

THE SEPTEMBER 1931

RADIO INDEX

The Magazine that Doubles the Pleasure of Radio



25^c

How to Attach Head-Phones to
Modern Receivers

Complete List of World Stations

Radio Sets for Direct Current

98 Changes in Station Data

No. 51

N. S. E.

RADIO THEORY

AND

MODERN PRACTICE

A New Book in Simple Terms—Profusely Illustrated

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

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

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

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

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

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

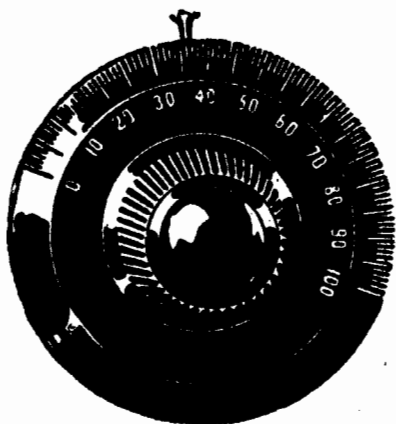
This book of 224 pages, printed in large type, bound in flexible cloth will be given to our readers

FREE For Two Annual Subscriptions

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

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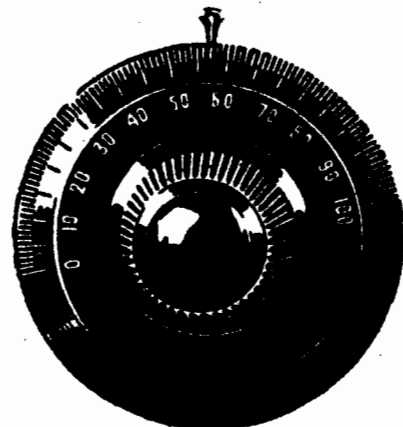
SEPTEMBER 1, 1931



RADIO IN DEX

REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER
Editor and Publisher



EIGHTH YEAR

Contents

NUMBER 51

Frontispiece . . . Dorothy Knapp, Noted Stage Star The N.B.C. "Television Girl"	
Using Phones with A. C. Sets	2
The Radio Puzzle Page	4
Can Static Be Eliminated?	6
Advice For the Troubled	8
The Readers' Conference	10
Modern Sets for D. C. Current	12
With our DX Readers	14
Slogans of the Stations	29
A Modern Battery Set	30
Key to Chain Stations	31
Ready Reference Table for Dial Numbers	
What's On the Air Tonight?	32
Hour-by-Hour Index to Chain Programs	
A Complete Index by Frequencies	40
Cross-Indexed by Dial Numbers and Wave Lengths	
A Complete Index by States and Cities	54
With Key to Location of Station on Broadcast Map	
A Complete Index by Call Letters	60
Broadcasting Stations of the World	65

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USING PHONES with A. C. SETS

SO widespread was the interest in the article in the April, 1930, issue of RADEX on connecting head phones to modern a. c. receivers that that issue is entirely exhausted. We are therefore reprinting this article together with others on the same subject with a new diagram illustrating the procedure.

Very few modern receivers are equipped with head-phones jack and plug. We believe set manufacturers are making a mistake in omitting this connection. In the March RADEX we described a phone adapter which we can furnish to our readers for \$1.50 each. This adapter has the advantage that no change in the wiring of the set is required. The last tube ahead of the loud-speaker is removed and the plug of the adapter is placed in its socket thus taking off the signals before they are amplified to loud-speaker volume. For those who desire to change their receivers so it will be unnecessary to remove the power tube, the following article is recommended.

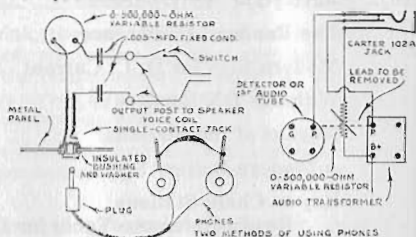
On most modern receivers no provision is made for connecting a headset and it cannot very well be connected to the regular loudspeaker terminals as the phones would soon be ruined by this practice. However, DX fans, who usually are busy fishing for far-off stations late at night, prefer the use of headphones as the signals are more readily detected than with a loudspeaker. The use of phones is also preferable at night as the raucous voice of a speaker is highly objectionable to members of the family who have already retired. The absence therefore of a headset connection, such as a jack on the panel, has given rise to a problem which many of our readers have presented to us for a solution.

Well, the solution is comparatively simple, and there are two methods that can be followed by any radio fan. Get a 500,000-ohm variable resistor, two .005-mfd. fixed condensers and a single-circuit switch of any type. One terminal of one condenser is connected to one output terminal of the set and the other condenser is similarly connected to the

How to Change Wiring

second output terminal. One terminal of the variable resistor is run to the unconnected side of the first condenser. The headphone cord is run to the unconnected side of the second condenser and to the unconnected side of the resistor. The switch is cut in one of the lines supplying the speaker, enabling the user to cut it out.

Instead of connecting the headset cord directly to the condenser and resistor, some fans may desire to install a jack on the panel, from which these connections are made, a plug on the cord making contact with the jack. Similarly, the resistor can be mounted on the panel. The jack and resistor must be well insu-



lated from the panel if the latter is metal, which is the case in most modern receivers. Special fiber bushings and washers are obtainable for the purpose. Unless carefully insulated in this way, serious trouble will result, owing to a feedback from the power stage, and a direct short-circuit between the B-negative and B-positive. If you have an output transformer installed on the subpanel of your receiver, it is not necessary to use the two condensers to protect the phones from high voltage as the transformer serves this purpose. An output choke is sometimes used instead of a transformer, and in this case, also, no condensers are required. On dynamic speakers, the switch to cut off the speaker when using the phones should, of course, be connected exactly as shown in the diagram, as this disconnects the voice coil. If your speaker continues to give a low hum

while using the phones, cut a similar switch in the leads connected to the field winding of the speaker.

A Different Hook-Up

Another method of connecting the headphones is to cut them into the circuit directly after the detector tube, or, if desired, after the first audio stage, the advantage of the latter hookup being greater amplification of the signal. Get a three-contact jack of the type that breaks a circuit between two terminals when a plug is inserted. A Carter No. 102A jack is of this type. Connect the lowest lug of the jack to the B-positive terminal of the audio transformer or resistor unit following either the detector or the first audio stage, depending on where it is desired to make the connection. The other lead to this terminal of the transformer supplying the B-positive, should be left in place.

Remove the lead running from the P-terminal of the transformer or resistor to the P-terminal on the tube socket. Run a lead from the P-terminal on the socket to the top lug of the jack, and another lead from the P-terminal of the transformer to the middle lug of the jack. The wiring is then complete. Use soldering lugs under the nuts on the transformer and socket terminals, and solder the leads to the lugs to insure good electrical contact. Inserting the phone plug in the jack disconnects the upper two jack contacts, breaking the plate circuit to the following stages and thus automatically keeping the signal from passing beyond the headphones, although the tubes will continue to light.

For a Majestic Set

A. R. Van Compernelle, 618 North Baker St., Danta Ana, Calif., has discovered a most effective method of attaching headphones to his Majestic set. He stresses the warning, however, that this is not to be undertaken by anyone who has not had experience in soldering a radio set. His description of his method follows:

It is a simple matter to attach headphones to your Majestic and silence its speaker without causing any harm to the set or decreasing its efficiency if you are "nifty" with a soldering iron and if you know how. Here's how.

To attach the phones, solder a lead to each of the G-45 tubes using the plate prong and run these two leads to your phone plug-in jack. Use a small rubber-insulated wire and solder it up against the base of the tube prong. If you attempt to wrap the wire around the prong it will make a bulky job and you will be unable to put the tube back in far enough. To ascertain which is the



Here are the Stebbins Brothers, Esley, Capt. Bill and John. The principal characters in the N.B.C. series "The Stebbins Boys." Arthur Allen is Esley, Phillips Lord is Capt. Bill, and Parker Fennelly is John. Swift program daily 6:45 p.m. EDST.

plate prong, stand behind your set and then the plate prong of the G-45 tubes is in the "upper right-hand corner." Be sure that the insulation on the wire is not peeled off beyond the base of the tube or it will short against the metal shield.

To silence the speaker, place a small snap switch in one of the voice coil leads. This will deprive the speaker of the voice output from the set but it will still be using its proper share of power from the rectifier. There is a terminal plate at the base of the speaker and the two little white wires running from the top of this terminal plate are the voice coil leads. Melt one of them loose with a soldering

(Continued on page 18)

RADIO PROBLEMS for KEEN WITS

Four More Call Letter Puzzles

THOSE June puzzles certainly gave our readers something to do to while away the two months RADEX was on vacation. We received many SOS calls claiming that No. 1 simply couldn't be made to work and that there must be a misprint somewhere. However, exactly twenty-four of our puzzlers were keen enough to answer all four problems correctly. "Thought I wouldn't be able to answer all the June puzzles," says a correspondent in Stevensville, Mich., George Raba, "until I found that Mexico also has 'states'."

Here are the correct solutions: For No. 1:

KSAC
WACO
KLRA
KTRH
WIBU
WLSI
WLBL
WODA

The state is Coahuila and the city Saltillo.

For No. 2:

KPSN Pasadena
WCOA Pensacola
WODA Paterson
WOAX Trenton
WSPD Toledo
CNRL London
CNRX Toronto

For No. 3:

KWVG
WGCM
CMKF
KFWB
WBCM
CMCM
CMCF
CFCF
CFCH
CHCK
CKCK
CKWX
WXYZ

For No. 4: The calls spelled out by the knight in its jumps were:

KWKC-WWNC-WWL-CKCK-WKBW-KWK-WJW

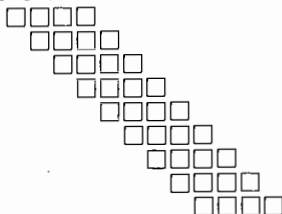
All very simple as you will readily see. Now here are four more puzzles on which you may sharpen your wits and improve your knowledge of radio stations. As

always, the calls are taken from the main index of RADEX and do not contain foreign or obsolete calls unless specifically mentioned. Get the correct solutions to all four problems in to us before September 20th and you may have either a copy of the new RADEX map or the October issue or have your subscription extended.

No. 1 this month is another simple little exercise in cipher or code. Each of the figures given stands for a letter and these letters form four station calls.

1565
2626
3657
4517

No. 2 is a problem in cross-call composition submitted by Ivan D. Ide, Genoa, Ill. You are to take the following calls and arrange them in the squares in such a way that they may be read either vertically or horizontally. Some of the calls may be reversed. WLW CMW KREG KCRC WRAK WELK KWWG WNAC WPAW WCAC WMPK WRAW WADC CNRW WDRC KPRC WPCC.

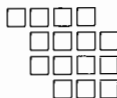


The last two puzzles this month were submitted by W. R. Anderson, 852 Manning Ave., Toronto, Ont. No. 3 is a very clever composition in code so designed that the code letters themselves form station calls. In this problem each of the letters given below stands for still another letter and when deciphered, eight entirely different calls will appear.

CMC XEP KGKY KGW
CMX WPG WRNY WPEN

The call indicated by WPEN does not appear in this issue as its call was

changed in May. No. 4 is similar to No. 3 of May, except that it contains fifteen squares instead of twelve. When properly filled in it should contain seven calls reading both horizontally and vertically with no call used twice and no call reversed.



Columbia Goes Television

WITH civic, radio and stage celebrities participating, the Columbia Broadcasting System officially opened its experimental television station, W2XAB, at 10:15 p.m., EDST, Tuesday, July 21.

The opening of the station followed several weeks of tests in which clear reception of W2XAB's signals was reported from cities as far away as Boston, Hartford, Baltimore, Camden, Schenectady and Philadelphia. Although sight transmission of the premiere program will be limited geographically to a comparatively small section along the Eastern seaboard, the sound transmission will be carried to most of the 85 outlets on the world's largest network.

Transmitting apparatus and antennae systems are adjacent to the studio located on the 23rd floor of the Columbia Building, 485 Madison Avenue, New York. The equipment is of the most modern design, representing latest advances in the science of visual broadcasting, and is especially noteworthy for its compactness.

The station, W2XAB, is licensed experimentally by the Federal Radio Commission. It will operate in the channel from 2,750 to 2,850 kilocycles with 500 watts power. Sixty-line scanning at twenty frames per second are the picture specifications.

At the outset no attempts will be made to televise more than two performers at the same time. In the same way, musical emphasis will be placed solely on an individual instrumentalist. Experiments have been planned, however, toward the televising of trios, quartets and orches-

tras. Bill Schudt, Jr., Acting Director of Television Programs, likewise intends to attempt the transmission of numerous novelties—such as juggling, shadow pictures and dramas in pantomime.

Do We Prefer Jazz?

BY far the majority of radio listeners prefer jazz above all other kinds of music, reports *Broadcast Advertising* as the result of a recent questionnaire to broadcasting stations in which station managers were asked to list the music numbers that requests and fan mail showed to be most popular during March.

"When Your Hair Has Turned to Silver" led as the favorite piece of music of the month with most of the responding stations. Other leaders were "The Peanut Vendor" and "I'm Alone Because I Love You," which tied for second place, and "Yours and Mine" and "You're Driving Me Crazy," which were the third leading choices.

A few stations reported audiences with preferences other than dance music. Station WLS, Chicago, for example, claiming mainly a rural audience, reported that melodies like "Bury Me Out On the Prairie," "Mrs. Murphy's Chowder," "Turkey in the Straw" and "Missouri Waltz" were most popular with its audience.

Station WCCO, Minneapolis, reported that Scandinavian music was the first choice of its audience. Songs of the old west were demanded by listeners of KFDN, Caspar, Wyo., and old-time melodies were preferred by the audiences of WIBW, Topeka, Kan., and WNAX, Yankton, S. D. Station KYA, San Francisco, reported receiving very few requests for jazz, listing the following numbers as the most popular: "Bells of St. Mary's," "Song of Songs," "I'll Take You Home Again, Kathleen," "Ah, Sweet Mystery of Life" and "Lover Come Back to Me." Station KNX, Los Angeles, reported that requests for current popular hits were very much in the minority compared with old-time songs, songs of the west and ultra classics such as symphonies and operas.

Can STATIC ever be ELIMINATED?

By B. FRANCIS
DASHIELL

SEPTEMBER ushers in the welcome conclusion of our warm and sultry summer weather. Seasonal static will soon be gone, but a few of its hisses, clicks and crashes will remain to annoy us at times during the fall and winter months. And next summer, and the summer after, static will return with renewed vigor to ruin or radio reception. To most of us it seems strange that, after many years of remarkable development, radio must be rendered useless by its greatest pest—summer static.

Natural static is a creature of the atmosphere. It has existed since the beginning of things. But it was not until the coming of wireless that men learned of static. Marconi did not know that the mysterious sounds which interfered with his first code signals came from the air. Now all has changed; everyone knows that static means mysterious radio noises of ear-splitting intensity; also, the word has taken its permanent place in the modern slang of today.

Why should static be a grim reality that haunts the souls of radio engineers and tries the patience of millions of broadcast listeners? Since static is so similar to radio waves, it cannot be tuned out like broadcast signals. It endures only because science has failed to discover means to eliminate static from our radio sets. A fortune awaits the person who succeeds in this. And to further humiliate the radio expert the extreme sensitivity of modern radio receivers easily brings in more and louder static!

Lightning's Contribution

Summer static is a product of seasonal heat and humidity. Winter static develops with certain changes in the weather. Neither of these two types can be avoided. The former, however, appears with greater violence and persistence since the influencing condition exists throughout the summer with considerable intensity. Thunderstorms cause the

most severe forms of summer static. The intensity of the electro-magnetic waves created by lightning frequently are severe enough to burn out tubes and the fine windings in the receiver. And a direct stroke, happening on very rare occasions, will entirely destroy the aerial wires and radio set, as well as creating other serious damage, unless proper precautions have been taken by using lightning arresters. Lightning actually occurs at places over the world many times each second during the year, and it is therefore no surprise that static sounds are heard in sensitive sets at any time.

Static Reduces Audience

As long as the air is hot and humid, a condition prevailing during the summer season, we hear constant streams of sputtering and hissing static coming from our loud speakers. The nuisance can become so disagreeable that we are compelled frequently to forego some pleasing programs. And the sponsors of these broadcasts are financial losers, for, when static is bad, the army of listeners quickly diminishes, and the potential value of the broadcast is lost. If definite forecasts of static could be made with the degree of efficiency as our well-known weather prognostications, radio programs could be arranged to suit expected reception conditions, and radio stations, the public, and advertising sponsors would benefit more than they have during the summer season.

In summer we have a constant source of static in the powerful energy of the thunderstorm. Lightning strokes, which are but giant electric sparks or short circuits occurring between clouds, or clouds and the earth, require millions and millions of volts of potential—perhaps far more than the combined output of all broadcasting stations. Static created by the lightning of a thunderstorm actually has been heard over a distance of 1000 miles, and the location of the storm determined by the U. S. Navy radio compass equipment on a battleship!

The sound of thunder does not affect radio; it is simply a concussion following air expansion created by a stroke of lightning. Many times most of us have observed a distant flash of lightning and heard simultaneously its accompanying crash of static. But the sound of thunder did not arrive until many seconds later, or perhaps was not heard at all. This is because static radio waves, static impulses, lightning strokes, light and electricity, all travel at the same velocity—186,000 miles a second! Thunder has the speed of sound, only 1100 feet a second. All the waves mentioned have many frequencies or vibrations and different wave lengths to suit certain situations. The artificial waves, such as radio, can, therefore, be separated and tuned in and out at will. But lightning waves and stray atmospheric impulses cannot be tuned nor controlled; they cover every radio wave and frequency, but to a less extent on the very short waves.

Besides the loud static created by lightning we have a milder form of persistent static that is associated with warm weather. And, in fact, this static will be found on occasion throughout the year. No one knows exactly what it is nor why it seems always to accompany certain changes in the weather. For instance, on winter nights, when radio reception happens to be perfect for the DX fan, static suddenly appears and, before many hours have passed, the weather becomes cloudy and warmer, with rain or snow. In summer, however, static is present most of the time, becoming worse as a thunderstorm begins to approach, and diminishing after the passage of the storm. But there is seldom a real let up in static noises, and when the air does become so clear that distant signals roll in until the coming of the dawn, we will find thousands of DX fans enthusiastically enjoying the greatest sport of all radio.

Static electricity breeds in the atmosphere all about us. It takes very little air friction and weather disturbances to generate this form of energy. Even the evaporation of water into the air in hot weather and the subsequent actions of the minute water droplets of vapor will



P. & A. Photo.

"Static created by lightning has been heard one thousand miles."

create tremendous electrification. For example, rub a fountain pen or rubber comb with a dry cloth; sparks will jump from the end. Touch it to a radio set or aerial and loud bursts of static will be heard. The same condition exists in the air; atmosphere is a gas and as its molecules become electrified we find free electrons drifting all about. They gather into groups, and some come into contact with the antenna or set and give up their tiny charges of electricity.

But as there is sufficient energy to influence and vary the grid potential of a sensitive radio set, the weak atmospheric impulse will pass through the radio and audio frequency amplifiers and quickly emerge as a strong static sound. Then, too, there are other and vastly more complicated situations which breed static. We find these, it is sufficient to say, in the erratic flow of earth currents passing upward into the ground wire and then through the receiver; or moving back and forth between overhead clouds and the earth and causing variations in the strength of the electric

(Continued on page 19)

PLAIN ADVICE for the Troubled

RADEX is happy to announce the addition to its staff of B. Francis Dashiell, Mechanical Engineer, of Washington, D. C., as Technical Editor. For many years Mr. Dashiell had charge of the United States Weather Bureau's radio work and developed the present system of weather broadcasting which are now so well known to broadcast listeners and commercial ships and planes. He is at present conducting original research in aerology for the benefit of aviation. Mr. Dashiell is an old amateur station owner, code operator, and experimenter. He is a neighbor of Mr. C. Francis Jenkins, the famous inventor of television, and has worked with the latter on tele-photo machines. Mr. Dashiell will handle the Questions and Answers department of this publication each month, as well as contribute articles of interest and information.

Readers are invited to submit questions in regard to radio and these will be answered in plain and easily understandable language. This service is rendered to readers of this magazine without cost.

That Short-Wave Adapter

The article describing a short-wave adapter published in the May, 1931, issue appears to be in error. The plug-in coils, which are built on bases of old 201-A tubes, measure $1\frac{3}{8}$ inches in diameter instead of only $1\frac{1}{8}$ inches as given. The inside of the tickler coil is given as $1\frac{3}{8}$ inches, and, for that reason it is impossible to insert the plug-in coils.

It is likely that bases of old 199 tubes instead of 201-A tubes were intended by the designer of the set for they measure $1\frac{1}{8}$ inches in diameter. However, since they are not always easy to procure, it is suggested that 201-A bases be used as was indicated, but the inner diameter

Help for Balky Sets

of the tickler coil be increased to $1\frac{1}{2}$ inches, and the coils be wound on tubes $1\frac{3}{8}$ inches in diameter attached to the bases. The slight increase in the length of the wire wound about the tickler because of this enlarged tube size will make no difference. But the secondary windings on the plug-in coils, which are now increased from $1\frac{1}{8}$ inches to $1\frac{3}{8}$ inches in diameter, will require shortening in order to hold to the same tuning frequency limits. The length of the wire in the total number of turns in the secondary of each coil must be reduced by nine inches.

No Ground Wires

It is said some radio sets cannot be operated with the ground wire disconnected. Is this so? Can such a set be identified by an examination of the wiring diagram? Also, what effect does static have on the tubes of a set?

Most sets can be operated after a fashion with the ground wire removed. Also, the removal of the antenna reduces the signal strength, static, and interference, and, at times such is desirable. But the removal of the ground seriously affects the capacity of the set. Then, too, certain all-electric sets must have a ground wire to operate. Some persons remove the antenna and attach the ground wire in the antenna post. This frequently gives sharp and clear tuning that cuts through local stations. But such action should be avoided in the case of electric sets. An examination of the wiring diagram will indicate to the trained engineer which sets cannot be operated without a ground wire. You should stick to the conventional circuit.

Static will injure tubes when the discharge accompanies a very severe or direct stroke of lightning. The damage consists of a burning or fusing of the parts of the tube and causing a misalignment of grids and plates.

Low Frequency Stations Are Dead

I have trouble receiving radio broadcasts

from stations operating between 670 and 560 kilocycles. I have a model 35 Arborphone receiver. Where can I procure a wiring diagram?

Your trouble in receiving on frequencies of 670 to 560 kilocycles—447 to 535 meters—is quite common among radio owners. It is seldom the fault of the set. The difficulty lies in receiving stations of higher wave lengths with the same efficiency as exhibited on low waves. A broadcasting station will transmit more energy with sharper tuning on higher frequencies than on the lower frequencies. When the power used at two stations is equal, the one operating on the lower wave can be heard much farther away than the one of higher wave length. Also, there are more sta-

tions broadcasting in the lower wave length band than on higher waves. This can be noted from the list of stations published in this issue. Perhaps one of your reasons is the fact that not many stations operate within the practical range of your set in your vicinity between the frequency limits mentioned by you. We wonder whether some reader can assist in furnishing a diagram of your Arborphone receiver?

Static and More Telephones

What size grid condenser and leak should be used in an effort to minimize static? In attaching telephones to my Majestic 72, can I fasten the leads from the phone jack to the plate of the power tube and silence the speaker with a snap

(Continued on page 19)

Col. Charles A. Lindbergh, on the eve of his flight to the Orient, is presented with a medal by the Columbia Broadcasting System, in recognition of his distinguished contribution to the art of radio. The famous flyer, with his intrepid wife, is now midway of the Pacific.



Radio CONFERENCE of RADEX Readers

Monthly Exchange of Ideas and Opinions

IN publishing the remarkable record claimed by Ollie Ross we took particular pains to explain that we were in no position to vouch for the veracity of his verifications and did not desire to enter into any dispute regarding the DX championship. We have received a number of letters criticizing us for even publishing so vast a claim as that of Mr. Ross. As we take it, these objectors do not want even to learn about any record so great even though it seems very well authenticated. RADEX can hardly assume such a position. Our readers are entitled to know what is going on in the DX world; they may do as they please about believing it.

"Mr. Ollie Ross' record log in the Midsummer issue is not consistent with the average material found in the DX Bible 'RADEX'," criticizes Wm. Dyson, 72 Cambridge Ave., Hamilton, Ont. "Although I do not doubt that Mr. Ross has heard every station he claims, I cannot understand how he can have 1309 actual verifications. You are, of course, aware that regardless of the amount of material on a program submitted, many stations send out a card thanking you for a report on the program of (date) at (time) but which says nothing that would prove reception to be correct. The letter from Norway which you have evidently reprinted for the *Los Angeles Examiner* is not a verification, although it is undoubtedly written in reply to a report of reception. Although it would be counted by anyone on their log, would you consider it an actual verification, and if so why? When other fans write in saying they have a log of so many stations with so many verified, I know they do not count replies such as the one mentioned as a verification. You will also note, and it shows the honesty of Mr. Ross, that the record-holder has experimented with grounds and aerials in 36 states. Realizing the fact that location has a most important

bearing on the possibility of hearing stations, I cannot see that it would be fair to consider Mr. Ross as a champion because any fan could unquestionably boost his total log, particularly with low-powered and daytime stations, if his set was operated in so many different localities."

"I think that I can answer the question raised on Ross' log of 1309 stations, which is more than the total number in the world at the present time," advises, F. E. Holley, 6450 So. Lincoln St. Chicago, Ill. "The answer is that I and every DXer I know count every new set of call letters as a new station, also there were a good many stations on the air five or six years ago that no longer exist."

"Ollie Ross' great record is explained when he admits living in 36 states in four years. I admire his frankness, as there are few who would make such an admission," comments Edwin M. Prosser, 84 Saratoga, Ave., Brooklyn, N. Y.

Pacific vs. Atlantic

"Some one wondered about the fact that Pacific Coast DXers receive Australia, Japan, etc., quite regularly, while Europe is very seldom heard in the east. Your correspondent's conclusion was that reception is better on the west coast. That does sound logical, but is not the real answer. The main reason why Europe is seldom heard in the United States, while west coast fans often hear Australia is time difference. Germany is six hours ahead of Eastern Standard time so naturally signs off at about 6 p.m. EST, which is midnight in Germany. Due to this fact, it is almost impossible to hear European stations on one of their evening programs. The only chance lies in catching one of the European station's early morning programs. Some stations in Europe come on at 6 a.m. EST. In summer it is then daylight and the waves die out before they hit the darkness over the Atlantic, but in winter there is a chance. If a European station comes on at 5 or 6 a.m., when it is dark there, then it is only 11 p.m. to

midnight EST. So darkness is all the way between, and it is possible and probable that on a good night an early morning European program may be heard at around midnight EST. If all U. S. stations would sign off at 9 p.m. EST time some night (it would then be 3 a.m. in Germany), and a special DX test given, there is little doubt that Europe would be heard. As to Australia, Japan, Hawaii, and others, they can be, and are, heard by west coast fans, simply because at the time darkness prevails between these countries and the U. S., it happens to be between 1 a.m. and 6 a.m. PST and they can thus be picked up without interference from locals."



Her name is Artennis Fauc and she was formerly a popular favorite in musical comedy. Now she is in "Dancing By the Sea." A C.B.S. feature at five p.m. Mondays and Saturdays, and 2:45 p.m. on Wednesdays.

This advice is from Geo. Lilley, 227 West Bernard St., West Chester, Pa.

"During the last few issues of RADEX there have appeared many letters from the Western DX fans telling of their foreign reception, and I think it is about time some of us Eastern fans tell about our foreign reception," comments Mac Plung, 1425 Coney Island Ave., Brooklyn, N. Y. "So far I have succeeded in logging stations across both of the seas. I have heard two stations from across the Atlantic, namely, 2LO, London, and a station in Koenigsberg, Germany. I have both of these stations verified. I have logged two Japanese stations, JOHK and JOIK, also verified; 2YA, Wellington, N. Z., also verified, indirectly. What I consider my best catch

is 3LO, of Melbourne, Australia, verified, indirectly. I have heard KGU and LR4, verifications requested, but no answers so far. I think if you make a request for the Eastern fans to send in their reports that many will respond."

"Do you consider it anything wonderful for a North American fan to log Japan, Australia, etc., on an antenna system such as some use?" asks Wm. Dyson, 72 Cambridge Ave., Hamilton, Ont. "I was quite surprised to see the number of distant stations given by Mr. Walbrecht in the current issue of RADEX, but as usual was sorry to see his tremendous length of aerial, 325 feet, averaging 50 feet high."

What Is Wrong With DX?

"One of the big troubles hurting the DX game today is the carelessness with which some stations verify reports," complains George Lilley, 227 W. Bernard St., West Chester, Pa. "The stations using these printed form verification cards seem to be the worst offenders, and such stations as KGBU, Ketheikan, Alaska, answer most any kind of letter, whether it contains a correct report or not, with their form card saying, 'Your report checks with our log for the date mentioned.' On the other hand, such stations as KYA, San Francisco, are to be congratulated on the care they take in issuing verifications. I know of several cases where DXers have sent in flimsy

(Continued on page 21)

MODERN SETS for D.C. CURRENT

THE major development in radio receiving sets has naturally been in the use of alternating current. Many thousands of people in this country, however, are served only by direct current and we receive a great many letters from readers asking for information regarding the development of modern receivers for d. c. lines. We recently sent a questionnaire to leading manufacturers of receivers to ascertain what they had to offer our readers who have access only to direct current. From the replies we are quoting in this article.

The All-American Mohawk Corporation, North Tonawanda, N. Y., says: "While it is not easily possible to make a receiver operating on 110-volt DC, work as effectively as an AC receiver on the same voltage, it is possible to make a very satisfactory d. c. set. The first reason for an AC set on 110 being better is because the set can develop potentials of from 200 to 300 volts, thus giving increased amplification, whereas a DC 110 is limited to just 110 volts and consequently cannot get the same power in amplification as the AC. However, new tubes have been developed for DC operation on 110 volts which operate at a lower rating and consequently will develop a higher output. These tubes we are incorporating in the new DC set we are developing. This set, we have every reason to believe, will work just as well at more than 1000 kilocycles as it will below that frequency. We do not convert DC into AC but use the current as supplied by the power line. Our new DC-7 set (Model S-7) will consume about 35 to 40 watts, part of which will be used to supply the dynamic speaker field. It will be a very sensitive set and we believe will be quite satisfactory for all purposes intended."

From the Stromberg-Carlson Telephone Manufacturing Co., Rochester, N. Y., comes the following comment: "The DC receiving sets that we are manufacturing at the present time are most efficient and can be depended upon to give good service in any locality that

Neglected Field Now Being Developed

is supplied with DC current. The sensitivity of the receiver is equally as good at one end of the tuning dial as it is at the other end. Of course it is an acknowledged fact that most of the noise and interference travels on the higher frequencies and quite naturally there will be with this receiver as well as with any other, more noise in operation when stations on the lower end of the dial (or in the higher frequencies) are tuned in. This is due entirely to atmospheric and local electrical conditions."

The Colonial Radio Corporation, Buffalo, N. Y., thinks that users of DC sets cannot expect just as good results as with AC receivers because with the limitation of line voltage it is impossible to get maximum output from either audio or radio amplifiers. They feel also that DC receivers will drop slightly at the low frequency end of the scale. This company is now developing a model which will consume no more than 35 watts DC. It will be a superheterodyne employing nine tubes with four pentode tubes in push-pull output.

The Crosley Radio Corporation, Cincinnati, Ohio, lists several DC receivers which, they claim, are just as satisfactory as alternating current sets with the exception of the limitation on volume heretofore referred to. They feel, however, that their DC sets still have more volume than is required for ordinary home installation. "As far as tuning in different frequencies is concerned," writes Crosley, "A DC set will cover the same bands of frequencies as the AC sets. It has the same selectivity, sensitivity and fidelity as an AC set. Our sets work on direct current. AC sets must have a rectifier built into the circuit that changes the alternating current into direct current. With our DC receivers no rectifier is required because you already have direct current, which is the kind required for the grid and plate circuits of the tubes."

This limitation of volume in DC operation is being met by F. A. D. Andrea, Inc., Long Island City, N. Y., in a way which they believe will make their DC receivers practically parallel the performance of last year's AC receivers before the development of AC power pentodes. "It has been the practice heretofore," they write, "to deal with the DC receiver more or less with disregard of voltage limitation in an endeavor to produce a receiver having no greater number of tubes than prevails

type '24 as r. f. amplifiers, one type '27 two element detector, one type '27 detector and one type '27 audio amplifier, twelve in all.

From the Philco manufacturers, the Philadelphia Storage Battery Co., is the following: "Philco has developed a wonderful DC set which utilizes special type 14 and type 17 tubes especially designed for operation on direct current. The Philco DC receivers have a marvelous tone and the sensitivity and selectivity are up to the standards of the AC

The Three Boswell Sisters—Martha, Vet and Connie—whom you may hear at 9:45 p.m. EDST every Friday evening, 7:45 p.m. Sunday or 8:45 p.m. Thursday—a C.B.S. program.



in AC apparatus. Realizing that the voltage limitation could be overcome only by increasing the number of tubes placed in the receiver, we have made our KB chassis and provided a special speaker designed to give remarkably truthful tone without disagreeable blasting. Our r. f. transformers are of the double coupled type the same as included in our AC equipment, so that long-wave reception equals that obtained on short wave in the matter of sensitivity." The new Fada DC sets use six '71 type power tubes in two banks of three each, operated in push-pull. The other tubes used are three screen grid

sets. It has been consistently noted in the operation of these sets that stations are brought in with equal clarity over the entire broadcast band. The set does not use any conversion system for changing DC to AC, but simply has a voltage drop arrangement for the various A, B and C power supplies." Philco lists two DC receivers, a Highboy at \$76.75 and a Baby Grand at \$60.95.

The Colin B. Kennedy Corporation, South Bend, Ind., believes that the voltage limitations of DC will prevent any DC set from giving the performance of standard AC receivers. They believe

(Continued on page 28)

TALKING DX with OUR READERS

THE new DX season is just dawning and already our readers are at work adding new stations to their log.

With the improved sets available a new radius of stations is open to the patient and skilful DXer. Of all the collecting hobbies, none is more fascinating than this of fishing the ether for the distant human voice. Here is what some of our readers have to say about it.

"With the receipt today of my fourth verification without stamp after having sent ten cents, I feel compelled to drop you a line in, shall we say protection, of the thousands of RADEX readers," complains G. R. Edwards, 58 Belcourt Road, Toronto, Ont. "No I am not Scotch, but I do not like to go to the bother of enclosing ten cents in cardboard, etc., expecting to get back a stamp only to get perhaps a postcard or a letter too big to go into verification book without cutting, which spoils the content and the looks. The stations to which I have sent ten cents are: CKAC, WNBO, WFBL and WBMS, all of which are marked (*) in RADEX to indicate that they send stamp for ten cents."

"I have a one-tube set which I built and I truly believe I can claim a 'blooper' DX record," states Paul V. Trice, 379 Grant St., Sharon, Pa. "My antenna (N-S direction) is only 15 feet high, but I have a special ground which is, I think, the cause of my success. With this one-tube set, since November, 1930, I have logged 197 stations. These stations are located in 39 states, 5 provinces of Canada, Cuba and Mexico. My best catch is KG CX, Wolf Point, Mont., 100 watts. I received verification from them a short time ago. WROL, Knoxville, Tenn., said they would be broadcasting a program (DX test) every first Sunday of each month early in the morning. CKPC said they will be testing every first Saturday early in morning starting 12 midnight Friday."

"Have picked up 12 Pacific Coast stations during one night, and my special reception was landing CKMO, Vancouver, B. C., having a power of 50

Fishing For Record

watts, and I am only using a 3-tube single circuit receiver, detector and two stages of audio, my aerial being strung between veranda posts and overall length is about 34 feet, and only about 8 or 10 feet above the ground. I have noticed others further west than I picking up this station on their large sets, but would like to hear from some person near me who have heard this station also." Hilliard Hamblin, Warsaw, Ont.

"I have a Crosley A. C. 7-tube set with a 90-foot antenna, 25 feet high, north-south, with lead-in at the south. I have been DXing since October, 1929, and have been collecting verifications since October, 1930. My records are: Ten 50-watt stations, the most distant being WCAZ, Carthage, Ill., and CFBO, St. John, N. B. I also have received CKPC, Preston, Ont." Francis Orcutt, 127 South Ave., Penn Yan, N. Y.

"Last Sunday morning I pulled in WSYB in Rutland, Vt., making a station in each of the 48 states in U. S. A. now. I have 582 stations on my log and have been DXing since November, 1929. I use a Scott A. C. 10 receiver and a 1930 Mastertone for my DX work. My aerial is 75 feet long and I use a buried gas pipe ground and also a chemical ground of buried B batteries. A good ground is a real essential for DX work." Ray E. Everly, 102 W. Washington St., Newton, Ill.

"Using an old 5-tube battery set, an Erla (with balloon coils) with three dials, I logged 114 stations within 24 hours. In this list were CMC, KPO, KFI, KHQ and KGA. Received during this time stations on 82 of the 96 frequencies in the regular broadcast band. Of course, none of these was received during daylight, except a few of the nearer ones in New York, New Jersey, etc. Several others, too numerous to mention, were also heard—KOA, KFJF, KSTP, KSL, etc." Stanley A. Schmuck, 94 Otis St., E. Cambridge, Mass.

"My set is a Majestic Mode 70 equipped with tubes two years old. I use an aerial 75 feet long, 30 feet high on one end and about 60 on the other. I wired the three coils of a three-circuit tuner (from an old set) together, and inserted it and a ten-year-old .002 mmf. mica fixed condenser in the aerial lead-in, and it sure has some kick. It is also variable and this enables reception of many new stations," writes Harvey Hobbs, 111 East 8th St., Covington, Ky.

"Here's a record for an RCA Radiola 18, which I have possessed since November, 1928. I have tuned in 583 stations to date, including the following: 2BL, 4QG, 6WF, 2YA, JOAK, JOBK, JOCK, CKMO, CKWX, KPQ, KUJ, KPCB, KXL, KGFJ, KJBS, KGGM, KGEK, KGEW, HJN, KGMB, TJW, CMCM, CMBR and CMGB (latter used 4½ watts when heard)," reports M. Tuchinsky, 3436 Filbert St., Philadelphia, Pa.

P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind., thinks that XETY has moved from 840 to 1310 keys. He has heard them on 1310 keys. several times. Mr. Hauss adds. "I have received a verification from 10AK, Stratford, Ont., saying that they are transmitting on about 1185 keys., with a power of 15 watts, although they are listed on 1200 keys. with 5 watts. They gave their

program to be as follows: Every evening from 6 to 7 E.S.T., and Monday night from 8:30 to 9:30 with old-time music."

C. M. Falconer, of Baltimore, has a letter from XETY stating that their new frequency is 1300 keys.

"I have a good catch for this year, which is WOCL, Jamestown, N. Y., with only 25 watts power. I pulled that station on a Bosch all-electric 7-tube, on a dynamic loud speaker. I have verifications from KGMB, Honolulu, HHK, Haiti, XEW, XEN, XETF, XES, Mexico, and WGCM, Gulfport, Miss. (this took two and a half months to get), a 100 watt verification, KOY, Phoenix, Ariz., and many others." Louis Rewald, 483 Wilmot Ave., Burlington, Wis.

"Have had 400 stations, including 28 in California, 7 in Oregon, 6 in Washington, 27 in Canada, 3 in Mexico, 4 in Cuba. 1 in Porto Rico. Have also had fairly good, KGMB, Honolulu, KGBU, Ketchikan, and JOAK, Tokyo. Am using only a cheap two-tube battery set employing 90 volts on the plate. Use a cone speaker for a lot of my stations. Employ a triple ground, outside." H. H. Diedrich, 2420 Fifth Ave., Moline, Ill.

"I have received 262 stations since January 14th last on my Atwater Kent Model 55. I find that I can receive distant stations above 790 keys, much

(Continued on page 26)

Morton Downey, Jacques Renard and Anthony Wons of the Camel Quarter-Hour. C.B.S. daily at 7:45 p.m. EDST and 11:30 p.m. Jacques is conductor of the syncopated orchestra and Anthony is Tony of the Scrap-Book. Morton Downey is rapidly achieving radio stardom.





TO John S. Young, staff announcer for the National Broadcasting Company, radio announcing is more than a career. To him, it is a very good solution of the "American Tragedy"—the difficult task of combining livelihood with a pleasant job.

In his early days at Yale University, where he was a classmate of Rudy Vallee, he couldn't decide whether he should be a lawyer, playwright or actor.

By the flip of a coin and the process of elimination, he studied playwriting under George Pierce Baker at Yale.

At the start it loomed as a wonderful profession. But near his graduating days, he learned that it was more of an ordeal than anything else. For unless the playwright could produce another "Abie's Irish Rose" or something like it, he was quite out of the picture.

After being graduated from Yale, Young tried acting, but he just didn't get the breaks.

He appeared before the microphones of WBZ-WBZA frequently as an actor, and announcing caught his eye as something of a novelty. A few months later, he could be found on the fifty-yard line of the Yale Bowl with a microphone in one hand, and the line-up in the other. At last he had found a profession in which excitement and profit reign!

A year or so with the two famous New England radio stations and he came to New York as staff announcer for the National Broadcasting Company.

His rise with that organization didn't take very long. The reason, probably, was that he took his job seriously. He is now announcing several major NBC programs. He proved to radio listeners recently that he was an efficient ukulele player on the "Personalities at 711" program.

His biggest thrill came when he received a personal radiogram from Commander Richard E. Byrd, a few minutes after he had finished announcing a special short wave program broadcast to Byrd at the South Pole from the Capitol Theater.

Caught in one of his serious moments, he said: "The trust, confidence or good will of the radio listener must never be violated. The announcer's vision of the homes his voice is entering must contain an element of sanctity. Therefore nothing 'tainted' must be presented."

To John S. Young, the microphone is the mouthpiece of the world—if not today, then surely tomorrow.

A Wired Radio System

THE Minden Radio and Electric Laboratories of Minden, Nebraska, have constructed and installed a wired radio system of transmission operating on a wave length of 267.7 meters or 1120 kcys. The call letters are MREL. They have been broadcasting daily programs from 12 to 1 p.m. week days and 2 to 4 p.m. Sundays.

The programs are led from the transmitter into the power lines which carry the signals into homes served by the power company. The telephone lines pick up the signals from the power wires.

Lee Ad. Richmond, of Station KFKA, sends us the information and wonders if any readers of RADEX have tuned station MREL.

There have been many rumors of power companies undertaking broadcasting of this sort, but this is the first instance in actual operation that has come to our attention.

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

Your Zone	EST	Where Time is Given as		PST
		CST	MST	
EST	.....	Add 1 hr.	Add 2 hrs.	Add 3 hrs.
CST	Subt. 1 hr.		Add 1 hr.	Add 2 hrs.
MST	Subt. 2 hrs.	Subt. 1 hr.		Add 1 hr.
PST	Subt. 3 hrs.	Subt. 2 hrs.	Subt. 1 hr.	.....
State	City	Call	Freq.	Watts
Alabama	Birmingham	WAPI	1140	5000
	Sundays, 9 a.m.-5:45 p.m.; 8:15-10:30 p.m., CST.			
	Mon.-Tues.-Wed., 6:45 a.m.-6 p.m.; 9-12 p.m.			
	Thur.-Fri.-Sat., 6:45 a.m.-9:00 p.m.			
Alaska	Juneau	KFTU	1310	10
	Sundays, 1-3 p.m.—Weekdays, 12-1 p.m., PST.			
California	El Centro	KXO	1500	100
	Sundays, 9 a.m.-2 p.m.; 6-10 p.m., PST.			
	Weekdays, 6:45 a.m.-2 p.m.; 5-10 p.m.			
Connecticut	Storrs	WCAC	600	250
	Mon.-Wed., 12:45-1:15 p.m.; 7:15-8 p.m., EST.			
Idaho	Boise	KIDO	1250	1000
	Sundays, 9 a.m.-6:30 p.m., MST.			
	Weekdays, 7:45 a.m.-10 p.m.			
	Sandpoint	KGKX	1420	100
	Sundays, 11 a.m.-3 p.m., MST.			
	Weekdays, 9:30 a.m.-9:30 p.m.			
Illinois	Carthage	WCAZ	1070	50
	Daily, 10 a.m.-4 p.m., CST.			
Louisiana	New Orleans	WDSU	1250	1000
	Daily, 7 a.m. to midnight, CST.			
Massachusetts	Fall River	WSAR	1450	250
	Thurs., 8 a.m.-3:15 p.m.; 5-9 p.m., DST.			
	Daily (except Sun. and Th.) 8 a.m.-3 p.m.; 5-9 p.m.			
Minnesota	Northfield	KPMX	1250	1000
	Daily (except Wed. and Fri.), 10:15-10:30 a.m., CST.			
	Wed.-Fri., 8-9 p.m.			
Montana	Wolf Point	KGCX	1310	100
	Sunday, 10:45 a.m. to 12:30 n., MST.			
	Daily, 8 a.m.-6:30 p.m.			
Nebraska	Clay Center	KMMJ	740	1000
	Sunday, 7-9 a.m.; 12-1:30 p.m., CST.			
	Daily, 5 a.m.-7:10 p.m.			
New Jersey	Newark	WOR	710	5000
	Sunday, 11 a.m.-12 p.m., DST.			
	Daily, 6:45 a.m.-12 p.m.			
New York	Utica	WIBX	1200	100
	Sunday, 10:20 a.m.-6:15 p.m., DST.			
	Daily, 7:45 a.m.-10:30 p.m.			
Oregon	Astoria	KFJI	1370	100
	Daily, 8 a.m.-9 p.m., PST.			
	Portland	KXL	1420	100
	Sunday, 12:01 a.m.-midnight, PST.			
	Saturday, 7:30 a.m. and all night.			
	Daily (except Sat.-Sun.), 7:30 a.m.-1 a.m.			
Pennsylvania	Seranton	WGBI	880	250
	Mon.-Wed.-Thur.-Sat., 11 a.m.-12:30 p.m.; 1:30 p.m.-3:30 p.m. (ex. Sat.); 5:50 p.m.-11 p.m., EST.			
	Tues., 11 a.m.-12:30 p.m.; 1:30 p.m.-3:30 p.m.; 5:30 p.m.-8 p.m.			
	Fri., 11 a.m.-12:30 p.m.; 1:30-3:30 p.m.			
Rhode Island	Providence	WLSI	1210	100
	Sunday, 1-6:30 p.m.—Daily, 3-6 p.m.; 9-11 p.m., DST.			
Texas	Dallas	WFAA	800	50000
	Sundays, 7:30 a.m.-9:30 p.m., CST.			
	Mon.-Wed.-Fri., 7 a.m.-9 p.m.			
	Tues.-Thur.-Sat., 7 a.m.-12 mid.			
Wisconsin	Madison	WHA	940	750
	Mon.-Wed.-Fri., 10-11 a.m.; 12-1 p.m.; 4:30-5:30 p.m., CST.			
	Tues.-Thurs.-Sat., 10-11 a.m.; 12-1:30 p.m.			
Cuba	Havana	CMX	890	500
	Daily, 12 n.-2 p.m.; 8-11 p.m.; 12 m.-1 a.m., CST.			
	Sat. night, midnight-4 a.m.			

In your Spare Time

Build Radio Sets—Make Extra Money!

RADIO-CRAFT

shows you HOW!

In RADIO-CRAFT, the magazine endorsed by thousands of Radio Service Men and Set Builders throughout the country, you will find most important articles telling how to build radio receivers. These articles are written by men outstanding in the radio profession, and among them we find John F. Rider, Sylvan Harris, Bertram M. Freed and others. RADIO-CRAFT also contains important reviews of the latest developments in Short Waves, Television, Sound Projection, Airplane Radio, Automobile Radio, Midget Sets, Construction of Test Laboratories, Cause and Cure of Interference, Service Men's Notes, New Apparatus, Money-Saving Kinks and many other subjects described every month.

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The Summer's Changes

Frequencies:

580	CFCY	Charlottetown, P.E.I., from 960
645	CKCI	Quebec, Que., from 880
645	CKCR	Waterloo, Ont., from 1010
675	VOWR	St. Johns, N. F., from 682
690	XET	Monterrey, Mex., from 630
810	WJTL	Tifton, Ga., from 1310
900	TIC	San Jose, Costa Rica, from 750
910	XEW	Mexico City, from 780
930	CFCH	North Bay, Ont., from 1200
930	CFCL	Prescott, Ont., from 1010
965	XED	Reynosa, Mexico, from 961
1010	CHCK	Charlottetown, P.E.I., from 960
1010	CHCS	Hamilton, Ont., from 1120
1010	CKOC	Hamilton, Ont., from 1120
1010	WLAP	Louisville, Ky., from 1200
1132	XEH	Monterrey, Mexico, from 1080
1180	WMAZ	Macon, Ga., from 890
1220	KTW	Seattle, Wash., from 1270
1240	KGCU	Mandan, N. D., from 1200
1240	KLPM	Minot, N. D., from 1420
1310	WFDV	Rome, Ga., from 1370
1360	XETO	Mexico City, from 1485
1370	WJTL	Tifton, Ga., from 810

Power:

630	CFCT	Victoria, B. C., 500 to 50
640	KFI	Los Angeles, Cal., 5000 to 50,000
645	CKCI	Quebec, Que., 22.5 to 100
810	WCCO	Minneapolis, Minn., 7500 to 3000
890	WKAQ	San Juan, P. R., 500 to 250
930	CFRC	Kingston, Ont., 500 to 50
930	WBG	Elkins Park, Pa., 50 to 25
985	CFCN	Calgary, Alta., 500 to 10,000
1010	CHCS	Hamilton, Ont., 10 to 500
1010	CKOC	Hamilton, Ont., 50 to 500
1010	WLAP	Louisville, Ky., 100 to 250
1110	KSOO	Sioux Falls, S. D., 2000 to 2500
1120	CJOC	Lethbridge, Alta., 50 to 100
1180	WMAZ	Macon, Ga., 250 to 500
1200	KGEK	Yuma, Colo., 50 to 100
1200	KMLB	Monroe, La., 50 to 100
1210	CKMC	Cobalt, Ont., 15 to 100
1210	CKPC	Preston, Ont., 25 to 50
1210	WJBY	Gadsden, Ala., 50 to 100
1210	WOCJ	Jamestown, N. Y., 50 to 25
1310	KXRO	Aberdeen, Wash., 75 to 100
1320	KGMB	Honolulu, Hawaii, 500 to 250
1340	WSPD	Toledo, Ohio, 500 to 1000
1350	WEHC	Emory, Va., 100 to 500.
1360	WQBC	Vicksburg, Miss., 300 to 500
1500	KGIZ	Grant City, Mo., 50 to 100

Owners:

560	WNOX	Knoxville, Tenn., to WNOX, Inc.
770	WBBM	Chicago, Ill., to WBBM Brdstg. Corp.
770	WJBT	Chicago, Ill., to WBBM Brdstg. Corp.
780	KELW	Burbank, Cal., to Magnolia Park, Ltd.
930	WDBJ	Roanoke, Va., to Times-World Corp.
1180	WHDI	Minneapolis, Minn., to Dr. Geo. W. Young
1200	WCAX	Burlington, Vt., to Burlington Daily News
1200	WFBE	Cincinnati, Ohio, to Post Publishing Co.
1200	WLBG	Petersburg, Va., to WLBG, Inc.
1200	WRBL	Columbus, Ga., to WRBL Radio Station, Inc.
1220	WCAE	Pittsburgh, Pa., to WCAE, Inc.
1280	WIBA	Madison, Wis., to Badger Brdstg. Co.
1290	KFUL	Galveston, Texas, to News Publishing Co.
1310	WBEO	Marquette, Mich., to Lake Superior Brdstg. Co.
1310	WOBT	Jackson, Tenn., to Sun Pub. Co.
1360	KGER	Long Beach, Calif., to Consolidated Brdstg. Co.
1370	KCRC	Enid, Okla., to Enid Radiophone Co.
1370	KUJ	Walla Walla, Wash., to KUJ, Inc.

1370	WRBJ	Hattiesburg, Miss., to Hattiesburg Brdstg. Co.
1370	WRDO	Augusta, Maine, to WRDO, Inc.
1380	KOH	Reno, Nevada, to The Bee, Inc.
1380	KSO	Clarinda, Iowa, to Iowa Brdstg. Co.
1420	KFXD	Nampa, Idaho, to Frank E. Hurt

Deletions:

780	WISJ	Madison, Wis.
1170	KTNT	Muscatine, Iowa
1370	KZM	Hayward, Calif.
1410	WSSH	Boston, Mass.
1420	KFQU	Holy City, Calif.
1420	KFQW	Seattle, Wash.

Locations:

590	WKZO	Kalamazoo, Mich., from Berrien Springs, Mich.
1200	WFAM	South Bend, Ind., from LaPorte, Ind.
1310	WOBT	Jackson, Tenn., from Union City, Tenn.
1420	WFDW	Anniston, Ala., from Talladega, Ala.
1420	WKBI	Cicero, Ill., from Chicago, Ill.

New:

830	WEEU	Reading, Pa.
948	NRH	Heredia, Costa Rica
1200	WBHS	Huntsville, Ala.
1420	WAGM	Presque Isle, Maine
1420	WDEV	Waterbury, Vt.
1420	WJMS	Ironwood, Mich.
1430	WFEA	Manchester, N. H.
1490	TJW	Hamilton, Bermuda

Call:

675	VOWR	St. Johns, N. F., from 8WMC
1200	WFAM	South Bend, Ind., from WRAF
1270	KVOR	Colorado Springs, Colo., from KFUM
1370	WJTL	Tifton, Ga., from WRBI
1420	KABC	San Antonio, Texas, from KTAP

Chains:

1160	WWVA	Wheeling, W. Va., new CBS
1330	KGB	San Diego, Calif., new CBS

Using Phones

(Continued from page 3)

iron, solder on another lead and run it to one side of your switch, then run a lead from the other side of the switch and solder it on to the lead which you unsoldered from the terminal plate and the job is complete. Then you can plug in your phones, switch off the speaker and DX all night without bothering anybody.

For Philcos

Stand the chassis on its side, which will give you a full view of the under-wiring. Solder a wire to each plate terminal of the speaker plug socket (they are the lower ones). Run this wire to the phone post which may be attached to the metal chassis, but be sure that the screw is insulated and use fiber washers against the chassis. Disconnect the yellow wire which is in the center of the speaker and runs to meet the white wire

at the base. A snap switch may be attached to the arch on back of the cabinet which is unseen and easily snapped on and off as desired. Solder a wire to the yellow wire and carry it to one side of the switch, the other side to the white wire. Assemble the set and the job is done. Attach your phones and go to it. If you have any respect for your phones I'll advise you to disconnect them when the speaker is in high volume.

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

Summer Static

(Continued from page 5)

field between; wind friction; and other phenomena; all of which create tiny currents to flash through the radio set as characteristic forms of static.

A form of static that need not enter seriously into this discussion is the ever-present man-made static. It broadcasts constantly from commercial mechanical sources. However, its sound is not unlike much natural static. All-electric sets using house current are more likely to be affected by artificial static than the older types of battery-operated sets. Unfortunately, no one is capable of distinguishing exactly between the two forms of static, and, at times, the weather and static gets the blame when the fault lies within the set itself or some nearby interfering source.

Static will be with us always; we cannot escape its many annoyances. Then, too, no part of the world is immune. Byrd's expeditions into the Arctic and Antarctic were equipped with excellent radio apparatus, and even they reported severe static interferences in the frozen wastes at the ends of the world. Much of this was due, however, to the aurora, that brilliant and mysterious display which frequently prevents telephone, telegraph and radio operations. Any commercial radio operator will tell you that the tropics seldom have respite from a constant barrage of summer static.

The weather of the world comes and

goes in constantly changing moods, and because of the close relationship between static and conditions existing in the atmosphere, we must be prepared to endure radio static as long as weather remains. Mark Twain once so aptly remarked: "We all talk about the weather but no one ever does anything about it." And he was right; we can't do anything about the weather, nor the static it creates!

Radio Troubles

(Continued from page 9)

switch in the lead to the voice coil of the speaker? Will an output transformer be necessary if I use a 171-A tube and connect another magnetic speaker to my present set?

Additional grid leaks and condensers will not eliminate static without interfering with the signal strength and tuning of the set. There is nothing one can add to a receiver to reduce static. Telephones must not be attached directly to the output or plate circuit of the last power tube. The phones are best inserted in series with the plate circuit of the detector tube. The use of a two-circuit jack will cut out the audio-amplifiers and automatically cut off the speaker and the rest of the tubes as far as the flow of B current is concerned. Some additional information about the use of phones with the Majestic set will be found on page 5 of the March issue of RADEX. An output transformer is necessary whenever a power tube such as the 171-A is used to operate a magnetic type loud speaker as the windings should never be subjected to more than 90 volts direct current.

Using Another Speaker

Give directions for connecting an extra speaker to my set. I wish to use a magnetic speaker at a distant place in the house.

Since you do not mention any particular radio set we can give only general directions. The plate circuit of the last power tube or tubes always connect to the loud speaker coils, regardless whether the speaker is of the magnetic or dynamic type. You must determine which are these leads and then open the circuit with two extension wires reaching be-

yond the set. These two wires are then connected with the primary winding of an output transformer, and the transformer will then be in series with the power tube plate and the original speaker in the set. The two secondary terminals of the transformer are then connected to the distant magnetic loud speaker. This is rather crude, for there are other things that ought to be taken into consideration, such as impedance, voltage drop., etc. So, then, there may be some loss of power and tone in both speakers when operating together.

More DX Telephones

I have the latest Atwater-Kent No. 84, and wish occasionally to use headphones for quiet DX reception.

Information for the use of earphones in the plate circuit of the detector tube has been given elsewhere. There are many methods of making these connections, but we believe the most simple solution for the average person is to insert the telephone jack in series with the lead from the detector plate to the primary of the first audio transformer or resistance unit. A switch in the voice coil lead of the speaker will shut off that unit, or the tubes may be removed from their socket when the headset is in use.

New Power Tubes

I am contemplating replacing my present tubes with a new set before the coming DX season. Can I use -47s in place of the old -45s, and -51s or -35s instead of the old type -24s? Also, what type and make of short-wave adaptor would give best results with my Sonora receiver?

The undistorted output of the new -47 pentode tube is considerably greater than that of a single -45 tube in the last power stage. But, unfortunately, you cannot receive the benefits of the new tube, for, unlike the -45, it has a screen grid inside and one additional prong on the base for the screen connection. New sockets and additional wiring would be necessary, and this would not be very practicable. The new multi-mu tube may be placed in almost any receiver now using -24 tubes. The type number generally used for the new style screen-grid radio frequency tube is -35, but two

or three manufacturers use the number -51 for some unknown reason. The new tubes may be placed in the -24 sockets without a single change being made. The plate current drain is somewhat higher than with the -24 tubes and this may overwork the power-pack. Also, a long antenna should be used. If a strong intercepted signal current is sent into the grids of these tubes it eliminates the necessity of powerful amplification and the resulting presence of an annoying hiss, such as frequently characterized the -24 tubes. There are a number of short-wave adapters on the market suitable for your receiver. Or you could construct one as outlined in previous issues of RADEX. At best, an adapter outfit is not nearly as efficient as a separate short-wave set built with short leads and compactness.

Static From Fan Motors

I have an electric fan that interferes with reception to such an extent that I cannot use it when the radio is turned on.

Yet a friend, next door, who has the same kind of receiver as mine, experiences no interference from his a. c. fan. What is wrong with my set or fan?

The radio set is not at fault. The trouble lies in the fan. It is evident that the two fans are built on differing principles. There are three kinds of electric motors and this trouble is not found entirely with fans, but any kind of machine electrically operated about the home. There is an a. c. fan that runs by induction only; another that is a combination a. c. and d. c. motor; and the a. c. fan motor with brushes and commutator. Your fan has a motor coming under the two latter classifications, while your friend has an a. c. induction motor in his fan. That type of fan has no brushes or commutator and, therefore, sparks cannot occur and make static interferences with radio reception. The remedy in your case, is to clean the commutator by polishing with emery cloth and renewing or smoothing down the brushes. This will prevent some of the static, but the best thing to do is to set aside the old fan and purchase one with nothing but an a. c. induction motor. This type of fan motor gives little or no

trouble and lasts many years. You can connect a large fixed condenser between each brush connection and the ground to absorb some of the sparks that cause static impulses, and also across the brushes and the commutator.

Readers' Conference

(Continued from page 11)

reports and would receive a reply saying that they had not given enough information for a real verification. The thing I most appreciate about KYA is that in such cases as the above they would return the dime to the writer. The majority of the stations would, I believe, have thrown in an Ekko stamp and sent it to the writer and considered themselves a dime in pocket. If any station owner sees this letter my message to them is—for the good of the honest DX fan please do not issue verifications unless in receipt of a correct report from the writer."

"It would be a forward step for the art of DXing if all stations adopted the policy of G5SW in the matter of verifying fan letters," says Eugene Martin, Belmont, Kans. "They disregard all reports, even though they be correct, which are mailed over 24 hours from the stated time of reception. This goes a long way toward combating exchange of program data among DXers who are

not strictly conscientious and whose ethics are not exactly up to par."

"I believe a black list in RADEX will greatly help the radio fan," insists Herbert V. Haussler, Box 15, Pratt Station, Brooklyn, N. Y. "WSMK and WMBA have not answered my letters with dimes enclosed, even after sending three reminders to each. Also the following have verified by letter for 10 cents, but have sent no stamps: KGJF, WJKS, WRHM, WGST, KTSL, WBCM."

"The following stations have not answered my requests for verification, although I have written twice to some: WHAT, WODA, WMBA, WAAM, WXYZ, WBZ, XEG, XEM, WSMK KTSL and WLAP," complains Edwin M. Prosser, 84 Saratoga Ave., Brooklyn, N. Y.

Defends Stations

"You can inform some of your readers," writes Richard D. Caddell, 609 Ridge Ave., Pittsburgh, Pa., "not to be too hasty in jumping to conclusions regarding stations not answering requests for verifications. Sometimes their letters get mislaid or overlooked and sometimes their guesses are wrong. I received a verification card from the so-called 'Black Sheep' KTFI, Twin Falls, Idaho, exactly ten weeks from the date I wrote them. I have written KWKC and WD1XI each eight letters and still have

Mary and Bob of the True Story Program, an N.B.C. feature Mondays at 10 p.m. EDST. Mary is played by Mary Sterling, and Bob by Cecil Seest.



hopes for a reply. They will soon get tired of getting my letters and send me a card to get rid of me."

"During the past six weeks I have received verifications from 2YA, 2BL, also JOAK. The latter sent me a complete list of Japanese stations compiled up to February, 1931. This list snows 16 stations all being hooked up with the chain, except three. They state that at present all Japanese stations are on the air from 6:30 a.m. to 10 p.m. Japanese time. 2BL, Sydney, broadcasts boxing matches every Saturday night. I am also expecting verifications from 4QG and 2FC. Other foreign stations which I have heard during the past winter are 3LO, JOIK, JOHK and JOGK," reports Levi Rost, Cokato, Minn.

"Can you tell me how to stir up stations CMCQ and CMW in Havana, Cuba?" asks LeRoy House, Box 57, Plant City, Fla. "I checked programs of each and am sure that I have the report correct and have heard nothing from either station. I have written CMCQ about five times and CMW twice. If you know of any way to get a verification from these stations, please tell me."

"I have a log of 432 stations and have over 400 verified, a few of the best being JOAK, JOIK, KGU, KGMB, KGBU, 10 BQ (15 watts), CKCP, KONO, KPFL, WIAS and KGCX," states Ralph D. Ohlweiler, 19 Taft St., Southbridge, Mass. "I can't seem to get verifications from WMBA, WEAN, WRAX, WJBK, WEHC and WMIL."

From a New Zealand Reader

"I am enclosing 4/2 English money for a trial subscription to RADEX. I am very keen on DXing. I use a Spartan ten valve for doing the work. Here are some of the latest New Zealand stations which DXers might want to know: 2YB, New Plymouth, 1230 kcys., 100 watts, Sun., Mon., Wed., 7-10 p.m.; 2ZL, Hastings, 1335 kcys., 100 watts, Tues., Fri., 7-10 p.m.; 2ZI, Hastings, 1335 kcys., 100 watts, Mon., Thurs., 7-10 p.m.; 2L2XY, Wellington, 1120 kcys., hours irregular. In logging these stations DXers must not forget that New Zealand is nearly a day ahead of you guys, so to log 2YB, New Plymouth, on

Wednesday, you must be up at 2:30 a.m. mountain time." This interesting information is from Milton Ellis, Barrett St., New Plymouth, N. Z.

"I am a DXer," says Antonio Gomez, Box 90, Banes, Oriente, Cuba, "and if anybody wants to write to me about radio I will be very glad," and adds, "I have a RCA radiola 80 and a short-wave adapter. I have received in short wave, Radio Roma, Italy; PCJ, Holland; W8XX, Pittsburgh; W9XAA, Chicago; W3XAU, Philadelphia; W1XAZ, Springfield; VK2ME, Sydney; G5SW, England; W2XAF, Schenectady; W3XL, New York; Santa Domingo; Honduras; XDA, Mexico; HKD, Colombia."

Some Timely Tips

"For your information, Station XED, Reynosa, Mexico, is broadcasting on 965 kcys. This information I obtained last evening as they were signing off, giving the channel, as authorized by the Mexican government, together with the information that one could obtain twelve bottles of a certain brand of alcoholic beverages for a stated price, also that they were interested in hearing from listeners in the U. S. A., to whom they would send a souvenir. This station was received with tremendous volume; no fading, no interference, and very good modulation," reports G. S. Richards, Box 502, Norwalk, Conn.

"If any of your readers have never pulled in WJAZ, 1490 kcys., it comes in about 4 p.m.-5:30 p.m. They have played only classical and symphonies on phonograph records every time I have heard them, and I've never heard them use a bit of advertising yet. I can get their announcements plainly, but can barely hear their music. The reason I said they come in about 4 p.m. is that WCHI signs off at 3:30 and sometimes WJAZ comes in at 3:45 CDST," writes Harold Yehling, 534 West 60th Place, Chicago, Ill.

"Why don't you list KZRM, Manila, P.I.?" asks Don Townsend, 1421 Arch St., Berkeley, Calif. "I just got a verification from them and they state they are using 50,000 watts power and are operating on 618.5 kcys. and owned by Radio Corp. of the Philippines. They

are on the air Tuesday to Saturday, inclusive, from 1 a.m.-7 a.m. PST; from 11 p.m. Saturday-1 a.m. Sunday, and 2 a.m.-7 a.m.; Monday, 7-2 a.m. PST."

From Robert Oueton, 11240 Huston St., North Hollywood, Calif., comes the following: "Here are some of our stations for the boys, KMTR, 570 kcys., 500 watts, all night; KMCS, 1120 kcys., 500 watts, all night; KGFS, 1000 kcys., 100 watts, all night; KFOX, Long Beach, Calif., 1250 kcys., 3 a.m. PST."

"Here's a tip for DX fans," reports Ralph H. Schiller, 4 Vincent St., Hawthorne, N. J. "CKMO, a 50-watter, located at Vancouver, B. C., on 730 kcys., has special broadcasts on Sunday, Monday, Tuesday, Thursday and Friday, from 11:30 p.m. to 3 a.m. PST."

"I have a card from HHK, Haiti, advising me that there are to be no more noonday broadcasts. Their hours are from 8-9 a.m. Fridays, and 6:45-7:15 a.m. EST, Saturdays. A verification from CKMO indicates that they broadcast from 11:30 p.m.-3 a.m. PST each Sunday, Monday, Tuesday, Thursday and Friday, called 'midnight prowl' for DX fans." So reports Jimmie Manners, 23 Heil Ave., Trenton, N. J.

"DXers will be fully repaid," promises A. W. Snyder, 3216 W. 38th Place, Chicago, Ill., "by tuning in WMAQ at 10:45 p.m. Monday nights of DX season. They plan to arrange special DX programs for every state next fall and winter and also have lots of other valuable information."

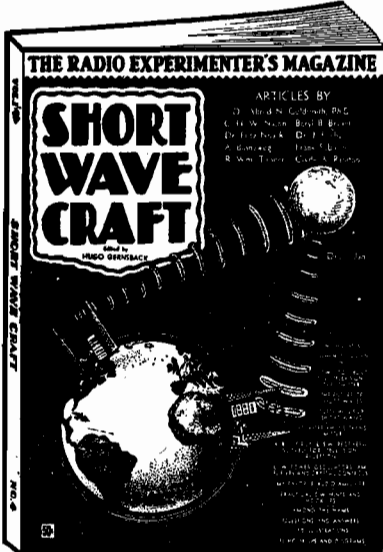
Some SOS Calls

Geo. D. Iliffe, Suite C. Baldwin Apts., Winnipeg, Man., would like to identify a station he received at 12:20 CST Saturday night, June 27th. He says: "The station came in between 1200 and 1210 kcys. and was broadcasting from the Munroe Hotel, Kansas City, Kansas. It was asking for reports on reception from time to time, but I could never catch the call letters. I wrote to the hotel asking them to turn my letter over to the station with its studio located in their building, I received a reply from the Munroe Hotel, Kansas City, Mo., stating that there was no station located

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on their premises. I assume there can be no such hotel in Kansas City, Kans., and the P. O. sent it to the Missouri City. I do not see how the station could be WLBF which I have already received at its correct frequency, 1420 kcys."

"WRHM no longer bothers us fans in the east, but WFIW seems never to be silent," comments Jackson W. Thompson, 535 Hess St., Bethlehem, Pa. "They sure crowd the dial between 930 and 950 kcys. Now we have another one that takes up everything between 1320 and 1370 kcys. and that is WJKS at Gary, Ind. They have their 'Get Acquainted Club' and lots of nonsensical phonograph records and begin at 3 a.m. EST and for two whole hours spoil reception for the fans who are after Nevada and the Pacific Coast."

"On July 1st at 4:45 a.m. EDST, I picked up a station on 780-790 kcys., testing very weak and static bad. I caught the letters OS. The announcer spoke English and said it was a new station and mentioned Italy. I don't believe it was Italy, the only OS is in CWOS on 789, but that is no new station. If you find out, please let me know," writes Roy Cattle, RFD No. 2, Paterson, N. J.

"I have bagged over 225 stations on my Radiola 32 superheterodyne. There is, however something wrong in its mechanical features. I receive almost every station on two different frequencies. The set has a twin dial. Say I get station WABC on 850 kcys. I turn my dial to 770 and get WABC again. If, while on 770 kcys., I turn the left dial towards 850, the volume increases. This spoils my DX reception, as well as local, because if there is a station broadcasting at the same time on 770, I receive a constant howl and whistle. It will please me very much if you can help me locate my trouble, or perhaps if you publish my letter in your magazine, some of our RADEX friends may be able to help me," writes Sam N. Kiamie, 2857 Sampson Ave., New York, N. Y.

Major R. L. Foster, of the U. S. Army, Washington, D. C., calls our attention to a station operating on 780 kcys. from some theatre in Albany, N. Y. Can anyone identify this station?

"Please tell me what is the best time to get stations in the West Indies," inquires Archie Ferril, 38 Humbercrest Blvd., Toronto 9, Ont.

"In your April issue CKPR is listed at Port Arthur on 890 kcys. The Canadian National Radio Features Magazine, with whose programs they are connected, shows them on 930 kcys. at Fort William, Ont.," says Gordon F. Blackwell, 129 Longarth St., London, Ont.

"You give XEO, Mexico City, as being on 940 kcys.," states Charles Huey, 312 W. Miner St., West Chester, Pa. "I heard XEO the other night loud and clear between two close stations on 930 and 940. I think it comes on 935 kcys. to be exact."

R. E. Moran, 540 Parkdale Ave., Ottawa, Canada, reports that CFLC has changed its frequency from 1010 kcys. to either 910 or 920 kcys.

DC Current Again

"On page 15 and 24 of your Midsummer edition you tell one of the persons who wrote to you for advice on the operation of an a. c. set from d. c. lines, suggesting a motor generator as the means of doing this. Well I feel sorry for the gentleman who has the a. c. set and has been used to listening to its playing from the a. c. lines and attempts to use it on the d. c. lines with the aid of the motor generator," advises Michael J. Jordan, 1641 Lexington Ave., New York City. "In the first place, the average a. c. set uses about 125 watts per hour to operate, and if one uses a motor generator to change the type of current, he will find that to get his motor generator to supply this amount of a. c. he will be passing through his converter 250 watts. Figure that out at from seven to ten cents per 1000 watts, and you have a very expensive device on your hands."

In another article in this issue we are describing some modern sets designed especially for DC voltage which do not require converters.

Answers to Inquiries

"I think Ivan D. Ide is slightly off on his Greenwich Civil Time," comments John Malone, Sparland, Ill. "This time begins at midnight as 0000; 1 a.m. is 0100, 3:49 a.m. is 0349, noon at Green-

wich is 1200, 1 p.m. 1300, 11 p.m., 2300, and so on. Central Standard is six hours earlier than Greenwich Time, so 2045, or 8:45 p.m. Greenwich time, minus 6 hours would be 2:45 p.m."

"In answer to Harris Schiestel, of Detroit, G5SW takes three or four months to reply to letters," says Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. "I waited three months for a verification and an acquaintance of mine waited four months. They use a form letter except for the last sentence, which either verifies reception or says that they can't verify it. I have a total of 57 short-wave stations with 14 countries represented; about ten are verified."

"Concerning Hedley Simmonds reports on WMBA or WNBA on 1200 keys., located as Silver Haven, this station is WNBO, listed in RADEX as Washington, Pa. My verification gives their location as Washington also, but while listening Sunday morning, I tuned in WNBO and they gave their location as Silver Haven, from where a program of dance music was being broadcast. Evidently they broadcast by remote control from Silver Haven," advises Lester R. Reinmund, 416 68th Ave., West Allis, Wis.

"In answer to Mr. Rawstron's request for someone to identify the station he heard on 760 kcys., which mentioned missionary work in the James Range, I think the station he heard was 4QG, Brisbane, This station would be the most likely to come in at 5 a.m., and also the James Range is in Central Australia. I have had this station coming in fairly well twice and recently I received a letter of verification from them. Incidentally, I have also received verifications from JOAK and OAX," reports F. E. Holley, 6450 So. Lincoln St., Chicago, Ill.

"A reader in Paterson, N. J. mentioned that he heard 2YA in the spring and asked if this had been done so late in the year before. I heard 2YA on July 6, 1931, and this is midsummer reception," states George Lilley, 227 W. Bernard St., West Chester, Pa. "West Chester is located in the extreme southeast corner of Pennsylvania, or you

might say on the Atlantic coast. I had this midsummer reception from 2YA on my two-tube set, and have, of course, written for a verification."

Lester R. Reinmund writes us that the station using the slogan 'The Voice of the Prairie,' regarding which S. D. Dorrance, Jr., of New York inquired, is CFCN which has just recently moved from 690 to 985 keys.

"I think Edward H. Chandler heard either WWJ with an early religious program, or 5SC, Glasgow, Scotland. If the Scot has religious programs about 8 or 9 a.m., their time, it was probably it. It uses only 1000 watts," writes John Malone, Sparland, Ill.

"KOB, State College, N. M., frequently broadcasts by remote control from their studios in El Paso," reports Richard D. Caddall, 609 Ridge Ave., Pittsburgh, Pa.

Wm. Dyson, 72 Cambridge Ave., Hamilton, Ont., believes the station on 1500 kcys. referred to by Mr. Bowers is KPQ.

Some New Clubs

"I have become so interested in the collecting of radio verifications," comments Ralph H. Schiller, 4 Vincent St., Hawthorne, N. J., "that I have decided to inaugurate a new radio DX club. I have named it the Transcontinental DX Club. There are quite a few members in this club already and with your kind permission to publish this letter in your next available issue, I am sure I can create even more interest in this club. To all who write to me I will explain the objects and benefits of this club."

Ray LaRocque, 135 Highland St., Worcester, Mass., writes as follows: "I would like to have you tell RADEX readers that a DX club has been formed in New England, called the Radio Listeners' Club of Central New England. Any reader who is interested in joining this club can communicate with the Secretary L. Rushton, care Evening Gazette, Worcester, Mass."

For Foreign Postage

"Here is a real friend," says Richard Douglas, 1125 Krug Park Place, St. Joseph, Mo., "In writing to a foreign

station and enclosing postage for verification, United States fans usually send U. S. stamps, which in some places are no good. These International Response coupons may be purchased at any post office at a cost of 9 cents apiece. They are good for one full rate letter to any country in the postal union from any country in the union. They are valid for six months after the date of purchase."

"Reception is good all summer here," writes Anthony Arsenault, Box 444, 19 Spring St., Summerside, P. E. I., Canada, "My radio is a three-tube home-made set, using only 45 volts of B battery and it gives me very good loud-speaker reception. I'm very interested in getting DX stations. Have heard nearly every state in the U. S. A., also Cuba, Mexico, Porto Rico, and as far as Manitoba in Canada. I would like to receive letters from all interested in DX and promise to answer any received."

"While reading the Midsummer edition I noticed the article about the unlicensed station KTST, located at Seymour, Texas. I have a verification from this station dated April 18, 1931. It is owned by the KTST Broadcasting Co. and is located on top floor of the Harvey Hotel in Seymour. It uses 50 watts power on 1210 keys.," reports Lester R. Reinmund, 416 68th Ave., West Allis, Wis.

Harvey Hobbs, 111 East 8th St., Covington, Ky., gives the following information: "WLAP, Louisville, has received permission from the Federal Radio Commission to operate 18 hours a day for 60 days on 1010 keys., with a power of 250 watts. After this time has elapsed, the change will either be made permanent or they will return to 1200 keys. and 100 watts power."

"Someone speaks of KCAA's harmonic—its second one. Have any readers experienced a sixth harmonic?" asks John Malone, Sparland, Ill., "I have, several times, of WKY on a Pilot Super Wasp."

Prof. D. Gadoury, 2215 Hood St., Montreal, Que., who has logged 309 stations, with JOBK verified, would like to know if there is a DX Club in Montreal.

With the DXers

(Continued from page 15)

better without a ground wire. With the ground disconnected, the volume control seems to act like the oscillation coil of a regenerative set. This makes the tuning much sharper above 790 keys." Albert Byles, 227 Chatham Ave., Toronto 6, Ont.

"I have a 7-tube Crosley which was purchased October, 1929. With this set I have reached 279 stations; 8 of these in California, 9 in Texas, 2 in Oregon, 1 in the state of Washington, 2 in Mexico and 2 in Cuba. I have reached every state in the United States except five, namely, North Dakota and four states in the mountain time division." Chas. F. Kyle, 392 Preble St., So. Portland, Me.

"With regard to DX reception, we can hear several Mexican stations any night, also Havana, Cuba, quite frequently. I have verifications from 2YA, Wellington, N. Z., and 2BL, Sydney, Australia, and have also heard 3LO, Melbourne; 2FC, Sydney; 4QG, Brisbane, and others in Australia. Also several Japanese stations. All of these were heard on a loudspeaker." Edwin H. Chandler, Ranfurly, Alta.

"I have a Magnaformer 8-tube super-heterodyne which works only using a loop. Here is what I have done since the first of the year: 15 stations from Pacific coast, 6 stations from Mexico, 5 from Cuba, 23 Canadian, 3 from Nova Scotia, one Alaskan, and one Japanese (JOAK). I have heard every state but Nevada. Have received stations on every channel. Let us hear from other readers using loop antennas." Chas. Maier, Jr., 92 Zabriskie St., Jersey City, N. J.

"I have 285 Ekko verified stamps of stations received on my Grebe 7-tube t.r.f. set, getting seven stations on the west coast, 3 in Mexico, 4 in Cuba and 3 in Nova Scotia. Would like to hear from any listener who has ever heard England and France from the Atlantic side of U. S. and the time he got it," requests George J. Greene, 911 2nd Ave., Long Island City, N. Y.

"I receive the Sunday broadcast from London direct every Sunday and get quite a kick out of hearing them before-

hand making arrangements for the proper reception and tests. I also receive the Radio telephone connection between London and New York, that is one end of the connection." Chas. A. Ransom, 17th and Fairmount Ave., Philadelphia, Pa.

"I am writing this to tell you how much RADEX has helped me to log 220 stations. I am 16 years old and a cripple, so radio is my favorite hobby. I have logged 6 Mexican stations, 22 Canadian, 3 Cuban, and 189 in the United States. My best catches are a 100-watt Cuban, a 500-watt in Vancouver, and 10BP, 25-watter in Wingham, Ont." Stanley Brown, 467 Congregation St., Montreal, Que.

"Since last October I have logged 225 stations, including three in Mexico and one in Cuba. I have logged twenty-four stations on the Pacific coast since Christmas. Some of my best catches are a 50 and 100 watter in Vancouver, B. C., a 50-watt at Detroit, and two 250-watt in California." Jack C. Foster, 785 Dorchester Ave., Winnipeg, Man.

"I have logged 424 stations and have over 400 verified," reports Ralph D. Ohlweiler, 19 Taft St., Southbridge, Mass. "Among these I have JOAK, KGMB, KGU, KGBU, 16 from Cuba, 6 from Mexico, and await one from JOIK. I also have verifications from KFPL, KONO, KG CX and KOB. My aerial is 300 feet long."

"I received KFXM, WEHC, CKWX, all of which are 100-watters. The New York stations on 1500 keys., like WWRL, WNBF, WLBX, come in so clearly it seems impossible. I would like to know when one can pick up KGBU, Ketchikan, Alaska." Robert Nickolas, 601 E. Monrow Ave., Kirkwood, Mo.

"I have verification of reception from KMTR, Los Angeles, under date of April 11th, which states, 'Yes, we are a 500-watt station now, but listen close as we are moving to our new station about the first, where we will have a complete new RCA 1000-watt transmitter'," reports T. B. Hubbell, 330 Lafayette Ave., Lexington, Ky.

"Exactly four months ago today I got a new Radiola Superheterodyne, and I think that it is the finest and most

powerful set I have ever seen. Since I first got my set, up until today, I have logged 404 stations." Harry A. Shaffer, 301 S. Fairview St., Lock Haven, Pa.

"I have an 8-tube Philco and in about two months have picked up about 141 stations from coast to coast and in Canada, Mexico, Porto Rico and Cuba. I think this is a pretty good record considering the location I am in with power lines, garages, charging plants, etc., all around me." G. A. Wieland, 507½ Oak St., Toledo, Ohio.

"I am a DX fan and have gotten some pretty good catches. The best, I think, is KFVD, a 250-watt station in Culver City, Cal. I have received 13 in California, 3 in Oregon, 4 in Washington, 4 Mexican and two Cuban." Kenneth A. Peterson, 184 Francis Ave., Pontiac, Mich.

"Three cheers for RADEX. I bought a copy a few months ago and oh, boy, I certainly have enjoyed radio since then. RADEX has it with plenty to spare. I am just a beginner as a DXer and up to date have logged 203 stations in about four months with verifications for nearly all distant points." Del Hoisington, 35 W. Broadway, Derry, N. H.

"What do you think concerning this luck on 'Jumbo' my one-lung set? Received KNX, KGO, KFI, KECA, CMC, CMX, WKAQ, WJBY, WKDY, KSL, KVOO and KDYL. All of these are verified. Here are some I am waiting for verifications from: KOB, XEI and XED." Donald Pierce, 2844 N. Bailey St., Philadelphia, Pa.

"I have received 183 stations on our 5-tube battery set, 20 of which are Candian, 3 Mexican and 3 Cuban. My best catches are CMBS, a 150-watter in Havana, which verified, although you have not got them marked, and KTM, Los Angeles, with 500 watts." Robert C. House, 68 Dewey Ave., Buffalo, N. Y.

"I picked up W9XBR, Salina, Kans., broadcasting on 1540 keys. and using only 5 watts, on Sunday morning, March 22nd. I have had a police station WMP located somewhere in Massachusetts. They were talking about Brookline, Mass. Does anyone know exactly where it is?" Victor J. Balt, 226 Sumner Ave., Aurora, Ill.

"I have a verification from XEM saying that they have been using 750 kcys, but now they are on 730 kcys.," advises John R. Carter, 1119 W. 9th St., Erie, Pa. "I get XED regularly on 975 or 980 kcys. I have a verification from CMX giving their power as 1 kilowatt or 1000 watts."

"Speaking of records, how's this? One night last winter from 1 a.m. until 7 a.m. I listened to United States, Canada, Mexico, Cuba, Costa Rica, Peru, Argentina, Hawaii, Japan and New Zealand. I would like to know if any DXers have heard Africa and what time to listen for them." Arlo F. Kelley, 4234 W. 15th St., Amarillo, Texas.

"My ground is two four-foot lead pipes, driven into the ground about 20 feet apart, connected together with heavy copper wire. It gives 50% more volume than my old ground did," says E. J. Russell, Boscawen, N. H. "I would like advise on the best time to get station 2LO, London."

"I am using a Crosley Buddy mantel set with 5 tubes. In seven months I have heard all the states but Nevada and Wyoming," says Louis J. McVey, Route 10, Box 144B, Sparrows Point, Md.

"XEQ, Juarez, has never been on the air but one time, about a month ago, test program, then went haywire. XEJ is the only station operating in Juarez," reports Mrs. Roy Schanck, El Paso, Texas.

"I receive 10BP at Wingham and 10AR, Stratford, regularly. 10BP broadcasts from 1:30 to 2:30 p.m. every Tuesday and 10AK is on every evening from 5:30 to 7:15." Fred Wakerell, 343 Forbes St., London, Ont.

"I got lots of fun out of my radio. I have an Atwater Kent No. 47. Last week I had CMCF in Havana, which is only a 250-watt. I have had WIL in St. Louis, which is only 100 watts." Mrs. Nannie Redmond, 7 E. University Ave., Cincinnati, Ohio.

"I have received 37 stations outside the United States, including Alaska, Hawaii, Cuba, Canada, Mexico, and seven stations in Japan, I have just received a verification from JOAK. I have an 11-tube Philco," writes Joe Whiteside, 720 N. Navajo, Altus, Okla.

"My set consists of but two tubes with earphones. I have received in the last two months letters or postcards from over 125 stations in Mexico, Cuba, Canada and United States." Douglas Blackwell, 14 Walnut St., London, Ont.

"In four months of DXing I have logged 313 stations, on a 9-tube Sparton Model 593. My best recent catches include CKWX, CKMO, WKAQ, WKAU, KFVD and KGFJ." H. A. Knauff, 28 Lakeshore Drive, New Toronto, Ont.

"This winter we made a two-tube short-wave set and tuned in 107 amateur stations in two evenings." S. E. Barrett, 443 No. Colorado St., Kansas City, Mo.

Sets for D. C. Current

(Continued from page 13)

that the best answer to the problem is to be found in the use of a good rotary converter, as the combined price of receiver and converter is now probably lower than any other method giving the same efficiency.

The United American Bosch Corp. Springfield, Mass., has two receivers which are designed especially for DC use. The Model 75 employs three 224 radio frequency stages, a 227 power detector, a 227 first audio and two 245 power output tubes in push-pull. The first audio stage, which is not found on their AC model, compensates for the lower voltages necessitated by DC operation. They claim this set gives results which are directly comparable to their standard AC model.

The Pierce Airo, Inc., New York City, too, believe that they have a DC receiver which functions just as well as the average AC set on the market. The current consumption of this set is approximately 40 watts per hour.

None of the DC sets described in this article is intended for use on farm power plants developing 32 volts. On such systems a converter such as described in April, 1930, RADEX (No. 38) must be used. Such a converter changes the 32-volt current into 110-volt, thus permitting the use of the regular AC receiver.

Slogans of the Stations

FOR the following list of station slogans we are indebted to Fred Stone, Jr., (age 13), of Kintnersville, Pa.

KDKA "Pioneer Broadcasting Station of the World."
 KDYL "Out On the Great Divide."
 KFJM "Grand Forks, the Education Center of the State."
 KFKA "The Pike's Peak Station."
 KLX "Where Rail and Water Meet."
 KLZ "It's a Privilege to Live in Colorado."
 KMOX "The Voice of St. Louis."
 KOB "The Sunshine State of America."
 KOIN "Hood River Apples from Portland."
 KPO "The Voice of San Francisco, City of the Golden Gate."
 KPRC "Kotton Port Rail Center."
 KTHS "Kum to Hot Springs."
 KUSD "South Dakota University for South Dakotans."
 KVOO "The Voice of Oklahoma."
 KWCR "The Voice of Cedar Rapids."
 KWG "Voice of San Joaquin Valley."
 KWKC "Keep Watching Kansas City."
 KWWG "Kum to the World's Winter Garden."
 WAAW "Where Agriculture Accumulates Wealth."
 WBAP "Where the West Begins."
 WBAX "In Wyoming Valley, Home of Anthracite."
 WCAC "From the Nutmeg State."
 WCAD "The Voice of the North Country"
 WCAX "The Voice of the Green Mountains."
 WCCO "Service to the Northwest."
 WDAE "Away Down South in the Sunshine State."
 WDAY "Biggest Little City in the World."
 WDBJ "Roanoke, Down in Old Virginia."
 WDBO "Way Down by Orlando."
 WDOD "Wonderful Dynamo of Dixie."
 WEAU "The Heart of the Corn Belt." (?)
 WEAH "The Voice of the Millions."
 WEBR "We Extend Buffalo's Regards."

WFAA "Working For All Alike."
 WFBG "The Original Gateway to the West."
 WFBM "The Convention City of America."
 WFBH "Home of the Star-Spangled Banner."
 WFDW "The Vehicle City."
 WGAL "World's Gardens at Lancaster."
 WHBF "Where Historic Blackhawk Fought."
 WHK "Cleveland, the Convention City."
 WHN "Voice of the Great White Way."
 WLW "The Nation's Station."
 WIOD "Wonderful Isle of Dreams."
 WCBE "Second Port of the U. S. A." (?)
 WJAR "The Southern Gateway to New England."
 WLBL "Wisconsin, Land of Beautiful Lakes."
 WLS "World's Largest Store."
 WMC "Memphis, Down in Dixie."
 WNAD "Voice of Sooner Land."
 WNJ "Voice of Newark."
 WKAQ "The Isle of Enchantment, Where the World's Best Coffee Grows."
 WOAI "The Winter Playground of America."
 WOAX "Trenton Makes; the World Takes."
 WOC "Where the West Begins" and "In the State Where the Tall Corn Grows."
 WOCL "We're on Chautauqua Lake."
 WODA "The Voice of the Silk City."
 WOOD "The Furniture Capital."
 WOS "Watch Our State."
 WPG "The World's Playground."
 WQAM "The Most Southerly Broadcasting Station in the U. S."
 WQAN "The Voice of Anthracite."
 WRC "The Voice of the Capital."
 WRVA "Carry Me Back to Old Virginia."
 WSB "The Voice of the South."
 WTAG "The Voice From the Heart of the Commonwealth."
 WTAQ "The Voice of the Wilderness."
 WTAR "Down in Old Virginia."
 WTIC "The Insurance City."

We note a few errors in this list but perhaps our readers can correct them and add other slogans to the list.

INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

The Radex Press,
 5005 Euclid Avenue,
 Cleveland, Ohio

Enclosed find \$..... for which send me postpaid my choice of your offers as checked below:

- | | |
|---|--------|
| <input type="checkbox"/> One radio map of North America | 25c |
| <input type="checkbox"/> One copy of the next RADEX | 25c |
| <input type="checkbox"/> Trial subscription, next five issues of RADEX | \$1.00 |
| <input type="checkbox"/> One year's subscription to RADEX, 10 issues, and Radio Map free | 1.75 |
| <input type="checkbox"/> Two subscriptions to RADEX with one leatherette cover and Radio Map, both free | 3.50 |
| <input type="checkbox"/> One two-year subscription with leatherette cover and Radio map, both free | 3.50 |
| <input type="checkbox"/> Leatherette Cover | .50 |

Write Name Plainly

Street and Number

City and State

At LAST a MODERN BATTERY SET

Good News for the Electric-Less

IN the rush to meet the demand for modern all-electric receivers, most radio manufacturers have overlooked the thousands and perhaps millions who do not have access to electric current. Such people have therefore not shared in the great advance that has been made in receivers in the past few years.

We are glad, on account of these millions, to call attention to the Crosley Battery "Show Boy." Of this set the manufacturers say: "Here is an entirely new six-tube battery radio receiving set housed in a small, compact and truly beautiful table model cabinet and making use of the new two-volt tubes and new Air Cell battery.

"Radio manufacturers have devoted their efforts, up to now, to the development of the highly popular small size radio receiver for use on house electric light circuits. Now Crosley offers this unusual small sized table model battery receiver incorporating in its design all of the best features of the small-size electric sets. It has all the features and delivers all of the performance of the largest battery-operated set. It uses six tubes, three of which are screen grid. There are two type '32 radio amplifier tubes, one '32 detector tube, one '31 intermediate audi tube and two '31 output tubes connected in push-pull. The type '32 tubes require only 60 milliamperes for the filament—less than one-tenth of the power required by the older type tubes. The type '31 tubes require only one-fifth of the filament power heretofore required. The two-volt tubes operate on a two-volt 'A' battery as compared with the six-volt previously necessary for the operation of a battery type receiver.

"The new Air Cell battery recommended for use with the "Show Boy" has a life of approximately 1000 hours of operation of level capacity—about

three hours a day for a year. There is no fluctuation in the power delivered by this cell. It suffers no deterioration nor does it exert any power until water has been put into it. Then it begins its battery life and continues to deliver an even maximum of power until the end of 1000 hours or more. It eliminates entirely the necessity for charging the "A" battery every week or two.

"Three 45-volt "B" battery blocks are recommended for the operation of this set. Four blocks may be used when extreme sensitivity and maximum volume are required. Simplicity of construction reduces the battery connections from the usual seven or nine to only four. The circuit used permits long, useful life of the 'B' batteries as it is not susceptible to voltage changes.

"The speaker is the latest type Crosley magnetic power speaker, lending a richness and depth of tone never before found in a receiver of this type."

The price of the Crosley Battery "Show Boy" is \$47.50 complete with tubes and batteries. A circular descriptive of this set may be secured from Mr. D. J. Butler, Crosley Radio Corporation, Cincinnati, Ohio.

The Airport Stations

Guy B. Welsh submits the following airport stations which can be heard in the BE band.

WRW	Greensboro, N. C., 950 keys.
WWAP	Pittsburgh, Pa., 1250 keys.
WWAS	Cincinnati, Ohio, 1360 keys.
WWAB	Buffalo, N. Y., 1050 keys.
WWAH	Knoxville, Tenn., 1010 keys.
WWU	Hadley Field, N. J., 1010-680 keys.
WVO	Cleveland, Ohio, 1030 keys.
WWA	Albany, N. Y., 1270 keys.
WWR	Richmond, Va., 780 keys.
WWB	Baltimore, Md., 1050 keys.
WWQ	Bellefonte, Pa., 1280 keys.
WWT	Atlanta, Ga., 750 keys.
KCU	Fresno, Calif., 1040 keys.
KCAE	Winslow, Ariz., 800 keys.
KCV	Oakland, Calif., 800 keys.

CFCF 1030 N	KPRC 920 N	WCCO 810 C	WHK 1390 C	WNAK 570 C
CFRB 960 C	KRLD 1040 C	WCFL 970 N	WHO 1000 N	WNOX 560 C
CKAC 730 C	KSCJ 1330 C	WCKY 1490 N	WHP 1430 C	WOAI 1190 N
CKGW 690 N	KSD 550 N	WCSH 940 N	WIBO 560 N	WOC 1000 N
KDKA 980 N	KSL 1130 N	WDAE 1220 C	WIBW 580 C	WOKO 1440 C
KDYL 1290 C	KSTP 1460 N	WDAF 610 N	WIOD 1300 N	WORC 1200 C
KECA 1430 N	KTAR 620 N	WDAY 940 N	WIP 610 C	WOW 590 N
KFAB 770 N	KTHS 1040 N	WDBJ 930 C	WIS 1010 C	WOWO 1160 C
KFH 1300 C	KTRH 1120 C	WDBO 1120 C	WISN 1120 C	WPG 1100 C
KFI 640 N	KTSA 1290 C	WDOD 1280 C	WJAR 890 N	WPTF 680 N
KFJF 1480 C	KVI 760 C	WDRC 1330 C	WJAS 1290 C	WQAM 560 C
KFKX 1020 N	KVOO 1140 N	WDSU 1250 C	WJAX 900 N	WRC 950 N
KFPY 1340 C	KWK 1350 N	WEAF 660 N	WJDX 1270 N	WREC 600 C
KFRC 610 C	KYW 1020 N	WEAN 780 C	WJJD 1130 C	WREN 1220 N
KFSD 600 N	WAAB 1410 C	WEBC 1290 N	WJR 750 N	WRR 1280 C
KFYR 550 N	WABC 860 C	WEEI 590 N	WJZ 760 N	WRVA 1110 N
KGB 1330 C	WACO 1240 C	WENR 870 N	WKBN 570 C	WSAI 1330 N
KGO 790 N	WADC 1320 C	WFAA 800 N	WKBW 1480 C	WSB 740 N
KGW 620 N	WAIU 640 C	WFAN 610 C	WKRC 550 C	WSM 650 N
KHJ 900 C	WAPI 1140 N	WFBL 1360 C	WKY 900 N	WSMB 1320 N
KHQ 590 N	WBAL 760 N	WFBM 1230 C	WLAC 1470 C	WSPD 1340 C
KLRA 1390 C	WBAP 800 N	WFI 560 N	WLAP 1010 C	WSUN 620 N
KLZ 560 C	WBBM 770 C	WFLA 620 N	WLBW 1260 C	WTAG 580 N
KMBC 950 C	WBCM 1410 C	WGAR 1450 N	WLBZ 620 C	WTAM 1070 N
KMOX 1090 C	WBEN 900 N	WGL 1370 C	WLIT 560 N	WTAQ 1330 C
KOA 830 N	WBRC 930 C	WGN 720 N	WLS 870 N	WTAR 780 C
KOH 1380 C	WBT 1080 C	WGR 550 C	WLW 700 N	WTIC 660 N
KOIL 1260 C	WBZ-A 990 N	WGST 890 C	WMAL 630 C	WTMJ 620 N
KOIN 940 C	WCAE 1220 N	WGY 790 N	WMAQ 670 C	WTOC 1260 C
KOL 1270 C	WCAH 1430 C	WHAM 1150 N	WMC 780 N	WWJ 920 N
KOMO 920 N	WCAO 600 C	WHAS 820 N	WMT 600 C	WWNC 570 C
KPO 680 N	WCAU 1170 C	WHEC 1440 C	WNAC 1230 C	WWVA 1160 C
				WXYZ 1240 C

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

Time is given by Eastern Daylight Saving. For Eastern Standard time, subtract one hour; for Central Time, two hours; for Mountain Time, three hours; and for Pacific Time, four hours.
 Programs of the National Broadcasting Company begin with WEAF and WJZ; those of the Columbia Broadcasting System with WABC.

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

Daily (Except Saturday and Sunday)

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

8:00-8:15 Gene and Glenn
 WEAF WTAM WTIC WJAR WTAG WEEI
 WCHS WFI WRC WGY WCAE WBEN

8:15-8:30 Morning Devotions
 WEAF WTIC WRC WCAE WGY WHAS
 WCHS WJAR WWJ WPTF WIOD WFLA
 WBSN WTAG WGN WJAX WJDX WRVA
 WBEN WFI KFYZ WOV WCKY WIBA

8:30-9:00 Cheerio
 WEAF WTIC WEEI WRC WCKY WWJ
 KPRC WFI WSB WSM WJAX WPTF
 WTAG WOAI WBEN WRVA WIOD CKGW
 WHAS WFLA WSN WTAM WJDX WJAR
 WGY WOV WCAE WCHS WSBM WDAF
 KSTP WGN WDAY KFYZ WAPI

9:45-10:00 A. & P. Program
 WEAF WTIC WJAR WTAG WCHS WRC
 WGY WCAE WTAM WWJ WOC KSD
 WHO WDAF WTMJ WEBC WRVA WPTF
 WIOD WFLA WSN WHAS WSM WMC
 WSB WSBM WJDX WOAI WKY WBEN
 WFI KSTP WIBO WGN WOV KPRC
 WEEI WFAA WAPI WJAX

12:00-12:30 Don Bigelow and His Orchestra
 WABC WOKO KFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WPG WCAU
 WHP WJAS WLWB WMAL WCAO WTAR
 WDBJ WKBN WNBC WBT WTOC WDBO
 WXYZ WBCM WSPD WDOD WREC WLAC
 WBRC WDSU WISN WTAQ WFBM KSCJ
 KMOX KMBC KIRA KOIL KFH KFJF
 KRLD K TSA WACO KFOR

12:30-1:00 Columbia Revue
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WPG WIP-
 WFAN WHP WJAS WLWB WMAL WCAO
 WTAR WDBJ WKBN WNBC WBT WTOC
 WDBO WXYZ WSPD WDOD WREC WLAC
 WDSU WISN WTAQ WOV WFBM WMAQ
 KMBC KIRA KOIL KFH KFJF KRLD
 K TSA WACO KDYL KLZ KFOR

1:30-2:30 National Farm and Home Hour
 WJZ WHAM WJR KSTP WRVA WHAS
 WEBC WAPI WOV WOC WMC KVOO
 WKY WOAI WRC WGAR WHO WDAF
 WJDX WBAL WSB KWK KOA WBZ
 WBZA KTHS WFLA WSN WJAX KFAB
 KPRC KDKA WLW WPTF WSM WDAY
 KFYZ WSBM WFAA WTMJ WIOD WIBA
 KYW

3:00-3:30 Columbia Salon Orchestra
 WABC WOKO WFBL WGR WDRC WAAB
 WPG WIP-WFAN WHP WMAL WCAO
 WDBJ WHK WKBN WNBC WBT WTOC
 WDBO WXYZ WBCM WSPD WDOD WLAC
 WDSU WISN WTAQ WGL WFBM WMAQ
 KSCJ WMT KMBC KIRA KFH KFJF
 KTRH K TSA KVI KFPY KPRC KLZ
 KFOR

3:00-4:00 Woman's Radio Review
 WEAF WTIC WEEI WJAR WSAI KYW
 KSD WOC WTAG WCHS WFI WRC
 WGY WBEN WCAE WTAM WWJ WHO
 WOV WDAF

5:00-5:30 The Lady Next Door
 WEAF WTAG WJAR KSD WRC WTAM
 WENR

6:00-6:25 Black and Gold Room Orchestra
 WEAF WCAE WTAM WENR WFI WRC
 WGY WOC WHO WDAY KSD WJAR
 WWJ WKY

6:45-7:00 Swift Program — Stebbins Boys
 WEAF WCAE WTIC WTAG WEEI WJAR
 WCHS WFI WRC WGY WBEN WDAF

6:45-7:00 Literary Digest Topics — Lowell Thomas
 WJZ WBZ WBZA WHAM KDKA WLW
 WBAL

7:00-7:15 Amos 'n' Andy
 WJZ WHAM KDKA WBZ WBZA WRC
 CKGW WCKY WLW WBAL CFCE WRVA
 WPTF WJAX WIOD WFLA WSN

7:15-7:30 Denis King and Linit Orchestra
 WABC WOKO WFBL WHEC WGR WEAN
 WDRC WNAC WORC WCAU WJAS WMAL
 WCAO WADC WKRC WSPD WBBM WCCO
 WMT KMOX KMBC KOIL CFRB

7:30-7:45 Phil Cook — the Quaker Man
 WJZ WBZ WBZA WENR KFYZ WDAY
 WBAL WGAR KDKA WREN KWK KFAB
 WTMJ KSTP WHAM WEBC WLW WRC
 KOA KSL

7:45-8:00 Camel Quarter-Hour — Morton Downey
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WCAU WHP
 WJAS WMAL WCAO WTAR WDBJ WVVVA
 WADC WHK WKRC WCAH WKBN WNNC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WSPD WOV WMAQ KMBC WSJS

7:45-8:00 The Goldbergs — Comedy Sketch
 WEAF WSAI WWJ WENR WGY WBEN
 WCAE

8:00-8:15 Pryor's Cremo Military Band
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WPG WCAU
 WHP WJAS WLWB WMAL WCAO WTAR
 WDBJ WADC WHK WKRC WCAH WNNC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WSPD WNOX WTAQ KFH WBTM

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

11:00-11:15 Amos 'n' Andy
 WMAQ KWK WREN WDAF WTMJ KECA
 KSL WHAS WSM WGAR WSB WKY
 WENR WJR KSTP WSBM WJDX KTHS
 KPRC WEBC KGO KHQ KOMO KGW
 KFSD WOAI WMC KOA KFAB WBAP
 WIBA

11:15-11:30 Swift Program — Stebbins Boys
 KSD WHO WOC WSB WBAP WGN
 WSAI WTAM WFAA WWJ WMC WSBM

11:15-11:30 Literary Digest Topics — Lowell Thomas
 WGAR WJR WENR KWK WREN WDAY
 KFYZ KFAB KSTP WEBC

11:15-11:30 Pryor's Cremo Military Band
 WKBN WGST WBCM WLPD WDOD WREC
 WLAC WBRG WDSU WISN WOV WFBM
 WMAQ WCCO KSCJ WMT KMOX KMBC
 KIRA WNAX KOIL WBW KFJF WRR
 KTRH K TSA WACO KOH KMJ KFBK
 KOL KVI KFPY KOIN KPRC KHJ
 KDYL KLZ

11:30-11:45 Camel Quarter-Hour — Morton Downey
 WGST WDOD WREC WLAC WNOX WBRG

WDSU WISN WFBM WCCO KSCJ WMT
 KMOX KLRA WNAK KOIL KFJF
 WRW KTRH KTSA WACO KOH KOL
 KVI KFPY KOIN KFRC KHJ KDYL
 KLZ KGB

Sunday

12:15-12:30 Echoes of the Orient
 WEF WGY WTAM WDAF WCSH WCKY
 WTIC WLIT WBN WOC WHO WCAE
 WENR WOC

12:30-1:00 Troika Bells
 WJZ WBAL KWK WGAR KDKA WLW
 KFAB KFYR KOMO KFSD WHAM WTMJ
 WPTF WFLA WSUN WSM WAPI WKY
 KOA KECA KTAR WHAS WWSB
 KGO KSTP

1:00-2:00 Pop Concert — Walter Logan
 WEF WTIC WEEI WJAR WCSH WFI
 WRC WGY WBN KGW KOMO KPO
 KECA KGO KOA WHAS KFJR WDAY
 WCAE WTAM WJJ WBO WOC WHO
 WDAF WTMJ WENR WWSB WAPI KSL

1:30-2:00 Columbia Little Symphony
 WABC WOKO WFBL WGR WLWZ WDRC
 WAAB WPG WIP-WFAN WHP WJAS
 WMAL WCAO WDBJ WHK WKBN WWNC
 WBT WTOC WDBO WXYZ WBCM WDOD
 WBRW WDSU WISN WTAQ WMAQ WCCO
 KSCJ WMT KMBK KOIL KFJF KVI
 KFPY KDYL KLZ KVOR

2:15-2:30 The Caribbeans — Dance Band
 WEF WTIC WTAG WEEI WJAR WLIT
 WRC WGY WBN WCAE WTAM WJJ
 WDAF KSTP WDAY WHAS WSM WAPI
 WWSB KOA KGO KGW KECA KFSD
 KTAR KFYR KSL

2:30-3:00 Gypsy Trail
 WABC WOKO WFBL WHEC WKBW WLWZ
 WEAN WDRC WNAK WORC WCAU
 WHP WJAS WMAL WDBJ WHK WKBN
 WWNC WBT WTOC WDBO WXYZ WBCM
 WSPD WDOD WREC WLAC WBRW WDSU
 WISN WTAQ WGL WMAQ WCCO KSCJ
 WMT KMOX KMBK KOIL KFJF KTRH
 KTSA KVI KFPY KDYL KLZ KVOR

2:30-3:00 NBC Artists Service Program
 WEF WTIC WOV WJJ KSD WRC
 WTAM WCSH WDAF WLIT WBN WEEI
 CKGW

2:30-3:00 Yeast Foamers
 WJZ WBAL WBZ WBZA WGAR WJR
 WLW KDKA KYW KWK WREN KFAB
 WTMJ KSTP WNBC WRVA WPTF WIOD
 WFLA WSUN WSM WBS WJAX WHAS
 WAPI WJDX WWSB KTHS KVOO KOMO
 WFAA WKY WOI KOA KSL KPO
 KECA KGW KHQ KTAR KFSD

3:00-3:30 Moonshine and Honeysuckle
 WEF WTIC WEEI WJAR WTAG WLIT
 WRC WTAM WJJ KYW KSD WOC
 WGY WBN WHO WDAF WBN WEEI
 WCSH WCAE CKGW

3:00-4:00 Symphonic Hour
 WABC WOKO WFBL WHEC WKBW WLWZ
 WEAN WDRC WAB WCAU WHP WJAS
 WLW WMAL WCAO WDBJ WKBN WWNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WDOD WREC WLAC WBRW WDSU WISN
 WTAQ WGL WFBM WMAQ WCCO KSCJ
 WMT KMBK KLRA KOIL KFJF KTRH
 KRLD KTRH KTSA WACO KVI KFPY
 KDYL KLZ KVOR

3:00-4:00 The Friendly Hour
 WJZ WBAL KDKA KWK WREN KFAB
 WRVA WJAX KFYR WIOD KVOO WFLA
 WSUN KOA KSTP WNBC WKY KHQ
 WSB WGAR WDAY WJDX WSM WFAA
 WBZ WBZA WSM WMC KGO WOI
 WBO WBA (KTHS off 3:30)

3:30-4:00 Balkan Mountain Men
 WEF WTIC WJAR WTAG WCSH WRC
 WGY WBN WCAE WTAM WJJ WSAI
 KSD WDAF CKGW WLIT WEEI WENR

4:00-5:00 Cathedral Hour
 WABC WOKO WFBL WHEC WKBW WLWZ
 WEAN WDRC WAAB WCAU WHP WJAS
 WMAL WCAO WDBJ WHK WKBN WWNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WDOD WREC WLAC WBRW WDSU WISN
 WOWO WFBM KSCJ KMOX KMBC KLRA
 KOIL KFJF KFJF KRLD KTRH WACO
 KVI KFPY KDYL KLZ KVOR

4:00-5:00 National Sunday Forum
 WEF WTIC WEEI WJAR WCSH WTAG
 KOA WOV WKY WOI WSAI WJAX
 WHAS WJDX KPRC WNBC WDAF WJZ
 WLIT WFLA WSUN KHQ WMT WBO
 WOC WRC KGW WGY WSM WBS
 WWSB WBN WRVA WIOD KPO WDAY
 KFYR KSD WFAA

4:00-5:00 Ravinia Opera Concert
 WJZ WJR WBZ WBZA KDKA KYW
 WLW KWK WREN KFAB CKGW CFCF
 WHAM WJR WGAR

5:00-6:00 Sabbath Reveries
 WJZ WBAL WHAM KWK WIOD WJDX
 KOMO WFLA WSUN KTAR KGO KHQ
 WLW WREN CKGW KGW WOI WBZ
 WBZA WGAR WJAX WWSB WDAY WRVA
 KFAB WSM WMC WBP WKY KDKA
 WNBC WIBA

5:00-6:00 Gilbert and Sullivan Gems
 WEF WTIC WJAR WTAG WRC WCSH
 WGY WJJ WFI WBN WTMJ WSAI
 WOC WHO WDAF CFCF WCAE WEEI

6:00-7:00 Catholic Hour
 WEF WTIC WEEI WJAR WTAG WRC
 WCSH WGY WJJ WNBC WCAE WIOD
 WJDX WWSB KSTP WCAE KMO KSD
 KGW WOC KECA KTAR WHO WDAY
 WJAX WFLA WSUN WMC WSB WBP
 KPRC WOI WRVA WDAF KOA KVOO
 WSM KPO WBN WOV WENR KFJR
 WLIT KTHS WSAI

7:00-7:15 New World Symphony
 WABC WOKO WFBL WHEC WGR WLWZ
 WDRC WPG WIP-WFAN WHP WJAS
 WLBW WMAL WCAO WDBJ WKBN WWNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WDOD WLAC WBRW WDSU WTAQ WFBM
 WCCO KSCJ WMT KMOX KMBC KLRA
 KOIL KFJF KFJF KTRH WACO KVI
 KFPY KFRC KDYL KLZ KVOR

7:00-7:30 Through the Opera Glass
 WEF WTIC WCSH WLIT WRC WGY
 WCAE WJJ WSAI WPTF WREI WJAX
 WOC WHO WDAF WTAG WEEI WJAR
 WTMJ WNBC WBO WIOD WHAS WSM
 WAPI WWSB WJDX KTHS KVOO WBP
 KPRC WOI WKY KOA KSL KGO
 KFI KGW KOMO KHQ KFSD KTAR
 WBN WENR

7:00-7:30 Over Jordan
 WJZ WHAM WJR KWK WREN KFAB
 CFCF KSTP WDAY WREN WRVA WJAX
 WIOD WFLA WSUN WHAS WSM WSB
 WAPI WJDX KVOO KPRC WKY WBO
 WWSB

7:30-7:45 Daddy and Rollo
 WABC WFBL WGR WEAN WNAK WCAU
 WLW WMAL WCAO WADC WHK WKRC
 WXYZ WSPD WISN WOV WFBM WBBM
 WCCO KMOX KMBC KOIL

7:30-8:00 Iodent Club of the Air
 WEF WJAR WTAG WCSH WLIT WRC
 WGY WBN WCAE WJJ WSAI WLS
 KSD WDAF

7:45-8:00 The Boswell Sisters
 WABC WOKO WFBL WHEC WGR WLWZ
 WEAN WDRC WORC WIP-WFAN WHP
 WJAS WLW WMAL WCAO WDBJ WHK
 WKBN WWNC WBT WTOC WDBO WXYZ
 WBCM WSPD WOD WREC WLAC WBRW
 WDSU WISN WOV WFBM WCCO KSCJ
 WMT KMOX KMBC KLRA KOIL KFJF

KFFJ KTRH WACO KVI KFPY KFRC
 KDYL KLZ KVOR

8:00-8:15 Enna Jettick Melodies
 WJZ WBZ WBZA WBAL WHAM WLW
 WJR WGAR KYW KDKA KWK WREN
 KFAB CFCF WTMJ KSTP WEBC WDAY
 KFJR WRVA WPTF WIOD WFLA WSUN
 WHAS WSM WMC WSB WAPI WSMB
 WJDX KTHS WFAA KPCC KVOO WOAI
 WKY WIBA KOA KSL KPO KFI
 KGW KOMO KHQ KTRAR KFSD

8:00-8:15 Devils, Drugs and Doctors
 WABC WFBL WHEC WGR WEAN WDRC
 WNBC WCAU WJAS WMAL WCAO WADC
 WHK WKRC WGST WXYZ WSPD WREC
 WBRG WDSU WISN WOVW WFBM WMAQ
 WCCO KSCJ KMOX KMBC KOIL WIMB
 WRR KTSa KOL KVI KFPY KOIN
 KFRC KHJ KLZ

8:00-9:00 Chase and Sanborn
 WEAJ WVIC WJAR WTAG WCSH WRC
 WGY WCAE WWJ WSAI KSD WOW
 WIOD KSTP WHO WOC WHAS WEBC
 WMC WSB WSMB KTHS KPCC WTMJ
 WTAM WJDX WFLA WSUN WDAF WBNB
 WPTF CFCF WOAI WKY WLIT WLS
 KVOO WFAA WRVA

8:30-8:45 Tony Parenti and His Saxophones
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNBC WORC WCAU WHP
 WJAS WLBW WMAL WCAO WDBJ WKBN
 WWNC WTOC WXYZ WDDO WREC WBRG
 WDSU WISN WOVW WFBM WCCO KSCJ
 WMT KMOX KMBC KLRA WNAK KOIL
 KFH KFJF KTRH KTSa WACO KVI
 KFPY KFRC KDYL KLZ KVOR

8:30-9:00 Harbor Lights
 WJZ WBAL WHAM KDKA WJR WLW
 KWK KOA KGO KFI WREN KSL
 KGW

8:45-9:00 Modern Male Chorus
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNBC WORC WCAU WHP
 WJAS WLBW WMAL WCAO WDBJ WKBN
 WWNC WTOC WXYZ WSPD WDDO WREC
 WBRG WDSU WISN WOVW WFBM WCCO
 KSCJ WMT KMOX KMBC WNAK KFH
 KFJF KTRH KTSa KFPY KFRC KDYL
 KLZ KVOR

9:00-9:15 Heel Hugger Harmonies
 WJZ WBAL WBZ WBZA WHAM KDKA
 WJR WLW KWK WENR WREN KFAB
 KSTP KOA KSL KPO KFI KGW
 KOMO KHQ KFSD KTRAR WGAR

9:00-9:15 "Our Government" - David Lawrence
 WEAJ WTAG WCSH WGY KSD WSAI
 WSB WMC WOW WJDX WFLA WSUN
 WOC WHO WRC KVOO WCAE WDAY
 WJAR WENR WBNB WFI WSMB WKY
 WIOD WEEI WPTF

9:00-9:30 The Dutch Masters
 WABC WOKO WFBL WHEC WGR WEAN
 WDRC WNBC WCAU WMAL WCAO WADC
 WHK WKRC WCAH WXYZ WSPD WOVW
 WFBM WBBM WCCO KMOX KMBC KOIL

9:15-9:45 Bayuk Stag Party
 WJZ WBAL WLW KWK WREN WJR
 KYW WHAM KDKA WBZ WBZA WGAR

9:15-9:45 Russian Singers
 WEAJ WEEI WRC WFI WGY WTAG
 WGN WJAR WWJ WSAI KSD WOW
 WOC WHO WBNB CKGW WCSH WCAE
 WTAM WDAF CFCF WIOD KOA

9:30-10:30 Lewisohn Stadium Concert
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNBC WORC WPG WIP-
 WFAN WCAU WHP WJAS WLBW WMAL
 WCAO WDBJ WHK WKBN WWNC WBT
 WTOC WDBO WXYZ WSPD WDDO WREC
 WLAC WBRG WDSU WISN WOVW WFBM
 WMAQ WCCO KSCJ WMT KMOX KMBC
 WNAK KOIL KFJF KRLD KTRH KTSa
 KVI KFPY KFRC KDYL KLZ KVOR

9:45-10:15 Kellogg Slumber Music
 WJZ WBAL WBZ WBZA WHAM KDKA
 WJR WKC WREN WLW WGAR KYW

10:30-11:00 The Gauchos
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNBC WORC WCAU WHP
 WJAS WLBW WMAL WCAO WDBJ WHK
 WWNC WBT WTOC WDBO WXYZ WSPD
 WDDO WREC WLAC WBRG WDSU WISN
 WOVW WFBM WCCO KSCJ WMT KMOX
 KMBC WNAK KOIL KFJF KRLD KTRH
 KTSa KVI KFPY KFRC KDYL KLZ

10:45-11:15 Sunday at Seth Parker's
 WEAJ WEEI WCSH WRC WGY WDAF
 CKGW WTMJ KSTP WCAE WTM WWJ
 KYW WOW WHO WEBC WMC WIOD
 WHAS WSM WJDX KPCC WKY KOA
 KGO KGW KTRAR WSB KSD WRVA
 KFSD WJAX WOC WFLA WSUN KECA
 WFI WBNB WJAR WAPI WDAY KFYR
 KHQ WPTF WOAI KSL WFAA

11:00-11:30 Continental String Quartette
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNBC WPG WCAU WHP
 WLBW WMAL WDBJ WWNC WBT WTOC
 WDBO WXYZ WSPD WDDO WREC WBRG
 WDSU WISN WFBM WCCO KSCJ WMT
 KMOX KLRA WNAK KOIL KFJF KRLD
 KTRH KTSa KVI KFPY KDYL KLZ

11:30-12:00 South Sea Islanders
 WEAJ WRC WGY WOW WTAM WOC
 WHO WWJ KSTP WDAY KFYR WHAS
 WSB KPCC

11:30-12:00 Red Nichola and His Orchestra
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNBC WPG WCAU WHP
 WLBW WMAL WCAO WTRAR WDBJ WKBN
 WWNC WBT WTOC WDBO WXYZ WSPD
 WDDO WREC WLAC WBRG WDSU WISN
 WFBM WCCO KSCJ WMT KMOX KMBC
 KLRA WNAK KOIL KFH KFJF KRLD
 KTRH KTSa KFPY KDYL KLZ KVOR

Monday

5:00-5:30 Dancing by the Sea
 WABC WOKO WFBL WGR WDRC WAAB
 WORC WPG WIP-WFAN WHP WJAS
 WLBW WMAL WCAO WDBJ WHK WWNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WDDO WREC WLAC WBRG WDSU WISN
 WTAQ WGL KSCJ WMT KMBC KOIL
 KFJF KRLD KTRH KTSa WACO KVI
 KFPY KFRC KDYL KLZ KVOR

6:15-6:45 Mormon Tabernacle Choir and Organ
 WJZ WBAL WSM KOA KOMO KFAB
 KGW CKGW KSTP KTRAR KPO KFSD
 WSMB WHAM WIBO KFYR KGO KWK
 WREN WDAY WJDX KECA WRC WLW
 KSL

7:00-7:30 Teddy Black and His Orchestra
 WEAJ WJAR WJDX WSAI KOA KGO
 KECA WTAG KCSH WBNB WSB WAPI

7:15-7:30 Tastyest Jesters
 WJZ WCKY WHAM WBZ WBZA WREN
 KDKA WRC WRVA WPTF WJAX WIOD
 WBAL WGAR WFLA WSUN

7:30-7:45 Archer Gibson Concert Organist
 WEAJ WTAG KSD KOA WOW CFCF
 WHAS WJAR KSL KGO WJDX

7:45-8:00 Paris Night Life
 WJZ WBAL WHAM WJR WGAR WLW
 KWK WREN KYW KFAB

8:00-8:30 Roxy Symphony Concert
 WJZ WGAR WBAL WLS WENR CKGW
 WFLA WSUN WSM WSB WRC WJDX
 WREN WFAA KOA WIOD

8:30-8:45 Manhattan Sereaders
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNBC WORC WPG WIP-
 WFAN WHP WJAS WLBW WMAL WCAO
 WTRAR WDBJ WWNC WBT WDBO WXYZ

WEBC WBAW WSB WKY WOAI WEEI
 WSAI KYW KSTP KSL KGO KECA
 KGW KHQ KOMO KVOO

9:30-10:00 The Bristleleers
 WABC WFBL WKBW WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WHK
 WKRC WXYZ WSPD WOWO WMAQ KMOX
 KMBC KOIL

9:30-10:30 Music of the Ages
 WJZ WBAL WCKY WREN KWK WBZ
 WBZA WHAM WENR KDKA WRVA WIOD
 WJAX WPTF KFAB WFLA WSUN

10:00-10:15 Ben Bernie and His Orchestra
 WABC WFBL WEAN WDRC WHK WCAU
 WJAS WMAL WCAO WADC WHK WKRC
 WKBN WBT WXYZ WSPD WLAC WBRC
 WDSU WWOV WBBM KMBK KOIL KFH
 KFJF KRLL KTSa KMJ KOL KVI
 KFPY KOIN KFRC KHJ KDYL

10:00-11:00 Lucky Strike Dance Orchestra
 WEAf WTC WEEI WJAR WTAG WCSH
 WFI WRC WCAE WWJ WSAI KSD
 WOC WHO WTMJ WEBC WRVA WJAX
 WIOD WFLA WSUN WHAS WSM WMC
 WSB WSMB WJDX WOAI KGA KGO
 WKY KGW KHQ KBO KTAf KFSf
 WDAF KVVO WTAM WENR WOW WDAY
 KFI KSL KFJR KSTP WENR WPTF
 WGY WBAW WIBA (KPRC on 10:45 to 11:00)

10:30-11:00 Savino Tone Pictures
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WORC WPG WCAU
 WHP WJAS WLWB WMAL WCAO WTAR
 WDBJ WKBW WNBC WBT WTOC WDBO
 WXYZ WBCM WSPD WDOD WLAC WBRC
 WDSU WOWO WFBM WCCO KSCJ WMT
 KMOX WNAX KOIL KFH KFJF KRLL
 KTRH KTSa KVR KVI KFPY KFRC
 KDYL KZL WISN

11:45-12:00 Asbury Park Casino Orchestra
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WAAB WORC WCAU WHP
 WLWB WMAL WCAO WTAR WDBJ WKBW
 WWNC WBT WTOC WDBO WXYZ WBCM
 WSPD WDOD WREC WLAC WBRC WDSU
 WISN WGL WFBM WCCO KSCJ WMT
 KMBC KLRA WNAX KFH KFJF KRLL
 KTRH KTSa WACO KVR KFPY KDYL
 KZL

12:00-12:30 Romanelli and His Orchestra
 WABC WFBL WHEC WKBW WLBZ WEAN
 WNAC WPG WCAU WHP WLB WCAO
 WTAR WDBJ WKBW WNBC WBT WTOC
 WDBO WXYZ WBCM WSPD WDOD WREC
 WLAC WBRC WDSU WISN WGL WFBM
 WCCO KSCJ WMT KMOX KMBK KLRA
 WNAX KOIL KFH KFJF KRLL KTRH
 KTSa WACO KVR KFPY KFRC KDYL
 KZL

12:00-12:30 Rudy Vallee and His Connecticut Yankees
 WEAf WTC WRC WGY WDAF WDAY
 WBN WTAM KSD WSB WAPI WWJ
 WENR WIBA KOA

Wednesday

3:45-4:30 Dancing by the Sea
 WABC WOKO WFBL WGR WLBZ WEAN
 WDRC WAAB WPG WCAU WHP WMAL
 WCAO WDBJ WHK WKBW WNBC WBT
 WTOC WDBO WXYZ WBCM WSPD WDOD
 WREC WLAC WBRC WDSU WISN WTAQ
 WGL WFBM KSCJ WMT KMOX KMBK
 KLRA KOIL KFH KFJF KRLL KTRH
 KTSa WACO KVR KVI KFPY KFRC
 KDYL KZL

7:00-7:15 Snoop and Peep
 WEAf WJAR WCAE KSD WNBC WSB
 WJDX KOA KSL KGO KGW KECA

7:15-7:30 Boscul Moments with Mme. Alda
 WEAf WTC WEEI WJAR WCSH WLIT
 WRC WBN WENR WCAE WTAM

7:30-7:45 Lee Morse - Crooner
 WEAf WLIT KSD WTAG WHAS WSB
 WAPI WJDX

7:30-7:45 Miller and Lyles
 WFBL WHEC WGR WEAN WDRC
 WORC WHP WJAS WLWB WMAL WCAO
 WTAR WDBJ WHK WKBW WNBC WBT
 WTOC WXYZ WBCM WSPD WDOD WREC
 WLAC WBRC WDSU WISN WTAQ WGL
 WFBM WBBM WCCO KSCJ KMOX KMBK
 KOIL KFH KFJF KTRH KVR KZL

8:00-8:15 Willard Robison
 WEAf WTAG WEEI WJAR WRC WBN
 WTAM WSAI WBO WOC WHO WOW
 WDAF WSB WFAA KOA KSL KGO
 KGW KTAf WIOD WFLA WSUN

8:00-8:15 The Frigidarians
 WJZ WBAL WGAR KYW WREN KFAB
 WTMJ WNBC WDAY WRVA WMC WSB
 WAPI WESB WJAX KVOA WOAI KOA
 KSL CFCE WPTF WIOD WFLA WSUN

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

8:30-9:00 Mobiloil Concert
 WEAf WEEI WJAR WCSH WTAG WLIT
 WRC WSAI KSD WOV WTAM KOA
 KVOO WFAA WOAI WKY WTC KSL
 WGY WEBC WDAF WCAE WHO WOC
 WWJ WBN KSTP WTMJ WDAY KFJR

8:30-9:00 Jack Frost's Melody Moments
 WJZ WBAL WHAM KDKA WGAR WJR
 WLW WLS

8:45-9:00 Tastyest Gloom Chasers
 WABC WFBL WGR WLBZ WEAN WDRC
 WNAC WORC WCAU WJAS WCAO WADC
 WHK WCAH WXYZ WSPD WDSU WOWO
 WFBM WBBM WCCO KMOX KMBK

9:00-9:30 Gold Medal Fast Freight
 WABC WOKO WFBL WKBW WEAN WDRC
 WNAC WCAU WJAS WMAL WCAO WDBJ
 WADC WHK WKRC WXYZ WSPD WOWO
 WFBM WMAQ WCCO KSCJ WMT KMOX
 KMBK KOIL KFH

9:00-9:30 The First Nighter
 WJZ WLS KDKA WHAM WGAR WREN
 WBAL KWK WBZ WBZA WENR

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

9:30-10:00 Eno Crime Club
 WABC WFBL WKBW WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WHK
 WKRC WXYZ WSPD WOWO WMAQ KMOX
 KMBK KOIL CFRB

9:30-10:00 Dutch Masters Program
 WJZ WBAL WBZ WBZA WHAM WGAR
 KDKA WJR WLW WENR KWK WREN

9:30-10:30 Palmolive Hour
 WEAf WTC WEEI WJAR WTAG WCSH
 WLIT WRC WGY WCAE WSAI WGN
 KSD WOV WSW WSMB WTMJ KSTP
 CKGW WHAS WSM WMC WDAF WHO
 WSB WOAI KOA KSL KGO KOMO
 KHQ WWJ WTAM WBN KFI KVOO
 WFAA KPRC WIBA KGW

10:00-10:15 Vitality Personalities
 WABC WOKO WFBL WKBW WEAN WDRC
 WNAC WCAU WJAS WMAL WCAO WADC
 WHK WKRC WCAH WBT WGST WXYZ
 WBCM WSPD WLAf WREC WLAC WBRC
 WDSU WISN WOWO WFBM WBBM WCCO
 KMOX KMBK KOIL KFH KFJF KRLL
 KTRH KTSa KOL KVI KFPY KOIN
 KFRC KHJ KDYL KZL

10:15-10:30 Hernandez Brothers
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WORC WCAU WHP

WJAS	WLBW	WMAI	WCAO	WTAR	WDBJ	KWK	WREN	WLW	KFAB	WLS	WJR
WUNC	WBT	WTOC	WXYZ	WBCM	WSPD	WHAM					
WDOD	WREC	WLAC	WBRC	WDSU	WISN	8:15-8:45 The Columbians					
WOWO	WFBM	WMAQ	WCCO	KSCJ	KMBC	WABC	WOKO	WFBL	WHEC	WEAN	WDRG
WNAX	KOIL	KFH	KFJF	KRLD	KTRH	WNAC	WORC	WPG	WIP-WFAN	WCAU	
KTSA	KVOR	KVI	KFPY	KFRK	KDYL	WHP	WLBW	WTAR	WDBJ	WKBN	WUNC
KLZ						WBT	WTOC	WDBO	WBCM	WBRC	WDSU
10:30-11:00 Nit Wit Hour											
WABC	WOKO	WFBL	WHEC	WKBW	WLBZ	WISN	WTAQ	WFBM	WMAQ	WCCO	KSCJ
WEAN	WDRG	WNAC	WORC	WCAU	WHP	WMT	KMBC	KLRA	WNAX	KOIL	KFH
WJAS	WLBW	WMAI	WCAO	WTAR	WDBJ	KFJF	KTRH	WACO	KVOR	KVI	KFPY
WUNC	WBT	WTOC	WXYZ	WBCM	WDOD	KFRK	KLZ				
WREC	WLAC	WBRC	WDSU	WISN	WOWO	8:45-9:00 Sisters of the Skillet					
WFBM	WCCO	KSCJ	WMT	KMBC	WNAX	WJZ	WREN	KFAB	WBAL	WBZ	WBZA
KOIL	KFH	KFJF	KRLD	KTRH	KTSA	WHAM	KDKA	WGAR	WJR	WLW	WLS
WACO	KVOR	KVI	KFPY	KFRK	KDYL	KWK					
KLZ						8:45-9:00 The Boswell Sisters					
10:30-11:00 Coca Cola Program											
WEAF	WEEI	WTIC	WCBS	WLIT	WRC	WABC	WOKO	WFBL	WHEC	WEAN	WDRG
WCAE	WSAI	WOC	WBEBC	WKY	KYW	WNAC	WORC	WCAU	WHP	WLBW	WMAI
KSD	WRVA	WJAX	KSTP	WIOD	WSM	WCAO	WDBJ	WHK	WKBN	WUNC	WTOC
KPRC	WOAI	KOA	WFAA	KSL	KGO	WDBO	WXYZ	WBCM	WSPD	WREC	WLAC
KGW	KHQ	KOMO	KFSD	WJDX	WDAF	WBRC	WDSU	WISN	WTAQ	WFBM	WCCO
WHAS	WTAM	WHO	WOW	WMC	WPTF	KSCJ	KMBC	KLRA	WNAX	KOIL	KFH
WSB	WVJ	WAPI	WBEN	KFI	WGY	KFJF	WACO	KVOR	KVI	KFPY	KFRK
WTMJ	WJAR	WFLA	WSUN	KTAR	KVVO	KDYL					
CFCF	WSMB	WTAG				9:00-9:15 Premier Salad Dressers					
11:00-11:15 "The Voice of Radio Digest"											
WEAF	KSD	WOC	WHO	WRC	WEEI	WABC	WFBL	WKBW	WEAN	WDRG	WNAC
WJAR	WCBS	WGY	WIBO	WIOD	WOW	WCAU	WJAS	WMAI	WCAO	WADC	WHK
WTAM						WKRC	WXYZ	WSPD	WOWO	WBBM	KMBC
						KOIL	KTRH				
11:15-12:00 Vincent Lopez and His Orchestra											
WEAF	WRC	WJAX	WEEI	WTAM	WDAF	9:00-9:30 Blackstone Plantation					
WVJ	WOC	WHO	WAPI	WOAI	WOW	WJZ	WBZ	WBZA	WBAL	KDKA	WCKY
WIOD	WENR					WHAM					
11:45-12:00 Will Osborne and His Orchestra											
WABC	WOKO	WFBL	WHEC	WKBW	WLBZ	9:00-9:30 Arco Birthday Party					
WDRG	WAAB	WORC	WPG	WCAU	WHP	WEAF	WTIC	WEEI	WJAR	WTAG	WCBS
WLBW	WMAI	WCAO	WTAR	WDBJ	WUNC	WFI	CKGW	WRC	WGY	WSM	WIOD
WTOC	WDBO	WXYZ	WBCM	WSPD	WDOD	WJAX	WOAI	WKY	KOA	WBAP	WRVA
WREC	WLAC	WBRC	WDSU	WISN	WGL	WVJ	WSAI	KSD	WDAF	KYW	WBEBC
WFBM	WCCO	KSCJ	WMT	KMBC	KLRA	WOW	WSM	WJDX	WOC	WHO	KGO
WNAX	KFJF	KRLD	KTRH	KTSA	KVOR	KECA	KOMO	KHQ	KGW	WAPI	WTAM
KFRK	KDYL	KLZ				WBEN	KTAR	KFSD	KSTP	WSB	WMC
						WPTF	KSL	WHAS	WCAE		
Thursday											
4:30-5:00 Maze of Melody											
WJZ	WBAL	WGAR	WJR	WLW	WENR	9:15-9:30 The Coty Melody Girl					
KWK	WRC	KSTP	WDAY	KFYR	WJAX	WABC	WFBL	WKBW	WEAN	WDRG	WNAC
WSM	WMC					WCAU	WJAS	WMAI	WCAO	WADC	KMOX
7:00-7:15 Kate Smith and Her Swanne Music											
WABC	WOKO	WFBL	WHEC	WDRG	WAAB	WHK	WKRC	WXYZ	WSPD	WOWO	WBBM
WORC	WCAU	WHP	WLBW	WMAI	WDBJ	9:30-10:00 Willard Robison and His Orchestra					
WKBN	WUNC	WBT	WTOC	WDBO	WBCM	WEAF	WTIC	WTAG	WJAR	WCSH	CKGW
WREC	WLAC	WBRC	WDSU	WTAQ	WCCO	WFI	WRC	WGY	WCAE	WVJ	WSAI
KSCJ	WMT	KLRA	KOIL	KFH	KFJF	WENR					
KRLD	KTRH	KTSA	KVOR	KDYL	KLZ	9:30-10:00 Maxwell House Ensemble					
7:00-7:15 Vaughn de Leath											
WEAF	WTIC	WFI	WCAE	WVJ	WENR	WJZ	WBZ	WBZA	WBAL	WKY	WTMJ
KSD	WHO	KFYR	WAPI	WMC	KOA	WBCB	WHAS	WSM	WJAX	KPRC	KOA
KGO	KTAR					WRVA	KSTP	WSB	WBAP	WREN	KWK
7:45-8:00 The Frigidarians											
WJZ	WGAR	KYW	WREN	KFAB	WTMJ	WIOD	WJR	WSMB	WOAI	KECA	KGW
WBCB	WDAY	WIBA	WMC	WSB	WAPI	WSUN	WFLA	WSUN	WFLA	WHAM	WJDX
WSMB	WJDX	KVVO	KPRC	WOAI	KOA	9:30-10:30 Lewisohn Stadium Concert					
CKGW	CFCF	WPTF	WJAX	WIOD	WFLA	WABC	WOKO	WFBL	WHEC	WKBW	WEAN
WSUN	KSL					WDRG	WNAC	WORC	WPG	WIP-WFAN	
8:00-8:15 Dixie Spiritual Singers											
WJZ	WBZ	WBZA	KFAB	KWK	WREN	WHP	WLBW	WMAI	WCAO	WTAR	WDBJ
WBAL	KDKA	WGAR	WJR	WCKY	WHAM	WHK	WLBW	WUNC	WBT	WTOC	WDBO
WENR	WLS	WRVA				WXYZ	WBCM	WSPD	WLAC	WBRC	WDSU
8:00-9:00 Fleischmann Hour—Rudy Vallee											
WEAF	WTIC	WEEI	WTAG	WJAX	WJDX	WISN	WTAQ	WFBM	WCCO	KSCJ	WMT
WJAR	WCBS	WFI	WRC	WGY	WHO	KMOX	KMBC	WNAX	KOIL	KFH	KFJF
WOW	WVJ	WHAS	WMC	WSAI	WJAR	KTRH	KLZ	KRLD	KVOR	KVI	KFPY
WSB	WSMB	WBEBC	KOA	WRVA	KTHS	KDYL	KLZ	KRLD			
KOL	KOMO	WOAI	WSM	WOC	WAPI	10:00-11:00 Lucky Strike Dance Orchestra					
KOA	KHQ	WTAM	KECA	KSD	CKGW	WEAF	WTIC	WEEI	WJAR	WTAG	WCBS
WGN	KGW	WBEN	KPRC	WIOD	WPTF	WFI	WRC	WGY	WCAE	WVJ	WSAI
WFLA	WSUN	WCAE	CFCF	KVVO	(WDAF on 8:45 to 9:00) (KSTP on 8:15) (WKY, WBAP off 8:30) (WTMJ on 8:30)	WBEN	WBAP	KSD	WOW	WKY	WOAI
8:15-8:30 Rin-Tin-Tin Thriller											
WJZ	WBZ	WBZA	WBAL	KDKA	WGAR	KOA	KSL	WTMJ	WIOD	WHAS	WSM
						WMC	WSMB	WJDX	KVVO	WDAF	WJAX
						KPRC	WTAM	WEBC	WRVA	WFLA	WSUN
						WSB	WPTF	WFAA	KGO	KGW	WOC
						WHO	KFI	KOMO	KHQ	KFSD	KTAR
						WENR	WDAY	KFYR	WAPI	(KTHS on 10:30)	
						WIBA	(KSTP on 8:45 to 9:00)	WHAS	WSM	KPRC	(off 10:30)
						11:00-11:15 St. Moritz Orchestra					
						WABC	WOKO	WFBL	WHEC	WKBW	WDRG
						WAAB	WORC	WIP-WFAN	WHP	WLBW	
						WMAI	WCAO	WTAR	WDBJ	WKBN	WUNC
						WBT	WTOC	WDBO	WXYZ	WBCM	WSPD

WREC WLAC WBRC WDSU WISN WCCO
 KSCJ WMT KLRA WNAX KOIL KFJF
 KRLD KTRH K TSA WACO KVOR KVI
 KPFP KFCR KDYL KLZ

11:00-11:15 Little Jack Little
 WEAFF WTIC WOV WFI WIOD WTAM
 WWJ WENR

11:45-12:00 Radio Roundup
 WABC WOKO WFBL WHEC WKBW WDRC
 WAAB WORC WCAU WHP WLWB WMAL
 WCAO WTAR WDBJ WBNW WNCN WBOC
 WXYZ WBCM WSPD WREC WLAC WBRC
 WDSU WISN WACO KSCJ WMT KMBC
 KLRA WNAX KOIL KFJF KRLD KTRH
 K TSA KVOR KPFP KDYL KLZ

12:00-12:30 Guy Lombardo and Royal Canadians
 WABC WFBL WHEC WKBW WEAN WNAC
 WPG WCAU WHP WLWB WMAL WCAO
 WTAR WDBJ WHK WBNW WNCN WTOC
 WDBO WXYZ WBCM WSPD WREC WLAC
 WBRC WDSU WISN WFBM WCCO WMT
 KMBC KLRA WNAX KOIL KFH KFJF
 KRLD KTRH K TSA KVOR KPFP KDYL
 KLZ

Friday

7:00-7:15 Kate Smith and Her Swanee Music
 WABC WOKO WFBL WHEC WDRC WAAB
 WORC WCAU WHP WLWB WMAL WCAO
 WDBJ WBNW WNCN WBT WTOC WDBO
 WBCM WREC WLAC WBRC WDSU WTAQ
 WCCO KSCJ WMT KMOX KOIL KFH
 KFJF KRLD KTRH K TSA KVOR KDYL
 KLZ

7:00-7:45 Major Bowes' Family
 WEAFF WJAR WCHS WCAE WWJ WENR
 WOC WHO KOA WSBM WOV KSD
 WDAF KFYP

7:30-7:45 Red Nichols and His Orchestra
 WFBL WDRC WORC WCAU WHP WLWB
 WCAO WTAR WDBJ WBNW WNCN WBT
 WTOC WDBO WXYZ WBCM WSPD WREC
 WLAC WBRC WDSU WISN WTAQ WFBM
 KSCJ KMBC KOIL KFH KFJF KTRH
 KVOR KLZ

8:00-8:30 Nestle's Program
 WJZ WBZ WBZA WHAM KDKA WREN
 KFAB WJR WLW KWK WGAR WBAL
 WLS WCKY

8:00-9:00 Cities Service Concert Orchestra
 WEAFF WTIC WEEL WRC KTHS KGW
 KVOO WGY WLF WTCAE WJAR WCHS
 WOV KCV WDAF KSD KSTP WTMJ
 WKY WOC WBC KOA WOAI KOMO
 KGO KHQ WTAG KSL CKGW WSAI
 WHO KECA WTAM WBNW WWJ KTHS
 (WFAA KPRC off 8:30) K TAR

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

8:30-9:00 Lewishahn Stadium Concert
 WABC WOKO WFBL WHEC WEAN WDRC
 WNAC WORC WHP WLWB WMAL WCAO
 WTAR WDBJ WHK WBNW WDBO WXYZ
 WBCM WSPD WREC WLAC WBRC WDSU
 WISN WTAQ WFBM WCCO KSCJ KMOX
 KMBC WNAX KOIL KFJF KVOR KVI
 KPFP KDYL KLZ

9:00-9:30 Interven Program
 WJZ WHAM WMC KDKA WJAX WKY
 WREN KPRC KWK WBZ WBZA WSBM
 KGW WIOD WFLA WSN KSTP WHAS
 KYW WBC WCKY WSB WAPI WBAL
 WOAI KSL KGO KOMO KHQ KFSD
 K TAR WGAR KFI KOA WRVA WTMJ

9:00-9:30 Cliequot Club
 WEAFF WTIC WEEL WJAR WTAG WCHS
 WLIT WRC WOV WCAE WSAI KSD
 WBO WWJ WDAF WOC WHO WGY
 WBNW

9:00-9:45 Liberty Magazine Hour
 WABC WFBL WKBW WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WHK
 WKRC WXYZ WSPD WOV WMAQ KMOX
 KMBC KOIL

9:30-10:00 Pond's Dance Program
 WEAFF WTAG WJAR WCHS WLIT WRC
 WCAE WFNK KSD WOC WHO WOV
 WGY WBNW WTAQ WWJ

9:30-10:00 Armour Program
 WJZ WBZ WBZA WJR KYW WREN
 KSTP WBC WRVA WMC WSB WOAI
 KOA KSL KGO WKY WHAS KGW
 KHQ KOMO KDKA WJAX WJDX WPTF
 WIOD WTMJ WAPI WHAM KFI WSM
 WLW WSBM WGAR WBAL WFAA KWK
 KPRC

9:45-10:00 Friendly Five Footnotes
 WABC WFBL WKBW WEAN WNAC WCAU
 WJAS WMAL WCAO WHK WKRC WBT
 WXYZ WREC WLAC WNOX WDSU WFBM
 WMAQ WCCO KMOX KMBC KOIL KRLD
 KLZ

10:00-10:30 Pillsbury Pageant
 WABC WOKO WFBL WKBW WEAN WDRC
 WNAC WCAU WJAS WMAL WCAO WTAR
 WDBJ WADC WHK WMAQ WGST WXYZ
 WSPD WREC WOV WMOX WCCO KMOX
 KMBC KOIL KFJF KRLD KOL KVI
 KPFP KOIN KPRC KHL KDYL KLZ

10:00-10:30 Paul Whiteman's Paint Men
 WJZ WBZ WBZA WBAL WHAM KDKA
 WJR WGAR KYW KWK KPRC KSTP
 WBC WDAY KFYP WRVA WPTF WIOD
 WFLA WSN WHAS WSM WMC WSB
 WSBM WJDX WFAA WOAI KOA WKY
 KSL KGO KFI KGW KOMO KHQ
 WLW KFSD WJAX K TAR WAPI WTMJ

10:00-10:30 Kodak Week-End Program
 WEAFF WJAR WCHS WCAE WWJ KSD
 WSAI WRC WBNW WLIT WTAG WTAM
 WGY WOV WENR WEEL WOC WHO

10:30-11:00 RKO Theater of the Air
 WEAFF WTIC WJAR WTAG WLIT WGY
 WCAE WWJ WSAI WBO KSD WDAF
 WRVA WJAX WIOD WMC WSB WSBM
 WOC WJDX KGO KTS WOAI WKY
 WRC WCHS WTMJ KOA KGW KFI
 KHQ KOMO K TAR KFSD WHO WOV
 WTAG KSL WFLA WSN WBNW WDAY
 KFYP WEEL WPTF WAPI WENR WHAS
 WBA

10:30-11:00 Around the Samovar
 WABC WOKO WFBL WHEC WKBW WEAN
 WDRC WNAC WORC WCAU WHP WLWB
 WMAL WCAO WTAR WDBJ WHK WNCN
 WBT WTOC WDBO WXYZ WBCM WSPD
 WLAC WBRC WDSU WISN WCCO KSCJ
 WMT KMOX KMBC WNAX KOIL KFH
 KFJF KTRH K TSA KVOR KVI KPFP
 KDYL

11:00-12:00 Vincent Lopez and His Orchestra
 WEAFF WOC WHO (WDAY on 11:15) (WOW on
 11:45) (WGY WCAE off 11:30) (WTAM KSD WWJ
 WSB on 11:30) KVOO WEEL WBNW KFYP
 WDAF WFLA WSN

11:30-12:00 Lew White Organ Recital
 WJZ WGAR WENR KFAB CKGW WBAL
 WHAM WREN WRC KVOO

Saturday

5:15-5:45 Dancing by the Sea
 WABC WOKO WFBL WHEC WDRC WAAB
 WORC WPG WIP-WEAN WHP WLWB
 WMAL WCAO WDBJ WHK WNCN WBT
 WTOC WDBO WBCM WSPD WREC WLAC
 WBRC WDSU WISN KSCJ WMT KMBC
 KOIL KFJF KRLD KTRH K TSA WACO
 KVOR KVI KPFP KPRC KDYL

5:30-5:45 Song Shoppe
 WEAFF WTIC WWJ WCAE KSTP WRC
 WBNW KSD WJAR WENR WTAG KOA
 WSB WTAM WOV WDAY KFYP

6:00-6:30 Winegar's Barn Orchestra
 WABC WOKO WFBL WHEC WDRC WAAB
 WORC WIP-WFAN WBT WLWB WCAO
 WDBJ WBNB WNNC WHT WTOC WDBO
 WBCM WSPD WREC WBRC WDSU WTAQ
 WCCO KSCJ WMT KMBC KOIL WIBW
 KFJF KFJF KRLL KTRH KTSA KVOR
 KVI KFPY KFCR KDYL WLAC

7:00-7:15 Lee Morse—Crooner
 WEAF WTIC WFI WCAE WWJ WSB
 KOA KGO WCSH WENR KFJR KSD

7:15-7:30 Laws That Safeguard Society
 WEAF WJAR WTAG WCSH WFI WGY
 WBEN WOC WHO WBEC WOA1 KOA
 KGO WEEL KECA KOMO KTAR WTIC
 WJDX WDAY WENR WOV

7:15-7:30 Tastyest Jesters
 WJZ WHAM WCKY WREN KDKA WBZ
 WBZA WBAL WRC WLW WGAR WRVA
 WPTF WJAX WIOD WFLA WSUN

7:30-7:45 Three Mustachios
 WEAF WOC WHO WJAR WDAF WOV
 WFVA CFCF WTIC WTAG WJAR WCSH
 WFI WRC WGY WBEN WTAM WSM
 WENR

7:30-7:45 Sonata Recital
 WJZ WHAM WREN WGAR KGO WLW
 KDKA KWK KFAB KOA KPO KGW
 KECA KFSD

8:00-8:30 Rudy Vallee and His Connecticut Yankees
 WJZ WBAL WHAM WJR KWK WREN
 CKGW CFCF WBO WFVA WFLA WSUN
 WMC KTHS WOA1 KOA KFS

8:00-8:30 Over the Heather—Sandy MacFarlane
 WEAF WTAG WGY WCAE KSD WOC
 WHO WOV WEEL WJZ WSA1 WDAF
 WJAR WCSH WFI WBEN WTAM WTIC

8:15-8:30 Henry Burbee—Brusioff's Orchestra
 WABC WOKO WFBL WHEC WDRC WAAB
 WORC WPG WCAU WHP WLWB WMAL
 WTAR WDBJ WBNB WNNC WBT WTOC
 WDBO WXYZ WFCM WSPD WLAC WBRC
 WDSU WISN WTAQ WFBM KSCJ WMT
 KLRA WNAX KOIL KFJF KFJF KTRH
 WACO KVOR KVI KFPY KFCR

8:30-8:45 Kate Smith and Her Swanee Music
 WABC WFBL WHEC WDRC WAAB WORC
 WPG WCAU WHP WLWB WTAR WDBJ
 WBNB WNNC WBT WDBO WXYZ WBCM
 WSPD WLAC WBRC WDSU WISN WTAQ
 WFBM WMAQ KSCJ WMT KMOX KMBC
 KLRA WNAX KOIL KFJF KFJF KTRH
 WACO KVOR KVI KFPY KFCR KDYL

8:30-9:00 Silver Flute
 WEAF WTIC WGY KSD WDAF WOV
 WJAR WWJ WSA1 WTAG WCSH WFI

8:45-9:00 Tastyest Gloom Chasers
 WABC WFBL WGR WLWB WEAN WDRC
 WNAC WORC WCAU WJAS WCAO WADC
 WHK WCAH WXYZ WSPD WDSU WOWO
 WFBM WBBM WCCO KMOX KMBC

9:00-9:15 The Boswell Sisters
 WABC WOKO WFBL WHEC WKBW WEAN
 WDRC WNAC WORC WPG WCAU WHP
 WLWB WMAL WCAO WTAR WDBJ WHK
 WBNB WNNC WBT WTOC WDBO WXYZ
 WBCM WSPD WREC WLAC WBRC WDSU
 WISN WTAQ WFBM WMAQ WCCO KSCJ
 WMT KMOX KMBC WNAX KOIL KFJF
 KFJF KTRH KTSA KVOR KVI KFPY
 KFCR KDYL

9:00-9:30 General Electric Program
 WEAF WTIC WJAR WTAG WCSH WFI
 WRC WGY WBEN WCAE WTAM WWJ
 WSA1 WBO KSD WOC WHO WDAF
 KSTP WBCB WRVA WJAX WFLA WSUN
 WHAS WMC WSB WAPI WSMB WBAP
 KFCR WOA1 KOA WTMJ KSL KGO
 KFI KGW KOMO KHQ KTAR KFSD
 WLW WOC WJDX WDAY KFJR WPTF
 WIOD

9:30-10:00 The Domino Orchestra
 WJZ WBZ WBZA WBAL WHAM KDKA
 WGAR WJR WLW KYW WREN KWK

9:30-10:00 Club Valspar
 WEAF WTIC WJAR WTAG WCSH WFI
 WRC WGY WBEN WCAE WTAM WWJ
 WSA1 WEEL KSD WOC WHO WDAF
 KSTP WBCB WRVA WJAX WHAS WMC
 WSB WAPI WSMB WBAP KFCR WOA1
 WOV WTMJ CKGW WPTF WIOD WFLA
 WSUN WKY WJDX WDAY KFJR

9:30-10:00 Lewisohn Stadium Concert
 WABC WOKO WFBL WHEC WKBW WEAN
 WDRC WNAC WORC WPG WHP WLWB
 WMAL WCAO WTAR WDBJ WBNB WNNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WLAC WBRC WDSU WISN WTAQ WFBM
 WMAQ KSCJ WMT KMOX KMBC WNAX
 KOIL KFJF KTRH KTSA KVOR
 KVI KFPY KFCR KDYL WCAU

10:00-11:00 Hank Simmons' Show Boat
 WABC WOKO WFBL WHEC WKBW WEAN
 WDRC WNAC WORC WPG WCAU WLWB
 WMAL WTAR WDBJ WHK WBNB WNNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WREC WLAC WBRC WDSU WISN WFBM
 WCCO KSCJ WMT KMOX KMBC WNAX
 KOIL KFJF KFJF KRLL KTRH KT A
 WACO KVOR KVI KFPY KFCR KDYL

10:00-11:00 Lucky Strike Dance Orchestra
 WEAF WTIC WEEL WJAR WTAG WCSH
 WFI WRC WGY WBEN WCAE WTAM
 WOV WSA1 WGN KSD WOC WHO
 WOV WDAF WTMJ KSTP WBCB WRVA
 WJAX WIOD WFLA WSUN WHAS WMC
 WSB WSMB WJDX KVOO WFAA WOA1
 WKY KOA KSL KGW KFI KGW
 KOMO KHQ KTAR KFSD WDAY KFJR
 WIBA KFCR

11:00-11:15 Little Jack Little
 WEAF WTIC WFI WCAE KSD WGY

11:00-11:15 Bert Low and His Orchestra
 WABC WOKO WFBL WHEC WKBW WDRC
 WAAB WORC WCAU WHP WLWB WMAL
 WCAO WTAR WDBJ WHK WBNB WNNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WREC WLAC WBRC WDSU WISN WCCO
 KSCJ WMT KMOX KLRA WNAX KOIL
 KFJF KFJF KRLL KTRH KTSA WACO
 KVOR KVI KFPY KFCR KDYL

11:15-12:00 Tal Henry and His Orchestra
 WEAF WTIC WRC KSD WOC WHO
 WOV WSB KFCR WEEL WFI WTAM
 WGY WWJ WDAF WCAE CFCF WIOD

11:30-12:00 Los Conquistadores
 WJZ WHAM WGAR WJR WBO WREN
 KSTP WDAY KFJR KOA KFSD KTAR

11:45-12:00 Will Osborne and His Orchestra
 WABC WOKO WFBL WHEC WKBW WDRC
 WAAB WORC WCAU WHP WLWB WMAL
 WCAO WTAR WDBJ WHK WBNB WNNC
 WBT WTOC WDBO WXYZ WBCM WSPD
 WREC WLAC WBRC WDSU WISN WFBM
 WCCO KSCJ WMT KMBC KLRA WNAX
 KOIL KFJF KRLL KTRH KTSA KVOR
 KFPY KFCR KDYL

12:00-12:30 Guy Lombardo and His Royal Canadians
 WABC WFBL WHEC WKBW WEAN WNAC
 WPG WCAU WHP WLWB WMAL WCAO
 WTAR WDBJ WHK WBNB WNNC WBT
 WTOC WDBO WXYZ WBCM WSPD WREC
 WLAC WBRC WDSU WISN WFBM WCCO
 WMT KMOX KMBC KLRA WNAX KOIL
 KFJF KTRH KTSA KVOR KFPY

12:00-12:30 Sherbo's Continentals
 WEAF WTIC WGY WBEN WTAM KSD
 WWJ WOV WMC KFCR KOA WRC
 WDAY WIBA

12:30-1:00 Smith Ballew and His Orchestra
 WEAF WTIC WGY WBEN WWJ KSD
 WOC WHO WOV WRC WSB KFCR
 KOA

INDEX BY FREQUENCIES AND DIAL NUMBERS

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KEY

Frequency in kilocycles. Wave lengths in meters. Second column symbols: * Verifies^{2c} receptions 2c; sends station stamp 10c; † Verifies 2c; no stamp; ‡ Sends stamp but does not verify otherwise; § Does not verify; ¶ Did not reply. § Verification 25c, reply card 10c. 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 frequencies; Y given permit to move to another city. Dn — This daylight station may use evening hours under certain conditions. Dashes (..) have no meaning.

540 kilocycles 555.6 meters

CKX	†	500		Brandon, Manitoba
KEY	--	101	547	Merida, Mexico

--	--	--

Manitoba Telephone System
Partido Socialista Surt

550 kilocycles 545.1 meters

KFDY	†	500	1+	Brookings, S. D.
KFUO	*	500	2+	St. Louis, Mo.
KFYR	†	1000	1+N	Bismarck, N. D.
KOAC	†	1000	--	Corvallis, Ore.
KSD	†	500	2N	St. Louis, Mo.
WGR	*	1000	C	Buffalo, N. Y.
WKRC	†	1000	C	Cincinnati, Ohio

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

560 kilocycles 535.4 meters

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

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

570 kilocycles 526.0 meters

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

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Wichita Falls Broadcasting Co.
KMTR Radio Corp.
American Radio Tel. Co.
Ohio State University
WKBN Broadcasting Corp.
Clive B. Meredith
Knickerbocker Broadcasting Co., Inc.
House of Gurney, Inc.
Dept. of Plants and Structures
Clive B. Meredith
Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCL	--	500	3S	Toronto, Ont.
CFCY	*	250	1	Charlottetown, P. E. I.
CHMA	--	250	4S	Edmonton, Alta.
CKCL	*	500	3	Toronto, Ont.
CKNC	*	500	3	Toronto, Ont.
CKUA	†	500	4	Edmonton, Alta.
KGFX	--	200	D	Pierre, S. D.
KSAC	†	500	2+	Manhattan, Kans.
WIBW	*	1000	2+C	Topeka, Kansas
WOBU	*	250	1+	Charleston, W. Va.
WSAZ	*	250	1	Huntington, W. Va.
WTAG	*	250	N	Worcester, Mass.

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Dominion Battery Co.
The Island Radio 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.

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters

CMW	--	1400	588	Havana, Cuba
KHQ	--	1000	+N	Spokane, Wash.
WCAJ	--	500	N	Lincoln, Nebr.
WEEL	+	1000	N	Boston, Mass.
WKZO	*	1000	D	Kalamazoo, Mich.
WOW	*	1000	1N	Omaha, Nebr.
XEZ	*	500	588	Mexico City

Columbus Commercial & Radio Co. Louis Wasmer, Inc. Nebraska Wesleyan University Edison Elec. Illuminating Co. WKZO, Inc. Woodmen of the World Gonzales Zamacona y Cia.		

KCYS.

670

MTRS.

447.5

DIAL

600 kilocycles 499.7 meters

CNRO	+	500	3	Ottawa, Ont.
KFSD	*	500	+N	San Diego, Cal.
WCAC	+	250	2+	Storrs, Conn.
WCAO	*	250	C	Baltimore, Md.
WICC	*	250	2+	Bridgeport, Conn.
WMT	*	500	C	Waterloo, Iowa
WREC	*	500	+C	Memphis, Tenn.

Canadian National Railways Airfan Radio Corp. Conn. Agricultural College Monumental Radio, Inc. Bridgeport Broadcasting Station, Inc. Waterloo Broadcasting Co. WREC, Inc.		

610 kilocycles 491.5 meters

KFRC	*	1000	C	San Francisco, Cal.
WDAF	*	1000	N	Kansas City, Mo.
WVAN	*	500	2C	Philadelphia, Pa.
WIP	*	500	2C	Philadelphia, Pa.
WJAY	+	500	D	Cleveland, Ohio

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

620 kilocycles 483.6 meters

KGW	*	1000	+N	Portland, Ore.
KTAR	*	500	+N	Phoenix, Arizona
WFLA	*	1000	1+N	Clearwater, Fla.
WLWB	*	500	C	Bangor, Maine
WSUN	*	1000	1+N	St. Petersburg, Fla.
WTMJ	*	1000	+N	Milwaukee, Wis.

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

630 kilocycles 475.9 meters

CFCT	*	50	---	Victoria, B. C.
CJGX	--	500	---	Yorkton, Sask.
CNRA	*	500	---	Moncton, N. B.
KFRU	*	500	1-	Columbia, Mo.
WGBF	+	500	1	Evansville, Ind.
WMAL	*	250	+C	Washington, D. C.
WOS	*	500	1	Jefferson City, Mo.

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

640 kilocycles 468.5 meters

CHRC	--	100	645	Quebec, Que.
CKCR	--	50	645	Waterloo, Ont.
CMHJ	--	40	645	Cienfuegos, Cuba
KFI	*	50000	N	Los Angeles, Cal.
WAIU	*	500	C Dn	Columbus, Ohio
WOI	--	5000	D	Ames, Iowa
XFG	--	2000	638	Mexico City

E. Fontaine John Patterson Arturo Hernandez Earle C. Anthony, Inc. American Insurance Union State College of Agriculture Secretaria de Guerra y Marina		

650 kilocycles 461.3 meters

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

Queen City Broadcasting Co. National Life & Accident Ins. Co.		

660 kilocycles 454.3 meters

CHWK	+	100	---	Chilliwack, B. C.
CJRM	+	500	665	Moose Jaw, Sask.
CJRW	--	500	665	Fleming, Sask.
CMCO	--	225	---	Havana, Cuba
WAAW	*	500	D	Omaha, Nebr.
WEAF	+	50000	N	New York City
WTIC	*	5000	N	Hartford, Conn.

Chilliwack Broadcasting Co., Ltd. Jas. Richardson & Sons, Ltd. Jas. Richardson & Sons, Ltd. J. L. Stowers Omaha Grain Exchange National Broadcasting Co., Inc. Travelers Broadcasting Service, Inc.		

670 kilocycles 447.5 meters

VOWR	--	500	675	St. Johns, N. F.
WMAQ	*	5000	C	Chicago, Ill.
XER	--	101	674	Mexico City

65		
Wesley United Church WMAQ, Inc. Armida y Cia.		

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

680 kilocycles 440.9 meters

KFEQ * 2500 D St. Joseph, Mo.
 KPO † 5000 N San Francisco, Cal.
 WPTF * 1000 N Dn Raleigh, N. C.
 XETF 500 --- Veracruz, Mexico

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Scroggin & Co., Bank
 Hale Bros. & The Chronicle
 Durham Life Insurance Co.
 Manuel Angel Fernandez & Cia

690 kilocycles 434.5 meters

CFAC -- 500 1 Calgary, Alta.
 CHCA * 500 1 Calgary, Alta.
 CJCJ * 500 1 Calgary, Alta.
 CKGW * 5000 2N Toronto, Ont.
 CNRC * 500 1 Calgary, Ont.
 CPRY -- 5000 2 Toronto, Ont.
 NAA -- 1000 --- Arlington, Va.
 VAS † 10000 685 Glace Bay, N. S.
 XET † 500 --- Monterrey, Mexico

[] [] []

The Calgary Herald
 The Western Farmer
 Albertan Publishing Co., Ltd.
 Gooderham & Worts, Ltd.
 Canadian National Railways
 Canadian Pacific Railways
 U. S. Navy
 Canadian Marconi Co.
 Mexico Music Co., S. A.

700 kilocycles 428.3 meters

WLW * 50000 N Cincinnati, Ohio

[] [] []

Crosley Radio Corp.

710 kilocycles 422.3 meters

KMPC * 500 Dn Los Angeles, Cal.
 WOR * 5000 Newark, N. J.
 XEN † 1000 711 Mexico City

[] [] []

R. S. MacMillan
 Bamberger Broadcasting Service, Inc
 Cia. Civil de Inversiones

720 kilocycles 416.4 meters

WGN † 25000 N Chicago, Ill.

61 [] [] []

Chicago Tribune

730 kilocycles 410.7 meters

CHLS -- 50 1 Vancouver, B. C.
 CHYC * 5000 2S Montreal, Que.
 CKAC * 5000 2C Montreal, Que.
 CKCD -- 50 1 Vancouver, B. C.
 CKFC † 50 1 Vancouver, B. C.
 CKMO -- 50 1 Vancouver, B. C.
 CKWX † 100 1 Vancouver, B. C.
 CMK † 3150 --- Havana, Cuba
 CNRM * 5000 2 Montreal, Que.
 XEM † 500 --- Tampico, Mexico

61 [] [] []

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

740 kilocycles 405.2 meters

KMMJ * 1000 Dn Clay Center, Nebr.
 WSB -- 5000 N Atlanta, Ga.

[] [] []

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

750 kilocycles 399.8 meters

WJR † 5000 N Detroit, Mich.

[] [] []

WJR, The Goodwill Station, Inc.

760 kilocycles 394.5 meters

KVI * 1000 C Dn Tacoma, Wash.
 WBAL * 1000 N Baltimore, Md.
 WEW * 1000 D St. Louis, Mo.
 WJZ † 30000 N New York City

[] [] []

Puget Sound Broadcasting Co., Inc.
 Consolidated Gas, Elec. & Power Co.
 St. Louis University
 National Broadcasting Co., Inc.

770 kilocycles 389.4 meters

KFAB * 5000 1N Lincoln, Nebr.
 WBBM * 25000 1C Chicago, Ill.
 WJBT -- 25000 1S Chicago, Ill.

58 [] [] []

KFAB Broadcasting Co.
 WBBM Broadcasting Corp.
 WBBM Broadcasting Corp.

780 kilocycles 384.4 meters

CKY -- 5000 3 Winnipeg, Manitoba
 CMGH -- 60 --- Matanzas, Cuba
 CNRW -- 5000 3 Winnipeg, Manitoba
 KELW * 500 2 Burbank, Cal.
 KTM * 500 2+ Los Angeles, Cal.
 WEAN * 250 +C Providence, R. I.
 WMC -- 500 +N Memphis, Tenn.
 WPOR -- 500 1 Norfolk, Va.
 WTAR * 500 1C Norfolk, Va.

[] [] []

Manitoba Telephone System
 Alberto Alvarez
 Canadian National Railways
 Magnolia Park, Ltd.
 Pickwick Broadcasting Corp.
 Shepard Broadcasting Service, Inc.
 Memphis Commercial-Appeal, Inc.
 WTAR Radio Corp.
 WTAR Radio Corp.

INDEX BY FREQUENCIES AND DIAL NUMBERS

790 kilocycles 379.5 meters

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

57		
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E. Artalejo
Frank H. Jones
National Broadcasting Co., Inc.
General Electric Co.

800 kilocycles 374.8 meters

WBAP	†	10000	IXN	Fort Worth, Texas
WFAA	†	50000	1N	Dallas, Texas
XEU	--	101	---	Veracruz, Mexico
XFC	--	350	805	Aguascalientes, Mexico

56		
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Carter Publications, Inc.
News & Journal
Fernando Pazos
Gobierno del Estado de Aguascalientes

810 kilocycles 370.2 meters

WCCO	*	5000	C	Minneapolis, Minn.
WPCW	*	500	D	New York City

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Northwestern Broadcasting, Inc.
Eastern Broadcasters, Inc.

820 kilocycles 365.6 meters

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

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

830 kilocycles 361.2 meters

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

51		
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Leopoldo V. Figueroa
National Broadcasting Co., Inc.
Berks Broadcasting Co.
Matheson Radio Co., Inc.
University of Florida

840 kilocycles 356.9 meters

CFCM	†	500	1	Toronto, Ont.
CHCT	--	1000	---	Red Deer, Alta.
CKLK	†	1000	2	Red Deer, Alta.
CMC	†	500	---	Havana, Cuba
CNRD	†	1000	2	Red Deer, Alta.
CNRT	*	500	1	Toronto, Ont.

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

850 kilocycles 352.7 meters

KWKH	*	10000	1	Shreveport, La.
WWL	*	5000	1	New Orleans, La.

52/2		
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Hello World Broadcasting Corp.
Loyola University

860 kilocycles 348.6 meters

CMJE	--	20	856	Camaguey, Cuba
KMO	†	500	+ Dn	Tacoma, Wash.
WABC	*	5000	XC	New York City
WBOQ	--	5000	---	New York City
WHB	*	500	D	Kansas City, Mo.
XEJ	*	101	857	Juarez, Mexico
XFX	--	500	---	Mexico City, Mexico

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

870 kilocycles 344.6 meters

WENR	--	50000	1N	Chicago, Ill.
WLS	†	50000	1XN	Chicago, Ill.

51		
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National Broadcasting Co., Inc.
Agricultural Broadcasting Co.

880 kilocycles 340.7 meters

CHML	*	50	4	Hamilton, Ont.
CJCB	*	50	---	Sydney, N. S.
CKCI	†	100	3	Quebec, Que.
CKCV	†	50	3	Quebec, Que.
CNRQ	†	50	3	Quebec, Que.
KFKA	†	500	2+	Greeley, Colo.
KLX	*	500	---	Oakland, Cal.
KPOF	*	500	2	Denver, Colo.
WCOC	*	500	+	Meridian, Miss.
WGBI	*	250	1	Scranton, Pa.
WQAN	*	250	1	Scranton, Pa.
WSUI	*	500	---	Iowa City, Iowa

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

KCY.S.

880

MTRS.

340.7

DIAL

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

890 kilocycles 336.9 meters

CFBO	*	500	---	St. John, N. B.
CKCO	†	100	---	Ottawa, Ont.
CKPR	*	50	---	Port Arthur, Ont.
CMCF	†	250	---	Havana, Cuba
CMX	*	500	---	Havana, Cuba
KFNF	**	500	2+	Shenandoah, Iowa
KGJF	*	250	---	Little Rock, Ark.
KUSD	*	500	2+	Vermillion, S. D.
WGST	*	250	+C	Atlanta, Ga.
WILL	*	250	2+	Urbana, Ill.
WJAR	*	250	+N	Providence, R. I.
WKAQ	*	250	---	San Juan, P. R.
WMMN	*	250	+	Fairmount, W. Va.
XES	\$	500	---	Tampico, Mexico

C. A. Mumro, Ltd. Dr. G. M. Geldert Daoull Motor Car Corp. Roual Karman Francisco Lavin 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 Holt-Rowe Broadcasting Co. Difusora Portena XES		

900 kilocycles 333.1 meters

KGBU	†	500	---	Ketchikan, Alaska
KHJ	*	1000	C	Los Angeles, Cal.
KSEI	*	250	---	Pocatello, Idaho
TIC	--	50	---	San Jose, Costa Rica
WBEN	**	1000	N	Buffalo, N. Y.
WJAX	**	1000	N	Jacksonville, Fla.
WKY	**	1000	N	Oklahoma City
WLBL	*	2000	D	Stevens Point, Wis.

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

910 kilocycles 329.6 meters

CFOC	--	500	1	Saskatoon, Sask.
CHNS	**	500	3	Halifax, N. S.
CJGC	*	5000	2	London, Ont.
CNRH	**	500	3	Halifax, N. S.
CNRL	*	500	2	London, Ont.
CNRS	--	500	1	Saskatoon, Sask.
XEW	†	5000	---	Mexico City

The Electric Shop, Ltd. Halifax Herald, Ltd. Free Press Printing Co., Ltd. Canadian National Railways Canadian National Railways Canadian National Railways Mexico Music Co.		

920 kilocycles 325.9 meters

HHK	*	1000	---	Port au Prince, Haiti
KFEL	†	500	1	Denver, Colo.
KFXF	*	500	1	Denver, Colo.
KOMO	†	1000	N	Seattle, Wash.
KPRC	**	1000	+N	Houston, Texas
WAAF	--	500	D	Chicago, Ill.
WBSO	--	500	D	Needham, Mass.
WWJ	†	1000	N	Detroit, Mich.
XFF	†	250	915	Chihuahua, Mexico

Republic of Haiti Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drivers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobierno del Estado de Chihuahua		

930 kilocycles 322.4 meters

CFCH	*	50	---	North Bay, Ont.
CFLC	*	50	3	Prescott, Ont.
CFRC	*	50	3	Kingston, Ont.
CJCA	**	500	4	Edmonton, Alta.
KFWI	†	500	1	San Francisco, Cal.
KGBZ	**	500	2+	York, Nebr.
KMA	**	500	2+	Shenandoah, Iowa
KROW	*	500	1+C	Oakland, Cal.
WBRC	*	500	+C	Birmingham, Ala.
WDBJ	*	250	+C	Roanoke, Va.
WIBG	*	25	S	Elkins Park, Pa.

Northern Supplies, Ltd. Radio Association Queen's University The Edmonton Journal, Ltd. Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. St. Paul's P. E. Church.		

940 kilocycles 319.0 meters

KGU	†	1000	---	Honolulu, Hawaii
KOIN	*	1000	C	Portland, Oregon
WAAT	--	300	D	Jersey City, N. J.
WCSH	*	1000	N	Portland, Maine
WDAY	**	1000	N	Fargo, N. D.
WFIW	*	1000	N	Hopkinsville, Ky.
WHA	**	750	D+	Madison, Wis.
XEO	--	5000	---	Mexico City

32		
Marion A. Mulrony KOIN, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW, Inc. University of Wisconsin National Revolucionario Party		

950 kilocycles 315.6 meters

KFWB	*	1000	---	Hollywood, Cal.
KGHL	**	1000	---	Billings, Mont.
KMBC	*	1000	C	Kansas City, Mo.
NRH	**	75	948	Heredia, C. R.
WRC	†	500	N	Washington, D. C.

31		
Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. National Broadcasting Co., Inc.		

INDEX BY FREQUENCIES AND DIAL NUMBERS

1060 kilocycles 282.8 meters

KWJJ -- 500 Dn
 WBAL * 10000 1N
 WJAG * 1000 Dn
 WTIC * 50000 1N

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 kilocycles 280.2 meters

CMBG -- 150 ---
 CMBT -- 150 ---
 CMCB -- 150 ---
 KJBS * 100 D
 WCAZ * 50 D
 WDZ † 100 D
 WTAM * 50000 N

Havana, Cuba
 Havana, Cuba
 Havana, Cuba
 San Francisco, Cal.
 Carthage, Ill.
 Tuscola, Ill.
 Cleveland, Ohio

Francisco Garrigo
 E. Perera
 Antonio Capablanca
 Julius Brunton & Sons Co.
 Superior Broadcasting Service
 James L. Bush
 National Broadcasting Co., Inc.

1080 kilocycles 277.6 meters

WBT * 5000 C
 WCBG * 5000 1 Dn
 WMBI * 5000 1 Dn

Charlotte, N. C.
 Zion, Ill.
 Chicago, Ill.

Station WBT, Inc.
 Wilbur Glenn Voliva
 Moody Bible Institute

1090 kilocycles 275.1 meters

KMOX * 50000 C
 XEL -- 10 1091

Santa Clara, Cuba
 Saltillo, Mexico

Voice of St. Louis, Inc.
 Antonio Garza Castro

1100 kilocycles 272.6 meters

CMKD -- 20 ---
 KGDM * 250 DX
 WLWL * 5000 1
 WPG * 5000 1C

Santiago, Cuba
 Stockton, Cal.
 New York City
 Atlantic City, N. J.

Jose Caluff
 E. F. Peffer
 Missionary Society of St. Paul
 WPG Broadcasting Corp.

1110 kilocycles 270.1 meters

CMHI -- 15 ---
 KSOO * 2500 Dn
 WRVA * 5000 N

Santa Clara, Cuba
 Sioux Falls, S. D.
 Richmond, Va.

Laviz y Paz
 Sioux Falls Broadcasting Assn., Inc.
 Larus & Bros. Co., Inc.

1120 kilocycles 267.7 meters

CFJC -- 100 ---
 CHGS -- 100 ---
 CJOC † 100 ---
 KFIO † 100 D
 KFSG * 500 3
 KMCS * 500 3Y
 KRSC † 50 D
 KTRH * 500 2C
 WDBO * 500 +C
 WDEL † 250 +X
 WHAD * 250 1
 WISN † 250 1C
 WTAW * 500 2

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

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

1130 kilocycles 265.3 meters

KSL * 5000 N
 WJJD * 20000 C Dn
 WOV * 1000 D
 XEE * 105 ---
 XEH -- 5000 1132

Salt Lake City
 Mooseheart, Ill.
 New York City
 Oaxaca, Mexico
 Monterrey, Mexico

Radio Service Corp. of Utah
 Loyal Order of Moose
 International Broadcasting Corp.
 Alfonso Zorilla B.
 Tarnava y Cia.

1140 kilocycles 263.0 meters

CMGD -- 5 ---
 KVOO * 5000 1N
 WAPI * 5000 1N
 XETA -- 500 ---

Matanzas, Cuba
 Tulsa, Okla.
 Birmingham, Ala.
 Mexico City

Rafael Rodriguez
 Southwestern Sales Corp.
 Alabama Polytechnic Institute
 Manuel Espinosa Tagle

1150 kilocycles 260.7 meters

CMCQ -- 600 ---
 CMHA -- 200 1154
 CMQ † 250 ---
 WHAM * 5000 N

Havana, Cuba
 Cienfuegos, Cuba
 Havana, Cuba
 Rochester, N. Y.

Andres Martinez
 Fox Bros. Co.
 Jose Fernandez
 Stromberg-Carlson Tel. Mfg. Co.

INDEX BY FREQUENCIES AND DIAL NUMBERS

1160 kilocycles 258.5 meters

WOWO * 10000 1C Ft. Wayne, Ind.
 WWVA * 5000 1C Wheeling, W. Va.

[] [] []

Main Auto Supply Co.
 West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

CMKG -- 30 1176 Santiago de Cuba
 WCAU * 10000 C Philadelphia, Pa.

[] [] []

Ricardo Arnaldo
 Universal Broadcasting Co.

1180 kilocycles 254.1 meters

CMGB -- 7.5 1185 Matanzas, Cuba
 KEX * 5000 2 Portland, Ore.
 KOB * 20000 2 State College, N. M.
 WDGW * 1000 1 Dn Minneapolis, Minn.
 WGBS † 500 --- New York City
 WHDI † 500 1 Dn Minneapolis, Minn.
 WMAZ † 500 --- Macon, Ga.

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Jose Anorga
 Western Broadcasting Co.
 College of Agriculture & Mech. Arts
 Dr. George W. Young
 General Broadcasting System, Inc.
 Dr. George W. Young
 Junior Chamber of Commerce

1190 kilocycles 252.0 meters

WOAI * 50000 N San Antonio, Texas

[] [] []

Southern Equipment Co.

1200 kilocycles 249.9 meters

CMKB -- 15 --- Santiago de Cuba
 KBMT -- 100 D Paragould, Ark.
 KFJB † 100 + Marshalltown, Iowa
 KFWF -- 100 5+ St. Louis, Mo.
 KGDE * 100 + Fergus Falls, Minn.
 KGDY † 100 --- Huron, S. D.
 KGEK † 100 9 Yuma, Colo.
 KGWE † 100 9 Fort Morgan, Colo.
 KGFI † 100 --- Los Angeles, Cal.
 KGHI * 100 --- Little Rock, Ark.
 KGY † 10 + Lacey, Wash.
 KMLB -- 100 D Monroe, La.
 KSMR -- 100 --- Santa Maria, Cal.
 KVOS * 100 --- Bellingham, Wash.
 KWG * 100 --- Stockton, Cal.
 WABI † 100 --- Bangor, Maine
 WABZ * 100 1 New Orleans, La.
 WBBZ * 100 --- Ponca City, Okla.
 WBHS † 50 10CP Huntsville, Ala.
 WCAT † 100 --- Rapid City, S. D.
 WCAX * 100 2 Burlington, Vt.
 WCLO † 100 --- Janesville, Wis.
 WCOD † 100 3 Harrisburg, Pa.
 WEPS † 100 7 Worcester, Mass.
 WFAM * 100 8 South Bend, Ind.
 WFBC * 50 10 Knoxville, Tenn.
 WFBE † 100 + Cincinnati, Ohio
 WHBC † 10 4S Canton, Ohio
 WHBY † 100 --- Green Bay, Wis.
 WIBX * 100 + Utica, N. Y.
 WIL * 100 5+ St. Louis, Mo.
 WJBC * 100 6 La Salle, Ill.
 WJBL † 100 6 Decatur, Ill.
 WJBW † 100 1 New Orleans, La.
 WKJC * 100 3 Lancaster, Pa.
 WLBG * 100 + Petersburg, Va.
 WNBO * 100 4 Washington, Pa.
 WNBW † 10 --- Carbondale, Pa.
 WNBX † 10 2 Springfield, Vt.
 WORC * 100 7CX Worcester, Mass.
 WRBL † 50 --- Columbus, Ga.
 WWAE * 100 8 Hammond, Ind.
 XEA -- 101 --- Guadalajara, Mexico

[] [] []

Melchor Aguero
 W. J. Beard's Temple of Music
 Marshall Electric Co., Inc.
 St. Louis Truth Center, Inc.
 Jaren Drug Co.
 Voice of South Dakota
 Beehler Elec. Equipment Co.
 City of Fort Morgan
 Ben S. McGlashan
 Berean Bible Class
 St. Marten's College
 J. C. Liner
 Santa Maria Radio
 KVOS, Inc.
 Portable Wireless Tel. Co., Inc.
 Pine Tree Broadcasting Corp.
 Samuel D. Reeks
 C. L. Carrell
 The Hutchens Co.
 State School of Mines
 Burlington Daily News
 WCLO Radio Corp.
 Keystone Broadcasting Corp.
 Alfred Frank Kleindienst
 South Bend Tribune
 First Baptist Church
 Post Publishing Co.
 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.
 WLBG, Inc.
 John Brownlee Spriggs
 Home Cut Glass & China Co.
 First Congregational Church
 Alfred Frank Kleindienst
 WRBL Radio Station, Inc.
 Hammond-Calumet, Broad. Corp.
 Alberto Palos Sauza

KCYS.
 1210
 MTRS.
 247.8
 DIAL

CUT OUT ON DOTTED LINE

1210 kilocycles 247.8 meters

CFCO -- 100 --- Chatham, Ont.
 CFNB * 500 --- Fredericton, N. B.
 CJOR * 500 --- Sear Island, B. C.
 CKMC † 100 --- Cobalt, Ont.
 CKPC † 50 + Preston, Ont.
 KDFN † 100 --- Casper, Wyo.

[] [] []

Western Ontario "Better Radio" Club
 James S. Neill & Sons, Ltd.
 G. C. Chandler
 R. L. MacAdam
 Metal Shingle & Siding Co.
 Donald Lewis Hathaway

INDEX BY FREQUENCIES AND DIAL NUMBERS

KDLR	†	100	---	Devil's Lake, N. D.
KFOR	*	100	---	Lincoln, Nebr.
KFVS	*	100	6	Cape Girardeau, Mo.
KFXM	†	100	9	San Bernardino, Cal.
KGCR	†	100	---	Watertown, S. D.
KGMP	†	100	---	Elk City, Okla.
KGNO	†	100	---	Dodge City, Kansas
KMJ	*	100	---	Fresno, Cal.
KPFC	§	50	9	Pasadena, Cal.
KWEA	*	100	---	Shreveport, La.
WALR	*	100	---	Zanesville, Ohio
WBAX	*	100	---	Wilkes-Barre, Pa.
WBBI	†	100	7S	Richmond, Va.
WBBS	*	100	2	Springfield, Ill.
WCOB	*	100	3	Yonkers, N. Y.
WCOH	*	100	4	Chicago, Ill.
WCRW	*	100	5	Providence, R. I.
WDWF	--	100	6	Harrisburg, Ill.
WEBQ	*	100	4	Chicago, Ill.
WEDC	--	100	3	Freeport, N. Y.
WGBB	*	100	---	Gulfport, Miss.
WGCM	*	100	---	Rock Island, Ill.
WHBF	*	100	---	Anderson, Ind.
WHBU	†	100	---	Poynette, Wis.
WIBU	*	100	3	Red Bank, N. J.
WJBI	--	100	1	Lewisburg, Pa.
WJBU	*	100	---	Gadsden, Ala.
WJBY	*	100	---	Mansfield, Ohio
WJW	*	100	---	Ithaca, N. Y.
WLCI	*	50	5	Providence, R. I.
WLST	*	100	7	Richmond, Va.
WMBG	*	100	3	Jamaica, N. Y.
WMRJ	*	100	---	Jamestown, N. Y.
WOCL	*	25	---	Manitowoc, Wis.
WOMT	*	100	5	Pawtucket, R. I.
WPAW	*	100	---	Thomasville, Ga.
WQDX	*	100	+	Greenville, Miss.
WRBQ	†	100	4	Chicago, Ill.
WSBC	*	100	---	Columbus, Ohio
WSEN	†	100	---	Springfield, Tenn.
WSIX	†	100	---	Gastonia, N. C.
WSOC	†	100	2	Springfield, Ill.
WTAX	†	---	---	Mexico City
XEX	--	500	---	

KDLR, Inc.
Howard A. Shuman
Hirsch Battery & Radio Co.
J. C. & E. W. Lee
Greater Kampeska Radio Corp.
Bryant Radio & Electric Co.
Dodge City Broadcasting Co.
James McClatchy Co.
Pasadena Presbyterian Church
Hello World Broadcasting Corp.
Roy W. Waller
John H. Stenger, Jr.
Grace Covenant Pres. Church
H. L. Dewing & Chas. Messter
Westchester Broadcasting Corp.
Clinton R. White
Dutée W. Flint
First Trust & Savings Bank
Emil Denemark, Inc.
Harry H. Carman
Great Southern Land Co., Inc.
Beardsley Specialty Co.
Citizens Bank
Wm. C. Forrest
Monmouth Broadcasting Co.
Bucknell University
Gadsden Broadcasting Co., Inc.
Mansfield Broadcasting Assn.
Lutheran Assn. of Ithaca
The Lincoln Studios, Inc.
Havens & Martin, Inc.
Peter J. Prinz
A. E. Newton
Francis M. Kadow
Shartenburg & Robinson Co.
Stevens Luke
J. Pat. Scully
World Battery Co., Inc.
Columbus Broadcasting Co.
638 Tire & Vulcanizing Co.
WSOC, Inc.
WTAX, Inc.
Excelsior, Cia Editorial S. A.

1220 kilocycles 245.8 meters

CMCA	--	150	1225	Havana, Cuba
CMCD	--	250	1225	Havana, Cuba
CMCN	--	250	1225	Havana, Cuba
KFKU	--	500	1	Lawrence, Kansas
KTW	--	1000	---	Seattle, Wash.
KWSC	--	1000	+	Pullman, Wash.
WCAD	*	500	D	Canton, N. Y.
WCAE	*	1000	N	Pittsburgh, Pa.
WDAE	*	1000	C	Tampa, Fla.
WREN	*	1000	1N	Lawrence, Kansas

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M. Cruz
Angel Bertamaty
Antonio Ginard
University of Kansas
First Presbyterian Church
State College of Washington
St. Lawrence University
WCAE, Inc.
Tampa Publishing Co.
Jenny Wren Co.

1230 kilocycles 243.8 meters

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

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

1240 kilocycles 241.8 meters

CMAB	--	20	1249	Pinar del Rio, Cuba
CMKE	--	250	1249	Santiago de Cuba
KGCU	--	250	3	Mandan, N. D.
KLPM	†	250	3	Minot, N. D.
KTAT	†	1000	1	Ft. Worth, Texas
WACO	†	1000	1C	Waco, Texas
WXYZ	†	1000	C	Detroit, Mich.

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Francisco Martinez
Edmundo Recamier
Mandan Radio Assn.
John B. Cooley
S. A. T. Broadcast Co.
Central Texas Broadcasting Co., Inc.
Kunsky-Trendle Broadcasting Corp.

1250 kilocycles 239.9 meters

KFMX	†	1000	2	Northfield, Minn.
KFOX	*	1000	---	Long Beach, Cal.

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Carleton College
Nichols & Warinner, Inc.

INDEX BY FREQUENCIES AND DIAL NUMBERS

KIDO † 1000 ---
 WAAM * 1000 1+X
 WCAL * 1000 2
 WDSU † 1000 C
 WGCP -- 250 1
 WLB † 1000 2
 WODA * 1000 1
 WRHM * 1000 2
 XEFA -- 250 ---

Boise, Idaho
 Newark, N. J.
 Northfield, Minn.
 New Orleans, La.
 Newark, N. J.
 St. Paul, Minn.
 Paterson, N. J.
 Minneapolis, Minn.
 Mexico City

Boise Broadcasting Station
 WAAM, Inc.
 St. Olaf College
 Jos. H. Uhalt
 May Radio Broadcast Corp.
 University of Minnesota
 Richard E. O'Dea
 Minnesota Broadcast Corp.
 Luis F. Murguia

1260 kilocycles 238.0 meters

KOIL * 1000 C
 KRGV * 500 1
 KVOA * 500 D
 KWWG * 500 1
 WLBW * 500 C+
 WTOC * 500 C

Council Bluffs, Iowa
 Harlingen, Texas
 Tucson, Arizona
 Brownsville, Texas
 Oil City, Pa.
 Savannah, Ga.

Mona Motor Oil Co.
 KRGV, Inc.
 Robert M. Riculfi
 Herald Pub. Co.
 Radio-Wire Program Corp.
 Savannah Broadcasting Co.

1270 kilocycles 236.1 meters

CMJB -- 20 1276
 KGCA † 50 2D
 KOL † 1000 C
 KVOR * 1000 ---
 KWLC * 100 2D
 WASH * 500 1
 WEAI * 1000 D
 WFBR -- 500 ---
 WJDX * 1000 N
 WOOD † 500 1

Ciego de Avila, Cuba
 Decorah, Iowa
 Seattle, Wash.
 Colorado Springs, Colo.
 Decorah, Iowa
 Grand Rapids, Mich.
 Ithaca, N. Y.
 Baltimore, Md.
 Jackson, Miss.
 Grand Rapids, Mich.

Eduardo V. Figueroa
 Charles W. Greenley
 Seattle Broadcasting Co., Inc.
 Reynolds Radio Co., Inc.
 Luther College
 WASH Broadcasting Corp.
 Cornell University
 Baltimore Radio Show, Inc.
 Lamar Life Insurance Co.
 Kunsy-Trendle Broadcasting Corp.

1280 kilocycles 234.2 meters

CMBJ -- 15 1285
 CMBM -- 15 1285
 CMCG -- 30 1285
 CMCH -- 15 1285
 CMCR -- 20 1285
 KFBB * 1000 +
 WCAM * 500 1
 WCAP * 500 1
 WDOD * 1000 +C
 WIBA * 500 +
 WOAX -- 500 1
 WRR † 500 C

Havana, Cuba
 Havana, Cuba
 Havana, Cuba
 Havana, Cuba
 Havana, Cuba
 Great Falls, Mont.
 Camden, N. J.
 Asbury Park, N. J.
 Chattanooga, Tenn.
 Madison, Wis.
 Trenton, N. J.
 Dallas, Texas

Jesus Lopez
 Jose Leiro
 Jose Justo Moran
 Hernani Torralbas
 Aurelio Hernandez
 Buttrey Broadcast, Inc.
 City of Camden
 Radio Industries Broadcast Co.
 WDOD Broadcasting Corp.
 Badger Broadcasting Co.
 WOAX, Inc.
 City of Dallas

1290 kilocycles 232.4 meters

KDYL † 1000 C
 KFUL -- 500 1
 KLCN -- 50 D
 KTSA † 1000 1+C
 WEBC * 1000 +N
 WJAS * 1000 C+
 WNBZ -- 50 D

Salt Lake City
 Galveston, Texas
 Blytheville, Ark.
 San Antonio, Texas
 Superior, Wis.
 Pittsburgh, Pa.
 Saranac Lake, N. Y.

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

KCYS.
1310
 MTRS.
228.9

1300 kilocycles 230.6 meters

KFAC * 1000 4
 KFHF * 1000 2C
 KFJR * 500 3
 KGFE * 1000 4
 KTBR -- 500 3
 WBRR * 1000 1
 WEVD * 500 1
 WHAP * 1000 1
 WHAZ * 500 1
 WIOD * 1000 N
 WOQ * 1000 2
 XETY -- 2000 ---

Los Angeles, Cal.
 Wichita, Kansas
 Portland, Ore.
 Los Angeles, Cal.
 Portland, Ore.
 Brooklyn, N. Y.
 New York City
 New York City
 Troy, N. Y.
 Miami, Fla.
 Kansas City, Mo.
 Mexico City

Los Angeles Broadcasting Co.
 Radio Station KFHF Co.
 Ashley C. Dixon & Son
 Trinity Methodist Church
 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
 Juan Gutierrez, Jr.

DIAL

1310 kilocycles 228.9 meters

KCRJ † 100 ---
 KFBK † 100 ---
 KFGU † 100 7
 KFIO * 10 ---
 KFJY * 100 7
 KFPL † 100 ---
 KFPM * 15 ---
 KFUP -- 100 8
 KFXJ † 100 8

Jerome, Arizona
 Sacramento, Cal.
 Boone, Iowa
 Kneau, Alaska
 Ft. Dodge, Iowa
 Dublin, Texas
 Greenville, Texas
 Denver, Colo.
 Grand Junction, Colo.

Chas. C. Robinson
 Jas. McClatchy Co.
 Boone Biblical College
 Alaska Electric Light & Power Co.
 C. S. Tunwall
 C. C. Baxter
 The New Furniture Co.
 Fitzsimmons General Hospital
 Western Slope Broadcasting Co.

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

KFXR	†	100	+	Oklahoma City	Exchange Ave. Baptist Church
KGBX	†	100	---	St. Joseph, Mo.	KGBX, Inc.
KGXC	†	100	+	Wolf Point, Minn.	First State Bank of Vida
KGEZ	†	100	---	Kalispell, Mont.	Treloar-Church Broadcasting Co.
KGFW	†	100	---	Ravena, Nebr.	Central Nebraska Broadcasting Corp.
KIT	†	50	---	Yakima, Wash.	Carl E. Haymond
KMED	†	100	---	Medford, Ore.	Mrs. W. J. Virgin
KRMD	†	50	9	Shreveport, La.	Robert M. Dean
KTLC	*	100	---	Houston, Texas	Houston Broadcasting Co.
KTSL	---	100	9	Shreveport, La.	G. A. Houseman
KTSM	*	100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR	†	100	7	Cedar Rapids, Iowa	Harry F. Paar
KXRO	†	100	---	Aberdeen, Wash.	KXRO, Inc.
WBEO	---	100	CP	Marquette, Mich.	Lake Superior Broadcasting Co.
WBOW	*	100	---	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE	---	100	---	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	*	100	1	Joliet, Ill.	WCLS, Inc.
WDAH	†	100	2	El Paso, Texas	Bledsoe & Blackwell
WEBR	*	100	+	Buffalo, N. Y.	Howell Broadcasting Co., Inc.
WEXL	†	50	---	Royal Oak, Mich.	Royal Oak Broadcasting Co.
WFBG	*	100	3X	Altoona, Pa.	Wm. F. Gable Co.
WFDG	*	100	---	Flint, Mich.	Frank D. Fallain
WFDV	†	100	D	Rome, Ga.	Dolies Goings
WGAL	---	100	5	Lancaster, Pa.	WGAL, Inc.
WGH	*	100	---	Newport News, Va.	Hampton Roads Broadcasting Corp.
WHAT	†	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
WJAC	*	100	3	Johnstown, Pa.	Johnstown Automobile Co.
WJAK	*	50	6	Marion, Ind.	Marion Broadcasting Co.
WKAU	*	100	---	Laconia, N. H.	Laconia Radio Club
WKBB	*	100	1	Joliet, Ill.	Sanders Bros. Radio Station
WKBC	*	100	---	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS	*	100	---	Galesburg, Ill.	Permill N. Nelson
WLBC	†	50	6	Muncie, Ind.	Donald A. Burton
WMBO	†	100	---	Auburn, N. Y.	Radio Service Laboratories
WNBH	*	100	---	New Bedford, Mass.	New Bedford Broadcasting Co.
WOBT	†	100	+	Jackson, Tenn.	Sun Publishing Co.
WOL	*	100	---	Washington, D. C.	American Broadcasting Co.
WRAW	*	100	5X	Reading, Pa.	Reading Broadcasting Co.
WROL	†	100	---	Knoxville, Tenn.	Stewart Broadcasting Co.
WSAJ	*	100	---	Grove City, Pa.	Grove City College
WSJS	*	100	---	Winston-Salem, N. C.	Winston-Salem Journal Co.
WTEL	*	100	4	Philadelphia, Pa.	Foulkrod Radio Engineering Co.

1320 kilocycles 227.1 meters

CMJC	--	15	1321	Camaguey, Cuba	
CMKH	--	250	1327	Santiago de Cuba	
KGHF	†	250	+	Pueblo, Colo.	
KGMB	†	250	---	Honolulu, Hawaii	
KID	†	250	1+	Idaho Falls, Idaho	
KTFI	†	250	1X	Twin Falls, Idaho	
WADC	†	1000	C	Akron, Ohio	
WSMB	*	500	N	New Orleans, La.	

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Feliciano Isaac
 Alberto Ravelo
 C. P. Ritchie & J. E. Finch
 Honolulu Broadcasting Co., Ltd.
 KID Broadcasting Co.
 Radio Broadcasting Corp.
 Allen T. Simmons
 Saenger Theatre & Maison Blanche Co.

1330 kilocycles 225.4 meters

KGB	*	500	C	San Diego, Cal.	Don Lee, Inc.
KSCJ	*	1000	1+C	Sioux City, Iowa	Perkins Bros. Co.
WDRG	*	500	C	Hartford, Conn.	WDRG, Inc.
WSAI	*	500	N	Cincinnati, Ohio	Crosley Radio Corp., Lessee
WTAQ	*	1000	1C	Eau Claire, Wis.	Gillette Rubber Co.
XEC	--	50	1333	Toluca, Mexico	Jesus R. Benavides

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Oscar Montenegro
 Jose G. Reigada
 Jorge Garcia Serra
 M. D. Autran
 Southwestern Hotels Co.
 Symons Broadcasting Co.
 City of Pensacola
 Toledo Broadcasting Co.

1340 kilocycles 223.7 meters

CMBA	--	50	1345	Havana, Cuba	
CMBF	--	7.5	1345	Havana, Cuba	
CMCU	--	50	1345	Havana, Cuba	
CMCY	--	15	1345	Havana, Cuba	
KFPW	†	50	D	Fort Smith, Ark.	
KFPV	*	1000	C	Spokane, Wash.	
WCOA	*	500	---	Pensacola, Fla.	
WSPD	*	1000	C	Toledo, Ohio	

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Oscar Montenegro
 Jose G. Reigada
 Jorge Garcia Serra
 M. D. Autran
 Southwestern Hotels Co.
 Symons Broadcasting Co.
 City of Pensacola
 Toledo Broadcasting Co.

1350 kilocycles 222.1 meters

KWK	*	1000	N	St. Louis, Mo.	Greater St. Louis Broadcasting Corp.
WAWZ	*	250	1	Zarephath, N. J.	Pillar of Fire
WBNX	--	250	1	New York City	Standard Cahill Co., Inc.
WCDA	*	250	1	New York City	Italian Educ. Broadcasting Co., Inc.
WEHC	*	500	D	Emory, Va.	Emory & Henry College
WMSG	--	250	1	New York City	Madison Sq. Garden Brdctg. Corp.

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Greater St. Louis Broadcasting Corp.
 Pillar of Fire
 Standard Cahill Co., Inc.
 Italian Educ. Broadcasting Co., Inc.
 Emory & Henry College
 Madison Sq. Garden Brdctg. Corp.

INDEX BY FREQUENCIES AND DIAL NUMBERS

1360 kilocycles 220.4 meters

CMKF	--	30	1363
KGER	*	1000	---
KGIR	*	500	---
KWSC	*	500	---
WFBL	*	1000	CX
WGES	*	500	1+
WJKS	*	1000	1+
WQBC	†	500	D
XETO	--	101	---

Holguin, Cuba
Long Beach, Cal.
Butte, Montana
Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
Gary, Ind.
Vicksburg, Miss.
Mexico City

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Manuel J. de Gongora
Consolidated Broadcasting Corp.
KGIR, Inc.
Jordan & Burk
Onondaga Radio Broadcasting Corp.
Oak Leaves Broadcasting Station, Inc.
Johnson-Kennedy Radio Corp.
Delta Broadcasting Co., Inc.
Ricardo Gonzales Montero

1370 kilocycles 218.7 meters

CMAC	--	30	1375
CMGE	--	30	1375
KCRC	†	100	2+
KFBL	*	50	3+
KFBI	†	100	---
KFJM	†	100	---
KFJZ	†	100	---
KFLX	†	100	---
KGAR	*	100	+
KGDA	†	100	---
KGFG	†	100	2
KGFL	†	50	---
KGKL	†	100	---
KMAC	†	100	5
KONO	†	100	5
KOOS	*	100	---
KRE	†	100	6
KUJ	†	100	---
KVL	--	100	3
KWKC	†	100	---
WBCF	†	50	---
WBTM	†	100	7
WCBM	†	100	+Z
WELK	†	100	+
WGL	*	100	C
WHBD	†	100	---
WHBQ	†	100	---
WHDF	†	100	+
WIBM	†	100	1
WJBK	*	50	1
WJTL	--	100	---
WLEY	†	100	+
WLVA	†	100	7
WMBR	†	100	---
WPOE	†	100	---
WQDM	*	100	D
WRAC	*	100	---
WRAM	†	100	---
WRBJ	†	10	---
WRDO	†	100	CP
WRJN	†	100	---
WSVS	*	50	---

Pinar del Rio, Cuba
Cardenas, Cuba
Enid, Okla.
Everett, Wash.
Astoria, Ore.
Grand Forks, N. D.
Ft. Worth, Texas
Galveston, Texas
Tucson, Arizona
Mitchell, S. D.
Oklahoma City
Raton, N. M.
San Angelo, Texas
San Antonio, Texas
San Antonio, Texas
Marshfield, Ore.
Berkeley, Cal.
Walla Walla, Wash.
Seattle, Wash.
Kansas City, Mo.
Gene Falls, N. Y.
Danville, Va.
Baltimore, Md.
Philadelphia, Pa.
Fort Wayne, Ind.
Mount Orab, Ohio
Memphis, Tenn.
Calumet, Mich.
Jackson, Mich.
Detroit, Mich.
Tifton, Ga.
Lexington, Mass.
Lynchburg, Va.
Tampa, Fla.
Patchogue, N. Y.
St. Albans, Vt.
Williamsport, Pa.
Wilmington, N. C.
Hattiesburg, Miss.
Augusta, Maine
Racine, Wis.
Buffalo, N. Y.

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Oscar S. Mechoso
Genaro Sebater
Enid Radiophone 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.
W. W. McAllister
Mission Broadcasting Co.
H. H. Hanseth, Inc.
First Congregational Church
KUJ, Inc.
KVI, Inc.
Wilson Duncan Broadcasting Co.
W. N. Parker and H. H. Metcalfe
Clarke Electric Co.
Baltimore Broadcasting Corp.
WELK Broadcasting Station, Inc.
Fred Z. Zieg
F. P. Moler
Broadcasting Station WHBQ, Inc.
Upper Michigan Broadcasting Co.
WIBM, Inc.
James F. Hopkins, Inc.
Oglethorpe University
Lexington Air Stations
Lynchburg Broadcasting Corp.
F. J. Reynolds
Nassau Broadcasting Corp.
A. J. St. Antoine
C. R. Cummins
Wilmington Radio Association
Hattiesburg Broadcasting Co.
WRDO, Inc.
Racine Broadcasting Corp.
Seneca Vocational School

1380 kilocycles 217.3 meters

KOH	†	500	C
KQV	†	500	2
KSO	*	500	1
WKBH	*	1000	1
WSMK	*	200	2

Reno, Nevada
Pittsburgh, Pa.
Clarinda, Iowa
La Crosse, Wis.
Dayton, Ohio

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The Bee, Inc.
KQV Broadcasting Co.
Iowa Broadcasting Co.
WKBH, Inc.
Stanley M. Krohn, Jr.

KCYS.

1400

MTRS.

214.2

DIAL

1390 kilocycles 215.7 meters

KLRA	*	1000	1C
KOY	†	500	---
KUOA	†	1000	1
WHK	*	1000	C

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

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Arkansas Broadcasting Co.
Nielsen Radio & Sporting Goods Co.
University of Arkansas
Radio Air Service Corp.

1400 kilocycles 214.2 meters

CMBI	--	30	1405
CMBK	--	15	1405
CMBN	--	30	1405
CMBQ	--	50	1405
CMBX	--	30	1405
CMBY	--	100	1405
KLO	*	500	---

Havana, Cuba
Havana, Cuba
Havana, Cuba
Havana, Cuba
Havana, Cuba
Havana, Cuba
Ogden, Utah

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Heriberto Meireles
Jose L. Ferriol
Armado Romeu
Emilio Salas
Bertin Fernandez
Lino E. Cosculluela
Peery Building Co.

CUT OUT ON
DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

KOCW	*	250	+	Chickasha, Okla.
WBAA	†	500	1+	Lafayette, Ind.
WBBC	*	500	2	Brooklyn, N. Y.
WCGU	*	500	2	Brooklyn, N. Y.
WCMA	†	500	1	Culver, Ind.
WFOX	---	500	2	Brooklyn, N. Y.
WKBF	†	500	1	Indianapolis, Ind.
WLTH	*	500	2	Brooklyn, N. Y.
XEP	---	2500	---	Laredo, Mexico

College for Women
Purdue University
Brooklyn Broadcasting Corp.
U. S. Broadcasting Corp.
General Broadcasting Corp.
Paramount Broadcasting Co.
Indianapolis Broadcasting, Inc.
The Voice of Brooklyn, Inc.
La Voz Latino

1410 kilocycles 212.6 meters

KFLV	†	500	4	Rockford, Ill.
KGRS	*	1000	1	Amarillo, Texas
WAAB	*	500	C	Boston, Mass.
WBGM	*	500	C	Bay City, Mich.
WDAG	*	1000	1	Amarillo, Texas
WHBL	*	500	4	Sheboygan, Wis.
WHIS	†	250	---	Bluefield, W. Va.
WODX	*	500	3	Mobile, Ala.
WRBX	*	250	---	Roanoke, Va.
WSFA	†	500	3	Montgomery, Ala.

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Rockford Broadcasters, Inc.
Gish Radio Service
Bay State Broadcasting Corp.
James E. Davidson
National Radio & Broadcasting Corp.
Press Pub. Co.
Daily Telegraph
Mobile Broadcasting Corp.
Richmond Development Corp.
Montgomery Broadcasting Co., Inc.

1420 kilocycles 211.1 meters

KABC	†	100	---	San Antonio, Texas
KBPS	---	100	4	Portland, Ore.
KFIZ	*	100	---	Fond du Lac, Wis.
KFXD	*	100	---	Nampa, Idaho
KFXV	---	100	---	Flagstaff, Arizona
KFYU	†	100	+	Abilene, Texas
KGFF	†	100	---	Shawnee, Okla.
KGCG	†	100	5	San Francisco, Cal.
KGIW	†	100	---	Trinidad, Colo.
KGIX	†	100	---	Las Vegas, Nevada
KGKX	†	100	---	Sand Point, Idaho
KGVO	†	100	D	Missoula, Montana
KICK	*	100	---	Red Oak, Iowa
KORE]	*	100	---	Eugene, Ore.
KXL	*	100	4	Portland, Ore.
KXYZ	---	100	---	Houston, Texas
WAGM	---	100	CP	Presque Isle, Maine
WDEV	---	50	D	Waterbury, Vt.
WEDH	*	100	---	Erie, Pa.
WEHS	---	100	2	Cicero, Ill.
WELL	†	50	X	Battle Creek, Mich.
WFDW	*	100	---	Annsonton, Ala.
WHDL	*	100	D	Tupper Lake, N. Y.
WHFC	---	100	2	Cicero, Ill.
WIAS	†	100	---	Ottumwa, Iowa
WIBR	*	50	---	Steubenville, Ohio
WILM	*	100	---	Wilmington, Del.
WJBO	*	100	---	New Orleans, La.
WJMS	---	100	CPD	Ironwood, Mich.
WKBI	---	100	2	Cicero, Ill.
WLBF	†	100	---	Kansas City, Kansas
WMBC	*	100	+	Detroit, Mich.
WMBH	---	100	+	Joplin, Mo.
WPAD	†	100	---	Paducah, Ky.
WSPA	*	100	---	Spartanburg, S. C.
WTBO	*	100	+	Cumberland, Md.

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Alamo Broadcasting Co.
Benson Polytechnic Institute
Reporter Printing Co.
Frank E. Hurt
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
Mosby's Incorporated
Red Oak Radio Corp.
Eugene Broadcasting Station
KXL Broadcasters, Inc.
Harris County Broadcast Co.
Aroostook Broadcasting Corp.
Harry C. Whitehill
Erie Dispatch-Herald
WEHS, Inc.
Enquirer-News Co.
Raymond G. Hammett
Tupper Lake Broadcasting Co., Inc.
WHFC, Inc.
Iowa Broadcasting Co.
George W. Robinson
Delaware Broadcasting Co., Inc.
Valdemar Jensen
Marius Johnson
WKBI, Inc.
WLBF Broadcasting Co.
Michigan Broadcasting Co., Inc.
Edwin Dudley Aber
Paducah Broadcasting Co.
Voice of South Carolina
Associated Broadcasting Corp.

1430 kilocycles 209.7 meters

KECA	†	1000	N	Los Angeles, Cal.
KGNF	†	500	D	North Platte, Nebr.
WBAK	†	500	1+	Harrisburg, Pa.
WCAH	*	500	C	Columbus, Ohio
WFEA	---	500	CP	Manchester, N. H.
WGBC	*	500	2S	Memphis, Tenn.
WHP	*	500	1C+	Harrisburg, Pa.
WNBR	*	500	2	Memphis, Tenn.

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Earle C. Anthony, Inc.
Great Plains Broadcasting Co.
Penna. State Police
Commercial Radio Service Co.
Rines Hotel Co.
Memphis Broadcasting Co.
WHP, Inc.
Memphis Broadcasting Co.

1440 kilocycles 208.2 meters

KLS	*	250	D	Oakland, Cal.
WBGW	*	500	---	Greensboro, N. C.
WCBA	*	250	1	Allentown, Pa.
WHEC	*	500	2C	Rochester, N. Y.

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Warner Bros.
North Carolina Broadcasting Co.
B. B. Musselman
Hickson Electric & Radio Corp.

INDEX BY FREQUENCIES AND DIAL NUMBERS

WMBD	*	500	3+	Peoria Heights, Ill.	Peoria Broadcasting Co.
WOKO	†	500	2C	Albany, N. Y.	WOKO, Inc.
WSAN	*	250	1	Allentown, Pa.	Allentown Call Publishing Co., Inc.
WTAD	†	500	3	Quincy, Ill.	Ills. Stock Medicine Broadcasting Co.

1450 kilocycles 206.8 meters

CMKA	--	20	---	Santiago de Cuba
KTBS	*	1000	---	Shreveport, La.
WBMS	*	250	1	Hackensack, N. J.
WGAR	†	500	N	Cleveland, Ohio
WHOM	*	500	1	Jersey City, N. J.
WKBO	*	250	1	Jersey City, N. J.
WNJ	*	250	1	Newark, N. J.
WSAR	*	250	---	Fall River, Mass.
WTFI	--	500	Y	Toccoa, Ga.

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Arturo C. de Ribas
 Tri-State Broadcasting System, Inc.
 WBMS Broadcasting Corp.
 WGAR Broadcasting Co.
 New Jersey Broadcasting Corp.
 Camith Corp.
 Radio Investment Co.
 Doughty & Welch Electric Co., Inc.
 Toccoa Falls Broadcasting Co.

1460 kilocycles 205.4 meters

KSTP	*	10000	N	St. Paul, Minn.
WJSV	*	10060	---	Alexandria, Va.

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National Battery Broadcasting Co.
 Independent Publishing Co.

1470 kilocycles 204.0 meters

KGA	†	5000	---	Spokane, Wash.
WLAC	*	5000	C	Nashville, Tenn.

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Northwest Broadcasting System, Inc.
 Life & Casualty Insurance Co.

1480 kilocycles 202.6 meters

KFJF	*	5000	C	Oklahoma City
WKBW	*	5000	C	Buffalo, N. Y.

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National Radio Mfg. Co.
 Buffalo Broadcasting Co., Lessees

1490 kilocycles 201.2 meters

TJW	--	7.5	---	Hamilton, Bermuda
WCHI	*	5000	1	Chicago, Ill.
WCKY	*	5000	1N	Covington, Ky.
WJAZ	--	5000	1	Chicago, Ill.

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People's Pulpit Association
 L. B. Wilson, Inc.
 Zenith Radio Corp.

1500 kilocycles 199.9 meters

CMBL	--	15	---	Havana, Cuba
CMBR	--	15	---	Havana, Cuba
CMCM	--	15	---	Havana, Cuba
CMCT	--	5	---	Havana, Cuba
KDB	*	100	---	Santa Barbara, Cal.
KGFI	*	100	+	Corpus Christi, Texas
KGFK	†	50	---	Moorhead, Minn.
KGIZ	†	100	---	Grant City, Mo.
KGKB	†	100	---	Tyler, Texas
KGKY	*	100	---	Scottsbluff, Nebr.
KPJM	*	100	---	Prescott, Arizona
KPQ	†	50	---	Wenatchee, Wash.
KREG	†	100	---	Santa Ana, Cal.
KUT	†	100	---	Austin, Texas
KXO	*	100	---	El Centro, Cal.
WDIX	*	100	---	Tupelo, Miss.
WKBV	†	100	+	Connerville, Ind.
WKBZ	†	50	---	Ludington, Mich.
WLBX	*	100	1	Long Island City, N. Y.
WLOE	*	100	+	Boston, Mass.
WMBA	†	100	---	Newport, R. I.
WMBQ	*	100	1	Brooklyn, N. Y.
WMIL	†	100	1	Brooklyn, N. Y.
WMPC	*	100	---	Lapeer, Mich.
WNBF	*	100	---	Binghamton, N. Y.
WOFI	*	100	---	Bristol, Tenn.
WRDW	*	100	+	Philadelphia, Pa.
WRDW	*	100	---	Augusta, Ga.
WSYB	†	100	---	Rutland, Vt.
WYRL	†	100	1	Woodside, N. Y.
WWSW	--	100	---	Pittsburgh, Pa.

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Julio C. Hidalgo
 Tomas Basail
 Martinez y Madico
 Alberto Fernandez
 Dwight Faulding
 Eagle Broadcasting Co., Inc.
 Red River Broadcasting Co., Inc.
 Grant City Park Corp.
 Eagle Publishing Co.
 Hilliard Co., Inc.
 A. P. Miller
 Westcoast Broadcasting Co.
 Pacific Western Broadcasting
 Driskill Hotel
 E. R. Irey and F. M. Bowles
 North Mississippi Broadcasting Corp.
 Knox Battery & Electric Co.
 K. L. Ashbacher
 John N. Brahy
 Boston Broadcasting Co.
 LeRoy Joseph Beebe
 Paul J. Gollhofer
 Arthur Faske
 First M. P. Church
 Howitt, Wood Radio Co., Inc.
 Radiophone Brdcastg. Station, Inc.
 Wm. Penn Broadcasting Co.
 Musicove, Inc.
 Philip Weiss Music Co.
 Long Island Broadcasting Corp.
 William S. Walker

KCYS.
1500
 MTRS.
199.9
 DIAL

INDEX BY LOCATIONS WITH MAP KEY

ILLINOIS			Watts	Keys.			
Carthage J-18	50	WCAZ	1070	Shenandoah J-16			500 KFNF 890
Chicago I-20	10000	KFKX	1020	Sioux City I-15			500 KMA 930
	10000	KYW	1020	Waterloo I-17			1000 KSCJ 1330
	500	WAAF	920				500 WMT 600
	25000	WBBM	770	KANSAS			
	1500	WCFL	970	Dodge City L-13			100 KGNO 1210
	5000	WCHI	1490	Kansas City K-16			100 WLBF 1420
	100	WCRW	1210	Lawrence K-16			500 KFKU 1220
	100	WEDC	1210				1000 WREN 1220
	50000	WENR	870	Manhattan K-15			500 KSAC 580
	500	WGES	1360	Milford K-14			5000 KFBI 1050
	25000	WGN	720	Topeka K-16			1000 WIBW 580
	1000	WIBO	560	Wichita L-15			1000 KFH 1300
	5000	WJAZ	1490	KENTUCKY			
	25000	WJBT	770	Covington K-22			5000 WCKY 1490
	50000	WLS	870	Hopkinsville M-20			1000 WFIW 940
	5000	WMAQ	670	Louisville L-21			10000 WHAS 820
	5000	WMBI	1080				250 WLAP 1010
	500	WPCC	560	Paducah M-19			100 WPAD 1420
	100	WSBC	1210	LOUISIANA			
	100	WEHS	1420	Monroe P-18			100 KMLB 1200
	100	WHFC	1420	New Orleans R-19			100 WABZ 1200
	100	WKBI	1420				1000 WDSU 1250
	100	WJBL	1200				100 WJBO 1420
	100	WKBS	1310				100 WJBW 1200
	100	WEBQ	1210				500 WSMB 1320
	100	WCLS	1310				500 WWL 850
	100	WKBB	1310	Shreveport P-17			50 KRMD 1310
	100	WJBC	1200				1000 KTBS 1450
	1000	WJJD	1130				100 KTSL 1310
	500	WMBD	1440				1000 KWEA 1210
	500	WTAD	1440				10000 KWKH 850
	500	KFLV	1410	MAINE			
	100	WHBF	1210	Augusta F-28			100 WRDO 1370
	100	WCBS	1210	Bangor F-29			100 WABI 1200
	100	WTAX	1210				500 WLBZ 620
	100	WDZ	1070	Portland F-28			1000 WCSH 940
	250	WILL	890	Presque Isle D-29			100 WAGM 1420
	5000	WCBD	1080	MARYLAND			
INDIANA				Baltimore J-26			10000 WBAL 760-1060
Anderson J-21	100	WHBU	1210				250 WCAO 600
Connersville K-21	100	WKBV	1500				100 WCBM 1370
Culver I-20	500	WCMA	1400				500 WFBR 1270
Evansville L-20	500	WGBF	630	Cumberland J-25			100 WTBO 1420
Fort Wayne J-21	100	WGL	1370	MASSACHUSETTS			
	10000	WOWO	1160	Boston G-28			500 WAAB 1410
	1000	WJKS	1360				1000 WBIS 1230
	100	WVAE	1200				1000 WEEI 590
	1000	WFBM	1230				1000 WHDH 850
	500	WKBF	1400				100 WLOE 1500
	500	WBAA	1400				1000 WNAC 1230
	50	WJAK	1310				250 WLEY 1450
	50	WLBC	1310				100 WFSO 920
	100	WFAM	1200				500 WNBH 1310
	500	WSBT	1230				15000 WBZ-A 990
	100	WBOW	1310				100 WEPS 1200
							100 WORC 1200
							250 WTAG 580
IOWA				MICHIGAN			
Ames I-17	5000	WOI	640	Battle Creek I-21			50 WELL 1420
Boone I-17	100	KFGQ	1310	Bay City H-22			500 WBCM 1410
Cedar Rapids I-18	100	KWCR	1310	Calumet E-19			100 WHDF 1370
Clarinda J-16	500	KSO	1380	Detroit H-22			50 WJBK 1370
Council Bluffs J-16	1000	KOIL	1260				5000 WJR 750
Davenport I-18	5000	WOC	1000				100 WNBC 1420
Decorah H-18	50	KGCA	1270				
	100	KWLC	1270				
Des Moines I-17	5000	WHO	1000				
Fort Dodge I-16	100	KFJY	1310				
Iowa City I-18	500	WSUI	880				
Marshalltown I-17	100	KFJB	1200				
Ottumwa J-17	100	WIAS	1420				
Red Oak J-16	100	KICK	1420				

INDEX BY LOCATIONS WITH MAP KEY

Detroit H-22	1000	WWJ	920	NEVADA	Watts		Keys.
	1000	WXYZ	1240	Las Vegas L-5	100	KGIX	1420
East Lansing H-21	1000	WKAR	1040	Reno I-3	500	KOH	1380
Flint H-22	100	WDFD	1310	NEW HAMPSHIRE			
Grand Rapids H-21	500	WASH	1270	Laconia G-28	100	WKAV	1310
	500	WOOD	1270	Manchester G-28	500	WFEA	1430
Ironwood F-18	100	WJMS	1420	NEW JERSEY			
Jackson I-21	100	WIBM	1370	Asbury Park I-27	500	WCAP	1280
Kalamazoo I-21	1000	WKZO	590	Atlantic City J-27	5000	WPG	1100
Lapeer H-22	100	WMPD	1500	Camden I-26	500	WCAM	1280
Ludington H-20	50	WKBZ	1500	Hackensack I-27	250	WBMS	1450
Marquette F-19	100	WBEO	1310	Jersey City I-27	300	WAAT	940
Royal Oak H-22	50	WEXL	1310		500	WHOM	1450
				Newark I-27	250	WKBO	1450
MINNESOTA					1000	WAAM	1250
Fergus Falls F-15	100	KGDE	1200		250	WGCP	1250
Minneapolis G-17	5000	WCCO	810		250	WNJ	1450
	1000	WDGY	1180		5000	WOR	710
	500	WHDI	1180	Paterson I-27	1000	WODA	1250
	1000	WRHM	1250	Red Bank I-27	100	WJBI	1210
Moorhead F-15	50	KGKF	1500	Trenton I-26	500	WOAX	1280
Northfield G-17	1000	KFMX	1250	Zarephath I-27	250	WAWZ	1350
	1000	WCAL	1250				
St. Paul G-17	1000	WLB	1250	NEW MEXICO			
	10000	KSTP	1460	Albuquerque N-7	250	KGGM	1230
				Raton M-11	50	KGFL	1370
				State College P-9	20000	KOB	1180
MISSISSIPPI				NEW YORK			
Greenville O-18	100	WRBQ	1210	Albany H-27	500	WOKO	1440
Gulfport Q-19	100	WQGM	1210	Auburn H-25	100	WBMO	1310
Hattiesburg Q-19	10	WRBJ	1370	Binghamton H-26	100	WNBF	1500
Jackson P-19	1000	WJDX	1270	Brooklyn I-27	500	WBBC	1400
Meridian P-20	500	WCOG	880		1000	WBRR	1300
Tupelo N-20	100	WDIX	1500		500	WCGU	1400
Vicksburg P-18	500	WQBC	1360		500	WFOX	1400
					500	WLTH	1400
					100	WMBQ	1500
					100	WMIL	1500
MISSOURI				Buffalo H-24	1000	WBEN	900
Cp. Girardeau L-19	100	KFVS	1210		100	WEBR	1310
Columbia K-17	500	KFRU	630		1000	WGR	550
Grant City J-16	100	KGIZ	1500		5000	WKBW	1480
Jefferson City L-17	500	WOS	630		1000	WMAK	1040
Joplin M-16	100	WMBH	1420		50	WSVS	1370
Kansas City K-16	1000	KMBC	950	Canton F-26	500	WCAD	1220
	100	KWKC	1370	Freeport I-27	100	WGBB	1210
	1000	WDAF	610	Glens Falls G-27	50	WBGF	1370
	500	WHB	860	Ithaca H-25	1000	WEAI	1270
	1000	WOQ	1300		50	WLCI	1210
St. Joseph K-16	2500	KFEQ	680	Jamaica H-27	100	WMRJ	1210
	100	KGBX	1310	Jamestown H-24	25	WOCL	1210
St. Louis L-18	500	KFUO	550	Long Island City I-27	100	WLBX	1500
	100	KFWF	1200		5000	WABC	860
	50000	KMOX	1090		250	WBNX	1350
	500	KSD	550		5000	WBOQ	860
	1000	KWK	1350		250	WCDA	1350
	1000	WEW	760		50000	WEAF	660
	100	WIL	1200		500	WEVD	1300
					500	WGBS	1180
MONTANA					1000	WHAP	1300
Billings F-9	1000	KGHL	950		250	WHN	1010
Butte F-7	500	KGIR	1360		30000	WJZ	760
Great Falls E-8	1000	KFBB	1280		5000	WLWL	1100
Kalispell D-7	100	KGEZ	1310		500	WMCA	570
Missoula E-7	100	KGVO	1420		250	WMSG	1350
Wolf Point E-11	100	KGCC	1310		500	WNYC	570
					1000	WOV	1130
					250	WPAP	1010
NEBRASKA					500	WPCH	810
Clay Center J-14	1000	KMMJ	740		250	WQAO	1010
Lincoln J-15	5000	KFAB	770		250	WRNY	1010
	100	KFOR	1210				
	500	WCAJ	590				
Norfolk I-15	1000	WJAG	1060				
North Platte J-13	500	KGNF	1430				
Omaha J-15	500	WAAW	660				
	1000	WOW	590				
Ravenna J-14	100	KGFW	1310				
Scottsbluff I-11	100	KGKY	1500				
York J-15	500	KGBZ	930				

INDEX BY LOCATIONS WITH MAP KEY

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

NORTH CAROLINA

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

NORTH DAKOTA

Bismarck F-13	1000	KFYR	550
Devils Lake E-14	100	KDLR	1210
Fargo F-15	1000	WDAY	940
Grand Forks E-15	100	KFJM	1370
Mandan F-13	100	KGCU	1240
Minot E-13	100	KLPM	1240

OHIO

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

OKLAHOMA

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

OREGON

Astoria D-2	100	KFJI	1370
Corvallis E-2	1000	KOAC	550
Eugene F-2	100	KORE	1420
Marshfield F-1	100	KOOS	1370

Medford G-2	100	KMED	1310
Portland E-3	5000	KEX	1180
	100	KBPS	1420
	500	KFJR	1300
	1000	KGW	620
	1000	KOIN	940
	500	KTBR	1300
	500	KWJJ	1060
	100	KXL	1420

PENNSYLVANIA

Allentown I-26	250	WCBA	1440
	250	WSAN	1440
	100	WFBG	1310
Altoona I-25	10	WNBW	1200
Carbondale H-26	25	WIBG	930
Elkins Park I-26	100	WEDH	1420
Erie H-24	100	WSAJ	1310
Grove City I-24	500	WBAK	1430
Harrisburg I-25	100	WCOD	1200
	500	WHP	1430
Johnstown J-24	100	WJAC	1310
Lancaster I-26	100	WGAL	1310
	100	WKJC	1200
	100	WJBU	1210
Lewisburg I-26	500	WLBW	1260
Oil City I-24	10000	WCAU	1170
Philadelphia I-26	100	WELK	1370
	500	WFAN	610
	500	WFI	560
	100	WHAT	1310
	500	WIP	610
	500	WLIT	560
	100	WPEN	1500
	250	WRAX	1020
	100	WTEL	1310
Pittsburgh J-24	50000	KDKA	980
	500	KOV	1380
	1000	WCAE	1220
	1000	WJAS	1290
	100	WWSW	1500
Reading I-26	1000	WEEU	830
	100	WRAU	1310
Scranton H-26	250	WGBI	880
	250	WQAN	880
State College I-25	500	WPSC	1230
Washington J-24	100	WNBO	1200
Wilkes-Barre I-26	100	WBAX	1210
	100	WBRE	1310
Williamsport I-25	100	WRAK	1370

PORTO RICO

San Juan W-34	250	WKAQ	890
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RHODE ISLAND

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

SOUTH CAROLINA

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

SOUTH DAKOTA

Brookings H-15	500	KFDY	550
Huron H-14	100	KGDY	1200
Mitchell H-14	100	KGDA	1370
Pierre G-13	200	KGFX	580
Rapid City H-12	100	WCAT	1200
Sioux Falls H-15	2500	KSOO	1110

INDEX BY LOCATIONS WITH MAP KEY

Vermillion I-15	500	KUSD	890	Petersburg L-26	100	WLBG	1200
Watertown G-15	100	KGCR	1210	Richmond K-26	100	WBBL	1210
Yankton I-15	1000	WNAX	570		100	WMBG	1210
TENNESSEE				Roanoke L-24	5000	WRVA	1110
Bristol L-23	100	WOPI	1500		250	WDBJ	930
Chattanooga N-21	1000	WDOD	1280		250	WRBX	1410
Jackson N-20	100	WOBT	1310	WASHINGTON			
Knoxville M-22	50	WFBC	1200	Aberdeen D-2	100	KXRO	1310
	1000	WNOX	560	Bellingham C-3	100	KVOS	1200
	100	WROL	1310	Everett C-3	50	KFBL	1370
Memphis N-19	500	WGBC	1430	Lacey D-3	10	KGY	1200
	100	WHBQ	1370	Pullman E-5	1000	KWSC	1220
	500	WMC	780	Seattle C-3	5000	KJR	970
	500	WNBR	1430		1000	KOL	1270
	500	WREC	600		1000	KOMO	920
Nashville M-21	5000	WLAC	1470		100	KPCB	650
	5000	WSM	650		50	KRSC	1120
Springfield M-20	100	WSIX	1210		1000	KTW	1220
TEXAS					100	KVL	1370
Abilene P-13	100	KFYO	1420	Spokane D-5	100	KXA	570
Amarillo N-12	1000	KGRS	1410		1000	KFTO	1120
	1000	WDAG	1410		5000	KFPY	1340
	100	KUT	1500		5000	KGA	1470
Austin Q-14	500	KFDM	560	Tacoma D-3	1000	KHQ	590
Beaumont R-17	500	KWWG	1260		500	KMO	860
Brownsville U-15	500	WTAW	1120	Walla Walla E-5	1000	KVI	760
College Sta. Q-15	500	KGFI	1500	Wenatchee D-4	100	KUJ	1370
Corpus Christi S-14	100	KRLD	1040	Yakima D-4	50	KPQ	1500
Dallas P-15	10000	WFAA	800		50	KIT	1310
	5000	WRR	1280	WEST VIRGINIA			
Dublin P-14	100	KFPL	1310	Bluefield L-24	250	WHIS	1410
El Paso P-9	100	KTSM	1310	Charleston K-23	250	WOBW	580
	100	WDAH	1310	Fairmount J-24	250	WMMN	890
Fort Worth P-15	1000	KFJZ	1370	Huntington K-23	250	WSAZ	580
	1000	KTAT	1240	Wheeling J-24	5000	WWVA	1160
	10000	WBAP	800	WISCONSIN			
Galveston R-16	100	KFLX	1370	Eau Claire G-18	1000	WTAQ	1330
	500	KFUL	1290	Fond du Lac H-19	100	KFTZ	1420
Greenville O-15	15	KFPM	1310	Green Bay G-19	100	WHBY	1200
Harlingen T-14	500	KRGV	1260	Janesville I-19	100	WCLO	1200
Houston R-16	1000	KPRC	920	La Crosse H-18	1000	WKBH	1380
	100	KTLC	1310	Madison H-19	750	WHA	940
	500	KTRH	1120		500	WIBA	1280
	100	KXYZ	1420	Manitowoc H-20	100	WOMT	1210
San Angelo Q-13	100	KGKL	1370	Milwaukee H-19	250	WHAD	1120
San Antonio R-14	100	KABC	1420		250	WISN	1120
	100	KMAC	1370		1000	WTMJ	620
	100	KONO	1370	Poynette H-19	100	WIBU	1210
	1000	KTSA	1290	Racine I-20	100	WRJN	1370
	50000	WOAI	1190	Sheboygan H-20	500	WHBL	1410
Tyler P-16	100	KGKB	1500	Stevens Pt. G-19	2000	WLBL	900
Waco Q-15	1000	WACO	1240	Superior F-17	1000	WEBC	1290
Wichita Falls O-14	250	KGKO	570	WYOMING			
UTAH				Casper H-10	100	KDFN	1210
Ogden I-7	500	KLO	1400	CANADA			
Salt Lake City I-7	1000	KDYL	1290	ALBERTA			
	5000	KSL	1130	Calgary B-7	500	CFAC	690
VERMONT					10000	CFCN	985
Burlington F-27	100	WCAX	1200		500	CHCA	690
Rutland G-27	100	WSYB	1500		500	CJJC	690
St. Albans F-27	100	WQDM	1370		500	CNRC	690
Springfield G-27	10	WNBX	1200	Edmonton A-8	250	CHMA	580
Waterbury F-27	50	WDEV	1420		500	CJCA	930
VIRGINIA					500	CKUA	580
Alexandria K-26	10000	WJSV	1460	Lethbridge C-8	100	CJOC	1120
Arlington J-25	1000	NAA	690	Red Deer A-8	1000	CHCT	840
Danville L-25	100	WBTM	1370		1000	CKLC	840
Emory L-23	500	WEHC	1350		1000	CNRD	840
Lynchburg L-25	100	WLVA	1370				
Newport News L-26	100	WGH	1310				
Norfolk L-26	500	WPOR	780				
	500	WTAR	780				

INDEX BY LOCATIONS WITH MAP KEY

BRITISH COLUMBIA				SASKATCHEWAN			
	Watt		Keys,				
Chilliwack B-3	100	CHWK	665	Fleming C-13	500	CJRW	665
Kamloops B-5	100	CFHC	1120	Moose Jaw C-11	500	CJRM	665
Sea Island	500	CJOR	1210	Regina C-12	500	CHWC	960
Vancouver B-3	50	CHLS	730		500	CJBR	960
	50	CKCD	730		500	CKCK	960
	50	CKFC	730	Saskatoon B-11	500	CNRR	960
	50	CKMO	730		500	CFQC	910
	100	CKWX	730	Yorkton B-13	500	CNRS	910
	500	CNRV	1030		500	CJGX	630
Victoria C-3	50	CFCT	630				
MANITOBA				HAITI			
Brandon D-14	500	CKX	540	Port au Prince X-30	1000	HHK	920
Winnipeg D-15	5000	CKY	780				
	5000	CNRW	780				
NEW BRUNSWICK				MEXICO			
Fredericton D-29	500	CFNB	1210	Aguascalientes W-10	350	XFC	805
Moncton D-30	500	CNRA	630	Chihuahua, Chih. R-9	250	XFF	915
St. John D-30	500	CFBO	890	Guadalajara, Jal. X-10	101	XEA	1200
				Juarez P-9	101	XEJ	857
NEWFOUNDLAND					1000	XEQ	1015
St. Johns A-35	500	VOWR	675	Laredo, N. L. S-13	101	XEFE	980
					2500	XEP	1400
NOVA SCOTIA				Merida, Yuc. X-19	105	XEY	547
Glace Bay C-32	10000	VAS	685	Mexico City Y-13j	1000	XEB	1030
Halifax E-31	500	CHNS	910		250	XEFA	1250
	500	CNRH	910		101	XEK	990
Sydney C-32	50	CJCB	880		1000	XEN	711
Wolfville D-31	50	CKIC	1010		5000	XEO	940
					101	XER	674
ONTARIO					500	XETA	1140
Chatham H-22	100	CFCO	1210		100	XETO	1360
Cobalt E-23	100	CKMC	1210		2000	XETY	1300
Hamilton H-24	500	CHCS	1010		500	XEX	1210
	50	CHML	880		5000	XEW	910
	500	CKOC	1010		500	XEZ	588
Kingston G-25	50	CFRC	930		2000	XFG	638
London H-23	5000	CJGC	910		1000	XFI	818
	500	CNRL	910		500	XFX	860
North Bay	50	CFCH	930	Monterrey N. L. U-13	5000	XEH	1132
Ottawa F-25	100	CKCO	890		500	XET	690
	500	CNRO	600	Morelia, Mich. Y-12	101	XEIj	1000
Port Arthur E-19	50	CKPR	890	Oaxaca, Oak. AA-14	105	XEE	1132
Prescott F-25	50	CFLC	930	Puebla Z-13	101	XEV	1034
Preston H-23	50	CKPC	1210	Reynosa, Tams. T-14	10000	XED	965
Toronto G-24	500	CFCA	840	Saltito, Coah. U-12	10	XEL	1091
	500	CFCL	580	Tampico, Tams. W-14	500	XEM	730
	5000	CFRB	960		500	XES	890
	500	CKCL	580	Toluca. Y-12	50	XEC	1333
	5000	CKGW	690	Veracruz, Ver. Z-14	500	XETF	680
	500	CKNC	580		101	XEU	800
	500	CNRT	840				
	5000	CNRX	960				
	5000	CPRY	690				
Waterloo G-23	50	CKCR	645				
PRINCE EDWARDS ISLAND				CUBA			
Charlottetown C-31	250	CFCY	580	Cardenas W-24	30	CMGE	1375
	100	CHCK	1010	Camaguey W-26	15	CMJC	1321
Summerside C-31	100	CHGS	1120		20	CMJE	856
				Ciego de Avila W-26	20	CMJB	1276
				Cienfuegos W-25	200	CMHA	1154
					40	CMHJ	645
				Colon W-24	100	CMGA	834
				Havana W-23	50	CMBA	1345
					150	CMBC	965
					150	CMBD	965
					7.5	CMBF	1345
					150	CMBG	1070
					30	CMBI	1405
					15	CMBJ	1285
					15	CMBK	1405
					15	CMBL	1500
					15	CMBM	1285
					30	CMBN	1405
					50	CMBQ	1405
					15	CMBR	1500
Quebec D-27	100	CHRC	645	Havana W-23			
	100	CKCI	880				
	50	CKCV	880				
	50	CNRQ	880				

CFAC 690	CJRW 665	CMBS 790	CMKD 1100
Calgary, Alta.	Fleming, Sask.	Havana, Cuba	Santiago, Cuba
CFBO 890	CKAC 730	CMBT 1070	CMKE 1249
St. John, N. B.	Montreal, Que.	Havana, Cuba	Santiago, Cuba
CFCA 840	CKCD 730	CMBW 1010	CMKF 1363
Toronto, Ont.	Vancouver, B. C.	Havana, Cuba	Holguin, Cuba
CFCF 1030	CKCI 880	CMBX 1405	CMKG 1176
Montreal, Que.	Quebec, Que.	Havana, Cuba	Santiago, Cuba
CFCH 930	CKCK 960	CMBY 1405	CMKH 1327
North Bay, Ont.	Regina, Sask.	Havana, Cuba	Santiago, Cuba
CFCL 580	CKCL 580	CMBZ 1010	CMQ 1150
Toronto, Ont.	Toronto, Ont.	Havana, Cuba	Havana, Cuba
CFCN 985	CKCO 890	CMC 840	CMW 588
Calgary, Alta.	Ottawa, Ont.	Havana, Cuba	Havana, Cuba
CFCO 1210	CKCR 645	CMCA 1225	CMX 890
Chatham, Ont.	Waterloo, Ont.	Havana, Cuba	Havana, Cuba
CFCT 630	CKCV 880	CMCB 1070	CMNA 630
Victoria, B. C.	Quebec, Que.	Havana, Cuba	Moneton, N. B.
CFCY 580	CKFC 730	CMCD 1225	CNRC 690
Ch'lottet'n,P.E.I.	Vancouver, B. C.	CMCE 890	Calgary, Alta.
CFJG 1120	CKGW 690	CMEF 890	CNRD 840
Kamloops, B. C.	Toronto, Ont.	CMFG 1285	Red Deer, Alta.
CFLC 930	CKIK 1010	CMGG 1285	CNRH 910
Prescott, Ont.	Wolfville, N. S.	CMGH 1285	Halifax, N. S.
CFNB 1210	CKIL 840	CMHI 1110	CNRL 910
Fredericton, N.B.	Red Deer, Alta.	CMIA 1150	London, Ont.
CFQC 910	CKIM 1210	CMIB 1500	CNRM 730
Saskatoon, Sask.	Cobalt, Int.	CMIC 1225	Montreal, Que.
CFRB 960	CKMO 730	CMIN 660	CNRO 600
Toronto, Ont.	Vancouver, B. C.	CMIO 660	Ottawa, Ont.
CFRC 930	CKNC 580	CMIP 1150	CNRQ 880
Kingston, Ont.	Toronto, Ont.	CMIQ 1150	Quebec, Que.
CHCA 690	CKOC 1010	CMIR 1285	CNRR 960
Calgary, Alta.	Hamilton, Ont.	CMIS 1500	Regina, Sask.
CHCK 1010	CKPC 1210	CMIT 1500	CNRS 910
Ch'lottet'n,P.E.I.	Preston, Ont.	CMIU 1345	Saskatoon, Sask.
CHCS 1010	CKPR 890	CMIV 1345	CNRT 840
Hamilton, Ont.	Port Arthur, Ont.	CMJ 1345	Toronto, Ont.
CHCT 840	CKUA 580	CMJA 1345	CNRV 1030
Red Deer, Alta.	Edmonton, Alta.	CMJB 1276	Vancouver, B. C.
CHGS 1120	CKWX 730	CMJC 1321	CNRW 780
Sum'rside,P.E.I.	Vancouver, B. C.	CMJD 856	Winnipeg, Man.
CHLS 730	CKX 540	CMJE 730	CNRX 960
Vancouver, B.C.	Brandon, Man.	CMK 1450	Toronto, Ont.
CHMA 580	CKY 780	CMKA 1450	CPRY 690
Edmonton, Alta.	Winnipeg, Man	Santiago, Cuba	Toronto, Ont.
CHML 880	CMAB 1249	CMKB 1200	HHK 920
Hamilton, Ont.	Pinar del Rio, Cu	Santiago, Cuba	Port au Prince,H.
CHNS 910	CMAC 1375	Santiago, Cuba	KABC 1420
Halifax, N. S.	Pinar del Rio, Cu	Santiago, Cuba	San Antonio, Tex.
CHRC 645	CMBA 1345	Santiago, Cuba	KBPS 1420
Quebec, Que.	Havana, Cuba	Santiago, Cuba	Portland, Ore.
CHWC 960	CMBC 965	Santiago, Cuba	KBTM 1200
Regina, Sask.	Havana, Cuba	Santiago, Cuba	Paragould, Ark.
CHWK 665	CMBD 965	Santiago, Cuba	KCRC 1370
Chilliwack, B. C.	Havana, Cuba	Santiago, Cuba	Enid, Okla.
CHYC 730	CMBF 1345	Santiago, Cuba	KCRJ 1310
Montreal, Que.	Havana, Cuba	Santiago, Cuba	Jerome, Ariz.
CJBR 960	CMBG 1070	Santiago, Cuba	KDB 1500
Regina, Sask.	Havana, Cuba	Santiago, Cuba	S. Barbara, Cal.
CJCA 930	CMBI 1405	Santiago, Cuba	KDFN 1210
Edmonton, Alta.	Havana, Cuba	Santiago, Cuba	Casper, Wyo.
CJCB 880	CMBJ 1285	Santiago, Cuba	KDKA 980
Sydney, N. S.	Havana, Cuba	Santiago, Cuba	Pittsburgh, Pa.
CJCC 690	CMBK 1405	Santiago, Cuba	KDLR 1210
Calgary, Alta.	Havana, Cuba	Santiago, Cuba	Devils Lake,N.D.
CJCG 910	CMBL 1500	Santiago, Cuba	KDYL 1290
London, Ont.	Havana, Cuba	Santiago, Cuba	Salt Lake City
CJGJ 630	CMBM 1285	Santiago, Cuba	KECA 1430
Yorkton, Sask.	Havana, Cuba	Santiago, Cuba	Los Angeles, Cal.
CJOC 1120	CMBN 1405	Santiago, Cuba	KELW 780
Lethbridge, Alta.	Havana, Cuba	Santiago, Cuba	Burbank, Cal.
CJOR 1210	CMBQ 1405	Santiago, Cuba	KEX 1180
Sea Island, B. C.	Havana, Cuba	Santiago, Cuba	Portland, Ore.
CJRM 665	CMBR 1500	Santiago, Cuba	KFAB 770
Moose Jaw, Sask.	Havana, Cuba	Santiago, Cuba	Lincoln, Nebr.

KFAC 1300
Los Angeles, Cal.
KFBB 1280
Great Fls., Mont.
KFBI 1050
Milford, Kans.
KFBK 1310
Sacramento, Cal.
KFBL 1370
Everett, Wash.
KFDM 560
Beaumont, Tex.
KFDY 550
Brookings, S. D.
KFEL 920
Denver, Colo.
KFEQ 680
St. Joseph, Mo.
KFGQ 1310
Boone, Iowa
KFH 1300
Wichita, Kansas
KFI 640
Los Angeles, Cal.
KFIO 1120
Spokane, Wash.
KFIU 1310
Juneau, Alaska
KFIZ 1420
Fond du Lac, Wis.
KFJB 1200
Marshalltown, Ia.
KJFF 1480
Oklahoma City
KFJI 1370
Astoria, Ore.
KFJM 1370
Grd. Forks, N.D.
KFJR 1300
Portland, Ore.
KFYJ 1310
Fort Dodge Ia.
KFJZ 1370
Ft. Worth, Tex.
KFKA 880
Greeley, Colo.
KFKU 1220
Lawrence, Kans.
KFKX 1020
Chicago, Ill.
KFLV 1410
Rockford, Ill.
KFLX 1370
Galveston, Tex.
KFMX 1250
N'thfield, Minn.
KFNF 890
Shenandoah, Ia.
KFOR 1210
Lincoln, Nebr.
KFOX 1250
Long Beach, Cal.
KFPL 1310
Dublin, Texas
KFPM 1310
Greenville, Texas
KFPV 1340
Ft. Smith, Ark.
KFPY 1340
Spokane, Wash.
KFQD 1230
Anchorage, Alas.
KFRC 610
San F'nisco, Cal.
KFRU 630
Columbia, Mo.

KFSD 600
San Diego, Cal.
KFSG 1120
Los Angeles, Cal.
KFUL 1290
Galveston, Texas
KFVU 550
St. Louis, Mo.
KFUP 1310
Denver, Colo.
KFVD 1000
Culver City, Cal.
KFVS 1210
Cape Gir'rd'u, Mo
KFWB 950
Hollywood, Cal.
KFWF 1200
St. Louis, Mo.
KFWI 930
San F'nisco, Cal.
KFXD 1420
Nampa, Idaho
KFXF 920
Denver, Colo.
KFXJ 1310
Grand Junc., Col.
KFXM 1210
San Ber'd no, Cal.
KFXR 1310
Oklahoma City
KFYI 1420
Flagstaff, Ariz.
KFYO 1420
Abilene, Texas
KFYR 550
Bismarck, N. D.
KGA 1470
Spokane, Wash.
KGAR 1370
Tucson, Arizona
KGB 1330
San Diego, Cal.
KGBU 900
Ketchikan, Al'ka
KGBX 1310
St. Joseph, Mo.
KGBZ 930
York, Nebr.
KGCA 1270
Decorah, Iowa
KGCR 1210
Watertown, S. D.
KGCU 1240
Mandan, N. D.
KGCC 1310
Wolf P't, Mont.
KGDA 1370
Mitchell, S. D.
KGDE 1200
Fergus Falls, Minn
KGDM 1100
Stockton, Cal.
KGDY 1200
Huron, S. D.
KGEF 1300
Los Angeles, Cal.
KGEK 1200
Yuma, Colo.
KGER 1360
Long Beach, Cal.
KGEW 1200
Ft. Morgan, Colo.
KGEZ 1310
Kalispell, Mont.
KGFF 1420
Shawnee, Okla.

KGFG 1370
Oklahoma City
KGFI 1500
Corp's Ch'sti, Tex
KGJF 1200
Los Angeles, Cal.
KGFK 1500
Moonhead, Minn.
KGFL 1370
Raton, N. M.
KGFW 1310
Ravenna, Nebr.
KGFX 580
Pierre, S. D.
KGGC 1420
San F'nisco, Cal.
KGGF 1010
Coffeyville, Okla.
KGGM 1230
Albuq'rque, N.M.
KGHF 1320
Pueblo, Colo.
KGHI 1200
Little Rock, Ark.
KGHL 950
Billings, Mont.
KGIR 1360
Butte, Mont.
KGIW 1420
Trinidad, Colo.
KGIX 1420
Las Vegas, Nev.
KGIZ 1500
Grant City, Mo.
KGJF 890
Little Rock, Ark.
KGKB 1500
Tyler, Texas
KGKL 1370
San Angelo, Tex.
KGKO 570
Wichita Flls, Tex.
KGKX 1420
Sand Point, Idaho
KGKY 1500
Scottsbluff, Nebr.
KGMB 1320
Honolulu, T. H.
KGMP 1210
Elk City, Okla.
KGNF 1430
No. Platte, Nebr.
KGNO 1210
Dodge City, Kas.
KGO 790
San F'nisco, Cal.
KGRS 1410
Amarillo, Texas
KGU 940
Honolulu, Hawaii
KGVO 1420
Missoula, Mont.
KGW 920
Portland, Ore.
KGY 1200
Lacey, Wash.
KHJ 900
Los Angeles, Cal.
KHQ 590
Spokane, Wash.
KICK 1420
Red Oak, Iowa
KID 1320
Idaho Falls, Ida.
KIDF 1250
Boise, Idaho

KIT 1310
Yakima, Wash.
KJBS 1070
San F'nisco, Cal.
KJR 970
Seattle, Wash.
KLCN 1290
Blytheville, Ark.
KLO 1400
Ogden, Utah
KLPM 1240
Minot, N. Dak.
KLRA 1390
Little Rock, Ark.
KLS 1440
Oakland, Cal.
KLX 880
Oakland, Cal.
KLZ 560
Denver, Colo.
KMA 930
Shenandoah, Ia.
KMAC 1370
San Antonio, Tex.
KMBC 950
Kan. City, Mo.
KMCS 1120
Inglewood, Cal.
KMED 1310
Medford, Ore.
KMJ 1210
Fresno, Cal.
KMLB 1200
Monroe, La.
KMMJ 740
Clay Ctr., Nebr.
KMO 860
Tacoma, Wash.
KMOX 1090
St. Louis, Mo.
KMPK 710
Los Angeles, Cal.
KMTR 570
Los Angeles, Cal.
KNX 1050
Los Angeles, Cal.
KOA 830
Denver, Colo.
KOAC 550
Corvallis, Ore.
KOB 1180
State Coll., N.M.
KOCW 1400
Chickasha, Okla.
KOH 1380
Reno, Nevada
KOIL 1260
Council Bluffs, Ia.
KOIN 940
Portland, Ore.
KOL 1270
Seattle, Wash.
KOMO 920
Seattle, Wash.
KONO 1370
San Antonio, Tex.
KOOS 1370
Marshfield, Ore.
KORE 1420
Eugene, Ore.
KOY 1390
Phoenix, Arizona
KPCB 650
Seattle, Wash.
KPJM 1500
Prescott, Ariz.

KPO 680	KUOA 1390	WACO 1240	WCAH 1430
San F'nisco, Cal.	Fayetteville, Ark.	Waco, Texas	Columbus, Ohio
KPof 880	KUSD 890	WADC 1320	WCAJ 590
Denver, Colo.	Vermillion, S. D.	Akron, Ohio	Lincoln, Nebr.
KPPC 1210	KUT 1500	WAGM 1420	WCAL 1250
Pasadena, Cal.	Austin, Texas	Presque Isle, Me.	Northfield, Minn.
KPQ 1500	KVI 760	WAIU 640	WCAM 1280
Wanatchee, Wash	Tacoma, Wash.	Columbus, Ohio	Camden, N. J.
KPRC 920	KVL 1370	WALR 1210	WCAO 600
Houston, Texas	Seattle, Wash.	Zanesville, Ohio	Baltimore, Md.
KQY 1380	KVOA 1260	WAPI 1140	WCAE 1280
Pittsburgh, Pa.	Tucson, Arizona	Birmingham, Ala.	Asbury Pk., N. J.
KQW 1010	KVOO 1140	WASH 1270	WCAT 1200
San Jose, Cal.	Tulsa, Okla.	Gr. Rapids, Mich.	Rapid City, S. D.
KRE 1370	KVOR 1270	WAWR 1350	WCAU 1200
Berkeley, Cal.	Col. Sp'gs, Colo.	Zarephatb, N. J.	Philadelphia, Pa.
KREG 1500	KVOS 1200	WBAA 1400	WCAX 1200
Santa Ana, Cal.	Bellingh'm, Wash.	Lafayette, Ind.	Burlington, Vt.
KRGV 1260	KWCR 1310	WBAB 1430	WCAY 1070
Harlingen, Texas	Cedar Rapids, Ia.	Harrisburg, Pa.	Carthage, Ill.
KRLD 1040	KWEA 1210	WBAL 760-1060	WBAL 1440
Dallas, Texas	Shreveport, La.	Baltimore, Md.	Allentown, Pa.
KRMD 1310	KWGG 1200	WBAP 800	WCBD 1080
Shreveport, La.	Stockton, Cal.	Fort Worth, Tex.	Zion, Ill.
KROW 930	KWJJ 1060	WBAX 1210	WCBM 1370
Oakland, Cal.	Portland, Ore.	Wilkes-Barre, Pa.	Baltimore, Md.
KRSC 1120	KWK 1350	WBBC 1400	WCRS 1210
Seattle, Wash.	St. Louis, Mo.	Brooklyn, N. Y.	Springfield, Ill.
KSAC 580	KWKC 1370	WBBL 1210	WCDA 1300
Manh'tt'n, Kans.	Kansas City, Mo.	Richmond, Va.	Minneap., Minn.
KSCJ 1330	KWKH 850	WBMM 770	WCDA 1350
Sioux City, Ia.	Shreveport, La.	Chicago, Ill.	New York City
KSD 550	KWLC 1270	WBRR 1300	WCFL 970
St. Louis, Mo.	Decorah, Iowa	Brooklyn, N. Y.	Chicago, Ill.
KSEI 900	KWSC 1220	WBWB 1200	WCGU 1400
Pocatello, Idaho	Pullman, Wash.	Ponca City, Okla.	Brooklyn, N. Y.
KSL 1130	KWWG 1260	WBWC 1410	WCHI 1490
Salt Lake City	Brownsville, Tex.	Bay City, Mich.	Chicago, Ill.
KSMR 1200	KXA 570	WBBN 900	WCCK 1490
Santa Maria, Cal.	Seattle, Wash.	Buffalo, N. Y.	Covington, Ky.
KSO 1380	KXL 1420	WBEO 1310	WCLO 1200
Clarinda, Iowa	Portland, Ore.	Marquette, Mich.	Janesville, Wis.
KSOO 1110	KXO 1500	WBGF 1370	WCLS 1310
Sioux Falls, S. D.	El Centro, Cal.	Glens Falls, N. Y.	Joliet, Ill.
KSTP 1460	KXRO 1310	WBHS 1200	WCMA 1400
St. Paul, Minn.	Aberdeen, Wash.	Huntsville, Ala.	Culver, Ind.
KTAB 560	KXYZ 1420	WBIG 1440	WCOA 1340
San F'nisco, Cal.	Houston, Texas	Greensboro, N.C.	Pensacola, Fla.
KTAR 620	KYA 1230	WBIS 1230	WCOC 880
Phoenix, Ariz.	San F'nisco, Cal.	Boston, Mass.	Meridian, Miss.
KTAT 1240	KYW 1020	WBMS 1450	WCOD 1200
Ft. Worth, Tex.	Chicago, Ill.	Hackensack, N.J.	Harrisburg, Pa.
KTBR 1300	NAA 690	WBNX 1350	WCOH 1210
Portland, Ore.	Arlington, Va.	New York City	Yonkers, N. Y.
KTBS 1450	TIC 900	WBOQ 860	WCRW 1210
Shreveport, La.	San Jose, C. R.	New York City	Chicago, Ill.
KTPI 1320	VAS 585	WBOW 1310	WCSC 1360
Twin Falls, Ida.	Glace Bay, N. S.	Terre Haute, Ind.	WCSSH 940
KTHS 1040	VOWR 675	WBRC 930	Portland, Maine
Hot Spgs., Ark.	St. Johns, N. F.	WBRE 1310	WDAE 1220
KTLC 1310	WAAB 1410	Wilkes-Barre, Pa.	Tampa, Fla.
Houston, Texas	WAAF 920	WBSO 920	WDAF 610
KTM 780	Chicago, Ill.	Needham, Mass.	Kansas City, Mo.
Los Angeles, Cal.	WAAM 1250	WBT 1080	WDAG 1410
KTRH 1120	Newark, N. J.	Charlotte, N. C.	Amarillo, Texas
Houston, Texas	WAAT 940	WBTM 1370	WDAH 1310
KTSA 1290	Jersey City, N. J.	Danville, Va.	El Paso, Texas
San Antonio, Tex.	WAAW 660	WBZ-A 990	WDAY 940
KTSL 1310	Omaha, Nebr.	Springfield, Mass.	Fargo, N. D.
Shreveport, La.	WABC 860	WCAC 600	WDBJ 930
KTSM 1310	New York City	Storrs, Conn.	Roanoke, Va.
KTWP 1220	WABI 1200	WCAD 1220	WDBO 1120
Seattle, Wash.	Bangor, Maine	Canton, N. Y.	Orlando, Fla.
KUJ 1370	WABZ 1200	WCAE 1220	WDEL 1120
Walla Wal., Wash.	New Orleans, La.	Pittsburgh, Pa.	Wilmington, Del.

WDEV 1420
Waterbury, Vt.
WDGY 1180
Minneap., Minn.
WDIX 1500
Tupelo, Miss.
WDDO 1280
Chattan'ga, Tenn
WDRG 1330
Hartford, Conn.
WDSU 1250
New Orleans, La.
WDWF 1210
Providence, R. I.
WDZ 1070
Tuscola, Ill.
WEAF 660
New York City
WEAI 1270
Ithaca, N. Y.
WEAN 780
Providence, R. I.
WEOA 570
Columbus, Ohio
WEBC 1290
Superior, Wis.
WEBQ 1210
Harrisburg, Ill.
WEER 1310
Buffalo, N. Y.
WEDC 1210
Chicago, Ill.
WEDH 1420
Erie, Pa.
WEI 590
Boston, Mass.
WEU 830
Reading, Pa.
WEHC 1350
Emory, Va.
WEHS 1420
Cicero, Ill.
WELK 1370
Philadelphia, Pa.
WELL 1420
Battle C'k, Mich.
WENR 870
Chicago, Ill.
WEPS 1200
Worcester, Mass.
WEVD 1300
New York City
WEW 760
St. Louis, Mo.
WEXL 1310
Royal Oak, Mich.
WFAA 800
Dallas, Texas
WFAM 1200
So. Bend, Ind.
WFAN 610
Philadelphia, Pa.
WFBC 1290
Knoxville, Tenn.
WFBE 1200
Cincinnati, Ohio
WFBG 1310
Altoona, Pa.
WFBL 1360
Syracuse, N. Y.
WFBM 1230
Indianapolis, Ind.
WFRB 1270
Baltimore, Md.
WFDE 1310
Flint, Mich.
WFDV 1310
Rome, Ga.

WFDW 1420
Anniston, Ala.
WFEA 1430
Manchester, N.H.
WFI 560
Philadelphia, Pa.
WFIW 940
Hopkinsville, Ky.
WFLA 620
Clearwater, Fla.
WFOX 1400
Brooklyn, N. Y.
WGAL 1310
Lancaster, Pa.
WGAR 1450
Cleveland, Ohio
WGBB 1210
Freeport, N. Y.
WGCB 1430
Memphis, Tenn.
WGBF 630
Evansville, Ind.
WGBI 880
Scranton, Pa.
WGBS 1180
New York City
WGCM 1210
Gulfport, Miss.
WGCP 1250
Newark, N. J.
WGES 1360
Chicago, Ill.
WGH 1310
Newp't News, Va.
WGL 1370
Ft. Wayne, Ind.
WGN 720
Chicago, Ill.
WGR 550
Buffalo, N. Y.
WGST 890
Atlanta, Ga.
WGY 790
Schenec'dy, N. Y.
WHA 940
Madison, Wis.
WHAD 1120
Milwaukee, Wis.
WHAM 1150
Rochester, N. Y.
WHAP 1300
New York City
WHAS 820
Louisville, Ky.
WHAT 1310
Philadelphia, Pa.
WHAZ 1300
Troy, N. Y.
WHB 860
Kansas City, Mo.
WHBC 1200
Canton, Ohio
WHBD 1370
Mt. Orab, Ohio
WHBF 1210
Rock Island, Ill.
WHBL 1410
Sheboygan, Wis.
WHBQ 1370
Memphis, Tenn.
WHBU 1210
Anderson, Ind.
WHBY 1200
Green Bay, Wis.
WHDF 1370
Calumet, Mich.
WHDH 830
Boston, Mass

WHDI 1180
Minneap., Minn.
WHDL 1420
Tupp'r L'ke, N.Y.
WHEC 1440
Rochester, N. Y.
WHFC 1420
Cicero, Ill.
WHIS 1410
Bluefield, W. Va.
WHK 1390
Cleveland, Ohio
WHN 1010
New York City
WHO 1000
Des Moines, Ia.
WHOM 1450
Jersey City, N. J.
WHP 1430
Harrisburg, Pa.
WIAS 1420
Ottumwa, Iowa
WIBA 1280
Madison, Wis.
WIBG 930
Elkins Park, Pa.
WIBM 1370
Jackson, Mich.
WIBO 560
Chicago, Ill.
WIBR 1420
Steubenville, O.
WIBU 1210
Poynette, Wis.
WIBW 580
Topeka, Kansas
WIBX 1200
Utica, N. Y.
WICC 600
Bridgeport, Conn
WIL 1200
St. Louis, Mo.
WILL 890
Urbana, Ill.
WILM 1420
Wilmington, Del.
WIOD 1300
Miami, Fla.
WIP 610
Philadelphia, Pa.
WIS 1010
Columbia, S. C.
WISN 1120
Milwaukee, Wis.
WJAC 1310
Johnstown, Pa.
WJAG 1060
Norfolk, Nebr.
WJAK 1310
Marion, Ind.
WJAR 890
Providence, R. I.
WJAS 1290
Pittsburgh, Pa.
WJAX 900
Jacksonville, Fla.
WJAY 610
Cleveland, Ohio
WJAZ 1490
Chicago, Ill.
WJBC 1200
La Salle, Ill.
WJBI 1210
Red Bank, N. J.
WJBK 1370
Detroit, Mich.
WJBL 1200
Decatur, Ill.

WJBO 1420
New Orleans, La.
WJBT 770
Chicago, Ill.
WJBU 1210
Lewisburg, Pa.
WJBW 1200
New Orleans, La.
WJBY 1210
Gadsden, Ala.
WJDX 1270
Jackson, Miss.
WJJD 1130
Mooseheart, Ill.
WJKS 1360
Gary, Ind.
WJMS 1420
Ironwood, Mich.
WJR 750
Detroit, Mich.
WJSV 1460
Alexandria, Va.
WJTL 1370
Tifton, Ga.
WJW 1210
Mansfield, Ohio
WJZ 760
New York City
WKAQ 890
San Juan, P. R.
WKAR 1040
E. Lansing, Mich.
WKAV 1310
Laconia, N. H.
WKBB 1310
Joliet, Ill.
WKBC 1310
Birmingham, Ala.
WKBF 1400
Indianapolis, Ind.
WKBH 1380
La Crosse, Wis.
WKBI 1420
Cicero, Ill.
WKBN 570
Youngstown, O.
WKBO 1450
Jersey City, N. J.
WKBS 1310
Galesburg, Ill.
WKBV 1500
Connersville, Ind.
WKBW 1480
Buffalo, N. Y.
WKBZ 1500
Ludington, Mich.
WKJC 1200
Lancaster, Pa.
WKRC 550
Cincinnati, Ohio
WKY 900
Oklahoma City
WKZO 590
Kalamazoo, Mich.
WLAC 1470
Nashville, Tenn.
WLAP 1010
Louisville, Ky.
WLB 1250
St. Paul, Minn.
WLBC 1310
Muncie, Ind.
WLBK 1420
Kansas City, Kas.
WLBG 1200
Ettrick, Va.
WLBI 900
Stevens Pt., Wis.

WLBW 1260 Oil City, Pa.	WNBH 1310 New B'd'd.,Mass.	WPSC 1230 State College, Pa.	WSJS 1310 Winst.-Sal., N. C.
WLBX 1500 L. I. City, N. Y.	WNBO 1200 Washington, Pa.	WPTF 680 Raleigh, N. C.	WSM 650 Nashville, Tenn.
WLBZ 620 Bangor, Maine	WNBR 1430 Memphis, Tenn.	WQAM 560 Miami, Fla.	WSMB 1320 New Orleans, La.
WLCI 1210 Ithaca, N. Y.	WNBW 1200 Carbondale, Pa.	WQAN 880 Scranton, Pa.	WSMK 1380 Dayton, Ohio
WLEY 1370 Lexington, Mass.	WNBX 1200 Springfield, Vt.	WQAC 1010 New York City	WSOC 1210 Gastonia, N. C.
WLIT 560 Philadelphia, Pa.	WNBZ 1290 Sar'n c L'ke,N.Y.	WQBC 1360 Vicksburg, Miss.	WSPA 1420 Spartanburg,S.C.
WLOE 1500 Boston, Mass.	WNJ 1450 Newark, N. J.	WQDM 1370 St. Albans, Vt.	WSPD 1400 Toledo, Ohio
WLS 870 Chicago, Ill.	WNOX 560 Knoxville, Tenn.	WQDX 1210 Thomasville, Ga.	WSUI 880 Iowa City, Iowa
WLST 1210 Providence, R. I.	WNYC 570 New York City	WRAK 1370 Williamsport, Pa.	WSUN 620 St. Peters'bg, Fla.
WLTH 1400 Brooklyn, N. Y.	WOAI 1190 San Antonio, Tex.	WRAM 1370 Wilmington, N.C.	WSVS 1370 Buffalo, N. Y.
WLVA 1370 Lynchburg, Va.	WOAX 1280 Trenton, N. J.	WRAW 1310 Reading, Pa.	WSYB 1500 Rutland, Vt.
WLW 700 Cincinnati, Ohio	WOBT 1310 Jackson, Tenn.	WRAX 1020 Philadelphia, Pa.	WSYR 570 Syracuse, N. Y.
WLWL 1100 New York City	WOBU 580 Charlest'n, W.Va.	WRBJ 1370 Hattiesburg, Miss	WTAD 1440 Quincy, Ill.
WMAC 570 Syracuse, N. Y.	WOC 1000 Davenport, Iowa	WRBL 1200 Columbus, Ga.	WTAG 580 Worcester, Mass.
WMAK 1040 Buffalo, N. Y.	WOEL 1210 Jamestown, N. Y.	WRBQ 1210 Greenville, Miss.	WTAM 1070 Cleveland, Ohio
WMAL 630 Washington,D.C.	WODA 1250 Paterson, N. J.	WRBX 1410 Roanoke, Va.	WTAQ 1330 Evan Claire, Wis.
WMAQ 670 Chicago, Ill.	WODX 1410 Mobile, Ala.	WRC 950 Washington,D.C.	WTAR 780 Norfolk, Va.
WMAZ 1180 Macon, Ga.	WOI 640 Ames, Iowa	WRDO 1370 Augusta, Maine	WTAW 1120 College Sta., Tex.
WMBA 1500 Newport, R. I.	WOKO 1440 Albany, N. Y.	WRDW 1500 Augusta, Ga.	WTAX 1210 Springfield, Ill.
WMBC 1420 Detroit, Mich.	WOL 1310 Washington, D.C.	WRFC 600 Memphis, Tenn.	WTBO 1420 Cumberland, Md.
WMBD 1440 Peoria Hghts.,Ill.	WOMT 1210 Manitowoc, Wis.	WREN 1220 Lawrence, Kans.	WTCL 1310 Philadelphia, Pa.
WMBG 1210 Richmond, Va.	WOOD 1270 Gr. Rapids, Mich.	WRHM 1250 Minneap., Minn.	WTFI 1450 Toccoa, Ga.
WMBH 1420 Joplin, Mo.	WOPI 1500 Bristol, Tenn.	WRJN 1370 Racine, Wis.	WTIC 660-1060 Hartford, Conn.
WMBI 1080 Chicago, Ill.	WOQ 1300 Kansas City, Mo.	WRNY 1010 New York City	WTMJ 620 Milwaukee, Wis.
WMBO 1310 Auburn, N. Y.	WOR 710 Newark, N. J.	WROL 1310 Knoxville, Tenn.	WTOC 1260 Savannah, Ga.
WMBQ 1500 Brooklyn, N. Y.	WORC 1200 Worcester, Mass.	WRR 1280 Dallas, Texas	WWAE 1200 Hammond, Ind.
WMBR 1370 Tampa, Fla.	WOS 630 Jeff's'n City, Mo.	WRUF 830 Gainesville, Fla.	WWJ 920 Detroit, Mich.
WMC 780 Memphis, Tenn.	WOV 1130 New York City	WRVA 1110 Richmond, Va.	WWL 850 New Orleans, La.
WMCA 570 New York City	WOW 590 Omaha, Nebr.	WSAI 1330 Cincinnati, Ohio	WWNC 570 Asheville, N. C.
WMIL 1500 Brooklyn, N. Y.	WOWO 1160 Ft. Wayne, Ind.	WSAJ 1310 Grove City, Pa.	WWRL 1500 Woodside, N. Y.
WMMN 890 Fairmont, W. Va.	WPAD 1420 Paducah, Ky.	WSAN 1440 Allentown, Pa.	WWSW 1500 Pittsburgh, Pa.
WMPC 1500 Lapeer, Mich.	WPAP 1010 New York City	WSAR 1450 Fall River, Mass.	WWVA 1160 Wheeling, W. Va.
WMRJ 1210 Jamaica, N. Y.	WPAW 1210 Pawtucket, R. I.	WSAZ 580 Hunt'gton,W.Va.	WXYZ 1240 Detroit, Mich.
WMSG 1350 New York City	WPCC 560 Chicago, Ill.	WSB 740 Atlanta, Ga.	XEA 1200 Guad'l'jara, Mex.
WMT 600 Waterloo, Iowa	WPCH 810 New York City	WSBC 1210 Chicago, Ill.	XEB 1030 Mexico City
WNAC 1230 Boston, Mass.	WPEN 1500 Philadelphia, Pa.	WSBT 1230 South Bend, Ind.	XEC 1333 Toluca, Mexico
WNAD 1010 Norman, Okla.	WPG 1100 Atl'ntic City,N.J.	WSEN 1210 Columbus, Ohio	XED 965 Reynosa, Mexico
WNAX 570 Yankton, S. D.	WPQE 1370 Patchogue, N. Y.	WSFA 1410 Montgomery, Ala.	XEE 1132 Oaxaco, Mexico
WNBF 1500 Bingh'm't'n, N.Y.	WPOR 780 Norfolk, Va.	WSIX 1210 Springfield, Tenn.	XEFA 1250 Mexico City

XEFE 980 Laredo, Mexico	XEO 940 Mexico City	XETO 1360 Mexico City	XFC 805 Aguascalntes, M.
XEH 1132 Monterrey, Mex.	XEP 1400 Laredo, Mexico	XETY 1300 Mexico City	XFF 915 Chihuahua, Mex.
XEI 1000 Morelia, Mexico	XEQ 1015 Juarez, Mexico	XEU 800 Veracruz, Mex.	XFG 638 Mexico City
XEJ 857 Juarez, Mexico	XER 674 Mexico City	XEV 1034 Puebla, Mexico	XFI 818 Mexico City
XEK 990 Mexico City	XES 890 Tampico, Mexico	XEW 910 Mexico City	XFX 860 Mexico City
XEL 1091 Saltillo, Mexico	XET 690 Monterrey, Mex.	XEX 1210 Mexico City	
XEM 730 Tampico, Mexico	XETA 1140 Mexico City	XEY 547 Merida, Mexico	
XEN 711 Mexico City	XETF 680 Veracruz, Mex.	XEZ 588 Mexico City	

INDEX BY LOCATIONS WITH MAP KEY

(Continued from page 55)

CUBA				Holguin W-27	30	CMKF	1363
Havana W-23	150	CMBS	790	Matanzas W-24	7.5	CMGB	1185
	150	CMBT	1070		5	CMGD	1140
	150	CMBW	1010		50	CMGF	977
	30	CMBX	1405	Pinar del Rio W-22	60	CMGH	780
	100	CMBY	1405		20	CMAB	1249
	150	CMBZ	1010		30	CMAC	1375
	500	CMC	840	Santa Clara W-25	15	CMHI	1110
	150	CMCA	1225	Santiago X-28	20	CMKA	1450
	150	CMCB	1070		15	CMKB	1200
	250	CMCD	1225		150	CMKC	1034
	250	CMCF	890		20	CMKD	1100
	30	CMCG	1285		250	CMKE	1249
	15	CMCH	1285		30	CMKG	1176
	15	CMCM	1500	Tuinucu	250	CMKH	1327
	250	CMCN	1225		500	CMHC	790
	225	CMCO	660				
	600	CMCQ	1150	BERMUDA			
	20	CMCR	1285	Hamilton M-35	7.5	TJW	1490
	5	CMCT	1500				
	50	CMCU	1345	COSTA RICA			
	15	CMCY	1345	Heredia FF-23	75	NRH	948
	3150	CMK	730	San Jose FF-23	50	TIC	900
	250	CMQ	1150				
	1400	CMW	588				
	500	CMX	890				

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

Keys.	Meters	Call	City	Country	Keys.	Meters	Call	City	Country
150	2000	RYK	Kaunas	Lithuania	250	1200	TAL	Istanbul	Turkey
160	1875	.....	Huizen	Holland	256.4	1170	RW11	Tachkent	Russia
174	1724	.....	Paris	France	260	1153.8	.....	Kalundborg	Denmark
183.5	1635	.....	Konigs Westerhausen	Germany	260	1153.8	.....	Soro	Denmark
187.5	1600	RW14	Irkoutsk	Russia	260	1153.8	OXO	Skamlebak	Denmark
193	1554	TAE	Angora	Turkey	270	1111.1	SP1	Warsaw	Poland
193	1554	SXX	Daventry	Great Britain	272.7	1100	RW58	Moskva Imeni	Russia
202.6	1481	RW1	Moskva Noginsk	Russia	280	1071	.....	Hilversum	Holland
207.5	1444	.....	Paris	France	280	1071	PCF	Scheveningen	Holland
222.5	1348	SBG	Metala	Sweden	284.9	1053	RW7	Tifis	Russia
230.1	1304	RW49	Moskva Stchelkovo	Russia	297	1010	.....	Basel	Switzerland
235.2	1275	.....	Tunis-Kasbah	Tunis	300	1000	RW3	Leningrad	Russia
238	1260.5	RW8	Bakou	Russia	300	1000	RW53	Leningrad	Russia
238	1260.5	RW43	Bakou	Russia	310	967.7	RW60	Alma-Ata	Russia
238.1	1260	RW6	Novosibirsk	Russia	320	937.5	RW4	Kharkov	Russia
250	1200	SBE	Boden	Sweden	333.7	899.1	RW19	Achkhabad	Russia
					342.8	875	RW18	Samkand	Russia
					343	874.6	RW21	Erivan	Russia

Kcys.	Meters	Call	City	Country	Kcys.	Meters	Call	City	Country
353.5	848.7	RW12	Rostov-sur-le-Don	Russia	665	451	2FC	Sydney	Australia
363.6	825	RW5	Sverdlovsk	Russia	666.7	450	RW13	Odessa	Russia
368.1	815	RW9	Kiev	Russia	666.7	450	ZTJ	Johannesburg	South Africa
385.6	778	RW25	Voronej Goubernski	Russia	670	448	LP4	Buenos Aires	Argentina
389	770	SBF	Ostersund	Sweden	671	447	.....	Ecole Superieure	France
394	761.4	RW42	Nijni-Novgorod	Russia	671	447	LKA	Alesund	Norway
395	760	.....	Geneva	Switzerland	671	447	LKN	Nottdoden	Norway
414	724.6	.....	Rabat	Morocco	673	447	LBR	Rjukan	Norway
416.7	720	RW2	Moskva Opytnaia	Russia	675	445.9	1BO	Bolzano	Italy
421.3	712	RW47	Tachkent	Russia	675	444	VOWR	St. Johns	Newfoundl'd
428.6	700	RW10	Minak	Russia	676	443.8	RW23	Groznyj	Russia
434.8	690	RW35	Astrakhan	Russia	680	441	JOLK	Fukuoka	Japan
441	680	.....	Lausanne	Switzerland	680	441	1RO	Rome	Italy
444.4	675	RW22	Oufa	Russia	684.9	437	HJN	Bogota	Colombia
461.5	650	RW45	Orenbourg	Russia	686.5	437	RW46	Petropavlovsk	Russia
468.7	640	RW29	Petrozavodsk	Russia	689	435	SBA	Akmolinsk	Russia
471.7	636	RW44	Omsk	Russia	689	435	SCN	Stockholm	Sweden
					690	434.7	JODK	Malmberget	Sweden
					690	434.7	SP5	Keji	Japan
					690	434.7	6WF	Wilno	Poland
								Perth	Australia

500

700

511	587.1	RW30	Dnepropetrovsk	Russia	700	428.5	JOKK	Okayama	Japan
521.7	575	RW16	Samara	Russia	700	428.5	VPB	Colombo	Ceylon
527	569	.....	Freiburg Breisgau	Germany	704.2	426	RW20	Kharkov	Russia
527	569	LKH	Hamar	Norway	710	423	JOJK	Kanazawa	Japan
530	566	SP3	Krakow	Poland	710	423	LS1	Buenos Aires	Argentina
531	565	RW24	Smolensk	Russia	710	423	SP4	Katowice	Poland
536	560	.....	Augsburg	Germany	716	419	.....	Berlin	Germany
536	560	.....	Hanover	Germany	720	416.7	2YA	Wellington	New Zealand
550	545	HAL	Lakihegy	Hungary	720	416.7	5AD	Adelaide	Australia
550.5	545	RW17	Kazan	Russia	729.9	411	RW55	Pokrovsk	Russia
554	542	SBD	Sundsvall	Sweden	730	411	CX10	Montevideo	Uruguay
560	535.7	RW41	Veliki Oustug	Russia	730	411	5CL	Adelaide	Australia
563	533	.....	Munchen	Germany	738	406.5	ZTD	Durban	South Africa
572	524.6	YLZ	Riga	Latvia	743	403	.....	Berne	Switzerland
580	517	7ZL	Hobart	Australia	747.5	401	.....	Tallinn	Estonia
581	516.3	.....	Wien-Rosenhugel	Austria	748.1	401	RW51	Naltchek	Russia
587.1	511	RW50	Arnavir	Russia	750	400	.....	Mont de Marsan	France
590	508.5	ON4RB	Brussels	Belgium	750	400	JOBK	Oaaka	Japan
599	500.8	1MI	Milano	Italy	750	400	LR7	Buenos Aires	Argentina
					750	400	PRAA	Rio de Janeiro	Brazil
					750	400	PRAL	Sao Paulo	Brazil
					750	400	PRAP	Recife	Brazil
					750	400	6CK	Cork	Ireland
600	500	ZZG	Wanganui	New Zealand	752	399	5SC	Glasgow	Great Britain
600	500	ZZK	Wanganui	New Zealand	760	395	JQAK	Dairen	Japan
600	500	ZZR	Wanganui	New Zealand	760	395	4QG	Brisbane	Australia
603.6	497	RW31	Ivanovo-Voznesenak	Russia	769	394.2	.....	Bucuresti	Roumania
608	493.4	LKO	Oslo	Norway	769	390	VUM	Madras	British India
608	493.4	RW32	Stavropol	Russia	770	390	.....	Frankfurt, Main	Germany
617	487	.....	Praha	Cascho-slovakia	770	390	CX12	Montevideo	Uruguay
618.5	484	KZRM	Manilla	Philippine Is.	778	386	JOHK	Sandai	Japan
620	484	3AR	Melbourne	Australia	779	385.1	RW36	Arkhaughelak	Russia
621.1	483	RW40	Gomel	Russia	779	385.1	JOPK	Shizuoka	Japan
625	480	KZRM	Manila	Philippine Is.	788	380.7	SP6	Lwow	Poland
626	479	5GB	Daventry	Great Britain	790	380	1GE	Genoa	Italy
630	476.1	IZH	Hamilton	New Zealand	790	380	.....	Toulouse	France
630.2	476	RW52	Simferopol	Russia	790	380	JOGK	Kumamoto	Japan
635	472	.....	Langenberg	Germany	792.5	378.5	LR1	Buenos Aires	Argentina
635	472	JONK	Nagano	Japan	792.5	378.5	OAX	Lima	Peru
635.6	472	RW28	Vladivostok	Russia	792.5	378.5	RW37	Moskva Mospas	Russia
640	468.8	RW56	Penza	Russia	795.8	377	RW39	Moskva	Russia
644	465.8	OC	Lyon	France	795.8	377	RW27	Makhatch Kala	Russia
645.2	465	RW48	Tomsk	Russia	797	377	ZZY	Manchester	Great Britain
650	461.5	CX6	Montevideo	Uruguay					
650	461.5	RW33	Krasnodar	Russia					
650	461.5	4YA	Dunedin	New Zealand					
653	459	.....	Zurich	Switzerland	800	375	ZTC	Capetown	South Africa
662	453	.....	Klagenfurt	Austria	800	375	3LO	Melbourne	Australia
662	453	.....	Danzig	Germany	806	372	.....	Hamburg	Germany
662	453	LKD	Bodo Kringkaster	Norway	809.9	370.4	VUC	Calcutta	British India
662	453	LKM	Tromso	Norway	810	370	CX14	Montevideo	Uruguay
662	453	LKP	Porgrund	Norway	810	370	JOCK	Nagoya	Japan
662	453	LKT	Trondelag	Norway	810.8	370	RW26	Stalino	Russia
662	453	SCT	Uppsala	Sweden	815	368.1	LKF	Fredrikstad	Norway
662	453	1BT	Bolzano	Italy	820	366	ZZP	Waipoa	New Zealand
					824	364.1	LKB	Bergen	Norway

800

800	375	ZTC	Capetown	South Africa
800	375	3LO	Melbourne	Australia
806	372	.....	Hamburg	Germany
809.9	370.4	VUC	Calcutta	British India
810	370	CX14	Montevideo	Uruguay
810	370	JOCK	Nagoya	Japan
810.8	370	RW26	Stalino	Russia
815	368.1	LKF	Fredrikstad	Norway
820	366	ZZP	Waipoa	New Zealand
824	364.1	LKB	Bergen	Norway

Keys.	Meters	Call	City	Country	Keys.	Meters	Call	City	Country
825	363.7		Alger	France	1022	293		Limoges	France
830	361	JOJK	Sapporo	Japan	1025	292.6	2UE	Sydney	Australia
830	361	LR5	Buenos Aires	Argentina	1030	291.3	LR9	Buenos Aires	Argentina
833	360		Stuttgart	Germany	1035	290	EB4BQ	Keups Marchienne-Docherie	Belgium
833.3	360	PRAC	Rio de Janeiro	Brazil	1040	288.5	ZDE	Dundee	Great Britain
838	358	RW57	Tiraspol	Russia	1040	288.5	2EH	Edinburgh	Great Britain
840	357.1	VUB	Bombay	British India	1040	288.5	2LS	Bradford	Great Britain
842	356	ZLO	London	Great Britain	1040	288.5	5PY	Plymouth	Great Britain
850	353	CX16	Montevideo	Uruguay	1040	288.5	5SX	Swansea	Great Britain
850	353	JOFK	Hiroshima	Japan	1040	288.5	6BM	Bournemouth	Great Britain
851	352.5		Graz	Austria	1040	288.5	6FL	Sheffield	Great Britain
855	350.8	ZBL	Sydney	Australia	1040	288.5	6KH	Hull	Great Britain
857	350	ZBW	Hongkong	China	1040	288.5	6LV	Liverpool	Great Britain
857.1	350	HSP1	Bangkok	Siam	1040	288.5	6ST	Stoke on Trent	Great Britain
857.1	350	PRAE	Sao Paulo	Brazil	1049	286		Montpelier	France
857.1	350	PRAH	Bahia	Brazil	1050	285.7		Tartu	Estonia
857.1	350	PRAJ	Juiz de Fora	Brazil	1050	285.7	CX26	Montevideo	Uruguay
864.5	347	RW24	Platigorsk	Russia	1050	285.7	ZZF	Palmerston	New Zealand
869	345.2		Strasbourg	France	1050	285.7		Lyon	France
869.5	345		Shanghai	China	1051	285.8	RW54	Khabarovsk	Russia
870	345	JOAK	Tokio	Japan	1052.6	285		Innsbruck	Austria
870	345	LR2	Buenos Aires	Argentina	1058	284		Berlin	Germany
875	342.9	SP2	Poznan	Poland	1058	284		Magedburg	Germany
878	342		Brno	Czechoslovakia	1058	284		Stettin	Germany
					1058	284	SCR	Uddevalia	Sweden
882	340	PRAN	Curityba	Brazil	1058	284	SCU	Varberg	Sweden
882	340	VUL	Lahore	British India	1058	284		Kobenhavn	Denmark
890	337	CX18	Montevideo	Uruguay	1067	281.2		Liege	Belgium
890	337	VOGT	Bell Island	Newfoundl'd	1070	280	EB4RW	Buenos Aires	Argentina
890	337	7HO	Hobart	Australia	1070	280	L55	Sydney	Australia
					1070	280	ZKY	Shanghai	China
					1071	280	XXG	Bratislava	Czechoslovakia
					1076	279			

900

Keys.	Meters	Call	City	Country	Keys.	Meters	Call	City	Country
900	333.3	1YA	Auckland	New Zealand	1080	277.8	4ZB	Dunedin	New Zealand
905	331.4	1NA	Napoli	Italy	1080	277.8	4ZM	Dunedin	New Zealand
910	330	LR6	Buenos Aires	Argentina	1080	277.8	4ZO	Dunedin	New Zealand
914	328.2		Grenoble	France	1080	277.8	7LA	Launceston	Australia
919	326		Petit Parisien	France	1083	277	KSMS	Shanghai	China
920	326	PRAD	Pelotas	Brazil	1090	275	EB4RG	Gand	Belgium
923	325		Breslau	Germany	1090	275	PRAQ	Bello Horizonte	Brazil
930	322.6	CX20	Montevideo	Uruguay	1090	275	1ZB	Auckland	New Zealand
930	322.6	3UZ	Melbourne	Australia	1090.9	275	PRAG	Porto Alegre	Brazil
932	322	SBB	Goteborg	Sweden	1094	273.2	1TO	Torino	Italy
932	322	SCC	Falun	Sweden					
934.3	320	PRAB	Rio de Janeiro	Brazil					
934.3	320	PRAO	Sao Paulo	Brazil					
937.5	320	HSP3	Saladeng Bangkok	Siam	1100	272.7	7LA	Launceston	Australia
937.5	320	KZRC	Cebu	Philippine Is.	1103	272		Rennes	France
937.5	320	XGAH	Shanghai	China	1110	270.3	KZKA	Manila	Philippine Is.
940	319	KGU	Honolulu	Hawaii	1111	270	PRAZ	Franca	Brazil
940	319	2RN	Dublin	Ireland	1112	270		Kaiserslautern	Germany
941	319		Dresden	Germany	1112	270	SCF	Hudiksvall	Sweden
950	315.8		Marseilles	France	1112	270	SCO	Norrkoping	Sweden
950	315.8		Bremen	Germany	1112	270	SCQ	Trollhattan	Sweden
950	315.8	LR3	Buenos Aires	Argentina	1125	266.6	ZUW	Sydney	Australia
950	315.8	VONA	St. Johns	Newfoundl'd	1130	265.5		Lille	France
950	315.8	2GB	Sydney	Australia	1130	265.5	CX30	Montevideo	Uruguay
952	315	NKS	Shanghai	China	1139	263		Moravska Ostrava	Czechoslovakia
960	312.5	5DN	Adelaide	Australia					
963	311.5		Agen	France					
968	310	5WA	Cardiff	Great Britain	1140	263.2	CW30	Tacuarembó	Uruguay
970	309.3	CX22	Montevideo	Uruguay	1145	262	4BC	Brisbane	Australia
971	309		Vitus	France	1148	261	5NO	Newcastle-on-Tyne	Great Britain
980	306.1	3YA	Christchurch	New Zealand	1150	260	EB4GT	Brussels	Belgium
986	304.3		Bordeaux	France	1150	260.9	LR8	Buenos Aires	Argentina
990	303	LR4	Buenos Aires	Argentina	1153	260	ZZM	Gisborne	New Zealand
995	301	2BD	Aberdeen	Great Britain	1153.8	260	KZIB	Manila	Philippine Is.

1000

Keys.	Meters	Call	City	Country	Keys.	Meters	Call	City	Country
1000	300	GEC	Tientsin	China	1157	259			
1000	300	PRAS	Santos	Brazil	1160	258	4ZI	Invercargill	New Zealand
1000	300	PRAY	Mogy das Cruzes	Brazil	1160	258	47P	Invercargill	New Zealand
1004	298.8		Hilversum	Holland	1160	258	7HO	Hobart	Australia
1010	297	6ML	Perth	Australia	1166	257	SBH	Horby	Sweden
1016.9	295	PRAR	Sao Paulo	Brazil	1170	256	CX32	Montevideo	Uruguay
1020	294	4GR	Toowoomba	Australia	1175	255.3		Toulouse	France
1022	293		Kosice	Czechoslovakia	1180	254.2	CW32	Salto	Uruguay
					1180	254.2	ZZD	Masterton	New Zealand

Keys.	Meters	Call	City	Country	Keys.	Meters	Call	City	Country
1180	254.2	2ZQ	Masterton	New Zealand	1373	218	.....	Flensburg	Germany
1180	254.2	3DB	Melbourne	Australia	1373	218	SCK	Karlstad	Sweden
1180	254.2	6ML	Perth	Australia	1373	218	SCW	Ornskoldsvik	Sweden
1184	253	.....	Gleiwitz	Germany	1382	217	.....	Konigsberg	Germany
1190	252.1	LS2	Buenos Aires	Argentina	1390	215.8	LS9	Buenos Aires	Argentina
1190	252.1	1ZQ	Auckland	New Zealand	1391	216	SCE	Halmstad	Sweden
1195	250.1	.....	Montpellier	France	1395	215	EB4CF	Masson Verriers	Belgium
					1395	215	EB4RC	Schaerbeek	Belgium
								Brussels	

1200

1200	230	EB4ED	DeCaluwe	Belgium
1200	250	3ZC	Christchurch	New Zealand
1200	250	5KA	Adelaide	Australia
1206	248	.....	Juan les Pins	France
1210	247.9	CX34	Montevideo	Uruguay
1210	247.9	1ZM	Manurewa	New Zealand
1210	247.9	2ZE	Eketahuna	New Zealand
1211	247.7	1TR	Trieste	Italy
1220	246	.....	Linz Donau	Austria
1220	246	.....	Kassel	Germany
1220	246	.....	Bloemendaal	Holland
1220	246	CW34	Salto	Uruguay
1220	246	SCB	Eskilstuna	Sweden
1220	246	SCI	Kalmar	Sweden
1220	246	SCL	Kiruna	Sweden
1220	246	SCP	Saffle	Sweden
1220	246	2MV	Moss Vale	Australia
1220	246	4ZL	Dunedin	New Zealand
1229	233.8	SP7	Lodz	Poland
1230	243.9	LS8	Buenos Aires	Argentina
1230	243.9	2YB	New Plymouth	New Zealand
1238	242	2BE	Belfast	Great Britain
1245	241	2NC	Newcastle	Australia
1247	240	.....	Nimes	France
1247	240	LKS	Staranger	Norway
1250	240	CX36	Montevideo	Uruguay
1256	239	.....	Nurnberg	Germany
1260	238.1	CW36	Salto	Uruguay
1260	238.1	2ZH	Napier	New Zealand
1260	238.1	3WR	Wangaratta	Australia
1264	237.2	.....	Sud Ouest	France
1265	237	SCV	Orebro	Sweden
1270	236.2	LS3	Buenos Aires	Argentina
1274	235.5	LKK	Kristiansand	Norway
1276.5	235	.....	Shanghai	China
1290	232.6	CX38	Montevideo	Uruguay
1290	232.6	4BK	Brisbane	Australia
1292	232	.....	Kiel	Germany

1300

1300	230.8	CW38	Salto	Uruguay
1300	230.8	KZRC	Cebu	Philippine Is.
1300	230.8	3BA	Ballaret	Australia
1301	231	SCA	Boras	Sweden
1301	231	SBC	Malmo	Sweden
1301	231	SCG	Halsingborg	Sweden
1301	231	SCS	Umea	Sweden
1304	230	PRAM	Sao Paulo	Brazil
1305	230	EB4FO	Schaerbeek Brus-	Belgium
			sels	
1310	229	5AD	Adelaide	Australia
1319	227	.....	Aachen	Germany
1319	227	.....	Koln	Germany
1319	227	.....	Munster	Germany
1320	227.3	KGMB	Honolulu	Hawaii
1320	227.3	2AY	Albury	Australia
1330	225.6	CX40	Montevideo	Uruguay
1330	225.6	2ZI	Hastings	New Zealand
1330	225.6	2ZL	Hastings	New Zealand
1335	225	EB4EX	Houben Otto-	Belgium
			mont	
1340	223.9	CW40	Paysandu	Uruguay
1340	223.9	2XN	Lismore	Australia
1350	222.2	LS6	Buenos Aires	Argentina
1350	222.2	3KZ	Melbourne	Australia
1363.6	220	PRAF	Belem Para	Brazil
1364	220	PRAX	Rio de Janeiro	Brazil
1365	220	EB4CE	Lucas Chatelin-	Belgium
			eau	

1400

1400	214	SP8	Warsaw	Poland
1400	214	VOX	St. Johns	Newfoundland
1400	214	3GL	Geelong Victoria	Australia
1408	213.5	.....	Normandie	France
1410	212.8	CX44	Montevideo	Uruguay
1410	212.8	1PA	Palermo	Italy
1413	212	.....	Beziers	France
1415	212	2HD	Newcastle	Australia
1420	211.3	CW44	Paysandu	Uruguay
1430	210	EB4FG	Andre Dampremy	Belgium
1450	206.9	CX46	Montevideo	Uruguay
1460	205.4	2MV	Moss Vale	Australia
1470	204.1	SCD	Gavle	Sweden
1480	202.7	SCM	Kristinehamn	Sweden
1480	202.7	2AY	Albury	Australia
1490	201.3	CX48	Montevideo	Uruguay
1490	201.3	SCH	Jonkoping	Sweden

1500

1500	200	2LS	Leeds	Great Britain
1530	196	SCJ	Karlskrona	Sweden
4273.5	70.2	RW15	Khabarovsk	Russia
5000	60	XCTE	Shanghai	China
5514.7	54.4	RW38	Moskva Mosps	Russia
6000	50	RW59	Moskva Stchel-	Russia
			kovo	
6072	49.41	UOR2	Wien	Austria
6250	48	HKC	Bogota	Colombia
7300	41	HSP2	Bangkok	Siam
9520	31.51	.....	Lynby	Denmark
9520	31.51	OXZ	Skamlebak	Denmark
9590	31.28	PCI	Hillversum	Holland
11750	25.5	5SW	Chelmsford	Great Britain
14991	19.84	HVJ	Rome	Italy
17775	16.88	PHI	Huizen	Holland
51724	5.8	RW61	Moskva Vei	Russia

WGM Owner Arrested

Lee Elton Spencer, owner and operator of Station WGM, Jeanette, charged with operating without a license either for the station or himself, has been arrested upon charges filed by Federal radio inspectors.

The offense carries a possible sentence of five years' imprisonment, \$5,000 fine, or both.

Spencer is said to have been indicted last September at Erie on similar charges and was freed under \$2,500 bond. The station was quiet for a time, but soon became active again.

WGM has caused a decided howl in many receiving sets particularly with WABC, New York, and WHAS, Louisville.

HOW TO TUNE A SET CORRECTLY

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

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

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

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

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

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

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

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

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

We now have found that the dial numbers for 630 keys, are 72-70 and the dial numbers for 660 keys, are 69-67. If we now will set our dials for 70-68 it is obvious we will have our set tuned for 650 keys. We listen carefully and if they are on the air and within range of our set we will tune in WSM of Nashville at this point. We then enter the dial readings for WSM opposite 650 keys. Now it is

clear that if we reset our dials at 71-69 our set will be tuned to 640 keys, and at that point KF1 of Los Angeles will be heard, always assuming, of course, that it is on the air and within range of our particular set.

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

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

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

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

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

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

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters

EHQ	1900	Spokane, Wash.
WJLJ	1900	Lincoln, Neb.
WEEI	1900	Boston, Mass.
OWW	1900	Omaha, Neb.
WEMC	1900	Berrien Springs, Mich.

76	74
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Louis Warner, Inc.
University-Wesleyan University
Edison Elec. Illuminating Co.
Woodward of the World
Emmanuel Missionary College

600 kilocycles 499.7 meters

CFCH	330	Fresno Falls, Ore.
EFBU	600	Laramie, Wyo.
LECD	600	San Diego, Calif.
WCAO	600	Baltimore, Md.
WELW	600	Bechtel, W. Va.
WV	600	Portsmouth, Tenn.
WHIC	600	Memphis, Tenn.
WTIC	600	Harford, Conn.

75	73
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Abdell Fawar & Paper Co.
Bishop N. S. Thomas
Alfonso Realty Corp.
Monumental Radio Co., Inc.
Bethel College
Vaughan School of Music
WVAC, Inc.
Travelers Insurance Co.

610 kilocycles 491.5 meters

EFRC	1900	San Francisco, Calif.
WDAF	1900	Kansas City, Mo.
WFAN	1910	Philadelphia, Pa.
WOO	1910	Kansas City, Mo.

74	72
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Don Lee, Inc.
Samuel H. Starr Co.
Kavanaugh Broadcasting Co., Inc.
Crispen Bros., Inc.
Udley School of Christianity

620 kilocycles 483.6 meters

EFAD	300	Phoenix, Ariz.
LDW	1000	Portland, Ore.
WDAE	1000	Tampa, Fla.
WDDO	1000	Orlando, Fla.
WELC	1000	Dover-Forsyth, Mo.
WTMJ	1000	Minneapolis, Minn.

73	71
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Blosser Equipment Co.
Oregonian Publishing Co.
Tampa Publishing Co.
Rollins College, Inc.
Thompson & Co. Corp.
Minneapolis Journal

630 kilocycles 475.9 meters

CFCT	500	Virginia, S. C.
WAKR	500	Madison, S. D.
CNEA	500	Monroeville, N. S.
WV	500	Madison, S. D.
EFBU	500	Columbia, Mo.
CFB	500	Franklin, Ind.
WOS	500	Washington, D. C.
WOS	500	Jefferson City, Mo.

72	70
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Verona Broadcasting Ass'n.
Wintrop Radio Exchange
Central National Railway
Leahon Lyman
Richmond Publishing Co.
Transmission on the Air, Inc.
M. A. Leach Co.
State Marketing Bureau

640 kilocycles 468.5 meters

EF1	3000	Los Angeles, Calif.
WALU	3000	Columbus, Ohio

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Berts C. Anthony, Inc.
American Insurance Union

650 kilocycles 461.3 meters

WSM	600	Nashville, Tenn.
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70	68
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National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

WAAW	500	Omaha, Neb.
WEAF	50000	New York City

69	67
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Omaha Grain Exchange
National Broadcasting Co., Inc.

670 kilocycles 447.5 meters

WCAO	600	Chicago, Ill.
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68	66
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Chicago Daily News, Inc.

680 kilocycles 440.9 meters

EPQ	5000	San Francisco, Calif.
WPTF	5000	Raleigh, N. C.

67	65
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Metc. Bros. & The Chronicle
Burham Life Insurance Co.

I Will Train You at Home

to fill a

BIG PAID



Radio Job!

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

Here's Proof

8500 a week

"My earnings in Radio are many times greater than I ever expected they would be when I enrolled. They seldom fall under \$100 a week!"

F. E. WINDBORNE,
1414 W. 4th St.,
Norfolk, Va.

Jumped from \$55 to \$100 a week

"Before I entered Radio I was making \$55 a week. Last week I earned \$110.00 receiving and selling Radio!"

Give my address to N. R. I.

J. A. VAUGHN
8715 S. Kingshighway,
St. Louis, Mo.

\$500 extra in 6 months

"I had 7 more \$500 from January to May in my spare time. My best week brought me \$107. I should have taken it long ago."

BOYD MOORE
N. R. I. Box 812,
Indianapolis, Ind.

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 be 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 to a \$1,000,000,000 industry. Over 600,000 jobs have been created. Hundreds more are being opened every year by its continued growth. Men and young men with the right training—the kind of training I give you—are needed continually.

You have many jobs to choose from

Broadcasting stations use engineers, operators, station managers and pay \$1,000 to \$3,000 a year. Manufacturers continually need testers, inspectors, foremen, engineers, service men, buyers, for jobs paying up to \$15,000 a year. Shipping companies use hundreds of Radio operators, give them world wide travel at practically no expense and a salary of \$35 to \$200 a month. Dealers and jobbers employ service men, salesmen, buyers, managers, and pay \$30 to \$100 a 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 jobs, common in most every neighborhood, for spare time money. Throughout your course I send you information on servicing popular makes of sets; I give you the plans 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 Lessons and Instruction Service upon completing.

64-page book of information FREE

Get your copy today. It tells you where Radio's good jobs are, what they pay, tells you about my course, what others who have taken it are doing and making. Find out what Radio offers you, without the slightest obligation. ACT NOW.

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

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.

Back view of 5 tube Screen Grid A. C. tuned Radio frequency set—one of many circuits you can build with my outfits.



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City State

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