THE MAY 1931

RADIO INDEX

The Magazine that Doubles the Pleasure of Radio

25c

Another A-B-C Article:

What Happens Inside Your Set

Short Wave Adapters for A. C. Sets

List of Principal Short Wave Stations

More DX Targets for May

No. 49 N. S. E.

RADIO THEORY
AND
MODERN PRACTICE

A New Book in Simple Terms—Profusely Illustrated

Just off the press, here is a book that we believe every person interested at all in Radio, ought to have. While the veriest novice can easily understand its simple explanations, yet it is a book which an experienced radiotrician will find of the greatest value.

The chapter on *Radio Principles* explains the radio wave from its birth at the transmitter to its conversion into sound at the receiver. Numerous pictures and sketches enable the reader to grasp each stage. There is a list of the necessary technical words with their definitions in simple language and a list of the symbols used in radio diagrams with their meanings fully explained.

The chapter on *Vacuum Tubes* is, we think, the most simple and yet complete exposition of the principle and operation of radio tubes we have ever seen. The difference in tubes is fully explained and the reader learns not only the use and characteristics of each tube but the purpose served by each prong. Not only is the screen-grid tube covered but the new five-element as well.

In *Principles of Receiver Circuits* ten different systems are described and explained, from "Regenerative" to "Super-heterodyne with second harmonic oscillator."

A chapter on *Radio Circuit Diagrams* gives the schematic diagrams for many of the prominent sets including Super-Zenith, General Electric, Bosch, Super-Wasp, Silver Marshall, Grebe, Stewart-Warner, RCA, Atwater Kent, Majestic, Stromberg-Carlson and others, with explanations of each and where to look and what to do for trouble.

The chapter on *Short Waves* is not only a complete treatise on short-wave theory and practice, but several well-known short wave sets are diagramed and explained. Other chapters which we can mention only as indicative are *Aerials, Loud Speakers, Radio Instruments, Broadcasting Transmitters, Radio Troubles, Television, etc.*

This book of 224 pages, printed in large type, bound in flexible cloth will be given to our readers

FREE For Two Annual Subscriptions

We have secured a number of these books for those of our readers who will help us in this way to increase the field of RADEX. You can earn a copy in a few minutes by telling your friends about this magazine.

We do not sell the book

THE MAY 1931

RADIO INDEX

REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER
Editor and Publisher

SEVENTH YEAR NUMBER 49

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THE RADEX PRESS
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WHAT HAPPENS Inside YOUR SET

A Third Article in A-B-C's

TO the average radio fan, the operation of his set and the conversion to sound of high-frequency electrical energy, sent through the air by broadcasting stations, and picked up on the receiver aerial, is an unfathomed mystery. Just how the process in his receiver works can be made to sound extremely difficult, but can nevertheless be said in easily understandable words, and with the aid of a few analogies, will become perfectly clear to anyone.

The electrical current traversing space in all directions and for thousands of miles is picked up by countless aerials. The small amount of current intercepted by an aerial is passed through a coil in the receiver, the primary of the first r.f. coil, to the ground, which, by the way, forms the return path for the electrical energy to the source — the broadcasting station. In this way a receiver may be likened to the water system of your home, which, being tapped to the street mains, obtains its pressure and flow from the latter. The only difference is that the water-supply system can stand only a definite load before its pressure gives out, which is not the case in radio signals as it is impossible for receivers to absorb all the supplied energy.

Converting R. F. into A. F.

The extremely small amount of radio energy, which is of a very high frequency, as explained in the March issue of RADEX, must be built up in strength before it can be converted to audio frequencies, and finally transformed into sound. This is done by means of a series of transformers and vacuum tubes. A transformer has two windings, called the primary and the secondary windings, which are usually not directly connected to each other. When a pulsating direct current or an alternating current passes through a coil it creates an invisible, magnetic field around the coil, which fluctuates in strength in unison with the fluctuation of the current in the coil. The peculiarity of such a magnetic field is that it causes an electrical current to flow through a second endless coil placed in the magnetic field. This is exactly what happens in the case of a transformer. The primary winding receives the input current which sets up the magnetic field and the secondary winding, placed in the same plane as the first, has a current induced into it. The pulsations of current in the secondary, which are brought about instantaneously, are in unison, or in synchronism with those in the primary. This alone does not increase signal strength.

The Secondary Circuit

We have been looking at the secondary coil as an endless winding, providing an unbroken path for an electrical circuit. If the coil is cut and a small battery inserted, the coil ends being connected to the battery, a strong current will flow through the secondary, which is superimposed on the induced current, but is in turn slightly influenced by the fluctuations of the latter, resulting in stronger fluctuating current than the transformer could produce without the battery. Now the question naturally arises why some transformers have iron cores, as audio-frequency transformers in your receiver, while such a core is generally lacking in radio-frequency transformers or "coils." The core concentrates the magnetic field and allows closer coupling between the primary and secondary windings and consequently allows a greater transfer of energy without any appreciable loss. Some r.f. transformers are also of this type; these do not need tuning condensers across them to make them respond to any certain frequencies.

Broadness of tuning is one objection often encountered in the core-type of r.f. transformers, plus the difficulty that they cannot be wound to cover the entire waveband satisfactorily, amplifying the signals more at one end of the range or more at the other end, depending on the coil winding. Air-core transformers or

"coils" permit greater flexibility in tuning and more selective tuning by means of a variable condenser of a capacity to match the coil. The condenser makes the coil responsive to certain frequencies, which can be varied by manipulation of the condenser. This can best be understood by an analogy to a stringed musical instrument like a piano. If you strongly hum a certain note on the scale, you will find, upon suddenly stopping and carefully listening

Lillian Taiz makes a beautiful "Freda Zorn" on the Dutch Master's program, CBS Fridays, 8:30-9 p.m. EDST.

close to the piano, that the string tuned to the same note you are humming, is also producing sound at exactly the same pitch. This is known as "sympathetic vibration." None of the other strings respond because they are strung to other frequencies. Also, if you take a tuning wrench and turn the peg that holds the string tight, it will no longer respond to the same note, but will respond to a lower or higher note, depending on whether it is loosened or tightened. The variable condenser hooked across the secondary winding of a r.f. transformer or coil acts in the same way as the tuning peg, the coil being likened to the vibrating piano string.

(*Continued on page 20*)

Chains Synchronize

THE Federal Radio Commission has authorized stations WTIC Hartford, and WBAL Baltimore to synchronize with WEAF and WJZ, respectively, and the new system has already been put into effect. This will apply only when the two stations are broadcasting chain programs. On their other programs they will divide time as heretofore.

Under the new arrangement WBAL will synchronize during the time it is not operating on its own wave lengths with WJZ in New York, and similarly WTIC will synchronize with, and accept programs from WEAF, NBC's other metropolitan key station. In the periods when they are not synchronized, WBAL and WTIC will broadcast independently on the wave length of 1060 kilocycles which they now share in the federal allocations.

When the plan was first announced, the participating engineers pointed out that the immediate advantage of the synchronization will be to enable WTIC and WBAL to give full-time service in their respective areas. Under the old scheme, one of the stations was necessarily silent on those days or during those hours, when the other was using their joint wave length: Synchronization with one of NBC's stations in New York will permit them to serve their listeners during every broadcasting hour.

Ever since the idea of synchronization was first conceived, Horn has been a guiding factor in its development. It was under his supervision that the first working application of synchronism was effected between the Westinghouse stations WBZ and WBZA, in Springfield and Boston.

"Synchronization, as it is developed and applied, will be of utmost importance to the listening public," Horn declares. "If spaced geographically, stations will be able to synchronize and still maintain their own program services without interference. And this possibility will enable many stations which are now limited in power, because they share channels with other stations, to increase their power and extend their service ranges."

SHORT WAVE Adapter for A. C. Sets

Making Your Own

HERE is a plug-in short-wave adapter for use on a.c. receivers having a 227 detector. It has been tested thoroughly and found entirely satisfactory. Any radio fan can construct this adapter as it consists of parts readily obtainable, while the tuning coils, ticker and r.f. choke are of the homemade variety. In this article complete instructions are given for winding and mounting them. The parts needed for the adapter are a five-prong adapter plug to fit the detector socket of the receiver, also a 227 tube, which is used for the short-wave detector, and a base for it. Then get a four-prong socket of the sub-panel mounting type having a diameter of not less than 1⅜-inches. The use of this particular type and socket is highly important as will be seen later. Two small variable condensers, one a 23-plate midget, and the other a 15-plate midget, are required, besides a fixed condenser of .006-mfd. capacity and a grid condenser of .00025-mfd. capacity and a 5-ohm grid leak. The 23-plate midget is used for tuning while the 17-plate midget controls oscillation. A panel, subpanel, subpanel brackets, binding posts and screws are also needed, besides five old 201A tubes that have served their purpose. With these parts and a quantity of insulated wire, including a four-conductor cable of suitable length, you are ready to start wiring.

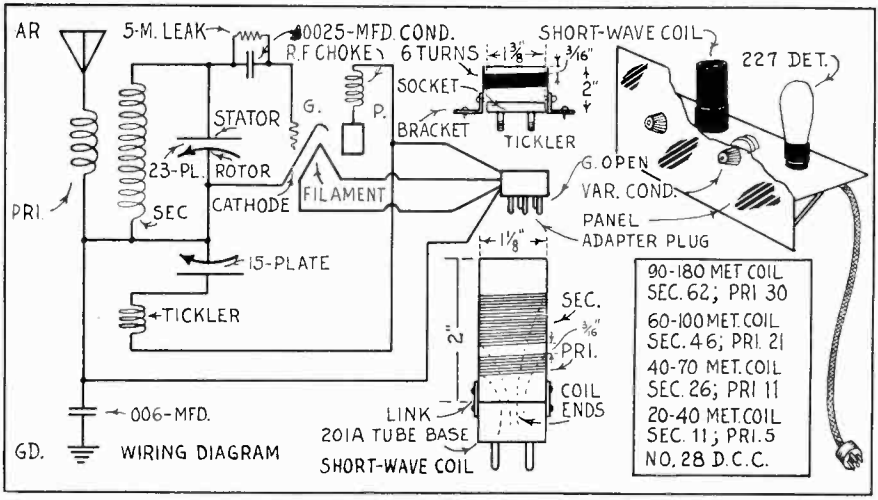
Connecting Socket

The 227-tube socket is screwed down on the subpanel in a convenient position near one side, as shown in the drawing, while the socket for the coils is mounted on the other side. Two flexible, insulated leads of the cable are then run from the heater, or filament, terminals of the socket to corresponding terminals on the adapter plug. Connect the cathode terminal of the adapter plug to the .006-mfd. fixed condenser, while the other side of the condenser is connected to a ground binding post. The line running from the cathode of the adapter unit is also connected to terminals on the tuning-coil socket to which one end of the primary and the corresponding end of the secondary are connected, and then over to the rotor-plate terminals of both variable condensers as shown in the wiring diagram. The other terminals of the coil socket are then wired, the open end from the primary to the aerial binding post, while the one from the secondary runs to the stator-plate terminal of the 23-plate condenser and also to one side of the grid condenser. The other side of the grid condenser connects to the grid terminal of the detector socket. The cathode terminal of the detector socket goes to the rotor-plate terminals of both variable condensers.

Wiring Plate Circuit

The set is now completely wired except for the plate circuit, which runs to one side of the r.f. choke, to be made next, and to one side of the tickler winding, also to be made. The r.f. choke consists merely of a ½-inch tube or spool on which 60 turns of No. 24 d.c.c. or enameled wire is wound. One end of the choke, as just mentioned, connects to the plate terminal of the detector socket, while the other end runs to the plate terminal of the adapter plug, a lead in the cable being used for this purpose. The grid terminal of the adapter plug is left open.

Now for the tickler coil. Get a 2-inch length of bakelite or formica tubing that has an inside diameter of 1⅜-inch so that it will fit snugly on the tube socket, which serves to hold the interchangeable coils. Small brass angle brackets are screwed to both the tube and the subpanel after the tickler is wound on. It consists of six turns of No. 20 d.c.c. or enameled wire, wrapped around the outside of the tube, starting $\frac{3}{16}$-inch from the top end. Pairs of small holes drilled through the tubing serve to anchor the ends of the wire to prevent the coil from unwinding, the wire being threaded back and forth once through each pair of holes. If a socket slightly



larger than 1⅜-inch in diameter is used, a corresponding larger size of tube must be used for the tickler. But it must be remembered that a tube socket smaller than 1⅜-inch cannot be used as the coils are mounted on the bases of old tube and these must fit inside of the tube on which the tickler is wound. It has already been mentioned that one end of the tickler coil connects to the plate terminal of the detector socket, the other end of the tickler connects to the stator-plate terminal of the 15-plate midget condenser.

The Short-Wave Coils

The construction of four interchangeable plug-in coils for work on various bands from 20 to 180 meters are then made. Get four old 201A tubes and remove the glass carefully, including that cemented to the bottom of the base. The diameter of the base is 1⅛ inch, and four 2-inch lengths of 1⅛-inch bakelite tubing are obtained, one being attached to each tube base by means of two links. However, before doing this the coils should be wound on the tubes. The coils must be wound in exactly the same direction as the tickler. This is highly important and should be remembered.

The secondaries are wound at the top and a space of $\frac{3}{16}$-inch left between the secondaries and the primaries. No. 28 d.c.c. or enameled wire is used for both windings. For the 20 to 40-meter coil, use 11 turns for the secondary and five turns for the primary. The 40 to 70-meter coil should have a secondary of 26 turns, and a primary of 11 turns, while the 60 to 100-meter coil is provided with a 46-turn secondary and a 21-turn primary. Lastly, the 90 to 180-meter coil has a secondary of 62 turns and a primary of 30 turns.

The ends of all coils are threaded through small holes drilled in the wall of the tubing and are then dropped down inside of the tube to make connection with the prongs in the base. Bare the ends of the wires and solder them to the prongs to get a good electrical connection. Before doing this insert the base in the coil socket and observe to which terminals the prongs connect. Be sure that the ends of the coils are connected to the right prongs on the base so that the leads run between the points indicated in the wiring diagram. The set will not function is a mistake is made here. Check through the wiring to see that the connections are correct before soldering. Too much stress cannot be laid on the importance of good soldering in a radio set. After soldering the coil ends to the prongs of the bases, attach the tubes by means of the links, screws and nuts holding the links, tube and base together securely.

(*Continued on page 7*)

If You KNOW YOUR STATIONS

WE thought those March puzzles would hold our readers for a while, but when we stated that twenty-eight correct answers had been received, we reckoned without the sharp wits of our puzzlers. Before the month was over exactly 127 correct solutions had been received! Then we thought the April problems were still harder but the answers are flooding in.

Edward C. Houlgate, 388 Waterloo street, London, Ont., writes: "I am almost ashamed to do the puzzles now, having won the last three copies." We can only say that it is our wits against yours and if we can't devise puzzles that will stick you, we'll have to pay the price and like it. So get your copies of RADEX free as long as you can.

Still our readers continue to rub it in and "spoof" us because the puzzles are so easy. Regarding the April problems, Fred Morgenstern, 309 West 104th street, New York City, says: "They were the easiest puzzles you have published in a long time." And "please make them harder" urges Greer McCrorry, 606 S. 2nd street, W., Cedar Rapids, Iowa. John R. Carter, 1119 West 9th street, Erie, Pa., thinks the puzzles are getting easier in stead of harder. Well, even algebra gets easier after one gets the hang of it. "It sure is great sport solving them. Keep them coming." Thus comments Clarence Fleagle, R.F.D. 1, Box 31A, Abilene, Kansas.

Answers for April

Several readers admitted that we gave the start to the solution of the code puzzle away with the 9-9-8 call for this could only be HHK. Here is the correct solution for No. 1: KYW - XFF - CMC - XEW - WCKY - WKY - CMW - KFMX - XEF - CKX - XEY - CMK - CMCM - XEFE - HHK.

No. 2 was correctly solved as follows: WTOC - KGY - KGBU - WJAK - WBCM - XETF - WLIT - KGIX - CMKC - WCRW - CFBO - WBAK - WEW - WCLB - KREG - WAAF - CKCD - WLW - KPO - XFC - KFWF - WCAP - WWRL - WMT - WPOE.

Try These Puzzles

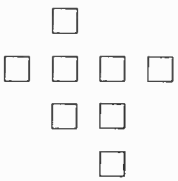
In No. 3, the state was California and the city which appeared in the third vertical column was Los Angeles. There were different combinations which could be used and all were counted as correct.

Try These on Your Radio

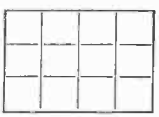
For our first puzzle this month we have another one in code. Instead of figures we are using letters. Each of the letters given below stands for still another letter and our readers are asked to identify the calls for which these letters stand. Any good amateur detec-ative must be able to decipher coded notes and this is the first lesson in winning a tin badge.

WTFY	KBOK	CTF
XKWM	WYO	XBOK
KWM	CIEM	

In Puzzle No. 2, you are required to place letters in the eight squares so as to form six calls, reading right and left and up and down.



Puzzle No. 3 is similar to No. 3 of March except that it contains twelve squares instead of sixteen. When completed it should contain seven calls reading both horizontally and vertically with no call used twice. There are two different ways, so far as we have been able to find, of solving this puzzle and we are asking for both solutions, making two puzzles of this one.



Send in the correct solutions of these four problems so as to reach us by May 20th and we will send you a free copy of the June RADEX or add a month to your subscription if you request it.

Ninety-pound mistress of the 1,100-pound organ. Little Miss Ann Leaf has a million admirers. CBS programs.

Phones for Philco

IN your March issue an article appeared for attaching headphones to the Majestic set. No doubt we all thank Mr. A. L. Van Compernolle, of California, for his effective method and I'll help him along by adding that I myself have a Baby Grand Philco and have attached headphones to it, precisely the same as Mr. Van Compernolle's method but a little neater and easier. Here it is: To most Philco baby grand owners, their set is very easy to remove from the cabinet. First disconnect the a.c. line, then remove the tubes. Follow by removing the dial knobs (just pull off). On the bottom of the cabinet are three bolts, which can be removed easily. Disconnect the speaker plug at the back of the set. The set can be removed from the cabinet with ease and lots of room to work.

Stand the set on its side which will give you a full view of the under wiring. Solder a wire to each plate terminal of the speaker plug socket (they are the lower ones). Run this wire to the phone post which may be attached to the metal chassis, but be sure that the screw is insulated and us fiber washers against the chassis. Disconnect the yellow wire which is in the center of the speaker and runs to meet the white wire at the base. A snap switch may be attached to the arch on back of the cabinet which is unseen and easily snapped on and off as desired. Solder a wire to the yellow wire and carry it to one side of the switch, the other side to the white wire. Assemble the set and the job is done. Attach your phones and go to it and the rest of the family can sleep. If you have any respect for your phones I'll advise you to disconnect them when speaker is in high volume.

I am sure all Philco owners who love DX work will have the pleasure that I get from this little stunt, so please pass it on to them.— *W. J. MacKeen, 1316 Broadway, Schenectady, N. Y.*

Short Wave Adapter

(*Continued from page 5*)

To connect the short-wave adapter to the receiver, remove the detector tube from the set and insert the adapter plug connected to the cable. Operating current is obtained from the receiver. The r.f. impulses are picked up by the detector of the adapter, and are then amplified by the audio system of the receiver. The r.f. section of the receiver is not used and in order to amplify signals satisfactorily the audio ends of the set must have two stages. One stage is not enough for the amplification required. The tuning dial of the adapter unit will pick up stations within the limits of the coil you are using, each coil covering a different waveband. The adapter will be found to be selective and capable of bringing in considerable distance, depending, of course, on conditions.

Technical Editor Analyzes Difficulties

Advice You Can Understand

I have a Music Master 7-tube Neutrodyne, model 250, and have never been able to get stations above 1400 kcys. I would like to know if this could be remedied so that I can tune up to 1500 kcys. As you probably know the coils in this set are very small. How many turns should be removed from the primary and secondary windings, and would this affect the volume?

Just a few turns of wire should be removed from the secondary windings of the radio-frequency coils to make the set tune to a higher frequency. The primary windings will not have to be touched unless quite a number of turns are taken off the seconday. In that case just two or three turns should be removed from the primary to bring them back to about the same ratio as they were before making the change. If you get the low frequency stations at the extreme end of the dial at present, such alteration of the coils might, however, make it impossible to get the lower frequency stations at all. The exact number of turns to be removed depends on the diameter of the coil to some extent. About the only method to follow is the "cut and try" method. Take off a few turns and then replace the coils temporarily. If still more wire has to be removed, this can be done without much trouble. Be careful not to remove too much.

Minimizing Oscillation

I am having some trouble with an a.c. Radiola, model 46. It has three 224, one 280, and one 245. When I turn the tuning control it squeals and whistles on stations and pops on the vacant places. With the volume control turned back, it doesn't bother at all. Some stations cannot be tuned in unless considerable time is taken in tuning. Can you kindly tell me where to look for the trouble?

With the Radiola No. 46, you will have some difficulty in getting rid of oscillation. This set has a high-gain r.f. amplifier, and has a tendency to oscillate, unless the r.f. condensers are perfectly adjusted. Adjustment cannot be made on the trimmer condensers alone. The stator plates on the gang condenser in this set are made to move sideways for greater or for less capacity when all the plates are in mesh. It will be necessary to balance the stator plates on all the condensers to eliminate the oscillation, and this can best be done in the following manner: First remove the cans and move all the stators toward one side so that their relation to the rotors will be exactly the same. Then replace the cans, for without these the set will oscillate whether the condensers are properly lined up or not. Tune in stations and adjust the trimmers, which are accessible through small holes in the cans. Perhaps the oscillation will be eliminated from one part of the tuning range, but is still evident outside of this section. Again remove the cans, move the stators the same distance, and repeat the above operation. This is continued until the oscillation is completely eliminated, which can be done but usually requires careful repetition of the adjustment several times.

Broad Tuning

I have one of the first Philco a.c. sets made, and would like to know how it can be made to tune sharper on frequencies from 1200 to 1500 kilocycles. I understand the neutralization and can use the local station as an oscillator but I believe that the trouble is something else.

If your set has the condensers properly balanced, about the only remedy for broad tuning is to obtain looser coupling between the primary and secondary windings of the r.f. coils. This can be done by increasing the separation between the coils. If the set is still too broad, remove a few turns of wire from the primary winding. Of course, you are aware of the fact that a long aerial, which includes both the actual aerial and the lead-in wire, will make a set tune broader than a short aerial. Most t.r.f. sets broaden out at the upper section of

the dial, so this is no particular failing of your set.

Aerial Lessens Volume

I have a General-Electric 9-tube electric superhetrodyne, which works pretty good with a ground of about 25 feet run through the cellar and attached to a cold-water pipe, and also attached to the aerial post of the receiver. I erected a 40-foot aerial with a 10-foot lead-in and connected this to the aerial post, hooking the ground lead to the regular ground binding post of the set. This decreased the volume to some extent. I don't think that there is any defect in the set as it is almost new. I also have a Radiola No 28 superheterodyne and a Radiola No. 104 speaker, which furnishes B-power for the set. One of the 216-B tubes has burned out and I was wondering whether a 281 tube could be substituted, both being half-wave rectifiers.

Your General-Electric superheterodyne receiver is designed to work on an aerial and ground. As you are not having any trouble except that the aerial won't work, the inference is that your aerial is grounded, causing it to be ineffective. In this case the primary coil of the tuning unit is not receiving any r.f. current. A 281 tube can be substituted in many cases for a 216-A but its output is 110 milliamperes, whereas the 216-A has an output of only 65 milliamperes. When two half-wave rectifiers are used to obtain full-wave rectification, as in your instance, they should both pass about the same amount of current for most efficient operation. By using one 216-A and one 281, a hum may result, but you can determine this by trying out the combination.

B-Battery Loss

I have a Stanford 6-tube, screen-grid, battery-operated receiver made by the Columbia Radio Corporation. It employs three 232 screen-grid tubes, and three 231 power output tubes. I use three 45-volt B-batteries, one 22.5-volt C-battery and six dry cells for A-supply. The B-batteries last about a week or 10 days. After taking the receiver to a radio service man, who claims to have repaired it, the trouble still persists. The set functions perfectly in every other way. Can you suggest where the trouble lies?

There is undoubtedly a short circuit across your B-batteries, which causes them to run down so quickly. In order to locate the trouble, the first thing to do is to disconnect the B-batteries from the receiver. The test across the B-neg. and B-pos. lines of the receiver with a voltmeter and C-battery connected in series. If there is a permanent short-circuit in the set, the voltmeter will register a reading. Periodic short-circuits inside of the tubes will not always show up in this

(*Continued on page 18*)

Ray Kelly has one of the most emphasized positions in Radio. He is Chief Sound Effects Engineer of the NBC. He doubles for the Atlantic Ocean, a trimotored airplane, a haunted house, a locomotive and what-have you. Here he is with a few of his "props."

In Which OUR READERS Experiment

Trying New Ideas

REPORTS of interesting experiments with aerials and grounds continue to come to us and we pass these on to our readers for the suggestions they contain.

"Since I use loop aerials exclusively, perhaps my experience will be of interest. Briefly, here it is: A straight loop suspended in the attic of my house, the aerial running east and west, with about 40 feet (copper wire, seven strand) on the sides, and about six feet across the ends. The lead was run out of the attic window and in through the window of my room on the second floor, using a window jumper. The ground was run under the carpet to the cold water line in the bathroom. I used a Grebe Synchrophase, 5-tube set. I used a Peerless A-eliminator in conjunction with a Willard B-eliminator. Just to give an idea of what can be done with an inside loop aerial, I want to say that from October, 1929, until March, 1930, I pulled in 182 stations in the regular broadcast band, as well as some 45 short-wave amateur stations."— Don Gross, Bradford Court Apts., Newton Centre, Mass.

Ground as Aerial

"We have been trying some experiments with different ground and aerial connections on our own receiver, which by the way is also a superheterodyne, home-made, which we have been using for about four years. Recently we built it over to use screen-grid tubes. We find by using the ground wire on the aerial post we can get stations on some bands very clearly with lots of volume. The ground wire is connected to two galvanized pipes, driven into the ground in the cellar and connected together by a wire which runs directly up to the receiver. KFI, Los Angeles, comes in very loud with this ground wire on the aerial post alone, when this station can just barely be heard with aerial and ground connected. The aerial which we use is on a steel mast 45 feet high, stranded enamel copper wire 125 feet long."— Glen E. Clute, Route 58, Box 78, Schenectady, N. Y.

"I have been experimenting with a booster unit before the antenna and ground circuit of my set. I connected the tickler and secondary of a three circuit tuner together and then I connected the other end of the secondary to the set ground and the other end of the tickler to the radiator. Then I connected a .0005 mfd. variable condenser in the antenna circuit. This increased the volume of the stations on the lower wave lengths but did not affect the stations on the higher wave lengths."— L. M. Armstrong, Jr., 31 Center street, Rhinebeck, N. Y.

Another Pipe Aerial

"Thought I would let you know what I picked out of the air March 17th at night. I used for an aerial a piece of pipe three feet long with wire attached to one end and driven into the ground eight feet. I received the following stations: XEW, KGR, KGCX, VAS, KHJ, KFXF, KFWF, KEX, KFVD, JOAK, with a Philco table model two and a half years old."— L. E. Barton, Mercer County, Transfer, Pa.

"I have been experimenting with ground aerials. I have a ground aerial about 85 feet long with a six-foot gas pipe driven into the ground so it sticks out about 1½ feet. This ground aerial I have connected to the ground of the radio. This brought me these stations, KLZ, KTAR, CJGX, KFI, XEW, KGO, KOA, KHJ, KOB, WOAI, WFAA, WBAP, KMA and KRLD."— Edward E. Moskal, 20 Quincy street, Passaic, N. J.

"I use two aerials (umbrella and straight) combined into one, about 200 feet altogether. I have 16 stations from the coast, including KFVD, Culver City; eight Cuban; six Mexican (verification from XETY); ten Canadian, including Halifax, Glace Bay, N. S., and CFCY, Charlottetown, P.E.I."— Mrs. Harold R. Keck, 1315 Court street, Allentown, Pa.

FLOYD GIBBONS, war correspondent whose "beat" has extended to almost every known corner of the world, is a hero of adventure fiction come to life. Before he came to the National Broadcasting Company to recount his hair-raising adventures, he had made an enviable name for himself as a reporter, a war correspondent, an author, an explorer and a lecturer.

His twenty years as a "Headline Hunter" have been replete with thrills. Today, as a radio personality, he is known to millions for his gripping tales of adventure and his interest-compelling manner of interpreting the day's news over the air.

Gibbons was born in Washington, D. C. After being graduated from Georgetown University he took the advice of another famous journalist and went West to launch his newspaper career. He got his first job twenty-three years ago on the Minneapolis Star. His salary was $7 a week. Little realizing that the cub reporter was later to reach the heights of journalism, his city editor fired him for — of all things — incompetency.

But young Gibbons was not discouraged. He developed a clarity of style and a keenness of observation that soon won him recognition as a star reporter.

His first experience as a war correspondent was in 1914, when he was assigned to cover the Battle of Naco on the Arizona-Sonora front. He remained in Mexico to file vivid reports of the battles and skirmishes in the many revolutions and counter-revolutions in the Latin-American Republic.

When the notorious Francesco Villa terrified the Mexican countryside, Gibbons was with him reporting the Guerrila warfare. Later he accompanied General Pershing on his punitive expedition against Villa.

His reports were widely read and were largely instrumental in bringing about the Pan-American conference on the Mexican question. He also wrote a series of articles exposing the conditions of the poorly equipped state troopers on the Mexican border that were extensively quoted in the campaign throughout the United States for military training.

Before the United States entered the World War, he was assigned by the Chicago Tribune to go to London as its

war correspondent. This was on the same day that Germany announced to the world the submarine blockade of the British Isles.

Gibbons decided to risk the blockade. His newspaper insured him for $25,000. Providing himself with a non-sinkable garment and carrying a supply of compressed food tablets, he booked passage on the S.S. Laconia, a Cunard Liner carrying munitions and war supplies.

The night the Laconia entered the U-boat zone, a torpedo from a German submarine found its mark and the Laconia slowly settled as the passengers crowded to the lifeboats. Gibbons donned his lifesuit and got into a boat filled with terrified passengers. The boat drifted about all night until he and his companions were picked up by a British vessel and brought to Queenstown Harbor, Ireland.

Torpedoed on "Laconia"

Gibbons was reported lost at sea. But a few days after his obituary was read in America, the 4000-word story of the sinking of the Laconia which he cabled from Queenstown was printed in the Tribune. The story stirred great interest and was read on the floor of the United States Senate at a time when America was only awaiting an "overt act" to declare war on Germany. Five weeks later the United States entered the war.

When the A.E.F. landed in France, Gibbons was among the first of the American war correspondents to go to the front with the American troops. He was under fire during the remainder of the war. At the Battle of Chateau Thierry he was wounded and lost the sight of his left eye.

The Croix de Guerre was conferred on him and he was later made a Chevalier of the Legion of Honor. He also received the Italian War Cross.

Since the World War Gibbons has participated in at least one war or revolution almost every year, covering rebellions and uprisings in every nook and corner of the globe. He has had adventures all over Europe, Africa and Asia.

He was the first war correspondent to defy the ukase of the Soviet government against foreign newspapermen by reporting first hand post-revolution conditions in Russia. He gathered news in the battle-scarred Balkans. He covered the Spanish-Riff war and was with the French when they were closing in on Abd-El-Krim. His adventures even carried him to Timbuctu.

Lost on the Sahara

Four years ago he was lost in the Sahara desert when he led an American expedition through blinding sandstorms across a waste of blazing sand. For three months and five days he pushed on across the Sahara until he finally reached Timbuctu. The expedition kept on through the jungles of Central Africa for 1100 miles until the party reached the Cape.

In addition to his many magazine articles and signed dispatches, Gibbons is author of "The Red Knight of Germany" and "The Red Napoleon."

He became a broadcasting artist accidentally. He had visited M. H. Aylesworth, president of the National Broadcasting Company to get information for "The Red Napoleon." In the book he told of war correspondents who described wars through portable microphones, while flying over the battlefields in radio-equipped planes. The NBC executive suggested that he try broadcasting. Gibbons gave up his newspaper connections and has been on the air ever since.

More than a year ago he made his radio debut as the "Headline Hunter." Later the NBC assigned him to cover the arrival of the Graf Zeppelin at Lakehurst, N. J. He described the return of the giant dirigible as he walked about the field with a microphone and a portable transmitter hung about his neck, thus fulfilling the prophecy he made in his book.

Some months ago he became a radio war correspondent, describing a mimic battle of the Argonne at the War College in Washington. His present weekly feature is "The House of Magic" on Saturday evening, between 9:00 and 10:00 o'clock.

He is one of the fastest speakers on the air and recently was clocked speaking at the rate of 217 words a minute.

RADIO GOSSIP with our READERS

IT is a real pleasure to us to pass on to our readers the little tips on betterment of reception which we receive from our experimenters. One good friend recently wrote us that one of these tips alone was worth fully fifty years' subscription in improvement of tone and reception. Says another, O. C. Wright, Palmer, Nebr.:

"I don't claim to have bought your first book published, as I don't know for sure when you started, but I have every number from 1926 up to the present number and I simply wouldn't think of destroying any of them as they have so much good advice and instructions in so many numbers."

The first issue of RADEX appeared in September, 1924, nearly eight years ago, and it has seen marvelous changes in radio during this time, but we are convinced that the next few years will bring even greater changes. Engineers have so far merely scratched the surface of the art and only a Jules Verne could prophesy the changes that are coming.

The "Old Timer" of the Empire Builders, Harvey Hays, with his leading lady, Miss Lucille Husting.

Monthly Family Conference

Just a week or two ago, it was reported that signals were sent across the English channel with a power no greater than a flash-light. A frequency was used that has heretofore been deemed impossible of use — a seven-inch wave-length which we compute at about 1,666,666 kilocycles. Try to comprehend the vast number of frequencies this opens to use. We could each have our private frequency instead of a telephone line. But enough of the digression.

Writes Robert R. Rawstron, 15 Edgewood street, Claremont, N. H.:

"I've got a hot tip to pass on to fellow DXers. The sensitivity of a screen grid receiver can be increased by a simple job of wiring. Merely run a fine wire from the plate terminal on a standard 5-prong 224 tube to within a quarter inch of the cap. The amount of regeneration increase can be controlled by the proximity of the wire to the cap. The wire may be held at the top by a strip of adhesive tape. For those who do not know one prong from another, the plate terminal prong can be found thusly: Hold the tube prong end up and locate the isolated prong. The first prong to your left is the plate terminal."

"One thing which helped me a lot," writes LeRoy Cattle, R.F.D. No. 2, Paterson, N. J., "was the suggestion by A. R. Von Compernolle on putting phones on a Majestic. I put them on mine and it's a great improvement. I hesitated to have it done in a repair shop because they always cut out one or two stages of a.f. amplification which isn't so very nice."

"Now for some information," begins C. P. Lawrence, 1424 A avenue, E., Cedar Rapids, Iowa. "I have a 7-tube Truetone receiver, using three No. 224, two No. 245, one No. 227, and one No. 280 tubes. When listening to programs from powerful stations and desiring to reduce the volume control, if the knob is turned back the volume reduces until

a certain point is reached. Then further turning of the control perceptibly increases the volume till it cuts out entirely. This makes it difficult to regulate for low volume. I have wondered if this is a common fault of this type of receiver, or whether something should be remedied. I would appreciate any information concerning this."

Undoubtedly some of our readers can lend a hand to Mr. Lawrence. Albert Palmer, R.F.D. No. 2, Sta. A., East Liverpool, Ohio, too, calls for help.

"I have a Philco 7-tube set, Model 511, and have never been able to separate stations from 1250 to 1500 kcys. For example, in tuning WADC, Akron, I can also hear WJAS, Pittsburgh, and WHK, Cleveland. All three stations should be received very clear. I attempted to adjust the neutrodons, of which there are six, and found that when they are set to the place they should be it has a terrible howl, or what is often called 'motor boating.' "

Saves Stamp Money

"I save the cost of the magazine many times over each month, as I collect Ekko stamps. I know just what stations issue stamps and in that way I avoid sending dimes to stations not issuing stamps, which return the coins all too infrequently." Thus writes Henry C. Ewald, 5623 138th street, Flushing, N. Y. This is exactly the reason we publish the symbols in the Index by Frequencies. Many readers send us lists of stations which have verified for them in order that we may supply symbols where they are lacking. We regret we cannot use this information. Our symbols indicate the information that has been supplied to us by the broadcasting stations themselves. This makes an official statement of their policy. We cannot, of course, guarantee that each station will live up to its policy.

We receive complaints from time to time that certain stations do not answer letters. Sometimes this may be true for various reasons. The fault may be with the station or it may be with the writer. We ourselves receive many letters which the writers forget to sign or fail to give their address. Regarding this Frank Wilkes, 25 Maurice avenue, Ossining, N. Y., asks: "What about a black-list or a symbol for stations which do not verify?" and W. Campbell, 739 N. High street, Columbus, Ohio, adds:

"Why don't stations reply to reports of reception when stamp is enclosed? My waiting list grows. Here are some: WWJ, KTM, XEW, XEF, WFLA, WADC, KVOO, WSMK, WICC, KSL, WDOD, KNX AND WTFI. When stations request reports they might at least mail a postal card. I seldom have less than a fifteen minute report on any station. For instance, KNX, I had report from 12:48 to 1:12, so what more do they want?"

But Jackson W. Thompson, 535 Hess street, Bethlehem, Pa., thinks "the fans ought not to be so quick in their decisions for I have received at least fifty stamps as long as two months after I applied for them." and A. J. Kendrick, Box 66, Duncan, Okla., adds:

"In your last issue I read the clipping from C. R. Simpson stating that he has written four letters to KFKB, Milford, Kans., and hadn't heard from them. Just want to say that I sent a report on March 23rd and received a nice letter from them March 27th."

Clement Hanson, 88 Broad street, Providence, R. I., has two complaints:

"I wrote a letter requesting verification from WFAA in Dallas, the station that they are so proud of down there, according to some Texan in the March issue. I sent a stamped envelope for reply. They have a rubber stamp like this 'Radio Station WFAA.' They put that on the bottom of my letter and sent it back!"

A Short Wave Inquiry

Asks Harris Schiestel, 13734 Mapleridge, Detroit, Mich.:

"Could any of the RADEX short-wave listeners please tell me if they ever received a verification from G5SW of Chelmsford, England. On January 2nd I wrote to this station for verification and as yet have not received a reply."

Here are some answers to queries that have appeared in previous issues.

Don Gross, Bradford Court Apts., Newton Centre, Mass., says:

"Tell Mr. Robert H. Buckley, Kent, Ohio, that the Canadian stations of Quebec province usually announce first in French and then in English, and that the CHIC he heard may be CKAC at Montreal, as the French pronunciation is very similar, although this station does not check his keys. exactly. I have visited this station personally and have heard them announce this way and to one unfamiliar with French, it is confusing."

A Backward Record

"I noticed in the March issue a device for scrambling the programs. I may be able to shed some light on this. Some time ago WTIC was testing over WEAN's frequency and they put on a stunt of this kind. It is simply a phonograph record played backwards."

This comment comes from Paul M. Fairbanks, 341 Bratton avenue, Lewistown, Pa.

While some readers are striving for Cuban stations, other readers, in Cuba, are trying to log our own. From Mrs. A. C. Gray, Central Tanamo, Cayo Mambi, Oriente, Cuba, comes this interesting note:

"Sometime ago someone asked about the station in Santo Domingo. It was completely destroyed by the cyclone of September 4, 1930. Well they are on the air again. I picked them up February 11th, at 8:30 p.m. Their call letters are HEXK, Santo Domingo City, Dominican Republic, or for verification, it might be better to address them HEXK, Cuidad Santo Domingo, Republica Dominicana. I've been picking up quite a few stations and have been getting verifications too. My best catches, I think, are KMTR, Los Angeles, and KGCX, a 100-watt station at Wolf Point, Mont. I think DXing a most exciting game, you never know what will come next. I feel somewhat as Little Jack Horner must have felt when he found his plum."

We are always glad to receive suggestions for the betterment of this magazine. We have put many of these into effect in the past. Some criticisms, however, have two sides.

"I offer this suggestion not knowing how far it will get. Why not place the names of station owners somewhere in the back of the book, as they are only of interest when writing to stations, and in their place give us a dotted line in order that we may mark down the day, date and time station is received. I have found that data of this kind is often valuable in seeking the same station again, or another on the same wavelength."

Our indexes were arranged as a result

The "Gold Medal" two-piano duo, l. to r., Phil Ohman and Victor Arden, Mondays at 8:30 EDST on the NBC.

of long experience in DXing, to place the various data where it would be the most convenient to the users. RADEX is, we believe, the only publication that gives all the information in the Index by Frequencies rather than scattered through all three lists. We do this for the reason that it is this index that the DXer has before him when tuning and identifying stations. We believe the names of owners belong in this list for the reason that they very often aid in identifying a signal. Thus if a listener were trying to identify a program on 690 keys., for instance, and, as so often happens, did

not catch the call letters, the name "Western Farmer" would prove immediate identification. We suggest that the data desired by Mr. Albert J. Sauerbier, 5 East street, Jersey City, N. J., in the letter quoted above, be entered in the blank in the Index by Call Letters.

Objects to Records

And here is a criticism for the broadcasters:

"One thing that I am not in favor of and that is the idea of electrical transcriptions. There's nothing like the real honest-to-goodness programs. But everything goes the way of the least expense and bigger and more profits."

The Editor does not share this aversion to records. As a matter of fact, we doubt very much if anyone can tell whether it is the orchestra playing or an electrical transcription of that orchestra. All radio reception is, after all, a "transcription." We do not hear the original music but only an electrical vibration set up by that music. Whether this music passes through one or two transcriptions, affects it very, very slightly. Who can possibly tell on the Chevrolet program, for instance, that it is not the orchestra they hear? As for us, we would much rather hear a transcription of a first-rate artist than the original of a dozen second or third-raters. What do our readers think?

A newsy letter comes from Mrs. M. L. Ellis, Secretary-Treasurer of the Buffalo Evening News DX Club, 152 Tremont avenue, Kenmore, N. Y. This Club, with Mr. E. K. Bame as President, is, she says, "Still going strong. Members are coming in to it from all over the eastern part of the United States and we expect to bring in the west coast soon. We completed a very successful contest December 31st, with Mr. Johnson winning the News cup for the most verified stations during 1930. And these were real verifications, for neither comment letters nor stamps were accepted. The contest now is for four months, and September 1st another one will start lasting till January 1, 1932. Plans are about complete for a broadcast program over the News station, WBEN. Mr. Brauner, with 784 verifications, still sets the pace for the rest of us, but we are creeping up on him."

We received many letters regarding WTIC coming in on WEAF'S frequency and in another column our readers will find the facts about this change. Says Arthur Fair, 161 W. King street, York, Pa.:

"Enclosed you will find a newspaper clipping with the detailed account of WBAL combining with WJZ, and WTIC combining with WEAF. The combination seems to work all right. The combined force of the two stations sure brings in the music loud and clear. I presume this will be approved by many people as a step towards synchronization of most of the stations and thus clear up the channels. I don't believe it will be approved by DXers though, because they won't be able to prove so easily that they got certain stations."

Here is a reader who had his subscription to RADEX paid for by a broadcasting station!

"I am fortunate in having my subscription paid for by WBBZ. I received a $5.00 check for being their most remote listener to a recent DX. In February I received a $5.00 check from KGBX for the same reason. CMBR is sending me a Bible for being their most remote listener when they were using 15 watts." Robert R. Rawstron, 15 Edgewood street, Claremont, N. H.

A "Half-Harmonic"

"I had a rather queer experience the other night. I was fishing around on 620 kcys., when I heard a strange station broadcasting. I listened, of course, and I was surprised to hear that it was one of our locals, KGBX, a 100-watter on 1310 kcys. I tuned them in on their correct frequency and sure enough they were playing the same music. The only way I can explain it is that perhaps it was a 'half-harmonic' if there is such a thing." Thus writes Richard Douglas, 1125 Krug Park Place, St. Joseph, Mo.

"Radio Station KFJR had a test program for one week and they offered a set of radio tubes to the one who received KFJR from the most distant point from Portland, Ore., where they are located. I heard them on March 6th

and won the set of tubes that they offered." Frank Maida, R.F.D. No. 1, Long Branch, N. J.

The two pet enemies of our DXers seem to be WRHM and WFIW. We receive more complaints of these two stations hogging the dials than of all others combined.

"I too, would like to add my complaint against WRHM at Minneapolis spoiling 1250 reception, but they are not nearly

"Al and Pete," Radio Comedy Team; comedy songs and humorous dialogue, mornings at 11:45 over NBC.

as bad as WFIW in Hopkinsville, Ky., on 940. My set tunes very sharply, but WFIW is generally on all night up to the wee small hours and they not only spoil 940 reception, but 930 and 950 as well. It wouldn't be so bad if they put on some decent music, which at least WRHM does, but they always have old country fiddling, yodeling, cowboy songs or some such nonsense." F. W. Edel, 709 W. Nevada street, Urbana, Ill.

A word of hope comes from Daniel C. Looby, 703 W. Tioga street, Philadelphia, Pa.:

"WRHM no longer spoils reception on 1250 kcys. all night long. They have dis-

(*Continued on page 21*)

DX Targets for May

THE following information regarding time on the air has been secured from the stations concerned, from newspaper clippings and from our readers. The times shown can be quickly converted into your own time by use of the following table:

Your Zone	Where Time is Given as EST	CST	MST	PST
EST	.....	Add 1 hr.	Add 2 hrs.	Add 3 hrs.
CST	Subt. 1 hr.	.....	Add 1 hr.	Add 2 hrs.
MST	Subt. 2 hrs.	Subt. 1 hr.	.....	Add 1 hr.
PST	Subt. 3 hrs.	Subt. 2 hrs.	Subt. 1 hr.	.....

State or Province	*City*	*Call*	*Freq.*	*Matts*
Arizona	Tucson	KVOA	1260	500
Sundays, 9 a.m.-2 p.m., 4-9 p.m., MST. Weekdays, 7-10 a.m., 11 a.m.-2 p.m., 4-9 p.m. Second Sunday each month, 1-4 a.m. (Special DX)				
Colorado	Denver	KOA	830	12500
Weekdays, 7 a.m.-11:55 p.m., MST. Sundays, 9 a.m.-11:55 p.m., MST.				
Cuba	Camaguey	CMJA	1332	10
Saturday, 11:30 p.m.-3:30 a.m. Sun.				
Georgia	Columbus	WRBL	1200	50
Sundays, 4 a.m., EST.				
Hawaii	Honolulu	KGU	940	1000
Weekdays, 6:15-9:30 a.m., 12-1 p.m., 4:45 p.m. Sundays, 8:30-9:15 a.m., 2:45-10 p.m. (Noon EST is 2:30 a.m., Honolulu.)				
Illinois	Harrisburg	WEBQ	1210	100
Sundays, 11 a.m., CST.				
	Rock Island	WHBF	1210	100
10th of each mo., 2-4 a.m., CST. (Special DX				
	Tuscola	WDZ	1070	100
Sundays, 2 p.m., CST.				
Indiana	Terre Haute	WBOW	1310	100
Sundays, 2 p.m., CST.				
Manitoba	Brandon	CKX	540	500
Sundays, 7-8:15 p.m. / Wed.-Fri., 8-10 p.m. } Summer Schedule				
Mexico	Mexico City	XETY	840	2000
Saturday, 11 p.m.-12 m. (DX Friendly Hour).				
Montana	Butte	KGIR	1360	500
Saturdays, 12-5 a.m., MST (Night Owls).				
Nevada	Las Vegas	KGIX	1420	100
Daily, 9 a.m.-1 p.m., 6-10 p.m., MST.				
New Brunswick	St. John	CFBO	890	500
Weekdays, 3-5 a.m., EST. (5 mins. only).				
New Hampshire	Laconia	WKAV	1310	100
Sundays (3rd of each mo.), 3-6 a.m., EST. Sundays, 3-5 p.m.				
New York	Ithaca	WLCI	1210	50
Sundays, 10:45 a.m.-12:15 p.m., EST.				
	Woodside	WWRL	1500	100
Sunday, 12:15-3 a.m., EST. (Special DX).				
Oklahoma	Tulsa	KVOO	1140	5000
Thu. and Sat. until 1 a.m. CST. (organ).				
Ontario	Cobalt	CKMC	1210	15
Sundays, 3-6 p.m., EST.				
Quebec	Montreal	CHYC	730	5000
Sundays, 9-11 a.m. and p.m., EST.				
Tennessee	Bristol	WOPI	1500	100
Wednesday, 3-5 a.m. (Special DX 1st Wed. each mo.).				
Texas	Dublin	KFPL	1310	100
Weekdays, 6-10 a.m., 12-12:30, 7:30-9:30 p.m., CST. Sundays, 7:30-9:30 a.m., 1:30-2:30 p.m., CST.				
	San Antonio	KMAC	1370	100
Tuesdays, 12:30-1:30 a.m., CST. (Special DX). Weekdays, 7-9:30, 10-11 a.m., 12-2, 4-6, 7-8, 10-12 p.m. Sundays, 7-9, 11-12 a.m., 2-4, 6-8 p.m.				
Vermont	St. Albans	WQDM	1370	100
Sundays, 3-4 p.m., EST. Weekdays, 12-1 p.m., EST.				

Technical Difficulties

(*Continued from page 9*)

way, so you will have to tap each tube with the finger. Any deflection of the voltmeter needle when doing this indicates an internal short-circuit. Most likely this will be found to be the seat of your trouble. A new tube substituted for the defective one will be the remedy. However, a broken-down blocking condenser between the B-neg. and B-pos., or between the B-pos. and A-neg., the latter being connected to the B-neg. line in most battery-operated sets, may also account for the short-circuit. If the fault is not in the tubes, remove the blocking condensers and test them separately. A volume control on a metal panel may be short-circuited and the B-leads in the set may be touching each other.

Atwater Kent No. 30

Where can I secure wiring diagrams of the Atwater Kent receiver model No. 30? Does this set require a power tube or detector tube and how much C-voltage should I have? What is the purpose of an output transformer hooked up to a loudspeaker?

You can undoubtedly get a wiring diagram for the model No. 30 Atwater Kent receiver from "Radio," 428 Pacific Building, San Francisco, California, or Radio News, 381 Fourth avenue, New York City, or by writing to the manufacturers, Atwater Kent Radio Co., Philadelphia, Pa. This set does not require a power tube in the last audio stage as the set originally called for 90 volts of maximum B-power for the last audio tube, indicating the use of a 201A tube, and a C-bias of 4½ volts. However, you can use a 112A or 171A power tube by increasing the B and C voltages according to the needs of these tubes as follows: For the 11 A, use 135 volts of B and nine volts of C, and for the 171A tube, use 180 volts of B and 40.5 volts of C. On this set a 201A or 200A tube can be used as a detector. The purpose of an output transformer or choke is mainly to protect the loudspeaker windings from excessive plate voltage to which a power tube is subjected.

Attaching Phones

I followed the diagram and instructions for installing a headphone jack published in the April, 1930, issue of Radex but fail to cut off the loudspeaker, which this hookup is supposed to do. The lowest lug of the Carter No. 102A jack is connected to the B-pos. terminal of the first audio transformer. I removed the lead running from the P-terminal of the transformer to the P-terminal on the socket to the top lug of the jack while another lead from the P-terminal of the transformer was connected to the middle lug of the jack.

If you have wired up the phone hookup correctly, as it seems from the information of your letter, there are two points, either one or both of which may be the cause of the trouble. First examine the lugs at the end of the jack to which the wires are soldered. If the solder on the upper lug touches that on the second lug, there is a direct electrical path across them, which permits the loudspeaker to function even when the phones are plugged in. The second possible cause is the phone plug itself. You will notice that the ball end of this plug is insulated from the shank by means of a fiber washer. When plugging into the jack, the ball end may be too large so that it touches both contacts, giving the same effect as the solder across the ends of the lugs. For proper operation the ball end makes contact with the second lug when the plug is pushed all the way in, while the shank makes contact with the upper blade of the jack only. Look for a short circuit at this point. Perhaps the spring of the blades is so strong that the plug does not separate them. A path across the upper two blades or the wires connected to them is responsible for your trouble. The plate current to the audio tubes must be cut off in order to prevent the loudspeaker from working.

Defective Speaker

I have a Utah loudspeaker unit that broke down, losing about two-thirds of its volume. Several radio repair shops have failed to give any satisfaction in repairing the unit. The coil checks perfectly but I had it unwound and rewound again to make sure there was no break in the wire. The magnets seem to have plenty of strength and I cannot locate the trouble. Will you kindly advise?

Usually it is not economical to try repairing a defective loudspeaker unit of the magnetic type. Such units can be purchased about as cheap as the cost of repairing them and sometimes cheaper. In most cases a winding is burned out but if this is not the trouble with yours, which can be quickly determined by making a voltage test across the ends of the coils with a voltmeter and battery connected in series, it is possible that the thrust pin which connects to the diaphragm, is not centrally located, or the soldered ends are a trifle loose. Also, the plate between the coils may need adjustment. Any defects of such kind make a marked difference in the volume and in the tone quality of reception.

Body Aerial

I have a Lyric with four screen-grid tubes. Lately there seems to be quite a bit of crackling noise on almost all stations. I took off the top cover of the shield to see if there were any possible broken or loose connections. My finger touched the wire that comes from the coil to the top of the first screen grid tube and instantly the noise ceased and volume was increased about three times its original strength. I would greatly appreciate a little advice as to what is wrong with this set.

When you touch the top terminal of the first screen-grid tube and the volume increases while the noise stops, your body serves as an aerial and provides the tube with more input energy than it is otherwise getting from the aerial, indicating a faulty volume control or a grounded aerial. Have the volume control replaced, after, of course, checking the condition of the aerial, and you may be reasonably certain that your trouble will be over.

Changing to A.C.

I am using a six-tube King-Hinners neutrodyne receiver and at present it is equipped with 201A tubes. I think that a power tube and detector can be used with the set. I would also like to change this set to all-electric operation. Will you kindly tell me what difference that would make in reception, with the addition of a power tube?

You should be able to improve your reception considerably by converting your battery set to all-electric operation, using a power tube and providing a dynamic loudspeaker. However, there are many all-electric models, which can be purchased cheaper than the cost of equipment to electrify battery-operated sets. Consult your dealer or write for a catalogue and prices from the prominent mail-order houses. Be sure to state the kind of electric current available, the voltage, whether d.c. or a.c. and if the latter also the cycles. By electrifying a battery-operated set there is always the possibility that the results will not be entirely satisfactory, perhaps there will be a hum or uncontrollable oscillation. Taking these objectionable features into consideration, the purchase of a ready-made set is a better idea, especially as this includes a dynamic speaker and power amplification at the audio end.

Broken Condensers

I have a high-voltage power pack supplying 7.5 volts for the 210 power tube in my receiver. After the set had been disconnected for some time and then hooked up again, I heard a click when the current was first turned on, after which the glow tube ceased functioning and the rectifier tube heated considerably so that the plate became red hot. No voltage could be obtained across any of the output terminals except the 7.5 volt terminals. Where does the trouble lie and how should it be remedied?

For the condition you have described there are one or two causes, or possibly both. One or more of the high-voltage condensers may be punctured, or a resistor used to reduce the voltage at the output is burned out. Test the condensers by first removing them from the circuit and then connecting a C-battery with a voltmeter in series with the two terminals. A good condenser will not give a reading on the meter but a punctured condenser will. The same test can be applied to the resistors, but in this case a good resistor gives a reading while a defective one does not. Hooking up the set incorrectly is undoubtedly responsible for your trouble.

Inside of Your Set

(Continued from page 3)

In a receiver, the secondary winding of the coil is cut not only for the insertion of a battery, but also for a vacuum tube. Nevertheless, the flow of current through the secondary is continuous as there is no actual break in the electrical circuit; it flows through the battery from the positive terminal, through the circuit and back to the negative, passing through the battery and continuing in the same way. Also, the evacuated tube offers no resistance to the flow of current, and the latter passes directly through it. To understand this, it is necessary to find out exactly how the vacuum tube works and the purpose of each part, comprising it. The principle of all vacuum tubes is the same whether it is one designed for a battery-operated receiver, or for an a.c. receiver. The differences will be taken up later.

How Vacuum Tube Works

A vacuum tube consists of a sealed glass bulb, from which all the air has been pumped out or evacuated, and some gas has been introduced to absorb the very small amount of air that could not be removed by mechanical means. The gas also tends to reduce resistance to an electric current, which under the influence of the heat and pressure, will pass through a vacuum. Of course, the ends of the conductor carrying the current must pass up through the base of the tube into the evacuated, gas-filled space. Then the current, in presence of heat and pressure (voltage) jumps off one end of the wire through space and alights on the other end of the conductor, continuing its flow through the circuit outside of the tube. The end of the wire from which the current jumps off is called the plate and the end on which it alights is called the cathode.

The heat is provided inside of the tube by means of a filament like that of any ordinary incandescent lamp used for illumination purposes. Incidentally the vacuum in the tube also prevents the filament from burning out quickly, or oxidizing, which it would do if there were any air in the tube. Just notice how quickly a filament will burn out if you remove the tip or crack the glass, allowing the entrance of air. Also, a filament in a vacuum can pass so much current, without burning out, that it becomes red or white hot, providing illumination, which is the story of the incandescent lamp in a nutshell.

Action of Filament

Now, getting back to the radio tube, after this little digression, we find that the filament provides the heated condition necessary for the passage of current through the vacuum. The cathode may be separate from the filament, as it is in 227 type of tubes, or the filament may itself serve the purpose of the cathode, as in the 201A, 220A, 112A and 171A type of tubes. In the latter case the filament is connected to two separate circuits, one a high-voltage circuit, which passes through the vacuum, and the other a low-voltage circuit, which lights the filament. The exact amount of current flowing through the filament circuit is controlled by means of a resistor, which may be of a fixed value, or may be variable. In the latter case it is a rheostat, which was first used extensively on battery-operated receivers. However, if the source of supply is constant and does not fluctuate in voltage, a resistor is not absolutely necessary. The filament of a tube goes to two separate prongs on its base, the plate to another, and if a separate cathode is used, this is connected to a fourth prong.

With these elements only, however, radio would be impossible. Another element, the grid, is placed between the plate and the cathode to control the amount of current passing through the tube. The grid can be likened to a valve in a water pipe; opening or closing it increases or diminishes the flow of water. The grid is merely a screen. Very small fluctuations of voltage impressed on it control instantaneously the comparatively large amount of plate current flowing through the vacuum and directly through the screen. The result is that the fluctuations in the plate current are in perfect synchronism with those in the grid circuit. The secret of this wonderful control lies in the fact that like kinds of

electricity repel each other while unlike kinds attract each other. To make this absolutely clear, it should be remembered that electricity, like water, flows through a circuit under pressure from one end, or by means of a suction at the other end. In a water pipe placed at an angle from an overhead tank to a point below, the pressure in the tank forces the water down the pipe, and the water in the lower end of the pipe also tends to pull the water directly above it downwards, as is the case with a siphon. If you tightly squeeze a siphon tube while the water is running through it there will be pressure from above and a pull from below. In a similar electric conductor passing a current, the side of pressure is called positive and the side of suction is called negative. The actual pressure is an electric circuit is called voltage and the flow of current is called amperage. Naturally when two equal pressures oppose each other like two tanks of water that are equally high and are filled with the same amount of water, there can be no current flow from one to the other. Similarly a positive electrical pressure conflicting with another positive pressure, retards or stops the flow of one or both, when arranged like the plate and grid in a vacuum tube. This is what is meant by "like kinds of electricity repel each other." Now, working along the same analogy, one can easily see how unlike kinds of electricity, that is positive and negative attract each other, just like the pressure and vacuum in the water line. However, for those inclined to debate this analogy, it may be stated that this holds true only in respect to electrostatic electricity, as exhibited in a vacuum tube. It does not apply to two or more separate electrical currents, flowing over the same conductor, as they will pass each other in opposite directions like strangers, each seeming to occupy a small portion of the conductor.

Returning to the function of the grid element. A positive charge on the grid retards the plate current, while a negative charge increases its flow. As previously mentioned, one end of the secondary coil of a transformer or coil connects to the grid element. The r.f. signals, which alternate from negative to positive many times per second, cause the enormously greater plate current to vary in synchronism, so that this current has practically the same characteristics as the weak current picked up by the aerial, only amplified many times. The output of the first tube goes to a second coil, and then to the next vacuum tube, where the already strengthened current is amplified still more. This process is repeated up to the detector tube, where the frequency of the signal is changed, and after the frequency is changed to a lower number of vibrations per second, the process of amplification is again carried on by the a.f. tubes or audio amplifier. You can surmise what an enormous enormous multiplication the output signal of a radio receiver must be of the feeble input signal. Then comes the process of transforming the a.f. output into audible vibrations that are picked up by the ear, and are intelligent, pleasing or annoying to our minds — changing electrical impulses to sound waves — but that is another story.

Reader Gossip

(*Continued from page 17*)

continued broadcasting in the early morning hours and sign off about 1 a.m. A good many DXers will be glad to know this."

"CJRW (or short wave VE9CL) Winnipeg (remote control from Fleming, Sask.) has been operating for some time on a frequency of 660 kcys. instead of 600 as previous. This test is being made to see if reception will be any better in Winnipeg. We were experiencing quite a bit of noise on this station on the original frequency, but reception is much better now so that the change will no doubt be permanent." J. S. Clark, Royal York Apts., Kennedy street, Winnipeg, Man. "Radio experimental station W9XV, Carterville, Mo., conducted test programs last week on fly power (2 watts). I picked them up real good and just received a fine verification." Rudolph Kure, 301 Warner street, Cincinnati, Ohio.

"When I got KOB they announced 'KOB, El Paso.' That puzzled me as I could not get an El Paso station with a

power of only 100 watts." Walter L. Scott, 1320 Race street, Cincinnati, Ohio.

"Here are some changes in the station listings that I have on good authority, from the Chicago Daily News DX Club, in fact: XEN, Mexico City, 719, is moving to 702; and if you hear XEP, Laredo, Mexico, on 1400, they are just testing there. One reason that the Mexican stations are heard everywhere except on their own frequency is that they can use any frequency they want after midnight." Richard Douglas, St. Joseph, Mo.

"On March 11th I received and verified CJRM. They are operating on 665 kcys. The Radio Bulletin on which the verification came stated that CJRW in Fleming was also operating on 665 kcys. with a power of 1000 watts. CMRX, their short wave station, has been temporarily suspended and the 2000 watt station now operates under the call letters VE9CL on 48.8 meters." Fred H. Bisset, Box 339, Goderich, Ont.

"KFI of Los Angeles has now commenced the construction of their new 50,000-watt station, the transmitter of which will be located at Northam, a railway siding near Buena Park and located about midway between Los Angeles and Santa Ana." Lieut. Gordon R. Jackson, 420 No. Pasadena avenue, Pasadena, Calif.

CHMA Reinstated

"In the last letter I wrote you on February 23rd I said that CHMA had been deleted. It has reapplied for and been granted a license to operate on Sundays only, sharing time with CKUA, also of Edmonton. It operates on 580 kcys., with 250 watts power." Raymond Donovan, 10028 105th street, Edmonton, Alta.

"XETY recently announced that they were going to move to 1300 kcys., but they seem to be on 1290 and interfere a good deal with KDYL." F. E. Holley, 6450 So. Lincoln street, Chicago, Ill.

"On the evening of Saturday, March 7th, and early Sunday, March 8th, I had the extreme pleasure to tune in a station on each of the 96 channels from 550 to 1500 kcys." Meyer D. Walters, 202 Asquith street, Baltimore, Md.

Paul J. Keck, 1013 Maple street, Allentown, Pa., takes this poke at some of us:

"You have no regular joke department, but some of the letters I read in RADEX sure do create hilarity. 'I see by the paper' where one person tuned in 106 stations in five hours, and another person got 163 stations in one evening. All I can say is they sure must do a lot of guessing."

Ouch! But that isn't really deserved. It really is fun to turn the dials and see how many different stations one can hear in a given time but, of course, that isn't DXing. But, knowing the chain programs, it is possible to tune in a surprisingly large number of cities in a short time.

Do Tuners Tune?

We have had many inquiries regarding various "tuners." Here is both an inquiry and an answer:

"Just one or two questions: There is a radio station here, CKCL, I believe, selling a Varituner. I also notice in the March RADEX that someone asks for information about them. I, too, would like to get some information about the Varituner from someone who has used it. Is it any help in cases of tuning one station out? For instance, WLW and CKGW are on the same wave length and quite frequently drown each other out. Will Varituner correct this?" James Gartlan, 83 Chelsea avenue, Toronto, Ont.

"I have a 9-tube Radiola superheterodyne and get very good results from it. In the past two months I have logged 273 stations, including 2YA, New Zealand, 4QG and 2BL, Australia, two Cuban and three Mexican. I do not use an aerial. I have a piece of pipe driven into the basement floor and a wire from the pipe to the antenna post of my set. The ground is not connected to anything except one of WFIW'S Cleer Tones. The Cleer Tone increases the volume 50 per cent. This may interest Mr. C. Bonneville of Washington, D. C." H. E. Vaughan, 323 3rd street, Brandon, Man.

These devices with the fancy names are usually nothing more nor less than wave-traps and ought to be advertised

and sold as such. Their principal value is in tuning through locals. Those we have tested do help to tune out interfering stations on adjoining frequencies but they do it by reducing the volume of both of them leaving only the stronger to be received. Exactly the same results can be obtained by switching to an inside aerial. Their claims regarding static elimination are dreams of the advertisement-writer.

Remember the inquiry in March regarding a station in Gretna, Nebr.? Here are some comments:

"I notice in your March RADEX that station KMRS, Gretna, Nebr., was heard by Felix Schmitz of Omaha, and you said no notice was given by the Commission of such a station. Today we heard this station and listened to it for half an hour. We heard the announcement more than a dozen times, 'Sun Theatre, Gretna, Nebr.,' but each time we understood the call to be KMRF." Fred Wageman, 1341 L street, Havelock, Nebr.

"I read about this new station KMRS in Gretna, Nebr. I have received them several times. They are on the air on Sunday afternoons. I do not think they are on 1490 kcys. because it is on the same number as KICK of Red Oak, Iowa, which is on 1420 kcys." Keen Hamilton, Ralston, Nebr.

Outlaw Station

"Regarding new station at Gretna, Nebr., KMRS, on 1490, there is a young chap there who is an ardent short-wave fan, and it would not be surprising to me if he is doing a little broadcasting on his own transmitter. However, I may be entirely wrong." Dr. F. S. Taylor, 222½ N. Hastings avenue, Hastings, Nebr.

"In answer to the questions of A. Cotes, Jr., Springfield, Ohio, in the March issue, I would like to report that I have received this station, WIBS, many times. It is the Michigan State police transmitter which gives time announcements every hour and also any other information that has to be given to the police cars. It broadcasts on a band above the regular broadcast band, together with a few other police transmitters. The frequency is 1712 kcys." Meyer D. Walters, 202 Asquith street, Baltimore, Md.

"I notice a letter from Mr. Albert Cotes, Jr., stating that he gets a signal which is a series of dots and dashes, which is repeated constantly day and night. Mr. Cotes no doubt is picking up an airport direction signal. I am located about two miles from the airport of Albany and about four miles from the airport of Schenectady. Both of these airports have direction finders which I can pick up on my receiver in the broadcast band, although their wave is much lower than broadcasting, or rather higher in kilocycles." Glen E. Clute, Route 58, Box 78, Schenectady, N. Y.

KCAA on Harmonic

"KCAA that Mr. Wallis of Neosho, Mo., gets is located at Tulsa, Okla., and he is getting them on their second harmonic of a wave of 1015 meters. Pretty good for him. They are owned by the Department of Commerce, Bureau of Lighthouses, and on this transmission broadcast weather reports to the airways." Ivan D. Ide, Box 312, Genoa, Ill.

"CFCH is the station whose announcement is 'Up where the north begins.' They verified and sent me the following information: 'North Bay is situated on Lake Nippissing, 250 miles north of Toronto.'" Robt. H. Silverman, 135 So. 17th street, Philadelphia, Pa.

"I note that one reader, John W. Christy, heard a program in the background of WEAF, which he couldn't identify, and which one reader thought was cross modulation. The real answer to that is probably that Mr. Christy was hearing either CJRM or CJRW, both of which have been trying out a wave of 665 kcys., to cut down interference from U.S. stations." F. W. Edel, 709 W. Nevada street, Urbana, Ill.

"To answer the query of a reader as to KCAA on 1180 kcys. This is a government aircraft communications station situated at Tulsa, Okla. One of its frequencies is 296 kcys., which would have a harmonic at 1184 kcys." Frank Wilkes, 25 Maurice avenue, Ossining, N. Y.

If Mr. Welsh, of Pennsylvania, is get-

ting airport stations between 1500 and 550 they are either harmonics from below the band or it is a superheterodyne and getting them on short waves." Ivan D. Ide, Box 312, Genoa, Ill.

"The station XE-AR which so many readers inquired about was XETA in Mexico City, using the experimental call XETAR." F. W. Edel, 709 W. Nevada street, Urbana, Ill.

"I read in the February issue of a Mr. Duval being puzzled as to a police station of St. Louis. I am sure he has the call letters wrong. I have a verified statement from them. Their real call letters are KGPC. They are on 1712 kcys., 500 watts." Mrs. Guy Lanphear, 121 W. Grant street, Minneapolis, Minn.

"Can you tell me why it is that I can get KPO, San Francisco, much better than VAS, Glace Bay, N. S.? VAS has 10,000 watts against 5000 of KPO." A. R. G. Tippet, 188 Cote St. Antoine road, Westmount, Que.

Power and distance are only two of the many factors affecting radio reception. It is impossible for anyone to calculate which stations he will receive merely by judging the power and distance. There are other intangible and unexplainable factors.

For our close this month we have something in the nature of a swan-song by Arthur L. Robb, 1338 Mulvane street, Topeka, Kans.

"The good nights when stations leap out from all points of the dial and distant stations come booming in are becoming fewer and farther between. The daylight stations are lengthening their schedules and Amos 'n' Andy can no longer be picked up on eastern stations at six o'clock. These are a few of the signs that the DX season is commencing to wane and the time approaching when there will be no RADEX for three long months."

But "why bring that up?"

Owing to many changes now being made in world stations and the coming of the static season, we are holding the new list of foreign stations until September.

Changes for May

Frequencies		
547	XEY	Merida, Mex., from 1000
674	XER	Mexico City, from 650
711	XEN	Mexico City, from 719
800	XEU	Veracruz, Mex., from 1000
857	XEJ	Juarez, Mex., from 1000
961	XED	Reynosa, Mex., from 977
980	XEFE	Laredo, Mex., from 1000
990	XEX	Mexico City, from 1210
1015	XEQ	Juarez, Mex., from 750
1034	XEV	Pueblo, Mex., from 1000
1091	XEL	Saltillo, Mex., from 1000
1130	XEE	Oaxaca, Mex., from 1000
1200	XEA	Guadalajara, Mex., from 1000
1333	XEC	Toluca, Mex., from 1000
1400	XEP	Laredo, Mex., from 1430
Power		
600	WICC	Bridgeport, Conn., 500 to 250
660	CHWK	Chilliwack, B. C., 5 to 50
870	WLS	Chicago, Ill., 5000 to 50,000
1180	WGBS	New York City, 250 to 500
1310	KMED	Medford, Ore., 50 to 100
1410	WDAG	Amarillo, Tex., 250 to 1000
Owners		
780	WMC	Memphis, Tenn., to Memphis Commercial-Appeal.
1270	WOOD	Grand Rapids, Mich., to Kunsky-Trendle Broadcasting Corp.
1330	WDRC	Hartford, Conn., to WDRC Inc.
1430	WHP	Harrisburg, Pa., to WHP Inc.
Deletions		
1000	XEF	Oaxaca, Mex.
1470	WTNT	Nashville, Tenn.
Locations		
1350	WAWZ	From New York City to Zarephath, N. J.
1500	WCLB	From Long Beach, N. Y., to Brooklyn
New		
1485	XETO	Mexico City
Calls		
1500	WCLB	Brooklyn, N. Y., to WMIL
Chains		
550	KFYR	Bismarck, N. D., new NBC.
940	WDAY	Fargo, N. D., new NBC.
1200	WLAP	Louisville, Ky., new CBS.
Additional Frequencies		
660	WTIC	Hartford, Conn., Network programs.
760	WBAL	Baltimore, Md., Network programs.

New Lists in This Issue

We have received so many inquiries from readers attempting to identify the short wave stations they pick up, that we are publishing on pages 61 and 62, of this issue a list of those short wave stations assigned frequencies apt to be picked up on a broadcasting set.

On pages 62 and 63 will be found a complete list of the Relay Broadcasting, Television and Experimental stations. This data is arranged alphabetically by radio districts. We believe this is the first time this information has ever been published for the benefit of radio listeners.

This information will not appear regularly and this issue should be preserved.

BRIEF REPORTS of DX RECEPTION

Letters About Logs

From the Commonwealth of Australia on the other side of the globe, comes this letter. The writer is L. F. Schnitzerling, Canning street, Warwick, Queensland.

"I had the pleasure, through the the generosity of an American pen-friend, to have brought to my notice November's issue of your delightful little book 'Radio Index.' I must say that it is an excellent book for the amateur and contains some very good articles."

Mr. Schnitzerling is kind enough to send us an up-to-date list of the broadcasting stations in Australia and this information will be used to correct our world list for its publication in September. His list contains 47 stations.

"I own a one-tube (home-made) set using four dry cells and only 22½ volts of B power. Since October 15, 1930, I have logged 401 stations. I have 27 in the states of Oregon, Washington and California (all verified). By the way, I have received one or more stations from every state in the Union, but one. That state is Nevada." Joaquin T. Russe, 21 Standish Street, Provincetown, Mass.

"We have only had our Westinghouse radio less than three months and I have logged 111 radio stations. I heard a station announced as WJSV, Mount Vernon Hill, Va., and in your book it is Alexandria, Va. Can you give me some information through your book on this?" Kenneth Colwell, Wallaceburg, Ont.

As our readers probably know, Washington's home, Mount Vernon, is located near Alexandria, Va. WJSV has a fine home between Alexandria and Washington which they call Mount Vernon Hills.

"On a Victor radio, ten tubes, in a year's time, I have logged 215 stations in 34 states. Also eight in Canada, three in Cuba, five in Mexico, and my log shows KSL, Salt Lake City; KOA and KFXK, Denver; KTAR, Phoenix; KNX, KFI, KPO, California; KEX, Portland, Ore., etc." W. Russell Acker, 709 W. Rose Street, Pottsville, Pa.

"I have logged 193 stations in a little over three months. I have received two stations in Cuba, four in Mexico, and the rest in Canada and the U. S. I also want to inform you that CJRM, Moose Jaw, now operates on 665 kcys." Jack Blair, 1078 First Avenue, N. W., Moose Jaw, Sask.

"I have a combination 2-tube radio built by myself and have received proof of reception from 46 states in the U.S., every province in Canada, 37 Pacific coast stations, six Mexican, five Cuban, one in Haiti, and one in Porto Rico." Theodore Vachovetz, Box 163, Elmsford, N. Y.

"I have now logged 335 stations. I have brought them all in over my loud speaker and have had at least one station on every one of the 96 channels. My log includes 17 stations in five provinces of Canada, six in Cuba, five in Mexico, one in Porto Rico, and 28 in the Pacific coast states." Harold L. Ball, 514 31st Street, South Bend, Ind.

"To date I have received 318 stations, of which 12 are 2,000 miles or more distant, and 51 and 100 watts or less. I use a Zenith, model 11." Jack Kelleher, 50 Spring Street, Red Bank, N. J.

"My log now consists of 297 stations, of which 13 are Pacific coast stations, two in Cuba, one in Mexico, and 11 in Canada. I have about 175 verifications, all of the more distant ones being included." Wm. Buchner, 279 Madison Street, Passaic, N. J.

"We have had our radio for not quite two months. It is a 1930 Victor combination 10-tube electric machine. It has four screen-grid tubes. Altogether we have 150 different stations in the U.S., Canada, Mexico and Cuba." Ford Martyn, 695 Nassau Street, Winnipeg, Man.

"My record, though not rating with those who receive Japan, etc., is now 457, 398 of which I received with my Philco, the others about four years ago with an old Radiola Regenoflex." Mel-

vinde Jager, 106 Llewellyn Avenue, Hawthorne, N. J.

"In the month of January I logged 226 stations in 38 states, Mexico, Canada and Cuba. 139 have been verified and have 87 still out. I have an 8-tube Amrad that is over two years old." Louis C. Borsheim, 4908 Chicago Street, Omaha, Neb.

"I am a DX fan and since around October 1st have collected 220 stations, the best being KGMB, Honolulu; CMK, Havana; XEW, Mexico City; CNRM and CKAC, Montreal. I have a General Motors radio." Patrick J. DeVany, 1192 Stout Street, Denver, Colo.

"I have to date logged a total of 310 stations, including 21 in Canada, and two in Cuba. Believe it or not, I have used a 2-tube RCA III regenerative set, operated with batteries and using earphones." Stanley H. Bond, Oakland, Md.

"In five months from October 1, 1930, to March 1, 1931, I logged 332 stations for a total of 493,910 miles or an average 1,488 miles to each station. My receiver is a 5-tube Gilfillan battery set." R. A. Butts, 203 S. Main Street, Ellensburg, Wash.

"So far I have received 434 stations, including 126 of 100 watts or less, 49 on the Pacific coast, 10 in Mexico, six in Cuba, one in Hawaii and one in Porto Rico." F. E. Holley, 6450 S. Lincoln Street, Chicago, Ill.

"I have used RADEX since last November and up to now have added 112 new stations, including 57 100-watt stations. This gives me 382 stations in one and one-half years with my Majestic 72." Levi Rost, Cokato, Minn.

"With a W. R. 6 Westinghouse and the help of your Radio Index, I tuned in a station for each channel in ten days and in the last 43 days have logged 240 stations." J. Dale Stambaugh, 3741 Keswick Road, Baltimore, Md.

"I am doing very well with my 11-tube Westinghouse Superheterodyne. The total is 293 stations with CKPC, WOCL, 25-watters; WEDH, 30 watts; CKOC, WJBY, Gadsden, Ala., 50-watters; and KFVD, 250 watts at Culver City, Calif." L. G. Briscoe, 3743 Hutchison Street, Montreal, Que.

"I am a member of the Newark News Radio Club and have so far received about 430 stations, including 35 on the Pacific coast." Florine Rossi, 8 Nelson Street, Dover, N. J.

"My record to date is 269 stations. Nine in Cuba, three in Mexico, and 17 in Canada. I have also had WKAQ in Porto Rico." Jack Roberts, 211 Harvard Avenue, Collingswood, N. J.

N — National

KEY TO CHAIN STATIONS

C — Columbia

CFCF 1030 N
CFRB 960 C
CKAC 730 C
CKGW 690 N
KDKA 980 N
KDYL 1290 C
KECA 1430 N
KFAB 770 N
KFH 1300 C
KFI 640 N
KFJF 1480 C
KFKX 1020 N
KFPY 1340 C
KFRC 610 C
KFSD 600 N
KFYR 550 N
KGO 790 N
KGW 620 N
KHJ 900 C
KHQ 590 N
KLRA 1390 C
KLZ 560 C
KMBC 950 C
KMOX 1090 C
KOA 830 N
KOH 1380 C
KOIL 1260 C
KOIN 940 C
KOL 1270 C
KOMO 920 N
KPO 680 N
KPRC 920 N
KRLD 1040 C
KSCJ 1330 C
KSD 550 N
KSL 1130 N
KSTP 1460 N
KTAR 620 N
KTHS 1040 N
KTRH 1120 C
KTSA 1290 C
KVI 760 C
KVOO 1140 N
KWK 1350 N
KYW 1020 N
WABC 860 C
WACO 1240 C
WADC 1320 C
WAIU 640 C
WAPI 1140 N
WBAL 760 N
WBAP 800 N
WBBM 770 C
WBCM 1410 C
WBEN 900 N
WBRC 930 C
WBT 1080 C
WBZ-A 990 N
WCAE 1220 N
WCAH 1430 C
WCAO 600 C
WCAU 1170 C
WCCO 810 C
WCFL 970 N
WCKY 1490 N
WCSH 940 N
WDAE 1220 C
WDAF 610 N
WDAY 940 N
WDBJ 930 C
WDBO 1120 C
WDOD 1280 C
WDRC 1330 C
WDSU 1250 C
WEAF 660 N
WEAN 780 C
WEBC 1290 N
WEEI 590 N
WENR 870 N
WFAA 800 N
WFAN 610 C
WFBL 1360 C
WFBM 1230 C
WFI 560 N
WFLA 620 N
WGAR 1450 N
WGL 1370 C
WGN 720 N
WGR 550 C
WGST 890 C
WGY 790 N
WHAM 1150 N
WHAS 820 N
WHEC 1440 C
WHK 1390 C
WHO 1000 N
WHP 1430 C
WIBO 560 N
WIBW 580 C
WIOD 1300 N
WIP 610 C
WISN 1120 C
WJAR 890 N
WJAS 1290 C
WJAX 900 N
WJDX 1270 N
WJJD 1130 C
WJR 750 N
WJZ 760 N
WKBN 570 C
WKBW 1480 C
WKRC 550 C
WKY 900 N
WLAC 1470 C
WLAP 1200 C
WLBW 1260 C
WLBZ 620 C
WLIT 560 N
WLS 870 N
WLW 700 N
WMAL 630 C
WMAQ 670 C
WMC 780 N
WMT 600 C
WNAC 1230 C
WNAX 570 C
WOAI 1190 N
WOC 1000 N
WOKO 1440 C
WORC 1200 C
WOW 590 N
WOWO 1160 C
WPG 1100 C
WPTF 680 N
WQAM 560 C
WRC 950 N
WREC 600 C
WREN 1220 N
WRR 1280 C
WRVA 1110 N
WSAI 1330 N
WSB 740 N
WSM 650 N
WSMB 1320 N
WSPD 1340 C
WSUN 620 N
WTAG 580 N
WTAM 1070 N
WTAQ 1330 C
WTAR 780 C
WTIC 660 N
WTMJ 620 N
WTOC 1260 C
WWJ 920 N
WWNC 570 C
WXYZ 1240 C

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Program

Time is given by Eastern Daylight Saving. For Eastern Standard time, subtract one hour; for Central Time, two hours for Mountain Time, three hours; and for Pacific Time, four hours.

Programs of the National Broadcasting Company begin with WEAF and WJZ; those of the Columbia Broadcasting System with WABC.

These programs are correct to date but are subject to change daily thereafter

Daily (Except Saturday and Sunday)

6:45-8:00 Tower Health Exercises

WEAF WEEI WFI WGY WCAE WRC
WBEN CKGW

8:00-8:15 Gene and Glenn — Quaker Early Birds

WEAF WJAR WEEI WTAG WCSH WFI
WRC WGY WCAE WTAM WWJ WSAI
CKGW WRVA WPTF WJAX WIOD WFLA
WSUN

8:15-8:30 Morning Devotions

WEAF WRC WCAE WGY WHAS WOW
WFI WCSH WJAR WWJ WPTF WIOD
WAPI WFLA WSUN WTAG WGN WJAX
WJDX WRVA WBEN WSMB WFI

8:30-9:00 Cheerio

WEAF WEEI WCKY WRC WCSH WWJ
WHO WOC WDAF WAPI KPRC WFI
WSB WSM WJAX WPTF WTAG WOAI
WBEN WRVA CKGW WIOD WHAS WFLA
WSUN WTAM WMC WJDX WJAR WGY
WOW WCAE WIBO

9:00-9:30 Something for Everyone

WABC WHEC WPG WCAU WHP WJAS
WDBJ WWNC WXYZ WBCM WDOD WREC
WLAC WBRC KSCJ WMT KMOX KMBC
KOIL KFH KFJF KTRH CFRB

9:15-9:45 Campbell's Orchestra

WEAF WJAR WLIT WTAG WCSH WRC
WDAF WBEN WCAE WHO WTAM WSAI
KSD WOW WOC WWJ CKGW (WLS on
9:30)

9:45-10:00 A. & P. Program

WEAF WJAR WTAG WCSH WRC WGY
WCAE WTAM WWJ WOC KSD WHO
WDAF WTMJ WEBC WRVA WPTF WIOD
WFLA WSUN WHAS WSM WMC WSB
WAPI WSMB WJDX KVOO WBAP KPRC
WOAI WKY WBEN WOW WFI KSTP
WIBO

11:15-11:30 Radio Household Institute

WEAF WJAR WTAG WCSH WLIT WRC
WHAS WSM WSB WCAE WWJ WSAI
KFKX WTAM KSD WTMJ KSTP WEBC
WAPI WSMB WOAI KTHS KVOO KPRC
WKY WEEI WGY WMC WBEN

12:00-12:30 Paul Tremaine and His Orchestra

WABC WHEC WLBZ WORC WPG WCAU
WHP WJAS WLBW WMAL WCAO WTAR
WDBJ WHK WKRC WAIU WWNC WDOD
WREC WLAC WBRC KSCJ WMT KMBC
WDAY KOIL WIBW KFJF KLZ

12:30-1:00 Columbia Revue

WABC WLBZ WORC WPG WCAU WHP
WJAS WLBW WMAL WCAO WTAR WXYZ
WBCM WDOD WREC WLAC WBRC KSCJ
WMT KMBC WDAY WIBW KFJF KLZ

12:30-1:30 National Farm and Home Hour

WJZ WHAM WJR KSTP WRVA WHAS
WREN WFAA WEBC WIOD WAPI WOW
WMC WSB WGAR KVOO WKY WOAI
WRC WHO WDAF WJDX WBAL WSMB
KWK KOA WBZ WBZA WOC KTHS
WFLA WSUN WJAX KFAB KPRC KDKA
WLW KFKX WPTF WSM

1:30-2:00 Hotel Orchestra

WABC WHEC WLBZ WEAN WPG WFAN
WJAS WLBW WMAL WCAO WTAR WDBJ
WKRC WAIU WWNC WXYZ WBCM WDOD
WLAC WBRC

2:30-3:00 American School of the Air

WABC WFBL WKBW WEAN WNAC WCAU
WJAS WLBW WMAL WCAO WTAR WDBJ
WADC WHK WKRC WWNC WGST WXYZ
WSPD WDOD WREC WLAC WBRC WDSU
WOWO WFBM WMAQ WCCO KMOX KMBC
KOIL KFJF KRLD KTSA KLZ KDYL
KVI KOL KFPY KOIN KHJ KFRC

3:00-3:30 Columbia Salon Orchestra

WABC WHEC WLBZ WEAN WNAC WORC
WPG WHP WLBW WMAL WCAO WTAR
WDBJ WHK WKRC WAIU WWNC WXYZ
WBCM WSPD WDOD WREC WLAC WBRC
KSCJ WMT KMBC WDAY KOIL WIBW
KFJF KRLD KTRH KLZ CFRB

5:00-5:30 The Lady Next Door

WEAF WRC KSD WTAG WSM WHAS
WKY KPRC WTAM

5:30-5:45 Little Orphan Annie

WJZ WBZ WBZA WBAL KDKA WGAR

6:05-6:30 Black and Gold Room Orchestra

WEAF WCAE WCSH WWJ WJAR WBEN

6:45-7:00 Uncle Abe and David

WEAF WEEI WJAR WCSH WFI WRC
WTMJ WSM WEBC WCAE WGY WTAG
WTAM WWJ WSAI KSD WOC WHO
WOW WDAF WSB WAPI WSMB WJDX
WENR WHAS

6:45-7:00 Literary Digest Topics

WJZ WBZ WBZA WHAM WBAL KDKA
WRVA WPTF WJAX WIOD WLW WFLA
WSUN

7:00-7:15 Amos 'n' Andy

WJZ WHAM KDKA WBZ WBZA WRC
CKGW WRVA WPTF WJAX WIOD WCKY
WFLA WSUN WLW WJR WGAR CFCF

7:30-7:45 Phil Cook — Quaker Man

WJZ WBZ WBZA WHAM KDKA WREN
KWK WTMJ WEBC KOA KSL KGO
KECA KGW WRC KOMO KHQ KFSD
KTAR WGAR WSMB WSB WPTF WJAX
WIOD WFLA WHAS WSM WMC WJDX
KTHS KPRC WOAI

8:00-8:15 Literary Digest Topics

WFBL WGR WJAS WADC WHK WGST
WXYZ WSPD WREC WBRC WDSU WFBM
WGL WMAQ WCCO WMOX KMBC KOIL
KFJF WRR KTSA

11:00-11:15 Amos 'n' Andy

WMAQ WREN KWK WDAF WTMJ WHAS
WSM WSB WKY WENR KSTP WSMB
WJDX KTHS KPRC WEBC WOAI WMC
KOA KFAB WBAP

11:15-11:30 Arthur Pryor's Cremo Military Band

WADC WKBW WKRC WHK WOWO KMBC
WLBW KOIL WJAS KMOX WFBL WSPD
WGST WBCM WBRC WDOD WRR KLZ
KOIN KOL KFPY WHP KTRH WFBM
KLRA WCCO WISN WREC WCAH WLAC
WDSU KFJF KSCJ KTSA KDYL WIBW
WMT KFH WKBN WNAX KOH WTAQ
WLAP WOKO WACO

Sunday

1:00-2:00 National Oratorio Society

WEAF WJAR WCSH WRC WGY WCAE
WTAM WWJ KSD WOW WOC WHO
WDAF CKGW WTMJ KSTP WEBC WHAS

KPO KOA KGW KFSD KOMO KECA
WBEN KGO CFCF

1:30-2:00 Around the Samovar

WABC WFBL WHEC WDRC WPG WHP
WJAS WMAL WTAR WDBJ WADC WAIU
WKBN WWNC WXYZ WBCM WDOD WREC
WLAC WBRC WDSU WTAQ KSCJ WMT
KMOX KMBC KLRA KFJF KTSA KLZ
KDYL KFPY CFRB WOKO

2:00-3:00 Cathedral Hour

WABC WHEC WLBZ WEAN WNAC WORC
WPG WCAU WHP WMAL WCAO WTAR
WDBJ WKRC WWNC WXYZ WBCM WDOD
WREC WLAC WBRC WFBM WMAQ WBBM
KSCJ WMT KMBC WDAY KOIL WIBW
KFH KFJF KRLD KTRH KTSA KLZ
CFRB

2:30-3:00 Yeast Foamers

WJZ WBZ WBZA WBAL WGAR WJR
WLW KDKA KYW KWK WREN KFAB
WTMJ KSTP WEBC WRVA WPTF WIOD
WFLA WSUN WJAX WHAS WSM WMC
WSB WAPI WJDX WSMB KTHS KVOO
WFAA KPRC WOAI WKY KOA KSL
KPO KECA KGW KHQ KTAR KFSD

2:30-3:00 NBC Artists Service Program

WEAF WOW WWJ KSD WGY WRC
WCAE CFCF

3:00-4:00 National Youth Conference

WJZ WBAL KDKA KWK WREN KFAB
WRVA WJAX WIOD KVOO WFAA WOAI
WFLA WSUN KGW WPTF KGO KOA
KSTP WEBC WMC WSMB KPRC WKY
KPO KOMO KHQ WSB WAPI WGAR
WTMJ KSL

3:00-5:00 New York Philharmonic Orchestra

WABC WHEC WLBZ WEAN WNAC WORC
WCAU WHP WJAS WLBW WMAL WCAO
WTAR WDBJ WKRC WAIU WWNC WXYZ
WBCM WSPD WDOD WREC WLAC WBRC
WFBM WMAQ WCCO KSCJ WMT KMOX
KMBC WDAY KOIL WIBW KFH KFJF
KRLD KTRH KLZ KFRC

4:00-4:30 Williams Oilomatics

WJZ WBZ WBZA KDKA WJR WGAR
WLW KWK WREN KFAB WBAL

4:00-5:00 Dr. S. Parkes Cadman

WEAF WEEI WJAR WCSH WTAG KOA
WOW WKY WOAI WSAI WJAX WHAS
WJDX KVOO KPRC WEBC WDAF WWJ
WFLA WSUN KHQ WHO WOC KGO
KOMO WCAE WFJC WRC KGW WPTF
WMC WGY WSM KTHS WBAP WSB
WSMB WAPI WBEN WRVA WIOD

5:00-5:30 Rev. Donald Grey Barnhouse

WABC WFBL WGR WEAN WDRC WNAC
WCAU WJAS WMAL WADC WKRC WXYZ
WSPD WOWO WMAQ KOIL KRLD WRR

5:00-6:00 Davey Hour

WEAF WJAR WTAG WCSH WFI WRC
WGY WCAE WTAM KSD WSAI WENR
WOC WHO WOW WDAF CKGW WBEN
WEEI WWJ

5:00-6:00 National Vespers

WJZ WBAL WHAM KWK WREN WCKY
KSTP WEBC WIOD WMC KOMO WJDX
WPTF KVOO KPRC WFLA WSUN KOA
KTAR KGO KGW KHQ WSM WKY
WSB WOAI WAPI WSMB WBZ WBZA
WGAR (KFAB on 5:15) (WIBO on 5:30)

5:30-6:00 Sweethearts of the Air

WABC WFBL WKBW WEAN WDRC WNAC
WFAN WCAU WJAS WMAL WADC WKRC
WXYZ WSPD WOWO WBBM KMBC KOIL

6:00-7:00 Catholic Hour

WEAF WEEI WJAR WTAG WCSH WRC
WGY WWJ WEBC WIOD WKY WJDX
KGO KSTP WSMB KOMO KSD KGW
WCAE KECA KTAR WFJC WOC WHO
WDAF WJAX WFLA WSUN WHAS KOA
WSB WBAP KPRC WOAI WRVA WMC
KVOO WSAI WSM WFI WIBO WLIT

7:00-7:30 Westinghouse Salute

WJZ WBZ WBZA WBAL WHAM KDKA
WGAR WJR WCKY KYW KWK WREN
WJAX WIOD WHAS WMC WSM WSMB
WJDX KVOO WOAI WKY

7:15-7:30 Rhythm Choristers — Freddie Rich

WABC WFBL WEAN WNAC WHP WJAS
WLBW WMAL WCAO WTAR WDBJ WADC
WAIU WKBN WWNC WXYZ WDOD WBRC
WDSU WTAQ WFBM KSCJ WMT KMOX
KMBC KLRA KFH KFJF KRLD KTSA
KLZ KFPY KFRC WOKO

7:30-8:00 RCA Victor Program

WEAF WJAR WTAG WCSH WWJ KPRC
WBEN WRC WGY WCAE WTAM WSAI
KYW WRVA WIOD WFLA WSUN WHAS
KSD WDAF WTMJ WEBC WMC WSB
WSMB WJDX KTHS KVOO WOAI WKY
KOA KSL KGO KFI KTAR KFSD
KGW KOMO KHQ

8:00-8:15 Enna Jettick Melodies

WJZ WBZ WBZA WHAM KWK KYW
WKY WJR WREN WFAA KPRC WOAI
WHAS WSM WTMJ KSTP KDKA WMC
KOA WENR WIOD KTHS WSMB KOMO
KFI KGW KSL KHQ WLW WCKY
WSB WPTF WRVA WFLA WSUN KFAB
KFSD KTAR WJDX KPO KVOO KHQ

8:00-8:15 "Devils, Drugs and Doctors"

WABC WFBL WHEC WGR WEAN WDRC
WNAC WCAU WJAS WMAL WCAO WADC
WHK WKRC WGST WXYZ WSPD WREC
WLAC WBRC WDSU WISN WOWO WFBM
WMAQ WCCO KSCJ KMOX KMBC KOIL
WIBW WRR KTSA KLZ KDYL KVI
KOL KFPY KOIN KHJ KFRC

8:00-9:00 Chase and Sanborn Choral Orchestra

WEAF WJAR WTAG WCSH WRC WGY
WCAE WWJ WSAI KSD WOW WIOD
WIBO KSTP WHO WOC WHAS WLIT
WEBC WMC WSB WSMB WKY KTHS
KPRC WOAI WTMJ WTAM WJDX WIOD
WFLA WSUN WDAF WTIC KVOO WBEN

8:15-8:30 Piano Pals

WABC WFBL WHEC WEAN WDRC WNAC
WORC WHP WJAS WLBW WMAL WTAR
WDBJ WADC WKBN WWNC WXYZ WDOD
WREC WDSU WTAQ WOWO WFBM KSCJ
WMT KMBC KLRA KFJF KLZ KDYL
KFPY

8:15-9:15 Colliers Radio Hour

WJZ WBZ WBZA WHAM KDKA WJR
WLW KYW KWK WREN KOA KSL
KHQ KOMO KFI KGW KPO

9:00-9:15 "Our Government," David Lawrence

WEAF WTAG WCSH WEBC WGY WHAS
KSD WKY WSAI WFJC WSB WMC
WSM WFAA WOW WOAI WSMB WJDX
WIOD WFLA WSUN WOC WHO WRC
WWJ KVOO WLIT WBEN WJAR

9:00-9:30 Coty Playgirl — Irene Bordoni

WABC WFBL WGR WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WBBM KMOX
KMBC KOIL

9:15-9:45 Atwater Kent Program

WEAF WEEI WRC WFI WGY WCAE
WTAM WWJ WSAI KSD WOW WSM
WFAA KOA WOAI WSMB KFI KGW
KOMO KPO KHQ KPRC WKY WHAS
WGN WSB WOC WHO WMC WDAF
KSL CKGW WAPI WBEN KSTP

9:30-9:45 World Adventures with Floyd Gibbons

WJZ WBZ WBZA WHAM KDKA WJR
KWK WREN KYW WCKY WGAR

9:30-10:00 Graham-Paige Hour

WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WBT WGST WTOC WQAM WDBO
WDAE WXYZ WSPD WREC WDSU WOWO
WBBM WCCO KMOX KMBC KOIL KFJF
KRLD KTRH KTSA KLZ KDYL KOL
KFPY KOIN KHJ KFRC

9:45-10:15 Iodent Club of the Air

WEAF WWJ WSAI WENR KSD WOW

WDAF WTIC WCAE WJAR WTAG WCSH
WFI WRC WTAM WGY WBEN WEEI

10:00-10:30 Royal's Poet of the Organ
WABC WFBL WKBW WEAN WNAC WCAU
WJAS WLBW WMAL WCAO WADC WHK
WKRC WGST WXYZ WSPD WLAC WOWO
WBBM KMOX KMBC KOIL KLZ KDYL
KOL KFPY KOIN KHJ KFRC

10:15-10:30 "Gangland"
WJZ WHAM WGAR KWK WREN WENR
WDAY WBAL WJR WEBC KFYR KOA

10:15-10:45 National Dairy Productions
WEAF WEEI WJAR WTIC WTAG WCSH
WFI WRC WGY WBEN WCAE WTAM
WWJ WSAI WOW WDAF WSB WAPI
WSMB WJDX WRVA WJAX WIOD WFLA
WSUN WHAS WSM WMC

10:30-11:00 Kellogg Slumber Music
WJZ WBZ WBZA WHAM KDKA WJR
KWK WENR WREN WBAL WLW

10:45-11:00 The Round Towners with Freddie Rich
WABC WFBL WEAN WDRC WNAC WORC
WPG WCAU WJAS WLBW WMAL WCAO
WTAR WDBJ WADC WKBN WXYZ WDOD
WREC WLAC WBRC WDSU WTAQ WOWO
WFBM KSCJ WMT KMOX KMBC KLRA
KFJF KRLD KTSA KLZ KFPY CFRB
WOKO

10:45-11:15 Sunday at Seth Parker's
WEAF WEEI WCSH WRC WGY WOW
WDAF CKGW WTMJ KSTP WCAE WTAM
WFJC WWJ KYW WOW WHO WEBC
WJAX WIOD WHAS WSM WJDX KPRC
WKY KOA KGO KGW WSB KTAR
KFSD WRVA WBEN WLIT

11:00-12:00 Back Home Hour
WABC WHEC WLBZ WPG WHP WMAL
WTAR WDBJ WXYZ WBCM WSPD WDOD
WREC WLAC WFBM WCCO WMT WDAY
WNAX WIBW KFH KFJF KRLD KTRH
KTSA

11:30-12:00 Russian Cathedral Choir
WEAF WRC WFJC WWJ WBAP KOA
WOW WSB WGY WTAM KSTP WEBC
WIOD WHAS WBEN

Monday

3:30-4:00 Sixteen Singers
WEAF WRC WOC WHO KSD KSTP
WTAM WGY WWJ

3:30-4:00 Chicago Serenade
WJZ WHAM WJR WLW WLS KDKA
WFLA WSUN WMC WAPI WJAX WGAR

4:00-4:30 Dance Orchestra
WJZ WBAL KSTP KTAR KOA KGO
KWK KFSD WHAM WSM WSB WSMB
WMC WBZ WBZA WGAR KYW

4:15-4:30 U.S. Army Band
WABC WLBZ WEAN WNAC WORC WPG
WCAU WLBW WMAL WCAO WTAR WDBJ
WAIU WWNC WXYZ WBCM WSPD WDOD
WREC WLAC WBBM WCCO KSCJ WMT
KMOX KMBC WDAY KOIL KFJF KRLD
KTRH KLZ KOL KFRC CFRB

4:30-5:00 Wardman Park Hotel Orchestra
WABC WLBZ WEAN WNAC WORC WPG
WFAN WHP WLBW WMAL WCAO WTAR
WDBJ WKRC WAIU WWNC WXYZ WBCM
WSPD WDOD WREC WLAC WBRC WCCO
KSCJ KMOX KMBC WDAY KOIL WIBW
KFJF KRLD KTRH KTSA KLZ KOL
KFRC CFRB

6:15-6:45 Mormon Tabernacle Choir
WJZ WBAL WSM KWK KOA KSL
KGO KOMO KFAB KGW CKGW KSTP
KTAR KPO WHAS WAPI KFSD WRC
WSMB

7:00-7:15 Current Events— Kaltenborn
WDBJ WKRC WWNC WXYZ WBCM WDOD
WBRC KSCJ WMT WDAY KOIL WABC
WHEC WLBZ WORC WHP WJAS WLBW
WMAL WCAO WTAR WIBW KFH KFJF
KTRH KOL KFRC

7:15-7:30 Tastyeast Jesters
WJZ WCKY WHAM WBZ WBZA WREN
KDKA WRC WGAR

7:45-8:00 Careless Love — Negro Sketch
WEAF WCSH WTAG WGY WOC WHO
WOW WEEI

7:45-8:30 Roxy's Gang Program
WJZ WHAM KWK WSB WSM KFAB
CKGW WIBO WGAR

8:00-8:15 "How's Business?"
WEAF WJAX WJAR WRC KSD WCAE
WWJ KOMO WSAI WDAF WJDX KGO
KVOO KECA KHQ WFLA WSUN WHAS
WEBC WSMB KGW KTAR KFSD KSL
WMC

8:15-8:30 Pennzoil Pete
WEAF WEEI WTIC WJAR WCSH WLIT
WRC WBEN WCAE WTAM WSAI KYW
KSD WOC WHO WHAS WSM WMC
WSB WDAF WEBC WRVA WPTF WFLA
WSUN WIOD WSMB WJDX WKY KTHS
WFAA WOAI CKGW WTMJ WWJ KSTP

8:15-8:30 Barbasol Program
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WISN WFBM WCCO
KMOX KMBC KOIL

8:30-9:00 A. & P. Gypsies
WEAF WEEI WTAG WJAR WTIC WCSH
WLIT WRC WGY WCAE WWJ WSAI
WGN KSD WOC WDAF WTAM WOW
WHO WBEN

8:30-9:00 The Simmons Hour
WABC WFBL WGR WEAN WDRC WNAC
WORC WPG WCAU WJAS WLBW WMAL
WCAO WTAR WDBJ WADC WHK WKRC
WAIU WWNC WBT WGST WXYZ WBCM
WSPD WREC WLAC WBRC WDSU WTAQ
WOWO WFBM WMAQ WJJD WCCO KSCJ
WMT KMOX KMBC KOIL WIBW KFH
KFJF WRR KTRH KLZ KDYL KOL
KFPY KOIN KHJ KFRC CFRB

8:30-9:00 Gold Medal Express
WJZ WBZ WBZA KDKA WJAX WIOD
WFLA WSUN WGAR WJR WLW WOAI
WKY KYW KWK WREN KOA KSL
KFAB WRVA WPTF WBAL

9:00-9:30 Maytag Orchestra
WJZ WBZ WBZA WHAM KDKA WJR
KWK KYW KSTP WEBC KTHS WKY
WOAI KOA KSL KGO KECA KGW
KHQ KOMO KVOO WLW WFAA KPRC
WGAR

9:00-9:30 The Three Bakers
WABC WFBL WHEC WKBW WLBZ WEAN
WDRC WNAC WORC WPG WCAU WHP
WJAS WLBW WMAL WCAO WTAR WDBJ
WADC WHK WKRC WWNC WBT WGST
WTOC WQAM WDBO WDAE WXYZ WBCM
WSPD WDOD WREC WLAC WBRC WDSU
WISN WOWO WFBM WMAQ WCCO KSCJ
WMT KMOX KMBC KLRA WDAY WNAX
KOIL WIBW KFH KFJF WRR KTRH
KTSA KLZ KDYL KOL KFPY KOIN
KHJ KFRC

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

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

9:30-10:00 Bourjois
WABC WFBL WKBW WEAN WNAC WCAU
WJAS WLBW WMAL WCAO WADC WHK
WKRC WBT WXYZ WSPD WOWO WBBM
KMOX KMBC KOIL

10:00-10:30 Robert Burns Panatela Program
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WFBM WMAQ
WCCO KMOX KMBC KOIL KFJF KRLD
KTRH KTSA KLZ KDYL KVI KOL
KFPY KOIN KHJ KFRC

10:00-10:30 Stromberg-Carlson Program
WJZ WBZ WBZA WHAM KDKA KYW
KWK WREN WEBC WRVA WJAX WIOD
WHAS WSM WMC WSB WSMB WOAI
KOA KPRC KGO KFI WCKY KGW
KHQ KOMO WJDX WFLA WSUN WJR
KTAR KFSD WAPI WKY WGAR

10:00-10:30 Adventures of Sherlock Holmes
WEAF WJAR WCSH WWJ WTAG WEEI
WLIT WTAM WSAI WRC WGN WOC
WHO WBEN WCAE

10:30-11:00 Empire Builders
WJZ WBZ WBZA WHAM KDKA WJR
WLW KYW KWK WREN WTMJ WOAI
KSTP WEBC KOA KSL KGO KECA
KGW KOMO KHQ KTAR KFSD WKY
WBAP KPRC WGAR

10:30-11:00 Symphonic Rhythm Makers
WEAF WJAR WTAG WRC WCAE WTAM
WWJ WJDX WGY CFCF WEEI WENR

10:30-11:00 Savino Tone Pictures
WABC WFBL WEAN WDRC WNAC WORC
WJAS WLBW WMAL WCAO WTAR WDBJ
WADC WHK WWNC WBCM WDOD WREC
WBRC WISN WTAQ KSCJ WMT KMBC
KLRA WNAX KFJF KTSA KFPY CFRB
WOKO

11:00-11:15 Morton Downey — Leon Belasco's Orchestra
WABC WKBW WGR WEAN WDRC WNAC
WORC WPG WCAU WLBW WCAO WTAR
WDBJ WHK WKBN WBT WXYZ WBCM
WSPD WREC WLAC WBRC WISN WFBM
WCCO KSCJ KMOX KLRA WDAY KOIL
WIBW KFH KFJF KTRH KLZ KOL
KFPY CFRB

11:00-11:30 Florence Richardson and Orchestra
WEAF WCAE WOW (WSAI off 11:15) (WJDX
WMC WSB KSD WSM on 11:15) CFCF
WIOD

11:30-12:00 Henry Busse and his Orchestra
WEAF WWJ KSD WOC WHO WOW
WDAF KSTP WEBC KOA WTAM

Tuesday

10:15-10:30 Through the Looking Glass
WJZ WBZ WBZA WHAM WLW WREN
KFKX KDKA KWK CKGW KFAB WKY
KVOO WOAI WBAP WGAR

3:30-4:00 Golden Gems
WEAF WEEI WTIC WTAG WTAM WFJC
KSD WFLA WSUN KSTP WOC WHO
CKGW

4:00-5:00 Pacific Vagabonds
WJZ WHAM WJR WGAR WLW WLS
KWK KFAB WREN WRC WJAX WSM
WMC WAPI WFAA KSTP KOA KGO
KFSD KTAR

4:15-4:30 Italian Idyll
WABC WLBZ WEAN WNAC WORC WPG
WCAU WLBW WMAL WCAO WTAR WDBJ
WKRC WAIU WWNC WXYZ WSPD WDOD
WREC WLAC WBRC WBBM WCCO KSCJ
WMT KMOX KMBC WDAY KOIL KFJF
KTRH KTSA KLZ KFRC CFRB

6:30-6:45 'Who's Behind the Name?"
WEAF WFI WRC WCAE KOA KSD
KECA WIBO KGO KOMO WOC WHO
WSMB KGW KFSD WTAM WJDX KPRC

7:00-7:15 Political Situation in Washington
WABC WGR WNAC WCAU WJAS WLBW
WMAL WTAR WWNC WXYZ WSPD WDOD
WTAQ KFH KRLD WACO KOH KFRC

7:00-7:30 Voter's Service
WEAF WJAR WCSH WFI WBEN WCAE
WWJ WOC WHO WOW WOAI KOMO
KGO WTAG KSTP WEBC KGW WSAI
KOA WTIC

7:30-7:45 Winegar's Barn Orchestra
WDRC WORC WHP WJAS WLBW WDBJ
WAIU WKBN WWNC WXYZ WDOD WREC
WLAC WBRC WDSU WISN WTAQ WGL
KSCJ WMT KLRA KFH KDYL KFPY
KFRC CFRB

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

8:00-8:30 Paul Whiteman's Paint Men
WJZ WBZ WBZA WHAM KDKA WTMJ
WJR WLW KYW KWK WREN WRVA
WJAX KGW KOMO KHQ KFSD KTAR
WGAR WGY KOA WIOD WHAS WSM
WMC WSB WJDX WSMB WOAI KFAB
KGO KECA WBAL WPTF

8:00-8:30 Blackstone Plantation
WEAF WCAE WTAM WWJ WSAI WIBO
KSD WOC WHO WOW WDAF KOA
WEEI WJAR WTAG WCSH WFI WRC
WGY WBEN

8:15-8:30 Old Gold Character Readings
WABC WFBL WHEC WGR WLBZ WEAN
WDRC WNAC WORC WPG WCAU WHP
WJAS WLBW WCAO WTAR WDBJ WADC
WKRC WAIU WKBN WWNC WBT WGST
WTOC WQAM WDBO WDAE WXYZ WBCM
WSPD WDOD WREC WLAC WBRC WDSU
WISN WJJD WCCO KSCJ WMT KMOX
KMBC KLRA WDAY WNAX KOIL WIBW
KFH KFJF WRR KTRH KTSA KLZ
KDYL KVI KOL KFPY KOIN KHJ
KFRC

8:30-9:00 Florsheim Frolic
WEAF WTAG WFI WRC WGY WCAE
WWJ WSAI WGN KSD WDAF WEBC
WRVA KVOO WJAX WIOD WSUN WFLA
WSM WMC WSB WSMB WJDX KPRC
WOAI WKY KOA KSL KTHS WJAR
WHAS WCSH WBAP WBEN KSTP

8:45-9:00 Lee Morse — Nat Brusiloff's Orchestra
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WGST WTOC WQAM WDBO WDAE
WXYZ WSPD WLAC WDSU WOWO WMAQ
WCCO KMOX KMBC KOIL KTRH KLZ
KDYL KVI KOL KFPY KOIN KHJ
KFRC

9:00-9:30 Household Celebrities Program
WJZ WBZ WBZA WBAL WHAM KDKA
WGN KWK WREN WJR

9:00-9:30 McKesson Musical Magazine
WEAF WEEI WJAR WTAG WCSH WFI
WRC WBEN WTAM WSAI KSD WOW
WTMJ WEBC WRVA WIOD WFLA WSUN
WSM WMC WSB WSMB WJDX KPRC
WKY KOA KSL KGO KECA KTAR
KFSD KGW KOMO KHQ KVOO WOAI
KYW

9:00-9:30 Henry-George
WABC WFBL WGR WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WISN WOWO WFBM
WBBM WCCO KMOX KMBC KOIL KFH

9:30-10:00 The Philco Symphony Concert
WABC WFBL WHEC WKBW WEAN WDRC
WNAC WCAU WJAS WMAL WCAO WTAR
WADC WHK WKRC WGST WXYZ WSPD
WDOD WREC WLAC WBRC WDSU WISN
WOWO WFBM WMAQ WCCO WMT KMOX
KMBC KOIL KFH KFJF KRLD KTRH
KTSA CFRB

9:30-10:00 Death Valley Days
WJZ WBAL WCKY KWK WBZ WBZA
WHAM KDKA WENR

9:30-10:00 Happy Wonder Bakers
WEAF WJAR WEEI WTAG WCSH WRC
WGY WCAE WTAM WWJ WSAI WIBO
KSD WHO WOW WTMJ KSTP WEBC
KVOO WKY KOA KSL KGO KOMO
KECA KGW KHQ WBAP WOC WRVA
WFI WDAF WBEN KPRC

10:00-10:15 Graybar — Mr. and Mrs.
WADC WCAO WNAC WKBW WBBM WKRC
WHK WXYZ WOWO KMBC WABC WLBW
KOIL WCAU WJAS WEAN KMOX WFBL
WSPD WMAL WWNC WGST WBRC KRLD
KLZ KTRH WFBM WLRA WCCO WISN
WREC WTAR WLAC WDSU KFJF WHEC
WDBJ KTSA KDYL KFH WKBN KHJ
KOIN KFRC KOL KFPY

10:00-11:00 Lucky Strike Dance Orchestra
WEAF WEEI WJAR WTAG WCSH WFI
WRC WCAE WWJ WSAI KSD WOC
WHO WTMJ WEBC WRVA WJAX WIOD
WFLA WSUN WHAS WSM WMC WSB
WSMB WJDX WOAI WKY KOA KGO
KECA KGW KHQ KOMO KTAR KFSD
WIBO WDAF WTAM WAPI WBEN

10:15-10:30 Blue Ribbon Malt Jester
WABC WFBL WGR WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WBT WXYZ WSPD WLAC WBRC
WDSU WOWO WMAQ WCCO KMBC KLRA
KOIL KFH KRLD KTSA KLZ

10:30-10:45 Clara, Lu and Em
WJZ WBAL WHAM KDKA WJR WLW
KWK WREN WGAR WBZ WBZA WGN

10:30-11:00 Paramount Publix Playhouse
WABC WFBL WHEC WKBW WLBZ WEAN
WDRC WNAC WPG WCAU WHP WJAS
WMAL WCAO WTAR WDBJ WADC WHK
WKRC WKBN WWNC WBT WGST WTOC
WQAM WDBO WDAE WXYZ WBCM WSPD
WDOD WREC WLAC WBRC WDSU WISN
WOWO WFBM WBBM WCCO KSCJ WMT
KMOX KLRA WDAY WNAX KOIL WIBW
KFH KFJF KRLD KTRH KTSA KLZ
KDYL KOL KFPY KOIN KHJ KFRC
KNX CFRB

11:00-11:15 Fletcher Henderson and his Orchestra
WABC WFBL WHEC WDRC WORC WCAU
WJAS WLBW WCAO WTAR WDBJ WADC
WKBN WWNC WXYZ WBCM WDOD WREC
WLAC WBRC WDSU WISN WTAQ KSCJ
WMT KMOX KLRA WNAX KFH KRLD
KTSA KDYL KFPY

11:15-12:00 Cab Calloway and his Orchestra
WEAF WFI WOC WHO WOW KSD
WTIC WBEN WMC

Wednesday

2:45-3:00 Sisters of the Skillet
WJZ WBAL WHAM KDKA KWK WGAR
WREN KFAB CKGW KSTP WFLA WSUN
WMC WSB KOA KGO KECA WJR
WGN CFCF WRVA WPTF WJAX WIOD
WSM WPAI WJDX KPRC

3:00-3:15 Edna Wallace Hopper
WJZ WBZ WBZA WBAL WHAM KDKA
WGAR WLW WGN KWK WREN WTMJ
WJDX KOA KSTP WEBC WRVA WPTF
WJAX WIOD WFLA WSUN WHAS WSM
WMC WSB WSMB KSL KGO KECA
KGW KOMO KHQ KFAB WAPI KFSD

3:30-4:00 Evening Stars
WJZ WHAM WGAR KWK WREN WJAX
WLW WIBO CKGW WEBC KSTP WPTF
WIOD WFLA WSUN WSM WMC WSB
WAPI KPRC WOAI WKY KOA KSL
KTHS WBAP WJDX WSMB WHAS WBAL
WRVA WBZ WBZA WJR KYW KDKA
WJAX

4:00-5:00 U.S. Navy Band
WABC WGR WEAN WNAC WPG WCAU
WLBW WMAL WCAO WTAR WADC WWNC
WXYZ WSPD WDOD WLAC WDSU WISN
WTAQ WBBM WCCO KMOX KMBC KRLD
WACO KLZ KOH KFRC CFRB

7:00-7:30 Morton Downey
WABC WHEC WLBZ WEAN WNAC WORC
WCAU WHP WJAS WLBW WMAL WCAO
WTAR WDBJ WKRC WAIU WWNC WXYZ
WBCM WDOD WLAC WBRC KSCJ WDAY
WIBW KFJF KTRH KOL KFRC

7:15-7:30 Science Speaks
WEAF KFI KPO KGO WFI KOMO
KTAR KFSD WJAR WENR

7:30-7:45 Evangeline Adams, Astrologer
WABC WFBL WHEC WGR WEAN WDRC
WNAC WCAU WCAO WDBJ WTAR WADC
WHK WKRC WAIU WWNC WGST WXYZ
WSPD WDOD WREC WLAC WBRC WDSU
WISN WFBM WGL WCCO KMOX KMBC
KLRA KOIL KFJF WRR KTRH CFRB

7:45-8:00 "Back in the News in Washington"
WEAF WRC KOA KECA KGO WGY
WCAE WFJC WBEN WRVA WKY KOMO
KFSD WSAI WIBO KSD WOC WHO
WOW WDAF WAPI

7:45-8:00 Daddy and Rollo
WABC WFBL WKBW WEAN WNAC WCAU
WJAS WLBW WMAL WCAO WADC WKRC
WXYZ WSPD WREC WISN WFBM WGL
WMAQ WCCO KMOX KOIL WRHM

8:00-8:15 Listerine Program—Bobby Jones
WEAF WEEI WTIC WJAR WTAG WCSH
WLIT WRC WBEN WTAM WWJ WSAI
KSD WOC WHO WOW WPTF WIOD
WFLA WSUN WHAS WSM WSB WSMB
WJDX WFAA WOAI KOA

8:15-8:30 Radiotron Varieties
WEAF WTIC WJAR WTAG WRC WBEN
WTAM WSAI WIBO KSD WOW WIOD
WSM WSB WSMB WJDX WOAI KOA
KHQ KOMO KFSD KTAR KECA KSL
KGO KOA KVOO

8:30-9:00 Mobiloil Concert
WEAF WEEI WJAR WTAG WCSH WLIT
WRC WSAI KSD WOW WTAM KOA
KVOO WFAA WOAI WKY KPRC WTIC
KSL WGY WGN WEBC WDAF WCAE
WHO WOC WWJ WBEN

8:30-9:00 The Sunkist Musical Cocktail
WABC WFBL WGR WEAN WDRC WNAC
WFAN WCAU WJAS WMAL WCAO WADC
WHK WKRC WXYZ WSPD WOWO WJJD
KMOX KMBC KOIL KLZ KDYL KOL
KFPY KOIN KHJ KFRC

8:30-9:00 Canadian Pacific Musical Crusaders
WJZ WGAR WBZ WBZA WHAM KDKA
KYW KWK WCKY WREN KFAB CKGW

9:00-9:30 Gold Medal Fast Freight
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WTAR WDBJ
WADC WHK WKRC WCAH WXYZ WSPD
WLAP WREC WLAC WISN WOWO WFBM
WMAQ WCCO KSCJ KMOX KMBC KOIL
KFH KFJF KRLD KLZ KDYL KOL
KFPY KOIN KHJ KFRC KMJ

9:00-9:30 Halsey, Stuart Program
WEAF WEEI WJAR WTAG WCSH WLIT
WRC WGY WCAE CKGW WRVA WJAX
KOA KSL KGO KGW KOMO KHQ
WSAI KSD WOC WHO WOW WWJ
WSMB KVOO KPRC WOAI KSTP WTMJ
KYW WHAS WSM WMC WSB KFI
WBEN WTAM

9:30-10:00 Arabesque — Desert Play
WABC WFBL WDRC WORC WPG WJAS
WLBW WMAL WDBJ WWNC WXYZ WBCM
WDOD WREC WDSU WISN WTAQ WFBM
WMT KMOX KLRA WNAX KFJF KTSA
KLZ KDYL KFPY CFRB

9:30-10:30 Palmolive Hour
WEAF WEEI WTIC WJAR WTAG WCSH
WLIT WRC WGY WCAE WSAI WGN
KSD WOC WOW WSMB WTMJ KSTP
WHAS WSM WMC WDAF WHO WSB
WJAX WOAI KOA KSL KGO KGW
KOMO KHQ WFAA KPRC WWJ WTAM
KFI WBEN (KVOO of 10:00)

9:30-10:30 Camel Pleasure Hour
WJZ WBZ WBZA WHAM KDKA WREN
WLW KYW WSJS WRVA WJR KWK
WIOD WJAX WFLA WSUN

10:00-10:15 Vitality Personalities
WABC WADC WJAS WNAC WKBW WBBM
WKRC WBT WXYZ WOWO KMBC KOIL
WCAU WEAN KMOX WFBL WSPD WMAL
WDRC WGST WBRC WRR KTRH WFBM
KLRA WISN WCAH WLAC WDSU KFJF
KTSA KDYL KHJ KOIN KFRC KOL
KFPY

10:15-10:30 Peter Pan Forecasts
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WBBM KMOX
KMBC KOIL KRLD CFRB

10:30-10:45 McAleer Polishers
WABC WFBL WKBW WLBZ WEAN WDRC
WNAC WORC WPG WCAU WJAS WMAL
WCAO WTAR WADC WHK WKRC WCAH
WBT WGST WXYZ WSPD WREC WLAC
WDSU WISN WOWO WFBM WMAQ WCCO
KSCJ WMT KMOX KMBC KLRA KOIL
KFJF WRR KTRH KTSA WACO KLZ
KDYL CFRB CKAC WOKO

10:30-11:00 Coca Cola Program
WEAF WEEI WTIC WJAR WTAG WCSH
WLIT WRC WCAE WSAI WOC WEBC
WKY KYW KSD WRVA KSTP WJAX
WIOD WSM WSMB KTHS KPRC WOAI
KOA KSL KGO KECA KGW KHQ
KOMO WJDX WGY WDAF WHAS WTAM
WHO WOW KFSD WMC WSB WWJ
WAPI WBEN

10:45-11:15 Columbia Concerts Program
WABC WFBL WEAN WDRC WORC WPG
WIP-WFAN WCAU WJAS WLBW WMAL
WCAO WTAR WDBJ WADC WHK WKBN
WWNC WXYZ WBCM WDOD WREC WLAC
WBRC WDSU WISN WTAQ WOWO WFBM
KSCJ WMT KMOX KMBC KLRA WNAX
KFH KFJF KRLD KTSA KDYL KFPY
CFRB

11:15-12:00 Vincent Lopez and his Orchestra
WEAF WRC WCAE KSD WGY WLIT
WOC WHO (WWJ WFLA WSUN off 11:15)
(WAPI WDAF on 11:15)

11:30-12:00 Guy Lombardo and his Royal Canadians
WABC WEAN WDRC WNAC WPG WCAU
WLBW WTAR WDBJ WADC WKBN WWNC
WXYZ WBCM WDOD WREC WLAC WBRC
WDSU WISN KSCJ KMOX KMBC KLRA
WNAX KFH KTSA KLZ KDYL

Thursday

10:00-10:15 Ceresota Program
WEAF WJAR WTAG WCSH WFI WRC
WGY WCAE WWJ WSAI KYW KSTP
WRVA WTAM WBEN WOC WHO

11:30-11:45 Odorono-Cutex Program
WJZ WHAM KDKA KWK WREN WLW
WIBO KPRC WKY WOAI WBZ WBZA
KVOO WJR WFAA

3:30-4:00 Chicago Serenade
WJZ KDKA WJR WREN KFAB KOA
WLW WSM WMC WAPI WFLA WSUN
CKGW

4:30-5:00 U. S. Army Band
WJZ WLW KWK WREN KFAB WJAX
WSM KSTP WSMB

5:30-5:45 Rinso Talkie
WEAF WEEI WTIC WTAG WJAR WLIT
WRC WGY WBEN WCAE WTAM WWJ
KSD WOC WHO WSAI KYW

7:00-7:30 Mid-Week Federation Hymn Sing
WEAF WMC WIBO WWJ WHAS WOC
WHO KOA WBEN

7:30-7:45 St. Moritz Orchestra
WEAN WDRC WHP WJAS WLBW WMAL
WDBJ WKBN WBT WXYZ WREC WBCM
WLAC WBRC WISN WFBM WGL KSCJ
KMOX WDAY WNAX KOIL KFJF KTRH
KVI KFPY KFRC

8:00-8:15 Dixie Spiritual Singers
WJZ WBZ WBZA KFAB KWKH WREN
WBAL KDKA WGAR WJR WCKY WLS

8:00-9:00 Fleischmann Hour — Rudy Vallee
WEAF WEEI WTAG WJAX WIOD WJDX
WJAR WCSH WFI WRC WGY WCAE
WHO WOW WDAF WWJ WHAS KTAR
WMC WSB WSMB WEBC KOA WRVA
KSL KOMO WOAI WSM WOC WAPI
KGO KHQ KECA KSD CKGW WTAM
KGW KSTP WGN KPRC WBEN (WTMJ
KTHS WSAI WBAP WKY of 8:30)

8:15-8:30 Rin-Tin-Tin Thriller
WJZ WBZ WBZA WBAL KDKA WGAR
WJR KWK WREN WLW KYW KFAB

8:30-8:45 Kaltenborn Edits the News
WABC WFBL WGR WEAN WDRC WNAC
WORC WCAU WJAS WMAL WCAO WADC
WHK WKRC WXYZ WSPD WOWO WMAQ
WCCO KMOX KMBC KOIL

8:30-9:00 Salada Salon Orchestra
WJZ WBZ WBZA WBAL WHAM KDKA
WJR WIBO KWK WREN KFAB WGAR

8:45-9:00 The Hamilton Watchman
WABC WFBL WGR WEAN WNAC WCAU
WJAS WLBW WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WJJD KMOX
KMBC KOIL

9:00-9:15 Premier Salad Dressers
WABC WHEC WKBW WPG WJAS WLBW
WMAL WCAO WTAR WWNC WXYZ WSPD
WDOD WLAC WDSU WISN WTAQ KMBC
KFH KRLD WACO KLZ KOH

9:00-9:30 Blackstone Plantation
WJZ WBZ WBZA WBAL KDKA WCKY
WHAM

9:00-9:30 Arco Birthday Party
WEAF WEEI WJAR WTAG WCSH WFI
CKGW WRC WGY WSB WSM WIOD
WJAX WOAI KOA KSL WKY WBAP
WRVA WSTP WWJ WSAI KSD WDAF
KYW WCAE WEBC WOW WSMB WJDX
WOC WFJC WTMJ WMC WHO KGO
KECA KOMO KHQ KGW WAPI WTAM
WBEN

9:15-9:30 Old Gold Character Readings
WABC WFBL WHEC WGR WLBZ WEAN
WDRC WNAC WORC WPG WCAU WHP
WJAS WLBW WCAO WTAR WDBJ WADC
WHK WKRC WAIU WKBN WWNC WBT
WGST WTOC WQAM WDBO WDAE WXYZ
WBCM WSPD WDOD WREC WLAC WBRC
WDSU WISN WOWO WFBM WBBM WCCO
KSCJ WMT KMOX KMBC KLRA WDAY
WNAX KOIL WIBW KFH KFJF KRLD
KTSA KLZ KDYL KVI KOL KFPY
KOIN KHJ KFRC

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

9:30-10:00 Detective Story Magazine
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WBBM KMOX
KMBC KOIL

9:30-10:00 Maxwell House Ensemble
WJZ WBZ WBZA WBAL WLW KSTP
WKY WTMJ WEBC WHAS WSM WJAX
KPRC KOA WRVA WSB WBAP KYW
KWK WREN WIOD WJR WSMB WOAI
KECA KGW KOMO KHQ WAPI WMC
WHAM KDKA KSL KGO

10:00-10:30 The Lutheran Hour
WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WDSU WOWO WBBM
WCCO WMT KMOX KMBC WNAX KOIL
KRLD KLZ KDYL KOL KFPY KOIN
KHJ KFRC

10:00-11:00 Lucky Strike Dance Orchestra
WEAF WEEI WJAR WTAG WCSH WFI
WRC WGY WCAE WWJ WSAI WBEN
KSD WOW WKY WOAI KOA KSL
WTMJ WIOD WHAS WSM WMC WSMB
KYW KVOO WDAF WJAX KPRC WEBC

WRVA WFLA WSUN WSB WFAA KFSD
KTAR (KGO KGW KFI KOMO KHQ
off 10:30) (WOC WHO KTHS on 10:30)

10:45-11:00 Harriet Lee — Nat Brusiloff's Orchestra

WABC WFBL WEAN WDRC WNAC WORC
WIP-WFAN WJAS WLBW WMAL WCAO
WTAR WDBJ WADC WKBN WWNC WXYZ
WBCM WDOD WREC WLAC WBRC WDSU
WISN WTAQ WGL KSCJ WMT KMBC
KLRA WNAX KFJF KRLD KTSA KLZ
KDYL

11:00-11:15 Jack Denny and his Orchestra

WABC WFBL WDRC WORC WPG WCAU
WJAS WLBW WMAL WCAO WTAR WDBJ
WKBN WWNC WXYZ WBCM WDOD WREC
WLAC WBRC WDSU WISN WTAQ WGL
KSCJ WMT KMOX KLRA WNAX KFH
KFJF KRLD KLZ KDYL KFPY

11:15-12:00 Cab Calloway and his Orchestra

WEAF WWJ WOW WFI KSTP WJDX
WDAF WTAM WOC WHO WIBO WGY
WCAE

11:30-12:00 Radio Roundup

WABC WKBW WEAN WNAC WPG WCAU
WLBW WMAL WCAO WTAR WADC WWNC
WXYZ WSPD WDOD WLAC WDSU WISN
WTAQ WCCO KMBC KFH WACO KLZ
CFRB

Friday

4:00-4:30 Dancing Melodies

WEAF WTAG WCAE WFJC WTAM WWJ
WOC WHO WOW WDAF WBEN

4:00-5:00 Radio Guild

WJZ WBAL WHAM WRC CKGW WPTF
WJAX KGO KFI KOMO KFSD KTAR
KFAB KSTP WEBC WSM WMC WREN
KSL KOA KYW KWK WJR WGAR
WLW WTMJ WSB WSMB KVOO WOAI
WKY KPRC WRVA WJDX

4:45-5:00 National Child Health Series

WABC WFBL WDRC WORC WPG WIP-
WFAN WHP WMAL WTAR WDBJ WADC
WAIU WWNC WXYZ WBCM WDOD WREC
WLAC WISN WTAQ KSCJ WMT KMOX
KMBC KLRA KFJF KRLD KTSA KLZ
KDYL KFPY KFRC

5:00-5:45 Light Opera Gems

WABC WKBW WGR WDRC WHP WJAS
WLBW WCAO WTAR WAIU WKBN WBT
WXYZ WBCM WSPD WREC WLAC WBRC
WISN WGL WCCO KSCJ KMOX WDAY
KOIL KFH KFJF KRLD KTRH KTSA
KLZ CFRB

6:00-6:45 Winegar's Barn Orchestra

WABC WGR WFAN WJAS WLBW WCAO
WTAR WADC WWNC WDOD WLAC WDSU
WISN WTAQ WBBM KFH KRLD KLZ
KOH KFRC

7:00-8:00 Major Bowes' Family

WEAF WJAR WCSH WLIT WBEN WCAE
WWJ WENR WOC WHO KSTP WHAS
WMC WSB WSMB KOA KGO KECA
KGW KOMO KTAR

8:00-8:30 Nestle's Program

WJZ WBZ WBZA WHAM WIBO KWK
WREN KFAB WJR WLW KDKA WGAR

8:00-9:00 Cities Service Concert Orchestra

WEAF WEEI WTIC WLIT WRC WCAE
WJAR WCSH WOW KYW KSD WDAF
KSTP WTMJ WKY WOC KOA WEBC
WOAI KOMO KGO KGW KHQ KSL
WTAG CKGW KECA WHO WSAI WTAM
WBEN WWJ (WFAA KPRC off 8:30)

8:30-9:00 The Dutch Masters

WABC WFBL WGR WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WKRC
WXYZ WSPD WBBM WCCO KMOX KMBC
KOIL

8:45-9:00 Natural Bridge Revue

WJZ WHAM KDKA KWK WREN WJAX
WIOD WIBO WBZ WBZA WFLA WSUN
WRVA WJR

9:00-9:30 Clicquot Club Eskimos

WEAF WEEI WTIC WJAR WTAG WCSH
WLIT WRC WOW WCAE WSAI WIBO
KSD WWJ WDAF WOC WHO WGY
WBEN

9:00-9:30 Interwoven Pair

WJZ WHAM WMC KDKA WJAX WKY
WREN KPRC KWK WBZ WBZA KGW
WSMB WIOD WFAA WJR WTMJ KSTP
WHAS KYW WEBC WCKY WSM WRVA
WSB WAPI WOAI KOA KSL KGO
KECA KGW KOMO KHQ KFSD KTAR
WJR WGAR

9:00-10:00 True Story Hour

WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WMAQ KMOX
KMBC KOIL

9:30-9:45 Enna Jettick Songbird

WEAF WEEI WJAR WTAG WCSH WRC
WLIT WGY WBEN WCAE WWJ WSAI
WENR KSD WOC WHO WOW WDAF
CKGW WTAM CFCF

9:30-10:00 Armour Program

WJZ WBZ WBZA WJR KYW WREN
KSTP WEBC WRVA WMC WSB WGAR
WOAI KOA KSL KGO WKY WHAS
KGW KHQ KOMO KDKA WJAX WJDX
WIOD WTMJ WAPI WHAM KWK WSM
WLW WSMB KFI

9:45-10:00 "Saki Get Rich"

WEAF WJAR WTAG WCSH WRC WLIT
WGY WCAE KSD WBEN WENR

10:00-10:30 Armstrong Quakers

WJZ KDKA WBZ WBZA KYW KWK
WHAM KPRC WJR WTMJ WEBC WHAS
WSM WSB WOAI KOA WSMB KSL
KGW KOMO KHQ WMC KFI WBAP
WCKY KTHS KSTP KVOO WKY

10:00-10:30 Eastman Program

WEAF WJAR WCSH WCAE WWJ KSD
WSAI WRC WBEN WLIT WTAG WGY
WTAM WOW WENR KGO KGW KOMO
KHQ KOA KSL KTAR KFSD KFI

10:00-10:30 Van Heusen Program

WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WGST WXYZ WSPD WDSU WMAQ
WCCO KMOX KMBC KOIL

10:30-11:00 The March of Time

WABC WFBL WKBW WEAN WDRC WNAC
WCAU WJAS WMAL WCAO WADC WHK
WKRC WXYZ WSPD WOWO WBBM KMOX
KMBC KOIL

10:30-11:00 RKO Theatre of the Air

WEAF WEEI WJAR WTAG WLIT WGY
WCAE WWJ WSAI WIBO KSD WDAF
WRVA WJAX WIOD WMC WSB WSMB
WOC WJDX KGO KTHS WOAI WKY
WRC KOA KGW KFI KHQ KOMO
KTAR KFSD WCSH WHO WOW KSL
WTAM WFLA WSUN WBEN

11:00-11:15 Fletcher Henderson and his Orchestra

WABC WHEC WDRC WORC WCAU WJAS
WLBW WCAO WTAR WDBJ WKBN WWNC
WXYZ WBCM WDOD WLAC WBRC WDSU
WISN WTAQ KSCJ WMT KLRA WNAX
KFH KFJF KRLD KTSA KLZ KDYL
KFPY

11:00-12:00 Vincent Lopez and His Orchestra

WEAF WGY CKGW WTIC WOC WHO
(WRC WWJ off 11:15) (KOA KSTP WDAF
on 11:45) (KSD on 11:30) (WCFL on 11:15-
11:30) (WFJC WLIT off 11:30)

11:30-12:00 Ben Bernie and his Orchestra

WABC WFBL WHEC WEAN WDRC WNAC
WPG WIP-WFAN WLBW WMAL WCAO
WTAR WDBJ WADC WKBN WWNC WXYZ
WBCM WDOD WREC WLAC WBRC WDSU
WISN WTAQ WMT KSCJ KMOX KMBC
KLRA WNAX KFH KTSA KLZ KDYL

Saturday

1:30-2:00 Savoy Plaza Orchestra

WABC WHEC WLBZ WEAN WCAU WHP
WJAS WMAL WCAO WTAR WDBJ WKRC

WAIU WWNC WXYZ WBCM WSPD WDOD
WLAC WBRC WIBW CFRB

4:30-5:00 Spanish Serenade
WABC WLBZ WEAN WNAC WORC WFAN
WHP WMAL WCAO WTAR WDBJ WKRC
WAIU WWNC WXYZ WBCM WSPD WDOD
WREC WLAC WBRC WMAQ WBBM WCCO
KSCJ WMT KMOX KMBC WDAY KOIL
WIBW KFJF KRLD KTRH KTSA KLZ
KOL KFRC

5:00-5:15 Peter van Steeden and his Orchestra
WJZ WHAM WLW WJDX WBZ WBZA
WGAR

6:00-6:30 Ted Husing's Sportslants
WABC WFBL WFAN WHP WLBW WTAR
WDBJ WADC WHK WAIU WBT WBCM
WREC WLAC WBRC WISN WOWO WBBM
WCCO KSCJ WDAY KOIL WIBW KFH
KFJF KRLD KTRH KTSA KLZ KVI
KOL KFPY KHJ KFRC CFRB

6:15-6:45 Smith Ballew and His Orchestra
WJZ WBZ WBZA WRC KFAB KWK

7:00-7:15 Gene Austin, songs
WEAF WFI WCAE WWJ WSB KOA
KGO WCSH WENR WDAY WTIC KFYR

7:00-7:15 Morton Downey with Nat Brusiloff
WABC WHEC WDRC WORC WHP WJAS
WLBW WMAL WTAR WDBJ WADC WHK
WAIU WKBN WWNC WBCM WSPD WDOD
WDSU WTAQ WOWO WFBM KSCJ WMT
KLRA KFH KFJF KRLD KFPY KFRC
CFRB

7:15-7:30 Laws That Safeguard Society
WEAF WJAR WTAG WCSH WFI WGY
WBEN WWJ WOC WHO WOW WEBC
WOAI KOA KGO KECA KOMO KHQ
KTAR WJDX WEEI

7:15-7:30 Armand Vecsey and his Orchestra
WHEC WGR WEAN WNAC WJAS WLBW
WMAL WCAO WTAR WADC WHK WWNC
WSPD WDOD WDSU WTAQ KFH KRLD
WACO KOH KFRC

7:30-7:45 Rose of the Goldbergs
WJZ WHAM KWK WREN WIBO WSB
WJDX WSMB WAPI WGAR

7:30-8:00 Club Valspar — Ted Lewis
WEAF WTIC WJAR WTAG WCSH WGY
WRC WBEN WCAE WSAI WENR WOC
WHO WDAF CFCF CKGW WEBC WJAX
WIOD WLIT WFLA WSUN WSM WMC
WSB WAPI WJDX WSMB KTHS WOAI
WKY WEEI WTAM WTMJ KSTP (WWJ
on 7:30-7:45) (WHAS off 7:45) (WBAP on 7:45)

7:45-8:00 Pickard Family
WJZ WHAM KWK WREN WIBO WGAR

8:00-8:15 Dixies Circus
WJZ WBAL KDKA KYW WHAM WBZ
WBZA WOAI KSTP KPRC WKY CKGW
WGAR

8:00-8:15 Webster Program — Weber and Fields
WEAF WEEI WJAR WTAG WCSH WFI
WRC WGY WBEN WCAE WTAM WWJ
WSAI WIBO KSD WOC WHO WOW
WDAF WTMJ KSTP KOA KSL WEBC

8:15-8:30 Ben Alley, Tenor, with Ann Leaf
WABC WKBW WGR WDRC WORC WPG
WFAN WHP WJAS WLBW WMAL WCAO
WDBJ WADC WKBN WBT WXYZ WBCM
WSPD WREC WLAC WBRC WISN WOWO
WFBM WMAQ KSCJ KMOX WDAY WNAX
KOIL KFH KFJF KTRH KTSA KVI
KFPY KHJ KFRC

8:15-8:30 Radiotron Varieties
WEAF WEEI WJAR WTAG WCSH WRC
WGY WBEN WCAE WTAM WWJ WSAI
WIBO KSD WOC WHO WOW WDAF
WTMJ WRVA WJAX WIOD WFLA WSUN
WSM WMC WSB WSMB WJDX KPRC
WOAI WKY KOA KSL KGO KGW
KOMO KHQ KTAR KFSD

8:30-9:00 The Silver Flute
WEAF WEEI WTAG WCSH WRC WFI
WGY WCAE WWJ WSAI KSD WDAF
WIOD

8:30-9:00 Fuller Man
WJZ WBZ WBZA WBAL WHAM KDKA
WJR KWK WREN KOA CKGW WHAS
KPRC KGO KECA KGW KOMO KFAB
KHQ WIBO WKY WTMJ WMC WEBC
WSB WAPI WSMB WLW WJDX KSTP

8:45-9:00 Mary Charles — Nat Brusiloff's Orchestra
WABC WDRC WORC WCAU WHP WJAS
WLBW WCAO WTAR WDBJ WADC WAIU
WKBN WWNC WXYZ WBCM WSPD WDOD
WREC WLAC WDSU WISN WTAQ WOWO
WFBM KSCJ WMT KMOX KMBC KLRA
WNAX KFH KRLD KLZ KFPY KFRC
CFRB

9:00-9:30 Olson Rug Folk Songs
WABC WKBW WJAS WMAL WHK WKRC
WXYZ WISN WMAQ WCCO KMOX KMBC
KOIL

9:00-10:00 General Electric Hour
WEAF WEEI WJAR WTAG WCSH WFI
WRC WGY WBEN WCAE WTAM WWJ
WSAI WIBO KSD WOC WOW WDAF
WTMJ WKY KSTP WEBC WRVA WJAX
WHAS WMC WSB WAPI WSMB WBAP
KPRC WOAI KOA KSL KGO KFI
KGW KOMO KHQ KFSD KTAR

9:30-10:00 Columbia Educational Features
WABC WLBZ WEAN WNAC WORC WPG
WFAN WHP WJAS WLBW WMAL WTAR
WDBJ WKRC WWNC WXYZ WBCM WSPD
WDOD WREC WLAC WBRC WFBM WCCO
KSCJ WMT KMBC WDAY WNAX KOIL
WIBW KFH KFJF KTRH KTSA KLZ
KOL KFRC

10:00-10:30 Cuckoo
WJZ WBZ WBZA WBAL KDKA WHAM
WGAR WLW WIBO KWK WREN WJR
CFCF CKGW

10:00-11:00 Lucky Strike Dance Orchestra
WEAF WEEI WJAR WTAG WCSH WFI
WRC WGY WBEN WCAE WTAM WWJ
WSAI WGN KSD WHO WOC WOW
WDAF WTMJ KSTP WEBC WRVA WJAX
WIOD WFLA WSUN WHAS WMC WSB
WSMB WJDX KVOO WFAA KPRC WOAI
WKY KOA KSL KGO KFI KGW
KOMO KHQ KTAR KFSD

10:00-11:00 Hank Simmons' Show Boat
WABC WHEC WLBZ WEAN WNAC WORC
WPG WFAN WHP WJAS WLBW WMAL
WCAO WTAR WDBJ WKRC WWNC WXYZ
WBCM WSPD WDOD WLAC WBRC WFBM
WMAQ WCCO KSCJ WMT KMOX KMBC
WDAY WNAX KOIL WIBW KFH KFJF
KRLD KTRH KTSA KLZ KOL KFRC
CFRB

11:00-11:15 Troubadour of the Moon
WEAF WFI WCAE WWJ WSAI WOC
WHO WOW

11:00-11:15 Jack Denny and His Orchestra
WABC WHEC WLBZ WEAN WNAC WORC
WPG WCAU WHP WLBW WMAL WCAO
WTAR WDBJ WWNC WXYZ WBCM WSPD
WDOD WREC WLAC WBRC WFBM KSCJ
WMT KMBC WDAY WNAX KOIL WIBW
KFJF KRLD KTRH KLZ KOL CFRB

11:30-12:00 Guy Lombardo and His Orchestra
WABC WHEC WLBZ WEAN WNAC WORC
WPG WFAN WHP WLBW WMAL WCAO
WTAR WDBJ WKRC WWNC WXYZ WBCM
WDOD WREC WLAC WBRC WFBM WCCO
KSCJ WMT KMBC WDAY WNAX KOIL
WIBW KFJF KRLD KTRH KLZ KOL
CFRB

11:45-12:00 Little Jack Little
WEAF WFI WCAE WTAM KSD WOC
WHO WDAF WFLA WSUN WSB KOA
WGY WIBO WOW KPRC WIOD

12:30-1:00 Rudy Vallee and his Orchestra
WEAF WTIC WRC WBEN WTAM KSD
WMC WSB KPRC KOA

KEY

Frequency in kilocycles. Wave lengths in meters. Second column symbols: * Verifies receptions 2c; sends station stam 10c; † Verifies 2c; no stamp; ¢ Sends stamp but does not verify otherwise; ‡ Does not verify; § Did not reply. Third column shows night power in watts. Fourth 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; Z has been granted permit to change frequency; Y given permit to move to another city. Dn —This daylight station may use evening hours under certain conditions. Dashes (--) have no meaning.

540 kilocycles 555.6 meters

CKX	†	500	---	Brandon, Manitoba	Manitoba Telephone System
XEY	--	101	547	Merida, Mex.	Partido Socialista Surt

550 kilocycles 545.1 meters

CMCJ	--	250	---	Havana, Cuba	Rafael Rodriguez
KFDY	†	500	1+	Brookings, S. D.	S. D. State College
KFUO	*	500	2+	St. Louis, Mo.	Concordia Theological Seminary
KFYR	†	1000	1+N	Bismarck, N. D.	Meyer Broadcasting Co.
KOAC	†	1000	---	Corvallis, Ore.	State Agricultural College
KSD	†	500	2N	St. Louis, Mo.	Pulitzer Publishing Co.
WGR	*	1000	C	Buffalo, N. Y.	Buffalo Broadcasting Co.
WKRC	†	1000	C	Cincinnati, Ohio	WKRC Incorporated

560 kilocycles 535.4 meters

KFDM	*	500	X+	Beaumont, Texas	Magnolia Petroleum Co.
KLZ	*	1000	C	Denver, Colo.	Reynolds Radio Co., Inc.
KTAB	*	1000	---	San Francisco, Cal.	Associated Broadcasters
WFI	*	500	1N	Philadelphia, Pa.	Strawbridge & Clothier
WIBO	*	1000	3+N	Chicago, Ill.	Nelson Bros. Bond & Mortgage Co.
WLIT	†	500	1N	Philadelphia, Pa.	Lit Brothers
WNOX	*	1000	X+	Knoxville, Tenn	Sterchi Bros.
WPCC	*	500	3S	Chicago, Ill.	North Shore Congregational Church
WQAM	*	1000	C	Miami, Fla.	Miami Broadcasting Co.

570 kilocycles 526.0 meters

KGKO	*	250	+	Wichita Falls, Texas	Wichita Falls Broadcasting Co.
KMTR	*	500	---	Los Angeles, Cal.	KMTR Radio Corp.
KXA	*	500	--	Seattle, Wash.	American Radio Tel. Co.
WBAO	†	750	1	Columbus, Ohio	Ohio State University
WKBN	*	500	1C	Youngstown, Ohio	W. P. Williamson, Jr.
WMAC	--	250	2	Syracuse, N. Y.	Clive B. Meredith
WMCA	*	500	3	New York City	Knickerbocker Broadcasting Co., Inc.
WNAX	*	1000	C	Yankton, S. D.	House of Gurney, Inc.
WNYC	†	500	3	New York City	Dept. of Plants and Structures
WSYR	--	250	2	Syracuse, N. Y.	Clive B. Meredith
WWNC	*	1000	C	Asheville, N. C.	Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCL	--	500	3S	Toronto, Ont.	Dominion Battery Co.
CKCL	*	500	3	Toronto, Ont.	The Dominion Battery Co.
CKNC	*	500	3	Toronto, Ont.	Canadian National Carbon Co., Ltd.
CKUA	†	500	4	Edmonton, Alta.	University of Alberta
KGFX	--	200	D	Pierre, S. D.	Dana McNeil
KSAC	‡	500	2+	Manhattan, Kans.	State Agricultural College
WIBW	*	1000	2+C	Topeka, Kansas	Topeka Broadcasting Assn., Inc.
WOBU	*	250	1	Charleston, W. Va.	WOBU, Inc.
WSAZ	*	250	1	Huntington, W. Va.	WSAZ, Inc.
WTAG	*	250	N	Worcester, Mass.	Telegram Publishing Co.

KCYS. 670 MTRS. 447.5 DIAL

590 kilocycles 508.2 meters

CMW	--	700	588	Havana, Cuba	Columbus Commercial & Radio Co.
KHQ	--	1000	+N	Spokane, Wash.	Louis Wasmer, Inc.
WCAJ	*	500	1	Lincoln, Nebr.	Nebraska Wesleyan University
WEEI	†	1000	N	Boston, Mass.	Edison Elec. Illuminating Co.
WKZO	*	1000	DY	Berrien Springs, Mich.	WKZO, Inc.
WOW	*	1000	1N	Omaha, Nebr.	Woodmen of the World
XEZ	*	500	588	Mexico City	Gonzales Zamacona y Cia.

600 kilocycles 499.7 meters

CJRM	†	500	4	Moose Jaw, Sask.	Jas. Richardson & Sons, Ltd.
CJRW	--	500	4	Fleming, Sask.	Jas. Richardson & Sons, Ltd.
CNRO	†	500	3	Ottawa, Ont.	Canadian National Railways
KFSD	*	500	+N	San Diego, Cal.	Airfan Radio Corp.
WCAC	†	250	2+	Storrs, Conn.	Conn. Agricultural College
WCAO	*	250	C	Baltimore, Md.	Monumental Radio, Inc.
WICC	*	250	2D	Bridgeport, Conn.	Bridgeport Broadcasting Station, Inc.
WMT	*	500	C	Waterloo, Iowa	Waterloo Broadcasting Co.
WREC	*	500	+C	Memphis, Tenn.	WREC, Inc.

610 kilocycles 491.5 meters

KFRC	*	1000	C	San Francisco, Cal.	Don Lee, Inc.
WDAF	*	1000	N	Kansas City, Mo.	Kansas City Star Co.
WFAN	*	500	2C	Philadelphia, Pa.	Keystone Broadcasting Co., Inc.
WIP	*	500	2C	Philadelphia, Pa.	Gimbel Bros. Co.
WJAY	†	500	D	Cleveland, Ohio	Cleveland Radio Broadcasting Corp.

620 kilocycles 483.6 meters

KGW	*	1000	+N	Portland, Ore.	Oregonian Publishing Co.
KTAR	*	500	+N	Phoenix, Arizona	KTAR Broadcasting Co.
WFLA	*	1000	1+N	Clearwater, Fla.	Chamber of Commerce
WLBZ	*	500	C	Bangor, Maine	Maine Broadcasting Co., Inc.
WSUN	*	1000	1+N	St. Petersburg, Fla.	Chamber of Commerce
WTMJ	*	1000	+N	Milwaukee, Wis.	Milwaukee Journal

630 kilocycles 475.9 meters

CFCT	*	500	---	Victoria, B. C.	Victoria Broadcasting Association
CJGX	--	500	---	Yorkton, Sask.	Winnipeg Grain Exchange
CNRA	*	500	---	Moncton, N. B.	Canadian National Railways
KFRU	*	500	1	Columbia, Mo.	Stephens College
WGBF	†	500	1	Evansville, Ind.	Evansville on the Air, Inc.
WMAL	*	250	+C	Washington, D. C.	M. A. Leese
WOS	*	500	1	Jefferson City, Mo.	State Marketing Bureau
XET	†	500	---	Monterrey, Mex.	Mexico Music Co., S. A.

640 kilocycles 468.5 meters

CHRC	--	100	645	Quebec, Que.	E. Fontaine
CMHJ	--	40	645	Cienfuegos, Cuba	Arturo Hernandez
KFI	--	5000	NX	Los Angeles, Cal.	Earle C. Anthony, Inc.
WAIU	*	500	C Dn	Columbus, Ohio	American Insurance Union
WOI	*	5000	D	Ames, Iowa	State College of Agriculture
XFG	--	2000	638	Mexico City	Secretaria de Guerra y Marina

650 kilocycles 461.3 meters

KPCB	--	100	Dn	Seattle, Wash.	Queen City Broadcasting Co.
WSM	*	5000	N	Nashville, Tenn.	National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

CHWK	†	50	---	Chilliwack, B. C.	Chilliwack Brdcstg. Co., Ltd.
CMCO	--	225	---	Havana, Cuba	J. L. Stowers
WAAW	*	500	D	Omaha, Neb.	Omaha Grain Exchange
WEAF	†	50000	N	New York City	National Broadcasting Co., Inc.
WTIC	*	5000	N	Hartford, Conn.	Travelers Broadcasting Service, Inc.

670 kilocycles 447.5 meters

WMAQ	*	5000	C	Chicago, Ill.	WMAQ, Inc
XER	--	101	674	Mexico City	Armida y Cia.

680 kilocycles 440.9 meters

KFEQ	*	2500	D	St. Joseph, Mo.	Scroggin & Co., Bank
KPO	†	5000	N	San Francisco, Cal.	Hale Bros. & The Chronicle
WPTF	*	1000	N Dn	Raleigh, N. C.	Durham Life Insurance Co.
XETF	--	500	---	Veracruz, Mex.	Manuel Angel Fernandez & Cia.
8WMC	--	500	682	St. Johns, N. F.	Wesley United Church

690 kilocycles 434.5 meters

CFAC	--	500	1	Calgary, Alta.	The Calgary Herald
CFCN	--	500	1	Calgary, Alta.	Western Broadcasting Co.
CHCA	*	500	1	Calgary, Alta.	The Western Farmer
CJCJ	*	500	1	Calgary, Alta.	Albertan Publishing Co., Ltd.
CKGW	*	5000	2N	Toronto, Ont.	Gooderham & Worts, Ltd.
CNRC	--	500	1	Calgary, Alta.	Canadian National Railways
CPRY	--	5000	2	Toronto, Ont.	Canadian Pacific Railways
NAA	--	1000	---	Arlington, Va.	U. S. Navy
VAS	†	10000	685	Glace Bay, N. S.	Canadian Marconi Co.

700 kilocycles 428.3 meters

WLW	*	50000	N	Cincinnati, Ohio	Crosley Radio Corp.

710 kilocycles 422.3 meters

KMPC	*	500	Dn	Los Angeles, Cal.	R. S. MacMillan
WOR	*	5000		Newark, N. J.	Bamberger Broadcasting Service, Inc.
XEN	†	1000	711	Mexico City	Cia. Civil de Inversiones

720 kilocycles 416.4 meters

WGN	†	25000	N	Chicago, Ill.	Chicago Tribune

730 kilocycles 410.7 meters

CHLS	--	50	1	Vancouver, B. C.	W. G. Hassell
CHYC	*	5000	2S	Montreal, Que.	Northern Electric Co., Ltd.
CKAC	*	5000	2C	Montreal, Que.	La Presse Publishing Co., Ltd.
CKCD	--	50	1	Vancouver, B. C.	Vancouver Daily Province
CKFC	†	50	1	Vancouver, B. C.	United Church of Canada
CKMO	--	50	1	Vancouver, B. C.	Sprott-Shaw Radio Co.
CKWX	†	100	1	Vancouver, B. C.	A. Holstead & Wm. Hanlon
CMK	--	3000	---	Havana, Cuba	Cuban Broadcasting Co., Hotel Plaza
CNRM	*	5000	2	Montreal, Que.	Canadian National Railways
XEM	†	500	---	Tampico, Mex.	Herbert H. Denny y Cia.

740 kilocycles 405.2 meters

KMMJ	*	1000	Dn	Clay Center, Neb.	The M. M. Johnson Co.
WSB	--	5000	N	Atlanta, Ga.	Atlanta Journal Co.

750 kilocycles 399.8 meters

TIC	--	50	---	San Jose, Costa Rica	
WJR	†	5000	N	Detroit, Mich.	WJR, The Goodwill Station, Inc.

760 kilocycles 394.5 meters

KVI	*	1000	C Dn	Tacoma, Wash.	Puget Sound Broadcasting Co., Inc.
WBAL	*	1000	N	Baltimore, Md.	Consolidated Gas, Elec. & Power Co.
WEW	*	1000	D	St. Louis, Mo.	St. Louis University
WJZ	†	30000	N	New York City	National Broadcasting Co., Inc.

770 kilocycles 389.4 meters

KFAB	*	5000	1N	Lincoln, Nebr.	KFAB Broadcasting Co.
WBBM	*	25000	1C	Chicago, Ill.	The Atlas Co., Inc.
WJBT	--	25000	1S	Chicago, Ill.	The Atlas Co., Inc.

780 kilocycles 384.4 meters

CKY	--	5000	3	Winnipeg, Manitoba	Manitoba Telephone System
CNRW	--	5000	3	Winnipeg, Manitoba	Canadian National Railways
KELW	--	500	2	Burbank, Cal.	Union Bank & Trust Co.
KTM	*	500	2+	Los Angeles, Cal.	Pickwick Broadcasting Corp.
WEAN	*	250	+C	Providence, R. I.	Shepard Broadcasting Service, Inc.

WISJ	*	250	+	Madison, Wis.
WMC	--	500	+N	Memphis, Tenn.
WPOR	--	500	1	Norfolk, Va.
WTAR	*	500	1C	Norfolk, Va.
XEW	†	5000	---	Mexico City

Wisconsin State Journal Bdcsg. Co.
Memphis Commercial-Appeal, Inc.
WTAR Radio Corp.
WTAR Radio Corp.
Mexico Music Co.

790 kilocycles 379.5 meters

CMBS	--	150	---	Havana, Cuba
CMHC	--	500	---	Tuinucu, Cuba
KGO	†	7500	N	San Francisco, Cal.
WGY	†	50000	N	Schenectady, N. Y.

E. Artalejo
Frank H. Jones
National Broadcasting Co., Inc.
General Electric Co.

800 kilocycles 374.8 meters

WBAP	†	10000	1XN	Fort Worth, Texas
WFAA	¢	50000	1N	Dallas, Texas
XEU	--	101	---	Veracruz, Mex.
XFC	--	350	805	Aguascalientes, Mex.

Carter Publications, Inc.
News & Journal
Fernando Pazos
Gobierno del Estado de Aguascalientes

KCYS.
880
MTRS.
340.7
DIAL

810 kilocycles 370.2 meters

WCCO	*	7500	C	Minneapolis, Minn.
WPCH	*	500	D	New York City

Northwestern Broadcasting, Inc.
Eastern Broadcasters, Inc.

820 kilocycles 365.6 meters

WHAS	†	10000	N	Louisville, Ky.
XFI	--	1000	818	Mexico City

Courier-Journal & Times
Sria. de Ind., Commercio y Trabajo

830 kilocycles 361.2 meters

CMGA	--	100	834	Colon, Cuba
KOA	†	12500	N	Denver, Colo.
WHDH	--	1000	D	Boston, Mass.
WRUF	*	5000	Dn	Gainesville, Fla.

Leopoldo V. Figueros
National Broadcasting Co., Inc.
Matheson Radio Co., Inc.
University of Florida

840 kilocycles 356.9 meters

CFCA	†	500	1	Toronto, Ont.
CHCT	--	1000	---	Red Deer, Alta.
CKLC	†	1000	2	Red Deer, Alta.
CMC	*	500	845	Havana, Cuba
CNRD	†	1000	2	Red Deer, Alta.
CNRT	*	500	1	Toronto, Ont.
XETY	--	2000	---	Mexico City

Star Publishing & Ptg. Co.
G. F. Tull & Ardern, Ltd.
Alberta Pacific Grain Co., Ltd.
Cuban Telephone Co.
Canadian National Railways
Canadian National Railways
Juan Gutierrez, Jr.

850 kilocycles 352.7 meters

KWKH	*	10000	1	Shreveport, La.
WWL	*	5000	1	New Orleans, La.
XEJ	*	101	857	Juarez, Mex.

Hello World Broadcasting Corp.
Loyola University
Juan Buttner

860 kilocycles 348.6 meters

CMJE	--	5	856	Camaguey, Cuba
KMO	--	500	+ Dn	Tacoma, Wash.
WABC	*	5000	XC	New York City
WBOQ	--	5000	---	New York City
WHB	*	500	D	Kansas City, Mo.
XFX	--	500	---	Mexico City, Mex.

Manuel Fernandez
KMO, Inc.
Atlantic Broadcasting Corp.
Atlantic Broadcasting Corp.
WHB Broadcasting Co.
Secretaria de Educacion Publica

870 kilocycles 344.6 meters

CMHH	--	10	---	Cifuentes, Cuba
WENR	--	50000	1N	Chicago, Ill.
WLS	†	50000	1XN	Chicago, Ill.

Antonio Quintero
National Broadcasting Co., Inc.
Agricultural Broadcasting Co.

880 kilocycles 340.7 meters

CHML	*	50	4	Hamilton, Ont.
CJCB	*	50	---	Sydney, N. S.
CKCI	‡	22.5	3	Quebec, Que.
CKCV	†	50	3	Quebec, Que.
CNRQ	†	50	3	Quebec, Que.
KFKA	†	500	2+	Greeley, Colo.
KLX	*	500	---	Oakland, Cal.
KPOF	*	500	2	Denver, Colo.
WCOC	*	500	+	Meridian, Miss.
WGBI	*	250	1	Scranton, Pa.
WQAN	*	250	1	Scranton, Pa.
WSUI	*	500	---	Iowa City, Iowa

Maple Leaf Radio Co., Ltd.
N. Nathanson
Le "Soleil," Ltd.
G. A. Vandry
Canadian National Railways
Midwestern Radio Corp.
Tribune Publishing Co.
Pillar of Fire, Inc.
Mississippi Broadcasting Co., Inc.
Scranton Broadcasters, Inc.
Scranton Times
University of Iowa

890 kilocycles 336.9 meters

CFBO	*	500	---	St. John, N. B.	C. A. Munro, Ltd.
CKCO	‡	100	---	Ottawa, Ont.	Dr. G. M. Geldert
CKPR	--	50	---	Port Arthur, Ont.	Dougall Motor Car Corp.
CMCF	†	250	---	Havana, Cuba	Casa Karman
CMX	*	500	---	Havana, Cuba	Francisco Lavin
KFNF	--	500	2+	Shenandoah, Iowa	Henry Field Co.
KGJF	*	250	---	Little Rock, Ark.	Church of the Nazarene
KUSD	*	500	2+	Vermillion, S. D.	University of South Dakota
WGST	*	250	1+C	Atlanta, Ga.	Georgia School of Technology
WILL	*	250	2+	Urbana, Ill.	University of Illinois
WJAR	*	250	+N	Providence, R. I.	The Outlet Co.
WKAQ	*	500	---	San Juan, P. R.	Radio Corp. of Porto Rico
WMAZ	†	250	1+	Macon, Ga.	Junior Chamber of Commerce
WMMN	*	250	+	Fairmont, W. Va.	Holt-Rowe Broadcasting Co.
XES	†	500	---	Tampico, Mexico	Difusora Portena XES

900 kilocycles 333.1 meters

KGBU	†	500	---	Ketchikan, Alaska	Alaska Radio & Service Co.
KHJ	*	1000	C	Los Angeles, Cal.	Don Lee, Inc.
KSEI	*	250	---	Pocatello, Idaho	KSEI Broadcasting Association, Inc.
WBEN	*	1000	N	Buffalo, N. Y.	Buffalo Evening News
WJAX	*	1000	N	Jacksonville, Fla	City of Jacksonville
WKY	*	1000	N	Oklahoma City	WKY Radiophone Co.
WLBL	*	2000	D	Stevens Point, Wis.	Wisconsin Dept. of Markets

910 kilocycles 329.6 meters

CFQC	--	500	1	Saskatoon, Sask.	The Electric Shop, Ltd.
CHNS	*	500	3	Halifax, N. S.	Halifax Herald, Ltd.
CJGC	*	5000	2	London, Ont.	Free Press Printing Co., Ltd.
CNRH	--	500	3	Halifax, N. S.	Canadian National Railways
CNRL	*	500	2	London, Ont.	Canadian National Railways
CNRS	--	500	1	Saskatoon, Sask.	Canadian National Railways

920 kilocycles 325.9 meters

CMHD	--	250	---	Caibarien, Cuba	Manuel A. Alverez
HHK	*	1000	---	Port au Prince, Haiti	Republic of Haiti
KFEL	†	500	1	Denver, Colo.	Eugene P. O'Fallon, Inc.
KFXF	*	500	1	Denver, Colo.	Colorado Radio Corp.
KOMO	†	1000	N	Seattle, Wash.	Fisher's Blend Station, Inc.
KPRC	*	1000	+N	Houston, Texas	Houston Printing Co.
WAAF	--	500	D	Chicago, Ill.	Drovers Journal Publishing Co.
WBSO	--	500	D	Needham, Mass.	Babson Statistical Organization, Inc.
WWJ	†	1000	N	Detroit, Mich.	The Detroit, News
XFF	--	250	915	Chihuahua, Mex.	Gobierno del Estado de Chihuahua

930 kilocycles 322.4 meters

CJCA	*	500	4	Edmonton, Alta.	The Edmonton Journal, Ltd.
CFRC	--	500	'	Kingston, Ont.	Queen's University
KFWI	†	500	1	San Francisco, Cal.	Radio Entertainments, Inc.
KGBZ	--	500	2+	York, Nebr.	Dr. George R. Miller
KMA	*	500	2+	Shenandoah, Iowa	May Seed & Nursery Co.
KROW	*	500	1+X	Oakland, Cal.	Educational Broadcasting Corp.
WBRC	*	500	+C	Birmingham, Ala.	Birmingham Broadcasting Co., Inc.
WDBJ	*	250	+C	Roanoke, Va.	Richardson-Wayland Elec. Corp.
WIBG	*	50	S	Elkins Park, Pa.	St. Pauls P. E. Church

940 kilocycles 319.0 meters

KGU	†	1000	---	Honolulu, Hawaii	Marion A. Mulrony
KOIN	*	1000	C	Portland, Ore.	KOIN, Inc.
WAAT	--	300	D	Jersey City, N. J.	Bremer Broadcasting Corp.
WCSH	*	1000	N	Portland, Maine	Congress Square Hotel Co.
WDAY	*	1000	N	Fargo, N. D.	WDAY, Inc.
WFIW	*	1000	---	Hopkinsville, Ky.	WFIW, Inc.
WHA	--	750	D+	Madison, Wis.	University of Wisconsin
XEO	--	5000	---	Mexico City	National Revoluncionario Party

950 kilocycles 315.6 meters

CMBC	--	150	955	Havana, Cuba	Domingo Fernandez
CMBD	--	150	955	Havana, Cuba	Luis Perez Garcia
KFWB	*	1000	---	Hollywood, Cal.	Warner Bros. Broadcasting Corp.
KGHL	--	1000	---	Billings, Mont.	Northwestern Auto Supply Co., Inc.
KMBC	*	1000	C	Kansas City, Mo.	Midland Broadcasting Co., Inc.
WRC	†	500	N	Washington, D. C.	National Broadcasting Co., Inc.

960 kilocycles 312.3 meters

CFCY	*	250	1	Charlottetown, P. E. I.	The Island Radio Co.
CFRB	*	5000	2C	Toronto, Ont.	Rogers-Majestic Corp., Ltd.
CHCK	--	100	1	Charlottetown, P. E. I.	W. E. Burke
CHWC	*	500	3	Regina, Sask.	R. H. Williams & Sons. Ltd.
CJBR	--	500	3	Regina, Sask.	Cooperative Wheat Producers, Ltd.
CKCK	†	500	3	Regina, Sask.	Leader Publishing Co., Ltd.
CNRR	--	500	3	Regina, Sask.	Canadian National Railways
CNRX	*	5000	2	Toronto, Ont.	Canadian National Railways
XED	*	10000	961	Reynosa, Mex	International Broadcasting Co.

970 kilocycles 309.1 meters

CMGF	--	50	977	Matanzas, Cuba	Bernabe R. de la Torre
KJR	*	5000	---	Seattle, Wash.	Northwest Broadcasting System, Inc.
WCFL	--	1500	N Dn	Chicago, Ill.	Chicago Federation of Labor

980 kilocycles 305.9 meters

KDKA	--	50000	N	Pittsburgh, Pa.	Westinghouse Elec. & Mfg. Co.
XEFE	--	101	---	Laredo, Mex.	Rafael T. Carranza

990 kilocycles 302.8 meters

WBZ-A	†	15000	1N	Springfield-Boston	Westinghouse Elec. & Mfg. Co.
XEK	--	101	---	Mexico City	Arturo Martinez

1000 kilocycles 299.8 meters

KFVD	*	250	Dn	Culver City, Cal.	Los Angeles Broadcasting Co.
WHO	*	5000	1N	Des Moines, Iowa	Central Broadcasting Co.
WOC	*	5000	1N	Davenport, Iowa	Central Broadcasting Co.
XEI	*	101	---	Morelia, Mex.	Carlos Gutierrez M.

1010 kilocycles 296.8 meters

CFLC	*	50	3	Prescott, Ont.	Radio Association
CKCR	--	50	3	Waterloo, Ont.	John Patterson
CKIC	--	50	---	Wolfville, N. S.	Acadia Academy
CMBW	--	150	---	Havana, Cuba	M. Alvarez
CMBZ	--	150	---	Havana, Cuba	Manuel y G. Salas
CMCX	--	250	---	Havana, Cuba	"El Mundo"
KGGF	†	500	2	S. Coffeyville, Okla.	Powell & Platz
KQW	*	500	---	San Jose, Cal.	Pacific Agricultural Foundation, Ltd.
WHN	*	250	1	New York City	Marcus Loew Booking Agency
WIS	*	500	+	Columbia, S. C.	South Carolina Broadcasting Co., Inc.
WNAD	*	500	2	Norman, Okla.	University of Oklahoma
WPAP	*	250	1	New York City	Palisades Amusement Park
WQAO	--	250	1	New York City	Calvary Baptist Church
WRNY	--	250	1	New York City	Aviation Radio Station, Inc.
XEQ	--	1000	1015	Juarez, Mex.	Feliciano Lopez Islas

1020 kilocycles 293.9 meters

KFKX	*	10000	1N	Chicago, Ill.	Westinghouse Elec. & Mfg. Co.
KYW	*	10000	1N	Chicago, Ill.	Westinghouse Elec. & Mfg. Co.
WRAX	†	250	D	Philadelphia, Pa.	WRAX Broadcasting Co.

1030 kilocycles 291.1 meters

CFCF	--	1650	N	Montreal, Que.	Canadian Marconi Co.
CMKC	*	150	1034	Santiago de Cuba	M. P. Martinez
CNRV	†	500	---	Vancouver, B. C.	Canadian National Railways
XEB	†	1000	---	Mexico City, Mex.	El Buen Tono, S. A.
XEV	--	101	1034	Puebla, Mex.	Ciro Molina

1040 kilocycles 288.3 meters

KRLD	*	10000	1C	Dallas, Texas	KRLD Radio Corp.
KTHS	†	10000	1N	Hot Springs, Ark.	Chamber of Commerce
WKAR	*	1000	D	East Lansing, Mich.	Michigan State College
WMAK	*	1000	Dn	Buffalo, N. Y.	Buffalo Broadcasting Corp.

1050 kilocycles 285.5 meters

KFKB	*	5000	Dn	Milford, Kansas	Farmers & Bankers Life Insurance Co.
KNX	*	5000	X	Hollywood, Cal.	Western Broadcast Co.

KCYS.
1050
MTRS.
285.5
DIAL

1060 kilocycles 282.8 meters

KWJJ	--	500	Dn	Portland, Ore.	KWJJ Broadcast Co., Inc.
WBAL	*	10000	1N	Baltimore, Md.	Consolidated Gas Elec. & Pwr. Co.
WJAG	*	1000	Dn	Norfolk, Nebr.	Norfolk Daily News
WTIC	*	50000	1N	Hartford, Conn.	Travelers Broadcasting Service Corp.

1070 kilocycles 280.2 meters

CMBG	--	150	---	Havana, Cuba	Francisco Garrigo
CMBT	--	150	---	Havana, Cuba	E. Perera
CMCB	--	150	---	Havana, Cuba	M. D. Autran
KJBS	*	100	D	San Francisco, Cal.	Julius Brunton & Sons Co.
WCAZ	*	50	D	Carthage, Ill.	Superior Broadcasting Service
WDZ	†	100	D	Tuscola, Ill.	James L. Bush
WTAM	*	50000	N	Cleveland, Ohio	National Broadcasting Co., Inc.

1080 kilocycles 277.6 meters

WBT	*	5000	C	Charlotte, N. C.	Station WBT, Inc.
WCBD	*	5000	1 Dn	Zion, Ill.	Wilbur Glenn Voliva
WMBI	*	5000	1 Dn	Chicago, Ill.	Moody Bible Institute
XEH	--	5000	---	Monterrey, Mex.	Tarnava y Cia

1090 kilocycles 275.1 meters

CMAA	--	30	---	Guanajay, Cuba	Antonio Sarasola
CMGI	--	30	1094	Matanzas, Cuba	Armando Lizama
KMOX	*	50000	C	St. Louis, Mo.	Voice of St. Louis, Inc.
XEL	--	10	1091	Saltillo, Mex.	Antonio Garza Castro

1100 kilocycles 272.6 meters

CMKD	--	20	---	Santiago, Cuba	Jose Caluff
KGDM	*	250	DX	Stockton, Cal.	E. F. Peffer
WLWL	*	5000	1	New York City	Missionary Society of St. Paul
WPG	*	5000	1C	Atlantic City .N. J.	WPG Broadcasting Corp.

1110 kilocycles 270.1 meters

CMHI	--	15	---	Santa Clara, Cuba	Laviz y Paz
KSOO	*	2000	Dn	Sioux Falls, S. D.	Sioux Falls Broadcasting Assn., Inc.
WRVA	*	5000	N	Richmond, Va.	Larus & Bros. Co., Inc.

1120 kilocycles 267.7 meters

CFJC	--	100	---	Kamloops, B. C.	N. S. Dalgleish & Sons
CHCS	--	10	4	Hamilton, Ont.	The Hamilton Spectator
CHGS	*	100	---	Summerside, P. E. I.	R. T. Holman, Ltd.
CJOC	†	50	---	Lethbridge, Alta.	Harold R. Carson
CKOC	*	50	4	Hamilton, Ont.	Wentworth Radio & Auto Sply. Co., Ltd
KFIO	†	100	D	Spokane, Wash.	Spokane Broadcasting Corp.
KFSG	*	500	3	Los Angeles, Cal.	Echo Park Evang. Assn.
KMCS	*	500	3Y	Inglewood, Cal.	Dalton's, Inc.
KRSC	†	50	D	Seattle, Wash.	Radio Sales Corp.
KTRH	*	500	2C	Houston, Texas	Rice Hotel
WDBO	*	500	+C	Orlando, Fla.	Orlando Broadcasting Co., Inc.
WDEL	†	250	+X	Wilmington, Del.	WDEL, Inc.
WHAD	*	250	1	Milwaukee, Wis.	Marquette University
WISN	†	250	1C	Milwaukee, Wis.	Evening Wisconsin Co.
WTAW	*	500	2	College Station, Texas	Agricultural & Mech. College

1130 kilocycles 265.3 meters

KSL	*	5000	N	Salt Lake City	Radio Service Corp. of Utah
WJJD	*	20000	C Dn	Mooseheart, Ill.	Loyal Order of Moose
WOV	--	1000	D	New York City	International Broadcasting Corp.
XEE	*	105	---	Oaxaca, Mex.	Alfonso Zorilla B.

1140 kilocycles 263.0 meters

CMGD	--	5	---	Matanzas, Cuba	Rafael Rodriguez
KVOO	*	5000	1N	Tulsa, Okla.	Southwestern Sales Corp.
WAPI	*	5000	1N	Birmingham, Ala.	Alabama Polytechnic Institute
XETA	--	500	---	Mexico City	Manuel Espinosa Tagle

1150 kilocycles 260.7 meters

CMCQ	--	600	---	Havana, Cuba	Andres Martinez
CMHA	--	200	1154	Cienfuegos, Cuba	Fox Bross Co.
CMQ	†	250	---	Havana, Cuba	Jose Fernandez
WHAM	*	5000	N	Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co.

1160 kilocycles 258.5 meters

WOWO	*	10000	1C	Ft. Wayne, Ind.	Main Auto Supply Co.
WWVA	*	5000	1	Wheeling W. Va.	West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

CMKG	--	30	1176	Santiago de Cuba	Ricardo Arnoldo
KTNT	*	5000	Dn	Muscatine, Iowa	Norman Baker
WCAU	*	10000	C	Philadelphia, Pa.	Universal Broadcasting Co.

1180 kilocycles 254.1 meters

CMGB	--	7.5	1185	Matanzas, Cuba	Jose Anorga
KEX	*	5000	2	Portland, Ore.	Western Broadcasting Co.
KOB	*	20000	2	State College, N. M.	College of Agriculture & Mech. Arts
WDGY	*	1000	1 Dn	Minneapolis, Minn.	Dr. George W. Young
WGBS	‡	500	---	New York City	General Broadcasting System, Inc.
WHDI	*	500	1 Dn	Minneapolis, Minn.	Wm. Hood Dunwoody Industrial Inst.

1190 kilocycles 252.0 meters

WOAI	*	50000	N	San Antonio, Texas	Southern Equipment Co.

1200 kilocycles 249.9 meters

CFCH	--	50	---	North Bay, Ont.	Northern Supplies, Ltd.
CMKB	--	15	---	Santiago de Cuba	Melchor Aguero
KBTM	--	100	D	Paragould, Ark.	W. J. Beard's Temple of Music
KFJB	†	100	+	Marshalltown, Iowa	Marshall Electric Co., Inc.
KFWF	--	100	5+	St. Louis, Mo.	St. Louis Truth Center, Inc.
KGCU	--	100	---	Mandan, N. D.	Mandan Radio Association
KGDE	*	100	+	Fergus Falls, Minn.	Jaren Drug Co.
KGDY	--	100	---	Huron, S. D.	Voice of South Dakota
KGEK	†	50	9	Yuma, Colo.	Beehler Elec. Equipment Co.
KGEW	†	100	9	Fort Morgan, Colo.	City of Fort Morgan
KGFJ	--	100	---	Los Angeles, Cal.	Ben S. McGlashan
KGHI	*	100	---	Little Rock, Ark.	Berean Bible Class
KGY	†	10	+	Lacey, Wash.	St. Martin's College
KMLB	--	50	D	Monroe, La.	G. C. Liner
KSMR	--	100	---	Santa Maria, Cal.	Santa Maria Radio
KVOS	*	100	---	Bellingham, Wash.	KVOS, Inc.
KWG	*	100	---	Stockton, Cal.	Portable Wireless Tel. Co., Inc.
WABI	†	100	---	Bangor, Maine	Pine Tree Broadcasting Corp.
WABZ	*	100	1	New Orleans, La.	Samuel D. Reeks
WBBZ	*	100	---	Ponca City, Okla	C. L. Carrell
WCAT	†	100	---	Rapid City, S. D.	State School of Mines
WCAX	*	100	2	Burlington, Vt.	University of Vermont
WCLO	†	100		Janesville, Wis.	WCLO Radio Corp.
WCOD	†	100	3	Harrisburg, Pa.	Keystone Broadcasting Corp.
WEPS	†	100	7	Worcester, Mass.	Alfred Frank Kleindienst
WFBC	*	50	---	Knoxville, Tenn.	First Baptist Church
WFBE	--	100	+	Cincinnati, Ohio	WFBE, Inc.
WHBC	†	10	4S	Canton, Ohio	St. John's Catholic Church
WHBY	†	100	---	Green Bay, Wis.	St. Norbert's College
WIBX	--	100	+	Utica, N. Y.	WIBX, Inc.
WIL	*	100	5+	St. Louis, Mo.	Missouri Broadcasting Corp.
WJBC	*	100	6	La Salle, Ill.	Kaskaskia Broadcasting Co.
WJBL	†	100	6	Decatur, Ill.	Commodore Broadcasting, Inc.
WJBW	†	100	1	New Orleans, La.	Charles C. Carlson, Jr.
WKJC	*	100	3	Lancaster, Pa.	Kirk, Johnson & Co.
WLAP	†	100	+C	Louisville, Ky.	American Broadcasting Corp. of Ky.
WLBG	*	100	+	Petersburg, Va.	Robert Allen Gamble
WNBO	*	100	4	Washington, Pa.	John Brownlee Spriggs
WNBW	†	10	---	Carbondale, Pa.	Home Cut Glass & China Co.
WNBX	†	10	2	Springfield, Vt.	First Congregational Church
WORC	*	100	7CX	Worcester, Mass.	Alfred Frank Kleindienst
WRAF	*	100	8	La Porte, Ind.	Chas. Middleton
WRBL	†	50	---	Columbus, Ga.	David Parmer
WWAE	*	100	8	Hammond, Ind.	Hammond-Calumet Broad. Corp.
XEA	--	101	---	Guadalajara, Mex.	Alberto Palos Sauza
10-BP	*	25	---	Wingham, Ont.	Radio & Electric Shop

1210 kilocycles 247.8 meters

CFCO	--	100	---	Chatham, Ont.	Western Ontario "Better Radio" Club
CFNB	*	100	---	Fredericton, N. B.	James S. Neill & Sons, Ltd.
CJOR	*	50	---	Sea Island, B. C.	G. C. Chandler
CKMC	--	15	---	Cobalt, Ont.	R. L. MacAdam

KCYS.
1210
MTRS.
247.8
DIAL

CKPC	†	25	+	Preston, Ont.	Metal Shingle & Siding Co.
KDFN	†	100	---	Casper, Wyo.	Donald Lewis Hathaway
KDLR	†	100	---	Devils Lake, N. D.	KDLR, Inc.
KFOR	*	100	+	Lincoln, Nebr.	Howard A. Shuman
KFVS	*	100	6	Cape Girardeau, Mo.	Hirsch Battery & Radio Co.
KFXM	†	100	9	San Bernardino, Cal.	J. C. & E. W. Lee
KGCR	†	100	---	Watertown, S. D.	Cutler's Radio Brdcstg. Service, Inc.
KGMP	§	100	---	Elk City, Okla.	Bryant Radio & Electric Co.
KGNO	*	100	---	Dodge City, Kans.	Dodge City Broadcasting Co.
KMJ	*	100	---	Fresno, Cal.	James McClatchy Co.
KPPC	§	50	9	Pasadena, Cal.	Pasadena Presbyterian Church
KWEA	*	100	---	Shreveport, La.	Hello World Broadcasting Corp.
WALR	*	100	---	Zanesville, Ohio	Roy. W. Waller
WBAX	*	100	1	Wilkes-Barre, Pa.	John H. Stenger, Jr.
WBBL	†	100	7S	Richmond, Va.	Grace Covenant Pres. Church
WCBS	*	100	2	Springfield, Ill.	H. L. Dewing & Chas. Messter
WCOH	*	100	3	Yonkers, N. Y.	Westchester Broadcasting Corp.
WCRW	*	100	4	Chicago, Ill.	Clinton R. White
WDWF	--	100	5	Providence, R. I.	Dutee W. Flint
WEBQ	*	100	6	Harrisburg, Ill.	First Trust & Savings Bank
WEDC	--	100	4	Chicago, Ill.	Emil Denemark, Inc.
WGBB	*	100	3	Freeport, N. Y.	Harry H. Carman
WGCM	*	100	---	Gulfport, Miss	Great Southern Land Co., Inc.
WHBF	*	100	---	Rock Island, Ill.	Beardsley Specialty Co.
WHBU	†	100	---	Anderson, Ind.	Citizens Bank
WIBU	*	100	---	Poynette, Wis.	Wm. C. Forrest
WJBI	--	100	3	Red Bank, N. J.	Monmouth Broadcasting Co.
WJBU	*	100	1	Lewisburg, Pa.	Bucknell University
WJBY	*	50	---	Gadsden, Ala.	Gadsden Broadcasting Co., Inc.
WJW	*	100	---	Mansfield, Ohio	Mansfield Broadcasting Assn.
WLCI	*	50	---	Ithaca, N. Y.	Lutheran Assn. of Ithaca
WLSI	--	100	5	Providence, R. I.	The Lincoln Studios, Inc.
WMBG	*	100	7	Richmond, Va.	Havens & Martin, Inc.
WMRJ	*	100	3	Jamaica, N. Y.	Peter J. Prinz
WOCL	*	50	---	Jamestown, N. Y.	A. E. Newton
WOMT	*	100	---	Manitowoc, Wis.	Francis M. Kadow
WPAW	*	100	5	Pawtucket, R. I.	Shartenburg & Robinson Co.
WQDX	*	100	---	Thomasville, Ga.	Stevens Luke
WRBQ	†	100	+	Greenville, Miss.	J. Pat. Scully
WSBC	*	100	4	Chicago, Ill.	World Battery Co., Inc.
WSEN	†	100	---	Columbus, Ohio	Columbus Broadcasting Co.
WSIX	*	100	---	Springfield, Tenn.	638 Tire & Vulcanizing Co.
WSOC	†	100	---	Gastonia, N. C.	WSOC, Inc.
WTAX	†	100	2	Springfield, Ill.	WTAX, Inc.
XEX	--	500	---	Mexico City	Excelsior, Cia Editorial S. A.

1220 kilocycles 245.8 meters

CMCA	--	150	1225	Havana, Cuba	M. Cruz
CMCN	--	250	1225	Havana, Cuba	Antonio Ginard
KFKU	*	500	1	Lawrence, Kans.	University of Kansas
KWSC	*	1000	+	Pullman, Wash.	State College of Washington
WCAD	*	500	D	Canton, N. Y.	St. Lawrence University
WCAE	*	1000	N	Pittsburgh, Pa.	Gimbel Bros.
WDAE	*	1000	C	Tampa, Fla.	Tampa Publishing Co.
WREN	*	1000	1N	Lawrence, Kans.	Jenny Wren Co.

1230 kilocycles 243.8 meters

KFQD	--	100	---	Anchorage, Alaska	Anchorage Radio Club
KGGM	†	250	+	Albuquerque, N. Mex.	New Mexico Broadcasting Co.
KYA	*	1000	---	San Francisco, Cal.	Pacific Broadcasting Corp.
WBIS	*	1000	2	Boston, Mass.	Shepard Broadcasting Service, Inc.
WFBM	*	1000	1C	Indianapolis, Ind.	Indianapolis Power & Light Co.
WNAC	*	1000	2C	Boston, Mass.	Shepard Broadcasting Service, Inc.
WPSC	*	500	D	State College, Pa.	Pennsylvania State College
WSBT	†	500	1	South Bend, Ind.	South Bend Tribune

1240 kilocycles 241.8 meters

CMAB	--	20	1249	Pinar del Rio, Cuba	Francisco Martinez
CMGH	--	60	1249	Matanzas, Cuba	Alberto Alvarez
CMKE	--	250	1249	Santiago de Cuba	Edmundo Recamier
KTAT	†	1000	1	Ft. Worth, Texas	S. A. T. Broadcast Co.
WACO	†	1000	1C	Waco, Texas	Central Texas Broadcasting Co., Inc.
WXYZ	†	1000	C	Detroit, Mich.	Kunsky-Trendle Broadcasting Corp.

1250 kilocycles 239.9 meters

KFMX	†	1000	2	Northfield, Minn.	Carleton College
KFOX	*	1000	---	Long Beach, Cal.	Nichols & Warinner, Inc.
KIDO	†	1000	---	Boise, Idaho	Boise Broadcasting Station

WAAM	*	1000	1+X	Newark, N. J.	WAAM, Inc.
WCAL	*	1000	2	Northfield, Minn.	St. Olaf College
WDSU	†	1000	C	New Orleans, La.	Jos. H. Uhalt
WGCP	--	250	1	Newark, N. J.	May Radio Broadcast Corp.
WLB	†	1000	2	St. Paul, Minn.	University of Minnesota
WODA	--	1000	1	Paterson, N. J.	Richard E. O'Dea
WRHM	*	1000	2	Minneapolis, Minn.	Minnesota Broadcasting Corp.
XEFA	--	250	---	Mexico City	Luis F. Murguia

1260 kilocycles 238.0 meters

KOIL	*	1000	C	Council Bluffs, Iowa	Mona Motor Oil Co.
KRGV	*	500	1	Harlingen, Texas	KRGV, Inc.
KVOA	†	500	D	Tucson, Ariz.	Robert M. Riculfi
KWWG	*	500	1	Brownsville, Texas	Herald Pub. Co.
WLBW	*	500	C+	Oil City, Pa.	Radio-Wire Program Corp.
WTOC	*	500	C	Savannah, Ga.	Savannah Broadcasting Co.

1270 kilocycles 236.1 meters

CMJB	--	20	1276	Ciego de Avila, Cuba	Eduardo V. Figueroa
KFUM	*	1000	---	Colorado Springs, Colo.	Reynolds Radio Co., Inc.
KGCA	†	50	2D	Decorah, Iowa	Charles W. Greenley
KOL	†	1000	3C	Seattle, Wash.	Seattle Broadcasting Co., Inc.
KTW	--	1000	3	Seattle, Wash.	First Presbyterian Church
KWLC	*	100	2D	Decorah, Iowa	Luther College
WASH	*	500	1	Grand Rapids, Mich.	WASH Broadcasting Corp.
WEAI	*	1000	D	Ithaca, N. Y.	Cornell University
WFBR	--	500	---	Baltimore, Md.	Baltimore Radio Show, Inc.
WJDX	*	1000	N	Jackson, Miss.	Lamar Life Insurance Co.
WOOD	†	500	1	Grand Rapids, Mich.	Kunsky-Trendle Broadcasting Corp.

1280 kilocycles 234.2 meters

CMBJ	--	15	1285	Havana, Cuba	Jesus Lopez
CMBM	--	15	1285	Havana, Cuba	Jose Leiro
CMCG	--	30	1285	Havana, Cuba	Jose Justo Moran
CMCH	--	15	1285	Havana, Cuba	Hernani Torralbas
CMCR	--	20	1285	Havana, Cuba	Aurelio Hernandez
KFBB	*	1000	+	Great Falls, Mont.	Buttrey Broadcast, Inc.
WCAM	*	500	1	Camden, N. J.	City of Camden
WCAP	*	500	1	Asbury Park, N. J.	Radio Industries Broadcast Co.
WDOD	*	1000	+C	Chattanooga, Tenn.	WDOD Broadcasting Corp.
WIBA	*	500	---	Madison, Wis.	Capital Times Co.
WOAX	--	500	1	Trenton, N. J.	WOAX, Inc.
WRR	¢	500	C	Dallas, Texas	City of Dallas

1290 kilocycles 232.4 meters

KDYL	*	1000	C	Salt Lake City	Intermountain Broadcasting Corp.
KFUL	--	500	1	Galveston, Texas	Will H. Ford
KLCN	*	50	D	Blytheville, Ark.	C. L. Lintzenich
KTSA	†	1000	1+C	San Antonio, Texas	Lone Star Broadcast Co.
WEBC	*	1000	+N	Superior, Wis.	Head of Lake Broadcasting Co.
WJAS	*	1000	C+	Pittsburgh, Pa.	Pittsburgh Radio Supply House
WNBZ	--	50	D	Saranac Lake, N. Y.	Smith & Mace

1300 kilocycles 230.6 meters

KFH	*	1000	2C	Wichita, Kansas	Radio Station KFH Co.
KFJR	*	500	3	Portland, Ore.	Ashley C. Dixon & Son
KGEF	*	1000	4	Los Angeles, Cal.	Trinity Methodist Church
KTBI	*	1000	4	Los Angeles, Cal.	Bible Institute of Los Angeles
KTBR	--	500	3	Portland, Ore.	M. E. Brown
WBBR	*	1000	1	Brooklyn, N. Y.	People's Pulpit Association
WEVD	*	500	1	New York City	Debs Memorial Radio Fund, Inc.
WHAP	*	1000	1	New York City	Defenders of Truth Society, Inc.
WHAZ	*	500	1	Troy, N. Y.	Rensselaer Polytechnic Institute
WIOD	*	1000	N	Miami, Fla.	Isle of Dreams Broadcasting Corp.
WOQ	*	1000	2	Kansas City, Mo.	Unity School of Christianity

1310 kilocycles 228.9 meters

CMGC	--	30	1315	Matanzas, Cuba	Oscar Mechoso
KCRJ	†	100	---	Jerome, Ariz.	Chas. C. Robinson
KFBK	†	100	---	Sacramento, Cal.	Jas. McClatchy Co.
KFGQ	†	100	7	Boone, Iowa	Boone Biblical College
KFIU	--	10	---	Juneau, Alaska	Alaska Electric Light & Power Co.
KFJY	*	100	7	Ft. Dodge, Iowa	C. S. Tunwall
KFPL	†	100	---	Dublin, Texas	C. C. Baxter
KFPM	*	15	---	Greenville, Texas	The New Furniture Co.
KFUP	--	100	8	Denver, Colo.	Fitzsimmons General Hospital
KFXJ	†	100	8	Grand Junction, Colo.	Western Slope Broadcasting Co.

KCYS.
1310
MTRS.
228.9
DIAL

KFXR	†	100	+	Oklahoma City	Exchange Ave. Baptist Church
KGBX	*	100	---	St. Joseph, Mo.	KGBX Inc.
KGCX	†	100	+	Wolf Point, Mont.	First State Bank of Vida
KGEZ	†	100	---	Kalispell, Mont.	Treloar-Church Brdcstg. Co.
KGFW	†	100	---	Ravenna, Neb.	Central Nebraska Broadcasting Corp.
KIT	†	50	---	Yakima, Wash.	Carl E. Haymond
KMED	†	100	---	Medford, Ore.	Mrs. W. J. Virgin
KRMD	†	50	9	Shreveport, La.	Robert M. Dean
KTLC	*	100	---	Houston, Tex.	Houston Broadcasting Co.
KTSL	--	100	9	Shreveport, La.	G. A. Houseman
KTSM	*	100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR	†	100	7	Cedar Rapids, Iowa	Harry F. Paar
KXRO	†	75	X	Aberdeen, Wash.	KXRO, Inc.
WBEO	--	100	CP	Marquette, Mich.	Charles B. McCleod
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	Eagle Broadcasting Co.
WEBR	*	100	+	Buffalo, N. Y.	Howell Broadcasting Co., Inc.
WFXL	†	50	---	Royal Oak, Mich.	Royal Oak Broadcasting Co.
WFBG	*	100	3X	Altoona, Pa.	Wm. F. Gable Co.
WFDF	*	100	.	Flint, Mich.	Frank D. Fallain
WGAL	*	100	5	Lancaster, Pa.	WGAL, Inc.
WGH	*	100	---	Newport News, Va.	Hampton Roads Broadcasting Corp.
WHAT	†	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
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. Radio Station
WKBC	*	100	---	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS	*	100	---	Galesburg, Ill.	Permil N. Nelson
WLBC	†	50	6	Muncie, Ind.	Donald A. Burton
WMBO	†	100	---	Auburn, N. Y.	Radio Service Laboratories
WNBH	*	100	---	New Bedford, Mass.	New Bedford Broadcasting Co.
WOBT	†	100	+	Union City, Tenn.	Tittsworth's Radio & Music Shop
WOL	*	100	.	Washington, D. C.	American Broadcasting Co.
WRAW	*	100	5X	Reading, Pa.	Reading Broadcasting Co.
WRBI	--	100	---	Tifton, Ga.	Oglethorpe University
WROL	†	100	---	Knoxville, Tenn.	Stewart Broadcasting Co.
WSAJ	*	100	---	Grove City, Pa.	Grove City College
WSJS	*	100	---	Winston-Salem, N. C.	Winston-Salem Journal Co.
WTEL	*	100	4	Philadelphia, Pa.	Foulkrod Radio Engineering Co.

1320 kilocycles 227.1 meters

CMJC	--	15	1321	Camaguey, Cuba	Feliciano Isaac
CMKH	--	250	1327	Santiago de Cuba	Alberto Ravelo
KGHF	†	250	+	Pueblo, Colo	C. P. Ritchie & J. E. Finch
KGMB	†	500	---	Honolulu, Hawaii	Honolulu Broadcasting Co., Ltd.
KID	†	250	1+	Idaho Falls, Idaho	KID Broadcasting Co.
KTFI	--	250	1X	Twin Falls, Idaho	Radio Broadcasting Corp.
WADC	†	1000	C	Akron, Ohio	Allen T. Simmons
WSMB	*	500	N	New Orleans, La.	Saenger Theatre & Maison Blanche Co.

1330 kilocycles 225.4 meters

CMJA	--	10	1332	Camaguey, Cuba	Pedro Nogueras
KGB	*	250	X	San Diego, Cal.	Pickwick Broadcasting Corp.
KSCJ	*	1000	1+C	Sioux City, Iowa	Perkins Bros. Co.
WDRC	*	500	C	Hartford, Conn.	WDRC, Inc.
WSAI	*	500	N	Cincinnati, Ohio	Crosley Radio Corp., Lessee
WTAQ	*	1000	1C	Eau Claire, Wis.	Gillette Rubber Co.
XEC	--	50	1333	Toluca, Mex.	Jesus R. Benavides

1340 kilocycles 223.7 meters

CMBA	--	50	1345	Havana, Cuba	Oscar Montenegro
CMBF	--	7.5	1345	Havana, Cuba	Jose G. Reigada
CMCD	--	15	1345	Havana, Cuba	Angel Bertamaty
CMCU	--	50	1345	Havana, Cuba	Jorge Garcia Serra
CMCY	--	15	1345	Havana, Cuba	M. D. Autran
KFPW	†	50	D	Fort Smith, Ark.	Southwestern Hotels Co.
KFPY	*	1000	C	Spokane, Wash.	Symons Broadcasting Co.
WCOA	*	500	---	Pensacola, Fla.	City of Pensacola
WSPD	*	500	C+	Toledo, Ohio	Toledo Broadcasting Co.

1350 kilocycles 222.1 meters

KWK	*	1000	N	St. Louis, Mo.	Greater St. Louis Broadcasting Corp.
WAWZ	*	250	1	Zarephath, N. J.	Pillar of Fire
WBNX	--	250	1	New York City	Standard Cahill Co., Inc.
WCDA	*	250	1	New York City	Italian Educ. Broadcasting Co., Inc.
WEHC	*	100	+D	Emory, Va.	Emory & Henry College
WMSG	--	250	1	New York City	Madison Sq. Garden Brdcstg. Corp.

1360 kilocycles 220.4 meters

CMKF	--	30	1363	Holguin, Cuba	Manuel J. de Gongora
KGER	*	1000	4	Long Beach, Cal.	C. Merwin Dobyns
KGIR	†	500	---	Butte, Mont.	KGIR, Inc.
KPSN	*	1000	4	Pasadena, Cal.	Pasadena Star-News
WCSC	*	500	---	Charleston, S. C.	Jordan & Burk
WFBL	*	1000	CX	Syracuse, N. Y.	Onondaga Radio Broadcasting Corp.
WGES	*	500	1+	Chicago, Ill.	Oak Leaves Broadcasting Station, Inc.
WJKS	*	1000	1+	Gary, Ind.	Johnson-Kennedy Radio Corp.
WQBC	†	300	CP D	Vicksburg, Miss.	Delta Broadcasting Co., Inc.

1370 kilocycles 218.7 meters

CMGE	--	30	1375	Cardenas, Cuba	Genaro Sebater
KCRC	†	100	2+	Enid, Okla.	Champlin Refining Co.
KFBL	*	50	3	Everett, Wash.	Leese Bros.
KFJI	†	100	---	Astoria, Ore.	KFJI Broadcasters, Inc.
KFJM	†	100	---	Grand Forks, N. D.	University of North Dakota
KFJZ	*	100	---	Ft. Worth, Texas	Estate of H. C. Meachem
KFLX	--	100	---	Galveston, Texas	George Roy Clough
KGAR	*	100	+	Tucson, Ariz.	Tucson Motor Service Co.
KGDA	†	100	---	Mitchell, S. D.	Mitchell Broadcasting Corp.
KGFG	†	100	2	Oklahoma City	Oklahoma Broadcasting Co., Inc.
KGFL	†	50	---	Raton, N. M.	W. E. Whitmore
KGKL	†	100	---	San Angelo, Texas	KGKL, Inc., Opr. by Ragsdale Auto
KMAC	†	100	5	San Antonio, Tex.	W. W. McAllister
KONO	†	100	5	San Antonio, Texas	Mission Broadcasting Co.
KOOS	*	100	---	Marshfield, Ore.	H. H. Hanseth, Inc.
KRE	--	100	6	Berkeley, Cal.	First Congregational Church
KUJ	†	100	---	Walla Walla, Wash.	Paul R. Heitmeyer
KVL	--	100	3	Seattle, Wash.	KVL, Inc.
KWKC	--	100	---	Kansas City, Mo.	Wilson Duncan Broadcasting Co.
KZM	*	100	6	Hayward, Cal.	Leon P. Tenney
WBGF	†	50	---	Glens Falls, N. Y.	W. N. Parker and H. H. Metcalfe
WBTM	†	100	7	Danville, Va.	Clarke Electric Co.
WCBM	*	100	+Z	Baltimore, Md.	Baltimore Broadcasting Corp.
WELK	¢	100	+	Philadelphia, Pa.	WELK Broadcasting Station, Inc.
WFDV	†	100	---	Rome, Ga.	Dolies Goings
WGL	*	100	C	Fort Wayne, Ind.	Fred C. Zieg
WHBD	†	100	---	Mount Orab, Ohio	F. P. Moler
WHBQ	†	100	---	Memphis, Tenn.	Broadcasting Station WHBQ, Inc.
WHDF	†	100	+	Calumet, Mich.	Upper Michigan Broadcasting Co.
WIBM	--	100	1	Jackson, Mich.	WIBM, Inc.
WJBK	*	50	1	Detroit, Mich.	James F. Hopkins, Inc.
WLEY	--	100	+	Lexington, Mass.	Lexington Air Stations
WLVA	†	100	7	Lynchburg, Va.	Lynchburg Broadcasting Corp.
WMBR	†	100	---	Tampa, Fla.	F. J. Reynolds
WPOE	†	100	---	Patchogue, N. Y.	Nassau Broadcasting Corp.
WQDM	*	100	D	St. Albans, Vt.	A. J. St. Antoine
WRAK	*	100	---	Williamsport, Pa.	C. R. Cummins
WRBJ	†	10	---	Hattiesburg, Miss.	Woodruff Furniture Co., Inc.
WRBT	*	100	---	Wilmington, N. C.	Wilmington Radio Association
WRDO	§	100	CP	Augusta. Me.	Albert S. Woodson
WRJN	--	100	---	Racine, Wis.	Racine Broadcasting Corp.
WSVS	*	50	---	Buffalo, N. Y.	Seneca Vocational School

1380 kilocycles 217.3 meters

KOH	†	500	C	Reno, Nevada	Jay Peters
KQV	†	500	2	Pittsburgh, Pa.	Doubleday-Hill Electric Co.
KSO	*	500	1	Clarinda, Iowa	Berry Seed Co.
WKBH	*	1000	1	La Crosse, Wis.	WKBH, Inc.
WSMK	*	200	2	Dayton, Ohio	Stanley M. Krohn, Jr.

1390 kilocycles 215.7 meters

KLRA	*	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.
KOY	*	500	---	Phoenix, Ariz.	Nielson Radio & Sporting Goods Co.
KUOA	†	1000	1	Fayetteville, Ark.	University of Arkansas
WHK	*	1000	C	Cleveland, Ohio	Radio Air Service Corp.

1400 kilocycles 214.2 meters

CMBI	--	30	1405	Havana, Cuba	Heriberto Meireles
CMBK	--	15	1405	Havana, Cuba	Jose L. Ferriol
CMBN	--	30	1405	Havana, Cuba	Armado Romeu
CMBQ	--	50	1405	Havana, Cuba	Emilio Salas
CMBX	--	30	1405	Havana, Cuba	Bertin Fernandez
CMBY	--	100	1405	Havana, Cuba	Lino E. Cosculluala
KLO	*	500	---	Ogden, Utah	Peery Building Co.
KOCW	*	250	+	Chickasha, Okla.	College for Women
WBAA	†	500	1+	Lafayette, Ind.	Purdue University

KCYS
1400
MTRS.
214.2
DIAL

WBBC	*	500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU	*	500	2	Brooklyn, N. Y.	U. S. Broadcasting Corp.
WCMA	†	500	1	Culver, Ind.	General Broadcasting Corp.
WFOX	--	500	2	Brooklyn, N. Y.	Paramount Broadcasting Co.
WKBF	†	500	1	Indianapolis, Ind.	Indianapolis Broadcasting, Inc.
WLTH	*	500	2	Brooklyn, N. Y.	The Voice of Brooklyn, Inc.
XEP	--	2500	---	Laredo, Mex.	La Voz Latino

1410 kilocycles 212.6 meters

KFLV	†	500	4	Rockford, Ill.	Rockford Broadcasters, Inc.
KGRS	*	1000	1	Amarillo, Texas	Gish Radio Service
WAAB	*	500	2	Squantum, Mass.	Bay State Broadcasting Corp.
WBCM	*	500	C	Bay City, Mich.	James E. Davidson
WDAG	*	1000	1	Amarillo, Texas	National Radio & Broadcasting Corp.
WHBL	*	500	4	Sheboygan, Wis.	Press Pub. Co.
WHIS	†	250	---	Bluefield, W. Va.	Daily Telegraph
WODX	*	500	3	Mobile, Ala.	Mobile Broadcasting Corp.
WRBX	*	250	---	Roanoke, Va.	Richmond Development Corp.
WSFA	†	500	3	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.
WSSH	†	500	2	Boston, Mass.	Tremont Temple Baptist Church

1420 kilocycles 211.1 meters

CMHE	--	20	1429	Santa Clara, Cuba	Juan del Regato
KBPS	--	100	4	Portland, Ore.	Benson Polytechnic Institute
KFIZ	*	100	---	Fond du Lac, Wis.	Reporter Printing Co.
KFQU	*	100	5	Holy City, Cal.	W. E. Riker
KFQW	*	100	--	Seattle, Wash.	KFQW, Inc.
KFXD	*	100	---	Nampa, Idaho	Service Radio Co.
KFXY	--	100	---	Flagstaff, Ariz.	Mary M. Costigan
KFYO	†	100	+	Abilene, Texas	T. E. Kirksey
KGFF	†	100	---	Shawnee, Okla.	KGFF Broadcasting Co.
KGGC	†	100	5	San Francisco, Cal.	Golden Gate Broadcasting Co.
KGIW	†	100	---	Trinidad, Colo.	Leonard E. Wilson
KGIX	†	100	---	Las Vegas, Nevada	Las Vegas, Nevada, Radio Corp.
KGKX	--	100	---	Sand Point, Idaho	C. E. Twiss and F. H. McCann
KGVO	†	100	D	Missoula, Mont.	Mosby's Incorporate
KICK	*	100	---	Red Oak, Iowa	Red Oak Radio Corp.
KLPM	†	100	---	Minot, North Dakota	John B. Cooley
KORE	*	100	---	Eugene, Ore.	Eugene Broadcasting Station
KTAP	†	100	---	San Antonio, Texas	Alamo Broadcasting Co.
KXL	*	100	4	Portland, Ore.	KXL Broadcasters, Inc.
KXYZ	--	100	---	Houston, Texas	Harris County Broadcast Co.
WEDH	*	100	---	Erie, Pa.	Erie Dispatch-Herald
WEHS	--	100	2	Cicero, Ill.	WEHS, Inc.
WELL	†	50	X	Battle Creek, Mich.	Enquirer-News Co.
WFDW	*	100	---	Talladega, Ala.	Raymond G. Hammett
WHDL	*	10	DX	Tupper Lake, N. Y.	Tupper Lake Broadcasting Co., Inc.
WHFC	--	100	2	Cicero, Ill.	Triangle Broadcasters
WIAS	†	100	---	Ottumwa, Iowa	Iowa Broadcasting Co.
WIBR	*	50	---	Steubenville, Ohio	George W. Robinson
WILM	*	100	---	Wilmington, Del.	Delaware Broadcasting Co., Inc.
WJBO	*	100	---	New Orleans, La.	Valdemar Jensen
WKBI	*	100	2	Chicago, Ill.	Fred L. Schoenwolf
WLBF	†	100	---	Kansas City, Kas.	WLBF Broadcasting Co.
WMBC	*	100	+	Detroit, Mich.	Michigan Broadcasting Co., Inc.
WMBH	--	100	+	Joplin, Mo.	Edwin Dudley Aber
WPAD	†	100	---	Paducah, Ky.	Paducah Broadcasting Co.
WSPA	*	100	+	Spartanburg, S. C.	Voice of South Carolina
WTBO	*	100	+	Cumberland, Md.	Associated Broadcasting Corp.

1430 kilocycles 209.7 meters

KECA	‡	1000	N	Los Angeles, Cal.	Earle C. Anthony, Inc.
KGNF	†	500	D	North Platte, Neb.	Great Plains Broadcasting Co.
WBAK	†	500	1+	Harrisburg, Pa.	Penna. State Police
WCAH	*	500	C	Columbus, Ohio	Commercial Radio Service Co.
WGBC	*	500	2S	Memphis, Tenn.	Memphis Broadcasting Co.
WHP	*	500	1C+	Harrisburg, Pa.	WHP, Inc.
WNBR	*	500	2	Memphis, Tenn.	Memphis Broadcasting Co.

1440 kilocycles 208.2 meters

KLS	*	250	D	Oakland, Cal.	Warner Bros.
WBIG	*	500	---	Greensboro, N. C.	North Carolina Broadcasting Co.
WCBA	*	250	1	Allentown, Pa.	B. B. Musselman
WHEC	*	500	2C	Rochester, N. Y.	Hickson Electric & Radio Corp.
WMBD	*	500	3+	Peoria Heights, Ill.	Peoria Heights Radio Laboratory
WOKO	†	500	2C	Albany, N. Y.	WOKO, Inc.
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

CMKA	--	20	---	Santiago de Cuba	Arturio C. de Ribas
KTBS	*	1000	---	Shreveport, La.	Tri-State Broadcasting System, Inc.
WBMS	*	250	1	Hackensack, N. J.	WBMS Broadcasting Corp.
WGAR	†	500	N	Cleveland, Ohio	WGAR Broadcasting Co.
WHOM	*	500	1	Jersey City, N. J.	New Jersey Broadcasting Corp.
WKBO	*	250	1	Jersey City, N. J.	Camith Corp.
WNJ	*	250	1	Newark, N. J.	Radio Investment Co.
WSAR	*	250	---	Fall River, Mass.	Doughty & Welch Electric Co., Inc.
WTFI	--	500	---	Toccoa, Ga.	Toccoa Falls Institute

1460 kilocycles 205.4 meters

KSTP	*	10000	N	St. Paul, Minn.	National Battery Broadcasting Co.
WJSV	*	10000	---	Alexandria, Va.	Independent Publishing Co.

1470 kilocycles 204.0 meters

KGA	†	5000	---	Spokane, Wash.	Northwest Broadcasting System, Inc.
WLAC	*	5000	C	Nashville, Tenn.	Life & Casualty Insurance Co.

1480 kilocycles 202.6 meters

KFJF	*	5000	C	Oklahoma City	National Radio Mfg. Co.
WKBW	*	5000	C	Buffalo, N. Y.	Buffalo Broadcasting Co., Lessees
XETO	---	101	1485	Mexico City	Ricardo Gonzalez Montero

1490 kilocycles 201.2 meters

WCHI	*	5000	1	Chicago, Ill.	People's Pulpit Association
WCKY	*	5000	1N	Covington, Ky.	L. B. Wilson, Inc.
WJAZ	--	5000	1	Chicago, Ill.	Zenith Radio Corp.

1500 kilocycles 199.9 meters

CMBL	--	15	---	Havana, Cuba	Julio C. Hidalgo
CMBP	--	15	---	Havana, Cuba	Ricardo Perkins
CMBR	--	35	---	Havana, Cuba	Tomas Basail
CMCM	--	15	---	Havana, Cuba	Martinez y Madico
CMCT	--	5	---	Havana, Cuba	Alberto Fernandez
CMHB	--	10	---	Sagua la Grande, Cuba	Santiago Ventura
KDB	*	100	---	Santa Barbara, Cal.	Dwight Faulding
KGFI	*	100	+	Corpus Christi, Texas	Eagle Broadcasting Co., Inc.
KGFK	†	50	---	Moorhead, Minn.	Red River Broadcasting Co., Inc.
KGIZ	†	50	X	Grant City, Mo.	Grant City Park Corp.
KGKB	--	100	---	Brownwood, Texas	Eagle Publishing Co.
KGKY	*	100	---	Scottsbluff, Nebr.	Hilliard Co., Inc.
KPJM	*	100	---	Prescott, Ariz.	Miller & Klahn
KPQ	†	50	---	Wenatchee, Wash.	Wescoast Broadcasting Co.
KREG	†	100	---	Santa Ana, Cal.	Pacific Western Broadcasting
KUT	†	100	---	Austin, Texas	Driskill Hotel
KXO	*	100	---	El Centro, Cal.	E. R. Irey and F. M. Bowles
WDIX	--	100	---	Tupelo, Miss.	North Mississippi Broadcasting Corp.
WKBV	*	100	+	Connersville, Ind.	Knox Battery & Electric Co.
WKBZ	†	50	---	Ludington, Mich.	K. L. Ashbacker
WLBX	*	100	1	Long Island City, N. Y.	John N. Brahy
WLOE	*	100	+	Boston, Mass.	Boston Broadcasting Co.
WMBA	†	100	---	Newport, R. I.	LeRoy Joseph Beebe
WMBQ	*	100	1	Brooklyn, N. Y.	Paul J. Gollhofer
WMIL	---	100	1	Brooklyn, N. Y.	Arthur Faske
WMPC	†	100	---	Lapeer, Mich.	First M. P. Church
WNBF	*	100	---	Binghamton, N. Y.	Howitt-Wood Radio Co., Inc.
WOPI	*	100	---	Bristol, Tenn.	Radiophone Brdcstg. Station, Inc.
WPEN	*	100	+	Phildelphia, Pa.	Wm. Penn Broadcasting Co.
WRDW	*	100	---	Augusta, Ga.	Musicove, Inc.
WSYB	†	100	---	Rutland, Vt.	Seward & Weiss Music Co.
WWRL	*	100	1	Woodside, N. Y.	Long Island Broadcasting Corp.
WWSW	--	100	CP	Pittsburgh, Pa.	William S. Walker

KCYS.
1500
MTRS.
199.9
DIAL

	Watts		Kcys.
ALABAMA			
Birmingham O-21	5000	WAPI	1140
	500	WBRC	930
	100	WKBC	1310
Gadsden O-21	50	WJBY	1210
Mobile Q-20	500	WODX	1410
Montgomery P-21	500	WSFA	1410
Talladega O-21	100	WFDW	1420
ALASKA			
Anchorage	100	KFQD	1230
Juneau	10	KFIU	1310
Ketchikan	500	KGBU	900
ARIZONA			
Flagstaff M-7	100	KFXY	1420
Jerome M-6	100	KCRJ	1310
Phoenix N-6	500	KOY	1390
	500	KTAR	620
Prescott M-6	100	KPJM	1500
Tucson O-7	100	KGAR	1370
	500	KVOA	1260
ARKANSAS			
Blytheville M-19	50	KLCN	1290
Fayetteville M-16	1000	KUOA	1390
Fort Smith N-16	50	KFPW	1340
Hot Springs N-17	10000	KTHS	1040
Little Rock N-17	100	KGHI	1200
	250	KGJF	890
	1000	KLRA	1390
Paragould M-18	100	KBTM	1200
CALIFORNIA			
Berkeley J-2	100	KRE	1370
Burbank M-3	500	KELW	780
Culver City M-3	250	KFVD	1000
El Centro N-4	100	KXO	1500
Fresno K-2	100	KMJ	1210
Hayward J-1	100	KZM	1370
Hollywood M-3	1000	KFWB	950
	5000	KNX	1050
Holy City K-1	100	KFQU	1420
Inglewood M-3	500	KMCS	1120
Long Beach M-3	1000	KFOX	1250
	1000	KGER	1360
Los Angeles M-3	1000	KECA	1430
	5000	KFI	640
	500	KFSG	1120
	1000	KGEF	1300
	100	KGFJ	1200
	1000	KHJ	900
	500	KMPC	710
	500	KMTR	570
	500	KTM	780
	1000	KTBI	1300
Oakland J-1	250	KLS	1440
	500	KLX	880
	500	KROW	930
Pasadena M-3	50	KPPC	1210
	1000	KPSN	1360
Sacramento J-2	100	KFBK	1310
San Bernardino M-3	100	KFXM	1210
San Diego N-3	500	KFSD	600
	250	KGB	1330
San Francisco J-1	1000	KFRC	610
	500	KFWI	930
	100	KGGC	1420
	7500	KGO	790
	100	KJBS	1070
	5000	KPO	680
	1000	KTAB	560
	1000	KYA	1230
San Jose J-1	500	KQW	1010
Santa Ana M-3	100	KREG	1500
Santa Barbara M-2	100	KDB	1500
Santa Maria L-2	100	KSMR	1200
Stockton J-2	250	KGDM	1100
	100	KWG	1200
COLORADO			
Colorado Springs K-11	1000	KFUM	1270
Denver K-11	500	KFEL	920
	100	KFUP	1310
	500	KFXF	920
	1000	KLZ	560
	12500	KOA	830
	500	KPOF	880
Fort Morgan J-11	100	KGEW	1200
Grand Junction K-9	100	KFXJ	1310
Greeley J-11	500	KFKA	880
Pueblo L-11	250	KGHF	1320
Trinidad L-11	100	KGIW	1420
Yuma J-12	50	KGEK	1200
CONNECTICUT			
Bridgeport H-27	250	WICC	600
Hartford H-27	500	WDRC	1330
	50000	WTIC	660-1060
Storrs H-28	250	WCAC	600
DELAWARE			
Wilmington J-26	250	WDEL	1120
	100	WILM	1420
DISTRICT OF COLUMBIA			
Washington J-26	250	WMAL	630
	500	WRC	950
	100	WOL	1310
FLORIDA			
Clearwater R-24	1000	WFLA	620
Gainesville Q-24	5000	WRUF	830
Jacksonville Q-24	1000	WJAX	900
Miami T-25	1000	WIOD	1300
	1000	WQAM	560
Orlando R-24	500	WDBO	1120
Pensacola Q-21	500	WCOA	1340
St. Petersburg S-24	1000	WSUN	620
Tampa R-24	1000	WDAE	1220
	100	WMBR	1370
GEORGIA			
Atlanta O-22	250	WGST	890
	5000	WSB	740
Augusta O-23	100	WRDW	1500
Columbus O-22	50	WRBL	1200
Macon O-23	250	WMAZ	890
Rome N-22	100	WFDV	1370
Savannah O-24	500	WTOC	1260
Thomasville Q-22	100	WQDX	1210
Tifton P-23	100	WRBI	1310
Toccoa N-23	500	WTFI	1450
HAWAII			
Honolulu	500	KGMB	1320
	1000	KGU	940
IDAHO			
Boise G-5	1000	KIDO	1250
Idaho Falls G-7	250	KID	1320
Nampa G-5	50	KFXD	1420
Pocatello H-7	250	KSEI	900
Sand Point D-6	100	KGKX	1420
Twin Falls H-6	250	KTFI	1320

ILLINOIS	Watts		Kcys.
Carthage J-18	50	WCAZ	1070
Chicago I-20	10000	KFKX	1020
	10000	KYW	1020
	500	WAAF	920
	25000	WBBM	770
	1500	WCFL	970
	5000	WCHI	1490
	100	WCRW	1210
	100	WEDC	1210
	50000	WENR	870
	500	WGES	1360
	25000	WGN	720
	1000	WIBO	560
	5000	WJAZ	1490
	25000	WJBT	770
	100	WKBI	1420
	50000	WLS	870
	5000	WMAQ	670
	5000	WMBI	1080
	500	WPCC	560
	100	WSBC	1210
Cicero I-20	100	WEHS	1420
	100	WHFC	1420
Decatur K-19	100	WJBL	1200
Galesburg J-18	100	WKBS	1310
Harrisburg L-19	100	WEBQ	1210
Joliet I-19	100	WCLS	1310
	100	WKBB	1310
La Salle J-19	100	WJBC	1200
Mooseheart I-19	20000	WJJD	1130
Peoria Heights J-19	500	WMBD	1440
Quincy K-18	500	WTAD	1440
Rockford I-19	500	KFLV	1410
Rock Island I-18	100	WHBF	1210
Springfield K-19	100	WCBS	1210
	100	WTAX	1210
Tuscola K-20	100	WDZ	1070
Urbana J-20	250	WILL	890
Zion I-20	5000	WCBD	1080

INDIANA			
Anderson J-21	100	WHBU	1210
Connersville K-21	100	WKBV	1500
Culver I-20	500	WCMA	1400
Evansville L-20	500	WGBF	630
Fort Wayne J-21	100	WGL	1370
	10000	WOWO	1160
Gary I-20	1000	WJKS	1360
Hammond I-20	100	WWAE	1200
Indianapolis J-21	1000	WFBM	1230
	500	WKBF	1400
Lafayette J-20	500	WBAA	1400
La Porte I-20	100	WRAF	1200
Marion J-21	50	WJAK	1310
Muncie J-21	50	WLBC	1310
South Bend I-20	500	WSBT	1230
Terre Haute K-20	100	WBOW	1310

IOWA			
Ames I-17	5000	WOI	640
Boone I-17	100	KFGQ	1310
Cedar Rapids I-18	100	KWCR	1310
Clarinda J-16	500	KSO	1380
Council Bluffs J-16	1000	KOIL	1260
Davenport I-18	5000	WOC	1000
Decorah H-18	50	KGCA	1270
	100	KWLC	1270
Des Moines I-17	5000	WHO	1000
Fort Dodge I-16	100	KFJY	1310
Iowa City I-18	500	WSUI	880
Marshalltown I-17	100	KFJB	1200
Muscatine J-18	5000	KTNT	1170
Ottumwa J-17	100	WIAS	1420
Red Oak J-16	100	KICK	1420
Shenandoah J-16	500	KFNF	890
	500	KMA	930
Sioux City I-15	1000	KSCJ	1330
Waterloo I-17	500	WMT	600

KANSAS			
Dodge City L-13	100	KGNO	1210
Kansas City K-16	100	WLBF	1420
Lawrence K-16	500	KFKU	1220
	1000	WREN	1220
Manhattan K-15	500	KSAC	580
Milford K-14	5000	KFKB	1050
Topeka K-16	1000	WIBW	580
Wichita L-15	1000	KFH	1300

KENTUCKY			
Covington K-22	5000	WCKY	1490
Hopkinsville M-20	1000	WFIW	940
Louisville L-21	10000	WHAS	820
	100	WLAP	1200
Paducah M-19	100	WPAD	1420

LOUISIANA			
Monroe P-18	50	KMLB	1200
New Orleans R-19	100	WABZ	1200
	1000	WDSU	1250
	100	WJBO	1420
	30	WJBW	1200
	500	WSMB	1320
	5000	WWL	850
Shreveport P-17	50	KRMD	1310
	1000	KTBS	1450
	100	KTSL	1310
	100	KWEA	1210
	10000	KWKH	850

MAINE			
Augusta F-28	100	WRDO	1370
Bangor F-29	100	WABI	1200
	500	WLBZ	620
Portland F-28	1000	WCSH	940

MARYLAND			
Baltimore J-26	10000	WBAL	760-1060
	250	WCAO	600
	100	WCBM	1370
	500	WFBR	1270
Cumberland J-25	100	WTBO	1420

MASSACHUSETTS			
Boston G-28	1000	WBIS	1230
	1000	WEEI	590
	1000	WHDH	830
	100	WLOE	1500
	1000	WNAC	1230
	500	WSSH	1410
Fall River H-28	250	WSAR	1450
	100	WLEY	1370
Needham G-28	500	WBSO	920
New Bedford H-28	100	WNBH	1310
Springfield H-27	15000	WBZ-A	990
Squantum G-28	500	WAAB	1410
Worcester G-28	100	WEPS	1200
	100	WORC	1200
	250	WTAG	580

MICHIGAN			
Battle Creek I-21	50	WELL	1420
Bay City H-22	500	WBCM	1410
Berrien Springs I-20	1000	WKZO	590
Calumet E-19	100	WHDF	1370

Detroit H-22	50	WJBK	1370
	5000	WJR	750
	100	WMBC	1420
	1000	WWJ	920
	1000	WXYZ	1240
East Lansing H-21	1000	WKAR	1040
Flint H-22	100	WFDF	1310
Grand Rapids H-21	500	WASH	1270
	500	WOOD	1270
Jackson I-21	100	WIBM	1370
Lapeer H-22	100	WMPC	1500
Ludington H-20	50	WKBZ	1500
Marquette F-19	100	WBEO	1310
Royal Oak H-22	50	WEXL	1310

MINNESOTA

Fergus Falls F-15	100	KGDE	1200
Minneapolis G-17	7500	WCCO	810
	1000	WDGY	1180
	500	WHDI	1180
	1000	WRHM	1250
Moorhead F-15	50	KGFK	1500
Northfield G-17	1000	KFMX	1250
	1000	WCAL	1250
St. Paul G-17	1000	WLB	1250
	10000	KSTP	1460

MISSISSIPPI

Greenville O-18	100	WRBQ	1210
Gulfport Q-19	100	WGCM	1210
Hattiesburg Q-19	10	WRBJ	1370
Jackson P-19	1000	WJDX	1270
Meridian P-20	500	WCOC	880
Tupelo N-20	100	WDIX	1500
Vicksburg P-18	300	WQBC	1360

MISSOURI

Cp. Girardeau L-19	100	KFVS	1210
Columbia K-17	500	KFRU	630
Grant City J-16	50	KGIZ	1500
Jefferson City L-17	500	WOS	630
Joplin M-16	100	WMBH	1420
Kansas City K-16	1000	KMBC	950
	100	KWKC	1370
	1000	WDAF	610
	500	WHB	860
	1000	WOQ	1300
St. Joseph K-16	2500	KFEQ	680
	100	KGBX	1310
St. Louis L-18	500	KFUO	550
	100	KFWF	1200
	50000	KMOX	1090
	500	KSD	550
	1000	KWK	1350
	1000	WEW	760
	100	WIL	1200

MONTANA

Billings F-9	1000	KGHL	950
Butte F-7	500	KGIR	1360
Great Falls E-8	1000	KFBB	1280
Kalispell D-7	100	KGEZ	1310
Missoula E-7	100	KGVO	1420
Wolf Point E-11	100	KGCX	1310

NEBRASKA

Clay Center J-14	1000	KMMJ	740
Lincoln J-15	5000	KFAB	770
	100	KFOR	1210
	500	WCAJ	590
Norfolk I-15	1000	WJAG	1060
North Platte J-13	500	KGNF	1430
Omaha J-15	500	WAAW	660
	1000	WOW	590
Ravenna J-14	100	KGFW	1310
Scottsbluff I-11	100	KGKY	1500
York J-15	500	KGBZ	930

NEVADA

	Watts		Kcys
Las Vegas L-5	100	KGIX	1420
Reno I-3	500	KOH	1380

NEW HAMPSHIRE

Laconia G-28	100	WKAV	1310

NEW JERSEY

Asbury Park I-27	500	WCAP	1280
Atlantic City J-27	5000	WPG	1100
Camden I-26	500	WCAM	1280
Hackensack I-27	250	WBMS	1450
Jersey City I-27	300	WAAT	940
	500	WHOM	1450
	250	WKBO	1450
Newark I-27	1000	WAAM	1250
	250	WGCP	1250
	250	WNJ	1450
	5000	WOR	710
Paterson I-27	1000	WODA	1250
Red Bank I-27	100	WJBI	1210
Trenton I-26	500	WOAX	1280
Zarephath I-27	250	WAWZ	1350

NEW MEXICO

Albuquerque N-7	250	KGGM	1230
Raton M-11	50	KGFL	1370
State College P-9	20000	KOB	1180

NEW YORK

Albany H-27	500	WOKO	1440
Auburn H-25	100	WMBO	1310
Binghamton H-26	100	WNBF	1500
Brooklyn I-27	500	WBBC	1400
	1000	WBBR	1300
	500	WCGU	1400
	500	WFOX	1400
	500	WLTH	1400
	100	WMBQ	1500
	100	WMIL	1500
Buffalo H-24	1000	WBEN	900
	100	WEBR	1310
	1000	WGR	550
	5000	WKBW	1480
	1000	WMAK	1040
	50	WSVS	1370
Canton F-26	500	WCAD	1220
Freeport I-27	100	WGBB	1210
Glens Falls G-27	50	WBGF	1370
Ithaca H-25	1000	WEAI	1270
	50	WLCI	1210
Jamaica H-27	100	WMRJ	1210
Jamestown H-24	50	WOCL	1210
Long Island City I-27	100	WLBX	1500
New York City I-27	5000	WABC	860
	250	WBNX	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
	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

Patchogue I-27	100	WPOE	1370
Rochester G-25	5000	WHAM	1150
	500	WHEC	1440
Saranac Lake F-26	50	WNBZ	1290
Schenectady G-27	50000	WGY	790
Syracuse G-25	1000	WFBL	1360
	250	WMAC	570
	250	WSYR	570
Troy G-27	500	WHAZ	1300
Tupper Lake F-26	10	WHDL	1420
Utica G-26	100	WIBX	1200
Woodside I-27	100	WWRL	1500
Yonkers I-27	100	WCOH	1210

NORTH CAROLINA

Asheville M-23	1000	WWNC	570
Charlotte M-24	5000	WBT	1080
Gastonia M-24	100	WSOC	1210
Greensboro M-24	500	WBIG	1440
Raleigh M-25	1000	WPTF	680
Wilmington N-26	100	WRBT	1370
Winston-Salem M-24	100	WSJS	1310

NORTH DAKOTA

Bismarck F-13	1000	KFYR	550
Devils Lake E-14	100	KDLR	1210
Fargo F-15	1000	WDAY	940
Grand Forks E-15	100	KFJM	1370
Mandan F-13	100	KGCU	1200
Minot E-13	100	KLPM	1420

OHIO

Akron I-23	1000	WADC	1320
Canton I-23	10	WHBC	1200
Cincinnati K-22	100	WFBE	1200
	1000	WKRC	550
	50000	WLW	700
	500	WSAI	1330
Cleveland I-23	500	WGAR	1450
	1000	WHK	1390
	500	WJAY	610
	50000	WTAM	1070
Columbus J-22	500	WAIU	640
	500	WCAH	1430
	750	WEAO	570
	100	WSEN	1210
Dayton J-22	200	WSMK	1380
Mansfield J-22	100	WJW	1210
Mount Orab K-22	100	WHBD	1370
Steubenville J-23	50	WIBR	1420
Toledo I-22	500	WSPD	1340
Youngstown I-23	500	WKBN	570
Zanesville J-23	100	WALR	1210

OKLAHOMA

Chickasha N-14	250	KOCW	1400
Elk City N-13	100	KGMP	1210
Enid M-14	100	KCRC	1370
Norman N-15	500	WNAD	1010
Oklahoma N-15	5000	KFJF	1480
	100	KFXR	1310
	100	KGFG	1370
	1000	WKY	900
Ponca City M-15	100	WBBZ	1200
S. Coffeyville M-15	500	KGGF	1010
Shawnee N-15	100	KGFF	1420
Tulsa M-15	5000	KVOO	1140

OREGON

Astoria D-2	100	KFJI	1370
Corvallis E-2	1000	KOAC	550
Eugene F-2	100	KORE	1420
Marshfield F-1	100	KOOS	1370
Medford G-2	100	KMED	1310
Portland E-3	5000	KEX	1180
	100	KBPS	1420
	500	KFJR	1300
	1000	KGW	620
	1000	KOIN	940
	500	KTBR	1300
	500	KWJJ	1060
	100	KXL	1420

PENNSYLVANIA

Allentown I-26	250	WCBA	1440
	250	WSAN	1440
Altoona I-25	100	WFBG	1310
Carbondale H-26	10	WNBW	1200
Elkins Park I-26	50	WIBG	930
Erie H-24	100	WEDH	1420
Grove City I-24	100	WSAJ	1310
Harrisburg I-25	500	WBAK	1430
	100	WCOD	1200
	500	WHP	1430
Johnstown J-24	100	WJAC	1310
Lancaster I-26	100	WGAL	1310
	100	WKJC	1200
Lewisburg I-26	100	WJBU	1210
Oil City I-24	500	WLBW	1260
Philadelphia I-26	10000	WCAU	1170
	100	WELK	1370
	500	WFAN	610
	500	WFI	560
	100	WHAT	1310
	500	WIP	610
	500	WLIT	560
	100	WPEN	1500
	250	WRAX	1020
	100	WTEL	1310
Pittsburgh J-24	50000	KDKA	980
	500	KQV	1380
	1000	WCAE	1220
	1000	WJAS	1290
	100	WWSW	1500
Reading I-26	100	WRAW	1310
Scranton H-26	250	WGBI	880
	250	WQAN	880
State College I-25	500	WPSC	1230
Washington J-24	100	WNBO	1200
Wilkes-Barre I-26	100	WBAX	1210
	100	WBRE	1310
Williamsport I-25	100	WRAK	1370

PORTO RICO

San Juan W-34	500	WKAQ	890

RHODE ISLAND

Newport H-28	100	WMBA	1500
Pawtucket H-28	100	WPAW	1210
Providence H-28	100	WDWF	1210
	250	WEAN	780
	250	WJAR	890
	100	WLSI	1210

SOUTH CAROLINA

Charleston O-25	500	WCSC	1360
Columbia N-24	500	WIS	1010
Spartanburg N-23	100	WSPA	1420

SOUTH DAKOTA

Brookings H-15	500	KFDY	550
Huron H-14	100	KGDY	1200
Mitchell H-14	100	KGDA	1370
Pierre G-13	200	KGFX	580
Rapid City H-12	100	WCAT	1200
Sioux Falls H-15	2000	KSOO	1110

INDEX BY LOCATIONS WITH MAP KEY

Vermillion I-15	500	KUSD	890
Watertown G-15	100	KGCR	1210
Yankton I-15	1000	WNAX	570

TENNESSEE

Bristol L-23	100	WOPI	1500
Chattanooga N-21	1000	WDOD	1280
Knoxville M-22	50	WFBC	1200
	1000	WNOX	560
	100	WROL	1310
Memphis N-19	500	WGBC	1430
	100	WHBQ	1370
	500	WMC	780
	500	WNBR	1430
	500	WREC	600
Nashville M-21	5000	WLAC	1470
	5000	WSM	650
Springfield M-20	100	WSIX	1210
Union City M-19	100	WOBT	1310

TEXAS

Abilene P-13	100	KFYO	1420
Amarillo N-12	1000	KGRS	1410
	1000	WDAG	1410
Austin Q-14	100	KUT	1500
Beaumont R-17	500	KFDM	560
Brownsville U-15	500	KWWG	1260
Brownwood P-14	100	KGKB	1500
College Sta. Q-15	500	WTAW	1120
Corpus Christi S-14	100	KGFI	1500
Dallas P-15	10000	KRLD	1040
	50000	WFAA	800
	500	WRR	1280
Dublin P-14	100	KFPL	1310
El Paso P-9	100	KTSM	1310
	100	WDAH	1310
Fort Worth P-15	100	KFJZ	1370
	1000	KTAT	1240
	10000	WBAP	800
Galveston R-16	100	KFLX	1370
	500	KFUL	1290
Greenville O-15	15	KFPM	1310
Harlingen T-14	500	KRGV	1260
Houston R-16	1000	KPRC	920
	100	KTLC	1310
	500	KTRH	1120
	100	KXYZ	1420
San Angelo Q-13	100	KGKL	1370
San Antonio R-14	100	KMAC	1370
	100	KONO	1370
	100	KTAP	1420
	1000	KTSA	1290
	50000	WOAI	1190
Waco Q-15	1000	WACO	1240
Wichita Falls O-14	250	KGKO	570

UTAH

Ogden I-7	500	KLO	1400
Salt Lake City I-7	1000	KDYL	1290
	5000	KSL	1130

VERMONT

Burlington F-27	100	WCAX	1200
Rutland G-27	100	WSYB	1500
St. Albans F-27	100	WQDM	1370
Springfield G-27	10	WNBX	1200

VIRGINIA

Alexandria K-26	10000	WJSV	1460
Arlington J-25	1000	NAA	690
Danville L-25	100	WBTM	1370
Emory L-23	500	WEHC	1350
Lynchburg L-25	100	WLVA	1370
Newport News L-26	100	WGH	1310
Norfolk L-26	500	WPOR	780
	500	WTAR	780
Petersburg L-26	100	WLBG	1200
Richmond K-26	100	WBBL	1210
	100	WMBG	1210
	5000	WRVA	1110
Roanoke L-24	250	WDBJ	930
	250	WRBX	1410

WASHINGTON

Aberdeen D-2	75	KXRO	1310
Bellingham C-3	100	KVOS	1200
Everett C-3	50	KFBL	1370
Lacey D-3	10	KGY	1200
Pullman E-5	1000	KWSC	1220
Seattle C-3	100	KFQW	1420
	5000	KJR	970
	1000	KOL	1270
	1000	KOMO	920
	100	KPCB	650
	50	KRSC	1120
	1000	KTW	1270
	100	KVL	1370
	500	KXA	570
Spokane D-5	100	KFIO	1120
	1000	KFPY	1340
	5000	KGA	1470
	1000	KHQ	590
Tacoma D-3	500	KMO	860
	1000	KVI	760
Walla Walla E-5	100	KUJ	1370
Wenatchee D-4	50	KPQ	1500
Yakima D-4	50	KIT	1310

WEST VIRGINIA

Bluefield L-24	100	WHIS	1410
Charleston K-23	250	WOBU	580
Fairmont J-24	250	WMMN	890
Huntington K-23	250	WSAZ	580
Wheeling J-24	5000	WWVA	1160

WISCONSIN

Eau Claire G-18	1000	WTAQ	1330
Fond du Lac H-19	100	KFIZ	1420
Green Bay G-19	100	WHBY	1200
Janesville I-19	100	WCLO	1200
La Crosse H-18	1000	WKBH	1380
Madison H-19	750	WHA	940
	500	WIBA	1280
	250	WISJ	780
Manitowoc H-20	100	WOMT	1210
Milwaukee H-19	250	WHAD	1120
	250	WISN	1120
	1000	WTMJ	620
Poynette H-19	100	WIBU	1210
Racine I-20	100	WRJN	1370
Sheboygan H-20	500	WHBL	1410
Stevens Pt. G-19	2000	WLBL	900
Superior F-17	1000	WEBC	1290

WYOMING

Casper H-10	100	KDFN	1210

CANADA

ALBERTA

Calgary B-7	500	CFAC	690
	500	CFCN	690
	500	CHCA	690
	500	CJCJ	690
	500	CNRC	690
Edmonton A-8	500	CJCA	930
	500	CKUA	580
Lethbridge C-8	50	CJOC	1120
Red Deer A-8	1000	CHCT	840
	1000	CKLC	840
	1000	CNRD	840

BRITISH COLUMBIA	Watts		Kcys.
Chilliwack B-3	50	CHWK	665
Kamloops B-5	100	CFJC	1120
Sea Island	50	CJOR	1210
Vancouver B-3	50	CHLS	730
	50	CKCD	730
	50	CKFC	730
	50	CKMO	730
	100	CKWX	730
	500	CNRV	1030
Victoria C-3	500	CFCT	630
MANITOBA			
Brandon D-14	500	CKX	540
Winnipeg D-15	5000	CKY	780
	5000	CNRW	780
NEW BRUNSWICK			
Fredericton D-29	500	CFNB	1210
Moncton D-30	500	CNRA	630
St. John D-30	500	CFBO	890
NEWFOUNDLAND			
St. Johns A-35	500	8WMC	682
NOVA SCOTIA			
Glace Bay C-32	10000	VAS	685
Halifax E-31	500	CHNS	910
	500	CNRH	910
Sydney C-32	50	CJCB	880
Wolfville D-31	50	CKIC	1010
ONTARIO			
Chatham H-22	100	CFCO	1210
Cobalt E-23	15	CKMC	1210
Hamilton H-24	10	CHCS	1120
	50	CHML	880
	50	CKOC	1120
Kingston G-25	500	CFRC	930
London H-23	5000	CJGC	910
	500	CNRL	910
North Bay	50	CFCH	1200
Ottawa F-25	100	CKCO	890
	500	CNRO	600
Port Arthur E-19	50	CKPR	890
Prescott F-25	50	CFLC	1010
Preston H-23	25	CKPC	1210
Toronto G-24	500	CFCA	840
	500	CFCL	580
	5000	CFRB	960
	500	CKCL	580
	5000	CKGW	690
	500	CKNC	580
	500	CNRT	840
	5000	CNRX	960
	5000	CPRY	690
Waterloo G-23	50	CKCR	1010
Wingham G-23	25	10-BP	1200
PRINCE EDWARD ISLAND			
Charlottetown C-31	250	CFCY	960
	100	CHCK	960
Summerside C-31	100	CHGS	1120
QUEBEC			
Montreal E-26	1650	CFCF	1030
	5000	CHYC	730
	5000	CKAC	730
	5000	CNRM	730
Quebec D-27	100	CHRC	645
	22	CKCI	880
	50	CKCV	880
	50	CNRQ	880
SASKATCHEWAN			
Fleming C-13	500	CJRW	600
Moose Jaw C-11	500	CJRM	600
Regina C-12	500	CHWC	960
	500	CJBR	960
	500	CKCK	960
	500	CNRR	960
Saskatoon B-11	500	CFQC	910
	500	CNRS	910
Yorkton B-13	500	CJGX	630
HAITI			
Port au Prince X-30	1000	HHK	920
MEXICO			
Aguascalientes W-10	350	XFC	805
Chihuahua, Chih. R-9	250	XFF	915
Guadalajara, Jal. X-10	101	XEA	1200
Juarez P-9	101	XEJ	857
	1000	XEQ	1015
Laredo, N. L. S-13	101	XEFE	980
	2500	XEP	1400
Merida, Yuc. X-19	105	XEY	547
Mexico City Y-13	1000	XEB	1030
	250	XEFA	1250
	101	XEK	990
	1000	XEN	711
	5000	XEO	940
	101	XER	674
	500	XETA	1140
	100	XETO	1485
	2000	XETY	840
	500	XEX	1210
	5000	XEW	780
	500	XEZ	588
	2000	XFG	638
	1000	XFI	818
	500	XFX	860
Monterrey, N. L. U-13	5000	XEH	1080
	500	XET	630
Morelia, Mich. Y-12	101	XEI	1000
Oaxaca, Oak. AA-14	105	XEE	1132
Puebla Z-13	101	XEV	1034
Reynosa, Tams. T-14	10000	XED	961
Saltillo, Coah. U-12	10	XEL	1091
Tampico, Tams. W-14	500	XEM	730
	500	XES	890
Toluca. Y-12	50	XEC	1333
Veracruz, Ver. Z-14	500	XETF	680
	101	XEU	800
CUBA			
Caibarien W-25	250	CMHD	920
Cardenas W-24	30	CMGE	1375
Camaguey W-26	10	CMJA	1332
	15	CMJC	1321
	5	CMJE	856
Ciego de Avila W-26	20	CMJB	1276
Cienfuegos W-25	200	CMHA	1154
	40	CMHJ	645
	10	CMHH	870
Cifuentes	100	CMGA	834
Colon W-24	30	CMAA	1090
Guanajay W-23	50	CMBA	1345
Havana W-23	150	CMBC	955
	150	CMBD	955
	7.5	CMBF	1345
	150	CMBG	1070
	30	CMBI	1405
	15	CMBJ	1285
	15	CMBK	1405
	15	CMBL	1500
	15	CMBM	1285
	30	CMBN	1405
	15	CMBP	1500

(Continued on page 61)

CFAC 690
Calgary, Alta.
CFBO 890
St. John, N. B.
CFCA 840
Toronto, Ont.
CFCF 1030
Montreal, Que.
CFCH 1200
North Bay, Ont.
CFCL 580
Toronto, Ont.
CFCN 690
Calgary, Alta.
CFCO 1210
Chatham, Ont.
CFCT 630
Victoria, B. C.
CFCY 960
Ch'lottet'n,P.E.I.
CFJC 1120
Kamloops, B. C.
CFLC 1010
Prescott, Ont.
CFNB 1210
Fredericton, N.B.
CFQC 910
Saskatoon, Sask.
CFRB 960
Toronto, Ont.
CFRC 930
Kingston, Ont.
CHCA 690
Calgary, Alta.
CHCK 960
Ch'lottet'n,P.E.I.
CHCS 1120
Hamilton, Ont.
CHCT 840
Red Deer, Alta.
CHGS 1120
Sum'rside,P.E.I.
CHLS 730
Vancouver, B.C.
CHML 880
Hamilton, Ont.
CHNS 910
Halifax, N.S.
CHRC 645
Quebec, Que.
CHWC 960
Regina, Sask.
CHWK 665
Chilliwack, B.C.
CHYC 730
Montreal, Que.
CJBR 960
Regina, Sask.
CJCA 930
Edmonton, Alta.
CJCB 880
Syndey, N.S.
CJCJ 690
Calgary, Alta.
CJGC 910
London, Ont.
CJGX 630
Yorkton, Sask.
CJOC 1120
Lethbridge, Alta.
CJOR 1210
Sea Island, B.C.
CJRM 600
Moose Jaw, Sask.
CJRW 600
Fleming, Sask

CKAC 730
Montreal, Que.
CKCD 730
Vancouver, B.C.
CKCI 880
Quebec, Que.
CKCK 960
Regina, Sask.
CKCL 580
Toronto, Ont.
CKCO 890
Ottawa, Ont.
CKCR 1010
Waterloo, Ont.
CKCV 880
Quebec, Que.
CKFC 730
Vancouver, B.C.
CKGW 690
Toronto, Ont.
CKIC 1010
Wolfville, N.S.
CKLC 840
Red Deer, Alta.
CKMC 1210
Cobalt, Ont.
CKMO 730
Vancouver, B.C.
CKNC 580
Toronto, Ont.
CKOC 1120
Hamilton, Ont.
CKPC 1210
Preston, Ont.
CKPR 890
Port Arthur, Ont.
CKUA 580
Edmonton, Alta.
CKWX 730
Vancouver, B.C.
CKX 540
Brandon, Man.
CKY 780
Winnipeg, Man.
CMAA 1090
Guanajay, Cuba
CMAB 1249
Pinar del Rio, Cu.
CMBA 1345
Havana, Cuba
CMBC 955
Havana, Cuba
CMBD 955
Havana, Cuba
CMBF 1345
Havana, Cuba
CMBG 1070
Havana, Cuba
CMBI 1405
Havana, Cuba
CMBJ 1285
Havana, Cuba
CMBK 1405
Havana, Cuba
CMBL 1500
Havana, Cuba
CMBM 1285
Havana, Cuba
CMBN 1405
Havana, Cuba
CMBP 1500
Havana, Cuba
CMBQ 1405
Havana, Cuba
CMBR 1500
Havana, Cuba

CMBS 790
Havana, Cuba
CMBT 1070
Havana, Cuba
CMBW 1010
Havana, Cuba
CMBX 1405
Havana, Cuba
CMBY 1405
Havana, Cuba
CMBZ 1010
Havana, Cuba
CMC 845
Havana, Cuba
CMCA 1225
Havana, Cuba
CMCB 1070
Havana, Cuba
CMCD 1345
Havana, Cuba
CMCF 890
Havana, Cuba
CMCG 1285
Havana, Cuba
CMCH 1285
Havana, Cuba
CMCJ 550
Havana, Cuba
CMCM 1500
Havana, Cuba
CMCN 1225
Havana, Cuba
CMCO 660
Havana, Cuba
CMCQ 1150
Havana, Cuba
CMCR 1285
Havana, Cuba
CMCT 1500
Havana, Cuba
CMCU 1345
Havana, Cuba
CMCX 1010
Havana, Cuba
CMCY 1345
Havana, Cuba
CMGA 834
Colon, Cuba
CMGB 1185
Matanzas, Cuba
CMGC 1315
Matanzas, Cuba
CMGD 1140
Matanzas, Cuba
CMGE 1375
Cardenas, Cuba
CMGF 977
Matanzas, Cuba
CMGH 1249
Matanzas, Cuba
CMGI 1094
Matanzas, Cuba
CMHA 1154
Cienfuegos, Cuba
CMHB 1500
Sagua la Grande
CMHC 790
Tuinucu, Cuba
CMHD 920
Caibarien, Cuba
CMHE 1429
Santa, Clara Cu.
CMHH 870
Cifuentes, Cuba
CMHI 1110
Santa Clara, Cu.

CMHJ 645
Cienfuegos, Cuba
CMJA 1332
Camaguey, Cuba
CMJB 1276
Ciego de Avila
CMJC 1321
Camaguey, Cuba
CMJE 856
Camaguey, Cuba
CMK 730
Havana, Cuba
CMKA 1450
Santiago, Cuba
CMKB 1200
Santiago, Cuba
CMKC 1034
Santiago, Cuba
CMKD 1100
Santiago, Cuba
CMKE 1249
Santiago, Cuba
CMKF 1363
Holguin, Cuba
CMKG 1176
Santiago, Cuba
CMKH 1327
Santiago, Cuba
CMQ 1150
Havana, Cuba
CMW 588
Havana, Cuba
CMX 890
Havana, Cuba
CNRA 630
Moncton, N.B.
CNRC 690
Calgary, Alta.
CNRD 840
Red Deer, Alta.
CNRH 910
Halifax, N. S.
CNRL 910
London, Ont.
CNRM 730
Montreal, Que.
CNRO 600
Ottawa, Ont.
CNRQ 880
Quebec, Que.
CNRR 960
Regina, Sask.
CNRS 910
Saskatoon, Sask.
CNRT 840
Toronto, Ont.
CNRV 1030
Vancouver, B.C.
CNRW 780
Winnipeg, Man.
CNRX 960
Toronto, Ont.
CPRY 690
Toronto, Ont.
HHK 920
Port au Prince, H.
KBPS 1420
Portland, Ore.
KBTM 1200
Paragould, Ark.
KCRC 1370
Enid, Okla.
KCRJ 1310
Jerome, Ariz.
KDB 1500
S. Barbara, Cal.

KDFN 1210
Casper, Wyo.
KDKA 980
Pittsburgh, Pa.
KDLR 1210
Devils Lake,N.D.
KDYL 1290
Salt Lake City
KECA 1430
Los Angeles, Cal.
KELW 780
Burbank, Cal.
KEX 1180
Portland, Ore.
KFAB 770
Lincoln, Nebr.
KFBB 1280
Great Fls., Mont.
KFBK 1310
Sacramento, Cal.
KFBL 1370
Everett, Wash.
KFDM 560
Beaumont, Tex.
KFDY 550
Brookings, S.D.
KFEL 920
Denver, Colo.
KFEQ 680
St. Joseph, Mo.
KFGQ 1310
Boone, Iowa
KFH 1300
Wichita, Kansas
KFI 640
Los Angeles, Cal.
KFIO 1120
Spokane, Wash.
KFIU 1310
Juneau, Alaska
KFIZ 1420
Fond du Lac, Wis
KFJB 1200
Marshalltown, Ia.
KFJF 1480
Oklahoma City
KFJI 1370
Astoria, Ore.
KFJM 1370
Grd. Forks, N.D.
KFJR 1300
Portland, Ore.
KFJY 1310
Fort Dodge, Ia.
KFJZ 1370
Ft. Worth, Tex.
KFKA 880
Greeley, Colo.
KFKB 1050
Milford, Kansas
KFKU 1220
Lawrence, Kans.
KFKX 1020
Chicago, Ill.
KFLV 1410
Rockford, Ill.
KFLX 1370
Galveston, Tex.
KFMX 1250
N'tbfield, Minn.
KFNF 890
Shenandoah, Ia.
KFOR 1210
Lincoln, Nebr.
KFOX 1250
Long Beach, Cal.
KFPL 1310
Dublin, Texas

KFPM 1310
Greenville, Tex.
KFPW 1340
Ft. Smith, Ark.
KFPY 1340
Spokane, Wash.
KFQD 1230
Anchorage, Alas.
KFQU 1420
Holy City, Cal.
KFQW 1420
Seattle, Wash.
KFRC 610
San F'ncisco, Cal.
KFRU 630
Columbia, Mo.
KFSD 600
San Diego, Cal.
KFSG 1120
Los Angeles, Cal.
KFUL 1290
Galveston, Tex.
KFUM 1270
Col. Spgs., Colo.
KFUO 550
St. Louis, Mo.
KFUP 1310
Denver, Colo.
KFVD 1000
Culver City, Cal.
KFVS 1210
Cape Gir'rd'u,Mo
KFWB 950
Hollywood, Cal.
KFWF 1200
St. Louis, Mo.
KFWI 930
San F'ncisco, Cal.
KFXD 1420
Nampa, Idaho
KFXF 920
Denver, Colo.
KFXJ 1310
Grand Junc., Colo.
KFXM 1210
San Ber'd'no,Cal.
KFXR 1310
Oklahoma City
KFXY 1420
Flagstaff, Ariz.
KFYO 1420
Abilene, Texas
KFYR 550
Bismarck, N.D.
KGA 1470
Spokane, Wash.
KGAR 1370
Tucson, Ariz.
KGB 1330
San Diego, Cal.
KGBU 900
Ketchikan, Al'ka.
KGBX 1310
St. Joseph, Mo.
KGBZ 930
York, Nebr.
KGCA 1270
Decorah, Iowa
KGCR 1210
Watertown, S.D.
KGCU 1200
Mandan, N.D.
KGCX 1310
Wolf P't, Mont.
KGDA 1370
Mitchell, S. D.
KGDE 1200
Ferg's F'lls, Minn

KGDM 1100
Stockton, Cal.
KGDY 1200
Huron, S. D.
KGEF 1300
Los Angeles, Cal.
KGEK 1200
Yuma, Colo.
KGER 1360
Long Beach, Cal.
KGEW 1200
Ft. Morgan, Colo.
KGEZ 1310
Kalispell, Mont.
KGFF 1420
Shawnee, Okla.
KGFG 1370
Oklahoma City
KGFI 1500
Corpus Ch'sti,Tex
KGFJ 1200
Los Angeles, Cal.
KGFK 1500
Moorhead, Minn.
KGFL 1370
Raton, N. M.
KGFW 1310
Ravenna, Nebr.
KGFX 580
Pierre, S. D.
KGGC 1420
San F'ncisco, Cal.
KGGF 1010
Coffeyville, Okla.
KGGM 1230
Alb'q'rque, N.M.
KGHF 1320
Pueblo, Colo.
KGHI 1200
Little Rock, Ark.
KGHL 950
Billings, Mont.
KGIR 1360
Butte, Mont.
KGIW 1420
Trinidad, Colo.
KGIX 1420
Las Vegas, Nev.
KGIZ 1500
Grant City, Mo.
KGJF 890
Little Rock, Ark.
KGKB 1500
Brownwood, Tex.
KGKL 1370
San Angelo, Tex.
KGKO 570
Wichita Flls., Tex
KGKX 1420
Sand Point, Ida.
KGKY 1500
Scottsbluff, Nebr.
KGMB 1320
Honolulu, T. H.
KGMP 1210
Elk City, Okla.
KGNF 1430
No. Platte, Neb.
KGNO 1210
Dodge City, Kans.
KGO 790
San F'ncisco, Cal.
KGRS 1410
Amarillo, Texas
KGU 940
Honolulu, Hawaii
KGVO 1420
Missoula, Mont.

KGW 620
Portland, Ore.
KGY 1200
Lacey, Wash.
KHJ 900
Los Angeles, Cal.
KHQ 590
Spokane, Wash.
KICK 1420
Red Oak, Iowa.
KID 1320
Idaho Falls, Ida.
KIDO 1250
Boise, Idaho
KIT 1310
Yakima, Wash.
KJBS 1070
San F'ncisco, Cal.
KJR 970
Seattle, Wash.
KLCN 1290
Blytheville, Ark.
KLO 1400
Ogden, Utah
KLPM 1420
Minot, N. Dak.
KLRA 1390
Little Rock, Ark.
KLS 1440
Oakland, Cal.
KLX 880
Oakland, Cal.
KLZ 560
Denver, Colo.
KMA 930
Shenandoah, Ia.
KMAC 1370
San Antonio,Tex.
KMBC 950
Kan. City, Mo.
KMCS 1120
Inglewood, Cal.
KMED 1310
Medford, Ore.
KMJ 1210
Fresno, Cal.
KMLB 1200
Monroe, La.
KMMJ 740
Clay Ctr., Nebr.
KMO 860
Tacoma, Wash.
KMOX 1090
St. Louis, Mo.
KMPC 710
Los Angeles, Cal.
KMTR 570
Los Angeles, Cal.
KNX 1050
Los Angeles, Cal.
KOA 830
Denver, Colo.
KOAC 550
Corvallis, Ore.
KOB 1180
State Coll., N.M.
KOCW 1400
Chickasha, Okla.
KOH 1380
Reno, Nevada
KOIL 1260
Council Bluffs, Ia.
KOIN 940
Portland, Ore.
KOL 1270
Seattle, Wash.
KOMO 920
Seattle, Wash.

KONO 1370
San Antonio, Tex.
KOOS 1370
Marshfield, Ore.
KORE 1420
Eugene, Ore.
KOY 1390
Phoenix, Ariz.
KPCB 650
Seattle, Wash.
KPJM 1500
Prescott, Ariz.
KPO 680
San F'ncisco, Cal.
KPOF 880
Denver, Colo.
KPPC 1210
Pasadena, Cal.
KPQ 1500
Wenatchee, Wash
KPRC 920
Houston, Texas
KPSN 1360
Pasadena, Cal.
KQV 1380
Pittsburgh, Pa.
KQW 1010
San Jose, Cal.
KRE 1370
Berkeley, Cal.
KREG 1500
Santa Ana, Cal.
KRGV 1260
Harlingen, Texas
KRLD 1040
Dallas, Texas
KRMD 1310
Shreveport, La.
KROW 930
Oakland, Cal.
KRSC 1120
Seattle, Wash.
KSAC 580
Manh'tt'n, Kans.
KSCJ 1330
Sioux City, Ia.
KSD 550
St. Louis, Mo.
KSEI 900
Pocatello, Idaho
KSL 1130
Salt Lake City
KSMR 1200
Santa Maria, Cal.
KSO 1380
Clarinda, Iowa
KSOO 1110
Sioux Falls, S.D.
KSTP 1460
St. Paul, Minn.
KTAB 560
San F'ncisco, Cal.
KTAP 1420
San Antonio, Tex.
KTAR 620
Phoenix, Ariz.
KTAT 1240
Ft. Worth, Tex.
KTBI 1300
Los Angeles, Cal.
KTBR 1300
Portland, Ore.
KTBS 1450
Shreveport, La.
KTFI 1320
Twin Falls, Ida.
KTHS 1040
Hot Spgs., Ark.

KTLC 1310
Houston, Texas
KTM 780
Los Angeles, Cal.
KTNT 1170
Muscatine, Iowa
KTRH 1120
Houston, Texas
KTSA 1290
San Antonio, Tex.
KTSL 1310
Shreveport, La.
KTSM 1310
El Paso, Texas
KTW 1270
Seattle, Wash.
KUJ 1370
Walla Wal., Wash.
KUOA 1390
Fayetteville, Ark.
KUSD 890
Vermillion, S. D.
KUT 1500
Austin, Texas
KVI 760
Tacoma, Wash.
KVL 1370
Seattle, Wash.
KVOA 1260
Tucson, Arizona
KVOO 1140
Tulsa, Okla
KVOS 1200
Bellingh'm, Wash.
KWCR 1310
Cedar Rapids, Ia.
KWEA 1210
Shreveport, La.
KWG 1200
Stockton, Cal.
KWJJ 1060
Portland, Ore.
KWK 1350
St. Louis, Mo.
KWKC 1370
Kansas City, Mo.
KWKH 850
Shreveport, La.
KWLC 1270
Decorah, Iowa
KWSC 1220
Pullman, Wash.
KWWG 1260
Brownsville, Tex.
KXA 570
Seattle, Wash.
KXL 1420
Portland, Ore.
KXO 1500
El Centro, Cal.
KXRO 1310
Aberdeen, Wash
KXYZ 1420
Houston, Texas
KYA 1230
San F'ncisco, Cal.
KYW 1020
Chicago, Ill.
KZM 1370
Hayward, Cal.
NAA 690
Arlington, Va.
TIC 750
San Jose, C. R.
VAS 685
Glace Bay, N. S.
WAAB 1410
Squantum, Mass.

WAAF 920
Chicago, Ill.
WAAM 1250
Newark, N. J.
WAAT 940
Jersey City, N. J.
WAAW 660
Omaha, Nebr.
WABC 860
New York City
WABI 1200
Bangor, Maine
WABZ 1200
New Orleans, La.
WACO 1240
Waco, Texas
WADC 1320
Akron, Ohio
WAIU 640
Columbus, Ohio
WALR 1210
Zanesville, Ohio
WAPI 1140
Birmingham, Ala.
WASH 1270
Gr. Rapids, Mich.
WAWZ 1350
Zarephath, N. J.
WBAA 1400
Lafayette, Ind.
WBAK 1430
Harrisburg, Pa.
WBAL 760-1060
Baltimore, Md.
WBAP 800
Fort Worth, Tex.
WBAX 1210
Wilkes-Barre, Pa.
WBBC 1400
Brooklyn, N. Y.
WBBL 1210
Richmond, Va.
WBBM 770
Chicago, Ill.
WBBR 1300
Brooklyn, N. Y.
WBBZ 1200
Ponca City, Okla.
WBCM 1410
Bay City, Mich.
WBEN 900
Buffalo, N. Y.
WBEO 1310
Marquette, Mich.
WBGF 1370
Glens Falls, N. Y.
WBIG 1440
Greensboro, N.C.
WBIS 1230
Boston, Mass.
WBMS 1450
Hackensack, N.J.
WBNX 1350
New York City
WBOQ 860
New York City
WBOW 1310
Terre Haute, Ind.
WBRC 930
Birmingham, Ala.
WBRE 1310
Wilkes-Barre, Pa.
WBSO 920
Needham, Mass.
WBT 1080
Charlotte, N. C.
WBTM 1370
Danville, Va.

WBZ-A 990
Springfield, 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.
WCAX 1200
Burlington, Vt.
WCAZ 1070
Carthage, Ill.
WCBA 1440
Allentown, Pa.
WCBD 1080
Zion, Ill.
WCBM 1370
Baltimore, Md.
WCBS 1210
Springfield, Ill.
WCCO 810
Minneap., Minn.
WCDA 1350
New York City
WCFL 970
Chicago, Ill.
WCGU 1400
Brooklyn, N. Y.
WCHI 1490
Chicago, Ill.
WCKY 1490
Covington, Ky.
WCLO 1200
Janesville, 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.
WCSC 1360
Charleston, S. C.
WCSH 940
Portland, Maine
WDAE 1220
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.
WDIX 1500
Tupelo, Miss.
WDOD 1280
Chattan'ga, Tenn
WDRC 1330
Hartford, Conn.
WDSU 1250
New Orleans, La.
WDWF 1210
Providence, R. I.
WDZ 1070
Tuscola, Ill.
WEAF 660
New York City
WEAI 1270
Ithaca, N. Y.
WEAN 780
Providence, R. I.
WEAO 570
Columbus, Ohio
WEBC 1290
Superior, Wis.
WEBQ 1210
Harrisburg, Ill.
WEBR 1310
Buffalo, N. Y.
WEDC 1210
Chicago, Ill.
WEDH 1420
Erie, Pa.
WEEI 590
Boston, Mass.
WEHC 1350
Emory, Va.
WEHS 1420
Cicero, Ill.
WELK 1370
Philadelphia, Pa.
WELL 1420
BattleCreek,Mich
WENR 870
Chicago, Ill.
WEPS 1200
Worcester, Mass.
WEVD 1300
New York City
WEW 760
St. Louis, Mo.
WEXL 1310
Royal Oak, Mich.
WFAA 800
Dallas, Texas
WFAN 610
Philadelphia, Pa.
WFBC 1200
Knoxville, Tenn.
WFBE 1200
Cincinnati, Ohio
WFBG 1310
Altoona, Pa.
WFBL 1360
Syracuse, N. Y.
WFBM 1230
Indianapolis, Ind.
WFBR 1270
Baltimore, Md.
WFDF 1310
Flint, Mich.
WFDV 1370
Rome, Ga.

WFDW 1420
Talladega, Ala.
WFI 560
Philadelphia, Pa.
WFIW 940
Hopkinsville, Ky.
WFLA 620
Clearwater, Fla.
WFOX 1400
Brooklyn, N. Y.
WGAL 1310
Lancaster, Pa.
WGAR 1450
Cleveland, Ohio
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.
WGL 1370
Ft. Wayne, Ind.
WGN 720
Chicago, Ill.
WGR 550
Buffalo, N. Y.
WGST 890
Atlanta, Ga.
WGY 790
Schenec'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.
WHAT 1310
Philadelphia, Pa.
WHAZ 1300
Troy, N. Y.
WHB 860
Kansas City, Mo.
WHBC 1200
Canton, Ohio
WHBD 1370
Mt. Orab, O.
WHBF 1210
Rock Island, Ill.
WHBL 1410
Sheboygan, Wis.
WHBQ 1370
Memphis, Tenn.
WHBU 1210
Anderson, Ind.
WHBY 1200
Green Bay, Wis.
WHDF 1370
Calumet, Mich.
WHDH 830
Boston, Mass.
WHDI 1180
Minneap., Minn.

WHDL 1420
TupperLake,N.Y.
WHEC 1440
Rochester, N. Y.
WHFC 1420
Cicero, Ill.
WHIS 1410
Bluefield, W. Va.
WHK 1390
Cleveland, Ohio
WHN 1010
New York City
WHO 1000
Des Moines, Ia.
WHOM 1450
Jersey City, N. J.
WHP 1430
Harrisburg, Pa.
WIAS 1420
Ottumwa, Iowa
WIBA 1280
Madison, Wis.
WIBG 930
Elkins Park, Pa.
WIBM 1370
Jackson, Mich.
WIBO 560
Chicago, Ill.
WIBR 1420
Steubenville, O.
WIBU 1210
Poynette, Wis.
WIBW 580
Topeka, Kansas
WIBX 1200
Utica, N. Y.
WICC 600
Bridgeport, Conn.
WIL 1200
St. Louis, Mo.
WILL 890
Urbana, Ill.
WILM 1420
Wilmington, Del.
WIOD 1300
Miami, Fla.
WIP 610
Philadelphia, Pa.
WIS 1010
Columbia, S. C.
WISJ 780
Madison, Wis.
WISN 1120
Milwaukee, Wis.
WJAC 1310
Johnstown, Pa.
WJAG 1060
Norfolk, Nebr.
WJAK 1310
Marion, Ind.
WJAR 890
Providence, R. I.
WJAS 1290
Pittsburgh, Pa.
WJAX 900
Jacksonville, Fla.
WJAY 610
Cleveland, Ohio
WJAZ 1490
Chicago, Ill.
WJBC 1200
La Salle, Ill.
WJBI 1210
Red Bank, N. J.
WJBK 1370
Detroit, Mich.
WJBL 1200
Decatur, Ill.

WJBO 1420
New Orleans, La.
WJBT 770
Chicago, Ill.
WJBU 1210
Lewisburg, Pa.
WJBW 1200
New Orleans, La.
WJBY 1210
Gadsden, Ala.
WJDX 1270
Jackson, Miss.
WJJD 1130
Mooseheart, Ill.
WJKS 1360
Gary, Ind.
WJR 750
Detroit, Mich.
WJSV 1460
Alexandria, Va.
WJW 1210
Mansfield, Ohio
WJZ 760
New York City
WKAQ 890
San Juan, P. R.
WKAR 1040
E. Lansing, Mich.
WKAV 1310
Laconia, N. H.
WKBB 1310
Joliet, Ill.
WKBC 1310
Birmingham, Ala.
WKBF 1400
Indianapolis, Ind.
WKBH 1380
La Crosse, Wis.
WKBI 1420
Chicago, Ill.
WKBN 570
Youngstown, O.
WKBO 1450
Jersey City, N. J.
WKBS 1310
Galesburg, Ill.
WKBV 1500
Connersville, Ind.
WKBW 1480
Buffalo, N. Y.
WKBZ 1500
Ludington, Mich.
WKJC 1200
Lancaster, Pa.
WKRC 550
Cincinnati, O.
WKY 900
Oklahoma City
WKZO 590
Be'n Spgs., Mich.
WLAC 1470
Nashville, Tenn.
WLAP 1200
Louisville, Ky.
WLB 1250
St. Paul, Minn.
WLBC 1310
Muncie, Ind.
WLBF 1420
Kansas City, Ks.
WLBG 1200
Ettrick, Va.
WLBL 900
Stevens Pt., Wis.
WLBW 1260
Oil City, Pa.
WLBX 1500
L.I.City, N.Y.

WLBZ 620
Bangor, Me.
WLCI 1210
Ithaca, N. Y.
WLEY 1370
Lexington, Mass.
WLIT 560
Philadelphia, Pa.
WLOE 1500
Boston, Mass.
WLS 870
Chicago, Ill.
WLSI 1210
Providence, R. I.
WLTH 1400
Brooklyn, N. Y.
WLVA 1370
Lynchburg, Va.
WLW 700
Cincinnati, Ohio
WLWL 1100
New York City
WMAC 570
Syracuse, N. Y.
WMAK 1040
Buffalo, N. Y.
WMAL 630
Washington, D.C.
WMAQ 670
Chicago, Ill.
WMAZ 890
Macon, Ga.
WMBA 1500
Newport, R. I.
WMBC 1420
Detroit, Mich.
WMBD 1440
Peoria Hghts., Ill.
WMBG 1210
Richmond, Va.
WMBH 1420
Joplin, Mo.
WMBI 1080
Chicago, Ill.
WMBO 1310
Auburn, N. Y.
WMBQ 1500
Brooklyn, N. Y.
WMBR 1370
Tampa, Fla.
WMC 780
Memphis, Tenn.
WMCA 570
New York City
WMIL 1500
Brooklyn, N. Y.
WMMN 890
Fairmont, W.Va.
WMPC 1500
Lapeer, Mich.
WMRJ 1210
Jamaica, N. Y.
WMSG 1350
New York City
WMT 600
Waterloo, Iowa
WNAC 1230
Boston, Mass.
WNAD 1010
Norman, Okla.
WNAX 570
Yankton, S. D.
WNBF 1500
Bingh'mt'n, N.Y.
WNBH 1310
New B'df'd, Mass.

WNBO 1200
Washington, Pa.
WNBR 1430
Memphis, Tenn.
WNBW 1200
Carbondale, Pa.
WNBX 1200
Springfield, Vt.
WNBZ 1290
SaranacL'ke, N.Y.
WNJ 1450
Newark, N. J.
WNOX 560
Knoxville, Tenn.
WNYC 570
New York City
WOAI 1190
San Antonio, Tex.
WOAX 1280
Trenton, N. J.
WOBT 1310
Union City, Tenn.
WOBU 580
Charlest'n, W.Va.
WOC 1000
Davenport, Iowa
WOCL 1210
Jamestown, N. Y.
WODA 1250
Paterson, N. J.
WODX 1410
Mobile, Ala.
WOI 640
Ames, Iowa
WOKO 1440
Albany, N. Y.
WOL 1310
Washington, D.C.
WOMT 1210
Manitowoc, Wis.
WOOD 1270
Gr. Rapids, Mich.
WOPI 1500
Bristol, Tenn.
WOQ 1300
Kansas City, Mo.
WOR 710
Newark, N. J.
WORC 1200
Worcester, Mass.
WOS 630
Jeff's'n City, Mo.
WOV 1130
New York City
WOW 590
Omaha, Nebr.
WOWO 1160
Ft. Wayne, Ind.
WPAD 1420
Paducah, Ky.
WPAP 1010
New York City
WPAW 1210
Pawtucket, R. I.
WPCC 560
Chicago, Ill.
WPCH 810
New York City
WPEN 1500
Philadelphia, Pa.
WPG 1100
Atl'ntic City, N.J.
WPOE 1370
Patchogue, N. Y.
WPOR 780
Norfolk, Va.
WPSC 1230
State College, Pa.

WPTF 680
Raleigh, N. C.
WQAM 560
Miami, Fla.
WQAN 880
Scranton, Pa.
WQAO 1010
New York City
WQBC 1360
Vicksburg, Miss.
WQDM 1370
St. Albans, Vt.
WQDX 1210
Thomasville, Ga.
WRAF 1200
La Porte, Ind.
WRAK 1370
Williamsport, Pa.
WRAW 1310
Reading, Pa.
WRAX 1020
Philadelphia, Pa.
WRBI 1310
Tifton, Ga.
WRBJ 1370
Hattiesburg, Miss
WRBL 1200
Columbus, Ga.
WRBQ 1210
Greenville, Miss.
WRBT 1370
Wilmington, N.C.
WRBX 1410
Roanoke, Va.
WRC 950
Washington, D.C.
WRDO 1370
Augusta, Me.
WRDW 1500
Augusta, Ga.
WREC 600
Memphis, Tenn.
WREN 1220
Lawrence, Kans.
WRHM 1250
Minneap., Minn.
WRJN 1370
Racine, Wis.
WRNY 1010
New York City
WROL 1310
Knoxville, Tenn.
WRR 1280
Dallas, Texas
WRUF 830
Gainesville, Fla.
WRVA 1110
Richmond, Va.
WSAI 1330
Cincinnati, Ohio
WSAJ 1310
Grove City, Pa.
WSAN 1440
Allentown, Pa.
WSAR 1450
Fall River, Mass.
WSAZ 580
Hunt'gton, W.Va.
WSB 740
Atlanta, Ga.
WSBC 1210
Chicago, Ill.
WSBT 1230
South Bend, Ind.
WSEN 1210
Columbus, Ohio
WSFA 1410
Montgomery, Ala.

WSIX 1210
Springfield, Tenn.
WSJS 1310
Winst.-Sal., N. C.
WSM 650
Nashville, Tenn.
WSMB 1320
New Orleans, La.
WSMK 1380
Dayton, Ohio
WSOC 1210
Gastonia, N. C.
WSPA 1420
Spartanburg, S.C.
WSPD 1340
Toledo, Ohio
WSSH 1410
Boston, Mass.
WSUI 880
Iowa City, Ia.
WSUN 620
St. Petersb'g, Fla.
WSVS 1370
Buffalo, N. Y.
WSYB 1500
Rutland, Vt.
WSYR 570
Syracuse, N. Y.
WTAD 1440
Quincy, Ill.
WTAG 580
Worcester, Mass.
WTAM 1070
Cleveland, Ohio
WTAQ 1330
Eau Claire, Wis.
WTAR 780
Norfolk Va.
WTAW 1120
College Sta., Tex.
WTAX 1210
Springfield, Ill.
WTBO 1420
Cumberland, Md.
WTEL 1310
Philadelphia, Pa.
WTFI 1450
Toccoa, Ga.
WTIC 660-1060
Hartford, Conn.
WTMJ 620
Milwaukee, Wis.
WTOC 1260
Savannah, Ga.
WWAE 1200
Hammond, Ind.
WWJ 920
Detroit, Mich.
WWL 850
New Orleans, La.
WWNC 570
Asheville, N. C.
WWRL 1500
Woodside, N. Y.
WWSW 1500
Pittsburgh, Pa.
WWVA 1160
Wheeling, W. Va.
WXYZ 1240
Detroit, Mich.
XEA 1200
Guad'l'jara, Mex.
XEB 1030
Mexico City
XEC 1333
Toluca, Mex.
XED 961
Reynosa, Mex.

XEE 1132 Oaxaco, Mex.
XEFA 1250 Mexico City
XEFE 980 Laredo, Mex.
XEH 1080 Monterrey, Mex.
XEI 1000 Morelia, Mex.
XEJ 857 Juarez, Mex.
XEK 990 Mexico City
XEL 1091 Saltillo, Mex.

XEM 730 Tampico, Mex.
XEN 711 Mexico City
XEO 940 Mexico City
XEP 1490 Laredo, Mex.
XEQ 1015 Juarez, Mex.
XER 674 Mexico City
XES 890 Tampico, Mex.
XET 630 Monterrey, Mex.

XETA 1140 Mexico City
XETF 680 Veracruz, Mex.
XETO 1485 Mexico City
XETY 840 Mexico City
XEU 800 Veracruz, Mex.
XEV 1034 Puebla, Mex.
XEW 780 Mexico City
XEX 1210 Mexico City
XEY 547 Merida, Mex.

XEZ 588 Mexico City
XFC 805 Aguascal'ntes, M.
XFF 915 Chihuahua, Mex.
XFG 638 Mexico City
XFI 818 Mexico City
XFX 860 Mexico City
8WMC 682 St. Johns, N.F.
10BP 1200 Wingham, Ont.

INDEX BY LOCATIONS WITH MAP KEY

(Continued from page 55)

Havana W-23	50	CMBQ	1405
	35	CMBR	1500
	150	CMBS	790
	150	CMBT	1070
	150	CMBW	1010
	30	CMBX	1405
	100	CMBY	1405
	150	CMBZ	1010
	500	CMC	845
	150	CMCA	1225
	150	CMCB	1070
	15	CMCD	1345
	250	CMCF	899
	30	CMCG	1285
	15	CMCH	1285
	250	CMCJ	550
	15	CMCM	1500
	250	CMCN	1225
	225	CMCO	660
	600	CMCQ	1150
	20	CMCR	1285
	5	CMCT	1500
	50	CMCU	1345
	250	CMCX	1010
	15	CMCY	1345
	3000	CMK	730
	250	CMQ	1150
	700	CMW	588
	500	CMX	890
Holguin W-27	30	CMKF	1363
Matanzas W-24	7.5	CMGB	1185
	30	CMGC	1315
	5	CMGD	1140
	50	CMGF	977
	60	CMGH	1249
	30	CMGI	1094
Pinar del Rio W-22	20	CMAB	1249
Sagua la Grande W-24	10	CMHB	1500
Santa Clara W-25	20	CMHE	1429
	15	CMHI	1110
Santiago X-28	20	CMKA	1450
	15	CMKB	1200
	150	CMKC	1034
	20	CMKD	1100
	250	CMKE	1249
	30	CMKG	1176
	250	CMKH	1327
Tuinucu	500	CMHC	790
COSTA RICA			
San Jose FF-23	50	TIC	750

SOME SHORT WAVE STATIONS

Following is a list of commercial stations having a frequency above the broadcast band and yet near enough to it to be picked up on some sets.

Call	*Kcys.*	*Location*	*Owner*
KGJX	1712	Pasadena, Calif.	City of Pasadena
KGKM	1596	Beaumont, Texas	City of Beaumont
KGOY	1712	San Antonio, Texas	City of San Antonio, Police Department
KGOZ	2470	Cedar Rapids, Iowa	City of Cedar Rapids, Police Department
KGPA	1596	Seattle, Wash.	City of Seattle, Fire and Police Departments
KGPB	2416	Minneapolis, Minn.	City of Minneapolis Police Department
KGPD	1596	San Francisco, Cal.	City of San Francisco, Police and Fire Departments
KGPE	2422	Kansas City, Mo.	Missouri Metropolitan Police Department
KGPP	2452	Portland, Ore.	City of Portland, Bureau of Police
KSW	1712	Berkeley, Cal.	Berkeley Police Department
KVP	1712	Dallas, Texas	City of Dallas, Police Department
WCF	1596	New York, N. Y.	City of New York, Fire Department
WCK	2410	Belle Isle, Mich.	City of Detroit
WEQ	1596	Baltimore, Md.	Board of Fire Commissioners
WEY	1596	Boston, Mass.	Boston Fire Department
WKDT	1596	Detroit, Mich.	City of Detroit
WKDU	1712	Cincinnati, Ohio	City of Cincinnati, Police Department
WKDX	1684	New York, N. Y.	Department of Plants and Structures

Call	Keys.	Location	Owner
WMD	2452	Fordson, Mich.	Ford Motor Company
WMDZ	1712	Indianapolis, Ind.	City of Indianapolis, Police Department
WMJ	2422	Buffalo, N. Y.	City of Buffalo, Police Department
WMO	2410	Highland Park, Mich.	City of Highland Park
WMP	1662	Framingham, Mass.	Massachusetts Department of Public Safety
WNDA	2440	Miami, Fla.	City of Miami, Police Department
WPDA	2416	Tulare, Cal.	City of Tulare, Police Department
WPDB	1712	Chicago, Ill.	Chicago Police Department
WPDE	2416	Louisville, Ky.	City of Louisville
WPDF	2440	Flint, Mich.	City of Flint, Police Department
WPDH	2416	Richmond, Ind.	City of Richmond, Police Department
WPDI	2416	Columbus, Ohio	Board of County Commissioners
WPDJ	2416	Passaic, N. J.	City of Passaic, Department of Public Safety
WPDL	2440	Lansing, Mich.	City of Lansing
WPDN	1712	Auburn, N. Y.	City of Auburn
WPDP	2440	Philadelphia, Pa.	City of Philadelphia, Bureau of Police
WPDR	1712	Rochester, N. Y.	City of Rochester, Department of Public Safety
WRBH	2452	Cleveland, Ohio	City of Cleveland, Police Department
WRDR	2410	Grosse Point, Mich.	Township of Grosse Point
WRDS	1662	Ingham, Mich.	Michigan Department of Public Safety

RELAY BROADCASTING, TELEVISION AND EXPERIMENTAL STATIONS

The class of stations is indicated by the symbols R, T and E. Some of these stations have many frequencies. Only the lowest is given.

R — Relay Broadcasting. T — Television Station. E — Experimental Station.

First District

Call	Keys.	Location		Power
W1XA	8650	Wianno, Mass.	E	500
W1XAC	1604	Providence, R. I.	E	250
W1XAF	Var.	Boston, Mass.	E	Var.
W1XAI	1604	Medford, Mass.	E	1000
W1XAM	1604	S. Manchester, Conn.	E.	1000
W1XAN	1608	Dartmouth, Mass.	E	500
W1XAV	2100	Boston, Mass.	T	500
W1XAW	1604	Medford, Mass.	E	500
W1XAY	2000	Lexington, Mass.	T	5000
W1XAZ	9570	E. Springfield, Mass.	R	10000
W1XB	1604	Somerville, Mass.	E	500
W1XC	1604	Marion, Mass.	E	10000
W1XE	321	Boston, Mass.	E	200
W1XF	321	Hartford, Conn.	E	200
W1XI	1604	Gloucester, Mass.	E	500
W1XJ	1604	Cambridge, Mass.	E	500
W1XK	990	Millis, Mass.	E	1000
W1XL	6425	Hartford, Conn.	E	500
W1XM	1604	Cambridge, Mass.	E	500
W1XN	1604	Middletown, Conn.	E	500
W1XO	1604	Cambridge, Mass.	E	500
W1XP	1604	S. Dartmouth, Mass.	E	1000
W1XQ	50	Bradley, Me.	E	25000
W1XR	50	Houlton, Me.	E	1000
W1XS	12850	Chestnut Hill, Mass.	E	500
W1XT	1604	Boston, Mass.	E	500
W1XV	1604	Dartmouth, Mass.	E	500
W1XY	2000	Lawrence, Mass.	T	250
W1XZ	1604	Worcester, Mass.	E	1000

Second District

Call	Keys.	Location		Power
W2XA	45	Rocky Point, N. Y.	E	190000
W2XAA	1604	New York, N. Y.	E	1000
W2XAD	15340	S. Schenectady, N. Y.	R	25000
W2XAE	240	Schenectady, N. Y.	E	5000
W2XAF	9530	S. Schenectady, N. Y.	R	40000
W2XAG	550	S. Schenectady, N. Y.	R	200000
W2XAI	6425	Newark, N. J.	E	50000
W2XAK	1604	S. Schenectady, N. Y.	E	250
W2XAL	6100	Coytesville, N. J.	R	20000
W2XAM	1604	New Brunswick, N. J.	E	10000
W2XAN	860	Nassau Co., N. Y.	E	500
W2XAO	6950	New Brunswick, N. J.	E	80000
W2XAP	2750	Jersey City, N. J.	T	250
W2XAQ	2506	Aircraft X118E	E	50
W2XAR	1604	Long Island City, N. Y.	E	500
W2XAS	1604	Rocky Point, N. Y.	E	80000
W2XAT	50000	S. S. Utica	E	10
W2XAV	1556	Ocean, N. J.	E	1000
W2XAW	23000	S. Schenectady, N. Y.	E	25000
W2XAX	2500	New York, N. Y.	E	20
W2XB	560	New York, N. Y.	E	5000
W2XBA	2750	Newark, N. J.	T	500
W2XBB	1604	Brooklyn, N. Y.	E	1000
W2XBD	2306	Garden City, N. Y.	E	20
W2XBE	Var	New York, N. Y.	E	50
W2XBF	1604	Mt. Vernon, N. Y.	E	250
W2XBG	1604	Garden City, N. Y.	E	200
W2XBI	1604	Rocky Point, N. Y.	E	10000
W2XBJ	6740	Rocky Point, N. Y.	E	80000
W2XBK	25700	Weehawken, N. J.	E	10
W2XBL	60000	Rocky Point, N. Y.	E	1
W2XBM	1604	Rocky Point, N. Y.	E	200
W2XBN	3000	Schenectady, N. Y.	E	500
W2XBO	2000	Long Island City, N. Y.	T	5000
W2XBP	1604	Rocky Point, N. Y.	E	10
W2XBQ	1608	Aircraft No. 4876	E	250
W2XBR	6020	New York, N. Y.	R	1000
W2XBS	2000	New York, N. Y.	T	5000
W2XBU	2000	Beacon, N. Y.	T	100
W2XBW	1604	Garden City, N. Y.	E	500
W2XBX	1608	Aircraft NC4616	E	500
W2XBY	1604	Jersey City, N. J.	E	450
W2XBZ	4795	New Brunswick, N. J.	E	80000
W2XC	5000	Babylon, N. Y.	E	500
W2XCA	2302	Aircraft 767	E	200
W2XCB	4795	Grasmere, N. Y.	E	50
W2XCC	4795	New Dorp, N. Y.	E	50
W2XCD	1604	Passaic, N. J.	E	5000
W2XCE	1604	Brooklyn, N. Y.	E	20000
W2XCH	2302	Schenectady Airport	E	300
W2XCI	1604	New York, N. Y.	E	250
W2XCK	23100	Little Neck, N. Y.	E	1000
W2XCM	1604	Sayville, N. Y.	E	5000
W2XCN	240	S. Schenectady, N. Y.	E	5000
W2XCO	2100	New York, N. Y.	T	5000
W2XCP	2000	Allwood, N. J.	T	2000
W2XCQ	1604	Rocky Point, N. Y.	E	100
W2XCR	2750	Jersey City, N. J.	T	5000
W2XCS	1608	Port Washington, N. Y.	E	200
W2XCT	23000	New York, N. Y.	E	50000
W2XCU	1604	Ampere, N. J.	R	20000
W2XCV	2326	Roosevelt Field, N. Y.	E	100
W2XCW	2100	Schenectady, N. Y.	T	20000
W2XCX	6080	Kearney, N. J.	R	500
W2XCY	23100	Linden, N. J.	E	1000
W2XD	1604	Tuckerton, N. J.	E	10000
W2XE	11840	Cross Hassock Bay, N. Y.	R	20000
W2XG	1604	Ocean, N. J.	E	5000
W2XI	790	Schenectady, N .Y	E	15000
W2XJ	1604	Deal, N. J.	E	15000
W2XK	1604	S. Schenectady, N .Y	E	25000
W2XL	7130	Newark, N. J.	E	250
W2XM	1604	Holmdel, N. J	E	1000

Call	Kcys.	Location		Power
W2XN	1604	New York, N. Y	E	150
W2XO	1604	S. Schenectady, N. Y.	E	25000
W2XP	1604	Winfield, N. Y.	E	1000
W2XQ	5885	New York, N. Y.	E	10
W2XR	2100	Long Island City, N. Y.	T	500
W2XS	1604	Rocky Point, N. Y.	E	10
W2XT	1604	Rocky Point, N. Y.	E	80000
W2XU	2750	New York, N. Y.	E	250
W2XV	4795	Long Island City, N. Y.	E	500
W2XW	1604	New York, N. Y.	E	250
W2XX	2000	Ossining, N. Y.	T	100
W2XY	1608	Newark Airport	E	400
W2XZ	1610	Bellmore, N. Y.	R	50000

Third District

W3XAB	1604	Camden, N. J.	E	250
W3XAD	2850	Camden, N. J.	T	500
W3XAJ	1604	Camden, N. J.	E	250
W3XAK	2000	Bound Brook, N. J.	T	5000
W3XAL	6100	Bound Brook, N. J.	R	20000
W3XAU	6060	Byberry, Philadelphia, Pa	R	500
W3XC	1604	Byberry, Philadelphia, Pa.	E	20
W3XD	1539	Alexandria, Va.	E	500
W3XE	1604	Baltimore, Md.	E	500
W3XF	1539	Fredericksburg, Va.	E	500
W3XG	1539	Fredericksburg, Va.	E	500
W3XH	1539	Richmond, Va.	E	500
W3XI	1604	Baltimore, Md.	E	200
W3XK	2000	Silver Springs, Md.	T	5000
W3XL	1604	Bound Brook, N. J.	E	20000
W3XM	6425	Philadelphia. Pa.	E	500
W3XN	194	Whippany, N. J.	E	60000
W3XO	6640	New Jersey Portable	E	10
W3XQ	1975	Mountain Lakes, N. J.	E	250
W3XR	1604	Mendham N. J.	E	500
W3XS	1604	Philadelphia, Pa.	E	50
W3XU	1604	Washington, D. C.	E	50000
W3XW	3256	Boonton, N. J.	E	50
W3XZ	4795	Washington, D. C.	E	250

Fourth District

K4XC	6425	San Juan, P. R.	E	200
K4XK	5483	San Juan, P. R.	E	250
W4XA	30100	Miami, Fla.	E	100
W4XB	6425	Miami, Fla.	E	200
W4XG	1604	Hialeah, Fla.	E	500
W4XQ	1604	Miami Beach, Fla.	E	1000

Fifth District

W5XH	1604	New Orleans, La.	E	1000

Sixth District

K6XAK	1604	Honolulu, T. H.	E	100
K6XB	1604	Kawaihae, T. H.	E	500
K6XBZ	1604	Honolulu, T. H.	E	100
K6XO	1604	Kahuku, T. H.	E	10000
K6XP	1604	Honolulu, T. H.	E	1000
K6XS	1604	Honolulu, T. H.	E	1000
K6XX	1604	Lahaira, T. H.	E	500
W6XA	23000	Salt Lake City, Utah	E	50000
W6XAD	2398	San Francisco, Cal.	E	1000
W6XAF	2938	Sacramento, Cal.	R	500
W6XAH	1604	Beverly Hills, Cal.	E	1000
W6XAJ	1604	Los Angeles. Cal.	E	1000
W6XAL	6080	Westminster, Cal.	R	15000
W6XAN	23100	Los Angeles, Cal.	E	1000
W6XAP	1604	Los Angeles, Cal.	E	500
W6XAQ	1604	San Mateo Co., Cal.	E	10000
W6XAX	2727	Oakland, Cal.	E	50
W6XAY	1604	Palo Alto, Cal.	E	250
W6XBA	3256	S. S. Metha Nelson	E	100
W6XBB	1604	San Francisco, Cal.	E	500
W6XBK	300	San Francisco, Cal.	E	500
W6XBL	150	Berkeley, Cal.	E	1000
W6XBO	1200	Los Angeles, Cal.	E	500
W6XBR	1604	Los Angeles, Cal.	E	100
W6XBX	1608	Galt, Cal.	E	75
W6XE	1604	Orange, Cal.	E	500
W6XF	1604	California Portable	E	500
W6XG	790	Oakland, Cal.	E	10000
W6XH	1604	Stanford University	E	1000
W6XI	1604	Bolinas, Cal.	E	10000
W6XJ	1604	California Portable	E	500
W6XL	1604	Alameda, Cal.	E	5000
W6XM	1604	Berkeley, Cal.	E	1000
W6XN	6425	Oakland. Cal.	E	10000
W6XQ	278	Sixth District Portable	E	2000
W6XR	283	Salt Lake City, Utah	E	500
W6XV	99	Palo Alto, Cal.	E	10000
W6XW	6425	Oakland, Cal.	E	10000
W6XZ	23000	San Francisco, Cal.	E	50000

Seventh District

K7XD	1540	Libbyville, Alaska	E	50
K7XF	1604	S. S. Kiska	E	50
W7XA	1604	Portland, Ore.	E	1000
W7XAO	2750	Portland, Ore.	T	100
W7XAP	2000	Seventh District Portable	E	10
W7XAQ	2000	Seventh District Portable	E	10
W7XAS	101	Wenatchee, Wash.	E	7000
W7XAT	101	E. Wenatchee, Wash.	E	10000
W7XB	1604	Bozeman. Mont.	E	100
W7XC	1604	Seattle, Wash.	E	1000
W7XE	1604	Seattle, Wash.	E	100
W7XP	1596	Seattle, Wash.	E	500

Eighth District

W8XAC	1604	Rochester, N. Y.	E	50
W8XAG	8650	Dayton, Ohio	E	50
W8XAL	6060	Mason, Ohio	R	250
W8XAV	2000	E. Pittsburgh, Pa.	T	20000
W8XAW	1604	Morgantown, W. Va.	E	200
W8XB	1608	Utica, Mich	E	500
W8XC	1608	Aircraft X-7654	E	75
W8XD	1604	Cleveland, Ohio	E	500
W8XE	1604	State College, Pa.	E	500
W8XF	1712	Cleveland, Ohio	E	100
W8XG	1604	Ohio Portable	E	200
W8XH	23060	Buffalo, N. Y.	E	5000
W8XI	31000	E. Pittsburgh, Pa.	E	20000
W8XJ	1608	West Dover, Ohio	E	200
W8XK	6140	E. Pittsburgh, Pa.	R	40000
W8XL	1604	Dayton, Ohio	E	500
W8XO	Var.	Cleveland, Ohio	E	500
W8XP	1604	E. Pittsburgh, Pa.	E	500
W8XS	1604	E. Pittsburgh, Pa.	E	50
W8XT	660	E. Pittsburgh, Pa.	T	25000
W8XZ	Var.	Detroit, Mich.	E	.....

Ninth District

W9XA	830	Denver, Colo.	R	12500
W9XAA	6080	Chicago, Ill.	R	500
W9XAG	2000	Chicago, Ill.	T	1000
W9XAH	1490	Chicago, Ill.	E	500
W9XAK	1712	Chicago, Ill.	E	500
W9XAL	1608	Addison, Ill.	E	500
W9XAM	4795	Elgin, Ill.	E	500
W9XAO	2000	Chicago, Ill.	T	500
W9XAP	2750	Chicago, Ill.	T	1000
W9XAQ	6040	Addison, Ill.	R	1000
W9XAS	278	Lake, Wis.	E	7.5
W9XAW	1604	Houghton, Mich.	E	250
W9XAZ	2000	Iowa City, Iowa	T	500
W9XB	1604	Culver, Ind.	E	1000
W9XC	2140	Chicago, Ill.	E	10000
W9XD	1604	Gunnison, Colo.	E	100
W9XE	1604	Golden, Colo.	E	5
W9XF	6020	Downers Grove, Ill.	R	5000
W9XG	2000	W. Lafayette, Ind.	T	1500
W9XH	1604	Madison, Wis.	E	500
W9XI	1604	Minneapolis, Minn.	E	500
W9XJ	1604	Grand Forks, N. D.	E	500
W9XK	3256	Rantoul, Ill.	E	1000
W9XL	1604	Anoka, Minn.	E	1000
W9XM	23000	Chicago, Ill.	E	5000
W9XO	1604	Chicago, Ill.	E	750
W9XP	23100	Chicago, Ill.	E	1000
W9XR	2850	Downers Grove, Ill.	T	5000
W9XU	6060	Council Bluffs, Iowa	R	500
W9XV	1604	Carterville, Mo.	E	100
W9XW	300	Hastings, Nebr	E	10000
W9XY	1604	Chicago ,Ill	E	25000

FAVORITE PROGRAMS

Time	Station	Dials	Feature

DAILY

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

HOW TO TUNE A SET CORRECTLY

Read This Page Carefully and You Can Set Your Dials Accurately for Any Station in America

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 kcys. 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 kcys. 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 kcys. are 72-70 and the dial numbers for 660 kcys. are 69-67. If we now will set our dials for 70-68 it is obvious we will have our set tuned for 650 kcys. 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 kcys. Now it is clear that if we reset our dials at 71-69 our set will be tuned to 640 kcys. 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 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 the 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 us 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.

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters			76	74
KHQ	1000	Spokane, Wash.		Louis Wasmer, Inc.
WCAE	500	Lincoln, Nebr.		Nebraska Wesleyan University
WFEA	500	Boston, Mass.		Edison Elec. Illuminating Co.
WOW	1000	Omaha, Nebr.		Woodmen of the World
WEMC	1000	Berrien Springs, Mich.		Emmanuel Missionary College
600 kilocycles 499.7 meters			75	73
CFCH	250	Iroquois Falls, Ont.		Abitibi Power & Paper Co.
KFBU	500	Laramie, Wyo.		Bishop N. S. Thomas
KFSD	500	San Diego, Calif.		Airfan Radio Corp.
WCAO	250	Baltimore, Md.		Monumental Radio Co., Inc.
WFIW	250	Hamilton, Ohio		Beloit College
WOAN	500	Lawrenceburg, Tenn.		Vaughan School of Music
WREC	500	Memphis, Tenn.		WREC, Inc.
WTIC	250	Hartford, Conn.		Travelers Insurance Co.
610 kilocycles 491.5 meters			74	72
KFRC	1000	San Francisco, Calif.		Don Lee, Inc.
WDAF	1000	Kansas City, Mo.		Kansas City Star Co.
WFAN	500	Philadelphia, Pa.		Keystone Broadcasting Co., Inc.
WIP	500	Philadelphia, Pa.		Gimbel Bros., Inc.
WOQ	1000	Kansas City, Mo.		Unity School of Christianity
620 kilocycles 483.6 meters			73	71
KFAD	500	Phoenix, Ariz.		Electrical Equipment Co.
KGW	1000	Portland, Ore.		Oregonian Publishing Co.
WDAE	1000	Tampa, Fla.		Tampa Publishing Co.
WGHP	1000	Orlando, Fla.		Rollins College, Inc.
WLBZ	500	Dover-Foxcroft, Me.		Thompson L. Guernsey
WTMJ	1000	Milwaukee, Wis.		Milwaukee Journal
630 kilocycles 475.9 meters			72	70
CFCT	500	Victoria, B. C.		Victoria Broadcasting Assn.
CJGX	500	Yorkton, Sask.		Winnipeg Grain Exchange
CNRA	500	Moncton, N. B.		Canadian National Railways
CYR	250	Matapan, Mex.		Castillo Llamas
KFXU	1000	Columbia, Mo.		Brigham College
WGHP	500	Evansville, Ind.		Evansville on the Air, Inc.
WMAL	250	Washington, D. C.		M. A. Leese Co.
WOS	500	Jefferson City, Mo.		State Marketing Bureau
640 kilocycles 468.5 meters				
KFI	5000	Los Angeles, Calif.		Earle C. Anthony, Inc.
WAIU	5000	Columbus, Ohio		American Insurance Union
650 kilocycles 461.3 meters			70	68
WSM	5000	Nashville, Tenn.		National Life & Accident Ins. Co.
660 kilocycles 454.3 meters			69	67
WAAW	500	Omaha, Nebr.		Omaha Grain Exchange
WEAF	50000	New York City		National Broadcasting Co., Inc.
670 kilocycles 447.5 meters			68	66
WMAQ	5000	Chicago, Ill.		Chicago Daily News, Inc.
680 kilocycles 440.9 meters			67	65
KPO	5000	San Francisco, Cal.		Mels Bros. & The Chronicle
WPTF	5000	Raleigh, N. C.		Durham Life Insurance Co.

If all the Radio sets I've "fooled" with in my time were piled on top of each other, they'd reach about half way 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 skimping 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. 1EO, Washington, D. C.

J. E. SMITH, President,
National Radio Institute, Dept. 1EO,
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 .....