THE DECEMBER 1930

RADEX INDEX

The Magazine that Doubles the Pleasure of Radio



(25°)

To

A Very Merry Christmas and A Happy New Jear

From

Give RADEX for Christmas

E can't think of a thing that would give your friends so much pleasure for so little money as any one of the items listed below.

The December RADEX will have a Christmas and New Year greeting right on the front cover—just fill in your own and your friend's names and there is the finest kind of a holiday card and one that will give pleasure for months.



Let RADEX Be Your Santa Claus



For 25 Cents:

The Christmas number of RADEX, or The Radio Map of North America.

For 50 Cents:

A leatherette cover for RADEX or Map.

For 75 Cents:

Leatherette cover with RADEX or Map.

For One Dollar:

Leatherette cover with both RADEX and Map, or The next five issues of RADEX.

For 1.75:

Next five issues of RADEX, Map and Cover, or Next ten issues of RADEX and Map.

For \$3.50:

Two subscriptions of 10 issues (or one subscription of 20 issues) with Cover and two Maps.

Use the subscription blank on Page 18.

In the January issue: How to Add a Short Wave
Adaptor to Your Set

THE DECEMBER 1930



RADIO EX



REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER

Editor and Publisher

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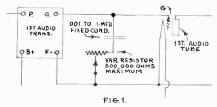
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ADDING Your Own TONE CONTROL

NE of the latest gadgets to put on your radio set, or have installed by a competent service man, is a tone control. Do not confuse this with a volume control, because it isn't such a thing, although it does reduce the volume of the higher tones. A tone control is just what its name implies, that is a control of the tone quality of a receiver. It would, however, be decidedly foolish to imagine that a tone control improve reception to such a marked degree that one can make a good set out of a poor one. No such miracle is suggested. "Well," you ask, "what does a tone control do and is it a worthwhile improvement?" To be sure a tone control is desirable; it improves reception by taking the harsh edge off a raspy tenor, the shrillness from a loud soprano, it softens the blatant effect of a blary, brass band and changes the pitch of a speaker who has a decidedly irritating nasal quality of voice.

How It Works

The tone control consists of a fixed condenser, of from .001 to .1-mfd. capacity, and a variable resistor having a maximum resistance of 500,000 ohms, the latter being installed on the panel of the receiver so that it is always accessible. Usually the connections are as shown in Fig. 1. One side of the fixed condenser is connected to the G-terminal



of the first audio transformer, that is the one following the detector stage. The other side of the condenser goes to the fixed side of the resistor, while the variable side of the resistor is connected to the F-terminal of the same audio transformer. Thus the condenser and resistor are connected in series while the whole arrangement is merely shunted across

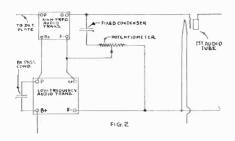
The Why and the How of It

the secondary winding of the first audio transformer. When the resistor is set so that all of its resistance is in the circuit, the reproduction is practically the same as it was before making the above-mentioned change in the wiring. But when the resistance is cut out by moving the resistor arm in the opposite direction, the higher frequencies passing through the secondary winding of the transformer and from there to the grid of the first audio tube, are partly bypassed through the fixed condenser so that a portion of their strength is absorbed.

In reality, a tone control merely suppresses the higher frequencies, these being more easily passed through the condenser than through the first audio tube when the resistance in the tonecontrol circuit is reduced to a point where it is less than that of the grid circuit of the first audio stage, and as you know, an electric current always follows the path of least resistance, as many of us do ourselves. A tone control will not actually deepen the bass notes nor lower the frequency range of the first audio transformer, but when the higher frequencies are suppressed, that is, reduced in volume, while the lower frequencies still retain their original values, the latter will seem comparatively louder than otherwise.

A Clever Arrangement

One radio manufacturer has incorporated a delightfully clever idea that really does permit the user to emphasize either the high or the low notes along any desired graduation. He uses two audio transformers for the first stage, one designed to pass the higher frequencies and the other the lower frequencies. The circuit is shown in Fig. 2. The tone-control unit or resistor, which in this case happens to be a potentiometer, is cut in the circuit in a somewhat similar manner as that already described. The transformers are



hooked up in series, that is, the primary of one is connected in series with the primary of the other, and the same is true of the secondaries. When the resistor arm is set halfway, a normal tone quality is obtained, both transformers being in action. Turning the resistor toward one side cuts down the higher tones and then most of the load is carried by the lower-frequency transformer. resulting in emphasis of the low tones. Turning the resistor in the opposite direction cuts the load off this transformer, transferring it to the one designed for higher frequencies with the result that high tones are emphasized.

It has been questioned whether a tone control is necessary or advisable in case where tone, as actually produced before the microphone, is already of a superior quality. Naturally it would be useless to attempt improvement of something that is already perfect, or nearly so. On such cases, one would immediately discourage the use of a tone control. But there are a few factors that must be taken into consideration, even when dealing with really good tone. In the first place radio engineers claim that in order to have perfect reproduction of tone at the receiving end, the volume should be exactly the same strength as the signal when picked up by the microphone at the studio. However, in the average home this is usually out of the question. Imagine having a 50-piece band playing full strength in a small 9 by 12 living room. For comfort then the volume must be greatly reduced. When this is done the low notes of the musical scale, to which the human ear is least sensitive, are lost, while the higher ones are retained, thereby throwing the tone quality entirely out of balance. This is true whether the music

being broadcast is perfect in respect to tone quality. Obviously, to restore the proper balance at the receiving end the higher tones should be reduced in volume in the same proportion as the low notes, which can be accomplished by the installation of a tone control. The distorted effect due to incorrect location of microphones can also be corrected to a great extent by using a tone control. Another reason why a tone control is a good gadget is that as long as radio broadcasting exists there will be screechy sopranos, squalking tenors and others

(Continued on page 16)



Salt and Peanuts of WLW. Frank Salt and "Peanuts" sing old songs, new songs, blue songs, love songs, trick songs, hick songs and all sorts of songs.

WAVE TRAP Increases SELECTIVITY

And Gives Greater Volume

ERE is a simple wave trap, which anyone, who likes to experiment a little, can readily make. necessary parts for its construction are a .0005-mfd. variable condenser, a bakelite or cardboard tube four inches in diameter and three inches long, some No. 18 d. c. c. wire for the primary winding and some No. 22 d. c. c. wire for the secondary winding. A small snap switch and a piece of bakelite, large enough to hold the condenser, will also be found very handy. Wrap from 40 to 45 turns of No. 22 wire on the tube, this winding being the one which is connected at both ends to the variable condenser. On top of this winding, wrap 10 turns of No. 18 wire. The latter winding is connected between the antenna and the antenna post of the receiver. You will find it handy to connect a snap switch across this winding so that the wave trap may be shorted out when not in use. With a long antenna, fewer turns are used on the primary winding. On a 100-foot antenna only five turns of primary are needed. Mount the condenser and the switch on the bakelite panel and fasten the tube holding the coil to the frame of the condenser.

I am using a Crosley Gembox A. C. receiver. My antenna is located in the attic of a 11/2-story house. It is about 35 feet in length and runs north and south. with the lead-in taken from the south end. My ground lead is about eight feet long and it is soldered directly to the city water mains. I find that my wave trap increases the signal strength from 75 to 100 per cent. I had often read the advertisements of certain manufacturers who claimed that the use of a wave trap increased signal strength, but this was rather difficult for me to believe. However, you can imagine my surprise, when after fixing up the wave trap described above, not only was interference cut down, but I actually found

that the wave trap increased the volume to a considerable extent.

Another Type

A slightly different wave trap, which I have also found highly satisfactory, makes use of low-loss form to hold the windings. The number of turns of the windings, and also the capacity of the variable condenser differ from the preceding wave trap. Get a bakelite tube four inches in diameter and 21/2 inches in length. With a scriber carefully make a mark entirely around the tube about one-half inch from each end. Then lay off four sections about one-quarter inch wide running across the tube lengthwise. These sections should be equidistant. Then take a drill and make a hole which will enable you to insert a small metalcutting blade of a scroll saw, and cut out the pieces between the sections laid off. The result will be a ring at each end connected by four one-quarter-inch crosspieces. Keep the cutouts as they must be used when winding the coil, or else the wire will stretch directly from one crosspiece to another and the resulting coil will be square, which is, of course, not desired. Get a smaller coil that fits snugly inside of the four-inch coil, even if you have to build the diameter up by several layers of paper. After the smaller coil is put in place the cutout pieces are put back in their original positions and the wire is wound on the outside. Apply a liberal coating of collodion to the wire so that it will be practically self-supporting when dry, at which time the inner tube can be removed and also the cutouts.

In this case the secondary winding consisted of 30 turns of No. 18 d. c. c. wire. The primary winding, consisting of 10 turns of No. 14 d. c. c. wire, is then wound on a 3½-inch tube, and collodion is again applied. When dry, slip the winding off the tube and mount it inside of the secondary winding. Sometimes difficulty is experienced in removing a collidion-treated coil from a tube. One

(Continued on page 25)

MEET FREDDIE RICH



THIS is the story of a career and a personality, productive, gracious and surprising. To introduce so elaborately such an unassuming young man as Freddie Rich is incongruous, but imperative. Behind his smooth-shaven face, kindly eyes and smile is a determination intransigent. The will of a fighter who, not yet thirty, has established himself in this highly competitive world as a director extraordinary, a successful composer of popular music and a picturesque bon vivant.

He comes from the East Side and frankly admits it. His experiences recall those of the boy in "Haunch, Paunch and Jowl." He fraternized with peddlers, policemen and street musicians; felt the raw edges of poverty; battled with gangs. He stole away from school to swim in the East River, but nevertheless found time to practice daily at the piano. But unwillingly—unwillingly, that is, until one day his father, to punish him, stopped his lessons and locked up the instrument.

Then Freddie's need for forbidden music grew so urgent that he became a steadfast disciple and practiced faithfully hour after hour until he was proficient. Soon he was reaching out with the mysterious facility of the true artist into harmony and composition.

At twelve he had a job on Second

Avenue in an old-fashioned "nickelodion." Tired fingers, poor ventilation, strain. Ten hours straight playing a day, with time off only to meet the requirements of the Board of Education, and \$13 a week for his services, \$12.50 going to his family and 50 cents for himself.

A hiatus here. A transitional period, with Freddie finally in the Damrosch Conservatory of Music, happy, and substantially laying the foundation for his future musical life.

The rest is a record of definite achievement. In 1922 at the Hotel Astor he was one of the first dance orchestra directors to conduct a program over the radio. In 1923 he was a recording artist and was composing numbers like "Animal Crackers." He was also gathering in dollars for his brilliant arrangement of the "Parade of the Wooden Soldiers."

Now as one of the principal conductors for the Columbia Broadcasting System, he does as many as sixteen different programs a week.

At rehearsals he is affable, winning, mild and resourceful.

"Come on, boys," he calls, and immediately his musicians respond with the best they have. He does not use a baton, but directs with hands and fingers superlatively plastic. He edits quickly: "Back eight measures as you'd actually play it," he orders. Then he stamps his feet, hard—so hard that they have to put felt on the stand to preserve it for other directors.

"Once more from the beginning," he shouts. "Give me the last eight bars that you are actually going to play.... 'Dum, dum, dum' alla breve...." And finally, when the grueling hours of rehearsal are over, he dismisses his men with—"Thank you very much, boys."

How to Add a Short Wave Adaptor Will be Found in the January RADEX

Collecting RADIO VERIFICATIONS

A NUMBER of inquiries come to us regarding verification cards and asking for information as to securing them. It is necessary only to listen to a program long enough to ascertain the title of the feature and the time at which it was received. Send this in a letter to the station which you heard with a 2-cent stamp and they will advise you whether or not it agrees with their records. Stations as a rule will not give verifications on chain programs, as these are known to every one and do not constitute a proper basis for verification.

Station Stamps

New readers unfamiliar with DX stamps write to ask us what the asterisk means in the Index by Frequencies. This indicates that the station so marked has notified us that upon receipt of 10 cents and the correct report of a program received from their station, they will send as verification an adhesive stamp. Many listeners are making a collection of these stamps, as proof of the stations which they have received. Most of the stations furnish a stamp issued by the Ekko Company, although a few stations have put out an individual stamp of their own.

Recently collectors have begun to gather these radio stamps in the same way that philatelists have been collecting postage stamps for many years. This has given rise to a controversy which has been raging pro and con in the last several issues of this magazine.

Several readers have taken violent objection to the claims of DX reception published in our columns. Karl Halpern, 1435 Coney Island Ave., Brooklyn, N. Y., believes that some of these criticisms are aimed at him and therefore sends to us letters and cards he has received from foreign stations which indicate beyond a doubt that he heard their stations correctly. Two of these verifications were from JOBK, Japan, and EAJ19, Spain. Those of us who have never been able to tune in a single station from across the water do find it difficult to realize that one located in such a large city as

The Hobby of Many Readers

Brooklyn can bring in a number of them. But Mr. Halpern submits evidence proving that he has done so.

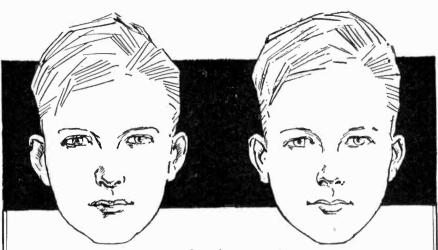
Another correspondent, Leon V. Garland, 216 West Franklin St., El Segundo, Calif., writes that he knows that his was the name referred to as heading the list of members of one of the stamp exchanges, but he says, "Although I have a number of Ekko stamps and have sold a number to parties wanting them, I have yet to find one person who is collecting them as proof of reception." Mr. Garland says that as proof of reception stamps are quite worthless, as he knows a number of stations that will send them just for the asking and 10 cents, and that he has known cases where proof cards from one station were sent to the stamp company with a request for a certain stamp of another station and the request was honored. Under such circumstances, of course, the possession of stamps constitutes in no way a proof of reception.

A second letter from Leonard L. Hoffman, 618 No. McBride St., Syracuse, N. Y., and a letter from J. W. Brauner, 17 E. Spring St., Williamsville, N. Y., seem to object more to the publicity given DXers than to their claims. As we have stated before if a person desires to claim unfounded reception he can do so without possessing a stamp. There are throughout the United States DXers who are making remarkable records in bringing in distant stations, including those across both the Atlantic and Pacific.

More Verifications

And Joseph Baskys, 1610 South Union Ave., Chicago, writes that his total of 978 stations were all verified by letter only and although he too sells stamps to collectors, he bases his count only on those verified by letter. He states further that he has shown all of his letters of foreign verification to Mr. Gilchrist,

(Continued on page 22)



One of these Boys Will Fail-IF

DOTH possess equal health and intelligence, both have qualities that make for success, but only one will succeed, for the other one stammers—he will fail. He is dominated by fear. He will dread to meet people, for he will lack the self-confidence so necessary to succeed in all walks of life, but especially in business; and the humiliation of his disability will result in an impairment of his nervous system—a condition often the beginning of ill health.

All stammerers are fully aware of their handicap; they know how it feels to be regarded as "different" from other people—and often laughed at. They know that their affliction sets them apart from all others who are normal. They know that stammering is a handicap which prevents their greatest success in business or their participation in social affairs. But all stammerers do not know that their handicap can be removed.

From childhood Benjamin Bogue was afflicted with a chronic case of stammering. For nearly twenty years he endured the experience common to all stammerers. But after long years of tireless effort, after endless nights of study and days of research he developed the method by which he cured himself.

STAMMERING

ITS CAUSE AND CURE

In the book offered below, Mr. Bogue relates the story of his own experiences, and describes how he restored himself to perfect speech. As stammering is due to a lack of co-ordination between the speech muscles and the brain, he quotes in the book the eminent authorities that for years recognized the well-known fact that stammering cannot be "outgrown,"

but instead becomes "ingrown," and that in order to restore perfect speech it is necessary to establish proper functioning of the speech musculature.

Beginning on page 72 will be found an explanation of the causes of stammering. The results of stammering are also fully described, giving the basis of the conviction held by leading speech authorities that stammering should be removed before it becomes deeply rooted in the muscular and nervous system. The text beginning on page 196 is devoted to a description of the Bogue Unit Method, which is based on the principle of coordination between the mind and the speech organs. It has restored perfect speech to stammerers everywhere. No drugs or medicine are used, and the method is highly endorsed by physicians.

In this book will be found the reason for the world-wide reputation of the Bogue Unit Method and its international recognition as the standard method for the cure of stammering and stuttering. Hundreds of helpful facts are embodied in this valuable book entitled "Stammering, Its Cause and Cure," a copy of which will be sent on receipt of ten cents mailed with the coupon.

Benjamin N. Boque, 14051 Boque Building, 1147 N. Illinois St., Indianapolis, Ind. Enclosed is 10 cents for which please send me the book "Stammering—Its Cause and Cure"—and full information regarding the Boque Unit Method for the cure of stammering and stuttering.
Name
Address

HERE'S What's Wrong with MY SET

Diagnosis by the Technical Editor

Are you able to give me definite information regarding the following: Is there a short-wave receiver manufactured that can be used by plugging into a Radiola superheterodyne set using UV 199 tubes? If so, please send me the name of the manufacturer or dealer so that I may get further information.

Short-wave adapters of the usual kind consist of a short-wave tuner. which is connected ahead of the detector tube, the r. f. stages of the receiver being entirely disconnected. Another method of adaption is to substitute short-wave coils for the regular coils used in the r. f. stages, both sets of coils being interchangeable. In the case of a superheterodyne, of which the intermediatestage coils or transformers are not interchangeable, and the oscillator coil is especially designed for the broadcast waveband, the use of an adapter becomes more complicated and is not really satisfactory. About the only method that could be used is a short-wave adapter connected ahead of the second detector, the output of the intermediate stages being disconnected. Such a tuner would, of course, have no r. f. amplification, and consequently the range of the receiver would not be very great. If you are interested in such a tuner write to the Aero Products Co., Ravenswood and Wilson Avenues, Chicago, Ill., requesting them for their their short-wave catalogue. If you wish good short-wave reception, it is best to build a separate receiver especially designed for shortwave reception.

Reducing Hum

When I bought a Radiola No. 60 superheterodyne about two years ago, I found that it had a very decided hum, I reduced this about ninety per cent by shunting a 2500-mfd., 9-volt filter condenser across the rectifier of my Magnavox dynamic loudspeaker. Recently, while having the set overhauled for necessary minor adjust-

ments of the intermediate transformers, trimmer condensers, and regeneration control, I had the radiotrician change the wiring to permit the use of 245 tube in the audio stage. Since this was done I find the operation of the set very satisfactory in regard to tone, volume, distance and selectivity. However, the former bad hum is back again and the condenser across the rectifier apparently has no effect at all. I am sure it is not the fault of the condenser, because I had it tested and I also tried a new one of the same type. I find that the hum is now in the set instead of in the speaker, which I proved by disconnecting the speaker and using phones. I have called the same man who worked on it before but he does not seem to be able to find the cause of the hum. I would like to ask if you can suggest where to look for the trouble and the method of correcting it.

The power unit of your receiver is not designed to supply power to a 245 tube. which requires from 180 to 250 volts of plate potential. Besides a 2.5-volt filament voltage the C-bias requirements are also different, and the 245 tube passes more plate current than the 171A. When used in conjunction with a power unit not intended for it, there are possibilities of overloading the unit, which invariably results in a. c. hum. According to manufacturer's data, the 245 tube is not interchangeable with the 171A tube or any other power tube, and it can only be used with apparatus especially built for it, The difference in tone quality obtained by using a 245 tube instead of a 171A, is so slight that it does not pay to make the change, and when you have complications, such as the introduction of the a. c. hum, I would certainly change right back again to the use of a 171A tube, which was the original arrangement and operated satisfactorily. Let well enough alone.

Probably Tube Trouble

I have a Kolster 6D battery-operated receiver and have gotten excellent results until recently. At present I am unable to get any stations other than the locals. I think that the fault lies in the tuning condensers, as I had to put a piece of metal next to one of them to get any volume even from locals. Kindly advise me how to remedy this fault.

It is impossible to completely diagnose your trouble merely from the fact that a piece of metal placed next to one of the tuning condensers increases the volume of your receiver. It is, however, evident from this fact that your r. f. tubes are not delivering their normal supply, and the pickup is poor. Get new tubes, inspect your aerial, insure a good ground, be certain that your batteries are up to their normal voltage, and you will have no more trouble.

Fitting Tubes to Set

I have a Franklin Consolette six-tube battery-operated set and would like to know what tubes would work best in it. I have three Rextrons, which have no numbers on them at all. I have a Radiotron UX201A, Cunningham CX301A, and one Airline GX200A, which is a detector tube and works better than any I have had. When I got the set it had a 200A Sonotron detector, but this wasn't good and I got a UX200A Radiotron and burned

it out the first time I put it into the socket.

Can you give me any advice?

Use a UX200A tube in the detector stage and 201A tubes in all other stages unless the last audio stage is designed for the use of a power tube and in that case use a power tube in this stage. providing the correct plate voltage and grid-bias voltage. First try a 201A in the power stage and if this is not satisfactory use a 112A tube, increasing the C-bias to nine volts and using 135 volts of plate potential on the last stage only. If the maximum B-voltage on your set is 90, you may be reasonably certain that the last tube should be a 201A. If it is a resistance-coupled set you may have to supply 135 volts of plate potential on the audio tubes and still use the 201A type.

Voltage Control

I have a Silvertone seven-tube screengrid receiver, that is a very good performer with the exception that it fades badly. I have noticed that your advice to readers having this same trouble is to use a voltage control between the source of house-lighting supply and the receiver. Believing that my trouble has been due to fluctuating house current, I have approached several radio

(Continued on page 20)



Norman Brokenshire, one of Radio's most popular masters-of-ceremonies, tunes in to a trio which introduced the new popular song, "Sing Something Simple" from the "Second Little Show." Left to right, Arline Judge, Ruth Tester and Fay Brady

Our Readers WRITE to the EDITOR

About Things They Learn

ANY letters of commendation have been received regarding the new RADEX Radio Map of North America. Our Canadian readers have been especially interested in securing a map showing the location of the U. S. stations as well as those in their own country. "It is indeed a splendid map and a worthy companion to RADEX," says Hedley Simmons, 22 Clyde St., Hamilton, Ont. "Certainly up to the high standard that you maintain for your publication," is the comment of Carroll C. Foltz, 303 Central Ave., No. Baltimore, Ohio. "I am very well pleased with the map. I put a circle around the cities I have heard and in this way I can see at a glance the ones I have and have not received," explains Jack Roberts, 211 Harvard Ave., Collingswood, N. J. "I have mounted the map on heavy cardboard and bound the edges with red tape. I use Moore map pins to mark the cities I have received. A blue-headed pin for those received but not verified and a red pin for those verified," is the method of use described by Thos. Van Buren, 32 Fourth Ave., Gloversville, N. Y.

"A word of praise for the RADEX radio map," says Tom Lovell, P. O. Box 209, Belton, Texas. "Anyone interested and caring to know what distance their radio is reaching out should have this map. For my own convenience, starting with my town as the center, I have made 100-mile circles covering the map. I can thus tell at a glance how far any broadcasting station is from me."

WCHI and KMAC

We still receive conflicting reports in regard to this Chicago station, but it seems to be pretty well agreed that it is now broadcasting over WORD, although D. E. Cosgrave, Hotel Strand, Chicago, believes they resumed broadcasting on Saturday, October 25th. Mr. Cosgrave says Chicago publications show WCHI

at 823 Tower Court, while WORD is at 2150 Lincoln Park West.

LeRoy House, P. O. Box 57, Plant City, Fla., a beginner in DXing, has now 56 stations verified and letters to 14 more outstanding. "WHAS writes me," says Mr. House, "that they have issued a set of five stamps for verification. WTIC, Hartford, uses their own station stamp as well as a nice letter in verifying my reception."

2LO Schedule

"A friend in England writes me," says George Lilley, 227 W. Bernard St., West Chester, Pa., "that 2LO broadcasts between 10 and 10:30 a.m. and 11:00 and 11:30 a.m., that is 5:00 to 5:30 and 6:00 to 6:30 EST. Tell your Eastern readers," adds Mr. Lilley, "to try for KGFJ, 100 watts, Los Angeles. They are on the air 24 hours a day. I received them quite a few times this fall around 5:00 a.m. Also logged KGAR, Tucson, Ariz., 100 watts, November 2nd, at 4:40 a.m., with a two-tube receiver."

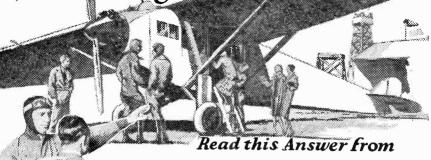
"Have logged from one to 36 stations from all the states except Maine and New Hampshire, so far I have never heard them," says O. C. Arnold, RFD 4, North Topeka, Kansas.

"Recently I purchased a Majestic 52, a wonderful little set, and in eight nights I have logged 65 stations on 50 channels, including CMC and CMK, Cuba, and KFI, KGO, and KNX, California," writes Everett N. Daniel, 3235 Hackberry St., Cincinnati, Ohio. "This is fairly good in view of the fact that I am located almost next door to a street car barn and I surely do know it when a car goes past or when they start a motor." Mr. Daniel complains that WKBU, the Cincinnati police station, supposed to be operated on 720 kcys. spoils everything for him around 1370.

"I can't DX like some of the readers of RADEX," admits W. E. Evans, 2 Woodland Road, Sewickley, Pa., "but I get a great kick out of trying. Four weeks ago I bought a Kylectron and in that time I have logged 184 stations on

(Continued on page 12)

"How can I get into Aviation?"



AWorld Famous Trans-Atlantic Pilot

To succeed in Aviation—to make BIG MONEY—it is not necessary to be a pilot. There will have to be thousands of pilots, of course. But for every plane that flies, there's an immediate need for forty trained men to fill important jobs right on the ground. There have to be construction, motor and instrument experts—managers, service foremen, salesmen—and skilled craftsmen of almost every kind. All of these jobs pay big money—all of them are stepping stones to still bigger money. Aviation offers more opportunity for good starting salaries and rapid advancement than any other field. It's the world's fastest-growing industry. And NOW, while there are plenty of places on the "ground floor"—is the time to get into it.

Get Your "Ground-work" NOW at Home, Hinton Will Train You

Walter Hinton, the world-famous Trans-Atlantic pilot, will train you QUICKLY—right at home—for a big-pay place in Aviation. In a course of instruction which experts pronounce the most remarkable ever produced, he will give you the facts about plane construction, motors, theory of flight, navigation, instruments, and a whole lot more. He gives you the practical knowledge you need to fill ANY job in ANY branch of Commercial Aviation. Furthermore, he helps you get that job—helps you turn his training into actual cash. All over the country, men who are now actively engaged in Aviation owe their start and their success to Hinton. Get the facts QUICK. Find out how he can train and start YOU. Mail the coupon now.

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was pilot of the famous NC-4, first plane to fly the Atlantic. He also piloted the first plane from North to South America—and was first aerial explorer of the

jungle regions of the Upper

Amazon. During the War he was one of the crack flying instructors of the U. S.

Navy. He is ready to train

you-right at home-as he

is training hundreds of others—for big pay and a

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Rush back t	o Washington	Quick!

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Name	
Street Age (Must be over	
State	

377 T

Wings of

Opportunit

Readers Write the Editor

(Continued from page 10)

every wave except 540, 880, 1030. I haven't enough stations to be classed a real DXer, but in any event I am not a radio liar and don't think that any of your readers who write you of their DX work are either."

"I have noticed some queer reception with Florida stations," says F. E. Wilkes, Ossining, N. Y. "For instance, I have had every Florida station except one, WJAX comes in as early as 6:00 p.m., and when WQAM was on 1240 they came in at 5:30 p.m., which is rather good reception, is it not? My set tunes down through the marine frequencies from 1500 to 1600 kcys., and through the experimental station frequencies down as far as the amateur band." Mr. Wilkes lists a number of the shortwave stations he has heard with his set.

The German Stations

The following interesting letter is from H. Walter Fricke, 560 30th St., No. Bergen, N. J.:

"In my June letter to you I stated that I was going to write to the German short-wave transmitter in Koenigs Wusterhausen requesting them to intersperse announcements in English. The reason for this was that one of your readers, Mr. P. J. Soper, 256 Burroughs Terrace, Union, N. J., had complained in your midsummer edition that the aforementioned German station never announces in English.

"Well, today I received a letter from the 'Program Committee of the German Broadcasting Companies' which, in translation, reads something like this:

"'Your letter, addressed to the main transmitter, Koenigs Wusterhausen, has been referred to us. Your detailed information on broadcasting conditions in your country has had our fullest attention, and we wish to thank you for the interest you are showing in the German shortwave transmitters. We regret that, at this time, we are unable to comply with your wish that the programs of the German short wave transmitter be announced in English, the reason for this being that this transmitter does not

send out its own program but picks up its features only from the regular German broadcasters. We would like to mention, however, that those special features which are sent out only by the shortwave transmitter are announced in English, too. We hope that, in the meantime, you have acquired a short-wave receiver, and that you are having good reception. We would be grateful to you for reports on reception, and hoping to hear from you again, we are —'."

"I noticed in the November RADEX that you have deleted KMAC," writes D. M. Patterson, 1502 No. Robinson St., Cleburne, Texas, "I am sending you a clipping from the Fort Worth paper which indicates that this station is still on the air." The clipping referred to describes the death of the radio technician of Station KMAC atop the Blue Bonnet Hotel during the broadcast of a program.

"KMAC should not have been deleted as they were on the air as late as October 10th, broadcasting from the Blue Bonnet Hotel in San Antonio," writes Donald Hill, Broken Bow, Neb. "I know this is so as I received them for several nights straight. As for WCHI, all the announcements I have heard were as follows: 'WORD broadcasting a program for the WCHI Broadcasting Corporation,' which think explains that controversy. WBOQ has been on the air nearly every night for the past week or two, testing for several hours with WHK. Cleveland. on 860. I notice that you still list WGGF as being at Picher, Okla. They have been at Coffeyville, Kans., for sometime. operated by the Coffeyville Journal."

Those Time Schedules

We have given the idea of compiling the hours on the air for all stations much thought, but have not as yet found a plan that would give this information in convenient form without occupying too great a bulk. Raymond N. Flood, 9 Chase St., Brattleboro, Vermont, suggests that we add an eight-page section and make it a part of RADEX. Many have written in to say that they would gladly purchase this information at 10 cents a copy or even 25 or 50 cents. To arrange this information so that reading

downwards the stations on the air at any certain hour of the day or night would be indicated, while reading from left to right would show the hours that any particular station was on the air, would require a total of 126,000 hourly design nations. As the most we have been able to figure to a page is 2720 such designations, this would require a book of 46 pages in order to convey this information in the most helpful way. This could. of course, be condensed if we were to make it read only one way, but the question is whether our readers would prefer to know what stations are on the air at any particular hour, or whether they would prefer to know the hours for any particular station. If any of our readers have any suggestion for the arrangement of this data we would be glad to hear from them.

Some Puzzling Stations

"I and others have been hearing a station giving the call letters WRDA on 560 kcys., but they do not give their location. I last heard this station on October 8th at 3 a.m." This is the report of Geo. H. Snyder, Jr., P.O. Box 202, Ridgewood. N. J. The only record we have of WRDA is that this call was given to the Buffalo Evening News and later changed to WBEN.

WNRC recently changed its call letters to WBAM, but several readers report hearing them give the call letters WBIG. Have they changed their call again?

A number of readers object to our deletion of WBOQ and state that they have recently heard this station testing after midnight with WHK, Cleveland. WHK has been carrying on experiments in synchronization with the key station of the Columbia System and evidently WABC has resurrected the old WBOQ call to be used while testing.

Martin Savitsky, 17 Liberty St., Shelton, Conn., asks for information about WRDS which was broadcasting police information; and Nicholas J. Hock, 20 Burnet St., Newark, N. J., wants data on WCF and WRBE. None of these stations is a broadcasting station, and no list is published so far as we know giving commercial calls alphabetically. As there are many thousands of

commercial stations it is out of the question to identify them without knowing their frequencies.

"WDBJ is listed in RADEX at 250 watts," says Jack Bachman, 204 No. 34th St., Philadelphia, Pa., "but the way they come in it hardly seems possible that they broadcast on such low power. I get them as loud and clear as some of the local thousand-watters."

"CNRL-CHNS broadcast on 910 kcys., but you always log them on 930," comments Geo. S. Buckman, Hillside and College Ave., So. Nyack, N. Y. These stations are listed correctly in accordance with data furnished us by the Dominion Government. But they may be testing a different frequency. Perhaps some of our Canadian readers can enlighten us.

"It seems since KMOX got its strong wave we will have trouble out this way," writes Chas. M. Konn, 4310 Seeboldt Ave., Detroit, Mich. "Sharp as my 12-tube set tunes I get a heterodyne from KMOX on WTAM's wave with lots of squealing, for which it seems that KMOX is to blame." We know of locations within a hundred miles of Cleveland in which KMOX now drowns out WTAM entirely. Both of these station are on 50,000 watts experimental. Certainly the situation in this vicinity would be cleared by reducing KMOX to 25,000 watts, and it is possible that WTAM may interfere with KMOX in other sections.

We understand that the Federal Radio Commission has instituted legal proceedings against the so-called outlaw stations WGM and WOOP. Guy B. Welsh, Reynoldsville, Pa., reports hearing WGM nearly every day between noon and six o'clock. They state they are located in Jeanette, so he says, although a letter received from this station sometime ago gave their location as Adamsburg. In view of the fact that the Commission has at last taken action we are deleting these two unlicensed stations in this issue.

"You show WEAF as having 50,000 watts and WJZ 30,000," says an unsigned letter from Fox Chase, Pa., "I get WJZ loud at any time, but WEAF is hard to receive and never comes in clear. It cannot be the set as other people

around here have the same trouble." Reception is no indication of power, as sometimes, due to peculiarity of location, a small-powered station is received with greater clarity and even with more volume than one with much greater power no further away.

"I noticed a paragraph in which you tell of Iowa listeners who get interference between WBBM and KFAB. There is little or no interference between these two stations in the daytime here in Nebraska, but in the past few weeks WBBM has been getting louder and louder until there is a slight growl at almost any time of the day," comments Donald Hill. Broken Bow. Neb.

"Why doesn't the Federal Radio Commission do something about WBBM and KFAB on 770 kcvs.?" asks Greer Mc-Crory, 606 So. 2nd St., W., Cedar Rapids, Iowa. "Practically all of the time they are on the air simultaneously and sometimes WJBT comes on and adds to the chaos. Listening to a football game from WBBM I hear music and advertising all jumbled together with the game. Please do see if something can't be done. Cedar Rapids police, like the police in Chicago. have radio-equipped cars, so they can get orders from headquarters and whenever the police station KGOZ broadcasts I can hear it above all other stations any place between 1300 and 1500 keys. Why is this? I have been told that this station broadcasts on 120 meters and I don't see why I can hear it on 200 to 215 meters. It is possible to hear these police orders any time they are broadcast." It is possible that the police broadcasting station is manned by amateurs, or rather beginners, and has not yet developed a technique that permits them to keep on their proper wave. Or you may be hearing a harmonic. In either case, it would seem that a complaint to the police authorities would lead them to correct the situation, for undoubtedly they do not desire to have the public hear their orders to cruising cars.

"I wonder if anyone has a record like this," asks Guy B. Welsh, Reynoldsville, Pa. "At 6:30 p.m. on October 26th I was listening in on the 1370 channel. Between 6:30 and 6:31 I dialed three new sta-

tions, WBGF, Glens Falls, N. Y., WBTM, Danville, Va., and WJBK, Detroit, Mich. In the same minute I heard the announcements of WLVA, Lynchburg, Va., and WCBM, Baltimore, Md. This seems impossible, but I have my family and several friends to prove it. Early Monday morning, I brought in KXO, a 100-watt station in California, and KGMB, a 500-watter in Honolulu." Mr. Welsh adds that his set is not working as well as formerly, but from these records we cannot see how anything serious can be wrong with it.

Improving RADEX

Quite a number of readers have written in to commend us for publishing the month's changes by themselves and we will try to maintain this feature. It will not always be practical, however, for the reason that the body of the magazine goes to press first and the data is held until the last possible moment for the latest corrections. Ralph Caldwell, Route 1, Clarksville, Pa., would like to have us include the requests for more power and different wave lengths. Aside from the fact that there are hundreds of these every month. most of which come to naught, we feel that this information would merely be confusing, as a mere request means nothing.

In the November issue we asked our readers to decide for themselves what the improvement was we were making that month. Only a few discovered that we are now arranging the stations alphabetically under the weekly programs, something that has long been requested by our readers, but something which makes a vast amount of work for the editors.

"Why not insert a few Canadian programs?" asks T. Crawford, 9-205 Alexander Ave., Winnipeg, Man. "And make the best book still better." Lack of space prevents our publishing individual station programs. If there are now any Canadian chains regularly broadcasting over several stations, we would be glad to learn of them.

"Would it be possible to include some of the powerful trans-Pacific stations in the regular index, as you do the Cuban stations," asks Don Turner, Box 655, Taft. Calif. "We distance-hounds on the Pacific coast pick them up quite regularly, I have had JOFK, JOGK, JCCK, JOBK, JOIK, JOHK, JOAK, 2YA, and 2FC several times." These stations will now be found in the Index of World Stations which is arranged by frequencies with space for dial numbers, which we feel sure will answer the purpose.

Some Inquiries

From Joseph Cabus, R. F. D. 3, Poughkeepsie, N. Y. "I and others up here are troubled at times with fading. and I wondered if the ground you recently mentioned as having been tested by the U.S. Bureau of Standards would aid my reception and help to check the fading." If the fading is due to natural phenomena, we doubt if anything can check it, but sometimes the action of a poor ground, loose connections, faulty power supply, poor tubes, etc., are taken for fading. Certainly every set should have a good ground and we know of no line of experiment which it will better pay to follow than that of various grounds.

"Could you tell me if aerials are made gold-plated and if they are on the market. I understand they are used on ship work. Would they be better than lacquered aerials?" asks M. E. Williams, Box 121, Timmins, Ont. Aside from such aerials being very expensive, we doubt if they would have any greater value than the enameled aerial. An enameled aerial is very much better than a bare wire, as the copper is protected from the action of soot. Some devices must be extremely well protected at sea because of the action of the salt water and salt air, causing corrosion.

"I recently heard the announcer at Springfield, Mass., give the call letters WBZ, WBZA, and a third set which I could not catch," states a reader from Helena, Mont. "I don't know of any other station belonging to Westinghouse on that wave length. Do you know anything about this or was I hearing things?" We do not know what the third station could have been unless it was W1XAZ, the short-wave relay station of the Westinghouse.

Set Servicing, Short Wave, Television, Sound Projection, Automobile Radio, Airplane Radio, Construction of Test Laboratories, Cause

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A question which has puzzled many is presented by Tom Lovell, previously quoted. "The frequencies measured in kilocycles are all the same distance apart, but the difference between meters is not the same. Stations on the higher frequencies from 1400 to 1500 are harder to separate on the dial than is the case in the lower frequencies. Is this because the difference between the meters is less?"

The fault is not with the meters, but with the condensers in the set. In order to accommodate the great number of stations on the air, the broadcasting band has been made wider than engineers have so far been able to devise condensers to cover. The average condenser will separate stations well only for about 75 of 100 points and these are usually in the center. To give perfect reception and separation of all stations with condensers as at present developed we ought to use broadcast frequencies of say 600 to 1400, but these 80 channels would not be sufficient for our American stations.

A New Chain

We have received publicity regarding the formation of a new chain on the Pacific coast, the United Broadcasting Company, whose first program was scheduled for November 1st. Headquarters of the chain are in Los Angeles. The nine stations which will comprise the new network are said to be the following: KXA, Seattle; KVOS, Bellingham; KMED, Medford; KXL, Portland; KORE, Eugene; KTAB, San Francisco, KFWB, Los Angeles; KTM, Los Angeles; KGB, San Diego.

"In the last issue someone reported hearing KMJ on the Columbia chain," says Richard Bogart, 1416 Linden St., Allentown, Pa. "I think I can solve this as KMJ carries KHJ's programs, almost every night, and KHJ is on the Columbia chain." This is verified by Leon V. Garland, El Segundo, Calif., who says, "KMJ is a member of the Don Lee System, and they are on the Columbia. Here are several other hundred-watters that are broadcasting chain programs, KFBK, KZM, KOH."

Station Information

"You will be interested to know that beginning Saturday, November 15th,

the NBC programs which have been heard over WGR will be transferred to WBEN," is reported by Valentine Sadowski, 188 Miller Ave., Buffalo, N. Y.," and the Columbia programs will be heard over WKBW and WGR. Radio station WMAK will broadcast local programs."

"If you haven't received notice already," writes Kenneth J. Louden, P. O. Box 533, Orangeville, Ont., "CJGC, of London, Ont., is starting broadcasting this week with a new transmitter of 1000 watts power."

"I have not heard radio station WCLB listed in RADEX on 1500 kcys. for the last ten months," says Gordon C. Hamilton, 142 E. 18th St., New York City, "although I frequently listen to other stations on that wave. Are you sure it has not been deleted?" It has not been deleted, but is it still on the air?

"How many of your readers have noticed that there are only two stations in Manitoba?" asks Richard W. Herzer, 338 Kingsway, Winnipeg, "and they are both owned by the Provincial Government. Manitoba as far as I know is the only place in North America where the broadcasting is entirely in the hands of the Government. How they can do this legally is more than I can see."

"In September, 1930, I received WJAX on 1260 kcys. Their letterhead and RADEX both show them on 900 kcys., but I heard them on 1260," says James L. Cavanagh, Jr., 101 No. Spring Ave., La Grange, Ill.

Adding Your Own Tone Control

(Continued from page 3)

who, unfortunately, cannot adjust their voice to the likes and dislikes of listeners and therefore it becomes a dire necessity for the listeners to either tune them out or use a tone control to sweeten them.

Anyone who can carefully trace the wiring of his receiver, can readily install the condenser and resistor constituting a tone control. These two parts are comparatively cheap and can be obtained at almost any radio shop. A radio service man will also be willing to make the necessary changes at a nominal figure.

A NEW PROBLEM for our PUZZLERS

A NUMBER of solutions to the October puzzle were received after the deadline date set for the 28th and consequently could not be considered Readers should bear in mind that we are now mailing the new RADEX to subscribers on the 25th of each month and therefore they must mail their answers before the 23rd in order to have them count.

In the October puzzle there was one call, 9-33 vertical, which could be filled with either KGIW or KGIX and either of these solutions was considered as correct. "The puzzles surely are interesting to work and a person learns a lot about the different stations while working them," comments Paul W. Douds, R. D. 1, Toronto, Ohio. "I enjoy all the puzzles which do not require recourse to the ancient history of radio for solution," says L. S. Miller, 5909 32nd St., N. W., Washington, D. C. "I think this is the easiest puzzle you have had for some time," comments Billy McQuade, 6617 Leland Way, Hollywood, Calif., but the joke is on Billy for he had 14-40 vertical wrong. On the other hand, Walter Kolojay, 5031 Northcote Ave., East Chicago, Ind., says he found this puzzle very hard but he got it right, "As soon as I get my RADEX," writes Walter, "I turn to the

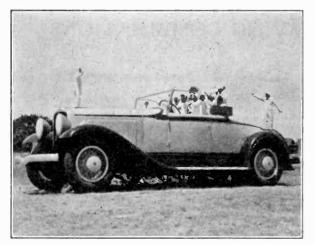
They Wanted a Hard One

puzzle page, for I find it very interesting I enjoy not only the puzzles but all the articles written about radio. These articles are educational and useful and I would like to see more of them published. The arrangement of the Radio Index is the best I have ever seen."

"I presume the September edition was used in making up the October puzzle for the October issue has no frequency with thirty-one 100-watters," points out George W. Kuehnle, 1469 York Street, Windsor, Ont. Readers should remember in working these puzzles, always to use the previous month's issue, for it is impossible to use the data of the edition in which the puzzle appears.

Those who sent in solutions in November and did not receive a copy of the December issue as a premium will undoubtedly find the reason why in this correct solution:

CKX WWL KJR
KMED C WGAL
YBMCRKWJKSD
CMW Y WLW
W W OAC W W
WGCMC KFKXO
J S WWG B C
WHB O WOW
KFSDWKYRBTK
WBAK O CMBZ
KGW WHO WOM



Here are Jean Goldkette's "Stude baker Champions' in a brand new President Roadster. But what's wrong with this picture? The car is a "prop" used in filming "Wild Flowers" a talking picture. It's 15½ times bigger than the regular model

CR CA CD CE X C CI CS C T CH CE C
_W _E _B _S _T _E _R _S _
_O _FR _A _D _I _O _

"Each issue your puzzles become more and more easy," thinks Clayton Huff, Martinsville, Ind. "I wish that you would get some good hard puzzle." We think it is not so much that the puzzles are getting easier as it is that our puzzlers are getting better! A number have written in to ask, however, for harder puzzles, so we have, through much lucubration (that's a hard one, anyway), brought forth the following. If you find it too hard, don't blame us.

So sure are we that you will find this a hard nut to crack that we are going to send for correct solutions your choice of either the radio map or the January RADEX.

The puzzle is to fill in letters in the squares so that from beginning to end

we will have the calls for the following stations:

In the capital of the Confederacy. The fishermen's station.

A memorial to a great socialist. (Reverse.) Increased its power in October to 5000 watts.

One of 32 100-watters on this wave. In U-13 on the new map.

Independence Broadcasting. (Reverse.) Ought to belong to the BPOE.

Named for a great Quaker

On a canal whose east end is west of the west end. 850 miles south of Minneapolis on the new map. (Reverse.)

On 1500. (This one is jumbled.)

Last three letters initials of railroad owner. (Reverse.)

In a state capital. Tune at noon.

Purdue. (Reverse.)

Columbia outlet municipally owned.

First on the last.

One of three 250 watters in its state. (Reverse.) Shares time with 20-kilowatter in another state.

In Thomasville. (Reverse.) On the Mississippi. The Queen's University.

On 1210. (Reverse.) In Ohio. (Jumbled.) On zero. (Reverse.)

HERE'S A LITTLE SLIP

that will bring pleasure to you or your radio friends Obey that impulse and sign it now

MONEY-SAVING COMBINATIONS

The Radex Press 1367 East Sixth Street, Cleveland, Ohio. Enclosed find \$_____ for which send me postpaid my choice of your offers as checked below: 25c One Radio Map of North America. 25c One copy of the next RADEX ☐ Trial subscription, next five issues of RADEX _____\$1.00 One year's subscription to RADEX, 10 issues, and Radio Map free ☐ Two subscriptions to RADEX with one leatherette cover and Radio Map, both free_ 3.50 .50 ☐ Leatherette Cover _____ 3.00 One copy "Radio Trouble Shooting," by E. R. Haan Write Name Plainly Street and Number City and State 43

December Changes

Power:

KFYR 550—Bismarck, N. D. 1000 to 500.

VAS 690—Louisburg, N. S. 500 to 10000.

CMK 730—Havana, Cuba. 3000 to 2000.

CJGC 910—London, Ont. 500 to 1000.

CMCQ 950—Havana, Cuba. 500 to 1000.

CMBZ 1010—Havana, Cuba. 100 to 150.

WTAX 1210—Springfield, Ill. 50 to 100.

KWSC 1220—Pullman, Wash. 500 to 1000.

Frequencies:

CMW —Havana, Cuba. 600 to 588.

XET —Monterrey, Mex. 620 to 630. VAS —Louisburg, N. S. 690 to 685.

XEN —Mexico City. 731 to 720.

XED —Reynosa, Mex. 770 to 960.

XFX —Mexico City. 840 to 860. CMBC—Hayana, Cuba, 1220 to 1130.

CMBC—Havana, Cuba. 1220 to 1130. CMQ —Havana, Cuba. 1220 to 1130.

Ownership

WJZ 760—New York City. To National Broadcasting Co., Inc.

WRC 950—Washington, D. C. To National Broadcasting Co., Inc. KGGF 1010—Coffeyville, Kans. To

Coffeyville Journal.

WRAX 1020—Philadelphia, Pa. To WRAX Broadcasting Co.

WTAM 1070—Cleveland, Ohio. To National Broadcasting Co., Inc.

WBNY 1350—New York City. To Pillar of Fire.

WIBM 1370—Jackson, Mich. To WIBM, Inc.

Deleted:

WGM 840—Adamsburg, Pa. WOOP 840—Jeannette, Pa.

Locations:

KGGF 1010—Picher, Okla. To Coffeyville, Kansas.

Reinstated:

KMAC 1370-San Antonio, Texas.

New

Rutland, Vt., 100 watts—Seward & Weiss Music Co.

Short Waves

FOR LESS \$5



EXPLORE the fascinating short-wave bands at next to no expense for no end of fun! You can do this with a short-wave converter, which works in conjunction with your broad-cast receiver. Parts cost less than \$5 yet this is a three-tube converter, using 227 tubes for AC or battery operation. Only one dial, so stations are not hard to find. You'll be surprised at the tremendous distances you can cover. Even European stations may be received.

Keep Posted!

ADIO WORLD, the first and only national radio weekly, which publishes a great amount of circuits for short-wave as well as broadcast reception, offers you an opportunity to find out all the particulars of the 3-tube converter circuit, with blueprint and list of few parts needed. Send \$1.00 for 8 weeks' subscription, one copy a week for eight weeks, beginning with the November 8th issue, and receive the blueprint free. The November 8th issue and subsequent issues you will receive tell the whole story of this marvelous converter.

DIDIO	WORLD.	145	w	45+h	St	New	York	City-

Enclosed please find \$1.00 for which send "Radio World" for 8 weeks, beginning with the November 8th issue, and send converter blueprint free.

Name	
Address	
City	State(RX)

What's Wrong with My Set?

(Continued from page 9)

dealers in this city asking about voltage controls and they state that they have a device that will keep voltage from passing above 110 volts, but it will not build up the voltage in case the house-lighting current drops below that point. If there is a voltage control on the market that will keep voltage on an even basis as outlined in your section. I will appreciate very much your furnishing me with the trade name together with the manufacturer's name.

The Radial Co., 50 Franklin Street, New York City, claim that their automatic voltage regulator provides a constant 110-volt potential regardless of slight line fluctuations. Write to this concern for particulars. If your fading is very pronounced it may not be due to fluctuating line voltage. Have a local electrician test the house-lighting circuit under a load at night, to see whether or not the voltage falls below par. Severe fading is often caused by one or more defective screen-grid tubes. Check for this condition before purchasing a voltage regulator.

Substituting Tubes

I have a set equipped with 224 r. f. tubes. Could these be replaced with a. c. Pentodes? I noticed that the voltage is very similar in these two tubes.

Never substitute tubes of any other value than those that are supposed to be used in the receiver. The voltage of tubes is not the only factor in comparing them. There are many other factors, such as C-bias, plate voltage, plate current and filament current, etc. Unless tubes agree in all such factors it is decidedly unwise to substitute one kind for another.

Replacing Transformers

I have a Steinite No. 40C receiver, purchased last December and in it there are eight transformers, including those for the push-pull audio-frequency amplifier. There are no transformers of this type available here for use on the Steinite receiver. Will you recommend other transformers that can be substituted?

The most advisable thing to do in your case is to write to the manufacturers of your receiver, explaining the trouble to

them and they will be glad to send you the necessary transformers to replace the defective ones in your set, at the regular rates. The name and address of this concern is The Steinite Labs., Radio Building, Atchison, Kansas.

Burst of Noises

I am the owner of the Federal Model E 45-60 radio receiver, powered by a Raytheon power pack. When I have the set turned on and am receiving a fairly clear program, a burst of line noises and static comes in and cuts the volume down that the station can barely be heard, When it does this I pull the detector tube out of the socket and push it back again, after which the program is all right for some time. I have replaced the volume control. a three-point 50,000-ohm potentiometer. and I have also replaced several detectors and other tubes, all to no avail. Could you possibly tell me where I could locate the trouble?

Noises of the kind you have experienced are often traced to one or more of several causes, namely, (1) internal short circuits of the intermittent kind inside of the tubes. Usually only one tube is the offender, Replace the tubes one by one until the defective one has been found. (2) If you have already done so and the trouble still continues, try a new rectifier in your power pack. (3) A leaky grid condenser may have to be replaced. (4) Look over every socket prong and see that the tube tips make good electrical connection with the socket prongs. Corrosion at these points may be responsible. (5) Also examine the wiring for a poorly soldered or a loose connection. (6) If you are accustomed to turning the volume control over to nearly its maximum volume, your set may be breaking into oscillation. In this case adjust the power pack so that it will deliver slightly less B-voltage. This will permit the volume control to be turned to the extreme right-hand position without causing the set to break into oscillation.

Reception Varies

I have a five-tube Hammerlund-Roberts receiver and it worked all right for me last winter, but ever since I installed eliminators for A and B supply, it has not been satisfactory. Sometimes it will pick up stations all right and other times I can't get anything outside of locals, which always come in when wanted. At one time stations of higher wave lengths come in much better than those of lower wave lengths. The length of my aerial is sixty feet, including the lead-in. I have tried a longer aerial but this does not seem to help. I am using a Knight B-eliminator and an Abox A-eliminator, both of which seem to be in good working condition. Can you kindly advise me where to look for trouble?

Variations in line voltage may be responsible for the varying degrees of efficiency you are experiencing with your receiver. This would be more pronounced in case your tubes are rather old. Therefore, it would be a good idea to have them tested and the old ones replaced. Another cause for your inability to get distant stations regularly is a purely natural one, being due to atmospheric

conditions. It is a well-known fact that weather conditions vary so much that greater distance is possible on one night than on another.

Balancing Condensers

Will you kindly tell me how to balance a Lyric radio receiver?

Balancing the variable condensers of a radio receiver is a task that requires some degree of skill and accuracy. If a radio service man is not available who can do this work for you, get a copy of the May, 1930, issue of RADEX, which gives complete instructions for balancing t. r. f.

Volume Control Trouble

I have a Kolster K-20 receiver which seems to operate satisfactorily on local stations, but when tuning in out-of-town stations it is necessary to turn the volume control as high as possible. I also find that the least reduction of volume cuts the stations out completely, which would seem to indicate that the volume control was

It's a pity but they're all a bit cuckoo as they're from the "Cuckoo Hour" of the NBC. From the well-known "left to right" we have Ambrosia Weems (Virginia Gardiner); Mrs. Pennyfeather (Mrs. Adelina Thomason); Prof. Weems (Ray Knight); Fellock Soames (Eustace Wyatt); Dolly Gray (Gladys Shaw Erskine); and sitting on the foreground, Ivan Firth and Arthur Campbell



completely bypassed. In other words, I have absolutely no volume control on out-of-town stations. New tubes do not remedy the fault. Please advise the probable causes of this trouble and the remedy.

It seems that the power-supply unit does not provide the maximum amount of voltage necessary for the operation of your set. This usually makes it necessary to turn the volume control up entirely as in your case. By increasing the plate voltage a trifle by adjusting the power pack this trouble can be overcome. If this does not help a new volume control of exactly the same resistance as the old one should be installed.

Street Railway Noises

I wonder if you would send me the necessary information how to reduce the interference caused by an electric railway. From the time a car approaches a point one-half mile from our house the trouble commences and it continues until it gets about the same distance beyond. Can you recommend anything to eliminate this noise?

Radio interference from external sources, which is picked up by the aerial of a receiver, cannot be eliminated at the receiver, but must be trapped at its source. Shielding the room containing your receiver will not prevent the aerial, which is outside, from picking up the undesired signals. Shielding the room containing the high-frequency apparatus which causes the trouble, is effective. provided, of course, the shield is grounded. Electric railways cause interference that is really beyond your control. The best method of minimizing your pickup of these interfering signals is to use an underground antenna such as the "Subantenna." Also use lead-sheathed cable for grounding your receiver instead of ordinary bare wire, which is usually used for the purpose. A wave trap could be used for trapping certain signals of a constant wave length, but in your case the signals are of all sorts of wave lengths and come in over the entire dial.

Attaching Phones

I have a Majestic Model No. 71 and it is not possible to use a pair of headphones with it in order to get distant reception. Can a change be made in the wiring to accommodate a phone plug?

The installation of a jack to permit the use of headphones on a receiver not already wired for earphone reception. involves some rewiring and it is best to take the set to a reliable radio dealer or serviceman to have these changes made. The B-positive and plate leads of the second audio tubes are led to the jack. which should automatically cut out the rest of the audio amplifier when the plug is pushed in. There are several methods of making such an installation, but in any case it is best to let your local radio dealer take care of it for you. For fuller information in regard to this problem, see the article in No. 38 RADEX for April, 1930.

Collecting Verifications (Continued from page 6)

Radio Editor of the Chicago Daily News DX Club. Mr. Baskys uses headphones only in making records and does not try to bring stations in with loudspeaker volume. Then too, he uses a loop and has often been able to tune in three different stations on the same frequency by turning the loop in their direction. He lists a number of foreign stations as having been received recently and offers to send his letters of verification from them. Among these are Auckland and Christchurch, New Zealand, Lima, Peru, and Manila, P. I.

To our controversy, Wm. James, 308 Pacific St., Brooklyn, N. Y., contributes the following: "It is no wonder that some folks have written in questioning various DX catches. Some of the yarns rank with the best fish stories. There must be a limit to what a radio set will do and I honesty believe some of these claims go too far. Don't think this is written by a sorehead who has no DX catches for I have plenty. But my log is nothing like some that have been printed. At the present writing my log is 484 verified catches but not one is off the North American continent. As to daylight reception, about the best I can do is Philadelphia and I have a good set. It may be that I have never been looking for these extraordinary catches at just the right time."

"Here is a little ancient history." goes on Mr. James, "that may throw a little light on this subject. Last year the Newark News Radio Club arranged with CJOC at Lethbridge, Alberta, for that station to put on a late program so that the DXers would have a chance to get this station. Well, the great night came and CJOC got letters telling how good they came in. Verifications were asked for by persons that 'heard' their program and one bozo even went so far as to say he listened to them for a full hour and heard the whole program. Now comes the joke: On the night in question CJOC had broken down and didn't go on the air at all."

Thos. Van Buren, 32 Fourth Ave., Gloversville, N. Y., summarizes the situation by saying "Keep up the DX department in RADEX; don't stop it, rather enlarge it for I agree with you most of these DXers tell the truth and just because a certain reception seems impossible this does not make it so, for, under the same conditions, other things being equal, anybody may receive these stations your DXers state they receive. So keep up the good work, publish all etters received and let the readers decide for themselves the truth thereof."

Some Inquiries

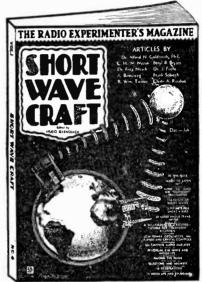
"I would like to know what distance to expect in the daytime," writes Richard W. Herzer, 338 Kingsway, Winnipeg, Man. "Here in Winnipeg the farthest we get with volume enough for programs, is Fargo, N. D., and Bismarck, 200 and 250 miles away, respectively. The farthest I have picked up with headphones is Yankton, S. D., 400 miles away. This distance seems to me to be very poor in comparison with other reports. About what distance is considered normal daytime reception?"

This is a pretty hard question to answer. Mr. Baskys, above quoted, states that two years ago he received KGU, Honolulu, at 4:30 p.m., while Mr. James stated that Brooklyn to Philadelphia was his best daylight reception. Daytime reception is very freaky and occasionally a distant station will be

The Radio Experimenter's MAGAZINE

SHORT WAVE CRAFT, Mr. Hugo Gernsback's latest radio magazine, has been called his greatest achievement in radio magazine publishing. SHORT WAVE CRAFT is the one and only real big magazine on short waves you have wished for so long. HERE IS PROOF!

ON ALL LARGE NEWS STANDS



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Among the contributors to SHORT WAVE CRAFT, we find Lee de Forest, F. H. Schnell, "Bob" Hertzberg, C. W. Palmer, H. W. Secor, Clyde Fitch, R. Wm. Tanner, Dr. Alfred N. Goldsmith, Beryl B. Bryant, C. W. H. Nason and others.

Regular Departments in SHORT WAVE CRAFT Photographic Section—Pictures of latest short wave sets and stations. Transmitters for Short Waves—How to Build Them. Short Wave Receivers—Construction data for all types and kinds. The Short Wave Experimenter. Television on Short Waves. Short Waves for the Broadcast Listener. Ultra Short Waves. How to Build Short Wave Aerials. The Short Wave Beginner. Aircraft Short Wave Sets. Short Wave Question Box.

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brought in in daylight which constant tuning will never bring in thereafter. We believe that consistent daylight reception over 300 miles cannot be expected although we know some of our readers will not agree with this statement.

Miss "Anonymous," of Helena, Mont., who "has a horror of publicity so please don't use my name," writes: "On 1110 kcys. I have been getting a foreign station. We have a 1931 Radiola, nine tubes, and every bit of power has to be used to take that station in. I hear everything, even the station's call letters, but because I want to understand them so badly, I can't! They sound like KPI but, of course, that's not right the only thing I feel sure about is the I. Spanish (I guess) is spoken and it sounds like it might be a Cuban station. Can you help me?" CMHI, Santa Clara, Cuba, is on 1110 and CMKD, Santiago, is on 1100, but it hardly seems possible it could be either of these as they are rated to use but 15 and 40 watts respectively. Has anyone else heard this station?

Cuban Stations

"Can you tell me the official wave of CMCH, Havana? Had them near 1200 kcys." writes Jack B. Schneider, Garwood, N. J. We have no record of CMCH; could it have been CMCA, 100 watts on 1225?

Several readers report hearing a station that announces in Spanish on 780 kcys. The nearest station of which we have any record which might be Spanish speaking is CMHC, Tuinucu, Cuba, which is supposed to use 791 kcys.

"I wonder if you know that the Cuban stations have made quite a general change in frequencies this month," asks Carroll C. Foltz, 303 Central Ave., No. Baltimore, Chio. "About all of the larger stations seem to have increased power and changed waves. There is one on 780 which interferes with WMC and I believe it is CMC, although I am not sure."

Roger D. Causse, P.O. Box 6688, Lester, Pa., Radio Operator on SS. Thermo, from Puerto, Padre, Cuba, and sends us a list of Cuban stations which was furnished to him by Station CMCQ.

Karl Halpern, Brooklyn, N. Y., also sends a list of Cuban stations and the Department of Commerce at Washington has just completed a check of the Island stations. From these lists our Cuban data is being corrected in this month's issue.

"On October 26th I heard a station on 1180 kcys. speaking what I am sure was Spanish. I thought perhaps it was Cuba or Mexico, but there is no station listed on or near that frequency," writes O. W. Desmond, 407 E. John St., Maumee, Ohio. "The program was some sort of a convention in a large hall with lots of speaking. They shut down about 11:20 p.m. Can anyone identify this station?"

A very small station, CMGB, Mantanzas, Cuba, with only 7.5 watts is rated as using 1185 kcys. This seems to be the only Cuban possibility. Our latest Mexican data gives no station nearer than 1200 kcys., XEA, Guadalajara, with 100 watts. Mr. Desmond has one of the new nine-tube Graybar Superhets, on which he logged 106 stations in about three weeks.

Mexican Stations

"XET, Monterrey, Mexico, is on 630 kcys. and not 620," says Jack P. Schneider, "XEN, Mexico City, comes in on 720 kcys.," says Miss Anonymous, "interfering greatly with WGN. Occasionally CKWX, at Vancouver, takes the stage and CMK is only a squeal."

"A few corrections on the Mexican stations, XEN, which you have on 730 is on 720. It heterodynes squarely on top of WGN every night. It evidently changed waves to prevent interference with CMK," writes Wm. E. Kessel, 411 No. 8th St., Temple, Texas. "XEM, which you have on 840 is on 765. I receive it practically every night. XFX, which you have on 840 is on 860. I heard its call letters clearly there."

"I logged Station XEW, Mexico City, sometime ago," states D. M. Patterson, 1502 N. Robinson St., Cleburne, Texas, "and wrote them regarding the program. I received a very nice letter in reply. They said they would like to hear from listeners in the U. S. A. and would answer all letters received by them.

"Will you please take notice that our radio station XED, located in Revnosa. Mexico, is to be inaugurated on November 8, 1930," writes A. D. Martinez, Station Manager. "We will operate on a frequency of 960 keys, with a rating of 10,000 watts. We will appreciate your making corrections in your station list." The slogan of the new station is the "Voice of Two Republics," and the invitation to the opening gives as one of the motives of the new station the cementing more firmly the already amicable relations enjoyed between the United States and Mexico. RADEX takes this opportunity on behalf of its many thousands of readers of extending its congratulations to the new station and trusts that it will be heard frequently in many homes throughout the United States.



FIGHT TUBERCULOSIS

Building a Wave Trap

(Continued from page 4)

method of overcoming this trouble is to wrap a layer of thin paper around the tube and then wind the wire over it. The tube can readily be slipped out of the paper wrapping as there is no adhesive holding these two together. Then the paper can carefully be peeled off. In this case the condenser used was originally one of .001-mfd. capacity. but I cut out some of the stator plates in order to broaden the distance between the stations on the lower end of the dial. After these alterations the capacity of the condenser is about .00075-mfd. I find that the above-described coil and condenser covers the entire broadcast range satisfactorily.

I have found it convenient to fasten the wave trap to the underside of the table which holds the radio set. Angle brackets are used for the purpose, being attached to the panel holding the condenser and also to the table.

Daylight Stations

A NUMBER of readers have written us that they have heard during the evening hours some of the stations which we list as daylight stations. There are certain stations which are limited entirely to the daylight hours; there are others which the Radio Commission terms "Limited Time Stations," which are regularly on daylight hours, but which under certain circumstances, as outlined in General Order No. 48 of the Commission, may operate during the evening.

General Order No. 48 reads as follows:

"A limited time broadcasting station is hereby defined as a station which, under its license from this Commission, is permitted to operate during hours allowed daytime broadcasting stations as specified in General Order No. 41, and in addition during certain time temporarily not used by the unrestricted station or stations on the same frequency. An example is the use of late evening hours by a limited time broadcasting station in the West after the

closing of an Eastern station on the same frequency.

"A limited time broadcasting station desiring to operate after sunset shall so notify the Commission, which will ascertain what hours the use of which is not desired by the unrestricted station or stations on the same frequency, and will thereafter authorize the operation of the limited time station accordingly, subject however, to the right of said unrestricted station or stations to reclaim the use of such hours upon reasonable notice to the Commission and to the limited time broadcasting station.

"A limited time broadcasting station

will not be permitted to operate at any time when its operation will cause heterodyne interference with other broadcasting stations assigned to the same frequency."

The Commission lists the following stations as having been granted the "Limited Time" privileges. We are indicating these stations by "Dn." KPCB, 650; WPTF, 680; KMPC, 710; KMMJ, 740; KVI, 760; WRUF, 830; KMO, 860; WCFL, 970; KFVD, 1000; WMAK, 1040; KFKB, 1050; WJAG, 1060; KWJJ, 1060; WCBD, 1080; WMBI, 1080; KSOO, 1110; WJJD, 1130; KTNT, 1170; WDGY, 1180; WHDI, 1180.

BROADCASTING RELAY STATIONS

A List of the Short Wave Transmitters

Location of Transmitter California	Call Signal	Frequency in Kilocycles (Meters in Parenthesis)	Power (Watts in Antenna)	Licensee and Address
	W6XAF	2,938 (112.1), 5,870 (51.11)	500	State Dept. of Agri-
	W6XAL	6,080 (49.34), 15,250 (19.672), 21,500 (13.953)	15,000	culture (Calif.) Pacific-Western Bdct. Federation
Colorado Denver	W9XA	830 (361)	12,500	General Electric Co.
Illinois	*****			
Addison Chicago	W9XAQ W9XAA	6,040 (49.67) 6,080 (49.34), 11,840 (25.34), 17,780 (16.873)		Chicago Daily News Chicago Fed. of Labor
Downers Grove	W9XF	6,020 (49.83), 11,800 (25.42), 21,500 (13.953)	5,000	Gt. Lakes Radio Bdct. Co., 72 W.Adams St., Chicago, Ill.
Iowa Council Bluffs	W9XU	6,060 (49.5)	500	Mona Motor Oil Co.
Massachusetts East Springfield	W1XAZ	9,570 (31.35), 2,398 (125.1)	10,000	West'g'e Elec& Mfg.Co.
•	W2XAL	6,040 (49.67), 11,800 (25.42),		Nat'l Broadcasting Co. Aviation Radio Sta.
Kearny	W2XCX	6,080 (49.34)	500	L. Bamberger & Co.
South Schenectady	W2XE W2XBR W2XAD W2XAF	11,840 (25.34), 15,280 (19.634) 6.020 (49.83)	20,000 1,000 25,000 40,000	Nat'l Brondcasting Co. Atlantic Bdct. Corp. Baruchrome Corp. Gen. Electric Co. Gen. Electric Co. Gen. Electric Co.
Mason	W8XAL	6,060 (49.5)	250	Crosley Radio Corp., 1325 Arlington St., Cincinnati, Ohio
Pennsylvania East Pittsburgh		(25.25), 15,210 (19.724), 17,780	40,000	Westinghouse Elec. & Mfg. Co.
Philadelphia	W3XAU	(16.873), 21,540 (13.928) 6,060 (49.5), 9,590 (31,28)	500	Universal Brdc. Co., 1940 Market St.
Canada Middlechurch, Man	CJRX	11,720 (25.6)	2000	James Richardson & Sons, Ltd.

KEY TO CHAIN STATIONS

C-Columbia

CFRB	KOL	WBEN	WFAA	WJDX	WOW
960 C	1270 C	900 N	800 N	1270 N	590 N
CKAC	KOMO	WBRC	WFAN	MIID	wowo
730 C	920 N	930 C	610 C	1090 C	1160 C
CKGW	KPO	WBT	WFBL	WJR	WPG
690 N	680 N	1080 C	1360 C	750 N	1100C
KDKA	KPRC	WBZ	WFBM	WJZ	WPTF
980 N	920 N	990 N	1230 C	760 N	680 N
KDYL _	KRLD	WBZA	WFI	WKBN	WQAM
1290 C	1040 C	990 N	560 N	570 C	560 C
KECA	KSCJ	WCAE	WFIW	WKBW	WRC
1430 N	1330 C	1220 N	940 C	1480 C WKRC	950 N
KFAB	KSD	WCAH 1430 C	WFJC 1450 N	550 C	600 C
770 N	550 N	WCAO	WFLA	WKY	WREN
KFH 1300 C	1130 N	600 C	620 N	900 N	1220 N
KFI	KSTP	WCAU	WGN	WLAC	WRR
640 N	1460 N	"LI70 C	720 N —	1470 C	1280 C
KFJF	KTAR	wcco	WGR	WLBW	WRVA
1480 C	620 N	810 C	550 C	1260 C	1110 N
KFKX	KTHS	WCFL	WGST	WLBZ	WSAI
1020 N	1040 N	970 N	890 C	620 C	1330 N
KFPY	KTŘH	WCKY	WGŸ	WLIB	WSB
1340 C	1120 C	1490 N	790 N	720 N	740 N
KFRC	KTSA	WCSH	WHAM	WLIT	WSM
610C	1290 C	940 N	1150 N	560 N	650 N
KFSD	KVI	WDAE	WHAS	WLS	WSMB
600 N	760 C	1220 C	820 N	870 N	1320 N
KGO	KVOO	WDAF	WHEC_	WLW	WSPD
790 N	1140 N	610 N	1440 C	700 N	1340 C
KGW	KWK	WDAY	WHK	WMAK	WSUN
620 N	1350 N	940 C	1390 C	900 C	620 N
KHJ	KYW 1020 N	WDBJ 930 C	WHO 1000 N	630 C	580 N
900 C	WABC	WDBO	WHP	WMAQ	WTAM
KHQ 590 N	860 C	1120 C	"1430 C	670 C	1070 N
KLRA	WADC	WDOD	WIBO	WMC	WTAR
1390 C	1320 C	1280 C	560 N	780 N	780 C
KLZ	WAIU	WDSU	l wißw l	WMT	WTIC
560 C	640 C	1250 C	580 C	600 C	1060 N
KMBC	WAPI	WEAF	WIOD	WNAC	WTMJ
950 C	1140 N	660 N	1300 N	1230 C	620 N
KMOX	WBAL	WEAN	WISN	WNAX	WTOC
1090 C	1060 N	780 C	1120 C	570 C	1260 C
KOA	WBAP	WEBC	WJAR	WOAI	WWJ
830 N	800 N	1290 N	890 N	1190 N	920 N
KOIL	WBBM	WEEL	WJAS	WOC	WWNC
1260 C	770 C	590 N	1290 C	1000 N	570 C
KOIN	WBCM	WENR	WJAX	WORC	WXYZ
940 C	1410 C	870 N	900 N	1200 C	1240 C

ENTER YOUR DIAL NUMBERS IN THESE SPACES

510	610	710	810	910	1010	1110	1210	1310	1410
520	620	720	820	920	1020	1120	1220	1320	1420
530	630	730	830	930	1030	1130	1230	1330	1430
540	640	740	840	940	1040	1140	1240	1340	1440
550	650	750	850	950	1050	1150	1250	1350	1450
560	660	760	860	960	1060	1160	1260	1360	1460
570	670	770	870	970	1070	1170	1270	1370	1470
580	680	780	880	980	1080	1180	1280	1380	1480
590	690	790	890	990	1090	1190	1290	1390	1490
600	700	800	900	1000	1100	1200	1300	1400	1500

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

Time is given by Eastern Standard: For Central Time, subtract one hour; For Mountain Time, two hours; and or Pacific time, three hours.

Programs of the National Broadcasting Company begin with WEAF and WJZ; those of the Columbia Broadcasting System with WABC. Other stations are in alphabetical order.

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

and the contest to date out	are subject to change uaity thereafter
Daily (Except Saturday and Sunday)	2:30-3:00 Columbia Educational Features
6:45-8:00 Tower Health Exercises	
WEAF CKGW WCAE WEEL WFL WBEN	KLZ KMBC KSCJ KVI WACC WAIU WBCM WBRC WCAO WCAU WCCO WDAY WDBJ WDOD WFAN WFBM WHY
WGY WRC 8:15-8:30 Morning Devotions	WEEL WEEL WILL WILL WILL
WEAF WAPI WCAE WCKY WCSH WFI	WIBW WISN WJAS WKBN WKRC WLAC WLBZ WMAL WMT WNAC WOWO WPG
WELA WREN WOV WHAS WIOD WIAD	WREC WSPD WTAR WWNC WYVZ
WJAX WJDX WLS WOW WPTF WRC WRVA WSUN WTAG WWJ	3:00-3:30 Columbia Salon Orchestra
WRVA WSUN WTAG WWJ 8:30-9:00 Cheerio	WABC KFJF KFPY KLZ KMBC KOL KRLD KSCJ KVI WADC WAIU WBCM
	WBRC WCAO WCAU WDAY WDRI WDOD
WEAF CKGW KPRC KSTP WAPI WCAE WCKY WCSH WDAF WEEI WFI WFLA	WEAN WFBM WGR WHEC WHP WIBW WISN WKBN WKRC WLAC WLBZ WMAL
WBEN WGY WHAS WIBO WIOD WIAR	WISN WKBN WKRC WLAC WLBZ WMAL WMT WNAC WORC WPG WREC WSPD
WJAX WJDX WMC WOAI WOW WPTF WRC WRVA WSB WSM WSUN WTAG	WMT WNAC WORC WPG WREC WSPD WTAR WWNC WXYZ
WRC WRVA WSB WSM WSUN WTAG WTAM WWJ	5:00-5:30 The Lady Next Door
9:00-9:15 The Quaker Man	WEAF KSD WBEN WFAA WHAS WRC
KPRC KŠD KSTP KTHS KVOO WAPI	6:05-6:45 Black and Gold Room Orchestra
WDAF WEBC WFAA WHAS WHO WJDX	WEAF WCAE WCSH WFAA WGY WHO
WKY WLS WMC WOAI WOC WOW WSB WSM WSMB WTMJ	WJAR WOC WRC WTAG WW.I
9:00-9:30 Something For Everyone	6:45-7:00 Uncle Abe and David WEAF KSD WAPI WCAE WCSH WDAF
WABC KDYL KFH KFJF KMBC KMOX	WEAF KSD WAPI WCAE WCSH WDAF WEBC WEEI WENR WFI WFJC WGY
KSCJ WADC WBCM WBRC WDBJ WDOD	WHAS WHO WJAR WJDX WMC WOC
WHP WJAS WLAC WMAQ WMT WPG WREC WSPD WWNC WXYZ	WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ
9:00-10:00 Morning Melodies	6:45-7:00 Literary Digest Tonics
WEAF WAPI WGY WBEN WHAS WOW	6:45-7:00 Literary Digest Topics WJZ KDKA WBAL WBZ WBZA WFLA
WRC WRVA WSM WTAM WWJ	WHAM WIOD WJAX WLW WPTF WRVA
11:15-11-30 Radio Household Institute	7:00-7:15 Amos 'n' Andy
WEAF KFKX KPRC KSD KSTP KTHS KVOO WAPI WCAE WCSH WEBC WEEI	WJZ CKGW KDKA WBZ WBZA WCKY
WBEN WGY WHAS WJAR WKY WLIT	WFLA WHAM WIOD WJAX WJR WLW
WMC WOAL WDC WEST WED WEN	WPTF WRC WRVA WSUN 7:30-7:45 Phil Cook, Quaker Man
WSMB WTAG WTAM WTMJ WWJ	WJZ KDKA KECA KPSD KGO KGW
12:00-12:30 Manhattan Tower Orchestra WABC KDYL KFH KFJF KFPY KMBC	KHQ KOA KOMO KSL KTAR KWK WBZ WBZA WEBC WHAM WRC WREN
KSCJ WADC WAIU WBCM WBRC WCAO	WBZ WBZA WEBC WHAM WRC WREN
WDAY WDOD WEAN WHP WIRW WISN	11:15-11:30 Columbia's Radio Column
WJAS WKRC WLAC WLBW WLBZ WMAL WMT WORC WOWO WPG WREC WSPD	WABC KFH KFJF KFPY KLZ KMBC
WTAR WXYZ	KOL KSCJ WBCM WBRC WCAO WCAU WCCO WDAY WDBJ WDOD WEAN WFBM
12:30-1:00 Columbia Revue	WIBW WISN WLBW WLBZ WMAL WMT
WABC KFJF KFPY KFRC KMBC KOL KSCJ_ KVI WADC WBRC WCAO WCAU	WNAC WNAX WORC WPG WREC WTAR
WDAY WDBJ WDOD WHEC WHP WIBW	WWNC WXYZ 11:00-11:15 Amos 'n' Andy
WISN WJAS WKBN WLBW WLBZ WMAL	KFAB KOA KPRC KSTP KTHS KWK
WMT WORC WOWO WPG WREC WSPD WTAR WWNC WXYZ WGR	WBAP WDAF WEBC WHAS WJDX WMAQ
12:30-1:30 National Farm and Home Hour	WMC WOAI WREN WSB WSM WSMB WTMJ
WJZ KDKA KFAB KFKX KOA KPRC	11:30-11:45 Amos 'n' Andy
KSTP KIHS KVOO WAPI WBAL WBZ	KECA KFSD KGO KGW KHQ KOMO
WBZA WDAF WEBC WFAA WFLA WHAM WHAS WHO WIOD WJAX WJDX WJR	KSL
WKY WLW WMC WOAI WOC WOW	Sundan
WPTF WRC WREN WRVA WSB WSM	Sunday
WSMB WSUN 1:30-2:00 Harold Stern and Ambassador Orchestra	1:30-145 Echoes of the Orient WJZ CKGW KFAB WBAL WLW WRC
WABC KFKJ KFPY WADC WAIU WBCM	WJZ CKGW KFAB WBAL WLW WRC WREN
WBRC WCAO WDBJ WDOD WEAN WFAN	1:30-2:00 Neapolitan Nights
WGR WHEC WJAS WKRC WLAC WLBZ WMAL WORC WOWO WSPD WTAR WWNC	WEAF KGO KSD KSL WCAE WDAF
WXYZ	WHAS WHO WIBO WOC WOW WTAM
	·· ·· -

1:30-2:00 Conclave of Nations	7:30-8:00 Williams Oilomatics
WABC KFPY KLZ KMBC KMOX KSCJ KVI WAIU WBCM WBRC WCAO WCAU	WJZ KDKA KOA KSL KWK WBZ WBZA WGN WHAM WJR WLW WREN
WDAY WDBJ WDOD WGR WHEC WHP	7:35-8:30 Major Bowes' Family
WORC WPG WREC WSPD WTAR WWNC	WFJC WFLA WGY WHAS WIOD WJAR
WXYZ	WJDX WKY WLS WMC WOAI WRC
2:00-3:00 Roxy Symphony Concert WJZ CKGW KDKA KFAB KSTP KWK	WSAI WSB WSMB WSUN WTAG WWJ 8:00-8:15 The World's Business
KYW WBAL WBZ WBZA WEBC WFAA	WABC KDYL KFPY KFRC KHJ KLZ
WFLA WHAM WHAS WIOD WJAX WLW WPTF WRC WREN WRVA WSB WSUN	KMBC KOL KRLD KSCJ WADC WAIU WCAO WDAY WDBJ WDOD WEAN WFBM
2:00-3:00 Cathedral Hour	WCR WHEC WHP WIRW WISN WIAS
WABC KDYL KFH KFPY KLZ KMBC	WKBN WLAC WLBW WLBZ WMAL WMT WNAC WNAX WORC WREC WTAR WWNC
KMOX KRLD KSCJ KVI WADC WBCM WBRC WCAO WCAU WCCO WDBJ WDOD	WXYZ
WEAN WFBM WHEC WHP WIRW WISN	8:00-8:15 Enna Jettick Melodies WJZ KDKA KFAB KFI KFSD KGW
WKBN WKRC WLAC WLBZ WMT WNAC WORC WPG WSPD WTAR WWNC WXYZ	KHQ KOA KOMO KPO KPRC KSL
2:30-3:00 NBC Artists' Service Program WEAF KSD KSL WDAF WGY WLS	KSTP KTAR KTHS KVOO KWK KYW WAPI WBZ WBZA WCKY WEBC WFAA
WEAF KSD KSL WDAF WGY WLS	WFLA WHAM WHAS WIOD WJAX WJDX
WOW WTAG WWJ 3-00-4:00 National Youth Conference	WJR WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSUN WTMJ
WJZ KDKA KFAB KFSD KGO KGW	8:15-9:15 Collier's Radio Hour
KOA KSL KTHS KVOO KWK WBAL WBZ WBZA WFAA WFLA WIOD WJAX	WJZ KDKA KFI KGW KHQ KOA KOMO KPO KSL KWK KYW WBZ
WBZ WBZA WFAA WFLA WIOD WJAX WJDX WJR WLS WLW WOAI WPTF	WBZA WHAM WJR WLW WREN
WREN WRVA WSB WSUN	8:30-9:00 Chase & Sanborn Choral Orchestra WEAF KPRC KSD KSTP KTHS KVOO
3:00-5:00 New York Philharmonic Orchestra WABC KDYL KFH KFJF KFPY KFRC	WCAE WCSH WDAF WEBC WFJC WFLA
KHJ KLZ KMBC KMOX KRLD KSCJ	WGY WHAS WHO WIBO WIOD WJAR
KVI WADC WAIU WBCM WBRC WCAO	WOW WRC WSAI WSB WSB WSMB
WCAU WCCO WDAY WDBJ WDOD WEAN WFBM WHEC WHP WIBW WISN WJAS	WSUN WTAG WTAM WTIC WTMJ WWJ
WKBN WKRC WLAC WLBW WLBZ WMAO	WBEN 9:00-9:15 Our Government, David Lawrence
WMT WNAC WORC WOWO WREC WSPD WTAR WWNC WXYZ WGR	WEAF KSD WCAE WCSH WEBC WEEL
4:00-4:15 Florsheim's Sunday Feature	WFAA WFJC WFLA WGY WHAS WHO WIOD WJAR WJDX WKY WLIT WMC
WJZ KDKA KFAB KWK KYW WBAL WBZ WBZA WHAM WJR WLW WREN	WOAI WOC WOW WPTF WRC WSAI
WBZ WBZA WHAM WJR WLW WREN 4:00-5:00 Dr. S. Parkes Cadman	WSB WSM WSMB WSUN WTAG WTIC
WEAF KGO KGW KHQ KOA KOMO	9:00-9:30 Majestic Theatre of the Air
KPO KPRC KVOO WCAE WCSH WDAF WEBC WEEI WFAA WFJC WFLA WBEN	WABC CFRB CKAC KDYL KFH KFJF KFPY KFRC KHJ KLRA KLZ KMBC
WHAS WHO WIBO WIOD WJAR WJAX	KOIL KOIN KOL KRLD KTSA KVI
WJDX WKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSUN	WADC WBBM WBRC WBT WCAO WCAU WCCO WDBJ WDEL WDOD WDSU WEAN
WTAG WWJ	WFBL WFBM WHK WIBW WISN WJAS
5:00-5:30 Rev. Donald Grey Barnhouse WABC KMOX KOIL KRLD WADC WCAU	WKBW WKRC WLAC WLBW WLBZ WMAL WNAC WOWO WPG WREC WSAZ WSPD
WFBL WJAS WKBW WKRC WMAL WMAQ WNAC WOWO WXYZ	WTAR WWNC WXYZ
WNAC WOWO WXYZ	9:15-10:15 Atwater Kent Hour WEAF CKGW KFI KGW KHQ KOA
5:00-6:00 Davey Hour WEAF CKCW KSD WCSH WGY WHO	KOMO KPO KSD KSL KSTP WAPI
WJAR WOC WOW WRC WSAI WTAG 5:00-6:00 National Vespers	WCAE WDAF WEEL WFAA WFL WGN WBEN WGY WHAS WHO WKY WMC
WJZ KFAB KGO KGW KHQ KOA	WOAL WOC WOW WRC WSAL WSB
KOMO KPRC KSTP KTAR KVOO KWK WBAL WBZ WBZA WEBC WFLA WHAM	9:30-10:00 Tone Pictures
WIOD WJAX WJDX WLW WMC WOAI	WABC KFJF KFPY KLRA KLZ KMBC KMOX KOIL KOL KRLD KSCJ WADC
WPTF WRC WREN WSB WSUN 5:30-6:00 The French Trio	WBCM WBRC WCAO WCCO WDAY WDBJ
KDVI. KEIE KEPY KLZ KMBC KSCI	
KVI WADC WBRC WCCO WDAY WDBJ WDOD WEAN WFBM WHP WIBW WJAS	WJAS WKBW WKRC WLAC WLBW WMAL WMT WNAC WNAX WORC WREC WSPD
WKBN WLBW WLBZ WMAL WMT WNAC	WTAR WWNC WXYZ
WORC WOWO WPG WREC WSPD WTAR WWNC WXYZ WGR	10:00-10:30 Toscha Seidel and Orchestra WABC KFJF KFPY KLRA KLZ KMBC
6:00-7:00 Catholic Hour	KMOX KOH, KSCI WADC WBCM WBRC
WEAF KECA KGO KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR	WCAO WCAU WDAY WDBJ WDOD WEAN WFBM WHEC WIBW WJAS WKBW WKRC
KVOO KYW WBAP WCAE WCSH WDAF	WLAC WLBW WMAL WMT WNAC WNAX
WEBC WEEI WFJC WFLA WGY WKY WHAS WHO WIOD WJAR WJAX WJDX	WORC WREC WSPD WTAR WXYZ 10:15-10:45 Studebaker Champions
WLIT WMC WOAI WOC WRC WRVA	WEAF KEI KGO KGW KIQ KOA
WSAI WSB WSM WSMB WSUN WTAG WTMJ WWJ	WEEL WELL WGN WBEN WGY WJAR
7:06-7:35 Iodent Big Brother Club	WOW WRC WTAG WTAM WTIC WTMJ
WEAF KSD WCAE WCSH WEBC WEEI WFJC WBEN WHO WJAR WLIT WLS	WWJ 10:30-11:00 Around the Samovar
WOC WOW WRC WSAI WTAG WTMJ	WABC WADC WCAO WCAU WDBJ WEAN WHEC WHK WJAS WKBN WLBW WLBZ
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WMAL WNAC WORC WPG	WSPD	WTAR	,	WDAF	WFJC	WFLA	WHAS	wно	WIOD
WXYZ 10:30-11:00 Lew White, Organist		WBZA	1	WJAR WOW WTAG	WFJC WJAX WPTF WTIC	WJDX WRC WWJ	WKY WSAI	WOAI WSMB	WOC WSUN
WHAM WJAX WJDX WJR 10:45-11:15 Sunday at Seth Parker's	WREN		8-15-	8:30 M	Ardi Gras KDYL WADC	KFPY	KFRC	KMBC	KRLD
10:45-11:15 Sunday at Seth Parker's WEAF CKGW KFSD KGO KOA KOMO KPRC KSTP	KGW KTAR	KHQ KYW	Į.	KSCJ V DOD	WADC WEAN	WRCM	WCCO	WDAY WISN	W DBJ W JAS
WCAE WCSH WDAF WEBC WFJC WBEN WGY WHAS	WEEI	WFI WIOD	Y	VINAC	WEAN WLAC WNAX	WORU	WLBZ WTAR	WMAL WWNC	WMAQ
WJAX WJDX WKY WMC WRC WSB WSM WTAM	WOC WTMJ	WOW WWJ	8:30-	9:00 ln; VJZ	gram Sha CKGW	vers KDKA	KFAB KYW	KOA WBZ	KPRC
11:00-11:30 Kaffee Hag Slumber Music WJZ KDKA KWK WBZ	WBZA	WENR	V	CTHS VEBC	KVOO WFAA WKY	KWK	WHAS	WIOD	WBZA WJAX
WHAM WJR WLW WREN 11:00-12:00 Back Home Hour			V	VJR VRVA	WSB	W LW WSM	WMC WSMB	WOAI WSUN	WREN WTMJ
WABC KFH KFJF KFPY KMOX KRLD WCCO WDAY	KHJ WDBJ	WDOD	V	VABC	KFJF	KFPY	KLRA WDAY	KMOX	KOIL
WFBM WHEC WIBW WISN WMAL WMT WNAX WPG	WKBN WREC	WKRC WTAR	1	VEAN	WBCM WFBL	WCD	WJAS		WLBW
WXYZ 11:03-12:00 Russian Cathedral Choir	wnin	WEDG	, , ,	VREC	WMAQ WWNC & P Gyps KSD	WMT	WNAC	WNAX	WORC
11:03-12:00 Russian Cathedral Choir WEAF CKGW KOA KSTP WFJC WBEN WGY WHAS	WBAP WIOD	WEBC WOW	8:30-9	VEAF	KSD	WCAE WGY			WEEI WLIT
WRC WSB WTAM WWJ			v	VGN VOC VTIC	WBEN WOW WWJ	WRC	WHO WSAI	WJAR WTAG	WTAM
Monday 3:00-3:30 Phil Napleon and His Band			9:00-9 V	9:30 Ma	ytag Orc KDKA KOMO	hestra KECA	KGO	KGW	кно
WJZ KDKA KPRC KWK WRZA WHAM WREN WSR	WBAL WSM	WBZ	ļ k	ČŎĀ CVOO	KOMO KWK	KPRC KYW	KSL WBZ	KSTP WBZA	KTHS WCKY
3:30-4:00 Sixteen Singers WEAF CKGW KSD KSTP	WBEN	WEJC	V	VOAT	KWK WHAM WREN	WSB	WJR WSM	WKY	WMC
WHO WOC WRC WTAM 4:00-4:30 Hetel Cosmopolitan Orchestra			9:00:9 V	9:30 Mi VABC	nneapolis KMBC WCAO	-Honeyw KMOX	ell Symp KOIL	hony Ho WADC	ur WBBM
WJZ CKGW KGO KOA KYW WAPI WBAL WFAA	KOMO WHAM	WJAX	v	VHK .	WISN	WJAS	WERR	WKRE:	WFBL WLBW
WJR WLW WREN WSB	WSM	WTMJ	9:30-1	VMAL 10:00 C	WNAC hesebrou	WOWO gh Rea l l	WPG	WSPD	WXYZ
WABC KDYL KFJF KFPY KLZ KMBC KMOX KOL KVI WADC WAIU WBCM WCAU WCCO WDAY WDBJ	KFRC KRLD	KHJ KSCJ	V	VJZ VBZA	hesebrou CKGW WHAM	KDKA WJR	KWK WLW	KYW WR EN	WBZ
WCAU WCCO WDAY WDBJ	WBRC WDOD	WCAO WEAN	9:30-1 V	0:00 B	WHAM burjois— KDYL KMBC WADC WDSU WKRW	Evening KFJF	n Paris KFPY	KFRC	КНЈ
WGR WHEC WIBW WISN WLBZ WMAL WMT WNAC WREC WSPD WTAR WWNC	WKRC WORC	WLAC WPG	K K	RLD	WADC	WBBM	WBT	KOIN WCAO	KOL WCAU
4:30-5:00 Wardman Park Hotel Orchest	ra	7/1 //		10110	11 11 11	11 11 11	11 DD 11	WGST WMAL	WHK WNAC
KMBC KMOX KOL KRLD	KFRC KSCJ	KLZ KVI	9:30-1	VOWO 10:00 G	eneral M	WSPD otors Fai	nily Part	KGW	MIO
WDAY WDBJ WDOD WEAN	WCAO WFAN WLBZ	WCCO WGR	•K	COA	KECA KOMO	KPRC WDAF	KGO KSD	KSL WFAA	KHQ KSTP WGN
WHP WIBW WISN WLAC WMT WNAC WORC WPG WTAR WWNC WXYZ	WREC	WMAL WSPD	7	VEAE VBEN	WGY	WHAS WMC	WEEI WHO WOAI	WJAR WOC	WJAX WOW
6:00-6:30 Mormon Tabernacle Choir	KESD	KGO	V.	KY RC TIC	WSAI WTMJ	WSB	WSM	WTAG	WTAM
KGW KOA KOMO KPO KTAR KWK WAPI WBAL	KFSD KSL WHAS	KSTP WLW	10:00-	10:30 F / ABC	Robert Bu KDYL	rns Pana KFJF	tela Prog KFPY	ram KFRC	кнј
WRC WSM			K	LZ	KMBC	KMOX	KOIL	KOIN WADC	KOL WBT
6:00-6:30 WSPD Commodores WABC KFJF KFPY KFRC KOL KRLD WAIU WBBM	KLRA WBCM	KLZ WBRC	W	HK	WJAS	KTSA WCCO WKBW	WKRC	WFBL WLBW	WFBM WMAL
KOL KRLD WAIU WBBM WCCO WDAY WDBJ WDOD WHP WKBW WLBW WMAL WSPD WTAR WWNC	WFAN WMT	$\begin{array}{c} \text{WFBL} \\ \text{WREC} \end{array}$	10:00-	MAQ 10:30 S	WNAC trombers KDKA	WOWO -Carlson	WPG Program	WSPD	WXYZ
7:00-7:15 Current Events			- K	HO	KUA	KOMO	KPRU	KTAR.	KGW KWK
KOL KSCJ KVI WBCM	WCAU	KLZ WDAY	W W	YW FLA	WAPI WHAM WKY	WHAS	WBZA WIOD	WCKY WJAX	WEBC WJDX
WISN WJAS WLBW WLBZ	WHP WMAL	WIBW WMT	W	/SB	wsm '	WSMB	WOAI WSUN		WRVA
7:30-8:00 Colonial Beaconlights	WWNC		10:00-	EAF	dventure WCAE	WCSH	WEEI WTAG	mes WGN WTAM	WJAR
WTAG	WGY	WJAR	10:30-	11:00 E	WRC mpire Bu KDKA	WSAI ilders KECA	KFSD	KGO	KGW
7:45-8:00 Anheuser-Busch Program KEJF KLRA KMBC KMOX KTRH WAIU WDOD WDSU WMAQ WMT WREC WSPD	KOIL WFBM	KRLD WHK	K	HQ	KOA	KOMO KYW	KPRC WBAP	KSL WBZ	KSTP WBZA
WMAQ WMT WREC WSPD	WXYZ	WIII	W	EBC	WHAM WTMJ	ŴĴŔ	WKY	WLW	WOAI
	KGW WSB	KWK WSM	10:30-	11:00 A	merican KFPY	KFRC	KHJ	KLZ	KNX
8.00.8.30 Helt Hour in Nation's Canital		KQA	· · · · · · · · · · · · · · · · · · ·	OII.	KOL WDAY WKRC	KSCI	WADC	WBBM WISN	WCAH WJAS
WEAF KECA KFSD KGO KOMO KPRC KSD KVOO	KYW	WCAE	W	KBN	WKRC	WLBW	WMT	WNAX	WSPD

10:30-11:00 Symphonic Rhythm Makers WEAF WCAE WCSH WDAF WEEI WA WJDX WMC WOW WRC WSB W	WRVA WSAI WSB WSM WSMB WSUN JAR WTAG WWJ
WTAM WW.I WBEN	TÄG 8:45-9:00 Fremier Salad Dressers WABC KDYL KFPY KFRC KHJ KLZ KMBC KMOX KOIL KOIN KOL KTRH
11:00-11:15 Will Osborne and His Orchestra WABC KDYL KFH KFJF KFPY KI	LZ KVI WADC WBT WCAO WCAU WCCO
WCCO WDAY WDRI WDOD WFBM WI	IBW WHK WJAS WKBW WKRC WLAC WLBW
WISN WLBW WLBZ WMAL WMT WI WORC WPG WREC WTAR WWNC W	NAX WMAL WMAQ WNAC WOWO WPG WQAM XYZ WSPD WTOC WXYZ
WEAR WSB WSMB WTMJ WWJ	EBC WJZ CKGW KDKA KWK KYW WBAL RC WBZ WBZA WCKY WHAM WREN
WSAI WSB WSMB WTMJ WWJ 11:30-12:00 Bernie Cummins and His Orchestra	
WEAF KSD KSTP WDAF WHO W	OC WABC KFH KMBC KMOX KOIL WADC WBBM WCAO WCAU WCCO WEAN WFBL WFBM WHK WHP WISN WAS WKBW
11:30-12:00 Sammy Watkins and His Orchestra	WEDG WIRW WMAI WNAG WOWO WEED
KMRC KOL KSCI WRCM WRRC WO	CAO WXYZ WBÉN
WCCO WDAY WDBJ WDOD WFBM W	HK 9:00-9:30 Eveready Program MT WEAF KGO KGW KHQ KOA KOMO
WCCO WDAY WDBJ WDOD WFBM W WIBW WISN WKRC WLBZ WMAL W WNAX WORC WPG WREC WTAR W	WNC KSD KSL WCAE WCSH WEBC WEEI
WXYZ	WJAR WJDX WMC WOC WOW WRC
12:00-1:00 Phil Spitalny and His Orchestra WEAF KSD KSTP KYW WDAF W. WHO WKY WOC WRC WSM W	FIC WSAI WSB WSM WSMB WTAM WWJ
WWJ	WEAF KECA KGO KGW KHQ KOA
Tuesday	WBAP WCAE WCSH WDAF WEBC WEEI
10:15-10:30 Through the Looking Glass WJZ CKGW KDKA KFAB KFKX K	WFI WFJC WBEN WGY WHAS WHO PRC WIBO WJAR WJDX WKY WMC WOC
KVOO KWK WBZ WBZA WHAM W	JR WOLD WILL WALL HOD HOMD
WKY WLW WOAI WREN 3:30-4:00 Golden Gems	9:30-10:00 Philes Symphony Concert
WEAF KSD KSTP WEEI WFJC W WJAX WOW WSUN WTAG WTAM W	FLA WABC CFRB KFH KFJF KMBC KMOX TIC KOIL KRLD KTRH KTSA WADC WBRC
4:00-4:30 Italian Idvll	WBT WCAO WCAU WCCO WDOD WDSU LZ WEAN WFBL WFBM WGST WHEC WHK
KMBC KMOX KRLD KSCJ KVI W.	ADC WISN WJAS WKBW WKRC WLAC WLBW
WDRI WDOD WEAN WHK WIBW W	CCO WMAL WMAQ WMT WNAC WOWO WPG ISN WREC WSPD WTAR WXYZ
WKRC WLAC WLBZ WMAL WMT W WORC WOWO WPG WREC WTAR W	NAC 10:00-10:15 Enns lettick Sanghird
WXYZ WGR	WNC WEAF KSD WCAE WCSH WDAF WEEI WFI WFIC WBEN WGY WHO WIBO WJAR WOG WOW WRC WSAI WTAG
4:00-5:00 Pacific Vagabonds WJZ KFAB KFSD KGO KOA KS	STP WTAM WWJ
	SM 10:00-10:15 Graybar's, Mr. and Mrs. WABC KDYL KFH KFJF KFPY KFRC
5:00-5:15 Rhythm Kings WABC KDYL KFH KFJF KLZ K KMOX KRLD KSCJ WAIU WBCM W	MRC KHI KIRA KIZ KMRC KMOX KOH.
WCAO WCCO WDOD WFBM WHP W	TISN WADC WAID WBBM WBRC WBT WCAO
WWNC WXYZ WGR	WEBM WGST WHEC WHK WISN WJAS
7:15-7:45 Musical Aviators Orchestra	WKBN WKBW WKRC WLAC WLBW WMAL LZ WNAC WOWO WPG WREC WSPD WTAR CCO WWNC WXYZ
KOIL KRLD KSCI WAIU WBRC W	CCO WWNC WXYZ HEC 10:00-10:30 Westinghouse Salute
WHP WIBW WISN WJAS WKRC W	ALAC WJZ KDKA KECA KFSD KGO KGW
WLBW WMT WORC WREC WTAR W	KWK KYW WAPI WBAL WBZ WBZA
7-30-8:00 Seconyland Sketches	
WTAG	JAR WJAX WJR WKY WMC WOAI WREN WRVA WSB WSM WSMB WSUN WTMJ 10:15-11:00 Peramount Publix Radio Playhouse
8:00-8:15 Troika Bells WEAF WDAF WEEI WFI WRC W	SAI WABC CFRB KDYL KFH KFJF KFPY
WWJ 8:00-8:30 Pure Oil Orchestra	KOIL KOIN KOL KSCI KTRH KTSA
WJZ KDKA KFAB KSTP KWK K	YW WADC WBBM WBCM WNRC WBT WCAO
WLW WMC WPTF WREN WRVA W	YSB WDOD WDSU WEAN WFBL WFBM WGST
WSM WTMJ 8:00-8:30 Blackstone Program	WHEC WHK WHP WIBW WISN WJAS WKBN WKBW WKRC WLAC WLBW WLBZ
8:00-8:30 Blackstone Program WABC KMBC KMOX KOIL WADC W WBT WCAH WCAO WCAU WCCO W	VAIU WMAL WMT WNAC WNAX WOWO WPG EAN WOAM WREC WRR WSPD WTAR WTOC
WEBL WHEC WHK WHP WJAS W	KRW WWNC WXYZ
WORC WPG WSPD WXYZ	NAC 10:15-11:00 Lucky Strike Orchestra WEAF KECA KFSD KGO KGW KHQ KOA KOMO KSD KTAR WCAE WCSH
8:30-9:00 Florsheim Frolic WEAF KOA KPRC KSD KSL K	STP WDAF WERC WEEL WEL WELC WELA
KTHS KVOO WRAP WCAE WCSH W	WDAF WBEN WHAS WHO WIBO WIOD WJAR WGY WJAX WJDX WKY WMC WOAI WOC
WHAS WHO WIOD WIAR WIAX W	VJDX WRC WRVA WSAI WSB WSM WSMB
WKY WMC WOAI WOC WOW W	VRC WSUN WTAG WTMJ WWJ

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WFJC WFLA WGY W WJDX WLIT WMC W WSAI WSB WSM W WWJ	STP WCAE WI	IOD 9:00-9:30 Van Heusen Program RC WARC KMRC KMOX KOIL KRLD WADC
11:30-12:00 California Melodies WABC KFH KFPY KI WBCM WBRC WCAO W WEAN WFBM WHEC W WKBN WKRC WLBW WNAX WORC WREC W	CCO WDBJ WI YHK WIBW WI YMAL WMT WN	SCJ
Thursd 9:45-10:00 Our Daily Food	•	WIOD WJAR WJAX WJDX WKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTMJ
WBAP WBEN WCAE W WFLA WGY WHAS W	MC WOAI WO	EBC JAR OC WJZ KDKA KWK WBAL WBZ WBZA WCKY WHAM WIBO WREN
10:00-10:15 Ceresota Program WEAF KSTP KYW W	BEN WCAE WO	WEAF WCAE WCSH WFI WBEN WGY CSH WIBO WJAR WRC WSAI WTAG WTAM SAI WWJ
10:45-11:00 The Manhatters WJZ KDKA KPAB K' WLW WREN WSMB 4:30-5:00 Melody Magic WABC KDYL KFJF K	WK WHAM WI FPY KFRC KL RLD KSCJ KV	KYW WAPI WBAI WBAP WBZ WBZA WEBC WHAM WHAS WIOD WJAX WJR LZ WKY WLW WMC WOAI WPTF WREN
WADC WAIU WBCM W WDAY WDBJ WDOD W WIBW WISN WLAC W WORC WOWO WPG W WXYZ WGR	EAN WFAN WE	CCO HP NAC WNC WNC WNC WNC WNC WNC WNC WNC WCAO WCAO WCAO WCAO WCAO WCAO WCAO WCA
KTAR WCAE WBEN W WKY WOC WRC W WTAG WTAM WTIC		SD
5:30-5:45 The Toddy Party WEAF CKGW KSD K WEEI WFJC WBEN W WRC WSAI WTAG W		CSH WMAL WMT WNAC WOWO WSPD WXYZ
7:00-7:30 Mid-Week Federation I WEAF KOA WHAS W WMC WOC WWJ		JAR WBZA WHAM WREN 10:00-11:00 RCA Hour
	NAC WXYZ	FBL WEAF CKGW KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTY KTHS KYW WAPI WCAE WCSH WDAF WEBC WEEI WFAA WFI WFJC WFLA
KTAR KTHS WAPI W WDAF WEBC WEEL W	GO KGW KE SD KSL KS VBAP WCAE WO VFI WFJC WO	HQ WEEN WGY WHAS WIOD WJAR WIAX STP WJDX WKY WMC WOAI WOW WOK WOW WOW WOW WOAI WWW WSAI WSAI WSAI WSAI WSAI WSAI WSA
WBEN WGY WHAS W WJAX WJDX WKY W	MC WOAI WO	JAR 10:30-11:00 Paul Whiteman and His Orchestra OC WABC KFPY KLRA KMBC KMOX KOIL SR KSCJ WADC WBCM WBRC WCCO WDAY

WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

8:00-9:00 Lucky Strike Orchestra WJZ KDKA KFAB KWK KYW WBAL WHAM WJR WREN

8:15-8:30 Voice of Columbia
WABC KFH KFPY KLRA KMBC KMOX
KSCJ WADC WBCM WBRC WCCO WDAY
WHEN WGR WHEC WDBJ WDOD WFBL WFBM WGR WHEC WIBW WISN WIAS WKRC WLAC WLBW WMAL WMT WNAX WORC WPG WREC WSPD WTAR WWNC WXYZ

8:30-8:45 Kaltenborn Edits the News
WABC KMBC KMOX KOIL
WCAO WCAU WCCO WEAN
WKBW WKRC WLBW WMAL WMAQ WNAC
WOWO WPG WSPD WXYZ

8:45-9:00 The Hamilton Watchman WABC KMBC KMOX KOIL WCAU WEAN WFBL WHK WADC WCAO WJAS WJJD

WADC WBCM WBRC WCCO WDAY WDOD WEAN WFAN WFBL WGR WHP WIBW WISN WJAS WKRC KSCJ WDBJ WDOD WEAN WFAN WFBL WGR WHEC WHP WIBW WISN WJAS WKRC WLAC WLBW WMAL WMT WNAC WNAX WORC WREC WSPD WTAR WWNC WXYZ 11:00-11:15 Palais d'Or Orchestra KSD KSTP WBEN WCAE WFI WJDX WOC WOW WRC WSAI WSMB WWJ WHO 11:30-12:00 Ted Fiorito and His Orchestra
WABC KFH KFPY KLRA KI KFPY KLRA KMBC KMOX WBCM WBRC WCAO WCCO KMOX KOIL WDAY KOL WDAY WDBJ WDOD WEAN WFBL WFBM WHEC WHP WISW WISN WKRC WLBW WMAL WMT WAAC WNAX WORC WPG WREC WSPD WTAR WWNC WXYZ 11:30-11:45Duke Ellington and His Orchestra
WEAF CKGW KSD KSTP WDAF WFI
WFJC WJDX WOW WRC WWJ

Friday

11:00-12:00 NBC Music Appreciation Hour								
WEAF	WJZ	CKGW	KDKA	KFAB	KOA			
KPRC	KSD	KSL	KSTP	KVOO	KWK			
KYW	WAPI	WBAL	WBZ	WBZA	WCAE			
WCSH	WDAF	WEBC	WEEI	WENR	WFAA			
WFLA	WGN	WWJ	WGY	WHAM	WHAS			
WHO	WIBO	WIOD	WJAR	WJAX	WJDX			
WJR	WKY	WLIT	WLW	WMC	WOAL			
WOC	WOW	WPTF	WRC	WREN	WRVA			
WSAI	WSB	WSM	WSMB	WSUN	WTAG			
WTAM	WTMJ							

1:00-2:00 Palais d'Or Orchestra WEAF KSD KYW V WRC WTAM WTMJ WGY WHO WOC

7:15-7:30 Ozzie Nelson and His Orchestra -(:30 OZZIE Neison and HIS Orchestra KFJF KFPY KFRC KLRA KSCJ WBCM WBRC WCCO WDBJ WDOD WEAN WFBM WGR WHP WISN WJAS WLBW WMT WORC WSPD WTAR WWNC WXYZ

7:45-8:00 Brownbilt Footlites

WJZ KDKA KFAB KWK WEBC WBZ WBZA WFLA WHAS WIOD WJAX WJDX WMC WOAL WPTF WREN WRVA WSB WSM WSMB WSUN WTMJ

8:00-8:30 Nestle's Program WJZ KDKA KFAB KWK WHAM WIBO WJR WLW WBZ WBZA WREN

8:00-9:00 Cities Service Concert Orchestra

WEAF CKGW KECA KGO KGW KHQ KOMO KPRC WCAE WCSH KSTP KSL WDAF WEBC WEEI WFAA WBEN WHO WOAI WOC WOW WJAR WKY WLIT WSAI WRC WTAG WTAM WTIC WTMJ WWJ

8:15-8:30 Grand Opera Miniature WABC KDYL KFH KI

KFH KFJF KFPY
KMBC KRLD KSCJ
WBCM WDAY WDBJ KFRC KHI KLZ KVI WADC WAIU WDOD WADC WAID WISH WISH WISH WISH WKRC WHEC WLBW WLBZ WMAL WMAQ WMT WNAX WORC WREC WSPD WTAR WWNC WXYZ WGR

8:30-9:00 Weed Tire Chain Program
WABC KFJF KMBC KMOX KOIL KRLD
WADC WCAO WCAU WCCO WEAN WFBL
WJAS WKBW WKRC WLBW WMAL WMAQ WNAC WOWO WSPD WXYZ

8:45-9:00 Natural Bridge Revue

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

9:00-9:30 Interwoven Pair

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

WTMJ
9:00-9:30 Cliquot Club Eskimos
WEAF KSD WCAE WCSH WDAF WEEI
WBEN WGY WHO WIBO WJAR WLIT
WOW WRC WSAI WTAG WTIC

9:00-10:00 True Story Hour

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

9:30-10:00 Del Lampe's Eversharp Orchestra

WEAF KSD WFJC WGN WCAE WCSH WDAF WBEN WGY WHO WEEI WJAR WLIT WOC WOW WRC WSAI WTAG 9:30-10:00 Armour Program KGW WJZ KDKA KFI KGO KHQ KSTP KOA KOMO KSL KWK KYW WEBC WFAA WHAM

WAPI WBZ WBZA WHAS WIOD WJAX WJDX WJR WKY WMC WPTF WLW WOAI WREN WRVA WSB WSM WSMB WTMJ

10:00-10:30 Crime Prevention Program
WEAF KSD WCAE WCSH WJAR WRC

10:00-10:30 Armstrong Quakers WJZ KDKA KFI KGO KOA KOMO KPRC KSL KGO KGW KHO KSTP KWK WBAP WBZ KYW WBZA WCKY WEBC WHAM WHAS WIR WKY WMC

WSMB WTMJ

WREN WSB

WTAR WXYZ

10:00-10:30 Radio Follies, Guy Lombardo WABC KDYL KFJF KFPY K KLZ KMCB KMOX KOIL K KVI WADC WBT WCAO W KFRC KHJ KOIN KOL KVI WADC WBT WCAO WCAU WCCO WDSU WEAN WFBL WGST WHEC WHK WHP WJAS WKBW WKRC WMAL WMAQ WNAC WORC WOWO WPG WRR WSPD WRR

10:30-10:45 Wrigley Football Program
WABC KMBC KMOX KOIL
WBT WCAO WCAU WEAN WFBL WHK
WJAS WKBW WKRC WLBW WMAL WNAC WOWO WPG WSPD WXYZ

10:30-11:00 RKO Theatre of the Air WEAF KFI KGW KFSD KGO KOMO KSD KOA KSL KTAR KTHS WCAE WCSH WDAF WEEL WFLA WBEN WGY WHO WIBO WIOD WJAR WJAX WJDX WKY WOAI WOC WOW WLIT WLW WMC WRC WRVA WSAI WSMB WSUN WTAG WSB WTAM WWJ

10:45-11:00 Phoenix Hosiery Program WABC KDYL KFPY KFRC KMOX KMX KOIL KOIN WCAO WCCO WDSU WEAN WJAS WKBW WKRC WLAC KLZ KMRC KOL WBBM WGST WHK WNAC WRR WXYZ

11:00-11:30 Will Osborne and His Orchestra
WABC KDYL KFH KFJF KFPY KLZ
KMBC KOL WBCM WBRC WCAO WDAY
WDBJ WDOD WIBW WISN WLBW WLBZ
WMAL WMT WNAX WORC WREC WSPD
WTAR WWNC WXYZ

11:00-12:00 Vincent Lopez and His Orchestra WEAF CKGW KOA WDAF WFJC WGY WLIT WMC WOC KSD KSTP WHAS WHO WOW WRC WCAE WJDX WSB WSMB WTIC WWJ WSM

11:30-12:00 Romanelli and His Orchestra
WABC KDYL KFH KFIF KFPY KLZ
KMBC KMOX KOL WBCM WBRC WCAO
WCCO WDAY WDBJ WDOD WEAN WHK
WBW WISN WKRC WLBW WLBZ WMAL
WMT WNAC WNAX WORC WREC WSPD WMAL

Saturday

10:30-11:00 New World Salon Orchestra
WABC KDYL KFJF KMBC KRLD KSCJ
WADC WAIU WBCM WCAO WCAU WDAY
WDBJ WDOD WEAN WFBM WHEC WHK
WISN WJAS WKBN WLAC WLBZ WMAL
WMT WNAC WREC WWNC WXYZ

1:30-2:00 Savoy Plaza Orchestra
WABC KLRA WADC WBCM WBRC WCAO
WDBJ WDOD WEAN WFBL WGR WHP
WJAS WKRC WLAC WMAL WSPD WTAR WWNC WXYZ

4:30-5:00 The Marionettes
WEAF KGO KOA KTAR WBEN WCAE
WGY WRC

 5:00-5:45 Warwick
 Hotel Orchestra
 KMBC
 KFPY
 KLRA
 KLZ
 KMBC

 WARC
 KFPY
 KLRA
 KLZ
 KMBC

 WARD
 WSAIU
 WBCM
 WBRC
 WCAO

 WCCO
 WDAY
 WDOD
 WFAN
 WFBL
 WGR

 WHP
 WISO
 WJAS
 WLBW
 WMAL
 WMT

 WPG
 WREC
 WSPD
 WTAR
 WWNC
 WXYZ

5:30-6:00 Blue Aces WJZ KWK WHAM WHAS WMC WSB WSMB

6:00-6:15 The Jameses
WEAF CKGW KGO KGW KOA KSD
KTAR WCAE WFI WGY WHAS WJAR
WMC WOW WRC WWJ

6:00-6:15 Tom, Dick and Harry
WABC KDYL KFH KFJF KFPY KLZ
KMOX KRLD KSCJ WADC WAIU WBCM
WBRC WCCO WDAY WDBJ WDOD WFAN
WHEC WHK WHP WIBW WISN WKBN
WLBW WMT WREC WTAR WWNC WGR

6:15-6:40 Smith Ballew and His Orchestra WJZ KFAB KWK WBZ WBZA

7:05-7:30 Whyte's Orchestra
WEAF KGO KGW KOA KSD WFI
WGY WJAR WTIC WWJ

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

7:30-8:00 Necco Surprise Party
WABC WEAN WFBL WHEC WKBW WLBZ
WNAC WORC

7:45-8:00 Pickard Family
WJZ CKGW KDKA KFAB KWK KYW
WBZ WBZA WHAM WLW WREN

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

8:00-8:30 Salon Singers
WEAF KSD WCAE WCSH WDAF WEEI
WFI WBEN WGY WHO WIOD WJAR
WJAX WOC WOW WRC WSAI WSMB

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

8:15-8:30 Dixie Echoes
WABC KDYL KFH KFJF KFPY KHJ
KMBC KSCJ WADC WBCM WCAO WDAY
WDBJ WDOD WFAN WHK WIBW WISN
WMAS WKBN WKRC WLAC WLBW WLBZ
WMAL WMT WNAX WORC WOWO WREC
WSPD WTAR WWNC WXYZ WGR

8:30-8:45 Dancing Yesterdays
WABC KFH KFH KFH KFPY KFRC KLRA
KMBC KOIL KSCJ WADC WBCM WCAO
WCAU WDBJ WDOD WEAN WFBL WGR
WIBW WISN WJAS WKRC WLAC WLBW
WMAL WMT WNAC WNAX WORC WPG

8:30-9:00 Fuller Man
WJZ CKGW KDKA KECA KFAB KGO
KGW KIQ KOA KOMO KPRC KWK
WBAL WBZ WBZA WHAM WIBO WJR
WKY WLW WREN

8:45-9:00 Wallace Silversmiths
WABC KMBC KMOX WBT WCAU WCCO

WDSU WJAS WMAL WMAQ WNAC WRR

9:00-9:30 Carborundum Hour WABC KMOX WCAU WHK WKBW WMAQ WNAC WXYZ

9:00-10:00 General Electric Hour

KFSD KGO KGW KHQ WEAF KFI KSTP KOA KOMO KPRC KSD KTAR WAPI WBAP WCAE KSL WCSH WDAF WEBC WEEL WFI WBEN WHAS WHO WJAR WJAX WKY WMC WOAT WIBO WOW WRC WRVA WSAI WSB WOC WSMB WTAG WTAM WTMJ WWJ

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

9:30-10:00 Columbia Educational Features

WABC KFH KFJF KFPY KHJ KLRA
KLZ KMBC KOLL KOL KSCJ WADC
WBCM WCAO WCAU WCCO WDBJ WDOD
WEAN WFBL WFBM WHP WIBW WISN
WJAS WKBW WKRC WLAC WLBW WMAL
WMAQ WMT WNAC WNAX WORC WSPD

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

10:00-11:00 Chicago Civic Opera WJZ KDKA WBAL WBZ WBZA WHAM

11:00-11:15 Troubadour of the Moon
WEAF KSTP WDAF WFI
WJDX WOC WOW WRC WSAI WTAM
WWJ

11:00-11:30 Jack Denny and His Orchestra
WABC KDYL KFJF KFPY KFRC KLZ
KMBC KOL KRLD KSCJ WBCM WBRC
WCAO WDAY WDBJ WDOD WEAN WFAN
WFBM WHEC WHK WHP WIBW WISN
WLBW WLBZ WMAL WMT WNAC WNAX
WORC WPG WREC WSPD WTAR WWNC

| 11:15-12:00 Bernie Cummins and His Orchestra | WEAF CKGW KOA KSD KSTP WCAE WDAF WFI WFJC WGW WOW WRC WSB WSMB WTAM WTMJ WWJ

12:00-1:00 Rudy Vallee and his Orchestra

WEAF KOA KSD KSTP WDAF WFJC WJDX WRC WSB WWJ

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KEY

Frequency in kilocycles. Wave lengths in meters. Second column symbols: * Verifies receptions 2c; sends station stamp 10c; † Verifies 2c; no stamp; † Does not verify; § Did not reply. Third column shows night power in watts. Fourth column symbols: D, daytime only; S, Sunday only; Stations dividing time have same small figures; X means station has been granted permit to increase power; + means station has greater power during day; CP indicates station has construction permit only; Some Cuban and Mexican stations have odd frequencies; Correct kilocycles shown in small figures; N means NBC chain; C means Columbia chain; Z has been granted permit to change frequency: Y given permit to move to another city. Dn—This daylight station may use evening hours under certain conditions.

540 kilocycles 555.6 meters

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

550 kilocycles 545.1 meters

KFDY 500 $^{1+}_{2+}_{1+}$ Brookings, S. D. St. Louis, Mo. KFUO 500 KFYŘ ş 500 Bismarck, N. D. KOAC KSD WGR Syracuse, Ore. St. Louis, Mo. Buffalo, N. Y. Cincinnati, Ohio 1000 2N 500 1000 WKRC 1000 XEY 547 105 Merida, Yucatan

WH

S. D. State College Concordia Theological Seminary Meyer Broadcasting Co. State Agricultural College Pulitzer Publishing Co. Buffalo Broadcasting Co. WKRC Incorporated Partido Socialista del Sureste

560 kilocycles 535.4 meters

KFDM KLZ 500 X+ Beaumont, Texas 1000 Denver, Colo. KTAB WFI 1000 San Francisco, Cal. Philadelphia, Pa. 1N+ 3+N 1N 500 WIBO 1000 Chicago, Ill. Philadelphia, Pa. WLIT WNOX WPCC 500 Knoxville, Tenn Chicago, Ill. Miami, Fla. X+ 3S 1000 500 WOAM 1000

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

570 kilocycles 526.0 meters

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

wH

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

580 kilocycles 516.9 meters

CFCL 500 Toronto, Ont. **CHMA** 250 Edmonton, Alta. --CKCL CKNC CKUA 500 Toronto, Ont. Toronto, Ont. * 3 4 D 500 500 Edmonton, Alta. KGFX KSAC WIBW 200 Pierre, S. D. 500 $^{2+}_{2+C}$ Manhattan, Kans. 500 Topeka, Kansas WOBU 250 Charleston, W. Va. Huntington, W. Va. _ _ WSAZ 250 * 250 Worcester, Mass.

Dominion Battery Co.
Christian and Missionary Alliance
The Dominion Battery Co.
Canadian National Carbon Co., Ltd.
University of Alberta
Dana McNeil
State Agricultural College
Topeka Broadcasting Assn., Inc.
WOBU, Inc.
WSAZ, Inc.
Telegram Publishing Co.

590 kilocycles 508.2 meters Havana, Cuba Spokane, Wash. Lincoln, Nebr. 1000 588 KHQ WCAJ WEEI +N 1000 500 1000 N Boston, Mass. t WKZO WOW Berrien Springs, Mich. Omaha, Nebr. 1000 D * 1000 īN Mexico City XFI 1000 591 Lynchburg, Va. CP 500

INDEX BY FREQUENCIES AND DIAL NUMBERS

600 kilocycles 499.7 meters CFCH 250 Iroquois Falls, Ont. 500

CJRM CJRW CNRO KFSD WCAC Moose Jaw, Sask. Fleming, Sask. 500 500 ŝ Ottawa, Ont. * 500 +N 2+ San Diego, Cal. Storrs, Conn. 250 250 Baltimore, Md. WGBS 250 2+ New York City Waterloo, Iowa Lawrenceburg, Tenn. WMT 500 C WOAN 500 WREC 500 Memphis, Tenn.

610 kilocycles 491.5 meters

San Francisco, Cal. Kansas City, Mo. KFRC WDAF 1000 C 1000 Philadelphia, Pa. Philadelphia, Pa. Cleveland, Ohio WFAN 500 2C WIP 500 WIAY

620 kilocycles 483.6 meters

KGW 1000 +NPortland, Ore. KTAR WFLA WLBZ $_{1+N}^{+N}$ 500 Phoenix, Arizona 1000 Clearwater, Fla. Bangor, Maine St. Petersburg, Fla. Milwaukee, Wis. 500 WSUN 1000 1+N +N 1000

630 kilocycles 475.9 meters

CFCT 500 Victoria, B. C. CJGX CNRA KFRU WGBF 500 Yorkton, Sask 500 Moncton, N. B. 500 ī Columbia, Mo. Evansville, Ind. ŧ 500 1 +C WMAL WOS Washington, D. C 250 Jefferson City, Mo. 500 1+Monterrey, Mexico Jalapa, Ver. 500 631

640 kilocycles 468.5 meters

KFI WAIU WOI 5000 NX Los Angeles, Cal. 500 Columbus, Ohio 5000 Ď Ames, Iowa XFG 2000 638 Mexico City

650 kilocycles 461.3 meters

Seattle, Wash. Nashville, Tenn. KPCB WSM 100 Dn 5000

660 kilocycles 454.3 meters

WAAW 500 DN Omaha, Neb. WEAF 50000 New York City

447.5 meters 670 kilocycles

5000 1000 WMAQ Chicago, Ill. 666 Mexico City XEB

80 Abitibi Power & Paper Co. Jas. Richardson & Sons, Ltd. Jas. Richardson & Sons, Ltd. Canadian National Railways Airfan Radio Corp. Conn. Agricultural College Monumental Radio, Inc. General Broadcasting System, Inc. Waterloo Broadcasting Co. WREC, Inc. WREC, Inc.

Columbus Commercial & Radio Co. Louis Wasmer, Inc. Nebraska Wesleyan University

Sria. de Industria, Commercio y Trabajo

Edison Elec. Illuminating Co.

Woodmen of the World

WKZO, Inc.

Abe Cohen

Don Lee, Inc. Kansas City Star Co. Keystone Broadcasting Co., Inc. Gimbel Bros. Co. Cleveland Radio Broadcasting Corp.

Y. J.

Oregonian Publishing Co. KTAR Broadcasting Co. Chamber of Commerce Maine Broadcasting Co., Inc. Chamber of Commerce Milwaukee Journal

Victoria Broadcasting Association Winnipeg Grain Exchange Canadian National Railways Stephens College Evansville on the Air, Inc. M. A. Leese State Marketing Bureau Mexico Music Ĉo.

Gobierno del Estado de Veracruz

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

Wescoast Broadcasting Co. National Life & Accident Ins. Co.

Omaha Grain Exchange National Broadcasting Co., Inc.

WMAQ, Inc. E. Buen Tono, S. A.

[37]

680 kilocycles 440.9 m	eters
KFEO * 2500 D St Jacomb	Mo. Scroggin & Co. Benk
KPO † 5000 N San Franc WPTF * 1000 N Dn Raleigh, N	isco, Cal. Hale Bros. & The Chronicle L. C. Durham Life Insurance Co.
690 kilocycles 434.5 m	eters WA
CFAC - 500 1 Calgary, A	lta. The Calgary Herald
CHCA 500 1 Col	Ita. Western Broadcasting Co. Ita. The Western Farmer
CJCJ 5000 1 Calgary, A	dta. Albertan Publishing Co. 1+d
1/CKGW 5000 2N Toronto. (Ont. Gooderham & Worts I ad
CPRY 5000 2N Toronto, (Ita. Canadian National Railways Ont. Canadian Pacific Railways
VAS 10000 685 Louisburg	Va. U. S. Navy N. S. Canadian Marconi Co.
700 kilocycles 428.3 me	eters
WLW * 50000 N Cincinnat XEZ 500 697 Mexico Cit	
	V
710 kilocycles 422.3 me	
KMPC - 500 Dn Los Angele WOR - 5000 - Newark, N	s, Cal. R. S. MacMillan Bamberger Broadcasting Service, Inc.
720 kilocycles 416.4 me	eters Eo 14
WGN - 25000 N Chicago, II XEN † 1000 Mexico Cit	I. Chicago Tribune
8WMC 500 722 St. Johns,	N. F. Wesley United Church
730 kilocycles 410.7 me	eters
CHLS 500 1 Vancouver. CHYC 5000 2 Montreal,	
CKAC - 5000 2C Montreal	Que. La Presse Publishing Co. 1 td
CKFC - 50 1 Vancouver	B. C. United Chunch of Court
CKWX † 100 1 Vancouver,	B. C. Sprott-Shaw Radio Co. B. C. A. Holstead & Wm. Hanlon
CMK - 2000 - Havana, Connection - 5000 2 Montreal,	iba Cuban Broadcasting Co. Hotal Diagram
=	
740 kilocycles 405.2 me	
KMMJ - 1000 Dn Clay Cente WSB - 5000 N Atlanta, Go	r, Neb. The M. M. Johnson Co. Atlanta Journal Co.
750 kilocycles 399.8 me	ters
TIX 50 San Jose, C WJR † 5000 N Detroit, Mi	osta Rica
760 kilocycles 394.5 me	
WEW - 1000 D St. Louis, N	10. St Louis University
W1Z † 30000 N New York (XEM 500 765 Tampico, M	National Broadcasting Co. Inc.
	Herbert A. Denny y Cia.
770 kilocycles 389.4 me	
KFAB * 5000 IN Lincoln Ne	br. KFAB Broadcasting Co.
WBBM * 25000 1C Chicago, III WJBT 25000 1S Chicago, III	The Atlas Co., Inc. The Atlas Co., Inc.
780 kilocycles 384.4 me	
CNRW - 5000 3 Winnipeg,	Manitoba Canadian National Railways
KELW 500 2 Burbank, C	al. Union Bank & Trust Co.

BY EDECLIENCIES AND DIAL NUMBERS

INDEX BY FREQUENCIES	AND DIAL NUMBERS	
KTM	Pickwick Broadcasting Corp. Shepard Broadcasting Service, Inc. Wisconsin State Journal Bdcsg. Co. Memphis Commercial-Appeal WTAR Radio Corp. WTAR Radio Corp. Mexico Music Co.	
790 kilocycles 379.5 meters		
CMHC - 500 791 Tuinucu, Cuba KGO † 7500 N San Francisco, Cal. WGY † 50000 N Schenectady, N. Y.	Frank H. Jones National Broadcasting Co., Inc. General Electric Co.	KCYS.
800 kilocycles 374.8 meters		880 mtrs.
WBAP * 10000 1XN Fort Worth, Texas WFAA - 50000 1N Pallas, Texas XEU - 101 - Veracruz, Mex.	Carter Publications, Inc. News & Journal Natalio Ulibarri	340.7 DIAL
810 kilocycles 370.2 meters		,
WCCO - 7500 C Minneapolis, Minn. WPCH - 500 D New York City	Northwestern Broadcasting, Inc. Eastern Broadcasters, Inc.	
820 kilocycles 365.6 meters		
WHAS † 10000 N Louisville, Ky.	Courier-Journal & Times	
830 kilocycles 361.2 meters	l l	
CMGA 300 834 Colon, Cuba KOA † 12500 N Denver, Colo. WHDH 1000 D Boston, Mass. WRUF * 5000 Dn Gainesville, Fla.	Leopoldo V. Figueros National Broadcasting Co., Inc. Matheson Radio Co., Inc. University of Florida	
840 kilocycles 356.9 meters		
CFCA † 500 1 Toronto, Ont. CHCT - 1000 - Red Deer, Alta. CKLC - 1000 2 Red Deer, Alta. CMC - 500 - Havana, Cuba CNRD - 1000 2 Red Deer, Alta. CNRT - 500 1 Toronto, Ont.	Star Publishing & Ptg. Co. G. F. Tull & Ardern, Ltd. Alberta Pacific Grain Co., Ltd., Cuban Telephone Co. Canadian National Railways Canadian National Railways	CUT C
850 kilocycles 352.7 meters		TU
KWKH * 10000 1 Shreveport, La. NBA 750 846 Balboa, Canal Zone WWL * 5000 1 New Orleans, La.	Hello World Broadcasting Corp. United States Navy Loyola University	ON DC
860 kilocycles 348.6 meters	eu 1/	TT
KMO	KMO, Inc. Atlantic Broadcasting Corp. WHB Broadcasting Co. Juan G. Buttner Secretaria de Educacion Publica	CUT OUT ON DOTTED LINES
870 kilocycles 344.6 meters	WH	
WENR - 50000 1N Chicago, III. WLS - 5000 1XN Chicago, III.	Great Lakes Broadcasting Co. Agricultural Broadcasting Co.	
880 kilocycles 340.7 meters	with	
CHCS - 10 4 Hamilton, Ont. CHML - 50 4 Hamilton, Ont. CHRC - 100 3 Quebec, Que. CJCB - 50 Sydney, N. S. CKC1 22.5 3 Quebec, Que. CKCV 50 3 Quebec, Que. CKOC - 50 4 Hamilton, Ont. CNRQ 50 3 Quebec, Que. CKOC - 50 4 Greeley, Colo. CRQ 50 4 Greeley, Colo. CNRQ 50 3 Quebec, Que. CKCX 50 4 Greeley, Colo. CNRQ 50 3 Quebec, Que. CKCX 500 - Oakland, Cal.	The Hamilton Spectator Maple Leaf Radio Co., Ltd. E. Fontaine N. Nathanson Le "Soleil," Ltd. G. A. Vandry Wentworth Radio & Auto Sply. Co., Ltd Canadian National Railways Midwestern Radio Corp. Tribune Publishing Co.	

KPOF WCOC WGBI WQAN WSUI	*	500 500 250 250 500	2 + 1 1	Denver, Colo. Meridian, Miss. Scranton, Pa. Scranton, Pa. Iowa City, Iowa
		000		iowa City, iowa

890 kilocycles 336.9 meters

			JULU		DOID TITUELLIS
	CFBO	*	50		St. John, N. B.
	CKCO		100		Ottawa, Ont.
	KFNF	*	500	2+	Shenandoah, Iowa
	KGJF	*	250		Little Rock, Ark,
	KUSD	*	500	2+	Vermillion, S. D.
	WGST		250	1+C	Atlanta, Ga.
	WILL	*	250	2+	Urbana, Ill.
	WJAR	*	250	+N	Providence, R. I.
ý	WKAQ		500		San Juan, P. R.
	WMAŽ	†	250	1+	Macon, Ga.
	WMMN	*	250	+	Fairmount, W. Va.
	XES	t	500		Tampico, Mexico

900 kilocycles 333.1 meters

				OCCIT TITCECTO
CMX	*	250	- 10	Havana, Cuba
KGBU	†	500		
KHJ	*	1000	C	Los Angeles, Cal.
KSEI	*	250		Pocatello, Idaho
WBEN		1000		Buffalo, N. Y.
WJAX	*	1000	N	Jacksonville, Fla
WKY	*	1000	N	Oklahoma City
WLBL	*	2000	D	Stevens Point, Wis.

910 kilocycles 329.6 meters

CFQC		500	1	Saskatoon, Sask.
CJGC	*	1000	2	London, Ont.
CNRL	*	500	2	London, Ont.
CNRS		500	1	Saskatoon, Sask.

920 kilocycles 325.9 meters

J = 0		C J C 1	C G 0	20.7 IIICCCIS
CMHD		250		Caibarien, Cuba
HHK	1	1000		Port au Prince, Haiti
KFEL	†	500	1	Denver, Colo.
KFXF	*	500	1	Denver, Colo.
KOMO	†	1000	Ν	Seattle, Wash.
KPRC		1000	D +N	Houston, Texas
WAAF		500	Ď	Chicago, Ill.
WBSO		500	D	Wellesley Hills, Mass.
WWJ	†	1000	N	Detroit, Mich.
XEX		500	923	Mexico City, Mex.
XFE		250	923	Villa Hermosa, Tab.

930 kilocycles 322.4 meters

		-J	•	OPP. I IIICCCIS
CJCA	*	500	4	Edmonton, Alta.
CFRC		500	,	Kingston, Ont.
CHNS	*	500		Halifax, N. S.
CKIC		50		Wolfville, N. S.
CKPR		50	3	Midland, Ont.
CNRE		500	4	Edmonton, Alta.
CNRH		500		Halifax, N. S.
KFWI		500	1	San Francisco, Cal.
KGBZ		500	2+	York, Nebr.
KMA	*	500	2+	Shenandoah, Iowa
KROW		500	1+X	Oakland, Cal.
WBRC		500	+C	Birmingham, Ala.
WDBJ	nds.	250	÷č	Roanoke, Va.
WIBĞ		50	ρČ	Elkins Park, Pa.
			_	wattio ratk, ru,

940 kilocycles 319.0 meters

710	1110	Cyci	CG	ory of the fels
KGU KOIN WAAT WCSH WDAY	† * ! * ' *	1000 1000 300 1000 1000 1000	CDNCC	Honolulu, Hawaii Portland, Ore. Jersey City, N. J. Portland, Maine Fargo, N. D. Hopkinsville, Ky.
WHA		750	Ď	Madison, Wis.

Pillar of Fire, Inc. Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times University of Iowa

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

CU: KL

Francisco Lavin
Alaska Radio & Service Co.
Don Lee, Inc.
KSEI Broadcasting Association, Inc.
Buffalo Evening News
City of Jacksonville
WKY Radiophone Co.
Wisconsin Dept. of Markets

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

Manuel A. Alverez
Republic of Haiti
Eugene P. O'Fallon, Inc.
Colorado Radio Corp.
Fisher's Blend Station, I.i.c.
Houston Printing Co.
Drovers Journal Publishing Co.
Babson Statistical Organization, Inc.
The Detroit, News
Excelsior Cia Editorial S. A.
Gobierno Del Estado d Tobasco

The Edmonton Journal, Ltd.
Queen's University
Halifax Herald, Ltd.
Acadia Academy
Midland Broadcasting Corp.
Canadian National Railways
Canadian National Railways
Radio Entertainments, Inc.
Dr. George R. Miller
May Seed & Nursery Co.
Educational Broadcasting Corp.
Birmingham Broadcasting Corp.
Birhardson-Wayland Elec. Corp.
St. Pauls P. E. Church

Marion A. Mulrony KOIN, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW, Inc. University of Wisconsin

725

KCYS.

1040 MTRS.

288.3

DIAL

950 kilocycles 315.6 meters CMCQ KFWB KGHL KMBC 1000 955 Havana Cuba Andres Martinez Warner Bros. Broadcasting Corp. 1000 Hollywood, Cal. Billings, Mont. Kansas City, Mo. Washington, D. C. Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. 1000 c -1000 National Broadcasting Co., Inc. Ñ WRC 500 960 kilocycles 312.3 meters TU FL Charlottetown, P. E. I. CFCY CFRB 250 The Island Radio Co. 2C Rogers-Majestic Corp., Ltd. 4000 Toronto, Ont. W. E. Burke R. H. Williams & Sons, Ltd. CHCK 30 Charlottetown, P. E. I. Pilot Butte, Sask. Regina, Sask. Regina, Sask. Regina, Sask. CHWC 500 CJBR CKCK CNRR CNRX ž Cooperative Wheat Producers, Ltd. 500 Cooperative wheat Producer Leader Publishing Co., Ltd. Canadian National Railways Canadian National Railways 33 500 500 4000 Toronto, Ont. XED Revnosa, Mexico International Broadcasting Co., Inc. 10000 970 kilocycles 309.1 meters Northwest Broadcasting System, Inc. 5000 Seattle, Wash. Monterrey, N. L. Chicago, Ill. 101 Ing. Constantino de Tarnava 1500 N Dn Chicago Federation of Labor 980 kilocycles 305.9 meters KDKA XEO Pittsburgh, Pa. Westinghouse Elec. & Mfg. Co. 983 Mexico City F. Armida y Cia. 990 kilocycles 302.8 meters Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. INY INY Springfield, Mass. 500 Boston, Mass. 1000 kilocycles 299.8 meters WHO WOC Culver City, Cal. Des Moines, Iowa Davenport, Iowa 250 Los Angeles Broadcasting Co. Central Broadcasting Co. Central Broadcasting Co. 5000 IN IN 5000 XEI Morelia, Mexico 101 999 Carlos Gutierrez M. 1010 kilocycles 296.8 meters50 50 Radio Association CFLC 3 Prescott, Ont. Waterloo, Ont. Havana, Cuba Havana, Cuba John Patterson CKCR Manuel y G. Salas CMBZ 150 ---250 Raul Karmen <u>-</u>2 Coffeyville, Kans. San Jose, Cal. New York City KGGF KOW WHN 500 Coffeyville Journal Pacific Agricultural Foundation, Ltd. 500 i 250 Marcus Loew Booking Agency wis George T. Barnes, Inc. Ĉ+ Columbia, S. C. 500 University of Oklahoma Norman, Okla. WNAD 500 2 New York City New York City New York City WPAP 250 1 Calvary Baptist Church Calvary Baptist Church WQAO 250 1 Aviation Radio Station, Inc. 1020 kilocycles 293.9 meters CU Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. 10000 Chicago, Ill. iN Chicago, Ill. Philadelphia, Pa. 10000 250 WRAX Broadcasting Co. 1030 kilocycles 291.1 meters 500 Montreal, Que. Vancouver, B. C. Canadian Marconi Co. Canadian National Railways 500 1040 kilocycles 288.3 meters w KRLD 1C 1N KRLD Radio Corp. 10000 Dallas, Texas 10000 Chamber of Commerce KTHS WKAR Hot Springs, Ark. Michigan Agricultural College East Lansing, Mich. Buffalo, N. Y. 1000 WMAK 1000 C Dn Buffalo Broadcasting Corp.

1			
1050 kil	locycles	285.5 meters	
KFKB KNX *	5000 Dn 5000 X	Milford, Kansas Hollywood, Cal.	KFKB Broadcasting Assn., Inc. Western Broadcast Co.
1060 kil	locycles	282.8 meters	WH
WWJJ WBAL * WJAG * WTIC †	500 Dn 10000 IN 1000 Dn 50000 IN	Portland, Ore. Baltimore, Md. Norfolk, Nebr. Hartford, Conn.	KWJJ Broadcast Co., Inc. Consolidated Gas Elec. & Pwr. Co. Norfolk Daily News Travelers Broadcasting Service Corp.
1070 kil	ocycles	280.2 meters	CU-14
KJBS * WCAZ WDZ WTAM * XER	100 D 50 D 100 D 50000 N 101 1071	San Francisco, Cal. Carthage, III. Tuscola, III. Cleveland, Ohio Mexico City	Julius Brunton & Sons Co. Superior Broadcasting Service James L. Bush National Broadcasting Co., Inc. F. Armida y Cia
1080 kil	ocycles	277.6 meters	
WBT * WCBD * WMBI	5000 C 5000 1 Dn 5000 1 Dn	Charlotte, N. C. Zion, Ill.	Station WBT, Inc. Wilbur Glenn Voliva Moody Bible Institute
1990 kil	ocycles	275.1 meters	ev A
KMOX * XEL	50000 1CX	St. Louis, Mo. Saltillo, Coah.	Voice of St. Louis, Inc. Antonio Garza Castro
1100 kil	ocycles	272.6 meters	
KGDM * WLWL * WPG	250 DX 5000 1 5000 1C	Stockton, Cal. New York City Atlantic City, N. J.	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.
1110 kil	ocycles	270.1 meters	22
KSOO * WRVA *	2000 Dn 5000 N	Sioux Falls, S. D. Richmond, Va.	Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.
1120 kile	ocycles	267.7 meters	2-2
CFJC CHGS * CJOC KFIO † KFSG * KMIC * KRSC † KTRH * WDBO * WDEL † WHAD * WISN WTAW	15 100 D 500 3 500 3 500 D 500 2C 500 +C 250 +C 250 +C 250 1C 250 1C 10 CPD	Kamloops, B. C. Summerside, P. E. I. Lethbridge, Alta. Spokane, Wash. Los Angeles, Cal. Inglewood, Cal. Seattle, Wash. Houston, Texas Orlando, Fla. Wilmington, Del. Milwaukee, Wis. Milwaukee, Wis. College Station, Texas Rayne, La. Haynesville, La.	N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Spokane Broadcasting Corp. Echo Park Evang. Assn. Dalton's, Inc. Radio Sales Corp. Rice Hotel Orlando Broadcasting Co., Inc. WDEL, Inc. Marquette University Evening Wisconsin Co. Agricultural & Mech. College Ber, Killmer & Bailey C. C. Crawford
1130 kild		265.3 meters [
CMBC CMQ KSL WJJD A WOV XEF	150 150 5000 N 20000 C Dn 1000 D 105 1131	Havana, Cuba Havana, Cuba Salt Lake City Mooseheart, III. New York City Oaxaca, Oax.	Domingo Fernandez Cruz Jose Fernandez Radio Service Corp. of Utah Loyal Order of Moose International Broadcasting Corp. Frederico Zorrila
1140 kilo	ocycles	263.0 meters	with
WAPI	5000 1N 5000 1N	Tulsa, Okla. Birmingham, Ala.	Southwestern Sales Corp. Alabama Polytechnic Institute
1150 kilo		260.7 meters [will
CMHA WHAM *	200 1154 5000 N	Cienfuegos, Cuba Rochester, N. Y.	Jose Ganduxe Stromberg-Carlson Tel. Mfg. Co.

1160 kilocycles

258.5 meters

Main Auto Supply Co. West Virginia Broadcasting Corp.

WOWO

1C 5000

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

1170 kilocycles

256.3 meters

213

Dn 10000

Muscatine, Iowa Philadelphia, Pa. Norman Baker Universal Broadcasting Co

1180 kilocycles

254.1 meters Portland, Ore. State College, N. M. Minneapolis, Minn. KEX 5000 KOB 20000 WDGY 1000 Dn whoi Minneapolis, Minn. 500 1 Dn

Western Broadcasting Co. College of Agriculture & Mech. Arts Dr. George W. Young Wm. Hood Dunwoody Industrial Inst.

1190 kilocycles

500 50000 252.0 meters Bridgeport, Conn. San Antonio, Texas

Bridgeport Broadcasting Station, Inc. Southern Equipment Co.

1200 kilocycles 249.9 meters

100 **KBTM** 50 **KFHA** KFJB KFWF 100 5 100 KGCU KGDE 100 100 100 KGDY 9 KGEK 50 KGEW ŧ 100 100 KĞFJ

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100

10

50

100

100

100

KGHI

KGY KMLB

KSMR

KVOS

Paragould, Ark. Gunnison, Colo. Marshalltown, Iowa St. Louis, Mo. Mandan, N. D. Fergus Falls, Minn. rergus raiis, Minn. Huron, S. D. Yuma, Colo. Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Lacey, Wash. Monroe, La. Santa Maria, Cal. Bellingham, Wash. DCP

Stockton, Cal.
Bangor, Maine
New Orleans, La.
Ponca City, Okla
Rapid City, S. D.
Burlington, Vt. KWG WABI † 100 ī --WABZ WBBZ 100 100 WCAT WCAX WCLO 100 2 --Burlington, Vt. Janesville, Wis. 100 † 100 Harrisburg, Pa. WCOD 100 3 WEHC 100 +xEmory, Va.

Worcester, Mass. Knoxville, Tenn. Cincinnati, Ohio Canton, Ohio WEPS 100 WFBC 50 WFBE 100 45 WHBC 10 Green Bay, Wis. Utica, N. Y. WHBY 100 WIBX 100 + 5+

St. Louis, M La Salle, Ill. Decatur, Ill. Mo. WIL 100 WIL WJBC WJBL WJBW WKJC WLAP WLBG WMAY ĕ 100 Ğ 100 New Orleans, La. 1 3 100 Lancaster, Pa. 100 100

Lancaster, Louisville, Ky. Petersburg, Va St. Louis, Mo. 8 100 WMAY WNBO 100 Washington, Pa. Carbondale, Pa. Springfield, Vt. Worcester, Mass. 100 4 WNBW † 10 2 CX WNBX 10

WORC 100 Flint, Mich. WPDF 100 La Porte, Ind WRAF 100 Columbus, Ga. Hammond, Ind. WRBL WWAE 50 8 100 Guadalajara, Jal. XEA 101 10-BP Wingham, Ont.

W. J. Beard's Temple of Music

The Hawkins-Craig Syndicate Marshall Electric Co., Inc. St. Louis Truth Center, Inc.

Mandan Radio Association

Jaren Drug Co.

KCYS. 1200 MTRS.

J. Albert Loesch and George W. Wright Beehler Elec. Equipment Co. City of Fort Morgan 249.9 Ben S. McGlashan Berean Bible Class DIAL St. Martin's College G. C. Liner Santa Maria Valley R. R. Co. KVOS, Inc Portable Wireless Tel. Co., Inc.

Pine Tree Broadcasting Corp. Coliseum Place Baptist Church C. L. Carrell State School of Mines University of Vermont WCLO Radio Corp.

Norman R. Hoffman Emory & Henry College Alfred Frank Kleindienst First Baptist Church WFBE, Inc. St. John's Catholic Church St. Norbert's College

WIBX, Inc. Missouri Broadcasting Corp. Kaskaskia Broadcasting Co. Commodore Broadcasting, Inc. Charles C. Carlson, Jr.

Kirk, Johnson & Co. American Broadcasting Corp. of Ky. Robert Allen Gamble Kingshighway Presbyterian Church

John Brownlee Spriggs Home Cut Glass & China Co. First Congregational Church Alfred Frank Kleindienst City of Flint

Chas. Middleton David Parmer Hammond-Calumet Broad. Corp. Alberto Palos Sauza Radio & Electric Shop

OUT ON DOTTED LINES

01

1210	ki	locyc	les	247.8 meters
CFCO		100		Chatham, Ont.
CFNB		50		Fredericton, N. B.
CHWK	+	5		Chilliwack, B. C.
CJOR	*	50		Sea Island, B. C.
CKMC		15		Cobalt, Ont.
CKPC	+	25		Preston, Ont.
KDFN	†	100		Casper, Wyo.
KDLR		100		Devils Lake, N. D.
KFOR		100	+	Lincoln, Nebr.
KFVS	- 41	100	6	Cape Girardeau, Mo.
KFXM		100	9	San Bernardino, Cal.
KGCR	-	100		Watertown, S. D.
KGMP	8	100		Elk City, Okla.
KGNO	*	100		Dodge City, Kans.
KMJ		100		Fresno, Cal.
KPPC	\$ *	50	9	Pasadena, Cal.
KWEA		100		Shreveport, La.
WALR	*	100		Zanesville, Ohio
WBAX		100	1	Wilkes-Barre, Pa.
WBBL	†	100	7S	Richmond, Va.
WCBS	\$	100	2	Springfield, Ill.
WCOH		100	3	Yonkers, N. Y.
WCRW	*	100	4	Chicago, Ill.
WDWF		100	5	Providence, R. I.
WEBQ		100	6	Harrisburg, Ill.
WEDC		100	4	Chicago, Ill.
WGBB	*	100	3	Freeport, N. Y.
WGCM		100		Gulfport, Miss
WHBF		100		Rock Island, Ill.
WHBU	†	100		Anderson, Ind.
WJBI		100	3	Red Bank, N. J.
WJBU		100	1	Lewisburg, Pa.
WJBY	z -4	50		Gadsden, Ala.
WJW	*	100		Mansfield, Ohio
WĽCI	*	50		Ithaca, N. Y.
WLSI		100	5 7	Providence, R. I.
WMBG		100	7	Richmond, Va.
WMRJ	*	100	3	Jamaica, N. Y.
WOCL	*	25		Jamestown, N. Y.
WOMT	7.5	100		Manitowoc, Wis.
WPAW	*	100	5	Pawtucket, R. I.
WQDX		50		Thomasville, Ga.
WRBQ	†	100	\mathbf{x} +	Greenville, Miss.
WRBU	1-	100		Gastonia, N. C.
WSBC	Ŧ.	100	4	Chicago, Ill.
WSEN	†	100		Columbus, Ohio

614	
Western Ontario "Better	Radio" Club
James S. Neill & Sons, L	td.
Chilliwack Broadcasting	Co., Ltd.
G. C. Chandler	•
R. L. MacAdam	
Metal Shingle & Siding C	က
Donald Lewis Hathaway KDLR, Inc.	
Howard A. Shuman	
Hirsch Battery & Radio (`~
J. C. & E. W. Lee	۵.
Cutler's Radio Brdcstg.	Service Inc
Bryant Radio & Electric (Co.
Dodge City Broadcasting	Co.
James McClatchy Co.	
Pasadena Presbyterian Cl	nurch
Hello World Broadcasting	Corp.
Roy. W. Waller	
John H. Stenger, Jr.	
Grace Covenant Presbyte	rian Church
H. L. Dewing & Chas. Me Westchester Broadcasting	sster
Clinton R. White	Corp.
Dutee W. Flint	
First Trust & Savings Bar	nk
Emil Denemark, Inc.	
Harry H. Carman	
Great Southern Land Co.	, Inc.
Beardsley Specialty Co.	
Citizens Bank	_
Monmouth Broadcasting	Co.
Bucknell University	T.,
Gadsden Broadcasting Co Mansfield Broadcasting A	., Inc.
Lutheran Assn. of Ithaca	SSI1.
The Lincoln Studios, Inc.	
Havens & Martin, Inc.	
Peter J. Prinz	
A. E. Newton	
Francis M. Kadow	
Shartenburg & Robinson	Co.
Stevens Luke	
J. Pat. Scully	
A. J. Kirby Music Co. World Battery Co., Inc.	
Columbus Broadcasting C	'o
638 Tire & Vulcanizing Co	o,
WTAX, Inc.	•

1220 kilocycles

#

WSEN WSIX

WTAX

WDAE

245.8 meters
Lawrence, Kans. Pullman, Wash.
Canton, N. Y.
Pittsburgh, Pa. Tampa, Fla.
Lawrence, Kans.

Columbus, Ohio Springfield, Tenn. Springfield, Ill.

KFKU KWSC WCAD WCAE 1000 1000 ZQ+ 500

2

100 100

100

1000

1000

1000

1230 kilocycles 243.8 meters

		J -		
KFQD KGGM KYA WBIS WFBM WNAC WPSC WSBT	*	100 250 1000 1000 1000 1000 500 500	+ 1C 2C D 1	Anchorage, Alaska Albuquerque, N. Mex. San Francisco, Cal. Boston, Mass. Indianapolis, Ind. Boston, Mass. State College, Pa. South Bend, Ind.

Anchorage Radio Club New Mexico Broadcasting Co. Pacific Broadcasting Corp. Pacific Broadcasting Corp. Shepard Broadcasting Service, Inc. Indianapolis Power & Light Co. Shepard Broadcasting Service, Inc. Pennsylvania State College South Bend Tribune

University of Kansas State College of Washington

St. Lawrence University Gimbel Bros.

Tampa Publishing Co. Jenny Wren Co.

1240 kilocycles

12 10	1/11	ocy c	163
KTAT	Ť	1000	1
WACO		1000	1
WXYZ		1000	C

241.8 meters Ft. Worth, Texas Waco, Texas Detroit, Mich.

S. A. T. Broadcast Co. Central Texas Broadcasting Co., Inc. Kunsky-Trendle Broadcasting Corp.

1310 MTRS. 228.9DIAL

TUO.

ON DOTTED

LINES

KCYS.

Bible Institute of Los Angeles M. E. Brown People's Pulpit Association
Debs Memorial Radio Fund, Inc.
Defenders of Truth Society, Inc.
Rensselaer Polytechnic Institute Isle of Dreams Broadcasting Corp. Unity School of Christianity

Chas. C. Robinson Jas. McClatchy Co. Boone Biblical College Alaska Electric Light & Power Co. C. S. Tunwall

Brooklyn, N. Y. New York City New York City Troy, N. Y. Mismi Beach

Miami Beach, Fla.

228.9 meters

Sacramento, Cal.

Juneau, Alaska

Ft. Dodge, Iowa

Jerome, Ariz.

Boone, Iowa

Kansas City, Mo.

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5

500

500

1000

1000

1000

1000 1310 kilocycles

100

100

100

10

100

500

3

7⁻⁻

7--

KTBI

KTBR WBBR

WEVD

WHAP

WHAZ

WIOD

woo

KCRJ KFBK

KFGQ

KFIU

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				DI IND QUENCIDO!	E DIED MONDERO
KFPL		100		Dublin, Texas	C. C. Baxter
KFPM	*	15		Greenville, Texas	The New Furniture Co.
KFUP		100	8	Denver, Colo.	Fitzsimmons General Hospital
KFXJ KFXR		50 100	8XY +	Edgewater, Colo. Oklahoma City	Western Slope Broadcasting Co.
KGBX KGCX KGEZ	*	100		St. Joseph Mo	Exchange Ave. Baptist Church KGBX Inc.
KGCX		100	ċ	St. Joseph, Mo. Wolf Point, Mont.	First State Bank of Vida
KGEZ	†	100	C	Kalispell, Mont.	Chamber of Commerce
KGFW KIT		100 50		Ravenna, Neb. Yakima, Wash. Medford, Ore.	O. F. Sothman and R. H. McConnell Carl E. Haymond Mrs. W. J. Virgin Robert M. Dean
KMED	441	50		Medford Ore	Carl E. Haymond
KRMD		50	9	Shreveport, La.	Robert M. Dean
KTLC		100	9 X 9 2 7	Houston, Tex.	Houston Broadcasting Co.
KTSL		100	9	Shreveport, La.	G. A. Houseman W. S. Bledsoe & W. T. Blackwell
KTSM		100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR KXRO	, † *	100 75		Cedar Rapids, Iowa Aberdeen, Wash.	Harry F. Paar KXRO, Inc.
WBOW	*	100		Terre Haute, Ind.	Ranks of Wabash Inc
WBRE		100		Wilkes-Barre, Pa.	Banks of Wabash, Inc. Louis G. Baltimore
WCLS	*	100	ī	Joliet, Ill.	WCLS, Inc.
WDAH WEBR	*	100 100	2	El Paso, Texas Buffalo, N. Y.	Eagle Broadcasting Co.
WEXI	Ť	50	+	Royal Oak, Mich.	Howell Broadcasting Co., Inc.
WEXL WFBG		100	3	Altoona, Pa.	Royal Oak Broadcasting Co. Wm. F. Gable Co.
WFDF		100		Flint, Mich.	Frank D. Fallain
WFKD WGAL	*	50	4X	Philadelphia, Pa.	Foulkrod Radio Engineering Co.
WGAL	*	100	5 C 4X	Lancaster, Pa. Newport News, Va.	WGAL, Inc.
WHAT	7	100 100	AV	Newport News, Va.	Hampton Roads Broadcasting Corp.
WIRII		100	7.7.	Philadelphia, Pa. Poynette, Wis.	Independence Broadcasting Co. William C. Forrest
WJAC WJAK WKAV		100	3-+	Johnstown, Pa.	Johnstown Automobile Co.
WJAK	*	50	6	Marion, Ind.	Marion Broadcasting Co.
WKAV	*	100		Laconia, N. H. Joliet, Ill.	Laconia Radio Chib
WKBC		100 100	1	Joliet, III.	Sanders Bros. Radio Station R. B. Broyles Furniture Co.
WKBB WKBC WKBS	*	100		Birmingham, Ala. Galesburg, Ill.	Permil N. Nelson
WLBC	†	50	6	Muncie, Ind.	Donald A. Burton
WMBO	† † *	100		Muncie, Ind. Auburn, N. Y.	Radio Service Laboratories
WNBH	*	100	+	New Bedford, Mass.	Radio Service Laboratories New Bedford Broadcasting Co.
WOBT WOL	*	100 100	+	Union City, Tenn.	Tittsworth's Radio & Music Shop
WRAW	*	50	5XZ	Washington, D. C. Reading, Pa.	American Broadcasting Co.
WROL		100		Knoxville, Tenn.	Reading Broadcasting Co.
WSAJ	*	100		Grove City, Pa.	Grove City College
WSJŠ	-	100		Grove City, Pa. Winston-Salem, N. C.	Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co.
				,	
1320	kilo	cve	les	227.1 meters	

KGHF		250 250	X + 1+	Pueblo, Colo	C. P. Ritchie & J. E. Finch
KGIQ KGMB	+	500		Twin Falls, Idaho Honolulu, Hawaii	Radio Broadcasting Corp.
KID	- 1	500	1+	Idaho Falls, Idaho	Honolulu Broadcasting Co., Ltd. KID Broadcasting Co.
WADC	† *	1000	C	Akron, Ohio	Allen T. Simmons
WSMB	*	500	N	New Orleans, La.	Saenger Theatre & Maison Blanche Co.
1222					
1330	kilo	сус	Ies	225.4 meters	
KCR	*	250	X	San Diego, Cal.	Pickwick Broadcasting Corp.
KSCJ WDRC		1000	1+c	Sioux City Jowa	Perkins Bros. Co.
WDRC	*	500		New Haven, Conn.	Doolittle Radio Corp.
WSAI		500	N	New Haven, Conn. Cincinnati, Ohio Eau Claire, Wis.	Crosley Radio Corp. Lessee
WTAQ XEC	Τ.	1000 50	1333	Eau Claire, Wis. Toluca, Mex.	Gillette Rubber Co.
ALDC		30	1555	Totaca, Mex.	Jesus R. Benavides
1240	1-:1-		1	222 7	
1340	KHO	cyc.	ies	223.7 meters	
KFPW		50	D	Fort Smith, Ark.	John Brown Schools
KFPY		1000	С	Spokane, Wash.	Symons Broadcasting Co.
WCOA WSPD	*	500 500	C+	Pensacola, Fla.	City of Pensacola
WSFD		300	C+	Toledo, Ohio	Toledo Broadcasting Co.
1250	4			200.1	
1350	kilo	cyc]	les	222.1 meters	
		1000	N		
KWK WBNY		1000 250	N 1	St. Louis, Mo. New York City	Greater St. Louis Broadcasting Corp.
KWK WBNY WCDA	*	250 250	1	New York City New York City	Pillar of Fire
KWK WBNY WCDA	* :	250 250 250	1 1 1	New York City New York City New York City	Pillar of Fire Italian Educ. Broadcasting Co., Inc. Standard Cahill Co., Inc.
KWK WBNY	*	250 250	1	New York City New York City	Pillar of Fire

INDEX	BY FREQUENCIES	AND DIAL NUMBERS
1360 kilocycles	220.4 meters	
CMKC * 150 136 KGER * 1000 4 KGIR - 500 KPSN - 1000 4 WCSC - 500 WFBL * 1000 C+ WGES - 500 1+ WJKS * 1000 CP	Long Beach, Cal. Butte, Mont. Pasadena, Cal. Charleston, S. C.	M. P. Martinez C. Merwin Dobyns KGIR, Inc. Pasadena Star-News Jordan & Burk Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp. Delta Broadcasting Co., Inc.
1370 kilocycles	218.7 meters	
KCRC † 100 2+ KFBL 50 3 KFJI - 100 KFJM † 100 KFJZ 100 X KFLX 100 KGAR 100 + KGDA 1 100 KGFG - 100 KGFG - 100 KGFG - 100 KGKBL 1 100 KGNAC 1 100 KONO 1 10	San Angelo, Texas San Antonio, Texas Marshfield, Ore. Berkeley, Cal. Seattle, Wash. Kansas City, Mo. Hayward, Cal. Glens Falls, N. Y. Danville, Va. Z. Baltimore, Md. Philadelphia, Pa. Rome, Ga. Fort Wayne, Ind. Mount Orab, Ohio Memphis, Tenn. Calumet, Mich. Jackson, Mich. Lexington, Mich. Lexington, Mass. Lynchburg, Va. Tampa, Fla. Patchogue. N. Y. St. Albans, Vt. Williamsport, Pa. Hattiesburg, Miss. Wilmington, N. C. Racine, Wis. Buffalo, N. Y.	Champlin Refining Co. Leese Bros. KFJI Broadcasters, Inc. University of North Dakota Estate of H. C. Meachem George Roy Clough Tucson Motor Service Co. Mitchell Broadcasting Corp. Oklahoma Broadcasting Co., Inc. W. E. Whitmore KGKL. Inc., Opr. by Ragsdale Auto W. W. McAllister Mission Broadcasting Co. H. H. Hanseth, Inc. First Congregational Church KVL, Inc. Wilson Duncan Broadcasting Co. Leon P. Tenney W. N. Parker and H. H. Metcalfe Clarke Electric Co. Baltimore Broadcasting Station, Inc. Dolies Goings Fred C. Zieg F. P. Moler Broadcasting Station WHBQ, Inc. Unner Michigan Broadcasting Co. WIBM, Inc. James F. Hopkins, Inc. Lexington Air Stations Lynchburg Broadcasting Corp. F. J. Reynolds Nassau Broadcasting Corp. A. J. St. Antoine C. R. Cummins Woodruff Furniture Co., Inc. Wilmington Radio Association Racine Broadcasting Corp. Seneca Vocational School Albert S. Woodson
1380 kilocycles	217.3 meters	
KOH † 500 2 KQV † 500 2 KSO * 500 1 WKBH * 1000 1 WSMK 200 2	Reno, Nevada Pittsburgh, Pa. Clarinda, Iowa La Crosse, Wis. Dayton, Ohio	Jay Peters Doubleday-Hill Electric Co. Berry Seed Co. WKBH, Inc. Stanley M. Krohn, Jr.
1390 kilocycles	215.7 meters	

CUT OUT ON DOTTED LINES

Arkansas Broadcasting Co. Nielson Radio & Sporting Goods Co. University of Arkansas Radio Air Service Corp. 1390 MTRS. 215.7 DIAL

Little Rock, Ark. Phoenix, Ariz. Fayetteville, Ark. Cleveland, Ohio

1000 500 1000

1000

1C

1400 kilocycles 214.2 meters

CMBY		200	1405	Havana, Cuba
KLO	*	500	X	Ogden, Utah
KOCW	*	250	+	Chickasha, Okla.
WBAA		500	1+	Lafayette, Ind.
WBBC		500	2 `	Brooklyn, N. Y.
WCGU		500	2	Brooklyn, N. Y.
WCM/		500	1	Culver, Ind.
WKBF	*	500	1	Indianapolis, Ind.
WLTH	*	500	2	Brooklyn, N. Y.
WSDA		500	2	Brooklyn, N. Y.
WSGH		500	2	Brooklyn, N. Y.

Lino E. Cosculluala Peery Building Co. College for Women Purdue University Brooklyn Broadcasting Corp. U. S. Broadcasting Corp. General Broadcasting Corp. Indianapolis Broadcasting, Inc. The Voice of Brooklyn, Inc. Paramount Broadcasting Co. Paramount Broadcasting Co.

1410 kilocycles 212.6 meters

		ocje	100	212.0 1116,6613
KFLV	+	500	4	Rockford, Ill.
KGRS		1000	1	Amarillo, Texas
WBCM	*	500	С	Bay City, Mich.
WDAG		250	1X	Amarillo, Texas
WHBL	*	500	4	Sheboygan, Wis.
WLEX		500	2	Lexington, Mass.
WMAF		500	2	S. Dartmouth, Mass
WODX		500	3	Mobile, Ala.
WRBX	*	250	-	Roanoke, Va.
WSFA	t	500	3	Montgomery, Ala.
WSSH	Ť	500	ž	Boston, Mass.

Rockford Broadcasters, Inc. Gish Radio Service James E. Davidson National Radio & Broadcasting Corp. Press Pub. Co. Lexington Air Stations Round Hills Radio Corp. Mobile Broadcasting Corp. Richmond Development Corp. Montgomery Broadcasting Co., Inc. Tremont Temple Baptist Church

1420 kilocycles 211.1 meters

1 120	I/II	OCyc	103	LII.I IIIELEIS
KBPS	4-	100	4	Portland, Ore.
KFIZ		100		Fond du Lac, Wis.
KFQU KFQW KFXD	*	100	5X.	Holy City, Cal.
KFŎW		100		Seattle, Wash.
KFXD		100	$\ddot{\mathbf{x}}\mathbf{y}$	Nampa, Idaho
KFXY		100		Flagstaff, Ariz.
KFYO		100	+	Abilene, Texas
KGFF		100		Alva, Okla.
KGCC		100	5	San Francisco, Cal.
KGIW		100		Trinidad, Colo.
KGIX		100		Las Vegas, Nevada
KGKX		100		Sand Point, Idaho
KICK	*	100		Red Oak, Iowa
KLPM	t	100		Minot, North Dakota
KORE		100		Eugene, Ore.
KTAP	Ş	100		San Antonio, Texas
KXL	14.4	100	4	Portland, Ore.
KXYZ		100	X	Houston, Texas
WEDH	*	30	$\frac{\tilde{X}}{2}$	Erie, Pa.
WEHS		100	2	Evanston, Ill.
WELL		50	\mathbf{x}	Battle Creek, Mich.
WFDW	*	100		Talladega, Ala.
WHDL	§	10	D	Tupper Lake, N. Y.
WHFC		100	2	Cicero, Ill.
WHIS	†	100		Bluefield, W. Va.
WIAS		100		Ottumwa, Iowa
WIBR		50		Steubenville, Ohio
WILM		100		Wilmington, Del.
WJBO	§	100		New Orleans, La.
WKBI	*	100	2	Chicago, Ill.
WLBF		100		Kansas City, Kas.
WMBC		100	\mathbf{x} +	Detroit, Mich.
WMBH		100	+	Joplin, Mo.
WPAD	†	100		Paducah, Ky.
WSPA	*	100	+	Spartanburg, S. C.
WTBO	*	100		Cumberland, Md.

Benson Polytechnic Institute
Reporter Printing Co.
W. E. Riker
KFQW, Inc.
Service Radio Co.
Mary M. Costigan
T. E. Kirksey
KGFF Broadcasting Co.
Golden Gate Broadcasting Co.
Leonard E. Wilson
Las Vegas, Nevada, Radio Corp.
C. E. Twiss and F. H. McCann
Red Oak Radio Corp.
John B. Cooley
Eugene Broadcasting Station
Alamo Broadcasting Station
Alamo Broadcasting Co.
KXL Broadcasters, Inc.
Harris County Broadcast Co.
Erie Dispatch-Herald
WEHS, Inc.
Enquirer-News Co.
Raymond G. Hammett
Tupper Lake Broadcasting Co., Inc.
Triangle Broadcasters
Daily Telegraph
Poling Electric Co.
George W. Robinson
Delaware Broadcasting Co., Inc.
Valdemar Jensen
Fred L. Schoenwolf
WLBF Broadcasting Co.
Michigan Broadcasting Co.
Michigan Broadcasting Co.
Michigan Broadcasting Co.
Paducah Broadcasting Co.
Voice of South Carolina
Associated Broadcasting Corp.

1430 kilocycles 209.7 meters

				-00.7	1110001
KECA	İ	1000	N	Los An	geles, Cal.
KGNF	f	500	D	North I	Platte, Neb.
WBAK		500	1X+		ourg, Pa.
WCAH	*	500	ic '		bus, Ohio
WGBC	*	500	2	Mempl	nis, Tenn.
WHP	*	500	icx	Harrisl	ourg, Pa.
WNBR	*	500	2	Mempl	nis, Tenn.
				-	•

Pacific Development Radio Co. Great Plains Broadcasting Co. Penna. State Police Commercial Radio Service Co. Memphis Broadcasting Co. Pennsylvania Broadcasting Co. Memphis Broadcasting Co.

1440	kilocycl	les	208.2 meters	
KLS WBAM WCBA WHEC WMBD WOKO WSAN	* 250 * 500 - 250 * 500 - 500 - 500 - 250	D 1 2C 3+ 2	Oakland, Cal. Greensboro, N. C. Allentown, Pa. Rochester, N. Y. Peoria Heights, Ill. Poughkeepsie, N. Y. Allentown, Pa.	Warner Bros. North Carolina Broadcasting Co. B. B. Musselman Hickson Electric & Radio Corp. Peoria Heights Radio Laboratory Hudson Valley Broadcasting Co. Allentown Call Publishing Co., Inc. Ills. Stock Medicine Broadcasting Co.
WTAD 1450	kilocyc		Quincy, Ill. 206.8 meters	This, Stock Medicine Broadcasting Co.
	* 1000	103	Shreveport, La.	Tri-State Broadcasting System, Inc.
KTBS WBMS WCSO WFJC WGAR WHOM WKBO WNJ WSAR WTFI	* 250 - 500 * 500 - 500 - 250 * 250 § 250 - 250 - 500	1 2 Y 2 N Y CP 1 1	Hackensack, N. J. Springfield, Ohio Akron, Ohio Cleveland, Ohio Jersey City, N. J. Jersey City, N. J. Newark, N. J. Fall River, Mass. Toccoa, Ga.	WBMS Broadcasting Corp. WGAR Broadcasting Co. WGAR Broadcasting Co. WGAR Broadcasting Co. New Jersey Broadcasting Corp. Camith Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Institute
1460	kilocyc	les	205.4 meters [wth
KSTP WJSV	* 10000 * 10000	NX 	St. Paul, Minn. Alexandria, Va.	National Battery Broadcasting Co. Independent Publishing Co.
1470	kilocyc	les	204.0 meters	5
KGA WLAC WTNT	† 5000 5000 5000	ĨĈ 1	Spokane, Wash. Nashville, Tenn. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co. Tennessee Publishing Co.
1480	kilocyc	les	202.6 meters	
KFJF WKBW		c	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Buffalo Broadcasting Co., Lessees
1490	kilocyc	les	201.2 meters	
WCK Y WJAZ WORD	* 5000 5000 5000	1N 1 1	Covington, Ky. Chicago, Ill. Chicago, Ill.	L. B. Wilson, Inc. Zenith Radio Corp. People's Pulpit Association
1500	kilocyc	les	199.9 meters [
KDB KGFI KGFK KGKB KGKY KPJM KREG KUJ KUJ KUJ WCLB WCLB WKBV WKBZ WLBX WLBX WLBX WMBA WMBG WMBG WMPC WNBF WOPI WRDW	* 100 100 * 100 * 100	3Y 1 2+ 	Santa Barbara, Cal. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Brownwood, Texas Scottsbluff, Nebr. Prescott, Ariz. Wenatchee, Wash. Santa Ana, Cal. Longview, Wash. Austin, Texas El Centro, Cal. Long Beach, N. Y. Tupelo, Miss. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boston, Mass. Newport, R. I. Pittsburgh, Pa. Brooklyn, N. Y. Lapeer, Mich. Binghamton, N. Y. Bristol, Tenn. Phildelphia, Pa. Augusta, Ga. Woodside, N. Y. Rutland, Vt.	Dwight Faulding Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. Eagle Publishing Co. Hilliard Co., Inc. Miller & Klahn Wescoast Broadcasting Co. Pacific Western Broadcasting Paul R. Heitmeyer Rice Hotel E. R. Irey and F. M. Bowles Arthur Faske Blair & Anderson Knox Battery & Electric Co. K. L. Ashbacker John N. Brahy Boston Broadcasting Co. LeRoy Joseph Beebe Rev. J. W. Sproul Paul J. Gollhofer First M. P. Church Hewitt-Wood Radio Co., Inc. Radiophone Brdestg. Station, Inc. Wm. Penn Broadcasting Co. Long Island Broadcasting Co. Long Island Broadcasting Co. Seward & Weiss Music Co.

KCYS. 1500 MTRS. 199.9

DIAL

ALABAMA	111		Son Jose I 1	500	Work	
	Watts	Kcys.	San Jose J-1 Santa Ana M-3	500 100		1010 1500
Birmingham O-21	5000 WAPI 500 WBRC	1140	Santa Barbara M-2	100	KDB	1500
	500 WBRC 100 WKBC	930 1310	Santa Maria L-2	100		1200
Gadsden O-21	50 WJBY	1210	Stockton J-2	250	KGDM	1100
Mobile O-20	500 WODX	1410	043347 - 6337	100	KWG	1200
Montgomery P-21 Talladega O-21	500 WSFA 100 WFDW	1410	CANAL ZONE			
Tanadega O-21	MG4M 001	1420	Balboa FF-26	750	NBA	850
ALASKA			COLOBADO			
Anchorage	100 KFOD	1230	COLORADO			
Juneau	100 KFQD 10 KFIU	1310	Colorado Springs K-		KFUM	1270
Ketchikan	500 KGBU	900	Denver K-11	500 100	KFEL KFUP	920
ADIZONIA			li	500	KFXF	1310 920
ARIZONA			ll .	1000	KLZ	560
Flagstaff M-7	100 KFXY	1420	ll .	12500	KOA	830
Jerome M-6 Phoenix N-6	100 KCRJ 500 KOY	1310	Edgewater K-10	500	KPOF	880
THOUSING IN-O	500 KTAR	1390 620	Fort Morgan J-11	50 100	KFXJ KGEW	1310 1200
Prescott M-6	100 KPIM	1500	Greeley J-11	500	KFKA	880
T 0.7	100 KGAR	1370	Gunnison K-9	50	KFHA	1200
Tucson O-7	500 KVOA	1260	Pueblo L-11 Trinidad L-11	250 100	KGHF KGIW	1320
ARKANSAS			Yuma J-12	50	KGEK	1420 1200
	#a ***		ll			1200
Blytheville M-19 Fayetteville M-16	50 KLCN	1290	CONNECTICUT	•		
Fort Smith N-16	1000 KUOA 50 KFPW	1390 1340	Bridgeport H-27	500	WICC	1190
Hot Springs N-17	10000 KTHS	1040	Hartford H-27	50000	WTIC	1060
Little Rock N-17	100 KGHI	1200	New Haven H-27 Storrs H-28	500	WDRC	1330
	250 KGJF 1000 KLRA	890	310118 11-28	250	WCAC	600
	1000 KLRA 500	1390 1250	DELAWARE			
Paragould M-18	100 KBTM	1200	Wilmington J-26	250	WDEL	1120
				100	WILM	1420
CALIFORNIA			DISTRICT OF			
Berkeley J-2	100 KRE	1370	DISTRICT OF	COLU		
Burbank M-3	500 KELW	780	Washington J-26	250	WMAL	630
Culver City M-3 El Centro N-4	250 KFVD 100 KXO	1000 1500	İ	500 100	WRC WOL	950
Fresno K-2	100 KMJ	1210	FLORIDA	100	WOL	1310
Hayward J-1	100 KZM	1370	Clearwater R-24	1000	11/17/	
Hollywood M-3	1000 KFWB 5000 KNX	950	Gainesville Q-24	1000 5000	WFLA WRUF	620 830
Holy City M-3	100 KFOU	1050 1420	Jacksonville Q-24	1000	WJAX	900
Inglewood M-3	500 KMIC	1120	Miami T-25	1000	WJAX WQAM	560
Long Beach M-3	1000 KFOX	1250	Miami Beach T-25 Orlando R-24	1000 500	WIOD	1300
Los Angeles M-3	1000 KGER 1000 KECA	1360	Pensacola Q-21	500	WDBO WCOA	1120 1340
200 Inigeles M-5	1000 KECA 5000 KFI	1430 640	St. Petersburg S-24	1000	WSUN	620
	500 KFSG	1120	Tampa R-24	1000	WDAE	1220
	1000 KGEF	1300	OF OF OTA	100	WMBR	1370
	100 KGFJ 1000 KHJ	1200 900	GEORGIA			
	500 KMPC	710	Atlanta O-22	250	WGST	890
	500 KMTR	570 I	Augusta O-23	5000 100	WSB WRDW	740
	500 KTM	780	Columbus O-22	50	WRBL	1500 1200
Oakland J-1	1000 KTBI 250 KLS	1300 1440	Macon O-23	250	WMAZ	890
•	500 KLX	880	Rome N-22	100	WFDV	1370
Posedone M 2	500 KROW	930	Savannah O-24 Thomasville Q-22	500 50	WTOC	1260
Pasadena M-3	50 KPPC 1000 KPSN	1210	Toccoa N-23	500	WQDX WTFI	1210 1450
Sacramento J-2	1000 KPSN 100 KFBK	1360 1310				1400
San Bernardino M-3	100 KFXM	1210	HAWAII			
San Diego N-3	500 KFSD	600	Honolulu	500	KGMB	1320
San Francisco J-1	250 KGB 1000 KRFC	1330		1000	KGU	940
	500 KFWI	610 930	IDAHO			
	100 KGGC	1420	Boise G-5	1000	KIDO	1250
	7500 KGO	790	Idaho Falls G-7	500	KID	1320
	100 KJBS 5000 KPO	1070 680	Nampa G-5	50	KFXD	1420
	1000 KTAB	560	Pocatello H-7 Sand Point D-6	250 100	KSEI KGKX	900
	1000 KYA	1230	Twin Falls H-6	250	KGIQ	1420 1320
		U				

ILLINOIS	Watts		Kcys.	Ottumwa J-17	100 100	WIAS KICK	1420 1420
Carthage J-18	50	WCAZ	1070	Red Oak J-16 Shenandoah J-16	500	KFNF	890
Chicago I-20	10000 10000	KFKX KYW	1020 1020		$\frac{500}{1000}$	KMA KSCJ	930 1330
	500	WAAF	920	Sioux City I-15 Waterloo I-17	500	WMT	600
	25000 1000	WBBM WCFL	770 970				
	100	WCRW	1210	KANSAS			
	100 50 000	WEDC WENR	1210 870	Coffeyville M-16	500	KGGF	1010
	500	WGES	1360	Dodge City L-13 Kansas City K-16	100 100	KGNO WLBF	1210 1420
	25000 1000	WGN WIBO	720 560	Lawrence K-16	1000	KFKU	1220
	5000	WJAZ	1490	Manhattan K-15	1000 500	WREN KSAC	1220 580
	25000 100	WJAZ WJBT WKBI	770 1420	Milford K-14	5000	KFKB	1050 580
	5000	WLS	870	Topeka K-16 Wichita L-15	500 1000	WIBW KFH	1300
	5000 5000	WMAQ WMBI	670 1080	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	5000	WORD	1490	KENTUCKY			
	500 100	WPCC WSBC	560 1210	Covington K-22	5000	WCKY WFIW	1490 940
Cicero I-20	100	WHFC	1420	Hopkinsville M-20 Louisville L-21	1000 10000	WHAS	820
Decatur K-19	100 100	W JBL WEHS	1200 1420		100	WLAP	1200
Evanston I-20 Galesburg J-18	100	WKBS	1310	Paducah M-19	100	WPAD	1420
Galesburg J-18 Harrisburg L-19	100 100	WEBQ WCLS	1210 1310	LOUISIANA			
Joliet I-19	100	WKRB	1310	Haynesville P-17	10		1120
La Salle J-19	100 20000	W JBC W J J D	1200 1130	Monroe P-18	50	KMLB	1200 1200
Mooseheart I-19 Peoria Heights J-19		WMBD	1440	New Orleans R-19	100 1000	WABZ WDSU	1250
Quincy K-18	500	WTAD	1440 1410	}	100	WJBO WJBW	1420
Rockford I-19 Rock Island I-18	500 100	KFLV WHBF	1210		100 500	WSMB	1200 1320
Springfield K-19	100	WCBS	1210	ł	5000	WWL	850
Tuscola K-20	100 100	WTAX WDZ	1210 1070	Rayne Q-18 Shreveport P-17	150 50	KRMD	1120 1310
Urbana J-20	250	WILL	890	Siffeveport 1-17	1000	KTBS	1450
Zion I-20	5000	WCBD	1080		100 100	KTSL KWEA	1310 1210
					10000	KWKH	850
INDIANA				MAINE	***	MDDO	1270
Anderson J-21	100	WHBU	1210	Augusta F-28 Bangor F-29	100 100	WRDO WABI	1370 1200
Connersville K-21	100 500	WKBV WCMA	1500 1400	_	500	WLBZ	620
Culver I-20 Evansville L-20	500	WGBF	630	Portland F-28	1000	WCSH	940
Fort Wayne J-21	100 10000	WGL WOWO	1370 1160				
Gary I-20	1000	WJKS WWAE	1360	MARYLAND			
Hammond I-20 Indianapolis J-21	100 1000	WFBM	1200 1230	Baltimore J-26	10000 250	WBAL WCAO	1060 600
indianapons J-21	500	WKBF	1400		100	WCBM	1370
Lafayette J-20 La Porte I-20	500 100	WBAA WRAF	1400 1200		250 100	WFBR WTBO	1270 1420
Marion J-21	50	WJAK WLBC	1310	Cumberland J-25	100	WIDO	1420
Muncie J-21	50 500	WLBC WSBT	1310 1230	NA COA CURIOTE	vrc		
South Bend I-20 Terre Haute K-20	100	WBOW	1310	MASSACHUSET		WDIC	1230
				Boston G-28	1000 500	WBIS WBZA	990
TOWA					1000	WEEI	590
IOWA	5000	WOI	640		1000 100	WHDH WLOE	830 1500
Ames I-17 Boone I-17	100	KFGO	1310		1000	WNAC	1230
Cedar Rapids I-18	100 500	KWCR	1310 1380	Fall River H-28	500 250	WSSH WSAR	1410 1450
Clarinda J-16 Council Bluffs J-16	1000	KOIL	1260	Lexington G-28	500	WLEX	1410
Davenport I-18	5000 50	WOC KGCA	1000 1270	New Bedford H-28	100 100	WLEY WNBH	1370 1310
Decorah H-18	100	KWLC	1270	S. Dartmouth H-28	500	WMAF	1410
Des Moines I-17	5000	WHO	1000 1310	Springfield H-27 Wellesley Hills G-28	15000 500	WBZ WBSO	990 920
Fort Dodge I-16 Iowa City I-18	100 500		880	Worcester G-28	100	WEPS	1200
Marshalltown I-17	100	KFJB	1200 1170	1	100 250	WORC WTAG	1200 580
Muscatine J-18	5000	KTNT	11/0	1			

MICHIGAN Battle Creek I-21	Watts 50 WELL	Kcys. 1420	NEBRASKA Clay Center	Watts 1000		Kcys. 740
Bay City H-22 Berrien Springs I-2 Calumet E-19 Detroit H-22	100 WHDF	1410 590 1370	Lincoln J-15	5000 100 500	KFOR	770 1210 590
Delion II-22	5000 WJR 100 WMBC	1370 750 1420 920	Norfolk I-15 North Platte J-13 Omaha J-15	1000 500 500 1000		1060 1430 660 590
East Lansing H-21 Flint H-22	1000 WXÝZ 1000 WKAR 100 WFDF	1240 1040 1310	Ravenna J-14 Scottsbluff I-11 York J-15	100 100 100 500	KGFW KGKY KGBZ	1310 1500 930
Grand Rapids H-21	100 WPDF 500 WASH 500 WOOD	1200 1270 1270	NEVADA			700
Jackson I-21 Lapeer H-22 Ludington H-20 Royal Oak H-22	100 WIBM 100 WMPC 50 WKBZ 50 WEXL	1370 1500 1500 1310	Las Vegas L-5 Reno I-3	100 500	KGIX KOH	1420 1380
MINNESOTA			NEW HAMPSH	IRE		
Fergus Falls F-15	100 KGDE	1200	Laconia G-28	100	WKAV	1310
Minneapolis G-17	7500 WCCO 1000 WDGY 500 WHDI	810 1180 1180	NEW JERSEY			
Moorhead F-15 Northfield G-17	1000 WRHM 50 KGFK 1000 KFMX	1250 1500 1250	Asbury Park I-27 Atlantic City J-27	500 5000	WCAP WPG WCAM	1280 1100
St. Paul G-17	1000 WCAL 1000 WGMS 1000 WLB	1250 1250 1250	Camden I-26 Hackensack I-27 Jersey City I-27	500 250 300	WAAT	1280 1450 940
MICCICCIPPI	10000 KSTP	1460	Newark I-27	250 250 1000	WHOM WKBO WAAM	1450 1450 1250
MISSISSIPPI Greenville O-19	100 WRBQ	1210		250 250	WGCP WNJ	1250 1450
Gulfport Q-19 Hattiesburg Q-19 Jackson P-19 Meridian P-20	100 WGCM 10 WRBJ 500 WJDX 500 WCOC	1210 1370 1270 880	Paterson I-27 Red Bank I-27 Trenton I-26	5000 1000 100 500	WOR WODA WJBI WOAX	710 1250 1210 1280
Tupelo N-20 Vicksburg P-18	100 WDIX 300 WQBC	1500 1360	NEW MEXICO			
MISSOURI			Albuquerque N-7 Raton M-11 State College P-9	250 50 20000	KGGM KGFL KOB	1230 1370
Cp. Girardeau L-19 Columbia K-17 Grant City J-16 Jefferson City L-17	100 KFVS 500 KFRU 50 KGIZ 500 WOS	1210 630 1500	NEW YORK	20000	KOB	1180
Joplin M-16 Kansas City K-16	100 WMBH 1000 KMBC 100 KWKC	630 1420 950 1370	Auburn H-25 Binghamton H-26	100 100	WMBO WNBF	1310 1500
	1000 WDAF 500 WHB 1000 WOQ	610 860	Brooklyn I-27	500 1000 500	WBBC WBBR WCGU	1400 1300 1400
St. Joseph K-16	2500 KFEQ 100 KGBX	1300 680 1310	ļļ	500 100	WLTH WMBQ	1400 1 50 0
St. Louis L-18	500 KFUO 100 KFWF 50000 KMOX	550 1200 1090	Buffalo H-24	500 500 1000	WSDA WSGH WBEN	1400 1400 9 00
	500 KSD 1000 KWK	550 1350		100 1000 5000	WEBR WGR	1310 550
	1000 WEW 100 WIL 100 WMAY	760 1200 1200	Company E 24	1000 50	WKBW WMAK WSVS	1480 1040 1370
MONTANA			Canton F-26 Freeport I-27 Glens Falls G-27	500 100 50	WCAD WGBB WBGF	1220 1210 1370
Billings F-9 Butte F-7	1000 KGHL	950	Ithaca H-25	1000 5 0	WEAI WLCI	1270 1210
Great Falls E-8 Kalispell D-7 Wolf Point E-11	500 KGIR 1000 KFBB 100 KGEZ	1360 1280 1310	Jamaica H-27 Jamestown H-24 Long Island City I-27	100 25 100	WMRJ WOCL WLBX	1210 1210 1500
Wolf Point E-11	100 KGCX	1310	Long Beach I-27	100	WCLB	1500

New York City I-27	5000	WABC	860	OKLAHOMA	Watts		Kcys.
new Tork Grey 1 2.	250	WBNY	1350		100	KGFF	1420
	250	WCDA	1350	Alva M-14 Chickasha N-14	250	KOCW	1400
	50000	WEAF	660	Elk City N-13	100	KGMP	1210
	500	WEVD	1300	Enid M-15	100	KCRC	1370
	250	WGBS	600	Norman N-15	500	WNAD	1010
	1000	WHAP	1300 1010	Oklahoma N-15	5000	KFJF KFXR	1480
	250 30000	WHN	760	-	100	KFXR	1310
	250	WJZ WKBQ	1350		100	KGFG	1370
	5000	WLWL	1100		1000	WKY	900
	500	WMCA	570	Ponca City M-15	100	WBBZ	1200
	250	WMSG	1350	Tulsa M-16	5000	KVOO	1140
	500	WNYC	570				
	1000	wov	1130	l oregon			
	250	WPAP	1010	Astoria D-2	100	KFJI	1370
	500	WPCH	810	Corvallis E-2	1000	KOAC	550
	250	WQAO WRNY	1010	Eugene F-2	100	KORE	1420
	250		1010	Marshfield F-1	100	KOOS	1370
Patchogue I-27	100	WPOE	1370	Medford G-2	50	KMED	1310
Poughkeepsie H-27	500	WOKO	1440	Portland E-3	5000	KEX.	1180
Rochester G-25	5000	WHAM	1150 1440		100	KBPS	1420
	500	WHEC	1290		500	KFJR	1300
Saranac Lake F-26	50 50000	WNBZ WGY	790		1000	KGW	620
Schenectady G-27		WFBL	1360	l	1000	KOIN	940
Syracuse G-25	1000 250	WMAC	570	I	500	KTBR	1300
	250	WSYR	570 570	l	500	KWJJ	1060
Troy G-27	500	WHAZ	1300	l .	100	KXĽ	1420
Tupper Lake F-26	10	WHDL	1420	DENTALONIANI	T 4		
Utica G-26	100	WIBX	1200	PENNSYLVAN			
Woodside I-27	100	WWRL	1500	Allentown I-26	250	WCBA	1440
Yonkers I-27	100	WCOH	1210		250	WSAN	1440
				Altoona I-25	100	WFBG	1310
NORTH CAROL	INA		- 1	Carbondale H-26	10	WNBW	1200
		*****	570	Elkins Park I-26	50 30	WIBG	930
Asheville M-23	1000	WWNC	570	Erie H-24	30	WEDH	1420 1310
Charlotte M-24	5000	WBT	1080 1210	Grove City I-26	100 500	WSAJ WBAK	1430
Gastonia M-24	100	WRBU	1440	Harrisburg I-25	100	WCOD	1200
Greensboro M-24	500 1000	WBAM WPTF	680	ľ	500	WHP	1430
Raleigh M-25	100	WRBT	1370	Johnstown I-24	100	WIAC	1310
Wilmington N-26 Winston-Salem M-24	100	wsjs	1310	Johnstown J-24 Lancaster I-25	100	WJAC WGAL	1310
WINSTON-Salem M-24	100	,,,,,,	1010	Lancaster 1-20	100	WKIC	1200
NODELL DAILO				Lewisburg I-26	100	WIBU	1210
NORTH DAKOT	l A			Oil City I-24	500	WLBW	1260
Bismarck F-13	500	KFYR	550	Philadelphia I-26	10000	WCAU	1170
Devils Lake E-14	100	KDLR	1210 940		100	WELK	1370
Fargo F-15	1000	WDAY	940		500	WFAN	610
Grand Forks E-15	100	KF JM KGCU	1370		500	WFI	560
Mandan F-13	100	KGCU	1200		50	WFKD	1310 1310
Minot E-13	100	KLPM	1420		100 500	WHAT WIP	610
OTTYO					500	WLIT	560
OHIO					100	WPEN	1500
Akron I-23	1000	WADC	1320		250	WRAX	1020
			1450				
arton 1 20	500	WEJC	1430	Pittsburgh I-24		KDKA	
Canton I-23	10	WFJC WHBC	1200	Pittsburgh J-24	50000	KDKA	980
Canton I-23	10 100	WFBE	1200 1200	Pittsburgh J-24		KDKA	980 1380 1220
Canton I-23	10 100 1000	WFBE WKRC	1200 1200 550	Pittsburgh J-24	50000 500	KDKA	980 1380 1220 1290
Canton I-23	10 100 1000 50000	WFBE WKRC WLW	1200 1200 550 700	Pittsburgh J-24	50000 500 1000 1000 100	KDKA KQV WCAE WJAS WMBJ	980 1380 1220 1290 1500
Canton I-23 Cincinnati K-22	10 100 1000 50000 500	WFBE WKRC WLW WSAI	1200 1200 550 700 1330	Reading I-26	50000 500 1000 1000 100 50	KDKA KQV WCAE WJAS WMBJ WRAW	980 1380 1220 1290 1500 1310
Canton I-23 Cincinnati K-22	10 100 1000 50000 500 500	WFBE WKRC WLW WSAI WGAR	1200 1200 550 700 1330 1450		50000 500 1000 1000 100 50 250	KDKA KQV WCAE WJAS WMBJ WRAW WGBI	980 1380 1220 1290 1500 1310 880
Canton I-23 Cincinnati K-22	10 100 1000 50000 500 500 1000	WFBE WKRC WLW WSAI WGAR WHK	1200 1200 550 700 1330 1450 1390	Reading I-26 Scranton H-26	50000 500 1000 1000 1000 50 250 250	KDKA KQV WCAE WJAS WMBJ WRAW WGBI	980 1380 1220 1290 1500 1310 880 880
Canton I-23 Cincinnati K-22	10 1000 50000 500 500 1000 500	WFBE WKRC WLW WSAI WGAR WHK	1200 1200 550 700 1330 1450 1390 610	Reading I-26 Scranton H-26 State College I-25	50000 500 1000 1000 100 50 250 250 500	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC	980 1380 1220 1290 1500 1310 880 880 1230
Canton I-23 Cincinnati K-22 Cleveland I-23	10 100 1000 50000 500 500 1000 500 5000	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM	1200 1200 550 700 1330 1450 1390 610	Reading I-26 Scranton H-26 State College I-25 Washington J-24	50000 500 1000 1000 100 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO	980 1380 1220 1290 1500 1310 880 880 1230
Canton I-23 Cincinnati K-22 Cleveland I-23	10 1000 50000 500 500 1000 500 50000 5000	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU	1200 1200 550 700 1330 1450 1390 610 1070	Reading I-26 Scranton H-26 State College I-25	50000 500 1000 1000 100 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX	980 1380 1220 1290 1500 1310 880 880 1230 1200
Canton I-23 Cincinnati K-22 Cleveland I-23	10 1000 50000 500 500 1000 500 50000 500 5	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO	1200 1200 550 700 1330 1450 1390 610 1070 640 1430	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre 1-26	50000 500 1000 1000 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBRE	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310
Canton I-23 Cincinnati K-22 Cleveland I-23	10 1000 50000 500 500 500 500 5000 5000	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 570	Reading I-26 Scranton H-26 State College I-25 Washington J-24	50000 500 1000 1000 100 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX	980 1380 1220 1290 1500 1310 880 880 1230 1200
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22	10 1000 50000 500 500 1000 500 50000 500 5	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO	1200 1200 550 700 1330 1450 1390 610 1070 640 1430	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre 1-26	50000 500 1000 1000 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBRE	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22	10 1000 50000 5000 500 500 500 500 500 5	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO WSEN WSMK WIW	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 570 1210	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25	50000 500 1000 1000 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBRE	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22 Dayton J-22 Mansfield J-22	10 1000 50000 500 500 500 500 500 500 50	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO WSEN WSMK WIW	1200 1200 550 700 1330 1450 1390 610 1430 570 1210 1380 1210	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25	50000 500 1000 1000 1000 250 250 500 100 100 100 50	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBAX WBAX	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22 Dayton J-22 Mansfield J-22 Mount Orab K-22	10 1000 50000 500 500 500 500 500 500 50	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAH WEAH WSEN WSMK	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 570 1210	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25	50000 500 1000 1000 50 250 250 500 100	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBRE	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310 1370
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22 Dayton J-22 Mansfield J-22 Mount Orab K-22 Springfield J-22	10 1000 50000 5000 500 1000 5000 5000 5	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO WSEN WSMK WJW WHBD WCSD	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 1210 1380 1210 1370 1450	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25 PORTO RICO San Juan W-34	50000 500 1000 1000 1000 50 250 500 100 100 50	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBAX WBAX	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310 1370
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22 Dayton J-22 Mansfield J-22	10 1000 50000 5000 5000 5000 5000 5000	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WAIU WCAH WEAO WSEN WSMK WJW WHBD WCSO WIBR WSPD	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 570 1210 1380 1210 1380 1210 1370 1450 1430	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25 PORTO RICO San Juan W-34 RHODE ISLAI	50000 5000 1000 1000 1000 250 250 500 100 100 50	KDKA KOV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBRE WRAK	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310 1370
Canton I-23 Cincinnati K-22 Cleveland I-23 Columbus J-22 Dayton J-22 Mansfield J-22 Mount Orab K-22 Springfield J-22 Steubenville J-23	10 1000 50000 5000 5000 5000 5000 500 750 100 200 100 500 500 500 500 500 500 500 500 5	WFBE WKRC WLW WSAI WGAR WHK WJAY WTAM WCAH WEAO WSEN WSEN WSMK WJW WHBD WCSO	1200 1200 550 700 1330 1450 1390 610 1070 640 1430 1210 1380 1210 1370 1450	Reading I-26 Scranton H-26 State College I-25 Washington J-24 Wilkes-Barre I-26 Williamsport I-25 PORTO RICO San Juan W-34	50000 500 1000 1000 1000 50 250 500 100 100 50	KDKA KQV WCAE WJAS WMBJ WRAW WGBI WQAN WPSC WNBO WBAX WBAX WBAX	980 1380 1220 1290 1500 1310 880 880 1230 1210 1310 1370

Providence H-28	100	WDWF	1210	VERMONT	Watts		V
	250	WEAN	780	Burlington F-27	100	WCAY	Kcys. 1200
	250	WJAR	890	Rutland G-27	100	WCAX	1500
	100	WLSI	1210	St. Albans F-27	5	WODM	1370
SOUTH CAROI				Springfield G-27	10	WNBX	1200
Charleston O-25	500	WCSC WIS	1360	VIDCINIA			
Columbia N-24 Spartanburg N-23	500 100	WSPA	1010 1420	VIRGINIA			
		WOLA	1420	Alexandria J-26	10000	WJSV	1460
SOUTH DAKO	TA			Arlington J-25 Danville L-25	1000 100	NÃA WBTM	690 1370
Brookings H-15	500	KFDY	550	Emory L-23	100	WEHC	1200
Huron H-14 Mitchell H-14	100 50	KGDY KGDA	1200 1370	Lynchburg L-25	100	WLVA	1370
Pierre G-13 Rapid City H-12 Sioux Falls I-15	200	KGFX WCAT	580	Newport News L-26	500 100	WGH	590
Rapid City H-12	100	WCAT	1200	Norfolk L-26	500	WPOR	1310 780
Vormailliam V 15	2000 500	KSOO	1110 890	1	500	WTAR	780
Vermillion I-15 Watertown G-15	100	KUSD KGCR	1210	Petersburg L-26	100	WLBG	1200
Yankton I-15	1000	WNAX	570	Richmond K-26	100 100	WBBL WMBG	1210
TENNESSEE					5000	WRVA	1210 1110
Bristol L-23	100	WOPI	1500	Roanoke L-24	250	WDBJ	930
Chattanooga N-21	1000	WDOD	1280		250	WRBX	1410
Knoxville M-22	50	WFBC	1200	WASHINGTON			
	1000 100	WNOX WROL	560 1310	Aberdeen D-2	75	KXRO	1310
Lawrenceburg N-20	500	WOAN	600	Bellingham C-3	100	KVOS	1200
Memphis M-19	500	WGBC	1430	Everett C-3 Lacey D-3	50 10	KFBL KGY	1370 1200
	100	WHBQ	1370	Longview D-3	100	KŬÍ	1500
	500 500	WMC WNBR	780 1 43 0	Longview D-3 Pullman E-5	1000	KUJ KWSC	1220
	500	WREC	600	Seattle C-3	100 5000	KFQW	1420
Nashville M-20	5000	WLAC	1470 \		1000	KJR KOL	970 1270
	5000 5000	WSM	650 1470	İ	1000	KOMO	920
Springfield M-20	100	WTNT WSIX	1210		100	KPCB	650
Union City M-19	100	WOBT	1310	1	50 1000	KRSC KTW	1120
TEXAS				i	100	KVL	1270 1370
Abilene P-13	100	KFYO	1420	l .	500	KXA	570
Amarillo N-12	1000	KGRS	1410	Spokane D-5	100	KFIO	1120
Austin Q-14	250 100	WDAG Kut	1410 1500	i	1000 5000	KFPY KGA	1340 1470
Beaumont R-17	500	KFDM	560	i	1000	KHQ	596
Brownsville U-15	500	KWWG	1260	Tacoma D-3	500	KMÖ	860
Brownwood P-14	100	KGKB	1500	Wenatchee D-4	1000	KVI	700
College Sta. Q-15 Corpus Christi S-14	500 100	WTAW KGFI	1120 1500	Yakima D-4	50 50	KPQ KIT	1500 1310
Dallas P-15	10000	KRLD	1040	/	-		1010
	50000	WFAA	800	WEST VIRGINI			
Dublin P-14	500	WRR	1280	Bluefield L-24	100	WHIS	1420
El Paso P-9	100 100	KFPL KTSM	1310 1310	Charleston K-23	250 250	WOBU WMMN	580 890
	100	WDAH	1310	Fairmont J-24 Huntington K-23	250	WSAZ	580
Fort Worth P-15	100	KFJZ	1370	Wheeling J-24	5000	WWVA	1160
	$\frac{1000}{10000}$	KTAT WBAP	1240 800	WISCONSIN			
Galveston R-16	100	KFLX	1370	_	1000	37.1m. 4 G	
	500	KFUL	1290	Eau Claire G-18 Fond du Lac H-19	1000 100	WTAQ KFIZ	1330 1420
Greenville O-15	15	KFPM	1310	Green Bay G-19	100	WHBY	1200
Harlingen T-14 Houston R-16	500 1000	KRGV KPRC	1260 920	Janesville I-19	100	WCLO	1200
Hodston K-10	500	KTRH	1120	La Crosse H-18	1000	WKBH WHA	1380
	100	KTRH KXYZ	1420	Madison H-19	750 500	WIBA	940 1280
S 41- 0 13	100	KTLC	1310		250	WIST	780
San Angelo Q-13 San Antonio R-14	100 100	KGKL KMAC	1370 1370	Manitowoc H-20	100	WOMT	1210
	100	KONO	1370	Milwaukee H-20	250	WHAD	1120
	100	KTAP KTSA	1420		250 1000	WISN WTMJ	1120 620
	1000	KTSA	1290	Poynette H-19	100	WIBU	1310
Waco Q-15	50000 1000	WOAI WACO	1190 1240	Racine I-20	100	WRJN	1370
Wichita Falls O-14	250	KGKO	570	Sheboygan H-20	500	WHBL	1410
UTAH			2. 0	Stevens Pt. G-19 Superior F-17	2000 1000	WLBL WEBC	900 1290
Ogden I-7	500	KLO	1400	_	1000	LDC	1230
Salt Lake City I-7	1000	KDYL	1290	WYOMING			
	5000	KSL	1130	Casper H-10	100	KDFN	1210
			-				

CAN	NADA			PRINCE EDWAR	Watts	LAND	Kcys.
ALBERTA	Watts		Kcys.	Charlottetown C-31	250	CFCY	960
Calgary B-7	500	CFAC CFCN	690 690	Summerside C-31	30 100	CHCK CHGS	960 1120
	500 500	CHCA	690	OUEBEC			
	500 500	CJCJ CNRC	690 690	Montreal E-26	500	CFCF CHYC	1030 730
Edmonton A-8	250	CHMA	580		5000 5000	CKAC	730
	500 500	CJCA CKUA	930 580	Quebec D-27	5000 100	CNRM CHRC	730 880
T -41-1	500 50	CNRE	930 1120	Quenec D-27	22	CKCI	880
Lethbridge C-8 Red Deer A-8	1000	CJOC CHCT	840		50 50	CKCV CNRQ	880 880
	1000 1000	CKLC CNRD	840 840	SASKATCHEWA			
			***	Fleming C-13	500 500	CJRW	600 600
BRITISH COLU Chilliwack B-3	UMBIA 5	CHWK	1210	Moose Jaw C-11 Pilot Butte	50 0	CJRM CHWC	960
Kamloops B-5	15	CFJC	1120	Regina C-12	500 500	CJBR CKCK	960 960
Sea Island Vancouver B-3	50 50	CFJC CJOR CHLS	1210 730		500	CNRR	960
Vancouver D-3	50	CKCD	730	Saskatoon B-11	500 500	CFQC CNRS	910 910
	50 50	CKFC CKMO	730 730	Yorkton C-13	500	CJGX	630
	100 500	CKWX	730 1030	HAITI			0.20
Victoria C-3	500	CFCT	630	Port au Prince X-30	1000	HHK	920
MANITOBA			1	MEXICO	250	XFF	920
Brandon D-14	500	CKX	540	Chihuahua, Chih. R-9 Guadalajara, Jal. X-10 Jalapa, Ver. Y-14	101 350	XFF XEA	1200 630
Winnipeg D-15	5000 5000	CKY CNRW	780 780	Jalapa, Ver. Y-14 Juarez, Chih.	101	XFC XEJ	860
NEW DOUNGS		CITIC	, 00	Juarez, Chih. Merida, Yuc. X-19 Mexico City Y-13	105 1000	XEY XEB	550 670
NEW BRUNSW Fredericton D-29	1CK 50	CFNB	1210	Wexico City 1-15	1000	XEN	720 980
Moncton D-30	500	CNRA	630 890		101 101	XEO XER	1070
St. John D-30	50	CFBO	090		5000 500	XEW XEX	780 920
NEWFOUNDLA St. Johns A-35	500	8WMC	720		500	XEZ	700
•		OWING	720		50 2000	XFA XFG XFI	540 640
NOVA SCOTIA		CHNC	930		1000 500	XFI XFX	590 860
Halifax E-31	500 500	CHNS CNRH VAS	930	Monterrey, N. L. U-13	101	XEH	960
Louisburg C-32 Sydney C-32	10000 50	VAS CJCB	690 880	Morelia, Mich. Y-12	500 101	XET XEI	630 1000
Wolfville D-31	50	CKIC	930	II Oaxaca, Oax, AA-14	105 10000	XEF XED	1130 960
ONTARIO				Reynosa, Tams. Saltillo, Coah. Tampico, Tams.	10	XEL	1090
Chatham H-22	100	CFCO	1210	Tampico, Tams.	501 500	XEM XES	765 890
Cobalt E-23 Hamilton H-24	15 10	CKMC CHCS	1210 880	Toluca, Mex.	50	XEC! XEU	1330 800
Hammon II 21	50	CHML	880 880	Veracruz, Ver. Villahermosa, Tab.	101 250	XFE	920
Iroquois Falls F-26	50 250	CKOC CFCH	600	CUBA			
Kingston G-25 London H-23	500 1000	CFRC	930 910	Caibarien W-25	250 200	CMHD CMHA	920 1150
	500	CJGC CNRL	910	Cienfuegos W-25 Colon W-24	300	CMGA	830
Midland G-23 Ottawa F-25	50 100	CKPR CKCO	930 890	Havana W-23	150 200	CMBC CMBY	1130 1405
Prescott F-25	500 50	CNRO CFLC	600 1010		150 500	CMBZ CMC	1010 840
Preston G-23	25	CKPC	1210		100	CMCE	1280
Toronto G-24	500 500	CFCA CFCL	840 580		250 1000	CMCF CMCQ	1010 950
	4000 5000	CFRB	960 690		500	CMI CMK	770 730
	500	CJSC CKCL	580		2000 150	CMO	1130
	5000 500	CKGW	690 580		1000 250	CMW CMX	588 900
	500	CNRT	840 960	Santiago X-28	150	CMKC	1360
	4000 5000	CPRY	690	Tuinucu	500	CMHC	790
Waterloo G-23 Wingham G-23	50 25	CKCR 10-BP	1010 1200	COSTA RICA San Jose FF-23	50	TIX	750
- Ingriam G-23	23	TO-DE	1200	1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			

CFAC 690		CJRW 600	1	CMKC 1360		KFDM 560	1
Calgary, Alta.		Fleming, Sask		Santiago, Cuba		Beaumont, Tex.	
CFBO 890		CJSC 690		CMQ 1130		K FDY 550	
St. John, N. B. CFCA 840		Toronto, Ont. CKAC 730		Havana, Cuba		Brookings, S.D.	
Toronto, Ont.		Montreal, Que.		CMW 590 Havana, Cuba		KFEL 920	
CFCF 1030		CKCD 730		CMX 900		Denver, Colo. KFEQ 680	-
Montreal, Que.		Vancouver, B.C.		Havana, Cuba		St. Joseph Mo	
CFCH 600		CKCI 880		I CNRA 630		St. Joseph, Mo. KFGQ 1310 Boone, Iowa	
lrog's Falls, Ont.		Quebec, Que.		Moncton, N.B.		Boone, Iowa	
CFCL 580	l [CKCK 960	1	CNRC 690		KFH 1300	
Foronto, Ont. CFCN 690		Regina, Sask. CKCL 580		Calgary, Alta.		Wichita, Kansas	
Calgary, Alta.	i I	CKCL 580 Toronto, Ont.		CNRD 840 Red Deer, Alta.		KFHA 1200	1
CFCO 1210		CKCO 890		CNRE 930		Gunnison, Colo. KFI 640	-
Chatham, Ont.		Ottawa, Ont.	Į.	Edmonton, Alta.	1	Los Angeles, Cal.	
CECT 630		CKCR 1010		CNRH 930		KFIO 1120	
Victoria, B. C.		Waterloo, Ont.		Halifax, N. S.		Spokane, Wash.	
CFCY 960		CKCV 880		CNRL 910		KFIU 1310	
Ch'lottet'n,P.E.I. CFJC 1120		Quebec, Que. CKFC 730		London, Ont.		Juneau, Alaska	
Kamloops, B. C.	l N	Vancouver, B.C.		CNRM 730		KFIZ 1420	ł
CFLC 1010		CKGW 690		Montreal, Que. CNRO 600		Fond du Lac, Wis KFJB 1200	
Prescott, Ont.		Toronto, Ont.		Ottawa, Ont.		Marshalltown, Ia.	
CFNB 1210		CKIC 930		CNRQ 880		KFJF 1480	
redericton, N.B.		Wolfville, N.S.		Quebec, Que.		Oklahoma City	l
CFQC 910		CKLC 840		CNRR 960		KFJI 1370	
askatoon, Sask.		Red Deer, Alta.		Regina, Sask.		Astoria, Ore.	
CFRB 960 Foronto, Ont.		CKMC 1210		CNRS 910		KFJM 1370	
CFRC 930		Cobalt, Ont. CKMO 730	-	Saskatoon, Sask. CNRT 840		Grd. Forks, N.D. KFJR 1300	i
Kingston, Ont.		Vancouver, B.C.		Toronto, Ont.		Portland, Ore.	
CHCA 690		CKNC 580		CNRV 1030		KFJY 1310	
Calgary, Alta.		Toronto, Ont.		Vancouver, B.C.		Fort Dodge, Ia.	
CHCK 960	- 11	CKOC 880		CNRW 780		I KFJZ 1370	
Ch'lottet'n,P.E.I.		Hamilton, Ont.		Winnipeg, Man.		Ft. Worth, Tex.	
CHCS 880 Hamilton, Ont.	H	CKPC 1210		CNRX 960	1 1	KFKA 880	
CHCT 840		Preston, Ont. CKPR 930		Toronto, Ont.		Greeley, Colo. KFKB 1050	
Red Deer, Alta.	- 1	Midland, Ont.		Toronto, Ont.		KFKB 1050 Milford, Kansas	
CHGS 1120		CKUA 580		HHK 920		KFKU 1220	
um'rside, P.E.I.		Edmonton, Alta.		Port au Prince, H.		Lawrence, Kans.	
HLS 730	11	CKWX 730		KBPS 1420		KFKX 1020	
Vancouver, B.C.		Vancouver, B.C.		Portland, Ore.		Chicago, Ill.	
Edmonton, Alta.	- 11	CKX 540 Brandon, Man.		KBTM 1200 Paragould, Ark.		KFLV 1410	
HML 880		CKY 780		KCRC 1370		Rockford, Ill. KFLX 1370	
Iamilton, Ont.		Winnipeg, Man.		Enid, Okla.	1	Galveston, Tex.	
CHNS 930		CMBC 1130	7 - 1	KCRJ 1310		KFM X 1250	
Ialifax, N.S.		Havana, Cuba		Jerome, Ariz.		N'thfield, Minn.	
CHRC 880		CMBY 1400		KDB 1500		KFNF 890	
Quebec, Que.		Havana, Cuba CMBZ 1010		S. Barbara, Cal.		Shenandoah, Ia.	
ilot Butte, Sask.	- 11	Havana, Cuba		KDFN 1210 Casper, Wyo.		KFOR 1210	
HWK 1210		CMC 840		KDKA 980		Lincoln, Nebr. KFOX 1250	
hilliwack, B.C.	- 1	Havana, Cuba		Pittsburgh, Pa.		Long Beach, Cal.	
HYC 730		CMCE 1280		KDLR 1210		KFPL 1310	
Iontreal, Que.		Havana, Cuba		Devils Lake, N.D.		Dublin, Texas	
JBR 960		CMCF 1010		KDYL 1290		KFPM 1310	
egina, Sask. JCA 930		Havana, Cuba CMCQ 950		Salt Lake City		Greenville, Tex.	
dmonton, Alta.		CMCQ 950 Havana, Cuba		KECA 1430		KFPW 1340	
JCB 880		CMGA 830		Los Angeles, Cal. KELW 780		Ft. Smith, Ark. KFPY 1340	
yndey, N.S.		Colon, Cuba		Burbank, Cal.		Spokane, Wash.	
JCJ 690		CMHA 1150		KEX 1180		KFQD 1230	
algary, Alta.		Cienfuegos, Cuba		Portland, Ore.		Anchorage, Alas.	
JGC 910				KFAB 770		KFQU 1420	
ondon, Ont. JGX 630		Tuinucu, Cuba		Lincoln, Nebr.		Holy City, Cal. KFQW 1420	
JGX 630 orkton, Sask.		CMHD 920 Caibarien, Cuba		KFBB 1280		KFQW 1420 Seattle, Wash.	
JOC 1120		CMI 770		Great Fls., Mont. KFBK 1310		KFRC 610	
ethbridge, Alta.		Havana, Cuba	i	Sacramento, Cal.		San F'ncisco, Cal.	
JOR 1210		CMK 730		KFBL 1370		KFRU 630	
ea Island, B.C.		Havana, Cuba		Everett, Wash.		Columbia, Mo.	
JRM 600						-,	
Ioose Jaw, Sask.						}	
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KFSD 600	KGFF 1420	KIDO 1250	KPJM 1500
KFSD 600 San Diego, Cal.	KGFF 1420 Alva, Okia.	Boise, Idaho	KPJM 1500 Prescott, Ariz.
KFSG 1120	KGFG 1370	KIT 1310	KPO 680
Los Angeles, Cal.	Oklahoma City	Yakima, Wash.	San F'ncisco, Cal.
KFUL 1290	KGF1 1500	KJBS 1070	KPOF 880
Galveston, Tex. KFUM 1270	Corpus Ch'sti, Tex L	San F'ncisco, Cal. KJR 970	Denver, Colo. KPPC 1210
Col. Spgs., Colo.	Los Angeles, Cal.	Seattle, Wash.	KPPC 1210 Pasadena, Cal.
KFUO 550	KGFK 1500	KLCN 1290	KPQ 1500
St. Louis, Mo.	Moorhead, Minn.	Blytheville, Ark.	Wenatchee, Wash
KFUP 1310	KGFL 1370	KLO 1400	II KPRC 920
Denver, Colo.	Raton, N. M. KGFW 1310	Ogden, Utah	Houston, Texas KPSN 1360
KFVD 1000 Culver City, Cal.	KGFW 1310 Ravenna, Nebr.	KLPM 1420 Minot, N. Dak.	KPSN 1360 Pasadena, Cal.
KFVS 1210	KGFX 580	KLRA 1390	KQV 1380
Cape Gir'rd'u, Mo	Pierre, S. D. KGGC 1420	Little Rock, Ark.	Pittsburgh, Pa.
KFWB 950	KGGC 1420	KLS 1440	KQW 1010
Hollywood, Cal. KFWF 1200	San F'ncisco, Cal.	Oakland, Cal.	San Jose, Cal.
KFWF 1200 St. Louis, Mo.	KGGF 1010 Coffeyville, Kans.	KLX 880 Oakland, Cal.	KRE 1370
KFWI 930	KGGM 1230	KLZ 560	Berkeley, Cal. KREG 1500
San F'ncisco, Cal.	Alb'q'rque, N.M.	Denver, Colo.	Santa Ana, Cal.
KFXD 1420	KGHF 1320	KMA 930	KRGV 1260
Nampa, Idaho	Pueblo, Colo.	Shenandoah, Ia.	Harlingen, Texas
KFXF 920 Denver, Colo.	KGHI 1200 Little Rock, Ark.	KMAC 1370	KRLD 1040 Dallas, Texas
KFXJ 1310	KGHL 950	San Antonio, Tex. KMBC 950	KRMD 1310
Edgewater, Colo.	Billings, Mont.	Kan. City, Mo.	Shreveport, La.
KFXM 1210	KGIQ 1320	KMED 1310	KROW 930
San Ber'd'no,Cal.	Twin Falls, Ida.	Medford, Ore.	Oakland, Cal.
KFXR 1310 Oklahoma City	KGIR 1360	KMIC 1120 Inglewood, Cal.	KRSC 1120 Seattle, Wash.
KFXY 1420	Butte, Mont. KGIW 1420	KM J 1210	II KSAC: 580
Flagstaff, Ariz.	Trinidad, Colo.	Fresno, Cal.	Manh'tt'n, Kans.
KFYO 1420	KGIX 1420	KMLB 1200	II KSCJ 1330
Abilene, Texas KFYR 550	Las Vegas, Nev. KGIZ 1500	Monroe, La. KMM J 740	Sioux City, Ia. KSD 550
Bismarck, N.D.	Grant City, Mo. KGJF 890	Clay Ctr., Nebr.	St. Louis, Mo.
KGA 1470	KGJF 890	KMO 860	KSEL 900
Spokane, Wash.	Little Rock, Ark. _	Tacoma, Wash.	Pocatello, Idaho
KGAR 1370	KGKB 1500	KMOX 1090 St. Louis, Mo.	KSL 1130 Salt Lake City
Tucson, Ariz. KGB 1330	Brownwood, Tex	KMPC 710	KSMR 1200
San Diego, Cal.	San Angelo, Tex. _	Los Angeles, Cal.	Santa Maria, Cal.
KGBU 900	II KGKO 570	KMTR 570	KSO 1380
Ketchikan, Al'ka. KGBX 1310	Wichita Flls., Tex KGKX 1420	Los Angeles, Cal.	Clarinda, Iowa
St. Joseph, Mo.	Sand Point, Ida.	KNX 1050 Los Angeles, Cal.	KSOO 1110 Sioux Falls, S.D.
KCRZ 930	II KGKY 1500	II KOA 830	KSTP 1460
York, Nebr.	Scottsbluff, Nebr.	Denver, Colo.	St. Paul, Minn.
KGCA 1270	KGMB 1320 Honolulu, T. H.	H KUAC 550	KTAB 560
Decorah, Iowa KGCR 1210	KGMP 1210	Corvallis, Ore. KOB 1180	San F'ncisco, Cal. KTAP 1420
Watertown S.D.	Elk City, Okla.	State Coll., N.M.	San Antonio, Tex.
KGCU 1200	KGNF 1430	KOCW 1400	KTAR 620
Mandan, N.D.	No. Platte, Neb.	Chickasha, Okla.	Phoenix, Ariz.
Wolf P't, Mont.	KGNO 1210	KOH 1380	KTAT 1240
KGDA 1370	Dodge City, Kans KGO 790	Reno, Nevada KOIL 1260	Ft. Worth, Tex.
Mitchell, S. D.	San F'ncisco, Cal.	Council Bluffs, Ia.	Los Angeles, Cal.
KGDE 1200	KGRS 1410	KOIN 940	KTBR 1300
Ferg's F'lls, Minn	Amarillo, Texas	Portland, Ore.	Portland, Ore.
KGDM 1100 Stockton, Cal.	KGU 940 Honolulu, Hawaii	KOL 1270 Seattle, Wash.	KTBS 1450 Shreveport, La.
KGDY 1200	KGW 620	KOMO 920	KTHS 1040
Huron, S. D.	Portland, Ore.	Seattle, Wash.	Hot Spgs., Ark.
KGEF 1300	KGY 1200	II KUNU 1370 I	KTLC 1310
Los Angeles, Cal KGEK 1200	Lacey, Wash. KHJ 900	San Antonio, Tex	Houston, Texas
KGEK 1200 Yuma, Colo.	Los Angeles, Cal.	KOOS 1370 Marshfield, Ore.	KTM 780 Los Angeles, Cal.
KGEK 1360	KHO 590	KORE 1420	KTNT 1170
Long Beach, Cal. 📗	Spokane, Wash.	Eugene, Ore.	Muscatine, Iowa
KGEW 1200	KICK 1420	KOY 1390	KTRH 1120
Ft.Morgan, Colo. KGEZ 1310	Red Oak, Iowa. KID 1320	Phoenix, Ariz. KPCB 650	Houston, Texas KTSA 1290
Kalispell, Mont.	Idaho Falls, Ida.	Seattle, Wash.	San Antonio, Tex.
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KTSL 1310 Shreveport, La.	WABC 860 New York City	WCAH 1430	WDEL 1120
KTSM 1310	WABI 1200	Columbus, Ohio WCAJ 590	Wilmington, Dal. WDGY 1180
El Paso, Texas	Bangor, Maine	Lincoln, Nebr.	Minneap., Minn.
KTW 1270 Seattle, Wash.	WABZ 1200 New Orleans, La.	WCAL 1250	H WDIX 1500 1
KUJ 1500	WACO 1240	Northfield, Minn. WCAM 1280	Tupelo, Miss. WDOD 1280
Longview, Wash.	ll Waco, Texas	Camden, N. J.	Chattan'ga, Tenn
KUOA 1390 Fayetteville, Ark.	WADC 1320 Akron, Ohio	WCAO 600 Baltimore, Md.	Chattan'ga, Tenn WDRC 1330
KUSD 890	II WAIII 640	WCAP 1280	N. Haven, Conn. WDSU 1250
Vermillion, S. D.	Columbus, Ohio	Asbury Pk., N. J. WCAT 1200	II New Orleans La
KUT 1500 Austin, Texas	WALR 1210 Zanesville, Ohio	Rapid City, S. D.	WDWF 1210
KVI 760	WAPI 1140	WCAU 1170	Providence, R. I. WDZ 1070
Tacoma, Wash.	Birmingham, Ala.	Philadelphia, Pa.	Tuscola, III. WEAF 660 New York City WEAI 1270 Ithaca, N. Y.
KVL 1370 Seattle, Wash.	WASH 1270 Gr. Rapids, Mich.	WCAX 1200 Burlington, Vt.	WEAF 660
KVOA 1260	WBAA 1400	WCAZ 1070	WEAL 1270
Tucson, Arizona	Lafayette, Ind.	Carthage, Ill.	Ithaca, N. Y.
KVOO 1140 Tulsa, Okla	WBAK 1430 Harrisburg, Pa.	WCBA 1440 Allentown, Pa.	II WEAN 180
KVOS 1200	WBAL 1060	WCBD 1080	Providence, R. I. WEAO 570
Bellingh'm, Wash.	Baltimore, Md.	Zion, Ill.	Columbus, Ohio
KWCR 1310 Cedar Rapids, Ia.	WBAM 1440 Greensboro, N. C.	WCBM 1370	WEBC 1290 Superior, Wis.
KWEA 1210	II WBAP 800	Baltimore, Md. WCBS 1210	WEBQ 1210
Shreveport, La.	Fort Worth, Tex.	Springfield, Ill.	Harrisburg, Ill.
KWG 1200 Stockton, Cal.	WBAX 1210 Wilkes-Barre, Pa.	WCCO 810 Minneap., Minn.	WEBR 1310
KWII 1060	WBBC 1400	WCDA 1350	Buffalo, N. Y. WEDC 1210
Portland, Ore.	Brooklyn, N. Y.	WCDA 1350 New York City	Chicago, Ill.
KWK 1350 St. Louis, Mo. KWKC 1370	WBBL 1210 Richmond, Va. WBBM 770	WCFL 970 Chicago, Ill.	WEDH 1420
KWKC 1370		WCGU 1400	Erie, Pa. WEEI 590
Kansas City, Mo.	Chicago, Ill.	Brooklyn, N. Y.	Dogton Mass
KWKH 850 Shreveport, La.	WBBR 1300 Brooklyn, N. Y.	WCKY 1490 Covington, Ky.	WEHC 1200 Emory, Va.
KWLC 1270	WBBZ 1200 Ponca City, Okla.	WCLB 1500	WEHS 1420
Decorah, Iowa	Ponca City, Okla.	Long Beach, N.Y.	Evanston, Ill.
KWSC 1220 Pullman Wash	WBCM 1410 Bay City, Mich.	WCLO 1200 Janesville, Wis.	WELK 1370
Pullman, Wash. KWWG 1260	WBEN 900 Buffalo, N. Y. WBGF 1370	WCLS 1310	Philadelphia, Pa. WELL 1420
Brownsville, Tex. KXA 570	Buffalo, N. Y.	WCLS 1310 Juliet, Ill.	BattleCreek,Mich
KXA 570 Seattle, Wash.	Glens Falls, N. Y.	WCMA 1400 Culver, Ind.	WENR 870 Chicago, Ill.
N.A.L 1420	II WBIS 1230	WCOA 1340	WEPS 1200
Portland, Ore.	Boston, Mass. WBMS 1450	Pensacola, Fla.	Warragter Mass
KXO 1500 El Centro, Cal. KXRO 1310	Hackensack, N.J.	WCOC 880 Meridian, Miss.	WEVD 1300 New York City
KXRO 1310	WBNY 1350	WCOD 1200	WEW 760
Aberdeen, Wash KXYZ 1420	New York City WBOW 1310	Harrisburg, Pa.	St. Louis, Mo.
Houston, Texas	Terre Haute, Ind.	WCOH 1210 Yonkers, N. Y. WCRW 1210	WEXL 1310 Royal Oak, Mich.
KYA 1230	WBRC 930	WCRW 1210	WFAA 800
San F'ncisco, Cal. KYW 1020	Birmingham, Ala. WBRE 1310	II Chicago, Ill.	WFAA 800 Dallas, Texas WFAN 610
Chicago, Ill.	Wilkes-Barre, Pa.	WCSC 1360 Charleston, S. C.	Philadelphia, Pa.
KZM 1370		WCSH 940	WFBC 1200 Knoxville, Tenn.
Hayward, Cal. NAA 690	West 920 Well'l'yH'ls, Mass WBT 1080	Portland, Maine WCSO 1450	Knoxville, Tenn. ———————————————————————————————————
Arlington, Va.	Charlotte, N. C.	Springfield, Ohio	WFBE 1200 Cincinnati, Ohio
NBA 850 Balboa, C. Z.	WBTM 1370	WDAE 1220	WFBG 1310
TTX 750 L	Danville, Va WBZ 990	Tampa, Fla. WDAF 610	Altoona, Pa.
San Jose, C. R.	Springfield, Mass	Kansas City, Mo.	WFBL 1360 Syracuse, N. Y.
VAS 690	WBZA 990 Boston, Mass.	WDAG 1410	WFBM 1230
Louisburg, N. S. WAAF 920	WCAC 600	Amerillo, Texas WDAH 1310	Indianapolis, Ind. WFBR 1270
Chicago III	I Storrs Conn	El Paso, Texas	Baltimore, Md.
WAAM 1250 Newark, N. J. WAAT 940 Jersey City, N. J. WAAW 660	WCAD 1220 Canton, N. Y.	WDAY 940 Fargo, N. D.	WFDF 1310
WAAT 940	WCAE 1220	WDBJ 930	Flint, Mich. WFDV 1370
Jersey City, N. J.	Pittshurgh, Pa.	Roanoke, Va.	Rome, Ga.
WAAW 660		WDBO 1120	
Omaha, Nebr.	-	Orlando, Fla.	
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WFDW 1420	WHBY 1200	WJAZ 1490	WLB 1250
Talladega, Ala.	Green Bay, Wis.	 Chicago, Ill. WJBC 1200	St. Paul, Minn. WLBC 1310
WFI 560	WHDF 1370 Calumet, Mich.	WJBC 1200 La Salle, Ill.	Muncie, Ind.
Philadelphia, Pa WFIW 940	WHDH 830	 WJBI 1210	WLBF 1420
Hopkinsville, Ky	Boston, Mass.	 Red Bank, N. J.	Kansas City, Ks.
WFJC 1450	WHDI 1180	WJBK 1370 Detroit, Mich.	WLBG 1200 Ettrick, Va.
Akron,Ohio WFKD 1310	Minneap., Minn. WHDL 1420	 WJBL 1200	WLBL 900
Philadelphia, Pa.	TupperLake, N.Y.	Decatur, Ill.	Stevens Pt., Wis.
WFLA 620	WHEC 1440	WJBO 1420	WLBW 1260
Clearwater, Fla.	Rochester, N. Y.	 New Orleans, La WJBT 770	Oil City, Pa. WLBX 1500
WGAL 1310	WHFC 1420 Cicero, Ill.	WJBT 770 Chicago, Ill.	L.I.City, N.Y.
Lancaster, Pa. WGAR 1450	WHIS 1420	WJBU 1210	WLBZ 620
Cleveland, Ohio	Bluefield, W. Va.	 Lewisburg, Pa.	Bangor, Me.
WGBB 1210	WHK 1390	WJBW 1200	WLC1 1210
Freeport, N. Y. WGBC 1430	Cleveland, Ohio	 New Orleans, La WJBY 1210	WLEX 1410
WGBC 1430 Memphis, Tenn.	New York City	Gadsden, Ala.	Lexington, Mass.
WGBF 630	WHO 1000	WJDX 1270	WLEY 1370
Evansville, Ind.	Des Moines, Ia.	 Jackson, Miss WJJD 1130	Lexington, Mass WLIT 560
WGBI 880	WHOM 1450	Mooseheart, Ill.	Philadelphia, Pa.
Scranton, Pa. WGBS 600	Jersey City, N. J. WHP 1430	 Mooseheart, Ill. WJKS 1360	WLOE 1500
New York City WGCM 1210	Harrisburg, Pa.	 Gary, Ind.	Boston, Mass.
WGCM 1210	WIAS 1420	WJR 750 Detroit, Mich.	WLS 870 Chicago, Ill.
Gulfport, Miss. WGCP 1250	Ottumwa, Iowa WIBA 1280	 WJSV 1460	WLS1 1210
Newark, N. J.	Madison, Wis.	Alexandria, Va.	Providence, R. I.
WGES 1360	WIBG 930	WJW 1210	WLTH 1400
Chicago, Ill. WGH 1310	Elkins Park, Pa. WIBM 1370	 Mansfield, Ohio	Brooklyn, N. Y. WLVA 1370
WGH 1310 Newp't News, Va.	Jackson, Mich.	WJZ 760 New York City	Lynchburg, Va.
WGL 1370	WIBO 560	WKAQ 890	
Ft. Wayne, Ind.	Chicago, Ill.	 San Juan, P. R. WKAR 1040	Cincinnati, Ohio WLWL 1100
WGMS 1250 St. Paul, Minn.	WIBR 1420 Steubenville, O.	E. Lansing, Mich.	New York City
WGN 720	WIBU 1310	WKAV 1310	WMAC 570
Chicago, Ill.	Poynette, Wis.	Laconia, N. H.	Syracuse, N. Y. WMAF 1410
WGR 550	WIBW 580 Topeka, Kansas	Joliet, Ill.	WMAF 1410 S. D'rtm'th, Mass
Buffalo, N. Y. WGST 890	WIBX 1200	 WKBC 1310	WMAK 1040
Atlanta, Ga.	Utica, N. Y.	 Birmingham, Ala.	Buffalo, N. Y.
WCV 790	WICC 1190	WKBF 1400	WMAL 630 Washington, D.C.
Schenec'd'y, N.Y WHA 940	Bridgeport, Conn. WIL 1200	 Indianapolis, Ind WKBH 1380	WMAQ 670
Madison, Wis.	St. Louis, Mo.	La Crosse, Wis.	Chicago, Ill.
WHAD 1120	WILL 890	WKBI 1420	WMAY 1200
Milwaukee, Wis. WHAM 1150	Urbana, Ill. WILM 1420	 Chicago, Ill. WKBN 570	St. Louis, Mo. WMAZ 890
WHAM 1150 Rochester, N.Y.	Wilmington, Del.	Youngstown, O.	Macon, Ga.
WHAP 1300	WIOD 1300	WKBO 1450	WMBA 1500
New York City	Miami Beh., Fla.	 Jersey City, N. J. WKBQ 1350	Newport, R. I. WMBC 1420
WHAS 820 Louisville, Ky.	WIP 610 Philadelphia, Pa.	New York City	WMBC 1420 Detroit, Mich.
WHAT 1310	WIS 1010	WKBS 1310	WMBD 1440
Philadelphia, Pa.	Columbia, S. C.	 Galesburg, Ill.	Peoria Hghts.,Ill. WMBG 1210
WHAZ 1300	WISJ 780 Madison, Wis.	WKBV 1500 Connersville, Ind.	Richmond, Va.
Troy, N. Y. WHB 860	WISN 1120	 WKBW 1480	WMBH 1420
Kansas City, Mo.	Milwaukee, Wis.	 Buffalo, N. Y.	Joplin, Mo.
WHBC 1200	WJAC 1310	WKBZ 1500	
Canton, Ohio WHBD 1370	Johnstown, Pa. WJAG 1060	 Ludington, Mich WKJC 1200	Chicago, Ill. WMBJ 1500
Mt. Orab, O.	Norfolk Nebr.	 Lancaster, Pa.	Pittsburgh, Pa.
WHBF 1210	WJAK 1310 Marion, Ind.	WKRC 550	WMBO 1310
Rock Island, Ill.	Marion, Ind. WJAR 890	 Cincinnati, O. WKY 900	Auburn, N. Y. WMBQ 1500
WHBL 1410 Sheboygan, Wis.	Providence, R. I.	Oklahoma City	Brooklyn, N. Y.
WHRG 1370	WJAS 1290	WKZO 590	WMBR 1370
Memphis, Tenn.	Pittsburgh, Pa.	 Be'n Spgs., Mich. WLAC 1470	WMBR 1370 Tampa, Fla. WMC 780
WHBU 1210	WJAX 900 Jacksonville, Fla.	WLAC 1470 Nashville, Tenn.	Memphis, Tenn.
Anderson, Ind.	WJAY 610	 H WLAP 1200	II WMUA 570
	Cleveland, Ohio	 Louisville, Ky.	New York City

WMMN 890	WOV 1130	WROL 1310	WTNT 1470
Fairmont, W.Va.	New York City	Knoxville, Tenn.	Nashville, Tenn.
WMPC 1500 Lapeer, Mich.	WOW 590	II WKK 1280	WTOC 1260
WMRJ 1210	Omaha, Nebr. WOWO 1160	Dallas, Texas WRUF 830	Savannah, Ga.
Jamaica, N. Y.	Ft. Wayne, Ind.	Gainesville, Fla.	WWAE 1200 Hammond, Ind.
WMSG 1350	II WPAD 1420	WRVA 1110	WWJ 920
New York City	Paducah, Ky.	Richmond, Va.	Dotnoit Mich
WMT 600 Waterloo, Iowa	WPAP 1010 New York City	WSAI 1330	WWL 850
WNAC 1230	WPAW 1210	WSAJ 1310	New Orleans, La.
Boston, Mass.	Pawtucket, R. I.	Grove City, Pa.	WWL 850 New Orleans, La. WWNC 570 Asheville, N. C.
WNAD 1010	11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WSAN 1440	WWPT 1500
Norman, Okla.	Chicago, Ill.	Allentown, Pa.	Woodside, N. Y.
WNAX 570 Yankton, S. D.	WPCH 810 New York City	II WSAR 1450	WWVA 1160 Wheeling, W. Va.
WNBF 1500	WPDF 1200	Fall River, Mass. WSAZ 580	Wheeling, W. Va. WXYZ 1240
Bingh'mt'n, N.Y.	Flint, Mich.	Hunt'gton, W.Va.	WXYZ 1240 Detroit, Mich.
WNBH 1310	Flint, Mich. WPEN 1500	WSB 740	XEA 1200
New B'df'd, Mass.	Philadelphia, Pa.	Atlanta, Ga.	Guadalajara, Jal.
WNBO 1200	WPG 1100	WSBC 1210	II XEB 670
Washington, Pa. WNBR 1430	Atl'ntic City, N.J. WPOE 1370	Chicago, Ill. WSBT 1230	Mexico City
Memphis, Tenn.	Patchogue, N. Y.	South Bend, Ind.	XEC 1330
WNBW 1200	Wrok 180	WSDA 1400	Toluca, Mex. XED 960
Carbondale, Pa.	Norfolk, Va.	Brooklyn, N. Y.	Reynosa, Tams.
WNBX 1200	WPSC 1230	II WSEN 1210	XEF 1130
Springfield, Vt. WNBZ 1290	State College, Pa. WPTF 680	Columbus, Ohio WSFA 1410	Oaxaca, Oax.
SaranacL'ke, N.Y.	Raleigh, N. C.	Montgomery, Ala.	XEH 960
WNJ 1450	WQAM 560	WSGH 1400	Monterrey, N. L. XEI 1000
Newark, N. J.	Miami, Fla.	Brooklyn, N. Y.	Morelia, Mich.
WNOX 560	WQAN 880	WSIX 1210	H XEJ 860
Knoxville, Tenn. WNYC 570	Scranton, Pa. WQAO 1010	Springfield, Tenn.	Juarez, Chih.
New York City	New York City	WSJS 1310 WinstSal., N. C.	XEL 1090 Saltillo, Coah.
WOAI 1190	WQDM 1370	WSM 650	XEM 765
San Antonio, Tex.	St. Albans, Vt.	Nashville, Tenn.	Tampico, Tams.
WOAN 600 Law'nceb'g, Tenn.	WQDV 1500	WSMB 1320	I XEN 720
WOAX 1280	Tupelo, Miss. WQDX 1210	New Orleans, La. WSMK 1380	Mexico City
Trenton, N. J. WOBT 1310	Thomasville, Ga.	Dayton, Ohio	XEO 980 Mexico City
WOBT 1310	WRAF 1200	WSPA 1420	XER 1070
Union City, Tenn.	La Porte, Ind.	Spartanburg, S.C.	Mexico City
WOBU 580 Charlest'n, W.Va.	WRAK 1370 Williamsport, Pa.	WSPD 1340	I XES 890
WOC 1000	WRAW 1310	Toledo, Ohio WSSH 1410	Tampico, Tamp.
Davenport, Iowa	Reading, Pa.	Boston, Mass.	Monterrey, N. L.
WOCL 1210	WRAX 1020	WSIII 880	XEU 800
Jamestown, N. Y. WODA 1250	Philadelphia, Pa.	Iowa City, Ia	Veracruz, Ver.
WODA 1250 Paterson, N. J.	WRBJ 1370 Hattiesburg, Miss	WSUN 620 St. Petersb'g, Fla.	XEW 780
WODX 1410	WRBL 1200	WSVS 1370	Mexico City XEX 920
Mobile, Ala.	Columbus, Ga	Buffalo, N. Y.	Mexico City
WOI 640	WRBQ 1210	WSYR 570	XEY 550
Ames, Iowa WOKO 1440	Greenville, Miss. WRBT 1370	Syracuse, N. Y. WTAD 1440	Merida, Yuc.
P'ghkeepsie, N.Y.	Wilmington, N.C.	WTAD 1440 Quincy, Ill.	XEZ 700 Mexico City
WOL 1310	WRBU 1210	WTAG 580	XFA 540
Washington, D.C.	Gastonia, N. C.	Worcester, Mass.	Mexico City
WOMT 1210	WRBX 1410	WTAM 1070	XFC 630
Manitowoc, Wis. WOOD 1270	Roanoke, Va. WRC 950	Cleveland, Ohio WTAQ 1330	Jalapa, Ver.
Gr. Rapids, Mich.	Washington, D.C.	Eau Claire Wis	XFE 920 Villahermosa,Tab
WOPI 1500	WRDO 1370	Eau Claire, Wis. WTAR 780	XFF 920
Bristol, Tenn.	Augusta, Me.	Norfolk Va.	Chihuahua, Chih.
WOQ 1300	WRDW 1500 Augusta, Ga.	WTAW 1120	XFG 640
Kansas City, Mo. WOR 710	WREC 600	College Sta., Tex. WTAX 1210	Mexico City XFI 590
Newark, N. J.	Memphis, Tenn.	Springfield, Ill.	Mexico City
WORC 1200	H WREN 1220	WTBO 1420	XFX 860
Worcester, Mass. WORD 1490	Lawrence, Kans.	Cumberland, Md.	XFX 860 Mexico City 8WMC 720
WORD 1490 Chicago, Ill.	WRHM 1250 Minneap., Minn.	WTFI 1450 Toccoa, Ga.	8WMC 720
WOS 630	WRJN 1370	WTIC 1060	St. Johns, N. F. 10BP 1200
Jeff's'n City, Mo	Racine, Wis.	Hartford, Conn.	Wingham, Ont.
	WRNY 1010	WTMJ 620	
	New York City	Milwaukee, Wis.	ļ

Principal Broadcasting Stations of the World

Fill in your dial numbers and you will then know where these foreign stations should be received on your set

-	Call	Watts	City -	Country	Kcys.	Call	Watts	City	Country
119 155	RYK	7000	Berlin Kovno	Germany Lithuania				550	
155 160	PH9	6200	Kovno Huizen	Netherlands	[-				
162	TNU	0200	Carthage	Tunisia					
166		40000	Lahti	Finland	553	SBD	600	Sundsvall	Sweden
167		1000	Norddeisch	Germany	563		4000	Munich	Germany
174		13500	Paris	France	571	RA30	1000	Dneipropetrovsk	Russia
176	RA43	4000	Kharkov	Russia	571	YLZ	10000	Riga	Latvia
187		5000	Angora	Turkey	580	RA38	1000	Krasnodar	Russia
193	5XX	25000	Daventry	Un. Kingdom	580	7ZL	600	Hobart	Australia
202.5		12000	Warsaw	Poland	581		15000	Vienna	Austria
207	RA1	40000	Moscow	Russia	590	ON4RB	3600	Brussels	Belgium
	FL	15000	Paris	France	599	IMI	7000	Milan	Italy
222	SBG	30000	Motala	Sweden					
231	AFT	10000	Berlin	Germany				600	
240	TUA	500	Tunis	Tunisia				1	
250	ERACES * 1	100	Tallinn	Estonia					
250	ODE	6000	Osmanie	Turkey	600	CWOW		N/	11
250	SBE	600	Boden	Sweden	600	CWOW	500	Montevideo	Uruguay
260	D 1 22	7500	Kalundborg	Denmark	606	XGZ	500	Nanking	China
269	RA33	4000	Novorossisk	Russia	608	LKO CKB	60000 5000	Oslo	Norway Czecho-
272 278	RA57 RA67	500 1200	Irkutsk Malchik	Russia Russia	616	OKP	2000	Prague	czecno- slovakia
278 279	PCF	1500		Nussia Netherlands	620	3AR	1000	Melbourne	Australia
280	PFB1	7000	Scheveningen Hilversum	Netherlands	625	COTN	500	Tientsin	China
285	RA15	500	Sverdlovak	Russia	625	CMAB	1000	Santiago	Chile
285	RA49	1200	Erivan	Russia	625	RA17	1500	Vladivostok	Russia
300	RA42	10000	Leningrad	Russia	626	5GB	25000	Daventry	Un. Kingdo
307	RA40	1200	Odessa	Russia	631	RA43	4000	Kharkov	Russia
316	RA12	1200	Voronezh	Russia	633	EAJ8	1000	San Sebastian	Spain
325	RA39	1200	Gomel	Russia	635		8000	Langenburg	Germany
333	RA22	1200	Samara	Russia	644	YN	3000	Lyon	France
343	RA41	1200	Vologda	Russia	648	4YA	500	Dunedin	New Zealan
345	RA11	. 4000	Tiffis	Russia	653		630	Zurich	Switzerland
349	RA18	1200	Minsk	Russia	662	IBZ	200	Bolzano	Italy
357	RA13	1800	Nizhni-Novgorod	Russia	662		500	Klagenfurt	Austria
366	RA14	4000	Rostov-on-Don	Russia	662	SCT	150	Uppsala	Sweden
375	RA7	180	Ivanovo Vos-		662	LKP	700	Porsbrund	Norway
			nesensk	Russia	662	100000000	700	Aix la Chapelle	Germany
375	RA9	250	Sevastopol	Russia	662	EAJ22	500	Salamanca	Spain
375	D. 154	1750	Colombo	Ceylon	664	RUS 2FC	500 2500	Salvador Sydney	Salvador Australia
380 389	RA56 SBF	1200 600	Artemovsk Ostersund	Russia Sweden	665 666	ZTJ	15000	Johannesburg	South Africa
393	RA46	2000	Petrozovodsk	Russia	667	RA4	300	Moscow	Russia
393 395	KA40	250	Geneva	Switzerland	667	RA2	500	Moscow	Russia
397	RA5	1200	Kiev	Russia	671	FPTT	1000	Paris	France
100	RA8	700	Bogorodsk	Russia	671	LKR	1000	Rjukan	Norway
100	RA45	4000	Baku	Russia	671	LKA	350	Aalesund	Norway
111	RA77	1200	Stalino	Russia	674	СОНВ	1000	Harbin	China
117	RA47	200	Armavir	Russia	680	IRO	3000	Rome	Italy
120	RA27	2000	Tashkent	Russia	685	LT2	1000	LaPlata	Argentina
129	RA26	1000	Astrakhan	Russia	688	SBA	1000	Stockholm	Sweden
135	RA44	1200	Tver	Russia	689	PTB	500	Danzig	Danzig
142		600	Lausanne	Switzerland	689	CAB	1000	Canton	China
162	RA16	1200	Vel Ustjuk	Russia	689	SCN	250	Malmberget	Sweden
169	RA25	1000	Orenburg	Russia	690	6WF	1000	Perth	Australia
			_		695		2500	Belgrade	Yugoslavia
					698	JODK	1000	Keijo	Japan
			500					700	
	5.00	***	V .	p :	700	CWOA	1000	Montevideo	Uruguay
21	RA34	1000	Kourak	Russia	706	LS1	5000	Buenos Aires	Argentina
522	. 1611	3000	Lljubljana	Yugoslavia	706	ET IN	550	Sorocaba	Brazil Colombia
26	LKH	700	Hamar	Norway	706	HJN		Bogota	Colombia Spain
		1500	Freiburg	Germany Germany	707.6 708	EAJ7 JOJK	1500 3000	Madrid Kanazawa	Japan Japan
527							3000	N A OB ZB WB	
527 535		700	Augsburg						
527 535 535		750	Hanover	Germany	714	RA32	200	Saratov	Russia
527									

Keus	. Call	Watts	City	Country	Kcus	. Call	Watts	City	Country
717		4000	Berlin	Germany	923		4000	Breslau	Germany
718	2YA	5000	Wellington	New Zealand	930	4RK	2000	Rockhampton	Australia
724	******	2500	Rabat	Morocco	931	SBB	10000 500	Goteborg	Sweden Brazil
725 730	5CL	750 2500	Dresden Adelaide	Germany Australia	937 937	PRAB COPK	1000	Rio de Janerio Peking	China
734	JCL	10000	Katowice	Poland	940	2RN	1500	Dublin	Irish Free St.
735		2200	Tartu	Estonia	941		250	Basle	Switzerland
743	2.02.00	1000	Berne	Switzerland	942	CT1AA	1000	Lisbon	Portugal
750 750	LR7 PRAA	1250 1000	Buenos Aires Rio de Janerio	Argentina Brazil	949 950	LR3 2GB	1000 600	Buenos Aires Sydney	Argentina Australia
750	FRAA	250	Marsan	France	950	20B	500	Marseilles	France
750	7LO	2000	Nairobi	Kenya	950		700	Bremen	Germany
750	JOBK	10000	Osaka	Japan	956	K4	250	Tucuman	Argentina
750 752	EAJ2 5SC	750 1000	Madrid Glasgow	Spain Un. Kingdom	959 960	5DN	1500 100	Krakow Adelaide	Poland Australia
759	JQAK	5000	Dairen	Kwangtung	963.1		480	Agen	France
760	LT4	500	Mendoza	Argentina	967.8		2000	Paris	France
760	4QG	2500	Brisbane	Australia	967	PRAP	300 1000	Pernambuco	Brazil
769 769	JOHK	10000 1500	Sendai Franfort on Main	Japan Germany	968 973	5WA	700	Cardiff Zagreb	Un. Kingdom Yugoslavia
777.2		500	Rheims	France	980	3YA	500	Christchurch	New Zealand
779		500	Wilna	Poland	983.6	PIAA	500	Lisbon	Portugal
779	LKF	700	Fredrikstad	Norway	986		1500	Bordeaux	France
779 788	IGE	8000 1200	Toulouse Genoa	France Italy	990 995	LR4 2BD	2000 1000	Buenos Aires Aberdeen	Argentina Un. Kingdom
789	ZTD	1000	Durban	South Africa	333	200			On. Ringuom
789	JOGK	10000	Kumamoto	Japan			1	1000	
789	LR1	500	Buenos Aires	Argentina					
789 789	PRAJ OAX	200 1500	Juiz de Fora Lima	Brazil Peru			400		<u> </u>
789	cwos	500	Montevideo	Uruguay	1000 1000	RA21 OPX	150 1000	Tomsk LaPaz	Russia Bolivia
797	2ZY	1000	Manchester	Un. Kingdom	1004	PFBI	7000	Hilversum	Netherlands
			800		1004	scc	500	Falun	Sweden
_			800		1009	11111111	200	Jyvaskyla	Finland
					1010 1013	6ML	300 10000	Perth Tallinn	Australia Estonia
800	ZTC	1000	Cape Town	South Africa	1013	CMAO	250	Santiago	Chile
800	3LO	2500	Melbourne	Australia	1022	CINAO	500	Limoges	France
804	CMAC	1000	Santiago	Chile	1023	OKK	2500	Kosice	Czecho-
806	10.01	4000	Hamburg	Germany				6. 1	slovakia
810 810	JOCK VUC	10000 3000	Nagoya Calcutta	Japan India	1025 1029.9	2UE	50 500	Sydney Lyon	Australia France
815	VUC	3000	Seville	Spain	1023.	, ik	750	Vipuri	Finland
824		2400	Algiers	Algeria	1030	LR9	2000	Buenos Aires	Argentina
824	LKB	1000	Bergen	Norway	1031	ITO	7000	Turin	Italy
825 825.3	F8GC 8DB	1500 100	Paris Algiers	France Algeria	1034 1040	CMAJ 6BM	100 1000	Valparaiso Bournemouth	Chite Un. Kingdom
828	LR5	2000	Buenos Aires	Argentina	1040	6LV	130	Liverpool	Un. Kingdom
831	JOIK	10000	Sapporo	Japan	1040	2DE	130	Dundee	Un. Kingdom
833	BB 14/1/	4000	Stuttgart Sao Paulo	Germany	1040	2EH	350	Edinburgh	Un. Kingdom
833 840	PRAE G5	1000 250	Sao Paulo Venado Tuerto	Brazil Argentina	1040 1040	· bkh SPY	130 130	Hull Plymouth	Un. Kingdom Un. Kingdom
840	Anr	3000	Bombay	India	1040	2LS	130	Leeds & Bradford	Un. Kingdom
842	2LO	30000	London	Un. Kingdom	1040	6FL	130	Sheffield	Un. Kingdom
849	JOFK	10000	Hiroshima	Japan	1040	6ST	130	Stoke on Trent	Un. Kingdom Un. Kingdom
851 855	2BL	7000 2500		Austria	1040	SSX	130 150	Swansea	Un. Kingdom
857	ZBW	1500		Australia Hong Kong	1049 1049	2ZF	200	Palmerston Montpellier	New Zealand France
857	PRAD	500	Rio de Janerio	Brazil	1050	D5		Bahia Blanca	Argentina
857	CWOR	500	Montevideo	Uruguay	1058		500	Innsbruck	Austria
860 869	EAJI	7500		Spain	1059		2000	Berlin	Germany
869 869	JOAK	10000	Cairo Tokyo	Egypt Japan	1059 1059		750	Magdeburg Stettin	Germany Germany
870	LR2	3000		Argentina	1059	SCU	300	Varberg	Sweden
877	OKB	2500	Brunn	Czecho-	1067		1000	Copenhagen	Denmark
009	E4	250	4 1	slovakia	1070	EAR5	500	Las Palmas	Canary Isl'ds
882 887	E4 KRC	350 250	Azul Shanghai	Argentina China	1071 1071	PRAR CRC	500 500	Sao Paulo Tientsin	Brazil China
887	ON4GT	100		Belgium	1075	OKR	12500	Bratislava	Czecho-
895	XGY	250	Hangchow	China					slovakia
896		1500	Poznan	Poland	1076	LS5	1000	Buenos Aires	Argentina
			900		1080 1086		200 4000	Caen Konigsberg	France Germany
					1086	LT3	4000 1500	Rosario	Argentina
					1091		250	Angers	France
900	1YA	500	Auckland	New Zealand			4	100	
900	JFAK	1000	Taihoku	Japan	_			100	
905.2 905.2	INA	1500	Naples	ltaly C					
905.2 909	LR6	500 1000		France Argentina	1103		1500	Rennes	France
909			Cairo	Egypt	1110		4000	Kaiserslautern	Germany
914.1		1500		France	1110	SCF		Hudiksvall	Sweden

1110 SCO 1112 LS4 1121 EAJI3 1125 2UW	250 1000	Norrkoping	Sweden			_		
1121 EAJ13 1125 2UW	1000					1	L400	
1125 2UW		Buenos Aires	Argentina		-	, -		
1123 ZUW	10000 100	Barcelona	Spain					
1129 SCQ	250	Sydney Trollhattan	Australia Sweden	1410	D4	100	Mar del Plata	Argentina
1130	500	Lille	France	1428	LS6	1000	Buenos Aires	Argentina
1147 2ZM	160	Gisborne	New Zealand	1470	SCD	200	Gavle	Sweden
1148 5NO	1000	Newcastle	Un. Kingdom	1471 1481	SCM	1500 250	Ludwigshaven Kristinehamn	Germany Sweden
1149 LR8	1500	Buenos Aires	Argentina	1484	SCH	250	Jonkoping	Sweden
1150 2LO 1153 PRAC	30000 500	London Rio de Janerio	Un. Kingdom					5 • • • • • • • • • • • • • • • • • •
1153 PRAC 1155 2MK	50	Bathurst	Brazil Australia			1	1500	
1157	3000	Gleiwitz	Germany					
1167 SBH	10000	Horby	Sweden					***
1169 CWON	200	Montevideo	Uruguay	1500	2LS	130	Leeds & Bradford	
1175 MRD	1500	Toulouse	France	1530 1560	SCJ G2SH	250	Karlskrona Akureyri	Sweden Iceland
1180 3DB 1184	100 4000	Melbourne Leipzig	Australia Germany	1635	AFT	10000	Berlin	Germany
1188 1ZQ	4000	Leipzig Auckland	New Zealand	2000	RA51	350	Leningrad	Russia
1190 LS2	1000	Buenos Aires	Argentina	2000	RA72	800	Smolensk	Russia
1193 EAJ18	200	Almeria	Spain	2142		500	Surabaya	Netherland
1199 3ZC	250	Christchurch	New Zealand	2998		1500	Manaos	East Indies Brazil
1199.5	5000	Bordeaux	France	3088		2000	Soro	Denmark
1199 PRAG	500	Porto Alegre	Brazil	3446		2500	Haiphong	French Indo
								China
	1	1200			4 H9XD		Zurich	Switzerland
				3750	F8AV PK1AA		Nogent-sur-Seine	
			1	3998	PKIAA	500	Batabia	Netherland East Indies
				4262.3	3 F8GC	1500	Paris	France
1200	500	Toulon	France	4434			Doberitz	Germany
1200 5KA 1211 SCI	200 200	Adelaide Kalmas	Australia Sweden	5169	OKIMPI	5000	Prague	Czecho-
1219	250	Juan les Pins	France	5170	IBR	1000	Bandoeng	slovakia Netherland
1219 ON4RW	200	Liege	Belgium	3110	IBK	1000	Danqueng	East Indies
1219 ON4RG	400	Ghent	Belgium	5290	AGJ		Nauen	Germany
1219	750	Kassel	Germany Finland	5552	AFT	10000	Berlin	Germany
1219 1219	1500	Abo Bjørenborg (Por		5879	AIN		Casablanca	Morocco
1219	750	Jakobstad	Finland	5996	PK2AF	500	Djokjakarta	Netherland East Indies
1219 SCL	200	Kiruna	Sweden	5996	3ZC	250	Christchurch	New Zealand
1220 SCB	200	Eskilstuna	Sweden	6005	HRB	2300		Honduras
1220 SCP	400 500	Saffle Linz	Sweden Austria	6057	15515551	500	Lyngby	Denmark
1220 1224 CMAQ	100	Santiago	Chile	6662	РН3СН	250	Surabaya	Netherland
1229	1000	Trondhjem	Norway	6666	7IR A X		Rome	East Indies Italy
1238 2BE	1000	Belfast	Un. Kingdom	6877		2500	Rabat	Morocco
1245 2NC	2000	Newcastle	Australia	7005	8KR		Constantine	Tunisia
1254 1256	1000 500	Nuremburg Nimes	Germany France	7055	VS3AB		Johore	Brit. Malaya
1260.4	5000	Bordeaux	France	7260 7313	VS1AB PK6KZ	500	Singapore	Brit. Malaya Netherland
1265 SCV	200	Orebro	Sweden	1313	LVOVT	300	Makassar	East Indies
1270 LS3	1000	Buenos Aires	Argentina	7317.1	1	2000	Paris	France
1287 G4	560	Rafaela	Argentina	7462.		500		France
1292	700	Kiel	Germany	7590	JFAB		Taipeh	Japan
				7963 7995	JHBB		Doberitz Hirasio	Germany Japan
	1	1300		8818	31100		Para	Brazil
				8995		500	Reykjavik	Iceland
				9225	2BL	1000	Sydney	Australia
1201 CCD	600	M 1	£	9369	ZTJ	15000	Johannesburg	South Africa
1301 SCB 1301 SCG	600 200	Malmo Helsingborg	Sweden Sweden	9369 9375	3LO	1000 1000	Melbourne Berne	Australia Switzerland
1301 SCS	200	Umea	Sweden	9375	H9XD		Zurich	Switzerland
1304		Schaerbeck	Germany	9375	FL	15000	Paris	France
1309 SCA	150	Boras	Sweden	9488		500	Lyngby	Denmark
1313	250	Biarritz Muenster	France	9640 9761	7LO F2BD	1000 480		Kenya France
1319 1319	1500 4000	Viuenster Cologne	Germany Germany	9761	EAM	480	Agen Madrid	France Spain
1330 PRAO	1000	Sao Paulo	Brazil	9994	LGN		Bergen	Norway
1330 J2	400	Concordia	Argentina	10520	2FC	1000	Sydney	Australia
1337 6CK	1000	Cork	Irish Free St.	10520	2ME		Sydney	Australia
1344 LOAA	10000	Luxemburg	Luxemburg		SAS		Karlsborg Bahia	Sweden Brazil
1351 LS7 1357	1000 10000	Buenos Aires Helsingfors	Argentina Finland	15300	SQBE	500	Bahia Lyngby	Denmark
1363.6	250	St. Etienne	France	17430			Nauen	Germany
1364.3	1500	Beziers	France	17640	PLF		Malabar	Netherland
1373 SCW	200	Ormskoeldsvik	Sweden	10000	DIII	40000	U:	East Indies
1373	1500	Flensburg	Germany Sweden	17778 1935 5		40000	Huizen Nancy	Netherlands France
1375 SCK 1388 ON4CE	250 200	Karlstad Chatelineau	Sweden Belgium		PK4PA	240	Palembang	Netherland
1390 SCE	200	Halmstad	Sweden					East Indies

FAVORITE PROGRAMS

me Station Dials Feature	Time Station Dials Feature
DAILY	WEDNESDAY
SUNDAY	THURSDAY
MONDAY	FRIDAY
TUESDAY	SATURDAY

HOW TO TUNE A SET CORRECTLY

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

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters

600 kilocycles 499.7 meters

610 kilocycles 491.5 meters

620 kilocycles 483.6 meters

630 kilocycles 475.9 meters

640 kilocycles 468.5 meters

650 kilocycles 461.3 meters

660 kilocycles 454.3 meters

670 kilocycles 447.5 meters

5000 San Francisco, Cal.

5000 Chicago, 10.

WAAW 500 Omehs, Nebr.

5000 Nashville Tenn.

5000 Los Angeles, Calif.

Sun Prancisco, Calif.
Kartus Ciry, Mo.
Philadelphia, Ca.
Philadelphia, Pa.
Esnas Ciry, Mo.

A LL 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 bought your first EX. Proceed as RADEX. follows:

Tune in some stationany 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. either of these indexes we find that the frequency of WEAF is 660. Now we turn to 660 kilocycles in the Index by Frequencies and Dial Numbers. Here we find that WEAF is one of the two stations which have been assigned the 660 kcys. frequency by the Federal Radio Commission. We also find that it has a power of 50,000 watts, that it is located in New York City and is owned by the National Broadcasting Co., Inc.

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

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

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

Now we tune in some other station, proceeding

www.mer. Inc.

raska Wesleyan University
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dmen of the World
nanuel Missionary College 75 73

blibt Power & Paper Co.
Ishop N. S. Thomas
Irida Radio Corp.

commental Radio Co., Inc. WREL Inc. Travelers Insurance Co. 74 172 Lee, Inc.
1000 City Star Co.
1000 City Star Co.
1000 Broadcasting Co., Inc.
1001 Broad, Inc.
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State Marketing Bureau

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67 65 Hale Bros. & The Chronicle Burham Life Insurance Ca. 680 kilocycles 440.9 meters

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

of great value to us in

identifying programs. Let us say that we hear music at 67-65 on our dials. We refer to our Index by Frequencies and Dial Numbers and we find that we are in tune to 680 kilocycles. On this wave there are two stations: KPO at San Francisco and WPTF at Raleigh, N. C. Both of these stations have 5000 watts in power. But knowing which is the closer to our set, we can tell almost invariably which station we are hearing. Radio Commission has had to give the same frequency in most cases to several stations but they have distributed them

When two stations in the same locality have the

same frequency, they are

so

interfere.

required to divide the time. In this case, of course, it is not possible to tell which one of the two stations is broadcasting at the particular moment we hear it, but we do know it is one or the other of them.

geographically

should not

The second column in the Index by Frequencies, as we have seen, gives the power of the station as measured in watts. This power also aids us in identifying stations as we will not ordinarily hear those stations with 500 watts or less unless they are close to our home city.

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

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

I Will Train You at Home





will give You my new 8 OUTFITS of RADIO PARTS for a home Experimental Laboratory

\$100 a week

If you are earning a penny less than \$50 a week, send for my book of information on the opportunities in Radio. It is free. Clip the coupon NOW. Why he satisfied with \$25, \$30 or \$40 a week for longer than the short time it takes to get ready for Radio.

Radio's growth opening hundreds of \$50, \$75, \$100 a week jobs every year. In about ten years Radio has grown from a \$2.000,000,000 industry. Over 800,000 jobs have been created. Hundreds more are being opened every year by its continued are being opened every year by its continued are lieng and young men with the right training—thaning—thaning training I give you—are needed continually.

You have many jobs to choose from

Tou have many lobs to choose from Broadcasting stations use engineers, operators, station managers and pay \$1,500 to \$5,000 a year. Manufacturers continually need testers, inspectors, foremen, engineers, service men, buyers, for jobs paying up to \$15,000 a year. Shipping companies use llundreds of Radio operators, or jobs paying up to \$15,000 a year. Shipping companies use llundreds of Radio operators, and payers and payers and payers and payers, and payers, and payers, and payers, and payers, and payers, managers, and pay \$40 to \$100 week. There are many other opportunities too.

week. There are many other opportunities too.

So many opportunities many N. R. I. men

make \$5 to \$25 a week extra while learning

The day you enroll with me I'll show you
how to do 10 join common in most every nei hborhood, for spare time money. Throughout
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and ideas that are making \$200 to \$1.000 for
hundreds of N. R. I, students in their spare time
while studying.

Talking Movies, Television, Wired Radio are also included

Radio principles as used in Talking Movies, Television and home Television experiments. Wired Radio, Radio's use in Aviation, are all given. I am so sure that I can train you satisfactorily that I will agree in writing to refund every penny of your tuition if you are not satisfied with my Lessona and Instruction Service upon completing. upon completing.

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that our course, what others who have taken
it are doing and making. Find out what Radio
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You can build over 100 circuits with these outfits. You build and experiment with the circuits used in Crosley, Atwater-Kent, Eveready, Majestic, Zenith, and other popular sets. You learn how these sets work, why they work, how to make them work. This makes learning at home easy, fascinating, practical.

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