAT
Jersey City, N. J. 245.8m-1220kc. 300 watts. Bremer Broadcasting Corp. Announcer, J. B. Bayley. Slogan, "The Voice at the Gate of the Garden State." Daily ex Sun, 10:30 am, housewives' hour; 6 pm, markets; 6:05, dinner music; 6:40, weather; 6:45, sports; 7, time. Mon, Thurs, Sat, 8-11 pm. Tues, 8-9 pm. Sun, 5:30 pm, 6, 7, time; 7:30, quartet; 8, program. Eastern. Founded Nov. 20, 1926.

WAAW
Omaha, Nebr. 499.7m-600kc. 500 watts. Omaha Grain Exchange. Announcer, James Thompson. Slogan, "Pioneer Market Station of the West." Daily ex Sun, 8:30 am, 8:45, 9:15, 9:45, 10:15, 10:45, 11:15, 11:45, 12:15, 1:15, 1:35, 1:40, 8, 8:30. Daily ex Sat, Sun, 1:30-3:30 pm. Daily ex Wed, Sun, 7-9 pm. Founded 1921. Central.

WABC
Richmond Hill, N. Y. 325.9m-920kc. 2500 watts. Atlantic Broadcasting Corp. Mon, Wed, Fri, 7:30-1 pm. Eastern.

WABF
Kingston, Pa. 205.4m-1460kc. 250 watts. Markle Broadcasting Corp. Announcer, E. L. Jones. Slogan, "The Voice of Wyoming Valley. Daily ex Sun, 12-1 pm. Mon, Wed, Fri, 7-9 pm. Sun, 9:30-10:30 am, 10:30-12, 7:30-9. Eastern.

WABI
Bangor, Me. 389.4m-770kc. 100 watts. First Universalist church. Announcer, Prof. W. J. Creamer, Jr. Sun, 10:30 am, 7:30-9 pm. Eastern. Founded 1923.

WABQ
Philadelphia, Pa. 223.7m-1340kc. 500 watts. Keystone Broadcasting Co., Haverford college. Hotel Lorraine. Mon, 6-11:30 pm. Tues, 6-12:30 am. Wed, 12-1 pm, 6-11:30 pm. Thurs, 6-11:30 pm. Fri, 6-12:30 pm. Sat, 6:30-11:30 pm. Sun, 11-12 n, 2-3 pm, 8-11:30. Eastern.

WABW
Wooster, Ohio. 247.8m-1210kc. 50 watts. The College of Wooster, Dept. of Physics. Announcer, A. W. Corcn.

WABY
Philadelphia, Pa. 247.8m-1210kc. 50 watts. John Magaldi, Jr. Slogan, "Quaker City Sleep Dodgers." Club, "The American Broadcasting Club." Sun, 9 pm, music; 10:30, "Sleep Dodgers' Session." Eastern.

WABZ
New Orleans, La. 247.8m-1210kc. 50 watts. The Coliseum Place Baptist church. Announcer, Charles B. Page. Slogan, "The Station with a Message." Sun, 11-12:15 pm, 7:30-9, church service. Central. Founded January, 1924.

WADC
Akron, Ohio. 296.9m-1010kc. 500 watts. Allen Theater Broadcasting Station. Announcer, George F. Honston. Daily ex Sun, 11-12 noon, 5:30-6 pm. Mon, Wed, Fri, 8-11 pm. Tues, 8-11 pm. Thurs, 8-11 pm. Sun, 10:30-11:45 am, 12:30-1:30 pm, 3-5, 9-11 pm. Eastern.

WAFD
Detroit, Mich. 230.6m-1300kc. 100 watts. Albert B. Parfet Co. Announcer, Stanley G. Smith. Slogan, "Gateway to the Great Lakes." Mon, 8-12 mid. Wed, Fri, 8-10 pm. Sat, 12 mid. Sun, 10:30 am; 7:30 pm. Eastern.

WAGM
Royal Oak, Mich. 225.4m-1330kc. 50 watts. Robert L. Miller. Announcer, R. L. Miller. Mon, 8-12:30 am. Wed, Fri, 8-12 mid. Founded Oct. 3, 1925. Central.

WAIT
Taunton, Mass. 214.2m-1400kc. 10 watts. A. H. Waite & Co., Inc. Off the air until October.

WAIU
Columbus, Ohio. 282.8m-1060kc. 5000 watts. American Insurance Union. Announcer, Don Bernard. Daily ex Sun, 10:30 am, 10:55, time, 12-1 pm, music, news, markets, weather. Daily ex Sat, Sun, 2-4 pm, stock, music. Mon, Tues, Wed, Thurs, 6-7 pm. Fri, Sat, 6-7 pm. Mon, Fri, 7-12 mid. Tues, Sat, 10-12 mid. Eastern.

WALK
Willow Grove, Pa. 201.2m-1490kc. 50 watts. Albert A. Walker, portable.

WAMD
St. Paul-Minneapolis, Minn. 225.4m-1330kc. 500 watts. Radisson Radio Corporation. Stanley E. Hubbard. Slogan, "The Call of the North." Daily ex Sun, 10:30 am, musicale; 11, shopping news; 12, weather; 1201 pm, organ; 5, readers' club; 5:30, musical moments; 5:45, news; 5:50, baseball; 5:58, time; 6, What's Doing Tonite; 6:03, fishing reports; 6:05, financial news; 6:15, dinner concert; 7, musicale; 10:45, musicale; Sun, 5:50 pm, baseball; 5:55, What's Doing; 6, dinner concert; 9:45, request program. Central.

WAPI
Auburn, Ala. 325.9m-920kc. 1000 watts. Alabama Polytechnic Institute. Announcer, W. A. Young. Daily ex Sun, 12-1. Tues, Thurs, Fri, 9-10 pm. Installed 1922. Central.

WARS
Brooklyn, N. Y. 227.1m-1320kc. 500 watts. Amateur Radio Specialty Co. Daily ex Sun, 4 pm, 12 mid. Sun, 12:30-3 pm. Eastern.

WASH
Grand Rapid, Mich. 256.3m-1170kc. 250 watts. Baxter Laundries, Inc. Daily ex Sat, Sun, 12:30-1:30 pm, 5:30-6. Thurs, 6-6:30 pm. Daily ex Thurs, Sun, 7-8 pm. Sun, 10-11:30 am, 4-5 pm, 7-8:30. Central. Founded March 13, 1925.

WATT
Boston, Mass. 201.2m-1490kc. 100 watts. Edison Elec. Illuminating Co.

WBAA
W. Lafayette, Ind. 272.6m-1100kc. 500 watts. Purdue university. Announcer, J. W. Stafford. Daily ex Sun, 9:50 am, stocks, markets, weather. Mon, Fri, 7 pm, special program. Central.

WBAK
Harrisburg, Pa. 299.8m-1000kc. 500 watts. Pennsylvania State Police. Announcer, A. E. Poorman. Daily ex Sun, 10:30 am, 1:30 pm, 4, 7, police report, fire protection, farm news. Eastern. Founded 1919.

WBAL
Baltimore, Md. 285.5m-1050kc. 5000 watts. Consolilated Gas, Elec. Light & Power Co. Announcer, Stanley W. Barnett. Slogan, "The Station of Good Music." Daily ex Sun, Sat, 4-5 pm, 6-11 pm. Sun, 6:30-7:30 pm, 7:30-8:15. Eastern. Founded Nov. 2, 1925.

WBAO
Decatur, Ill. 267.7m-1120kc. 100 watts. James Millikin University. University activities. Mon, Wed, 7-8 pm. Central. Founded 1922.

WBAP
Fort Worth, Tex. 499.7m-600kc. 1500 watts. Fort Worth Star-Telegram. Announcer, "The Hired Hand." Daily ex Sun, 9, 10, 11, 12 m, 1 pm, 2, 3, "Port of Missing Men." Mon, Tues, Thurs, Fri, Sat, 12:05-12:30 pm, 6-7 pm, 8-9. Mon, Tues, Fri, 10-12 mid. Mon, 10-12 mid. Sun, 11 am, church; 9:30-11. Central.

WBAR
Sisiht, Wis. 270.1m-1110kc. 500 watts. Kopp Radio Co. Slogan, "The Station of Northern Wisconsin." Mon, 9-10 pm. Wed, 8-9 pm. Thurs, 7:30-8:30. Sun, 10-11 pm. Central.

WBAW
Nashville, Tenn. 247.8m-1210kc. 100 watts. Waldrum Drug Co. Announcer, Harry Stone. Sun, 7:30 pm. Central.

WBAX
Wilkes-Barre, Pa. 249.9m-1200kc. 100 watts. John H. Stenger, Jr. Slogan, "In Wyoming Valley, Home of the Anthracite." Tues, 6:30-11 pm. Thurs, 9-2 am. Sun, 5-9 pm. Eastern. Founded May, 1922.

WBBC
Brooklyn, N. Y. 227.1m-1320kc. 500 watts. Brooklyn Broadcasting Corp. Mon, 11 am, 7-8 pm, 10-12. Tues, 6-7:30 pm, 10:30-12. Wed, 6-7 pm, 10-12. Thurs, 11 am, 7-10 pm. Fri, 6-8 pm, 10-12. Sat, 6-9 pm. Sun, 6-8 pm, 10:30-12 mid. Eastern.

WBBL
Richmond, Va. 247.8m-1210kc. 100 watts. Grace Covenant Presbyterian church. Announcer, W. L. Pierce. Tues, 8 pm. Sun, 11 am, 7:45 pm. Eastern. Founded Feb, 1924.

WBBM
Chicago, Ill. 389.4m-770kc. 5000 watts. Atlass Investment Co. Announcer, Nate Caldwell. Daily ex Sun, Mon, 4 pm, 4:30, 7-11 pm. Thurs, 11-12 mid. Fri, 12-15-1:15 am. Sun, 12:30-2 pm, 4, 8-11 pm. 12-2 am. Founded 1922. Central.

WBBP
Petoskey, Mich. 239.9m-1250kc. 100 watts. Petoskey High School. Announcer, Carl Bowman. Tues, 9-10:30 pm. Fri, 8-9:30 pm. Sun, 10:30 am, church services; 3 pm, sacred concert. Central.

WBBR
Rossville, N. Y. 256.3m-1170kc. 1000 watts. International Bible Students' Association. Mon, Tues, Thurs, Fri, 2-4 pm, 7-9. Wed, 2-4 pm, 6-7. Sun, 10-12 n, 2-4 pm, 7-9. Founded Feb., 1924. Eastern.

WBBW
Norfolk, Va. 236.1m-1270kc. 50 watts. Ruffner Junior High School. Announcer, Lee M. Klinefelter, Slogan, "The School You'd Like to Go To." Mon, 7:30-8:30 pm. Thurs, 8:30-9:30 pm. Eastern.

WBBY
Charleston, S. C. 499.7m-600kc. 75 watts. Washington Light Infantry. Slogan, "Seaport of the Southeast."

WBBZ
Chicago, Ill. 204m-1470kc. 100 watts. C. L. Carrell.

WBCN
Chicago, Ill. 288.3m-1040kc. 250 watts. Great Lakes Broadcasting Co. Daily ex Sun, Mon, 11 am, Mrs. Peterson; 1-2 pm, 5-6, 7-8. Mon, 1-2 pm, 5-6, Sun, 10:30 am, church; 5-6 pm, 7:30-9:30. Central.

WBES
Takoma Park, Md. 265.3m-1130kc. 100 watts. Bliss Elec. School. Announcer, Wm. M. Johnson, Jr. Fri, 6-7 pm. Eastern.

WBET
Boston, Mass. 265.3m-1130kc. 500 watts. Boston Transcript Co. Announcers, Gerard H. Slattery, Wayne H. Latham, Richard D. Grant. Slogan, "The Boston Evening Transcript—New England's Leading Family Daily." Daily 6:30-11 pm. Eastern.

WBIS
Boston, Mass. 265.3m-1130kc. 500 watts. Boston Information Service. Announcer, Nancy Howe. Daily ex Sun, 8-10 am, 2-4 pm. Eastern. Founded Jan. 29, 1927.

WBKN
Brooklyn, N. Y. 267.7m-1120kc. 100 watts. Arthur Faske. Announcers, L. W. Berne, Al. H. DeGuire. Daily Sun, 12-2 pm, 3-5. Mon, Fri, 8-10 pm. Tues, 10-12 mid. Wed, 12 mid. Thurs, 6-8 pm. Sat, 6-8. Eastern. Founded Nov. 22, 1926.

WBMH
Detroit, Mich. 211.1m-1420kc. 100 watts. Braun's Music House.

WBMS
Union City, N. J. 267.7m-1120kc. 100 watts. George Julius Schowerer. Slogan, "The Voice of Union City." Daily ex Sun, 12-1 pm, 5-6:30, 8-12 mid. Sun, 3-6 pm, 8-12 mid. Daily ex Sun, 8:30-12 mid. Sun, 1-3 pm, 7:30-11. Eastern.

WBNY
New York, N. Y. 236.1m-1270kc. 500 watts. B. A. Ruchome Corp. Daily ex Sat, 7-11 pm. Sun, 2:30 pm, 6. Founded 1925. Eastern.

WBOQ
Richmond Hill, N. Y. 325.9m-920kc. 500 watts. Atlantic Broadcasting Co. Tues, Sat, 6:30-10:05 pm. Eastern.

WBRC
Birmingham, Ala. 243.8m-1230kc. 250 watts. Birmingham Broadcasting Co. Announcer, Dud Connolly. Slogan, "The Biggest Little Station in the World." Daily ex Sat, Sun, 1-2 pm. Mon, Tues, Wed, Fri, 8-10 pm. Sun, 10:45 am, service; 6:30 pm, organ; 8, service. Eastern.

WBRE
Wilkes-Barre, Pa. 249.9m-1200kc. 100 watts. Announcer, Louis G. Baltimore. Mon, Fri, 12:30-1:15 pm, 6:30-12. Wed, 12:30-1:15 pm, 6:30-11:30. Sun, 9-12 mid. Eastern.

WBRL
Tilton, N. H. 232.4m-1290kc. 500 watts. Booth Radio Laboratories. Tues, Thurs, Sat, 8 pm, Wed, 8:30 pm. Sun, 10:30 am, 7 pm, services. Eastern.

WBRS
Brooklyn, N. Y. 211.1m-1420kc. 100 watts. North American Broadcasting Corp. Announcer, Edward McMahon. Mon, 8:30-12 mid. 12-2:30 am. Thurs, 8:30-10 pm. Fri, 8:30-12 mid. Eastern.

WBSO
Wellesley Hills, Mass. 384.4m-780kc. 100 watts. Babson's Statistical organization. Announcer, Marshall McCarroll. Daily ex Sun, 4-5 pm, 12-1 am. Eastern. Founded Jan., 1927.

WBT
Charlotte, N. C. 258.5m-1160kc. 500 1000 watts. 7 am-7 pm, C. C. Coddington, Inc. Announcer, H. W. Burwell. Daily ex Sun, 12:30 pm. Mon, 2:20 pm, 6:30, WEAF; 8. Tues, 3:50 pm, baseball. Wed, 3:50 pm, baseball. Thurs, 3:50 pm, 8, 8:30. Fri, 3:50 pm, baseball. 9. Sat, 2:20 pm. Sun, 10:55 am, service; 8 pm, service; 6:20, WRC. Eastern.

WBZ

Springfield, Mass. 333.1m-900kc. 15000 watts. Westinghouse Elec. & Mfg. Co. Announcer, Aidan Redmond. Daily ex Sun, 10:30 am, organ; 10:45, household hints; 11:20, weather; 6:27 pm, baseball; 6, organ; 6:30-10:30, 10:30, baseball, weather. Sun, 2 pm, WJZ; 7:30, baseball, weather; 7:45, music; 10:50, weather. Installed Sept. 19, 1921. Eastern.

WBZA

Boston, Mass. 333.1m-900kc. 500 watts. Westinghouse Elec. & Mfg. Co. Same programs as WBZ.

WCAC

Mansfield, Conn. 535.4m-560kc. 500 watts. Connecticut Agricultural College. Announcer, Daniel E. Noble. Slogan, "From the Nutmeg State." Mon, 7:15-8 pm. Sat, 7:30-8:30 pm. Eastern. Founded June, 1923.

WCAD

Canton, N. Y. 365.6m-820kc. 500-1000 watts. St. Lawrence University. Announcer, Ward C. Priest. Slogan, "The Voice of the North Country." Daily, 12:30 pm, weather, reports, talks, music, time. Wed, 8 pm. Eastern.

WCAE

Pittsburgh, Pa. 516.9m-580kc. 500 watts. Pittsburgh Press. Daily ex Sun, 6:45-8 am, exercise-; 8:15, 9:15, 10:15, 12:15, 2:15 pm, 5:15; 1:30, 3:40 pm, news; 2:30 pm, organ; 6, dinner music; 7, popular music; 5:30, 7:30, Uncle Kay Bee; 8-10. Sun, 6 pm, 7:15-10, WEAF. Eastern.

WCAH

Columbus, Ohio. 234.2m-1280kc. 250 watts. Entrekin Elec. Co. Tues, 8-10:30 pm. Sun, 10:30 am, 12 n, 7:30-9 pm. Every other Sun, 4 pm. Eastern.

WCAJ

University Place, Nebr. 379.5m-790kc. 500 watts. Nebraska Wesleyan University. Announcer, J. C. Jensen. Daily, 10 am, convocation exercises; 4:30 pm, weather, news. Tues, Fri, 12 n, organ. Tues, 7:30 pm, Bible study; Tues, 8 pm, class; 9 pm, musicale. Sun, 11 am, services; 4 pm, vesper. Founded Oct., 1921. Central.

WCAL

Northfield, Minn. 236.1m-1270kc. 500 watts. Dept. of Physics, St. Olaf College. Announcer, Hector Skitter. Slogan, "The College on the Hill." Mon, ex Sun, 9:45 am. Mon, 7 pm; 8:15. Sun, 8:30-9:30 am; 3-4 pm. Central. Founded, 1922.

WCAM

Camden, N. J. 223.7m-1340kc. 500 watts. City of Camden. Announcer, Harry E. Ehrhart. Mon, Wed, Fri, 7:30-10:30 pm. Eastern. Founded Oct. 26, 1926.

WCAO

Baltimore, Md. 384.4m-780kc. 250 watts. Monumental Radio, Inc. Announcer, Wm. L. Atkinson. Mon, Wed, Fri, 6-11 pm. Sun, 11 am, service; 3-5, Columbia; 8, service; 9-11, Columbia chain. Eastern.

WCAT

Rapid City, S. D. 247.8m-1210kc. 100 watts. South Dakota State School of Mines. Announcer, J. O. Kammerman. Daily ex Sun, 9:30 am, 12:30 pm, weather, reports. Thurs, 7:30 pm, concert. Mountain.

WCAU

Philadelphia, Pa. 260.7m-1150kc. 500 watts. Universal Broadcasting Co. Announcer, Stan Lee Broza. Slogan, "Where Cheer Awaits U." Mon, 5:30-11:30 pm. Tues, 5-11:30 pm. Wed, 5:30-12 mid. Thurs, 5:30-12 mid. Fri, 5:30-11 pm. Sat, 6:30-11. Sun, 2-11 pm. Eastern.

WCAX

Burlington, Vt. 254.1m-1180kc. 100 watts. University of Vermont. Slogan, "The Voice of the Green Mountains." Fri, 7-8 pm. Eastern.

WCAZ

Carthage, Ill. 340.7m-880kc. 50 watts. Carthage College. Announcer, Raymond Derks. Daily ex Sun, 11:40-12:15 pm. Mon, Wed, 7-8 pm. Central.

WCBA

Allentown, Pa. 222.1m-1350kc. 100 watts. Queen City Radio station. Wed, 8:15-11 pm. Fri, 7:30-10:30 pm. Sat, 10-11 pm, dance music. Sun, 10 am, 5:30 pm, 7, church service. Eastern.

WCBD

Zion, Ill. 344.6m-870kc. 5000 watts. Wilbur Glenn Voliva. Announcer, J. H. DeVew. Slogan, "Where God Rules, Man Prospers." Tues, Thurs, 8-10:30 pm, concert. Wed, 12:30-1 pm, organ. Thurs, 2:30-3:45 pm, service. Sun, 9-10:45 am, Bible school; 2:30-6 pm, church services; 8-10:30 pm. Founded May, 1923. Central.

WCBE

New Orleans, La. 227.1m-1320kc. 5 watts. Uhalt Brothers Radio Co. Announcer, Joe Uhalt, Slogan, "Second Port U. S. A." Daily ex Sun, 11:30-12:30 pm. Daily, 7:30-8:30 pm, dance. Sun, 12:30-3 pm, dinner concert; 9, dance music. Central.

WCBM

Baltimore, Md. 384.4m-780kc. 100 watts. Hotel Chateau. Announcer, Harry J. Dobe. Mon, Wed, Sat, 10-12 mid. Sun, 6 pm. Eastern. Founded March 25, 1923.

WCBR

Providence, R. I. 201.2m-1490kc. 100 watts. Charles H. Messter. (Portable.)

WCBS

Springfield, Ill. 209.7m-1430kc. 250 watts. Harold L. Dewing, Charles H. Messter. Slogan, "Home of Abraham Lincoln." Mon, 9-11 pm. Tues, Wed, Thurs, Fri, 8:30-10:30 pm. Sun, 10:45-12 n, 12:30-2 pm, 6-7, 7:30-8. Central.

WCCO

Minneapolis-St. Paul, Minn. 405.2m-740kc. 7500. 6 am-6 pm. 5000 watts. Washburn-Crosby Co. Announcer, Paul Johnson. Slogan, "Service to the Northwest." Daily ex Sun, 9:30 am, program for day; 9:35, news; 9:45, weather, markets; 10:30, markets; 11:30, markets; 1:30, weather, markets; 3, markets; 5:45, livestock. Mon, 7:30 U. of Minn.; 8, WEAF; 9, program; 10, weather. Tues, 8 pm, New York; 9:30, musicale; 10, weather. Wed, 7:30, WEAF; 10, weather, grain; organ. Thurs, 7:30 pm, WEAF; 10, weather, markets. Fri, 7, WEAF; 8, music; 9, WEAF; 9:30, music; 10, weather; 10:05, music. Sat, 6:15 pm, music; 7:45, talk; 9, music; 10, weather, dance program. Founded Oct. 1, 1924. Central.

WCDA

Brooklyn, N. Y. 211.1m-1420kc. 250 watts. Italian Educational Broadcasting Co.

WCFL

Chicago, Ill. 483.6m-620kc. 1500 watts. Chicago Federation of Labor. Announcer, Maurice Wetzel. Slogan, "The Voice of Labor." Daily ex Sun, 1:10-2 pm, 4-12 mid. Sun, 11-1 pm, 2:30-6:30, 7:30-9:30. Central.

WCGU

Coney Island, N. Y. 218.8m-1370kc. 500 watts. Charles G. Unger. Daily ex Sun, 1 pm. Wed, Fri, 8 pm. Sun, 11 am. Eastern.

WCLO

Camp Lake, Wis. 227.1m-1320kc. 100 watts. C. E. Whitmore, Announcer, Glenn G. Balcom. Slogan, "The Playground of the Lake Region." Daily ex Tues, Thurs, 11:30 am, 2:30-5:30, 7-12 mid. Founded Aug. 4, 1925. Central.

WCLS

Joliet, Ill. 215.7m-1390kc. 150 watts. M. A. Fleman Co. Slogan, "Will County's Largest Store." Tues, Wed, Thurs, Fri, Sat, 8-11 pm. Sun, 9:30-12 n, 10-11. Central.

WCMA

Culver, Ind. 258.5m-1160kc. 250 watts. Culver Military Academy. Announcer, C. F. McKinney. Daily ex Sun, public service hour. Mon, 8-10:30 pm. Wed, 8-10:30 pm. Fri, 8-10:30 pm. Sun, 11-12:30 pm, chapel service. Founded 1925. Central.

WCOA

Pensacola, Fla. 249.9m-1200kc. 500 watts. Municipal Broadcasting Station. Announcer, John E. Frenkel. Slogan, "Wonderful City of Advantages." Daily ex Sun, 10:30 am, 12:30 pm. Mon, Wed, Fri, 8 pm, Tues, Thurs, Sat, 10-12 mid. Sun, 11 am, 12:30, 7:45 pm. Central.

WCOC

Columbus, Miss. 230.6m-1300kc. 250 watts. Crystal Oil Co. Announcer, Park Balch. Daily 5-6 pm. Tues, Fri, 8-10 pm. Central. Founded Feb. 26, 1927.

WCOT

Olneyville, R. I. 225.4m-1330kc. 50 watts. Jacob Conn. Announcer, Lewis S. Bellem, Jr. Daily and Sun, 2:30-4 pm. Daily ex Sun, 8-10 pm. Eastern.

WCRW

Chicago, Ill. 223.7m-1340kc. 500 watts. Clinton R. White. Announcers, C. R. White, Charles P. Hughes. Slogan, "For Your Entertainment." Daily ex Sun, 11:30-1 pm. Daily ex Mon, 6:30-7:30 pm, 9:30-10:30. Central.

WCSH

Portland, Me. 428.3m-700kc. 500 watts. Congress Square Hotel. Announcer, L. T. Pitman, H. C. Wing. Daily ex Sat, Sun, 9-10 am, housewives' hour; 12-12:30 pm, stocks, weather; 2-3, musicale; 7-8, stocks, sports. Mon, 11:45 am, Civitans' club; 9, WEAF. Tues, 8 pm, Strand theater; 9, WEAF. Wed, 8:30, WEAF; Thurs, 6:30 pm, WEAF. Fri, 7:30 pm, concert; 8, Treasure Hunters. Founded June, 1925. Eastern.

WCSO

Springfield, Ohio. 256.3m-1170kc. 500 watts. Wittenberg College. Announcer, Lester Crowl. Fri, 8-9 pm. Central.

WCWK

Fort Wayne, Ind. 214.2m-1400kc. 250 watts. Chester W. Keen. Slogan, "The Home Sweet Home Station." Fri, 7-8 pm. Sat, 8-10 pm. Sun, 11-12 n, 5-5:30 pm, 5:30-6:30, 6:30-7:30 pm. Founded, 1924. Central.

WCWS

Danbury, Conn. 214.2m-1400kc. 100 watts. Danbury Broadcasting Station. Founded Aug. 2, 1926.

WCX

Pontiac, Mich. 440.9m-680kc. 5000 watts. The Detroit Free Press. Announcer, C. D. Tomy. Club, "Red Apple Club." Daily ex Sun, 4 pm, music, 4:15, news, markets, weather; 5:45, Skeezix time. Eve, blue chain. Tues, 10-2 am, club. Eastern.

WDAD

Nashville, Tenn. 225.4m-1330kc. 1000 watts. Dad's Auto Accessories, Inc. Announcer, F. E. Exum. Slogan, "The Athens of the South." Mon, Wed, Sat, 11:45 am, 12:45, 3-4 pm, 9-10. Tues, Fri, 11:45 am, 12:45, 3-4 pm, 7-9 pm. Sun, 3-4:30 pm, 6:30. Central.

WDAE

Tampa, Fla. 267.7m-1120kc. 500 watts. Tampa Daily Times. Announcer, Bruce Lum. Daily ex Sun, 11:30-1 pm, 4-10. Sun, 11 am-12:30 pm, 7:30-9:30 pm. Eastern. Founded 1921.

WDAF

Kansas City, Mo. 370.2m-810kc. 1000 watts. Kansas City Star. Announcer, H. Dean Fitzer. Club, "Nighthawks." Daily ex Sun, 8:30 am, 9:30, 10:30, 11:30, 12:30, 3:15 pm, grain quotations. Daily ex Sun, 8 am, Bible lesson; 12-1 pm, talks; 3-4, matinee; 6-7, school of the air; 7-10, musicale; 11:45-1, Nighthawk frolic. Sun, 7:15-9:15 pm. Founded June 5, 1922. Central.

WDAG

Amarillo, Tex. 263m-1140kc. 250 watts. J. Laurence Martin. Daily ex Sun, Fri, 12:45-1:45 pm, weather, markets, farm; 9-10:30 pm, music. Fri, 8-9 pm. Sun, 9:45-10:45 am, 7:30-9:30 pm. Central.

WDAH

El Paso, Tex. 234.2m-1280kc. 100 watts. Trinity Methodist church. Announcer, Louis Gemoets. Wed, 7:30-10 pm. Sun, 9:30-12 n, 7:30-9 pm. Founded Spring 1924. Mountain.

WDAY

Fargo, N. D. 361.2m-830kc. 250 watts. Radio Equipment Corporation. Announcer, Kenneth M. Hance. Slogan, "The Biggest Little City in the World." Daily ex Sun, 7-9 am, news, 9, markets; 10, weather, news; 10:15, chapel service; 11, markets; 12, music; 1, 3-4, 5, musicale; 5:45, news; 6, entertainment; Mon, Wed, Thurs, 7:30-8:15 pm. Sun, 10:30 am, service; 2, 4-6. Central. Founded May, 1922.

WDBJ

Roanoke, Va. 230.6m-1300kc. 250 watts. Richardson Wayland Elec. Corp. Announcer, J. W. Johnson. Slogan, "Roanoke Down in Old Virginia." Daily ex Sun, 12-1 pm, music; 5:30-6:45, music, news, weather. Mon, 8-9 pm. Wed, Sat, 9 pm, concert. Sun, 7:45 pm, church. Eastern.

WDBO

Orlando, Fla. 288.3m-1040kc. 500-1000 watts 6 am-6 pm. 500 watts. Orlando Broadcasting Co. Announcer, Harold Danforth. Slogan, "The Voice of Central Florida." Daily ex Sun, 7:30-10:30 pm. Sun, 10:45 am, 4 pm, 7:30. Founded 1921. Eastern.

WDEL

Wilmington, Del. 296.9m-1010kc. 100 watts. Wilmington Elec. Spec. Co. Announcer, Harvey Smith. Slogan, "The First Broadcasting Station of the First City of the First State." Tues, Thurs, Sat, 8-11 pm. Sun, 10-12 mid. Eastern.

WDGY

Minneapolis, Minn. 263m-1140kc. 500 watts. Dr. George Young. Daily 2-5 pm. Mon, Wed, 7-8 pm, 10-12. Tues, 7-12 mid. Thurs, 7-10 pm. Fri, 7-8 pm, 10-12. Sat, 7-8 pm. Sun, 2-6 pm. Central. Founded 1923.

WDOD

Chattanooga, Tenn. 245.8m-1220kc. 500 watts. Chattanooga Radio Co., Inc. Announcer, Frank S. Lane. Daily ex Sun, 12-1:15 pm. Mon, Tues, Wed, Fri, 6:45-10 pm. Sat, 6:45-8:30 pm. Sun, 11 am, 6:30 pm, 7:30-9. Sat, 9-10 pm. Founded 1925. Central.

WDRC

New Haven, Conn. 282.8m-1060kc. 500 watts. Doolittle Radio Corp. Announcer, F. M. Doolittle. Daily ex Sat, Sun, 11-12 mid. 6:45-10 pm. Sun, 11-12:30 pm. Eastern.

WDWF

Cranston, R. I. 260.7m-1150kc. 500 watts. Dutee W. Flint, Inc. Slogan, "Quality First." Eastern.

WDWM

Asbury Park, N. J. 263m-1140kc. 500 watts. Radio Industries Broadcast Co. Announcer, Franklin D. Scott. Daily, 10-12 mid. Eastern. Founded July 1, 1927.

WDZ

Tuscola, Ill. 277.6m-1080kc. 100 watts. James L. Bush. Announcer, G. R. Muir. Daily ex Sun, 9 am, 9:30, 10, 10:30, 11, 11:30, 12 n, 12:30, 1, 1:15, 1:30, 2:45, grain, markets, livestock, markets. Central. Founded Mar. 1921.

WEAF

New York, N. Y. 491.5m-610kc. 50,000 watts. National Broadcasting Co., Inc. Slogan, "The Voice to the Millions." Daily ex Sun, 6:45-8 am, 8-8:45, 11-1:15 pm, 4-12 midnight. Sun, 2-11 pm. Eastern.

WEAM

North Plainfield, N. J. 239.9m-1250kc. 250 watts. Borough of North Plainfield. Announcer, H. W. Blackford. Slogan, "America's Pioneer Municipal Broadcasting Station." Fri, 8-12 pm, concert, talks. Sun, 11-12 noon. Eastern.

WEAN

Providence, R. I. 288.3m-1040kc. 500 watts. The Shepard Stores. Announcer, Chester H. Miller. Slogan, "We Entertain a Nation." Daily ex Sun, 12-1 pm, 4-5, music, reports, weather, concert; 6:30-10:30. Sun, 10:45-11:30 am, 7:30-8:45 pm, church service. Eastern.

WEAO

Columbus, Ohio. 282.8-1060kc. 750 watts. Ohio State University. Announcer, Robert Coleman. Daily ex Sun, 9:45 am, 11, 12:30 pm, 4. Mon, Wed, Fri, 10 am. Tues, 7 pm. Wed, 7-8:30 pm; Thurs, 7-10:30 pm. Eastern.

WEAR

Cleveland, Ohio. 399.8m-750kc. 1000 watts. Willard Storage Battery Co. Daily ex Sun, 11:30 am, markets, time, weather. Daily ex Sun, Sat, 3:30 pm, markets, weather. Eastern.

WEBC

Superior, Wis., Duluth, Minn. 241.8m-1240kc. 250 watts. Head-of-the-Lakes Radio Station. Daily ex Sun, 1:15 pm, markets; 6, orchestra. Mon, 8 pm, music. Wed, 8:30 pm. Fri, 9 pm. Sun, 10:40 am, services. Central.

WEBE

Cambridge, Ohio. 247.8m-1210kc. 10 watts. Roy W. Waller. Fri, 7:45-9:15 pm. Sun, 7-8:30 pm. First Sun in month, 2:30-3:30 pm. Eastern.

WEBH

Chicago, Ill. 365.6m-820kc. 2000 watts. 6 am-7 pm 1000 watts. Edgewater Beach Hotel-Herald-Examiner. Announcer, Robert Baniel. Slogan, "The Voice of the Great Lakes." Daily ex Sun, 3-4 pm, music; 5-5:45, children's club. Daily ex Sun, Mon, 7-8 pm, dinner concert. Tues, 9-11 pm, Uptown theater. Wed, 9-11 pm, musicale; 12-1 am, revue. Thurs, 9-11 pm, musicale. Fri, 9-11 pm. Sat, 10-12 mid. Sun, 6 pm, organ; 7-9, orchestra. Central.

WEBJ

New York, N. Y. 256.3m-1170kc. 500 watts. Third Avenue Railway Co. Announcer, H. A. Bruno. Slogan, "The Red Trolley Station." Wed, 7-11 pm. Fri, 9-11 pm. Eastern.

WEBQ

Harrisburg, Ill. 223.7m-1340kc. 15 watts. Tate Radio Co. Announcer, Dr. H. J. Raley. Slogan, "The Voice from Egypt." Daily ex Sun, 7:15-7:45 pm. Mon, Thurs, 8-10 pm. Sun, 11-12 n, 2-4 pm, 7-8. Central. Founded Sept. 1, 1923.

WEBR

Buffalo, N. Y. 241.8m-1240kc. 200 watts. H. H. Howell. Announcer, Glenn Pickett. Slogan, "We Extend Buffalo's Regards." Daily ex Sun, 7:45-8:30 pm. Mon, Wed, Fri, 8:30-11:30 pm. Sat, 9-11 pm. Sun, 12 n, concert; 8-9 pm, church; 10:15-12 mid, organ. Eastern.

WEBW

Beloit, Wis. 258.5m-1160kc. 500 watts. Beloit College. Announcer, Arthur Weimer. Sun, 4:30 pm. Central.

WEDC

Chicago, Ill. 241.8m-1240kc. 500 watts. Emil Denemark, Broad. Station. Daily, 6-7:30, 9:30-11:30. Daily ex Sun, 6:30-7:30 pm. Jewish hour. Fri, 6:30-7:30 pm. Bohemian hour. Central.

WEEI

Boston, Mass. 461.3m-650kc. 500 watts. Edison Elec. Illuminating Co. Announcer, Arthur F. Edes. Slogan, "The Friendly Voice." Daily ex Sun, 6:45 am, exercises; 7:45, Roaring Lyons. Mon, 4 pm, 5:30, 6:30-10:30, 10:30. Tues, 3 pm, 4, 6:30-10, 10. Wed, 4 pm, 6:30-10, 10. Thurs, 4 pm, 6:30-10:10, 10. Fri, 4 pm, 6:30-10, 10. Sun, 10:05 am, 7, news, 7:20, 9:20. Eastern. Founded Sept. 29, 1924.

WEHS

Evanston, Ill. 215.7m-1390kc. 100 watts. Victor C. Carlson. Daily ex Sun, Mon, 6-9 pm. Wed, Fri, Sat, 10-12 mid. Thurs, 11-12 mid. Sun, 6:30-9 pm. Central.

WEMC

Berrien Springs, Mich. 483.6m-620kc. 100 watts. Emanuel Missionary College. Announcer, Paul N. Pearce. Slogan, "The Radio Lighthouse." Daily ex Sat, Sun, 7:30-9 am. Mon, 7-12 mid. Tues, Thurs, 3-4 pm. Sun, 9-10 am, 11-12. Central. Founded April 1, 1923.

WENR

Chicago, Ill. 288.3m-1040kc. 500 watts. Great Lakes Radio Broadcasting Co. Daily ex Sun, Mon, 11:30 am, Mrs. Peterson, 12-1 pm, concert; 2-5, popular request; 6-7, dinner concert; 8-9:30, classical; 9:30-12 mid. Mon, 12-1 pm, 2-5, 6-7. Sun, 2-4 pm, 6-7, 9:30-11. Founded Sept. 29, 1925. Central.

WEPS

Gloucester, Mass. 296.9m-1010kc. 100 watts. Matheson Radio Co., Inc.

WEVD

Woodhaven, N. Y. 245.8m-1220kc. 500 watts. Debs Memorial Radio Fund.

WEW

St. Louis, Mo. 352.7m-850kc. 1000 watts. St. Louis University. Announcer, G. Dahm. Daily ex Sun, 9 am, 10, 2, 5 pm, reports. Tues, Thurs, 7 pm, lectures, music. Sun, 9:35 am, 11, 2 pm, 7:15. Founded April 26, 1921. Central.

WFAA

Dallas, Tex. 499.7m-600kc. 500 watts. Dallas News and Dallas Journal. Slogan, "Working for All Alike." Daily, 6:30-7:30 am, exercises; 7:30, 8:30, 9:30, 10:30, 11:30, reports; music; 12:30, 1:30, 2:30, 3:30, 4:30, 5:30, reports, news; 7-8, music, silent. Wed, Mon, Tues, Thurs, Fri, Sat, 9-10 pm. Tues, Sat, 10-12 mid. Sun, 1:45 pm, 6-7, 8-9, 11-12. Founded June 26, 1922. Central.

WFAM

St. Cloud, Minn. 252m-1190kc. 10 watts. St. Cloud Daily Times. Off the air temporarily.

WFBC

Knoxville, Tenn. 234.2m-1280kc. 50 watts. First Baptist church. Announcer, St. John Reynolds. Sun, 10:45 am; 7:30 pm, services; 4 pm, sacred music. Central.

WFBE

Cincinnati, O. 245.8m-1220kc. 250 watts. Hotel Garfield. Daily ex Sun, 12-1 pm. Mon, 5:30 pm, 9, 11, 12:30. Tues, 5:30 pm, 8:30, 9, 12:30. Wed, 6-8:30 pm, 9, 10, 11, 12:30. Thurs, 6 pm, 8, 10, 10:30, 11, 12:30. Fri, 5:30 pm, 6:30. Sat, 3-4 pm, 6-8, 9-10, 11, 2:30. Sun, 1-2 pm, 6:30-7:30 pm, 11, 12:30. Central.

WFBG

Altoona, Pa. 280.2m-1070kc. 100 watts. The Wm. F. Gable Co. Announcer, Roy F. Thompson. Slogan, "The Original Gateway to the West." Daily ex Sun, Mon, 11:45 am; 12 n, 3 pm, 6:30, 7:30, 8, 8:30, 10. Sun, 10:45 am, 3:30 pm, 7:30. Eastern. Founded Aug. 28, 1925.

WFBJ

Collegeville, Minn. 272.6m-1100kc. 100 watts. St. John's university. Announcer, Hilary Doerfler. Slogan, "In the Heart of the Landscape Paradise." Wed, 8-9:30 pm. Fri, 4-5 pm. Central.

WFBL

Syracuse, N. Y. 258.5m-1160kc. 750 watts. Onondaga company. Mon, 6:30-7:30 pm, 9-12 mid. Tues, 6:30-10 pm. Wed, Fri, 6:30-11 pm. Thurs, 6:30-12:30 pm. Sat, 6:30-7:30 pm. Sun, 3-7:30 pm, 9-11. Eastern.

WFBM

Indianapolis, Ind. 225.4m-1330kc. 250 watts. Indianapolis Power and Light company. Announcer, Bailey Fesler. Slogan, "The Crossroads of America."

WFBR

Baltimore, Md. 225.4m-1330kc. 100 watts. Fifth Infantry, Maryland National Guard. Slogan, "Home of the Star Spangled Banner." Announcer, S. R. Kennard. Tues, Thurs, Sat, evening programs. Eastern. Founded Oct. 1, 1924.

WFBZ

Galesburg, Ill. 247.8m-1210kc. 50 watts. Knox college. Announcer, George B. Strain. Slogan, "At Old Siwash." Wed, 8-10 pm. Central.

WFCI

Pawtucket, R. I. 225.4m-1330kc. 50 watts. Frank Crook, Inc. Announcer, H. E. Stafford XYZ. Slogan, "The City of Diversified Industries." Mon, Wed, Fri, 8-11 pm. Eastern.

WFDF

Flint, Mich. 272.6m-1100kc. 100 watts. Frank D. Fallain. Slogan, "The Motor City." Mon, Wed, Fri, 8-10:30. Eastern. Founded May 25, 1922.

WFI

Philadelphia, Pa. 405.2m-740kc. 500 watts. Strawbridge & Clothier. Announcer, John Vanderslooot. Daily ex Sun, 10:15 am, 1 pm, 3, 6:20, 7:30 pm. Daily ex Sun, Mon, 7:30 pm. Tues, 8-11:30 pm. Thurs, Sat, 8-11 pm, Sun, 10:20 am, 7:30, 4:30 pm. Eastern. Founded March 18, 1922.

WFIW

Hopkinsville, Ky. 280.2m-1070kc. 500-1000 watts. Acme Mills, Inc. Announcer, Hal Fifer. Mon, Sat, 8-11 pm. Tues, Wed, 8-11 pm. Fri, 8-11 pm. Sun, 9:30-10:30 am, 9-10 pm. Daily ex Sun, 12-1 n, 3-4 pm, 6-7. Central. Founded Feb. 12, 1927.

WFKB

Chicago, Ill. 223.7m-1340kc. 500 watts. Francis K. Bridgman. Off the air temporarily. Founded April 22, 1925.

WFKD

Philadelphia, Pa. 247.8m-1210kc. 50 watts. Foulkrod Radio Eng. Co. Mon, Thurs, 8-11 pm. Eastern.

WFLA

Clearwater, Fla. 288.3m-1040kc. 500 watts. Chamber of Commerce. Announcer, Walter Tison. Daily ex Sun, Sat, 8:30-10:30 pm. Founded, Dec. 25, 1925. Eastern.

WGAL

Lancaster, Pa. 252m-1190kc. 15 watts. Lancaster Elec. Supply & Construction Co. Announcer, Charles W. Feagley. Slogan, "World's Gardens at Lancaster." Tues, Thurs, Sat, 7-10:30 pm. Sun, 11 am. Eastern.

WGBB

Freeport, N. Y. 245.8m-1220kc. 400 watts. Harry H. Carman. Mon, 7-8 pm. Wed, Fri, 7-11 pm. Sun, 10:40-12:30 pm, 4-5:30. Eastern. Founded Dec. 13, 1925.

WGBC

Memphis, Tenn. 277.6m-1080kc. 15 watts. First Baptist church. Announcer, A. L. Cowles. Sun, 9:30 am, 7:30 pm. Central.

WGBF

Evansville, Ind. 236.1m-1270kc. 250 watts. The Fink Furniture Co. Announcers, Harold Finke, H. L. Thompson. Slogan, "The Gateway to the South." Daily ex Sun, 7:15 am, 12:10 pm, markets; 12:15, weather; 12:20, farm talk; 12:30, organ; news. Mon, 7:15. Tues, 1:15 pm, 7, 8. Wed, 2:30 pm. Fri, 1:15 pm, 8:30. Sun, 9 am. Central. Founded Oct., 1923.

WGBI

Scranton, Pa. 230.6m-1300kc. 250 watts. Scranton Broadcasters, Inc. Daily ex Sun, 10-12:30 pm, 6 pm. Sun, 7-10 pm. Eastern.

WGBS

Astoria, N. Y. 348.6m-860kc. 500 watts. Gimbel Brothers. Announcer, Floyd Neale. Daily ex Sun, 10-11 am, 1:30-2:30 pm, 3-4. Mon, Wed, 6-7 pm. Tues, Thurs, Sat, 7:30-11:30 pm. Sun, 8 pm. Eastern.

WGCP

Newark, N. J. 280.2m-1070kc. 500 watts. Paramount Broadcasting & Artists Service, Inc. Announcer, Bradford Browne. Tues, Thurs, 11-12 n, 3-6 pm, 9-12. Mon, Fri, 1-3 pm, 6-9. Wed, 12-3 pm, 6-9. Sat, 9-12 n, 9-12 mid. Sun, 12-6 pm. Eastern.

WGES

Chicago, Ill. 241.8m-1240kc. 500 watts. Guyons Paradise Ballroom. Announcer, George Guhlins. Tues, Thurs, Sat, 6-7:15 pm, 8-1. Wed, Fri, 6-7:15 pm, 10-1. Sun, 10:15-11:30 am, 11:40-1 pm, 2:30-4, 6-7:15, 8-1. Founded Aug., 1920. Central.

WGHP

Mt. Clemens, Mich. 319m-940kc. 750 watts. George Harrison Phelps, Inc. Announcer, Corley W. Kirby. Daily ex Sat, Sun, 10:30 am, 2 pm, 6, 8. Sun, 10:30 am, 3-5 pm, 9-11. Eastern.

WGL

New York, N. Y. 293.9m-1020kc. 500 watts. 1000 watts, 7 am-1 pm. Broadcasting Corp. Daily ex Sun, 10-12 n, 2-4 pm, 6. Mon, Wed, Fri, 9-12 mid. Tues, Thurs, Sat, 6-9 pm. Sun, 7-12 mid. Eastern.

WGM

Jeannette, Pa. 208.2m-1440kc. 50 watts. Verne & Elton Spencer. Announcer, Verne Spencer. Slogan, "Voice from Glass City." Mon, Tues, Thurs, Fri, 7:30-9 pm. Sun, 1:30-4 pm. Eastern.

WGMU

New York, N. Y. 201.2m-1490kc. 100 watts. Atlantic Broadcasting Co.

WGN

Elgin, Ill. 305.9m-980kc. 500 watts. Chicago Tribune. Announcers, Bill Hay, Quin Ryan, Frank Dahm, J. R. Tyson, Tommy Coates. Daily ex Sun, 9-10 am, news; 11-11:30, music; 11:30-11:57, household hints; 11:57-12:01, time;; 12:40-2:55 pm, music; 2:55, baseball; 5-5:57, music; 5:57-6:01, time; 6:01-6:10, stocks and bonds; 6:10-6:35, Punch and Judy; 6:35-6:50, music; 6:50-7, Almanack. Daily ex Sun, Mon, 8-11 pm. Sun, 12-1 pm, Uncle Walt; 1-2, organ; 2-3, music; 3, baseball; 6:10-6:45, Punch and Judy; 6:45-11:25, music. Central.

WGR

Buffalo, N. Y. 302.8m-990kc. 750 watts. Federal Radio Corp. Announcer, Kenneth Fickett. Daily ex Sun, 6:45-8 am. Daily ex Sun, Sat, 12 n, stocks; 1 pm, 2:30-4:30. Tues, Thurs, 8-11 pm. Mon, Wed, Fri, 8-12 mid. Sun, 10:45-12 n, 7:45-9 pm, 9:15-10. Eastern. Founded May 21, 1922.

WGST
Atlanta, Ga. 270.1m-1110kc. 500 watts. Georgia School of Technology. Announcer, Walter W. Merkle. Slogan, "The Southern Technical School with a National Reputation." Founded Jan., 1924.

WGWB
Milwaukee, Wis. 218.8m-1370kc. 500 watts. Radiocast Corp. of Wisconsin. Announcer, John Sullivan. Slogan, "Make Milwaukee Mightier." Daily ex Sun, Sat. 10:30-12:30 pm. Mon. 8-10:30 pm. Wed. 8-9 pm. Fri, 9-10:30 pm. Sun, 10-11 am, 6-7 pm. Central,

WGY
Schenectady, N. Y. 379.5m-790kc. 50,000 watts. General Electric Company. Announcer, Kolin Hager. Slogan, "Good Evening to You All." Daily ex Sun, 6:45-8 am, exercises; 8:30, talk; 11:55, time; 12:01 pm, weather; 12:02, produce; 12:06, weather; 2 pm, music; 2:30, orchestra; 5, stocks; 6:30, orchestra. Tues, 6:30-10:30 pm. Wed, 6:30-11 pm. Thurs, 6:30-12:30 am. Fri, 6:30-11:30 pm. Sat, 6:30-12 mid. Sun, 10 am, 4-6:30 pm, 7:20, WEAF; 8:15, time; 8:15, WEAF; 8:45, WEAF. Sun, 2XAD, 22.02m. Eastern. Founded, 1922.

WHA
Madison, Wis. 302.8m-990kc. 750 watts. Univ. of Wis. Mon, Wed, Fri, 7:30-9:30 pm. Central.

WHAD
Milwaukee, Wis. 270.1m-1110kc. 500 watts. Marquette University.

WHAM
Rochester, N. Y. 277.6m-1080kc. 5000 watts. Stromberg-Carlson Tel. Mfg. Co. Announcer, E. E. Chappell. Daily ex Sun, 6:30-11 pm. Tues, 2:30-4 pm. Sun, 10:30-12 n., 3:30-5, 6:30-11. Eastern.

WHAP
New York, N. Y. 236.1m-1270kc. 1000 watts. Defenders of Truth Society, Inc. Mon, Thurs, 6-9 pm. Wed, 9-11:30 pm. Sat, 7-11:30 pm. Sun, 7:30-9:30 pm. Eastern. Founded May, 1925.

WHAR
Atlantic City, N. J. 272.6m-1100kc. 1000 watts. Seaside Hotel. Announcer, E. Dennison. Pioneer Broadcasting Station of Atlantic City. Daily ex Sun, Wed, 2:15-3:15 pm, 7:45-9. Sun, 10:45 am, 2:15-3:10 pm, 7:30-9. Founded, 1922. Eastern.

WHAS
Louisville, Ky. 461.3m-650kc. 500 watts. Courier-Journal and Louisville Times Co. Announcer, D. H. Ives. Daily ex Sun, 3-5 pm, 7-9 pm. Sun, 10 am, service; 2-3, 4:30-5:30, 6:20-8:15, 8:15-9:15. Founded July, 1922. Central.

WHAZ
Troy, N. Y. 545.1m-550kc. 500 watts. Rensselaer Polytechnic Inst. Announcer, Rutherford Hayner. Slogan, "Transcontinental and International Broadcasting Station Located at the Oldest College of Science and Engineering in America." Club, R. P. I. students. Mon, 8-12 midnight, concert, educational talks, orchestra, features. Founded June 22. Eastern.

WHB
Kansas City, Mo. 336.9m-890kc. 500 watts. Sweeney Auto & Electrical School. Announcer, John T. Schilling. Slogan, "Heart of America." Daily ex Sun, 8:25 am, 9:25, 10:25, 10:30, 11:20, 11:30, 11:56, market reports; 2-3, ladies' hour. Daily ex Sun, Sat, 12:15 pm, 12:30, 1:25, 1:40, stocks. Daily, 7-8 pm. Mon, 8-9 pm, Tues, Thurs, 8-10 pm. Sat, 12:05 pm, 12:30, 1:25, markets, 8-10 pm. Sun, 9:45-10:45 am, service; 7-7:45; 11:15-1 am, organ. Central. Founded April, 1922.

WHBA
Oil City, Pa. 260.7m-1150kc. 10 watts, Shaffer Music House. Tues, 9-10 pm. Eastern. Founded Nov., 1924.

WHBC
Canton, Ohio. 236.1m-1270kc. 10 watts. Rev. E. P. Graham. Slogan, "Ignorance Is Our Greatest Foe." Mon, 8-8:30 pm. Central.

WHBD
Bellefontaine, Ohio. 222.1m-1350kc. 100 watts. Chamber of Commerce.

WHBF
Rock Island, Ill. 222.1m-1350kc. 100 watts. Beardsley Specialty company. Announcer, C. L. Beardsley. Slogan, "Where Historic Blackhawk Fought." Daily ex Sun, 12-2 pm. Mon, Wed, 9-11 pm. Sat, 2-4 pm, 7-9. Central. Founded Feb. 1925.

WHBL
Chicago, Ill. 204m-1470kc. 100 watts. C. L. Carroll. (Portable.) Founded, 1925.

WHBM
Chicago, Ill. 201.2m-1490kc. 100 watts. C. L. Carroll. (Portable.)

WHBN
Gainesville, Fla. 296.9m-1010kc, 10000 watts. U. of Florida.

WHBP
Johnstown, Pa. 228.9m-1310kc. 250-500 watts. Johnstown Automobile Co. Announcer, J. C. Tully. Slogan: "The Voice of the Friendly City." Daily ex Sun, 1:15 pm. Mon, 11 pm. Thurs, 10 pm. Sat, 10 pm. Eastern.

WHBQ
Memphis, Tenn. 232.4m-1290kc. 100 watts. Broadcasting Station WHBQ, Inc. Announcer, Thomas Thompson. Daily ex Sun, 7-8 pm. Sun, 10:45 am. Central. Founded March, 1925.

WHBU
Anderson, Ind. 220.4m-1360kc. 15 watts. Citizen's Bank.

WHBW
Philadelphia, Pa. 220.4m-1360kc. 50 watts. D. R. Kienzle. Mon, Wed, Sat, Sun, evenings.

WHBY
West De Pere, Wis. 249.9m-1200kc. 50 watts. St. Norbert's College. Green Bay-De Pere Broadcasting Station. Daily, 6 pm, weather, markets. Wed, Fri, Sat, Sun, 5-6 pm. Mon, Fri, 8-10 pm. Central. Founded Jan., 1925.

WHDI
Minneapolis, Minn. 245.8m-1220kc. 500 watts. Wm. Hood Dunwoody Industrial Institute. Announcer, M. R. Bass. Slogan, "Northwest Leading Trade School." Mon, 8-9 pm. Wed, 8:30 pm. Fri, 9-10 pm. Daily ex Sun, 6:57-9:30 am, time. Central. Founded May 22, 1922.

WHEC
Rochester, N. Y. 254.1m-1180kc. 500 watts. Hickson Electric company, Inc. Slogan, "The Magazine of the Air." Announcer, Edward H. Tryan. Daily ex Sun, 12-3 pm, 6:30-10. Sun, 10:30-12 n, 7:30-10 pm. Eastern,

WHFC
Chicago, Ill. 215.7m-1390kc. 200 watts. Woodson & Wilson, Inc. Daily ex Mon, 8-12 mid. Central daylight.

WHK
Cleveland, Ohio. 265.3m-1130kc. 500 watts. 1,000 watts 6 am-6 pm. Radio Air Service Corp. Slogan, "Cleveland Pioneer Broadcasting Station." Daily, 12 n., 10-1 pm, music; 3:30, housekeepers' chat; 5:30, 9, 10, 11-12. Sat, 12 n, 6, 8-9, 9-12 mid. Sun, 10 am, 5 pm, 5:15, 6, 7:30, 8:15-9:30. Eastern.

WHN
New York, N. Y. 394.5m-760kc. 500 watts. Loew's State Broadcasting Station. Announcers, N. T. G., Edward B. Husing. Slogan, "The Voice of the Great White Way." Daily ex Sun, 12:30-1 pm, 2:15-3:15, 3:45-5:30, 6:30-12 mid. Sun, 12:30-6 pm; 9:30-12. Eastern. Founded March, 1922.

WHO
Des Moines, Ia. 535.4m-560kc. 5000 watts. Bankers Life Co. Announcer, N. Dean Cole. Daily ex Sun, 8-9 am, 10, 10:30-12 n., 12:15-1:15, 2:15-4:30, 6:30-12. Sun, 11 am, 2:5 pm, 6:30-9:30. Central. Founded 1924.

WHPP
New York, N. Y. 206.8m-1450kc. 10 watts. WHPP, Inc.

WHT
Deerfield, Ill. 416.4m-720kc. 5000 watts. Radiophone Broadcasting Corp. Announcer, Pat Barnes. Slogan, "Write Home Tonight." Daily ex Mon, 10-2:30 pm, 7-10. Tues, Thurs, 11-1 am. Mon, 10-2.30 pm. Sun, 10 am, 11, 12, 1, 7 pm. 7:30, 10. Central. Founded April 25, 1925.

WIAD
Philadelphia, Pa. 288.3m-1040kc. 100 watts. Howard R. Miller. Slogan, "The Voice from the Birthplace of Liberty." Tues, Thurs, Fri, 6-12 mid. Eastern. Founded June, 1922.

WIAS
Burlington, Ia. 322.4m-930kc. 100 watts. Home Electric Co. Announcer, Frank B. Orf. Wed, 8 pm. Mon, Fri, 8 pm. Sat, 10:30 pm. Sun, 10:30 am. Central.

WIBA
Madison, Wis. 239.9m-1250kc. 100 watts. The Capital Times Strand theater. Announcer, Kenneth F. Schmitt. Slogan, "Four Lakes City." Mon, 7-11 pm. Wed, 8-10 pm. Fri, 6:15-7 pm. Sat, 7-8 pm. Sun, 12-1 pm. Central. Founded June, 1924.

WIBG
Elkins Park, Pa. 440.9m-680kc. 50 watts. St. Paul's Protestant Episcopal church. Announcer, W. Le Roy Auspach. Sun, 10:55 am, 3:55 pm. Eastern. Founded 1925.

WIBI
Port Washington, N. Y. 267.7m-1120kc. 100 watts. Frederick B. Zittell, Jr. Founded Sept. 15, 1925.

WIBJ
Chicago, Ill. 201.2m-1490kc. 100 watts. C. L. Carroll. (Portable.)

WIBM
Chicago, Ill. 201.2m-1490kc. 100 watts. C. L. Carroll. (Portable.)

WIBO
Chicago, Ill. 416.4m-720kc. 5000 watts. Nelson Brothers Bond and Mtg. Co. Announcer, Walter Preston. Daily ex Sun, 2:30-7 pm. Tues, Thurs, 10-11 pm. Wed, Fri, Sat, Sun, 10-1 am. Sun, 8:45-10 am. Central. Founded May 20, 1925.

WIBR
Steubenville, Ohio. 249.9m-1200kc. 50 watts. Thurman A. Owings. Announcer, Robert Merryman. Slogan, "Where Investments Bring Results." Daily ex Sun, 6:30-7:30 pm. Wed, 11:15-12:45 am. Mon, Fri, 8:30-10 pm. Sun, 4-5 pm. Founded Jan., 1925. Eastern.

WIBS
Elizabeth, N. J. 204m-1470kc. 150 watts. New Jersey National Guard.

WIBU
Poynette, Wis. 217.3m-1380kc. 20 watts. The Electric Farm. Wisconsin State Journal. Mon, 9 pm. Sun, 2 pm, 4. Central. Founded July 10, 1925.

WIBW
Portable. 204m-1470kc. 100 watts. C. L. Carroll. (Portable) Chicago. Founded 1926.

WIBX
Utica, N. Y. 238m-1260kc. 150 watts. WIBX Inc. Daily ex Sun, Sat, 10:30-11 am, stocks, markets, news; 12-1, music. Mon, Tues, Thurs, Fri, 6-11 pm. Sun, 11-1 pm. Eastern.

WIBZ
Montgomery, Ala. 230.6m-1300kc. 15 watts. A. D. Trum.

WICC
Sport Hill, Conn. 214.2m-1400kc. 250 watts. The Bridgeport Broadcasting Station. Announcer, Charles W. Selen. Slogan, "The Industrial Capitol of Connecticut." Mon, Tues, Thurs, Fri, 8-10 pm. Sun, 9:50 am. Eastern. Founded Aug. 2, 1926.

WIL
St. Louis, Mo. 258.5m-1160kc. 250 watts. Benson Broadcasting Co. Announcer, Billy Knight. Daily and Sun, 9:30-11:30 am, 2:45-5 pm. Daily ex Thurs, 8-11 pm. Central. Founded Sept., 1922.

WIOD
Miami Beach, Fla. 247.8m-1210kc. 1000 watts. Carl G. Fisher. Announcer, Jesse H. Jay. Slogan, "Wonderful Isle of Dreams."

WIP
Philadelphia, Pa. 508.2m-590kc. 500 watts. Gimbel Bros. Announcer, E. A. Davies. Slogan, "Watch Its Progress." Daily ex Sun, 1-2 pm, 3-4:30, 6-7:30. Tues, Thurs, Sat, 10-10:30 am. Tues, Thurs, Sat, 8-12 mid. Sun, 10:45-12 n, 9-12 mid, alternate Sundays, 7:15-12 mid. Eastern.

WJAD
Waco, Tex. 333.1m-670kc. 500 watts. Hotel Raleigh. Mon, Tues, Thurs, 6:30-7:30 pm. Mon, Tues, Thurs, Fri, 8:30-10 pm. 1st and 3rd Wed. 8:30-9:30 pm. Central.

WJAG
Norfolk, Nebr. 285.5m-1050kc. 250-500 watts. Norfolk Daily News. Announcer, Karl Stefan. Slogan, "The World's Greatest Country Daily, and Home of Printer's Devil." Daily ex Sun, 12:15 pm; Wed, Sat, 6:30-7:30 pm, orchestra. Sun, 3 pm. Central.

WJAK
Kokomo, Ind. 234.2m-1280kc. 50 watts. Kokomo Tribune. Daily ex Sun, 11:45 am, chapel. Mon, 7:30 pm, music. Tues, Wed, Thurs, 5:30 pm, concert. Founded Sept., 1921, Central.

WJAM
Cedar Rapids, Iowa. 239.9m-1250kc. 250 watts. Midwest Broadcasting Service. Daily ex Sun, 9 am, 9:40, 12:30, 1:20, markets. Mon, Wed, Fri, 7-9 pm. Tues, Thurs, Sat, 9-11 pm. Central. Founded July 29, 1922.

WJAR
Providence, R. I. 374.8m-800kc. 500 watts. The Outlet Co. Announcer, J. A. Reilly. Slogan, "The Southern Gateway of New England." Daily ex Sun, 1:05-2 pm, weather, reports, music. Mon, Wed, Fri, 10 am, household hints. Mon, Wed, 7:30-10:30 pm. Tues, 8-10:30 pm. Thurs, 7:30-10:30 pm. Fri, 8-10:30 pm. Sat, 8-9 pm. Sun, 7:20-10:15 pm. Eastern.

WJAS
Pittsburgh, Pa. 270.1m-1110kc. 500 watts. Pittsburgh Radio Supply House. Pickering's Studio. Announcer, Howdy Clark. Slogan, "World's Jolliest Aerial Station." Daily ex Sun, 10:30 am-2 pm, 9-11. Tues, Thurs, Sat, 10:30 am-2 pm, 8-11. Sun, 11 am-2 pm, 3-4, 9-10. Eastern.

WJAX
Jacksonville, Fla. 336.9m-890kc. 1000 watts. City of Jacksonville. Daily ex Sun, 11:55-12:05 pm. Daily ex Sun, Thurs, 7:30-11 pm. Sun, 11 am, 6:30-7:30 pm, 8-9, 10-11. Eastern. Founded Nov. 26, 1925.

WJAY
Cleveland, Ohio. 227.1m-1320kc. 500 watts. Cleveland Radio Broadcasting Corp. Announcer, Johnny Mack. Slogan, "On the Hollenden." Daily ex Sun, 10 am, 12, organ; 1, 6-12 mid. Sun, 12:10-30 am, services; 6:30 pm, 7, 11 pm, 11, time. Central.

WJAZ
Mt. Prospect, Ill. 263m-1140kc. 5000 watts. Zenith Radio Corp. Announcer, George G. Smith. Daily ex Sun, Mon, Thurs, 7-8 pm, 9-11. Thurs, 9-12 mid. Sun, 7-9 pm. Founded 1922. Central.

WJBA
Joliet, Ill. 322.4m-930kc. 50 watts. D. H. Lentz, Jr. Tues, Thurs, Fri, Sat, 7-12 mid. Central.

WJBB
Tampa, Fla. 344.6m-870kc. 250 watts. Financial Journal.

WJBC
La Salle, Ill. 227.1m-1320kc. 100 watts. Hummer Furniture Co. Announcer, LeRoy Stremlau. Slogan, "Better Home Station." Daily ex Sun, 12:30-1:30 pm. Mon, 8-10 pm. Sat, 4-5 pm. Sun, 10-11:30 am, 3:30-4:45 pm, 7:30-9:30 pm. Founded May 4, 1925. Central.

WJBI
Red Bank, N. J. 263m-1140kc. 150 watts. Robert S. Johnson.

WJBK
Ypsilanti, Mich. 220.4m-1360kc. 15 watts. Ernest Goodwin. Announcer, H. T. Augustus. Mon, 9-11 pm. Thurs, 10-12 mid. Sat, 11-12 mid. Eastern.

WJBL
Decatur, Ill. 212.6m-1410kc. 250 watts. William Gushard Dry Goods Co. Announcer, W. H. Wiley. Mon, 9-10:30 pm. Wed, 9-11 pm. Sat, 9-11:30 pm. Sun, 10:45-12:15 pm. Central. Founded Sept. 24, 1925.

WJBO
New Orleans, La. 263m-1140kc. 100 watts. Valdemar Jensen. Founded 1922.

WJBR
Omro, Wis. 227.1m-1320kc. 100 watts. Gensch and Stearns. Announcer, C. W. Stearns. Slogan, "The Center of the State of Lakes." Mon, Thurs, 8-10:30 pm. Sun, 2:30-4 pm, 8-10:30. Central. Founded Feb. 10, 1926.

WJBT
Chicago, Ill. 389.4m-770kc. 500 watts. John S. Boyd. Announcer, Bobbie Griffin. Daily 11-11:30 am, 5-7 pm, 11-12 mid. Sun, 10-12:30 pm, 2-12 mid. Central.

WJBU
Lewisburg, Pa. 214.2m-1400kc. 100 watts. Bucknell university. Announcer, Geo. A. Irland. Slogan, "In the Heart of the Keystone State." Thurs, 8 pm. Eastern.

WJBW
New Orleans, La. 238m-1260kc. 30 watts. C. Carlson, Jr. Tues, Fri, 7-8 pm. Sun, 9-10 pm. Central.

WJBY
Gadsden, Ala. 234.2m-1280kc. 50 watts. Electric Construction Co. Mon, Wed, Fri, 8-9 p.m. Central. Founded Aug, 11, 1926.

WJBZ
Chicago Heights, Ill. 208.2m-1440kc. 100 watts. Roland G. Palmer. Anthony Coppotelli. Mon, Wed, Fri, 7-12 mid. Central.

WJJD
Mooseheart, Ill. 365.6m-820kc. 1000 watts. Loyal Order of Moose station. Palmer House, Herald Examiner. Announcer, Gene Rouse. Slogan, "The Call of the Moose." Daily ex Sun, 10 am, news; 10:30, organ; 11-12 n., Prudence Penny; 12, music; 4 pm, piano reveries; 4:45, Palmer house soloists; 5:45, music; 6, symphony; 6:15, talk. Daily ex Sun, Mon, 8 pm. Tues, Fri, 11-1 am. Wed, Thurs, 11-12 mid. Sat, 9-10 pm, 12-2 am. Sun, 7:30-10:30 am, services; 1:30-2 pm, funnies; 2-4, Bible classes; 9, studio program; 10, news. Central.

WJKS
Gary, Ind. 232.4m-1290kc. 500 watts. Johnson Kennedy Radio Corp.

WJPW
Ashtabula, Ohio. 208.2m-1440kc. 30 watts. J. P. Wilson. Mon, Wed, Fri. 7:45 pm, 8:30-11. Sun, 10:30-12 n, 7:30-8:30. Central.

WJR
Pontiac, Mich. 440.9m-680kc. 5000 watts. 8xA. O. 32 m. The Richards-Oakland Co. Slogan, "The Good Will Station." Announcers, Leo Fitzpatrick, John F. Patt. Daily ex Sun, 12:45-2 pm, 6-12 mid. Mon, Wed, Fri, 10 am, 11. Sun, 10 am, service; 2-4 pm, service; 6-10:30 pm. Eastern. Founded August, 1925.

WJZ
Bound Brook, N. J. 454.3m-660kc. 30,000 watts. R. C. A. Managed by National Broadcasting Co. Announcers, Milton J. Cross, Marley Sherris, Norman Sweetser, Curt Peterson. Daily 1-2:40 pm, 4:30-6, 6:50-11:30 pm. Mon, 11:30-12 mid. Wed, 6:30-7. Sun, 9-10 am; 1-3 pm, 5:30-6:50, 7-10:30. Founded 1921. Eastern.

WKAQ
San Juan, Porto Rico. 340.7m-880kc. 500 watts. Radio Corporation of Porto Rico. Announcer, Joaquin Agusty. Slogan, "The Island of Enchantment, Where the World's Best Coffee Grows." Wed, 8-10 pm. Intercolonial.

WKAR
East Lansing, Mich. 285.5m-1050kc. 500-1000 watts. Michigan State College. Announcer, Keith Himebaugh. Daily ex Sun, 12-12:30 pm, weather, markets, agricultural topics. Eastern.

WKAV
Laconia, N. H. 223.7m-1340kc. 50 watts. Laconia Radio club. Fri, 7:30 pm. Sun, 10:45 am; 6:30-8:15. Eastern. Founded Oct. 1, 1922.

WKBB
Joliet, Ill. 215.7m-1390kc. 150 watts. Sanders Brothers. Mon, 7-9 pm. Tues, Thurs, 8-12 mid. Mon, 8-10 pm. Sun, 3-5 pm. Central.

WKBC
Birmingham, Ala. 218.8m-1370kc. 10 watts. H. L. Ansley. Tues, Thurs, Sat, 7:30-8 pm. Eastern.

WKBE
Webster, Mass. 228.9m-1310kc. 100 watts. K. & B. Electric Co. Thurs, Sat, 8-10:30 pm. Eastern daylight. Founded Feb. 27, 1925.

WKBF
Indianapolis, Ind. 252m-1190kc. 500 watts. Noble B. Watson. Daily ex Sun, 10 am, 10:30, 10:40, 5 pm, 7, 7:10. Daily ex Sun, Mon, Sat, 12 n. Mon, 7:30 pm, 8:30, 9. Tues, 8:30-10:30 pm. Thurs, 7:30-10 pm. Fri, 7:30, 8-9:30 pm. Sun, 2:30 pm, 7:30. Founded Oct., 1925. Central.

WKBG
Chicago, Ill. 201.2m-1490kc. 100 watts. C. L. Carroll. (Portable.)

WKBH
LaCrosse, Wis. 220.4m-1360kc. 500 watts. Callaway Music Co. Daily ex Sun, 10 am, Aunt Sammy; 12 n., weather, U. S. Farm talks. Mon, 8:30 pm. Wed, 9 pm. Fri, 9 pm. Sat, 10 pm. Sun, 10:30 am. Central. Founded 1924.

WKBI
Chicago, Ill. 322.4m-930kc. 50 watts. Fred L. Schoenwolf. Fri, Sat, Sun, 10-12 mid. Central.

WKBL
Monroe, Mich. 205.4m-1460kc. 15 watts. Monroe Radio Mfg. Co.

WKBN
Youngstown, Ohio. 214.2m-1400kc. 50 watts. Radio Electric Service Co. Daily ex Sun, 7:30 am, exercises. Tues, 5:45 pm. Thurs, 6 pm. Eastern.

WKBO
Jersey City, N. Y. 218.8m-1370kc. 500 watts. Camith Corp. Daily ex Sun, 12-1 pm. Mon, 6-9 pm. Tues, 5-8 pm. Wed, 1-2 pm. Thurs, 6-8 pm. Fri, 9-12 mid. Sat, 1-3 pm. Eastern.

WKBP
Battle Creek, Mich. 212.6m-1410kc. 50 watts. Battle Creek Enquirer and News.

WKBQ
New York, N. Y. 218.8m-1370kc. 500 watts. Standard Cahill Co., Inc. Announcer, Allan Cahill. Wed, 9-12 mid. Tues, 10-11 am, 3-5 pm. Wed, 8-12 mid. Thurs, 1-3 pm, 8-12 mid. Fri, 11-12 n., 3-6 pm. Sat, 3-7 pm. Founded Sept. 1926.

WKBS
Galesburg, Ill. 217.3m-1380kc. 100 watts. Permil N. Nelson. Announcer, Paul W. Palmquist. Slogan, "The Mayflower Station in the Renowned City of Colleges." Mon, Wed, Fri, 10-11 am, 12:30-1 pm, 2:30-3:30, 7-11. Tues, Thurs, 10-11 am, 12:30-1 pm, 2:30-3:30, 7-9, 10-11. Sat, 7-9 pm, 10-11. Sun, 1:30-3 pm. Central. Founded Oct. 1926.

WKBT
New Orleans, La. 252m-1190kc. 50 watts. First Baptist church. Announcer, W. H. Green. Slogan, "The Gospel Wave." Sun, 11 am, 7:45 pm, service. Central.

WKBV
Brookville, Ind. 217.3m-1380kc. 100 watts. Knox Battery & Electric Co., Fri. 7-9 pm. Sun, 7-9 pm. Central.

WKBW
Buffalo, N. Y. 217.3m-1380kc. 500-750 watts. Churchill Evangelistic Assn., Inc. Daily ex Sun, 7:30 pm. Sun, 9:30 am, 3 pm, 7-9, 10-12 mid. Eastern.

WKBZ
Ludington, Mich. 199.9m-1500kc. 15 watts. Karl L. Ashbacker. Mon, 8-10 pm. Sun, 10:30-12 n, 7-8:30 pm. Central.

WKDR
Kenosha, Wis. 322.4m-930kc. 15 watts. Edward A. Dato.

WKEN
Kenmore, N. Y. 204m-1470kc. 250 watts. WKEN Inc. Daily ex Sun, 6 pm. Mon, 8-10 pm. Tues, 7:45-10 pm. Thurs, 8-11 pm. Sun, 11 am, 7:30. Eastern. Founded Fall, 1925.

WKJC
Lancaster, Pa. 252m-1190kc. 50 watts. Kirk Johnson & Co. Mon, Wed, Fri, 6-10 pm, Wed, 11-12 mid. Sun, 11-12 n, 7:30-8:30. Eastern.

WKRC
Cincinnati, Ohio. 245.8m-1220kc. 250 watts. Kodel Radio Corp. Mon, Wed, 6-8 pm, 9-11, 12-2. Tues, 6-7 pm, 9-12 mid. Thurs, 8-10 pm. Fri, 9-11 pm. Sat, 6-7 pm, 9-12. Sun, 11-12 n; 3-5 pm, 7-8, 9-11, 11:30-1. Eastern.

WKY
Oklahoma City, Okla. 288.3m-1040kc. 150 watts. WKY Radiophone Co. Daily 10-11 am, 6-7:30 pm. Mon, Wed, Fri, 9-11 pm. Central.

WLAC
Nashville, Tenn. 225.4m-1330kc. 1000 watts. Life and Casualty. Mon, Wed, Sat, 7-9. Wed, 1:30-2 pm; Thurs, 6-7 pm. Tues, Thurs, 6-7 pm, 9-11. Sun, 6:30-7:30 pm, 9:15-10:15 pm. Central. Opened Nov. 24, 1926.

WLAP
Louisville, Ky. 267.7m-1120kc. 30 watts. 100 watts 6 am-6 pm. Virginia av. Baptist Church. Sun, 11 am, 8-9:15 pm. Central.

WLB
Minneapolis, Minn. 245.8m-1220kc. 500 watts. U. of Minnesota. Tues, 4-5 pm, Wed. 6:15-7 pm, Fri, 4-5 pm. Central.

WLBC
Muncie, Ind. 209.7m-1430kc. 50 watts. D. A. Burton. Wed, 8-12 mid. Thurs, 9-12 mid. Fri, 8-11 pm, Sat, 7-11 pm, Sun, 2-4 pm. Central.

WLBF
Kansas City, Mo. 209.7m-1430kc. 50 watts. Everett L. Dillard. Slogan, "Where Listeners Become Friends." Daily ex Sun, 9-12 n, 2-4 pm, 7-10:30. Central. Founded Nov. 13, 1926.

WLBG
Petersburg, Va. 214.2m-1400kc. 100 watts. R. A. Gamble.

WLBH
Farmingdale, N. Y. 232.4m-1290kc. 30 watts. Jos. J. Lombardi, Announcer, H. J. Martin. Mon, Wed, Fri. 7:30-11 pm, Eastern.

WLBI
Wenona, Ill. 238m-1260kc. 250 watts. Wenona Legion Broadcasters, Inc. Mon, 7-12 mid. Wed, Fri. 7-9 pm. Sun, 9 am. Central.

WLBL
Stevens, Point, Wis. 302.8m-990kc. 1000 watts. Wisconsin Dept. of Markets. Slogan, "Wisconsin, Land of Beautiful Lakes." Daily ex Sun, 8 am, 9-10, 11-12 n, weather, markets; 1 pm, news. Thurs, Sat, 8-10 pm. Central.

WLBM
Cambridge, Mass. 230.6m-1300kc, 50 watts. Browning Drake Corporation.

WLBN
Chicago, Ill. 204m-1470kc. 100 watts. William Evert Hiler (Portable). Daily ex Sun, 12-1 pm, 5-7, 9-11. Central.

WLBO
Galesburg, Ill. 217.3m-1380kc. 100 watts. Frederick A. Trebbe, Jr. Tues, Thurs, Sat, 9-10 pm. Central. Founded Jan. 16, 1927.

WLBQ
Atwood, Ill. 202.6m-1480kc. 25 watts. E. Dale Trout.

WLBR
Belvidere, Ill. 322.4m-930kc. 15 watts. Alford Radio Co. Mon, 7-8:30 pm, Fri, 7:30-8:30 pm. Sat, 11-1 am, Sun, 11-12 mid. Central.

WLBT
Crown Point, Ind. 322.4m-930kc. 50 watts. Harold Wendell.

WLBV
Mansfield, Ohio. 206.8m-1450kc. 50 watts. Mansfield Broadcasting Association. Announcer, Ray Davis. Mon, 6-7 pm, 9-11 pm. Wed, 9-11 pm. Sat, 9:30-12 mid. Sun, 10:30-12 n. Central.

WLBW
Oil City, Pa. 293.9m-1020kc. 500 watts. Petroleum Telephone Co. Mon, 9:30-11 pm. Thurs, 10-11:30 pm. Sun, 3:30-5 pm, Eastern.

WLBX
Long Island, N. Y. 204m-1470kc. 250 watts. John N. Brahy.

WLBY
Iron Mountain, Mich. 209.7m-1430kc. 50 watts. Aimone Electric. Daily and Sun, 12-1 pm. Central.

WLBZ
Foxcroft, Me. 208.2m-1440kc. 250 watts. Thompson L. Guernsey. Irregular schedule.

WLCI
Ithaca, N. Y. 247.8m-1210kc. 50 watts, Lutheran Assn. of Ithaca. Announcer, Robert F. Schuetz. Slogan, "The Church at the Gate of the Campus." Sun, 10:45 am, 7:45 pm. Eastern.

WLEX
Lexington, Mass. 215.7m-1390kc. 5 watts. J. Smith Dodge, Carl S. Wheeler. Daily ex Sat, Sun, 8:30-10:30 pm. Sat, 11 pm, Sun, 3-4 pm, 8:30-10:30. Eastern. Founded Oct., 1926.

WLIB
Elgin, Ill. 305.9m-980kc. 15000 watts. Liberty Magazine. Announcers, Bill Hay, Tommy Coates. Daily ex Sun, 10-11 am, 12:01-12:40 pm, 7-8, 11-1. Sun, 5-6:15 pm. Central.

WLIT
Philadelphia, Pa. 405.2m-740kc. 500 watts. Lit Bros. Mon, Wed, Fri, 12-2 pm, music; 4:30, music; 5:30, stories; 7:30, music; 8, 8:30, 9, 10, 10:30. Tues, 11 am, 12n, 2 pm, 4:30, 5:30, 7:30. Tues, Sat, 12n, 2 pm, 4:30, 5:30, 7:30. Eastern.

WLS
Chicago, Ill. 344.6m-870kc. 5000 watts. Sears, Roebuck & Co. Slogan, "World's Largest Store." Daily ex Sun, 9-1:30 pm, half hour markets; 12-1 pm, farm program; 2:30-3:30, homemakers hour Wed, Fri, 5:30-12 mid. Sat, 5:30-1 am. Tues, Thurs, 5:30-8 pm. Sun, 10:50-2:15 pm. U. of Chicago; 12:15-2:30 pm, 6-8, Little Brown church. Central. Founded April 6, 1924.

WLSI
Providence, R. I. 260.7m-1150kc. 500 watts. Lincoln Studios Inc. Mon, 6:45 pm. Tues, 6:30 pm. Wed, 7 pm, 9. Thurs, 6:30. Fri, 7 pm. Sat, 6:30 pm. Sun, 6:30 pm. Eastern.

WLTH
Providence, R. I. 265.7m-1150kc. 500 watts. Lindy of Brooklyn, Inc. Mon, Tues, Sun, 11-1 pm, 4-7, 9-12. Wed, Fri, 11-2 pm, 11-12 mid. Thurs, Sat, 11-1 pm, 4-7, 9-12 mid. Eastern.

WLTS
Chicago, Ill. 483.6m-620kc. 100 watts. Lane Technical High School. Mon, 9-10 am, 2-4 pm, 6-7. Tues, Wed, Thurs, Fri, 9-10 am, 2-4 pm. Central.

WLW
Harrison, Ohio. 428.3m-700kc. 5000 watts. 52m-5764kc. 250 watts. The Crosley Radio Corp. Announcer, Fred Smith. Daily ex Sat, Sun, 8 am, exercises; 10, woman's hour; 11:15, markets; 11:55, time; 12 n, weather, musicale; 1:30, 2:30-4:30, musicale; 3:30, markets; 6:50, Markets, 7-12 mid. Sat, 10 am, woman's hour, 11:15, time, 12 n, weather, 12:05, musicale; 12:45, markets; 2:30-4:30, 6:50, markets; 7-12 mid. Sun, 9:30 am, 11, 3 pm, organ; 6:30-11. Alternate Sun, 5:30 pm, chain. Eastern. Founded, 1919.

WLWL
New York, N. Y. 370.2m-810kc. 1000 watts. The Paulist League. Announcer, Joseph A. Bier. Slogan, "For God and Country."

WMAC
Cazenovia, N. Y. 225.4m-1330kc. 500 watts. C. B. Meredith. Announcer, C. R. Jones. Thurs, 12 n, farm program; 8 pm, popular studio. Founded 1922. Eastern.

WMAF
South Dartmouth, Mass. 416.4m-720kc. 1000 watts. Round Hills Radio Corp. Not operating.

WMAK
Buffalo, N. Y. 545.1m-550kc. 750 watts. WMAK Studios, Inc. Announcer, William Fay. Daily ex Mon, Sun; 6:30, WGY; 7, about town; 7:15 pm, news. Tues, Thurs, Sat, 6:15-7:15 pm, dinner music. Sun, 10:25 am, church; 1:30 pm, 3:30, 7:30 pm, church service. Eastern. Founded Sept. 22, 1921.

WMAL
Washington, D. C. 241.8m-1240kc. 250 watts. M. A. Leese Radio Co. Daily 6:30 pm. Eastern.

WMAN
Columbus, Ohio. 234.2m-1280kc. 50 watts. First Baptist church. Announcer, John Bohannan. Sun, 10:30-12 n, 7:30-9 pm. Eastern.

WMAQ
Chicago, Ill. 447.5m-670kc. 1000 watts. The Chicago Daily News. Announcer, Robert Whitney. Daily ex Sun, 6:30-11 am, 12 n-3 pm, 4-7, 8-10. Sun, 10:45-12 n, 7 pm, 8-10. Daily ex Sun, Sat, 12:10-12:25 pm, farm. Central.

WMAY
St. Louis, Mo. 247.8m-1210kc. 1000 watts. Kingshighway Presbyterian church. Slogan, "May Every By-Way Hear Kingshighway." Sun, 11 am, 8 pm. Central.

WMAZ
Macon, Ga. 270.1m-1110kc. 500 watts. Mercer University. Announcer, Milton Randolph. Mon, Wed, 1-2 pm. Tues, Thurs, 8-9 pm. Eastern.

WMBA
Newport, R. I. 204m-1470kc. 100 watts. LeRoy Joseph Beebe.

WMBB
Homewood, Ill. 252m-1190kc. 5000 watts. American Bond & Mortgage Co.-Trianon Announcer, Hugh Aspinwall. Slogan, "World's Most Beautiful Ballroom." Daily ex Sun, Mon, 6-10:30 pm, Sun, 3-6 pm, 7-10:30. Central.

WMBC
Detroit, Mich. 243.8m-1230kc. 100 watts. Michigan Broadcasting Co. Announcer, Gordon Higham. Daily ex Sun, 6-10 pm. Eastern.

WMBD
Peoria Heights, Ill. 205.4m-1460kc. 250 watts. Peoria Heights Radio Laboratory. Daily ex Thurs, musicale. Sun, service.

WMBE
St. Paul, Minn. 208.2m-1440kc. 10 watts. Dr. C. S. Stevens. Mon, Fri, 10-12 n. Wed, 8-10 pm. Sat, 9-11 pm. Central.

WMBF
Miami Beach, Fla. 384.4m-780kc. 500 watts. Fleetwood Hotel. Daily, 7-8 pm; 7:30-9. Eastern. Founded 1924.

WMBG
Richmond, Va. 220.4m-1360kc. 15 watts. Havens and Martin. Slogan, "The Daylight Station." Announcer, W. H. Wood. Daily ex Sun, 2-3 pm, Eastern.

WMBH
Joplin, Mo. 204m-1470kc. 100 watts. Edwin Dudley Aber. Announcers, M. E. Jones, E. D. Aber. Slogan, "Where Memories Bring Happiness." Mon, Tues, Wed, Thurs, 12:15-1 pm, 1-1:30, 5:30-7:30, 8:30-10:30. Central.

WMBI
Chicago, Ill. 263m-1140kc. 500 watts. Moody Bible Institute. Slogan, "The West Point of Christian Service." Announcer, Wendall Loveless. Daily ex Sun, 7-7:40 am, 10:30-11:30, 12:30-1:30 pm, 3:30-4:30, Tues, Wed, Fri, Sat, 8-9 pm, Thurs, 7-9 pm. Sun, 3:30-7 pm. Central. Founded July 28, 1926.

WMBJ
Monessen, Pa. 232.4m-1290kc. 50 watts. Star theater. Fri, 9:45-11 pm. Eastern.

WMBL
Lakeland, Fla. 228.9m-1310kc. 50 watts. Benford's Radio studios.

WMBM
Memphis, Tenn. 209.7m-1430kc. 10 watts. Seventh Day Adventist Church.

WMBO
Auburn, N. Y. 220.4m-1360kc. 100 watts. Radio Service Laboratories.

WMBQ
Brooklyn, N. Y. 204m-1470kc. 100 watts. Paul J. Gollhofer.

WMBR
Tampa, Fla. 252m-1190kc. 100 watts. F. J. Reynolds. Daily ex Sun, 1-2 pm, 2-3, 7-8, 8-9, 10-11. Eastern.

WMBS
Harrisburg, Pa. 234.2m-1280kc. 250 watts. Mack's Hatters Co. Announcer, W. S. McCachren. Slogan, "The Voice of the Susquehanna." Daily ex Sun, 11:30 am, musicale, 12 n, organ; 1 pm, women's club; 5:50, sports; 6, time, 6-11:30 pm, music. Sat, 11:30-3 am, Knut Kracker Klub frolic. Sun, 8:30 am-9 pm. Eastern. Founded March 1, 1924.

WMBW
Youngstown, Ohio. 214.2m-1400kc. 50 watts. Youngstown Broadcasting Co., Inc. Founded Jan., 1927.

WMC
Memphis, Tenn. 516.9m-580kc. 500 watts. The Commercial Appeal. Announcer, Francis S. Chamberlin. Slogan, "Station WMC, Memphis." "Down in Dixie." Club, "Midnight Frolic." Daily ex Sun, 9:45 am, 12 n, 2:30 pm, weather, markets, music. Daily, 8 pm, program; Tues, 11 pm, Midnight Frolic. Sun, 11 am, church service. Founded Jan. 20, 1923. Central.

WMCA
Hoboken, N. J. 370.2m-810kc. 500 watts. Hotel McAlpin. Announcer, Snedden Weir. Slogan, "Where the Searchlight Flashes and the White Way Begins." Daily ex Sun, Sat, 10:30 am, 1 pm, 2:45, 5, 6-1 am. Sat, 10:30-1 pm, 6-1 am. Sun, 10 am-12 mid. Eastern.

WMES
Boston, Mass. 211.1m-1420kc. 150 watts. Mass. Educational Society. Mon, Thurs, 8-10:30 pm. Sun, 10:45-12 n, 7:45-9:30. Eastern. Founded Aug. 1, 1927.

WMPC
Lapeer, Mich. 234.2m-1280kc. 30 watts. First Methodist Protestant Church. Daily ex Sat, 12-1 pm. Daily ex Sat, Thurs, 7:30-10 pm. Daily ex Sat, 4-5 pm. Sun, 10:30-12 n, 12-1 pm, 4-5:30, 7:30-10. Central. Founded Dec. 6, 1926.

WMRJ
Jamaica, N. Y. 206.8m-1450kc. 10 watts. Peter J. Prinz. Tues, Thurs, 8-11:30 pm. Sat, 12-2:30 am. Sun, 12-2:30 pm, 9-11:30. Eastern.

WMSG
New York, N. Y. 236.1m-1270kc. 500 watts. Madison Square Garden. Mon, Wed, Thurs, 9-12 mid. Tues, Fri, 6-9 pm. Eastern.

WNAC
Boston, Mass. 288.3m-1040kc. 500 watts. The Shepard Stores. Announcers, John J. Fanning, Ben Hadfield, F. Lewis Dunham, Joseph Lopez, Jean Sargent. Daily ex Sun, 10:30-11:30 am, 1-2 pm, 4-5, 6-12 mid. Sun, 10:45-1:30 pm; 3-5, 7:30-11. Eastern. Founded July 31, 1922.

WNAD
Norman, Okla. 239.9m-1250kc. 500 watts. University of Oklahoma. Mon, Wed, Thurs, Sat, 7:15-8 pm. Tues, Fri, 12:15-1 pm, 2:30-3:30. Central.

WNAL
Omaha, Nebr. 258.5m-1160kc. 250 watts. R. J. Rockwell. Announcer, Ronald J. Rockwell. Slogan, "Pioneer Station of Omaha." Fri, Sat, 7-9 pm, 9-11 pm. Central. Founded 1921.

WNAT
Philadelphia, Pa. 288.3m-1040kc. 100 watts. Lennig Bros. Co. Slogan, "We Never Are Tired." Wed, 6:50 pm. Sat, 8 pm. Sun, 6:50 pm. Eastern.

WNAX
Yankton, S. D. 302.8m-990kc. 500 watts 6 am-6 pm, 250 watts after 6 pm. Gurney Seed & Nursery Co. Daily and Sun, 11 am-10 pm. Sun, 11-12 n, 2-7 pm. Central. Founded Aug. 22, 1927.

WNBA
Forest Park, Ill. 208.2m-1440kc. 200 watts. Michael T. Pafferty. Irregular hours.

WNBF
Endicott, N. Y. 206.8m-1450kc. 50 watts. Hewitt-Wood Radio Co. Irregular schedule.

WNBH
New Bedford, Mass. 260.7m-1150kc. 250 watts. New Bedford Hotel. Announcer, I. Vermilya. Mon, 6-10:30 pm, Tues, Thurs, 7-8 pm, Wed, 6-10 pm. Fri, 6-10:30 pm. Sun, 11-12:15 pm, 7:30-9 pm. Eastern.

WNBJ
Knoxville, Tenn. 206.8m-1450kc. 50 watts. Lonsdale Baptist Church.

WNBL
Bloomington, Ill. 199.9m-1500kc. 15 watts. Gray, Trimble and Smith Elec. Co. Sun, 2-4 pm. Mon, 8-12 mid. Central.

WNBO
Washington, Pa. 211.1m-1420kc. 15 watts. John Brownlee Spriggs. Daily ex Sun, 2-4 pm, 9-11 pm. Sun, 11 am, 7 pm, services. Eastern.

WNBQ
Rochester, N. Y. 202.6m-1480kc. 15 watts. Gordon P. Brown.

WNBR
Memphis, Tenn. 228.9m-1310kc. 20 watts. Popular Radio Shop. Daily ex Sun, 6:30 pm. Sun, 2:30 pm. Central.

WNBX
Springfield, Vt. 241.8m-1240kc. 10 watts. WNBX Broadcasters.

WNJ
Newark, N. J. 280.2m-1070kc. 500 watts. Herman Lubinsky. Announcer, W. A. Bingenheimer. Slogan, "The Voice of Newark." Tues, Wed, Fri, Sat, Sun, 6-6:30 pm, 8:30-12 midnight, dance music. Eastern.

WNOX
Knoxville, Tenn. 265.3m-1130kc. 1,000 watts. Peoples Telephone & Telegraph Co. Tues, Thurs, 7-10 pm. Sat, 9-12. Central.

WNRC
Greensboro, N. C. 223.7m-1340kc. 500 watts. Wayne M. Nelson. Founded Mar. 24, 1926.

WNYC
New York, N. Y. 526m-570kc. 500 watts. New York Municipal Radio station. Announcer, Christie R. Bohnsack. Slogan, "Municipal Broadcasting Station of The City of New York." Daily, 7-10 pm. Eastern.

WOAI
San Antonio, Texas. 319m-940kc. 5000 watts. Southern Equip. Co. (Evening News-Express). Announcer, J. G. Cummings. Slogan, "The Winter Playground of America, Where the Sunshine Spends the Winter." Daily ex Sun, 10 am, weather reports, news; 12:15 pm, 3, 4, 6:15. Tues, Wed, Thurs, Fri, 8:30-9:30 pm. Fri, 9:30-10:30 pm. Sun, 11 am, service; 7:45 pm. Central. Founded summer 1922.

WOAN
Lawrenceburg, Tenn. 285.5m-1050kc. 250 watts. James D. Vaughan. Announcer, James D. Vaughan. Sun, 11-12 n, 7:30-8:30 pm, Central.

WOAX
Trenton, N. J. 239.9m-1250kc. 500 watts. F. J. Wolff. Slogan, "Trenton Makes; the World Takes." Daily ex Sun, 12:15-1:15 pm. Daily ex Sun, Sat, 6-7 pm. Wed, 7:30-9 pm. Fri, 7:30-8:30 pm. Sun, 7:30-9 pm. Eastern. Founded March 2, 1923.

WOBR
Ohio. 204m-1470kc. 10 watts. Karl Smith. (Portable.)

WOC
Davenport, Iowa. 374.8m-800kc. 5000 watts. The Palmer School of Chiropractic. Slogan, "Where the West Begins and in the State Where the Tall Corn Grows." Daily ex Sun, 12:27 pm, time; 12:30, markets; Tell the World Club, home hour; 5:45, chimes; 5:55, sports; Mon, 5:30 pm, WJZ; 7:05, Tues, 6:30, WEAF; 8, WEAF; 8:30, Wed, 7:30 pm, WEAF; 8:30, organ; 10, Thurs, 8 pm, 9. Fri, 7-8, WEAF; 8. Sun, 12 n, WJZ, pm, 6:30, 7:15, WEAF. Central.

WOCL
Jamestown, N. Y. 223.7m-1340kc. 25 watts. A. E. Neroton. Announcer, Roy W. Fox. Slogan, "We're on Chautauqua Lake." Mon, 9-9:15, 9:15-12 midnight. Thurs, 7-8 pm. Sun, 10:30 am, 7:30-9. Eastern.

WODA
Paterson, N. J. 293.9m-1020kc. 1000 watts. O'Dea Temple of Music. Slogan, "A Voice from the Silk City." Daily ex Sun, 12-1 pm; 5-7, 8:30-11. Founded April 13, 1925. Eastern.

WOI
Ames, Iowa. 265.3m-1130kc. 2500-5000 watts. Iowa State College. Announcer, A. H. Woolfries. Daily ex Sun, 7 am, 7:30, 8:45, 9:30, 10:30, 12:10, 12:15 pm, 12:30, 12:40, 12:45, 1 pm, 1:30, 9:30. Mon, 7:30 pm, 7:45, 8. Thurs, 7:30, 7:45, 8. Sun, 10:45 am, 3:45 pm. Founded April, 1922. Central.

WOK
Homewood, Ill. 252m-1190kc. 5000 watts. Karzas-Chicago Beach Hotel. Announcer, Hugh Aspinwall. Daily ex Mon, 11-12:30 am. Founded July 20, 1925. Eastern.

WOKO
Peekskill, N. Y. 215.7m-1390kc. 250 watts. H. E. Smith. Daily ex Sun, 10 am. Daily ex Sun, 10-11 am, 6-8 pm. Sat, 9-11 pm. Sun, 11-12:15 pm, 3-5. Eastern.

WOKT
Rochester, N. Y. 209.7m-1430kc. 500 watts. Titus-Ets Corp. Announcer, S. C. Hitchcock. Daily ex Sun, Mon, 11:30 am-2 pm, 6:45-10. Mon, 11:30-2 pm, 6:45-11 pm. Sun, 11-12:30 pm. Eastern.

WOMT
Manitowoc, Wis. 222.1m-1350kc. 50 watts. The Mikadow theater. Daily ex Sun, 5:30-6:50 pm. Mon, 10:30-1:30 am. Central.

WOO
Philadelphia, Pa. 508.2m-590kc. 500 watts. John Wanamaker. Daily ex Sun, 11 am, organ recital; 12:55, time; 12-1 pm, concert; 4:40, weather; 4:45, organ recital; 7:30, police reports; 10:55, time; 11:02, weather. Mon, Wed, Fri, 7:30-11 pm, music, concert. Eastern.

WOOD
Grand Rapids, Mich. 260.7m-1150kc. 500 watts. Walter B. Stiles, Inc. Mon, Tues, Wed, Thurs, Fri, 9-11 pm. Central.

WOQ
Kansas City, Mo. 336.9m-890kc. 500 watts. 6 am-6 pm, 250 watts. Unity School of Christianity. Daily ex Sun, 11-11:30 am. Daily ex Sun, 6-7 pm. Mon, 9-10 pm, Wed, Fri, 8-10 pm, Sat, 10-11 pm. Sun, 11-12:30 am, 2:30-3 pm, 7:45-9. Central. Founded 1921.

WOR
Newark, N. J. 422.3m-710kc. 500 watts. L. Bamberger & Co. Daily ex Sun, 6:45-8 am, 2:30-4 pm. Daily and Sun, 6:15-12 mid. Founded 1922. Eastern.

WORD
Batavia, Ill. 416.4m-720kc. 5000 watts. Peoples Pulpit association. Announcer, B. M. Rice. Slogan, "Watchtower Station WORD." Daily ex Mon, 7-10 pm, Sun, 10-12 am, 2:30-5 pm, 7-10. Founded Dec., 1924. Central.

WOS
Jefferson City, Mo. 422.3m-710kc. 500 watts. Missouri State Marketing Bureau. Announcer, Jack Heiny. Slogan, "Watch Our State." Daily ex Sun, 9 am, 10, 10:30, 11, 12 n, 1 pm, 2, markets; stocks, weather; 3:30, 4, 5, baseball. Mon, Tues, Wed, Thurs, Fri, 7 pm, markets, baseball; 7:15, news, Fri, 4 pm, children's hour. Mon, Wed, 8 pm. Fri, 8:15 pm. Central.

WOW
Omaha, Neb. 508.2m-590kc. 1000 watts. Woodmen of the World. Announcer, Lester Palmer. Slogan, "Where the West Is at the Best." Daily ex Sun, 8:15 am, 8:55, 10:30, 12:30 pm, 1:45, 4, markets. Daily ex Sun, Sat, 12:45 pm. Daily ex Sun, Wed, 6-7:30, 9-11. Sun, 9-10:45 am, 1:30 pm, 2:30-4 pm, 6-9. Founded April 2, 1923. Central.

WOWO
Fort Wayne, Ind. 228.9m-1310kc. 5000 watts, 6-6 pm, 2500 watts after 6 pm. Main Auto Supply Co. Mon, Wed, Thurs, 6-12 mid. Tues, 11 am, Wed, Thurs, 12-1 pm. Fri, 11 am, 4-5 pm, 8-10. Sat, 12-2 pm, 6-6:30 pm, Sun, 2-4 pm, 8-10. Central.

WPAP
Cliffside, N. J. 394.5m-760kc. 500 watts. Palisades Amusement Park. Announcer, Perry Charles. Mon, Wed, Sat, 8 pm. Tues, Fri, 8:30 pm. Thurs, 9 pm. Eastern.

WPCC
Chicago, Ill. 223.7m-1340kc. 500 watts. North Shore Congregational church. Announcer, Ralph E. Briggs. Wed, 7:30-8:30 pm. Fri, 7:30-9:30 pm. Sun, 11-12:30 pm, 3:30-5:30, 8-9:30. Central.

WPCH
New York, N. Y. 309.1m-970kc. 500 watts. Concourse Radio Corp. Mon, 7-12 mid. Tues, 4-7 pm. Wed, 6-9 pm. Thurs, 4-12 mid. Sat, 4-7 pm, 9-2 am. Sun, 6:30-12 mid. Eastern.

WPEP
Waukegan, Ill. 215.7m-1390kc. 500 watts. Announcer, Maurice Mayer. Slogan, "Waukegan Pep Station." Daily ex Mon, 3-5 pm, 6:30-9, 9:30-12. Mon, 3-5 pm. Central.

WPG
Atlantic City, N. J. 272-6m-1100kc. 5000 watts. Municipality of Atlantic City. Slogan, "World's Playgrounds." Daily ex Sun, Fri, 6:45-12:30 am. Sun, 4-15 pm, 5:15, 9, 9:15, 10:30. Eastern.

WPRC
Harrisburg, Pa. 209.7m-1430kc. 100 watts. Wilson Printing & Radio Co. Sun, 9-11 pm. Eastern.

WPSC
State College, Pa. 299.8m-1000kc. 500 watts. Pa. State College. Slogan, "The Voice of the Nittany Lion." Mon, Wed, Fri, 8 pm. Fri, 12 mid. Sat, 2 pm, football. Eastern.

WPSW
Philadelphia, Pa. 202.6m-1480kc. 50 watts. Philadelphia School of Wireless Telegraphy. Wed, Fri, 7 pm. Eastern.

WQAA
Parkesburg, Pa. 215.7m-1390kc. 500 watts. Horace A. Beale, Jr.

WQAM
Miami, Fla. 322.4m-930kc. 750 watts. Electrical Equip. Co. Announcer, Frederick W. Mizer. Slogan, "The Most Southern Radiocasting Station in U. S." Daily ex Sun, 11:45 am, 7:30 pm. Sun, 10:45 am, 7:30. Eastern. Founded Feb. 1, 1922.

WQAN
Scranton, Pa. 230.6m-1300kc. 250 watts. Scranton Times. Announcer, T. V. Nealon. Slogan, "The Voice of the Anthracite." Daily ex Sun, 12:30-1 pm, 4:30-5, news, reports, sports, music. Tues, Fri, 8 pm, entertainment. Sat, 6:30-7:15 pm, dance music. Eastern. Opened Jan. 8, 1923.

WQAO
New York, N. Y. 394.5m-760kc. 500 watts. Calvary Baptist church. Announcer, H. W. Kinsey. Slogan, "The First Church Owned and Operated Broadcasting Station in the World." Wed, 7:30 pm, church service. Sun, 11:15 am, 3 pm, 7:30, church service. Founded 1922. Eastern.

WQJ
Chicago, Ill. 447.5m-670kc. 500 watts. Calumet Baking Powder company-Chicago Daily News. Daily ex Sun, 11-12 n, 3-4 pm. Daily ex Sun, Mon, 7-8 pm, 10-11 am. Sun, 7-9:30 pm. Founded May 22, 1924. Central.

WRAF
La Porte, Ind. 208.2m-1440kc. 100 watts. Radio Club, Inc. Announcer, Charles Middleton. Slogan, "The Voice of the Maple City." Daily ex Sun, 12-1 pm, 7-9. Sun, 10:45-12:15 pm. Founded April, 1923. Central.

WRAH
Providence, R. I. 199.9m-1500kc. 250 watts. Stanley N. Read.

WRAK
Escanaba, Mich 282.8m-1060kc. 50 watts. Economy Light Company. Announcer, H. E. Flath. Slogan, "The Gateway to Cloverland." Mon, Fri 8:30 pm. Eastern.

WRAM
Galesburg, Ill. 247.8m-1210kc. 50 watts. Lombard College. Mon, 7-11 pm. Founded 1922. Central.

WRAV
Yellow Springs, Ohio. 296.9m-1010kc. 100 watts. Antioch College. Announcer, Charles W. Putman. Thurs, 9 pm, music; 9, educational. Sun, 7 pm. Central.

WRAW
Reading, Pa. 238m-1260kc. 100 watts. Avenue Radio & Elec. Shop. Slogan, "The Schuylkill Valley Echo." Announcer, C. M. Chafey. Tues, 9-11 pm, Thurs, 10-12 mid. Sun, 11 am, 1:30-2:30 pm, 3-4. Eastern. Founded June 5, 1923.

WRAX
Philadelphia, Pa. 212.6m-1410kc. 250 watts. Berachah Church, Inc. Tues, Thurs, 7:30-9:30 pm. Sun, 11:15-12:15 pm, 4-5. Eastern.

WRBC
Valparaiso, Ind. 238m-1260kc. 250 watts. Immanuel Lutheran church. Slogan, "World Redeemed by Christ." Mon, 7:30 pm. Sun, 7:30 pm, church service. Central. Founded March, 1924.

WRC
Washington, D. C. 468.5m-640kc. 500 watts. Radio Corp. of America. Announcer, John B. Daniel. Slogan, "The Voice of the Capitol." Daily ex Sun, 6:45 am-1 pm, WEAF; 1-2, organ; 5-11 pm. Sun, 11 am-9:30 pm. Eastern.

WRCO
Raleigh, N. C. 217.3m-1380kc. 250 watts. Wynne Radio Co. Sun, 10:45 am; 1 pm. Eastern.

WRCV
Norfolk, Va. 209.7m-1430kc. 100 watts. Radio Corporation of Virginia. Slogan, "The Voice of the Business District." Wed, Fri, Sat, 7:30-9 pm. Sun, 10:30-12:15 pm, 7:15-8:45. Eastern.

WREC
Memphis, Tenn. 254.1m-1180kc. 50 watts. WREC Inc. Daily ex Sun, 8-9 pm. Sun, 4-5:30 pm. Central.

WREN
Lawrence, Kan. 254.1m-1180kc. 750 watts. Jenny Wren. Daily ex Sun, 6:30-8 am, 10:45, 5-6 pm 9-10. Central.

WRES
Quincy, Mass. 217.3m-1380kc. 50 watts. Harry Leonard Sawyer. Tues, Wed, Thurs, Fri, 8-11 pm, Eastern.

WRHF
Washington, D. C. 322.4m-930kc. 150 watts. Washington Radio Hospital fund. Daily ex Sun, 11-12 n, news, police reports. Founded 1924. Eastern.

WRHM
Minneapolis, Minn. 260.7m-1150kc. 1000 watts. Rosedale Hospital, Inc. Announcer, Troy S. Miller. Daily ex Sun, 9-10:30 am, 5:45-6 pm, 6-7. Mon, Wed, Fri, 8-10 pm. Thurs, 10-12 mid. Sat, 6-11 pm. Sun, 2-6 pm, 6-12 mid. Central.

WRK
Hamilton, Ohio. 205.4m-1460kc, 100 watts. WRK Broadcasters. Daily ex Sun, 1:30-2:30 pm; 7:30-10:30. Central. Founded 1919.

WRM
Urbana, Ill. 272.6m-1100kc. 500-1000 watts. Univ. of Ill. Announcer, John Bayles. Daily ex Sun, 5-6 pm. Tues, 7-8 pm, musical. Stn, 4 pm, organ. Central.

WRMU
New York, N. Y. 201.2m-1490kc. 100 watts. Atlantic Broadcasting Corp.

WRNY
Coytesville, N. J. 309.1m-970kc. 500 watts. Experimenter Pub. Co. Daily ex Sun, 11-1 pm, 2:30-4, 7-11 pm. Sun, 11 am, 1-6:30 pm. Eastern. Founded June 12, 1925.

WRPI
Terre Haute, Ind. 208.2m-1440kc. 100 watts. Rose Polytechnic Institute Broadcasting Assn.

WRR
Dallas, Tex. 461.3m-650kc. 500 watts. City of Dallas. Announcer, John Thorwald. Slogan, "City of Achievements." Daily ex Sun, Wed, 12-1 pm, 6-7, 8-9. Mon, 9:30-10:30 pm, 11-12 midnight. Wed, 6:55 pm. Thurs, 9-10 pm, 11-12. Fri, 8-10 pm. Sun, 11-12 n; 6:55, police; 8, church; 9:30, music. Central.

WRRS
Racine, Wis. 322.4m-930kc. 50 watts. Racine Broadcasting Corp. Announcer, F. G. Leavenworth. Daily ex Sun, Sat, 6-7 pm, news. Mon, Wed, Fri, 12-1 pm, organ. 7:30-10:30 pm. Central. Founded Dec. 1, 1926.

WRSC
Chelsea, Mass. 211.1m-1420kc. 100 watts. William S. Pote.

WRST
Bay Shore, N. Y. 211.1m-1420kc. 250 watts. Radiotel Mfg. Co., Inc. Slogan, "Bay Shore, the Garden Spot of Long Island. Daily ex Sun, 5:45-6:30 pm, 7-11. Sun, 10-12 m, 8-11. Eastern.

WRVA
Richmond, Va. 254.1m-1180kc. 1000 watts. Larus & Bro. Co., Inc. Slogan, "Carry Me Back to Old Virginy." Announcer, J. Robert Readles. Daily ex Sat, Sun, 12-1:30 pm. Mon, Wed, Thurs, Fri, 7-12 mid. Sun, 11-12 n., Sun, 11-12 n., 8-9. Eastern.

WSAI
Mason, Ohio. 361.2m-830kc. 5000 watts. United States Playing Card Co. Daily and Sun, 7-12 mid. Fri, 8-9 pm. Eastern.

WSAJ
Grove City, Pa. 223.7m-1340kc. 250 watts. Grove City College. William L. Harman, activities. Irregular schedule. Founded Nov., 1921.

WSAN
Allentown, Pa. 222.1m-1350kc. 100 watts. Allentown Call Pub. Co. Announcer, Charles Walp. Tues, Thurs, 8:15 pm. Eastern.

WSAR
Fall River, Mass. 252m-1190kc. 100 watts. Doughty & Welch Elec. Co., Inc. Announcer, Barton G. Albert. Daily 12-1 pm, 5:30-6:30. Founded Jan. 1923. Eastern.

WSAX
Chicago, Ill. 204m-1470kc. 100 watts. Zenith Radio Corp.

WSAZ
Huntington, W. Va. 241.8m-1240kc. 100 watts. McKellar Elec. Co. Announcer, F. B. Smith. Daily ex Sun, 12-4 pm, 6-10. Sun, 10-12:30 pm, 3-4, 6-10. Eastern. Founded Feb., 1927.

WSB
Atlanta, Ga. 475.9m-630kc. 1000 watts. Atlanta Journal. Announcer, Lambdin Kay. Slogan, "The Voice of the South." Daily ex Sun, 10 am, homemakers half hour; 12-1 pm, music, weather; 1, farm service; 2:30, reports; 8-9, concert; 10:45-12, concert. Mon, 5:30 pm, WJZ. Tues, 7 pm, WEAF. Wed, 6:15 pm, health talk; 7, WJZ. Sat, 6 pm, S. S. lesson. Sun, 9:30 am, 10:54, 5 pm, 6:15, WEAF; 8:15, music. Central.

WSBC
Chicago, Ill. 232.4m-1290kc. 500 watts. World Battery Co. Daily ex Sun, Mon, Thurs, 6:30-8 pm. Daily ex Mon, 9-1 am. Sat, 2-4 am. Sun, 5-7 pm. Thurs, 6-7 pm. Central.

WSBF
St. Louis, Mo. 258.5m-1160kc. 250 watts. WSBF Broadcasters.

WSBT
South Bend, Ind. 238m-1260kc. 500 watts. South Bend Tribune. Announcer, C. G. Livengood. Mon, 8-10 pm, 12-1:30 pm, Wed, Fri, 8-10 pm. Founded 1925. Central.

WSDA
New York, N. Y. 227.1m-1320kc. 250 watts. City Temple. Thurs, 7:45-9:30 pm. Sat, 10:45-1 pm. Sun, 7:30-9:30 pm. Eastern.

WSEA
Virginia Beach, Va. 263m-1140kc. 500 watts. Virginia Beach Broadcasting Co. Announcer, George L. Sutherland. Slogan, "The Voice of Tidewater Virginia." Daily ex Sun, 11-1 pm, 1-3, 6:15-7:10 pm, 7-8, 8-11 pm, 11. Sun, 7-10 pm. Eastern.

WSIX
Springfield, Tenn. 212.6m-1410kc. 150 watts. 638 Tire and Vule, Co. Announcer, George H. Lawrence. Daily ex Sun, 12:30-1:30 pm, 7-9. Sun, 11 am. Central. Founded Jan. 7, 1927.

WSKC
Bay City, Mich. 272.6m-1100kc. 250 watts. World's Star Knitting Co. Announcer, S. F. Northcott. Slogan, "Where the Summer Trails Begin." Daily ex Sun, 12-1 pm, Hardy hour of music. Tues, Thurs, Sat, 9-11 pm. Sat, 12-2 am. Sun, 11 am. Eastern.

WSM
Nashville, Tenn. 340.7m-880kc. 5000 watts. National Life and Accident Insurance Company. Announcer, George Hay. Daily ex Sun, Sat, 11:45 am, 12:30 pm, 1-1:30. Mon, 6:30-11 pm. Tues, Wed, 7-11 pm. Thurs, 6:30-11 pm, Wed, 6-10 pm. Sat, 7-11 pm. Sun, 4:30-5:30 pm, 6:20-7:15, 8:15-9:15. Founded Oct. 5, 1925. Central.

WSMB
New Orleans, La. 322.4m-930kc. 500 watts. Saenger Theaters, Inc., and The Maison Blanche Co. Daily ex Sun, 12:30-1:30 pm, 6-7 pm. Mon, Wed, Thurs, Sat, 8:30-10:30 pm. Founded April 21, 1925. Central.

WSMK
Dayton, Ohio. 296.9m-1010kc. 200 watts. S. M. Kruhn, Jr. Slogan, "The Home of Aviation." Daily ex Sun, Thurs, 12-1 pm, 6-7, 8-10. Sat, 12-3 am. Sun, 10:45-12 n, 7:30-9 pm. Central.

WSOE
Milwaukee, Wis. 270.1m-1110kc. 250 watts. School of Engineering of Milwaukee. Slogan, "In the Land of the Sky-blue Waters." Daily ex Sun, 2:30-3:30 pm, matinee; 5:13-5:50, weather, Peter Rabbit; 5:50, library talk; 6:10, organ; 8-11, concert. Fri, 11-12 am, Victor hour. Fri, 7:45-8 pm, library talk. Sun, 3:30-4:30 pm, Bible class; 7:30-8:30, church. Central. Founded Sept. 21, 1922.

WSRO
Middletown, Ohio. 384.4m-780kc. 100 watts. Radio Co. Announcer, Harry W. Fahrlander. Slogan, "We Sell Radio Only." Tues, Fri, 10:30-11 am, 8-10 pm. Sun, 2-4 pm. Central.

WSSH
Boston, Mass. 265.3m-1130kc. 100 watts. Tremont Temple Baptist church. Announcer, Raymond B. Meader. Fri, 7:30-9 pm. Sun, 10 am, 6:30 pm. Eastern. Founded June 8, 1924.

WSUI
Iowa City, Iowa. 475.9m-630kc. 500 watts. Univ. of Iowa. Announcer, Carl Meuzer. Daily ex Sun, 9 am, 10:30. Daily ex Sat, Sun, 12:25 pm, 3:30. Mon, 8 pm, 9, 11. Wed, 8 pm, Sun, 9:30 pm. Mon, 11:15 pm. Sat, 7:30 pm. Sun, 9 pm. Founded Feb. 12, 1924. Central.

WSVS
Buffalo, N. Y. 205.4m-1460kc. 50 watts. Seneca Vocational School. David Warnhoff, announcer. Slogan, "Watch Seneca Vocational School." Founded Nov. 9, 1925.

WSYR
Syracuse, N. Y. 225.4m-1330kc. 500 watts. Clive B. Meredith, Slogan, "Voice of Central New York." Daily ex Sun. Thurs, 6:20-10:30 pm. Eastern. Founded 1922.

WTAD
Quincy, Ill. 236.1m-1270kc. 250 watts. 500 watts 6 am-7 pm. Illinois Stock Medicine Broadcasting Corporation Slogan, "The Voice of Agriculture." Daily ex Sun, 11:30-12:30 pm. Central. Founded Dec. 29, 1926.

WTAG
Worcester, Mass. 516.9m-580kc. 500 watts. Worcester Telegram Gazette. Announcer, Chester Gaylord. Slogan, "The Voice from the Heart of the Commonwealth." Daily ex Sun, Sat, 10:30 am, 12:30, 12:35, 1 pm, 7:30, 8, 8:30, 9, 10, 11. Sat, 12:30, 1 pm. Sun, 4, 5:30, 7:20-9:16 pm. Eastern.

WTAL
Toledo, Ohio. 280.2m-1070kc. 100 watts. The Toledo Broadcasting Co. Announcer, Karl Brinke. Slogan, "The Gateway to the Sea." Daily, 8 pm. Sat, 9 pm. Sun, 3 am. Eastern.

WTAM
Cleveland, Ohio. 399.8m-750kc. 3500 watts. 5000 watts 6 am-6 pm. Willard Storage Battery Co. Announcer, R. B. Humphrey. Slogan, "The Voice From the Storage Battery." Daily ex Sun, 6-12 mid. Sun, 11 am, 6, 7, 8, 9, 10 pm. Founded Sept. 26, 1923. Eastern.

WTAQ
Eau Claire, Wis. 254.1m-1180kc. 500 watts. Gillette Rubber Co. Announcer, C. S. Van Gorden. Slogan, "The Voice of the Wilderness." Mon, 12:15 pm, weather, news, markets; 6, 6:30, 7:30, 10. Tues, 12 n, 6 pm, 9. Wed, 12:15 pm, 6, 6:30. Thurs, 12:15 pm, 6, 9, 10. Fri, 12 n, 6, 8. Sat, 12:15 pm. Sun, 11 am. Central. Founded Oct. 12, 1922.

WTAR
Norfolk, Va. 236.1m-1270kc. 500 watts. Reliance Electric Co. Announcer, J. K. Bohannon. Slogan, "Down in Old Virginia." Daily ex Sun, 6:30 pm, weather, markets, news. Tues, 8-9 pm, music. Eastern.

WTAS
Chicago, Ill. 275.1m-1090kc. 500 watts. Illinois Broadcasting Corp.

WTAW
College Station, Tex. 309.1m-970kc. 500 watts. Agricultural and Mechanical College of Texas. Daily ex Sun, Sat, 12:15 pm. Founded 1922. Central.

WTAX
Streator, Ill. 322.4m-930kc. 50 watts. Williams Hardware Co., Radio Division. Announcer, N. B. Williams. Slogan, "Tapsa Kegga Nails." Mon, 8-10:30 pm. Thurs, 9-11 pm. Central.

WTAZ
Richmond, Va. 220.4m-1360kc. 15 watts. W. Reynolds, Jr., and T. J. McQuire.

WTFF
Mt. Vernon Hills, Va. 204m-1470kc. 50 watts. Independent Pub. Co.

WTFI
Toccoa, Ga. 209.7m-1430kc. 250 watts. Toccoa Falls Institute. Tues, Thurs, 7-8 pm. Sun, 9-10 pm. Eastern.

WTIC
Hartford, Conn. 535.4m-560kc. 500 watts. The Travelers Insurance Company. Slogan, "The Insurance City." Daily, 6:30-11 pm. Sat, Old Gold program. Sun, 4:30-7:30 pm. Founded Feb. 10, 1924. Eastern.

WTMJ
Milwaukee, Wis. 293.9m-1020kc. 1000 watts. Milwaukee Journal. Announcers, Fred Jeske, Larry Teich. Slogan, "Voice of Wisconsin, Land of Lakes." Mon, Tues, Wed, Thurs, Fri, 10-1 pm, 2-12 mid. Sat, 10-1 pm, 2-11. Sun, 11 am-5:15 pm, 5:15-10. Central.

WTRL
Midland Park, N. J. 206.8m-1450kc. 15 watts. Technical Radio Laboratory. Tues, 7-9 pm. Fri, 7-8 pm. Sun, 2-4 pm. Eastern.

WWAE
Chicago, Ill. 227.1m-1320kc. 500 watts. Dr. George E. Currier. Daily ex Sun, Mon, 7-9 pm. Central.

WWJ
Detroit, Mich. 352.7m-850kc. 1000 watts. The Detroit News. Announcer, E. L. Tyson, F. P. Wallace. Mon, Wed, Fri, 7:10 am, exercises; 9:30-10, household hints; 10:30-10:35, weather; 11:55-12, time; 12:05-12:45 pm, music; 1, organ; 3, music. Daily ex Sat, Sun, 6-8 pm, Mon, 8:30 pm, WEAF, 9, WEAF. Tues, 8, WEAF. Wed, 8 pm, music; 8:30, WEAF; 9:30, WEAF. Thurs, 8 pm, WEAF. Fri, 8 pm, WEAF; 9, WEAF; 9:30, WEAF; 10, WEAF. Sun, 11 am, 7:20 pm, WEAF; 9:15, WEAF. Eastern. Founded Aug., 1920.

WWL
New Orleans, La. 275.1m-1090kc. 100 watts. Loyola Univ. Announcer, O. L. Abell. Sat, 7:30-8:30 pm. Central. Founded March 31, 1922.

WWNC
Asheville, N. C. 296.9m-1010kc. 1000 watts. Asheville Chamber of Commerce. Daily ex Sun, 1 pm, 2, 7-8. Mon, 8-12 mid. Thurs, 8-10:45 pm. Sun, 11 am-4 pm, 7:30 pm. Eastern.

WWRL
Woodside, N. Y. 267.7m-1120kc. 100 watts. W. H. Reuman.

WWVA
Wheeling, W. Va. 336.9m-890kc. 250 watts. John C. Stroebel, Jr. Daily ex Sun, 6:45-7:45 am, 2 pm. 6. Mon, 7-11 pm. Sat, 11-1 am. 2 pm. Eastern. Founded Dec. 6, 1926.

Canada

CFAC
Calgary, Alta., Can. 434.5m-690kc. 500 watts. Calgary Herald. Announcer, Fred Carleton. Daily ex Sun, 1:15 pm, weather, markets. Mon, 3:30-4:30 pm; 9:30-10:30. Tues, 6-7 pm. Wed, 3:30-4:30 pm; 7:45-8:45. Thurs, 9 pm, 9:30-10:30, 12. Fri, 3:30-4:30 pm, 8:30. Sun, 11 am, 7 pm, service.

CFCA
Toronto, Ont., Can. 356.9m-840kc. 500 watts. Toronto Star. Announcer, Gordon W. McClain. Daily ex Sun, 12 n, 5:20, 6:30, weather, stocks. Mon, 6:30-8 pm. Wed, 8-12 mid. Thurs, 8-9 pm, 10:30-12 mid. Sat, 8-10 pm. Sun, 11 am, 7 pm. Eastern. Founded March, 1922.

CFCF
Montreal, P. Q., Can. 410.7m-730kc. 1650 watts. Canadian Marconi Co. Announcer, C. Walter Darling. Daily ex Sun, 12:45-1:40 pm, stocks, music. Mon, Fri, 7-7:30 pm, bedtime stories; 7:30-8:30, music; 9-10, 10:30-11:30, orchestra. Wed, 7-8 pm, orchestra. Eastern.

CFCH
Iroquois Falls, Ont. 499.7m-600kc. 250 watts. Abitibi Power and Paper Co., Ltd.

CFCN
Calgary, Alta., Can. 434.5m-690kc. 1800 watts. W. W. Grant, Ltd. Slogan, "Voice of the Prairies." Tues, 9-10 pm. Wed, 9-10 pm, 11-12. Thurs, 7:45-8:45 pm. Fri, 9-10 pm. Sun, 11 am, 7:15 pm, services, 3 pm. Mountain.

CFCQ
Vancouver, B. C. 410.7m-730kc. 10 watts. Sprott-Shaw Radio Co.

CFCT
Victoria, B. C., Can. 475.9m-630kc. 500 watts. The Dayville Station. Slogan, "The Mecca of Tourists." Wed, Fri, 8-9:30 pm. Every second Thurs. 10:30 pm, 12 mid, Night Birds. Mon, 6:30-7:30 pm. Sun, 11 am, 7:30 pm. Pacific. On air Mar. 1924.

CFCY
Charlottetown, P. E. I. 312.3m-960kc. 100 watts. Island Radio Co. Wed, Thurs, 7-8 pm. Sun, 11 am, 7 pm.

CFGC
Brantford, Ont. 296.9m-1010kc. 50 watts. Brant Radio Supply Co., Ltd. Daily ex Sun, 7-9 pm. Sun, services. Eastern.

CFJC
Kamloops, B. C. 267.7m-1120kc. 15 watts. N. S. Dalgleish and Sons, Weller and Weller.

CFLC
Prescott, Ont. 296.9m-1010kc. 50 watts. Radio Association of Prescott.

CFMC
Kingston, Ont., Can. 267.7m-1120kc. 20 watts. Monarch Battery Mfg. Co., Ltd.

CFNB
Fredericton, N. B. 247.8m-1210kc. 25 watts. James S. Neill & Sons, Ltd.

CFQC
Saskatoon, Sask., Can. 329.5m-910kc. 500 watts. The Electric Shop, Ltd. Announcer, Grant Stevenson. Slogan, "The Hub City of the West Where No. 1 Northern Hard Wheat Grows." Daily ex Sun, 9-10 am; 1:15-2 pm, markets, reports, music. Wed, 8-10 pm. Fri, 9-11:30 pm, dance program. Sun, 11 am, 7 pm, church service. Mountain.

CFRB
Township of King, York County, Ont. 291.1m-1030kc. 1000 watts. Standard Radio Mfg. Corp., Ltd.

CFRC
Kingston, Ont., Can. 267.7m-1120kc. 500 watts. Queen's University.

CFYC
Vancouver, B. C. 410.7m-730kc. 500 watts. International Bible Students' Assn.

CHCS
Hamilton, Ont., Can. 340.7m-880kc. 10 watts. Hamilton Spectator. Announcer, H. Earnshaw. Daily ex Sun, 6:45 pm, news, markets, baseball. Sat, 10-12 midnight, dance. Sun, 11 am, 7 pm. Eastern.

CHCY
King Edward Park, Edmonton, Alta. 516.9m-580kc. 250 watts. International Bible Students' Association. Tues, Thurs, Sat, 8:30-10 pm. Sun, 10-11 am, 3-4 pm, 9:15-10:30. Mountain. Founded May 11, 1926.

CHGS
Summerside, P. E. I. 267.7m-1120kc. 50 watts. R. T. Holman, Ltd. Daily ex Sun, 12 n. Sun, 11 am, 7 pm.

CHIC
Toronto, Can. 356.9m-840kc. 500 watts. Northern Electric Company, Ltd. Announcer, R. W. Lowman. Mon, 8-9 pm, 11-1 am. Sat, 10-11 am, 8-9 pm, 10-12 mid. Sun, 5-6 pm. Eastern.

CHMA
Edmonton, Alta. 516.9m-580kc. 250 watts. Christian & Missionary Alliance.

CHNC
Toronto, Can. 356.9m-840kc. 500 watts. Toronto Radio Research society.

CHNS
Halifax, N. S. 322.4m-930kc. 100 watts. Northern Elec. Co., Ltd. Sun, Mon, Wed, evening program. Atlantic. Founded May 12, 1926.

CHPC
Vancouver, B. C. 410.7m-730kc. 100 watts. Central Presbyterian Church.

CHRC
Quebec, Que. 340.7m-880kc. 5 watts. E. Fontaine.

CHSC
Unity, Sask. 267.7m-1120kc. 50 watts. H. N. Stovin, Radio Sales. Tues, Thurs, Fri, 7:30-9 pm. Wed, 9-10 pm. Sun, 7:30-8:45 pm.

CHUC
Saskatoon, Sask., Can. 329.5m-910kc. 500 watts. International Bible Students' association. Announcer, C. Roberts. Tues, 7:30-10 pm. Thurs, 8:30-10 pm. Fri, 7:30-8:30 pm. Sun, 12:45-2:15 pm, 8:30-10 pm.

CHWC
Regina, Sask., Can. 312.3m-960kc. 500 watts. R. H. Williams & Sons, Ltd. Daily ex Sun, 12-1 pm, 5-6. Wed, Sat, 8-10 pm. Mountain.

CHYC
Montreal, Que., Can. 411m-730kc. 750 watts. Northern Elec. Co., Ltd. Announcer, N. S. Richards. Wed, 6-12:30 am. Sun, 11 am, 7 pm. CNRM programs occasionally. Eastern.

CJBC
Toronto, Ont. 291.1m-1030kc. 500 watts. Baptist Church.

CJBR
Regina, Sask. 312.3m-960kc, 500 watts. Saskatchewan Co-operative Wheat Producers, Ltd. Thurs, 7:30-9 pm.

CJCA
Edmonton, Alta., Can. 516.9m-580kc. 500 watts. Edmonton Journal, Ltd. Announcer, R. A. Rice. Slogan: "The Sunniest Spot in Sunny Alberta." Daily ex Sun, 12:30 am, markets, news; 7:15 pm, children's program; 7:45, late news. Mon, Fri, 8:30 pm. Wed, 9-11 pm. Fri, 9-11 pm. Sun, 7:30 pm. Mountain.

CJCJ
Calgary, Alta. 434.5m-690kc. 100 watts. Radio Service & Repair Shop.

CJCU
Mission City, B. C., 247.8m-1210kc. 5 watts. E. R. Streeter.

CJGC
London, Ont., Can. 329.5m-910kc. 500 watts. London Free Press. Daily ex Sun, 1-2 pm, stocks, music. Tues, Wed, Thurs, Fri, 7-9 pm. Fri, 11-12 midnight. Sun, 11 am, 2-3 pm, 7, church services. Eastern.

CJGX
Yorkton, Sask. 475.9m-630kc. 500 watts. The Winnipeg Grain Exchange. Daily ex Sun, 9:30 am, 11:30, grain; 1:45 pm. Tues, Fri, 8:30-10 pm. Central.

CJOR
Sea Island, B. C. 291.1m-1030kc. 50 watts. G. C. Chandler.

CJRM
Moose Jaw, Sask. 296.9m-1010kc. 500 watts. James Richardson & Sons, Ltd. Daily ex Sun, 8:30-10:15 am, 11:55-2:30 pm, weather, markets. Mon, Wed, Fri, 6:30 pm, Sat, 10-12 mid. Sun, 9:30 am, 1:30 pm, 9:30-1:30 pm, 12:30. Mountain.

CJSC
Toronto, Can. 356.9m-840kc. 500 watts. The Evening Telegram.

CJWC
Saskatoon, Sask., Can. 329.5m-910kc. 250 watts. Wheaton Elec. Co. Announcer, M. Bowes. Daily ex Sun, 11:45-1 pm. Mon, 8:15-10 pm. Tues, Fri, Sat, 6-7 pm, Tues, Thurs, 5-6 pm. Sun, 3:45-5 pm. Founded Sept. 28, 1925.

CJYC
Toronto, Can. 291.1m-1030kc. 500 watts. Universal Radio of Canada, Ltd. Mon, 6-8 pm, 9-10. Tues, 10-11 pm. Thurs, 8-10 pm. Sat, 6-7 pm. Eastern.

CKAC
Montreal, Que., Can. 410.7m-730kc. 1200 watts. La Presse Announcer, Jacques Cartier. Mon, Wed, Fri, 11:45 pm, orchestra. Daily ex Sat, 4 pm, weather, markets, stocks, reports. Tues, Sat, 7 pm, safety talks; 10:30, dance. Sun, 2:45 pm, Capitol theater; 4:30, first three Thurs of month, CNRM. Last Thurs, Frontenac Breweries studio. Eastern.

CKCD
Vancouver, B. C., Can. 410.7m-730kc. 1000 watts. Vancouver Daily Province. Announcer, W. G. Hassell. Slogan, "Canada's Western Gateway." Mon, Tues, Wed, 8:30-9:30 pm. Thurs, Fri, 8:30-8:50 pm. Sat, 8:30-10:30 pm. Pacific.

CKCI
Quebec, Que. 340.7m-880kc. 22½ watts. Le Soleil, Ltd.

CKCK
Regina, Sask., Can. 312.3m-960kc. 500 watts. Leader Pub. Co. Announcer, A. W. Hooper. "The Queen City of the West." Mon, Tues, Thurs, Fri, 9:45-10:30 am, 1-1:45 pm, 8-10. Wed, Sat, 9:45-10:30 am, 1-1:45 pm. Sun, 9-10 pm. Mountain.

CKCL
Toronto, Can. 356.9m-840kc. 500 watts. The Dominion Battery Co., Ltd. Daily ex Sat, Sun, 10:30 am, 10:58, time; 7 am, 7:20, 7:40, exercises. Mon, 12:30 pm, markets; 3-4:30 pm. Tues, 3-4:30 pm, 6:40-7. Wed, 12:30 pm, 3-4:30 pm. Thurs, 3-4:30 pm. Fri, 11 am, 12:30 pm, markets; 3-4:30 pm. Sat, 7-8 pm. Sun, 3-5 pm. Eastern. Founded May 5, 1925.

CKCO
Ottawa, Ont., Can. 434.5m-690kc. 100 watts. Dr. G. M. Geldert (Ottawa Radio Assn.). Announcer, Dr. O. K. Gibson. Slogans, "Ottawa's Radio Voice." "The Community Voice of Canada's Capital." Tues, 8-10 pm. Sun, 7 pm, services; 9, sacred concert. Eastern. Founded March, 1924.

CKCV
Quebec, P. Q. 340.7m-880kc. 100 watts. G. A. Vandry.

CKCW
Burketon Junction, Ont., Can. 312.3m-960kc. 5,000 watts. Canadian Broadcasting Corp.

CKCX
Toronto, Ont. 291.1m-1030kc. 1000 watts. International Bible Students' Assn. Tues, Fri, 8-10 pm. Sat, 7-8 pm. Sun, 9:30-11 am, 1:30-3 pm, 8:15-9:15, 9:15-10:45. Eastern.

CKFC
Vancouver, B. C., Can. 410.7m-730kc. 50 watts. United Churches of Canada.

CKLC
Red Deer, Alta. 356.9m-840kc. 1000 watts. Alberta Pacific Grain Co. Ltd.

CKMC
Cobalt, Ont. 247.8m-1210kc. 5 watts. R. L. MacAdam.

CKNC
Toronto, Ont., Can. 356.9m-840kc. 500 watts. Canadian National Carbon Co., Ltd. Announcer, Ed. L. Stafford. Mon, Thurs, 9 pm. Eastern. Founded May 2, 1924.

CKOC
Hamilton, Ont., Can. 340.7m-880kc. 50 watts. Wentworth Radio Supply Co., Ltd. Announcer, L. Moore. Slogan, "The Voice of Hamilton." Mon, Sat, 6:15-7:15 pm, organ. Tues, Wed, Thurs, 5:30-6:30 pm. Fri, 6-7 pm. Sat, 4:30-5:30 pm. Sun, 2-3 pm. Eastern.

CKPC
Preston, Ont. 247.8m-1210kc. 7½ watts. Wallace Russ. Mon, Fri, 8-11 pm. Sun, 11-12:30 pm, 3-4:30.

CKPR
Midland, Ont. 267.7m-1120kc. 50 watts. E. O. Swan.

CKSH
St. Hyacinthe, P. Q. 312.3m-960kc. 50 watts. City of St. Hyacinthe.

CKSM
Toronto, Ont. 291.1m-1030kc. 1000 watts. St. Michael's Cathedral.

CKUA
Edmonton, Alta. 516.9m-580kc. 500 watts. U. of Alberta.

An Evening at Home With the Listener In

IN CENTRAL TIME

Call	Met.	Kc.	Watts	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday
CFCA	356.9	840	500	Silent	7:00- 7:15	6:15. 8:15	Silent	7:00-11:45	6:25- 9:30	Silent
CJRM	296.9	1010	50	11:30-12:30	Silent	7:30-10:00	Silent	7:30-10:00	Silent	7:30-10:00
CKAC	410.7	730	7500	7:15-12:00	2:45- 5:45	Silent	7:15-11:30	Silent	8:30- 9:30	Silent
CKCL	356.9	840	5000	6:00- 7:00	2:00- 3:00	Silent	5:00- 1:00	Silent	Silent	Silent
CKNC	356.9	840	500	Silent	Silent	8:00- 9:30	Silent	Silent	8:00- 9:30	Silent
CKY	384.4	780	500	7:30-10:30	6:00- 9:00	7:30-11:00	Silent	8:00-10:00	7:30- 9:00	Silent
CNRO	434.5	690	500	Silent	Silent	6:00-10:00	Silent	6:00-11:00	Silent	Silent
CYH	311	964	250	Silent	9:30-11:00	Silent	Silent	9:30-11:30	Silent	9:30-10:30
CYJ	400	750	1000	9:00-10:00	Silent	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00
KDKA	315.6	950	50000	6:30-10:00	6:00- 9:15	5:00- 9:00	5:00-10:35	5:20-10:00	5:20- 9:00	5:20-10:30
KFAB	309.1	970	2000	8:30-10:00	9:00-10:00	8:30-10:15	8:05-10:30	8:30-10:30	Silent	8:30-10:00
KFDM	483.6	620	500	Silent	8:00- 9:00	Silent	8:00-10:00	Silent	Silent	8:00-10:00
KFH	245.8	1220	500	7:30- 8:30	7:00- 8:00	7:30- 8:30	7:30- 8:30	7:30- 8:30	7:30- 8:30	7:30- 8:30
KFI	468.5	640	5000	8:30- 2:00	8:00-12:00	8:15- 1:00	8:15- 1:00	8:15- 1:00	8:15- 1:00	8:15- 1:00
KFJF	272.6	1100	750	7:15- 2:00	1:30- 9:00	7:15- 8:30	7:15- 8:30	7:15- 8:30	7:15- 8:30	7:15- 8:30
KFNF	461.3	650	2000	5:00- 7:00	6:00- 7:00	5:00- 7:00	5:00- 7:00	5:00- 7:00	5:00- 7:00	5:00 -7:00
KFOA	447.5	670	1000	10:00-11:00	Silent	8:00-11:00	8:00- 2:00	8:00-12:00	8:30- 1:30	8:45- 2:00
KFON	241.8	1240	500	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 3:00
KFRU	249.9	1200	500	Silent	Silent	6:15- 7:15	6:15- 7:15	Silent	6:15-12:00	6:15- 7:15
KFSD	440.9	680	500	6:00-12:00	2:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00
KFUO	545.1	550	500	7:15- 8:15	9:15-10:15	8:00: 9:00	6:30- 7:30	9:30-10:30	Silent	7:15- 8:15
KFVE	234.2	1280	1000	6:45-12:00	7:00-10:30	7:00-12:00	7:00-12:00	7:00-12:00	Silent	7:00-12:00
KFWB	361.2	830	500	8:00- 2:00	10:30- 1:00	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 2:00	9:00- 2:00
KFWI	267.7	1120	500	10:00- 3:00	8:30-12:00	8:00- 2:00	8:00- 1:00	8:00-12:00	8:00- 2:00	8:00-12:00
KGA	260.7	1150	2000	Silent	9:50-11:30	8:00-11:00	8:00-11:00	8:00-11:00	8:00-11:00	8:00-11:00
KGO	384.4	780	5000	10:00- 3:00	8:30-12:00	8:00-11:20	8:00- 1:00	8:00- 2:00	8:00- 2:00	8:00- 2:00
KGW	491.5	610	1000	8:00- 2:00	9:30- 1:00	8:00- 2:00	8:00- 2:00	8:00-12:00	8:00- 2:00	8:00- 2:00
KHJ	416.4	740	500	8:30-12:00	9:00-12:00	Silent	10:00- 1:00	10:00 -1:00	10:00- 1:00	10:00- 1:00
KIAF	421	709	500	Silent	4:00- 5:00	9:00-10:00	Silent	9:00-10:00	Silent	9:00-10:00
KJR	348.6	860	2500	8:00- 1:00	9:15-12:45	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00
KLDS	270.1	1110	1500	Silent	9:15-10:15	Silent	8:00- 9:00	Silent	8:00 9:00	Silent
KLX	508.2	590	500	Silent	Silent	9:00-12:00	Silent	8:30-12:00	Silent	9:00-12:30
KMA	394.5	760	1000	6:00- 9:00	Silent	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00
KMMJ	285.5	1050	500	8:00- 9:00	8:45- 9:45	8:00- 9:00	8:00- 9:00	Silent	8:00- 9:00	8:00- 9:00
KMOX	299.8	1000	5000	6:00- 1:00	6:00-11:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00
KNX	336.9	890	500	9:00- 2:00	6:30-12:00	9:00- 1:00	9:00- 1:00	9:00- 2:00	9:00- 4:00	9:00- 2:00
KOA	325.9	920	5000	Silent	7:30- 8:45	8:30-11:00	8:30- 9:30	8:30-11:00	Silent	7:00-11:00
KOIL	277.6	1080	2000	Silent	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00
KOIN	319	940	1000	9:15-10:00	8:00-12:00	8:00-12:00	8:00-11:30	8:00- 1:30	8:00-12:00	8:00- 1:30
KOMO	305.9	980	1000	8:00- 2:30	9:00-12:00	8:00- 2:30	8:00- 2:30	8:00- 2:30	8:00-12:00	8:00- 2:30
KPO	422.3	710	1000	8:00- 2:00	8:00-12:00	8:00- 2:00	8:00- 1:00	8:00- 1:00	8:00- 1:00	8:00- 1:00
KPRC	293.9	1020	500	7:30-12:00	7:50-10:30	7:30-12:00	7:30- 9:30	7:30- 9:30	7:30-12:00	Silent
KPSN	315.6	950	1000	10:00-11:00	8:00- 9:00	10:00-11:15	10:00-11:15	Silent	10:00-11:15	10:00-11:15
KSBA	267.7	1120	1000	9:00-10:00	8:00- 9:00	6:30- 9:00	6:30-12:00	6:30- 9:00	6:30- 9:00	6:30- 9:00
KSD	545.1	550	500	Silent	6:20- 8:45	9:30-10:30	7:00- 9:00	7:00- 8:30	6:00- 7:00	6:00- 8:30
KSL	302.8	990	1000	9:00-12:00	8:30-11:00	8:00-12:00	7:00- 9:00	8:30-12:00	8:30-12:00	8:30-11:00
KSO	227.1	1320	500	Silent	Silent	7:30- 9:00	7:30- 9:00	7:30- 9:00	7:30- 9:00	7:30- 9:00
KTAB	280.2	1070	500	Silent	9:45-11:15	10:00-12:00	10:00-12:00	12:00-12:00	10:00-12:00	10:00-12:00
KTHS	384.4	780	1000	8:30-10:00	8:30- 9:45	8:30-10:00	6:00-10:00	8:30-10:00	8:30-10:00	6:30- 1:00
KVOO	348.6	860	1000	7:00- 9:00	6:00- 8:15	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00-12:00
KWKH	394.5	760	1000	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00
KYA	309.1	970	500	9:00- 2:00	9:30-10:30	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00
KYW	526	570	2500	6:00-11:05	5:30-10:55	Silent	6:00-11:05	6:00-11:05	6:00-11:05	6:00-11:05
NAA	434.5	690	500	Silent	Silent	6:45- 7:00	7:30- 8:30	Silent	Silent	Silent
PWX	400	750	500	7:30-11:00	7:30-12:00	Silent	8:30-10:00	7:30- 9:00	Silent	Silent
WAAM	348.6	860	500	5:30- 6:30	Silent	6:00-11:30	5:30- 6:30	6:00-11:30	5:30- 6:30	6:00-11:30
WABC	325.9	920	2500	Silent	Silent	6:30-12:00	Silent	6:30-10:01	Silent	6:30-11:00
WADC	296.9	1010	500	Silent	Silent	8:00-11:00	Silent	6:15- 7:15	9:00-11:00	6:15-11:00
WAIU	282.8	1060	5000	Silent	Silent	6:00-11:00	9:00-11:00	Silent	Silent	6:00-11:00
WAMD	225.4	1330	500	4:15- 5:15	6:00-10:15	6:00-11:00	7:00- 8:00	6:15-11:00	6:00- 8:00	6:00-11:00
WBAL	285.5	1050	3000	Silent	5:00- 7:30	5:30-10:00	5:30:10:00	5:30-10:00	5:30-10:00	5:30-10:00
WBAP	499.7	600	1500	6:00- 9:00	9:30-11:00	6:00- 9:00	6:00-12:00	Silent	6:00- 9:00	6:00-12:00
WBBM	389.4	770	1000	8:00- 1:00	8:00- 1:00	Silent	8:00-12:00	8:00- 1:00	8:00-12:00	8:00-10:15
WBBR	256.3	1170	1000	Silent	6:00- 7:00	6:00- 8:00	6:00- 8:30	6:00- 8:00	7:00- 9:00	6:00- 7:00
WBCN	288.3	1040	500	7:00-12:00	4:00- 9:15	Silent	7:00- 1:00	7:00-12:00	7:00- 1:00	7:00-12:00
WBZ	333.1	900	1500	5:30- 9:30	6:15- 9:30	5:00- 9:30	5:15-10:15	5:15-10:00	5:03-10:00	5:15- 9:30
WCAE	516.9	580	500	6:00-10:30	4:30- 9:45	6:00-11:00	6:00-10:30	6:00-11:10	6:00-11:15	6:00-11:00
WCAU	260.7	1150	500	5:30-10:00	2:00-10:00	4:30-10:30	4:00-10:30	4:30-11:00	4:30-11:00	4:30-11:00
WCBD	344.6	870	5000	Silent	8:00-10:00	Silent	8:00-10:00	Silent	8:00-10:00	Silent
WCCO	405.2	740	5000	6:15-11:00	5:10-11:00	6:00-10:00	8:00-10:00	8:00-10:00	6:15-10:05	7:00-10:05
WCFL	483.6	620	1500	6:00-12:00	7:45- 8:45	Silent	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00
WCOA	249.9	1200	500	Silent	7:25- 8:25	8:00-10:00	Silent	8:00- 9:45	Silent	8:00- 9:45
WCSH	428.3	700	500	Silent	6:00- 7:30	6:15- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00-11:00
WDAF	370.2	810	1000	6:00- 1:00	7:15- 8:15	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00	6:00- 1:00
WDBO	288.3	1040	500	8:00- 9:00	6:30- 7:30	7:00- 8:00	7:00- 9:15	6:55- 9:00	8:30- 9:30	6:55- 9:00
WDOD	245.8	1220	500	9:00-10:00	7:30- 9:00	7:00-11:00	7:00-10:00	7:00-10:00	Silent	7:00-10:00
WEAF	491.5	610	5000	5:00-11:00	2:00- 9:30	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00
WEAN	288.3	1040	500	5:30- 9:30	6:30- 7:45	5:30- 9:30	5:30- 9:30	5:30- 9:30	5:30- 9:30	5:30- 9:30
WEAO	282.8	1060	750	Silent	Silent	Silent	6:00- 8:00	7:00- 9:00	7:00- 9:00	Silent
WEBH	365.6	820	2000	7:30-12:00	4:30- 9:00	Silent	7:00-10:15	7:00- 1:00	7:00-11:00	7:00-11:00
WEBJ	256.3	1170	500	Silent	Silent	Silent	6:00- 8:00	6:00- 8:00	Silent	6:00- 8:00
WEEI	461.3	650	500	5:00-10:10	6:20- 9:20	5:30-10:30	5:30-10:00	5:30-10:00	5:30-10:00	5:30-10:00
WEMC	483.6	620	1000	Silent	11:00-12:00	7:00-12:00	Silent	Silent	Silent	Silent
WENR	288.3	1040	500	6:00-12:00	9:30-12:00	Silent	6:00-10:00	6:00-12:00	6:00-10:00	6:00-12:00
WFAA	499.7	600	500	11:30-12:30	6:00-12:00	6:30- 9:30	6:30-12:00	Silent	6:30- 9:30	6:30- 9:30
WFI	405.2	740	500	5:30-10:45	4:30- 9:15	6:15- 7:15	6:15-11:00	6:15- 7:15	6:15-10:00	6:15- 7:15
WFLA	288.3	1040	500	Silent	Silent	7:30- 9:30	7:30- 9:30	7:30- 9:30	7:30- 9:30	7:30- 9:30
WGBF	236.1	1270	500	Silent	7:30- 8:30	7:00-12:30	7:45-10:00	Silent	Silent	7:45-10:00
WGBS	348.6	860	500	6:30-11:00	8:00- 1:00	Silent	6:05- 9:30	Silent	5:50-10:30	Silent
WGHP	319	940	750	Silent	7:00- 8:00	5:00-10:00	5:00-10:00	5:00-10:00	5:00-11:00	5:00-11:00
WGN	305.9	980	500	6:01-11:00	6:10-11:10	Silent	6:01-11:00	6:01-12:00	6:01-11:00	6:01-12:15
WGR	? 302.8	990	750	Silent	6:45- 9:00	7:00-11:00	7:00-11:00	7:00-11:00	7:00-10:00	7:00-11:00
WGY	379.5	790	30000	6:20-11:00	3:00- 9:00	5:30- 7:30	5:30-10:00	5:30-10:00	5:30-11:30	5:30-10:30
WHAR	272.6	1100	1000	6:30- 8:00	6:50- 7:00	6:30- 9:00	6:30- 8:00	Silent	4:30- 9:00	4:30- 6:00
WHAS	461.3	650	500	7:30- 9:00	6:20- 8:15	6:30-10:30	6:30- 9:00	7:30- 9:30	7:30- 9:00	7:00- 9:00
WHAZ	545.1	550	500	Silent	Silent	7:00-11:00	Silent	Silent	Silent	Silent
WHB	336.9	890	500	7:00- 8:00	7:00- 1:00	7:00- 8:00	7:00-10:00	7:00-11:45	7:00-10:00	6:00- 7:00
WHK	265.3	1130	500	5:00-11:00	4:00- 8:30	6:00- 9:30	5:00-10:00	6:00-10:00	5:00-10:00	5:00-10:00
WHN	394.5	760	500	Silent	5:30-11:00	5:30-11:00	6:00-11:00	5:30-12:00	6:00-12:00	5:30-12:00
WHO	535.4	560	5000	Silent	4:00- 9:00	6:30-12:00	6:30-10:30	6:30-11:00	6:30-10:30	6:30-10:00
WHT	416.4	720	5000	7:00-10:00	7:00-12:00	Silent	7:00- 1:00	7:00-10:00	7:00- 1:00	7:00-10:00
WIBO	416.4	720	500	5:00- 7:00	Silent	Silent	10:00-11:00	10:00- 1:00	10:00-11:00	10:00- 1:00
WIP	508.2	590	500	7:00-11:00	8:00-11:00	Silent	7:00-11:00	Silent	7:00-11:00	Silent
WJAR	374.8	800	500	Silent	6:00- 9:15	6:45-10:00	6:30- 9:00	6:30-10:00	6:45-10:00	6:45-10:30
WJAX	336.9	890	1000	7:00- 9:00	5:30-10:00	7:00-11:00	7:00- 9:00	6:00-10:00	Silent	6:00-10:00
WJAZ	263	1140	5000	7:00-11:00	7:00- 9:00	Silent	7:00-11:00	7:00-11:00	7:00-12:00	7:00-11:00
WJJD	365.6	820	1000	10:15- 2:00	9:00-10:15	Silent	6:00- 1:00	8:00-12:00	8:00-12:00	8:00- 1:00
WJR	440.9	680	5000	5:00-11:00	5:00- 9:30	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00
WJZ	454.3	660	30000	6:00-10:30	6:00- 9:30	6:00-10:30	6:00-10:30	6:00-10:30	6:00-10:30	6:00-10:30
WKAQ	340.7	880	500	Silent	Silent	6:30- 8:00	Silent	6:00- 8:00	Silent	6:00- 8:00
WKRC	333.1	900	500	5:00-11:00	6:00-12:00	5:00- 1:00	5:00-11:00	5:00- 1:00	7:00- 9:00	8:00-10:00
WLAC	225.4	1330	1000	7:00- 9:00	9:15-10:15	7:00- 9:00	9:00-12:00	8:00- 9:00	9:00-12:00	Silent
WLIB	305.9	980	5000	11:00-12:15	5:00- 6:10	Silent	7:00-12:15	7:00- 8:00	7:00-12:15	7:00- 8:00
WLIT	405.2	740	500	6:30- 7:30	1:00- 3:00	6:30 10:00	6:30- 7:30	6:15-10:30	6:30- 7:30	6:30-11:00
WLS	344.6	870	5000	6:15- 1:00	7:00- 8:55	Silent	7:00- 8:30	6:00-12:00	7:10- 7:55	6:00-12:00
WLW	428.3	700	5000	6:00- 9:30	6:30- 9:30	6:00-10:20	5:00-10:00	6:00-11:30	6:00-12:05	Silent
WMAK	545.1	550	750	6:30-11:00	6:50- 7:50	6:30-10:00	6:30-12:00	6:15- 9:30	6:00-10:00	6:30-10:00
WMAQ	447.5	670	1000	6:00- 2:00	7:00-10:00	Silent	6:30- 2:00	6:00- 2:00	6:00-12:00	6:00- 2:00
WMBB	252	1190	500	7:00-11:00	3:00-11:00	Silent	7:00-11:00	7:00-11:00	7:00-11:00	7:00-11:00
WMC	516.9	580	500	7:30- 8:30	5:20- 7:15	8:00- 9:30	7:30-12:00	8:00- 9:00	7:45-10:00	7:30-12:00
WMCA	370.2	810	500	5:00-11:15	5:00-12:00	5:30-12:30	5:00-11:00	5:00-12:30	5:30-12:00	5:30-11:00
WNAC	288.3	1040	500	5:00-10:00	5:30- 9:00	6:00-11:30	6:30-10:00	6:30-10:00	6:00- 9:00	6:00-10:00
WNYC	526	570	500	5:00- 9:35	5:00- 9:35	5:00- 9:35	5:00- 9:35	5:00- 9:35	5:00- 9:35	5:00- 9:30
WOAI	319	940	5000	Silent	7:45- 8:15	Silent	6:15- 9:30	8:30- 9:30	8:30- 9:30	8:30- 9:30
WOAN	285.5	1050	500	Silent	9:00-10:00	9:00- 1:30	9:00-10:00	9:00-10:00	9:00-10:00	9:00-10:00
WOC	374.8	800	5000	7:00- 8:00	6:30- 8:45	7:30- 9:30	8:00-10:00	7:30-10:00	7:00- 9:00	7:00-10:00
WOI	265.3	1130	2500	Silent	Silent	7:45- 8:45	Silent	Silent	7:30- 8:30	Silent
WOK	252	1190	5000	9:00-12:30	9:30-12:30	Silent	9:00-12:30	9:00-12:00	9:00-12:30	9:00-12:30
WOKT	209.7	1430	500	6:00-11:30	10:15-11:15	6:00-10:00	6:00-11:00	6:00-11:00	6:00-11:00	6:00-11:00
WOO	508.2	590	500	6:30- 7:30	6:30- 8:30	6:30- 9:55	6:30- 7:30	6:30- 9:55	6:30- 7:30	6:30- 9:55
WOQ	336.9	890	500	8:00-11:00	7:00- 7:15	Silent	8:00- 9:00	Silent	7:00- 9:00	Silent
WOR	422.3	710	500	6:00-11:00	3:30- 7:45	6:00-11:00	6:30-11:30	6:00-11:00	6:00-11:00	6:30-11:00
WOS	422.3	710	500	Silent	Silent	7:00-11:00	Silent	7:00- 9:00	Silent	7:00- 9:00
WOW	508.2	590	1000	6:00-11:00	9:00-10:00	5:45-10:00	6:00-11:00	Silent	5:45-11:00	5:00-11:00
WPG	272.6	1100	5000	6:00-11:30	5:15-10:00	6:00-11:00	6:00-11:30	6:00-11:00	6:00-11:00	Silent
WQAM	322.4	930	750	6:00- 7:30	6:30- 7:30	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00	6:00- 9:00
WRC	468.5	640	500	6:00-10:00	3:00- 9:30	5:00-11:00	5:00-11:00	5:00-11:00	5:00-11:00	5:00-10:30
WRR	461.3	650	500	6:00-10:00	8:00-10:30	6:00-12:00	6:00- 9:00	Silent	6:00-12:00	8:00-10:00
WRVA	254.1	1180	1000	Silent	Silent	7:30-11:00	Silent	7:30-12:00	7:30-12:00	7:30-12:00
WSAI	361.2	830	5000	7:00- 9:15	7:00- 8:15	6:00-10:00	6:00-12:00	6:00-10:30	6:00-10:00	7:00- 8:00
WSB	475.9	630	1000	8:00-12:00	4:00- 9:15	5:30-12:00	7:00-12:00	10:45-12:00	8:00-12:00	8:00-12:00
WSBC	232.4	1290	500	6:30- 1:00	5:00- 1:00	Silent	6:30- 1:00	6:30- 1:00	6:30- 1:00	6:30- 1:00
WSKC	272.6	1100	500	10:00- 1:00	Silent	8:00-10:00	Silent	8:00-10:00	Silent	Silent
WSM	340.7	880	5000	8:00-11:00	6:20- 8:45	6:30-11:00	7:00-11:00	7:00-11:00	7:00-11:00	8:00- 9:00
WSMB	322.4	930	500	8:30-10:30	Silent	8:30-10:30	Silent	8:30-10:30	8:30-10:30	Silent
WSOE	270.1	1110	250	8:00- 9:00	7:30- 8:30	6:00- 9:00	6:00-10:00	6:00- 9:00	6:00-10:00	6:00-10:00
WSUI	475.9	630	500	9:00-10:00	9:30-10:30	7:30-12:15	Silent	7:30- 8:30	Silent	Silent
WTAG	516.9	580	500	6:30-10:30	3:00- 9:45	6:30-11:00	6:30-11:00	6:30-11:00	6:30-11:00	6:30-10:30
WTAM	399.8	750	3500	5:15-11:00	5:00-10:15	5:00-11:30	5:00-11:00	5:15-10:00	5:00-11:00	5:30-11:00
WTIC	535.4	560	500	5:30-10:00	3:30- 6:30	5:30-10:00	5:30-10:00	5:30-10:00	5:30-10:00	5:30-10:00
WWJ	352.7	850	1000	Silent	6:20- 9:15	5:00-10:00	5:00- 9:00	5:00- 9:30	5:00- 9:00	5:00-10:30

IN EASTERN TIME

Call	Location	Met.	Kc.	Watts	Saturday	Sunday	Monday	Tuesday	Wed.	Thursday	Friday
CFCA	Toronto	356.9	840	500	Silent	8:00-10-15	7:15- 9:15	Silent	8:00-12:45	7:25-10:30	Silent
CJRM	Moosejaw	296.9	1010	50	12:30- 1:30	Silent	8:30-11:00	Silent	8:30-11:00	Silent	8:30-11:00
CKAC	Montreal	410.7	730	7500	8:15- 1:00	3:45- 6:45	Silent	8:15-12:30	Silent	9:30-10:30	Silent
CKCL	Toronto	356.9	840	5000	7:00- 8:00	3:00- 4:00	Silent	6:00-12:00	Silent	Silent	Silent
CKNC	Toronto	356.9	840	500	Silent	Silent	9:00-10:30	Silent	Silent	9:00-10:30	Silent
CKY	Winnipeg	384.4	780	500	8:30-11:30	7:00-10:00	8:30-12:00	Silent	9:00- 1:00	8:30-10:00	Silent
CNRO	Ottawa	434.5	690	500	Silent	Silent	7:00-11:00	Silent	7:00 12:00	Silent	Silent
CYH	Monterey	311	964	250	Silent	10:30-12:00	Silent	Silent	10:30-12:30	Silent	10:30-11:30
CYJ	Mexico City	400	750	1000	10:00-11:00	Silent	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00
KDKA	Pittsburgh	315.6	950	50000	7:30-11:00	7:00-10:1	6:00-10:00	6:00-11:35	6:20-11:00	6:20-10:00	6:20-11:30
KFAB	Lincoln	309.1	970	2000	9:30-11:00	10:00-11:00	9:30-11:15	9:05-11:30	9:30-11:30	Silent	9:30-11:00
KFDM	Beaumont	483.6	620	500	Silent	9:00-10:00	Silent	9:00-11:00	Silent	Silent	9:00-11:00
KFH	Wichita	245.8	1220	500	8:30- 9:30	8:00- 9:00	8:30- 9:30	8:30- 9:30	8:30- 9:30	8:30- 9:30	8:30- 9:30
KFI	Los Angeles	468.5	640	5000	9:30- 3:00	9:00- 1:00	9:15- 2:00	9:15- 2:00	9:15- 2:00	9:15- 2:00	9:15- 2:00
KFJF	Okla. City	272.6	1100	750	8:15- 3:00	2:30-10:00	8:15- 9:30	8:15- 9:30	8:15- 9:30	8:15- 9:30	8:15- 9:30
KFNF	Shenandoah	461.3	650	2000	7:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00	6:00- 8:00
KFOA	Seattle	447.5	670	1000	11:00-12:00	Silent	9:00-12:00	9:00- 3:00	9:00- 1:00	9:30- 2:30	9:45- 3:00
KFON	Long Beach	241.8	1240	500	9:00- 3:00	9:00- 3:00	9:00- 3:00	9:00- 3:00	9:00- 3:00	9:00- 3:00	9:00- 4:00
KFRU	Columbia	249.9	1200	500	Silent	Silent	7:15- 8:15	7:15- 8:15	Silent	7:15- 1:00	7:15- 8:15
KFSD	San Diego	440.9	680	500	7:00- 1:00	3:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00
KFUO	St. Louis	545.1	550	500	8:15- 9:15	10:15-11:15	9:00-10:00	7:30- 8:30	10:30-11:30	Silent	8:15- 9:15
KFVE	St. Louis	234.2	1280	1000	7:45- 1:00	8:00-11:30	8:00- 1:00	8:00- 1:00	8:00- 1:00	Silent	8:00- 1:00
KFWB	Hollywood	361.2	830	500	9:00- 2:00	11:30- 2:00	9:00- 2:00	9:00- 2:00	9:00- 2:00	9:00- 2:00	9:00- 2:00
KFWI	San Fran.	267.7	1120	500	11:00- 5:30	10:50-12:00	9:00- 3:00	9:00- 3:30	9:00- 3:00	9:00- 3:00	9:00- 3:00
KGA	Spokane	260.7	1150	2000	Silent	10:50-12:30	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00	9:00-12:00
KGO	Oakland	384.4	780	5000	11:00- 4:00	9:30- 1:00	9:00-12:20	9:00- 2:00	9:00- 3:00	9:00- 3:00	9:00- 3:00
KGW	Portland	491.5	610	1000	9:00- 3:00	10:30- 2:00	9:00- 3:00	9:00- 3:00	9:00- 1:00	9:00- 3:00	9:00- 3:00
KHJ*	Los Angeles	416.4	740	500	11:00- 1:00	10:00- 1:00	Silent	11:00- 2:00	11:00- 2:00	9:30- 2:00	9:30- 2:00
KIAF	Sihtipok	421	709	500	Silent	3:00- 4:00	8:00- 9:00	Silent	8:00- 9:00	Silent	8:00- 9:00
KJR	Seattle	348.6	860	2500	9:00- 1:00	9:00- 2:00	9:00- 1:00	9:00- 1:00	9:00- 1:00	9:00- 1:00	9:00- 1:00
KLDS	Independ.	270.1	1110	1500	Silent	10:15-11:15	Silent	9:00-10:00	Silent	9:00-10:00	Silent
KLX	Oakland	508.2	590	500	Silent	Silent	10:00- 1:00	Silent	9:30- 1:00	Silent	10:00- 1:30
KMA	Shenandoah	394.5	760	1000	7:00-10:00	Silent	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00
KMMJ	Clay Center	285.5	1050	500	9:00-10:00	9:45-10:45	9:00-10:00	9:00-10:10	Silent	9:00-10:00	9:00-10:00
KMOX	St. Louis	299.8	1000	5000	7:00- 2:00	7:00-12 00	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00
KNX	Hollywood	336.9	890	500	10:00- 3:00	7:30- 1:00	10:00- 2:00	10:00- 2:00	10:00- 3:00	10:00- 3:00	10:00- 3:00
KOA	Denver	325.9	920	5000	Silent	8:30- 9:45	9:30-12:00	9:30-10:30	9:30-12:00	Silent	8:00-12:00
KOIL	Council Blfs	277.6	1080	2000	Silent	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00
KOIN	Portland	319	940	1000	10:15-11:00	9:00- 1:00	9:00- 2:30	9:00-12:30	9:00- 2'30	9:00- 1:00	9:00- 2:30
KOMO	Seattle	305.9	980	1000	9:00- 3:30	10:00- 1:00	9:00- 3:30	9:00- 3:30	9:00- 3:30	9:00- 1:00	9:00- 3:30
KPO	San Fran.	422.3	710	1000	9:00- 3:00	9:00- 1:00	9:00- 3:00	9:00- 2:00	9:00- 2:00	9:00- 2:00	9:00- 2:00
KPRC	Houston	293.9	1020	500	8:30- 1:00	8:50-11:30	8:30- 1:00	8:30-10:30	8:30 10:30	8:30- 1:00	Silent
KPSN	Pasadena	315.6	950	1000	11:00-12:00	9:00-10:00	11:00-12:15	11:00-12:15	5 Silent	11:00-12:15	51:00-12:15
KSBA	Shreveport	267.7	1120	1000	10:00-11:00	9:00-10:00	7:30-10:00	7:30- 1:00	7:30-10:00	7:30-10:00	7:30-10:00
KSD	St. Louis	545.1	550	500	Silent	7:20- 9:45	10:30-11:30	8:00-10:00	8:00- 9:30	7:00- 8:00	7:00- 9:30
KSL	Salt Lake	302.8	990	1000	10:00- 1:00	9:30-12:00	9:00- 1:00	9:00-12:30	9:30- 1:00	9:30- 1:00	9:30-12:00
KSO	Clarinda	227.1	1320	500	Silent	Silent	8:30-10:00	8:30-10:00	8:30-10:00	8:30-10:00	8:30-10:00
KTAB	Oakland	280.2	1070	500	Silent	10:45-12:15	11:00- 1:00	11:00- 1:00	11:00- 1:00	12:00- 3:00	11:00- 1:00
KTHS	Hot Springs	384.4	780	1000	9:30-11:00	9:30-10:45	9:30-11:00	7:00-11:00	9:30-11:00	9:30-11:00	7:30-12:00
KVOO	Tulsa	348.6	860	1000	8:00-10:00	7:00- 9:15	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00- 1:00
KWKH	Kennonw'd.	394.5	760	1000	10:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00	10:00- 1:00
KYA	San Fran.	309.1	970	500	10:00- 3:00	10:30-11:30	9:00- 1:00	9:00- 1:00	9:00- 1:00	9:00- 1:00	9:00- 1:00
KYW	Chicago	526	570	2500	7:00-12:05	6:30-11:35	Silent	7:00-1. 05	7:00-12:05	7:00-12:05	7:00-12:05
NAA	Radio	434.5	690	500	Silent	Silent	7:45- 8:00	7:45- 8:00	7:25- 8:40	7:45- 8:00	7:45- 8:00
PWX	Havana	400	750	500	8:30-12:00	8:30- 1:00	Silent	9:30-11:00	8:30-10:00	Silent	Silent
WAAM	Newark	348.6	860	500	6:30- 7:30	Silent	7:00-12:30	6:30- 7:30	7:00-12:30	6:30- 7:30	7:00-12:30
WABC	New York	329.5	920	2500	Silent	Silent	7:30- 1:00	Silent	7:30- 1:00	Silent	7:30- 1:00
WADC	Akron	296.9	1010	500	Silent	Silent	9:00-12:00	Silent	7:15- 8:15	10:00-12:00	7:15-12:00
WAIU	Columbus	282.8	1060	5000	Silent	Silent	7:00-12:00	10:00-12:00	Silent	Silent	7:00-12:00
WAMD	Minneapolis	225.4	1330	500	5:15- 6:15	7:00-11:15	7:00-12:00	8:00- 9:00	7:15-12:00	7:00- 9:00	7:00-12:00
WBAL	Baltimore	285.5	1050	3000	Silent	6:00- 8:30	6:30-10:00	6:30-10:00	6:30-10:00	6:30-10:00	6:30-10:00
WBAP	Fort Worth	499.7	600	1500	7:00-10:00	10:30-12:00	7:00-10:00	7:00- 1:00	Silent	7:00-10:00	7:00- 1:00
WBBM	Chicago	389.4	770	1000	9:00- 2:00	9:00- 2:00	Silent	9:00- 1:00	9:00- 2:00	9:00- 1:00	9:00-11:15
WBBR	Staten Isld.	256.3	1170	1000	Silent	7:00- 8:00	7:00- 9:00	7:00- 9:30	7:00- 9:00	8:00-10:00	7:00- 8:00
WBCN	Chicago	288.3	1040	500	8:00- 1:00	5:00-10:15	Silent	8:00- 2:00	8:00- 1:00	8:00- 2:00	8:00- 1:00
WBZ	Springfield	333.1	900	1500	6:30-10:30	7:15-10:30	6:00-10:30	6:15-11:15	6:15-11:00	6:03-11:00	6:15-10:30
WCAE	Pittsburgh	516.9	580	500	7:00-11:30	5:30-10:45	7:00-12:00	7:00-11:30	7:00-12:10	7:00-12:15	7:00-12:00
WCAU	Philadelphia	260.7	1150	500	6:30-11:00	3:00-11:00	5:30-11:30	5:00-11:30	5:30-12:00	5:30-12:00	5:30-12:00
WCBD	Zion	344.6	870	5000	Silent	9:00-10:00	Silent	9:00-10:00	Silent	9:00-10:00	Silent
WCCO	Minn.-St. P.	405.2	740	5000	6:15-12:00	6:10-12:00	7:00-11:00	9:00-11:00	9:00-11:00	7:15-11:05	8:00-11:05
WCFL	Chicago	483.6	620	1500	7:00- 1:00	8:45- 9:45	Silent	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00
WCOA	Pensacola	249.9	1200	500	Silent	8:25- 9:25	9:00-11:00	Silent	9:00-10:45	Silent	9:00-10:45
WCSH	Portland	428.3	700	500	Silent	7:00- 8:30	7:15-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-12:00
WDAF	Kansas City	370.2	810	1000	7:00- 2:00	8:15- 9:15	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00
WDBO	Orlando	288.3	1040	500	9:00-10:00	7:30- 8:30	8:00- 9:00	8:00-10:15	7:55-10:00	9:30-10:30	7:55-10:00
WDOD	Chattanooga	245.8	1220	500	10:00-11:00	8:30-10:00	8:00-12:00	8:00-11:00	8:00-11:00	Silent	8:00-11:00
WEAF	New York	491.5	610	5000	6:00-12:00	3:00-10:30	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00
WEAN	Providence	288.3	1040	500	6:30-10:30	7:30- 8:45	6:30-10:30	6:30-10:30	6:30-10:30	6:30-10:30	6:30-10:30
WEAO	Columbus	282.8	1060	750	Silent	Silent	Silent	7:00- 9:00	8:00-10:00	8:00-10:00	Silent
WEBH	Chicago	365.6	820	2000	8:30- 1:00	5:30-10:00	Silent	8:00-11:15	8:00- 2:00	8:00-12:00	8:00-12:00
WEBJ	New York	256.3	1170	500	Silent	Silent	Silent	7:00- 9:00	7:00- 9:00	Silent	7:00- 9:00
WEEI	Boston	461.3	650	500	6:00-11:10	7:20-10.20	6:30-11:30	6:30 11:00	6:30-11:00	6:30 11:00	6:30 11:00
WEMC	Berrien Spg.	483.6	620	1000	Silent	12:00- 1:00	8:00- 1:00	Silent	Silent	Silent	Silent
WENR	Chicago	288.3	1040	500	7:00- 1:00	10:30- 1:00	Silent	7:00-11:00	7:00- 1:00	7:00-11:00	7:00- 1:00
WFAA	Dallas	499.7	600	500	12:30- 1:30	7:00- 1:00	7:30-10:30	7:30- 1:00	Silent	7:30-10:30	7:30-10:30
WFI	Philadelphia	405.2	740	500	6:30-11:45	5:30-10.15	7:15- 8:15	7:15-12:00	7:15- 8:15	7:15-11:00	7:15- 8:15
WFLA	Clearwater	288.3	1040	500	Silent	Silent	8:30-10:30	8:30-10:30	8:30-10:30	8:30-10:30	8:30-10:30
WGBF	Evansville	236.1	1270	500	Silent	8:30- 1:30	8:00- 1:30	8:45-11:00	Silent	Silent	8:45-11:00
WGBS	New York	348.6	860	500	7:30-12:00	9:00- 2:00	Silent	7:05-10:30	Silent	6:50-11:30	Silent
WGHP	Detroit	319	940	750	Silent	8:00- 9:00	6:00-11:00	6:00-11:00	6:00-11:00	6:00-12:00	6:00-12:00
WGN	Chicago	305.9	980	500	7:01-12:00	7:10-12:10	Silent	7:01-12:00	7:01- 1:00	7:01-12:00	7:01- 1:15
WGR	Buffalo	302.8	990	750	Silent	7:45-10:00	8:00-12:00	8:00-12:00	8:00-12:00	8:00- 1:00	8:00-12:00
WGY	Schenectady	379.5	790	30000	7:20-12:00	4:00-10:00	6:30- 8:30	6:30-11:00	6:30-11:00	6:30-12:00	6:30-11:30
WHAR	AtlanticCity	272.6	1100	1000	7:30- 9:00	7:50- 8:00	7:30-10:00	7:30- 9:00	Silent	5:30-10:00	5:30- 7:00
WHAS	Louisville	461.3	650	500	8:30-10:00	7:20- 9:15	7:30-11:30	7:30-10:00	8:30-10:30	8:30-10:00	8:00-10:00
WHAZ	Troy	545.1	550	500	Silent	Silent	8:00- 12:00	Silent	Silent	Silent	Silent
WHB	Kansas City	336.9	890	500	8:00- 9:00	8:00- 2:00	8:00- 9:00	8:00-11:00	8:00-12:45	8:00-11:00	8:00- 9:00
WHK	Cleveland	265.3	1130	500	6:00-12:00	5:00- 9:30	7:00-10:30	6:00-11:00	7:00-11:00	6:00-11:00	6:00-11:00
WHN	New York	394.5	760	500	Silent	6:30-12:00	6:30-12:00	7:00-12:00	6:30- 1:00	7:00- 1:00	6:30- 1:00
WHO	Des Moines	535.4	560	5000	Silent	5:00-10:00	7:30- 1:00	7:30-11:30	7:30-12:00	7:30-11:30	7:30-11:00
WHT	Chicago	416.4	720	5000	8:00-11:00	8:00- 1:00	Silent	8:00- 2:00	8:00-11:00	8:00- 2:00	8:00-11:00
WIBO	Chicago	416.4	720	500	6:00- 8:00	Silent	Silent	11:00-12:00	11:00- 2:00	11:00-12:00	11:00- 2:00
WIP	Philadelphia	508.2	590	500	8:00-12:00	9:00-12:00	Silent	8:00-12:00	Silent	8:00-12:00	Silent
WJAR	Providence	374.8	800	500	Silent	7:00-10:15	7:45-11:00	7:30-10:00	7:30-11:00	7:45-11:00	7:45-11:30
WJAX	Jacksonville	336.9	890	1000	8:00-10:00	6:30-11:00	8:00-12:00	8:00-10:00	7:00-11:00	Silent	7:00-11:00
WJAZ	Chicago	263	1140	5000	8:00-12:00	8:00-10:00	Silent	8:00-12:00	8:00-12:00	8:00- 1:00	8:00-12:00
WJJD	Mooseheart	365.6	820	1000	11:15- 3:00	10:00-11:15	Silent	7:00- 2:00	9:00- 1:00	9:00- 1:00	9:00- 2:00
WJR	Detroit	440.9	680	5000	6:00-12:00	6:00-10:30	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00
WJZ	New York	454.2	660	30000	7:00-11:30	7:00-10:30	7:00-11:30	7:00-11:30	7:00-11:30	7:00-11:30	7:00-11:30
WKAQ	San Juan	340.7	880	500	Silent	Silent	Silent	Silent	7:00- 9:00	7:00- 9:00	7:00- 9:00
WKRC	Cincinnati	333.1	900	500	6:00-12:00	6:00- 1:00	6:00- 2:00	6:00-12:00	6:00- 1:00	8:00-10:00	9:00-11:00
WLAC	Nashville	225.4	1330	1000	8:00-10:00	10:15-11:15	8:00-10:00	10:00- 1:00	8:00-10:00	10:00- 1:00	Silent
WLIB	Chicago	305.9	980	5000	12:00- 1:15	6:00- 7:10	Silent	8:00- 1:15	8:00- 9:00	8:00- 1:15	8:00- 9:00
WLIT	Philadelphia	405.2	740	500	7:30- 8:30	2:00- 4:00	7:30-11:00	7:30- 8:30	7:15-11:30	7:30- 8:30	7:30-12:00
WLS	Chicago	344.6	870	5000	7:15-12:00	8:00- 9:55	Silent	8:00- 9:30	7:00- 1:00	8:10- 8:55	7:00- 1:00
WLW	Cincinnati	428.3	700	5000	7:00-10:00	7:30-10:30	7:00-11:20	6:00-11:00	7:00-12:30	7:00- 1:05	Silent
WMAK	Lockport	545.1	550	750	7:30-12:00	7:50- 8:50	7:30-11:00	7:30- 1:00	7:15-10:30	7:00-11:00	7:30-11:00
WMAQ	Chicago	447.5	670	1000	7:00- 3:00	8:00-11:00	Silent	7:30- 3:00	7:00- 3:00	7:00- 1:00	7:00- 3:00
WMBB	Chicago	252	1190	500	8:00-12:00	4:00-12:00	Silent	8:00-12:00	8:00-12:00	8:00-12:00	8:00-12:00
WMC	Memphis	516.9	580	500	8:30- 9:30	7:20- 9:15	9:00-10:30	8:30- 1:00	9:00-10:00	8:45-11:00	8:30- 1:00
WMCA	New York	370.2	810	500	6:00-12:15	6:00- 1:00	6:30- 1:30	6:00-12:00	6:00- 1:30	6:30- 1:00	6:30-12:00
WNAC	Boston	288.3	1040	500	6:00-11:00	6:30-10:00	7:00-12:30	7:30-11:00	7:30-11:00	7:00-10:00	7:00-11:00
WNYC	New York	526	570	500	6:00-10:35	6:00-10:35	6:00-10:35	6:00-10:35	6:00-10:35	6:00-10:35	6:00 10:35
WOAI	San Antonio	319	940	5000	Silent	8:45- 9:45	Silent	7:15-10:30	9:30-10:30	9:30-10:30	9:30-10:30
WOAN	Lawrenceb'g	285.5	1050	500	Silent	10:00-11:00	10:00- 2:30	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00
WOC	Davenport	374.8	800	5000	8:00- 9:00	7:30- 9:45	8:30-10:30	9:00-11:00	8:30-11:00	8:00-10:00	8:00-11:00
WOI	Ames	265.3	1130	2500	Silent	Silent	8:45- 9:45	Silent	Silent	8:30- 9:30	Silent
WOK	Homewood	252	1190	5000	10:00- 1:30	10:00- 1:30	Silent	10:00- 1:30	10:00- 1:30	10:00- 1:30	10:00- 1:30
WOKT	Rochester	209.7	1430	500	7:00-12:30	11:15-12:15	7:00-11:00	7:00-12:00	7:00-12:00	7:00-12:00	7:00-12:00
WOO	Philadelphia	508.2	590	500	7:30- 8:30	7:30- 9:30	7:30-10:55	7:30- 8:30	7:30-10:55	7:30- 8:30	7:30-10:55
WOQ	Kansas City	336.9	890	500	9:00-12:00	9:00-10:15	Silent	9:00-10:00	Silent	8:00-10:00	Silent
WOR	Newark	422.3	710	500	7:00-12:00	4:30- 8:45	7:00-12:00	7:30-12:30	7:00-12:00	7:00-12:00	7:30-12:00
WOS	Jeff'n City	422.3	710	500	Silent	Silent	8:00-12:00	Silent	8:00-10:00	Silent	8:00-10:00
WOW	Omaha	508.2	590	1000	7:00-12:00	10:00-11:00	6:45-11:00	7:00-12:00	Silent	6:45-12:00	6:00-12:00
WPG	AtlanticCity	272.6	1100	5000	7:00-12:30	7:30- 8:30	7:00-12:00	7:00-12:30	7:00-12:00	7:00-12:00	Silent
WQAM	Miami	322.4	930	750	7:00- 8:30	6:15-11:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00	7:00-10:00
WRC	Washington	468.5	640	500	7:00-11:00	4:00-10:30	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00	6:00-11:30
WRR	Dallas	461.3	650	500	7:00-10:00	9:00-11:30	7:00-12:00	7:00-10:00	Silent	7:00- 1:00	9:00-11:00
WRVA	Richmond	254.1	1180	1000	Silent	Silent	8:30-12:00	Silent	8:30- 1:00	8:30- 1:00	8:30- 1:00
WSAI	Cincinnati	361.2	830	5000	8:00-10:15	7:45- 9:45	7:30-12:00	6:45-10:00	7:00-10:00	6:15-10:00	7:00- 9:00
WSB	Atlanta	475.9	630	1000	9:00- 1:00	5:00-10:15	6:30- 1:00	8:00- 1:00	9:00- 1:00	8:30- 1:00	9:00- 1:00
WSBC	Chicago	232.4	1290	500	7:30- 2:00	6:00- 2:00	Silent	7:30- 2:00	7:30- 2:00	7:30- 2:00	7:30- 2:00
WSKC	Bay City	272.6	1100	500	11:00- 2:00	Silent	9:00-11:00	Silent	9:00-11:00	Silent	Silent
WSM	Nashville	340.7	880	5000	9:00-12:00	7:20- 9:45	7:30-12:00	8:00-12:00	8:00-12:00	8:00-12:00	9:00-10:00
WSMB	New Orleans	322.4	930	500	9:30-11:30	Silent	9:30-11:30	Silent	9:30-11:30	9:30-11:30	Silent
WSOE	Milwaukee	270.1	1110	250	9:00-10:00	8:30- 9:30	7:00-10:00	7:00-10:00	7:00-10:00	7:00-11:00	7:00-11:00
WSUI	Iowa City	475.9	630	500	10:00-11:00	10:30-11:30	8:30- 1:15	Silent	8:30- 9:30	Silent	Silent
WTAG	Worcester	516.9	580	500	7:30-11:30	4:00-10:45	7:30-12:00	7:30-12:00	7:30-12:00	7:30-12:00	7:30-11:30
WTAM	Cleveland	399.8	750	3500	6:15-12:00	6:00-11:15	6:00-12:30	6:00-12:00	6:00-12:00	6:00-12:00	6:00-12:00
WTIC	Hartford	535.4	560	500	6:30-11:00	4:30- 7:30	6:30-11:00	6:30-11:00	6:30-11:00	6:30-11:00	6:30-11:00
WWJ	Detroit	352.7	850	1000	Silent	7:20-10:15	6:00-11:00	6:00-10:00	6:00-10:00	6:00-10:00	6:00-11:30

STATE AND CITY INDEX

Alabama

City	Call	Meters	Kc.	Watts
Auburn	WAPI	352.9	920	1,000
Birmingham	WBRC	243.8	1,230	250
	WKBC	218.8	1,370	10
Gadsen	WJBY	234.2	1,280	50
Montgomery	WIBZ	230.6	1,300	15

Arizona

City	Call	Meters	Kc.	Watts
Flagstaff	KFXY	205.4	1,460	25
Phoenix	KFAD	272.6	1,100	500
	KFCB	243.8	1,230	125
Prescott	KPJM	214.2	1,400	15
Tucson	KGAR	234.2	1,280	100

Arkansas

City	Call	Meters	Kc.	Watts
Blytheville	KLCN	285.5	1,050	50
Fayetteville	KUOA	296.9	1,010	500
Hot Springs	KTHS	384.4	780	1,000

California

City	Call	Meters	Kc.	Watts
Avalon	KFWO	299.8	1,000	250
Berkeley	KRE	256.3	1,170	100
Burbank	KELW	228.9	1,310	250
El Centro	KGEN	225.4	1,330	15
Fresno	KMJ	365.6	820	50
Holy City	KFQU	249.9	1,200	100
Hollywood	KFQZ	232.4	1,290	100
	KFWB	361.2	830	500
Inglewood	KMIC	223.7	1,340	250
La Crescenta	KGFH	223.7	1,340	250
Long Beach	KFON	241.8	1,240	500
	KGER	215.7	1,390	100
Los Angeles	KFI	468.5	640	5,000
	KFPR	232.4	1,290	250
	KFSG	275.1	1,090	500
	KGEF	263	1,140	500
	KGFJ	208.2	1,440	100
	KHJ	416.4	720	500
	KMTR	526	570	500
	KNX	336.9	890	500
	KPLA	252	1,190	500
	KRLO	215.7	1,390	250
	KTBI	288.3	1,040	500
Lower Lake	KGEU	227.1	1,320	50
Oakland	KFUS	256.3	1,170	50
	KFWM	236.1	1,270	500
	KGO	384.4	780	5,000
	KLS	245.8	1,220	250
	KLX	508.2	590	500
	KTAB	280.2	1,070	500
	KZM	245.8	1,220	100
Pasadena	KPPC	228.9	1,310	50
	KPSN	315.6	950	1,000
Sacramento	KFBK	535.4	560	100
San Ber'dino	KFWC	222.1	1,350	100
San Diego	KFBC	247.8	1,210	100
	KFSD	440.9	680	500
San Francisco	KFRC	454.3	600	1,000
	KFWI	267.7	1,120	500
	KGTT	206.8	1,450	50
	KJBS	220.4	1,360	50
	KPO	422.3	710	1,000
	KYA	309.1	970	500
San Jose	KQW	296.9	1,010	500
Santa Ana	KWTC	352.7	850	5
Santa Barbara	KFCR	211.1	1,420	50
Santa Maria	KSMR	272.6	1,100	100
Santa Monica	KNRC	374.8	800	500
Stockton	KGDM	217.3	1,380	10
	KWG	344.6	870	50
Venice	KFVD	208.2	1,440	250
Yuba City	KGFM	211.1	1,420	15

Colorado

City	Call	Meters	Kc.	Watts
Colo. Spgs.	KFUM	282.8	1,060	1,000
Denver	KFEL	247.8	1,210	250
	KFUP	227.1	1,320	100
	KFXF	282.8	1,060	250
	KGEY	201.2	1,490	250
	KLZ	399.8	750	1,000
	KOA	325.9	920	5,000
	KOW	247.8	1,210	250
Edgewater	KFXJ	215.7	1,390	50
Fort Morgan	KGEW	218.8	1,370	200
Greeley	KFKA	545.1	550	200
Gunnison	KFHA	254.1	1,180	50
Pueblo	KGDP	223.7	1,340	10
Yuma	KGEK	263	1,140	10

Connecticut

City	Call	Meters	Kc.	Watts
Danbury	WCWS	214.2	1,400	100
Hartford	WTIC	535.4	560	500
Mansfield	WCAC	275.1	1,090	500
New Haven	WDRC	282.2	1,060	500
Sport Hill	WICC	214.2	1,400	250

Delaware

City	Call	Meters	Kc.	Watts
Wilmington	WDEL	296.9	1,010	100

District of Columbia

City	Call	Meters	Kc.	Watts
Washington	WMAL	241.8	1,240	250
	WRC	468.5	640	500
	WRHF	322.4	930	150

Florida

City	Call	Meters	Kc.	Watts
Gainesville	WHBN	296.9	1,010	10,000
Clearwater	WFLA	288.3	1,040	500
Jacksonville	WJAX	336.9	890	1,000
Lakeland	WMBL	228.9	1,310	50
Miami	WQAM	322.4	930	750
Miami Beach	WIOD	247.8	1,210	1,000
	WMBF	384.4	780	500
Orlando	WDBO	288.3	1,040	500
Pensacola	WCOA	249.9	1,200	500
Tampa	WDAE	267.7	1,120	500
	WJBB	344.6	870	250
	WMBR	252	1,190	100

Georgia

City	Call	Meters	Kc.	Watts
Atlanta	WGST	270.1	1,110	500
	WSB	475.9	630	1,000
Macon	WMAZ	270.1	1,110	500
Toccoa	WTFI	209.7	1,430	250

Idaho

City	Call	Meters	Kc.	Watts
Boise	KFAU	285.5	1,050	2,000
Jerome	KFXD	204	1,470	15
Kellogg	KFEY	232.4	1,290	10
Pocatello	KSEI	333.1	900	250

Illinois

City	Call	Meters	Kc.	Watts
Atwood	WLBQ	202.6	1,480	25
Batavia	WORD	416.2	720	5,000
Belvidere	WLBR	322.4	930	15
Bloomington	WNBL	199.9	1,500	15
Carthage	WCAZ	340.7	880	50
Chicago	KFKX	526	570	2,500
	KYW	526	570	2,500
	WAAF	389.4	770	500
	WBBM	389.4	770	5,000
	WBBZ	204	1,470	100
	WBCN	288.3	1,040	250
	WCFL	483.6	620	1,500
	WCRW	223.7	1,340	500
	WEBH	365.6	820	2,000
	WEDC	241.8	1,240	500
	WENR	288.3	1,040	500
	WFKB	223.7	1,340	500
	WGES	241.8	1,240	500
	WGN	305.9	980	500
	WHBL	204	1,470	100
	WHBM	201.2	1,490	100
	WHFC	215.7	1,390	200
	WHT	416.4	720	5,000
	WIBJ	201.2	1,490	100
	WIBO	416.4	720	5,000
	WIBM	201.2	1,490	100
	WIBW	204	1,470	100
	WKBG	201.2	1,490	100
	WJAZ	263	1,140	5,000
	WJBT	389.4	770	500
	WKBI	322.4	930	50
	WLBN	204	1,470	50
	WLS	344.6	870	5,000
	WLTS	483.6	620	100
	WMAQ	447.5	670	1,000
	WMBB	252	1,190	5,000
	WMBI	263	1,140	500
	WPCC	223.7	1,340	500
	WQJ	447.5	670	500
	WSAX	204	1,470	100
	WSBC	232.4	1,290	500
	WTAS	275.1	1,090	500
	WWAE	227.1	1,320	500
Chi. Heights	WJBZ	208.2	1,440	100
Crete	WLS	344.6	870	5,000

Illinois (Continued)

City	Call	Meters	Kc.	Watts
Decatur	WBAO	267.7	1,120	100
	WJBL	212.6	1,410	250
Deerfield	WHT	416.4	720	5,000
East Wenona	WLBI	238	1,260	250
Elgin	WGN	305.9	980	500
	WLIB	305.9	980	1,500
Evanston	WEHS	215.7	1,390	100
Forest Park	WNBA	208.2	1,440	200
Galesburg	WFBZ	247.8	1,210	50
	WKBS	217.3	1,380	100
	WLBO	217.3	1,380	100
	WRAM	247.8	1,210	50
Harrisburg	WEBQ	223.7	1,340	15
Homewood	WOK	252	1,190	5,000
Joliet	WCLS	215.7	1,390	150
	WJBA	322.4	930	50
	WKBB	215.7	1,390	150
La Salle	WJBC	227.1	1,320	100
Mooseheart	WJJD	365.6	820	1,000
Mt. Prospect	WJAZ	263	1,140	5,000
Peoria	WMBD	205.4	1,460	250
Quincy	WTAD	236.1	1,270	250
Rockford	KFLV	267.7	1,120	100
Rock Island	WHBF	222.1	1,350	100
Springfield	WCBS	209.7	1,430	250
Streator	WTAX	322.4	930	50
Tuscola	WDZ	277.6	1,080	100
Urbana	WRM	272.6	1,100	500
Waukegan	WPEP	215.7	1,390	500
Zion	WCBD	344.6	870	5,000

Indiana

City	Call	Meters	Kc.	Watts
Anderson	WHBU	220.4	1,360	15
Brookville	WKBV	217.3	1,380	100
Crown Point	WLBT	322.4	930	50
Culver	WCMA	258.5	1,160	250
Evansville	WGBF	236.1	1,270	250
Fort Wayne	WCWK	214.2	1,400	250
	WOWO	228.9	1,310	2,000
Gary	WJKS	232.4	1,290	500
Indianapolis	WFBM	225.4	1,330	250
	WKBF	252	1,190	500
Kokomo	WJAK	234.2	1,280	50
Laporte	WRAF	208.2	1,440	100
Muncie	WLBC	209.7	1,430	50
South Bend	WSBT	238	1,260	500
Terre Haute	KGFO	204	1,470	100
	WRPI	208.2	1,440	100
Valparaiso	WRBC	238	1,260	250
W. Lafayette	WBAA	272.6	1,100	500

Iowa

City	Call	Meters	Kc.	Watts
Ames	WOI	265.3	1,130	2,500
Atlantic	KICK	322.4	930	100
Boone	KFGQ	209.7	1,430	10
Burlington	WIAS	322.4	930	100
Cedar Rapids	KWCR	239.9	1,250	250
	WJAM	239.9	1,250	250
Clarinda	KSO	227.1	1,320	500
Council Bluffs	KOIL	277.6	1,080	2,000
Cresco	KGDJ	202.6	1,480	10
Davenport	WOC	374.8	800	5,000
Decorah	KGCA	247.8	1,210	10
	KWLC	247.8	1,210	50
Des Moines	WHO	535.4	560	5,000
Fort Dodge	KFJY	232.4	1,290	100
Iowa City	KGFB	223.7	1,340	10
	WSUI	475.9	630	500
LeMars	KWUC	243.7	1,230	1,500
Marshalltown	KFJB	247.8	1,210	100
Muscatine	KPNP	211.1	1,420	100
	KTNT	256.3	1,170	1,000
Oskaloosa	KFHL	212.6	1,410	10
Shenandoah	KFNF	461.3	650	2,000
	KMA	394.5	760	1,000
Sioux City	KFMR	232.4	680	100
	KSCJ	243.8	1,230	500

Kansas

City	Call	Meters	Kc.	Watts
Concordia	KGCN	208.2	1,440	50
Independence	KFVG	225.4	1,330	50
Lawrence	KFKU	254.1	1,180	500
	WREN	254.1	1,180	750
Manhattan	KSAC	333.1	900	500
Milford	KFKB	241.8	1,240	1,500
Wichita	KFH	245.8	1,220	500

Kentucky

City	Call	Meters	Kc.	Watts
Hopkinsville	WFIW	280.2	1,070	500
Louisville	WHAS	461.3	650	500
	WLAP	267.7	1,120	30

Louisiana

City	Call	Meters	Kc.	Watts
Cedar Grove	KGGH	212.6	1,410	50
New Orleans	WABZ	247.8	1,210	50
	WCBE	227.1	1,320	5
	WJBO	263	1,140	100
	WJBW	238	1,260	30
	WKBT	252	1,190	50
	WSMB	322.4	930	500
	WWL	275.1	1,090	100
Shreveport	KFDX	236.1	1,270	250
	KGDX	212.6	1,410	250
	KRAC	220.4	1,360	50
	KSBA	267.7	1,120	1,000
	KWKH	394.5	760	1,000

Maine

City	Call	Meters	Kc.	Watts
Bangor	WABI	389.4	770	100
Foxcroft	WLBZ	208.2	1,440	250
Portland	WCSH	428.3	700	500

Maryland

City	Call	Meters	Kc.	Watts
Baltimore	WBAL	285.5	1,050	5,000
	WCAO	384.4	780	250
	WCBM	384.4	780	100
	WFBR	225.4	1,330	100
Takoma Park	WBES	265.3	1,130	100

Massachusetts

City	Call	Meters	Kc.	Watts
Boston	WBIS	302.8	990	100
	WATT	201.2	1,490	100
	WBET	265.3	1,130	500
	WBZA	333.1	900	500
	WEEI	461.3	670	500
	WMES	211.1	1,420	50
	WNAC	288.3	1,040	500
	WSSH	265.3	1,130	100
Cambridge	WLBM	230.6	1,300	50
Chelsea	WRSC	211.1	1,420	100
Fall River	WSAR	252	1,190	100
Gloucester	WEPS	296.9	1,010	100
Lexington	WLEX	215.7	1,390	5
New Bedford	WNBH	260.7	1,150	250
Quincy	WRES	217.3	1,380	50
S. Dartmouth	WMAF	416.4	720	1,000
Springfield	WBZ	333.1	900	15,000
Taunton	WAIT	214.2	1,400	10
Webster	WKBE	228.9	1,310	100
Wellesley Hills	WBSO	384.4	780	100
Worcester	WTAG	516.9	580	500

Michigan

City	Call	Meters	Kc.	Watts
Battle Creek	WKBP	212.6	1,410	50
Bay City	WSKC	272.6	1,100	250
Berrien Spgs.	WEMC	483.6	620	1,000
Detroit	WAFD	230.6	1,300	100
	WBMH	211.1	1,420	100
	WCX	440.9	680	5,000
	WJR	440.9	680	5,000
	WMBC	243.8	1,230	100
	WWJ	374.8	800	1,000
E. Lansing	WKAR	285.5	1,050	500
Escanaba	WRAK	282.8	1,060	50
Flint	WFDF	272.6	1,100	100
Grand Rapids	WASH	256.3	1,170	250
	WOOD	260.7	1,150	500
Iron Mountain	WLBY	209.7	1,430	50
Lansing	WREO	230.6	1,300	500
Lapeer	WMPC	234.2	1,280	30
Ludington	WKBZ	199.9	1,500	15
Monroe	WKBL	205.4	1,460	15
Mt. Clemens	WGHP	319	940	750
Petoskey	WBBP	239.9	1,250	100
Pontiac	WCX	440.9	680	5,000
	WJR	440.9	680	5,000
Royal Oak	WAGM	225.4	1,330	50
Ypsilanti	WJBK	220.4	1,360	15

Minnesota

City	Call	Meters	Kc.	Watts
Anoka	WCCO	405.2	740	5,000
Barrett	KGDE	205.4	1,460	50
Collegeville	WFBJ	272.6	1,100	100
Hallock	KGFK	223.7	1,340	50

Minnesota (Continued)

City	Call	Meters	Kc.	Watts
Minneapolis	KFDZ	215.7	1,390	10
	KGEQ	202.6	1,480	50
	WAMD	225.4	1,330	500
	WCCO	405.2	740	5,000
	WDGY	263	1,140	500
	WHDI	245.8	1,220	500
	WLB	245.8	1,220	500
	WRHM	260.7	1,150	1,000
Northfield	KFMX	236.1	1,270	500
	WCAL	236.1	1,270	500
St. Cloud	WFAM	252	1,190	10
St. Paul	KFOY	285.5	1,050	250
	WMBE	208.2	1,440	10
Sihtipok	KIAF	422.3	710	500

Mississippi

City	Call	Meters	Kc.	Watts
Columbus	WCOC	230.6	1,300	100

Missouri

City	Call	Meters	Kc.	Watts
C. Girardeau	KFVS	223.7	1,340	50
Carterville	KFPW	263	1,140	50
Columbia	KFRU	249.9	1,200	500
Independence	KLDS	270.1	1,170	1,500
Jefferson City	WOS	422.3	710	500
Joplin	WMBH	204	1,470	100
Kansas City	KMBC	270.1	1,110	1,500
	KWKC	222.1	1,350	100
	WDAF	370.2	810	1,000
	WHB	336.9	890	500
	WLBF	209.7	1,430	50
	WOQ	336.9	890	250
Kirksville	KFKZ	225.4	1,330	15
Kirkwood	KMOX	299.8	1,000	5,000
St. Joseph	KFEQ	230.6	1,300	1,000
	KGBX	288.3	1,040	100
St. Louis	KFQA	247.8	1,210	50
	KFUO	234.2	1,280	1,000
	KFVE	234.2	1,280	1,000
	KFWF	214.2	1,400	250
	KMOX	299.8	1,000	5,000
	KSD	545.1	550	500
	WEW	352.7	850	1,000
	WIL	258.5	1,160	250
	WMAY	247.8	1,210	500
	WSBF	258.5	1,160	250

Montana

City	Call	Meters	Kc.	Watts
Havre	KFBB	275.1	1,090	50
Kalispell	KGEZ	205.4	1,460	100
Missoula	KUOM	461.3	650	500
Vida	KGCX	243.8	1,230	10

Nebraska

City	Call	Meters	Kc.	Watts
Clay Center	KMMJ	285.5	1,050	750
Columbus	KGBY	202.6	1,480	50
Grand Island	KGEO	205.4	1,460	100
Humboldt	KGDW	206.8	1,450	100
Lincoln	KFAB	309.1	970	2,000
	KFOR	217.3	1,380	100
Norfolk	WJAG	285.5	1,050	250
Omaha	KFOX	258.5	1,160	100
	KOCH	258.5	1,160	250
	WAAW	499.7	600	500
	WNAL	258.5	1,160	500
	WOW	508.2	590	1,000
Ravenna	KGFW	296.9	1,010	10
Univ. Place	WCAJ	379.5	790	500
Wayne	KGCH	293.9	1,020	250
York	KGBZ	212.6	1,410	100

New Hampshire

City	Call	Meters	Kc.	Watts
Laconia	WKAV	223.7	1,340	50
Manchester	WCOM	238	1,260	100
Tilton	WBRL	232.4	1,290	500

New Jersey

City	Call	Meters	Kc.	Watts
Asb'ry Pk.	WDWM	263	1,140	250
Atl'ntic City	WHAR	272.6	1,100	1,000
	WPG	272.6	1,100	5,000
Bound Brook	WJZ	454.3	660	30,000
Camden	WCAM	223.7	1,340	500
Cliffside	WPAP	394.5	760	500
	WQAO	394.5	760	500
Coytesville	WRNY	309.1	970	500
Elizabeth	WIBS	204	1,470	150
Hoboken	WMCA	370.2	810	500
Jersey City	WAAT	245.8	1,220	500
	WKBO	218.8	1,370	500
Midland Pk.	WTRL	206.8	1,450	15
Newark	WAAM	348.6	860	500
	WGCP	280.2	1,070	500
	WNJ	280.2	1,070	500
	WOR	422.3	710	500
N. Pl'inf'l'd	WEAM	239.9	1,250	250
Paterson	WODA	293.9	1,020	1,000
Red Bank	WJBI	263	1,140	150
Trenton	WOAX	239.9	1,250	500
Union City	WBMS	267.7	1,120	100

New Mexico

City	Call	Meters	Kc.	Watts
Raton	KGFL	50	2,221	1,350
State College	KOB	394.5	760	5,000

New York

City	Call	Meters	Kc.	Watts
Astoria	WGBS	348.6	860	500
Auburn	WMBO	220.4	1,360	100
Bay Shore	WRST	211.1	1,420	250
Brooklyn	WARS	227.1	1,320	500
	WBBC	227.1	1,320	500
	WBKN	267.7	1,120	100
	WBRS	211.1	1,420	100
	WCDA	211.1	1,420	250
	WLTH	256.3	1,170	250
	WMBQ	204	1,470	100
Buffalo	WEBR	241.8	1,240	200
	WGR	302.8	990	750
	WKBW	217.3	1,380	500
	WMAK	545.1	550	750
	WSVS	205.4	1,460	50
Canton	WCAD	365.6	820	500
Cazenovia	WMAC	225.4	1,330	500
Coney Isl'nd	WCGU	218.8	1,370	500
Endicott	WNBF	206.8	1,450	50
F'rmingd'le	WLBH	232.4	1,290	30
Freeport	WGBB	245.8	1,220	400
Ithaca	WLCI	247.8	1,210	50
Jamaica	WMRJ	206.8	1,450	10
Jamestown	WOCL	223.7	1,340	25
Kenmore	WKEN	204	1,470	250
Lockport	WMAK	545.1	550	750
Long Island	WLBX	204	1,470	250
New York	WBNY	236.1	1,270	500
	WEAF	491.5	610	50,000
	WEBJ	256.3	1,170	500
	WGBS	348.6	860	500
	WGL			500
	WGMU	201.2	1,490	100
	WHAP	236.1	1,270	1,000
	WHN	394.5	760	500
	WHPP	206.8	1,450	10
	WKBQ	218.8	1,370	500
	WLWL	370.2	810	1,000
	WMCA	370.2	810	500
	WMSG	236.1	1,270	500
	WNYC	526	570	500
	WPCH	309.1	970	500
	WRMU	201.2	1,490	100
	WRNY	309.1	970	500
	WSDA	227.1	1,320	250
Peekskill	WOKO	215.7	1,390	250
Port Wash'tn.	WIBI	267.7	1,120	100
Richm'd Hill	WABC	325.9	920	2,500
	WBOQ	325.9	920	500
Rochester	WHAM	277.6	1,080	500
	WHEC	254.1	1,180	500
	WNBQ	202.6	1,480	15
	WOKT	209.7	1,430	500
Rossville	WBBR	256.3	1,170	1,000
Schenectady	WGY	379.5	790	50,000
Syracuse	WFBL	258.5	1,160	750
	WSYR	225.4	1,330	500
Troy	WHAZ	545.1	550	500
Utica	WIBX	238	1,260	150
Woodhaven	WEVD	245.8	1,220	500
Woodside	WWRL	267.7	1,120	100

North Carolina

City	Call	Meters	Kc.	Watts
Asheville	WWNC	296.9	1,010	1,000
Charlotte	WBT	258.5	1,160	1,000
Fort Bragg	AT9	434.5	690	750
Greensboro	WNRC	223.7	1,340	500
Raleigh	WRCO	217.3	1,380	250

North Dakota

City	Call	Meters	Kc.	Watts
Aneta	KGFN	199.9	1,500	500
Bismarck	KFYR	249.9	1,200	250
Mandan	KGCU	239.9	1,250	100
Devils Lake	KDLR	230.6	1,300	15
Fargo	WDAY	361.2	830	250
Grand Forks	KFJM	333.1	900	100

Ohio

City	Call	Meters	Kc.	Watts
Akron	WADC	296.9	1,010	500
	WDBK	227	1,320	250
Ashtabula	WJPW	208.2	1,440	30
Bellefontaine	WHBD	222.1	1,350	100
Cambridge	WEBE	247.8	1,210	10
Canton	WHBC	236.1	1,270	10
Cincinnati	WAAD	267.7	1,120	25
	WFBE	245.8	1,220	250
	WKRC	245.8	1,220	250
	WLW	428.3	700	5,000
	WSAI	361.2	830	5,000
Cleveland				
	WEAR	399.8	750	1,000
	WHK	265.3	1,130	1,000
	WJAY	227.1	1,320	500
	WTAM	399.8	750	3,500
Columbus	WAIU	282.8	1,060	5,000
	WCAH	234.2	1,280	250
	WEAO	282.8	1,060	750
	WMAN	234.2	1,280	50
Dayton	WSMK	296.9	1,010	200
Middletown	WSRO	384.4	780	100
Harrison	WLW	428.3	700	5,000
Hamilton	WRK	205.4	1,460	100
Mansfield	WLBV	206.8	1,450	50
Mason	WSAI	361.2	830	5,000
Springfield	WCSO	256.3	1,170	500
Steubenville	WIBR	249.9	1,200	50
Toledo	WTAL	280.2	1,070	100
Wooster	WABW	247.8	1,210	50
Yellow Spgs.	WRAV	296.9	1,010	100
Youngstown	WKBN	214.2	1,400	50
	WMBW	214.2	1,400	50

Oklahoma

City	Call	Meters	Kc.	Watts
Alva	KGFF	205.4	1,460	25
Chickasha	KOCW	252	1,190	250
Norman	WNAD	239.9	1,250	500
Okla. City	KFJF	272.6	1,100	750
	KFXR	223.7	1,340	15
	KGCB	215.7	1,390	50
	KGFG	215.7	1,390	50
	WKY	288.3	1,040	150
Picher	KGGF	206.8	1,450	100
Tulsa	KVOO	348.6	860	1,000

Oregon

City	Call	Meters	Kc.	Watts
Astoria	KFJI	249.9	1,200	15
Corvallis	KOAC	270.1	1,110	500
Eugene	KGEH	201.2	1,490	50
Medford	KMED	249.9	1,200	50
Portland	KEX	239.9	1,250	2,500
	KFEC	214.2	1,400	50
	KFJI	214.2	1,400	50
	KFJR	282.8	1,060	100
	KGW	491.5	610	1,000
	KLIT	206.8	1,450	10
	KOIN	319	940	1,000
	KTBR	282.8	1,060	50
	KWBS	199.9	1,500	15
	KWJJ	223.9	1,310	50
	KXL	220.4	1,360	50

Pennsylvania

City	Call	Meters	Kc.	Watts
Allentown	WCBA	222.1	1,350	100
	WSAN	222.1	1,350	100
Altoona	WFBG	280.2	1,070	100
Elkins Park	WIBG	440.9	680	50
Grove City	WSAJ	223.7	1,340	250
Harrisburg	WBAK	299.8	1,000	500
	WMBS	234.2	1,280	250
	WPRC	209.7	1,430	100
Jeannette	WGM	208.2	1,440	50
Johnstown	WHBP	228.9	1,310	250
Kingston	WABF	205.4	1,460	250
Lancaster	WGAL	252	1,190	15
	WKJC	252	1,190	50
Lewisburg	WJBU	214.2	1,400	100
Monessen	WMBJ	232.4	1,290	50
Oil City	WHBA	260.7	1,150	10
	WLBW	293.9	1,020	500
Parkesburg	WQAA	215.7	1,390	500
Philadelphia	WABQ	223.7	1,340	500
	WABY	247.8	1,210	50
	WCAU	260.7	1,150	500
	WFI	405.2	740	500
	WFKD	247.8	1,210	50
	WHBW	220.4	1,360	50
	WIAD	288.3	1,040	100
	WIP	508.2	590	500
	WLIT	405.2	740	500
	WNAT	288.3	1,040	100
	WOO	508.2	590	500
	WPSW	202.6	1,480	50
	WRAX	212.6	1,410	250
Pittsburgh	KDKA	315.6	950	50,000
	KQV	270.1	1,110	500
	WCAE	516.9	580	500
	WJAS	270.1	1,110	500
Reading	WRAW	238	1,260	100
Scranton	WGBI	230.6	1,300	250
	WQAN	260.6	1,300	250
State College	WPSC	299.8	1,000	500
Washington	WNBO	211.1	1,420	15
W'kes-Barre	WBAX	249.9	1,200	100
	WBRE	249.9	1,200	100
Willow G've	WALK	201.2	1,490	50

Rhode Island

City	Call	Meters	Kc.	Watts
Cranston	WDWF	260.7	1,150	250
Newport	WMBA	204	1,470	100
Olneyville	WCOT	225.4	1,330	50
Pawtucket	WFCI	225.4	1,330	50
Providence	WCBR	201.2	1,490	100
	WEAN	288.3	1,040	500
	WJAR	374.8	800	500
	WLSI	260.7	1,150	250
	WRAH	199.9	1,500	250

South Carolina

City	Call	Meters	Kc.	Watts
Charleston	WBBY	499.7	600	75

South Dakota

City	Call	Meters	Kc.	Watts
Brookings	KFDY	394.5	760	500
	KGCR	208.2	1,440	15
Dell Rapids	KGDA	254.1	1,180	15
Mitchell	KGFP	212.6	1,410	10
Oldham	KGDY	206.8	1,450	15
Pierre	KGFX	254.1	1,180	200
Rapid City	WCAT	247.8	1,210	100
Sioux Falls	KSOO	209.7	1,430	250
Vermilion	KUSD	483.6	620	250
Yankton	WNAX	302.8	990	250

Tennessee

City	Call	Meters	Kc.	Watts
Chattanooga	WDOD	245.8	1,220	500
Knoxville	WFBC	234.2	1,280	50
	WNBJ	206.8	1,450	50
	WNOX	265.3	1,130	1,000
Lawrenceb'g	WOAN	285.5	1,050	250
Memphis	WGBC	277.6	1,080	15
	WHBQ	232.4	1,290	100
	WMBM	209.7	1,430	10
	WMC	516.9	580	500
	WNBR	228.9	1,310	20
	WREC	254.1	1,180	50
Nashville	WBAW	247.8	1,210	100
	WDAD	225.4	1,330	1,000
	WLAC	225.4	1,330	1,000
	WSM	340.7	880	5,000
Springfield	WSIX	212.6	1,410	150

Texas

City	Call	Meters	Kc.	Watts
Amarillo	KGRS	243.8	1,230	150
	WDAG	263	1,140	250
Austin	KUT	232.4	1,290	500
Beaumont	KFDM	483.6	620	500
Breckenridge	KFYO	211.1	1,420	15
Brownsv'le	KWWG	277.6	1,080	500
College Sta.	WTAW	483.6	620	500
Dallas	KRLD	461.3	650	500
	WFAA	499.7	600	500
	WRR	461.3	650	500
Dublin	KFPL	275.1	1,090	15
El Paso	WDAH	234.2	1,290	100
Fort Worth	KFJZ	249.9	1,200	50
	KFQB	333.1	900	1,000
	WBAP	499.7	600	1,500

State and City Index Continued

Texas (Continued)

City	Call	Meters	Kc.	Watts			
Galveston	KFLX	270.1	1,110	100	—	—	—
	KFUL	256.5	1,160	500	—	—	—
Greenville	KFPM	230.6	1,300	14	—	—	—
Harlingen	KHMC	256.1	1,270	100	—	—	—
Houston	KFVI	238	1,260	250	—	—	—
	KPRC	293.9	1,020	500	—	—	—
	KTUE	212.6	1,410	5	—	—	—
San Angelo	KGFI	220.4	1,360	15	—	—	—
San Antonio	KGCI	220.4	1,360	15	—	—	—
	KGDR	202.6	1,480	15	—	—	—
	KGRC	220.4	1,360	50	—	—	—
	KTAP	228.9	1,310	20	—	—	—
	KTSA	265.3	1,130	2,000	—	—	—
	WOAI	319	940	5,000	—	—	—
Waco	WJAD	333.1	900	500	—	—	—

Utah

Ogden	KFUR	225.4	1,330	500	—	—	—
Salt Lake C.	KDYL	258.5	1,160	100	—	—	—
	KFUT	498.7	600	50	—	—	—
	KSL	302.8	990	1,000	—	—	—

Vermont

Burlington	WCAX	254.1	1,180	100	—	—	—
Springfield	WNBX	241.8	1,240	10	—	—	—

Virginia

Arlington	NAA	434.5	690	1,000	—	—	—
Mt. V'n H's	WTFF	204	1,470	50	—	—	—
Norfolk	WBBW	236.1	1,270	50	—	—	—
	WRCV	208.7	1,430	100	—	—	—
	WTAR	236.1	1,270	500	—	—	—
Petersburg	WLBG	214.2	1,400	100	—	—	—
Richmond	WBBL	247.8	1,210	100	—	—	—
	WMBG	220.4	1,360	15	—	—	—
	WRVA	254.1	1,180	1,000	—	—	—
	WTAZ	220.4	1,360	15	—	—	—
Roanoke	WDBJ	230.6	1,300	250	—	—	—
Va. Beach	WSEA	263	1,140	500	—	—	—

Washington

Aberdeen	KXRO	227.1	1,320	50	—	—	—
Bellingham		209.7	1,430	50	—	—	—
Everett	KFBL	223.7	1,340	50	—	—	—
Lacey	KGY	243.8	1,230	50	—	—	—
Pullman	KWSC	394.5	760	500	—	—	—
Seattle	KFOA	447.5	670	1,000	—	—	—
	KFQW	217.3	1,380	100	—	—	—

Washington (Continued)

City	Call	Meters	Kc.	Watts			
Seattle (Contd)	KJR	348.6	860	2,500	—	—	—
	KGBS	202.6	1,480	100	—	—	—
	KGCL	230.6	1,300	50	—	—	—
	KKP	265.3	1,153	15	—	—	—
	KOMO	305.9	980	1,000	—	—	—
	KPCB	230.6	1,300	50	—	—	—
	KRSC	211.1	1,420	50	—	—	—
	KTCL	277.6	1,080	500	—	—	—
	KTW	384.5	760	1,000	—	—	—
	KUJ	199.9	1,500	10	—	—	—
Spokane	KFIO	245.8	1,220	100	—	—	—
	KFPY	245.8	1,220	250	—	—	—
	KGA	280.7	1,150	2,000	—	—	—
	KHQ	370.2	810	1,000	—	—	—
Tacoma	KVI	234.2	1,280	50	—	—	—
	KMO	254.1	1,180	250	—	—	—
Walla Walla	KOWW	299.9	1,000	500	—	—	—

West Virginia

Huntington	WSAZ	241.8	1,240	100	—	—	—
Wheeling	WWVA	336.9	890	250	—	—	—

Wisconsin

Beloit	WEBW	258.5	1,160	500	—	—	—
Camp Lake	WCLO	227.1	1,320	100	—	—	—
Eau Claire	WTAQ	254.1	1,180	500	—	—	—
Fond du Lac	KFIZ	267.7	1,120	100	—	—	—
Kenosha	WKDR	322.4	930	15	—	—	—
La Crosse	WKBH	220.4	1,360	500	—	—	—
Madison	WHA	302.8	990	750	—	—	—
	WIBA	238.9	1,250	100	—	—	—
Manitowoc	WOMT	222.1	1,350	50	—	—	—
Milwaukee	WGWB	218.6	1,370	500	—	—	—
	WHAD	270.1	1,110	500	—	—	—
	WSOE	270.1	1,110	250	—	—	—
	WTMJ	293.9	1,020	1,000	—	—	—
Omro	WJBR	227.1	1,320	100	—	—	—
Poynette	WIBU	217.3	1,380	20	—	—	—
Racine	WRRS	322.4	930	50	—	—	—
Sisiht	WBAR	270.1	1,110	500	—	—	—
Stevens Point	WLBL	302.8	990	1,000	—	—	—
Superior	WEBC	241.8	1,240	250	—	—	—
W. De Pere.	WHBY	249.9	1,200	50	—	—	—

Wyoming

Laramie	KFBU	428.3	700	500	—	—	—

Alaska

City	Call	Meters	Kc.	Watts			
Anchorage	KFQD	344.6	870	100	—	—	—
Juneau	KFIU	225.4	1,330	10	—	—	—
Ketchikan	KGBU	228.9	1,310	500	—	—	—

Hawaii

Honolulu	KGU	270.1	1,110	600	—	—	—

Philippines

Manila	KZIB	249.9	1,200	20	—	—	—
	KZRM	413	726.1	500	—	—	—
	KZRQ	400	750	500	—	—	—

Porto Rico

San Juan	WKAQ	360.7	880	500	—	—	—

Canada

Bowmanville	CKCW	312.3	960	5,000	—	—	—
Brantford	CFGC	296.9	1,010	50	—	—	—
Burketon Jct.	CKCW	329.5	910	5,000	—	—	—
Calgary	CFAC	434.5	690	750	—	—	—
	CFCN	434.5	690	1,800	—	—	—
	CJCJ	434.5	690	250	—	—	—
	CNRC	434.5	690	500	—	—	—
Charlottet'n	CFCY	312.3	960	100	—	—	—
Cobalt	CKMC	247.8	1,210	5	—	—	—
Edmonton	CHMA	516.9	580	250	—	—	—
	CJCA	516.9	580	500	—	—	—
	CKUA	516.9	580	500	—	—	—
	CNRE	516.9	580	500	—	—	—
Edward Park	CHCY	516.9	580	250	—	—	—
Fredericton	CFNB	247.8	1,210	25	—	—	—
Halifax	CHNS	322.4	930	100	—	—	—
Hamilton	CHCS	340.7	880	10	—	—	—
	CKOC	340.7	880	50	—	—	—
Iroquois F'ls.	CFCH	499.7	600	250	—	—	—
Kamloops	CFJC	267.7	1,120	15	—	—	—
King	CFRB	291.1	1,030	1,000	—	—	—
	CICQ	410.7	730	10	—	—	—
Kingston	CFMC	267.7	1,120	20	—	—	—
	CFRC	267.7	1,120	500	—	—	—
London	CJCC	329.5	910	500	—	—	—
Midland	CKPR	267.7	1,120	50	—	—	—
Mission City.	CJCU	247.8	1,210	5	—	—	—
Moncton	CNRA	322.4	930	500	—	—	—
Montreal	CFCF	410.7	730	1,650	—	—	—
	CHYC	410.7	730	750	—	—	—
	CKAC	410.7	730	1,200	—	—	—
	CNRM	410.7	730	1,000	—	—	—

Canada (Continued)

City	Call	Meters	Kc.	Watts			
Moose Jaw	CJRM	296.9	1,010	50	—	—	—
Burnaby	CFYC	410.7	730	500	—	—	—
Ottawa	CKCO	434.5	690	100	—	—	—
	CNRO	434.5	690	500	—	—	—
Prescott	CFLC	296.9	1,010	50	—	—	—
Preston	CKPC	247.8	1,210	7½	—	—	—
Quebec	CHRC	340.7	880	5	—	—	—
	CKCI	340.7	880	22½	—	—	—
	CKCV	340.7	880	100	—	—	—
	CNRQ	340.7	880	50	—	—	—
Red Deer	CKLC	356.9	840	1,000	—	—	—
Regina	CHWC	312.3	960	15	—	—	—
	CJBR	312.3	960	500	—	—	—
	CKCK	312.3	960	500	—	—	—
	CNRR	312.3	960	500	—	—	—
Saskatoon	CFQC	329.5	910	500	—	—	—
	CHUC	329.5	910	500	—	—	—
	CJWC	329.5	910	250	—	—	—
	CNRS	329.5	910	500	—	—	—
Scarboro	CJYC	291.1	1,030	500	—	—	—
	CKCX	291.1	1,030	500	—	—	—
Sea Island	CJOR	291.1	1,030	50	—	—	—
St. Hyacinthe.	CKSH	312.3	960	50	—	—	—
Summerside	CHGS	267.7	1,120	25	—	—	—
Toronto	CFCA	356.9	840	500	—	—	—
	CHIC	356.9	840	500	—	—	—
	CHNC	356.9	840	500	—	—	—
	CJBC	291.1	1,030	500	—	—	—
	CJSC	356.9	840	500	—	—	—
	CJYC	291.1	1,030	500	—	—	—
	CKCL	356.9	840	500	—	—	—
	CKCX	291.1	1,030	1,000	—	—	—
	CKNC	356.9	840	500	—	—	—
	CKSM	291.1	1,030	1,000	—	—	—
	CNRT	356.9	840	500	—	—	—
Unity	CHSC	267.7	1,120	50	—	—	—
Vancouver	CFCQ	410.7	730	10	—	—	—
	CHPC	410.7	730	100	—	—	—
	CKCD	410.7	730	1,000	—	—	—
	CKFC	410.7	730	50	—	—	—
	CKWX	410.7	730	10	—	—	—
	CNRV	291.1	1,030	500	—	—	—
Victoria	CFCT	329.5	910	500	—	—	—
Winnipeg	CKY	384.4	780	500	—	—	—
	CNRW	384.4	780	500	—	—	—
Yorkton	CJGX	475.9	630	500	—	—	—

Canada (Continued from Page 57)

CKWX

Vancouver, B. C. 410.7m-730kc. 100 watts. Sparks Company, Announcer, H. W. Paulson. Daily ex Sun, 11-12 n, 4:30-5:30 pm, 6-7:30. Wed. 9:30-12 mid. Thurs. 11-12 mid. Fri. 9-10:30 pm. Sat. 11:30-1 am. Pacific.

CKY

Winnipeg, Man., Can. 384.4m-780kc. 500 watts. Manitoba Tel. System, Announcer, F. E. Rutland. Slogan, "Manitoba's Own Station." Daily ex Sun, 10:50-11 am, 12-1:45 pm, 3-4:30, 8:30, 9. Wed, Sat, 9-11 pm, CNRW. Central.

CNRA

Moncton, N. B., Can. 322.4m-930kc. 500 watts. Canadian National Railways, Announcer, W. V. George. Slogan, "Voice of the Maritimes." Daily ex Sun, 2-3:30 pm. Tues, 7:30 pm. Fri, 9 pm, Atlantic. Started Nov. 8, 1924.

CNRC

Calgary, Alta, Can. 434.5m-690kc. 500 watts. Canadian National Railways. Mon, Thurs, 9:30-10:30 pm. Mountain.

CNRE

Edmonton, Alta, Can. 516.9m-580kc. 500 watts. Canadian National Railways. Wed. 10-11:45 pm. Sat. 10-11:15 pm. Mountain.

CNRM

Montreal, Que., Can. 410.7m-730kc. 1,000-1,650 watts. Canadian National Railways. Announcer, J. S. McArthur. Thurs, 8:45 pm. Eastern daylight.

CNRO

Ottawa, Can. 434.5m-690kc. 500 watts. Canadian National Railways. Announcer, A. W. Ryan. Mon, 8-8:45 pm, 11-12 mid. Thurs, 7:30-11 pm. Eastern. On air Feb. 27, 1924.

CNRQ

Quebec City, Can. 340.7m-880kc. C. N. R.

CNRR

Regina, Sask., Can. 312.3m-960kc. 500 watts. Canadian National Railways. Tues, 8-10 pm. Mountain.

CNRS

Saskatoon, Sask., Can. 329.5m-910kc. 500 watts. Canadian National Railways. Daily, 2:30-3:30 pm. Mountain.

CNRT

Toronto, Ont., Can. 356.9m-840kc. 500 watts. Canadian National Railways. Announcer, E. W. Jackson. Mon, 9-11 pm. Eastern. First broadcast May 16, 1924.

CNRV

Vancouver, Can. 291.1m-1030kc. 500 watts. Canadian National Railways. Announcer, G. A. Wright.

CNRW

Winnipeg, Man., Can. 384.4m-780kc. 500 watts. Canadian National Railways. Announcer, R. H. Roberts. Mon, Tues, 6:30 pm. Wed, 10 pm. Thurs, Fri, 6:30 pm. Sun, 9 pm. Central.

Cuba

PWX

Havana, Cuba. 400m-750kc. 500 watts. Cuban Telephone Co. International Tel. and Teleg. Corp. Wed, Sun, 8:30 pm. music. Eastern.

2CT

Havana, Cuba. 350m-855kc. 50 watts. Casimiro Pujadas.

2FG

Hershey, Cuba. 200m-999.4kc. 20 watts. Alberto A. Ferrera.

2GF

Havana, Cuba. 192m-1540kc. 5 watts. Francisco Williams.

2HP

Havana, Cuba. 205m-1460kc. 200 watts. Cristina W. Vda. Cricet.

2JF

Marianao, Cuba. 245m-1220kc. 5 watts. Jose L. Ferriol.

2JT

Havana, Cuba. 46m-650kc. 5 watts. Jose A. Terry.

2JL

Havana, Cuba. 294m-1020kc. 5 watts. Jose Leiro.

2MA

Havana, Cuba. 305m-980kc. 50 watts. Modesto Alvarez.

2MF

Madruga, Cuba. 100m-299kc. Moises Fernandez.

2MG

Havana, Cuba. 284m-1055kc. 20 watts. Manuel Y. Guillermo Salas Music Store. Announcer, Roger Morales. Daily 3-4 pm, music. One day each week, 8-11 pm. Eastern.

2MK

Havana, Cuba. 85m-349kc. 100 watts. R. V. Waters.

2MU

Havana, Cuba. 265m-1330kc. 10 watts. Ulpiano Munis.

2OK

Havana, Cuba. 360m-833kc. 100 watts. Mario Garcia Velez.

2OL

Havana, Cuba. 257m-1170kc. 100 watts. Oscar Collado.

2RK

Havana, Cuba. 315m-950kc. 100 watts. Raoul Karman. Casa De La Porte.

2TW

Havana, Cuba. 270m-1110kc. 20 watts. Roberto E. Ramirez.

2UF

Havana, Cuba. 355m-844kc. 20 watts. Roberto E. Ramirez.

2XA

Havana, Cuba. 230m-1300kc. Lecuona Music Co.

2XX

Havana, Cuba. 225m-1333kc. 5 watts. Antonio A. Ginard.

5DW

Matanzas, Cuba. 270m-1110kc. 100 watts. Ramon Sarria Calderon.

5EV

Colon, Cuba. 360m-833kc. 5 watts. Leopoldo V. Figueroa. Sun, 9-11 pm. Eastern.

6BY

Cienfuegos, Cuba. 260m-1153kc. 200 watts. Jose Ganduxe.

6EV

Caibarien, Cuba. 250m-1200kc. 50 watts. Maria Josefa Alvarez. Daily, 10:30 pm.

6HS

S. La Grande, Cuba. 200m-1500kc. 10 watts. Santiago Ventura.

6KC

Cienfuegos, Cuba. 240m-1250kc. 10 watts. Carlos Hernandez.

6KP

Sancti Spiritus, Cuba. 195m-1540kc. 20 watts. Antonio Galguera.

6KW

Tuinucu, Cuba. 340m-880kc. 100 watts. Frank H. Jones. Slogan, "If You Hear the Koo of the Cuckoo You Are in Tune With Tuinucu." Daily 11:30-12:15 am. Eastern.

6LO

Caibarien, Cuba. 325m-920kc. 250 watts. Manuel A. Alvarez.

6RG

Santa Clara, Cuba. 200m-1500kc. 20 watts. Rafael Garcia Perez.

6XJ

Tuinucu, Cuba. 278m-1080kc. 100 watts. Frank H. Jones.

6YR

Camaguey, Cuba. 200m-1500kc. 20 watts. Diego Iborra.

7AZ

Camaguey, Cuba. 225m-1333kc. 10 watts. Pedro Nogueras.

7BY

Camaguey, Cuba. 235m-1277kc. 20 watts. Eduardo V. Figueroa.

7EV

Camaguey, Cuba. 190m-1580kc. 5 watts. Gonzalo Toraya.

7FU

C. Avila, Cuba. 200m-999.4kc. 5 watts. Feliciano Isaac.

7GT

Camaguay, Cuba. 195m-1540kc. Armando Vaquer.

7HS

C. de Avila, Cuba. 192m-1560kc. 10 watts. Porfirio de la Cruz.

7IR

C. de Avila, Cuba. 193m-1550kc. Armando Benguria.

7LO

Camaguey, Cuba. 230m-1300kc. 20 watts. Miguel Lopez Martinez.

7JQ

Florida, Cuba. 42m-7130kc. Leonard B. Fox.

7KP

Camaguey, Cuba. 43m-6970kc. 50 watts. Melchor Aguero.

7MN

Camaguey, Cuba. 273m-1100kc. 100 watts. Melchor Aguero.

7NM

Nuevitas, Cuba. 264m-1136kc. 20 watts. Domingo Caymares.

7SR

Camaguey, Cuba. 350m-860kc. 500 watts. Salvador C. Rionda. Slogan, "Cuba, the Land of Sunshine, Sugar and Tobacco." Mon, Tues, Thurs, 8:30 pm. Eastern.

8BY

Santiago, Cuba. 250m-1200kc. 100 watts. Alberto Ravelo.

Mexico

CYA

Mexico City, Mex. 265m-1130kc. 500 watts. Mon, Fri, 6:45-8 pm. Sun, 4-6 pm. Partido Liberal Avanzado. Mexican.

CYB

Mexico City, Mex. 270m-1110kc. 500 watts. El Buen, Tono. Tues, Thurs, Sat, 7:30-9 pm, concert. Mexican.

CYF

Oaxaca, Oax., Mex. 270m-1110kc. Federico Zorrilla. "The Voice from South of Mexico." Tues, Thurs, 7-8 pm. Sun, 8:30-10 pm. Mexican.

CYG

Mexico City, Mex. 300m-1000kc. 1000 watts. Secretara de Guerra y Marina.

CYH

Monterey, Mexico. 311m-964kc. 1000 watts. Tarnava & Cia. Slogan, "The Industrial Center of the Mexican Republic." Daily ex Sun, 7:55-8:10 pm. Wed, Fri, 8:30-10 pm. Sun, 8-10 pm. Mountain.

CYJ

Mexico City, Mex. 410m-730kc. 1000 watts. General Electric Co. Daily ex Sun, 8 pm. Mountain.

CYL

Mexico City, Mex. 480m-625kc. 500 watts. La Casa del Radio. Announcer, George Marron. Slogan, "The Land of Eternal Summer." Daily ex Sun, 1:30-2 pm, weather, financial reports, music. Tues, Fri, 8-9:30 pm. Sun, 8-9:30 pm, church. Mexican.

CYR

Mazatlan, Sin., Mex. Rosseter Y Cia.

CYX

Mexico City, Mex. 333m-900kc. 500 watts. Excelsior & Revista de Revistas. Announcer, Rafael Hermandez dez Dominguez. Slogan, "Land of the Aztecs." Mon, 8-9:30 pm. Mexican.

CYZ

Mexico City, Mex. 400m-750kc. Liga Central Mexicana de Radio. Mexican.

CZA

Mexico City, Mex. 70-500-1070 meters. Aviation Dept., War Ministry. Announcer, Ricardo S. Bravo. Daily, 12:30-1 pm, time, weather, news; 6:30-7:30, time, markets, music. Mexican.

Official Wave Lengths Table

Wave length	Frequency (kilocycles)	Power (watts)	Call signal	Location
199.9	1.500	15	KGFN	Aneta, N. D.
		50	KUJ	Seattle, Wash.
		15	KWBS	Portland, Ore.
		15	WKBZ	L'd't'n, Mich.
		15	WNBL	Bl'm'g't'n, Ill.
		250	WRAH	Prvdce, R. I.
201.2	1.490	50	KGEH	Eugene, Ore.
		250	KGEY	Denver, Colo.
		50	WALK	Will. C., Pa.
		100	WATT	Boston, Mass.
		100	WCBR	Prvdce., R. I.
		100	WGMU	N. Y., N. Y.
		100	WHBM	Chicago, Ill.
		100	WIBJ	Chicago, Ill.
		100	WIBM	Chicago, Ill.
		100	WKBC	Chicago, Ill.
		100	WRMU	N. Y., N. Y.
202.6	1.480	100	KGBS	Seattle, Wash.
		50	KGBY	Columbus, Neb.
		10	KGDJ	Cresco, Ia.
		15	KGDR	San Ant., Tex.
		50	KGEQ	Mipls., Minn.
		25	WLBQ	Atwood, Ill.
		15	WNBQ	R'ch'str, N.Y.
		50	WPSW	Phila., Pa.
204	1.470	15	KFXD	Jerome, Idaho
		100	KGFO	Tre. Hte., Ind.
		100	WBBZ	Chicago, Ill.
		100	WHBL	Chicago, Ill.
		150	WIBS	Eliz., N. J.
		100	WIBW	Chicago, Ill.
		250	WKEN	Kenmore, N.Y.
		50	WLBN	Chicago, Ill.
		250	WLBX	L. I., N. Y.
		100	WMBA	Newport, R.I.
		100	WMBH	Joplin, Mo.
		100	WMBQ	Br'klyn, N.Y.
		10	WOBR	Ohio (Port.)
		100	WSAX	Chicago, Ill.
		50	WTFF	Mt. V. H., Va.
205.4	1.460	25	KFXY	Flagstaff, Ariz.
		50	KGDE	Barrett, Minn.
		100	KGEO	Grand Is., Neb.
		100	KGEZ	Kalisp'l, Mont.
		25	KGFF	Alva, Okla.
		250	WABF	Kingston, Pa.
		15	WKBL	Monroe, Mich.
		250	WMBD	Peoria H., Ill.
		100	WRK	Hamilton, O.
		50	WSVS	Buffalo, N. Y.
206.8	1.450	100	KGDW	Hmbldt., Neb.
		15	KGDY	Oldham, S. D.
		100	KGGF	Picher, Okla.
		50	KGTT	San Fr., Calif.
		10	KLIT	Portland, Ore.
		10	WHPP	N. Y., N. Y.
		50	WLBV	Mansfield, O.
		10	WMRJ	Jamaica, N.Y.
		50	WNBF	Endicott, N.Y.
		50	WNBJ	Kn'xv'e, Tenn.
		15	WTRL	Midl. P., N. J.
208.2	1.440	250	KFVD	Venice, Calif.
		100	KGFJ	Los Ang., Cal.
		50	KGCN	C'nc'rdia, Kan.
		15	KGDR	Br'k'ss, S. D.
		50	WGM	Jeannette, Pa.
		100	WJBZ	Chgo. Hts., Ill.
		30	WJFW	Ashtabula, O.
		250	WLBZ	Dv.-Fxcr., Me.
		10	WMBE	S. Paul, Minn.
		200	WNBA	For. Pk., Ill.
		100	WRAF	La Porte, Ind.
		100	WRPI	Tre. Hte., Ind.
209.7	1.430	10	KFGQ	Boone, Ia.
		250	KSOO	Sx. Falls, S. D.
		50	KVOS	B'llingham, W.
		250	WCBS	Sprgfld., Ill.
		50	WLBC	Muncie, Ind.
		50	WLBF	Kans. C., Mo.
		50	WLBY	Iron M., Mich.
		100	WMBM	Mphs., Tenn.
		500	WOKT	Rchstr., N. Y.
		100	WPRC	H'rr'sb'g, Pa.
		100	WRCV	Norfolk, Va.
		250	WTFI	Toccoa, Ga.
211.1	1.420	50	KFCR	S. Barb., Cal.
		15	KFYO	B'k'ridge, Tex.
		15	KGFM	Yuba C., Cal.
		100	KPNP	Muscatine, Ia.
		50	KRSC	Seattle, Wash.
		100	WBMH	Detroit, Mich.
		100	WBRS	Br'klyn, N. Y.
		250	WCDA	Brooklyn, N.Y.
		50	WMES	Boston, Mass.
		15	WNBO	Wash., Pa.
		15	WRSC	Chelsea, Mass.
		250	WRST	Bay Sh., N. Y.
212.6	1.410	10	KFHL	Oskaloosa, Ia.
		100	KGBZ	York, Nebr.
		250	KGDX	Shrevep't, La.
		10	KGFP	Mitchell, S. D.
		50	KGGH	C. Grove, La.
		10	KTUE	Houston, Tex.
		250	WJBL	Decatur, Ill.
		50	WKBP	B'tle C., Mich.
		250	WRAX	Phila., Pa.
		150	WSIX	Sprgfld., Tenn.
214.2	1.400	50	KFEC	Portland, Ore.
		50	KFIF	Portland, Ore.
		250	KFWF	St. Louis, Mo.
		15	KPJM	Prescott, Ariz.
		100	WAIT	Taunt'n, Mass.
		250	WCWK	F.Wayne, Ind.
		100	WCWS	Danbury, Con.
		250	WICC	Sp't Hill., C'n.
		100	WJBU	Lewisb'rg, Pa.
		50	WKBN	Y'ngst'wn, O.
		100	WLBG	Peterab'g, Va.
		50	WMBW	Y'ngst'n, O.
215.7	1.390	10	KFDZ	Mnpls., Minn.
		50	KFXJ	Edgew'r, Colo.
		50	KGCB	Okla. C., Okla.
		100	KGER	Long B., Cal.
		50	KGFC	Okla. C., Okla.
		250	KRLO	Los Ang., Cal.
		5	WLEX	Lex'ton, Mass.
		150	WCLS	Joliet, Ill.
		100	WEHS	Evanston, Ill.
		200	WHFC	Chicago, Ill.
		150	WKBB	Joliet, Ill.
		250	WOKO	Pkski., N. Y.
		250	WPEP	Waukegan, Ill.
		500	WQAA	P'k'sb'rg, Pa.
217.3	1.380	100	KFOR	Lincoln, Nebr.
		100	KFQW	Seattle, Wash.
		5	KGDM	Stockton, Cal.
		20	WIBU	Poynette, Wis.
		100	WKBS	Galesburg, Ill.
		100	WKBV	Brkvle., Ind.
		500	WKBW	Buffalo, N. Y.
		100	WLBO	Galesburg, Ill.
		250	WRCO	Raleigh, N. C.
		100	WRES	Quincy, Mass.
218.8	1.370	10	KGEW	F. Mrgn., Col.
		500	WCGU	Coney Is., N.Y.
		500	WGWB	Miller., Wis.
		10	WKBC	Bgmham., Ala.
		500	WKBO	Jsy. C., N. J.
		500	WKBQ	N. Y., N. Y.
220.4	1.360	15	KGCI	San Ant., Tex.
		15	KGFI	S. Angelo, Tex.
		50	KGRC	San Ant., Tex.
		50	KJBS	San Fran., Cal.
		50	KRAC	Shrevep't, La.
		50	KXL	Portland, Ore.
		15	WHBU	Anders'n, Ind.
		50	WHBW	Phila., Pa.
		15	WJBK	Ypsint., Mich.
		500	WKBH	La Cr., Wis.
		15	WMBC	Richmond, Va.
		100	WMBO	Auburn, N. Y.
		15	WTAZ	Richmond, Va.
222.1	1.350	100	KFWC	S. Bernd., Cal.
		50	KGFL	Raton, N. M.
		100	KWKC	Kans. C., Mo.
		100	WCBA	Allent'wn, Pa.
		100	WHBD	Bellefntne., O.
		100	WHBF	Rock Isl., Ill.
		50	WOMT	Mntwoc., Wis.
		100	WSAN	Allent'wn, Pa.
223.7	1.340	50	KFBL	Ev'r't, Wash.
		50	KFVS	C. Girard., Mo.
		50	KFXR	Ok. City, Ok.
		10	KGDP	Pueblo, Colo.
		10	KGFB	Iowa City, Ia.
		250	KGFH	La Cres., Cal.
		50	KGFK	Hallock, Mich.
		250	KMIC	Inglewd., Cal.
		500	WABQ	Phila., Pa.
		500	WCAM	Camden, N. J.
		500	WCRW	Chicago, Ill.
		15	WEBQ	H'rrisb'g, Ill.
		500	WFKB	Chicago, Ill.
		50	WKAV	Laconia, N.H.
		500	WNRC	Grnsbo, N. C.
		25	WOCL	Jmstn., N. Y.
		500	WPCC	Chicago, Ill.
		250	WSAJ	Grove Cy., Pa.
225.4	1.330	10	KFIU	Juneau, Alaska.
		15	KFKZ	Kirksvle., Mo.
		500	KFUR	Ogden, Utah.
		50	KFVG	Indpdce., Kan.
		15	KGEN	El Centro, Cal.
		50	WAGM	Ryl. O., Mich.
		500	WAMD	Mnpls., Minn.
		50	WCOT	Olnvle., R. I.
		250	WFBM	Ind'p'l's, Ind.
		100	WFBR	Bal'm're, Md.
		50	WFCI	P't'ket, R. I.
		1,000	WLAC	Nshvle., Tenn.
		500	WMAC	Cazen., N. Y.
		500	WSYR	Syracuse, N.Y.
227.1	1.320	100	KFUP	Denver, Colo.
		50	KGEU	Lwr. L., Cal.
		500	KSO	Clarinda, Ia.
		50	KXRO	Aberdeen, Wa.
		500	WARS	Br'kl'n, N.Y.
		500	WBBC	Br'kl'n, N. Y.
		5	WCBE	New Orl., La.
		100	WCLO	Camp L., Wis.
		250	WDBK	Akron, O.
		500	WJAY	Cleveland, O.
		100	WJBC	LaSalle, Ill.
		100	WJBR	Omro, Wis.
		250	WSDA	N. Y., N. Y.
		500	WWAE	Chicago, Ill.
228.9	1.310	250	KELW	Burbank, Cal.
		500	KGBU	K'ch'k'n, Alas.
		50	KPPC	Pasadena, Cal.
		20	KTAP	San Ant., Tex.
		50	KWJJ	Portland, Ore.
		250	WHBP	Johnst'n, Pa.
		100	WKBE	Wbstr., Mass.
		50	WMBL	Lakel'd, Fla.
		20	WNBR	Mphs., Tenn.
		2,000	WOWO	Ft. We., Ind.
230.6	1.300	15	KDLR	D.'s Lk., N.D.
		1,000	KFEQ	St. Jos., Mo.
		15	KFPM	Gr'nv'le, Tex.
		50	KGCL	Seattle, Wash.
		50	KPCB	Seattle, Wash.
		100	WAFD	Detroit, Mich.
		100	WCOC	C'l'mb's, Miss.
		250	WDBJ	Roanoke, Va.
		250	WGBI	Scranton, Pa.
		15	WIBZ	M'nt'g'ry, Ala.
		50	WLBM	Cambrg, Mass.
		250	WQAN	Scranton, Pa.
		500	WREO	Lansing, Mich.
232.4	1.290	10	KFEY	Kellogg, Idaho
		100	KFJY	Ft. Dodge, Ia.
		250	KFPR	Los A., Calif.
		100	KFMR	Sioux City, Ia.
		100	KFQZ	H'lyw'd, Calif.
		500	KUT	Austin, Tex.
		500	WBRL	Tilton, N. H.
		100	WHBQ	M'phis, Tenn.
		500	WJKS	Gary, Ind.
		30	WLBH	Frmdale, N.Y.
		50	WMBJ	Monessen, Pa.
		500	WSBC	Chicago, Ill.
234.2	1.280	1,000	KFUO	St. Louis, Mo.
		1,000	KFVE	St. Louis, Mo.
		100	KGAR	Tucson, Ariz.
		15	KVI	Tacoma, Wash.
		250	WCAH	Columbus, O.
		100	WDAH	El Paso, Tex.
		50	WFBC	K'xv'le, Tenn.
		50	WJAK	Kokomo, Ind.
		50	WJBY	Gadsden, Ala.
		50	WMAN	Columbus, O.
		250	WMBS	Har'sb'rg, Pa.
		30	WMPC	Lapeer, Mich.
236.1	1.270	250	KFDX	Shr'v'port, La.
		500	KFMX	N'field, Minn.
		500	KFWM	O'kl'nd, Calif.
		100	KHMC	Harl'gen, Tex.
		50	WBBW	Norfolk, Va.
		500	WBNY	N. Y., N. Y.
		500	WCAL	N'field, Minn.
		250	WGBF	Ev'sville, Ind.
		1,000	WHAP	N. Y., N. Y.
		10	WHBC	Canton, Ohio.
		500	WMSG	N. Y'k, N. Y.
		250	WTAD	Quincy, Ill.
		500	WTAR	Norfolk, Va.
238	1.260	50	KFVI	Houston, Tex.
		100	WCOM	M'ch'r, N. H.
		150	WIBX	Utica, N. Y.
		30	WJBW	N. O'l'ns, La.
		250	WLBI	E. W'n'a, Ill.
		100	WRAW	Reading, Pa.
		250	WRBC	V'p'raiso, Ind.
		250	WSBT	So. Bend, Ind.
239.9	1.250	2,500	KEX	Portland, Ore.
		100	KGCU	Mandan, N. D.
		100	WBBP	P't'key, Mich.
		250	WCR	Cedar R., Ia.
		250	WEAM	N. P'ld, N. J.
		100	WIBA	Madison, Wis.
		250	WJAM	Cedar R., Ia.
		500	WNAD	Norman, Okla.
		500	WOAX	Trenton, N. J.
241.8	1.240	1,500	KFKB	Milford, Kan.
		500	KFON	L. Beach, Cal.
		250	WEBC	Superior, Wis.
		200	WEBR	Buffalo, N. Y.
		500	WJDC	Chicago, Ill.
		500	WGES	Chicago, Ill.
		250	WMAL	Wash., D. C.
		10	WNBX	Spr'gfield, Vt.
		100	WSAZ	H't'n, W. Va.
243.8	1.230	125	KFCB	Phoenix, Ariz.
		10	KGCX	Vida, Mont.
		150	KGRS	Amarillo, Tex.
		50	KGY	Lacey, Wash.
		500	KSCJ	Sioux City, Ia.
		1,500	KWUC	LaMars, Ia.
		250	WBRC	B'm'ham, Ala.
		100	WMBC	Detroit, Mich.
245.8	1.220	500	KFH	Wichita, Kan.
		100	KFIO	Spokane, Wash.
		250	KFPY	Spokane, Wash.
		250	KLS	Oakland, Calif.
		100	KZM	Oakland, Calif.
		300	WAAT	J. City, N. J.
		500	WDOD	C't'n'ga, Tenn.
		500	WEVD	W'sh'n, N. Y.
		250	WFBE	Cincinnati, O.
		400	WGBB	Fr'port, N. Y.
		500	WHDI	M'p'lis, Minn.
		250	WKRC	Cincl., Ohio.
		500	WLB	M'p'lis, Minn.
247.8	1.210	100	KFBC	S. Dieto, Calif.
		250	KFEL	Denver, Colo.
		100	KFJB	Marshall'n, Ia.
		50	KFQA	St Louis, Mo.
		10	KGCA	Decorah, Ia.
		250	KOW	Denver, Colo.
		50	KWLC	Decorah, Ia.
		50	WABW	Wooster, O.
		50	WABY	Phila., Pa.
		50	WABZ	N. O'l'ns, La.
		100	WBAW	N'ville, Tenn.
		100	WBBL	Richmond, Va.
		100	WCAT	R. City, S. D.
		10	WEBE	Cambridge, O.
		50	WFBZ	Galesburg, Ill.
		50	WFKD	Phila., Pa.
		1,000	WIOD	Miami B., Fla.
		50	WLCI	Ithaca, N. Y.
		1,000	WMAY	St. Louis, Mo.
		50	WRAM	Galesburg, Ill.
249.9	1.200	15	KFJI	Astoria, Ore.
		50	KFJZ	Ft. Worth, Tex.
		100	KFQU	H. City, Calif.
		500	KFRU	Columbia, Mo.
		250	KFYR	Bism'k, N. D.
		50	KMED	Medford, Ore.
		20	KZIB	Manila, P. I.
		100	WBAX	W. Barre, Pa.
		100	WBRE	W. Barre, Pa.
		500	WCOA	Pensacola, Fla.
		50	WHBY	W. dePere, Wis.
		50	WIBR	Steubenv'le, O.
252	1.190	250	KOCW	C'k'sha, Okla.
		500	KPLA	Los. A., Calif.
		10	WEAM	S. Cl'd, Minn.
		15	WGAL	Lancaster, Pa.
		500	WKBF	Ind'p'l's, Ind.
		50	WKBT	N. O'l'ns, La.
		50	WKJC	Lancaster, Pa.
		5,000	WMBB	Homewood, Ill.
		100	WMBR	Tampa, Fla.
		5,000	WOK	Chicago, Ill.
		100	WSAR	Fall R., Mass.
254.1	1.180	50	KFHA	Gun's'n, Colo.
		500	KFKU	L'wrence, Kan.
		15	KGDA	Dell Dap, S.D.
		250	KGFX	Pierre, S. D.
		250	KMO	Tacoma, Wash.
		100	WCAX	B'rlgton, Vt.
254.1	1.180—Cont'd.	500	WHEC	Roch., N. Y.
		50	WREC	M'phis, Tenn.
		750	WREN	L'rence, Kan.
		1,000	WRVA	Richmond, Va.
		500	WTAQ	E. Cl're, Wis.
256.3	1.170	50	KFUS	Oakland, Calif.
		100	KRE	Berkeley, Calif.
		1,000	KTNT	Muscatine, Ia.
		250	WASH	G. Rap., Mich.
		1,000	WBBR	R'ville, N. Y.
		500	WCSO	Sprnafield, O.
		500	WEBJ	N. Y., N. Y.
		250	WLTH	Br'klyn, N. Y.
258.5	1.160	100	KDYL	S. L. City, U.
		100	KFOX	Omaha, Neb.
		500	KFUL	C'veston, Tex.
		250	KOH	Omaha, Neb.
		1,000	WBT	Charlotte, N. C.
		250	WCMA	Culver, Ind.
		500	WEBW	Beloit, Wis.
		750	WFBL	Sy'c'se, N. Y.
		250	WIL	St. Louis, Mo.
		250	WNAL	Omaha, Neb.
		250	WSBF	St. Louis, Mo.
260.7	1.150	2,000	KGA	Spokane, Wash.
		500	WCAU	Phila., Pa.
		500	WDWF	Cranston, R.I.
		10	WHBA	Oil City, Pa.
		500	WLSI	Cranston, R. I.
		250	WNBH	N. B., Mass.
		500	WOOD	G. Rap., Mich.
		1,000	WRHM	M'p'lis, Minn.
263	1.140	50	KFPW	Car'ville, Mo.
		500	KGEF	Los A., Calif.
		10	KGEK	Yuma, Colo.
		250	WDAG	Amarillo, Tex.
		500	WDGY	Mnpls., Minn.
		250	WDWM	Asb.Pk.,N.Y.
		5,000	WJAZ	Mt. Prosp., Ill.
		150	WJBI	Red Bank, N.J.
		100	WJBO	N. Orleans, La.
		500	WMBI	Chicago, Ill.
		500	WSEA	Va. Bch., Va.
265.3	1.130	15	KKP	Seattle, Wash.
		2,000	KTSA	Sant Ant., Tex.
		100	WBES	To'ma P., Md.
		500	WBET	Boston, Mass.
		1,000	WHK	Cleveland, O.
		1,000	WNOX	K'ville, Tenn.
		2,500	WOI	Ames, Ia.
		100	WSSH	Boston, Mass.
267.7	1.120	100	KFIZ	F. du Lac, Wis.
		100	KFLV	Rockford, Ill.
		500	KFWI	S. Fran., Calif.
		1,000	KSBA	Shreveport, La.
		25	WAAD	Cincinnati, O.
		100	WBAO	Decatur, Ill.
		100	WBKN	Br'kl'n, N. Y.
		500	WCMS	U. City, N. J.
		500	WDAE	Tampa, Fla.
		100	WIBI	Pt. Was'n, N.Y.
		30	WLAP	Louisv'le, Ky.
		100	WWRL	W'ds'e, N. Y.
270.1	1.110	100	KFLX	C'veston, Tex.
		600	KGU	Honolulu, T. H.
		1,500	KLDS	Ind'p'nce, Mo.
		1,500	KMBC	K. C., Mo.
		500	KOAC	Corvallis, Ore.
		500	KQV	Pittsburgh, Pa.
		500	WGST	Atlanta, Ga.
		500	WHAD	M'w'kee, Wis.
		500	WJAS	P't'burgh, Pa.
		500	WMAZ	Macon, Ga.
		250	WSOE	M'w'kee, Wis.
272.6	1.100	500	KFAD	Phoenix, Ariz.
		750	KFJF	Okla., Okla.
		100	KSMR	S. Maria, Cal.
		500	WBAA	W. Laf., Ind.
		100	WFBJ	Collegev., Minn.
		100	WFDF	Flint, Mich.
		1,000	WHAR	Atl. City, N.J.
		5,000	WPG	Atl. City, N. J.
		500	WRM	Urbana, Ill.
		250	WSKC	Bay C'y, Mich.
275.1	1.090	50	KFBB	Havre, Mont.
		15	KFPL	Dublin, Tex.
		500	KFSG	Los. Ang., Calif.
		500	WCAC	Mansf'd, Conn.
		500	WTAS	Chicago, Ill.
		100	WWL	N. Orl'ns, La.
277.6	1.080	2,000	KOIL	C'l Bluffs, Ia.
		500	KTCL	Seattle, Wash.
		750	KWWG	B'ville, Tex.
		100	WDZ	Tuscola, Ill.
		15	WGBC	Memp's, Tenn.
		500	WHAM	Rch'ter, N.Y.
280.2	1.070	500	KTAB	Oakl'd, Calif.
		100	WFBG	Altoona, Pa.
		500	WGCP	Newark, N.J.
		500	WFIW	H'pk'ville, Ky.
		500	WNJ	Newark, N. J.
		100	WTAL	Toledo, O.
282.8	1.060	100	KFJR	Portland, Ore.
		1,000	KFUM	Colo. S., Colo.
		250	KFXF	Denver, Colo.
		50	KTBR	Portland, Ore.
		5,000	WAIU	Columbus, O.
		500	WDRC	N. Haven, Cn.
		750	WEAO	Columbus, O.
		50	WRAK	Esca'ba, Mich.
285.5	1.050	2,000	KFAU	Boise, Idaho
		250	KFOY	St. Paul, Minn.
		50	KLCN	Blythev'le, Ark.
		250	KMMJ	Clay C., Neb.
		5,000	WBAL	Bal'more, Md.
		250	WJAG	Norfolk, Nebr.
		500	WKAR	E. Lan., Mich.
		500	WOAN	L'burg, Tenn.
288.3	1.040	100	KGBX	St. Joseph, Mo.
		500	KTBI	L. Ang., Calif.
		250	WBCN	Chicago, Ill.
		500	WDBO	Orlando, Fla.
		500	WEAN	Prov., R. I.
		500	WENR	Chicago, Ill.
		500	WFLA	Clicota, Fla.
		100	WIAD	Phila., Pa.
		150	WKY	Okla City, Okla.
		500	WNAC	Boston, Mass.
		100	WNAT	Phila., Pa.
293.9	1.020	250	KGCH	Wayne, Neb.
		500	KPRC	Houston, Tex.
		1,000	WGL	New Y'k, N. Y.
		500	WLBW	Oil City, Pa.
		1,000	WODA	Paterson, N.J.
		1,000	WTMJ	Milw., Wis.
296.9	1.010	10	KGFW	Ravenna, Neb.
		500	KQW	S. Jose, Calif.
		750	KUOA	F'ettev'le, Ark.
		500	WADC	Akron, O.
		100	WDEL	Milm'ton Del.
		100	WEPS	Clouc'er, Mass.
		10,000	WHBN	G'n'v'le, Fla.
		100	WRVA	YellowSpgs., O.
		200	WSMK	Dayton, O.
		1,000	WWNC	Ashev'le, N.C.
299.8	1,000	250	KFWO	Avalon, Calif.
		5,000	KMOX	St. Louis, Mo.
		500	KOWW	WallaWal.W.
		500	WBAK	Har'burg, Pa.
		500	WPSC	St. Col'ge, Pa.
302.8	990	1,000	KSL	S. L. City, Utah
		100	WBIS	Boston, Mass.
		750	WGR	Buffalo, N. Y.
		750	WHA	Madison, Wis.
		1,000	WLBL	Stev. P., Wis.
		250	WNAX	Yankton, S.D.
305.9	980	1,000	KOMO	Seattle, Wash.
		15,000	WCGN	Elgin, Ill.
		500	WLIB	Elgin, Ill.
309.1	970	2,000	KFAB	Lincoln, Neb.
		500	KYA	S. Fran., Calif.
		500	WPCH	N. York, N.Y.
		500	WRNY	Cot'ville, N.J.
315.6	950	50,000	KDKA	Pitts'bg, Pa.
		1,000	KPSN	Pasad'a, Calif.
319	940	1,000	KOIN	Portland, Ore.
		1,500	WGHP	Mt. C., Mich.
		5,000	WOAI	San. Ant. Tex.
322.4	930	100	KICK	Atlantic, Ia.
		100	WIAS	Burlington, Ia.
		50	WJBA	Joliet, Ill.
		50	WKBI	Chicago, Ill.
		15	WKDR	Kenosha, Wis.
		15	WLBR	Belvidere, Ill.
		50	WLBT	Crown Pt., Ind.
		750	WQAM	Miami, Fla.
		50	WRRS	Racine, Wis.
		150	WRHF	Wash., D. C.
		500	WSMB	N. Orl'ns, La.
		50	WTAX	Streator, Ill.
325.9	920	5,000	KOA	Denver, Colo.
		2,500	WABC	Rchd.Hill, N.Y.
		1,000	WAPI	Auburn, Ala.
		500	WBOQ	Rchd.Hill, N.Y.
333.1	900	100	KFJM	Gr. Fks., N.D.
		1,000	KFQB	Ft. Wth., Tex.
		500	KSAC	Manhat'n, Kan.
		250	KSEI	Pocatello, Ida.
		15,000	WBZ	Sprngf'd, Mass.
		500	WBZA	Boston, Mass.
		500	WJAD	Waco, Tex.
336.9	890	500	KNX	L. Ang., Calif.
		500	WHB	Kan. City, Mo.
		1,000	WJAX	Jack'ville, Fla.
		250	WOQ	Kan. City, Mo.
		250	WWVA	Wheel., W.Va.
340.7	880	50	WCAZ	Carthage, Ill.
		1,000	WKAQ	San Juan, P.R.
		100	WRAV	Yel. Spr., O.
		5,000	WSM	Nashville, Tenn.
344.6	870	100	KFQD	Anchrg, Alas.
		50	KWG	Stockton, Cal.
		5,000	WCBD	Zion, Ill.
		250	WJBB	Tampa, Fla.
		5,000	WLS	Chicago, Ill.
348.6	860	2,500	KJR	Seattle, Wash.
		1,000	KVOO	Tulsa, Okla.
		500	WAAM	Newark, N.J.
		500	WGBS	Astoria, N. Y.
352.7	850	5	KWTC	S. Ana. Calif.
		1,000	WEW	St. Louis, Mo.
		1,000	WWJ	Detroit, Mich.
361.2	830	500	KFWB	Hollyw'd, Cal.
		250	WDAY	Fargo, N. D.
		5,000	WSAI	Mason, O.
365.6	820	50	KMJ	Fresno, Calif.
		500	WCAD	Canton, N. Y.
		2,000	WEBH	Chicago, Ill.
		1,000	WJJD	Mooseht., Ill.
370.2	810	1,000	KHQ	Spokane, Wash.
		1,000	WDAF	Kan. C., Mo.
		1,000	WLWL	New Y'k, Ill.
		500	WMCA	Hoboken, N.J.
374.8	800	500	KNRC	Sa. Mon., Cal.
		500	WAAW	Omaha, Neb.
		500	WJAR	Prov., R. I.
		5,000	WOC	Davenport, Ia.
379.5	790	500	WCAJ	Unl. Pl., Neb.
		50,000	WGY	Schn'dy, N. Y.

Wave length	Frequency (kilocycles)	Power (watts)	Call signal	Location
384.4	780	5,000	KGO	Oakland, Calif.
		1,000	KTHS	Ht. Sp'gs, Ark.
		100	WBSO	Ws. Hls., Mass.
		250	WCAO	Bltmo, Md.
		100	WCBM	Bltmo, Md.
		500	WMBF	Mt. Bch., Fla.
		100	WSRO	Mid'town, O.
389.4	770	500	WAAF	Chicago, Ill.
		100	WABI	Bangor, Me.
		5,000	WBBM	Chicago, Ill.
		500	WJBT	Chicago, Ill.
394.5	760	500	KFDY	B'k's, S. Dak.
		1,000	KMA	Shenandoah, Ia.
		5,000	KOB	St. Col., N. M.
		1,000	KTW	Seattle, Wash.
		1,000	KWKH	Shreveport, La.
		500	KWSC	Pullm'n, W'h.
		500	WHN	N. York, N. Y.
		500	WPAP	Cl'f's'd, N. J.
		500	WQAO	Cl'f's'd, N. J.
399.8	750	1,000	KLZ	Denver, Colo.
		500	KZRQ	Manila, P. I.
		1,000	WEAR	Cl'v'l'd, O.
		3,500	WTAM	Cl'v'l'd, O.
405.2	740	5,000	WCCO	Mn.-S. P., Mi.
		500	WFI	Phila., Pa.
		500	WLIT	Phila., Pa.
413	726	500	KZRM	Manila, P. I.
416.4	720	500	KHJ	Los Ang., Calif.
		5,000	WHT	Deerfield, Ill.
		5,000	WIBO	Chicago, Ill.
		1,000	WMAF	S. Dtm., Mass.
		5,000	WORD	Batavia, Ill.
422.3	710	1,000	KPO	San Fran., Cal.
		5,000	WOR	New'k, N. J.
		500	WOS	Jeff'son C., Mo.
428.3	700	500	KFBU	Laram., Wyo.
		500	WCSH	Portland, Me.
		5,000	WLW	Harrison, O.
434.5	690	1,000	NAA	Radio, Va.
440.9	680	500	KFSD	S. Diego, Cal.
		50	WIBG	Elk's Pk., Pa.
		5,000	WJR-WCX	Pnc. Mich.
447.5	670	1,000	KFOA	Sept., Wash.
		1,000	WMAQ	Chicago, Ill.
		500	WQJ	Chicago, Ill.
454.3	660	1,000	KFRC	S. Fran., Cal.
		30,000	WJZ	Bound Br'k, N.J.
461.3	650	2,000	KFNF	Shenand'h, Ia.
461.3	650—Cont'd.	500	KRLD	Dallas, Tex.
		500	KUOM	Missula, Mont.
		500	WEEI	Boton, Mass.
		500	WHAS	L'v's'lle, Ky.
		500	WRR	Dallas, Tex.
468.5	640	5,000	KFI	Los Angeles, Cal.
		1,000	WRC	Washing'n, D.C.
475.9	630	1,000	WSB	Atlanta, Ga.
		500	WSUI	Iowa City, Ia.
483.6	620	500	KFDM	Beaum't, Tex.
		250	KUSD	Vermillion, S.D.
		1,500	WCFL	Chicago, Ill.
		1,000	WEMC	B'r'n S., Mich.
		100	WLTS	Chicago, Ill.
		500	WTAW	Col. Sta., Tex.
491.5	610	1,000	KGW	Portland, Ore.
		50,000	WEAF	N. Y., N. Y.
499.7	600	50	KFUT	S. L. City, U.
		500	WAAW	Omaha, Neb.
		1,500	WBAP	Ft. Worth, Tx.
		75	WBBY	Ch'r'ston, S.C.
		500	WFAA	Dallas, Tex.
508.2	590	500	KLX	Oakland, Cal.
		500	WIP	Philadelphia, Pa.
		500	WOO	Phila., Pa.
		1,000	WOW	Omaha, Neb.
516.9	580	500	WCAE	Pittsb'gh, Pa.
		500	WMC	Memphis, Tenn.
		500	WTAG	Wrcstr., Mass.
526	570	2,500	KFKX	Chicago, Ill.
		2,500	KYW	Chicago, Ill.
		500	KMTR	Los Ang's, Cal.
		500	WNYC	N. Y., N. Y.
535.4	560	100	KFBK	Sacram'to, Cal.
		5,000	WHO	Des Moines, Ia.
		500	WTIC	Hartford, Conn.
545.1	550	200	KFKA	Greeley, Colo.
		500	KSD	St. Louis, Mo.
		500	WHAZ	Troy, N. Y.
		750	WMAK	Lockport, N.Y.

CLASSIFIED ADVERTISEMENTS

HOW about that new set you want to buy? What are you going to do with the old one? A Radio Digest classified advertisement will sell it for you.

Rates are twenty cents a word for each insertion. Five per cent discount for four insertions, 10 per cent discount for six insertions, 15 per cent discount for twelve insertions. Name and address are counted. Two initials count one word. Cash must accompany order. Minimum of ten words. Objectionable and misleading advertisements not accepted.

Business Opportunities

LAND FREE if planted to bananas. Bananas bear a full crop the second year. $5.00 monthly will plant five acres, which should pay $1,500 profit annually. Reliable Companies will cultivate and market your bananas for ¼. Bananas ripen every day and you get your check every 90 days. For particulars address Jantha Plantation Co., Empire Building, Block 978, Pittsburgh, Pa.

Employment

Agents

RADIO AGENTS—Make Big Money— Easy! Selling Marvelous New Sets and accessories. Buy from factory at lowest prices. Get New Catalog with thousands of nationally advertised bargains. FREE Call Book. Write today. American Auto and Radio Co., Dept. 118, American Radio Bldg., Kansas City, Mo.

WE PAY $48 a week, furnish auto and expenses to introduce our Soap and Washing Powder. Buss-Beach Company, Dept. A186, Chippewa Falls, Wis.

Male Help

Salesmen—Calling on the radio trade to sell ORTHOCONE speakers—nationally famed for their wonderful tonal qualities. Low price. Liberal discounts to dealers. Big commissions. An unusual money-making opportunity for you. Sample furnished. References required. Write immediately to ORTHOCONE SPEAKER CO., 2728 St. George Court, Chicago, Ill.

DO YOU DRIVE A CAR? U. S. Government Chauffeur-Carrier jobs will pay you $141 to $175 a month. "How to Qualify," mailed Free. Write, Instruction Bureau, 206, St. Louis, Mo.

Earn $25 weekly, spare time, writing for newspapers, magazines. Experience unnecessary. Details FREE. Press Syndicate, 1269, St. Louis, Mo.

MEN; get Forest Ranger job; $125-$200 monthly and home furnished; permanent. hunt, fish, trap. For details, write Norton, 362 McMann Building, Denver, Colo.

40% commission selling printed business stationery at knock-out prices. Part or full time. Free outfit V. Process Service, Minneapolis, Minn.

Maps

New Radio Maps. We are now able to supply our readers with new radio maps, showing location of stations, list of all stations by call letters. Come folded in cover, but may be used for pasting on cardboard. Size 28x34". Send 25 cents stamps or coin to Shopping Service, Radio Digest, 510 N. Dearborn St., Chicago, Ill.

Miscellaneous

The new and improved Proof of Reception Cards are the most practical and convenient proof of reception of those distant stations. Contains spaces for complete reception record, dial settings, call letters, stamps and signature of announcer. Handy size, 3x5 inches. 150 for $1 or send 25 cents (stamps or coin) for sample package. Shopping Service, Radio Digest, 510 N. Dearborn St., Chicago, Ill.

Stations play request numbers. Mail a request card, printed with name and address. 100 for $1.50. Send for sample. GISLER PRINT, 3243 Central Avenue, Indianapolis.

Motorcycles

USED MOTORCYCLES. All models. Easy payments. Free catalog. Western Motorcycle Co., 901 15th., Kansas City, Mo.

Patent Attorneys

PATENTS. Booklet free. Highest references. Best results. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

Patents

INVENTIONS COMMERCIALIZED. Patented or unpatented. Write Adam Fisher Manufacturing Company, 555 Enright, St. Louis, Missouri.

Radio

DIRECT FACTORY SALE

Wholesale prices. Tremendous savings. Selling direct to you. Here are some of our many items: 30 Henry Choke, 100 M. A., $2.19; 10 Henry Choke, 400 M. A., $5.48. Power Transformers for all kinds of Eliminators and for all types of A. C. Tubes, at Special Low Prices. EVERY ITEM FULLY GUARANTEED. Promptly shipped upon receipt of order. Send for free illustrated catalog today. Todd Electric Co., Inc. (Manufacturers), 36 West 20th Street, Dept C, New York City.

Change your phonograph into a loud speaker with the Fultone Unit for only $2 C. O. D., or postpaid if cash accompanies order. Bronstein's Pharmacy, 4600 Lincoln Ave., Chicago.

600 Mile Radio. $2.95 postpaid. Needs no tubes, batteries, or electrical current. Over 300,000 homes have them. Picture and folder sent free. National Radio Sales Co., Fuller Bldg., Wichita, Kansas.

AMUSEMENT at home; any boy can attach our special microphone in one minute and listen to any country. It's not attached to your set. Price $7.00. HOMESIDE RADIO CO., 233 Scott, San Francisco.

SUPER-GROUND CLAMP

Improves Reception

25c

THIS patented, adjustable clamp (fits any pipe) gives you a perfect ground connection that assures better radio reception. The binding post set screw cuts through dirt, corrosion or scale on the outside of the pipe, biting right into the clean metal underneath—you get a perfect metal-to-metal contact.

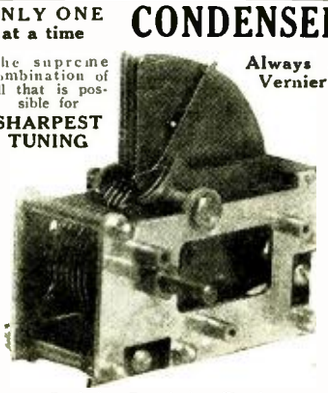
Price, 25c postpaid, to any address in U. S. Super Window Lead-In, 25c. Order yours today.

E. & M. RADIO SUPPLY CO.
3028 McKinley Blvd., Milwaukee, Wis.

ONLY ONE at a time CONDENSER

Always a Vernier

The supreme combination of all that is possible for **SHARPEST TUNING**



Send for Descriptive Circular

RADIO MANUFACTURING CO.
Office 110 E. 4th St. Joplin, Mo.

We have an oversupply of the famous Fultone loud speakers which we are disposing of at only $4.95 C. O. D., or postpaid if cash accompanies the order. Bronstein's Pharmacy, 4600 Lincoln Ave., Chicago.

Radio Log

LOG-CHART UR RADIO by the newest and simplest way. Absolutely no writing of call letters, wave lengths or dial numbers—a mere DOT locates that station as received on UR RADIO. Stations all over the world and outline map of the United States. Price 25c. DeaRie Radio Laboratories, 505 Madison Square Building, Chicago, Illinois. 229 Whittemore, Pontiac, Michigan.

Stamps

RADIO STATION stamps bought, sold and exchanged. Chas. A. Phildius, 510 East 120th St., New York, N. Y.

RADIO AT WHOLESALE

Write for my Big 1928 Radio Catalog—just off the press. Thousands of marvelous bargains in nationally advertised goods. All the LATEST IN RADIOS and equipment. Lowest wholesale prices. Agents Wanted.

It's a regular encyclopedia on Radio. All about trouble finding.

FREE Log and Call Book and Catalog. Get your copy today. Send postcard now!

American Auto & Radio Mfg. Co.
HARRY SCHWARTZKOPF, Pres.
Dept 118 American Radio Bldg., Kansas City, Mo. 3

FREE

DEALERS NEW 1928 CATALOG

$75 to $125 Weekly

$5 down

Charging Batteries Starts You

Let me show you how to make big money right from the start. I've prepared a FREE book explaining all details. First week's profit pays for all equipment. You can get all the battery charging business in your community with my Service Station Charger—it's years ahead of ordinary chargers—handles 50% to 70% more batteries. I explain everything—start you in a business of your own and put you on the way to big money. Write for FREE BOOK.

C. F. HOLMES, Chief Engineer, Dept. R.D.
Independent Electric Works
5116 Ravenswood Ave. Chicago, Ill.

Big Profits

FREE BOOK-Just Out

A&B Battery Charger ONLY $2

SATISFACTION GUARANTEED

Charges any type of storage A or B battery, using a few cents worth of ordinary house current, either alternating or direct. Cannot injure battery. Complete directions enclosed. Anyone can operate. No expensive "extras" to buy. Why pay $10.00 to $15.00 for a charger when you can get this splendid GUARANTEED R. B. Charger by mailing us two dollars (bills, money order, check or stamps) plus ten cents in stamps or coin to pay mailing costs. Charger will be sent postpaid. If you are not satisfied, return within five days and we will refund your money. Order at once—TODAY.

R. B. SPECIALTY CO.
Dept. 601-W, 308 East Third St., Cincinnati, O.

6 TUBE SUPERPHONIC

All Metal Chassis Shielded Ready to Wire

Radio ALL PARTS MOUNTED

Only $16.95

FREE! 6 TUBES UX 201-A TYPE Tested and Matched

Can be wired in a few minutes

COAST to COAST RECEPTION

An amazing value that can't be beat! Latest 6 tube tuned radio frequency circuit. Extremely selective, marvelous sensitivity. 2 stages of radio frequency, detector and 3 audio amplifiers for improved tone quality. 2 dial control. All metal chassis. Shielded. Clear and realistic reception guaranteed. Beautiful front panel, crystalline finish. Metal panel and sub-panel; all parts mounted. Simply connect a few wires. No special tools needed. Vernier dials for fine tuning. New type UX sockets. All hook-up wire and colored battery cable included. Value, $60.00; our price, $16.95.

Simple Wiring Directions

Very easy to wire this set with the instructions we furnish. Just connect a few wires. That is all. Can be wired in a few minutes by anyone. No Radio knowledge needed. Make money by wiring these sets in your spare time and selling them to your friends.

NO RADIO KNOWLEDGE NEEDED!

SEND NO MONEY

Just write your name and address on a post card and ask us to send you this great outfit together with 6 tubes. We will ship them right away. When they arrive, pay only $16.95 plus a small delivery charge. **RADIO EQUIPMENT CO.**
Dept. DA. 549 S. Wells St. Chicago, Ill.

A HOMEY HOTEL IN THE HEART OF NEW YORK

THE *New Flanders*

47th to 48th STREET ⟷ EAST OF BROADWAY

One of the finest Hotels in TIMES SQUARE

Single Rooms with Running Water, $2.00
Double Rooms with Running Water, $3.00
Single Rooms with Bath $2.50
Double Rooms with Bath . . $3.50

Special Weekly Rates

F. W. BIZEL, *Resident Manager*

Your Home Deserves Zenith Radio

GOOD music deserves good musical reproduction. Zenith radio will bring fine broadcast programs in the manner they should be brought—with tonal delicacy, with clear undistorted rendition of every voice or instrument. For the Zenith receiver is a high grade musical instrument, made with exacting care and scientific devotion to the highest standards of performance.

Zenith design ranges from the six-tube, battery or electrically operated set to the De Luxe, fully electrical ten-tube type. Every model embodies more than twenty-five Zenith improvements that have led the way in radio development. The Zenith price begins at one hundred dollars because Zenith quality cannot be built into a receiver of lower price. Whichever one of the sixteen Zenith models you select will bring those fine qualities of tone, selectivity, volume and clarity that your home deserves.

Make it a point to hear a Zenith demonstration before you buy radio. You will then have a standard of judgment—*the Zenith standard.* Both as musical instrument and as exquisite cabinet furniture Zenith radio is worthy of a place in the truly modern home.

DE LUXE ENGLISH ELECTRIC MODEL
10 Tubes
The first 10-tube completely Electric Radio using power speaker.

Western United States prices slightly higher
Licensed only for Radio amateur, experimental and broadcast reception

World's largest manufacturers of high grade radio — 16 models — 3 different circuits—6, 8 and 10 tubes, battery or electric—antenna or loop—$100 to $2500

ZENITH
TRADE MARK REG.
→LONG DISTANCE← RADIO
TRADE MARK REG.

3620 IRON STREET · CHICAGO

I am the Voice of the radio receiver . . . . Without me, even the finest of sets is wanting. For I speak where others whisper . . . . and whisper where others are mute. I tell everything and miss *nothing* . . . . I greet Volume with a smile, and snub Distortion with disdain. I am Music's mirror . . . . friend to the brasses . . . . ally of the winds and reeds . . . . helpmate of the basso . . . . guardian of the soprano. Others, masked in similar guise, attempt to impersonate me. But in vain. For I am the *real* Voice of the radio receiver. I am the Farrand *Oval* Speaker.

Farrand NEW OVAL

FOUR MODELS—The *Oval* SENIOR (Model 24), at $32.50—The *Oval* JUNIOR (Model 20), at $16.50—The *Oval* WALL (Model 30), at $45—The *Oval* PEDESTAL (Model 30-P), at $60.00. Slightly higher in Far West and Canada.

FARRAND MANUFACTURING CO., INC., LONG ISLAND CITY, N. Y.

ONLY $20

Here's a 180 volt "B" Eliminator at a Price You Don't Mind Paying

The New
CLOVERLEAF AUTOMATIC "A" & "B" CONTROL

A new and absolutely dependable automatic switch which localizes the control of the "B" Eliminator, trickle charger and "A" battery in the switch on the set. Easily attached in a few minutes. Only $2.75 from your dealer, or order direct, using coupon in the lower right corner of this page.

SUBANTENNA

SUBANTENNA Takes STATIC-FREE RADIO WAVES OUT OF THE GROUND

When the air is so loaded with static that distant reception is impossible with an "up-in-the-air" aerial, you can get loud, clear reception from your favorite far-away station, by picking it up out of the ground with a Subantenna. This amazing device is sold on an absolute guarantee of clearer, greater, better distant reception, or your money back. Send lower right coupon for explanation and particulars of Free Trial GUARANTEE OFFER.

DEALER'S COUPON

CLOVERLEAF MFG. CO.,
2712-L Canal St., Chicago, Ill.

Send me your dealer's proposition on:

- ☐ Cloverleaf **Lifetime** "B" Eliminator.
- ☐ Cloverleaf Automatic "A" & "B" Control.
- ☐ Subantenna.

Name .....

Address .....

ONLY $20—but it does everything that other 180-volt eliminators costing twice as much will do. In addition, it offers you positive assurance of a lifetime of dependable service.

This new, advanced type, unit will operate any set. 5,8,10 tubes, it makes no difference. Supplies constant voltages of 22, 45, 90, 135 and 180 volts for a power tube, from fixed output taps. No adjustments—no exposed binding posts.

The Cloverleaf **Lifetime** "B" is, in all truth, the "B" Eliminator sensation of the season. Think of it! $20 now buys a real, **long lived,** high voltage, high current-output, heavy duty "B" backed by a two-year guarantee of satisfaction.

Obtain a Cloverleaf Lifetime "B" from your dealer—or, if your dealer cannot supply you, use the right hand coupon from this page to take advantage of the special introductory **free tube** offer we are now making.

CLOVERLEAF MANUFACTURING CO.
2712-L CANAL ST. - - - - - - CHICAGO, ILL.

lifetime Cloverleaf "B" ELIMINATOR

Genuine Q. R. S. 85 Mil. TUBE FREE

If you live in a town where we have no dealer, fill in and mail the coupon from the bottom of this column. We will send you the Cloverleaf **Lifetime** "B" Eliminator express prepaid, and include a genuine $4.50 Q.R.S. 85 Milliampere tube FREE.

When the Cloverleaf "B" arrives, connect it to your set. Put it to every test you can think of. Make it drive a power tube. Then decide whether or not you think a better "B" eliminator can be built. If you are not satisfied, return the Cloverleaf "B" and we will immediately refund your money.

And if you do decide, despite the low price, that the Cloverleaf is the best "B" that any amount of money can buy—remember—it's backed by a two-year guarantee. Fill in and mail the coupon NOW.

FREE TUBE COUPON

CLOVERLEAF MFG. CO.,
2712-L Canal St., Chicago, Ill.

(Check how you want the Cloverleaf "B" shipped)

- ☐ I enclose $1 deposit, for which send me one Cloverleaf Lifetime "B" Eliminator and free Q.R.S.85 Mil. tube. I agree to pay expressman $19.00, plus small express charges.
- ☐ I enclose $20, for which ship me one Cloverleaf "B" Eliminator and free tube, express charges prepaid.
- ☐ I enclose $2.75, for which send me, postage prepaid, one Cloverleaf Automatic "A" and "B" Control.
- ☐ Send me full particulars of SUBANTENNA.

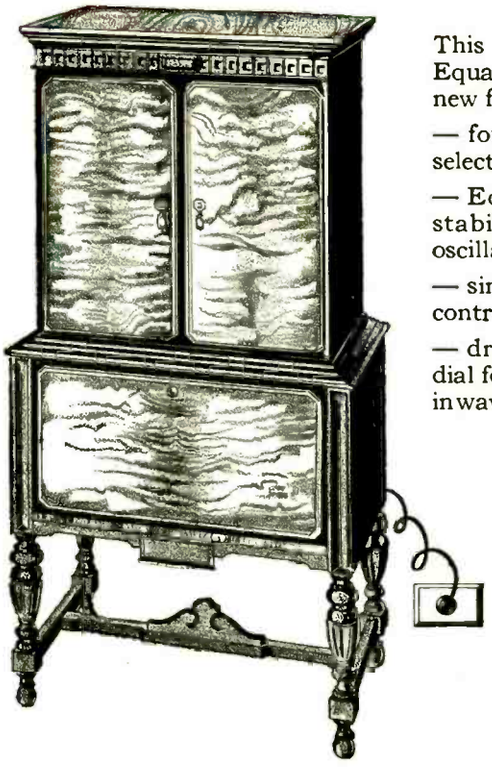
Name.....

Address.....

no { acids / trouble / batteries / water / excuses / makeshifts

THE ELECTRIC RADIO

The cabinet of model G-5, illustrated here, is without a doubt one of the finest that ever housed a radio set. It is panelled entirely of the most carefully selected genuine burl Walnut. Contains a large cone-speaker of great volume and superb tone. Truly a masterpiece of the cabinet makers art.



This all electric Freshman Equaphase embodies many new features—

— four tuned circuits for selectivity.

— Equaphase system of stabilization prevents all oscillations.

— single drive — just one-control.

— drum type illuminated dial for beauty — calibrated in wavelengths for efficiency.

Always Ready— Always Right

Your light socket supplies all the power.

$250 Complete Ready to Operate

A Freshman development—licensed under patents; RCA—General Electric Co.,—Westinghouse Electric & Mfg. Co. and American Tel. & Tel. Co.

Freshman EQUAPHASE

Sold on Convenient Terms

by Authorized Freshman Dealers Only

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CHICAGO LOS ANGELES