THE MAY 1929

RADIO INDEX

The Non-Technical Radio Magazine

The Lucky "Mike"

RADEX shows the frequency to which set is tuned as dials are turned, gives exact location of dials for any station in America and identifies programs received without announcement. For any dial and any set.

No. 29 "WHAT'S ON THE AIR TONIGHT" NSE

Use Your RADEX Properly

AND it will add tremendously to your pleasure and success in tuning your radio set. RADEX is so simple a child can use it and yet we find that many people are not using it properly. If you will follow these simple directions, RADEX will do for you the following things:

Show you the wave length and frequency to which your set is tuned whenever you place your dials.

Tell you where to set your dials for any station in America, even those you have never received.

Identify programs received the instant you hear them without waiting for announcements.

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

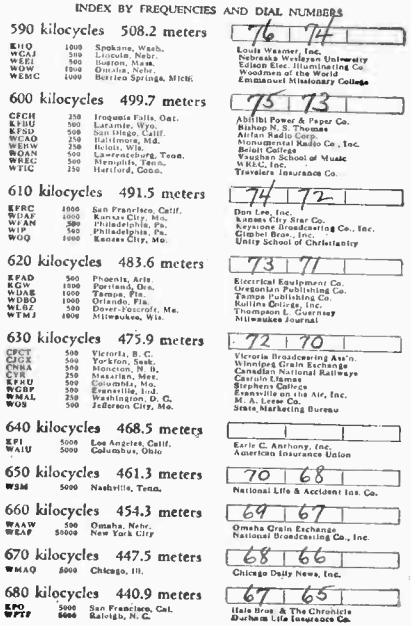
1st By Frequencies
2nd By Call Letters
3rd By States and Cities

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.



INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters — 76 | 74

KHQ	1000	Spokane, Wash.	Louis Wasmer, Inc.
WCAJ	500	Lincoln, Nebr.	Nebraska Wesleyan University
WEEI	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.
WEHS	250	Illois, Wis.	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.
WJAE	1000	Tampa, Fla.	Tampa Publishing Co.
WDBO	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 Ass'n.
CJGX	500	Yorkton, Sask.	Winnipeg Grain Exchange
CNRA	500	Moncton, N. B.	Canadian National Railways
CYR	250	Masatlan, Mex.	Carrick Thomas
KFXD	500	Columbia, Mo.	Stephens College
WGBF	500	Evansville, Ind.	Evansville on the Air, Inc.
WMAL	500	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

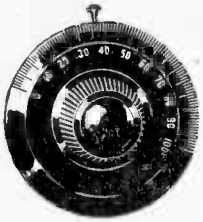
KPO	5000	San Francisco, Cal.	Hale Bros. & The Chronicle
WPTF	5000	Raleigh, N. C.	Durham Life Insurance Co.

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 the 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.

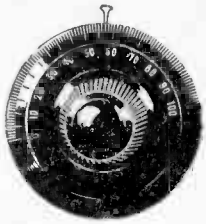
Let us now tune in some other station. We repeat the same procedure in tuning and find that we are hearing, let us say, WOS at Jefferson City. Proceed as before in ascertaining the frequency of WOS. This we find to be 630 kcys. We turn to 630 in the Index by Frequencies and enter our dial readings for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

We have now 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

(Continued on page 32)



RADIO INDEX



FRED C. BUTLER, Editor

FIFTH YEAR

Contents

NUMBER 29

PAGE

Subscription Price, $1.75 per year (Ten Issues)
Published Monthly excepting July and August.

THE RADEX PRESS

P. O. Box 143 . . . . . Cleveland, Ohio

Dynamic Speakers

Advantages of this New Type

By E. R. Haan

AS THE cone type of speaker has replaced the horn type because of better tone quality, so the dynamic speaker is taking the place of the cone type. The reason is that the dynamic speaker gives better reproduction due to more equal amplification of low and high tones and less distortion than a cone speaker. Besides, a dynamic speaker is capable of delivering much more volume. It differs radically from the other types of speakers in that it uses an electromagnet instead of a permanent magnet, and that a small, light movable coil is used instead of an iron core to actuate the cone, the coil being attached directly to the apex of the cone, instead of being connected to it by means of a drive pin. Whereas the pull of a permanent magnet is limited, that of an electromagnet is proportional to the amount of power supplied to it. The small coil is attracted or repelled by the electromagnet, depending on the current flowing through the small coil, this current being supplied by the receiver through a choke coil or output transformer. The cone of a dynamic speaker is mounted so that there is maximum space for its movement, without the use of any springs or pins to retard it, which makes possible the undistorted low tones.

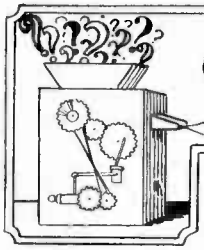
There are three types of dynamic speakers, namely, those using a 6-volt storage-battery current, those using a high voltage supplied by a B-eliminator, and those operating on rectified 110-volt alternating current. The first type is designed for use on battery-operated sets. The current passed through the speaker is relatively small so that there will be no heavy drain on the battery. The second type makes use of 90 volts d. c. supplied by a B-eliminator. Be sure, however, that the eliminator will stand the additional drain, for if it is overloaded an a. c. hum may result. It is best practice to operate a B-eliminator at about two-thirds of its maximum output. If the speaker overloads the eliminator, provide a separate eliminator for it. The type of dynamic speaker using rectified 110-volt a. c. for its winding excitation is equipped with a transformer and a rectifier. It should be connected in the a. c. supply to the eliminator, if one is used, so that one switch can be used to control both.

When a dynamic speaker is used it is necessary to provide a power tube in the last socket of the audio end of the receiver, and the power tube must be supplied with the amount of plate voltage and C-biasing voltage for which it is designed. A UX 171 or 171A, a UX 112 or 112A, a UX 210 or a UX 250 tube can be used for this purpose. No output transformer is needed if the dynamic speaker is already provided with one. Full, undistorted tone quality and plenty of current to operate a dynamic speaker can be obtained by connecting two power tubes in parallel or providing a push-pull amplifier as a substitute for the last stage of audio amplification.

The front part of the speaker frame must be fastened securely to a board which serves the purpose of a baffle, a circular hole being cut in the board to fit over the cone of the speaker. The reason for this is that rigidity is desired in order to prevent sound waves emitted from both sides of the cone from neutralizing each other and destroying the low frequencies. The baffle can be made of soft wood or soundproof insulating material to eliminate vibration as much as possible. Use material at least ⅜ in. thick. The size of the baffle depends to a great extent on the available space. Theoretically a large baffle is better than a small one, although the latter must usually be resorted to. The edges should be solidly fastened to a frame or to the edge of a cabinet in which the speaker is housed. Do not mount the speaker on rubber cushions as solidity is desired.

Counterpoise for Ground

In locations where the ground is exceptionally dry and it is therefore difficult to get a good ground connection, or in cases where a receiver is located near the top of a high building, where the ground wire must be of exceptional length, a counterpoise may be substituted for the ground. A counterpoise is merely another wire just as long as the aerial and erected in exactly the same way; it is located below the aerial and parallel to it. **E. R. H.**



The QUESTION MILL

Conducted by

S. E. SHAPIRO, TECHNICAL EDITOR

Since moving my set I have noticed that the loud speaker howls continually. We have the set on a small table with the speaker on top of the set. What is the cause of the howling and what remedy would you suggest?

The evident cause is the speaker's location on top of the radio set. There are some sets and speakers made for use in this manner and most are now. Vibrations from the speakers are communicated to the set and tubes and cause the howling. I am quite certain that setting the speaker on the floor or some other table or stand will eliminate this condition.

My all-electric radio set is of a type that uses Cardon No. 484 and 182 tubes. Is it true that I cannot use any other tubes?

For best results and longer tube life, it is very imperative that you use the specified Cardon tubes. The 484 runs at a higher voltage than most heater tubes. The 182 might be called a half-breed. It is a cross between the 171-A and the 250. It is to be used in the audio stage only.

Is it true that an iceless refrigerator causes interference with the radio?

Yes, interference is not only experienced from this source but from practically every household device which contains an electric motor. In this classification belong oil burning furnaces, vacuum cleaners, mixing machines, sewing machines and practically all medical instruments electrically operated. There are hundreds of little suspected causes of interference of this type. The competent radio service man working with an electrician can do much to eliminate most of these disturbing elements.

I have a receiver which operates very satisfactorily except that I am bothered with squeals and by losing stations when I take my hand from the tuning dial. What is the cause of this?

Generally speaking if the receiver is properly installed with both good aerial and ground connections, the condition you mention is caused by improper shielding or faulty construction. The effect is known as body capacity. Capacity, by way of explanation, is the ability or power of anything to receive or contain electricity. There is different capacity effect between a person's body and parts of a radio receiver which are carrying high frequency currents. When any part of the body such as the hand of the operator is brought near a radio receiver, the body capacity effect may change the tuning of the various circuits or may cause the circuits to start oscillating which results in howling and squealing. Most of this trouble may be eliminated by proper construction and shielding.

I have a very expensive set which is now three years old, it is battery operated because we are several miles from electric power lines. What can be done to improve its tone?

As a suggestion only, we state that the replacement of the audio transformers now used in the set by those of modern type which give a more real reproduction of the full frequency range and the addition of a suitable output device will materially aid the tone quality of any set. It may be well to suggest that if this is done a well designed speaker of the type now in general use, either dynamic or magnetic should replace the one that you are now using.

Can a short wave adaptor be used on a regular 6 tube A. C. set?

Yes, there are adaptors specially designed for this purpose as well as those designed for use with the usual battery set. Extreme care must be observed in tuning when using any adaptors and a pair of head phones are essential to aid in locating the stations when they are first tuned in. Generally a some-

what shorter antenna will be found advantageous.

I have a B eliminator which I purchased some time ago. It requires a 216 B tube and I have been unable to purchase one locally. Can I use another type tube without making any changes in the eliminator?

The new type X281 and X381 are much better and improved types than the 216 B which is now obsolete. The filament voltage is the same and no change need be made to use it in your eliminator. This information will solve the problems of many people owning sets using the 216 B tube. The replacement tubes are available at any reliable dealer's.

I have been using a crystal set for more than four years. I have never desired to use a large speaker up until this time but would like to do so now. How can this be done? What speaker would you recommend?

In its present form your crystal set will not operate any type of loud speaker unless it is of a type with which modern practice is unacquainted at this time, however, if used with a suitably designed and constructed amplifier, it may be used with any good loud speaker to give good volume on any stations which it may receive.

I have a seven tube electric set with a dynamic speaker. I would like to know if a traffic-signal 40 or 50 feet away from my home would cause my set to thunder and crackle. Most of it is caused in wet or rainy weather. Is there anything I can do to overcome this trouble?

There is no doubt but that a traffic signal will cause some interference, but it would be with regularity. That is, every time a light changes you will hear the crackle of the contacts. Interference will always be more bothersome during wet weather. A line filter or eliminator will relieve the situation somewhat.

I would like to know what you think about the subantenna which is an underground antenna. It is supposed to give better reception, reduce static, and increase distance and volume. This subantenna is buried in the ground at a depth of 18 inches and uses filtered ground waves. I would like to use this on a new electric set.

Discussing underground antennas, we find them still in the experimental stage. There are many people using them in preference to overhead antennae. Then there are those that find them inferior to overhead aerials. My advice would be to try an underground antenna and compare the results with your present aerial.

I have a seven tube all electric radio set. In the midst of a program it will stop dead. I then turn off the switch for about five minutes and when I turn it on again the program will start all right. It has done this about five times during the week. We also hear a scratching noise on the local stations. At times the speaker issues a terrible rumbling noise that can be heard all over the house. Our set is three months old.

Your trouble is evidently in your tubes and speaker. However, you may find the disturbance in tubes only. The fading I would trace to the detector tubes. This tube may have a cracked cathode. The proof of this would be that tube glow goes out when the set fades. The rumbling noise if not a speaker trouble, would be a shorted or microphonic tube. In your case, it is best to have your set and tubes checked thoroughly, paying special attention to your speaker.

We have a combination radio and victrola. Lately our phonograph has become noisy and quite bothersome to listen to. Where would you think the trouble is coming from?

Imperfect reproduction can be caused by bad needles that are not fastened in the receptacle properly. Should this fail to relieve the situation, disconnect your electric pickup and bring it in to your dealer for repairs.

To what can you trace oscillation in most radio sets?

In the event that a receiver is oscillating you may trace the trouble to any of the following causes: (1) A bad tube or tubes in the radio frequency stages. (2) Too high a voltage on the R. F. Tubes. (3) A shorted grid resistor. (4) A defectively wired bypass condenser. (5) Too long an aerial (this however is very infrequent). (6) A poor ground. (7) A primary coil may be reversed. (8) A shorted grid condenser. (9) A shorted detector plate condenser or any open detector plate.

(*Continued on page 20*)

Kidnapped

Radio Comes to the Rescue

By MARTIN APPLETON

THE head master of the Hudson School for Boys came into the class-room and touched young Howard Brandon on the shoulder. "Come into my office, my boy," he said. Young Brandon, a round-faced, curly-haired lad of fourteen rose and followed the master. In the office, the latter placed his hand kindly on the boy's shoulder and said, "I have some bad news for you, Brandon. Your father has been hurt in an automobile accident and has sent for you to come at once. It is not extremely serious but it is quite natural that under the circumstances you should be wanted at home. Get what things you will need. A car is waiting for you."

Brandon's face sobered and his lips twitched but he pressed his jaws together manfully, thanked the head master and left the room. In a few minutes he was back with his bag and was conducted to the door where a large car in charge of a uniformed chauffer awaited him. He realized that only a serious accident would have caused his parents to take him away from his school and his eyes were blinded by tears. He took a seat in the car and the driver closed the door of the car, took his own place behind the wheel and the car moved off.

That was the first act in the famous Brandon kidnapping case which aroused the interest of the entire country. The wide world opened and swallowed the young lad and no word was heard from him for weeks except the occasional letters to his father from his kidnappers demanding and arranging for the payment of ransom.

* * * * *

After riding for several miles, quiet and subdued, the boy turned to the driver and asked, "Why didn't our own driver come after me?" The driver explained that he was the chauffer of a friend of his father's who lived near the school and that the boy's mother had called the friend by long distance and asked that he get the boy off for home. The friend had instructed his driver to get the boy at once and drive him to New York. Young Brandon pondered this silently.

A few minutes later they caught up to a man walking along the road ahead of them. This man raised his hand and indicated that he desired to ride. The chauffer stopped and motioned to the man to get into the rear seat. The car started forward again and a moment later a cloth was suddenly pressed to the boy's nostrils. He struggled and tore at the hands encircling him. ***** When he awoke the evening sun had given way to midday. Slowly he came to consciousness and like one still in a dream, he pressed his eyes tightly together and tried to remember where he was and what had happened.

He was lying on a cot in what seemed to be a cabin. It was a rough room built of logs with the walls inside whitewashed. Slowly he looked around him and took in his surroundings. Four men at the other side of the room were playing cards paying no attention whatever to their prisoner. The room was roughly furnished but equipped with many articles necessary for comfort and even luxury. It was evidently a hunter's cabin fitted up for the enjoyment of its owner. The boy was not long in concluding exactly what had happened and what his situation was. For a few minutes he lay in a chill of terror and then there slowly came over him a glow of excitement and even of relish as, boylike, he realized he was in for a great adventure.

The men played on never looking toward the cot on which he lay. Silently the boy took stock of his surroundings. There were four windows but each was heavily barred on the outside with a heavy mesh of steel wire for the evident protection of the glass sash from marauders but it might well have been designed for the safe-keeping of a prisoner. In one corner of the room sat a small phonograph and in the other was a radio set at which the boy's eyes lightened with interest for radio had long been his hobby. Through one window the boy could see a wire which was evidently an aerial for there was no telephone in the room so far as he could see. Through the windows in each direction could be seen only a dense woods surrounding the little clearing in which the cabin set.

Howard saw plainly that as a prisoner he was utterly helpless. With four men for his guards, with the windows barred and the doors watched, escape was impossible unless it were by wits. So the boy came to the decision that he must seem quite helpless and entirely overcome by the situation in which he found himself. He must even cry a bit for it would serve his interest best if the men came to have a contempt for him and thus be led to slacken their surveillance.

He began to sob. The men turned and one of them rose and came over to him. "What's the matter, kid?" he asked, not unkindly. The boy drew away in fear and asked, "Where am I?" The man grinned and said, "Oh, you're all right. You'll be taken care of. All you have to do is what you are told and nobody will hurt you."

And thus began the great chapter in Howard's young life. The cabin was evidently well-stocked with food and the men took turns in preparing it. During the days and long into the nights they played cards. Sometimes Howard was permitted to go outside but always one of his captors was at his side. Every moment his eyes were alert for some sign that would give him a key to his location. Every moment his ears were keen to catch some word that might be useful to him in his dilemma. But few helpful facts came to his observation. The men discussed their project in front of him frankly and told of new demands that had been made upon his father and of the latest developments in the hunt that was going on throughout the country.

At night they would laugh with cruel glee at descriptions that were broadcast over the radio concerning the boy and slap each other on the back when it was announced positively, as happened several times, that their prisoner had been seen in distant places. The boy too got a thrill from hearing each evening of the great hunt that was going on for him but tears came to his eyes quickly when it was told how his father and mother were suffering.

As the days passed by, Howard imagined the men were growing somewhat less severe in their guarding. He was careful to do those things which would lead them to belittle him and underestimate his age and ability. One day he took down a pair of binoculars that were hanging on the wall and started to adjust them to his vision. One of his captors shouted at him but another said "Oh, what the hell. Let him have 'em. He can't get away with those things. Go on and deal." And so for several days the boy amused himself with the glasses. Through a certain small opening in the woods he could see a little village nestling in the valley but aside from that he had not the slightest idea where he might be. From the fact that WGY and WCAD were the most consistent stations he heard over the radio, he assumed that he was in the Adirondacks but where he had no way of knowing.

Once in a while the men would all leave the hut for an hour or two and loaf about on the outside although never did all of them leave the vicinity at any one time. The first time he was left alone, he ran to the radio set and with his heart beating furiously, opened the cabinet and peered in at the set. It was a neutrodyne with which he was more or less familiar and quickly he closed the lid and ran back to his cot. He now had a great idea and longed for the opportunity to try it out. Each time he was left alone, he would rush to the radio and study for a few minutes the intricate wiring of the set. He did this until he knew each wire and each instrument as though he had built it himself.

One day when he was being permitted to exercise in the open, he found a short piece of wire near the aerial. He picked it up casually and played with it for a time and then made as if to throw it away but instead tucked it carefully into his shirt.

So life went on for two weeks more but still no opportunity came for him to test his great idea. The men were beginning to chafe at their own imprisonment and were beginning to be bitter at the delay in providing ransom. More and more they seemed to relax their vigilance and although they never left him alone without locking him in the cabin, yet frequently they did this. One afternoon he watched from the window and saw all four of the men go off down the hill together. "Now," said the boy, and he ran to the radio and with some small tools he had picked up and secreted or made for himself out of such odds and ends as came to him, he began to unfasten wires and reattach them to new positions. For an hour he worked feverishly, stopping every few minutes to listen intently but, hearing no sound, to renew his work.

(*Continued on page 23*)

In Case of Fire

By HOWARD WALDORF

A RADIO set is more important than a cargo of air mail in the opinion of a certain Nebraska farmer.

This was brought out recently when a mail plane piloted by Norman Potter crashed beside a farmhouse adjoining the Omaha flying field.

Stunned by the impact, Potter came to to find his plane in flames and an excited farmer shaking him.

"Hurry up and help me or it'll be too late," the farmer shouted, running toward the nearby house.

Believing that someone was dying or badly injured, Potter clambered out of the wreckage and hurried after him. As he entered the doorway, he saw the farmer dancing excitedly around a huge radio set.

"Here—grab a hold of one end of this and help me carry it out before the house burns down," the farmer directed.

Potter turned on his heel and raced back to save the mail. The plane was now a mass of flames.

The farmer struggled with the set until he had dragged it out into the yard. He set it down on the ground just as the last spark of the fire went out—leaving the house undamaged.

"Sure a close call that time," Potter confided as he looked over the wreckage of the mail plane.

"Yeh, I don't know what I'd a done if I'd a lost that set," the farmer replied.

Ghostly at Least

I have found that my radio set can be enjoyed by everyone in the house by means of a very simple device. I attached a long cord to my loud speaker, and passed it through the same hole that I use to bring my battery wires up from the cellar. Then I place my loud speaker directly in front of the opening where cold air is taken into the hot-air furnace. When I turn on my radio set, the pipes from the furnace serve as carriers, transmitting the music into all rooms of the house. Oftentimes a guest is quite mystified to hear this perfectly transmitted music coming out of the register.—*Jacque Longaker, Buffalo, N. Y., in Radio Broadcast*

Electrolyte

The hydrometer nozzle should not be raised out of the cell of the battery while a reading is being taken, as a drop or two of the electrolyte might get on one's clothes or on a rug. This will be disastrous, for this acid eats through cloth very readily. The same care should be observed when transferring the hydrometer from one cell to another. In case some of the electrolyte is spilled accidentally, a rag saturated with ammonia or vinegar should be quickly applied to the spot on which the electrolyte was spilled, or a liberal quantity of ordinary baking soda should be sprinkled on the affected spot. Ammonia, vinegar, and baking soda have a counteracting effect on the electrolyte; they tend to neutralize it and arrest its ruinous action. E. R. H.

FROM far-off Haiti comes this letter from the American Vice-Consul: "I find your book extremely interesting and beneficial particularly so because we are unable to get the daily papers." It certainly does add to the joy of the day's work to know that one is helping people all over the continent to increase their pleasure and satisfaction with radio.

"Your April issue of RADEX was received yesterday," writes Rufus C. Myretetus of Collingswood, N. J., "and I am very much pleased with the added features, particularly those pertaining to the short waves and the schedule of short-wave broadcasts. Each issue of your publication seems to be better than the previous one." In this issue of RADEX we are incorporating still another improvement which we believe our army of readers will find invaluable. This is the tabbing of pages in the Index by Frequencies. This idea was suggested to us by Norris McElya of Miami, Florida. Each reader of RADEX should enter the key-dial numbers on the seven tabs and then with a few clips of the shears, he can tab his index for instantaneous reference. We shall be glad to learn if our readers like this new feature.

No Knocks in Radex

"RADEX is such a wonderful little book. Sure is worth its weight in gold. I wonder how I ever got along without it," writes Mrs. Wm. Atkinson, of 2709 Lawton Avenue, Detroit, Michigan. It is remarkable that out of the thousands of letters we receive from our readers there is not a single complaint regarding the make-up or service of RADEX. When we realize that we are serving a great diversity of readers—experts in radio, those who know nothing of its technique, residents of great cities, dwellers on ranches and places far from civilization, women, men and boys—it is gratifying that in a single publication we are able to please them all. Our complaints are limited to those who do not receive their copies quickly enough. One subscriber who had changed his address three times in as many months, complained that his last number had not been received. "It is a nuisance to have to write a letter for every copy I get," he wrote, "and I can assure you I wouldn't do it if I didn't want my RADEX so badly."

We do our very best to address our subscribers' copies accurately and out of the thousands we mail, it is not surprising that once in a while one should go astray. Some times we get letters from people accusing us of being fakes because they did not receive the RADEX for which they had subscribed, only to find that they did not give us any address on their subscriptions. It is astonishing how many people fail to give their addresses and we can only hold their subscriptions until they write again. Sometimes they never do and we presume they are warning their friends against RADEX telling how they sent us a subscription and never heard from it.

"Allow me to congratulate you on the wonderful little RADEX which you are putting out," writes John C. Barry of Nashua, N. H., who underscores a postscript "This letter is unsolicited." "I buy it regularly every month. It does not last long in this city. I have been using radio call books for about four years, so you see when I say yours is best, I mean it."

From an Expert Amateur

From an inspector in the great Westinghouse works at Pittsburgh, comes an interesting letter. B. H. Skinner of Hazelwood, Pa., writes: "I would like to write my appreciation of RADEX. It is the best little book that I have ever had my hands on. It sure is worth twice its price to any real radio fan and how I missed it so long I sure cannot explain because I have been getting nearly every publication on the market regarding radio at some time or other. And it was only three months ago that I met

RADEX by accident. I have been dabbling with radio ever since the days of wireless telegraphy before the war. I went from telegraph to radio step by step. From telegraph to crystal set, dry-cell sets, storage battery sets, next were the battery chargers, then battery eliminators and on to A. C. sets. I have tried some very funny things and often found these crude experiments of mine left me with less money in my pocket but wiser in the end. I do high-frequency testing on completed armatures and stators for short circuits, open circuits and wrong connections and my work proves more than interesting to me. And my hobby on the side is radio. And I am sincere when I say that for my part, I feel as if it is next to impossible to express the real praise due to you for your publication."

"WJSV is listed as located in Washington. This is an error as the station is located in Mt. Vernon Hills, Virginia," writes Thomas F. Creed of 132 East 127th Street, New York City. As we have explained before we prefer to give the location of the studio rather than that of the antenna and we are under the impression that the studio of WJSV is located in the city of Washington. If we are wrong we would like to be corrected. Mr. Creed adds, "Also I would like to state that RADEX is certainly a great help in bringing in DX. The articles by Mr. Haan are indeed interesting and have aided in locating and repairing many difficulties."

Mr. Haan's Book

We have had a number of orders for Mr. Haan's book and we have no hesitancy in recommending it to anyone who, lacking technical knowledge of radio, desires a book on the subject both helpful and understandable.

"You'll probably say that RADEX can't be improved upon. Nearly true but not quite," comments Clarendon Ions of Miami, Florida. He then goes on to suggest that in the Index by Frequencies, we place a small square like those on a ballot in front of each station listed wherein the user may check those stations he hears. We have written Mr. Ions that we will see if this can be done the next time our type is re-set but that we believe many users are already making a check mark in front of the stations that are received as a quick guide to identification in future.

"I have logged stations in almost every state in the Union, in Canada, Mexico and Cuba and I wish to say that I could only do this with the use of RADEX," says Paul Benson, 243 West Church Street, Lock Haven, Pa. "It's great," he adds. Mr. Benson would like to know when KOH of Reno, Nevada, is on the air. He has logged stations in every state except Nevada and would like to receive them.

Radex DX Club

Mr. Benson makes the suggestion that there may be many interested in DXing who would like to correspond with others regarding their successes or failures. This seems to us a capital idea and we hereby appoint as Secretary of the Club, Mr. Paul Benson, 243 West Church Street, Lock Haven, Pa. Perhaps a plan can be worked out whereby the letters received each week can be forwarded in a bunch to the members of the Club by them to be re-mailed to the next on the list.

And speaking of DX, Mrs. F. E. Geathard of 217 West 21st Avenue, Spokane, Wash., writes us that she has received a number of foreign stations in the broadcasting band and has verification from JOAK of Japan. She has brought in both Sidney and Brisbane in Australia, *at four a. m.* But, she says, "the resulting thrill is well worth staying up all night for."

"A friend of mine gave me recently a copy of RADEX and of all the log books I have ever seen, this is by far the best," writes C. M. Falconer of Guilford, Baltimore, Md. Mr. Falconer has an Atwater Kent six-tube No. 40 on which he has received one hundred and eighty stations in the last three months. He has also received thirty-eight short-wave stations between 200 and 222 meters.

Edward Neuman of 506 East 125th Street, Cleveland, Ohio, sends us a photograph of his set on which RADEX occupies a prominent place. "I can't say that I have had many radio logs and those I have had were good BUT none were quite as good as RADEX. My friends talked so much of RADEX that I decided to obtain one and now your circulation is increased by one. Haiti, Havana, Mexico City and nearly every west coast station and 80 others within one month is my record with the aid of RADEX. Some log book—RADEX," comments Mr. Neuman.

The C and X Stations

From Earl Mills, away up in Brandon, Manitoba, comes the following: "I am an ardent reader of RADEX and consider it the best log book available. It is not sold in our town and I am forced to send 146 miles to Winnipeg to get it." Mr. Mills sends us some corrections in our Canadian listings which we are incorporating in this issue. We have also received from the American State Department in Mexico City, the correct listings for Mexican stations all of which have changed their initial letter from C to X. Unfortunately Mexican stations are assigned to wave lengths rather than to frequencies and they do not fit exactly into our Index by Frequencies. We are forced to include them in the class nearest to their frequency. Hence, they will be received slightly off their rated wave length.

Clifford C. Malcolm of 426 Walnut Street, Mt. Carmel, Ill., writes: "Enclosed find subscription to RADEX. It is fine and the best one I have ever seen and it also gives some of the best information. When logging stations I can do it in a second. It is sure great.

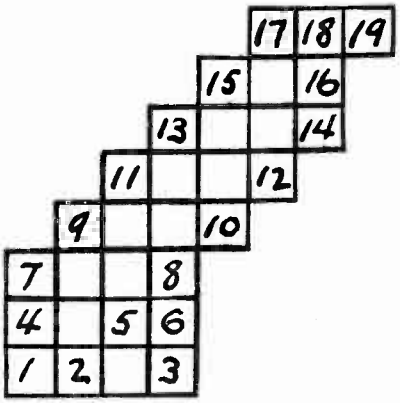
And now au revoir until June.

"Moulding" Aerials

If the radio owner desires, he can install an inside aerial on the moulding of the room in which the receiver is located. Get some stranded, insulated wire, about No. 22 gauge, and start to lay the wire behind the moulding just above the receiver. It is usually necessary to use small staples to hold the wire in place, taking care, however, not to fray the insulation of the wire while fastening it in place, which may allow the bared wire to touch the plaster, and this may result in an appreciable loss, especially if the plaster is damp. The wire should be of a length suitable to the type of receiver used. It may be found necessary to bring the wire around the moulding more than once, depending on the size of the room. One end of the aerial is brought down to the aerial post of the receiver. A usual ground connection is required, but no lightning arrestor is necessary. For temporary use, an inside aerial may be arranged by simply laying the aerial wire on the floor underneath the carpet, in the form of a large coil, and bringing one end to the receiver. E. R. H.

Radio Cross Words

You may know your onions but how well do you know your stations? Here is a cross-word puzzle composed of various call letters. To the first five sending correct answers to this puzzle, we will send one of those beautiful, blue, leatherette covers for RADEX. To each of the other successful contestants, we will send a copy of the June RADEX.



Horizontal

2-3 Recently changed both call letters and frequency.
4-6 Used to be WTAL.
7-8 Belongs to a hospital.
9-10 Is on 1370 kcys.
11-12 An old Southern reliable.
13-14 The head of the lakes.
15-16 An automobile station.
17-19 Used to divide time with WIL.

Vertical

7-1 Used to be on 850 kcys.
9-2 Out in the North-west.
11-5 Owned by American Broadcasting Corp.
13-8 On a cleared wave.
15-10 Formerly owned by Goodyear.
17-12 From San Francisco.
18-14 An old timer.

If you enjoy working out this puzzle, send us one of your own invention. For all we use we will pay one dollar each.

Care of Tubes

Use and Misuse of Radio Valves

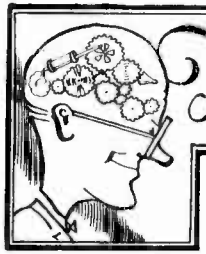
The prongs of your tubes must be clean and shiny to assure a perfect contact. The socket prongs should also be clean and tight fitting to the tube prongs. Next, always use the correct filament voltage. It is also a good plan to run the tube on about three-quarters of the full voltage required. This will give a greater tube life. The C voltage must be absolutely correct. Insufficient or excessive C voltage will cause distortion and discord. Correct B battery voltage must also be applied. If the B voltage is too high, or if it is too low, you will not get the proper volume or tone quality. In the case of B eliminators, be sure that your eliminator is capable of delivering a sufficient plate voltage to your tubes.

Let us warn you to use tubes where they are specified only. Never attempt to use the 171 type of tube as a detector or radio-frequency amplifier. This also applies to the 200-A type. Never use this tube as an audio amplifier or with a plate voltage higher than 45 volts. By doing so, you drive the chemicals from the plate and then naturally your tube loses its sensitivity to weak signals. Never attempt to use Hi-Mu tubes in transformer-coupled sets. By doing so, you will get distortion. The Hi-Mu tube was designed primarily for use in resistance- and impedance-coupled amplification circuits. The Hi-Mu tube can be used in some sets as an excellent detector, or as an exceedingly good radio frequency tube.

When using dry cell tubes be sure that you do not use more than 3 volts to light the filament. We suggest that a volt-meter be attached to your set to show what filament voltage is being used. If more than three volts is used over a period of time, the tubes will become paralyzed and lose their efficiency. It is very important when using type 171, 171-A, 112, or 112-A power tubes to see that you have the proper "C" voltage applied to the grid of the tube. This rule is generally neglected by the average radio users because they do not read the instructions on the tube carton. If the proper "C" voltage is not used, the tube becomes paralyzed and loses its efficiency. It is also very important that this rule be followed when you are using "B" batteries. If the correct "C" battery voltage is not applied, the life of your "B" batteries will be cut in half. Insufficient or excessive "C" voltage will cause distortion. It is very important when using the 201-B, 171-A and 112-A to see that the filament is operated at a very dull glow, almost invisible. If a tube of the 171-A, 201-B and 112-A type is used with a bright filament the filament will burn out.

In using the new AC tubes make sure that the transformer you use supplies the correct voltages to the filaments of your tubes. The filament of the 226's should burn at a dull glow for best operation. The filament voltage of the 226 is 1½ volts. The filament voltage of the 227 is 2½ volts. When the AC tubes are correctly used, there will be no hum. Never use excessive filament voltage on these tubes. By doing so you will not only decrease the life of your tube, but will cause excessive hum. The AC tubes should give you as good results as the storage battery tubes when properly used. The new rectifier tubes, types 281 and 280, are interchangeable with the old type 213 and 216-B. They can be used in any eliminator designed for the 213 and 216-B and will give a slightly increased voltage. To get the very best results from these tubes never let the eliminator run when the set is not being used. Always turn off the eliminator first and the set last, and when putting the set into operation, the set should be turned on first and the eliminator afterwards. It is only too true that the average radio fan simply takes the tube from the carton and places it in his set without reading the instruction book which comes with the tube. Yet, these same people buying an automobile would be sure to reread the instruction book to find out just how to take care of it....If you will follow carefully the instructions given with each tube, you will assure yourself of better reception, better tone, volume and distance and long life for your tubes. You will also be able to cut your tubes and "B" battery cost. Take care of your tubes—do not drop them or handle them roughly.

Always use the tubes for the purposes specified on the cartons. Never attempt to use a power tube as a detector or radio frequency tube because by doing so, you will very quickly ruin it. S. H. S.



The Editor Thinks~

that the recommendation of the Radio Commission for a tax on broadcasting stations is ill-advised. We do not at the moment recall any department of the Government which finances itself by a charge upon any class of industry. We can see no good reason for beginning such a practice with the radio industry. The Departments of Commerce, of Labor, of the Interior, and of Agriculture are the great service departments of the national government. They render a variety of service to a vast number of our people. Unless all classes which are served by these departments are to be taxed, then it would be manifestly unfair to pick out any one group.

that government officials would do well to try to learn to think of radio broadcasters as *publishers*. Radio is still so young relatively that they do not always think correctly of its function. We believe that broadcasting firms are exactly in the same position in relation to the government and to the people as are publishers of newspapers and magazines. Both perform a valuable and essential service for which both expect to be repaid directly or indirectly. Both furnish the public with information and entertainment which are necessary to an enlightened citizenship and both are equally entitled to such cooperation and assistance as the national government can give.

that radio has now become a vital part of life and we could no more take it out of our lives without irreparable loss than we could take away the automobile. True, we could go on existing without either just as we could take away electricity and go back to the tallow candle of our grandfathers. Yesterday's luxuries are today's necessities.

that any family which does not have a radio—and there are still some—is missing far more than they can possibly realize. One can exist without music just as one can without flowers or birds or beauty of any kind but such existence is hardly worth the effort. A home without music is scarcely a home at all. And before radio came there were thousands which rarely echoed to the strains of it. If one stops to think of it it is astonishing the service one gets from a radio set in a single evening. There is of course the entertainment features, the varied musical programs, the talks on current events but also there comes the correct time, the weather prophecy for tomorrow, the price of stocks or farm produce, the latest important news flashes and now and then the personal message of the heads of our government, city, state and nation. And all this is passing through the air over the home that has no radio—nay, it is in the very air of the room itself—but it is unintelligible because the family lacks the initiative to provide an outlet. For there are very few families in this country of ours so poor that they cannot afford even a crystal set.

that the value one gets in a radio purchase now is astounding compared to a few years ago. Think back only five years—crude instruments assembled in cheap cases with a maze of wires leading out to batteries, earphone speakers with small tin horns, squeaky music all in falsetto, amateurish programs interspersed with the reading of telegrams and even postal cards. What a change today! Sets of watch-like precision, gang-condensers operated from single dials, beautifully mounted in furniture which is alone a joy, entirely self-contained usually with not even batteries to bother with. And the price of a most beautiful set today would not even have bought the parts a few years ago.

that when one realizes the advance that has been made in five years, one is lost in contemplation of what may happen in the next ten or twenty. Some day of course the attractive and efficient radio sets of today will look as odd and antique as do the old slant-front sets of a few years ago. The change will undoubtedly be much more gradual from now on just as it will be with the automobile. But wouldn't it be interest-

ing if some seventh son of a seventh son could give us a glimpse of the receiver of 1950? Will it be a radio-vitaphone in which we see and hear in our own homes events that are occurring all over the world? Will static and fading and cross-talk then be routed?

that radio may in the course of generations synchronize our lives so that families will arise and take their exercise and eat similar breakfasts all at the behest of their radio. Even today there is coming to be a surprising similarity of action. Let a radio announcer merely say "We will now hear from Dr. Gadgett, the famous chiropractor" and all over the city, people rise as one person and move to the radio set and turn the dials.

that television will make more progress in the next two years than it has in the last ten. Quite a list of stations are now broadcasting pictures and more are asking for permits. Even set manufacturers are equipping their latest models with jacks for a television plug! Those who missed the thrill that came once in a lifetime of those who heard music coming from afar out of a set they themselves had made may now experience it in seeing the first silhouettes actually moving on a screen of their own making.

that our pet peeve is for the orchestra boys to laugh their forced mirth when the leader cracks a so-called joke. We lose any desire to smile we might have had when the hired assistants support their leader with their ha-ha's. Of course it doesn't cost us anything but our temper so we oughtn't to kick.

Proper Tuning

I have a late model A C set and would like to know why I cannot get all stations broadcasting within a radius of 500 miles of my home. My salesman told me that I could get all stations within 800 miles on any night. This I have found it impossible to do. Can you tell me why?

Evidently this is your first experience with a radio set. Any old timer will be able to tell you that it is impossible to hear all or even half of the stations in an evening. The ability to receive distance depends on the sensitivity and selectivity of your receiver and the efficiency of your aerial and ground connections. There are certain very interesting characteristics of radio reception which you should know in order to understand why you receive stations much better on some nights than you do on other nights. The novice at radio sometimes blames a poor-reception night on his receiver, but the experienced man smiles because he knows that tomorrow night will probably bring in those distant stations loud and clear. The general characteristics that you can expect about radio reception are:

1. Reception is much better in winter than summer.

2. Night reception is much better than day reception.

3. In any season reception may be much better on some nights than on others.

If you want to get the best results from your receiver, you must become skilled in handling. So take a real pride in tuning. Don't spin your dial and expect to get anything. Move it carefully as though you were setting your watch.

The instructions contained on the inside front cover of your RADEX, if carefully followed, will aid you very materially in improving your tuning and securing the best results.

In Front of the "Mike"

Little Stories of the Studios

THIS year we may all be present at the annual turf classic, the Kentucky Derby, for both the Columbia and NBC chains will give a "hoof-by-hoof" report of the great race. The NBC will have four announcers stationed at the quarter mile posts around the track. They will work with field glasses and will have ear phones strapped to their heads and close-talking microphones buckled to their chests.

One announcer will describe the start of the race and will tell what is happening until the horses are approaching the first quarter mile post where a second announcer will take up the story, picking up his cue by means of the ear phones. As soon as the horses have dashed past him a third NBC announcer at the half-mile post will take up the story and he in turn will pause as a fourth announcer tells of the panting ponies swinging into the home stretch. There will be another announcer at the finish line to tell the radio audience the name of the winning horses.

The Columbia System, on the other hand, will use a single announcer placed in a strategic spot in the infield sufficiently far from the grandstand to eliminate the crowd noise and at the same time close enough to view the start and finish. This method was chosen because it would give the listeners the advantage of hearing the entire race described by one voice to which they will have had an opportunity to become accustomed before the real excitement starts. It is now planned to erect a lattice work tower of duraluminum, fifty feet high, on a truck to be placed in the infield. Two men will be on duty in the "fighting top" of this mast. One of these will be Ted Husing, the announcer, and an assistant.

A special set of military aviation field glasses will be used in the tower. These are mounted on a tripod, and the aperture through which Husing gazes in following the horses is stationary. The assistant will keep these glasses trained upon the horses in the race by means of gun sights. By means of a hand wheel he will keep the leading horse or horses "on the bead" of the sights and the glasses are so adjusted that this will keep the entire field within the range of the lenses. From this point of vantage Husing will be able to describe the start, running and finish of the race continuously without interruption.

A daily resumé of scores in all major league baseball games, beginning with the opening games April 16, will be broadcast over two National Broadcasting Company networks throughout the season, it was announced today. The scores will be compiled and broadcast in cooperation with the United and Associated Press sport news staffs.

What's the Score

Alan J. Gould, general sports editor for the Associated Press, has accepted an invitation to give a resumé of the games on the opening day through an NBC network headed by WJZ, New York. William J. Fagan, United Press radio editor as in the past, will read the scores daily, except Sundays, through an NBC network, of which WEAF is the New York outlet.

More Whiteman Jazz

Paul Whiteman, king of jazz, and his famous orchestra have been so joyously received by the radio audience of the whole nation that P. Lorillard Company, makers of Old Gold cigarettes and sponsors of the Old Gold-Paul Whiteman Hour, have decided to continue him on the air for at least seven weeks longer than the original contract.

This announcement assures the continuation of this feature over a nation-wide hookup of the Columbia Broadcasting System through Tuesday, May 21st. Plans for the hour after that date probably will be announced in about a month.

President's First Talk

One of the largest chains of broadcasting stations ever assembled under the banner of the Columbia Broadcasting System will carry President Herbert Hoover's speech at the annual luncheon of the Associated Press, on April 22nd, to the listening audience of the entire United States and probably the Dominion of Canada. The use of the wire line facilities of the system have been opened to the stations of the entire continent for this event and they will be able to pick up the

words of the President on a point in the network nearest their location.

This address by President Hoover will undoubtedly be his first public message delivered after settling down to the task of running the country and will be one of the utmost importance.

The Mennen Men, a new dance orchestra conducted by Ben Bernie, inaugurated a series of radio programs through the National Broadcasting Company's System, Thursday night, April 4.

Bernie, "the young maestro," plans to present programs of lively fox-trots and other cyncopated numbers which start feet moving in thousands of homes for half an hour of early evening dancing. The series is sponsored by the Mennen Company of Newark, N. J.

Birds on the Air

A bird virtuoso, with a repertoire of three hundred songs, is the latest artist extraordinary to be signed up by the National Broadcasting Company. A second bird has been taken on as accompanist and understudy.

Perhaps these altogether unusual facts are stated too simply. It is the first time that birds have been booked for appearance on the air. It is the first record of birds who can sing anything but their natural songs. In fact, "Blue Boy" and "Big Boy" are a pair of startling songsters, subject of study for people with a scientific or musical turn of mind.

"Blue Boy," skilled soloist and virtuoso, is not blue in color. He is thoroughly yellow and a canary. But according to Miss Elizabeth Freeman, his owner and teacher, he is indigo in heritage, a thoroughbred "Black Forest Roller." A "roller," lest you should not know, is a bird that purls his notes, permitting them to reverberate in a liquid sort of trill. He is of a higher order than the "chopper," a vulgarian, given to a curt and raucous "peep-peep."

Chains are Growing

Four additions to the NBC group of associated radio stations are located in New Orleans, La., Birmingham, Ala., Hot Springs, Ark., and Miami Beach, Fla. They are WSMB in New Orleans, WAPI in Birmingham, KTHS in Hot Springs and WIOD in Miami Beach. These four southern stations heretofore have not been permanently connected with the network and their inclusion in the system means that NBC programs direct from New York and other centers of entertainment will be available the year around to the entire south.

Station WCFL in Chicago has been added to the National Broadcasting Company's System according to an announcement by the latter organization. The Chicago station is already broadcasting NBC programs.

Station WCFL is owned and operated by The Chicago Federation of Labor and is supported by The American Federation of Labor. It is the only important radio station in the country controlled by labor organizations. It is supported by subscriptions from the thousands of members of organized labor.

Color Harmony

Color as well as melody will come from the family radio speaker every Tuesday morning at 10:30 o'clock, Eastern Standard Time, beginning April 9, according to an announcement by the National Broadcasting Company. The Duco Decorators present the new program, and they plan to tell women how to beautify their homes by the proper use of bright and harmonious color schemes.

Marley R. Sherris, veteran NBC announcer, will be master of ceremonies and principal speaker. He will explain the variety of pastel shades which the housewife can apply to relieve the stark whiteness of the kitchen, the monotonous porcelain of the bathroom, and the drab sameness of every room in the house. An instrumental trio will supply music for the programs, which are sponsored by E. I. du Pont de Nemours and Co., of Philadelphia.

Microphone Fright

"My hands become ice cold and I'm scared to death every time I face the microphone." That is how pretty, petite, little Annette Hanshaw, "baby blue voice" of the Van Heusen programs over the Columbia Broadcasting System, feels about radio; yet, despite this fact, she has broadcast and recorded several hundred times.

Even during rehearsal Miss Hanshaw becomes frightened. Sitting in the studio during "microphone" rehearsals one will observe how nervous this little artist becomes as Alois Havrilla, the Van Heusen guest announcer, steps before the "mike" and introduces her. She rubs her little white hands together vigorously and looks pleadingly into

the cold, lifeless microphones. Suddenly Mr. Havrilla mentions her name. She jumps to her feet and almost runs across the studio and then very calmly, and without an apparent trace of fear, sings her big hit, "Lover Come Back to Me."

Annette Hanshaw has made phonograph records for three different companies. Before becoming a recording artist she was featured as a society entertainer.

Asked if recording had the same effect upon her as radio broadcasting, Miss Hanshaw said:

"Oh, no....recording doesn't bother me a bit....but radio....ooh!....it just scares me to death. I'm afraid of it; of its critics and its millions of ears!"

RADIO'S FUTURE

A few years ago the radio in the home was a novelty and not the institution as it is today, Owen D. Young, chairman of the NBC Advisory Council, said in his annual report.

"Now it has become an integral part of American life. The amazing rapidity with which it has made this position for itself is due in large part, I believe, to the enterprise and wisdom of the officers of the National Broadcasting Company," Mr. Young said. "The company had to cater in its programs to a wide variety of needs and tastes, and it has done so by a judicious application of the principle of diversity."

"It has helped create a vast new audience, of a magnitude which men never dreamed of, which weighs and judges our political and social speakers, our musicians and our educators. This new audience, invisible but attentive, differs not only in size but in kind from any audience the world has ever known. It is in reality the linking up of millions of homes. Inevitably this has had its effect upon the nature of the programs presented. What its effect will ultimately be no one can predict, but in spite of the development which has been crowded into these past few years, we can still say the surface of radio's possibilities has only been scratched."

Music Makes Money

MUSICIANS in the United States owe more than a third of their income to radio.

A report issued today by George Engles, director of the National Broadcasting and Concert Bureau, and also one of the leading managers in the concert field, shows that out of a total of $30,000,000 spent on music in the United States during the past year, the broadcasting companies have contributed fully $11,000,000. These figures cover only actual performances in concert halls, opera houses and over the air, and do not include what has been spent on recording devices.

"Radio expenditures have brought the national total for music up to the highest point in the country's history," Engles states. "The most spent on music previously, exclusive of radio, has been about $20,000,000 in a year. That amount covers both box-office receipts and subsidies of public-spirited citizens who shoulder the deficits of symphony orchestras and opera companies.

"The distribution of musical expenditures among artists has been made much more democratic by radio. In former years the lion's share has gone into the purses of less than twenty of the first rank artists. Three of these artists alone totalled a million dollars in box-office receipts last season. But with the broadcasting companies utilizing thousands of musicians, a far greater number of lesser known artists are enabled to earn a comfortable livelihood. The National Broadcasting Company alone presents 5,000 before its microphones monthly. This company and its clients spend over four million dollars annually on talent, nearly half of the grand total of eleven million contributed to music by the country's broadcasting companies."

Other figures revealed by Mr. Engles in his report show that of the $20,000,000 spent on music exclusive of radio broadcasting—that is, for concert hall and operatic performances—six million goes to the country's thirteen major symphony orchestras. About four million goes to the two leading opera houses, the Metropolitan and Chicago. The remainder goes to individual artists, summer concert orchestras, and the few minor opera companies.

A Series on Safety

IN AN effort to reduce America's annual 100,000 death toll from accidents, the National Broadcasting Company, in conjunction with the National Safety Council, will present thirteen weekly programs entitled "Universal Safety Series."

Charles M. Schwab will speak on the initial program of the series Saturday night, April 20, at 7:30 P. M. (EST) over a nation-wide network. Twelve other prominent men will participate in the series.

With radio carrying the messages directly into the homes of the potential radio audience of 50,000,000 persons, the talks will deal with safety in the various lines of human endeavor, from the home to aviation. Each speaker will deal with the problem as it affects his or her own particular field.

All programs, except the first, will last fifteen minutes. The first broadcast will be of thirty minutes duration to permit of an explanation by Henry A. Reninger, National Safety Council president, who will introduce Mr. Schwab.

Extensive efforts to back up the NBC programs will be launched in every town in the United States where his organization has local representation, Mr. Reninger said. This informative movement will be carried on by speakers before various civic organizations, a series of poster announcements in many places, including work shops of all kinds, and in various other ways.

The speakers have agreed to donate their time to the subject as the National Broadcasting Company throws its entire broadcasting facilities into the series.

Those who have definitely accepted the invitations to talk through the air include Mr. Schwab, whose subject will be "Safety as a Factor in Industry;" Robert P. Lamont, Secretary of Commerce, "Safety a National Problem;" James J. Davis, Secretary of Labor, "Safety and the Worker"; Madam Ernestine Schumann-Heink, concert and operatic star, "Safety in the Home"; Dr. Miller McClintock, of the Albert Russell Erskine Bureau of Street Traffic Research, Harvard University, "Making our Highways Safe"; Grover A. Whalen, New York Commissioner of Police, "Enforcement as An Aid to Safety"; and Joseph E. Sheedy, executive vice-president of the United States Lines, "Safety on the High Seas."

Other subjects will be "Death Through Accidents"; "Safety in the Air"; "Education —the Part It Plays in Safety"; "The Railroads and Safety," and "The Automobile and Safety." A full list of speakers on these subjects will be announced shortly, Mr. Reninger said.

The Safety Council official said the series "gives every promise of being the most effective and significant program of safety ever attempted in this country. The underlying purpose is to awaken the individual citizen to his own personal responsibilities in accident prevention and to arouse the American mind from its lethargy and indifference toward one of the vital problems of the day."

Life of B-Batteries

When a 22½-volt battery drops down to 17 volts, or a 45-volt battery drops to 37 volts, its efficient service for radio purposes is over, and it should then be replaced by a new one. It is true, as stated by a well-known manufacturer of B-batteries, that a 22½-volt battery, which has dropped to 17 volts, can be connected up with other old ones to supply voltage for the amplifier tubes, until its voltage drops down as low as 10 volts, but most batteries are inclined to become noisy when they have reached the 17-volt point, and it is therefore unwise to use them any longer. E. R. H.

Impure Water

Water from the city mains, or rain water caught in metal pans, or water containing any minerals or salts should never be used for storage batteries, as such water contains matter which is injurious to the battery. City water conducted through metal pipes and water held in a metal container absorbs some particles of metal, and when this water gets into a battery, a slight coating of metal is deposited on the plates, which tends to decrease their efficiency. Water containing salt and minerals also has the same effect. Pure rain water may be used, provided it is caught in the open, in non-metallic containers, and is not taken from roof gutters or conductor pipes. E. R. H.

Aunt 'Liz'beth's Radio

By LILLIACE M. MITCHELL

CHARLEY FISHER had not asked Elizabeth to marry him. He had been on the point of doing so for the last year. And now, for the first time, he was glad that he had not mentioned marriage.

Elizabeth had handed through the wicket her savings book together with a withdrawal slip for more than half her savings. Mutely Charley counted out the bills. He counted them over again slowly, hoping that Elizabeth would say just why she was drawing out so much money.

Elizabeth, however, only smiled at him merrily, bringing all of her dimples into play mischievously. "Be careful you don't count out too much," she warned with a little laugh.

"I never have done so," Charley answered stiffly, a quick eye flashing to the bank president who was at that moment passing the window marked Paying Teller.

All day long, Charley counted out money mechanically. Why had Elizabeth drawn out so much money? Was she, then, extravagant like all girls? How lucky he was not to have asked her to be his wife! But in spite of his head telling him this last over and over again, Charley's heart was sore. Until he had known Elizabeth, his life had been fairly lonely except for his little niece, Mollie, who had come to him when her parents had both died. Mollie had been only six months old when she had come and even now that she was nearly two years old she wasn't so very much company for Charley at night. The motherly woman where he roomed and boarded so that Mollie could be with him, usually had Mollie in bed before he reached the house.

The moment he was through with his work at the bank, Charley went to Elizabeth's house. It had come to his mind during that long afternoon that perhaps Elizabeth was going to take a trip some place. Lucky or unlucky to have escaped the clutches of an extravagant wife, Charley felt that he must see Elizabeth himself. If she went away—his heart contracted.

At Elizabeth's house, the moment he entered the living room he saw the thing that had been bought with her savings. Thing? The word was too kind. Charley had been brought up on the idea of Thrift. Not just thrift and savings but Thrift with a capital letter and a hushed tone of solemnity such as one identifies with the more grave moments of life.

"So you bought a radio?" he said abruptly. "Did you spend all of that money for that thing?"

Elizabeth laughed. "Every cent of it," she said cheerfully. "And it is well worth twice the price, too, Charley....oh, don't bother to tell me I was foolish. I know you so well now that I could recite, sentence for sentence, everything you think about such wild and wilful extravagance. But a radio is educational, Charley, and even if I have a college education, I can use more. Anyone can. There is a French course being given every morning in Chicago at eight or nine o'clock and The University of Chicago is broadcasting the course in American Literature—Professor Boynton's course. Oh, I am going to enjoy it wonderfully. Just listen to it."

"Oh, I don't care about listening to it," he said carelessly. "You would have done better to put the money into bonds."

Elizabeth laughed and turned the dial carelessly.

"See Aunt 'Liz'beth," came a childish treble. "No doggie....."

Charley flushed. His eyes sought Elizabeth's but hers were on the beautiful walnut cabinet.

"That voice sounded like Mollie's, didn't it?" she said with startled eyes.

She was turning the dial back and forth, trying to get again that little voice.

"Oh, it couldn't be," said Charley comfortably. "But—"

"But what?" demanded Elizabeth.

"Nothing," said Charley. "Only—only Mrs. Malone has been telling Mollie that someday you'll be her Aunt Elizabeth. Don't people tell children fool things," he ended weakly.

Elizabeth did not reply to this. She had found again the place but now a man's voice was talking. "....and the child was carried on the running-board of the car from some

place between Chicago and Detroit. The people started from Chicago and made twenty stops or so for gasoline and oil. A little tot in blue romper—doesn't know her Daddy's name nor where she lives—maybe two years old or so. If anyone knows where she belongs, telephone....."

But Charley had run to the telephone. "Mrs. Malone?" he said hoarsely. "Is Mollie all right?"

There was a long pause at the other end. "Well, the truth of it is she ran away and I've searched the neighborhood, thinking to get her back home before you got home, sir. She is probably in some neighbor's house playing with the children—"

Charley slammed down the receiver, sweat pouring from his forehead.

"Elizabeth! It—it is Mollie. She—she's run away—"

"Well, now," soothed Elizabeth, "don't get so excited. They have her safely and here is the number to telephone. She climbed into the carrying-case they had used for their dog on the last trip and she is safe, Charley."

"I have my car at the door—you'll go with me to get her?....It will be an all-night trip," he said.

"I'll be ready in five minutes," answered Elizabeth.

It wasn't an easy trip. Charley blamed himself a dozen times for having left her at the boarding house, his sister's only child.

"If you hadn't had that radio," he said to Elizabeth, "we might never have known where to find her. Oh, my dear—think of it!"

"Well, but I did have the radio," said Elizabeth practically. "And it is such a good one that I could get Timbuctoo if they had a broadcasting station there. Oh, a person needs a radio these days."

"There's my Aunt 'Liz'beth," said Mollie as soon as Elizabeth and Charley went into the room. "She's going to be my very own Auntie....want milk.....sleepy....." said Mollie, curling up in Elizabeth's arms.

"And you're going to be my very own Elizabeth, aren't you?" said Charley almost the moment they had headed the car for home.

"Wh—why, I guess I am," said Elizabeth. "If you don't need me, Charley, you surely need my radio, don't you, honey?"

"THE "BATTERIES" FOR TODAY'S GAME"!!

Daylight Saving Rules

REGULATIONS to govern the hours of operation of all broadcasting stations where the time of operation may be affected by daylight saving time were issued by the Federal Radio Commission March 25. Under the regulations contained in General Order No. 61, where the local time is changed from standard to daylight saving time at the location of all stations sharing time, the hours of operation shall have reference to daylight saving time.

Conditions are prescribed also for stations operating in the same channel in different areas where both daylight and standard time is recognized, in which cases the standard time is to be observed, unless the stations agree upon a new schedule among themselves. The full text of the order follows:

It is ordered that the following regulations will govern the hours of operation of all broadcasting stations where such time of operation may be affected by daylight saving time:

(1) Where the local time is changed from standard time to daylight saving time at the location of all the stations sharing time on the same frequency, the hours of operation of all said stations on said frequency shall be understood to have reference to daylight saving time, and not standard time, so long as daylight saving time is so observed. This provision shall govern whether the time is changed by provision of law or by the general observance of daylight saving time by the

local business community, and whether the time of operation of said stations is specified in the licenses or is mutually agreed upon between the licenses.

(2) Where the local time is not changed from standard time to daylight saving time at the location of all the stations sharing time on the same frequency, the hours of operation of all said stations on said frequency shall be understood to have reference to standard time and not daylight saving time, unless said licensees mutually agree upon a new schedule which shall be effective only while daylight saving time is observed at the location of some of said stations. This provision shall be effective whether the time of operation of said stations is specified in the licenses or is mutually agreed upon between the licensees.

(3) The time of operation of all broadcasting stations which do not share time with other stations on the same frequency shall be understood to have reference to standard time, whether the local time is changed as referred to herein or not, unless and until modification of such licenses with reference to hours of operation is made by the Commission. This provision shall be more effective where the time of operation of said stations is specifically stated in the licenses.

Question Mill

(*Continued from page 4*)

How is the C voltage supplied to the output stage of a Crosley Showbox?

The plate circuit of the push-pull output stage is connected to a high line. The grid circuit is grounded. A 50-ohm potentiometer with the mid tap grounded through an 1100-ohm resistance, is connected across the filament leads. The drop through the 1100-ohm resistance furnishes the necessary grid bias voltage.

I have a late model A. C. set and am troubled with static and interference to a great extent. Upon calling a service man, he said that he could do nothing. His claim was that the trouble was in the A. C. line. What can we do to eliminate this condition?

Taking it for granted that your trouble is in the A.C. line, the first thing you should do is to locate your cause of disturbance. It may he defective wiring, telephone transformers, elevators in buildings, motors, violet-ray machines, etc. The best but not absolute remedy, would be to use a line filter between your base receptacle and receiver. This will eliminate any noise coming in your A. C. line but will not eliminate disturbances picked up by your antenna. In that case, try to bring this disturbance to a minimum by trying your antenna in different location and angles.

I have a Simmons 90-volt B eliminator using a 201-A tube as a rectifier. What can I replace this tube with?

The 201-A tube will function properly but we find that the new 171-A will deliver more milliamps than the 201-A. Therefore, it would be perfectly safe to use the 171-A tube.

I have recently purchased a new Sparton A. C. Set. I have been told that I could not use an ordinary tube for replacement should my present tubes burn out. I have also been told that the speaker being of special design could not be replaced by one of another make. Is this true? If so, what tubes can I use?

The giver of this information has told you the absolute truth. The only tubes to be used are the Cardon 484 and the 182. The 484 is a heater type using 3 volts of filament compared to 2.5 volts of the other types of heaters. The 182's are the audios and cannot be replaced by any other tube. The rectifier tube is the only one where you may choose your own make. This is the common 280 rectifier. The speaker is especially designed for use with the Sparton circuit, therefore it is not advisable to use any other make.

Can I use direct current on an alternating current Radiola set?

No. You absolutely cannot use an A.C. set on a direct-current line. The name A. C. radio implies that the set is only to be used on A.C. current. By doing otherwise, you subject your set to burning up.

I have an A. C. seven-tube radio set, purchased a month ago. I put up a new aerial and a new ground wire. The aerial is sixty feet long with the lead-in measuring twenty-five feet. The present ground wire is seven feet long. I can now receive almost any station in the United States and about five in Canada, including Winnipeg, and Manitoba. But here

lies the trouble. When I tune in stations, they come in fairly loud, but they do not hold their volume long. The signals fade away, not completely, and then come roaring back again. WLW, WHK and WJAY all fade, but if I remove the aerial, the volume is terrific. My set uses 4-UX-226 tubes, 1-UX-227, 1-171A and 1-UX-280. Do you think the trouble is in the tubes or the set?

The possibility of tubes causing the trouble would depend mostly on the UX-227 tube. These tubes when having a cracked cathode act the way you have described in your letter. The only other possibility of this trouble may be that your aerial and ground are reversed, either on the exterior or interior. Try switching your aerial and ground regardless of what the binding posts read.

I have a Radiola 28 which is a loop set. How can I use an outside antenna to increase D. X?

There is a special antenna coil plug made for just such a purpose. This is plugged into your loop socket and your aerial and ground attached where specified. The plug can be purchased at most any radio store.

I have an AC radio with a Dynamic Speaker. The speaker issues a noise resembling that of the rushing of the wind. This makes reception quite irksome to listen to. Can you tell me if anything can be done to stop it?

There are two possible troubles in the speaker. One is that your cone may be out of line, and the other may be caused by A. C. hum. There is a hum control on the back of your radio chassis. Adjust this to minimum hum. If it proves to be the cone, have a competent mechanic adjust your speaker. You might also have your vacuum tubes checked because, even if they are all lighted it does not necessarily mean that they are functioning properly.

I have a new AC Radio set and thus far have ruined four detector tubes. What is the most logical cause for this?

There is such a thing as tube luck. Vacuum tubes have been known to last for years and then again, some may not last twelve hours. However, I would suggest that you have a voltage reading taken at the 227 socket. It should read below 2.5 volts. If it is more than this, your trouble lies in the power pack.

Can I use a 171-A tube in place of my 112 tube?

Yes, the change would probably be very beneficial, for clearer reception and more undistorted amplification. This 171-A also draws less power than the 112-A tube. Therefore your A battery consumption would be much lighter.

I am using a B eliminator that requires a UX-213 rectifier tube. I have tried to get another but was told that this tube was not manufactured. What tube if any, would you advise me to use?

The UX-213 tube is now replaced by the UX-280 full wave rectifier. This new tube was found more efficient and more long-lived than the old type 213. I might also add that the 216-B rectifier has been replaced by the UX or CX-381 half-wave rectifier.

I have a seven-tube A. C. radio set. How can I make this set tune sharper?

On the chassis of your radio set, between the condensers, you will find three small adjustments. These are known as oscillator adjustments. For the sharpest tuning it is best to adjust your set so that it oscillates, when the volume control is at a point delivering ¾ of the full volume. This will enable you to tune in stations by their squeal. When you have tuned in the squeal you will then have to cut down your volume control to the non-oscillating point.

My set is a console-type battery set using five tubes. At the beginning of my experience with this set, I could receive stations anywhere between New York and California. Now I cannot receive anything but locals. I have tried complete sets of new tubes in vain. I have tested the voltage of my A, B and C batteries and they all check O. K. Another point that I wish to bring up is the fact that, after using my set continuously for not more than an hour, my voltage drops and signals finally die away. On observing my A battery, I find that it shows full charge on the indicator in the A cell. What all-electric model RCA would you advise me to purchase for best results? I would like to change the model of my set, still using the same cabinet which now contains the model

I have. Will any other present day model fit into the cabinet of the Model 20?

The reason for your loss in voltage may be one of your cells in the A-supply. Although your indicator shows a full supply of filament power from one cell, the other cell may not function properly. The finest set RCA makes is the Model 60 Super Heterodyne. This is made in a table model and in a fine cabinet. No AC Model will fit your old cabinet. I believe that you will find it cheaper to buy a complete new set, rather than to try changing cabinets.

What, if any, directional effect has my aerial? It seems I get better reception from Eastern stations although my aerial points west.

It is often found that signals, both music and voice, will be received best from a direction opposite to that in which the antenna runs from the receiver. Unless the antenna is at least 100 feet long, it will show very little if any directional effects regardless of the direction in which it runs and will receive just as well from one point of the compass as any other. Any apparent directional effects are due to local conditions such as the interference of trees and buildings and the antenna location in general.

I receive the most powerful local stations at three places on the dial of my set. I am told that this is due to harmonics. What is a harmonic?

A harmonic is a frequency which is a multiple of another frequency. The first frequency is called the fundamental frequency. A frequency twice as great is called the second harmonic, one three times as great is called the third harmonic, and so on. In broadcasting it is desired that the transmitter send out the carrier wave of a fundamental frequency only. No harmonics are desired, in fact they are very harmful since they too may be transmitted if they are sufficiently strong. A loosely-coupled and properly controlled transmitter will not emit harmonics.

I have an A. C. set and am using a dynamic speaker. Will the life of the tubes be shortened or can the set or the speaker be harmed in any way by using a victrola pickup? The detecto tube stays in place and the set uses a 250 power tube.

The electric pickup will, in no way harm your set, speaker or tubes. When you buy an electric pick up, full instructions are given in every box. The only thing I might caution you on would be to turn off your set when you are not using the pickup. That is while your pickup is plugged into your set.

What is the purpose of the two power tubes (push-pull amplification) in many modern electric sets?

The purpose of push-pull amplification is to obtain a greater increase in volume without overloading the tubes. In push-pull amplification two tubes are used in one stage. They are not connected directly in parallel but are used with transformers of special design so that one of the tubes amplifies one-half the signal wave or signal voltage and the other tube amplifies the other half. This desirable feature can be incorporated in practically any set in use today at a very moderate cost, making it possible to use a dynamic speaker satisfactorily.

I have a five-tube A. C. set. Can I use the new dynamic speaker with it? I use a 171 Power tube in the output stage and I use 180 volts on the plate of it.

Yes, you can use the new dynamic speaker very effectively on your set. On the dynamic speaker you will find four leads. The two leads with the phonetips on them will go directly to your speaker terminals. The other two leads will go to the A. C. line. If you use this combination make sure you turn your speaker on and off when you do the same to your radio.

I have an Atwater Kent Model 37 receiver and a Model E speaker. Can I use a special detector tube in fourth socket on my set? Some people say that this action will make it squeal. The set is good but will you tell me, if by doing so, will I be able to get outside stations more clearly?

The only detector tube you can use is the 227 or 327. Both of these tubes are of the heater type, and as your set was designed to use this tube, do not try to use any other kind. Use only the specified tubes marked on your chassis. This set when performing properly should give you plenty of distance. If you are not getting it now, try a change in your aerial, you might lengthen it or change its position.

Kidnapped

(*Continued from page 6*)

Finally he breathed a long sigh and said, "Now to try it out." He had converted the receiving set into a miniature broadcasting station.

Taking a place in front of the loud speaker and carefully setting his dials to the wave length of WGY, he spoke into his improvised microphone: "SOS SOS SOS" he said slowly and distinctly. "This is Howard Brandon speaking. I am a prisoner in a cabin in a dense woods. I am about four miles southwest of a small village. In this village are two churches. Their steeples are exactly in line with the cabin. The cross on one steeple comes exactly in line with the belfry on the other. If you hear me notify my father."

He turned the dials slightly and repeated his statement. Over and over again he did this, always moving his dials to a new position. In the middle of one of his announcements he heard a step at the door and with quick wit, he said, "Darn the luck. Darn it all anyway." The door opened and one of his captors entered. "What're you talking about?" he demanded. "This darn radio has gone dead," responded the boy. "Oh," his jailor said, "you've probably worn it all out." The boy turned the dials again and again and finally gave it up in seeming disgust and left the set.

He thought of trying to rearrange the set but decided that would not be wise for, if his signals had been heard, some mention of them might be made over the radio that would forewarn the men. So he left the set out of commission and none of his captors knew enough of radio to tell what was wrong.

The next day the boy watched carefully for signs of having been heard. Once he thought he saw men in the belfry of the distant church but was not sure and once an airplane flew over the woods but whether his voice had really reached out in space to be heard, he did not know.

The next morning he was aroused by the smell of smoke which was pouring into one of the windows. He yelled to the men who were sleeping soundly. They jumped out of bed and groped their way to the door. One of them grabbed the water pail and they all ran out, Howard following after. Then he heard the command "Hands up" and peering through the smoke he saw a ring of men entirely surrounding the house, each with a vicious-looking gun pointing at the surprised kidnappers who raised their arms as one man. From among the posse a man ran forward and Howard with the one word, "Daddy" leaped into his arms.

The erstwhile captors stood with backs to the walls with arms raised heavenward, sullen and dispirited. Howard speaking to no one in particular, asked, "Did you get me? Who received me?" A young fellow about his own age stepped forward and said, "I did. I was fishing for distance and had on my ear phones when I got your SOS. It was pretty weak but I got most of it OK."

"What wave length did you get me on?" asked Howard. "I tried nearly all there were." "I got you on 370," was the answer.

"Say," said Howard to the crestfallen kidnappers, "didn't you guys know you could broadcast over a radio set?"

Exhausted B-Batteries

Low B-batteries cause weak, distorted, and wavering signals, and distant reception is then entirely impossible. When this symptom manifests itself and the owner is positive that the A-battery is fully charged and that the tubes are all in good condition, the B-batteries are presumably at fault, and they should be tested with a voltmeter. In case the owner has no voltmeter at hand, but suspects exhausted B-batteries, he can readily test them by using the following method, which applies to 45-volt batteries: A 10 or 25-watt lamp and a length of solid copper wire about 18 in. long are obtained. The wire is bared at one end for about 6 in., and is wrapped around the screw section of the lamp. The center contact of the base of the lamp should be held firmly against one terminal of the battery momentarily. If the lamp does not glow at all while this is being done, or if it glows very faintly, the battery is exhausted and should be discarded. This emergency method should never be tried on good batteries, because the lamp draws a considerable current and will quickly drain a battery. A prolonged light of only a few minutes could be obtained on a lamp in this way, but a good battery would then be worthless. This test cannot be applied to 22½-volt batteries. E. R. H.

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

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

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

Daily (Except Saturday and Sunday)

6:45-8:00 Tower Health Exercises

WEAF WEEI WFI WRC WGY
WGR WCAE

8:15-8:30 Morning Devotions

WEAF WRC WGY WGR WCAE

8:30-8:50 Cheerio

WEAF WEEI WRC WGY WCAE
WHO

10:00-10:30 Dr. Royal S. Copeland

WJZ WBZ WBZA WHAM KDKA
WLW WJR KFKX WREN WRC
WBAL KWK

10:00-10:30 Ida Bailey Allen

WABC WCAU WNAC WEAN WFBL
WKBW WCAO WJAS WADC WGHP
WBBM WOWO KMOX KMBC KOIL
WSPD WHK WMAL WLBW

10:30-11:30 The Blue Birds

WJZ KFKX WREN WJR KWK

11:15-11:30 Radio Household Institute

WEAF WEEI WTIC WJAR WTAG
WCSH WKY WRC WGY WGR
WCAE WTAM WWJ WSAI KSD
KSTP WTMJ KVOO WLIT KFKX
WHO WDAF WEBC WBT

12:45-1:45 Luncheon Music

WEAF WWJ WRC KSD WTAG

1:00-1:45 Montgomery Ward Hour

KFKX KSTP WHO WOW KOA
KWK WDAF WHAS WSM WMC
WSB KVOO WFAA WOAI KDKA
WOC

1:15-1:30 Department of Agriculture

KDKA KFKX KWK WDAF KSTP
WHAS WSM WMC WSB KVOO
WFAA WOAI KOA WHO WOW
WRC WOC

6:00-7:00 Dinner Music

WEAF WTAG WOW WRC WCAE

Sunday

12:30-12:55 Pro-Art String Quartet

WJZ WBAL WRC

1:00-2:00 Concert Artists' Hour

WJZ WBAL WJR WRC

2:00-3:00 Roxy Symphonic Concert

WJZ WBZ WBZA WBAL KYW
KDKA WJR WTMJ WREN WLW
WEBC WKY

2:00-2:30 Biblical Drama

WEAF WTIC WCAE KSD WOW
WDAF KVOO WFAA WHAS WHO
WGY KPRC WAPI

3:00-4:00 The Ballad Hour

WABC WOWO WSPD WNAC WCAO
WKRC KMOX WHK WEAN WJAS
WGHP KMBC WCAU WFBL WADC
WMAQ KOIL WLBW WMAL WKBW
WCCO WISN

3:00-4:00 Young People's Conference

WJZ WLW KWK WBT WBAL
WSB KVOO KSTP WREN WMC

3:00-4:00 Dr. Stephen S. Wise

WEAF WTIC WJAR WRC WSAI
WGR WHO

4:00-5:00 Cathedral Hour

WABC KMOX WHK WNAC WCAO
WKRC KMBC WMAQ WEAN WJAS
WGHP KOIL WCAU WFBL WADC
WOWO WSPD WLBW WMAL WKBW
WCCO WFBM WISN

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

WEAF WEEI WTIC WJAR WTAG
WHAS WCSH WJAX WGY WBT
WGR WCAE WSAI WSB WFAA
WOW KVOO WSM KOA WKY
WHO

4:30-5:00 McKinney Musicians

WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KYW KWK
WREN KSTP

5:30-6:00 Dr. Harry Emerson Fosdick

WJZ WBZ WBZA WBAL WLW
KWK WREN WHAM

5:30-6:00 Rev. Donald Grey Barnhouse

WABC WCAU WNAC WEAN WFBL
WJAS WADC WKRC WGHP WMAQ
WOWO KMOX KOIL WMAL WLBW
WKBW KMBC

5:30-6:00 Twilight Voices

WEAF WRC WGY WCAE KSD
WKY KOA

6:00-6:30 The Stetson Parade

WEAF	WTIC	WJAR	WTAG	WCSH
WFI	WRC	WGY	WGR	WCAE
WTAM	WWJ	KSD	WEEI	WGN
WOW	WDAF	KVOO	WOC	KPRC
WOAI	WHAS	WSM	WMC	WTMJ
KSTP	KOA	WBT	WFAA	

6:30-7:00 Dictograph Program

WEAF	WEEI	WRC	WGY	WDAF
WCAE	WTAM	WWJ	WOW	WCSH
WFI	WGR	KSD	WTIC	WJAR
WTAG	WHO	WOC	WCFL	

6:30-7:00 Whittall Anglo-Persians

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WLW	WJR	KYW	KWK
WREN	KOA	WTMJ	KSTP	WEBC
KSL	KPO	KGO	KFI	KGW
KOMO	KHQ			

7:00-7:30 Old Company's Program

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WRC	WGY	WGR	WLIT

7:00-8:00 Chicago Symphony Orchestra

WGN	WTMJ	WOC	WHO	WOW
WDAF	KSD	KSTP	WEBC	

7:30-8:00 At the Baldwin

WJZ	WBZ	WBZA	WBAL	WHAM
WJR	WLW	KWK	WREN	KOA
WHAS	WSM	WSB	WFAA	KPRC
WOAI	KYW	WKY		

7:30-9:00 Major Bowes' Family

WEAF	WTIC	WRC	WJAR	WGY
WCAE	WTAM	WHAS	WMC	WSB
WKY	WWJ	WHO	KSD	

8:00-8:15 The Enna Jettick Melodies

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WTMJ	WJR	WLW	KWK
WREN	WSB	WHAS	WSM	WKY
WFAA	WOAI	KSTP	KPRC	WMC
KOA				

8:00-8:30 La Palina Hour

WABC	WFBL	WADC	WSPD	KMOX
WKRC	KMBC	KOIL	WFBM	WCAU
WEAN	WJAS	WMAL	WCCO	WLBW
WCAO	WISN	WMAK		

8:15-9:15 Colliers Radio Hour

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	WLW	KYW	KWK
WREN	KOA	KSTP		

8:30-9:00 Sonatron Program

WABC	WCAU	WEAN	WFBL	WCAO
WJAS	WADC	WKRC	WOWO	KMOX
KMBC	KOIL	WHK	WLBW	WMAL
WCCO	KLZ	KDYL	KMTR	KYA
KEX	KJR	KGA	WBBM	WNAC
WGHP	WMAK	WSPD		

9:00-9:15 David Lawrence

WEAF	WTIC	WJAR	WFAA	WSB
WTAG	WCSH	WRC	WOW	WGR
WCAE	KSD	KVOO	WHAS	WGY
WHO	WOAI	WBT	WTMJ	WKY
WMC				

9:15-9:30 Utica Jubilee Singers

WJR	WJZ	KDKA	KWK	WHAM

9:15-10:15 Atwater Kent Radio Hour

WEAF	WEEI	WRC	WGR	KSD
WCAE	WWJ	WGN	WGY	WHO
WOAI	WFI	WTAM	WOW	KVOO
WFAA	KPRC	WSM	WSB	WBT
KOA	KPO	KGO	KFI	KGW
KOMO	KHQ	WKY	KSL	WMC
WOC	KSTP			

9:45-10:00 El Tango Romantico

WJZ	KDKA	KWK	WBZ	WBZA
WHAM				

10:00-10:30 De Forest Audions

WABC	WCAU	WNAC	WEAN	WFBL
WMAK	WCAO	WJAS	WADC	KMOX
WKRC	WGHP	WBBM	WOWO	WHK
KMBC	KOIL	WSPD	WLBW	WMAL
KLZ	KEX	KDYL	KJR	KMTR
KGA	KYA			

10:15-10:45 Studebaker Champions

WEAF	WTIC	WJAR	WTAG	WCSH
WFI	WRC	WGY	WGR	WCAE
WTAM	WWJ	WHO	WOW	KSTP
WTMJ	WEBC	WHAS	WSM	WMC
WSB	WBT	WRVA	WFAA	KPRC
WOAI	WKY	KOA	KPO	KFI
KOMO	KHQ	KGW	KGO	WGN
WJAX				

10:30-11:00 Around the Samovar

WABC	WCAU	WNAC	WEAN	WFBL
WMAK	WCAO	WJAS	WADC	KMOX
WKRC	WGHP	WSPD	WOWO	WHK
KMBC	KOIL	WLBW	WMAL	WMAQ
WISN				

10:45-11:15 Sunday at Seth Parker's

WEAF	WRC	WHO	WOW	WHAS
WJAX	WKY	KSTP	WCAE	

Monday

8:15-8:45 Musical Headlines

WJZ	KWK	WREN

8:50-9:00 Parnassus String Trio

WEAF	WEEI	WRC	WCAE

9:00-10:00 U. S. Navy Band

WEAF	WRC	WOW

9:15-10:00 Three Little Maids

WJZ	KWK	WREN

10:00-10:15 Harry Merker's Orchestra

WEAF	WGR	WRC

10:45-11:15 Parnassus String Trio

WEAF	WRC	WGY	KSD

12:00-12:30 Parnassus String Trio

WEAF	WWJ	KFKX

7:00-7:30 Uncle Don

WOR	WADC	WGHP	KMBC	WFBM
WCCO	KMOX	WKRC		

7:00-7:30 Rudy Vallee Orchestra

WEAF WTIC WCSH WOW WSM

7:00-7:30 South Sea Islanders

WJZ WBAL KWK

7:30-8:30 Roxy and his Gang

WJZ WBZ WBZA WHAM KDKA
KWK WJR WSM WSB WBAL
WREN WBT WRC WEBC WIOD
WCFL WSMB

8:00-8:30 Kansas Frolickers

WOR WNAC WEAN WFBL WMAK
WJAS WADC WKRC WMAQ KMOX
KMBC KOIL WMAL WHK WLBW
WCAU WISN WCAO WGHP WDBJ
WTAR WWNC WHEC WGL

8:00-8:30 Voice of Firestone

WEAF WEEI WTIC WJAR WTAG
WCSH WLIT WRC WGY WGR
WCAE WWJ KSD WOW WDAF
KVOO WFAA KPRC WOAI WEBC
WTMJ KYW WHAS WSM WSB
WBT WRVA WJAX WTAM KSTP
WOC WKY WIOD WMC WSMB
KOA

8:30-9:00 Ceco Couriers

WOR WNAC WEAN WFBL WMAK
WCAO WJAS WADC WKRC WGHP
WMAQ KMOX KMBC KOIL WCAU
WHK WSPD WMAL WGL WLBW
WCCO WHEC

8:30-9:30 A. & P. Gypsies

WEAF WTIC WJAR WCSH WLIT
WGY WCAE WTAM WWJ WGN
KSD WDAF WRC WTAG WGR
WEEI WOC

9:00-9:30 Edison Program

WJZ WBZ WBZA WBAL KDKA
WKR KYW KWK WREN WEBC
KSL KPO KGO KOMO KFI
KGW KHQ KOA WHAM

9:00-9:30 Physical Culture Magazine

WOR WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC WKRC
WGHP WMAQ KMOX KMBC WSPD
WHK WLBW KOIL WMAL WGL

9:30-10:30 General Motors Party

WEAF WEEI WJAR WCSH WLIT
WTAG WRC WGY WGR WCAE
WTAM WWJ WGN WTMJ KSD
WOW WDAF WFAA KPRC WOAI
WHAS WSM WSB WBT WJAX
KHQ KGO KFI KGW KSTP
KOA KSL KPO KOMO WKY
WTIC WOC WMC

9:30-10:00 Vitaphone Jubilee

WOR WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC WKRC
WGHP WMAQ KMOX KMBC WSPD
WHK WLBW KOIL WMAL WGL
KLZ KDYL KYA KEX KJR
KGA KMTR KFWB

9:30-10:00 Real Folks

WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KYW KWK
WREN

10:00-10:30 Robert Burns Panatellas

WOR WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC WKRC
WGHP WMAQ KMOX KOIL WSPD
WHK WLBW WMAL WOWO KMBC
WFBM

10:30-11:00 Empire Builders

WEAF WEEI WJAR WTAG WCSH
WLIT WRC WGY WGR WCAE
WTAM WWJ KYW KSD WOC
WOW KSTP WTMJ WEBC WHAS
WSB WBT WFAA KPRC WOAI
WKY KOA KSL KPO KFI
KGO KGW KOMO KHQ WTIC
WDAF

10:30-11:00 United Choral Singers

WOR WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC WKRC
WGHP WMAQ WOWO KMOX KMBC
KOIL WSPD WHK WLBW WMAL
WCCO

11:00-11:30 National Grand Opera

WEAF WGR WWJ KSD WRC
WFAA WRVA WJAX WKY WIOD
WHAS WGY WAPI

11:00-12:00 Slumber Music

WJZ WLW WHAM KDKA

Tuesday

10:30-11:00 Jewel Radio Hour

WABC WFBL WCAO WJAS WADC
WGHP WBBM KOIL WHK WMAL
WKBW WOWO KMOX WSPD WLBW

10:45-11:00 Fleischman Food Club

WEAF WTIC WJAR WTAG WCSH
WFI WRC WGY WGR WTAM
WWJ WSAI KYW KSD WOC
WOW WDAF WTMJ WHAS WMC
WSB WBT KVOO KPRC WOAI
WRVA KSTP WEBC WJAX WKY

11:00-11:30 Radio School of Cookery

WJZ WBZ WBZA WHAM KDKA
WLW WJR KWK KFKX WGN

2:15-3:15 Gotham String Trio

WEAF WRC KYW

2:45-3:00 Theronoid Health Talk

WABC WCAU WFBL WKBW WCAO
WJAS WADC WKRC WOWO KMOX
KOIL WSPD WHK WLBW WMAL

4:15-4:45 The Californians

WEAF WOW WWJ WCFL

5:00-5:30 Rudy Vallee's Orchestra

WEAF WRC WTAM WSM KOA

6:30-7:00 Savannah Liners' Orchestra

WJZ WBZ WBZA

7:00-7:30 Voters Service

WEAF	WTIC	WJAR	WTAG	WCSH
WFI	WRC	WGY	WCAE	KSD
WOW	WDAF	KOA	WHAS	WBT
WFAA	WMC	WGR	KSL	KPO
KGO	KOMO	KGW	KFI	KHQ

7:30-8:00 Soconyland Sketches

WEAF	WTIC	WGR	WRC	WCFL
WOW	WDAF	WTAM	WWJ	KSD
WHO				

7:30-8:00 Fundamentals of the Law

WJZ	WHAM	WRVA	WKY	KWK
KOA	WHAS	WOAI	WMC	WREN

7:30-8:00 MOBO Entertainers

WCAU	WABC	WNAC	WEAN	WFBL
WCAO	WJAS	WLBW	WKBW	WMAL

8:00-8:30 Genia Fonariova, Soprano

WEAF WFI WRC KSD WCAE

8:00-8:30 Stromberg-Carlson Sextet

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	KYW	KWK	WREN
WMC	KSTP	KVOO	WFAA	KPRC
WOAI	WHAS	WSB	WBT	KOA
WKY	WSM	WTMJ		

8:00-8:15 Frederic William Wile

WABC	WFAN	WNAC	WEAN	WFBL
WKBW	WCAO	WJAS	WADC	WOWO
KMOX	KOIL	WHK	WLBW	WMAL
WCCO				

8:15-9:00 U. S. Navy Band

WABC	WFAN	WNAC	WEAN	WFBL
WKBW	WJAS	WADC	WOWO	KMOX
KOIL	WHK	WLBW	WMAL	WCCO

8:30-9:00 Prophylactic Program

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WFI	WRC	WGY	WGR
WCAE	WWJ	KSD	WOW	WDAF
WHO	WLS			

8:30-9:00 Michelin Hour

WJZ	WBZ	WBZA	WBAL	WHAM
KVOO	WFAA	KPRC	WOAI	WJR
KDKA	KYW	KWK	WREN	

9:00-9:30 Concert Ensemble

WJZ WBAL WHAM KWK KDKA

9:00-10:00 Eveready Hour

WEAF	WEEI	WJAR	WFI	WRC
WGY	WGR	WCAE	WTAM	WWJ
WGN	KSD	WMC	WSB	WDAF
WHAS	WSM	KOMO	KHQ	KVOO
WOAI	KGO	KFI	KGW	KOA
KPO	WHO	KSTP	WEBC	KSL

9:00-10:00 Old Gold—Paul Whiteman

WABC	WIBW	WNAC	WEAN	WFBL
WCAO	WJAS	WADC	WKRC	WGHP
WOWO	KMOX	KMBC	KOIL	WSPD
WHK	WMAL	WKBW	WLBW	WBBM
WCCO	WDBJ	WTAR	WREC	KFJF
WISN	WDSU	KLRA	KEX	KJR
KGA	WCAU	KTSA	WWNC	WLAC
WDOD	WBRC	WRR	KLZ	KDYL
KYA	KMTR	WREC	KFH	WFBM

9:30-10:00 Dutch Masters Minstrel

WJZ	WTMJ	WBZ	WBZA	WBAL
WHAM	KDKA	WLW	KYW	WREN
WJR	KWK			

10:00-10:30 Clicquot Club Eskimos

WEAF	WEEI	WTIC	WJAR	WCSH
WFI	WRC	WGY	WCAE	WTAM
WWJ	WTMJ	KSD	WMC	WDAF
WFAA	KPRC	WOAI	WHAS	WSM
WSB	WBT	KOA	WTAG	WGR
KYW	WOW	KSTP	WHO	KSL
KPO	KGO	KFI	KGW	KOMO
KHQ	WJAX	WRVA	WEBC	

10:00-10:30 Williams Syncomatics

WJZ	WBAL	WHAM	KDKA	WJR
WLW	KWK	WREN	WGN	WBZ
WBZA				

10:00-11:00 Voice of Columbia

WABC	WFAN	WNAC	WEAN	WFBL
WCAO	WJAS	WADC	WKRC	WGHP
WOWO	KMOX	KOIL	WSPD	WMAL
WKBW	WLBW	WBBM	KLZ	KYA
KMTR	KJR	KEX	KGA	WISN
WCCO	KDYL			

10:30-11:00 Orchestradians

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	KYW	KWK	WREN
KSTP	KOA	KSL	KGO	KPO
KGW	KFI	KOMO	KHQ	WBT
WFAA				

11:00-12:00 Slumber Music

WJZ WHAM KDKA

11:00-12:00 Guy Lombardo

WABC	WNAC	WEAN	WFBL	WCAO
WJAS	WADC	WCAU	WGHP	WBBM
WOWO	KMOX	KMBC	KOIL	WSPD
WHK	WKBW	WLBW	WMAL	KLZ
KDYL	KYA	KMTR	KJR	KEX
KGA	WKRC			

11:00-12:00 Radio Keith-Orpheum

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WFI	WRC	WGY	WGR
WCAE	WTAM	WWJ	KYW	KSD
WHO	WDAF	KSTP	WTMJ	WEBC
WJAX	WHAS	WSM	WSB	WMC
WBT	WRVA	WFAA	KPRC	WOAI
WKY	KOA	KSL	WOW	KPO
KGO	KOMO	KHQ	KGW	KFI

Wednesday

10:00-11:00 National Home Hour

WEAF WJAR WGY WCAE WHO
WFI

11:00-11:30 Radio School of Cookery

WJZ WBZ WBZA WHAM KDKA
KWK WJR WLW WGN

2:15-3:15 Gotham String Trio

WEAF WRC WGR WOW WHO

3:00-4:00 U. S. Navy Band

WJZ WHAM WRC WBZ WBZA

4:00-5:00 Moment Musical

WJZ WBZ WBZA WJR WLS
KWK

4:00-5:00 Pacific Vagabonds

WEAF WRC WHO WOW KGO
KGW KHQ KSL KOMO WCFL

5:00-5:30 Music League Program

WEAF WRC WTAM KSD

6:00-6:10 Sport Talk

WEAF WRC WCAE WHO KSL

7:30-8:00 La Touraine Concert

WEAF WEEI WTIC WJAR WTAG
WCSH WGY WGR WCAE WWJ
WTAM WHAS WSB WMC

7:45-8:00 The Political Situation

WRC WJZ WBAL KDKA WLW
KWK

8:00-8:30 Sunkist Serenaders

WEAF WEEI WTIC WJAR WTAG
WCSH WLIT WRC WGY WGR
WCAE WWJ KSD WOC WOW
WDAF

8:00-8:30 Mobiloil Orchestra

WJZ WBZ WBZA WBAL WHAM
KDKA WJR WLW KYW WREN
KSTP WTMJ KOA KVOO WFAA
KPRC WOAI WEBC KWK

8:00-9:00 Show Boat

WCAU WOR WNAC WEAN WFBL
WKBW WJAS WADC WMAQ KMOX
WMAL KOIL WLBW WCCO WISN
WHK

8:30-9:00 Happy Wonder Bakers

WEAF WTIC WTAG WCSH WLIT
WRC WCAE KSD WOW WMC
WKY WJAR WGR WTMJ KPRC
WOC WWJ WOA KVOO WFAA
WEEI

8:30-9:00 Sylvania Foresters

WJZ KDKA WBZ WBZA WBAL
WHAM WLW WJR KWK KYW
WREN WRVA WBT

9:00-9:30 Van Heusen Program

WOR WNAC WEAN WFBL WMAK
WJAS WADC WMAQ KMOX KOIL
WLBW WMAL WCAU WCAO WKRC
WGHP KMBC WHK WSPD WKBW
WGL

9:00-9:30 Ipana Troubadors

WEAF WEEI WTIC WJAR WTAG
WCSH WRC WGY WGR WCAE
WTAM WWJ KPRC WOAI WHAS
WSM WSB WBT KOA WMC
KSD WOW WDAF WBAP WGN
KSTP WOC KVOO WTMJ WLIT

9:30-10:00 La Palina Smoker

WOR WCAU WNAC WEAN WFBL
WMAK WCAO WJAS WADC KMOX
WKRC WGHP WMAQ WOWO KOIL
KMBC WSPD WHK WMAL WLBW
WCCO WISN

9:30-10:30 Palmolive Hour

WEAF WJAX WSM WBT WEEI
WRC WTIC WGY WGN WDAF
WJAR WGR KSD KVOO WTAG
WCAE KPRC WFAA WTMJ WTAM
WOAI KOA WLIT WWJ WOW
WMC WHAS KSTP WOC KPO
KGO KFI KGW KOMO KHQ
KSL WCSH WSB

9:30-10:00 The Cabin Door

WJZ WJR KWK WLW

10:00-10:30 Kolster Radio Hour

WOR WFBL WADC WOWO WHK
WCAU WMAK WKRC KMOX KOIL
WNAC WCAO WGHP KMBC WMAL
WEAN WJAS WMAQ WSPD WLBW
WCCO KLZ KDYL KYA KEX
KJR KGA KMTR

10:30-11:00 Gold Strand Orchestra

WEAF WEEI WTIC WJAR WTAG
WCSH WLIT WRC WGY WGR
WCAE WTAM WWJ WOC KSD
WOW WBT KOA WHAS WSM
WMC WSB WFAA WOAI KPRC
KSL KSTP WKY KYW KPO
KGO KFI KOMO KHQ KGW

10:30-11:00 Daguerrotypes

WOR WMAK WFBL WOWO WSPD
WCAU WCAO WKRC KMOX WHK
WNAC WJAS WGHP WLBW WEAN
WADC WMAQ WMAL WCCO WISN
WFBM

11:00-11:30 Chancellor Orchestra

KSD WOC WOW WDAF KSTP
KOA WFAA KPRC WOAI KSL
WKY WEBC

11:00-12:00 Rudy Vallee's Orchestra

WEAF WDAF WKY KSD WWJ

11:00-12:00 Slumber Music

WJZ WRC WHAS KDKA

Thursday

11:00-11:30 Radio School of Cookery

WJZ WBZ WBZA WHAM KDKA
WLW WJR KWK WGN

2:15-3:15 La Salle String Quartet

WEAF WRC WGY WGR

2:45-3:00 Theronoid Health Talk

WABC WCAU WFBL WKBW WCAO
WJAS WADC WKRC WOWO KMOX
KOIL WSBD WHK WLBW WMAL

4:30-5:15 Twilight Hour

WEAF WRC WOW

5:00-5:30 Rudy Vallee's Orchestra

WJZ KSL WREN

6:00-6:30 German Bakers' Club

KYW	WLW	WFAA	WMC	KSTP
KDKA	KWK	KVOO	WREN	KPRC

7:00-7:30 Mid-Week Hymn Sing

WEAF	WCSH	WRC	WKY	KOA

7:15-7:30 May Singhi Breen

WJZ	KWK	WREN	WSM	WKY

7:30-8:00 The Yeast Foamers

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	KYW	KWK	WREN
WEBC				

7:30-8:00 Coward Comfort Hour

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH				

8:00-8:30 The Gossipers

WEAF	WFI	WRC	WGY	WWJ
KSD	KOA			

8:00-8:30 Lehn and Fink Serenade

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WOAI	WLW	WJR	WFAA
KYW	KWK	KPRC	WREN	WKY

8:00-8:30 Musical Vignettes

WABC	WNAC	WEAN	WFBL	WJAS
KMOX	KOIL	WLBW	WMAL	WKBW
WCAO	WISN			

8:30-9:00 Mennen Men

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	WLW	KYW	KWK
WREN				

8:30-9:00 Then and Now

WABC	WNAC	WEAN	WFBL	WKBW
WCAO	WJAS	KMOX	KOIL	WLBW
WMAL	WFBM			

8:30-9:00 Hoover Sentinels

WEAF	WEEI	WTAM	WFI	WRC
WGY	WCAE	WWJ	KSD	WHAS
WSM	WOW	WSB	WFAA	WDAF
WGN	WGR	WHO	KSTP	WBT
WMC				

9:00-9:30 Seiberling Singers

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WFI	WRC	WGY	WGR
KPO	WWJ	KFI	KSD	KHQ
KOA	WBT	WOW	WDAF	WFAA
KPRC	WHAS	WSM	WMC	WSB
WTMJ	KGO	KGW	WTAM	KYW
WHO	WJAX	KSTP	KOMO	WKY
WCAE				

9:00-9:30 Arabesque

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

9:30-10:00 Rapid Transit

WEAF	WRC	WCAE	WJAR	WFI
WTAG	WGR	WGY		

9:30-10:00 Sonora Phonograph Hour

WABC	WCAU	WNAC	WEAN	WFBL
WMAL	WJAS	WADC	WKRC	WBBM
WGHP	WOWO	KMOX	KMBC	WSPD
WKBW	WHK	WLBW	KOIL	WCAO
WCCO	KEX	KJR	KFJF	KRLD
KLZ	KDYL	KMTR	KYA	KGA
WTAR	WWNC	WLAC	WDOD	WREC
KLRA	KTSA	WDSU	WISN	WDBJ
WBRC	WIBW			

9:30-10:00 Maxwell House Hour

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WLW	WJR	KYW	KSD
WHO	WDAF	WBAP	KPRC	WHAS
WSM	WSB	WBT	KOA	WOW
WEBC	WJAX	WTMJ	KSTP	WRVA
WMC				

10:00-10:15 Rit Fashion Review

WABC	WNAC	WEAN	WFBL	WADC
WCAO	WKRC	WHK	WGHP	WOWO
KMBC	WLBW	KOIL	WJAS	WSPD
WMAL	WKBW	WCAU	WISN	

10:15-10:30 Musical Foursome

WABC	WNAC	WEAN	WFBL	WADC
WCAO	WKRC	WHK	WGHP	WOWO
KMBC	WLBW	KOIL	WJAS	WSPD
WMAL	WCAU	WKBW	WISN	

10:00-10:30 Halsey Stuart Hour

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WFI	WRC	WGY	WGR
WCAE	WTMJ	KSD	WOW	KVOO
WFAA	WOAI	WHAS	WBT	KOA
WSB	WWJ	KYW	WHO	KPRC
KSTP	WJAX	WMC	WRVA	KPO
KGO	KOMO	KHQ	KGW	KFI
WSMB	KSL			

10:30-11:00 Palais d'Or Orchestra

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	WLW	KYW	

10:30-11:00 Iso-Vis Entertainers

WGN	WHO	WOW	WDAF	KSTP
WTMJ	WEBC	KSD		

10:30-11:00 Musical Episode

WABC	WFAN	WNAC	WEAN	WCAO
WKRC	WGHP	KMBC	WSPD	WHK
WLBW	WMAL	WJAS	WADC	WOWO
KMOX	KOIL	WKBW	WFBL	WBBM
WISN				

10:30-11:00 Columbians

WABC	WFAN	WEAN	WNAC	WFBL
WJAS	WADC	WKRC	WGHP	WMAL
WOWO	KMOX	KMBC	WSPD	WKBW
WHK	WLBW	KOIL	WCAO	WBBM
KLZ	WTAR	WWNC	WLAC	WDOD
WREC	KLRA	KFJF	KRLD	KTSA
WDSU	WISN	WDBJ	WBRC	WIBW

10:30-11:30 Concert Bureau Hour

WEAF	WTIC	WTAG	WCAE	WWJ
WGR	WRC	WKY	WRVA	WHO
WFI	WGY	WSMB	WMC	KPRC

11:30-12:00 Dave Bernie's Orchestra

WEAF	WGR	WWJ	WHO	WRVA

Friday

10:00-11:00 National Home Hour

WEAF	WJAR	WFI	WGY	WCAE
WEAR	WHO			

11:00-12:00 RCA Educational Hour

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	WLW	WOW	WDAF
KVOO	WFAA	KPRC	WOAI	KOA
WTMJ	WHAS	WSM	WSB	WRVA
WBT	KFKX	WRC	WHO	KSTP
WJAX	KWK	WMC	WSMB	

12:00-12:15 Jean Carroll

WOR	WCAU	WNAC	WEAN	WFBL
WMAK	WCAO	WJAS	WADC	WKRC
WGHP	WHK	WMAL	WBBM	WOWO
KOIL	KMBC	WLBW		

4:00-5:00 Pacific Little Symphony

WJZ	WBZ	WBZA	WBAL	WJR
WLW	KWK	WREN	KOA	KGO
KOMO	WLS	KSL		

5:00-5:30 Florida Citrus Growers

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WRC	WGY	WGR	WCAE
WWJ	WSAI	KYW	KSD	WLIT

5:30-5:55 Jolly Bill and Jane

WEAF	WRC	WOW

6:30-7:00 Raybestos Twins

WEAF	WTAG	WCSH	WGY	WCAE
WTAM	WWJ	WLS		

6:45-7:00 Enna Jettick Melodies

WABC	WCAU	WNAC	WEAN	WFBL
WMAK	WJAS	WADC	WBBM	WOWO
KMOX	KOIL	KMBC	WHK	WLBW
WMAL	WRHM			

7:15-7:30 Squibbs Health Talk

WJZ	WBZ	WBZA	WHAM	KDKA
WJR	WLW	KWK	WREN	KSTP
WTMJ	KOA	WCFL		

7:30-8:00 Dixies Circus

WJZ	WBZ	WBZA	WBAL	KDKA
WJR	WLW	KYW	WBT	WSB
WSM	WHAS	WMC		

8:00-8:30 Songs

WOR	WNAC	WEAN	WFBL	WJAS
WMAQ	KMOX	KOIL	WLBW	WMAL
WADC	WCAO	WHK	WDBJ	WTAR
WWNC	WLAC	WDOD	WBRC	WREC
KLRA	KFJF	KRLD	KFH	WDSU
WCCO	WFBM	KTSA		

8:10-8:30 Old Man Donaldson

WJZ	KDKA	WMC

8:00-9:00 Cities Service Orchestra

WEAF	WEEI	WLIT	WRC	WDAF
WCAE	WTAM	WWJ	KSD	WOW
WFAA	KOA	KYW	WOC	WKY
KSTP	WGR	WTIC		

8:30-9:00 The Armstrong Quakers

WJZ	WBAL	WJR	KWK	WSB
WBZ	WHAM	WLW	WREN	WBZA
KDKA	WBT	WHAS	WSM	WLS
WMC				

8:30-9:00 Veedol Hour

WOR	WCAU	WNAC	WEAN	WFBL
WMAK	WJAS	WMAQ	KMOX	KOIL
WLBW	WMAL	WCCO	WADC	WHK
WCAO	WGHP	WOWO	KMBC	WHEC
WDBJ	WTAR	WWNC	WLAC	WDOD
WBRC	WREC	KLRA	KFJF	KRLD
KTSA	KFH	WDSU		

9:00-9:30 An Evening in Paris

WEAF	WEEI	WTIC	WRC	WGR
WCAE	WWJ	WCSH	WDAF	KSD
WJAR	WTAG	WGN	WLIT	WGY
WOW	WOC			

9:00-10:00 True Story Hour

WOR	WMAK	WOWO	WSPD	WLBW
WCAU	WCAO	WKRC	KMOX	WMAL
WNAC	WJAS	WGHP	KMBC	WFBL
WEAN	WADC	WMAQ	KOIL	WHK
WHEC				

9:00-10:00 Wrigley Review

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WLW	WJR	KYW	WREN
WHAS	WSM	WSB	WBT	WRVA
WJAX	KGO	WFAA	WOAI	KPO
KFI	KGW	KOMO	KHQ	KPRC
KOA	KSTP	WMC	KWK	WKY
KSL				

9:30-10:00 Schradertown Brass Band

WEAF	WEEI	WDAF	WTIC	WRC
WTAG	WCSH	WLIT	WGY	WGR
WCAE	WWJ	WOC	KSD	WOW
WJAR				

9:30-10:00 Philco Hour

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WLW	WJR	KYW	KWK
WREN	WTMJ	KSTP		

10:00-10:30 The Salon Singers

WEAF	WTIC	WJAR	WLIT	WWJ
KSD	WOC	WGR		

10:00-10:30 Kodak Hour

WOR	WFBL	WADC	WMAQ	WSPD
WCAU	WMAK	KOIL	WHK	WNAC
WCAO	WKRC	KMOX	WLBW	WEAN
WJAS	WGHP	KMBC	WMAL	WCCO
WISN	WOWO	KLZ	KDYL	KMTR
KYA	KEX	KJR	KGO	WDBJ
WTAR	WWNC	WLAC	WDOD	WBRC
WREC	KLRA	KFJF	KRLD	WIBW
KTSA	WDSU	WREC		

10:00-10:30 Hudson-Essex Challengers

WJZ	WBZ	WBZA	WBAL	WHAM
WRVA	KDKA	WLW	WJR	KYW
KWK	WREN	KVOO	WFAA	KPRC
WOAI	WHAS	WBT	WTMJ	KSTP
WEBC	KOA	KSL	KPO	KFI
KGW	KOMO	KHQ	WKY	WSB
WJAX	WMC	WIOD		

10:30-11:00 Half Hours with the Senate

WHAS	WMC	WJAX	KVOO	WFAA
WOAI	WKY	KSL	KPO	KGO
WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WLIT	WRC	WGY	WGR
WCAE	KYW	KSD	WOC	KPRC
WTMJ	WIOD	KGW	KHQ	

10:30-11:00 Phil Spitalny's Music

WJZ	WBZ	WBZA	WREN	WBAL

10:30-11:00 Night Club Romances

WOR	WCAU	WNAC	WEAN	WFBL
WMAK	WCAO	WJAS	WADC	WKRC
WGHP	WMAQ	KMOX	WDSU	KOIL
WSPD	WHK	WLBW	WMAL	WISN
WDBJ	WTAR	WWNC	WDOD	WREC
KFJF	KRLD	WIBW	KTSA	KLZ
KDYL	KMTR	KYA	KEX	KJR
KGA	WCCO	KLRA		

11:00-11:30 The Skellodians

WOC	WOW	KOA	KSD	WDAF
KVOO	WLS	KSTP		

11:00-12:00 Hotel St. Regis Orchestra

WEAF	WWJ	KSD	WOC	WDAF

11:00-12:00 Slumber Music

WJZ	WLW	WHAS	WKY	WRC
KDKA				

Saturday

9:30-10:30 U. S. Army Band

WEAF	WRC	WGR	WOC	KFKX
WOW				

3:30-4:30 RCA Demonstration Hour

WBZ	WBZA	WJZ	WHAM	KDKA
WLW	WJR	KYW	KWK	WOAI
WDAF	WRC	WBT	WOC	WMC
WOW	WTMJ	KSTP	KOA	

4:30-5:00 Rudy Vallee's Orchestra

WJZ	WLW	WCFL	KSL

5:00-5:30 Hotel St. Regis Orchestra

WEAF	WCAE	WRC	WWJ

6:30-7:00 Gold Spot Orchestra

WJZ	WBZ	WBZA	KDKA	WLW

6:30-7:00 White House Dinner Music

WEAF	WEEI	WTIC	WJAR	WSB
WTAG	WCSH	WFI	WRC	WGY
WGR	WCAE	WTAM	WWJ	WLS
WBT	WTMJ	KSTP	WRVA	WJAX

7:00-7:30 Universal Safety Series

WEAF	WRC	WGY	WTIC	WAJR
WTAG	WCAE	WHO	WGR	WCSH
WDAF	KSTP	WHAS	KOA	KSL
KGO	KFI	KGW	KOMO	

7:20-7:45 Hotel St. Regis Orchestra

WJZ	KWK	KOA	WRC

7:30-8:00 Phil Spitalny's Music

WEAF	WFI	WRC	WGY	WSB

8:00-8:30 Pure Oil Band

WJZ	WBAL	WHAM	KDKA	WJR
WLW	KYW	KWK	WREN	WTMJ
WHAS	WMC	WSB	WBT	WRVA
WJAX	WEBC	KSTP	WSM	

8:00-8:30 Lew White Organ Recital

WEAF	WTIC	WCAE	WWJ	KSD
WEEI	WRC	WKY	KOA	KSL
KPO	KGO	KGW	KHQ	KOMO
KFI	WFAA			

8:30-9:00 Mildred Hunt, Contralto

WEAF	WGY	WGR	KGW	KFI
WCAE	WWJ	KSD	WTIC	WJAR
WRC	KSL	KPO	KGO	KOMO
KHQ	WEEI			

8:30-9:00 Interwoven Entertainers

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	WLW	KYW	KWK
WREN	WHAS	WMC	WSB	WBT
WFAA	KPRC	WOAI	WKY	WRVA
WJAX				

9:00-9:30 The Camoah Mystery

WJZ	WBZ	WBZA	WBAL	WHAM
KDKA	WJR	KYW	KWK	WREN
WLW				

9:00-10:00 General Electric Hour

WEAF	WEEI	WTIC	WJAR	WTAG
WCSH	WFI	WRC	WGY	WOAI
WCAE	WTAM	WWJ	KSD	WHO
WOW	WDAF	WTMJ	KOA	WHAS
WMC	WSB	WBT	WFAA	KPRC
WKY	WJAX	WRVA	WEBC	KSL
KPO	KGO	KHQ	KGW	KOMO
KFI	WLS	KSTP		

10:00-10:30 National Forum

WABC	WFAN	WNAC	WEAN	WFBL
WKBW	WCAO	WJAS	WADC	WKRC
WGHP	WMAQ	WBBM	WOWO	KMOX
KMBC	KOIL	WSPD	WHK	WMAL
WCCO	WISN	KDYL	KYA	KJR
KGA	WFBM	KMTR		

10:00-11:00 Lucky Strike Orchestra

WEAF	KOA	WRC	KSD	WEEI
WGR	KPO	WTMJ	KSL	WCAE
WOW	KHQ	WJAR	WTIC	WDAF
KGO	WTAG	WWJ	KVOO	KFI
WCSH	WFAA	WSB	KGW	WFI
WGN	KPRC	WBT	KOMO	WGY
WHO	WOAI	WJAX	KSTP	WKY
WHAS	WIOD	WMC	KTHS	WSMB

10:30-11:00 U. S. Navy Band

WABC	WFAN	WNAC	WEAN	WFBL
WKBW	WCAO	WJAS	WADC	WKRC
WGHP	WMAQ	WBBM	WOWO	KMOX
KMBC	KOIL	WSPD	WHK	WMAL
WCCO	WISN	KDYL	KYA	KJR
KGA	WFBM	KMTR		

11:00-11:15 Wright Sisters

WEAF	WFI	WCAE	WWJ	KSD
WHO	WKY	WIOD		

11:15-12:00 Ben Pollack's Orchestra

WEAF	WCAE	WWJ	KSD	WHO
WDAF	WKY	WIOD		

FROM/TO	Albuquerque, N. Mex.	Atlanta, Ga.	Baltimore, Md.	Boise, Idaho	Boston, Mass.	Brownsville, Tex.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, Ohio	Cleveland, Ohio	Denver, Colo.	Des Moines, Iowa	Detroit, Mich.	El Paso, Tex.	Fargo, N. Dak.	Fort Worth, Tex.	Galveston, Tex.	Hastings, Nebr.	Hot Springs, Ark.	Houghton, Mich.	Jacksonville, Fla.	Kansas City, Mo.	Los Angeles, Calif.
Albuquerque, N. Mex.	----	1273	1670	774	1967	636	1577	1126	1248	1417	332	833	1360	228	968	561	803	588	773	1252	1492	717	663
Atlanta, Ga.	1273	----	575	1830	933	960	695	583	368	550	1208	738	595	1293	1112	750	688	901	498	947	286	675	1935
Baltimore, Md.	1670	575	----	2055	358	1525	273	603	423	305	1505	913	398	1750	1143	1239	1245	1154	964	808	682	962	2313
Boise, Idaho	774	1830	2055	----	2266	1610	1372	1453	1663	1754	637	1155	1571	969	975	1263	1538	934	1384	1367	2098	1158	663
Boston, Mass.	1967	933	358	2266	----	1881	398	849	737	550	1766	1159	613	2067	1304	1574	1598	1415	1302	922	1015	1250	2590
Brownsville, Tex.	838	960	1525	1610	1881	----	1575	1234	1184	1402	1047	1102	1398	682	1445	471	287	1013	650	1543	1025	923	1370
Buffalo, N. Y.	1577	695	273	1872	398	1575	----	454	392	175	1368	762	218	1690	923	1221	1289	1019	956	560	880	862	2195
Chicago, Ill.	1126	583	603	1453	849	1234	454	----	249	307	918	310	236	1249	571	820	954	566	585	367	861	413	1741
Cincinnati, Ohio	1248	368	423	1663	737	1184	392	249	----	218	1090	509	234	1333	818	839	897	742	569	589	628	541	1892
Cleveland, Ohio	1417	550	305	1754	550	1402	175	307	218	----	1223	617	94	1521	838	1046	1116	871	787	518	768	700	2044
Denver, Colo.	332	1208	1505	637	1766	1047	1368	918	1090	1223	----	607	1153	554	642	643	925	353	749	970	1468	555	828
Des Moines, Iowa	833	738	913	1155	1159	1102	762	310	509	617	607	----	545	980	397	640	851	256	488	458	1024	180	1433
Detroit, Mich.	1360	595	398	1671	613	1398	218	236	234	94	1143	545	----	1475	745	1018	1111	800	761	427	832	643	1976
El Paso, Tex.	228	1293	1750	969	2067	682	1690	1249	1333	1521	554	980	1475	----	1161	543	723	757	802	1422	1481	836	702
Fargo, N. Dak.	968	1112	1143	975	1304	1445	923	571	818	838	642	397	745	1161	----	973	1218	440	875	393	1400	548	1426
Fort Worth, Tex.	561	750	1239	1262	1574	471	1221	820	839	1046	643	640	1018	543	973	----	283	544	273	1093	943	460	1212
Galveston, Tex.	803	688	1245	1538	1598	287	1289	954	897	1116	925	851	1111	723	1218	283	----	808	375	1277	799	677	1423
Hastings, Nebr.	588	901	1154	934	1415	1013	1019	566	742	871	353	256	800	757	440	544	808	----	513	666	1178	226	1177
Hot Springs, Ark.	773	498	964	1384	1302	650	956	585	569	787	749	488	761	802	875	273	375	513	----	901	728	326	1437
Houghton, Mich.	1252	947	808	1367	922	1543	560	367	589	518	970	458	427	1422	393	1093	1277	666	901	----	1216	633	1787
Jacksonville, Fla.	1492	296	682	2098	1015	1025	880	861	628	768	1468	1024	832	1481	1400	943	799	1178	728	1216	----	952	2153
Kansas City, Mo.	717	675	962	1158	1250	923	862	413	541	700	555	180	643	836	548	460	677	226	326	633	952	----	1352
Los Angeles, Calif.	663	1935	2313	663	2590	1370	2195	1741	1892	2044	828	1433	1976	702	1426	1212	1423	1177	1437	1767	2153	1352	----
Louisville, Ky.	1174	317	498	1683	823	1093	483	268	92	309	1035	477	315	1253	818	751	807	693	480	636	595	480	1825
Memphis, Tenn.	938	335	792	1806	1133	777	802	481	410	627	878	485	621	978	882	448	492	591	176	830	591	370	1602
Miami, Fla.	1710	610	958	2368	1258	1100	1184	1190	957	1088	1732	1338	1156	1662	1721	1150	941	1468	983	1545	328	1247	2355
Minneapolis, Minn.	980	905	948	1140	1125	1335	733	356	603	632	699	235	542	1156	219	870	1087	399	722	272	1192	413	1522
Missoula, Mont.	895	1790	1947	252	2124	1706	1740	1348	1578	1640	670	1074	1552	1115	819	1312	1595	891	1385	1208	2070	1117	910
Nashville, Tenn.	1117	218	597	1631	941	952	626	394	239	456	1018	523	468	1169	900	643	666	697	370	760	502	478	1777
New Orleans, La.	1030	427	1001	1713	1359	536	1087	831	708	922	1079	825	938	986	1221	470	288	870	358	1187	511	678	1675
New York, N. Y.	1810	747	170	2153	188	1695	291	711	568	404	1628	1023	483	1902	1213	1398	1415	1275	1125	849	838	1097	2446
Norfolk, Va.	1696	507	167	2137	467	1465	435	696	474	429	1562	983	522	1755	1258	1226	1195	1216	955	946	548	1009	2352
Oklahoma, Okla.	518	753	1173	1138	1490	659	1117	689	755	946	503	469	905	578	736	188	456	357	260	926	988	893	1182
Omaha, Nebr.	718	815	1026	1044	1280	1061	883	432	620	738	485	122	666	875	390	590	828	135	490	547	1098	165	1312
Philadelphia, Pa.	1748	663	90	2113	268	1614	278	664	501	343	575	972	444	1834	1186	1324	1335	1222	1051	827	758	1037	2388
Phoenix, Ariz.	330	1592	2002	733	2295	1023	1904	1451	1578	1745	585	1154	1685	347	1225	858	1055	901	1094	1550	1800	1045	357
Pittsburgh, Pa.	1498	520	194	1863	478	1424	178	411	258	115	1320	718	208	1592	952	1097	1140	967	825	630	703	784	2135
Portland, Me.	2015	1022	446	2282	100	1961	438	892	802	605	1803	1197	657	2126	1313	1642	1678	1454	1371	924	1113	1300	2631
Portland, Oreg.	1107	2172	2367	349	2553	1944	2167	1765	1987	2063	985	1479	1975	1286	1246	1612	1885	1271	1733	1638	2442	1397	825
Richmond, Va.	1628	470	128	2060	471	1428	375	618	399	353	1488	905	445	1695	1180	1170	1154	1142	897	870	953	937	2283
St. Louis, Mo.	938	467	731	1339	1036	979	662	259	308	490	793	270	452	1033	658	568	697	455	325	591	755	238	1585
Salt Lake City, Utah	483	1580	1858	292	2099	1317	1701	1260	1450	1567	372	952	1490	609	865	977	1249	708	1116	1242	1860	922	577
San Francisco, Calif.	893	2133	2451	516	2696	1675	2298	1855	2037	2163	946	1547	2087	993	1447	1454	1693	1297	1648	1833	2375	1500	345
Schenectady, N. Y.	1823	640	278	2120	150	1770	249	702	605	408	1618	1012	467	1930	1157	1445	1487	1267	1175	776	960	1107	2445
Seattle, Wash.	1178	2180	2441	405	2508	2015	2130	1743	1974	2035	1020	1470	1945	1372	1206	1658	1938	1288	1759	1588	2450	1505	956
Shreveport, La.	764	548	1006	1433	1410	310	1080	725	688	904	799	624	891	752	1002	209	233	615	142	1043	733	326	1420
Spokane, Wash.	1028	1950	2110	290	2279	1852	1900	1514	1746	1804	827	1243	1715	1238	978	1470	1753	1061	1552	1360	2239	1286	939
Springfield, Mass.	1889	863	282	2196	79	1805	325	774	659	673	1632	1085	540	1990	1240	1495	1524	1340	1224	860	957	1173	2515
Vermillion, S. Dak.	742	917	1083	973	1314	1151	916	479	694	765	468	187	705	920	284	689	938	167	605	510	1203	280	1291
Washington, D. C.	1648	542	33	2045	392	1493	290	594	403	303	1490	895	397	1726	1141	1210	1214	1139	936	813	647	943	2295

Use Your RADEX Properly

(*Continued from Inside Cover*)

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 hear-

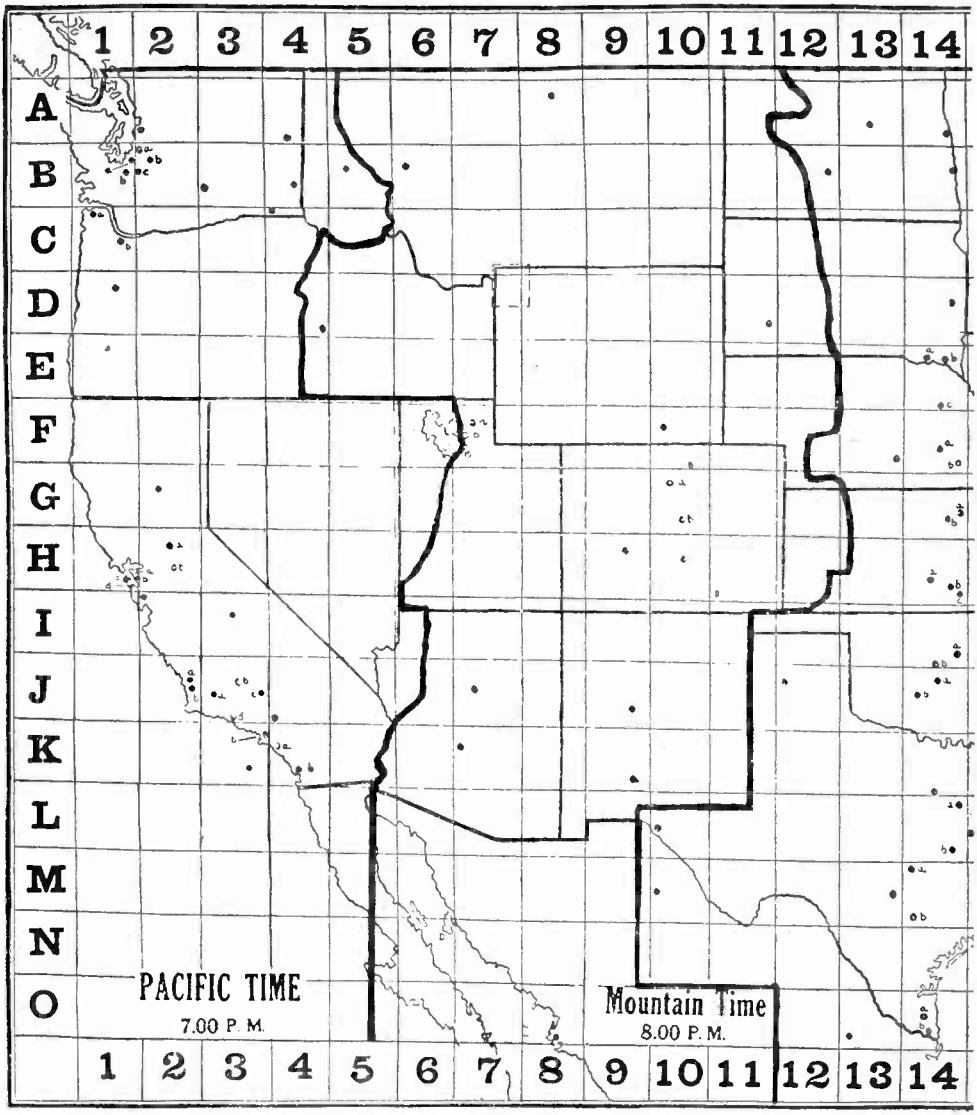
IN STATUTE MILES

Louisville, Ky.	Memphis, Tenn.	Miami, Fla.	Minneapolis, Minn.	Missoula, Mont.	Nashville, Tenn.	New Orleans, La.	New York, N. Y.	Norfolk, Va.	Oklahoma, Okla.	Omaha, Nebr.	Philadelphia, Pa.	Phoenix, Ariz.	Pittsburgh, Pa.	Portland, Me.	Portland, Oreg.	Richmond, Va.	St. Louis, Mo.	Salt Lake City, Utah	San Francisco, Calif.	Schenectady, N. Y.	Seattle, Wash.	Shreveport, La.	Spokane, Wash.	Springfield, Mass.	Vermillion, S. Dak.	Washington, D.C.
174	936	1710	980	895	1117	1030	1810	1696	518	718	1748	330	1498	2015	1107	1628	938	483	893	1823	1178	764	1028	1889	742	1648
317	335	610	905	1790	218	427	747	507	753	815	663	1592	520	1022	2172	470	467	1580	2133	840	2180	548	1960	863	917	542
498	792	958	948	1947	597	1001	170	167	1173	1026	90	2002	194	446	2367	128	731	1858	2451	278	2341	1064	2110	282	1083	33
623	1506	2368	1140	252	1631	1713	2153	2137	1138	1044	2113	733	1863	2282	349	2060	1389	292	516	2120	405	1433	290	2196	973	2045
823	1133	1258	1125	2124	941	1359	188	467	1490	1280	268	2295	478	100	2553	471	1036	2099	2696	150	2508	1410	2279	79	1314	892
093	777	1100	1335	1706	952	536	1695	1465	659	1061	1614	1023	1424	1961	1944	1428	975	1317	1675	1770	2015	510	1858	1805	1161	1493
483	802	1184	733	1740	626	1087	291	435	1117	883	278	1904	178	438	2167	375	662	1701	2298	249	2130	1080	1900	325	916	290
268	481	1190	356	1348	394	831	711	696	689	432	664	1451	411	892	1765	618	259	1260	1855	702	1743	725	1514	774	479	594
92	410	957	603	1578	239	708	568	474	755	620	501	1578	258	802	1987	399	308	1450	2037	605	1974	688	1746	659	694	403
309	627	1088	832	1640	456	922	404	429	946	738	343	1745	115	603	2063	353	490	1567	2163	408	2035	904	1804	473	785	303
035	878	1732	699	670	1018	1079	1628	1562	503	482	1575	585	1320	1803	985	1488	793	372	946	1618	1020	799	827	1692	468	1490
177	485	1338	235	1074	523	825	1023	983	469	122	972	1154	718	1197	1479	905	270	952	1547	1012	1470	624	1243	1085	187	895
315	621	1156	542	1552	468	938	483	522	905	666	444	1685	208	657	1975	445	452	1490	2087	467	1945	891	1715	540	705	397
253	978	1662	1156	1115	1169	986	1902	1755	578	875	1834	347	1592	2126	1286	1695	1033	689	993	1930	1373	752	1238	1990	920	1726
318	882	1721	219	819	900	1221	1213	1258	786	390	1186	1225	952	1313	1248	1180	656	865	1647	1157	1206	1002	976	1240	284	1141
751	448	1150	870	1312	643	470	1398	1226	188	590	1324	858	1097	1642	1612	1170	568	977	1454	1445	1658	209	1470	1495	689	1210
307	492	941	1087	1595	666	288	1415	1195	456	828	1335	1065	1140	1678	1885	1154	697	1249	1693	1487	1938	233	1753	1524	938	1214
593	591	1468	399	891	697	870	1275	1216	357	135	1222	901	967	1454	1271	1142	455	708	1297	1267	1288	615	1061	1340	167	1133
180	176	983	722	1385	370	358	1125	955	260	490	1051	1094	825	1371	1733	897	325	1116	1648	1175	1759	142	1552	1824	605	936
136	830	1545	272	1208	760	1187	849	946	926	547	827	1550	630	924	1638	870	591	1242	1833	776	1588	1043	1360	860	510	619
195	591	328	1192	2070	502	511	838	548	988	1098	756	1800	703	1113	2442	953	755	1840	2375	960	2450	733	2239	957	1203	647
180	370	1247	413	1117	472	678	1097	1009	293	165	1037	1045	784	1300	1397	937	238	922	1500	1107	1505	326	1286	1173	280	943
125	1602	2355	1522	910	1777	1675	2446	2352	1182	1312	2388	357	2135	2631	825	2283	1585	577	345	2445	956	1420	939	2515	1291	2295
---	319	923	605	1550	153	623	650	528	675	579	580	1512	345	892	1953	457	242	1400	1983	695	1945	598	1720	745	663	473
119	----	878	700	1483	195	358	953	778	422	529	878	1264	660	1205	1852	722	242	1250	1800	1010	1867	279	1652	1055	642	763
123	878	----	1516	2359	821	681	1095	802	1233	1402	1023	1998	1014	1357	2716	831	1067	2098	2603	1229	2740	950	2528	1210	1510	927
105	700	1516	----	1010	695	1050	1019	1047	692	291	985	1279	745	1145	1435	968	464	988	1585	975	1403	859	1173	1056	238	936
150	1483	2359	1010	----	1582	1733	2030	2045	1162	978	1997	932	1754	2193	430	1967	1331	435	762	1978	395	1457	170	2060	887	1940
58	195	821	695	1582	----	470	758	586	602	604	683	1445	472	1015	1970	526	253	1390	1958	820	1973	470	1752	863	704	567
23	358	681	1050	1733	470	----	1173	932	575	845	1090	1318	923	1445	2063	899	599	1433	1923	1259	2098	280	1898	1287	960	968
150	953	1095	1019	2030	758	1173	----	293	1324	1144	83	2142	313	277	2455	287	873	1972	2568	142	2419	1230	2190	120	1189	204
28	778	802	1047	2045	586	932	293	----	1186	1095	220	2027	316	565	2458	79	771	1925	2510	626	2440	1037	2211	411	1166	145
75	422	1233	692	1162	602	575	1324	1186	----	408	1256	843	1013	1550	1488	1122	456	862	1386	1354	1523	297	1324	1412	502	1150
79	529	1402	291	978	604	845	1144	1095	405	----	1094	1032	837	1318	1373	1020	352	833	1425	1133	1372	617	1149	1205	115	1012
80	878	1023	985	1997	683	1090	83	320	1256	1094	----	2079	254	360	2419	205	808	1923	2518	205	2388	1153	2159	801	1143	122
12	1264	1998	1279	932	1445	1318	2142	2027	843	1032	2079	----	1829	2345	1007	1960	1270	504	652	2152	1112	1067	1020	2220	1048	1980
45	660	1014	745	1754	472	923	313	316	1013	837	254	1829	----	545	2174	242	561	1670	2264	350	2145	939	1918	400	891	188
92	1209	1357	1145	2133	1015	1445	277	565	1550	1318	360	2345	545	----	2563	565	1094	2127	2725	197	2513	1484	2285	159	1345	480
53	1852	1716	1435	430	1970	2063	2455	2458	1488	1373	2419	1007	2174	2563	----	2381	1723	636	536	2405	143	1783	295	2488	1293	2360
57	722	831	968	1967	526	899	287	79	1122	1020	205	1960	242	565	2381	----	699	1950	2426	406	2362	985	2133	407	1089	96
42	242	1067	464	1331	253	599	873	771	456	352	808	1270	561	1094	1723	699	----	1158	1738	898	1722	466	1500	958	450	710
00	1250	2098	988	435	1390	1433	1972	1925	862	833	1923	504	1670	2127	636	1850	1158	----	592	1950	697	1155	548	2027	785	1845
83	1800	2603	1585	762	1958	1923	2568	2510	1386	1425	2518	652	2264	2725	536	2436	1738	592	----	2548	680	1655	730	2625	1983	2437
95	1010	1229	975	1978	820	1259	142	426	1354	1133	205	2152	350	197	2405	405	898	1950	2548	----	2363	1290	2139	86	1165	318
45	1867	2740	1403	395	1973	2098	2419	2440	1523	1372	2388	1112	2145	2513	143	2362	1722	697	680	2363	----	1820	229	2445	1282	2335
98	279	950	859	1457	470	280	1230	1037	297	617	1153	1067	939	1484	1783	985	466	1155	1655	1290	1820	----	1621	1333	726	1035
20	1652	2528	1173	170	1752	1898	2190	2211	1324	1149	2159	1020	1918	2285	295	2133	1500	548	730	2139	229	1621	----	2216	1055	2105
45	1055	1210	1056	2060	868	1287	120	411	1412	1205	201	2220	400	159	2488	407	958	2027	2625	86	2445	1333	2216	----	1242	321
63	642	1510	238	887	704	960	1189	1166	502	115	1143	1043	891	1345	1293	1089	450	785	1383	1165	1282	726	1055	1242	----	1073
73	763	927	936	1940	567	968	204	145	1150	1012	122	1980	188	480	2360	96	710	1845	2437	513	2335	1035	2105	321	1073	----

ing. 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. Where two stations in the same locality have the same frequency, they are required to divide time. In this case of course it is not possible to tell which one of the two stations is broadcasting at the particular moment we hear it but we do know it is one or the other of them.

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



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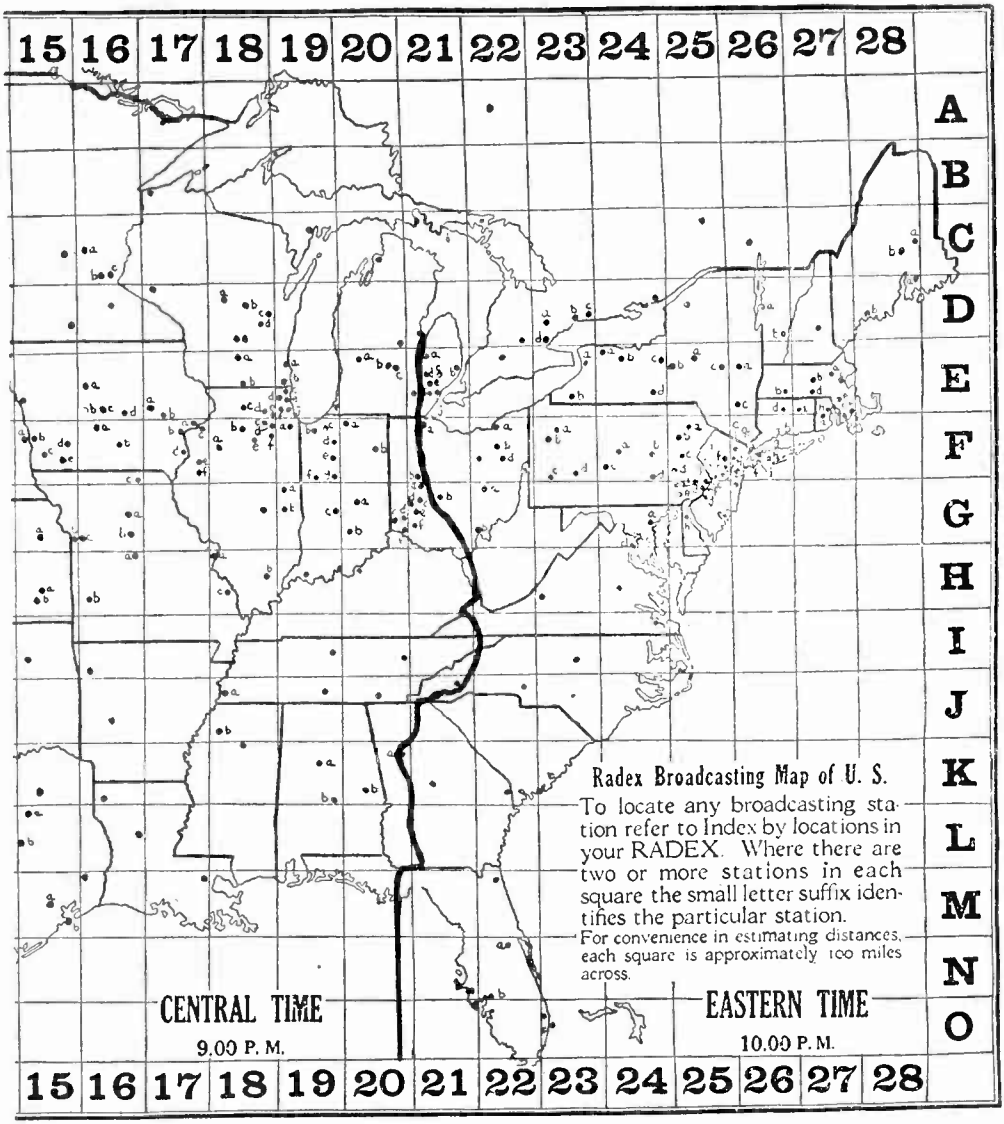

RADEX is published monthly throughout the year with the exception of July and August. The price is 25c per copy or $1.75 for the year of ten issues. If you desire to be up-to-date in radio and to be kept informed of the frequent changes in stations, please fill in the coupon on this page and mail it at once.

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540 kilocycles 555.6 meters

CKX	500	Brandon, Manitoba	Manitoba Telephone System
XFA	50	Mexico City	Sria. de Agricultura y Fomento

550 kilocycles 545.1 meters

KFDY	1000	Brookings, S. D.	S. D. State College
KFUO	500	St. Louis, Mo.	Concordia Theological Seminary
KFYR	500	Bismarck, N. D.	Hoskins-Meyer
KSD	500	St. Louis, Mo.	Pulitzer Publishing Co.
KTAB	500	Oakland, Cal.	Associated Broadcasters
WEAN	250	Providence, R. I.	The Shepard Stores
WEAO	750	Columbus, Ohio	Ohio State University
WGR	1000	Buffalo, N. Y.	Radio Station WGR Inc.
WKRC	500	Cincinnati, Ohio	Kodel Radio Corp.
XEY	105	Merida, Yucatan	Partido Socialista del Sureste

560 kilocycles 535.4 meters

KFDM	500	Beaumont, Texas	Magnolia Petroleum Co.
KFEQ	2500	St. Joseph, Mo.	Scroggin & Co. Bank
KLZ	1000	Denver, Colo.	Reynolds Radio Co., Inc.
KOAC	1000	Corvallis, Ore.	State Agricultural College
WDGY	500	Minneapolis, Minn.	Dr. George W. Young
WFI	500	Philadelphia, Pa.	Strawbridge & Clothier
WHDI	500	Minneapolis, Minn.	Wm. Hood Dunwoody Indus. Institute
WLIT	500	Philadelphia, Pa.	Lit Brothers
WMBF	500	Miami Beach, Fla.	Fleetwood Hotel Corp.
WNOX	1000	Knoxville, Tenn.	Sterchi Bros.
WOI	3500	Ames, Iowa	Iowa State College

570 kilocycles 526.0 meters

KGKO	250	Wichita Falls, Tex.	Wichita Falls Brdcstg. Co.
KMTR	1000	Hollywood, Cal.	KMTR Radio Corp.
KPLA	1000	Los Angeles, Cal.	Pacific Development Radio Co.
KUOM	500	Missoula, Mont.	University of Montana
KXA	500	Seattle, Wash.	American Radio Tel. Co.
WHA	750	Madison, Wis.	University of Wisconsin
WIBO	1000	Chicago, Ill.	Nelson Bros. Bond & Mfg. Co.
WKBN	500	Youngstown, Ohio	W. P. Williamson, Jr.
WMAC	250	Cazenovia, N. Y.	Clive B. Meredith
WMCA	500	New York City	Greeley Square Hotel Co.
WNAX	1000	Yankton, S. D.	Gurney Seed & Nursery Co.
WNYC	500	New York City	Dept. of Plants and Structures
WPCC	500	Chicago, Ill.	North Shore Congregational Church
WSMK	200	Dayton, Ohio	Stanley M. Krohn, Jr.
WSYR	250	Syracuse, N. Y.	Clive B. Meredith
WWNC	1000	Asheville, N. C.	Citizens Brdcstg. Co.

580 kilocycles 516.9 meters

CHMA	250	Edmonton, Alta.	Christian and Missionary Alliance
CHNC	500	Toronto, Ont.	Radio Research Society
CJBC	500	Toronto, Ont.	Jarvis Street Baptist Church
CJCA	500	Edmonton, Alta.	The Edmonton Journal
CJSC	500	Toronto, Ont.	The Evening Telegram
CKCL	500	Toronto, Ont.	The Dominion Battery Co.
CKNC	500	Toronto, Ont.	Canadian National Carbon Co.
CKUA	500	Edmonton, Alta.	University of Alberta
CNRE	500	Edmonton, Alta.	Canadian National Railways
KGFX	200	Pierre, S. D.	Dana McNeil
KSAC	500	Manhattan, Kans.	State Agricultural College
WOBU	250	Charleston, W. Va.	Charleston Radio Brdcstg. Co.
WSAZ	250	Huntington, W. Va.	McKellar Electric Co.
WSUI	500	Iowa City, Iowa	University of Iowa
WTAG	250	Worcester, Mass.	Telegram Publishing Co.

590 kilocycles 508.2 meters

KHQ	1000	Spokane, Wash.
WCAJ	500	Lincoln, Nebr.
WEEI	1000	Boston, Mass.
WOW	1000	Omaha, Nebr.
WEMC	1000	Berrien Springs, Mich.
XFI	1000	Mexico City

600 kilocycles 499.7 meters

CFCH	250	Iroquois Falls, Ont.
CHRC	25	Quebec, Que.
CJRM	500	Moose Jaw, Sask.
CJRW	500	Fleming, Sask.
CKCI	22.5	Quebec, Que.
CKCV	50	Quebec, Que.
CNRQ	50	Quebec, Que.
KFSD	500	San Diego, Cal.
KWYO	500	Laramie, Wyo.
WCAC	250	Storrs, Conn.
WCAO	250	Baltimore, Md.
WEBW	350	Beloit, Wis.
WOAN	500	Lawrenceburg, Tenn.
WREC	500	Memphis, Tenn.
WTIC	250	Hartford, Conn.

610 kilocycles 491.5 meters

KFRC	1000	San Francisco, Cal.
WDAF	1000	Kansas City, Mo.
WFAN	500	Philadelphia, Pa.
WIP	500	Philadelphia, Pa.
WOQ	1000	Kansas City, Mo.

620 kilocycles 483.6 meters

KFAD	500	Phoenix, Ariz.
KGW	1000	Portland, Ore.
WDAE	1000	Tampa, Fla.
WDBO	1000	Orlando, Fla.
WJAY	500	Cleveland, Ohio
WLBZ	250	Bangor, Me.
WTMJ	1000	Milwaukee, Wis.

630 kilocycles 475.9 meters

CFCT	500	Victoria, B. C.
CJGX	500	Yorkton, Sask.
CNRA	500	Moncton, N. B.
KFRU	500	Columbia, Mo.
WGBF	500	Evansville, Ind.
WMAL	250	Washington, D. C.
WOS	500	Jefferson City, Mo.
XFC	350	Jalapa, Ver.

640 kilocycles 468.5 meters

KFI	5000	Los Angeles, Cal.
WAIU	500	Columbus, Ohio
XFG	2000	Mexico City

650 kilocycles 461.3 meters

WSM	5000	Nashville, Tenn.

660 kilocycles 454.3 meters

WAAW	500	Omaha, Nebr.
WEAF	50000	New York City

670 kilocycles 447.5 meters

WMAQ	5000	Chicago, Ill.
XEB	1000	Mexico City

KCYS.	
670	Louis Wasmer, Inc.
	Nebraska Wesleyan University
MTRS.	Edison Elec. Illuminating Co.
447.5	Woodmen of the World
	Emmanuel Missionary College
DIAL	Sria. de Industria, Comercio y Trabajo
	Abitibi Power & Paper Co.
	E. Fontaine
	Jas. Richardson & Sons
	Jas. Richardson & Sons, Ltd.
	LeSoleil
	G. A. Vandry
	Canadian National Railways
	Airfan Radio Corp.
	Bishop N. S. Thomas
	Conn. Agricultural College
	Monumental Radio Co., Inc.
	Beloit College
	Vaughan School of Music
	WREC, Inc.
	Travelers Brdcstg. Service Corp.
	Don Lee, Inc.
	Kansas City Star Co.
	Keystone Broadcasting Co., Inc.
	Gimbel Bros., Inc.
	Unity School of Christianity
	Electrical Equipment Co.
	Oregonian Publishing Co.
	Tampa Publishing Co.
	Rollins College, Inc.
	Cleveland Radio Brdcstg. Corp.
	Maine Brdcstg. Co.
	Milwaukee Journal
	Victoria Broadcasting Association
	Winnipeg Grain Exchange
	Canadian National Railways
	Stephens College
	Evansville on the Air, Inc.
	M. A. Leese Co.
	State Marketing Bureau
	Goberno Estado de Veracruz.
	Earle C. Anthony, Inc.
	American Insurance Union
	Sria. de Guerra y Marina
	National Life & Accident Ins. Co.
	Omaha Grain Exchange
	National Broadcasting Co., Inc.
	Chicago Daily News, Inc.
	El Buen Tono, S. A.

CUT OUT ON DOTTED LINES

680 kilocycles 440.9 meters

KPO	1000	San Francisco, Cal.	Hale Bros. & The Chronicle
WPTF	1000	Raleigh, N. C.	Durham Life Insurance Co.

690 kilocycles 434.5 meters

CFAC	500	Calgary, Alta.	The Calgary Herald
CFCN	1800	Calgary, Alta.	W. W. Grant, Ltd.
CHCA	250	Calgary, Alta.	The Western Farmer
CJCJ	250	Calgary, Alta.	Albertan Publishing Co., Ltd.
CKCO	100	Ottawa, Ont.	Dr. G. M. Geldert
CNRC	500	Calgary, Alta.	Canadian National Railways
CNRO	500	Ottawa, Ont.	Canadian National Railways
NAA	1000	Arlington, Va.	U. S. Navy

700 kilocycles 428.3 meters

KFVD	250	Culver City, Cal.	Auburn Fuller Co.
KVI	1000	Tacoma, Wash.	Puget Sound Brdcstg. Co.
WLW	50000	Cincinnati, Ohio	Crosley Radio Corp.

710 kilocycles 422.3 meters

WOR	5000	Newark, N. J.	L. Bamberger & Co.

720 kilocycles 416.4 meters

WGN	25000	Chicago, Ill.	Chicago Tribune
WLIB	25000	Chicago, Ill.	Liberty Weekly, Inc.

730 kilocycles 410.7 meters

CHLS	50	Vancouver, B. C.	W. G. Hassell
CHYC	750	Montreal, Que.	Northern Electric Co.
CKAC	1200	Montreal, Que.	La Presse Publishing Co.
CKCD	50	Vancouver, B. C.	Vancouver Daily Province
CKFC	50	Vancouver, B. C.	United Church of Canada
CKMO	50	Vancouver, B. C.	Sprott-Shaw Radio Co.
CKWX	100	Vancouver, B. C.	A. Holstead & Wm. Hanlon
CNRM	1650	Montreal, Que.	Canadian National Railways
XEN	1000	Mexico City	General Electric, S. A.

740 kilocycles 405.2 meters

KMMJ	1000	Clay Center, Neb.	The M. M. Johnson Co.
WSB	10000	Atlanta, Ga.	Atlanta Journal Co.

750 kilocycles 399.8 meters

WCX	5000	Detroit, Mich.	Detroit Free Press
WJR	5000	Detroit, Mich.	WJR, Inc.

760 kilocycles 394.5 meters

WEW	1000	St. Louis, Mo.	St. Louis University
WJZ	30000	New York City	Radio Corp. of America, Inc.

770 kilocycles 389.4 meters

KFAB	5000	Lincoln, Nebr.	Nebraska Buick Automobile Co.
WBBM	25000	Chicago, Ill.	Atlas Investment Co.
WJBT	10000	Chicago, Ill.	The Atlass Co., Inc.

780 kilocycles 384.4 meters

CJCB	50	Sydney, N. S.	N. Nathanson
CKY	5000	Winnipeg, Manitoba	Manitoba Telephone System
CNRW	500	Winnipeg, Manitoba	Canadian National Railways
KELW	500	Burbank, Cal.	Earl L. White
KTM	500	Los Angeles, Cal.	Pickwick Brdcstg. Corp.
WBSO	250	Wellesley Hills, Mass.	Babson's Statistical Organization
WMC	500	Memphis, Tenn.	Memphis Commercial-Appeal
WPOR	500	Norfolk, Va.	WTAR Radio Corp.
WTAR	500	Norfolk, Va.	WTAR Radio Corp.

790 kilocycles 379.5 meters

KGO	7500	Oakland, Cal.	General Electric Co.
WGY	50000	Schenectady, N. Y.	General Electric Co.
6KW	1500	Tuinucu, Cuba	Frank H. Jones

800 kilocycles 374.8 meters

KTHS	10000	Hot Springs, Ark.	Chamber of Commerce
WBAP	50000	Fort Worth, Tex.	Carter Publications, Inc.
WSAI	5000	Cincinnati, Ohio	Crosley Radio Corp., Lessee

810 kilocycles 370.2 meters

WCCO	15000	Minneapolis-St. Paul	Washburn-Crosby Co.
WPCH	500	New York City	Eastern Broadcasters, Inc.

820 kilocycles 365.6 meters

WHAS	5000	Louisville, Ky.	Courier-Journal & Times

830 kilocycles 361.2 meters

HHK	1000	Port au Prince, Haiti	Republic of Haiti
KOA	12500	Denver, Colo.	General Electric Co.
WHDH	1000	Gloucester, Mass.	Matheson Radio Co., Inc.

840 kilocycles 356.9 meters

CFCA	500	Toronto, Ont.	Star Publishing & Ptg. Co.
CHCT	1000	Red Deer, Alta.	G. F. Tull & Ardern, Ltd.
CJBC	1000	Toronto, Ont.	Jarvis Street Baptist Church
CKLC	1000	Red Deer, Alta.	Alberta Pacific Grain Co.
CKOW	500	Toronto, Ont.	Nestle's Food Co.
CMC	500	Havana, Cuba	Cuban Telephone Co.
CNRT	500	Toronto, Ont.	Canadian National Railways
XFX	500	Mexico City	Sria. de Educacion Publica

850 kilocycles 352.7 meters

KWKH	5000	Shreveport, La.	W. K. Henderson
WWL	5000	New Orleans, La.	Loyola University

860 kilocycles 348.6 meters

KFQZ	250	Hollywood, Cal.	Taft Radio & Brdcstg. Co.
WABC	5000	New York City	Atlantic Broadcasting Corp.
WBOQ	5000	New York City	Atlantic Broadcasting Corp.
2OK	100	Havana, Cuba	Merio G. Velez
7SR	500	Elia, Cuba	Salvador Rionda

870 kilocycles 344.6 meters

WBCN	50000	Chicago, Ill.	Great Lakes Brdcstg. Co.
WENR	50000	Chicago, Ill.	Great Lakes Brdcstg. Co.
WLS	5000	Chicago, Ill.	Agricultural Brdcstg. Co.

880 kilocycles 340.7 meters

CHCS	10	Hamilton, Ont.	The Hamilton Spectator
CHML	50	Hamilton, Ont.	Maple Leaf Radio Co.
CKOC	100	Hamilton, Ont.	Wentworth Radio Supply Co.
KFKA	500	Greeley, Colo.	State Teachers College
KLX	500	Oakland, Cal.	Tribune Publishing Co.
KPOF	500	Denver, Colo.	Pillar of Fire, Inc.
WCOC	500	Columbus, Miss.	Crystal Oil Co.
WGBI	250	Scranton, Pa.	Scranton Broadcasters, Inc.
WQAN	250	Scranton, Pa.	Scranton Times

KCYS.
880
MTRS.
340.7
DIAL

CUT OUT ON DOTTED LINES

890 kilocycles 336.9 meters

CFBO	50	St. John, N. B.	C. A. Munro, Ltd.
KFNF	500	Shenandoah, Iowa	Henry Field Seed Co.
KGJF	250	Little Rock, Ark.	Church of the Nazarene
KUSD	500	Vermillion, S. D.	University of South Dakota
WGST	250	Atlanta, Ga.	Georgia School of Technology
WILL	250	Urbana, Ill.	University of Illinois
WJAR	250	Providence, R. I.	The Outlet Co.
WKAQ	500	San Juan, P. R.	Radio Corp. of Porto Rico
WMAZ	250	Macon, Ga.	Mercer University
WMMN	250	Fairmont, W. Va.	Holt Rowe Novelty Co.

900 kilocycles 333.1 meters

KGBU	500	Ketchikan, Alaska	Alaska Radio & Service Co.
KHJ	1000	Los Angeles, Cal.	Don Lee, Inc.
KSEI	250	Pocatello, Idaho	KSEI Broadcasting Association
WFBL	750	Syracuse, N. Y.	The Onondaga Co., Inc.
WFLA	750	Clearwater, Fla.	Chamber of Commerce
WKY	1000	Oklahoma City	WKY Radiophone Co.
WLBL	2000	Stevens Pt., Wis.	Wisconsin Dept. of Markets
WMAK	750	Buffalo, N. Y.	WMAK Brdcstg. Station, Inc.
WSUN	750	St. Petersburg, Fla.	Chamber of Commerce

910 kilocycles 329.6 meters

CFQC	500	Saskatoon, Sask.	The Electric Shop
CJGC	500	London, Ont.	Free Press Printing Co.
CJHS	250	Saskatoon, Sask.	Radio Service, Ltd.
CNRS	500	Saskatoon, Sask.	Canadian National Railways

920 kilocycles 325.9 meters

KOMO	1000	Seattle, Wash.	Fisher's Blend Station
KPRC	1000	Houston, Tex.	Houston Printing Co.
WAAF	500	Chicago, Ill.	Drovers Journal Publishing Co.
WWJ	1000	Detroit, Mich.	The Detroit News
XEX	500	Mexico City	Excelsior, Cia. Editorial, S. A.
XFF	250	Chihuahua, Chih.	Gobierno Estado de Chihuahua

930 kilocycles 322.4 meters

CHNS	500	Halifax, N. S.	Halifax Herald
CKIC	50	Wolfville, N. S.	Acadia University
KFWI	500	San Francisco, Cal.	Radio Entertainments, Inc.
KFWM	500	Oakland, Cal.	Oakland Educational Society
KGBZ	500	York, Nebr.	George R. Miller
KMA	500	Shenandoah, Iowa	May Seed & Nursery Co.
WBRC	500	Birmingham, Ala.	Birmingham Broadcasting Co.
WDBJ	250	Roanoke, Va.	Richardson-Wayland Elec. Corp.
WIBG	50	Elkins Park, Pa.	St. Pauls P. E. Church

940 kilocycles 319.0 meters

KFEL	250	Denver, Colo.	Eugene P. O'Fallon, Inc.
KFXF	250	Denver, Colo.	Pikes Peak Broadcasting Co.
KGU	500	Honolulu, Hawaii	Marion A. Mulrony
KOIN	1000	Portland, Ore.	KOIN, Inc.
WCSH	500	Portland, Maine	Congress Square Hotel Co.
WFIW	1000	Hopkinsville, Ky.	The Acme Mills, Inc.

950 kilocycles 315.6 meters

KFWB	1000	Los Angeles, Cal.	Warner Bros. Broadcasting Corp.
KGHL	500	Billings, Mont.	Northwestern Auto Supply Co.
KLDS	500	Independence, Mo.	Midland Broadcasting Co.
KMBC	500	Independence, Mo.	Midland Broadcasting Co.
KPSN	1000	Pasadena, Cal.	Pasadena Star-News
WHB	500	Kansas City, Mo.	Sweeney Automobile School
WRC	500	Washington, D. C.	Radio Corp. of America
2RK	20	Havana, Cuba	Raoul Karman

960 kilocycles 312.3 meters

CFCY	100	Charlottetown, P. E. I.
CFRB	1000	Twp. of King, Ont.
CHCK	30	Charlottetown, P. E. I.
CHWC	500	Regina, Sask.
CJBC	5000	Toronto, Ont.
CJBR	500	Regina, Sask.
CKCK	500	Regina, Sask.
CKGW	5000	Bowmanville, Ont.
CNRR	500	Regina, Sask.
XEE	101	Puebla, Pue.

The Island Radio Co.
Standard Radio Mfg. Corp.
W. E. Burke
R. H. Williams & Sons
Jarvis St. Baptist Church
Cooperative Wheat Producers
Leader Pub. Co.
Gooderham & Worts
Canadian Nat'l. Railways
Ramon Huerta G.

970 kilocycles 309.1 meters

KJR	5000	Seattle, Wash.
WCFL	1500	Chicago, Ill.
XEH	101	Monterey, N. L.

Northwest Radio Service Co.
Chicago Federation of Labor
Ing. Constantino de Tarnava

980 kilocycles 305.9 meters

KDKA	50000	Pittsburgh, Pa.

Westinghouse Elec. & Mfg. Co.

990 kilocycles 302.8 meters

WBZ	15000	Springfield, Mass.
WBZA	500	Boston, Mass.

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

1000 kilocycles 299.8 meters

KGFH	250	Glendale, Cal.
WHO	5000	Des Moines, Iowa
WOC	5000	Davenport, Iowa
XEI	101	Morelia, Mich.

Frederick Robinson
Bankers Life Co.
Palmer School of Chiropractic
Carlos Gutierrez M.

1010 kilocycles 296.8 meters

CFLC	50	Prescott, Ont.
CKCR	50	Brantford, Ont.
CKSH	50	St. Hyacinthe, Que.
KGGF	500	Picher, Okla.
KQW	500	San Jose, Cal.
WHN	250	New York City
WNAD	500	Norman, Okla.
WPAP	250	New York City
WQAO	250	New York City
WRNY	250	New York City
WSIS	250	Sarasota, Fla.

Radio Association
John Patterson
City of St. Hyacinthe
D. L. Connell, M. D.
First Baptist Church
Marcus Loew Booking Agency
University of Oklahoma
Palisades Amusement Park
Calvary Baptist Church
Experimenter Publishing Co.
Chamber of Commerce

1020 kilocycles 293.9 meters

KFKX	5000	Chicago, Ill.
KYW	5000	Chicago, Ill.
KYWA	500	Chicago, Ill.
WRAX	250	Philadelphia, Pa.

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

1030 kilocycles 291.1 meters

CFCF	1650	Montreal, Que.
CJOR	50	Sea Island, B. C.
CNRV	500	Vancouver, B. C.

Canadian Marconi Co.
G. C. Chandler
Canadian Nat'l Railways

1040 kilocycles 288.3 meters

KRLD	10000	Dallas, Texas
WFAA	5000	Dallas, Texas
WKAR	500	East Lansing, Mich.
WKEN	1000	Buffalo, N. Y.

KRLD, Inc.
News & Journal
Michigan Agricultural College
Radio Station WKEN, Inc.

1050 kilocycles 285.5 meters

KFKB	5000	Milford, Kansas
KNX	5000	Hollywood, Cal.
2MG	20	Havana, Cuba

KFKB Broadcasting Association
Western Broadcast Co.
M. y G. Salas

KCYS.
1050
MTRS.
285.5
DIAL

CUT OUT ON DOTTED LINES

1060 kilocycles 282.8 meters

KWJJ	500	Portland, Ore.	Wilbur Jerman
WBAL	10000	Baltimore, Md.	Consolidated Gas, Elec. & Pwr. Co.
WJAG	500	Norfolk, Nebr.	Norfolk Daily News
WTIC	5000	Hartford, Conn.	Travelers Brdcstg. Service Corp.

1070 kilocycles 280.2 meters

KJBS	100	San Francisco, Cal.	Julius Brunton & Sons Co.
WAAT	300	Jersey City, N. J.	Bremer Broadcasting Corp.
WCAZ	50	Carthage, Ill.	Carthage College
WDZ	100	Tuscola, Ill.	James L. Bush
WEAR	1000	Cleveland, Ohio	WTAM and WEAR, Inc.
WTAM	3500	Cleveland, Ohio	WTAM and WEAR, Inc.

1080 kilocycles 277.6 meters

WBT	5000	Charlotte, N. C.	C. C. Coddington, Inc.
WCBD	5000	Zion, Ill.	Wilbur Glenn Voliva
WMBI	5000	Chicago, Ill.	Moody Bible Institute

1090 kilocycles 275.1 meters

KFQA	5000	St. Louis, Mo.	Voice of St. Louis, Inc.
KMOX	5000	St. Louis, Mo.	Voice of St. Louis
2UF	10	Havana, Cuba	Benito V. Ferro

1100 kilocycles 272.6 meters

KGDM	50	Stockton, Cal.	E. F. Peffer
WLWL	5000	New York City	Missionary Society of St. Paul
WPG	5000	Atlantic City, N. J.	Municipality of Atlantic City

1110 kilocycles 270.1 meters

KSOO	2000	Sioux Falls, S. D.	Sioux Falls Broadcast Assn.
WRVA	1000	Richmond, Va.	Larus & Bros. Co., Inc.
2TW	20	Havana, Cuba	Roberto E. Ramirez

1120 kilocycles 267.7 meters

CFJC	15	Kamloops, B. C.	N. S. Dalgleish & Sons
CFRC	500	Kingston, Ont.	Queen's University
CHGS	25	Summerside, P. E. I.	R. T. Holman, Ltd.
CJOC	50	Lethbridge, Alta.	J. E. Palmer
CKPR	50	Midland, Ont.	E. O. Swan
KFSG	500	Los Angeles, Cal.	Echo Park Evang. Assn.
KMIC	500	Inglewood, Cal.	James R. Fouch
KRSC	50	Seattle, Wash.	Radio Sales Corp.
KUT	500	Austin, Texas	KUT Broadcasting Co.
WCOA	500	Pensacola, Fla.	City of Pensacola
WDEL	250	Wilmington, Del.	WDEL, Inc.
WHAD	250	Milwaukee, Wis.	Marquette University
WISN	250	Milwaukee, Wis.	Evening Wisconsin Co.
WTAW	500	College Station, Texas	Agricultural & Mech. College

1130 kilocycles 265.3 meters

KSL	5000	Salt Lake City	Radio Service Corp. of Utah
WJJD	20000	Mooseheart, Ill.	Loyal Order of Moose
WOV	1000	New York City	International Brdcstg. Corp.
XEF	105	Oaxaca, Oax.	Federico Zorrila

1140 kilocycles 263.0 meters

KVOO	5000	Tulsa, Okla.	Southwestern Sales Corp.
WAPI	5000	Birmingham, Ala.	Alabama Polytechnic Institute

1150 kilocycles 260.7 meters

WHAM	5000	Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co.
6BY	200	Cienfuegos, Cuba	Jose Ganduxe

1160 kilocycles 258.5 meters

WOWO	10000	Ft. Wayne, Ind.
WWVA	5000	Wheeling, W. Va.

1170 kilocycles 256.3 meters

KEJK	500	Los Angeles, Cal.
KTNT	5000	Muscatine, Iowa
WCAU	1000	Philadelphia, Pa.
2OL	100	Havana, Cuba

1180 kilocycles 254.1 meters

KEX	5000	Portland, Ore.
KOB	10000	State College, N. M.
WGBS	500	New York City

1190 kilocycles 252.0 meters

WICC	500	Bridgeport, Conn.
WOAI	5000	San Antonio, Texas

1200 kilocycles 249.9 meters

KFHA	50	Gunnison, Colo.
KFJB	100	Marshalltown, Iowa
KFKZ	15	Kirksville, Mo.
KFWC	100	Pomona, Cal.
KFWF	100	St. Louis, Mo.
KGCU	100	Mandan, N. D.
KGDE	50	Fergus Falls, Minn.
KGDY	15	Oldham, S. D.
KGEK	50	Yuma, Colo.
KGEW	100	Fort Morgan, Colo.
KGFK	50	Hallock, Minn.
KGY	10	Lacey, Wash.
KMJ	100	Fresno, Cal.
KPPC	50	Pasadena, Cal.
KSMR	100	Santa Maria, Cal.
KVOS	100	Bellingham, Wash.
KWG	100	Stockton, Cal.
KXO	100	El Centro, Cal.
WABI	100	Bangor, Maine
WABZ	100	New Orleans, La.
WBBW	100	Norfolk, Va.
WBBY	75	Charleston, S. C.
WBBZ	100	Ponca City, Okla.
WCAT	100	Rapid City, S. D.
WCAX	100	Burlington, Vt.
WCLO	100	Kenosha, Wis.
WEPS	100	Gloucester, Mass.
WFBC	50	Knoxville, Tenn.
WFBE	100	Cincinnati, Ohio
WHBC	10	Canton, Ohio
WHBY	100	West De Pere, Wis.
WIBX	100	Utica, N. Y.
WIL	100	St. Louis, Mo.
WJBC	100	La Salle, Ill.
WJBL	100	Decatur, Ill.
WJBW	30	New Orleans, La.
WKBE	100	Webster, Mass.
WKJC	100	Lancaster, Pa.
WLAP	30	Louisville, Ky.
WLBG	100	Petersburg, Va.
WMAY	100	St. Louis, Mo.
WMT	100	Waterloo, Iowa
WNBO	15	Washington, Pa.
WNBW	5	Carbondale, Pa.
WNBX	10	Springfield, Vt.
WPRC	100	Harrisburg, Pa.
WRAF	100	La Porte, Ind.
WRBL	50	Columbus, Ga.
WWAE	100	Hammond, Ind.
XEA	101	Guadalajara, Jal.
XES	250	C. Lerdo, Dgo.
2BB	15	Havana, Cuba

Main Auto Supply Co.
West Virginia Brdcstg. Corp.

R. S. MacMillan
Norman Baker
Universal Broadcasting Co.
Oscar C. Orta

Western Broadcasting Co.
College of Agriculture
General Broadcasting System

Bridgeport Broadcasting Station
Southern Equipment Co.

Western College of Colorado
Marshall Electric Co.
State Teachers College
James R. Fouch
St. Louis Truth Center, Inc.
Mandan Radio Association
Jaren Drug Co.
J. Albert Loesch
Beehler Elec. Equipment Co.
City of Fort Morgan
Kittson County Enterprise
St. Martin's College
The Fresno Bee
Pasadena Presbyterian Church
Santa Maria Valley R. R. Co.
L. Kessler
Portable Wireless Tel. Co.
E. R. Irey and F. M. Bowles
First Universalist Church
Coliseum Place Baptist Church
Ruffner Junior High School
Washington Light Infantry
C. L. Carrell
State School of Mines
University of Vermont
C. E. Whitmore
Matheson Radio Co., Inc.
First Baptist Church
Park View Hotel
St. John's Parish
St. Norbert's College
WIBX, Inc.
WIL Broadcasting Corp.
Hummer Furniture Co.
Wm. Gushard Dry Goods Co.
Charles C. Carlson, Jr.
K. & B. Electric Co.
Kirk Johnson & Co.
American Brdcstg. Corp. of Ky.
Robert Allen Gamble
Kingshighway Pres. Church
Waterloo Broadcasting Co.
John Brownlee Spriggs
Home Cut Glass & China Co.
First Congregational Church
Wilson Printing & Radio Co.
The Radio Club, Inc.
R. E. Martin
Hammond-Calumet Brdcstg. Co.
Alberto Palos Sauza
Cerveceria de Durango, S. A.
Bernardo Barrie

KCYS.
1200
MTRS.
249.9
DIAL

CUT OUT ON DOTTED LINES

1210 kilocycles 247.8 meters

CFCO	25	Chatham, Ont.	Western Ontario "Better Radio" Club
CFNB	50	Fredericton, N. B.	James S. Neill & Sons
CHWK	5	Chilliwack, B. C.	Chilliwack Brdcstg. Co., Ltd.
CKMC	15	Cobalt, Ont.	R. L. MacAdam
CKPC	25	Preston, Ont.	Wallace Russ
KDLR	100	Devils Lake, N. D.	Radio Electric Co.
KFOR	100	Lincoln, Nebr.	Howard A. Shuman
KFVS	100	Cape Girardeau, Mo.	Hirsch Battery & Radio Co.
KGCR	100	Watertown, S. D.	Cutler's Radio Brdcstg. Service
KPCB	100	Seattle, Wash.	Pacific Coast Biscuit Co.
KPQ	100	Seattle, Wash.	Archie Taft & Louis Wasmer
KWEA	100	Shreveport, La.	William E. Antony
WBAX	100	Wilkes-Barre, Pa.	John H. Stenger, Jr.
WCBS	100	Springfield, Ill.	H. L. Dewing & Chas. Messter
WCOH	100	Yonkers, N. Y.	Westchester Brdcstg. Corp.
WCRW	100	Chicago, Ill.	Clinton R. White
WDWF	100	Cranston, R. I.	Dutee W. Flint
WEBE	100	Cambridge, Ohio	Roy W. Waller
WEBQ	50	Harrisburg, Ill.	First Trust & Savings Bank
WEDC	100	Chicago, Ill.	Emil Denemark, Inc.
WGBB	100	Freeport, N. Y.	Harry H. Carman
WGCM	100	Gulfport, Miss.	Gulf Coast Music Co.
WHBF	100	Rock Island, Ill.	Beardsley Specialty Co.
WHBU	100	Anderson, Ind.	Citizens Bank
WIBA	100	Madison, Wis.	Capital Times-Strand Theatre
WINR	100	Bay Shore, N. Y.	Radiotel Mfg. Co., Inc.
WJBI	100	Red Bank, N. J.	Robert S. Johnson
WJBU	100	Lewisburg, Pa.	Bucknell University
WJBY	50	Gadsden, Ala.	Electric Construction Co.
WLBV	100	Mansfield, Ohio	Mansfield Broadcasting Assn.
WLCI	50	Ithaca, N. Y.	Lutheran Assn. of Ithaca
WLSI	100	Cranston, R. I.	The Lincoln Studios, Inc.
WMAN	50	Columbus, Ohio	W. E. Heskitt
WMBG	100	Richmond, Va.	Havens & Martin, Inc.
WMBR	100	Tampa, Fla.	F. J. Reynolds
WOCL	25	Jamestown, N. Y.	A. E. Newton
WOMT	100	Manitowoc, Wis.	Francis M. Kadow
WPAW	100	Pawtucket, R. I.	Shartenburg & Robinson
WRBQ	100	Greenville, Miss.	J. Pat Scully
WRBU	100	Gastonia, N. C.	A. J. Kirby Music Co.
WSBC	100	Chicago, Ill.	World Battery Co., Inc.
WSIX	100	Springfield, Tenn.	638 Tire & Vulcanizing Co.
WTAX	50	Streator, Ill.	Williams Hardware Co.
WTAZ	15	Richmond, Va.	W. Reynolds & T. J. McGuire

1220 kilocycles 245.8 meters

KFKU	1000	Lawrence, Kans.	University of Kansas
WCAD	500	Canton, N. Y.	St. Lawrence University
WCAE	500	Pittsburgh, Pa.	Kaufman & Baer Co.
WREN	1000	Lawrence, Kans.	Jenny Wren Co.

1230 kilocycles 243.8 meters

KFIO	100	Spokane, Wash.	North Central High School
KFQD	100	Anchorage, Alaska	Anchorage Radio Club
KYA	1000	San Francisco, Cal.	Pacific Broadcasting Corp.
WBIS	500	Boston, Mass.	Shepard-Norvell Co.
WFBM	1000	Indianapolis, Ind.	Indianapolis Power & Light Co.
WNAC	500	Boston, Mass.	Shepard-Norvell Co.
WPSC	500	State College, Pa.	Pennsylvania State College
WSBT	500	South Bend, Ind.	South Bend Tribune

1240 kilocycles 241.8 meters

KTAT	1000	Ft. Worth, Texas	Texas Air Transport Brdcst. Co.
WGHP	750	Detroit, Mich.	American Brdcstg. Corp.
WIOD	1000	Miami Beach, Fla.	Isle of Dreams Brdcstg. Co.
WJAD	1000	Waco, Texas	Frank P. Jackson
WQAM	1000	Miami, Fla.	Miami Brdcstg. Co.
WRBC	500	Valparaiso, Ind.	Immanuel Lutheran Church

1250 kilocycles 239.9 meters

KFMX	1000	Northfield, Minn.	Carleton College
KFOX	1000	Long Beach, Cal.	Nichols & Warinner, Inc.
KIDO	1000	Boise, Idaho	Boise Brdcstg. Station
KXL	500	Portland, Ore.	KXL Broadcasters
WAAM	1000	Newark, N. J.	WAAM, Inc.
WCAL	1000	Northfield, Minn.	St. Olaf College
WGCP	250	Newark, N. J.	May Radio Broadcast Corp.
WGMS	1000	St. Paul-Minneapolis	University of Minnesota
WLB	1000	Minneapolis, Minn.	University of Minnesota
WODA	1000	Paterson, N. J.	Richard E. O'Dea
WRHM	1000	Minneapolis, Minn.	Rosedale Hospital Co., Inc.

1260 kilocycles 238.0 meters

KOIL	1000	Council Bluffs, Iowa	Mona Motor Oil Co.
KRGV	500	Harlingen, Texas	Valley Radio-Electric Corp.
KWWG	500	Brownsville, Texas	Chamber of Commerce
WJAX	1000	Jacksonville, Fla.	City of Jacksonville
WLBW	500	Oil City, Pa.	Petroleum Telephone Co.

1270 kilocycles 236.1 meters

KFUM	1000	Colorado Spgs., Colo.	W. D. Corley
KGCA	50	Decorah, Iowa	Charles W. Greenley
KOL	1000	Seattle, Wash.	Seattle Brdcstg. Co.
KTW	1000	Seattle, Wash.	First Presbyterian Church
KWLC	100	Decorah, Iowa	Luther College
WASH	250	Grand Rapids, Mich.	U. C. Brdcstg. Corp.
WDSU	1000	New Orleans, La.	Joseph H. Uhalt
WEAI	500	Ithaca, N. Y.	Cornell University
WFBR	250	Baltimore, Md.	Baltimore Radio Show
WOOD	500	Grand Rapids, Mich.	Walter B. Stiles, Inc.

1280 kilocycles 234.2 meters

WCAM	500	Camden, N. J.	City of Camden
WCAP	500	Asbury Park, N. J.	Radio Industries Broadcast Co.
WDAY	1000	Fargo, N. D.	WDAY, Inc.
WDOD	1000	Chattanooga, Tenn.	Chattanooga Radio Co., Inc.
WEBC	1000	Superior, Wis.	Head of Lake Brdcstg. Co.
WOAX	500	Trenton, N. J.	Franklyn J. Wolff
WRR	500	Dallas, Texas	City of Dallas
2LR	50	Havana, Cuba	Jose Lara

1290 kilocycles 232.4 meters

KDYL	1000	Salt Lake City	Intermountain Brdcstg. Corp.
KFUL	500	Galveston, Texas	Will H. Ford
KLCN	50	Blytheville, Ark.	C. L. Lintzenich
KTSA	1000	San Antonio, Texas	Lone Star Broadcast Co.
WJAS	1000	Pittsburgh, Pa.	Pittsburgh Radio Supply House
WNBZ	10	Saranac Lake, N. Y.	Smith & Mace

1300 kilocycles 230.6 meters

KFH	500	Wichita, Kansas	Hotel Lassen
KFJR	500	Portland, Ore.	Ashley C. Dixon & Son
KGEF	1000	Los Angeles, Cal.	Trinity Methodist Church
KTBI	750	Los Angeles, Cal.	Bible Institute of Los Angeles
KTBR	500	Portland, Ore.	M. E. Brown
WBBR	1000	Rossville, N. Y.	Peoples Pulpit Association
WEVD	500	New York City	Eugene V. Debs Memorial Fund
WHAP	1000	New York City	Defenders of Truth Society, Inc.
WHAZ	500	Troy, N. Y.	Rensselaer Polytechnic Institute
WIBW	1000	Topeka, Kansas	Topeka Brdcstg. Assn.

1310 kilocycles 228.9 meters

KFBK	100	Sacramento, Cal.	Jas. McClatchy Co.
KFGQ	100	Boone, Iowa	Boone Biblical College
KFIU	10	Juneau, Alaska	Alaska Elec. Light & Power Co.
KFJY	100	Ft. Dodge, Iowa	C. S. Tunwall

KCYS.
1310
MTRS.
228.9
DIAL

CUT OUT ON DOTTED LINES

KFPL	15	Dublin, Texas	C. C. Baxter
KFPM	15	Greenville, Texas	The New Furniture Co.
KFUP	100	Denver, Colo.	Fitzsimmons General Hospital
KFXJ	50	Edgewater, Colo.	R. G. Howell
KFXR	100	Oklahoma City	Exchange Ave. Baptist Church
KGEZ	100	Kalispell, Mont.	Flathead Broadcasting Assn.
KGHG	50	McGeehee, Ark.	Chas. W. McCollum
KMED	50	Medford, Ore.	Mrs. W. J. Virgin
KRMD	50	Shreveport, La.	Robert M. Dean
KTSL	100	Shreveport, La.	Bates Radio & Electric Co.
KWCR	100	Cedar Rapids, Iowa	H. E. Paar
WAGM	50	Royal Oak, Mich.	Robert L. Miller
WBOW	100	Terre Haute, Ind.	Banks of Wabash Brdcstg. Assn.
WBRE	100	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	100	Joliet, Ill.	WCLS, Inc.
WDAH	100	El Paso, Texas	Trinity Methodist Church
WEBR	100	Buffalo, N. Y.	H. H. Howell
WEHS	100	Evanston, Ill.	Victor C. Carlson
WFBG	100	Altoona, Pa.	Wm. F. Gable Co.
WFDF	100	Flint, Mich.	Frank D. Fallain
WFKD	50	Philadelphia, Pa.	Foulkrod Radio Engineering Co.
WGAL	15	Lancaster, Pa.	Lancaster Electric Supply Co.
WGH	100	Newport News, Va.	Virginia Brdcstg. Co., Inc.
WHBP	100	Johnstown, Pa.	Johnstown Automobile Co.
WHFC	100	Chicago, Ill.	Triangle Broadcasters
WIBU	100	Poynette, Wis.	William C. Forrest
WJAK	50	Marion, Ind.	Marion Brdcstg. Co.
WKAV	100	Laconia, N. H.	Laconia Radio Club
WKBB	100	Joliet, Ill.	Sanders Bros.
WKBC	100	Birmingham, Ala.	R. B. Broyles Furn. Co.
WKBI	50	Chicago, Ill.	Fred L. Schoenwolf
WKBS	100	Galesburg, Ill.	Permil N. Nelson
WLBC	50	Muncie, Ind.	Donald A. Burton
WLBO	100	Galesburg, Ill.	Fred A. Trebbe, Jr.
WMBL	100	Lakeland, Fla.	Benford's Radio Studios
WNAT	100	Philadelphia, Pa.	Lennig Bros. Co.
WNBH	100	New Bedford, Mass.	New Bedford Broadcasting Co.
WNBJ	50	Knoxville, Tenn.	Lonsdale Baptist Church
WOBT	15	Union City, Tenn.	Tittsworth's Radio & Music Shop
WOL	100	Washington, D. C.	American Broadcasting Co.
WRAW	100	Reading, Pa.	Avenue Radio & Electric Shop
WRK	100	Hamilton, Ohio	S. W. Doron & J. C. Slade
WSAJ	100	Grove City, Pa.	Grove City College
WSMD	100	Salisbury, Md.	Tom F. Little

1320 kilocycles 227.1 meters

KGHB	250	Honolulu, Hawaii	Radio Sales Co.
KGHF	250	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGIQ	250	Twin Falls, Idaho	Stanley M. Soule
KID	250	Idaho Falls, Idaho	Jack W. Duckworth, Jr.
WADC	1000	Akron, Ohio	Allen T. Simmons
WSMB	500	New Orleans, La.	Saenger Theatre & Maison Blanche

1330 kilocycles 225.4 meters

KSCJ	1000	Sioux City, Iowa	Perkins Bros. Co.
WDRC	500	New Haven, Conn.	Doolittle Radio Corp.
WTAQ	1000	Eau Claire, Wis.	Gillette Rubber Co.

1340 kilocycles 223.7 meters

KFPW	50	Siloam Springs, Ark.	Rev. Lannie W. Stewart
KFPY	500	Spokane, Wash.	Symons Broadcasting Co.
KMO	500	Tacoma, Wash.	KMO, Inc.
WSPD	500	Toledo, Ohio	Toledo Broadcasting Co.

1350 kilocycles 222.1 meters

KWK	1000	St. Louis, Mo.	Greater St. Louis Brdcstg. Corp.
WBNY	250	New York City	Baruchrome Corp.
WCDA	250	New York City	Italian Educ. Brdcstg. Co.
WKBQ	250	New York City	Standard Cahill Co., Inc.
WMSG	250	New York City	Madison Square Garden

1360 kilocycles 220.4 meters

KFBB	500	Great Falls, Mont.	F. A. Buttery Co.
KGB	250	San Diego, Cal.	Pickwick Brdcstg. Corp.
KGIR	250	Butte, Mont.	Symons Broadcasting Co.
WGES	500	Chicago, Ill.	Oak Leaves Broacasting Corp.
WJKS	500	Gary, Ind.	Johnson-Kennedy Radio Corp.
WLEX	500	Lexington, Mass.	Lexington Air Stations
WMAF	500	S. Dartmouth, Mass.	Round Hills Radio Corp.
WQBC	300	Utica, Miss.	Chamber of Commerce

1370 kilocycles 218.7 meters

KCRC	100	Enid, Okla.	Champlin Refining Co.
KFBL	50	Everett, Wash.	Leese Bros.
KFJI	100	Astoria, Ore.	George Kincaid
KFJM	500	Grand Forks, N. D.	University of North Dakota
KFJZ	100	Ft. Worth, Texas	Henry C. Allison
KFLX	100	Galveston, Texas	George Roy Clough
KFUR	50	Ogden, Utah	Peery Building Co.
KGAR	100	Tucson, Ariz.	Tucson Motor Service Co.
KGBX	100	St. Joseph, Mo.	Foster-Hall Tire Co.
KGCI	100	San Antonio, Texas	Liberto Radio Sales
KGDA	50	Dell Rapids, S. D.	Home Auto Co.
KGER	100	Long Beach, Cal.	C. Merwin Dobyns
KGFG	100	Oklahoma City	Faith Tabernacle Assn.
KGFL	50	Raton, N. M.	Hubbard & Murphy
KGGM	100	Albuquerque, N. M.	New Mexico Brdcstg. Co.
KGKL	100	San Angelo, Texas	KGKL, Inc., Opr. by Ragsdale Auto Co.
KGRC	100	San Antonio, Texas	Eugene Roth
KIT	50	Portland, Ore.	Meier & Frank Co.
KKP	15	Seattle, Wash.	City of Seattle
KOH	100	Reno, Nevada	Jay Peters
KOOS	50	Marshfield, Ore.	H. H. Hanseth
KRE	100	Berkeley, Cal.	First Congregational Church
KVL	100	Seattle, Wash.	Arthur C. Dailey
KWKC	100	Kansas City, Mo.	Wilson Duncan Brdcstg. Co.
KZM	100	Hayward, Cal.	Leon P. Tenney
WBBL	100	Richmond, Va.	Grace Covenant Presbyterian Church
WCBM	100	Baltimore, Md.	Baltimore Brdcstg. Corp.
WELK	100	Philadelphia, Pa.	Howard R. Miller
WFBJ	100	Collegeville, Minn.	St. John's University
WGL	100	South Bend, Ind.	Fred C. Zieg
WHBD	100	Bellefontaine, Ohio	First Presbyterian Church
WHBQ	100	Memphis, Tenn.	Broadcasting Station WHBQ, Inc.
WHDF	100	Calumet, Mich.	Chas. C. MacLeod
WIBM	100	Jackson, Mich.	C. L. Carrell
WJBK	50	Ypsilanti, Mich.	James F. Hopkins
WJBO	100	New Orleans, La.	Valdemar Jensen
WMBO	100	Auburn, N. Y.	Radio Service Laboratories
WRAK	50	Erie, Pa.	C. R. Cummins
WRBT	100	Wilmington, N. C.	Wilmington Radio Association
WRJN	100	Racine, Wis.	Racine Broadcasting Corp.
WSVS	50	Buffalo, N. Y.	Seneca Vocational School

1380 kilocycles 217.3 meters

KQV	500	Pittsburgh, Pa.	Doubleday-Hill Electric Co.
KSO	1000	Clarinda, Iowa	Berry Seed Co.
WCSO	500	Springfield, Ohio	Wittenberg College
WKBH	1000	La Crosse, Wis.	Callaway Music Co.

1390 kilocycles 215.7 meters

KLRA	1000	Little Rock, Ark.	Arkansas Broadcasting Co.
KOW	500	Denver, Colo.	Associated Industries, Inc.
KOY	500	Phoenix, Ariz.	Nielson Radio Supply Co.
KUOA	1000	Fayetteville, Ark.	University of Arkansas
KWSC	500	Pullman, Wash.	State College of Washington
WHK	1000	Cleveland, Ohio	Radio Air Service Corp.

KCYS.
1390
MTRS.
215.7
DIAL

CUT OUT ON DOTTED LINES

1400 kilocycles 214.2 meters

WBAA	500	Lafayette, Ind.	Purdue University
WBBC	500	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU	500	Coney Island, N. Y.	U. S. Broadcasting Corp.
WCMA	500	Culver, Ind.	Culver Military Academy
WKBF	500	Indianapolis, Ind.	Noble Butler Watson
WLTH	500	Brooklyn, N. Y.	The Voice of Brooklyn, Inc.
WSDA	500	Brooklyn, N. Y.	Amateur Radio Specialty Co.
WSGH	500	Brooklyn, N. Y.	Amateur Radio Specialty Co.

1410 kilocycles 212.6 meters

KFLV	500	Rockford, Ill.	A. T. Frykman
KGRS	1000	Amarillo, Texas	Gish Radio Service
WDAG	250	Amarillo, Texas	J. Laurence Martin
WHBL	500	Sheboygan, Wis.	Press Pub. Co. & C. L. Carrell
WBCM	500	Bay City, Mich.	James E. Davidson

1420 kilocycles 211.1 meters

KFIF	100	Portland, Ore.	Benson Polytechnic Institute
KFIZ	100	Fond du Lac, Wis.	Commonwealth-Reporter
KFQU	100	Holy City, Cal.	W. E. Riker
KFQW	100	Seattle, Wash.	KFQW, Inc.
KFXD	50	Jerome, Idaho	Service Radio Co.
KFXY	100	Flagstaff, Ariz.	Mary M. Costigan
KFYO	100	Abilene, Texas	T. E. Kirksey
KGCN	50	Concordia, Kansas	Concordia Broadcasting Co.
KGCX	10	Vida, Mont.	First State Bank
KGFF	100	Alva, Okla.	Earl E. Hampshire
KGFJ	100	Los Angeles, Cal.	Ben S. McGlashan
KGFW	50	Ravenna, Neb.	Otto F. Sothman
KGGC	50	San Francisco, Cal.	Golden Gate Brdcstg. Co.
KGHD	50	Missoula, Mont.	Elmore-Nash Broadcasting Corp.
KGIW	100	Trinidad, Colo.	Trinidad Creamery Co., Inc.
KGKX	15	Sand Point, Idaho	C. E. Twiss
KICK	100	Red Oak, Iowa	Red Oak Radio Corp.
KOCW	100	Chickasha, Okla.	College for Women
KORE	100	Eugene, Ore.	Eugene Broadcasting Station
KTAP	100	San Antonio, Texas	Alamo Brdcstg. Co.
KTUE	5	Houston, Texas	Uhalt Electric
KXRO	75	Aberdeen, Wash.	KXRO, Inc.
WAAD	25	Cincinnati, Ohio	Ohio Mechanics Institute
WEDH	30	Erie, Pa.	Erie Dispatch-Herald
WHDL	10	Tupper Lake, N. Y.	George Franklin Bissell
WHIS	100	Bluefield, W. Va.	Daily Telegraph
WHPP	10	New York City	Bronx Broadcasting Co.
WIAS	100	Ottumwa, Iowa	Poling Electric Co.
WIBR	50	Steubenville, Ohio	Thurman A. Owings
WKBP	50	Battle Creek, Mich.	Enquirer-News Co.
WLBF	100	Kansas City, Mo.	Everett L. Dillard
WLBH	100	Patchogue, N. Y.	Nassau Brdcstg. Corp.
WLEY	100	Lexington, Mass.	Lexington Air Station
WMBC	100	Detroit, Mich.	Michigan Broadcasting Co., Inc.
WMBH	100	Joplin, Mo.	Edwin Dudley Aber
WMRJ	10	Jamaica, N. Y.	Peter J. Prinz
WQBZ	60	Weirton, W. Va.	J. H. Thompson
WSRO	100	Middletown, Ohio	Harry W. Fahrlander
WSSH	100	Boston, Mass.	Tremont Temple Baptist Church
WTBO	50	Cumberland, Md.	Cumberland Electric Co.

1430 kilocycles 209.7 meters

WBAK	500	Harrisburg, Pa.	Penna. State Police
WBRL	500	Manchester, N. H.	Booth Radio Laboratories
WCAH	250	Columbus, Ohio	Commercial Radio Service Co.
WGBC	500	Memphis, Tenn.	First Baptist Church
WMBS	500	Lemoyne, Pa.	Mack's Battery Co.
WNBR	500	Memphis, Tenn.	John Ulrich

1440 kilocycles 208.2 meters

KLS	250	Oakland, Cal.	Warner Bros.
WABO	500	Rochester, N. Y.	Lake Ave. Baptist Church
WCBA	250	Allentown, Pa.	B. B. Musselman
WHEC	500	Rochester, N. Y.	Hickson Electric Co.

WMBD	500	Peoria Heights, Ill.	Peoria Heights Radio Laboratory
WNRC	500	Greensboro, N. C.	Wayne M. Nelson
WOKO	500	Poughkeepsie, N. Y.	Harold E. Smith
WSAN	250	Allentown, Pa.	Allentown Call Publishing Co.
WTAD	500	Quincy, Ill.	Ills. Stock Medicine Brdcstg. Corp.

1450 kilocycles 206.8 meters

KSBA	1000	Shreveport, La.	Elliott & Steere
WBMS	250	Fort Lee, N. J.	WBMS Broadcasting Corp.
WFJC	500	Akron, Ohio	W. F. Jones Broadcast, Inc.
WIBS	250	Elizabeth, N. J.	New Jersey Broadcasting Corp.
WKBO	250	Jersey City, N. J.	Camith Corp.
WNJ	250	Newark, N. J.	Radio Investment Co.
WSAR	250	Fall River, Mass.	Doughty & Welch Electric Co.
WTFI	500	Toccoa, Ga.	Toccoa Falls Institute

1460 kilocycles 205.4 meters

KSTP	10000	St. Paul, Minn.	National Battery Brdcstg. Co.
WJSV	10000	Washington, D. C.	Independent Publishing Co.

1470 kilocycles 204.0 meters

KFJF	5000	Oklahoma City	National Radio Mfg. Co.
KGA	5000	Spokane, Wash.	Northwest Radio Service Co.
WKBW	5000	Buffalo, N. Y.	Churchill Evangelistic Assn.
WRUF	5000	Gainesville, Fla.	University of Florida

1480 kilocycles 202.6 meters

WCKY	5000	Covington, Ky.	L. B. Wilson
WJAZ	5000	Chicago, Ill.	Zenith Radio Corp.
WORD	5000	Batavia, Ill.	People's Pulpit Association
WSOA	5000	Chicago, Ill.	Radiophone Brdcstg. Corp.

1490 kilocycles 201.2 meters

KPWF	50000	Westminster, Cal.	Pacific Western Brdcstg. Fed.
WBAW	5000	Nashville, Tenn.	Waldrum Drug Co.
WLAC	5000	Nashville, Tenn.	Life & Casualty Insurance Co.
WFBL	1000	Syracuse, N. Y.	The Onondaga Co.

1500 kilocycles 199.9 meters

KDB	100	Santa Barbara, Cal.	Santa Barbara Brdcstg. Co.
KGDR	15	San Antonio, Texas	KGDR Brdcstg. Co.
KGFI	100	Corpus Christi, Texas	Eagle Brdcstg. Co., Inc.
KGKB	100	Brownwood, Texas	Eagle Publishing Co.
KGHI	100	Little Rock, Ark.	Berean Bible Class
KGHX	50	Richmond, Texas	Ft. Bend County School Board
KPJM	100	Prescott, Ariz.	Frank Wilburn
KUJ	10	Longview, Wash.	Columbia Valley Brdcstg. Co.
KWBS	15	Portland, Ore.	Schaeffer Radio Co.
KWTC	100	Santa Ana, Cal.	Pacific Broadcasting Foundation
WAFD	100	Detroit, Mich.	Albert B. Parfet Co.
WALK	50	Willow Grove, Pa.	Albert A. Walker
WCLB	100	Brooklyn, N. Y.	Arthur Faske
WHBW	100	Philadelphia, Pa.	D. R. Kienzie
WIBZ	15	Montgomery, Ala.	Alexander D. Trum
WILM	100	Wilmington, Del.	Delaware Brdcstg. Co.
WKBV	100	Brookville, Ind.	Knox Battery & Electric Co.
WKBZ	50	Ludington, Mich.	K. L. Ashbacker
WLBX	100	Long Island City, N. Y.	John N. Brahy
WLOE	100	Chelsea, Mass.	Boston Brdcstg. Co.
WMBA	100	Newport, R. I.	LeRoy Joseph Beebe
WMBJ	100	Pittsburgh, Pa.	Rev. John W. Sproul
WMBQ	100	Brooklyn, N. Y.	Paul J. Gollhofer
WMES	50	Boston, Mass.	Mass. Educational Society
WMPC	100	Lapeer, Mich.	First M. E. Church
WNBF	50	Binghamton, N. Y.	Howitt-Wood Radio Co.
WNBQ	15	Rochester, N. Y.	Brown Radio Service
WPSW	50	Philadelphia, Pa.	School of Wireless Telegraphy
WRBJ	10	Hattiesburg, Miss.	Woodruff Furniture Co.
WWRL	100	Woodside, N. Y.	Wm. H. Reuman

KCYS.
1500
MTRS.
199.9
DIAL

INDEX BY LOCATIONS WITH MAP KEY

ALABAMA

Birmingham K-19-a	5000	WAPI	1140
	100	WBRC	930
	10	WKBC	1310
Gadsden K-20-a	50	WJBY	1210
Montgomery K-19-b	15	WIBZ	1500

ALASKA

Anchorage	100	KFQD	1230
Juneau	10	KFIU	1310
Ketchikan	500	KGBU	900

ARIZONA

Flagstaff J-7	100	KFXY	1420
Phoenix K-7	500	KFAD	620
	500	KOY	1390
Prescott J-6	100	KPJM	1500
Tucson L-7	100	KGAR	1370

ARKANSAS

Blytheville I-18	50	KLCN	1290
Fayetteville I-16	1000	KUOA	1390
Hot Springs J-16	10000	KTHS	800
Little Rock J-17	100	KGHI	1500
	250	KGJF	890
	1000	KLRA	1390
McGehee K-17	50	KGHG	1310
Siloam Springs I-16	50	KFPW	1340

CALIFORNIA

Berkeley H-1-a	100	KRE	1370
Burbank J-4	500	KELW	780
Culver City K-3	250	KFVD	700
El Centro K-5	100	KXO	1200
Fresno I-3	100	KMJ	1200
Glendale K-3	250	KGFH	1000
Hayward H-2	100	KZM	1370
Hollywood K-3	250	KFQZ	850
	1000	KMTR	570
Holy City I-2	100	KFQU	1420
Inglewood K-4	500	KMIC	1120
Long Beach K-4-a	1000	KFOX	1250
	100	KGER	1370
Los Angeles K-3-b	500	KEJK	1170
	5000	KFI	640
	500	KFSG	1120
	1000	KFWB	950
	1000	KGEF	1300
	100	KGFJ	1420
	1000	KHJ	900
	5000	KNX	1050
	1000	KPLA	570
	500	KTM	780
Oakland H-1-b	750	KTBI	1300
	500	KFWM	930
	7500	KGO	790
	250	KLS	1440
	500	KLX	880
	500	KTAB	550
Pasadena J-4	50	KPPC	1200
	1000	KPSN	950
Pomona	100	KFWC	1200
Sacramento H-2-a	100	KFBK	1310
San Diego K-4-b	500	KFSD	600
	250	KGB	1360
San Francisco H-1-c	1000	KFRC	610
	500	KFWI	930
	50	KGGC	1420
	100	KJBS	1070
	1000	KPO	680
	1000	KYA	1230
San Jose I-2	500	KQW	1010
Santa Ana K-4	100	KWTC	1500
Santa Barbara J-3	100	KDB	1500
Santa Maria J-2-b	100	KSMR	1200
Stockton H-2-b	50	KGDM	1100
	100	KWG	1200
Westminster	50000	KPWF	1490

COLORADO

Colo. Springs H-10	1000	KFUM	1270
Denver G-10-b	250	KFEL	940
	100	KFUP	1310
	250	KFXF	940
	1000	KLZ	560
	12500	KOA	830
	500	KOW	1390
	500	KPOF	880
Edgewater G-10	50	KFXJ	1310
Fort Morgan G-11	100	KGEW	1200
Greeley F-10	500	KFKA	880
Gunnison H-9	50	KFHA	1200
Pueblo H-11	250	KGHF	1320
Trinidad H-10	100	KGIW	1420
Yuma G-11	50	KGEK	1200

CONNECTICUT

Bridgeport F-26	500	WICC	1190
Hartford E-26-d	5000	WTIC	1060
Mansfield E-27-i	250	WCAC	600
New Haven F-26-b	500	WDRC	1330

DELAWARE

Wilmington G-25	250	WDEL	1120
	100	WILM	1500

DISTRICT OF COLUMBIA

Washington G-24-c	250	WMAL	630
	500	WRC	950
	10000	WJSV	1460
	100	WOL	1310

FLORIDA

Clearwater N-21	750	WFLA	900
Gainesville M-21	5000	WRUF	1470
Jacksonville M-22	1000	WJAX	1260
Lakeland N-22	100	WMBL	1310
Miami O-23	1000	WQAM	1240
Miami Beach O-23	1000	WIOD	1240
	500	WMBF	560
Orlando N-22	1000	WDBO	620
Pensacola L-19	500	WCOA	1120
Sarasota N-22	250	WSIS	1010
St. Petersburg N-21	750	WSUN	900
Tampa N-22-b	1000	WDAE	620
	100	WMBR	1210

GEORGIA

Atlanta K-20-a	250	WGST	890
	10000	WSB	740
Columbus K-20	50	WRBL	1200
Macon K-21	250	WMAZ	890
Toccoa J-21	500	WTFI	1450

HAWAII

Honolulu	250	KGHB	1320
	500	KGU	940

IDAHO

Boise D-4	1000	KIDO	1250
Idaho Falls D-7	250	KID	1320
Jerome E-5	50	KFXD	1420
Pocatello E-7	250	KSEI	900
Sand Point	15	KGKX	1420
Twin Falls E-5	250	KGIQ	1320

ILLINOIS

Batavia F-18-c	5000	WORD	1480
Carthage F-17-e	50	WCAZ	1070
Chicago E-19-g	5000	KFKX	1020
	5000	KYW	1020
	500	KYWA	1020
	500	WAAF	920
	25000	WBBM	770
	5000	WBCN	870
	1500	WCFL	970
	100	WCRW	1210
	100	WEDC	1210
	50000	WENR	870
	500	WGES	1360
	25000	WGN	720
	100	WHFC	1310
	1000	WIBO	570
	5000	WJAZ	1480
	10000	WJBT	780
	50	WKBI	1310
	25000	WLIB	720
	5000	WLS	870
	5000	WMAQ	670
	5000	WMBI	1080
	500	WPCC	570
	100	WSBC	1210
	5000	WSOA	1480
Decatur G-18	100	WJBL	1200
Evanston E-19	100	WEHS	1310
Galesburg F-18-a	100	WKBS	1310
	100	WLBO	1310
Harrisburg H-18-b	50	WEBQ	1210
Joliet E-19-f	100	WCLS	1310
	100	WKBB	1310
La Salle F-18-d	100	WJBC	1200
Mooseheart E-18-e	20000	WJJD	1130
Peoria Heights G-18	500	WMBD	1440
Quincy G-17	500	WTAD	1440
Rockford E-18-c	500	KFLV	1410
Rock Island F-17-c	100	WHBF	1210
Springfield G-18	100	WCBS	1210
Streator F-18-e	50	WTAX	1210
Tuscola G-19-b	100	WDZ	1070
Urbana G-19-a	250	WILL	890
Zion E-19-c	5000	WCBD	1080

INDIANA

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

IOWA

Ames E-16-c	3500	WOI	560
Boone E-16	100	KFGQ	1310
Cedar Rapids E-17-a	100	KWCR	1310
Clarinda E-15-c	1000	KSO	1380
Council Bluffs F-15-b	1000	KOIL	1260
Davenport F-17-a	5000	WOC	1000
Decorah D-17	50	KGCA	1270
	100	KWLC	1270
Des Moines F-16-a	5000	WHO	1000
Fort Dodge E-16-a	100	KFJY	1310
Iowa City E-17-b	500	WSUI	580
Marshalltown E-16-d	100	KFJB	1200
Muscatine F-17-b	5000	KTNT	1170
Ottumwa F-17	100	WIAS	1420
Red Oak F-15	100	KICK	1420
Shenandoah F-15-c	500	KFNF	890
	500	KMA	930
Sioux City E-15	1000	KSCJ	1330
Waterloo F-17	100	WMT	1200

KANSAS

Concordia G-14	50	KGCN	1420
Lawrence G-15-a	1000	KFKU	1220
	1000	WREN	1220
Manhattan G-14-a	500	KSAC	580
Milford G-14	5000	KFKB	1050
Topeka G-14	1000	WIBW	1300
Wichita H-14-a	500	KFH	1300

KENTUCKY

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

LOUISIANA

New Orleans M-17	100	WABZ	1200
	1000	WDSU	1270
	100	WJBO	1370
	30	WJBW	1200
	500	WSMB	1320
	5000	WWL	850
Shreveport K-16	50	KRMD	1310
	1000	KSBA	1450
	50	KTSL	1310
	100	KWEA	1210
	5000	KWKH	850

MAINE

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

MARYLAND

Baltimore G-24-a	10000	WBAL	1060
	250	WCAO	600
	100	WCBM	1370
	250	WFBR	1270
Cumberland G-23	50	WTBO	1420
Salisbury G-25	100	WSMD	1310

MASSACHUSETTS

Boston E-27-c	500	WBIS	1230
	500	WBZA	990
	1000	WEEI	590
	50	WMES	1500
	500	WNAC	1230
	100	WSSH	1420
Chelsea E-27	100	WLOE	1500
Fall River E-27	250	WSAR	1450
Gloucester E-27	100	WEPS	1200
	1000	WHDH	830
Lexington E-27	500	WLEX	1360
	100	WLEY	1420
New Bedford E-27-g	100	WNBH	1310
S. Dartmouth E-27	500	WMAF	1360
Springfield E-26-b	15000	WBZ	990
Webster E-27-d	100	WKBE	1200
Wellesley Hills E-27	250	WBSO	780
Worcester E-27-b	250	WTAG	580

MICHIGAN

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

Detroit E-21-g	100	WAFD	1500
	5000	WCX	750
	750	WGHP	1240
	5000	WJR	750
	100	WMBC	1420
	1000	WWJ	920
East Lansing E-20-b	500	WKAR	1040
Flint E-21-a	100	WFDF	1310
Grand Rapids E-20-a	250	WASH	1270
	500	WOOD	1270
Jackson E-20	100	WIBM	1370
Lapeer E-21	100	WMPC	1500
Ludington D-19	50	WKBZ	1500
Royal Oak E-21-e	50	WAGM	1310
Ypsilanti E-21-f	50	WJBK	1370

MINNESOTA

Collegeville C-15	100	WFBJ	1370
Fergus Falls B-15	50	KGDE	1200
Hallock A-14	50	KGFK	1200
Minneapolis C-16-B	15000	WCCO	810
	500	WDGY	560
	1000	WGMS	1250
	500	WHDI	560
	1000	WLB	1250
	1000	WRHM	1250
Northfield D-16	1000	KFMX	1250
	1000	WCAL	1250
St. Paul C-16-c	10000	KSTP	1460
	15000	WCCO	810
	1000	WGMS	1250

MISSISSIPPI

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

MISSOURI

Cp. Girardeau H-18-c	100	KFVS	1210
Columbia G-16-b	500	KFRU	630
Independence G-16-c	500	KLDS	950
	500	KMBC	950
Jefferson City H-16-a	500	WOS	630
Joplin H-16	100	WMBH	1420
Kansas City G-15-b	100	KWKC	1370
	1000	WDAF	610
	500	WHB	950
	100	WLBF	1420
	1000	WOQ	610
Kirksville F-16-c	15	KFKZ	1200
St. Joseph G-15	2500	KFEQ	560
	100	KGBX	1370
St. Louis H-18-a	5000	KFQA	1090
	500	KFUO	550
	100	KFWF	1200
	5000	KMOX	1090
	500	KSD	550
	1000	KWK	1350
	1000	WEW	760
	100	WIL	1200
	100	WMAY	1200

MONTANA

Billings C-8	500	KGHL	950
Butte C-7	250	KGIR	1360
Havre A-8	500	KFBB	1360
Kalispell A-5	100	KGEZ	1310
Missoula B-6	50	KGHD	1420
	500	KUOM	570
Vida B-10	10	KGCX	1420

NEBRASKA

Clay Center G-14	1000	KMMJ	740
Lincoln F-14-b	5000	KFAB	770
	100	KFOR	1210
	500	WCAJ	590
Norfolk E-14-c	500	WJAG	1060
Omaha F-15-a	500	WAAW	660
	1000	WOW	590
Ravenna F-13	50	KGFW	1420
York F-13	500	KGBZ	930

NEVADA

Reno G-3	100	KOH	1370

NEW HAMPSHIRE

Laconia D-27	100	WKAV	1310
Manchester E-27	500	WBRL	1430

NEW JERSEY

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

NEW MEXICO

Albuquerque	100	KGGM	1370
Raton I-11	50	KGFL	1370
State College K-9	10000	KOB	1180

NEW YORK

Auburn E-24	100	WMBO	1370
Bay Shore F-26-h	100	WINR	1210
Binghamton E-25	50	WNBF	1500
Brooklyn F-26-f	500	WBBC	1400
	250	WCDA	1350
	100	WCLB	1500
	500	WLTH	1400
	100	WMBQ	1500
	500	WSGH	1400
Buffalo E-23-a	100	WEBR	1310
	1000	WGR	550
	5000	WKBW	1470
	1000	WKEN	1040
	750	WMAK	900
	50	WSVS	1370
Canton D-25	500	WCAD	1220
Cazenovia E-25-b	250	WMAC	570
Coney Island F-26	500	WCGU	1400
Freeport F-26-i	100	WGBB	1210
Ithaca E-24-d	500	WEAI	1270
	50	WLCI	1210
Jamaica F-26-f	10	WMRJ	1420
Jamestown E-23-b	25	WOCL	1210
Long Island City F-26	100	WLBX	1500

New York City F-26	5000	WABC	850
	250	WBNY	1350
	5000	WBOQ	860
	50000	WEAF	660
	500	WEVD	1300
	500	WGBS	1180
	1000	WHAP	1300
	250	WHN	1010
	10	WHPP	1420
	30000	WJZ	760
	250	WKBQ	1350
	5000	WLWL	1100
	500	WMCA	570
	250	WMSG	1350
	500	WNYC	570
	1000	WOV	1130
	250	WPAP	1010
	500	WPCH	810
	250	WQAO	1010
	250	WRNY	1010
Patchogue	100	WLBH	1420
Poughkeepsie F-26-a	500	WOKO	1440
Rochester E-24-b	500	WABO	1440
	5000	WHAM	1150
	500	WHEC	1440
	15	WNBQ	1500
Rossville F-26	1000	WBBR	1300
Saranac Lake D-26	10	WNBZ	1290
Schenectady E-25-c	50000	WGY	790
Syracuse E-24-c	750	WFBL	900
	250	WSYR	570
Troy E-21-a	500	WHAZ	1300
Tupper Lake D-25	10	WHDL	1420
Utica E-25-a	100	WIBX	1200
Woodside F-26	100	WWRL	1500
Yonkers E-26	100	WCOH	1210

NORTH CAROLINA

Asheville J-21	1000	WWNC	570
Charlotte J-22	5000	WBT	1080
Gastonia J-22	100	WRBU	1210
Greensboro I-22	500	WNRC	1440
Raleigh I-23	1000	WPTF	680
Wilmington J-24	50	WRBT	1370

NORTH DAKOTA

Bismarck B-12	500	KFYR	550
Devils Lake A-13	100	KDLR	1210
Fargo B-14	1000	WDAY	1280
Grand Forks A-14	500	KFJM	1370
Mandan B-12	100	KGCU	1200

OHIO

Akron F-22-b	1000	WADC	1320
	500	WFJC	1450
Bellefontaine G-21-a	100	WHBD	1370
Cambridge F-22	100	WEBE	1210
Canton F-22-d	10	WHBC	1200
Cincinnati G-20-e	25	WAAD	1420
	100	WFBE	1200
	500	WKRC	550
	50000	WLW	700
	5000	WSAI	800
Cleveland F-22-a	1000	WEAR	1070
	1000	WHK	1390
	500	WJAY	620
	3500	WTAM	1070
Columbus G-21-b	500	WAIU	640
	250	WCAH	1430
	750	WEAO	550
	50	WMAN	1210
Dayton G-21-e	200	WSMK	570
Hamilton G-20-d	100	WRK	1310
Mansfield F-21	100	WLBV	1210
Middletown G-20	100	WSRO	1420
Springfield G-21-c	500	WCSO	1380
Steubenville F-22	50	WIBR	1420
Toledo F-21-a	500	WSPD	1340
Youngstown F-22	500	WKBN	570

OKLAHOMA

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

OREGON

Astoria C-1-a	50	KFJI	1370
Corvallis D-1	1000	KOAC	560
Eugene D-1	100	KORE	1420
Marshfield E-1	50	KOOS	1370
Medford E-1	50	KMED	1310
Portland C-1-b	5000	KEX	1180
	100	KFIF	1420
	500	KFJR	1300
	1000	KGW	620
	50	KIT	1370
	1000	KOIN	940
	500	KTBR	1300
	15	KWBS	1500
	500	KWJJ	1060
	500	KXL	1250

PENNSYLVANIA

Allentown F-25-c	250	WCBA	1440
	250	WSAN	1440
Altoona F-24-c	100	WFBG	1310
Carbondale F-25	5	WNBW	1200
Elkins Park G-25-c	50	WIBG	930
Erie E-23	30	WEDH	1420
	50	WRAK	1370
Grove City F-23-b	100	WSAJ	1310
Harrisburg F-24-d	500	WBAK	1430
	100	WPRC	1200
Johnstown F-23-d	100	WHBP	1310
Lancaster G-25-a	15	WGAL	1310
	100	WKJC	1200
Lemoyne G-24	500	WMBS	1430
Lewisburg F-24-b	100	WJBU	1210
Oil City F-23-a	500	WLBW	1260
Philadelphia G-25-d	1000	WCAU	1170
	100	WELK	1370
	500	WFAN	610
	500	WFI	560
	50	WFKD	1310
	100	WHBW	1500
	500	WIP	610
	500	WLIT	560
	100	WNAT	1310
	50	WPSW	1500
	250	WRAX	1020
Pittsburgh F-23-c	50000	KDKA	980
	500	KQV	1380
	500	WCAE	1220
	1000	WJAS	1290
	100	WMBJ	1500
Reading F-25-d	100	WRAW	1310
Scranton F-25-a	250	WGBI	880
	250	WQAN	880
State College F-24-a	500	WPSC	1230
Washington F-23	15	WNBO	1200
Wilkes-Barre F-25-b	100	WBAX	1210
	100	WBRE	1310
Willow Grove G-25	50	WALK	1500

PORTO RICO

San Juan	500	WKAQ	890

RHODE ISLAND

Cranston F-27-a	100	WDWF	1210
	100	WLSI	1210
Newport F-27	100	WMBA	1500
Pawtucket E-27	100	WPAW	1210
Providence E-27-h	250	WEAN	550
	250	WJAR	890

SOUTH CAROLINA

Charlestown K-23	75	WBBY	1200

SOUTH DAKOTA

Brookings D-14	1000	KFDY	550
Dell Rapids D-14	50	KGDA	1370
Oldham D-14	15	KGDY	1200
Pierre D-12	200	KGFX	580
Rapid City D-11	100	WCAT	1200
Sioux Falls D-14	2000	KSOO	1150
Vermillion E-14-b	500	KUSD	890
Watertown	100	KGCR	1210
Yankton E-14-a	1000	WNAX	570

TENNESSEE

Chattanooga J-20	1000	WDOD	1280
Knoxville I-20	50	WFBC	1200
	50	WNBJ	1310
	1000	WNOX	560
Lawrenceburg J-19	500	WOAN	600
Memphis J-18-a	500	WGBC	1430
	100	WHBQ	1370
	500	WMC	780
	500	WNBR	1430
	500	WREC	600
Nashville I-19	5000	WBAW	1490
	5000	WLAC	1490
	5000	WSM	650
Springfield I-19	100	WSIX	1210
Union City I-18	15	WOBT	1310

TEXAS

Amarillo J-12	1000	KGRS	1410
	250	WDAG	1410
Austin L-14-b	500	KUT	1120
Beaumont M-16	500	KFDM	560
Breckenridge K-13	100	KFYO	1420
Brownsville O-14-b	500	KWWG	1260
Brownwood L-13	100	KGKB	1500
College Sta. M-13	500	WTAW	1120
Corpus Christi	100	KGFI	1500
Dallas L-15-a	10000	KRLD	1040
	5000	WFAA	1040
	500	WRR	1280
Dublin K-14	15	KFPL	1310
El Paso L-10	100	WDAH	1310
Fort Worth L-14-a	100	KFJZ	1370
	1000	KTAT	1240
	50000	WBAP	800
Galveston M-15-b	100	KFLX	1370
	500	KFUL	1290
Greenville K-15	15	KFPM	1310
Harlingen O-14	500	KRGV	1260
Houston M-15-a	1000	KPRC	920
	5	KTUE	1420
Richmond M-15	50	KGHX	1500
San Angelo M-12	100	KGKL	1370
San Antonio M-14-a	100	KGCI	1370
	15	KGDR	1500
	100	KGRC	1370
	100	KTAP	1420
	1000	KTSA	1290
	5000	WOAI	1190
Waco L-15-b	1000	WJAD	1240
Wichita Falls K-14	250	KGKO	570

UTAH

Ogden F-7-b	50	KFUR	1370
Salt Lake City F-7-c	1000	KDYL	1290
	5000	KSL	1130

VERMONT

Burlington D-26-a	100	WCAX	1200
Springfield D-26-b	10	WNBX	1200

VIRGINIA

Arlington G-24-d	1000	NAA	690
Newport News	100	WGH	1310
Norfolk I-24	100	WBBW	1200
	500	WPOR	780
	500	WTAR	780
Petersburg I-24	100	WLBG	1200
Richmond H-24	100	WBBL	1370
	100	WMBG	1210
	1000	WRVA	1110
	15	WTAZ	1210
Roanoke H-23	250	WDBJ	930

WASHINGTON

Aberdeen B-1	75	KXRO	1420
Bellingham A-1	100	KVOS	1200
Des Moines B-1	1000	KVI	700
Everett A-2	50	KFBL	1370
Lacey B-2-b	10	KGY	1200
Longview B-1	10	KUJ	1500
Pullman B-4	500	KWSC	1390
Seattle B-2-a	100	KFQW	1420
	5000	KJR	970
	15	KKP	1370
	1000	KOL	1270
	1000	KOMO	920
	100	KPCB	1210
	100	KPQ	1210
	50	KRSC	1120
	1000	KTW	1270
	100	KVL	1370
	500	KXA	570
Spokane A-4	100	KFIO	1230
	500	KFPY	1340
	5000	KGA	1470
	1000	KHQ	590
Tacoma B-1-a	500	KMO	1340

WEST VIRGINIA

Bluefield	100	WHIS	1420
Charleston H-22	250	WOBU	580
Fairmont G-23	250	WMMN	890
Huntington G-22	250	WSAZ	580
Weirton G-22	60	WQBZ	1420
Wheeling G-22	5000	WWVA	1160

WISCONSIN

Beloit E-18-b	350	WEBW	600
Eau Claire D-17	1000	WTAQ	1330
Fond du Lac D-18-d	100	KFIZ	1420
Kenosha E-19	100	WCLO	1200
La Crosse E-17	1000	WKBH	1380
Madison E-18-2	750	WHA	570
	100	WIBA	1210
Manitowoc D-19	100	WOMT	1210

Milwaukee E-19-a	250	WHAD	1120
	250	WISN	1120
	1000	WTMJ	620
Poynette D-18-e	100	WIBU	1310
Racine E-19	100	WRJN	1370
Sheboygan C-18	500	WHBL	1410
Stevens Pt. D-18-b	2000	WLBL	900
Superior B-17	1000	WEBC	1280
West De Pere D-19	100	WHBY	1200
WYOMING			
Laramie F-10	500	KWYO	600
CANADA			
ALBERTA			
Calgary	500	CFAC	690
	1800	CFCN	690
	250	CHCA	690
	250	CJCJ	690
	500	CNRC	690
Edmonton	250	CHMA	580
	500	CJCA	580
	500	CKUA	580
	500	CNRE	580
Lethbridge	50	CJOC	1120
Red Deer	1000	CHCT	840
	1000	CKLC	840
BRITISH COLUMBIA			
Chilliwack	5	CHWK	1210
Kamloops	15	CFJC	1120
Sea Island	50	CJOR	1030
Vancouver	50	CHLS	730
	50	CKCD	730
	50	CKFC	730
	50	CKMO	730
	100	CKWX	730
	500	CNRV	1030
Victoria	500	CFCT	630
MANITOBA			
Brandon	500	CKX	540
Winnipeg	5000	CKY	780
	500	CNRW	780
NEW BRUNSWICK			
Fredericton	50	CFNB	1210
Moncton	500	CNRA	630
St. John	50	CFBO	890
NOVA SCOTIA			
Halifax	500	CHNS	930
Sydney	50	CJCB	780
Wolfville	50	CKIC	930
ONTARIO			
Bowmanville	5000	CKGW	960
Brantford	50	CKCR	1010
Chatham	25	CFCO	1210
Cobalt	15	CKMC	1210
Hamilton	10	CHCS	880
	50	CHML	880
	100	CKOC	880
Iroquois Falls	250	CFCH	600
King Twp.	1000	CFRB	960
Kingston	500	CFRC	1120
London	500	CJGC	910
Midland	50	CKPR	1120
Ottawa	100	CKCO	690
	500	CNRO	690
Prescott	50	CFLC	1010
Preston	25	CKPC	1210
Toronto	500	CFCA	840
	500	CFCL	580
	500	CHNC	580
	500	CJBC	580
	1000	CJBC	840
	5000	CJBC	960
	500	CJSC	580
	500	CKCL	580
	500	CKNC	580
	500	CKOW	840
	500	CNRT	840
PRINCE EDWARD ISLAND			
Charlottetown	100	CFCY	960
	30	CHCK	960
Summerside	25	CHGS	1120
QUEBEC			
Montreal	1650	CFCF	1030
	750	CHYC	730
	1200	CKAC	730
	1650	CNRM	730
Quebec	25	CHRC	600
	22	CKCI	600
	50	CKCV	600
	50	CNRQ	600
St. Hyacinthe	50	CKSH	1010
SASKATCHEWAN			
Fleming	500	CJRW	600
Moose Jaw	500	CJRM	600
Regina	500	CHWC	960
	500	CJBR	960
	500	CKCK	960
	500	CNRR	960
Saskatoon	500	CFQC	910
	250	CJHS	910
	500	CNRS	910
Yorkton	500	CJGX	630
HAITI			
Port au Prince	1000	HHK	830
MEXICO			
Chihuahua	250	XFF	920
C. Lerdo, Dgo.	250	XES	1200
Guadalajara, Jal.	101	XEA	1200
Jalapa, Ver.	350	XFC	630
Merida, Yucatan	105	XEY	550
Mexico City	1000	XEB	670
	1000	XEN	730
	500	XEX	920
	50	XFA	540
	2000	XFG	640
	1000	XFI	590
	500	XFX	840
Monterrey, N. L.	101	XEH	970
Morelia, Mich.	101	XEI	1000
Oaxaca, Oax.	105	XEF	1130
Puebla, Pue.	101	XEE	960
CUBA			
Cienfuegos	200	6BY	1150
Ella	500	7SR	860
Havana	500	CMC	840
	15	2BB	1200
	50	2LR	1280
	20	2MG	1050
	100	2OK	860
	100	2OL	1170
	20	2RK	950
	20	2TW	1110
	10	2UF	1090
Tuinucu	1500	6KW	790

CFAC 690
Calgary, Alta.
CFBO 890
St. John, N. B.
CFCA 840
Toronto, Ont.
CFCF 1030
Montreal, Que.
CFCH 600
Iroquois Falls, Ont.
CFCN 690
Calgary, Alta.
CFCO 1210
Chatham, Ont.
CFCT 630
Victoria, B. C.
CFCY 960
Charlottet'n, P.E.I.
CFJC 1120
Kamloops, B. C.
CFLC 1010
Prescott, Ont.
CFNB 1210
Fredericton, N. B.
CFQC 910
Saskatoon, Sask.
CFRB 960
Twp. of King, Ont.
CFRC 1120
Kingston, Ont.
CHCA 690
Calgary, Alta.
CHCK 960
Charlottet'n, P.E.I.
CHCS 880
Hamilton, Ont.
CHCT 840
Red Deer, Alta.
CHGS 1120
Summerside, P.E.I.
CHLS 730
Vancouver, B. C.
CHMA 580
Edmonton, Alta.
CHML 880
Hamilton, Ont.
CHNC 580
Toronto, Ont.
CHNS 930
Halifax, N. S.
CHRC 600
Quebec, Que.
CHWC 960
Regina, Sask.
CHWK 1210
Chilliwack, B. C.
CHYC 730
Montreal, Que.
CJBC 580-840-960
Toronto, Ont.
CJBR 960
Regina, Sask.
CJCA 580
Edmonton, Alta.
CJCB 780
Sydney, N. S.
CJCJ 690
Calgary, Alta.
CJGC 910
London, Ont.
CJGX 630
Yorkton, Sask.
CJHS 910
Saskatoon, Sask.
CJOC 1120
Lethbridge, Alta.

CJOR 1030
Sea Island, B. C.
CJRM 600
Moose Jaw, Sask.
CJRW 600
Fleming, Sask.
CJSC 580
Toronto, Ont.
CKAC 730
Montreal, Que.
CKCD 730
Vancouver, B. C.
CKCI 600
Quebec, Que.
CKCK 960
Regina, Sask.
CKCL 580
Toronto, Ont.
CKCO 690
Ottawa, Ont.
CKCR 1010
Brantford, Ont.
CKCV 600
Quebec, Que.
CKFC 730
Vancouver, B. C.
CKGW 960
Bowmanville, Ont.
CKIC 930
Wolfville, N. S.
CKLC 840
Red Deer, Alta.
CKMC 1210
Cobalt, Ont.
CKMO 730
Vancouver, B. C.
CKNC 580
Toronto, Ont.
CKOC 880
Hamilton, Ont.
CKOW 840
Toronto, Ont.
CKPC 1210
Preston, Ont.
CKPR 1120
Midland, Ont.
CKSH 1010
St. Hyacinthe, Que.
CKUA 580
Edmonton, Alta.
CKWX 730
Vancouver, B. C.
CKX 540
Brandon, Man.
CKY 780
Winnipeg, Man.
CMC 840
Havana, Cuba
CNRA 630
Moncton, N. B.
CNRC 690
Calgary, Alta.
CNRE 580
Edmonton, Alta.
CNRM 730
Montreal, Que.
CNRO 690
Ottawa, Ont.
CNRQ 600
Quebec, Que.
CNRR 960
Regina, Sask.
CNRS 910
Saskatoon, Sask.
CNRT 840
Toronto, Ont.

CNRV 1030
Vancouver, B. C.
CNRW 780
Winnipeg, Man.
HHK 830
Portau Prince, Haiti
KCRC 1370
Oklahoma City
KDB 1500
Santa Barbara, Cal.
KDKA 980
Pittsburgh, Pa.
KDLR 1210
Devils Lake, N. D.
KDYL 1290
Salt Lake City
KEJK 1170
Los Angeles, Cal.
KELW 780
Burbank, Cal.
KEX 1180
Portland, Ore.
KFAB 770
Lincoln, Nebr.
KFAD 620
Phoenix, Ariz.
KFBB 1360
Great Falls, Mont.
KFBK 1310
Sacramento, Cal.
KFBL 1370
Everett, Wash.
KFDM 560
Beaumont, Texas
KFDY 550
Brookings, S. D.
KFEL 940
Denver, Colo.
KFEQ 560
St. Joseph, Mo.
KFGQ 1310
Boone, Iowa
KFH 1300
Wichita, Kansas
KFHA 1200
Gunnison, Colo.
KFI 640
Los Angeles, Cal.
KFIF 1420
Portland, Ore.
KFIO 1230
Spokane, Wash.
KFIU 1310
Juneau, Alaska
KFIZ 1420
Fond du Lac, Wis.
KFJB 1200
Marshalltown, Ia.
KFJF 1470
Oklahoma City
KFJI 1370
Astoria, Ore.
KFJM 1370
Grand Forks, N. D.
KFJR 1300
Portland, Ore.
KFJY 1310
Fort Dodge, Ia.
KFJZ 1370
Ft. Worth, Texas
KFKA 880
Greeley, Colo.
KFKB 1050
Milford, Kansas
KFKU 1220
Lawrence, Kans.

KFKX 1020
Chicago, Ill.
KFKZ 1200
Kirksville, Mo.
KFLV 1410
Rockford, Ill.
KFLX 1370
Galveston, Texas
KFMX 1250
Northfield, Minn.
KFNF 890
Shenandoah, Iowa
KFOR 1210
Lincoln, Nebr.
KFOX 1250
Long Beach, Cal.
KFPL 1310
Dublin, Texas
KFPM 1310
Greenville, Texas
KFPW 1340
Siloam Spgs., Ark.
KFPY 1340
Spokane, Wash.
KFQA 1090
St. Louis, Mo.
KFQD 1230
Anchorage, Alaska
KFQU 1420
Holy City, Cal.
KFQW 1420
Seattle, Wash.
KFQZ 860
Hollywood, Cal.
KFRC 610
San Francisco, Cal.
KFRU 630
Columbia, Mo.
KFSD 600
San Diego, Cal.
KFSG 1120
Los Angeles, Cal.
KFUL 1290
Galveston, Texas
KFUM 1270
Col. Spgs., Colo.
KFUO 550
St. Louis, Mo.
KFUP 1310
Denver, Colo.
KFUR 1370
Ogden, Utah
KFVD 700
Culver City, Cal.
KFVS 1210
CapeGirardeau,Mo.
KFWB 950
Los Angeles, Cal.
KFWC 1200
Pomona, Cal.
KFWF 1200
St. Louis, Mo.
KFWI 930
San Francisco, Cal.
KFWM 930
Oakland, Cal.
KFXD 1420
Jerome, Idaho
KFXF 940
Denver, Colo.
KFXJ 1310
Edgewater, Colo.
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 1360
San Diego, Cal.
KGBU 900
Ketchikan, Alaska
KGBX 1370
St. Joseph, Mo.
KGBZ 930
York, Nebr.
KGCA 1270
Decorah, Iowa
KGCI 1370
San Antonio, Texas
KGCN 1420
Concordia, Kans.
KGCR 1210
Watertown, S. D.
KGCU 1200
Mandan, N. D.
KGCX 1420
Vida, Mont.
KGDA 1370
Dell Rapids, S. D.
KGDE 1200
Fergus Falls, Minn.
KGDM 1100
Stockton, Cal.
KGDR 1500
San Antonio, Texas
KGDY 1200
Oldham, S. D.
KGEF 1300
Los Angeles, Cal.
KGEK 1200
Yuma, Colo.
KGER 1370
Long Beach, Cal.
KGEW 1200
Fort Morgan, Colo
KGEZ 1310
Kalispell, Mont.
KGFF 1420
Alva, Okla.
KGFG 1370
Oklahoma City
KGFH 1000
Glendale, Cal.
KGFI 1500
Corpus Christi, Tex.
KGFJ 1420
Los Angeles, Cal.
KGFK 1200
Hallock, Minn.
KGFL 1370
Raton, N. M.
KGFW 1420
Ravenna, Nebr.
KGFX 580
Pierre, S. D.
KGGC 1420
San Francisco, Cal.
KGGF 1010
Picher, Okla.
KGGM 1370
Albuquerque, N.M.
KGHB 1320
Honolulu, Hawaii
KGHD 1420
Missoula, Mont.

KGHF 1320
Pueblo, Colo.
KGHG 1310
McGehee, Ark.
KGHI 1500
Little Rock, Ark.
KGHL 950
Billings, Mont.
KGHX 1500
Richmond, Texas
KGIQ 1320
Twin Falls, Ida.
KGIR 1360
Butte, Mont.
KGIW 1420
Trinidad, Colo.
KGJF 890
Little Rock, Ark.
KGKB 1500
Brownwood, Texas
KGKL 1370
San Angelo, Texas
KGKO 570
Wichita Falls, Tex.
KGKX 1420
Sand Point, Idaho
KGO 790
Oakland, Cal.
KGRC 1370
San Antonio, Texas
KGRS 1410
Amarillo, Texas
KGU 940
Honolulu, Hawaii
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, Idaho
KIDO 1250
Boise, Idaho
KIT 1370
Portland, Ore.
KJBS 1070
San Francisco, Cal.
KJR 970
Seattle, Wash.
KKP 1370
Seattle, Wash.
KLCN 1290
Blytheville, Ark.
KLDS 950
Independence, Mo.
KLRA 1390
Little Rock, Ark.
KLS 1440
Oakland, Cal.
KLX 880
Oakland, Cal.
KLZ 560
Denver, Colo.
KMA 930
Shenandoah, Iowa
KMBC 950
Independence, Mo.
KMED 1310
Medford, Ore.
KMIC 1120
Inglewood, Cal.

KMJ 1200
Fresno, Cal.
KMMJ 740
Clay Center, Nebr.
KMO 1340
Tacoma, Wash.
KMOX 1090
St. Louis, Mo.
KMTR 570
Hollywood, Cal.
KNX 1050
Los Angeles, Cal.
KOA 830
Denver, Colo.
KOAC 560
Corvallis, Ore.
KOB 1180
State College, N. M.
KOCW 1420
Chickasha, Okla.
KOH 1370
Reno, Nevada
KOIL 1260
Council Bluffs, Ia.
KOIN 940
Portland, Ore.
KOL 1270
Seattle, Wash.
KOMO 920
Seattle, Wash.
KOOS 1370
Marshfield, Ore.
KORE 1420
Eugene, Ore.
KOW 1390
Denver, Colo.
KOY 1390
Phoenix, Ariz.
KPCB 1210
Seattle, Wash.
KPJM 1500
Prescott, Ariz.
KPLA 570
Los Angeles, Cal.
KPO 680
San Francisco, Cal.
KPOF 880
Denver, Colo.
KPPC 1200
Pasadena, Cal.
KPQ 1210
Seattle, Wash.
KPRC 920
Houston, Texas
KPSN 950
Pasadena, Cal.
KQV 1380
Pittsburgh, Pa.
KQW 1010
San Jose, Cal.
KPWF 1490
Westminster, Cal.
KRE 1370
Berkeley, Cal.
KRGV 1260
Harlingen, Texas
KRLD 1040
Dallas, Texas
KRMD 1310
Shreveport, La.
KRSC 1120
Seattle, Wash.
KSAC 580
Manhattan, Kans.
KSBA 1450
Shreveport, La.

KSCJ 1330
Sioux City, Iowa
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 550
Oakland, Cal.
KTAP 1420
San Antonio, Texas
KTAT 1240
Ft. Worth, Texas
KTBI 1300
Los Angeles, Cal.
KTBR 1300
Portland, Ore.
KTHS 800
Hot Springs, Ark.
KTM 780
Los Angeles, Cal.
KTNT 1170
Muscatine, Iowa
KTSA 1290
San Antonio, Texas
KTSL 1310
Shreveport, La.
KTUE 1420
Houston, Texas
KTW 1270
Seattle, Wash.
KUJ 1500
Longview, Wash.
KUOA 1390
Fayetteville, Ark.
KUOM 570
Missoula, Mont.
KUSD 890
Vermillion, S. D.
KUT 1120
Austin, Texas
KVI 700
Tacoma, Wash.
KVL 1370
Seattle, Wash.
KVOO 1140
Tulsa, Okla.
KVOS 1200
Bellingham, Wash.
KWBS 1500
Portland, Ore.
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 1390
Pullman, Wash.
KWTC 1500
Santa Ana, Cal.
KWWG 1260
Brownsville, Texas
KWYO 600
Laramie, Wyo.
KXA 570
Seattle, Wash.
KXL 1250
Portland, Ore.
KXO 1200
El Centro, Cal.
KXRO 1420
Aberdeen, Wash.
KYA 1230
San Francisco, Cal.
KYW 1020
Chicago, Ill.
KYWA 1020
Chicago, Ill.
KZM 1370
Hayward, Cal.
NAA 690
Arlington, Va.
WAAD 1420
Cincinnati, Ohio
WAAF 920
Chicago, Ill.
WAAM 1250
Newark, N. J.
WAAT 1070
Jersey City, N. J.
WAAW 660
Omaha, Nebr.
WABC 860
New York City
WABI 1200
Bangor, Maine
WABO 1440
Rochester, N. Y.
WABZ 1200
New Orleans, La.
WADC 1320
Akron, Ohio
WAFD 1500
Detroit, Mich.
WAGM 1310
Royal Oak, Mich.
WAIU 640
Columbus, Ohio
WALK 1500
Willow Grove, Pa.
WAPI 1140
Birmingham, Ala.
WASH 1270
Gr. Rapids, Mich.
WBAA 1400
Lafayette, Ind.
WBAK 1430
Harrisburg, Pa.
WBAL 1060
Baltimore, Md.
WBAP 800
Fort Worth, Texas
WBAW 1490
Nashville, Tenn.
WBAX 1210
Wilkes-Barre, Pa.
WBBC 1400
Brooklyn, N. Y.
WBBL 1370
Richmond, Va.
WBBM 770
Chicago, Ill.

WBCM 1410
Bay City, Mich.
WBCN 870
Chicago, Ill.
WBBR 1300
Rossville, N. Y.
WBBW 1200
Norfolk, Va.
WBBY 1200
Charleston, S. C.
WBBZ 1200
Ponca City, Okla.
WBIS 1230
Boston, Mass.
WBMS 1450
Fort Lee, N. J.
WBNY 1350
New York City
WBOQ 860
New York City
WBOW 1310
Terre Haute, Ind.
WBRC 930
Birmingham, Ala.
WBRE 1310
Wilkes-Barre, Pa.
WBRL 1430
Manchester, N. H.
WBSO 780
Wellesley H'ls, Mass
WBT 1080
Charlotte, N. C.
WBZ 990
Springfield, Mass.
WBZA 990
Boston, Mass.
WCAC 600
Storrs, Conn.
WCAD 1220
Canton, N. Y.
WCAE 1220
Pittsburgh, Pa.
WCAH 1430
Columbus, Ohio
WCAJ 590
Lincoln, Nebr.
WCAL 1250
Northfield, Minn.
WCAM 1280
Camden, N. J.
WCAO 600
Baltimore, Md.
WCAP 1280
Asbury Park, 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.-St. Paul
WCDA 1350
New York City
WCFL 970
Chicago, Ill.

WCGU 1400
Coney Island, N. Y.
WCKY 1480
Covington, Ky.
WCLB 1500
Brooklyn, N. Y.
WCLO 1200
Kenosha, Wis.
WCLS 1310
Joliet, Ill.
WCMA 1400
Culver, Ind.
WCOA 1120
Pensacola, Fla.
WCOC 880
Columbus, Miss.
WCOH 1210
Yonkers, N. Y.
WCRW 1210
Chicago, Ill.
WCSH 940
Portland, Maine
WCSO 1380
Springfield, Ohio
WCX 750
Detroit, Mich.
WDAE 620
Tampa, Fla.
WDAF 610
Kansas City, Mo.
WDAG 1410
Amarillo, Texas
WDAH 1310
El Paso, Texas
WDAY 1280
Fargo, N. D.
WDBJ 930
Roanoke, Va.
WDBO 620
Orlando, Fla.
WDEL 1120
Wilmington, Del.
WDGY 560
Minneapolis, Minn.
WDOD 1280
Chattanooga, Tenn.
WDRC 1330
New Haven, Conn.
WDSU 1270
New Orleans, La.
WDWF 1210
Cranston, R. I.
WDZ 1070
Tuscola, Ill.
WEAF 660
New York City
WEAI 1270
Ithaca, N. Y.
WEAN 550
Providence, R. I.
WEAO 550
Columbus, Ohio
WEAR 1070
Cleveland, Ohio
WEBC 1280
Superior, Wis.
WEBE 1210
Cambridge, Ohio
WEBQ 1210
Harrisburg, Ill.
WEBR 1310
Buffalo, N. Y.
WEBW 600
Beloit, Wis.
WEDC 1210
Chicago, Ill.

WEDH 1420
Erie, Pa.
WEEI 590
Boston, Mass.
WEHS 1310
Evanston, Ill.
WELK 1370
Philadelphia, Pa.
WEMC 590
Berrien Spgs., Mich.
WENR 870
Chicago, Ill.
WEPS 1200
Gloucester, Mass.
WEVD 1300
New York City
WEW 760
St. Louis, Mo.
WFAA 1040
Dallas, Texas
WFAN 610
Philadelphia, Pa.
WFBC 1200
Knoxville, Tenn.
WFBE 1200
Cincinnati, Ohio
WFBG 1310
Altoona, Pa.
WFBJ 1370
Collegeville, Minn.
WFBL 900-1490
Syracuse, N. Y.
WFBM 1230
Indianapolis, Ind.
WFBR 1270
Baltimore, Md.
WFDF 1310
Flint, Mich.
WFI 560
Philadelphia, Pa.
WFIW 940
Hopkinsville, Ky.
WFJC 1450
Akron, Ohio
WFKD 1310
Philadelphia, Pa.
WFLA 900
Clearwater, Fla.
WGAL 1310
Lancaster, Pa.
WGBB 1210
Freeport, N. Y.
WGBC 1430
Memphis, Tenn.
WGBF 630
Evansville, Ind.
WGBI 880
Scranton, Pa.
WGBS 1180
New York City
WGCM 1210
Gulfport, Miss.
WGCP 1250
Newark, N. J.
WGES 1360
Chicago, Ill.
WGH 1310
Newport News, Va.
WGHP 1240
Detroit, Mich.
WGL 1370
Ft. Wayne, Ind.
WGMS 1250
St. Paul-Minneap.
WGN 720
Chicago, Ill.

WGR 550
Buffalo, N. Y.
WGST 890
Atlanta, Ga.
WGY 790
Schenectady, N. Y.
WHA 570
Madison, Wis.
WHAD 1120
Milwaukee, Wis.
WHAM 1150
Rochester, N. Y.
WHAP 1300
New York City
WHAS 820
Louisville, Ky.
WHAZ 1300
Troy, N. Y.
WHB 950
Kansas City, Mo.
WHBC 1200
Canton, Ohio
WHBD 1370
Bellefontaine, Ohio
WHBF 1210
Rock Island, Ill.
WHBL 1410
Sheboygan, Wis.
WHBP 1310
Johnstown, Pa.
WHBQ 1370
Memphis, Tenn.
WHBU 1210
Anderson, Ind.
WHBW 1500
Philadelphia, Pa.
WHBY 1200
West De Pere, Wis.
WHDF 1370
Calumet, Mich.
WHDH 830
Gloucester, Mass.
WHDI 560
Minneapolis, Minn.
WHDL 1420
Tupper Lake, N.Y.
WHEC 1440
Rochester, N. Y.
WHFC 1310
Chicago, Ill.
WHIS 1420
Bluefield, W. Va.
WHK 1390
Cleveland, Ohio
WHN 1010
New York City
WHO 1000
Des Moines, Iowa
WHPP 1420
New York City
WIAS 1420
Ottumwa, Iowa
WIBA 1210
Madison, Wis.
WIBG 930
Elkins Park, Pa.
WIBM 1370
Jackson, Mich.
WIBO 570
Chicago, Ill.
WIBR 1420
Steubenville, Ohio
WIBS 1450
Elizabeth, N. J.
WIBU 1310
Poynette, Wis.

WIBW 1300
Topeka, Kansas
WIBX 1200
Utica, N. Y.
WIBZ 1500
Montgomery, Ala.
WICC 1190
Bridgeport, Conn.
WIL 1200
St. Louis, Mo.
WILL 890
Urbana, Ill.
WILM 1500
Wilmington, Del.
WINR 1210
Bay Shore, N. Y.
WIOD 1240
Miami Beach, Fla.
WIP 610
Philadelphia, Pa.
WISN 1120
Milwaukee, Wis.
WJAD 1240
Waco, Texas
WJAG 1060
Norfolk, Nebr.
WJAK 1310
Marion, Ind.
WJAR 890
Providence, R. I.
WJAS 1290
Pittsburgh, Pa.
WJAX 1260
Jacksonville, Fla.
WJAY 620
Cleveland, Ohio
WJAZ 1480
Chicago, Ill.
WJBC 1200
La Salle, Ill.
WJBI 1210
Red Bank, N. J.
WJBK 1370
Ypsilanti, Mich.
WJBL 1200
Decatur, Ill.
WJBO 1370
New Orleans, La.
WJBT 770
Chicago, Ill.
WJBU 1210
Lewisburg, Pa.
WJBW 1200
New Orleans, La.
WJBY 1210
Gadsden, Ala.
WJJD 1130
Mooseheart, Ill.
WJKS 1360
Gary, Ind.
WJR 750
Detroit, Mich.
WJSV 1460
Washington, D. C.
WJZ 760
New York City
WKAQ 890
San Juan, P. R.
WKAR 1040
East Lansing, Mich.
WKAV 1310
Laconia, N. H.
WKBB 1310
Joliet, Ill.
WKBC 1310
Birmingham, Ala.

WKBE 1200
Webster, Mass.
WKBF 1400
Indianapolis, Ind.
WKBH 1380
La Crosse, Wis.
WKBI 1310
Chicago, Ill.
WKBN 570
Youngstown, Ohio
WKBO 1450
Jersey City, N. J.
WKBP 1420
Battle Creek, Mich.
WKBQ 1350
New York City
WKBS 1310
Galesburg, Ill.
WKBV 1500
Brookville, Ind.
WKBW 1470
Buffalo, N. Y.
WKBZ 1500
Ludington, Mich.
WKEN 1040
Grand Island, N. Y.
WKJC 1200
Lancaster, Pa.
WKRC 550
Cincinnati, Ohio
WKY 900
Oklahoma City
WLAC 1490
Nashville, Tenn.
WLAP 1200
Louisville, Ky.
WLB 1250
Minneapolis, Minn.
WLBC 1310
Muncie, Ind.
WLBF 1420
Kansas City, Mo.
WLBG 1200
Petersburg, Va.
WLBH 1420
Patchogue, N. Y.
WLBL 900
Stevens Point, Wis.
WLBO 1310
Galesburg, Ill.
WLBV 1210
Mansfield, Ohio
WLBW 1260
Oil City, Pa.
WLBX 1500
L. I. City, N. Y.
WLBZ 620
Bangor, Me.
WLCI 1210
Ithaca, N. Y.
WLEX 1360
Lexington, Mass.
WLEY 1420
Lexington, Mass.
WLIB 720
Chicago, Ill.
WLIT 560
Philadelphia, Pa.
WLOE 1500
Chelsea, Mass.
WLS 870
Chicago, Ill.
WLSI 1210
Cranston, R. I.
WLTH 1400
Brooklyn, N. Y.

WLW 700
Cincinnati, Ohio
WLWL 1100
New York City
WMAC 570
Cazenovia, N. Y.
WMAF 1360
S. Dartm'th, Mass.
WMAK 900
Buffalo, N. Y.
WMAL 630
Washington, D. C.
WMAN 1210
Columbus, Ohio
WMAQ 670
Chicago, Ill.
WMAY 1200
St. Louis, Mo.
WMAZ 890
Macon, Ga.
WMBA 1500
Newport, R. I.
WMBC 1420
Detroit, Mich.
WMBD 1440
Peoria Heights, Ill.
WMBF 560
Miami Beach, Fla.
WMBG 1210
Richmond, Va.
WMBH 1420
Joplin, Mo.
WMBI 1080
Chicago, Ill.
WMBJ 1500
Pittsburgh, Pa.
WMBL 1310
Lakeland, Fla.
WMBO 1370
Auburn, N. Y.
WMBQ 1500
Brooklyn, N. Y.
WMBR 1210
Tampa, Fla.
WMBS 1430
Lemoyne, Pa.
WMC 780
Memphis, Tenn.
WMCA 570
New York City
WMES 1500
Boston, Mass.
WMMN 890
Fairmont, W. Va.
WMPC 1500
Lapeer, Mich.
WMRJ 1420
Jamaica, N. Y.
WMSG 1350
New York City
WMT 1200
Waterloo, Iowa
WNAC 1230
Boston, Mass.
WNAD 1010
Norman, Okla.
WNAT 1310
Philadelphia, Pa.
WNAX 570
Yankton, S. D.
WNBF 1500
Binghamton, N. Y.
WNBH 1310
WewBedford, Mass.
WNBJ 1310
Knoxville, Tenn.

WNBO 1200
Washington, Pa.
WNBQ 1500
Rochester, N. Y.
WNBR 1430
Memphis, Tenn.
WNBW 1200
Carbondale, Pa.
WNBX 1200
Springfield, Vt.
WNBZ 1290
Saranac Lake, N.Y.
WNJ 1450
Newark, N. J.
WNOX 560
Knoxville, Tenn.
WNRC 1440
Greensboro, N. C.
WNYC 570
New York City
WOAI 1190
San Antonio, Texas
WOAN 600
Lawrenceb'g, Tenn.
WOAX 1280
Trenton, N. J.
WOBT 1310
Union City, Tenn.
WOBU 580
Charleston, W. Va.
WOC 1000
Davenport, Iowa
WOCL 1210
Jamestown, N. Y.
WODA 1250
Paterson, N. J.
WOI 560
Ames, Iowa
WOKO 1440
Poughkeepsie, N.Y.
WOL 1310
Washington, D. C.
WOMT 1210
Manitowoc, Wis.
WOOD 1270
Gr. Rapids, Mich.
WOQ 610
Kansas City, Mo.
WOR 710
Newark, N. J.
WORD 1480
Batavia, Ill.
WOS 630
Jefferson City, Mo.
WOV 1130
New York City
WOW 590
Omaha, Nebr.
WOWO 1160
Fort Wayne, Ind.
WPAP 1010
New York City
WPAW 1210
Pawtucket, R. I.
WPCC 570
Chicago, Ill.
WPCH 810
New York City
WPG 1100
Atlantic City, N. J.
WPOR 780
Norfolk, Va.
WPRC 1200
Harrisburg, Pa.
WPSC 1230
State College, Pa.

WPSW 1500
Philadelphia, Pa.
WPTF 680
Raleigh, N. C.
WQAM 1240
Miami, Fla.
WQAN 880
Scranton, Pa.
WQAO 1010
New York City
WQBC 1360
Utica, Miss.
WQBZ 1420
Weirton, W. Va.
WRAF 1200
La Porte, Ind.
WRAK 1370
Erie, Pa.
WRAW 1310
Reading, Pa.
WRAX 1010
Philadelphia, Pa.
WRBC 1240
Valparaiso, Ind.
WRBJ 1500
Hattiesburg, Miss.
WRBL 1200
Columbus, Ga.
WRBQ 1210
Greenville, Miss.
WRBT 1370
Wilmington, N. C.
WRBU 1210
Gastonia, N. C.
WRC 950
Washington, D. C.
WREC 600
Memphis, Tenn.
WREN 1220
Lawrence, Kansas
WRHM 1250
Minneapolis, Minn.
WRJN 1370
Racine, Wis.
WRK 1310
Hamilton, Ohio
WRNY 1010
New York City
WRR 1280
Dallas, Texas
WRUF 1470
Gainesville, Fla.
WRVA 1110
Richmond, Va.
WSAI 800
Cincinnati, Ohio
WSAJ 1310
Grove City, Pa.
WSAN 1440
Allentown, Pa.
WSAR 1450
Fall River, Mass.
WSAZ 580
Huntington, W. Va.
WSB 740
Atlanta, Ga.
WSBC 1210
Chicago, Ill.
WSBT 1230
South Bend, Ind.
WSDA 1400
Brooklyn, N. Y.
WSGH 1400
Brooklyn, N. Y.
WSIS 1010
Sarasota, Fla.

WSIX 1210 Springfield, Tenn.
WSM 650 Nashville, Tenn.
WSMB 1320 New Orleans, La.
WSMD 1310 Salisbury, Md.
WSMK 570 Dayton, Ohio
WSOA 1480 Chicago, Ill.
WSPD 1340 Toledo, Ohio
WSRO 1420 Middletown, Ohio
WSSH 1420 Boston, Mass.
WSUI 580 Iowa City, Iowa
WSUN 900 St. Petersburg, Fla.
WSVS 1370 Buffalo, N. Y.
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 Streator, Ill.
WTAZ 1210 Richmond, Va.
WTBO 1420 Cumberland, Md.
WTFI 1450 Toccoa, Ga.
WTIC 600-1060 Hartford, Conn.
WTMJ 620 Milwaukee, Wis.
WWAE 1370 Hammond, Ind.
WWJ 920 Detroit, Mich.
WWL 850 New Orleans, La.
WWNC 570 Asheville, N. C.
WWRL 1500 Woodside, N. Y.
WWVA 1160 Wheeling, W. Va.
XEA 1200 Guadalajara, Jal.
XEB 670 Mexico City
XEE 960 Puebla, Pue.
XEF 1130 Oaxaca, Oax.
XEH 970 Monterey, N. L.
XEI 1000 Morelia, Mich.
XEN 730 Mexico City
XES 1200 C. Lerdo, Dgo.
XEX 920 Mexico City
XEY 550 Merida, Yucatan
XFA 540 Mexico City
XFC 630 Jalapa, Ver.
XFF 920 Chihuahua, Chih.
XFG 640 Mexico City
XFI 590 Mexico City
XFX 840 Mexico City
2BB 1200 Havana, Cuba
2LR 1280 Havana, Cuba
2MG 1050 Havana, Cuba
2OK 860 Havana, Cuba
2OL 1170 Havana, Cuba
2RK 950 Havana, Cuba
2TW 1110 Havana, Cuba
2UF 1090 Havana, Cuba
6BY 1150 Cienfuegos, Cuba
6KW 790 Tuinucu, Cuba
7SR 860 Elia, Cuba

Television Stations

			Kcs.
W1XAE	Springfield, Mass	Westinghouse Elec. & Mfg. Co	2000-2100
W1XAY	Lexington, Mass	Lexington Air Stations	2000-2100
W2XAL	New York City	Hotel Roosevelt	3091-9700
W2XBA	Newark, N. J	WAAM, Inc	2750-2850
W2XBS	Portable	Radio Corp. of America	2000-2100
W2XBT	Long Island City	Frank L. Carter	8195
W2XBV	Portable	Radio Corp. of America	2000-2100
W2XBW	Portable	Radio Corp. of America	2000-2100
W2XCL	New York City	Pilot Electric Mfg. Co	2000-2100
			2750-2850
W2XCO	New York City	Radio Corp. of America	2100-2200
W2XCR	Jersey City, N. J	Jenkins' Television Corp	2100-2200
W2XCW	Schenectady, N. Y	General Electric Co	2100-2200
W2XX	Ossining, N. Y	Robert F. Gowen	2000-2100
W3XK	Washington, D. C	Jenkins' Laboratories	2000-2100
			2850-2950
W3XL	Bound Brook, N. J	Radio Corp. of America	2850-2950
W4XA	Whitehaven, Tenn	WREC, Inc	2400-2500
W4XE	Winter Park, Fla	W. J. Lee	2000-2100
W6XAM	Los Angeles, Cal	Ben S. McGlashan	2000-2100
W6XBW	Los Angeles, Cal	P. S. Lucas	2140-4280
W6XC	Los Angeles, Cal	Robert B. Parrish	4500-4600
W6XF	Los Angeles, Cal	Calvin J. Smith	2700-2900
W6XN	Oakland, Cal	General Electric Co	2000-2100
W7XAO	Portland, Ore	Wilbur Jerman	2750-2850
W8XAV	Pittsburgh, Pa	Westinghouse Elec. & Mfg. Co	2000-2200
			2750-2850
W9XAA	Chicago, Ill	Federation of Labor	2000-2100
W9XAG	Chicago, Ill	Aero Products, Inc	2100-2200
W9XOA	Chicago, Ill	Nelson Bond & Mortgage Co	2000-2100
W9XAZ	Iowa City, Iowa	University of Iowa	2000-2100

The Short Wave Stations

For the info mation of those who are exploring the short-wave field, the following list of stations known to be broadcasting between 26.3 and 109.0 meters, is given. The definite wave length used by each station cannot be given as the experiments are being carried on at different frequencies. These frequencies are too high for the ordinary receiver and special instruments must be built in order to receive these stations. Most of the programs in this field are the same as those in the broadcast bands merely being duplicated at high frequencies in order that they may carry farther and each distant lands. The stations are designated by the initial letter X with a numeral preceding which indicates the radio district in which the station is located.

Call	Station	Owner	City and State	Meters	Watts
1 XAA	WRAH	Stanley N. Read	Providence, R. I.		7.5
1 XAE	WBZ	Westinghouse Elec. & Mfg. Co	Springfield, Mass.	70.0	
1 XAF	WEEI	Edison Elec. Illuminating Co.	Boston, Mass.		
1 XAG		Edison Elec. Illuminating Co	Boston, Mass.		
1 XY	WBRL	Booth Radio Laboratories	Tilton, N. H.	105-109	250
2 XA	WRMU	Yacht "MU-I" Grebe Co.	New York		
2 XAC	WGY	General Electric Co	Schenectady, N. Y.		
2 XAD	WGY	General Electric Co	Schenectady, N. Y.		
2 XAE	WGY	General Electric Co	Schenectady, N. Y.		
2 XAF	WGY	General Electric Co	Schenectady, N. Y.	32.7	
2 XAG	WGY	General Electric Co	Schenectady, N. Y.		
2 XAH	WGY	General Electric Co	Schenectady, N. Y.		
2 XAK	WGY	General Electric Co	Schenectady, N. Y.		
2 XAL	WRNY	Experimenter Pub. Co	New York	30.91	500
2 XAO		Atlantic Broadcasting Co.	New York	105.9	100
2 XAQ	WOR	L. Bamberger Co.	Newark, N. J.	65.4	50
2 XAW	WGY	General Electric Co	Schenectady, N. Y.		
2 XBA	WAAM	WAAM, Inc.	Newark, N. J.	65.18	50
2 XBH		Chas. G. Ungar	Coney Island, N. Y.	54.02	150
2 XE	WABC	Atlantic Broadcasting Co.	Richmond Hill, N. Y.	21.1	50
2 XZ		National Broadcasting Co	Bellmore, L. I.	49.15	50000
3 XK		C. Francis Jenkins Labs.	Washington, D. C.		
3 XL		Radio Corp. of America	Bound Brook, N. J.	59.96	30000
3 XN		Bell Telephone Laboratory	Whippany, N. J.		
4 XE		William Justice Lee	Winter Park, Fla.	200.	250
6 XA	KNX	Los Angeles Express	Los Angeles, Cal.	107.1	100
6 XAF	KNRC	Clarence B. Juneau	Santa Monica, Cal.	108.2	100
6 XAI	KGGM	Los Angeles Radio Club	Los Angeles, Cal.	66.04	50
6 XAK	KFWH	F. W. Morse	Chico, Cal.	108.2	50
6 XAL	KFQZ	L. E. Taft	Hollywood, Cal.	66.04	50
6 XAN	KRLO	Freeman Lang	Los Angeles, Cal.	105.9	250
6 XAR	KJBS	J. Brunton & Sons.	San Francisco, Cal.	32.	50
6 XAU	KHJ	Times-Mirror Co	Los Angeles, Cal.	104.1	50
6 XAZ		Nelson Radio Co	San Diego, Cal.	106.	50
6 XBA	KFSG	Air-Fan Radio Corp	Los Angeles. Cal.	108.2	250
6 XBE	KFBC	W. K. Azbill	San Diego, Cal.		
6 XBH	KFQV	W. E. Riker	Holy City, Cal.	31-106	50
6 XBR	KFWB	Warner Bros. Picture Studios	Los Angeles, Cal.	40-105	50
6 XBX	KFVD	McWhinnie Elec. Co	Venice, Cal.	105.	50
7 XAB	KFPY	Symons Investment Co.	Spokane, Wash.	105.9	
7 XAO	KWJJ	Wilbur Jerman, Inc.	Portland, Ore.	53-54	100
7 XC	KJR	Northwest Radio Service	Seattle, Wash.		
7 XO		Northwest Radio Service	Seattle, Wash.		
8 XAC	WHAM	Stromberg-Carlson Tel. Mfg. Co.	Rochester, N. Y.		
8 XAL	WLW	Crosley Radio Corp.	Cincinnati, Ohio	52.05	500
8 XAO	WJR	WJR, Inc	Detroit, Mich.	32.	75
8 XF	WHK	Radio Air Service Corp	Cleveland, Ohio	66.04	500
8 XJ	WEAO	Ohio State University	Columbus, Ohio	54.02	250
8 XK	KDKA	Westinghouse Elec. & Mfg. Co	Pittsburgh, Pa.	62.5	40000
8 XP	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	10-150	500
9 XAB	WNAL	R. J. Rockwell	Omaha, Nebr.	105.	50
9 XU	KOIL	Mona Motor Oil Co.	Council Bluffs, Ia.	61.06	500

PRINCIPAL FOREIGN STATIONS

Call Letters	Location	Wave Length	Call Letters	Location	Wave Length
AGC	Nauen, Germany	17.2	JB	Johannesburg, S. Africa	32.0
PCLL	Kootwijk, Holland	18.0	PCLL	Kootwijk, Holland	32.0
WOWO	Fort Wayne	22.8	3LO	Melbourne, Australia	32.0
5SW	Chelmsford, England	24.0	2XAI	Newark	43.0
2XAB	New York	24.0	WJSV	Mt. Vernon, Va	56.0
2FC	Sydney, Australia	28.5	AJG	Nauen, Germany	56.7
2ME	Sydney, Australia	28.5	GC	Paris, France	60.0
PCJJ	Hilversum, Holland	30.2	CJRX	Winnipeg, Manitoba	25.6

QUICK INDEX TO FAVORITE FEATURES

PROGRAM	CALL	DIAL NUMBERS			DAY	HOUR

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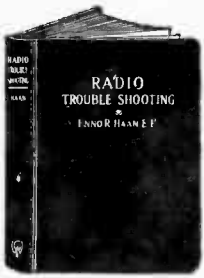

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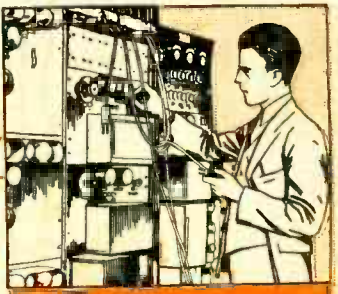

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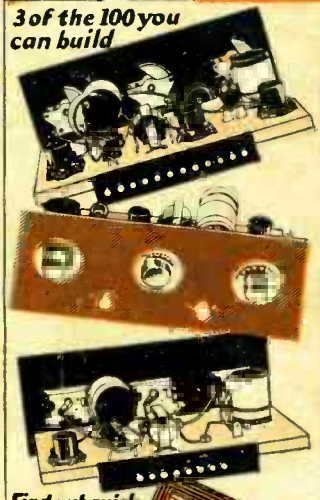

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