

THE JANUARY 1930

RADIO INDEX

The Radio Fan's Own Magazine



"The Cream in My Coffee"

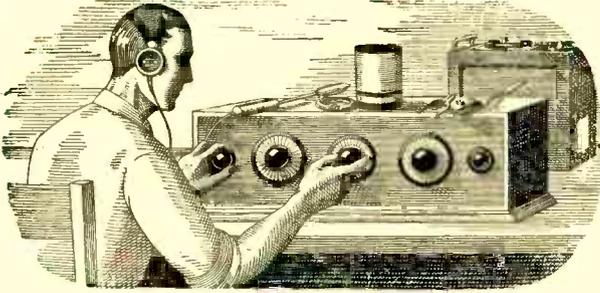
"Before I saw this magazine, I didn't know how to really tune my set. Since I got a copy of RADEX I have picked up 126 stations in 26 days. It surely showed me how to use a radio."

(See page 20)

No. 35

Complete Revision of Stations

N. S. E.



If all the Radio sets I've "fooled" with in my timewere piled on top of each other, they'd reach about halfway to Mars. The trouble with me was that I thought I knew so much about Radio that I really didn't know the first thing. I thought Radio was a plaything — that was all I could see in it for me.

I Thought Radio Was a Plaything

But Now My Eyes Are Opened, and I'm Making Over \$100 a Week!

\$50 a week! Man alive, just one year ago a salary that big would have been the height of my ambition.

Twelve months ago I was skimming along on starvation wages, just barely making both ends meet. It was the same old story — a little job, a salary just as small as the job.

If you'd told me a year ago that in twelve months' time I would be making \$100 and more every week in the Radio business — whew! I know I'd have thought you were crazy. But that's the sort of money I'm pulling down right now — and in the future I expect even more. Why, only today —

But I am getting ahead of my story. I was hard up a year ago because I was kidding myself, that's all — not because I had to be.

When broadcasting first became the rage, I first began dabbling with Radio. There's a fascination — something that grabs hold of a fellow — about twirling a little knob and suddenly listening to a voice speaking a thousand miles away!

Up to a year ago, I was just a dabbler — I thought Radio was a plaything. I never realized what an enormous, fast-growing industry Radio had come to be — employing thousands and thousands of trained men. I usually stayed home in the evenings after work, because I didn't make enough money to go out very much.

And as for the idea that a splendid Radio job might be mine, if I made a little effort to prepare for it — such an idea never entered my mind. When a friend suggested it to me one year ago I laughed at him.

"You're kidding me," I said.

"I'm not," he replied. "Take a look at this ad."

He pointed to a page ad in a magazine I'd seen many times but just passed up. This time I read the ad carefully. It told of many big opportunities for trained men to succeed in the great new Radio field. With the advertisement was a coupon. I sent the coupon in, and in a few days received a handsome 64-page book, telling about the opportunities in the Radio field and how a man can prepare quickly and easily at home to take advantage of these opportunities. Well, it was a revelation to me. I read the book carefully, and when I finished it I made my decision.

What's happened in the twelve months since that day, seems almost like a dream to me now. For ten of those twelve months, I've had a Radio business of my own. At first, of course, I started it as a little proposition on the side, under the guidance of the National Radio Institute. It wasn't long before I was getting so much to do that I quit my measly little clerical job, and devoted my full time to my Radio business.

Since that time I've gone right on up. They would have given me just as much help, too, if I had wanted to follow some other line of Radio besides building my

own retail business — such as broadcasting, manufacturing, experimenting, sea operating, or any one of the score of lines they prepare for you. And to think that until that day I sent for their eye-opening book, I'd been wailing, "I never had a chance."

Now I'm making, as I told you before, over \$100 a week. And I know the future holds even more, for Radio is one of the most progressive, fastest-growing businesses in the world today. And it's work that I like — work a man can get interested in.

You may not be as bad off as I was. But think it over — are you satisfied? Are you making enough money, at work that you like? Would you sign a contract to stay where you are now for the next ten years — making the same money? If not, you'd better be doing something about it.

This new Radio game is a live-wire field of golden rewards. The work is fascinating, absorbing, well paid. The National Radio Institute — oldest and largest Radio home-study school in the world — will train you inexpensively in your own home to know Radio from A to Z.

Take another tip — No matter what your plans are, no matter how much or how little you know about Radio — clip the coupon below and look their free book over. It is filled with interesting facts, figures, and photos, and the information it will give you is worth a few minutes of anybody's time. You will place yourself under no obligation — the book is free, and is gladly sent to anyone who wants to know about Radio. Just address J. E. Smith, President, National Radio Institute, Dept. OA52, Washington, D. C.

J. E. SMITH, President,
National Radio Institute, Dept. OA52,
Washington, D. C.

Dear Mr. Smith: — Please send me your 64-page free book, giving all information about the opportunities in Radio and how I can learn quickly and easily at home to take advantage of them. I understand this request places me under no obligation, and that no salesman will call on me.

Name
Address
Town
State

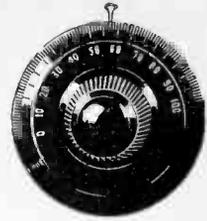
Please mention RADEX

THE JANUARY 1930

RADIO INDEX

REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER
Editor and Publisher



SIXTH YEAR

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Electrifying Battery Sets

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ELECTRICITY for house-lighting purposes is supplied to more than three-fourths of all the homes in the United States. The success of A.C. tubes, and other equipment eliminating the need of batteries in radio receivers, means that in a very short time nearly all receivers will be operated on the house-lighting current. This does not mean, however, that the four million battery-operated receivers purchased before the perfection of A.C. apparatus will be discarded. Many fans are rebuilding their old receivers, as it is a comparatively easy task for anyone who is able to handle a few tools and follow instructions. It is the primary purpose of this article to give authentic information, based on actual tests and experiments, on two methods that have been used in rewiring battery-operated sets for complete operation on the house-lighting current. However, if the fan does not desire to rewire his set for A.C. tubes but nevertheless desires all the advantages of electric operation, the simplest thing to do is to substitute an A-eliminator for the storage battery, and a B-eliminator for the B-batteries. Excellent results can be obtained from such equipment as there are several good A-eliminators on the market that are practically without hum and can be obtained for a nominal sum.

Fundamental Points

No matter what type of A.C. tubes are to be used, a few fundamental changes in the wiring are necessary in all cases, and these can be listed as follows: (Not applicable to series-filament wiring).

1. All filament connections to the ground line must be removed.
2. The filament terminals of all tubes operating at the same voltage are connected in parallel, preferably with the use of twisted wire to prevent inductive effects. At any rate the filament wires must be run close together.
3. All grid leads to the negative filament circuit must be disconnected, and

must be run to the ground line, except in a few cases where the grid of the transformer or resistance-coupler supplying the power tube is expressly connected to the negative line of the filament circuit, and in cases where the detector is given a positive bias by the introduction of a C-battery.

4. Rheostats and potentiometers formerly used are disconnected.

Arcturus 15-Volt A.C. Tubes

Fig. 1 shows an old style, 5-tube tuned radio-frequency receiver having three tuning dials, before and after its conversion to A.C. operation with the use of Arcturus A.C. tubes. This receiver is rewired in such a way that it may be used with batteries again if desired. The rotor terminals of the tuning condensers are left connected to the secondary winding of the R.F. coils, but are disconnected from the negative filament line, a connection which is often made through a potentiometer. In order to save work, it may be possible to disconnect the lead from all rotors of the condensers at the point where this lead connects to the potentiometer or to the negative line. It is then connected to the ground. It is good practice to run a ground lead across the set in the most convenient location, so that connections may easily be made to it at various points. The filament circuit must be altered so that all the tubes are connected in parallel and there must be no connection to the ground from the filament circuit. Remove the potentiometer and rheostats as these will not be needed for A.C. operation. The grid leak is disconnected from its position across the grid condenser, and it is connected to the grid of the detector tube, and to the positive terminal of a 9-volt C-battery, the negative terminal of the C-battery being run to one of the filament lines, which is also connected to the B-negative lead, and to the positive of a 1.5-volt C-battery. The negative side of the 1.5-volt C-battery is connected

(Continued on page 21)

Tuning for DX Stations

By JOSEPH A. STAUHS

DX Ace of the Newark News Radio Clubs

Editor's Note — The above Club was organized two years ago with only 55 members. Today it has more than 600 radio enthusiasts on its rolls. Each month the Club holds a DX contest and offers a loving cup to the member receiving the greatest number of verified stations in six hours. This cup will go permanently to the one winning it three times. It has now been won twice by Joseph A. Stauhs. In his first victory Mr. Stauhs registered 67 stations against his closest competitor's 48. In the

as well as skill. Fourth, there must be an outside aerial of from 50 to 75 feet in length and an exceedingly good ground. Fifth, there must be freedom from disturbing electrical noises such as those caused by faulty electrical circuits, motors, flashers, violet ray machines, etc.

To log a large number of radio stations, the writer has found systematized tuning much more successful than haphazard fishing. One must know exactly where to set his dial for each frequency in the broadcast band. Next to my fine

Here you see the Whittall's Anglo-Persian Orchestra, Louis Katzman, conductor, which you may hear any Sunday evening at 6:30 o'clock over the WJZ chain



second, the score was 61 and 50. A third contest resulted in a tie.

RADEX asked Mr. Stauhs to tell its readers just how he manages to make such records and to what he attributes his success. The following article is his reply.

* *

TO establish a record in tuning in distant stations, there are a number of essential factors. First of course, one must have a good receiver that is in prime condition and kept that way. Second, one must have a complete and accurate list of the stations he is trying to bring in. Third, one must exercise a vast amount of patience and persistence

receiver, I owe my success mostly to RADEX. From my entries in the Index by Frequencies I can tell exactly where to set my dials in order to tune my set for any desired channel. I begin with the frequency of 1500 kcys. and by the most careful adjustments of my set, I try to bring in some station on that channel. Under the rules of our contests, chain stations do not count. This is because the reception of programs at the hour heard must be verified by the station and naturally with chain stations, anyone knows what they are broadcasting at a certain hour and thus real verification is impossible.

I therefore make up a list of all chain

stations and their frequencies and I pass by all such channels. (*Editor's Note* — In this and future issues of RADEX, all chain stations are designated in the index.) We are not permitted to count stations within 100 miles and I must therefore avoid those waves on which either a chain or local station is broadcasting. As soon as I record a station on 1500 kcys., noting the time and feature, I tune in 1490 and so on down to 550 kcys. My RADEX gives me a picture of what I may expect on each channel and by using patience I quite frequently add to my log two or three or more stations on the same wave. For instance, I recently received WJZ on 760 kcys. They signed off at 12:25 a.m. and WEW was then heard for 18 minutes and when they signed off KVI came in quite clear.

A seven or eight tube receiver is not necessary to tune in DX stations. The writer has logged 408 stations on a three-tube set, including 11 in California, four in Washington, three in Oregon, two in Mexico, two in Cuba and one in Haiti. The standard receivers of today are more sensitive than the old three and four-tube sets. Using a manufactured six-tube receiver, I have logged 621 stations in 15 months, including two in British Columbia, one in Alaska, six in Cuba, four in Mexico, one in Australia, one in Hawaii, and one in Japan. As I stated before, I owe much of my success to RADEX for this wonderful book has enabled me to tune in every one of the broadcast channels and I can tune immediately to any channel I want.

I would advise every DX fan to have a jack installed in his receiver for there are many stations you can pick up with head-phones that you would pass right by with the loud-speaker. With most of the present-day electric receivers it is impossible to install a jack but I have overcome this by taking an old tube-base and running wires from each of the old internal connections to similar connections on an extra socket. I then remove my first audio tube and replace it with the tube-base putting the tube in the extra socket. I connect my head-phones in series with the plate. I am now using this device and feel sure that in the contest this month, I will be able to

make my greatest record. I am sure this will be a boon to all DX'ers. It is a good plan to use only one stage of amplification as a receiver is then more selective.

One thing that holds down DX records is the failure of announcers to give their station call at frequent intervals. How many times one must listen for half an hour or even more for the announcer to tell the station. I suggest that every time you write to a station you ask that they give their call more frequently and perhaps after awhile constant repetition will bring results. When one considers that the primary purpose of a station is the advertising of its owners, it seems strange the announcer fails to take advantage of the opportunity.

I think that chain programs should be limited to at most ten channels. At the present time you can tune in as many as twenty channels where the same program is being broadcast. (*Editor's Note* — At present the NBC lists 73 stations, and the Columbia 59. The NBC uses 50 channels and Columbia 40.) I also believe that high power is unnecessary. One New York station claims that they cannot reach their listeners within a radius of twenty miles with 5000 watts, but I have received 22 Pacific Coast stations using 500 watts or less. I believe that the maximum power for a station should be 10,000 watts. If a station wants to use more let it go on the short-wave channels.

Just a word about our club. The broadcasting stations have an association, so why should the listeners have the same thing? In Newark, in Buffalo, in Chicago, and in other cities there are radio clubs organized. If you do not belong to such a club I advise you to join one at once. If there is no club, organize one. The Federal Radio Commission favors the listeners banding together in clubs so they may find out just what the radio-users want. The Commission will consult such clubs regarding changes in allocations, increasing power, interfering stations, etc., and in this way ascertain the proper action that will best serve the public interest.

"Stopping Radio Noises" in the February Radex may be worth many dollars to you.

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and Largest Commercial
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What Makes the Whistle?

BOB MAC GIMSEY, the unique "harmony whistler" now being featured on the Empire Builder programs holds the record of having mystified the entire clinic of New York University, one of the largest clinics in the country. The examination was held prior to MacGimsey's debut in radio.

The doctor who searched MacGimsey's throat for a concealed canary, the psychologist and psychoanalyst who worked on the theory that the cheerful whistler might be mentally abnormal — all of them finally decided that Bob's whistling apparatus is simply a freak of nature.

The puzzling part of MacGimsey's



performance is that he whistles in harmony, striking two and three notes at a time.

Dr. Leo M. Hurd, professor of Laryngology at the University, stated that MacGimsey has no abnormalities in his nose or throat. He said: "I find that he makes his extra notes in whistling in his larynx by moving his vocal cords. It is a very interesting case and I have never seen one like it before."

Bob explains that he hears the harmony ahead of time but that the control then becomes automatic when he is really whistling — although he can con-

sciously make a discord if he does it deliberately.

Dr. Vivian Ezra Fisher, also of New York University, who deals primarily in abnormal psychology tried to prove that it was something strange in MacGimsey's make-up that caused the stunt — but after much probing into his reactions Dr. Fisher said that MacGimsey was about as normal a person as he had found and most decidedly interesting as well. He admitted that he couldn't add anything to the solution of the problem.

Next the whistler "performed" before two specialists in the art of speech, Alvin C. Busse and Richard C. Borden, who tried to determine whether or not this control was simply a variation of the normal kind of whistling which involves using the lips and the voice box. In this connection, the whistler gave a concert for several classes at the University.

Mac himself tells us that he has thought a lot about how this two and three part whistling "works" and he hoped that the scientific analysis would give him a clue to the truth. He is afraid to experiment too much with the mechanical operation which causes the two and three tones to go in opposite directions at the same time because it might result in spoiling the gift. Quoting him: "I am conscious of a tongue and throat movement together with some lip variation but the changes that take place are simply automatic."

Although the New York University clinic could not probe the mysterious whistler, they at least discovered that Bob MacGimsey is the only one of his kind.

You may hear this phenomon on the Empire Builders' program on Monday evenings at 10:30 o'clock E.S.T. over the N.B.C. chain headed by WJZ.

Boys!

We are giving some fine prizes
for a little work. Write
for circular.

Training the Squeal

A New Radio Musical Instrument

IT used to be said of the Chicago packers that they used every part of the pig but the squeal. Radio manufacturers are now using that to make most remarkable and beautiful music. Old-timers who used to build their own will remember the enemy known as body-capacity. When one brought his hand close to the set, the tubes broke into oscillation, giving forth the most unearthly squeals and screams. Leon Theremin, a young Russian scientist, has taken this phenomenon and developed an instrument which is being manufactured by the RCA and which

The soloist at the concert had been Leon Theremin, a Russian scientist. He performed upon an instrument of his own invention, known as the theremin and manufactured by the Radio Corporation of America.

Theremin educated the squeal in a radio set and turned a liability into an asset.

Many radio fans have been troubled, particularly with home-made sets, by the fact that the loud-speaker set up a howl when one brought his hand near the dials. In radio parlance, this is called "body capacity."

The Studebaker Champions — You may hear them Sunday evenings at 10:15 o'clock over the W E A F chain



is now being demonstrated by its inventor.

From an article by David Dietz, science editor of the *Cleveland Press*, we quote the following:

"Another 10 years and a man will have to be an electrical engineer to write a review of a symphony concert." The speaker was Arthur Shepherd, professor of music at Cleveland College and music critic of *The Cleveland Press*.

I had just remarked upon finding the following sentence in an article he had written about a concert of the Cleveland Symphony Orchestra:

"The theremin employs a screen grid UX224 radiotron, three UY227's a UX120, two UX171-A's and a UX280 radiotron for power supply."

The circuit in a radio set is delicately balanced. Bringing the hand near the dial, adds the capacity of the person's body to the circuit. This unbalances the circuit, throws the tubes into oscillation, and the howling results.

Theremin built a super-hetrodyne circuit within a small cabinet. Extending from the cabinet are two small antennae. The cabinet is then connected to a loud-speaker. Bringing one's hand near one of the antennae throws the tubes into oscillation. The resulting sound, however, is not a howl, but a rich vibrant tone. The closer one brings his hand to the antenna, the higher the tone becomes.

This is because the proximity of the hand controls the amount of capacity

added to the circuit and hence the frequency of oscillation. Bringing the hand near the other antenna controls the volume. The closer the hand is brought, the more the oscillations are damped and the less the volume.

The result is a musical instrument which can be played by waving one's hands in front of it.

Anyone can play it after a fashion. The man with an ear for music can learn to pick out tunes on it after an hour's practice. The trained musician can call forth unbelievably beautiful effects from it as Theremin demonstrated in the concert.

He played the "First Airphonic Suite, Opus 21," written especially for the occasion by Joseph Schillinger, famous composer. He was accompanied by the entire symphony orchestra of 90 men under the direction of Conductor Nikolai Sokoloff.

The event, in the opinion of this writer, was not a novelty. It was a milestone in the history of music.

The question one cannot help ask is: What of the future? The present theremin has a lyric tone in the cello register. Its range seems rather limited.

But this seems only a mere engineering detail. There is no reason why circuits can not be arranged to give every possible range from piccolo to bassoon and every tone quality from violin to bass tuba.

One noticeable thing is that the volume can be made tremendous. It is possible for example to bring the 90-piece symphony orchestra to double forte and yet have the tones of the theremin issue triumphantly and clearly above the whole orchestra.

The rich vibrant tone of the theremin is like the wind. It can flow lightly like a gentle breeze among summer trees, or roar like the fury of a thousand storm winds.

Many have felt the need of a new musical medium to express the machine age. Perhaps, here in the theremin, itself a product of the machine age, is the instrument.

Will another half century see violins and cellos in museums along with 14-stringed lutes and other instruments of the Middle Ages?

Will the concert of the future see a battery of theremins occupying the stage? Will a half-dozen players manipulate the whole battery and produce more intricate effects than an orchestra of 90 men can at the present?

These are the questions one cannot help asking.

For Women Only

FOR the very few women who are interested in the matter of clothes(!) the Columbia Broadcasting System has arranged a series of fashion talks by Miss Marjorie Oelrichs, who has just joined their staff as Fashion Director. In a series of talks which began on Wednesday, November 3, at 11:30 a.m., she will take her radio audience to the smart restaurants through-



out New York for luncheon, tea and dinner and describe for them the actual costumes that she sees there.

Miss Oelrichs approaches her new work with the best possible qualifications. She combines a prominent position in New York social life with training in the field of fashion design. She has had, furthermore, experience in dressmaking establishments both here and abroad as stylist and in the actual supervision of fitting.

Beginning December 3rd, Miss Oelrichs will talk over the Columbia chain twice each week on Tuesdays and Fridays, at 3:30 p.m., and will cover every field of fashion, including clothes for travel, and the much-discussed wardrobe for the woman of moderate means.

R. T. I. QUALIFIES YOU TO MAKE MONEY AND ITS SERVICE KEEPS YOU UP-TO-THE-MINUTE ON THE NEWEST DEVELOPMENTS IN RADIO, TELEVISION, AND TALKING PICTURES



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—J. NORFINGER,
R. 1, Box 37, Greenville, Ky.



MAKES \$25 A DAY

I make as high as \$25.00 per day and have made \$500.00 in 2 months from radio work. That's not so bad when I'm only 19 and in a small town. You did all you said you would and much more.—FLOYD KNISLEY,
Box 91, St. Joe, Ind.

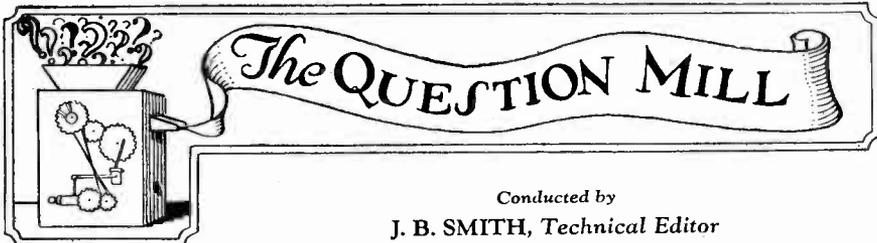
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The QUESTION MILL

Conducted by
J. B. SMITH, Technical Editor

We are glad to publish replies in this column to questions asked by any reader. We cannot promise, however, to reply by mail to other than yearly subscribers. If you are not a subscriber and desire personal reply, please send your subscription with your question. You will find blank for this purpose on page 34.

I have a Freshman all-electric screen grid receiver using a UX171A power tube and would like to know if it will produce enough power to operate a dynamic loudspeaker or do you suggest using a speaker of the magnetic type?

It is evident that your receiver has sufficient power to operate a dynamic loud-speaker if you desire to purchase one. However, many dynamic speakers on the market have an unpleasant hum, which is an objection. I have found a "Jensen" dynamic speaker highly satisfactory compared to a number of others. It is, of course, necessary to fit such a speaker to a baffle board, which has a circular hole cut in it a trifle smaller than the outside diameter of the speaker cone or circular framework around the cone, and the frame is then bolted to the baffle board around the hole. "Celotex" has been found to be an excellent material for use as a baffle. In most commercial receivers using a baffle board, it is fitted inside of the front of the cabinet or console, and for this reason its size is limited to about 1 by 2 feet. A larger baffle board is preferable from a standpoint of efficiency but is not usually advisable because of the space it occupies. A good magnetic type of loud-speaker does not have the above-mentioned disadvantages of a dynamic, but on the other hand, its range of pitch is not as great. If you purchase a magnetic speaker it is well to install an output transformer to protect the magnet windings of the speaker against high plate voltage delivered by the receiver.

In my receiver, equipped with two Arcturus, 15-volt, screen-grid A.C.tubes, reception suddenly stops a few minutes after the set has been turned on. Upon investigation I found that the first screen-grid tube lights when I turn on the set but goes out after a few moments. Wiggling the tube about a bit seems to make a connection again but as soon as it is left that way it goes out again. If I leave the set alone after it is turned on it resumes activity after a five-minute rest. I have taken the socket apart as I thought the spring prongs were making poor contact but after readjusting them and reassembling the socket, I find that the trouble still persists. The tube acts the same way in the second socket when the first two tubes are exchanged. What causes this trouble and how can I remedy it?

You cannot do anything but purchase a new tube, because to all appearances the heating element of the wires connected to it inside of the tube, disconnects after it is heated, which makes the tube inoperative.

I have a three-dial R.F. receiver which I would like to make into a one-dial receiver. It gives entire satisfaction except that it is rather inconvenient to tune three dials. Is there any method of accomplishing this?

Yes, one method is to couple the condensers mechanically, using a rack or belt to connect them together. Of course, a new panel will be necessary. This method, however, does not permit fine tuning unless the condensers and coils are perfectly matched, a condition seldom

found in receivers of the three-dial type. Get a device that will permit the tuning of the individual condensers separately, which you will find necessary for accurate tuning. Another method is to use a three-gang condenser on a single mounting, requiring only one dial to operate all three units. This method necessitates quite a change in the wiring of the receiver, besides a rearrangement of the instruments and possibly new coils that are more adaptable to the new layout. If your dials can be removed and you have access to a lathe, turn a small groove in each one so that you can slip rubber bands over them, which will

cumulation of ice, which may form on it during the winter months.

I have just installed a small motor over my furnace in connection with a thermostat for automatically opening and closing the draft and check, keeping the temperature even. When the motor operates, and this often occurs at night when we have the radio turned on, there is such a crackling noise in the loudspeaker that it is impossible to hear the program. Of course, the interference lasts only about thirty seconds, but is nevertheless so annoying that I would like to have you suggest a remedy.

Your trouble is caused by sparking

Permit us to introduce four stars of the Henry and George program which may be heard each Friday evening at 7 o'clock over the Columbia Broadcasting System. On your left, Henry (Dave Elman) and Flo (Georgia Backus); on your right Maizie (Harriet Lee) and George (Don Clark)



enable you to operate all three by merely turning one. This is the simplest method.

I have a quantity of ribbon antenna. How does it compare in efficiency with the standard seven-strand copper or phosphor-bronze wire?

According to the U.S. Bureau of Standards, no advantage is obtained in respect to efficiency by using ribbon aerial, but it will give just as good results as the standard stranded wire. I may also add that it has disadvantages owing to its width as it is apt to be broken in a strong wind or by the weight of an ac-

brushes of the motor and this kind of interference is often experienced with small motors about the house. The trouble can be eliminated by connecting two 2-mfd. fixed condensers in series across the power line supply the current to the motor. A ground connection to a cold-water pipe is then made to the point midway between the two condensers. A fuse of 10-ampere capacity should also be cut in each supply line to the motor in order to protect the fuses on the main circuit from being blown in case the condensers break down.

There is an electrical disturbance of some kind which causes occasional buzzing sounds in my receiver. My neighbors are also bothered in the same way. We have been unable to find anything in the vicinity in the line of an electrical device that might cause the trouble and we are at a loss how to locate it. Can you suggest some method of getting to the source?

One effective method of locating the source of electrical interference which disturbs radio reception is to get a portable receiver equipped with a loop. Start the set and tune in the interfering signal as loudly as possible. Very often it has a definite wavelength, and although it can be heard all over the dial, it will be loudest at one point. Now turn the loop around to a point where the disturbance comes in still louder and note precisely in which direction the loop points. Then take the receiver to a position a few blocks or possibly half a mile down the street and repeat the above procedure. Doing this at three points will often give you an indication in which direction the interfering signal is coming from. After chasing it down as near to its source as possible by this method, try the ordinary hunting system for finding electrical devices such as stop-and-go street signals, electric signs, power-line transformers and whatnot.

Why is it necessary to solder the lead-in wire to the antenna? I have simply wrapped the bared end of the lead-in wire around the aerial tightly and it seems to function all right.

Fine particles of dust and soot are bound to get in between the surface of the lead-in wire and the surface of the aerial and act as insulation and this reduces the effective pick-up quality of the aerial, which is most noticeable in distant reception. A film of corrosion, due to the effects of the weather, will also cover the surfaces in time, and the swaying of the aerial will tend to loosen the connection if it is merely twisted together. Crackling noises during reception have often been traced to such loose connections. Soldering the two wires together keeps soot and dirt out, prevents corrosion on the contacting surfaces, and makes the joint mechanically strong

so that it can withstand loosening effect of a constantly swaying aerial.

My Radiola superheterodyne often ceases in the midst of a program and the starts off again of its own accord. Usually this happens when someone walks near the set. What is the trouble and how can I cure it?

There is a broken connection that makes and breaks contact at intervals, owing to vibration of the set occasioned by walking near it. Such open circuits are often rather difficult to locate, but persistence and patience will be rewarded. It is possible that there is a loose contact at the can, which is grounded to the B-negative line. Give each lead a slight pull to see whether it is securely connected at various points. This type of receiver may be equipped with a built-in loop, and if so, examine the loop connections, which may be loose or broken. Poor tube contacts may also cause the trouble and you should clean both the tube tips and the socket prongs with very fine emery cloth. The trouble may even be located in some instances by turning the set on and then wiggling the tubes a little, one by one; if the trouble occurs while this is being done, the tube being handled is not making proper contact.

Our all-electric Majestic gives us satisfaction but during reception the volume will increase and decrease without anyone touching the volume control. It is hard for us to figure out what causes this, so we have written for your advice.

There are two causes for your trouble, either one of which may be accountable. One is fading. If you are located quite some distance from broadcasting stations such fading is highly probable. The second cause is fluctuation in the house-lighting circuit. I suspect that this is your trouble. Variations in voltage above and below the rated 110 volts, is a common occurrence, especially in the smaller communities, and this is caused by the variation of the power-line load. Besides making reception unpleasant owing to the increase and decrease in volume, this occurrence is not at all good for the tubes of your receiver as it causes them to operate at periodic higher

(Continued on page 14)

Here's the Answer

to every question about the principles, methods, or apparatus of radio transmitting and receiving. A complete course in radio operation in a single volume

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Prepared by Official Examining Officer

The author, *G. E. Sterling*, is Radio Inspector and Examining Officer, Radio Division, U. S. Dept. of Commerce. The book has been edited in detail by *Robert S. Kruse*, for five years Technical Editor of *QST*, the Magazine of the American Radio Relay League. Many other experts assisted them.

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The Revised Edition of "The Radio Manual" has just been published. Nearly 900 pages, 369 illustrations. Bound in Flexible Fabrikoid. The coupon brings the volume for free examination. If you do not agree that it is the best Radio book you have seen, return it and owe nothing. If you keep it, send the price of \$6.00 within ten days.

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Name

Street and No.

City and State

Please mention RADEX

The Question Mill

(Continued from page 12)

voltages than the voltage for which they are designed, and this will shorten their life. The best remedy I can suggest is to purchase a voltage stabilizer or automatic regulator, obtainable from any radio dealer. Such a device is designed to keep the input voltage to the receiver constant at all times regardless of variations of the house-lighting circuit. The investment is well worth while in the saving of tubes.

It is impossible for me to select any station without getting interference from others, which is very annoying and makes the set entirely useless. I have followed to the letter all the instructions that came with the set in regard to the aerial installation, which calls for 100 feet. I have also carefully soldered the lead-in wire to the aerial, and now the set gets every station in town, there being at least a dozen. What is the cause and the cure for this condition?

Manufacturers usually suggest the maximum length of aerial suitable for their particular type of receiver, especially intending the suggestion for installations in localities not so congested with broadcasting stations as your city. However, it would be well to add to their instructions that in case there are several stations operating in the vicinity, which causes your kind of interference, a short aerial should be used. I had the same trouble until I shortened the aerial so that only the lead-in wire was left. Try this and you will be able to enjoy the ether waves.

I have a 5R Browning-Drake battery-operated receiver, having taken it on a trade. I purchased five UX201A tubes and connected the set up according to the wiring instructions, but it does not work. The previous owner said something about a special tube in the first socket. Should a different tube be installed here, and if so what kind of a tube?

Yes, a UX199 tube is generally used in first R.F. stage of the Browning-Drake 5R receiver.

The best place I can erect my aerial is between the house and a large tree about 100 feet from the house, unless I would

set up a special pole. The tree sways in the wind and about twice a year a violent storm causes it to snap off the aerial. Can I get some spring wire to use for an outside aerial?

You have nearly hit the method of eliminating your trouble. Instead of getting a coil spring for the whole aerial, use a coil spring at one end only, between the insulator and the tree. Coil springs sold for use as inside aerials will perhaps answer the purpose, but at any rate get one that will allow plenty of stretch so that the aerial will not be subjected to the strain.

We have a battery-operated set, for we live on a farm, quite a distance from power lines and therefore cannot use an electric set. Every week I take the storage battery to town for charging and the terminals are so badly marked and corroded that after connecting the wires to it, I have to test the set to find out whether the wires are connected correctly or must be reversed. Is there an easier way to do this and one that will allow me to know exactly which terminal is positive and which one is negative. The leads to the set are marked with tabs indicating A-Neg. and A-Pos.

It is a simple matter to tell the negative and the positive terminal of a storage battery. In the first place corrosion tends to form about the positive terminal much faster and in a greater quantity than it does on the negative terminal. If the terminals have been thoroughly cleaned off so that this method of identification is impossible, connect two wires to the terminals and plunge them into the flesh of a raw potato half an inch apart. Hold the wires there for about thirty seconds or one minute, and then withdraw them. There will be a green spot around the place where one wire was held against it and this wire is connected to the positive terminal of the battery. Another method is to immerse both wires in a tumbler full of water in which a heaping teaspoonful of salt has been thoroughly dissolved. The wire from which the most bubbles arise is the negative wire. In both experiments you should be careful to keep the wires from touching each other. After you have determined the polarity, mark the battery case accordingly.

The Radio Puzzle Page

FORTY-SEVEN readers solved correctly the cross-calls puzzle in the November issue and as many more failed by one or two calls. Several called our attention to the fact that three different calls, CKCK, CKCD and CKCI, answered the requirements of vertical 1. We therefore considered any of the three as correct.

Leatherette covers were mailed to Cyril P. Engelmeier, Pittsburgh, Pa., Elmer Church, Perkasio, Pa., Laurance Angel, Jr., Tarrytown, N. Y., Lawrence S. Miller, Washington, D. C., and Donald Hill, Broken Bow, Nebr. Copies of the December edition were sent to the other forty-two. A copy is due to Samuel Pearson who failed to give his address.

Horizontal 20 proved to be a stumbling-block for many. Unfortunately this station, KWBS, was deleted the very month the puzzle appeared. Horizontal 21, WBSO, which included the last three letters of the former call, however, saved the situation.

Here we have the correct solution of this puzzle:

CKOW KOCW
 KOL KWK KMA
 CA KWBSO CP
 D WCSTACW I
 WBRC CCPW
 WASHWOWW
 W XELWSAR C
 BW NAAFW KK
 KOH WEW WRC
 WWVA WEEI

The letters from the puzzlers contained many interesting comments and a large number asked that this feature of the magazine be continued. "Each one is better than the last," writes Mrs. George S. Vawter of Mansfield, Ohio, "but when Mr. Angel sends his puzzle which is to contain old stations, I may take a month's vacation on puzzles unless he mixes in a few moderns. I have only my ingenuity and the last five issues of RADEX to help me, and the last-mentioned is a powerful ally indeed else I could not have solved last month's sticker. Probably if Mr. Angel's puzzle is published, I shall have back at him

by constructing one of my own — along the most modern and stylish lines, of course!"

Readers will recall that some months ago Laurance Angel, Jr., of Tarrytown, N. Y., threatened to submit a puzzle which would make the old timers go back in their memories to the days when even static from San Francisco was a wonderful thrill. He has made good his threat and on this page you will find a pretty hard nut to crack. We will continue to send a copy of RADEX to each one solving the puzzle correctly.

	1	2	3		4	5	6	
	7	8	9		10	11	12	
	13	14	15		16	17	18	
19	20	21		22		23	24	25
26			27	28	29			30
31	32	33		34		35	36	37
	38	39	40		41	42	43	
	44	45	46		47	48	49	
	50	51	52		53	54	55	

Vertical

- One of the "farthest south" stations in the U.S.
- On Lake Chautauqua.
- "Where rail and water meet."
- A Jersey pioneer.
- In cherry-blossom land.
- A 1924 Massachusetts station.
- In 1926 it was WOAW.
- "Tells the World" from "The Friendly City."
- In Old Mexico.
- In western Canada.
- Moved from 1430 to 1320 in the "big shift."
- Deleted New York police station.
- Deleted Virginia station.
- Old-time agricultural station.
- A 1926 station of 273 meters.

Horizontal

1. Shares frequency with four New York stations.
4. On 1210 kcys.
7. On 228.9 meters.
10. A long-dead sister of NAA.
13. Where "The Red Apple Club" once held forth.
16. A 1925 Nebraska station (last three letters).
19. A 1927 New York City station.
23. "The Town Crier" Announcer.
27. In the West Indies.
31. A 1925 St. Louis station with one of the first women announcers.
35. An old station in Canton, Ohio.
38. A northwestern newspaper.
41. This old-timer now uses three calls.
44. A pioneer insurance station.
47. A 1924 Texas station (last three letters).
50. South of the Rio Grande.
53. Long-deleted Wanamaker station.

We now have on hand as many puzzles as we can use in the next several months. These have been contributed by readers and while we have not yet analyzed them, they are very cleverly worked out and promise to give our puzzlers an excellent opportunity to lucubrate (See Webster, Noah).

A Famous Favorite

IN Mme. Louise Homer, we have one of the most charming personalities as well as one of the most delightful singers, in all radiodom. Mme. Homer, who has long been a famous operatic star, is delighted with radio as a means of presenting her gifts to the public and her programs presented by Atwater Kent, are favorites with millions.

Of her experience in radio, Mme. Homer recently said:

"My feelings when I first sang over the radio were quite definite and altogether different from the ordinary sensations of singing before a big audience. I wasn't nervous nor self-conscious as one often is when singing before a big crowd of people. But I was very conscious of quite a different feeling, which was really very powerful and uplifting.

"In one way it seemed as though I were reaching their spirits much more



definitely than I had felt in concerts. I also had a much more intimate feeling of speaking directly to them. I felt the atmosphere of the home-life, of the homes. In my mind I seemed to be entering, with a warm welcome, all these family homes and hearts. It was quite thrilling. I was almost overcome by it.

"When we deck ourselves out in our 'Sunday-go-to-meetin' raiment for a recital or concert a barrier is raised between the artist and the audience. A little rouge, perhaps a little powder, our hair quite properly arranged, and behold, we lose a little of our most real personality, I think. This loss of personal identity detracts from the singer's success and the appreciation of the audience. This is not the case over radio."

CHANGES in stations are constantly being made by the Radio Commission. Keep up-to-date by subscribing for RADEX by the year. See page 34.



We take pleasure in including in this issue, the long-promised key to daylight and Sunday stations, those sharing time, those having only a construction permit, etc. The new key will be found at the top of page 36. Many readers have asked for this new feature and not a few have said that this would make RADEX 100 per cent perfect in their estimation. Our station lists are being completely revised and reset in this issue and they have been checked and rechecked most carefully and are as nearly accurate as is humanly possible to make them. We sometimes wonder if our readers realize the vast amount of labor necessary to keep these lists up-to-the-minute, check each with the other two and prepare copy of all for the press. Then the printer's proof must again be checked to catch typographical errors. In the meantime the Radio Commission is constantly making changes and we have to watch three different sources to be sure to get each change. Even then new ones will slip through without being reported by either source. For instance, we have just received a new list from the Commission but when we received it we had to make about thirty changes which had been made while it was on the press.

The Canadian Government cooperates nicely and as they have relatively few changes, we are able to keep our list of the Dominion stations quite accurate. But we have great difficulty keeping track of the Cuban and Mexican stations, due to the fact that we have so far been unable to make contact with any government official who is cognizant of the changes. Happily four of our readers have this month supplied us with a late list of the Cuban stations. We have checked these four lists with each other and in this issue our readers will find accurate data on the stations in Cuba.

We are under obligations to subscribers M. Prats and A. De Moya, both of Havana, for these lists while our old friend, C. M. Falconer, of Baltimore, sends us a list he secured through the Cuban Consul in Baltimore.

Subscriber De Moya writes: "You will note that all stations begin their call with the letters CM which is followed, with only five exceptions, by a number and two more letters. This is the official call for these stations, but in every case the local announcers drop the first two letters, CM, and give only the number and last two letters so in order to avoid confusion to your readers, I would suggest that in giving the call letters, you also drop the first two, CM." We are following this suggestion of Mr. De Moya.

We have had many letters from our readers regarding the new Cuban station CMK on 730 kcys. This was listed in the December edition.

We are asking one or two of our Mexican subscribers to follow the example of our Cuban friends and send us the latest list of stations in Mexico although the present list was furnished us by our own State Department and is, we believe, fairly accurate.

Mr. Falconer writes: "Last night CMK, Havana; XEN, Mexico City; and CHYC, Montreal; were all talking at once, two in Spanish and one in French. It was a fine mess, but I was lucky enough to get the call letters from all three." So tune in 730 kcys. if you want goulash. Mr. Falconer also comments regarding a recent request: "The station heard by Mr. Barton was W3XE, a short wave station of WFBR of Baltimore. The fact that it is not listed is probably due to their having only an experimental license. They are on the air for one hour almost every night."

We are under obligations again to R. A. Veitch, of Toronto, for informa-

tion regarding recent Canadian changes. He hopes we will include in each issue a list of the changes made since the previous one. This will not always be practicable. This month, for instance, the changes made in calls, frequency, owners, power and time sharing would fill a page or more of RADEX. We imagine that most of our readers copy their dial numbers into the new issue each month rather than to try to make changes in the station lists.

Chas. B. Ilett, of Indianapolis, has also had the three stations on 730 keys. at the same time. "Have been able to catch all three on at the same time and separate them. Which I think is 'going some.' Sure get a kick out of such radio." We have discussed before the directional qualities of aerials. Mr. Ilett has two, one north and south, and one, east and west. His experience is interesting. "Some stations come in better on one and some on the other, but direction does not always count. For instance some Chicago stations come in better on north and south, while other Chicago stations are better on east and west."

Polish Programs

"Wonder if it would be too much trouble for you to find out when they broadcast Polish concerts," writes E. J. Cyerski, of Akron, Ohio. "Have heard that some stations in Chicago do so every Friday evening, but do not know which ones. Certainly will appreciate it if you can do something for me, as there is an elder in the family whom such programs would amuse very much." Can any of our readers give us the answer?

We have a long and interesting letter from S. Breidenback, of Dayton, Ohio, regarding the low-power stations he has brought in during the past year. Among them are a number of western stations on 250 watts with some as low as 30 watts. "I recommend RADEX to all who like preciseness and convenience in a log-book," he adds.

Crystal Records

And here is a word from our old friend of other days, the crystal set. Julian T. Dixon, of Birmingham, Ala., writes: What is the distance record for crystal

sets? I have one of my own design which has gotten ten stations, including WGN, WENR, WLW, and KRLD. Does this approach a record? I might add there is no amplifier of any kind on this set and that it uses a simple detector consisting of a cat-whisker and a crystal. I think that RADEX is getting better and better with every issue. I am sorry you have quit having a page for listing favorite programs." In this issue for you, friend Dixon, as well as for many others, we are again including a blank index for the programs you want to hear.

Have You Heard This!

"Can you tell me what station operates on a frequency of 690 keys. in Nova Scotia?" asks H. B. Hubbard, of Elizabeth, N. J. "I got that station a few nights ago but the static prevented my getting the call letters." A new list of Canadian stations just received does not give any Nova Scotian station on or near 590 keys. Has any other reader heard it? "I have had my set, a Philco, only since July and I have logged 179 stations in that time and I am sure I would not have had half that number without RADEX," adds Mr. Hubbard.

Several readers write us regarding the shifts in the Florida stations some of which, as noted in the December number, were moved twice in one month by the Commission. The last shift was effective November 30th and we believe they are now all settled down upon the waves allotted to them in December and in this number. We moved KTHS from 1040 by mistake. This station was given an additional frequency for the world-series and has not left 1040.

Dale Meyer, of Dover, Ohio, asks us to verify his reception of HHK Haiti and XFG Mexico City. We regret we are unable to do this as we do not have the hours any particular station broadcasts. Most stations will advise you if you heard them if you tell the hour and program you heard. Always send a stamp to U.S. stations and better send two pennies to foreign ones.

Prizes for Boys

"I received my football and am well pleased with it," writes Junior Jo Ivins, of Chattanooga, Tenn. "I have lots of friends who have radios and I think

RADEX gives fine information which cannot be gotten anywhere else." We are offering lots of prizes to boys who get subscriptions for us. An illustrated circular will be sent upon request.

Paul C. Pitman, of South Portland, Maine, is another reader who has brought in many low-power stations. He too has had not only KFEL of Denver but even KGU of Honolulu. The second night he had his new Grebe, Mr. Pitman brought in KNX, KGO, KFI, KOA, KSL, and several Texas stations.

Man-Made Static

We are having an article prepared on the elimination of noises as this seems to be a subject of great interest. This will appear in a forthcoming issue. Here is a comment from one of our readers, James A. Mitchell, of Wethersfield, Conn. "As my business is keeping the distribution system of a large public utility clear of all radio disturbances, you may be sure that I read everything that RADEX has to say upon that subject. My company was one of the first in the country to attempt this interference-elimination work upon an extensive scale and you cannot stress too highly the necessity of each radio fan checking up on his own electrical equipment which may be defective, watching out for loose fuses, connections and other possible sources of disturbance to his own and neighboring sets. If the truth were known, in most cities, the lighting company's equipment is responsible for less than ten per cent of the interference of which radio fans complain." Mr. Mitchell is an electrical engineer and knows whereof he speaks. He adds: "May I say in closing that I consider that RADEX is the only publication of its kind which gives all of the desirable information in a most convenient form?"

We have enough letters from friends this month to fill this copy of RADEX and leave no room for index! This just won't do and so we must pick from a very few just the highlights.

Location of Set

Samuel Pearson, of Portland, Ore., has a peeve and who can blame him? "I have a friend," he writes, "who has a home-made two-tube battery set and can get New York with ease, while I

have a modern, eight-tube all-electric and it is all I can do to get New York in the best receiving weather. My friend lives on an elevation or sort of plateau about 100 feet higher than the location where I live. There is a hill rising up to this level about an eighth of a mile from my house and consequently I am located in a sort of large hollow. Does the location make the difference?" There are so many invisible and intangible factors in radio reception that it is impossible to say what makes the difference. If you had asked us which of the two locations generally would be the better we would say that your friend's was far more favorable for DX. You could prove this theory by asking him to bring his set to your house some evening and see what it will do.

Harley Climpson, of Gibson City, Ill., uses four different call-books regularly, but says "through the use of all four, I find RADEX a far more useful helper than the rest. The style of publication, location of departments, puzzle-page and cover, are the biggest essentials of an up-and-going magazine like RADEX."

HHK Changes Wave

Mrs. George Barrett, Jr., of Northfield, N. J., calls our attention to the fact that HHK of Haiti is now broadcasting on 920 keys. instead of 830. She adds this postscript: "We wouldn't know how to operate our radio which is a new Philco, without a RADEX. We have had California, Haiti, and all over."

"I'm strong for RADEX," writes Fred J. Compton, of Columbus, Ohio. "Since April 22, 1929, I've logged 194 stations with your help and they are still piling up."

"I have an RCA Radiola 17 all-electric radio. It's a seven-tube set. When I tune in on locals I get perfect reception but when I tune in on some other station in the daytime, I get a lot of crackling sounds all through the program." This from a RADEX Buyer, Chicopee, Mass. The answer is, of course, that in tuning in a local the volume control is turned down and the signals come in above the static. When the control is turned up, the static drowns out the signals. This is assuming that the noise does not come

from the set itself and this can be easily determined by disconnecting aerial and ground.

Some Records

P. J. Soper, of Union, N. J., also sends us a list of Cuban stations and adds "I have been a DX fan from radio's beginning and have logged 495 stations. RADEX is the finest book I ever came across."

"Pulled in 233 stations, 21 on the Pacific Coast, with a Crosley Gem Box in about eight months," reports Dale Meyer, Dover, Ohio.

"In about three years I have received 450 stations on my five-tube receiver using the RADEX exclusively. Last year I received one station at least in every state and in every province of Canada bordering on the U.S., also stations in Haiti, Cuba, and Mexico. I wouldn't think of trying to get a distant station that I never had before, without the help of my RADEX." Thus reports Archie McCollister, of Ambridge, Pa.

A Hint for Dealers

RADEX may easily make the difference between dissatisfaction and complete content with a new radio set. The new purchaser knows nothing of the mysteries of radio nor what happens when he turns the dials. He knows nothing at all about the relation between kilocycles and dial numbers. He twirls the dials and takes what comes. Is it any wonder that he soon tires of radio and blames his set? Knowing this, it is surprising every set manufacturer and every dealer does not see that each purchaser of a new set gets a real index to stations with it. This letter from John Costic, of Stony Brook, N. Y., emphasizes this need: "I recently purchased a copy of RADEX and will say that *it is great*. Before I saw this magazine, I didn't know how to tune in a station. I used to sit up and listen to a station only to find that it was a local. Sometimes I'd get a distant station accidentally. Now I don't have to do that. Since I got a copy of RADEX I have picked up 126 stations in 26 days. Your magazine sure showed me how to use a radio. Without it I wouldn't be able to log 50 stations in a year."

Mary and Kitty

MISS MARY McCOY, one of radio's newest and brightest (and prettiest) stars, a protegee of Mme. Schumann-Heink and at present featured on Broadway in "Die Fledermus" (One Wonderful Night) is heard each Sunday evening on the Chase & Sanborn Choral Orchestra Program. It may be heard over the WEAFF chain at 8:30 o'clock, E.S.T. Mary was probably the inspiration for the song, "You're the Cream in My Coffee."

Studio Chat

When Jeannette Sheerer, clarinetist, was nine years old, she decided to try-out for the "Boy's Band" in her home town, Cedar Falls, Iowa. Then she grew up with the same band and later found herself playing solos with the Chicago Civic Symphony. She has been heard by the NBC System audience since last September. * * *

To the prospective spectator at a broadcast the NBC studios have much to offer, if the report of the hostess each evening is a criterion. Hundreds of people come every week to watch their favorite program. The appeal is so wide and interest so keen that an invitation system is employed which allows visitors to make application for admittance on a specified night. Thus congestion is avoided and everyone is able to see clearly the activity within the studios. * * *

Radio has a staunch supporter in Antoine de Vally, who recently organized and is now chairman of the Radio Section of the Commonwealth Club of San Francisco.

This club has just secured 6,000 answers from radio fans in the West in an effort to find out what listeners think of present-day broadcasting. A survey of the response will be made within a few days.

de Vally was producing operas on the stage in Oakland before he was lured away from the footlights by KGO for a position in a similar capacity. He has been producing radio operas for about two years and has been heard over the NBC System as a soloist.

structions also apply to installations using these substitute tubes.

Fig. 2 shows a 5-tube T.R.F. receiver, rewired for the use of UX A.C. tubes. Anyone can readily make the necessary changes, and the cost of the apparatus is approximately \$65.00, allowing about \$25.00 for a B-eliminator. In many cases the cost will, however, be lower than this figure. The following items are required:

- 1 UX 171 or UX 171A power tube.
- 1 UY 227 or C 327 detector tube.
- 1 UY tube socket.
- As many UX 226 or CX 326 tubes as are needed besides the detector and power tube.
- 1 50-ft. coil of No. 18 stranded, rubber-covered copper wire.
- 1 Filament transformer having 1.5, 2.5 and 5-volt terminals, and a center tap on each.
- 1 B-eliminator capable of delivering 180 volts.
- 1 3-meg. grid leak and mounting.
- 1 2000-ohm fixed resistor.
- 1 0 to 2000-ohm variable resistor.
- 1 0 to 50,000-ohm variable resistor.
- 1 0 to 1000-ohm variable resistor.
- 1 15-ohm potentiometer.

connected to all instruments to which it is already connected, except the rheostats and potentiometer. This line is to be used as the ground line, being connected to the ground binding post and to the B-negative line. If the F-terminal of the coil or transformer preceding the detector is not connected to the ground line this connection must also be made, and the former connection severed. Remove the old grid leak. One side of the 3-meg. grid leak is wired to the G-terminal of the detector and the other side to the ground line as shown in the diagram. The grid condenser, however, is left in its position.

All sockets, except the detector and power-tube sockets, must be wired together in parallel, using No. 18 stranded R.C. copper wire. This can be done by connecting the F-negative terminals of these sockets to one line, and the F-

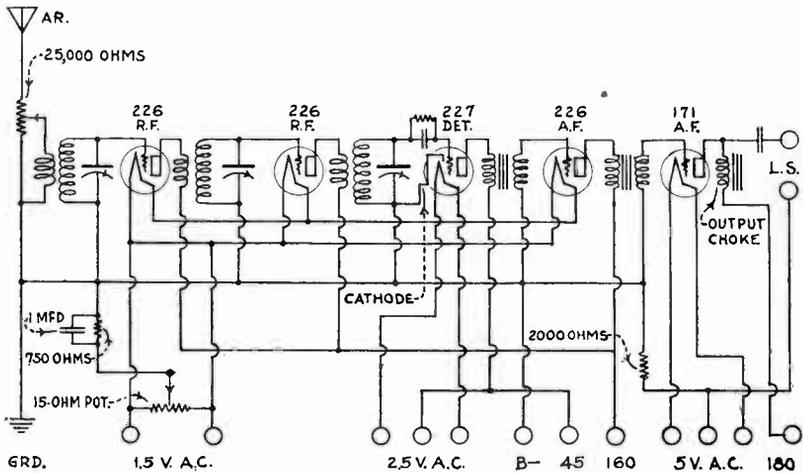


Figure 2. Diagram of a 5-Tube T.R.F. Receiver Rewired for Use with 1.5 Volt Amplifiers, 2.5 Volt Detector and a 5-Volt Power Amplifier, Operated Directly With Alternating Current

Be sure not to use any other values than the ones given in the above list. Disconnect, but do not remove all the wiring to the F-terminals of the tube sockets. Remove from the set all wiring that was formerly connected to the F-positive terminals of the sockets. The line formerly attached to the F-negative terminals of the sockets must remain

positive terminals to another line. There will then be two leads connecting the positive terminals of the sockets, namely the ground line and one of the filament lines. The two filament lines are twisted together like lampcord between points to which they are connected to prevent inductive effects. One end of this double line is connected to the 1.5-volt terminals

of the filament transformer. The transformer should be kept at least one foot away from the receiver. Replace the present detector socket with one of the UY type. This has an extra terminal marked C, which must be connected to the ground line. Also connect a pair of twisted wires to the F-terminals of the detector socket and to the 2.5-volt terminals of the filament transformer. A similar pair of twisted wires are run from the 5-volt terminals of the transformer to the F-terminals of the power-tube socket.

The resistors are then installed. The end terminals of the 15-ohm potentiometer are connected across the 1.5-volt filament lines. The center terminal of the potentiometer is connected to one side of a 0 to 1,000-ohm variable resistor, and the other side of the latter is connected to the ground line. One side of the 2000-ohm fixed resistor is connected to the ground line and the other side to the center tap of the 2.5-volt winding of the transformer to the B-positive line supplying detector-plate voltage, which is 45 volts. The resistors can be attached to the subpanel and need not be touched after they have once been adjusted. Two variable resistors for controlling stability and volume are now installed on the panel, these being substituted for rheostats formerly used but now discarded. The stability control is a 0 to 2,000-ohm variable resistor. One side is connected to the B-positive terminal on each R.F. coil or transformer, all other wiring to these B-terminals being removed. The volume control, of 0 to 50,000-ohm value, is connected to the G-terminal of the first audio tube, and to the ground line. The 180-volt B-positive line is connected to one of the loud-speaker binding posts or to a jack terminal, where the 90-volt line was formerly connected. Solder all the connections. Hook up the B-eliminator, insert the tubes, and the set is ready for operation. If a hum is noticed it may be found due to a faulty ground or aerial connection, or to the B-eliminator used. Carefully adjust the 15-ohm potentiometer and the 1,000-ohm variable resistor for best reception.

When is Advertising Obnoxious?

Two Sides to Radio Publicity

IN the hundreds of letters RADEX receives from its readers, without doubt the matter of direct advertising over the radio leads all other subjects of complaint. We feel sure our friends will be interested in the following discussion of this topic.

From a letter by Mr. Rexford Bellamy, senior partner of the firm of Bellamy-Neff Company, Chicago and New York, to the Editor of RADEX:

I have just been reading an article in the October issue of RADEX, entitled "Banish the Direct Advertiser." There is undoubtedly considerable truth expressed by the writer of this article, but I am wondering if he has taken up this question from all angles and is prepared with logical answers. The query arises as to who is going to pay for radio broadcasting if not the advertiser? Who has already paid for it, and who will continue to do so?

Most publishers will freely admit that their profits are from their advertising, despite the fact that they are also selling most copies of each issue of their publication. Where does the owner of a broadcasting station come in? His audiences are paying him nothing directly. Some of the representatives of broadcasting stations state that up to the present time they are being operated at a loss. The writer himself has spent some time in the last few years in both Des Moines, Iowa, and Nashville, Tennessee, in which two cities there are broadcasting stations operated by insurance companies. The writer has direct knowledge that at one time, not so very long ago, one of these stations was on the verge of being abandoned because the owners could not determine that it was doing them enough good directly or indirectly to warrant the annual investment. No doubt this situation is true of other stations which are owned and operated by concerns who are relying upon the creation of good will to warrant the expense of operation. On the other hand, the writer has information of another station which is operated

(Continued on page 63)

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

Time is given by Eastern Standard. For Central Time, subtract one hour, for Mountain Time, two hours, and the Pacific Time, three hours.

Station lists beginning with WEAF and WJZ are the National Broadcasting Co., Inc., while those beginning with WABC are the Columbia Broadcasting System.

Daily (Except Saturday and Sunday)

6:45-8:00 Tower Health Exercises
WEAF WEEI WCAE WFI WRC
WGY WGR

8:00-8:15 Jolly Bill and Jane
WEAF WEEI WGY WFI

8:00-8:30 Organ Reville
WABC WHK WEAN WREC WDBJ
WWNC KMBC KOIL WLAC

8:15-8:30 Morning Devotions
WEAF WCAE WRC WGY WGR

8:30-8:45 Morning Devotions
WABC WDOE WFBL WMAK WEAN
WREC WDBJ WWNC KMBC KOIL
WLAC

8:30-9:00 Cheerio
WEAF WEEI WCKY WRC WGY
WGR WHO WJAR WTAG WCSH
WCAE WWJ WOV WDAF WTMJ
KSTP WEBC WPTF WBT WAPI
KVOO KPRC WIBO

8:45-9:00 Something for Everyone
WABC WHK WDOE WCAU WFBL
WJAS WMAK WEAN WREC WDBJ
WWNC KOIL KMOX WLAC

9:00-10:00 Morning Melodies
WEAF WRC WWJ WOV WCKY

9:30-10:00 Morning on Broadway
WABC WHK WDOE WFBL WLBW
WOWO WKBW WMAL WREC WDBJ
WWNC KDYL KOIL KVI KMOX
WLAC

10:00-10:30 Ida Bailey Allen
WABC WGHP WMAL KMBC WCCO
WFBL WEAN WNAC WBBM WMAK
WCAU WCAO WJAS WADC WKRC
KMOX KOIL WSPD WHK WLBW
WISN WOWO

11:00-11:30 Forecast School of Cookery
WJZ WBZ WBZA WHAM KDKA
WLW KWK WREN WJR WGN

11:15-11:30 Radio Household Institute
WEAF WEEI WJAR WTAG WCSH
WLIT WRC WGY WGR WCAE
WTAM WWJ WSAI KSD WFKX
WTMJ KSTP WHO WPW WDAF

1:00-1:45 National Farm and Home Hour
WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KFCK WREN
KSTP WEBC WRVA WPTF WBT
WJAX WIOD WHAS WSM WMC
KVOO WKY KTHS KPRC WOAI
KOA WRC WHO WOW WDAF

1:30-2:00 Harold Stern Orchestra
WBAC WKRC WADC WISN WDOD
WFAN WFBM WCAO WGHP WBBM
WFBL WSPD WJAS WLBW WOWO
WMAK WMAL WMAQ WREC WDBJ
WWNC KOIL KVI KLZ WLAC

2:00-3:00 Patterns in Prints
WABC WHK WKRC WADC WDOD
WFAN WFBM WCAO WGHP WBBM
WFBL WSPD WJAS WLBW WOWO
WMAK WNAC WEAN WMAL WMAQ
WREC WDBJ WWNC KDYL KOIL
KVI KMOX KFPY KLZ WLAC

3:30-4:00 For Your Information
WABC WKRC WADC WISN WDOD
WCAU WFBM WFBL WSPD WOWO
WMAK WMAL WMAQ WREC WDBJ
WWNC KDYL KOIL KVI KMOX
KFPY KLZ WLAC WCAO

4:00-4:30 Musical Album
WABC WKRC WADC WISN WDOD
WCAU WFBM WCAO WCCO WBBM
WFBL WSPD WOWO WMAK WNAC
WEAN WMAL WMAQ WREC WDBJ
WWNC KDYL KOIL KVI KMOX
KFPY KLZ WLAC

4:00-5:00 U. S. Band
WABC WMAL WHP WFBL WDBJ
WDOE WISN WLAC WEAN WADC
WBRG WWNC WNAC WFBM WGHP
WCAU WSPD WMAQ WCCO WMAK
KDYL KMBC KOIL KLRA
KLZ KFPY KVI WREC

5:30-6:00 The Lady Next Door
WEAF WRC WWJ WAPI

6:00-7:00 Black and Gold Orchestra
WEAF WRC WCAE WLS WWJ
WTAG

7:00-7:15 Amos 'n' Andy
WJZ WBZ WBZA WHAM KDKA
WJR KYW KWK WREN WTMJ
KSTP WEBC KOA KSL WDAF
WRC WLW WMAQ

Sunday

8:00-9:00 Heroes of the Church
WNAC WEAN WLAC WDOD WHP
KMBC WREC WABC WFBL WBRG
WFBM WWNC WWNC KLRA

9:00-10:00 Morning Musicals
WABC WDOE WCAU WOWO WNAC
WEAN WREC WDBJ KMOX
WLAC

10:00-11:00 Children's Hour
WABC WDOE WCAU WNAC WEAN
WREC WDBJ WWNC KMOX WLAC

12:30-1:00 Metropolitan Echoes
WJZ WBAL KWK WRC

1:00-1:30 National Broadcasting Program
WEAF WCAE WWJ WHO

1:00-1:30 The Nomads
WJZ WBAL WJR WRC

1:30-1:45 Spanish Dreams
WEAF WWJ KSD WOW WCAE

1:30-2:00 The Pilgrims
WJZ WBAL WRC WJR

1:45-2:00 Godfrey Ludlow
WEAF WWJ WCAE WTAM KSD
KSTP WAPI WOW WHO

2:00-2:30 Troika Bells
WEAF WWJ KSL KSD WLS
WOC

2:00-3:00 Ballad Hour
WABC WKRC WLAC WFBL WBRG
WFBM WCCO WISN KLZ KDYL
KLRA KOIL KMBC KFPY WCAO
WMAL WHP WDBJ WDOD WKBN
WWNC WKBW WREC

2:00-3:00 Roxy Symphony Concert
WJZ WBZ WBZA WBAL KDKA
WLW WTMJ KSTP KYW WJR
WRC WFAA WEBC KWK KFAB

2:30-3:00 Milady's Musicians	WEAF WGY WJWJ WOW KSL				
	WLS KSD				
3:00-4:00 The Jewish Hour	WEAF WJAR WCSH WRC WGR				
	WCAE WJWJ WSAI WCFL				
3:00-4:00 National Youth Conference	WJZ WBAL WRVA WPTF WJAX				
	WMC WSE WQAI KFAB				
3:00-4:00 Symphonic Hour	WABC WHK WKRC WADC WISN				
	WDOD WCAU WFBB WCAO WCCO				
	WGHP WFBL WSPD WJAS WOWO				
	WKBW WNAC WEAN WMAL WMAQ				
	WAIU WREC WDBJ WWNC KDYL				
	KMBC KOIL KVI KMOX KFPY				
	KFH KLZ WLAC				
4:00-5:00 Cathedral Hour	WABC WHK WKRC WADC WISN				
	WDOD WCAU WFBB WCAO WCCO				
	WGHP WFBL WSPD WJAS WLBW				
	WOWO WKBW WNAC WEAN WMAL				
	WMAC WMAQ WREC WDBJ WWNC				
	KDYL KMBC KOIL KVI KMOX				
	KFPY KLZ WLAC				
4:00-5:00 National Light Opera	WJZ WBAL KSTP WRC KFAB				
	WTMJ				
4:00-5:30 Dr. S. Parkes Cadman	WEAF WEEL WJAR WTAG WCSH				
	WGY WGR WCAE WOW WRVA				
	WPTF WJAX WSM WMC WSB				
	WKY WOI KGO KOMO KHQ				
	WHO SAI WDAF WHAS WAPI				
	KVOO KPRC KOA WBT WEBC				
	KGW WOC				
5:00-5:30 Duo Disc Duo	WJZ WBZ WBZA WBAL WLW				
	KYW KWK WREN KFAB WJR				
5:00-5:30 McKeesson News Reel	WABC WNAC W AN WFBL WKBW				
	WJAS WADC WKRC WGHP WOWO				
	KMBC KOIL WSPD WHK WLBW				
	WMAL WHEC WDBJ WTAR WWNC				
	WLAC WDOD WBRC WREC KLRA				
	KFJF KRLD KFH K TSA WCCO				
	WISN WDSU KLZ KDYL KHJ				
	KFRK KOIN KVI KFPY WCAU				
	WMAQ KMOX				
5:30-6:00 Rev. Donald Grey Barnhouse	WABC WMAL WKBW WEAN WNAC				
	WKRC WJAS WFBL WLBW WCAU				
	WCAO WADC WMAQ WOWO KOIL				
	WFBM				
5:30-6:00 Twilight Voices	WEAF WJAR WTAG WCSH WRC				
	WGY WCAE KSD WHO WOW				
	KSTP KOA KSL WEEL WOC				
	WTMJ WGR				
5:30-6:00 National Religious Service	WJZ WBAL WBZ WBZA WHAM				
	KFAB				
6:00-6:15 Echoes of the Orient	WEAF WCAE WRC WJWJ KSD				
	KOA WGY WOC WOW				
6:00-6:30 Fox Fur Trappers	WABC WCAU WNAC WHK				
6:15-6:30 Countess Olga Medolago Albani	WEAF WRC WCAE KSD WOC				
	WHO WOV				
6:30-7:00 Old Company's Songalogue	WEAF WEEL WCSH WTAG WLIT				
	WJAR WRC WGY WGR				
6:30-7:00 Acousticon Program	WABC WJAS WNAC WEAN WHK				
	WSPD WCAU WFBL KOIL KMBC				
	WKBW WADC WKRC WGHP WOWO				
	WLBW WMAL KMOX WMAQ				
6:30-7:00 Whittall Anglo-Persians	WJZ WBZ WBZA WBAL WHAM				
	KDKA KLV WJR KYW KWK				
	WTMJ KSTP WEBC KOA KSL				
	KGO KOMO KHQ KGW KFI				
	WREN				
7:00-7:30 Heroes of the World	WEAF WJAR WTAG WCSH WLIT				
	WRC WGY WGR WCAE WTAM				
	WFJC WJWJ WSAI WLS WOC				
	WDAF WTMJ WEBC WRVA WPTF				
	WBT WJAX WIOD WHAS WSM				
	WMC WSB WSMB KVOO WKY				
	KPRC WQAI WEEL KSD WHO				
	WAPI KOA				
7:30-7:45 French Trio	WABC WKRC WADC WISN WDOD				
	WFAN WFBB WCAO WFBL WSPD				
	WJAS WLBW WMAL WMAQ WREC				
	WDBJ WWNC KDYL KOIL KVI				
	KFPY KLZ				
7:30-8:00 At the Baldwin	WJZ WBZ WBZA WBAL WHAM				
	WJR WLW WREN KYW KWK				
	WTMJ WEBC KSTP WHAS WSB				
	WSM KOA WMC KSL WSMB				
7:45-8:00 "The World's Business"	WABC WKRC WADC WISN WDOD				
	WFAN WFBB WCAO WCCO WFBL				
	WJAS WLBW WNAC WMAL WMAQ				
	WREC WDBJ WWNC KDYL KMBC				
	KOIL KVI KFPY KLZ				
7:30-8:30 Major Bowes' Family	WEAF WJAR WRC WGY WCAE				
	WWJ WSAI KSD WOW WFJC				
	WIOD WHAS WMC WSB WKY				
	WTAM KTHS WDAF WHO				
8:00-8:15 Enna Jettick Melodies	WJZ WBZ WBZA WHAM WKY				
	WJR KWK WLW WREN WFAA				
	KPRC WQAI WHAS WSM WSB				
	WTMJ KSTP WMC KOA KDKS				
	KYW WEBC WIOD WBT KVOO				
	KTHS				
8:00-8:30 La Palina Rhapodizers	WABC WNAC WCAU WEAN WFBL				
	WCAO WJAS WADC WKRC WFBM				
	KMOX KMBC KOIL WLBW WMAL				
	WISN WMAK WGHP WOWO WSPD				
	WCCO WHK				
8:15-9:15 Collier's Radio Hour	WJZ WBZ WBZA WHAM KDKA				
	WJR WLW KYW KWK WREN				
	KOA KSL KGW KOMO KHQ				
	KPO KFI				
8:30-9:00 Chase & Sanborn Orchestra	WEAF WTIC WJAR WTAG WCSH				
	WRC WLIT WGY WGR WCAE				
	WFJC WWJ WSAI KSD WOW				
	WLS WDAF WIOD WHAS WEBC				
	WMC WSB WSMB WKY KTHS				
	KPRC WQAI WOC KVOO				
8:30-9:00 Sonatron Program	WABC WCAU WEAN WFBL WCAO				
	WJAS WADC WKRC WOWO KMBC				
	KOIL WHK WLBW WMAL				
	KLZ KDYL WBBM WNAC WGHP				
	WMAK WSPD WCCO WFBM KFRC				
	KHJ KOIN KVI KFPY				
9:00-9:15 "Our Government," David Lawrence	WEAF WTIC WJAR WTAG WCSH				
	WRC WGY WCAE KSD WHAS				
	WKY WSAI WFJC WGR WSB				
	WBT WMC WSM WFAA WOW				
	WQAI WHO				
9:00-10:00 Majestic Theatre of the Air	WABC WCAU WNAC WEAN WFBL				
	WMAK WCAO WJAS WADC WKRC				
	WGHP WBBM WOWO KMOX KMBC				
	KOIL WSPD WHK WLBW WLAC				
	WMAL WDBJ WTAR WWNC WDOD				
	WBRC WREC KLRA KFJF KRLD				
	K TSA WDSU WCCO WISN KLZ				
	KDYL WFBM WBBW WCFR CKAC				
	KFRK KHJ KOIN KVI KFPY				
	WDEL				

9:15-9:45 D'Orsay's Parisienne Romance
 WJZ WBZ WBZA WHAM KDKA
 WJR KYW KWK WREN WCKY

9:15-10:15 Atwater Kent Concert
 WFAF WBEI WRC WGY WGR
 WCAE WTAM WWJ WSAI WGN
 KSD WOW KSTP KOA KSL
 KPO KGO KFI KGW KOMO
 KHQ WSM WMC WSB WFAA
 KPFC WOAI WKY WFI WSMB
 WOC

9:45-10:15 The Fuller Man
 WJZ WBZ WBZA WHAM KDKA
 WJR KYW KWK WREN WCKY

10:00-10:30 Jesse Crawford
 WABC WCAU WNAC WEAN WFBL
 WKBW WCAO WJAS WADC WKRC
 WGHP WMAQ WOWO KMOX KMBC
 KOIL WSPD WHK WLWB WMAL
 KLZ KDYL KHJ KFRC KOIN
 KVI KFPY

10:15-10:45 Studebaker Champions
 WFAF WTIC WTAG WCSH WFI
 WRC WGY WGR WCAE WTAM
 WWJ WGN KSTP WTMJ WBCB
 KOA KPO KGO KGW KOMO
 KFI KHQ WOW KSL WJAR

10:30-11:00 Arabesque
 WABC WHK WKRC WISN WADC
 WDOD WFBM WCAO WFBL WSPD
 WJAS WLWB WKBW WNAC WEAN
 WMAQ WMAQ WRC WDBJ WWNC
 KDYL KMBC KVI KMOX
 KLZ WLAC

10:45-11:15 Sunday at Seth Parker's
 WFAF WCAE WHAS WJAX WOW
 WKY WWJ WFJC WIOD WHO

11:00-12:00 Back Home Hour
 WABC WCAO WKRC WISN WDOD
 WCAU WFBM WGHP WFBL WSPD
 WOWO WMAK WNAC WEAN WMAL
 WMAQ WRC WDBJ WWNC KOIL
 KVI KFPY KFH KLZ KDYL

11:15-11:45 South Sea Islanders
 WJZ KDKA WRC KWK

11:15-11:45 Russian Cathedral Choir
 WFAF WJAX WWJ WOW WBAP
 WGY

11:45-12:00 Sam Herman, Xylophonist
 WFAF WOW KOA WOC WWJ
 WBAP

11:45-12:00 Armchair Quartet
 WJZ KDKA KWK WRC WREN

Monday

8:00-8:30 Organ Reveille
 WABC WGHP WWNC WCAU WDOD
 WRC WEAN WHK WLAC WFBL
 WBRC WHP WMAK KLRA KOIL
 KMBC WKBN

9:30-10:00 Blue Monday Chasers
 WABC WHK WDOD WFBL WLWB
 WOWO WMAK WMAL WRC WDBJ
 WWNC KDYL KOIL KVI KMOX
 WLAC

11:15-11:30 Ben and Helen
 WABC WMAL WRC WWNC WLWB
 WCAO WHP WDOD WDBJ WMAK
 WCAU KFH KLRA KFPY WFBL

12:30-1:30 Yoeng's Restaurant Orchestra
 WABC WKRC WCAO WMAL WHP
 WADC WJAS WISN WDOD WNAC
 WEAN WLWB WHK WLAC WFBL
 WBRC WGHP WOWO WWNC WMAK
 KLZ KFH KLRA KMBC KVI
 KFPY WRC

1:40-2:00 Harold Stern Ambassador Orchestra
 WABC WKRC WCAO WMAL WHP
 WISN WDOD WADC WJAS WEAN
 WLWB WDBJ WLAC WFBL WRC
 WGHP WOWO WWNC WCAU WMAK
 KLZ KLRA KVI KFPY WRC

5:00-5:30 Club Plaza Orchestra
 WABC WMAL WHP WFBL WDBJ
 WKBW WDOD WKRC WISN WWNC
 WCAO WMAQ WMAK WFAN KMBC
 KLRA KLZ KFPY KVI WRC

6:00-6:30 Mormon Tabernacle Choir
 WJZ WBAL WSM WLW KWK
 WRC KOA KSL KPO KGO
 KOMO KFAB WAPI

6:30-7:00 H. V. Kaltenborn
 WABC WHK WKRC WISN WDOD
 WFBM WCAO WBBM WJAS WLWB
 WOWO WKBW WMAQ WRC WDBJ
 WWNC KVI KFPY KLZ KFRC

7:15-7:30 The World Today
 WFAF WJAR WCSH WFI WRC
 WGR WCAE WFJC WWJ WSAI
 KSD WBCB WBT WSB WSMB
 WOAI WJAX

7:30-8:30 Roxy and His Gang
 WJZ WBZ WBZA WHAM KDKA
 WJR KWK WRC WSM WSB
 WIOD WCFL WSMB WAPI WPTF
 WREN KFAB

7:45-8:00 Back of the News
 WFAF WKY WOC WBBB WJAR
 WCSH WGR WSAI KWOO KOA

8:00-8:30 Henry-George
 WABC WHK WLWB KOIL WCAU
 WGL WFBM WCCO WCAO WADC
 WNAC WMAK WMAQ WKRC WJAS
 WEAN KMOX WFBL WSPD WMAL
 KMBC WISN WGHP

8:00-8:30 Voice of Firestone
 WFAF WBEI WTIC WJAR WTAG
 WCSH WLIT WRC WGY WGR
 WCAE WWJ KYW WSAI WRC KSD
 WOC WOW WDFJ WIOD KTHS
 WSMB KSTP WTMJ WBCB WJAX
 WHAS WSM WMC WSB WBT
 WRVA KVOO KPRC WOAI WKY
 WFJC WTAM WFAA

8:30-9:00 Ingram Shavers
 WJZ WBZ WBZA WJAR WLW
 KWK WREN WHAM KDKA KYW
 WIOD WRVA WJAX WTMJ WMC
 WSB WKY KTHS KPRC KFAB
 WBT WOAI WBCB WSM WSMB

8:30-9:00 Ceco Couriers
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WGHP WMAQ KMOX KMBC KOIL
 WHK WLWB WMAL WCCO WSPD
 WFBM

8:30-9:30 A & P Gypsies
 WFAF WBEI WTIC WJAR WTAG
 WCSH WLIT WRC WGY WGR
 WCAE WWJ WSAI WGN KSD
 WOC WDAF WTAM

9:00-9:30 Edison Program
 WJZ WBZ WBZA KDKA WJR
 KYW WREN WBCB KSL KPO
 KGO KOMO KFI KGW KHQ
 KOA KWK WHAM KSTP

9:00-9:30 Physical Culture Magazine Hour
 WABC WCAU WNAC WFBL WMAK
 WCAO WJAS WADC WKRC WGHP
 WMAQ WGL KMOX KMBC KOIL
 WSPD WHK WLWB WMAL WEAN

9:30-10:00 Chesebrough Real Folks
 WJZ WBZ WBZA WHAM KDKA
 KWK KYW WREN WLW WJR

9:30-10:00 General Motors Family Party
 WFAF WBEI WTIC WJAR WCSH
 WTAG WLIT WRC WGY WGR
 WCAE WTAM WWJ WGN KSD
 WOC WOW WDAF KSTP WTMJ
 WHAS WSM WMC WSB WBT
 WJAX WFAA KPRC WOAI WKY
 KOA KSL KPO KGO KFI
 KGW KOMO KHQ

9:30-10:00 "An Evening in Paris"
WABC WFBL WEAN WISN WNAC
WKRC WMAL WSPD WHK WADC
WMAK WMAQ WLBW WOWO WJAS
WCAU KMOX KMBC KOIL WCAO
WGHP CFRB

10:00-10:30 Cabin Nights
WJZ WBZ WBZA WJR KYW
KWK WREN WHAM KDKA WCKY

10:00-10:30 The Eternal Question
WEAF WJAR WCSH WRC WGY
WGR WWJ KSD WOC WJAX
WMC WKY KOA KGO

10:00-10:30 Panatela Country Club
WABC WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC WKRC
WGHP WMAQ WOWO KMOX KMBC
KOIL WSPD WHK WLBW WMAL
WFBM

10:30-11:30 Voice of Columbia
WABC WHK WLAC WCCO WOWO
WGHP WCAO WISN WWNC WKBN
WLBW WNAC WEAN WSPD WADC
WMAQ WMAL WDOU WFBM WBRB
WJAS WKRC WCAU KFH KOIL
KLZ KDYL WMAK KMOX KVI
WREC WDBJ

10:30-11:00 Empire Builders
WJZ WBZ WBZA WHAM KDKA
WJR WOW KYW KWK WREN
WTMJ KSTP WBBB WKY WFAA
KPRC WOAI KOA KSL KPO
KGO KFI KOMO KHQ KGW

10:30-11:00 Salon Singers
WEAF WTIC WRC WJZ WTAG
WGY WCAE WFDX

11:00-12:00 New Yorker Hotel Orchestra
WEAF WTIC WGR WFJC WWJ
WMC

11:30-12:00 Paul Specht's Orchestra
WABC WMAL WFBL WDBJ WKBN
WDOD WKRC WISN WEAN WBRB
WLBW WNAC WFBM WGHP WCAO
WSPD WCCO WKBW KFH KMBC
KOIL KLRA KLZ KFPY WREC
KDYL

Tuesday

3:15-4:00 Matinee Gems
WJZ KWK WRVA WJAX WIOD
KOA WJR

5:00-5:15 The Rhythm Kings
WABC WKRC WISN WDOD WFAN
WCAO WCCO WBBN WFBL WSPD
WOWO WMAL WMAQ WREC WDBJ
WWNC KMBC KVI KMOX KFPY
KLZ

6:00-6:30 Show Folks
WABC WHK WKRC WDOD WISN
WFBM WCAO WCCO WBBM WLBW
WOWO WEAN WMAQ WREC WDBJ
WWNC KVI KFPY KLZ KFRB

6:30-6:58 Dinner Symphony
WABC WHP WFBL WDBJ WKBN
WDOD WISN WBRB WLBW WWNC
WDBM WGHP WOWO WKBW
KMBC KLRA KLZ KFPY KVI
WREC

7:00-7:15 Utica Jubilee Singers
WEAF WTAG WFI WSAI WIOD
WHAS WSM WMC WOAI KOA
KSL WWJ

7:15-7:30 Universal Safety Series
WEAF WJAR WTAG WCSH WRC
WSAI WDAF WRVA WPTF WBT
WHAS WSMB WKY KTHS WOAI
KOA WFI WCAE WOW WBBB
WJAX WIOD WSM KVOO KSL
KGO KOMO KGW WCKY

7:30-7:45 Lew White Organ Recital
WJZ WBAL WRC WKY WIOD
WPTF WREN

7:30-8:00 Soconyland Sketches
WEAF WEEI WJAR WTAG WCSH
WGY WGR

8:00-8:30 Songs of the Season
WEAF WTAG WFI WRC WGY
WGR WWJ WSAI KSD WEEI

8:00-8:30 Blackstone Plantation
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WGHP KMBC
KOIL WLBW WMAL WHP WHEC
WCCO

8:00-8:30 Pure Oil Band
WJZ WBAL WHAM KDKA WJR
WLW KYW KWK WREN KSTP
WTMJ WBBB WHAS WMC WBT
WJAX WRVA WSM WSB

8:30-9:00 Around the World
WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KWK KYW
WREN WHAS WSM WMC WSB
WSMB KOA KSL KPO KGO
KGW KOMO KHQ

8:30-9:00 Prophylactic Program
WEAF WEEI WCAE WJAR WTAG
WCSH WFI WRC WGY WGR
WSAI KSD WLS WHO WOV
WDAF WWJ

8:30-9:00 True Romances
WABC WCAU WNAC WEAN WFBL
WKBW WADC WOWO KMOX KOIL
WHK WLBW WMAL WBBM KMBC
WCAO WGHP WSPD WAUI WJAS

9:00-9:30 Johnson and Johnson Program
WJZ WBZ WBZA WHAM KDKA
KYW KWK WLW WREN WBAL

9:00-10:00 Eveready Hour
WEAF WEEI WFI WRC WGY
WGR WCAE WTAM WWJ WGN
KSD WHO WDAF KSTP WBBB
WHAS WSM WMC WSB KVOO

9:00-10:00 Old Gold-Whiteman Hour
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WADC WGHP
WBBM WOWO KMOX KVCB KOIL
WSPD WHK WLBW WMAL WCCO
KLZ KDYL KLRA WDBJ WTRAR
WWNC WLAC WDOD WBRB WREC
KFJF K TSA WISN WDSU WFBM
KRDL WKRC KFRB KHJ KOIN
KVI KFPY KFH

9:30-10:00 Dutch Masters Minstrels
WJZ WBZ WBZA WBAL WHAM
KDKA KYW KWK WREN WJR

10:00-10:30 Fada Orchestra
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WADC WKRC
WGHP WBBM WOWO KMOX KMBC
KOIL WSPD WHK WLBW WMAL
WFBM KLRA KFJF KRDL K TSA
WCCO WISN WIBW

10:00-10:30 Chiquot Club Eskimos
WEAF WEEI WCSH WJAR WFI
WRC WGY WGR WCAE WWJ
WSAI WOW KYW KSD WHO
WDAF KSTP WHAS WSM WMC
WSB WOAI KOA KSL WTMJ
KPRC WRVA WBT WJAX WKY
KPO KGO KFI KGW KOMO
KHQ WBBB WBPAP WTAG

10:00-10:30 Williams Ollomatics
WJZ WBZ WBZA WBAL WHAM
KDKA KWK WREN WGN

10:30-11:00 Jesse Crawford
WABC WADC WCAO WNAC WKBW
WBBM WKRC WHK WGHP WJAS
KMBC WLBW KOIL WCAU WOWO
WEAN KMOX WFBL WSPD WMAL

10:30-11:00 Stars of Melody
WJZ WBAL WHAM KDKA WJR
KWK

10:30-11:30 R-K-O Hour
 WFAF WEEI WJAR WTAG WCSH
 WFI WRC WGY WGR WCAE
 WFJC WWJ WSAI KSD WHO
 WOV WDAF WTMJ KSTP WEBC
 WRVA WBT WJAX WIOD WHAS
 WSM WMC WSB WAFI WSMB
 WFAA KPRC WOAI WKY KTHS
 KOA KSL KPO KGO KGW
 KFI KOMO KHQ WIBO

11:30-12:00 Hotel Paramount Orchestra
 WABC WCCO WOVO WGHP WCAO
 WISN WHP WNNC WLBW WSPD
 WMAL WDOD WFBM WBRK WKRC
 WFAN KFH KOIL KLZ KDYL
 KMBC WKBW KFPY KVI WREX
 WDBJ

Wednesday

9:15-10:00 Parnassus String Trio
 WJZ WJR WREN KWK

10:30-11:00 Interior Decorating
 WABC WCAU WNAC WEAN WMAK
 WCAO WJAS WADC WGHP WOBW
 KMOX KOIL WSPD WHK WLWB
 WMAL WFBM WBBM WISN WFBL
 WKRC

12:30-1:30 Yoeng's Restaurant Orchestra
 WABC WKRC WCAO WMAL WHP
 WADC WEAN WISN WDOD WLBW
 WHK WLAC WFBL WBRK WGHP
 WOVO WNNC WMAK KLZ KFH
 KLRA KMBC KVI KFPY WREC

1:30-2:00 Harry Tucker Barclay Orchestra
 WABC WKRC WCAO WMAL WHP
 WADC WISN WDOD WJAS WEAN
 WDBJ WLAC WFBL WBRK WGHP
 WOVO WNNC WCAU WMAK KLZ
 KLRA KVI KFPY WREC

3:00-3:30 Columbia Ensemble
 WABC WMAL WHP WFBL WDBJ
 WKBN WDOD WISN WLAC WADC
 WBRK WNNC WFBM WGHP WCAO
 WMAK KLRA KLZ KFPY KVI
 WREC WSPD WCCO WCAU KMBC

4:30-5:15 Club Plaza Orchestra
 WABC WHK WCCO WOVO WGHP
 WCAO WISN WHP WNNC WNAC
 WSPD WADC WMAL WDOD WBRK
 WKRC WFAN KOIL KLZ KMBC
 WMAK KFPY WBBM KMOX KVI
 WREC WDBJ

6:30-7:00 Guy Lombardo's Orchestra
 WABC WKRC WISN WDOD WFBM
 WCAO WBBM WIAS WLBW WOVO
 WMAK WMAQ WREC WDBJ WNNC
 KVI KFPY KLZ

7:00-7:30 Jeddo Highlanders
 WFAF WTIC WGY WGR WJAR

7:30-8:00 Westinghouse Salute
 WJZ WBZ WBZA WHAM KDKA
 KYW WJR KWK WREN WEBC
 WRVA WPTF WBT WJAX WIOD
 WHAS WSM WMC WSB WSMB
 KVOO WKY WOAI KOA KFAB
 WCKY KSL KGO KGW KOMO
 KFI KHQ KPRC WFAA KSTP

7:30-8:00 Golden Gems
 WFAF WCSH WTAG WWJ WGR

8:00-8:30 Grand Opera Concert
 WABC WLAC WCCO WGHP WCAO
 WISN WHP WNNC WLBW WNAC
 WEAN WADC WMAQ WMAL WDOD
 WFBM WJAS WKRC WCAU KOIL
 KLZ KDYL KPRC WKBW KFPY
 KMOX KVI WAU WREC WDBJ

8:00-8:30 The Yeast Foamers
 WJZ WBZ WBZA WHAM KDKA
 WJR KYW KWK WLW WREN
 WTMJ KSTP WEBC KFAB

8:00-8:30 Mobiloil Concert
 WFAF WEEI WTIC WJAR WTAG
 WCSH WLIT WRC WGR WCAE
 WWJ WSAI KSD WOC WOW
 WDAF WFJC WTMAM KOA KVOO
 WFAA KPRC WOAI WKY

8:30-9:00 Forty Fathom Trawlers
 WABC WADC WCAO WNAC WKBW
 WMAQ WKRC WHK WGHP WLBW
 WCAU WJAS WEAN KMOX WFBL
 WMAL WHP WFBM WHEC

8:30-9:00 Happy Wonder Bakers
 WFAF WEEI WTIC WJAR WTAG
 WCSH WLIT WRC WGY WGR
 WWJ WSAI KSD WOC WOW
 WFJC KSTP WTMJ WMC KVOO
 WOAI KPRC WKY WLS WFAA

8:30-9:00 Sylvania Foresters
 WJZ WBZ WBZA WHAM KDKA
 KWK WREN WLW KYW WJR
 KFAB

9:00-9:30 MacFadden Red Seal Hour
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WGHP WMAQ KMOX KMBC KOIL
 WSPD WHK WLBW WMAL WGL

9:00-9:30 Columbus Male Chorus
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WGHP WMAQ KMOX KMBC KOIL
 WSPD WHK WLBW WMAL WGL

9:00-9:30 Halsey Stuart Program
 WFAF WEEI WJAR WTAG WCSH
 WLIT WRC WGY WCAE WWJ
 WSAI KSD WOC WOW WGR
 WBT WJAX WHAS WMC WSB
 WSMB KVOO KPRC WOAI KOA
 KGO KOMO KHQ KGW KFI

9:30-10:00 La Palina Smoker
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WMAQ WOVO KMOX KMBC KOIL
 WSPD WCCO WHK WLBW WMAL
 WISN WKRC

9:30-10 Buck and Wing
 WJZ WREN WHAM KDKA KWK
 WCKY WIBO

9:30-10:30 Palmolive Hour
 WFAF WEEI WTIC WJAR WTAG
 WCSH WLIT WRC WGY WGR
 WCAE WTAM WWJ WSAI WGN
 KSD WOC WOW WDAF WSMB
 KSTP WTMJ WHAS WSM WMC
 WSB WBT WJAX KVOO KPRC
 WOAI KOA KSL KPO KGO
 KFI KGW KOMO KHQ WFAA

10:00-10:30 Kolster Radio Hour
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WGHP WMAQ WOVO KMOX KMBC
 KOIL WSPD WHK WLBW WMAL
 WCCO KLZ KDYL KPRC KHJ
 KOIN KVI KFPY CJGC

10:00-10:30 Neapolitan Nights
 WJZ WHAM KDKA WREN WCKY

10:30-11:00 Stromberg-Carlson Program
 WJZ WBZ WBZA KDKA KYW
 KWK WREN WRVA KSTP WTMJ
 WEBC WIOD WHAS WSM WMC
 WSB WBT WJAX KVOO WBAP
 KPRC WOAI WKY KOA KSL
 KPO KGO KFI KGW KOMO
 KHQ WJR WHAM WSMB KTHS
 WAFI

10:30-11:00 In a Russian Village
 WABC WHK WLAC WCCO WGHP
 WCAO WISN WNNC WKBN WLBW
 WNAC WEAN WSPD WADC WMAQ
 WMAL WDOD WFBM WBRK WJAS
 WKRC WCAU KOIL KLZ KDYL
 WMAK KMOX KVI WREC WDBJ

10:30-11:00 Floyd Gibbons
 WFAF WTIC WJAR WRC WCAE
 WWJ KSD WOC WGN

11:00-11:30 Lew White Organ Recital
WEAF WTIC WWJ KSD WEBC
CKGW

11:00-12:00 Show Boat
WABC WHK WKRC WISN WDOD
WCAU WCAO WCCO WGHF WFBL
WSPD WJAS WLBW WMAK WNAC
WEAN WMAL WMAQ WREC WDBJ
WWNC KOIL KVI KFPY KFH
KLZ

11:30-12:00 Phil Spitalny's Music
WEAF WWJ KSD WEBC WOW

Thursday

9:30-10:00 Something Else
WABC WHK WDOD WFBL WLBW
WOWO WKBW WMAL WREC WDBJ
WWNC KDYL KOIL KVI KMOX
WLAC

11:00-11:15 "Your Child"
WEAF WTAG WJAR WRC WGY
WCAE KSD WOC KSTP WBT
WJAX WSM KVOO KPRC WKY

11:30-11:45 Du Barry Beauty Talk
WABC WCAU WNAC WEAN WFBL
WCAO WJAS WADC WGHF WBBM
WOWO KOIL WHK WLBW WMAL
WRHM WISN WSPD WAUW WKBW
WKRC

4:00-4:30 The Aztecs
WABC WCAO WMAL WHP WADC
WNAC WEAN WDBJ WHK WMAQ
WISN WDOD WLAC WBRC WGHF
WCCO WOWO WWNC WCAU WKBW
KLZ KDYL KLRA KOIL KMBC
KVI KFPY KRC WREC

4:30-5:00 Club Plaza Orchestra
WABC WKRC WBBM WCAO WMAL
WHP WADC WNAC WEAN WDBJ
WHK WMAQ WISN WDOD WLAC
WBRC WCO WOWO WWNC WKBW
KLZ KLRA KOIL KMBC KVI

5:00-5:15 Ebony Twins
WABC WKRC WISN WDOD WFAN
WCAO WCCO WBBM WFBL WSPD
WOWO WMAL WMAQ WREC WDBJ
WWNC KMBC KVI KMOX KFPY
KLZ

5:00-5:30 R-K-O Program
WEAF WEEI WTIC WJAR WCSH
WLIT WRC WCAE WFJC WSAI
KSD WOC WOW KYW WTAG
WGY WWJ WDAF WGR

6:30-7:00 Civic Repertory Plays
WABC WKRC WISN WDOD WFBM
WCAO WBBM WJAS WLBW WKBW
WMAQ WREC WDBJ WWNC KOIL
KVI KFPY KLZ

7:00-7:30 Mid-Week Hymn Sing
WEAF WCSH WHAS WRC KOA
WMC WJAR

7:00-7:30 Hotel Paramount Orchestra
WABC WHP WFBL WDBJ WKBW
WDOD WISN WBRC WLBW WWNC
WJAS WFBM WGHF WCAO KFH
KOIL KLRA KLZ KFPY KVI
WREC

7:30-8:00 Coward Comfort Music
WEAF WEEI WJAR WTAG WCSH

7:30-8:00 The 7-11's
WJZ WBZ WBZA WJR WEBC
KFAB WREN

7:30-8:15 Bernhard Levitow's Ensemble
WABC WMAL WFBL WDBJ WKBW
WDOD WKRC WISN WLAC WEAN
WLBW WWNC WJAS WNAC WFBM
WHK WCAO WSPD WKBW WFBM
KFH KMBC KLRA KLZ KFPY
KVI WREC

8:00-8:30 Lehn and Fink Serenade
WJZ WBZ WBZA WHAM KDKA
KYW KWK WREN WBAP KPRC
WOAI WKY WBAL WLW

8:00-9:00 Fleischmann Sunshine Hour
WEAF WEEI WTAG WJAR WCSH
WFI WRC WGY WGR WCAE
KSD WFJC WHO WOW WDAF
WWJ WTMJ WPTF WBT WJAX
WDOD WHAS WMC WSB WSMB
WKY WSAI KPRC KOA WEBC
WRVA KSL WOAI WSM KGO
KGW KOMO KHQ WBAP WAPI
KTHS KPO

8:15-8:30 "The Political Situation"
WABC WHK WKRC WADC WISN
WDOD WFAN WCAO WCCO WFBL
WSPD WJAS WLBW WOWO WKBW
WNAC WEAN WMAL WMAQ WREC
WDBJ WWNC KOIL KVI KMOX
KFPY KFH KLZ WLAC WFBM

8:30-9:00 Champion Sparkers
WJZ WBZ WBZA WBAL WHAM
KDKA WLW WLS KWK WREN
WJR KFAB

8:30-9:00 Manhattan Moods
WABC WMAL WFBL WDBJ WKBW
WDOD WKRC WISN WEAN WADC
WBRC WLBW WWNC WJAS WNAC
WGHF WHK WCAO WSPD WKBW
KFH KOIL KLRA KLZ KFPY
KVI WAUW WREC

9:00-9:30 Smith Brothers
WJZ WBZ WBZA WBAL WHAM
KDKA WJR WIBO KWK WREN
WCKY

9:00-9:30 True Detective Mysteries
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS KMBC KOIL
WLBW WMAL WSPD WHK WADC
WGHF WBBM WOWO WFBM WKRC
WISN WCCO WHEC

9:00-9:30 Seiberling Singers
WEAF WEEI WJAR WTAG WCSH
WFI WRC WGY WGR WCAE
WTAM WWJ WSAI KYW KSD
WHO WOW WDAF WFJC

9:30-10:00 Jack Frost's Melody Moments
WEAF WJAR WTAG WCSH WFI
WRC WGY WGR WCAE WWJ
WSAI WLS

9:30-10:00 Maxwell House Melodies
WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KSD WDAF
KSTP WTMJ WEBC WHAS WBAP
WSM WMC WBT KPRC KOA
WHO WOW WJAX WRVA WSB

10:00-11:00 Victor Program
WEAF WEEI WJAR WTAG WCSH
WFI WRC WGY WGR WCAE
WFJC WWJ WSAI KSD WOW
WBRC WRVA WHO WBT WKY
KPRC WOAI KOA KSL WBAP
WJAX WIOD WHAS WSM WMC
WSB WSMB KYW WDAF WKBW
KTHS WTMJ

10:00-11:00 Atwater Kent Program
WJZ WBZ WBZA WBAL WHAM
WJR KWK WREN KDKA WGN
WCKY

10:30-11:00 National Forum
WABC WHK WKRC WADC WISN
WDOD WFAN WCAO WBBM WFBL
WSPD WJAS WLBW WKBW WNAC
WEAN WMAL WMAQ WREC WDBJ
WWNC KDYL KOIL KVI KMOX
KFPY KLZ WLAC

11:00-11:30 Will Osborne and His Orchestra
WABC WMAL WHP WFBL WDBJ
WDOD WKRC WISN WEAN WBRW
WLBW WWNC WJAS WNAC WFBM
WGHF WCAO WSPD WKBW WFBM
WLBW WWNC WJAS WNAC WFBM
WGHF WCAO WSPD WKBW WCAU

KFH KMBC KOIL KLRA KLZ
 KFPY KVI WREC KDYL
 11:30-12:00 Hotel Paramount Orchestra
 WABC WKRC WISN WDOD WCAU
 WFBM WCAO WBBM WSPD WJAS
 WLBW WOWO WKBW WNAC WEAN
 WMAQ WREC WDBJ KDYL KOIL
 KVI KFPY KFH KLZ WWCN

Friday

11:00-11:15 Nell Vinick
 WABC WNAC WBAN WFBL WMAK
 WCAO WJAS WADC WKRC WGHF
 WOWO KOIL WSPD WLBW WMAL
 WHCC WFBM WCAU WAIU WBBM

11:00-12:00 Salon Singers
 WEAFF WJZ WEEI WJAR WTAG
 WCSH WLIT WRC WGY WGR
 WCAE WTAM WWJ KSD WFJC
 WSAI WHO WDAF KSTP WTMJ
 KOA WHAS WSM WMC WBT
 KVOO WFAA KPRC WOAI WJAX
 WRVA WEBC WKY WIOD WSMB
 WAPI WPTF KTHS WBZ WBZA
 WBAL WHAM KDKA WJR WLW
 KYW KWK WREN KFAB WOV

12:00-1:00 Evening Stars
 WEAFF WTAG WRC WWJ KSD
 WHO WOW WJAX KSTP WTMJ
 WSM WRVA WKY KOA KSL
 WCSH WGY WCAE WDAF KPRC
 WAPI WLIT WTAM WBT WBAP
 WBEC WFJC

4:00-4:20 Ann Leaf at the Organ
 WABC WBBM WCAO WMAL WHP
 WADC WNAC WEAN WDBJ WISN
 WDOD WMAQ WLAC WFBL WBRC
 WFBM WGHF WCCO WOWO WWCN
 WCAU WMAK KLZ KDYL KLRA
 KOIL KMBC KVI KFPY WREC

4:30-5:00 Club Plaza Orchestra
 WABC WKRC WBBM WCAO WMAL
 WHP WADC WNAC WEAN WDBJ
 WHK WISN WDOD WLAC WFBL
 WBRC WGHF WCCO WOWO WWCN
 WFAN WMAK KLZ KLRA KOIL
 KMBC KVI KFPY WREC

5:00-5:15 Dr. Thatcher Clark
 WABC WCCO WOWO WCAO WHP
 WWCN WKBN WDOD WKRC WFAN
 KLZ WMAK KFPY KVI WREC

6:30-7:00 Raybestos Twins
 WEAFF WJAR WTAG WCSH WRC
 WGY WCAE WTAM WWJ

7:00-7:30 Guy Lombardo and His Canadians
 WABC WHP WFBL WDBJ WDOD
 WISN WBRC WLBW WWCN WJAS
 WFBM WGHF WCAO WOWO WMAK
 KOIL KLRA KLZ KFPY KVI
 WREC

7:30-7:45 Broadway Lights
 WEAFF WCSH WLIT WRC WGR
 KSD WWJ

7:30-8:00 Dixies Circus
 WJZ WBZ WBZA KDKA KYW
 WHAS WSM WSB WBT WMC
 WLW

7:30-8:00 Howard Fashion Plates
 WABC WCAU WNAC WEAN WFBL
 WJAS

8:00-8:30 Brown-Bilt Footlights
 WABC WADC WCAO WNAC WMAK
 WKRC WHK WGHF WOWO KMBC
 WLBW KOIL WCAU WJAS WEAN
 KMOX WFBL WMAL WHP WAIU
 WFBM WHCC WCCO WWCN WTAR
 WDBJ WBRC WDOD WWCN WLAC
 WDSU KRLD KLRA KFJF KFH
 KLZ KHJ KOIN KDYL KFRC
 KVI KFPY WISN

8:00-9:00 Cities Service Orchestra
 WEAFF WEEI WTIC WLIT WRC
 WGR WCAE WTAM KYW KSD
 WOW WDAF KSTP WTMJ WKY
 WWJ WOC KOA WFAA WSAI
 WJAR

8:30-9:00 Eversharp Penmen
 WABC WFBM WMAQ WFBL WHK
 WMAK WJAS KMBC KOIL WKRC
 WNAC WEAN WADC WLBW WCAU
 WCAO WGHF WOWO KMOX
 WMAL WCCO CKGW

8:45-9:00 Natural Bridge Program
 WJZ WBZ WBZA WHAM KDKA
 WLW KWK WREN WRVA WBT
 WJAX WIOD KFAB WIBO

9:00-9:30 Harbor Lights
 WEAFF WEEI WTIC WJAR WRC
 WGR WCAE WWJ WSAI KSD
 WOC WOV

9:00-9:30 Interwoven Pair
 WJZ WBZ WBZA WHAM KDKA
 WMC KYW WREN KPRC WOAI
 KOA WHAS WSM WSB WBT
 WJAX KWK WRVA KSL KPO
 KGO KOMO KHQ KGW KFI
 WKY WAPI WSMB WIOD WLW
 WFAA

9:00-10:00 True Story Hour
 WABC WCAU WNAC WEAN WKRC
 WFBL WMAK WCAO WJAS WADC
 WGHF WMAQ WOWO KMOX KMBC
 KOIL WSPD WHK WLBW WMAL
 WHCC WCCO WDBJ WTAR WWCN
 WLAC WDOD WREC KFJF KLRA
 KRLD K TSA WDSU KLZ KDYL
 KHJ KFRC KOIN KVI KFPY

9:30-10:00 Schradertown Band
 WEAFF WEEI WTIC WJAR WTAG
 WCSH WGY WGR WCAE WWJ
 WSAI KSD WOC WOV WRC
 WLIT WFJC WIBO

9:30-10:00 Philco's Theatre Memories
 WJZ WBZ WBZA WHAM KDKA
 WJR KYW KWK WREN WHAM
 KSTP WEBC WRVA WMC WTMJ
 WSMB KPRC WOAI KOA KSL
 WSM WKY WCKY WBT WHAS
 KPO KGO KFI KGW KOMO
 KHQ

10:00-10:30 Bremer-Tully Time
 WABC WCAU WNAC WEAN WFBL
 WMAK WCAO WJAS WADC WKRC
 WGHF WMAQ KMOX KOIL WSPD
 WHK WLBW WMAL WISN KMBC
 WOWO WCCO

10:00-10:30 Planters Pickers
 WEAFF WTIC WJAR WTAG WCSH
 WLIT WRC WGY WGR WCAE
 WFJC WWJ WSAI WLS KSD
 WOW WDAF

10:00-10:30 Armstrong Quakers
 WJZ WBZ WBZA KDKA WBAP
 KYW KWK WREN WHAM WJR
 KSTP WTMJ WEBC WHAS WSM
 WSB WBT KVOO KPRC WOAI
 WKY WSMB KOA KSL KGO
 KFI KGW KOMO KHQ WMC

10:30-11:00 Armour Program
 WJZ WBZ WBZA WHAM KDKA
 WJR WLW KYW KWK WREN
 WBT WJAX WHAS WSM WMC
 WSB WSMB WRVA WFAA KPRC
 WOAI WKY WTMJ KSL KSTP
 WEBC KOA KPO KGO KFI
 KGW KOMO KHQ KVOO KTHS

10:30-11:00 Mystery House
 WEAFF WTAG WRC WWJ WOC
 WGR WCAE

11:00-12:00 Hotel St. Regis Orchestra
WEAF WTIC WWJ WSAI WFJC
WGY WOC

11:00-11:30 Jan Garber's Orchestra
WABC WCAO WMAL WNAC WEAN
WISN WDOD WLBW WDBJ WFBL
WBRC WGHP WKBW WOWO WNNC
WCAU WMAK KLZ KDYL KLRA
KOIL KMBC KFPY WREC

11:30-12:00 Abe Lyman's Orchestra
WABC WKRC WCAO WMAL WEAN
WLBW WDBJ WFBL WISN WDOD
WBRC WGHP WKBW WOWO WNNC
WKBW KLZ KDYL KFH KLRA
KOIL KMBC KVI KFPY WREC

Saturday

10:00-10:30 Personality Plus
WABC WHK WDOD WCAU WCAO
WBMM WFBL WLBW WOWO WKBW
WMAL WREC WDBJ WNNC KMBC
KOIL KVI KMOX KFPY WLAC

10:30-11:00 Columbia Male Trio
WABC WHK WDOD WCAU WCAO
WGHP WBBM WFBL WJAS WLBW
WOWO WKBW WMAL WREC WDBJ
WNNC KMBC KOIL KVI KFPY
KLZ WLAC

12:00-12:30 Adventures of Helen and Mary
WABC WKRC WDOD WCAU WBBM
WFBL WSPD WJAS WLBW WOWO
WKBW WMAL WREC WDBJ WNNC
KVI KFPY KLZ

7:30-8:00 Musical Vespers
WABC WHK WKRC WADC WDOD
WFAN WFBM WCAO WCCO WBBM
WFBL WOWO WKBW WMAQ WREC
WDBJ WNNC KVI KFPY KFH
KLZ

7:30-8:00 Phil Spitalny's Music
WEAF WEEI WFI WRC WWJ
WSAI WHO WSM WGY WFTF
KOA WCAE WJAR

8:00-8:15 "Exploring the Jungles for Science"
WABC WMAL WFBL WDBJ WDOD
WKRC WISN WLAC WEAN WADC
WLBW WNNC WJAS WNAC WFBM
WCAO WOWO WMAQ WKBW WCAU
KFH KMBC KOIL KLRA KLZ
KFPY KFRK WREC

8:00-8:30 "New Business World"
WEAF WEEI WJAR WTAG WCSH
WRC WGY WGR WCAE WWJ
WSAI WOW KSTP WEEC WRVA
WBT WJAX WHAS WMC WSMB
WBAP KOA

8:15-8:30 Babson Finance Period
WABC WFBL WEAN WBBM WNAC
WKRC WMAL WCAO WSPD WADC
WKBW WLBW WOWO WJAS WCCO
WCAU KMBC KOIL WGHP WHK
KMOX WJJD

8:30-9:00 Dixie Echoes
WABC WLAC WCCO WOWO WGHP
WCAO WISN WNNC WLBW WNAC
WEAN WSPD WADC WMAL WDOD
WFBM WBRC WJAS WKRC WFAN
KFH KOIL KLZ KFRK WKBW
KFPY KMOX KVI WREC WDBJ

8:30-9:00 Landerland Lyrics
WEAF WEEI WJAR WTAG WCSH
WRC WGY WGR WCAE WWJ
WSAI WLS KSD WHO WOW

WDAF WTMJ KSTP WEBC WRVA
WBT WJAX WIOD WHAS WSM
WMC WSB WAPI WSMB WKY
KTHS WBAP KPRC WOAI KOA

9:00-9:30 Graybar's, Mr. and Mrs.
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WADC WKRC
WGHP WMAQ WOWO KMOX KMBC
KOIL WSPD WHK WOBW WMAL
WFBM WDBJ WTAR WNNC KFJF
WLAC WDOD WBRC WREC KRLD
KFH K TSA WCCO WISN WDSU
KLRA KLZ KDYL KFRK KHJ
KGIN KVI KFPY WKBW

9:00-10:00 General Electric Hour
WEAF WEEI WJAR WTAG WCSH
WFI WRC WGY WGR WCAE
WTAM WWJ WLS KSD WHO
WOW WDAF WTMJ WEEC WJAX
WHAS WSMB WMC WSB WBT
WBAP KPRC WOAI WRVA WSAI
KSTP WAPI WKY KOA KPO
KGW KOMO KHQ KSL KGO
KFI

9:30-10:00 The Gulbransen Hour
WABC WGHP WCAO WHK WJAS
KOIL WNAC WKRC WEAN WADC
WLBW WCAU WFBL WMAK WMAQ
WOWO KMOX KMBC WSPD WMAL
WISN

9:30-10:00 Dutch Masters Minstrels
WJZ WBZ WBZA WBAL WHAM
KDKA WLW WJR KYW WKW
WREN

10:00-11:00 Lucky Strike Orchestra
WEAF WEEI WJAR WTAG WCSH
WFI WRC WGY WGR WCAE
WWJ WGN KSD WHO WOW
WDAF WIOD KSTP WTMJ WSMB
WJAX WHAS WMC WSB WBT
WBAP KPRC WOAI WKY WAPI
WSAI WFJC KOA KSL KPO
KGO KFI KGW KOMO KHQ
KEBC

10:00-11:00 Paramount-Publix Hour
WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WADC WKRC
WGHP WOWO KMBC WBBM KOIL
WSPD WHK WLBW WMAL WFBM
WHFC CFRB WDBJ WTAR WNNC
WLAC WDOD WBRC WREC KLRA
KFJF KRLD K TSA WCCO WISN
WDSU KLZ KDYL KHJ KFRK
KGIN KVI KFPY KMOX WIBW
WHP

10:00-11:00 Chicago Civic Opera
WJZ WBZ WBZA WBAL WHAM
KDKA WJR KWK WREN WCKY
CKGW

11:00-11:30 Guy Lombardo Canadians
WABC WKRC WISN WDOD WCAU
WCAO WGHP WFBL WSPD WJAS
WLBW WOWO WKBW WNAC WEAN
WMAL WMAQ WREC WDBJ WNNC
KDYL KMBC KOIL KVI KFPY
KLZ

11:30-12:00 Hotel Paramount Orchestra
WABC WOWO WGHP WCAO WISN
WHP WNNC WLBW WNAC WEAN
WSPD WMAL WDOD WBRC WKRC
WCAU KOIL KLZ KDYL WKBW
KFPY KVI WREC WDBJ

11:30-12:00 Abe Lyman Orchestra
WEAF WFI WHO WOW WDAF
WKY WWJ

Atlanta, Ga.	1273	1670	774	1967	938	1577	1126	1248	1417	332	833	1360	228	968	561	803	588	773	1252	1492	717	663	1174	936	1710	900
Baltimore, Md.	- 575	1830	933	1607	960	695	583	368	550	1208	738	595	1293	1112	750	688	901	498	947	286	675	1935	317	335	610	905
Boise, Idaho	- 2055	358	1525	273	603	423	305	1505	913	398	1750	1143			1239	1245	1154	964	808	262	962	2313	498	792	958	948
Boston, Mass.	- 2266	1610	1872	1453	1663	1754	637	1155	1671	969	975				1263	1538	1394	1384	1367	2098	1158	663	1623	1506	2368	1140
Brownsville, Tex.	1881	398	849	737	550	1766	1159	613	2087	1304	1574	3598	1415	1302	922	1015	1250	2590	823	1133	1258	1125	1258	1125		
Buffalo, N. Y.	- 1575	1234	1184	1402	1047	1102	1398	668	1445	471	287	1013	650	1543	1025	923	1370	1093	777	1100	1335					
Chicago, Ill.	- 454	392	175	1369	762	218	1690	923		1221	1289	1019	956	560	880	862	2195	483	802	1184	733					
Cincinnati, Ohio	- 249	307	918	310	236	1249	571			820	954	566	585	367	861	413	1741	268	481	1190	356					
Cleveland, Ohio	- 218	1090	509	234	1333	818				839	897	742	569	589	628	541	1842	92	410	957	607					
Denver, Colo.	- 1223	617	94	1521	838	1046	1116	871	787	518	768	700	2044	309	627	1088	632									
Des Moines, Iowa	- 607	1153	554	642	643	925	355	749	970	1466	555	828	1035	878	1732	699										
Detroit, Mich.	- 545	980	397	640	851	256	488	458	1024	180	1433	477	465	1538	235	1										
El Paso, Tex.	- 1475	745	1018	1111	800	761	427	832	643	1976	315	621	1156	542												
Fargo, N. Dak.	- 1161	543	723	757	802	1422	1481	836	702	1253	978	1662	1156	1662	1156											
Fort Worth, Tex.	- 283	544	273	1093	943	460	1212	751	448	1150	870															
Galveston, Tex.	- 808	375	1277	799	677	1423	807	492	941	1087																
Hastings, Nebr.	- 513	666		1178	226	1177	693	591	1468	399																
Hot Springs, Ark.	- 901	728	326	1427	480	176	983	722																		
Houghton, Mich.	- 1216	633	1787	636	830	1545	878																			
Jacksonville, Fla.	- 952	2153	595	591	328	1192																				
Kansas City, Mo.	- 1352	480	370	1247	413																					
Los Angeles, Calif.	- 1625	1602	2355	1522																						
Louisville, Ky.	- 319	923	605																							
Memphis, Tenn.	- 878	700	1516																							
Miami, Fla.	- 923	605																								
Minneapolis, Minn.	- 878	700	1516																							

How To Use Your RADEX

ALL stations in America are listed in RADEX in three tables:

- 1st by Frequencies.
- 2nd by Call Letters.
- 3rd by States and Cities.

The Index by Frequencies is the one to be used, the other two are merely supplementary.

Let us assume you have just bought your first RADEX. Proceed as follows:

Tune in some station—any station that comes in. Tune it sharply, turning down your rheostats (volume control) until we find the marks on your dials at which it comes in most clearly and with greatest volume.

Let us assume that the station we are hearing is WEAF in New York.

First we must ascertain the frequency for this station. Look it up under WEAF in the Index by Call Letters or under New York in the Index by States and Cities. In either of these indexes we find that the frequency of WEAF is 660. Now we turn to 660 kilocycles in the Index by Frequencies and Dial Numbers. Here we find that WEAF is one of the two stations which have been assigned the 660 keys. frequency by the Federal Radio Commission. We also find that it has a power of 50,000 watts, that it is located in New York City and is owned by the National Broadcasting Co., Inc.

In the blanks for dial numbers opposite 660 kilocycles (which is the wave length of 454.3 meters) enter the dial readings of your set. It is immaterial whether your set has one, two or three dials. Use as many of three spaces provided as you need. The set used in the illustration had two dials. In this case we entered the dial readings for 660 kilocycles as 69-67.

Let us now tune in some other station. We repeat the same procedure in tuning and find that we are hearing, let us say, WOS at Jefferson City. Proceed as before in ascertaining the frequency of WOS. This we find to be 630 keys. We turn to 630 in the Index by Frequencies and enter our dial readings for this band which on the set we are using was 72-70.

We now have found that the dial numbers for 630 keys are 72-70 and the dial numbers for 660 keys are 69-67. If we now will set our dials for 70-68 it is obvious we will have our set tuned for 650 keys. We listen carefully and if they are on the air and within range of our set we will tune in WSM of Nashville at this point. We then enter the dial readings for WSM opposite 650 keys. Now it is clear that if we reset our dials at 71-69 our set will be tuned to 640 keys, and at that point KFI of Los Angeles will be heard, always assuming of course that it is on the air and within range of our particular set.

Now we tune in some other station, proceeding

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters	76 74	Lucas Warner, Inc., Nebraska Wesleyan University Extension, Inc., Broadcasting Co., Woodmen of the World Educational Missionary College
600 kilocycles 499.7 meters	75 73	Abilene Power & Paper Co., Bishop P. S. Thomas, Airline Radio Corp., International Radio Co., Inc., Bethel College, Wisconsin School of Music, WREB, Inc., Travelers Insurance Co.
610 kilocycles 491.5 meters	74 72	Dunlap, Inc., Kansas City Star Co., National Broadcasting Co., Inc., Global Home, Inc., Unity School of Christianity
620 kilocycles 483.6 meters	73 71	Electrical Equipment Co., Encyclopedia Publishing Co., Temple Publishing Co., Radio City Corp., Inc., Thompson L. Courtney, Milwaukee Journal
630 kilocycles 475.9 meters	72 70	Victoria Broadcasting Ass'n, Winfield Grain Exchange, Christian National Ballgame, Carlton James, Stephens College, State School of the Air, Inc., N. A. Lorenz Co., State Marketing Bureau
640 kilocycles 468.5 meters		Ward C. Anthony, Inc., American Insurance Union
650 kilocycles 461.3 meters	70 68	National Life & Accident Ins. Co.
660 kilocycles 454.3 meters	69 67	Omaha Grain Exchange, National Broadcasting Co., Inc.
670 kilocycles 447.5 meters	68 66	Chicago Daily News, Inc.
680 kilocycles 440.9 meters	67 65	Hale Bros. & The Chronicle, Durham Life Insurance Co.

S IN STATUTE MILES

Missoula, Mont.	695 1117 1030	1810 1696 518 718 1748	330 1498 2015 1107 1628	1036 2099 2696 150 2508	1410 2279 79 1214 399	Albuquerque, N. Mex.
Mechville, Tenn.	1790 218 427	747 507 753 815 663	1592 520 1022 2172 470	487 1580 2133 840 2181	654 1960 663 917 542	Baltimore, Md.
New Orleans, La.	1947 297 1001	170 167 1173 1026 90	2002 194 446 2367 128	1379 292 516 2120 405	1433 290 2196 973 2045	Boise, Idaho
New York, N. Y.	252 1631 1713	2153 2137 1138 1044 2113	733 1863 2282 349 2060			Boston, Mass.
Norfolk, Va.	124 941 1359	188 467 1490 1280 268	2235 478 100 2553 471	1036 2099 2696 150 2508	1410 2279 79 1214 399	Brownsville, Tex.
Oklahoma, Okla.	1706 952 936	1695 1465 659 1061 1614	1023 1424 1961 1944 1428	975 1317 1675 1770 2015	510 1858 1805 1161 1493	Buffalo, N. Y.
Omaha, Nebr.	740 626 1087	291 435 1117 883 278	1904 178 438 2167 375	662 1701 2298 249 2130	1080 1900 325 916 290	Chicago, Ill.
Philadelphia, Pa.	348 394 831	711 696 689 432 664	1451 411 892 1765 618	259 1260 1855 702 1743	725 1514 774 479 594	Cincinnati, Ohio
Phoenix, Ariz.	1578 239 708	568 474 755 620 501	1578 258 808 1987 399	308 1450 2037 605 1974	688 1746 659 694 403	Cleveland, Ohio
Pittsburgh, Pa.	640 456 922	404 429 946 738 341	1745 115 603 2063 353	490 1567 2163 408 2035	904 1804 473 785 303	Denver, Colo.
Portland, Me.	670 1018 1079	1628 1528 503 485 1575	585 1320 1803 985 1468	793 372 946 1618 1020	799 827 1693 468 1490	Des Moines, Iowa
Portland, Ore.	474 523 625	1023 983 469 122 972	1116 178 1197 1479 905	270 952 1547 1012 1470	624 1843 1085 187 895	Detroit, Mich.
Richmond, Va.	152 468 938	843 522 905 666 444	1654 208 557 1975 445	452 1490 2087 487 1945	891 1715 540 705 397	El Paso, Tex.
St. Louis, Mo.	1115 1169 986	1902 1755 578 897 1834	347 1592 2126 1288 1695	1033 689 993 1930 1373	152 1838 1990 920 1728	Fargo, N. Dak.
Shant Lake City, Utah	819 900 1221	1213 1258 786 390 1186	1825 952 1313 1248 1180	658 865 447 1157 1206	1002 976 1240 284 1141	Fort Worth, Tex.
San Francisco, Calif.	1312 643 470	4398 1226 188 590 1324	858 1097 1642 1612 1170	589 197 1454 1446 1658	209 1470 1495 689 1210	Galveston, Tex.
Schenectady, N. Y.	1595 666 288	3415 1195 456 828 1335	1055 1146 1678 1885 1154	697 1849 1693 1487 1938	233 1753 1594 938 1214	Hastings, Nebr.
Seattle, Wash.	891 697 870	1275 1216 357 135 1222	901 967 1454 1271 1142	455 708 1297 1267 1288	615 1061 1340 167 1319	Hertford, N. C.
Shreveport, La.	1385 370 358	1125 955 260 490 1051	1094 825 1371 1713 897	235 1116 1648 117 1759	142 1552 1224 605 936	Houston, Mich.
Spokane, Wash.	1208 760 1167	849 946 926 547 827	1590 630 926 1638 870	592 1242 1833 776 1588	1043 1360 860 510 813	Jacksonville, Fla.
Springfield, Mass.	2070 502 511	838 548 988 1098 758	1800 703 1113 2442 953	755 1840 2375 960 2450	905 2528 1210 1510 927	Kansas City, Mo.
Vermillion, S. Dak.	1117 472 678	1097 1009 293 165 1037	1045 784 1300 1397 937	238 922 1500 1170 1507	326 1286 1173 890 943	Los Angeles, Calif.
Washington, D.C.	190 1777 1675	2446 2352 1188 312 2388	357 2135 2631 825 2283	1585 577 343 2445 956	1420 939 2513 1291 2295	Louisville, Ky.
	1550 153 623	650 528 675 579 580	1518 345 892 1953 457	242 1400 1983 995 1945	598 1720 745 663 473	Memphis, Tenn.
	1483 195 358	953 778 422 529 878	1254 660 1205 1852 722	242 1250 1800 1010 1687	279 1652 1085 642 763	Miami, Fla.
	2359 821 461	1095 802 1233 1402 1023	1998 1014 1357 2716 831	1067 2098 2603 1229 2740	859 1173 2056 238 936	Minneapolis, Minn.
	1010 959 1050	1019 1047 692 891 987	1279 745 1145 1435 968	464 980 1585 975 1403	1457 170 2060 887 1940	Missoula, Mont.
	1582 1733	2030 2045 1162 974 1997	832 1754 813 340 1967	1331 435 762 1978 395	470 1752 663 704 567	Nashville, Tenn.
		470 758 586 602 604 663	1445 472 1015 1970 526	253 1390 1958 820 1973	280 1898 1287 960 968	New Orleans, La.
		1173 932 575 845 1090	1316 923 1445 2063 899	599 1433 1322 1259 299	1120 290 120 1189 204	New York, N. Y.
		293 1324 1144 83	2142 813 277 2455 287	873 1972 2568 142 2419	1037 2211 411 1156 145	Norfolk, Va.
		1186 1095 220	2027 816 565 2458 79	771 1925 2510 426 2440	897 1324 1412 502 1150	Oklahoma, Okla.
		405 1256	843 1013 1550 1468 1132	456 862 1398 1354 1523	613 1149 1205 115 1018	Omaha, Nebr.
		1094	1032 897 1318 1373 1020	352 833 1425 1313 1372	1163 2129 801 1143 122	Philadelphia, Pa.
			2079 254 560 2419 205	808 1923 2518 805 2368	1067 1080 2220 1043 1980	Phoenix, Ariz.
			1829 2345 1007 1960	1270 504 652 2152 1112	931 2918 400 891 1288	Pittsburgh, Pa.
			545 2174 342	1581 1670 2264 350 2145	1484 2285 159 1345 480	Portland, Me.
			2563 565	1094 2127 2725 197 2513	1783 295 2488 1293 2360	Portland, Ore.
			2381	1723 635 536 2405 143	699 1850 2436 404 2362	Richmond, Va.
				1158 1738 988 1722	466 1500 958 450 710	St. Louis, Mo.
				592 1950 697	1155 548 2027 785 1843	Salt Lake City, Utah
				2568 680	1655 730 2625 1383 2437	San Francisco, Calif.
				2363	1290 2139 86 1165 311	Schenectady, N. Y.
					1820 229 2445 1282 3135	Seattle, Wash.
					1621 1333 728 1035	Shreveport, La.
					2216 1055 2105	Spokane, Wash.
					586 372 321	Springfield, Mass.
					1073	Vermillion, S. Dak.

as before until after an evening or two, we have blanks filled on every page. We are now able to set our dials for any frequency we desire and consequently any station we may want whether we have ever received it before or not.

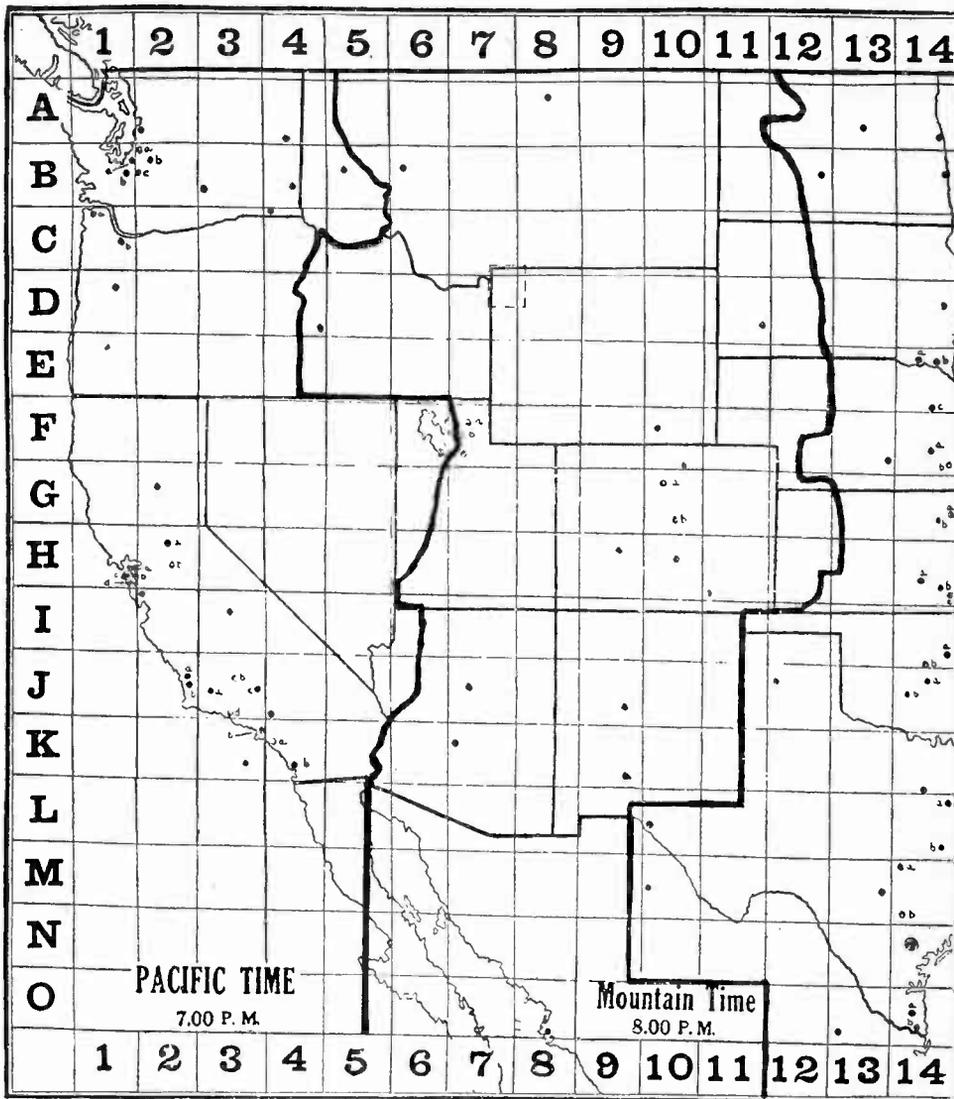
Our index now becomes of great value to us in identifying programs. Let us say that we hear music at 67-65 on our dials. We refer to our Index by Frequencies and Dial Numbers and we find that we are in tune to 680 kilocycles. On this wave there are two stations: KPO at San Francisco and WPTF at Raleigh, N. C. Both of these stations have 5000 watts in power. But knowing which is the closer to our set, we can tell almost invariably which station we are hearing. The Radio Commission has had to give the same frequency in most cases to several stations but they have distributed them geographically so they should not interfere. When two stations in the same locality have the same frequency, they are required to divide time. In this case of course it is not possible to tell which one of the two stations is broadcasting at the particular moment we hear it but we do know it is one or the other of them.

The second column in the index by Frequencies, as we have seen, gives the power of the station as measured in watts. This power also aids in

identifying stations as we will not ordinarily hear those stations with 500 watts or less unless they are close to our home city.

The Index by Call Letters also has spaces providing for logging dial numbers but these are provided merely for the convenience of those who want to be able to turn instantly to some favorite station. They may or may not be used as you desire. Remember that it is the Index by Frequencies that we must use to get the most value and pleasure out of our radios.

The Index by Frequencies is now printed with marginal tabs. If you will fill in under the word "dial" your reading for this particular frequency, you can then turn instantly to any frequency desired. Take a pair of shears and cut along the dotted line, as shown.



The Radex Press,

P.O. Box 143, Cleveland, Ohio

Begin With No. 35

36

Renewal or

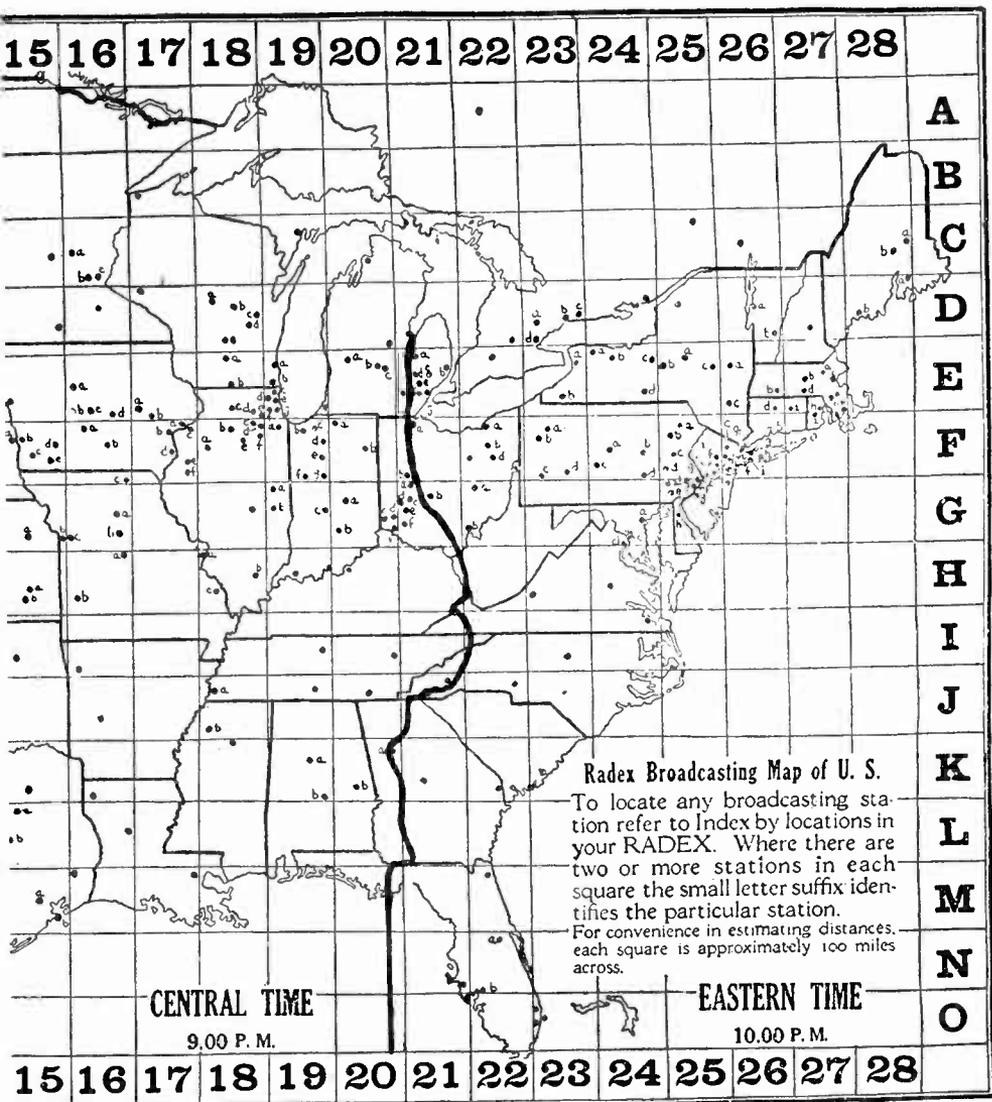
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Please enter my subscription for one year (ten issues) for which I enclose \$1.75. Also send me leatherette cover for which I enclose 50c. (Cross out if not wanted.)

Write Name Plainly

Street and No.

City and State



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In answer to many requests we have had prepared a beautiful leatherette cover stamped in gold. This cover is not only an ornament to even the finest set but it protects your RADEX from wear and gives a solid backing for making entries. The price of this cover is 50c or we will send one free for two yearly subscriptions. Send your own and a friend's subscription and we will send you one of these beautiful covers free.

INDEX BY FREQUENCIES AND DIAL NUMBERS

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KEY

Frequency in kilocycles. Wave lengths in meters. Second column shows power in watts. Third column symbols: D, daytime only. S, Sunday only. Stations dividing time have same small figures. X means station has been granted permit to increase power. + means station has greater power during day. CP indicates station has construction permit only. Some Cuban and Mexican stations have odd frequencies. Correct kilocycles shown in small figures. N means NBC chain. C means Columbia chain.

540 kilocycles 555.6 meters

CKX	500	---	Brandon, Manitoba
XFA	50	---	Mexico City

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Manitoba Telephone System
Sria. de Agricultura y Fomento

550 kilocycles 545.1 meters

KFDY	500	1+	Brookings, S. D.
KFUO	500	2+	St. Louis, Mo.
KFYR	500	1	Bismarck, N. D.
KOAC	1000	---	Corvallis, Ore.
KSD	500	2N	St. Louis, Mo.
WGR	1000	N	Buffalo, N. Y.
WKRC	500	XC	Cincinnati, Ohio
KEY	105	---	Merida, Yucatan

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S. D. State College
Concordia Theological Seminary
Hoskins-Meyer
State Agricultural College
Pulitzer Publishing Co.
Radio Station WGR, Inc.
J. S. Boyd
Partido Socialista del Sureste

560 kilocycles 535.4 meters

KFDM	500	X+	Beaumont, Texas
KLZ	1000	C	Denver, Colo.
KTAB	1000	---	Oakland, Cal.
WEBW	500	3D	Beloit, Wis.
WFI	500	1N	Philadelphia, Pa.
WLIT	1000	3+N	Chicago, Ill.
WNOX	500	1N	Philadelphia, Pa.
WNOX	1000	X+	Knoxville, Tenn.
WPCC	500	3S	Chicago, Ill.
WQAM	1000	---	Miami, Fla.

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Magnolia Petroleum Co.
Reynolds Radio Co., Inc.
Associated Broadcasters
Beloit College
Strawbridge & Clothier
Nelson Bros. Bond & Mortgage Co.
Lit Brothers
Sterchi Bros.
North Shore Congregational Church
Miami Broadcasting Co.

570 kilocycles 526.0 meters

KGKO	250	+	Wichita Falls, Texas
KMTR	500	---	Hollywood, Cal.
KXA	500	---	Seattle, Wash.
WEAO	750	1-	Columbus, Ohio
WKBN	500	1C	Youngstown, Ohio
WMAC	250	2	Cazenovia, N. Y.
WMCA	500	3	New York City
WNAX	1000	---	Yankton, S. D.
WNYC	500	3-	New York City
WSYR	250	2	Syracuse, N. Y.
WWNC	1000	C	Asheville, N. C.

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Wichita Falls Broadcasting Co.
KMTR Radio Corp.
American Radio Tel. Co.
Ohio State University
W. P. Williamson, Jr.
Clive B. Meredith
Knickerbocker Broadcasting Co., Inc.
Gurney Seed & Nursery Co.
Dept. of Plants and Structures
Clive B. Meredith
Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCL	500	3S	Toronto, Ont.
CHMA	250	4	Edmonton, Alta.
CJBC	500	3S	Toronto, Ont.
CJCA	500	4	Edmonton, Alta.
CJSC	500	4	Toronto, Ont.
CKCL	500	3	Toronto, Ont.
CKNC	500	3	Toronto, Ont.
CKUA	500	4	Edmonton, Alta.
CNRE	500	4	Edmonton, Alta.
KGFX	200	D	Pierre, S. D.
KSAC	500	2+	Manhattan, Kans.
WIBW	500	2+C	Topeka, Kansas
WOBU	250	1	Charleston, W. Va.
WSAZ	250	1	Huntington, W. Va.
WTAG	250	N	Worcester, Mass.

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Dominion Battery Co.
Christian and Missionary Alliance
Jarvis Street Baptist Church
The Edmonton Journal, Ltd.
The Evening Telegram
The Dominion Battery Co.
Canadian National Carbon Co., Ltd.
University of Alberta
Canadian National Railways
Dana McNeil
State Agricultural College
Topeka Broadcasting Assn., Inc.
Charleston Radio Broadcasting Co.
WSAZ, Inc.
Telegram Publishing Co.

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590 kilocycles 508.2 meters

KHQ	1000	X+N
WCAJ	500	1
WEEL	1000	N
WEMC	1000	D
WOW	1000	1N
XFI	1000	---

Spokane, Wash.
Lincoln, Nebr.
Boston, Mass.
Berrien Springs, Mich.
Omaha, Nebr.
Mexico City

Louis Wasmer, Inc.
Nebraska Wesleyan University
Edison Elec. Illuminating Co.
Emmanuel Missionary College
Woodmen of the World
Sria. de Industria, Comercio y Trabajo

KCY.S.
670
MTRS.
447.5
DIAL

600 kilocycles 499.7 meters

CFCH	250	3
CJRM	500	4
CJRW	500	4
CMW	1000	---
CNRO	500	3-
KFSD	500	+
WCAC	250	---
WCAO	250	C-
WMT	500	X
WOAN	500	1
WREC	500	1+C

Iroquois Falls, Ont.
Moose Jaw, Sask.
Fleming, Sask.
Havana, Cuba
Ottawa, Ont.
San Diego, Cal.
Storrs, Conn.
Baltimore, Md.
Waterloo, Iowa
Lawrenceburg, Tenn.
Memphis, Tenn.

Abitibi Power & Paper Co.
Jas. Richardson & Sons, Ltd.
Jas. Richardson & Sons, Ltd.
Columbus Commercial & Radio Co.
Canadian National Railways
Airfan Radio Corp.
Conn. Agricultural College
Monumental Radio, Inc.
Waterloo Broadcasting Co.
James D. Vaughan
WREC, Inc.

610 kilocycles 491.5 meters

CMX	500	---
KFRC	1000	C-
WDAF	1000	N
WFAN	500	2C
WIP	500	2
2-MM	200	612

Havana, Cuba
San Francisco, Cal.
Kansas City, Mo.
Philadelphia, Pa.
Philadelphia, Pa.
Havana, Cuba

Francisco Lavin
Don Lee, Inc.
Kansas City Star Co.
Keystone Broadcasting Co., Inc.
Gimbel Bros. Co.
Lino E. Cosculluala

620 kilocycles 483.6 meters

KGW	1000	X+N
KREP	500	---
WFLA	1000	1+
WJAY	500	D
WLBZ	500	---
WSUN	1000	1+
WTMJ	1000	+N

Portland, Ore.
Phoenix, Arizona
Clearwater, Fla.
Cleveland, Ohio
Bangor, Maine
St. Petersburg, Fla.
Milwaukee, Wis.

Oregonian Publishing Co.
KAR Broadcasting Co.
Chamber of Commerce
Cleveland Radio Broadcasting Corp.
Maine Broadcasting Co., Inc.
Chamber of Commerce
Milwaukee Journal

630 kilocycles 475.9 meters

CFCT	500	---
CJGX	500	---
CNRA	500	---
KFRU	500	1
WGFB	500	1
WMAL	250	+C
WOS	500	1+
XFC	350	---
2-JK	250	627

Victoria, B. C.
Yorkton, Sask.
Moncton, N. B.
Columbia, Mo.
Evansville, Ind.
Washington, D. C.
Jefferson City, Mo.
Jalapa, Ver.
Havana, Cuba

Victoria Broadcasting Association
Winnipeg Grain Exchange
Canadian National Railways
Stephens College
Evansville On the Air, Inc.
M. A. Leese
State Marketing Bureau
Gobierno Estado de Veracruz
Francisco Lavin

640 kilocycles 468.5 meters

KFI	5000	N
WAIU	500	C
WOI	500	D
XFG	2000	---
2-RK	250	643

Los Angeles, Cal.
Columbus, Ohio
Ames, Iowa
Mexico City
Havana, Cuba

Earle C. Anthony, Inc.
American Insurance Union
State College of Agriculture
Sria, de Guerra y Marina
Raul Karmen

650 kilocycles 461.3 meters

WSM	5000	N
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Nashville, Tenn.

National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

WAAW	500	D
WEAF	50000	N

Omaha, Neb.
New York City

Omaha Grain Exchange
National Broadcasting Co., Inc.

670 kilocycles 447.5 meters

WMAQ	5000	C
XEB	1000	---

Chicago, Ill.
Mexico City

Chicago Daily News, Inc.
E. Buen Tono, S. A.

CUT OUT ON DOTTED LINES

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680 kilocycles 440.9 meters

KFEQ	2500	D	St. Joseph, Mo.
KPO	5000	N	San Francisco, Cal.
WPTF	1000	N	Raleigh, N. C.
2-OK	100	---	Havana, Cuba

Scroggin & Co. Bank Hale Bros. & The Chronicle Durham Life Insurance Co. Julio E. Power		

690 kilocycles 434.5 meters

CFAC	500	1	Calgary, Alta.
CFCN	500	1	Calgary, Alta.
CHCA	500	1	Calgary, Alta.
CJBC	5000	2S	Toronto, Ont.
CJCL	500	1	Calgary, Alta.
CKGW	5000	2N	Toronto, Ont.
CNRC	500	1	Calgary, Alta.
CNRR	5000	2	Toronto, Ont.
NAA	1000	---	Arlington, Va.
VAS	500	---	Louisburg, N. S.

The Calgary Herald Western Broadcasting Co. The Western Farmer Jarvis Street Baptist Church Albertan Publishing Co., Ltd. Gooderham & Worts, Ltd. Canadian National Railways Canadian National Railways U. S. Navy Department of Fisheries		

700 kilocycles 428.3 meters

WLW	50000	N	Cincinnati, Ohio
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Crosley Radio Corp.		

710 kilocycles 422.3 meters

KEJK	500	---	Los Angeles, Cal.
WHB	500	D	Kansas City, Mo.
WOR	5000	---	Newark, N. J.

R. S. MacMillan Sweeney Automobile School Co. L. Bamberger & Co.		

720 kilocycles 416.4 meters

WGN	25000	N	Chicago, Ill.
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Chicago Tribune		

730 kilocycles 410.7 meters

CHLS	50	1	Vancouver, B. C.
CHYC	500	2	Montreal, Que.
CKAC	5000	2C	Montreal, Que.
CKCD	50	1	Vancouver, B. C.
CKFC	50	1	Vancouver, B. C.
CKMO	50	1	Vancouver, B. C.
CKWX	100	1	Vancouver, B. C.
CMK	2000	---	Havana, Cuba
CNRM	1650	2	Montreal, Que.
XEN	1000	---	Mexico City

W. G. Hassell Northern Electric Co., Ltd. La Presse Publishing Co., Ltd. Vancouver Daily Province United Church of Canada Sprott-Shaw Radio Co. A. Holstead & Wm. Hanlon Cuban Broadcasting Co., Hotel Plaza Canadian National Railways General Electric, S. A.		

740 kilocycles 405.2 meters

KMMJ	1000	---	Clay Center, Neb.
WSB	1000	XN	Atlanta, Ga.

The M. M. Johnson Co. Atlanta Journal Co.		

750 kilocycles 399.8 meters

WJR	5000	N	Detroit, Mich.
-----	------	---	----------------

WJR, The Goodwill Station, Inc.		

760 kilocycles 394.5 meters

KJR	5000	D	Seattle, Wash.
WEW	1000	D	St. Louis, Mo.
WJZ	30000	N	New York City

Ralph A. Horr, Receiver St. Louis University Radio Corp. of America, Inc.		

770 kilocycles 389.4 meters

KFAB	5000	IN	Lincoln, Nebr.
WBBM	25000	1C	Chicago, Ill.
WJBT	25000	1S	Chicago, Ill.

Nebraska Buick Automobile Co. The Atlass Co., Inc. The Atlass Co., Inc.		

780 kilocycles 384.4 meters

CKY	5000	3	Winnipeg, Manitoba
CNRW	5000	3	Winnipeg, Manitoba
KELW	500	2	Burbank, Cal.
KTM	500	2+	Los Angeles, Cal.
WEAN	250	+C	Providence, R. I.
WMC	500	+N	Memphis, Tenn.
WPOR	500	1	Norfolk, Va.
WTAR	500	1C	Norfolk, Va.

Manitoba Telephone System Canadian National Railways Earl L. White Pickwick Broadcasting Corp. The Shepard Co. Memphis Commercial-Appeal WTAR Radio Corp. WTAR Radio Corp.		

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790 kilocycles 379.5 meters

KGO 7500 N
WGY 50000 N
6KW 500 791

Oakland, Cal.
Schenectady, N. Y.
Tuinucu, Cuba

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General Electric Co.
General Electric Co.
Frank H. Jones

800 kilocycles 374.8 meters

WBAP 50000 1N
WFAA 10000 1XN

Fort Worth, Texas
Dallas, Texas

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Carter Publications, Inc.
News & Journal

810 kilocycles 370.2 meters

WCCO 7500 C
WPCH 500 D

Minneapolis, Minn.
New York City

--	--	--

Northwestern Broadcasting, Inc.
Eastern Broadcasters, Inc.

820 kilocycles 365.6 meters

CMI 500 815
WHAS 10000 N

Havana, Cuba
Louisville, Ky.

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Instituto Provincial
Courier-Journal & Times

830 kilocycles 361.2 meters

KOA 12500 N
WHDH 1000 D
WRUF 5000 ---
5-EV 300 834

Denver, Colo.
Gloucester, Mass.
Gainesville, Fla.
Colon, Cuba

--	--	--

General Electric Co.
Matheson Radio Co., Inc.
University of Florida
Leopoldo V. Figueroa

840 kilocycles 356.9 meters

CFCA 500 1
CHCT 1000 2
CJBC 1000 1S
CKLC 1000 2
CKOW 500 1
CMC 500 ---
CNRD 1000 2
CNRT 500 1
XFX 500 ---

Toronto, Ont.
Red Deer, Alta.
Toronto, Ont.
Red Deer, Alta.
Toronto, Ont.
Havana, Cuba
Red Deer, Alta.
Toronto, Ont.
Mexico City

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Star Publishing & Ptg. Co.
G. F. Tull & Ardern, Ltd.
Jarvis Street Baptist Church
Alberta Pacific Grain Co., Ltd.
Nestle's Food Co.
Cuban Telephone Co.
Canadian National Railways
Canadian National Railways
Sria. de Educacion Publica

850 kilocycles 352.7 meters

KWKH 10000 1
WWL 5000 1

Shreveport, La.
New Orleans, La.

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W. K. Henderson
Loyola University

860 kilocycles 348.6 meters

KFPY 500 C
KFOZ 250 ---
KMO 500 +
WABC 5000 1XC
WBOQ 5000 1X

Spokane, Wash.
Los Angeles, Cal.
Tacoma, Wash.
New York City
New York City

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Symons Broadcasting Co.
Taft Radio & Broadcasting Co., Inc.
KMO, Inc.
Atlantic Broadcasting Corp.
Atlantic Broadcasting Corp.

870 kilocycles 344.6 meters

WENR 50000 1N
WLS 5000 1XN

Chicago, Ill.
Chicago, Ill.

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Great Lakes Broadcasting Co.
Agricultural Broadcasting Co.

880 kilocycles 340.7 meters

CHCS 10 4
CHML 50 4
CHRC 100 3
CJCB 50 ---
CKCI 22.5 3
CKCV 50 3
CKOC 50 4
CNQC 50 3
KFKA 500 2+
KLX 500 ---
KPOF 500 2
WCOC 500 +
WGBI 250 1
WQAN 250 1
WSUI 500 2

Hamilton, Ont.
Hamilton, Ont.
Quebec, Que.
Sydney, N. S.
Quebec, Que.
Quebec, Que.
Hamilton, Ont.
Quebec, Que.
Greeley, Colo.
Oakland, Cal.
Denver, Colo.
Meridian, Miss.
Scranton, Pa.
Scranton, Pa.
Iowa City, Iowa

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The Hamilton Spectator
Maple Leaf Radio Co., Ltd.
E. Fontaine
N. Nathanson
Le "Soleil," Ltd.
G. A. Vandry
Wentworth Radio & Auto Sply. Co., Ltd.
Canadian National Railways
State Teachers College
Tribune Publishing Co.
Pillar of Fire, Inc.
Mississippi Broadcasting Co.
Scranton Broadcasters, Inc.
Scranton Times
University of Iowa

KCYS.
880
MTRS.
340.7
DIAL

CUT OUT ON DOTTED LINES

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890 kilocycles 336.9 meters

CFBO	50	---
CKCO	100	---
KFNF	500	2+
KGJF	250	---
KUSD	500	2+
WGST	250	1
WILL	250	2+
WJAR	250	+N
WKAQ	500	---
WMAZ	250	1+
WMMN	250	+

St. John, N. B.
Ottawa, Ont.
Shenandoah, Iowa
Little Rock, Ark.
Vermillion, S. D.
Atlanta, Ga.
Urbana, Ill.
Providence, R. I.
San Juan, P. R.
Macon, Ga.
Fairmount, W. Va.

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C. A. Munro, Ltd.
Dr. G. M. Geldert
Henry Field Seed Co.
Church of the Nazarene
University of South Dakota
Georgia School of Technology
University of Illinois
The Outlet Co.
Radio Corp. of Porto Rico
Junior Chamber of Commerce
Holt-Rowe Novelty Co.

900 kilocycles 333.1 meters

KGBU	500	---
KHJ	1000	C
KSEI	250	1C
WFBL	750	1C
WJAX	1000	N
WKY	1000	N
WLBL	2000	D
WMAK	750	1C

Ketchikan, Alaska
Los Angeles, Cal.
Pocatello, Idaho
Syracuse, N. Y.
Jacksonville, Fla.
Oklahoma City
Stevens Pt., Wis.
Buffalo, N. Y.

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Alaska Radio & Service Co.
Don Lee, Inc.
KSEI Broadcasting Association, Inc.
The Onondaga Co., Inc.
City of Jacksonville
WKY Radiophone Co.
Wisconsin Dept. of Markets
WMAK Broadcasting System, Inc.

910 kilocycles 329.6 meters

CFQC	500	1
CJGC	500	2
CJHS	250	1
CNRL	500	2
CNRS	500	1

Saskatoon, Sask.
London, Ont.
Saskatoon, Sask.
London, Ont.
Saskatoon, Sask.

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The Electric Shop, Ltd.
Free Press Printing Co., Ltd.
Radio Service, Ltd.
Canadian National Railways
Canadian National Railways

920 kilocycles 325.9 meters

HHK	1000	---
KVI	1000	C
KFEL	250	1
KFXF	250	1
KPRC	1000	+N
WAAF	500	D
WBSO	250	DX
WWJ	1000	N
XEX	500	---
XFF	250	---
6-LO	250	---

Port au Prince, Haiti
Tacoma, Wash.
Denver, Colo.
Denver, Colo.
Houston, Texas
Chicago, Ill.
Wellesley Hills, Mass.
Detroit, Mich.
Mexico City
Chihuahua, Chih.
Caibarien, Cuba

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Republic of Haiti
Puget Sound Broadcasting Co., Inc.
Eugene P. O'Fallon, Inc.
Colorado Radio Corp.
Houston Printing Co.
Drovers Journal Publishing Co.
Babson Statistical Organization, Inc.
The Detroit News
Excelsior, Cia Editorial, S. A.
Gobierno Estado de Chihuahua
Manuel A. Alvarez

930 kilocycles 322.4 meters

CHNS	500	---
CKIC	50	---
KFWI	500	1
KFWM	500	1+
KGBZ	500	2+
KMA	500	2+
WBRC	500	+C
WDBJ	250	+C
WIBG	50	D

Halifax, N. S.
Wolfville, N. S.
San Francisco, Cal.
Richmond, Cal.
York, Nebr.
Shenandoah, Iowa
Birmingham, Ala.
Roanoke, Va.
Elkins Park, Pa.

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Halifax Herald, Ltd.
Acadia Academy
Radio Entertainments, Inc.
Oakland Educational Society
Dr. George R. Miller
May Seed & Nursery Co.
Birmingham Broadcasting Co., Inc.
Richardson-Wayland Elec. Corp.
St. Pauls P. E. Church

940 kilocycles 319.0 meters

KGU	500	X
KOIN	1000	C
WCSH	1000	N
WDAY	1000	---
WFIW	1000	C
WHA	750	D

Honolulu, Hawaii
Portland, Ore.
Portland, Maine
Fargo, N. D.
Hopkinsville, Ky.
Madison, Wis.

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Marion A. Mulrony
KOIN, Inc.
Congress Square Hotel Co.
WDAY, Inc.
The Acme Mills, Inc.
University of Wisconsin

950 kilocycles 315.6 meters

KFWB	1000	---
KGHL	500	---
KMBC	1000	C
WRC	500	N
2-OH	150	952

Hollywood, Cal.
Billings, Mont.
Kansas City, Mo.
Washington, D. C.
Havana, Cuba

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Warner Bros. Broadcasting Corp.
Northwestern Auto Supply Co., Inc.
Midland Broadcasting Co., Inc.
Radio Corp. of America
Jose Fernandez Suviour

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960 kilocycles

312.3 meters

CFCR	500	3
CFCY	250	1
CFRB	4000	2C
CHCK	30	1
CHWC	500	3
CJBC	5000	2
CJBR	500	3
CKCK	500	3
CNRR	500	3
XEE	101	---

Regina, Sask.
Charlottetown, P. E. I.
Toronto, Ont.
Charlottetown, P. E. I.
Pilot Butte, Sask.
Toronto, Ont.
Regina, Sask.
Regina, Sask.
Regina, Sask.
Pueblo, Pue.

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Sydney I. Robinson
The Island Radio Co.
Rogers-Majestic Corp., Ltd.
W. E. Burke
R. H. Williams & Sons, Ltd.
Jarvis St. Baptist Church
Cooperative Wheat Producers, Ltd.
Leader Publishing Co., Ltd.
Canadian National Railways
Ramon Huerta G.

970 kilocycles

309.1 meters

KOMO	15000	N
XEH	1000	---

Seattle, Wash.
Monterey, N. L.

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Fisher's Blend Station, Inc.
Ing. Constantino de Tarnava

980 kilocycles

305.9 meters

KDKA	50000	N
------	-------	---

Pittsburgh, Pa.

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Westinghouse Elec. & Mfg. Co.

990 kilocycles

302.8 meters

WBZ	15000	1N
WBZA	500	1N

Springfield, Mass.
Boston, Mass.

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Westinghouse Elec. & Mfg. Co.
Westinghouse Elec. & Mfg. Co.

1000 kilocycles

299.8 meters

KFVD	250	---
WHO	5000	1N
WOC	5000	1N
XEI	101	---

Culver City, Cal.
Des Moines, Iowa
Davenport, Iowa
Morellia, Mexico

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Los Angeles Broadcasting Co.
Bankers Life Co.
Palmer School of Chiropractic
Carlos Gutierrez M.

1010 kilocycles

296.8 meters

CFLC	50	3
CKCR	50	3
KKSH	50	---
KGGF	500	2
KQW	500	---
WHN	250	1
WNAD	500	2
WPAP	250	1
WQAO	250	1
WRNY	250	1

Prescott, Ont.
Waterloo, Ont.
St. Hyacinthe, Que.
Picher, Okla.
San Jose, Cal.
New York City
Norman, Okla.
New York City
New York City
New York City

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Radio Association
John Patterson
City of St. Hyacinthe
D. L. Connell, M. D.
First Baptist Church
Marcus Loew Booking Agency
University of Oklahoma
Calvary Baptist Church
Calvary Baptist Church
Aviation Radio Station, Inc.

1020 kilocycles

293.9 meters

KFKX	5000	1XN
KYW	5000	1XN
WRAX	250	D

Chicago, Ill.
Chicago, Ill.
Philadelphia, Pa.

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Westinghouse Elec. & Mfg. Co.
Westinghouse Elec. & Mfg. Co.
Berachah Church, Inc.

1030 kilocycles

291.1 meters

CFCF	1650	---
CJOR	50	---
CNRR	500	---
2-MA	50	1027
2-KG	100	1027

Montreal, Que.
Sea Island, B. C.
Vancouver, B. C.
Marianao, Cuba
Havana, Cuba

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Canadian Marconi Co.
G. C. Chandler
Canadian National Railways
Modesto Alvarez
Manuel y G. Salas

1040 kilocycles

288.3 meters

KRLD	10000	1C
KTHS	10000	1N
WKAR	1000	D
WKEN	1000	---

Dallas, Texas
Hot Springs, Ark.
East Lansing, Mich.
Buffalo, N. Y.

--	--	--

KRLD Radio Corp.
Chamber of Commerce
Michigan Agricultural College
Radio Station WKEN, Inc.

1050 kilocycles

285.5 meters

KFKB	5000	X
KNX	5000	X

Milford, Kansas
Hollywood, Cal.

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KFKB Broadcasting Assn., Inc.
Western Broadcast Co.

KCYS.
1050
MTRS.
285.5
DIAL

CUT OUT ON DOTTED LINES

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1060 kilocycles 282.8 meters

KWJJ	500	---	Portland, Ore.
WBAL	1000	1N	Baltimore, Md.
WJAG	1000	---	Norfolk, Nebr.
WTIC	5000	1N	Hartford, Conn.

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Wilbur Jerman
Consolidated Gas Elec. & Pwr. Co.
Norfolk Daily News
Travelers Broadcasting Service Corp.

1070 kilocycles 280.2 meters

KJBS	100	D	San Francisco, Cal.
WAAT	300	D	Jersey City, N. J.
WCAZ	50	D	Carthage, Ill.
WDZ	100	D	Tuscola, Ill.
WEAR	1000	1N	Cleveland, Ohio
WTAM	5000	1N	Cleveland, Ohio

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Julius Brunton & Sons Co.
Bremer Broadcasting Corp.
Carthage College
James L. Bush
WTAM and WEAR, Inc.
WTAM and WEAR, Inc.

1080 kilocycles 277.6 meters

WBT	5000	N	Charlotte, N. C.
WCBF	5000	1	Zion, Ill.
WMBI	5000	1	Chicago, Ill.

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Station WBT, Inc.
Wilbur Glenn Voliva
Moody Bible Institute

1090 kilocycles 275.1 meters

KFOA	5000	1	St. Louis, Mo.
KMOX	5000	1C	St. Louis, Mo.

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Voice of St. Louis, Inc.
Voice of St. Louis, Inc.

1100 kilocycles 272.6 meters

KGDM	50	D	Stockton, Cal.
WLWL	5000	1	New York City
WPG	5000	1	Atlantic City, N. J.

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E. F. Pepper
Missionary Society of St. Paul
Municipality of Atlantic City

1110 kilocycles 270.1 meters

KSOO	2000	---	Sioux Falls, S. D.
WRVA	5000	1N	Richmond, Va.

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Sioux Falls Broadcasting Assn., Inc.
Larus & Bros, Co., Inc.

1120 kilocycles 267.7 meters

CFJC	15	---	Kamloops, B. C.
CFRC	500	---	Kingston, Ont.
CHGS	25	---	Summerside, P. E. I.
CJOC	50	---	Lethbridge, Alta.
CKPR	50	---	Midland, Ont.
KFSG	500	3	Los Angeles, Cal.
KMIC	500	3	Inglewood, Cal.
KRSC	50	D	Seattle, Wash.
KUT	500	2	Austin, Texas
WDBO	500	+	Orlando, Fla.
WDEL	250	+	Wilmington, Del.
WHAD	250	1	Milwaukee, Wis.
WISN	250	1C	Milwaukee, Wis.
WTAW	500	2	College Station, Texas

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N. S. Dalgleish & Sons
Queen's University
R. T. Holman, Ltd.
Harold R. Carson
Midland Broadcasting Corp.
Echo Park Evag. Assn.
Dalton's, Inc.
Radio Sales Corp.
KUT Broadcasting Co.
Orlando Broadcasting Co., Inc.
WDEL, Inc.
Marquette University
Evening Wisconsin Co.
Agricultural & Mech. College

1130 kilocycles 265.3 meters

KSL	5000	N	Salt Lake City
WJJD	2000	---	Mooseheart, Ill.
WQV	1000	D	New York City
XEF	105	---	Oaxaca, Oax.

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Radio Service Corp. of Utah
Loyal Order of Moose
International Broadcasting Corp.
Federico Zorrilla

1140 kilocycles 263.0 meters

KVOO	5000	1N	Tulsa, Okla.
WAPI	5000	1N	Birmingham, Ala.

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Southwestern Sales Corp.
Alabama Polytechnic Institute

1150 kilocycles 260.7 meters

WHAM	5000	N	Rochester, N. Y.
6BY	200	1154	Cienfuegos, Cuba

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Stromberg-Carlson Tel. Mfg. Co.
Jose Ganduxé

INDEX BY FREQUENCIES AND DIAL NUMBERS

1160 kilocycles 258.5 meters

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WOWO 10000 1C
 WWVA 5000 1

Ft. Wayne, Ind.
 Wheeling, W. Va.

Main Auto Supply Co.
 West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

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KTNT 5000 ---
 WCAU 10000 C

Muscatine, Iowa
 Philadelphia, Pa.

Norman Baker
 Universal Broadcasting Co.

1180 kilocycles 254.1 meters

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KEX 5000 2
 KOB 10000 2X
 WDGY 1000 1
 WGBS 500 ---
 WHDI 500 1

Portland, Ore.
 State College, N. M.
 Minneapolis, Minn.
 New York City
 Minneapolis, Minn.

Western Broadcasting Co.
 College of Agriculture & Mech. Arts
 Dr. George W. Young
 General Broadcasting System, Inc.
 Wm. Hood Dunwoody, Industry Inst.

1190 kilocycles 252.0 meters

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WICC 500 D
 WOAI 5000 XN

Bridgeport, Conn.
 San Antonio, Texas

Bridgeport Broadcasting Station, Inc.
 Southern Equipment Co.

1200 kilocycles 249.9 meters

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KFHA 50 ---
 KFJB 100 ---
 KFWF 100 5
 KFXXM 100 ---
 KGDE 50 ---
 KGDY 15 ---
 KGEK 50 9
 KGEW 100 9
 KGFJ 100 ---
 KGFK 50 ---
 KGHI 100 ---
 KGY 10 ---
 KSMR 100 ---
 KVOS 100 ---
 KWG 100 ---
 KXO 100 ---
 WABI 100 ---
 WABZ 100 1
 WBBY 75 ---
 WBBZ 100 ---
 WCAT 100 ---
 WCAx 100 2
 WCLO 100 ---
 WCOD 100 3
 WFBC 50 ---
 WHBC 10 4S
 WHBY 100 ---
 WIBX 100 +
 WIL 100 5+
 WJBC 100 6
 WJBL 100 6
 WJBW 30 1
 WKJC 100 3
 WLAP 30 ---
 WLBG 100 D
 WMAy 100 5+
 WNBO 100 4
 WNBW 10 ---
 WNBX 10 2
 WORC 100 ---
 WRAF 100 8
 WRBL 50 ---
 WWAE 100 8
 XEA 101 ---
 XES 250 ---

Gunnison, Colo.
 Marshalltown, Iowa
 St. Louis, Mo.
 San Bernardino, Cal.
 Fergus Falls, Minn.
 Oldham, S. D.
 Yuma, Colo.
 Fort Morgan, Colo.
 Los Angeles, Cal.
 Hallock, Minn.
 Little Rock, Ark.
 Lacey, Wash.
 Santa Maria, Cal.
 Bellingham, Wash.
 Stockton, Cal.
 El Centro, Cal.
 Bangor, Maine
 New Orleans, La.
 Charleston, S. C.
 Ponca City, Okla.
 Rapid City, S. D.
 Burlington, Vt.
 Kenosha, Wis.
 Harrisburg, Pa.
 Knoxville, Tenn.
 Canton, Ohio
 Green Bay, Wis.
 Utica, N. Y.
 St. Louis, Mo.
 La Salle, Ill.
 Decatur, Ill.
 New Orleans, La.
 Lancaster, Pa.
 Louisville, Ky.
 Petersburg, Va.
 St. Louis, Mo.
 Washington, Pa.
 Carbondale, Pa.
 Springfield, Vt.
 Worcester, Mass.
 La Porte, Ind.
 Columbus, Ga.
 Hammond, Ind.
 Guadalaajara, Jal.
 C. Lerdo Dgo.

Western College of Colorado
 Marshall Electric Co., Inc.
 St. Louis Truth Center, Inc.
 J. C. and E. W. Lee
 Jaren Drug Co.
 J. Albert Loesch and George W. Wright
 Beehler Elec. Equipment Co.
 City of Fort Morgan
 Ben S. McGlashan
 Lautzenheiser & Mitchell
 Berean Bible Class
 St. Martin's College
 Santa Maria Valley R. R. Co.
 KVOS, Inc.
 Portable Wireless Tel. Co., Inc.
 E. R. Irely and F. M. Bowles
 First Universalist Church
 Coliseum Place Baptist Church
 Washington Light Infantry
 C. L. Carrell
 State School of Mines
 University of Vermont
 C. E. Whitmore
 Norman R. Hoffman
 First Baptist Church
 St. John's Catholic Church
 St. Norbert's College
 WIBX, Inc.
 Missouri Broadcasting Corp.
 Hummer Furniture Co.
 Wm. Gushard Dry Goods Co.
 Charles C. Carlson, Jr.
 Kirk Johnson & Co.
 American Broadcasting Corp. of Ky.
 Robert Allen Gamble
 Kingshighway Presbyterian Church
 John Brownlee Spriggs
 Home Cut Glass & China Co.
 First Congregational Church
 Alfred Frank Kleindienst
 The Radio Club, Inc.
 David Farmer
 Hammond-Calumet Broadcasting Corp.
 Alberto Palos Sauza
 Cervceria de Durango, S. A.

KCYS.
 1200
 MTRS.
 249.9
 DIAL

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

1210 kilocycles 247.8 meters

CFCO	50	---	Chatham, Ont.
CFNB	50	---	Fredericton, N. B.
CHWK	5	---	Chilliwack, B. C.
CKMC	15	---	Cobalt, Ont.
CKPC	50	---	Preston, Ont.
KDFN	100	CP	Casper, Wyo.
KDLR	100	8	Devils Lake, N. D.
KFOR	100	+	Lincoln, Nebr.
KFVS	100	6	Cape Girardeau, Mo.
KGCR	100	---	Watertown, S. D.
KGCU	100	8	Mandan, N. D.
KMJ	100	9	Fresno, Cal.
KPCB	50	7	Seattle, Wash.
KPPC	50	9	Pasadena, Cal.
KPO	50	7	Seattle, Wash.
KWEA	100	---	Shreveport, La.
WBAX	100	1	Wilkes-Barre, Pa.
WCBS	100	2	Springfield, Ill.
WCOH	100	3	Yonkers, N. Y.
WCRW	100	4	Chicago, Ill.
WDWF	100	5	Providence, R. I.
WEBE	100	---	Cambridge, Ohio
WEBQ	100	6	Harrisburg, Ill.
WEDC	100	4	Chicago, Ill.
WGBB	100	3	Freeport, N. Y.
WGCM	100	---	Gulfport, Miss.
WHBF	100	---	Rock Island, Ill.
WHBU	100	---	Anderson, Ind.
WIBA	100	---	Madison, Wis.
WINR	100	3	Bay Shore, N. Y.
WJBI	100	3	Red Bank, N. J.
WJBU	100	1	Lewisburg, Pa.
WJBY	50	---	Gadsden, Ala.
WJW	100	---	Mansfield, Ohio
WLCI	50	---	Ithaca, N. Y.
WLSI	100	5	Providence, R. I.
WMAN	50	---	Columbus, Ohio
WMBG	100	---	Richmond, Va.
WOCL	25	---	Jamestown, N. Y.
WOMT	100	---	Manitowoc, Wis.
WPAW	100	5	Pawtucket, R. I.
WRBQ	100	---	Greenville, Miss.
WRBU	100	---	Gastonia, N. C.
WSBC	100	4	Chicago, Ill.
WSIX	100	---	Springfield, Tenn.
WTAX	50	2	Streator, Ill.

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Western Ontario "Better Radio" Club
 James S. Neill & Sons, Ltd.
 Chilliwack Broadcasting Co., Ltd.
 R. L. MacAdam
 Wallace Russ
 Donald Lewis Hathaway
 Radio Electric Co.
 Howard A. Shuman
 Hirsch Battery & Radio Co.
 Cutler's Radio Brdcastg. Service, Inc.
 Mandan Radio Association
 James McClatchy Co.
 Westcoat Broadcasting Co.
 Pasadena Presbyterian Church
 Westcoat Broadcasting Co.
 William E. Antony
 John H. Stenger, Jr.
 H. L. Dewing & Chas. Messter
 Westchester Broadcasting Corp.
 Clinton R. White
 Dutee W. Flint
 Roy W. Waller
 First Trust & Savings Bank
 Emil Denemark, Inc.
 Harry H. Carman
 Great Southern Land Co., Inc.
 Beardsley Specialty Co.
 Citizens Bank
 Capital Times
 Radiotel Mfg. Co., Inc.
 Robert S. Johnson
 Bucknell University
 Charles J. Black
 Mansfield Broadcasting Assn.
 Lutheran Assn. of Ithaca
 The Lincoln Studios, Inc.
 W. E. Heskett
 Havens & Martin, Inc.
 A. E. Newton
 Francis M. Kadow
 Shartenburg & Robinson Co.
 J. Pat Scully
 A. J. Kirby Music Co.
 World Battery Co., Inc.
 638 Tire & Vulcanizing Co.
 Williams Hardware Co.

1220 kilocycles 245.8 meters

KFKU	1000	1	Lawrence, Kans.
KWSC	500	---	Pullman, Wash.
WCAD	500	D	Canton, N. Y.
WCAE	500	XN	Pittsburgh, Pa.
WREN	1000	IN	Lawrence, Kans.

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University of Kansas
 State College of Washington
 St. Lawrence University
 Gimbel Bros.
 Jenny Wren Co.

1230 kilocycles 243.8 meters

KFIO	100	D	Spokane, Wash.
KFQD	100	--	Anchorage, Alaska
KGGM	250	+	Albuquerque, N. Mex.
KYA	1000	---	San Francisco, Calif.
WBTS	1000	2-	Boston, Mass.
WFBM	1000	1C	Indianapolis, Ind.
WNAC	1000	2C	Boston, Mass.
WPSC	500	D	State College, Pa.
WSBT	500	1	South Bend, Ind.

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Spokane Broadcasting Corp.
 Anchorage Radio Club
 New Mexico Broadcasting Co.
 F. C. Dahlquist, Receiver
 Shepard-Norwell Co.
 Indianapolis Power & Light Co.
 Shepard-Norwell Co.
 Pennsylvania State College
 South Bend Tribune

1240 kilocycles 241.8 meters

KSAT	1000	1	Ft. Worth, Texas
WDAE	1000	---	Tampa, Fla.
WGHP	750	C	Detroit, Mich.
WJAD	1000	1	Waco, Texas

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Texas Air Transport Broadcasting Co.
 Tampa Publishing Co.
 American Broadcasting Corp.
 Frank P. Jackson

INDEX BY FREQUENCIES AND DIAL NUMBERS

1250 kilocycles 239.9 meters

KFMX	1000	2	Northfield, Minn.
KFOX	1000	---	Long Beach, Cal.
KIDO	1000	---	Boise, Idaho
WAAM	1000	1+	Newark, N. J.
WCAL	1000	2	Northfield, Minn.
WDSU	1000	C	New Orleans, La.
WGCP	250	1	Newark, N. J.
WGMS	500	2	Minneapolis, Minn.
WLB	500	2	Minneapolis, Minn.
WODA	1000	1	Paterson, N. J.
WRHM	1000	2C	Minneapolis, Minn.

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Carleton College
Nichols & Warinner, Inc.
Boise Broadcasting Station
WAAM, Inc.
St. Olaf College
Jos. H. Uhalt
May Radio Broadcast Corp.
University of Minnesota
Washburn-Crosby Co.
Richard E. O'Dea
Minnesota Broadcasting Corp.

1260 kilocycles 238.0 meters

KOIL	1000	C	Council Bluffs, Iowa
KRGV	500	1	Harlingen, Texas
KVOA	500	D	Tucson, Ariz.
KWVG	500	1	Brownsville, Texas
WLBW	500	C	Oil City, Pa.
WTOC	500	---	Savannah, Ga.

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Mona Motor Oil Co.
Valley Radio-Electric Corp.
Robert M. Riculfi
Chamber of Commerce
Radio-Wire Program Corp.
Savannah Broadcasting Co.

1270 kilocycles 236.1 meters

KFUM	1000	---	Colorado Springs, Colo.
KGCA	50	2D	Decorah, Iowa
KOL	1000	3	Seattle, Wash.
KTW	1000	3	Seattle, Wash.
KWLC	100	2D	Decorah, Iowa
WASH	500	1	Grand Rapids, Mich.
WEAI	500	D	Ithaca, N. Y.
WFBR	250	---	Baltimore, Md.
WJDX	500	CP+N	Jackson, Miss.
WOOD	500	1	Grand Rapids, Mich.

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W. D. Corley
Charles W. Greenley
Seattle Broadcasting Co., Inc.
First Presbyterian Church
Luther College
WASH Broadcasting Corp.
Cornell University
Baltimore Radio Show, Inc.
Lamar Life Insurance Co.
Walter B. Stiles, Inc.

1280 kilocycles 234.2 meters

WCAM	500	1	Camden, N. J.
WCAP	500	1	Asbury Park, N. J.
WCFL	1000	+N	Chicago, Ill.
WDDO	1000	+C	Chattanooga, Tenn.
WOAX	500	1	Trenton, N. J.
WRR	500	---	Dallas, Texas

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City of Camden
Radio Industries Broadcast Co.
Chicago Federation of Labor
Chattanooga Radio Co., Inc.
Franklyn J. Wolff
City of Dallas

1290 kilocycles 232.4 meters

KDYL	1000	C	Salt Lake City
KFUL	500	1	Galveston, Texas
KLCN	50	D	Blytheville, Ark.
KTSA	1000	1+C	San Antonio, Texas
WEBC	1000	+N	Superior, Wis.
WJAS	1000	C	Pittsburgh, Pa.
WNBZ	50	D	Saranac Lake, N. Y.

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Intermountain Broadcasting Corp.
Will H. Ford
C. L. Lintzenich
Lone Star Broadcast Co.
Head of Lake Broadcasting Co.
Pittsburgh Radio Supply House
Smith & Mace

1300 kilocycles 230.6 meters

KFH	500	2XC	Wichita, Kansas
KFJR	500	3	Portland, Ore.
KGEF	1000	4	Los Angeles, Cal.
KTBI	750	4	Los Angeles, Cal.
KTBR	500	3	Portland, Ore.
WBRR	1000	1	Rossville, N. Y.
WEVD	500	1	New York City
WHAP	1000	1	New York City
WHAZ	500	1	Troy, N. Y.
WIOD	1000	N	Miami Beach, Fla.
WOQ	1000	2	Kansas City, Mo.

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Radio Station KFH Co.
Ashley C. Dixon & Son
Trinity Methodist Church
Bible Institute of Los Angeles
M. E. Brown
People's Pulpit Association
Debs Memorial Radio Fund, Inc.
Defenders of Truth Society, Inc.
Rensselaer Polytechnic Institute
Isle of Dreams Broadcasting Co.
Unity School of Christianity

1310 kilocycles 228.9 meters

KFBK	100	---	Sacramento, Cal.
KFGQ	100	7	Boone, Iowa
KFJY	100	7	Ft. Dodge, Iowa
KFPL	15	X	Dublin, Texas
KFPM	15	---	Greenville, Texas

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Jas. McClatchy Co.
Boone Biblical College
C. S. Tunwall
C. C. Baxter
The New Furniture Co.

KCYS.
1310
MTRS.
228.9
DIAL

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

KFUP	100	8	Denver, Colo.	Fitzsimmons General Hospital
KFXJ	50	8	Edgewater, Colo.	R. G. Howell
KFXR	100	CP+	Oklahoma City	Exchange Ave. Baptist Church
KGCX	100	+	Wolf Point, Mont.	First State Bank of Vida
KGEZ	100	---	Kalispell, Mont.	Chamber of Commerce
KGFV	50	X	Ravenna, Neb.	Otto F. Sothman and Roy H. McConnell
KMED	50	---	Medford, Ore.	Mrs. W. J. Virgin
KRMD	50	9	Shreveport, La.	Robert M. Dean
KTSL	100	9	Shreveport, La.	Houseman Sheet Metal Works, Inc.
KTSM	100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR	100	7	Cedar Rapids, Iowa	Harry F. Paar
KXRO	75	---	Aberdeen, Wash.	KXRO, Inc.
KWAGM	50	---	Royal Oak, Mich.	Robert L. Miller
WBOW	100	---	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE	100	---	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	100	1	Joliet, Ill.	WCLS, Inc.
WDAH	100	2	El Paso, Texas	Trinity Methodist Church
WEBR	100	+	Buffalo, N. Y.	Howell Broadcasting Co., Inc.
WFBC	100	3	Altoona, Pa.	Wm. F. Gable Co.
WFDF	100	---	Flint, Mich.	Frank D. Fallain
WFKD	50	4	Philadelphia, Pa.	Foulkrod Radio Engineering Co.
WGAL	15	5	Lancaster, Pa.	Lancaster Electric Supply Co.
WGH	100	---	Newport News, Va.	Virginia Broadcasting Co., Inc.
WIBU	100	---	Poynette, Wis.	William C. Forrest
WJAC	100	3	Johnstown, Pa.	Johnstown Automobile Co.
WJAK	50	6	Marion, Ind.	Marion Broadcasting Co.
WKAV	100	---	Laconia, N. H.	Laconia Radio Club
WKBB	100	1	Joliet, Ill.	Sanders Bros.
WKBC	100	---	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS	100	---	Galesburg, Ill.	Permil N. Nelson
WLBC	50	6	Muncie, Ind.	Donald A. Burton
WNAT	100	4	Philadelphia, Pa.	Albert A. Walker
WNBH	100	---	New Bedford, Mass.	New Bedford Broadcasting Co.
WNBJ	50	---	Knoxville, Tenn.	Lonsdale Baptist Church
WOBT	100	+	Union City, Tenn.	Tittsworth's Radio & Music Shop
WOL	100	---	Washington, D. C.	American Broadcasting Co.
WRAW	100	5	Reading, Pa.	Avenue Radio & Electric Shop
WRBI	20	---	Tifton, Ga.	Kent's Furniture and Music Store
WRK	100	---	Hamilton, Ohio	Hamilton Radio Service
WSAJ	100	---	Grove City, Pa.	Grove City College
WSJS	100	CP	Winston-Salem, N. C.	Winston-Salem Journal Co.

1320 kilocycles 227.1 meters

KGHB	500	---	Honolulu, Hawaii
KGHF	250	X+	Pueblo, Colo.
KGIQ	250	1	Twin Falls, Idaho
KID	250	1X+	Idaho Falls, Idaho
WADC	1000	C	Akron, Ohio
WSMB	500	N	New Orleans, La.

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Honolulu Broadcasting Co., Ltd.
C. P. Ritchie & J. E. Finch
Radio Broadcasting Corp.
Jack W. Duckworth, Jr.
Allen T. Simmons
Saenger Theatre & Maison Blanche Co.

1330 kilocycles 225.4 meters

KGB	250	---	San Diego, Cal.
KSCJ	1000	1C+	Sioux City, Iowa
WDRC	500	---	New Haven, Conn.
WSAI	500	N	Cincinnati, Ohio
WTAQ	1000	1	Eau Claire, Wis.

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Pickwick Broadcasting Corp.
Perkins Bros. Co.
Doolittle Radio Corp.
Crosley Radio Corp., Lessee
Gillette Rubber Co.

1340 kilocycles 223.7 meters

KFPW	50	D	Cartersville, Mo.
WCOA	500	---	Pensacola, Fla.
WSPD	500	+C	Toledo, Ohio

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Rev. Lannie W. Stewart
City of Pensacola
Toledo Broadcasting Co.

1350 kilocycles 222.1 meters

KWK	1000	N	St. Louis, Mo.
WBNY	250	1	New York City
WCDA	250	1	New York City
WKBO	250	1	New York City
WMSG	250	1	New York City

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Greater St. Louis Broadcasting Corp.
Baruchrome Corp.
Italian Educ. Broadcasting Co., Inc.
Standard Cahill Co., Inc.
Madison Square Garden Brdcastg. Corp.

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1360 kilocycles 220.4 meters

KFBB	500	3	Great Falls, Mont.
KGER	250	---	Long Beach, Cal.
KGIR	250	3	Butte, Mont.
KPSN	1000	---	Pasadena, Cal.
WGES	500	1	Chicago, Ill.
WJKS	500	1+	Gary, Ind.
WLEX	500	2	Lexington, Mass.
WMAF	500	2	S. Dartmouth, Mass.
WQBC	300	---	Utica, Miss.
WSSH	500	2	Boston, Mass.

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Buttery Broadcast, Inc.
 C. Merwin Dobyms
 KGIR, Inc.
 Pasadena Star-News
 Oak Leaves Broadcasting Station, Inc.
 Johnson-Kennedy Radio Corp.
 Lexington Air Stations
 Round Hills Radio Corp.
 Chamber of Commerce
 Tremont Temple Baptist Church

1370 kilocycles 218.7 meters

KCRC	100	2+	Enid, Okla.
KFBL	50	3	Everett, Wash.
KFJI	100	---	Astoria, Ore.
KFJM	100	---	Grand Forks, N. D.
KFJZ	100	---	Ft. Worth, Texas
KFLX	100	---	Galveston, Texas
KGAR	100	---	Tucson, Ariz.
KGBX	100	4	St. Joseph, Mo.
KGCI	100	5	San Antonio, Texas
KGDA	50	---	Dell Rapids, S. D.
KGFG	100	2	Oklahoma City
KGFL	50	---	Raton, N. M.
KGKL	100	---	San Angelo, Texas
KGRC	100	5	San Antonio, Texas
KIT	100	---	Yakima, Wash.
KLO	100	+	Ogden, Utah
KOH	100	---	Reno, Nevada
KOOS	100	---	Marshfield, Ore.
KRE	100	6	Berkeley, Cal.
KVL	100	3	Seattle, Wash.
KWKC	100	4	Kansas City, Mo.
KZM	100	6	Haywood, Cal.
WBBL	100	---	Richmond, Va.
WCBM	100	X	Baltimore, Md.
WEHC	100	---	Emory, Va.
WELK	100	---	Philadelphia, Pa.
WFBJ	100	---	Collegeville, Minn.
WGL	100	---	Fort Wayne, Ind.
WHBD	100	---	Mount Orab, Ohio
WHBQ	100	---	Memphis, Tenn.
WHDF	100	---	Calumet, Mich.
WIBM	100	1	Jackson, Mich.
WJBK	50	1	Ypsilanti, Mich.
WJEO	100	---	New Orleans, La.
WMBO	100	---	Auburn, N. Y.
WMBR	100	---	Tampa, Fla.
WPOE	100	---	Patchogue, N. Y.
WRAK	50	---	Erie, Pa.
WRBT	100	---	Wilmington, N. C.
WRJN	100	---	Racine, Wis.
WSVS	50	---	Buffalo, N. Y.

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Champlin Refining Co.
 Leese Bros.
 KFJI Broadcasters, Inc.
 University of North Dakota
 H. C. Meacham
 George Roy Clough
 Tucson Motor Service Co.
 Foster-Hall Tire Co.
 Liberto Radio Sales Co.
 Home Auto Co.
 Faith Tabernacle Assn.
 Hubbard & Murphy
 KGKL, Inc., Opr. by Ragsdale Auto
 Eugene J. Roth
 Carl E. Haymond
 Peery Building Co.
 Jay Peters
 H. H. Hanseth
 First Congregational Church
 Arthur C. Dailey
 Wilson Duncan Broadcasting Co.
 Leon P. Tenney
 Grace Covenant Presbyterian Church
 Baltimore Broadcasting Corp.
 Emory & Henry College
 Howard R. Miller
 St. John's University
 Fred C. Zieg
 F. P. Moler
 Broadcasting Station WHBQ, Inc.
 Upper Michigan Broadcasting Co.
 C. L. Carrell
 James F. Hopkins
 Valdemar Jensen
 Radio Service Laboratories
 F. J. Reynolds
 Nassau Broadcasting Corp.
 C. R. Cummins
 Wilmington Radio Association
 Racine Broadcasting Corp.
 Seneca Vocational School

1380 kilocycles 217.3 meters

KQV	500	2	Pittsburgh, Pa.
KSO	500	1	Clarinda, Iowa
WKBH	1000	1	La Crosse, Wis.
WSMK	200	2	Dayton, Ohio

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Doubleday-Hill Electric Co.
 Berry Seed Co.
 Callaway Music Co.
 Stanley M. Krohn, Jr.

1390 kilocycles 215.7 meters

KLRA	1000	1C	Little Rock, Ark.
KOY	500	---	Phoenix, Ariz.
KUOA	1000	1	Fayetteville, Ark.
WHK	1000	C	Cleveland, Ohio

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Arkansas Broadcasting Co.
 Nielson Radio Supply Co.
 University of Arkansas
 Radio Air Service Corp.

KCYS.
 1390
 MTRS.
 215.7
 DIAL

CUT OUT ON
 DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

1400 kilocycles 214.2 meters

KOCW	250	+
WBAA	500	1CP
WBBC	500	2
WCGU	500	2
WCMA	500	1
WKBF	500	1
WLTH	500	2
WSGH	500	2

Chickasha, Okla.
Lafayette, Ind.
Brooklyn, N. Y.
Coney Island, N. Y.
Culver, Ind.
Indianapolis, Ind.
Brooklyn, N. Y.
Brooklyn, N. Y.

College for Women
Purdue University
Brooklyn Broadcasting Corp.
U. S. Broadcasting Corp.
Culver Military Academy
Indianapolis Broadcasting, Inc.
The Voice of Brooklyn, Inc.
Amateur Radio Specialty Co.

1410 kilocycles 212.6 meters

KFLV	500	2
KGRS	1000	1
WBCM	500	---
WDAG	250	1
WHBL	500	2
WODX	500	3CP
WSFA	500	3CP

Rockford, Ill.
Amarillo, Texas
Bay City, Mich.
Amarillo, Texas
Sheboygan, Wis.
Mobile, Ala.
Montgomery, Ala.

Rockford Broadcasters, Inc.
Gish Radio Service
James E. Davidson
National Radio & Broadcasting Corp.
Press Pub. Co. & C. L. Carrell
Mobile Broadcasting Corp.
Montgomery Broadcasting Corp.

1420 kilocycles 211.1 meters

KFIF	100	4
KFIZ	100	---
KFOU	100	5
KQOW	100	---
KFXD	50	---
KFX Y	100	---
KFYO	100	+
KGFF	100	---
KGWC	50	5
KGGG	100	---
KGIV	100	---
KGIX	100	CP
KGKX	15	X
KICK	100	---
KLPM	100	---
KORE	100	---
KTAP	100	---
KTUE	5	X
KXL	100	4
WEDH	30	---
WEHS	100	2
WHDL	10	---
WHFC	100	2
WHIS	100	---
WIAS	100	---
WIBR	50	1
WILM	100	---
WKBI	50	2
WKBP	50	---
WLB F	100	---
WLEY	100	+
WMB C	100	X+
WMBH	100	+
WMRJ	10	---
WQBZ	60	1
WTBO	50	---

Portland, Ore.
Fond du Lac, Wis.
Holy City, Cal.
Seattle, Wash.
Jerome, Idaho
Flagstaff, Ariz.
Abilene, Texas
Alva, Okla.
San Francisco, Cal.
Trinidad, Colo.
Las Vegas, Nevada
Sand Point, Idaho
Red Oak, Iowa
Minot, North Dakota
Eugene, Ore.
San Antonio, Texas
Houston, Texas
Portland, Ore.
Erie, Pa.
Evanston, Ill.
Tupper Lake, N. Y.
Cicero, Ill.
Bluefield, W. Va.
Ottumwa, Iowa
Steubenville, Ohio
Wilmington, Del.
Chicago, Ill.
Battle Creek, Mich.
Kansas City, Kas.
Lexington, Mass.
Detroit, Mich.
Joplin, Mo.
Jamaica, N. Y.
Weirton, W. Va.
Cumberland, Md.

Benson Polytechnic Institute
Reporter Printing Co.
W. E. Riker
KFQW, Inc.
Service Radio Co.
Mary M. Costigan
T. E. Kirksey
KGFF Broadcasting Co.
Golden Gate Broadcasting Co.
Trinidad Creamery Co., Inc.
Las Vegas, Nevada, Radio Corp.
C. E. Twiss and F. H. McCann
Red Oak Radio Corp.
E. C. Reineke
Eugene Broadcasting Station
Alamo Broadcasting Co.
Uhalt Electric
KXL Broadcasters, Inc.
Erie Dispatch-Herald
Victor C. Carlson
George Franklin Bissell
Triangle Broadcasters
Daily Telegraph
Poling Electric Co.
George W. Robinson
Delaware Broadcasting Co., Inc.
Fred L. Schoenwolf
Enquirer-News Co.
WLB F Broadcasting Co.
Lexington Air Stations
Michigan Broadcasting Co., Inc.
Edwin Dudley Aber
Peter J. Prinz
J. H. Thomson
Associated Broadcasting Corp.

1430 kilocycles 209.7 meters

KEGA	500	N
KPLA	1000	---
WBAK	500	1
WBRI	500	---
WCAH	500	1C
WCB C	500	2
WHP	500	1C
WNBR	500	2

Los Angeles, Calif.
Los Angeles, Cal.
Harrisburg, Pa.
Tilton, N. H.
Columbus, Ohio
Memphis, Tenn.
Harrisburg, Pa.
Memphis, Tenn.

Earle C. Anthony, Inc.
Pacific Development Radio Co., Inc.
Penna. State Police
Booth Radio Laboratories
Commercial Radio Service Co.
First Baptist Church
Pennsylvania Broadcasting Co.
John Ulrich

1440 kilocycles 208.2 meters

KLS	250	D
WCBA	250	1
WHEC	500	2C

Oakland, Cal.
Allentown, Pa.
Rochester, N. Y.

Warner Bros.
B. B. Musselman
Hickson Electric Co.

INDEX BY FREQUENCIES AND DIAL NUMBERS

WMBD	500	3+	Peoria Heights, Ill.	Peoria Heights Radio Laboratory
WNRC	250	---	Greensboro, N. C.	Wayne M. Nelson
WOKO	500	2	Poughkeepsie, N. Y.	Hudson Valley Broadcasting Co.
WSAN	250	1	Allentown, Pa.	Allentown Call Publishing Co., Inc.
WTAD	500	3	Quincy, Ill.	Ills. Stock Medicine Broadcasting Co.

1450 kilocycles 206.8 meters

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KTBS	1000	---	Shreveport, La.	Elliott & Steere
WBMS	250	1	Fort Lee, N. J.	WBMS Broadcasting Corp.
WCSS	500	2	Springfield, Ohio	Wittenberg, College
WFJC	500	2N	Akron, Ohio	W. F. Jones Broadcast, Inc.
WIBS	250	1	Jersey City, N. J.	New Jersey Broadcasting Corp.
WKBO	250	1	Jersey City, N. J.	Carnith Corp.
WNJ	250	1	Newark, N. J.	Radio Investment Co.
WSAR	250	---	Fall River, Mass.	Doughty & Welch Electric Co., Inc.
WTFI	250	---	Toccoa, Ga.	Toccoa Falls Institute

1460 kilocycles 205.4 meters

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KSTP	10000	N	St. Paul, Minn.	National Battery Broadcasting Co.
WJSV	10000	---	Mt. Vernon Hills, Va.	Independent Publishing Co.

1470 kilocycles 204.0 meters

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KFJF	5000	C	Oklahoma City	National Radio Mfg. Co.
KGA	5000	---	Spokane, Wash.	Ralph A. Horr, Receiver
WKBW	5000	C	Buffalo, N. Y.	Churchill Evangelistic Assn., Inc.

1480 kilocycles 202.6 meters

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WCKY	5000	1N	Covington, Ky.	L. B. Wilson, Inc.
WJAZ	5000	1	Chicago, Ill.	Zenith Radio Corp.
WORD	5000	1	Chicago, Ill.	People's Pulpit Association
WSOA	5000	1	Chicago, Ill.	Radiophone Broadcasting Corp.

1490 kilocycles 201.2 meters

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KPWF	5000	CP	Westminster, Cal.	Pacific Western Broadcasting Fed.
WLAC	5000	1C	Nashville, Tenn.	Life & Casualty Insurance Co.
WTNT	5000	1	Nashville, Tenn.	Tennessee Publishing Co.

1500 kilocycles 199.9 meters

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KDB	100	---	Santa Barbara, Cal.	Santa Barbara Broadcasting Co.
KGFI	100	---	Corpus Christi, Texas	Eagle Broadcasting Co., Inc.
KGHX	100	---	Houston, Texas	Houston Broadcasting Co.
KGKB	100	---	Brownwood, Texas	Eagle Publishing Co.
KPJM	100	---	Prescott, Ariz.	Miller & Klahn
KUJ	10	3X	Longview, Wash.	Columbia Broadcasting Co., Inc.
KVEP	15	3	Portland, Ore.	Schaeffer Radio Co.
WCLB	100	1	Brooklyn, N. Y.	Arthur Faske
WKBV	100	+	Connersville, Ind.	Knox Battery & Electric Co.
WKBZ	50	---	Ludington, Mich.	K. L. Ashbacher
WLBX	100	1	Long Island City, N. Y.	John N. Brahy
WLOE	100	2	Boston, Mass.	Boston Broadcasting Co.
WMBA	100	---	Newport, R. I.	LeRoy Joseph Beebe
WMBQ	100	1	Brooklyn, N. Y.	Paul J. Gollhofer
WMES	50	2	Boston, Mass.	Mass. Educational Society
WMPC	100	---	Lapeer, Mich.	First M. E. Church
WNBF	50	---	Binghamton, N. Y.	Hewitt-Wood Radio Co., Inc.
WOPI	100	---	Bristol, Tenn.	Wilson Radiophone Service Co.
WPEN	100	+	Philadelphia, Pa.	Wm. Penn Broadcasting Co.
WRBJ	10	---	Hattiesburg, Miss.	Woodruff Furniture Co., Inc.
WWRL	100	1	Woodside, N. Y.	Long Island Broadcasting Corp.

KCYC.
1500
MTRS.
199.9
DIAL

INDEX BY LOCATIONS WITH MAP KEY

ALABAMA				Santa Maria J-2-b	100	KSMR	1200
Birmingham K-19-a	5000	WAPI	1140	Stockton H-2-b	50	KGDM	1100
	500	WBRC	930		100	KWG	1200
	100	WKBC	1310	Westminster	5000	KPWF	1490
Gadsden K-20-a	50	WJBY	1210	COLORADO			
Mobile L-19	500	WODX	1410	Colo. Springs H-10	1000	KFUM	1270
Montgomery K-19	500	WSFA	1410	Denver G-10-b	250	KFBL	920
ALASKA					100	KFUP	1310
Anchorage	100	KFOD	1230		250	KFXF	920
Ketchikan	500	KGBU	900		1000	KLZ	960
ARIZONA					12500	KOA	830
Flagstaff J-7	100	KFX Y	1420		500	KPOF	880
Phoenix K-7	500	KOY	1390	Edgewater G-10	50	KFXJ	1310
	500	KREP	620	Fort Morgan G-11	100	KGEW	1200
Prescott J-6	100	KPJM	1500	Greeley F-10	500	KFKA	880
Tucson L-7	100	KGAR	1370	Gunnison H-9	50	KFHA	1200
	500	KVOA	1260	Pueblo H-11	250	KGHF	1320
ARKANSAS				Trinidad H-10	100	KGIW	1420
Blytheville I-18	50	KLCN	1290	Yuma G-11	50	KGEK	1200
Fayetteville I-16	1000	KUOA	1390	CONNECTICUT			
Hot Springs J-16	10000	KTHS	1040	Bridgeport F-26	500	WICC	1190
Little Rock J-17	100	KGHI	1200	Hartford E-26-d	5000	WTIC	1060
	250	KGJF	890	New Haven F-26-b	500	WDRG	1330
	1000	KLRA	1390	Storrs	250	WCAC	600
CALIFORNIA				DELAWARE			
Berkeley H-1-a	100	KRE	1370	Wilmington G-25	250	WDEL	1120
Burbank J-4	500	KELW	780		100	WILM	1420
Culver City K-3	250	KFVD	1000	DISTRICT OF COLUMBIA			
El Centro K-5	100	KXO	1200	Washington G-24-c	250	WMAL	630
Fresno I-3	100	KMJ	1210		500	WRC	950
Hayward H-2	100	KZM	1370		100	WOL	1310
Hollywood K-3	1000	KFWB	950	FLORIDA			
	500	KMTR	570	Clearwater N-21	1000	WFLA	620
	5000	KNX	1050	Gainesville M-21	5000	WRUF	830
Holy City I-2	100	KFOU	1420	Jacksonville M-22	1000	WJAX	900
Inglewood K-4	500	KMIC	1120	Miami O-23	1000	WQAM	560
Long Beach K-4-a	1000	KFOX	1250	Miami Beach O-23	1000	WIOD	1300
	250	KGER	1360	Orlando N-22	500	WDBO	1120
	500	KECA	1430	Pensacola L-19	500	WCOA	1340
Los Angeles K-3-b	500	KEJK	710	St. Petersburg N-21	1000	WSUN	620
	5000	KFI	640	Tampa N-22-b	1000	WDAE	1240
	250	KFQZ	850		100	WMBR	1370
	500	KFSG	1120	GEORGIA			
	1000	KGEF	1300	Atlanta K-20-a	250	WGST	890
	100	KG FJ	1200		1000	WSB	740
	1000	KHJ	900	Columbus K-20	50	WRBL	1200
	1000	KPLA	1430	Macon K-21	250	WMAZ	890
	500	KTM	780	Savannah K-22	500	WTOC	1260
Oakland H-1-b	750	KTBI	1300	Tifton L-21	20	WRBI	1310
	7500	KGO	790	Toccoa J-21	250	WTFI	1450
	250	KLS	1440	HAWAII			
	500	KLX	880	Honolulu	500	KGHB	1320
Pasadena J-4	1000	KTAB	560		500	KGU	940
	50	KPPC	1210	IDAHO			
	1000	KPSN	1360	Boise D-4	1000	KIDO	1250
Richmond I-1	500	KFWM	930	Idaho Falls D-7	250	KID	1320
Sacramento H-2-a	100	KFBK	1310	Jerome E-5	50	KFXD	1420
San Bernardino J-3	100	KFXM	1200	Pocatello E-7	250	KSEI	900
San Diego K-4-b	500	KFSD	600	Sand Point A-4	15	KGKX	1420
	250	KGB	1330	Twin Falls E-5	250	KGIQ	1320
San Francisco H-1-c	1000	KFRC	610				
	500	KFWI	930				
	50	KGGC	1420				
	100	KJBS	1070				
	5000	KPO	680				
	1000	KYA	1230				
San Jose I-2	500	KQW	1010				
Santa Barbara J-3	100	KDB	1500				

INDEX BY LOCATIONS WITH MAP KEY

ILLINOIS

Carthage F-17-e	50	WCAZ	1070
Chicago E-19-g	5000	KFKX	1020
	5000	KYW	1020
	500	WAAF	920
	25000	WBBM	770
	1000	WCFL	1280
	100	WCRW	1210
	100	WEDC	1210
	50000	WENR	870
	500	WGES	1360
	25000	WGN	720
	1000	WIBO	560
	5000	WJAZ	1480
	25000	WJBT	770
	50	WKBI	1420
	5000	WLS	870
	5000	WMAQ	670
	5000	WMBI	1080
	5000	WORD	1480
	500	WPCC	560
	100	WBCB	1210
	5000	WSOA	1480
Cicero E-19	100	WHFC	1420
Decatur G-18	100	WJBL	1200
Evanston E-19	100	WEHS	1420
Galesburg F-18-a	100	WKBS	1310
Harrisburg H-18-b	100	WEBQ	1210
Joliet E-19-f	100	WCLS	1310
	100	WKBB	1310
La Salle F-18-d	100	WJBC	1200
Mooseheart E-18-e	20000	WJID	1130
Peoria Heights G-18	500	WMBD	1440
Quincy G-17	500	WTAD	1440
Rockford E-18-c	500	KFLV	1410
Rock Island F-17-c	100	WHBF	1210
Springfield G-18	100	WCBS	1210
Streator F-18-c	50	WTAX	1210
Tuscola G-19-b	100	WDZ	1070
Urbana G-19-a	250	WILL	890
Zion E-19-c	5000	WCBD	1080

INDIANA

Anderson G-20-a	100	WHBU	1210
Connersville G-20	100	WKBV	1500
Culver F-19-d	500	WCMA	1400
Evansville H-19	500	WGBF	630
Fort Wayne F-20-b	100	WGL	1370
	10000	WOWO	1160
Gary F-19	500	WJKS	1360
Hammond F-19	100	WWAE	1200
Indianapolis G-19-c	1000	WFBM	1230
	500	WKBF	1400
Lafayette G-19	500	WBAA	1400
La Porte F-19-c	100	WRAF	1200
Marion F-20	50	WJAK	1310
Muncie G-20	50	WLBC	1310
South Bend F-20-a	500	WSBT	1230
Terre Haute G-19	100	WBOW	1310
Valparaiso F-19-b	500	WRBC	1240

IOWA

Ames E-16-c	5000	WOI	640
Boone E-16	100	KFGQ	1310
Cedar Rapids E-17-a	100	KWCR	1310
Clarinda E-15-c	500	KSO	1380
Council Bluffs F-15-b	1000	KOIL	1260
Davenport F-17-a	5000	WOC	1000
Decorah D-17	50	KGCA	1270
	100	KWLC	1270
Des Moines F-16-a	5000	WHO	1000
Fort Dodge E-16-a	100	KFJY	1310
Iowa City E-17-b	500	WSUI	880
Marshalltown E-16-d	100	KFJB	1200
Muscatine F-17-b	5000	KTNT	1170

Ottumwa F-17	100	WIAS	1420
Red Oak F-15	100	KICK	1420
Shenandoah F-15-c	500	KFNF	890
	500	KMA	930
Sioux City E-15	1000	KSCJ	1330
Waterloo F-17	500	WMT	600

KANSAS

Kansas City G-15	100	WLBK	1420
Lawrence G-15-a	1000	KFKU	1220
	1000	WREN	1220
Manhattan G-14-a	500	KSAC	580
Milford G-14	5000	KFKB	1050
Topeka G-14	500	WIBW	580
Wichita H-14-a	500	KFH	1300

KENTUCKY

Covington G-20	5000	WCKY	1480
Hopkinsville I-19	1000	WFIW	940
Louisville H-20	10000	WHAS	820
	30	WLAP	1200

LOUISIANA

New Orleans M-17	100	WABZ	1200
	1000	WDSU	1250
	100	WJBO	1370
	30	WJBW	1200
	500	WSMB	1320
	5000	WWL	850
Shreveport K-16	50	KRMD	1310
	1000	KTBS	1450
	100	KTSL	1310
	100	KWEA	1210
	10000	KWKH	850

MAINE

Bangor C-28-b	100	WABI	1200
	500	WLBZ	620
Portland D-28-b	1000	WCSH	940

MARYLAND

Baltimore G-24-a	10000	WBAL	1060
	250	WCAO	600
	100	WCBM	1370
	250	WFBR	1270
Cumberland G-23	50	WTBO	1420

MASSACHUSETTS

Boston E-27-c	1000	WBIS	1230
	500	WBZA	990
	1000	WEEI	590
	100	WLOE	1500
	50	WMES	1500
	1000	WNAO	1230
	500	WSSH	1360
Fall River E-27	250	WSAR	1450
Gloucester E-27	1000	WHDH	830
Lexington E-27	500	WLEX	1360
	100	WLEY	1420
	100	WNBH	1310
New Bedford E-27	500	WMAF	1360
S. Dartmouth E-27	15000	WBZ	990
Springfield E-26-b	250	WBSO	920
Wellesley Hills E-27	100	WORC	1200
Worcester E-27-b	250	WTAG	580

MICHIGAN

Battle Creek E-20	50	WKBP	1420
Bay City D-21	500	WBCM	1410
Berrien Spgs. E-19	1000	WEMC	590
Calumet B-18	100	WHDF	1370

INDEX BY LOCATIONS WITH MAP KEY

Detroit E-21-g	750	WGHP	1240
	5000	WJR	750
	100	WMBC	1420
	1000	WWJ	920
East Lansing E-20-b	1000	WKAR	1040
Flint E-21-a	100	WFDL	1310
Grand Rapids E-20-a	500	WASH	1270
	500	WOOD	1270
Jackson E-20	100	WIBM	1370
Lapeer E-21	100	WMPG	1500
Ludington D-19	50	WKGB	1500
Royal Oak E-21-e	50	WAGM	1310
Ypsilanti E-21-f	50	WJBK	1370

MINNESOTA

Collegeville C-15	100	WFBJ	1370
Fergus Falls B-15	50	KGDE	1200
Hallock A-14	50	KGFK	1200
Minneapolis C-16-b	7500	WCCO	810
	1000	WDGY	1180
	500	WGMS	1250
	500	WHDI	1180
	500	WLB	1250
	1000	WRHM	1250
Northfield D-16	1000	KFMX	1250
	1000	WCAL	1250
St. Paul C-16-c	10000	KSTP	1460

MISSISSIPPI

Greenville K-17	100	WRBQ	1210
Gulfport M-18	100	WGCM	1210
Hattiesburg L-18	10	WRBJ	1500
Jackson L-18	500	WJDX	1270
Meridian L-18	500	WCOC	880
Utica L-17	300	WQBC	1360

MISSOURI

Cartersville H-16	50	KFPW	1340
Cp. Girardeau H-18-c	100	KFVS	1210
Columbia G-16-b	500	KFRU	630
Jefferson City H-16-a	500	WOS	630
Joplin H-16	100	WMBH	1420
Kansas City G-15-b	1000	KMBC	950
	100	KWKC	1370
	1000	WDAF	610
	500	WHB	710
	1000	WQQ	1300
St. Joseph G-15	2500	KFEQ	680
	100	KGBX	1370
St. Louis H-18-a	5000	KFQA	1090
	500	KFUO	550
	100	KFWF	1200
	5000	KMOX	1090
	500	KSD	550
	1000	KWK	1350
	1000	WBEW	760
	100	WIL	1200
	100	WMAY	1200

MONTANA

Billings C-8	500	KGHL	950
Butte C-7	250	KGIR	1360
Great Falls A-8	500	KFBB	1360
Kalispell A-5	100	KGEZ	1310
Wolf Point A-10	100	KGCX	1310

NEBRASKA

Clay Center G-14	1000	KMMJ	740
Lincoln F-14-b	5000	KFAB	770
	100	KFOR	1210
	500	WCAJ	590
Norfolk E-14-c	1000	WJAG	1060
Omaha F-15-a	500	WAAW	660
	1000	WOW	590
Ravenna F-13	50	KGFV	1310
York F-13	500	KGBZ	930

NEVADA

Las Vegas I-5	100	KGIX	1420
Reno G-3	100	KOH	1370

NEW HAMPSHIRE

Laconia D-27	100	WKAV	1310
Tilton D-27	500	WBRL	1430

NEW JERSEY

Asbury Park G-26	500	WCAP	1280
Atlantic City G-25	5000	WPG	1100
Camden F-25-f	500	WCAM	1280
Fort Lee F-26	250	WBMS	1450
Jersey City F-26-d	300	WAAT	1070
	250	WBS	1450
	250	WKBO	1450
Newark F-25-h	1000	WAAM	1250
	250	WGCP	1250
	250	WNJ	1450
	5000	WOR	710
Paterson F-26-c	1000	WODA	1250
Red Bank G-26	100	WJBI	1210
Trenton F-25	500	WOAX	1280

NEW MEXICO

Albuquerque J-9	250	KGGM	1230
Raton I-11	50	KGFL	1370
State College K-9	10000	KOB	1180

NEW YORK

Auburn E-24	100	WMBO	1370
Bay Shore F-26-h	100	WINR	1210
Binghamton E-25	50	WNBF	1500
Brooklyn F-26-f	500	WBBC	1400
	100	WCLB	1500
	500	WLTH	1400
	100	WMBQ	1500
	500	WSGH	1400
Buffalo E-23-a	100	WEBR	1310
	1000	WGR	550
	5000	WKBW	1470
	1000	WKEN	1040
	750	WMAK	900
	50	WSVS	1370
	500	WCAD	1220
Canton D-25	250	WMAK	570
Cazenovia E-25-b	500	WCGU	1400
Coney Island F-26	100	WGBB	1210
Freeport F-26-l	500	WGLI	1270
Ithaca E-24-d	10	WLCI	1210
	50	WLRJ	1420
Jamaica F-26-f	10	WOCJ	1210
Jamestown E-23-b	25	WLBX	1500
Long Island City F-26	100		

INDEX BY LOCATIONS WITH MAP KEY

New York City F-26	5000	WABC	860
	250	WBNY	1350
	5000	WBOQ	860
	250	WCDA	1350
	50000	WEAF	660
	500	WEVD	1300
	500	WGBS	1180
	1000	WHAP	1300
	250	WHN	1010
	30000	WJZ	760
	250	WKBO	1350
	5000	WLWL	1100
	500	WMCA	570
	250	WMSG	1350
	500	WNYC	570
	1000	WOV	1130
	250	WPAP	1010
	500	WPCH	810
	250	WQAO	1010
	250	WRNY	1010
	100	WPOE	1370
Patchogue F-26	500	WOKO	1440
Poughkeepsie F-26-a			
Rochester E-24-b	5000	WHAM	1150
	500	WHEC	1440
Rossville F-26	1000	WBRR	1300
Saranac Lake D-26	50	WNBZ	1290
Schenectady E-25-c	50000	WGY	790
Syracuse E-24-c	750	WFBL	900
	250	WSYR	570
Troy E-21-a	500	WHAZ	1300
Tupper Lake D-25	10	WHDL	1420
Utica E-25-a	100	WBX	1200
Woodside F-26	100	WWRL	1500
Yonkers E-26	100	WCOH	1210

NORTH CAROLINA

Asheville J-21	1000	WWNC	570
Charlotte J-22	5000	WBT	1080
Gastonia J-22	100	WRBU	1210
Greensboro I-22	250	WNRC	1440
Raleigh I-23	1000	WPTF	680
Wilmington J-24	100	WRBT	1370
Winston-Salem I-22	100	WSJS	1310

NORTH DAKOTA

Bismarck B-12	500	KFYR	550
Devils Lake A-13	100	KDLR	1210
Fargo B-14	1000	WDAY	940
Grand Forks A-14	100	KFJM	1370
Mandan B-12	100	KGCU	1210
Minot A-12	100	KLPM	1420

OHIO

Akron F-22-b	1000	WADC	1320
	500	WFJC	1450
Cambridge F-22	100	WEBE	1210
Canton F-22-d	10	WHBC	1200
Cincinnati G-20-e	500	WKRC	550
	50000	WLW	700
	500	WSAI	1330
Cleveland F-22-a	1000	WEAR	1070
	1000	WHK	1390
	500	WJAY	620
	50000	WTAM	1070
Columbus G-21-b	500	WAIU	640
	500	WCAH	1430
	750	WEAO	570
	50	WMAN	1210
Dayton G-21-e	200	WSMK	1380
Hamilton G-20-d	100	WRK	1310
Mansfield F-21	100	WJW	1210
Mount Orab	100	WHBD	1370
Springfield G-21-c	500	WCSO	1450

Stuebenville F-22	50	WIBR	1420
Toledo F-21-a	500	WSPD	1340
Youngstown F-22	500	WKBN	570

OKLAHOMA

Alva I-13	100	KGFF	1420
Chickasha J-14-b	250	KOCW	1400
Enid I-14	100	KCRC	1370
Norman J-14-a	500	WNAD	1010
Oklahoma I-14-b	5000	KFJF	1470
	100	KFXR	1310
	100	KGFG	1370
	1000	WKY	900
Picher I-15	500	KGGF	1010
Ponca City I-14	100	WBBZ	1200
Tulsa I-15	5000	KVOO	1140

OREGON

Astoria C-1-a	100	KFJI	1370
Corvallis D-1	1000	KOAC	550
Eugene D-1	100	KORE	1420
Marshfield E-1	100	KOOS	1370
Medford E-1	50	KMED	1310
Portland C-1-b	5000	KEX	1180
	100	KFIF	1420
	500	KFJR	1300
	1000	KGW	620
	1000	KOIN	940
	500	KTBR	1300
	15	KVEP	1500
	500	KWJJ	1060
	500	KXL	1420

PENNSYLVANIA

Allentown F-25-c	250	WCBA	1440
	250	WSAN	1440
	100	WFBG	1310
Altoona F-24-c	10	WNBW	1200
Carbondale F-25	50	WIBG	930
Elkins Park G-25-c	30	WEDH	1420
Erie E-23	50	WRAK	1370
Grove City F-23-b	100	WSAJ	1310
Harrisburg F-24-d	500	WBAK	1430
	100	WCOD	1200
	500	WHP	1430
Johnstown F-23-d	100	WJAC	1310
Lancaster G-24-a	15	WGAL	1310
	100	WKJC	1200
Lewisburg F-24-b	100	WJBU	1210
Oil City F-23-a	500	WLBW	1260
Philadelphia G-25-d	10000	WCAU	1170
	100	WELK	1370
	500	WFAN	610
	500	WFI	560
	50	WFKD	1310
	500	WIP	610
	500	WLIT	560
	100	WNAT	1310
	100	WPEN	1500
	250	WRAX	1020
Pittsburgh F-23-c	50000	KDKA	980
	500	KQV	1380
	500	WCAE	1210
	1000	WJAS	1290
Reading F-25-d	100	WRWB	1310
Scranton F-25-a	250	WGBI	880
	250	WQAN	880
State College F-24-a	500	WPSC	1310
Washington F-23	100	WNBO	1200
Wilkes-Barre F-25-b	100	WBAX	1210
	100	WBRE	1310

INDEX BY LOCATIONS WITH MAP KEY

PORTO RICO				San Antonio M-14-a			
San Juan	500	WKAQ	890	100	KGCI	1370	
RHODE ISLAND				100	KGRC	1370	
Newport F-27	100	WMBA	1500	100	KTAP	1420	
Pawtucket E-27	100	WPAW	1210	1000	KTSA	1290	
Providence E-27-h	100	WDWF	1210	5000	WOAI	1190	
	250	WEAN	780	1000	WJAD	1240	
	250	WJAR	890	250	KGKO	570	
	100	WLSI	1210	UTAH			
SOUTH CAROLINA				Ogden F-7-b	100	KLO	1370
Charleston K-23	75	WBBY	1200	Salt Lake City F-7-c	1000	KDYL	1290
SOUTH DAKOTA					5000	KSL	1130
Brookings D-14	500	KFDY	550	VERMONT			
Dell Rapids D-14	50	KGDA	1370	Burlington D-26-a	100	WCAX	1200
Oldham D-14	15	KGDY	1200	Springfield D-26-b	10	WNBX	1200
Pierre D-12	200	KGFX	580	VIRGINIA			
Rapid City D-11	100	WCAT	1200	Arlington G-24-d	1000	NAA	690
Sioux Falls D-14	2000	KSOO	1110	Ernory	100	WEHC	1370
Vermillion E-14-b	500	KUSD	890	Mt. Vernon Hills	10000	WJSV	1460
Watertown	100	KGCR	1210	Newport News I-24	100	WGH	1310
Yankton E-14-a	1000	WNAX	570	Norfolk I-24	500	WPOR	780
					500	WTAR	780
				Petersburg H-24	100	WLBG	1200
				Richmond H-24	100	WBBL	1370
					100	WMBG	1210
					5000	WRVA	1110
				Roanoke H-23	250	WDBJ	930
TENNESSEE				WASHINGTON			
Bristol I-22	100	WOPI	1500	Aberdeen B-1	75	KXRO	1310
Chattanooga J-20	1000	WDDO	1280	Bellingham A-1	100	KVOS	1200
Knoxville I-20	50	WFBC	1200	Everett A-2	50	KFBL	1370
	50	WNBJ	1310	Lacey B-2-b	10	KGY	1200
	1000	WNOX	560	Longview B-1	10	KUJ	1500
Lawrenceburg J-19	500	WOAN	600	Pullman B-4	500	KWSC	1220
Memphis J-18-a	500	WGBC	1430	Seattle B-2-a	100	KFQW	1420
	100	WHBQ	1370		5000	KJR	760
	500	WMC	780		1000	KOL	1270
	500	WNBR	1430		15000	KOMO	970
	500	WREC	600		50	KPCB	1210
Nashville I-19	5000	WLAC	1490		50	KPQ	1210
	5000	WSM	650		50	KRSC	1120
	5000	WTNT	1490		1000	KTW	1270
Springfield I-19	100	WSIX	1210		100	KVL	1370
Union City I-18	100	WOBT	1310		500	KXA	570
TEXAS				Spokane A-4	100	KFIO	1230
Abilene K-13	100	KFYO	1420		500	KFPY	860
Amarillo J-12	1000	KGRS	1410		5000	KGA	1470
	250	WDAG	1410	Tacoma B-1-a	1000	KHQ	590
	500	KUT	1120		500	KMO	860
Austin L-14-b	500	KFDM	560	Yakima B-3	1000	KVI	920
Beaumont M-16	500	KWGW	1260		100	KIT	1370
Brownsville O-14-b	500	KGKB	1500	WEST VIRGINIA			
Brownwood L-13	100	KGFI	1500	Bluefield H-22	100	WHIS	1420
College Sta. M-13	500	WTAW	1120	Charleston H-22	250	WOBU	580
Corpus Christi N-14	100	KGFI	1500	Fairmont G-23	250	WMMM	890
Dallas L-15-a	10000	KRLD	1040	Huntington G-22	250	WSAZ	580
	10000	WFAA	800	Weirton G-22	60	WQBZ	1420
	500	WRR	1280	Wheeling G-22	5000	WVVA	1160
	15	KFPL	1310	WISCONSIN			
Dublin K-14	100	KTSM	1310	Beloit E-18-b	500	WEBW	560
El Paso L-10	100	WDAH	1310	Eau Claire D-17	1000	WTAQ	1330
	100	KFJZ	1370	Fond du Lac D-18-d	100	KFIZ	1420
Fort Worth L-14-a	1000	KSAT	1240	Green Bay D-19	100	WHBY	1200
	50000	WBAP	800	Kenosha E-19	100	WCLO	1200
	100	KFLX	1370	La Crosse E-17	1000	WKBH	1380
	500	KFUL	1290	Madison E-18-2	750	WHA	940
Galveston M-15-b	100	KFPM	1310		100	WIBA	1210
	15	KRGV	1260	Manitowoc D-19	100	WOMT	1210
Greenville K-15	500	KPRC	920	Milwaukee E-19-a	250	WHAD	1120
Harlingen O-14	1000	KTUE	1420		250	WISN	1120
Houston M-15-a	5	KGHX	1500		1000	WTMJ	620
	100	KGKL	1370				
San Angelo M-12	100						

INDEX BY LOCATIONS WITH MAP KEY

Poynette D-18-e	100	WIBU	1310	Toronto	500	CKCL	580
Racine E-19	100	WRJN	1370		5000	CKGW	690
Sheboygan C-18	500	WHBL	1410		500	CKNC	580
Stevens Pt. D-18-b	2000	WLBL	900		500	CKOW	840
Superior B-17	1000	WEBC	1290		500	CNRT	840
WYOMING				Waterloo	5000	CNRR	690
Casper	100	KDFN	1210		50	CKCR	1010
CANADA				PRINCE EDWARD ISLAND			
ALBERTA				Charlottetown	250	CFCY	960
Calgary	500	CFAC	690		30	CHCK	960
	500	CFCN	690	Summerside	25	CHGS	1120
	500	CHCA	690	QUEBEC			
	500	CJ CJ	690	Montreal	1650	CFCF	1030
	500	CNRC	690		500	CHYC	730
Edmonton	250	CHMA	580		5000	CKAC	730
	500	CJCA	580		1650	CNRM	730
	500	CKUA	580	Quebec	100	CHRC	880
	500	CNRE	580		22	CKCI	880
Lethbridge	50	CJOC	1120		50	CKCV	880
Red Deer	1000	CHCT	840		50	CNRO	880
	1000	CKLC	840	St. Hyacinthe	50	CKSH	1010
	1000	CNRD	840	SASKATCHEWAN			
BRITISH COLUMBIA				Fleming	500	CJRW	600
Chilliwack	5	CHWK	1210	Moose Jaw	500	CJRM	600
Kamloops	15	CFJC	1120	Pilot Butte	500	CHWC	960
Sea Island	50	CJOR	1030	Regina	500	CFCR	960
Vancouver	50	CHLS	730		500	CJBR	960
	50	CKCD	730		500	CKCK	960
	50	CKFC	730		500	CNRR	960
	50	CKMO	730	Saskatoon	500	CFQC	910
	100	CKWX	730		250	CJHS	910
	500	CNRY	1030		500	CNRS	910
Victoria	500	CFCT	630	Yorkton	500	CJGX	630
MANITOBA				HAITI			
Brandon	500	CKX	540	Port au Prince	1000	HHK	920
Winnipeg	5000	CKY	780	MEXICO			
	5000	CNRW	780	Chihuahua	250	XFF	920
NEW BRUNSWICK				C. Lerdo, Dgo.	250	XES	1200
Fredericton	50	CFNB	1210	Guadalajara, Jal.	101	XEA	1200
Moncton	500	CNRA	630	Jalapa, Ver.	350	XFC	630
St. John	50	CFBO	890	Merida, Yucatan	105	XEY	550
NOVA SCOTIA				Mexico City	1000	XEB	670
Halifax	500	CHNS	930		1000	XEN	730
Louisburg	500	VAS	690		500	XEX	920
Sydney	50	CJCB	880		50	XFA	540
Wolfville	50	CKIC	930		2000	XFG	640
ONTARIO					1000	XFI	590
Chatham	50	CFCO	1210	Monterrey, N. L.	500	XFX	840
Cobalt	15	CKMC	1210	Morelia, Mich.	101	XEH	970
Hamilton	10	CHCS	880	Oaxaca, Oax.	105	XEF	1130
	50	CHML	880	Puebla, Pue.	101	XEE	960
	50	CKOC	880	CUBA			
	250	CFCH	600	Caibarien	250	6LO	920
Iroquois Falls	500	CFRC	1120	Cienfuegos	200	6BY	1150
Kingston	500	CJGC	910	Colon	300	5EV	830
London	500	CNRL	910	Havana	500	CMC	840
Midland	50	CKPR	1120		500	CMI	820
Ottawa	100	CKCO	890		2000	CMK	730
	500	CNRO	600		1000	CMW	600
Prescott	50	CFLC	1010		500	CMX	610
Preston	50	CKPC	1210		250	2JK	630
Toronto	500	CFCA	840		100	2KG	1030
	500	CFCL	580		200	2MM	610
	4000	CFRB	960		150	2OH	950
	500	CJBC	580		100	2OK	680
	5000	CJBC	690		250	2RK	640
	1000	CJBC	840	Marianao	50	2MA	1030
	5000	CJBC	960	Tuinucu	500	6KW	790
	500	CJSC	580				

CFAC 690	Calgary, Alta.	CJOC 1120	Lethbridge, Alta.	CNRL 910	London, Ont.
CFBO 890	St. John, N. B.	CJOR 1030	Sea Island, B. C.	CNRM 730	Montreal, Que.
CFCA 840	Toronto, Ont.	CJRM 600	Moose Jaw, Sask.	CNRO 600	Ottawa, Ont.
CFCF 1030	Montreal, Que.	CJRW 600	Fleming, Sask.	CNRQ 880	Quebec, Que.
CFCH 600	Iroq's Falls, Ont.	CJSC 580	Toronto, Ont.	CNRR 960	Regina, Sask.
CFCL 580	Toronto, Ont.	CKAC 730	Montreal, Que.	CNRS 910	Saskatoon, Sask.
CFCN 690	Calgary, Alta.	CKCD 730	Vancouver, B. C.	CNRT 840	Toronto, Ont.
CFCO 1210	Chatham, Ont.	CKCI 880	Quebec, Que.	CNRV 1030	Vancouver, B. C.
CFCR 960	Regina, Sask.	CKCK 960	Regina, Sask.	CNRW 780	Winnipeg, Man.
CFCT 630	Victoria, B. C.	CKCL 580	Toronto, Ont.	CNRX 690	Toronto, Ont.
CFCY 960	Ch'lottet'n, P.E.I.	CKCO 890	Ottawa, Ont.	HHK 920	Port au Prince, H.
CFJC 1120	Kamloops, B. C.	CKCR 1010	Waterloo, Ont.	KCRC 1370	Oklahoma City
CFLC 1010	Prescott, Ont.	CKCV 880	Quebec, Que.	KDB 1500	S. Barbara, Cal.
CFNB 1210	Fredericton, N.B.	CKFC 730	Vancouver, B. C.	KDFN 1210	Casper, Wyo.
CFQC 910	Saskatoon, Sask.	CKGW 690	Toronto, Ont.	KDKA 980	Pittsburgh, Pa.
CFRB 960	Toronto, Ont.	CKIC 930	Wolfville, N.S.	KDLR 1210	Devils Lake, N. D.
CFRC 1120	Kingston, Ont.	CKLC 840	Red Deer, Alta.	KDYL 1290	Salt Lake City
CHCA 690	Calgary, Alta.	CKMC 1210	Cobalt, Ont.	KECA 1340	Los Angeles, Cal.
CHCK 960	Ch'lottet'n, P.E.I.	CKMO 730	Vancouver, B. C.	KEJK 710	Los Angeles, Cal.
CHCS 880	Hamilton, Ont.	CKNC 580	Toronto, Ont.	KELW 780	Burbank, Cal.
CHCT 840	Red Deer, Alta.	CKOC 880	Hamilton, Ont.	KEX 1180	Portland, Ore.
CHGS 1120	Sum'rside, P.E.I.	CKOW 840	Toronto, Ont.	KFAB 770	Lincoln, Nebr.
CHLS 730	Vancouver, B. C.	CKPC 1210	Preston, Ont.	KFBF 1360	Great Fls., Mont.
CHMA 580	Edmonton, Alta.	CKPR 1120	Midland, Ont.	KFBK 1310	Sacramento, Cal.
CHML 880	Hamilton, Ont.	CKSH 1010	St. H'cinthe, Que.	KFBL 1370	Everett, Wash.
CHNS 930	Halifax, N.S.	CKUA 580	Edmonton, Alta.	KFDM 560	Beaumont, Tex.
CHRC 880	Quebec, Que.	CKWX 730	Vancouver, B. C.	KFDY 550	Brookings, S. D.
CHWC 960	Pilot Butte, Sask.	CKX 540	Brandon, Man.	KFEL 920	Denver, Colo.
CHWK 1210	Chilliwack, B. C.	CKY 780	Winnipeg, Man.	KFEQ 680	St. Joseph, Mo.
CHYC 730	Montreal, Que.	CMC 840	Havana, Cuba	KFGQ 1310	Boone, Iowa
CJBC580-840-960	Toronto, Ont.	CMI 820	Havana, Cuba	KFH 1300	Wichita, Kansas
CJBR 960	Regina, Sask.	CMK 730	Havana, Cuba	KFHA 1200	Gunnison, Colo.
CJCA 580	Edmonton, Alta.	CMW 600	Havana, Cuba	KFI 640	Los Angeles, Cal.
CJCB 880	Sydney, N.S.	CMX 610	Havana, Cuba	KFIF 1420	Portland, Ore.
CJCI 690	Calgary, Alta.	CNRA 630	Moncton, N.B.	KFIO 1230	Spokane, Wash.
CJCG 910	London, Ont.	CNRC 690	Calgary, Alta.	KFIZ 1420	Fond du Lac, Wis.
CJGX 630	Yorkton, Sask.	CNRD 840	Red Deer, Alta.	KFJB 1200	Marshalltown, Ia.
CJHS 910	Saskatoon, Sask.	CNRE 580	Edmonton, Alta.	KJFF 1470	Oklahoma City

KFJI 1370 Astoria, Ore.	KFXD 1420 Jerome, Idaho	KGGM 1230 Alb'qrque, N. M.
KFJM 1370 Grd. Forks, N. D.	KFXF 920 Denver, Colo.	KGHB 1320 Honolulu, T. H.
KFJR 1300 Portland, Ore.	KFXJ 1310 Edgewater, Colo.	KGHF 1320 Pueblo, Colo.
KFJY 1310 Fort Dodge, Ia.	KFXM 1200 San Ber'd'no, Cal.	KGHI 1200 Little Rock, Ark.
KFJZ 1370 Ft. Worth, Tex.	KFXR 1310 Oklahoma City	KGHL 950 Billings, Mont.
KFKA 880 Greeley, Colo.	KFXY 1420 Flagstaff, Ariz.	KGHX 1500 Houston, Tex.
KKBE 1050 Milford, Kansas	KFYO 1420 Abilene, Texas	KGIQ 1320 Twin Falls, Ida.
KFKU 1220 Lawrence, Kans.	KFYR 550 Bismarck, N. D.	KGIR 1360 Butte, Mont.
KFKX 1020 Chicago, Ill.	KGA 1470 Spokane, Wash.	KGIW 1420 Trinidad, Colo.
KFLV 1410 Rockford, Ill.	KGAR 1370 Tucson, Ariz.	KGIX 1420 Las Vegas, Nev.
KFLX 1370 Galveston, Tex.	KGB 1330 San Diego, Cal.	KGJF 890 Little Rock, Ark.
KFMX 1250 N'thfield, Minn.	KGBU 900 Ketchikan, Al'ka.	KGKB 1500 Brownwood, Tex.
KFNF 890 Shenandoah, Ia.	KG BX 1370 St. Joseph, Mo.	KGKL 1370 San Angelo, Tex.
KFOR 1210 Lincoln, Nebr.	KGBZ 930 York, Nebr.	KGKO 570 Wichita Flls., Tex
KFOX 1250 Long Beach, Cal.	KGCA 1270 Decorah, Iowa	KGKX 1420 Sand Point, Ida.
KFPL 1310 Dublin, Texas	KGCI 1370 San Ant'nio, Tex.	KGO 790 Oakland, Cal.
KFPM 1310 Greenville, Tex.	KGCR 1210 Watertown, S. D.	KGRC 1370 San Antonio, Tex.
KFPW 1340 Carterville, Mo.	KGCU 1210 Mandan, N. D.	KGRS 1410 Amarillo, Texas
KFPY 860 Spokane, Wash.	KG CX 1310 Wolf P't, Mont.	KGU 940 Honolulu, Hawaii
KFQA 1090 St. Louis, Mo.	KGDA 1370 Dell Rapids, S. D.	KGW 620 Portland, Ore.
KFQD 1230 Anchorage, Alias.	KGDE 1200 Ferg's F'lls, Minn	KGY 1200 Lacey, Wash.
KFQU 1420 Holy City, Cal.	KGDM 1100 Stockton, Cal.	KHJ 900 Los Angeles, Cal.
KFQW 1420 Seattle, Wash.	KGDY 1200 Oldham, S. D.	KHQ 590 Spokane, Wash.
KFQZ 860 Los Angeles, Cal.	KGEF 1300 Los Angeles, Cal.	KICK 1420 Red Oak, Iowa
KFRC 610 San F'nscisco, Cal.	KGEK 1200 Yuma, Colo.	KID 1320 Idaho Falls, Ida.
KFRU 630 Columbia, Mo.	KGER 1360 Long Beach, Cal.	KIDO 1250 Boise, Idaho
KFSD 600 San Diego, Cal.	KG EW 1200 Ft. Morgan, Colo.	KIT 1370 Yakima, Wash.
KFSG 1120 Los Angeles, Cal.	KGEZ 1310 Kalispell, Mont.	KJBS 1070 San F'nscisco, Cal.
KFUL 1290 Galveston, Tex.	KGFF 1420 Alva, Okla.	KJR 760 Seattle, Wash.
KFUM 1270 Col. Spgs., Colo.	KGFG 1370 Oklahoma City	KLCN 1290 Blytheville, Ark.
KFUO 550 St. Louis, Mo.	KGFI 1500 C'pus Ch'sti, Tex.	KLO 1370 Ogden, Utah
KFUP 1310 Denver, Colo.	KG FJ 1200 Los Angeles, Cal.	KLPM 1420 Minot, N. Dak.
KFVD 1000 Culver City, Cal.	KGFK 1200 Hallock, Minn.	KLRA 1390 Little Rock, Ark.
KFVS 1210 Cape Gir'rd'u, Mo	KGFL 1370 Raton, N. M.	KLS 1440 Oakland, Cal.
KFWB 950 Hollywood, Cal.	KGFW 1310 Ravenna, Nebr.	KLX 880 Oakland, Cal.
KFWF 1200 St. Louis, Mo.	KGFX 580 Pierre, S. D.	KLZ 560 Denver, Colo.
KFWI 930 San F'nscisco, Cal.	KGGC 1420 San F'nscisco, Cal.	KMA 930 Shenandoah, Ia.
KFWM 930 Richmond, Cal.	KGGF 1010 Picher, Okla.	KMBC 950 Kan. City, Mo.

WBMS 1450
 Fort Lee, N.J.
 WBNY 1350
 New York City
 WBOQ 860
 New York City
 WBOW 1310
 Terre Haute, Ind.
 WBRC 930
 Birmingham, Ala
 WBRE 1310
 Wilkes-Barre, Pa.
 WBRL 1430
 Tilton, N.H.
 WBSO 920
 Well'ty'H's, Mass
 WBT 1080
 Charlotte, N.C.
 WBZ 990
 Springfield, Mass.
 WBZA 990
 Boston, Mass.
 WCAC 600
 Storrs, Conn.
 WCAD 1220
 Canton, N.Y.
 WCAE 1220
 Pittsburgh, Pa.
 WCAH 1430
 Columbus, Ohio
 WCAJ 590
 Lincoln, Nebr.
 WCAL 1250
 Northfield, Minn.
 WCAM 1280
 Camden, N.J.
 WCAO 600
 Baltimore, Md.
 WCAP 1280
 Asbury Pk., N.J.
 WCAT 1200
 Rapid City, S.D.
 WCAU 1170
 Philadelphia, Pa.
 WCAZ 1200
 Burlington, Vt.
 WCAZ 1070
 Carthage, Ill.
 WCBA 1440
 Allentown, Pa.
 WCBF 1080
 Zion, Ill.
 WCBM 1370
 Baltimore, Md.
 WCBS 1210
 Springfield, Ill.
 WCCO 810
 Minneap., Minn.
 WCDA 1350
 New York City
 WCFL 1280
 Chicago, Ill.
 WCGU 1400
 Coney Is., N.Y.
 WCKY 1480
 Covington, Ky.
 WCLB 1500
 Brooklyn, N.Y.
 WCLO 1200
 Kenosha, Wis.
 WCLS 1310
 Joliet, Ill.
 WCMA 1400
 Culver, Ind.
 WCOA 1340
 Pensacola, Fla.

WCOC 880
 Meridian, Miss.
 WCOD 1200
 Harrisburg, Pa.
 WCOH 1210
 Yonkers, N.Y.
 WCRW 1210
 Chicago, Ill.
 WCSH 940
 Portland, Maine
 WCSO 1450
 Springfield, Ohio
 WDAE 1240
 Tampa, Fla.
 WDAF 610
 Kansas City, Mo.
 WDAG 1410
 Amarillo, Texas
 WDAH 1310
 El Paso, Texas
 WDAY 940
 Fargo, N.D.
 WDBJ 930
 Roanoke, Va.
 WDBO 1120
 Orlando, Fla.
 WDEL 1120
 Wilmington, Del.
 WDGY 1180
 Minneap., Minn.
 WDOD 1280
 Chattan'ga, Tenn
 WDRG 1330
 N. Haven, Conn.
 WDSU 1250
 New Orleans, La.
 WDFW 1210
 Providence, R.I.
 WDZ 1070
 Tuscola, Ill.
 WEFW 660
 New York City
 WEAI 1270
 Ithaca, N.Y.
 WEAN 780
 Providence, R.I.
 WEOO 570
 Columbus, Ohio
 WEAR 1070
 Cleveland, Ohio
 WERC 1290
 Superior, Wis.
 WEBE 1210
 Cambridge, Ohio
 WEBQ 1210
 Harrisburg, Ill.
 WEBR 1310
 Buffalo, N.Y.
 WBBW 560
 Beloit, Wis.
 WEDC 1210
 Chicago, Ill.
 WEDH 1420
 Erie, Pa.
 WEEI 590
 Boston, Mass.
 WEHS 1420
 Evanston, Ill.
 WELK 1370
 Philadelphia, Pa.
 WEMC 590
 Ber'n Spgs., Mich
 WENR 870
 Chicago, Ill.
 WEVD 1300
 New York City

WEW 760
 St. Louis, Mo.
 WFAA 800
 Dallas, Texas
 WFAN 610
 Philadelphia, Pa.
 WFBC 1200
 Knoxville, Tenn.
 WFBG 1310
 Altoona, Pa.
 WFBJ 1370
 Coll'geville, Minn.
 WFBL 900
 Syracuse, N.Y.
 WFBM 1230
 Indianapolis, Ind.
 WFBR 1270
 Baltimore, Md.
 WFDF 1310
 Flint, Mich.
 WFI 560
 Philadelphia, Pa.
 WFTW 940
 Hopkinsville, Ky.
 WFJC 1450
 Akron, Ohio
 WFKD 1310
 Philadelphia, Pa.
 WFLA 620
 Clearwater, Fla.
 WGAL 1310
 Lancaster, Pa.
 WGBB 1210
 Freeport, N.Y.
 WGBC 1430
 Memphis, Tenn.
 WGBF 630
 Evansville, Ind.
 WGBI 880
 Scranton, Pa.
 WGBS 1180
 New York City
 WGCM 1210
 Gulfport, Miss.
 WGCP 1250
 Newark, N.J.
 WGES 1360
 Chicago, Ill.
 WGH 1310
 Newp't News, Va.
 WGHP 1240
 Detroit, Mich.
 WGL 1370
 Ft. Wayne, Ind.
 WGMS 1250
 Minneap., Minn.
 WGN 720
 Chicago, Ill.
 WGR 550
 Buffalo, N.Y.
 WGST 890
 Atlanta, Ga.
 WGY 790
 Schnee'd'y, N.Y.
 WHA 940
 Madison, Wis.
 WHAD 1120
 Milwaukee, Wis.
 WHAM 1150
 Rochester, N.Y.
 WHAP 1300
 New York City
 WHAS 820
 Louisville, Ky.
 WHAZ 1300
 Troy, N.Y.

WHB 710 Kansas City, Mo.	WJAD 1240 Waco, Texas	W&BW 1470 Buffalo, N.Y.
WHBC 1200 Canton, Ohio	WJAG 1060 Norfolk, Nebr.	WKBZ 1500 Ludington, Mich.
WHBD 1370 Mt. Orab, O.	WJAK 1310 Marion, Ind.	WKEN 1040 Buffalo, N.Y.
WHBF 1210 Rock Island, Ill.	WJAR 890 Providence, R.I.	WKJC 1200 Lancaster, Pa.
WHBL 1410 Sheboygan, Wis	WJAS 1290 Pittsburgh, Pa.	WKRC 550 Cincinnati, O.
WHBQ 1370 Memphis, Tenn.	WJAX 900 Jacksonville, Fla.	WKY 900 Oklahoma City
WHBU 1210 Anderson, Ind.	WJAY 620 Cleveland, Ohio	WLAC 1490 Nashville, Tenn.
WHBY 1200 Green Bay, Wis.	WJAZ 1480 Chicago, Ill.	WLAP 1200 Louisville, Ky.
WHDF 1370 Calumet, Mich.	WJBC 1200 La Salle, Ill.	WLB 1250 Minneapolis, Minn.
WHDH 830 Gloucester, Mass.	WJBI 1210 Red Bank, N. J.	WLBC 1310 Muncie, Ind.
WHDI 1180 Minneapolis, Minn.	WJBK 1370 Ypsilanti, Mich.	WLBK 1420 Kansas City, Ks.
WHDL 1420 Tupper Lake, N.Y.	WJBL 1200 Decatur, Ill.	WLBG 1200 Ettrick, Va.
WHDC 1440 Rochester, N.Y.	WJBO 1370 New Orleans, La.	WLBL 900 Stevens Pt., Wis.
WHFC 1420 Cicero, Ill.	WJBT 770 Chicago, Ill.	WLBW 1260 Oil City, Pa.
WHIS 1420 Bluefield, W. Va.	WJBU 1210 Lewisburg, Pa.	WLBX 1500 L.I. City, N.Y.
WHK 1390 Cleveland, Ohio	WJBW 1200 New Orleans, La.	WLBZ 620 Bangor, Me.
WHN 1010 New York City	WJBY 1210 Gadsden, Ala.	WLCI 1210 Ithaca, N.Y.
WHO 1000 Des Moines, Ia.	WJDX 1270 Jackson, Miss.	WLFX 1360 Lexington, Mass.
WHP 1430 Harrisburg, Pa.	WJJD 1130 Mooseheart, Ill.	WLEY 1420 Lexington, Mass.
WIAS 1420 Ottumwa, Iowa	WJKS 1360 Gary, Ind.	WLIT 560 Philadelphia, Pa.
WIBA 1210 Madison, Wis.	WJR 750 Detroit, Mich.	WLOE 1500 Boston, Mass.
WIBG 930 Elkins Park, Pa.	WJSV 1460 Mt. Vern. H'ls, Va.	WLS 870 Chicago, Ill.
WIBM 1370 Jackson, Mich.	WJW 1210 Mansfield, Ohio	WLSI 1210 Providence, R.I.
WIBO 560 Chicago, Ill.	WJZ 760 New York City	WLTH 1400 Brooklyn, N.Y.
WIBR 1420 Steubenville, O.	WKAQ 890 San Juan, P.R.	WLW 700 Cincinnati, Ohio
WIBS 1450 Jersey City, N.J.	WKAR 1040 E. Lansing, Mich.	WLWL 1100 New York City
WIBU 1310 Poynette, Wis.	WKAV 1310 Laconia, N.H.	WMAC 570 Cazenovia, N.Y.
WIBW 580 Topeka, Kansas	WKBB 1310 Joliet, Ill.	WMAF 1360 S.D'r'tm'th, Mass.
WIBX 1200 Utica, N.Y.	WKBC 1310 Birmingham, Ala.	WMAK 900 Buffalo, N.Y.
WICC 1190 Bridgeport, Conn.	WKBF 1400 Indianapolis, Ind.	WMAL 630 Washington, D.C.
WIL 1200 St. Louis, Mo.	WKBH 1380 La Crosse, Wis.	WMAN 1210 Columbus, Ohio
WILL 890 Urbana, Ill.	WKBI 1420 Chicago, Ill.	WMAQ 670 Chicago, Ill.
WILM 1420 Wilmington, Del.	WKBN 570 Youngstown, O.	WMAY 1200 St. Louis, Mo.
WINR 1210 Bay Shore, N.Y.	WKBO 1450 Jersey City, N.J.	WMAZ 890 Macon, Ga.
WIOD 1300 Miami Bch., Fla.	WKBP 1420 Battle Crk., Mich.	WMBA 1500 Newport, R.I.
WIP 610 Philadelphia, Pa.	WKBQ 1350 New York City	WMBK 1420 Detroit, Mich.
WISN 1120 Milwaukee, Wis.	WKBS 1310 Galesburg, Ill.	WMBD 1440 Peoria Hghts., Ill.
WJAC 1310 Johnstown, Pa.	WKBV 1500 Connersville, Ind.	WMBG 1210 Richmond, Va.

WMBH 1420 Joplin, Mo.	WOI 640 Ames, Iowa	WRBU 1210 Gastonia, N.C.
WMBI 1080 Chicago, Ill.	WOKO 1440 P'ghkeepsie, N.Y.	WRC 950 Washington, D.C.
WMBO 1370 Auburn, N.Y.	WOL 1310 Washington, D.C.	WREC 600 Memphis, Tenn.
WMBQ 1500 Brooklyn, N.Y.	WOMT 1210 Manitowoc, Wis.	WREN 1220 Lawrence, Kans.
WMBR 1370 Tampa, Fla.	WOOD 1270 Gr. Rapids, Mich.	WRHM 1250 Minneap., Minn.
WMC 780 Memphis, Tenn.	WOPI 1500 Bristol, Tenn.	WRJN 1370 Racine, Wis.
WMCA 570 New York City	WOQ 1300 Kansas City, Mo.	WRK 1310 Hamilton, Ohio
WMES 1500 Boston, Mass.	WOR 710 Newark, N.J.	WRNY 1010 New York City
WMMN 890 Fairmont, W. Va.	WORC 1200 Worcester, Mass.	WRR 1280 Dallas, Texas
WMPC 1500 Lapeer, Mich.	WORD 1480 Chicago, Ill.	WRUF 830 Gainesville, Fla.
WMRJ 1420 Jamaica, N.Y.	WOS 630 Jeff's n City, Mo.	WRVA 1110 Richmond, Va.
WMSG 1350 New York City	WOV 1130 New York City	WSAI 1330 Cincinnati, Ohio
WMT 600 Waterloo, Iowa	WOW 590 Omaha, Nebr.	WSAJ 1310 Grove City, Pa.
WNAC 1230 Boston, Mass.	WOWO 1160 Ft. Wayne, Ind.	WSAN 1440 Allentown, Pa.
WNAD 1010 Norman, Okla.	WPAP 1010 New York City	WSAR 1450 Fall River, Mass.
WNAT 1310 Philadelphia, Pa.	WPAW 1210 Pawtucket, R.I.	WSAZ 580 Hunt'gton, W. Va.
WNAX 570 Yankton, S.D.	WPCC 560 Chicago, Ill.	WSB 740 Atlanta, Ga.
WNBf 1500 Bingh'mt'n, N.Y.	WPCH 810 New York City	WSBC 1210 Chicago, Ill.
WNBH 1310 New B'df'd, Mass.	WPEN 1500 Philadelphia, Pa.	WSBT 1230 South Bend, Ind.
WNBj 1310 Knoxville, Tenn.	WPG 1100 Atl'ntic City, N.J.	WSFA 1410 Montgomery, Ala.
WNBK 1200 Washington, Pa.	WPOE 1370 Patchogue, N.Y.	WSGH 1400 Brooklyn, N.Y.
WNBn 1430 Memphis, Tenn.	WPOR 780 Norfolk, Va.	WSIX 1210 Springfield, Tenn.
WNBW 1200 Carbondale, Pa.	WPSC 1230 State College, Pa.	WSJS 1310 Winst.-Sal., N.C.
WNBX 1200 Springfield, Vt.	WPTF 680 Raleigh, N.C.	WSM 650 Nashville, Tenn.
WNBZ 1290 SaranacL'ke, N.Y.	WQAM 560 Miami, Fla.	WSMB 1320 New Orleans, La.
WNJ 1450 Newark, N.J.	WQAN 880 Scranton, Pa.	WSMK 1380 Dayton, Ohio
WNOX 560 Knoxville, Tenn.	WQAO 1010 New York City	WSOA 1480 Chicago, Ill.
WNRC 1440 Greensboro, N.C.	WQBC 1360 Utica, Miss.	WSPD 1340 Toledo, Ohio
WNYC 570 New York City	WQBZ 1420 Weirton, W. Va.	WSSH 1360 Boston, Mass.
WOAI 1190 San Antonio, Tex.	WRAF 1200 La Porte, Ind.	WSUI 880 Iowa City, Ia.
WOAN 600 Law'nceb'g, Tenn.	WRAK 1370 Erie, Pa.	WSUN 620 St. Petersb'g, Fla.
WOAX 1280 Trenton, N.J.	WRAW 1310 Reading, Pa.	WSVS 1370 Buffalo, N.Y.
WOBT 1310 Union City, Tenn.	WRAX 1010 Philadelphia, Pa.	WSYR 570 Syracuse, N.Y.
WOBU 580 Charlest'n, W. Va.	WRBI 1310 Tifton, Ga.	WTAD 1440 Quincy, Ill.
WOC 1000 Davenport, Iowa	WRBJ 1500 Hattiesburg, Miss.	WTAG 580 Worcester, Mass.
WOCL 1210 Jamestown, N.Y.	WRBL 1200 Columbus, Ga.	WTAM 1070 Cleveland, Ohio
WODA 1250 Paterson, N.J.	WRBQ 1210 Greenville, Miss.	WTAQ 1330 Eau Claire, Wis.
WODX 1410 Mobile, Ala.	WRBT 1370 Wilmington, N.C.	WTAR 780 Norfolk, Va.

WTAW 1120		XEA 1200		XFI 590	
College Sta., Tex.		Guadalajara, Jal.		Mexico City	
WTAX 1210		XEB 670		XFX 840	
Streator, Ill.		Mexico City		Mexico City	
WTBO 1420		XEE 960		2JK 630	
Cumberland, Md.		Pueblo, Pue.		Havana, Cuba	
WTFI 1450		XEF 1130		2KG 1030	
Toccoa, Ga.		Oaxaca, Oax.		Havana, Cuba	
WTIC 1060		XEH 970		2MM 610	
Hartford, Conn.		Monterey, N.L.		Havana, Cuba	
WTMJ 620		XEI 1000		2MO 1030	
Milwaukee, Wis.		Morelia, Mich.		Marianao, Cuba	
WTNT 1490		XEN 730		2OH 950	
Nashville, Tenn.		Mexico City		Havana, Cuba	
WTOC 1260		XES 1200		2OK 680	
Savannah, Ga.		C. Lerdo, Dgo.		Havana, Cuba	
WWAE 1200		XEX 920		2RK 640	
Hammond, Ind.		Mexico City		Havana, Cuba	
WWJ 920		XEY 550		5EV 830	
Detroit, Mich.		Merida, Yucatan		Colon, Cuba	
WWL 850		XFA 540		6BY 1150	
New Orleans, La.		Mexico City		Cienfuegos, Cuba	
WWNC 570		XFC 630		6KW 790	
Asheville, N.C.		Jalapa, Ver.		Tuinucu, Cuba	
WWRL 1500		XFF 920		6LO 920	
Woodside, N.Y.		Chihuahua, Chih.		Caibarien, Cuba	
WWVA 1160		XFG 640			
Wheeling, W. Va.		Mexico City			

The Short Wave Stations

Call	Station	Owner	City and State	Meters	Watts
W1XAA	WRAH	Stanley N. Read	Providence, R. I.		75
W1XAB	WCSH	Congress Square Hotel Co.	Portland, Maine	63.79	250
W1XAE	WBEZ	Westinghouse Elec. & Mfg. Co.	Springfield, Mass.	70.0	
W1XAF	WEEI	Edison Elec. Illuminating Co.	Boston, Mass.		
W1XAG		Edison Elec. Illuminating Co.	Boston, Mass.		
W1XY	WBRL	Booth Radio Laboratories	Tilton, N. H.	105-109	250
W2XA	WRMU	Yacht, "MU-1" Grebe Co.	New York		
W2XAC		General Electric Co.	Schenectady, N. Y.		
W2XAD		General Electric Co.	Schenectady, N. Y.		
W2XAE		General Electric Co.	Schenectady, N. Y.		
W2XAF		General Electric Co.	Schenectady, N. Y.	32.7	
W2XAG		General Electric Co.	Schenectady, N. Y.		
W2XAH		General Electric Co.	Schenectady, N. Y.		
W2XAK		General Electric Co.	Schenectady, N. Y.		
W2XAL	WRNY	Aviation Radio Station, Inc.	New York	30.91	500
W2XAO		Atlantic Broadcasting Co.	New York	105.9	100
W2XAQ	WOR	L. Bamberger Co.	Newark, N. J.	65.4	50
W2XAW	WGY	General Electric Co.	Schenectady, N. Y.		
W2XBA	WAAM	WAAM, Inc.	Newark, N. J.	65.18	50
W2XBH	WCGU	Chas. G. Ungar	Coney Island, N. Y.	54.02	150
W2XE	WABC	Atlantic Broadcasting Co.	Richmond Hill, N. Y.	21.1	50
W2XZ		National Broadcasting Co.	Bellmore, L. I.	49.15	50000
W3XK		C. Francis Jenkins Labs.	Washington, D. C.		
W3XL	WJZ	Radio Corp. of America	Bound Brook, N. J.	59.96	30000
W3XN		Bell Telephone Laboratory	Whippany, N. J.		
W4XD	WSM	Nat'l Life & Accident Ins. Co.	Memphis, Tenn.	31.43	
W4XE		William Justice Lee	Winter Park, Fla.	200.	250
W6XA	KNX	Los Angeles Express	Los Angeles, Cal.	107.1	100
W6XAD	KFWO	Lawrence Mott	Avalon, Cal.	53.07	100
W6XAF	KNRC	Clarence B. Juneau	Santa Monica, Cal.	108.2	100
W6XAI	KGGM	Los Angeles Radio Club	Los Angeles, Cal.	66.04	50
W6XAK	KFWH	F. W. Morse	Chico, Cal.	108.2	50
W6XAL	KFQZ	L. E. Taft	Hollywood, Cal.	66.04	50
W6XAN	KRLO	Freeman Lang	Los Angeles, Cal.	105.9	250
W6XAR	KJBS	J. Brunton & Sons	San Francisco, Cal.	32.	50
W6XAU	KHJ	Times-Mirror Co.	Los Angeles, Cal.	104.1	50
W6XAX	KGO	General Electric Co.	Oakland, Cal.	10-40	10000
W6XAZ		Nelson Radio Co.	San Diego, Cal.	106.	50
W6XBA	KFSG	Air-Fan Radio Corp.	Los Angeles, Cal.	108.2	250
W6XBE	KFBC	W. K. Azbill	San Diego, Cal.		
W6XBH	KFQU	W. E. Riker	Holy City, Cal.	31-106	50
W6XBR	KFWB	Warner Bros. Picture Studio	Los Angeles, Cal.	40-105	50
W6XBV	KGER	C. Merwin Dobyns	Long Beach, Cal.	48.86	
W6XBX	KFVD	McWhinnie Electric Co.	Venice, Cal.	105.	50
W6XN	KGO	General Electric Co.	Oakland, Cal.	10-40	10000
W7XAB	KFPY	Symons Investment Co.	Spokane, Wash.	105.9	

W7XAO	KWJJ	Wilbur Jerman, Inc.	Portland, Ore.	53-54	100
W7XK	KJR	Northwest Radio Service	Seattle, Wash.	105.2	
W7XO	KJR	Northwest Radio Service	Seattle, Wash.		
W8XAC	WHAM	Stromberg-Carlson Tel. Mfg. Co.	Rochester, N. Y.		
W8XAL	WLW	Crosley Radio Corp.	Cincinnati, Ohio	52.05	500
W8XOA	WJR	WJR, Inc.	Detroit, Mich.	32.	75
W8XF	WHK	Radio Air Service Corp.	Cleveland, Ohio	66.04	500
W8XJ	WEO	Ohio State University	Columbus, Ohio	54.02	250
W8XK	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	62.5	40000
W8XP	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	10-150	500
W9XAB	WNAL	R. J. Rockwell	Omaha, Nebr.	105.	50
W9XU	KOIL	Mona Motor Oil Co.	Council Bluffs, Iowa	61.06	500

When is Advertising Obnoxious?

(Continued from page 23)

by a concern which has a definite commodity to sell which is receiving more than enough direct inquiries to keep their salesmen busy. I do not believe there is any question but what this concern would cease broadcasting if they did not obtain direct business from their station.

Who is going to pay Amos and Andy to continue broadcasting over the chain if not some advertiser, and I know from first-hand information that their joint salary runs into six figures.

I wonder if your writer remembers the days of yore when a tinkling piano or one or two voices were the sole forms of amusement coming over the air, and compare these with the wealth of entertainment we now have since broadcasting has been commercialized. Perhaps he would suggest that manufacturers of radio receiving sets and accessories should pay for our present programs. Certainly no one has benefited any more by these commercial programs than these manufacturers. Why not suggest to them that they set aside a certain amount every year to maintain all of our broadcasting stations? Incidentally, I wonder if it would be possible to buy these beautiful receiving sets as such low prices if they were prohibited from advertising over the air.

Possibly Mr. "Radio" thinks the solution will be the licensing of radio sets by the Government and that the Government then will divide this fee among broadcasting stations. Certainly someone has to pay for the expense of broadcasting.

I wonder where Mr. "Radio" gets the idea that all forms of advertising are intrusion. I wonder also if there are very many things that he uses in his daily life that he is not purchasing today cheaper than he has in the past because of ad-

vertising. If people did not read advertising and respond to it, there would be practically no advertising. This is so self-evident that it is hardly worth mentioning. But, on the other hand, it certainly proves that advertising can hardly be called an intrusion. It is true that people made fun of Henry Field, and, I presume, some protest against his advertising over the air. However, I myself have witnessed many scoffers of Henry Field tuning in to hear his programs and enjoying them. How many people petitioned to keep Henry on the air when there was danger of his station being eliminated? If anyone thinks that advertising over the air is an intrusion, all he has to do is switch to another station. A man or woman reading a magazine or newspaper does not have to read the advertising, but the fact is that they do. If there was no response to radio advertising either directly or indirectly, there would be no advertisers on the air. Personally I think that broadcast programs will always have to be paid for through advertising. Is there any other way?

Real Appreciation

When Bernice Berwin played in "Golden Legends" at the San Francisco studios, she did not realize she provided golden hours for Mrs. Merle A. Kramer, an invalid living in Colton, Calif.

Today Bernice is wearing a dainty yellow organdie gown fashioned by Mrs. Kramer. Large hand-painted poppies ornament the frock, which is made over a taffeta slip.

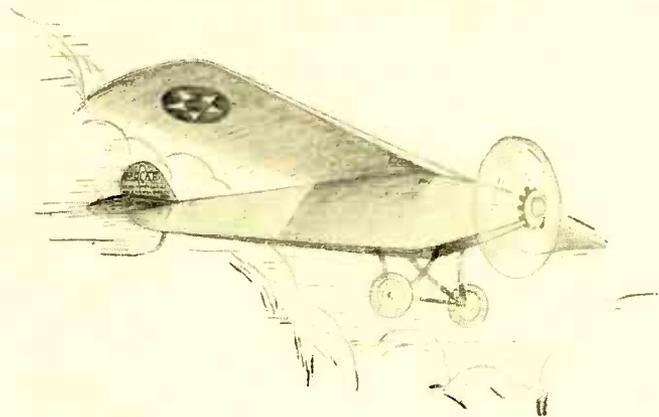
"May I make a frock for you—the kind I picture you wearing?" Mrs. Kramer wrote one day.

Bernice sent her measurement—size 14—and the gift came today.

Boys!

Get this new
MOCAR
Aluminum
MONOPLANE

FREE!



CLARENCE CHAMBERLIN, the daring aviator, who flew from New York to Germany, says: "The Mocar is a great flyer. I like the aluminum construction, as it is very strong and very light."

How to Get It!



Simply show RADEX—this copy you've got in your hands—to friends. Each order you get for 1 year's subscription at \$1.75 counts 7 points. Each single copy you sell at 25 cents counts 1 point. All you need to get the MOCAR absolutely FREE is 25 points. Start AT ONCE—when you have enough subscriptions and single copy sales to make 25 points, send us their names and a money order for \$6.25. We'll do the rest.

Soars and Zooms--- Everything!

A practical, simply designed, real model airplane that flies. It is constructed entirely of aluminum parts, all perfectly constructed and formed. This is an ideal model airplane that offers real instruction in flying. This plane has a wing spread of 18 inches, fusilage, 12 inches. A very powerful rubber motor, ball-bearing propellor and rubber tired disc wheels.

THE RADEX PRESS,

Circulation Department
1367 E. 6th Street, Cleveland, Ohio

Please mention RADEX

Did You Take Advantage of This Offer?

K O L S T E R

Electro - Dynamic Reproducer

Combined with 210 Power Amplifier and "B" Supply Unit



Model K-5

Height 42"
Width 25 1/2"
Depth 19"

Features:

1. Electro-Dynamic Reproducer (10 1/4-in. diam.)
2. 210 Power Amplifier. Fine tone quality.
3. Supplies "B" voltage, if desired.
4. Can be used with any electric or battery set.
5. Complete A. C. Electric operation.
6. Beautiful pencil-striped walnut cabinet.

List Price \$175.00
(without tubes)

Never \$49.50
Before

Terms: 25% cash with order, balance C.O.D. F.O.B. New York

American Sales Co., 19-21 Warren Street, New York City

THESE Dynamic Reproducers are Kolster built, packed in the original Kolster cases and cartons, shipped direct to us from the Kolster factory from whom we have purchased all these Dynamic Reproducers. Every Dynamic Reproducer is brand new, each bears the Kolster guarantee tag and the original serial number.

Such opportunity as herein presented is seldom available. And they won't last long at this low price. We suggest quick action—there's quality here—at a price heretofore unknown.

THIS finely matched rugged unit comprises a complete heavy duty Electro-Dynamic Reproducer, including a 210 Power Amplifier with "B" supply unit all self-contained on a steel frame. It weighs 45 pounds without the cabinet. The cabinet itself is of pencil-striped walnut, beautifully designed with Cathedral grille. It is equipped with switch for control of house current to reproducer, power unit and amplifier. A pilot light indicates when the Reproducer is in operation.

If desired, the 210 Power Amplifier will also supply 22, 67 and 90 volts "B" current, sufficient for any set using up to 8 tubes. An automatic voltage regular tube, UX-874, maintains the "B" voltage silent and steady. This Electro-Dynamic Reproducer can be used with any battery or A.C. set, replacing the last audio stage or be used with all tubes of the set. Wherever used it will bring out every shading and range of tone; every note is reproduced with utmost faithfulness, pure and undistorted. It will modernize any radio receiver.

The following tubes are required for its operation: 2-UX-281 (for full-wave rectification); 1-UX-210 (for super power amplification); 1-UX-874 (for voltage regulation). For use with phonograph pick-up, one additional audio stage is recommended between the pick-up and this Reproducer.

A 20-ft. cable is included with each instrument. Operates direct from 50-60 cycle, 110-120 volt A.C. current.

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