

THE OCTOBER 1931

RADIO INDEX

WHAT'S ON THE AIR TONIGHT?



25^c

What About the Pentode Tube?
Complete List of World Stations
by Countries

No. 52

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.

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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.

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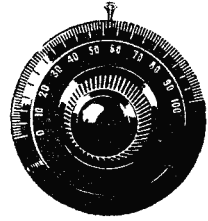
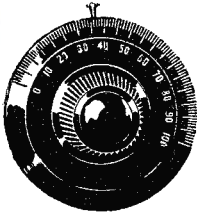
OCTOBER 1, 1931

RADIO IN DEX

REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER

Editor and Publisher



EIGHTH YEAR

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What about the PENTODE TUBE?

IT is a far cry from the first three-element (triode) radio tube developed in 1907 to the newest five-element (pentode) tube so widely acclaimed in 1931. This new power tube, which has taken the radio world by storm, has revolutionized the industry. It is just what its name implies—a thermionic tube consisting of five different electrodes and circuits. Within the tiny confines of the tube are placed a plate, filament, control-grid, screen-grid, and “suppressor” grid. The tube has been standardized by the type number -47. The prefix figure is determined by each individual manufacturer.

The first of the three-element tubes had been in use for many years before radio engineers brought out the four-element (tetrode) tube, which, in addition to the three essential circuits of the triode, was provided with a fourth electrode—the screen-grid. Immediately this tube became a favorite, especially in radio-frequency amplification work. But it had certain inherent faults. These are now overcome in the new multi or variable-mu tubes. Then scientists discovered that by adding still another, or fifth, element—the suppressor grid—the tube was capable of delivering to the loud speaker a large amount of power with a relatively weak input signal. The significance of this discovery will readily be seen.

Until recently the most satisfactory form of alternating current power tube was the -45 type. This tube went far to give good radio reception, but is now forced to stand aside for the new -47 pentode. The -45 tube required a rather powerful input voltage which called for one or more stages of audio amplification. But the new -47 pentode eliminates all extra stages and obtains its input voltage directly from the plate circuit of the detector tube. It then delivers a large quantity of amplified power without distortion directly into the speaker. The -47 tube is about four times as sensitive as the old -45 type, and twice as powerful.

Explanation by
B. Francis Dashiell

The pentode power tube is really a screen-grid tube fitted with an additional space-charge grid. It gives the same amplification as a -27 tube in the first stage and a -45 in the second and last stage. One pentode is equal to two standard stages of audio amplification. Most manufacturers are turning toward a single pentode for amplification, especially in the midget receivers. A pair of -45 tubes in a push-pull amplifier is obviously more powerful than a single pentode, but a first stage is necessary. A pair of -47 pentodes in push-pull eliminates this question and will give considerably more power than a pair of -45 tubes using the same hook-up. The use of a pair of pentodes in push-pull will give very high quality reproduction when operated directly from a power detector. The newer sets are using this combination with satisfaction. Between the detector and the pentodes a single tuned audio push-pull transformer is used.

Both the -47 and -45 tubes use 2.5 volts on the filament which in turn heats the cathode, and consume 1.5 amperes. The bulb dimensions are identical, being $5\frac{5}{8}$ inches high and $2\frac{3}{8}$ inches in diameter. But the -45 tube requires a large UX socket to receive its four prongs while the -47 pentode takes a standard UY socket for five prongs. The heater filament, plate and control-grid prongs and socket leads are the same as for the -27 type tube. The screen-grid lead, however, is brought out through the prong used for the cathode connection in cathode type tubes. The new suppressor grid of the pentode has no external connection through the tube base, for it is attached within the tube to the filament or cathode and assumes the potential of the filament. The pentode tube, therefore, is not interchangeable with the -45 tube unless difficult alterations are made within the set.

The five elements or circuits of the pentode tube require some elaboration in order that the reader may understand what is happening within the new tube.

The Five Elements

The filament. This is the "A" circuit of a battery tube, or the heater and cathode circuit of the a. c. tube. The filament is heated either by alternating or direct current. In the former case, however, the hot filament heats a separated cathode so as to eliminate the hum of the alternations within the filament. The cathode therefore becomes a source of electronic energy because streams of electrons—particles of negative electricity—pass across the space between the cathode and the plate. When this space conducts a great current of electricity the tube is said to have a large power output.

The plate. The "B" circuit of all tubes. This element is a positively charged electrode because it is connected to the positive terminal of the B battery or rectifier built in the set. The filament or cathode is connected to the negative end. When current flows between the filament and plate within the tube the circuit is completed. This flow will operate the speaker or some intervening resistor, inductance or transformer. Since power is furnished by the plate circuit it is known as the output circuit. When the output is considerable, such as in the case of the pentode, it reaches as much as 2.5 watts. Compare this with the small energy of only 7 milliwatts (.007 watts) of the tiny WD-11 tube!

The grid. The "C" circuit of most tubes. This grid is the controlling element for the flow of "B" or plate current; it continuously changes potential because of variations in the incoming signals. In turn, the grid becomes a "trigger" that controls the flow of electrons from the filament to the plate. These variations cause changing impulses which correspond to sound waves and, consequently, produce actual sound in the speaker. The control-grid is always placed between the filament and the plate. When the grid voltage is very small, but able to control large changes in the plate current or output of the tube, we then say that the tube has a

high *Mu*, which simply means a large amplification factor.

The screen-grid. The fourth element of a tetrode tube. It is a fine screen placed between the control-grid and the plate. Its purpose is to reduce the small but serious condenser-like capacity existing between the grid and the plate. It also prevents somewhat the flow of positive electricity in the form of ions



"Sammy Goldberg" himself! If you aren't listening regularly to "The Rise of the Goldbergs" (NBC-WEAF, daily 7:45-8:00 p.m., EST) you are missing one of the deservedly popular features. Alfred Corn, who plays the part of "Sammy," also acts in a number of other NBC dramatic programs.

from the plate back to the grid and filament and the creation of what is known as a space-charge. In the three-element tube there is a feed-back from the plate to the control-grid which causes squealing and howling in the speaker. The screen-grid of the tetrode tube is given a positive charge, but at a much lower potential than the plate. The filament-emitted electrons are pulled through the screen to the plate.

The suppressor-grid. This is the new and fifth element of the pentode tube. It is an additional grid placed in the narrow confines between the screen-grid and the plate. It has no external base
(Continued on page 24)

BRAIN TEASERS for RADIO FANS

Get your
November RADEX FREE

If this keeps on much longer, we will have to raise the white flag. We are nearly swamped with correct solutions for the puzzles that appeared in September. We thought one or two of these would surely hold our puzzlers, but we are beginning to think that nothing will, although that Mexican state in June did take a lot of them off the free list.

Evidently more and more of our readers are becoming intrigued by these radio puzzles. "Many thanks for RADEX and the joy that the puzzles bring," writes Arthur H. Hardy, Chicago. "Right or wrong, I certainly enjoy these puzzles. I read your magazine from cover to cover," is Harold L. King's comment (Groton, N. Y.). "Never worked so hard in my life to save a quarter but get a great kick out of your puzzles," says C. Eugene Perry, Van Wert, Ohio. "I was just about to give up in the 'state and principal city' puzzle when I happened to glance at the RADEX map. There was the solution staring me right in the face. That is about the best map I have ever had for radio use," comments T. J. Johnson, Bowlegs, Okla.

Now for the correct solutions of the September teasers. The calls in No. 1, the code puzzle, were XEFE-CFCF-KFEL-WEXL.

In No. 2, the correct order for the cross-call puzzle was as follows:

CRCK
WMPC
 WRAW
 CCPW
 WADC
 WRAK
 CNRW
 WELK
 GWWK

The code puzzle using station calls both ways translates to

XEX WBT CMCR CMK
XEW KTM KGIR KTBI

No. 4 was properly filled as follows:

CKCK
WKRC
KGEK
WGY

Unfortunately the last two could be solved in several different ways.

And here are the October puzzles which we respectfully refer to the class in radio problems. Get the correct solutions of all these puzzles to us by the 20th of October and receive a copy either of the November RADEX or the map of North America. Subscriptions may be extended one issue for correct solutions provided request is made. All calls used in these puzzles appeared in the regular indices of the September issue unless otherwise specified.

No. 1 this month is a code or cipher puzzle. It consists of four station calls. Each letter stands for one of the ten digits. You are to turn these letters into figures so that, added together, they give the sum as shown.

KFAB	CKGW
WGBC	WKBW

WGACA	DEBC

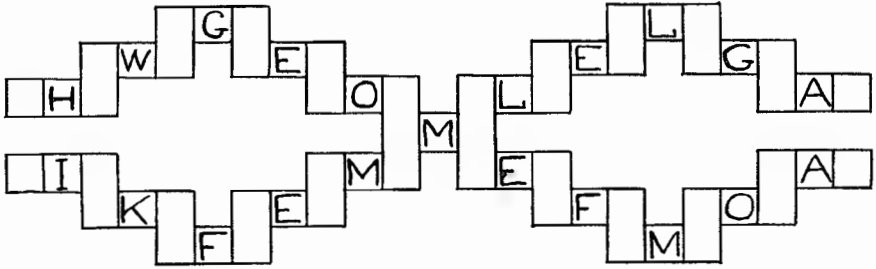
Just to give you a start: If A plus B equals C and B plus C equals A, what does B equal?

Problem No. 2 is a simple little thing with seven squares so arranged that when seven letters are filled in, seven station calls will appear, all reading left to right, no calls being reversed.

<input type="checkbox"/>		<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		<input type="checkbox"/>

No. 3 is another small problem in code. Each of the figures stands for a letter which, when properly deciphered, will give four station calls. All will read horizontally, left to right.

1234
1243
1432
1423



Problem No. 4 was submitted by Paul K. C. McAfee, Salina, Kans. One letter is to be placed in each of the twenty-two spaces so that twenty-one station calls will appear horizontally, reading left to right. No calls are reversed and none is used twice. This puzzle has been very well designed and should prove most interesting.

noise which is being measured. In operation the instrument is adjusted until the standard noise reads the same on the meter as the radio noise. The intensity is then read from a curve.

The portability of the instrument makes it readily applicable to tests in the field, in the home, or wherever the radio noise may occur.

Finding and Measuring Noises

A NEW device, called a "Radio Noise Meter," for the investigation of radio noise

THE world's most beautiful music comes to you every Sunday night during the Kellogg Slumber Hour, at 10:30 P.M. (Eastern Standard Time) Kellogg's Kaffee Hag Coffee and this beautiful music are real partners in bringing you restful sleep.

You may get the program over any of the N. B. C. Network of associated stations listed below:

- WJZ - - - - - New York
- WBZA - - - - - Boston
- WHAM - - - - - Rochester
- WBZ - - - - - Springfield
- KDKA - - - - - Pittsburgh
- WJR - - - - - Detroit
- WLW - - - - - Cincinnati
- WENR - - - - - Chicago
- KWK - - - - - St. Louis
- WREN - - - - - Kansas City
- KFI (10 P.M., P.C.T.) Los Angeles
- KOMO (10 P.M., P.C.T.) Seattle
- KOA (10:30 P.M., M.S.T.) Denver

may affect your ears in trouble caused by the intensity of the noise. Efforts under these conditions lack of a standard and the noise parison of investigators data upon requirements satisfied. Two parts—indicate the unit to

an aluminum standard

noise itself. By means of this it becomes possible to determine the intensity of the



"What is a reverse encore"? Here is Billy Scholtz demonstrating one while Phil Brae unlooses a "Mammy" song in the approved manner. Formerly known as "The Jolly Juglers," the pair is now heard as "Doc and Tony" each Thursday at 6:30 p.m. EST over Columbia.

Simple ANSWERS to Difficult QUESTIONS

B. Francis Dashiell
Technical Editor

Power Houses Ruin Reception

I live within two blocks of two power houses from which I get considerable noise on my new Atwater Kent receiver. Can you advise me what to do? I have heard that filters will stop this interference.

It is questionable whether the noise from the power house can be eliminated, for such interferences are best fought at the source. Even then a sensitive receiver will pick up entirely too much of this form of static. Perhaps it would be wise to talk the matter over with the chief electrician of the plants to see whether remedial measures can be attempted.

There are a number of static and noise filters on the market. It is obvious that we cannot recommend any one of them as being suitable. The performances of noise filters are far from being satisfactory, and, because they connect between the antenna and receiver, tend to diminish the strength of the signals being received. Rather fair results are claimed for buried or "subantennas." Also, devices known as capacity aerials, which take the place of outdoor antennas, are said to reduce external noises and increase the selectivity of the set.

It is suggested that, as an experiment on your part, you reduce the length of your antenna by at least one-half. It should not be pointed toward the power plant, but at right angles to a line connecting the receiver and the plants.

Super-Heterodyne and Standard Circuits

What is the difference between the circuit used in a superheterodyne receiver and that used in most other types of standard receivers?

The super-heterodyne method of reception is entirely different from any other. Current is generated by a local oscillating tube which, when combined with the original signal current, is converted into a "beat" or intermediate frequency current. This beat current, which is low in frequency, can be ampli-

fied almost indefinitely with little loss. It then passes into a detector tube, as well as audio-amplifying tubes, before entering the loud speaker. The frequency of the beat current is the numerical difference of the combining frequencies of the oscillator and incoming signal currents. The entire radio-frequency circuit of the super-heterodyne receiver is set for a single frequency and this state of resonance is permanent. The great sensitivity of the super-heterodyne is due to the fact that the local oscillator tube forces the incoming weak signals through the receiver by producing an extremely powerful beat current.

The so-called standard circuits make no provision for intensified heterodyne currents. The signal comes in the antenna and is passed through the radio-frequency coils by tuning them to resonance for the desired signal. Each tube takes up the signal and passes it along for additional amplification until it reaches the loud speaker. The super-heterodyne circuit is the most powerful and sensitive of all radio receiving circuits.

Variable-Mu Tubes

What are the advantages of the new multi-mu tubes over the older types. Can I change over to the new tubes?

The advantage of the new variable-mu tube (Type -35) over the older type -24 tube is that its amplification is controlled not by the screen-grid voltage, but by variations in the "C" or negative bias. The range of "C" bias is from -3 to -50 volts. The lower this negative voltage the greater the volume of the tube. The -35 variable-mu tetrode tube has been designed to eliminate the defects of the -24 tube. These defects were distortion, cross-talk, and other modulation disturbances, due to the large number of broadcasting stations operating at one time and the inability of most receivers entirely to separate stations so close together. The new -35 (some manufacturers use type number -51) tube also reduces the hum and receiver noises.

No changes are required in the receiver when switching over to the new tubes in place of the -24 type other than the matter of furnishing the proper grid bias required for volume control. This calls for a slight alteration in circuit wiring depending upon the particular scheme used in individual receivers.

Pentode Tube Superiority

Is a set with one pentode tube better than one having two other tubes?

You will find a complete answer to your question in the article on the pentode tube elsewhere in this issue of RADEX.

Radio Corporation of America

What does the expression "Licensed by RCA" mean when marked on radio receivers and other apparatus?

As is the case in most large industries the control of valuable patents and rights eventually becomes vested in the hands of some parent organization. The Radio Corporation of America is the controlling industry in the radio world. It has bought in many of the essential patents. If a manufacturer wishes to build and sell some piece of radio apparatus he must first obtain the permission of the Radio Corporation of America if that organization holds the rights to the circuits, tubes, and methods employed in the new proposition. In this case the manufacturer or person pays a stated royalty to the Radio Corporation of America. In some few cases prolonged fights in the law courts of America have resulted from revolt at paying tribute in order to use radio methods and inventions.

Our Short Wave Adapter

In the May issue of RADEX you published a diagram of a short wave adapter using the -27 tube for detector. My set uses a -24 tube for detector. How can I construct an adapter for this tube? What changes will be necessary in your diagram?

No changes are necessary to operate this adapter whether the receiver uses a -24 screen-grid detector or a -27 detector. The prongs and socket connections for both tubes are identical as far as this short wave set is concerned. The grid prong of the adapter plug is left open



Major Edward Boves in the spotlight. The popular managing director of the Capitol Theater recently celebrated his sixth anniversary of broadcasting. With the Capitol Family each Friday evening at 7:00 p.m. EST over the NBC-WEAF network.

when the -27 detector is used. This same prong on the -24 tube is the screen-grid, and the corresponding hole in the socket is the positive lead to the screen-grid. These connections are not used. The adapter plug connects only to the two heater leads, the plate, and the cathode. But you must procure a -27 detector tube to use in the detector socket of the short wave set. Note the answer to a question on page 8 of the September issue of RADEX regarding a correction in the design of the plug-in coils.

Lightning Arresters

Should I keep my lightning arrester in the circuit all year? Will it prevent the flow of electrostatic fields during winter and summer, and filter out static? My arrester has a choke coil and condenser mounted within.

It makes no difference whether the arrester remains in the antenna and receiver circuit all year or not. Provided

(Continued on page 25)

WHAT'S DOING IN DX?

Readers' Reports and Chatty Comment

SINCE writing you last I have had verifications from JOAK Tokio, Japan, and from 2FC and 2BL Sydney, Australia," advises Hugo L. Markland, P. O. Box 232, Steamboat Springs, Colo. "I asked JOAK for a list of Japanese stations as RADEX did not have a Japanese station listed in the vicinity of 600 kcs. and I continued to get the call letters of JOAK close to that frequency. However the list furnished cleared that up as a twin station of JOAK has an experimental wave at 590 kcs." Mr. Markland constructed a little crystal set on which he receives WOAI San Antonio about six hundred miles away.

"I have two stations from over the Atlantic, namely 2LO London and Stuttgart, Germany (no call letters), both verified," reports Clyde Ham, 1002 S. Lafayette St., Shelby, N. C. "The best time is around 5:30 to 6:30 a.m. EST. My log is around 450 stations now. I started verifying all the best catches in 1928 and they run like this: JOGK Kuamoto, KGBU Alaska, KGMB Honolulu, CKMO Vancouver, VAS Nova Scotia, CFCY P. E. I., WKAQ Porto Rico. I have a verification due me from JOIK. Have heard KGU but failed to get enough for verification."

Some Good Records

"Although I live away up here in Maine, I have picked up 231 stations," says Carl Hansman, Bethel, Maine. KOA Denver, KSL Salt Lake, KFI Los Angeles, XED Reynosa, and XEN, XEW and XEB are among his catches. "Although I live quite near WKAQ Laconia, N. H., I have been able to hear it well only a few times," comments Mr. Hansman. "I often hear it heterodyning with WNBK New Bedford. It seems to be on the air from 7:30 to 9:00 p.m. every day but Sunday, when it doesn't go on at all."

"With a Radiola 46—and RADEX—I have logged 370 stations in the last 15

months," reports Chester Dodge, Lexington, Nebr. JOAK, VAS and 2YA are included.

Harold E. Shade, 611 Washington St., Waterloo, Iowa, has a verification from the unlicensed KTST Seymour, Texas, which is using 1210 kcs. and 50 watts without permission of the Radio Commission. He needs Nevada, Vermont and Delaware to complete his geography. Mr. Shade uses for a ground a ten-foot pipe driven into the ground about nine feet. This pipe he keeps filled with water, the lower end being plugged.

E. L. Peters, Box 65, Westport, Nova Scotia, has logged 530 stations with his Crosley three-tube including the station in Stuttgart, Germany, which came in at one a.m. AST. Mr. Peters would like to know who won the cash prizes for distance that were offered by XEH Monterrey, Mexico. The broadcast was on March 4th. Mr. Peters received a verification but never heard about the prize.

George B. Holland, Jr., 1340 Baker Ave., Schenectady, reports the same situation with WOKO and WHEC as referred to in another item respecting WWVA and WOWO. The same explanation will cover. "I now have a log of 251 stations," adds Mr. Holland. "I have only eight on the West Coast but hope to remedy that this winter. I notice that the 910 and 1030 channels seem to be stickers with many DXers. The highest frequency, 1500, seems to be rather tough too."

"From October 15th, 1930, until March 24th," writes Paul K. C. McAfee, R. F. D. 4, Salina, Kansas, "I succeeded in logging 414 broadcasting stations on my Philco 9. This list is made up entirely of recognized broadcasting stations. I have fifteen Mexicans, four Cubans, Porto Rico, Six Japanese, one Argentine, one Australian, one New Zealand and ZBW in Hong Kong."

Benjamin Contreras, Box 74. Marina Sta., Mayaguez, Porto Rico, writes: "I have had my Majestic eight-tube super-heterodyne since last February and

since that time, although atmospheric conditions have been very bad, I have been able to hook 115 stations located in nine different countries. My best catch is LR3, a 1000-watt station in Buenos Aires, Argentina" Mr. Contreras agrees "it doubles the pleasure of radio"

Chas. E. Summers, Sr., of 28 Gallatin Ave., Buffalo, N. Y., reports he has logged about 300 stations since last March, his best catch being KFPM Greenville, Texas, on fifteen watts. He has had trouble getting verifications from over forty stations all of which advise that they verify.

"I have been using RADEX since I bought my 1928 Model 70 Majestic and I have over 300 stations, including 44

states, Mexico, Cuba, Haiti and Canada. I have 59 of the CBS and all but KECA and KOMO of the NBC," reports Andrew F. Crane, Jr., 703 American Bldg., Baltimore, Md.

E. Black, Jr., 576 Manor Lane, Pelham, N. Y., has had 213 stations in the BC band and reports he nearly had heart failure when he tuned in 2BL Sydney, Australia at 5:30 a.m. recently on a second-hand Radiola he had just bought. Mr. Black would like to correspond with DXers anywhere.

"Under a great handicap of a near-by railroad division headquarters with lots of interference, I have logged 290 stations in the last seven months with my RCA 82," writes Richard Walker,

(Continued on page 27)

The Ponce Sisters are one of the most successful harmonizing "sister teams" on the air. They have risen steadily since they began broadcasting a few years ago. They have made a number of feature shorts for talking pictures. Frequently heard in NBC-WJZ programs. (Dorothea is on the left and Ethel on the right.)



The "WHY" of CALL LETTERS

Their Origin and History Traced

By L. A. Corridon

Radio Division, U. S. Dept. of Commerce

NO doubt there are thousands of radio enthusiasts who have deliberated as to why call letters are assigned to radio stations, especially broadcasting stations, and as to what significance there is in the different groups of these letters.

In the early days of radio, or wireless, as this science of communication at one time was called, there was not very much system in the use of these calls for station identification.

After the establishment of the Radio Division of the Department of Commerce, on July 1, 1911, to enforce the provisions of the Radio Act of June 24, 1910, which was the first radio act enacted in the United States and following the ratification of the Berlin Convention of 1908, this country was allocated all combinations beginning with N, W and all of the K combinations with the exception of certain calls then assigned to stations of other countries. Subsequently, all the K, N and W calls, with the exception of the groups beginning with KA, KB and KC, were reserved for the United States.

The Radio Division, in order that the identification of stations may more readily be ascertained, allocated all K calls to land stations on the Pacific coast and to ships plying the Atlantic Ocean and Gulf of Mexico stations. The W calls were allocated to Atlantic and Gulf coast stations and stations on the Great Lakes. Ships plying the Pacific Ocean were also assigned W calls. This practice worked smoothly until the opening of the Panama Canal. From that time on, with ships going from one ocean to the other, either K or W calls were of necessity used and assigned to vessels in both oceans.

During the infancy of radio practically all land stations were on the coast, as all communication was done between ship-to-shore stations, there being no point-to-point communication between sta-

tions within the country. K calls at the time of the beginning of broadcasting were assigned to inland stations east or west of the Mississippi River; however, after the first broadcasting stations were erected, that river was made the dividing line of K and W calls. KDKA, East Pittsburgh, and KYW, Chicago, are among the pioneer broadcasting stations which accounts for these stations having K calls assigned to them.

Along about 1917, when this country entered the world conflict, the call combination of three letters were exhausted, making it necessary for the grouping of an additional letter. The International Radiotelegraph Conference held at Washington in 1927 allocated the remaining combinations beginning with KA, KB and KC to the United States, due to the arrangement decided upon to assign only three-letter calls to stations in the international service, that is, land stations communicating with ships at sea and land stations communicating with foreign countries. The number of stations of this category had increased tremendously. Four-letter calls under the Convention are now assigned to ships and land stations in domestic point-to-point service and five-letter calls are given to radio-equipped aircraft.

Fitting Calls to Stations

Shortly after the inception of broadcasting, the idea of giving calls to broadcasting stations that would have some special significance was conceived and, to begin with, assigned KOP to a station of the Detroit police department which since then has been placed out of commission. With the popularity of this call came a deluge of requests for calls designating the initials of a slogan, the owner's name, the name of a city, or state in which a station may be located. The station of the Radio Corporation in Washington, asked for WRC, which readily can be seen to stand for Washington Radio Corporation. Then along came a number of others, including WGN, Chicago, which stands for the slogan of the Chicago Tribune; WCCO,

St. Paul, Washburn-Crosby Co.; WACO, Waco, Texas, as one can observe, spells the name of the city in which this station is located; WJJD, Mooseheart, Ill., forgetting the initial letter which must be assigned, stands for James J. Davis, Director General of the Loyal Order of Moose, former Secretary of Labor and now junior Senator from Pennsylvania; WMMN, Fairmount, W. Va., stands for Senator Mansfield M. Neely, of that state; WGP, Atlantic City, World's Greatest playground, is very appropriate.

stormy experiences. KGB, now assigned to a station, the transmitter of which is located in San Diego and the studio in Los Angeles, was at one time used by the steamer *D. N. Luckenbach*, sunk by a submarine off the French coast in 1917. KOB, State College, New Mexico, was formerly used by the steam screw *Princess Anne* up to the time she broke in two on Rockaway Shoals, New York, with a cargo loss of \$500,000. Radio played an important part in the rescue of the 106 persons on board.



Miss Lee Morse, one of the leading exponents of blues and southern Mammy songs. Formerly a musical comedy star, she has made dozens of phonograph records and appeared in a number of motion pictures. Scheduled for several NBC programs.

There are many others using exceptionally appropriate calls. In Florida, at Miami Beach, officials could not assign the call requested, but, thinking of Florida's semi-tropical climate, assigned WIOD which became the initial letters of that station's slogan, viz., "Wonderful Isle of Dreams." The corporate name of this station is now Isle of Dreams Broadcasting Company. A number of broadcasting stations which are incorporated have used their call letters for their corporate name or as the name of ownership.

A number of the calls used today were formerly assigned to stations now out of existence, some of which have had

In each of the three-letter call groups allocated, it will be seen that there are 676 combinations and in each of the four-letter groups there are 26 times that number, or 17,576, making a total of 54,756 combinations available for assignment to United States stations.

With the growth of aviation and the installation of radio transmitting equipment on the larger mail and passenger aircraft, all calls beginning with the letters KH were reserved for stations of this class. In addition to KH call signals of aircraft must have three other letters, making a total of five letters in the complete signal.

PHIL COOK



PHIL COOK grins at his own jokes. So do other people, so it is all right. He has to work hard to be funny, but that's understandable, too, when one remembers that he writes two original fifteen-minute radio programs every day but Sunday.

Two years ago he almost deserted the National Broadcasting Company because he didn't have enough work to do. Then he decided to stick around and see what happened. Today, he is one of the highest-salaried radio stars.

He never went to college, but he is big enough to wear a 'coon skin coat. He's six feet up and down and could play guard on any football team. No excess fat, either.

Married. Crazy about his wife. They met when they were in grammar school in East Orange, N. J. Been sweethearts ever since, and will soon celebrate their fifteenth wedding anniversary. Have a daughter not quite a year old. Named her Phyllis, because if the baby had been a boy, Mrs. Cook was going to call it Phil, Jr. Cook gets slightly incoherent

when he talks about his child. Almost misses engagements because he forgets time when he plays with her.

Will only buy one pair of shoes at a time. When they wear out buys another pair. Insists on soft, plain-toe shoes. Indifferent about his clothes, but is always well dressed because Mrs. Cook insists.

Played the violin when he was a youngster and still plays it. His parents thought he would be a second Kreisler, but he earned his first pay-check as a commercial artist. Made a good living at commercial art and played around with writing in his spare time. Wrote musical comedies and three of them had Broadway runs.

Says he went into radio to surprise his family. Started as a ukulele player. His present instrument looks like the result of a mating between a uke and a mandolin. It's called a tiple.

He was born in Coldwater, Mich., but East Orange is still the old home town to him.

Lets his wife handle all his finances and draws enough cash to pay for lunches, car fare and cigarettes. Saving his money and hopes to retire and spend the rest of his life painting worthwhile pictures.

Admits some of his jokes are terrible, but claims that the percentage of people who will laugh at anything is surprisingly high.

Writes all the songs he sings in his programs. Once made claim he had never sung anything but his own material. Records show he once sang "Home, Sweet Home" at a radio banquet.

Has a slight choke in his voice that he uses effectively. When he is broadcasting keeps one eye on the man in the control room. If he can make that hard-boiled person smile or laugh, he knows he is clicking. Works his own sound effects whenever possible and uses his voice for a ferry boat whistle.

Seldom takes less than six characters during a broadcast. Rings the various characters with different colored pencil marks in order to keep them straight. Writes his own stuff, using the "hunt-

and-peck" system, and doesn't make a carbon copy.

Is one of the best-looking men in radio, but isn't conscious of it. Speaks very softly at all times. Grins a lot and remembers faces.

Some day he plans to write a book of stories for children and do his own illustrations.

He doesn't belong to any clubs or organizations. Has a prejudice against "jining."

Tries to read all his own fan mail and lets his wife read it. Even the mash notes.

Does his work at all hours of the day and night and even writes lyrics on the subway.

Doesn't like making personal appearances and hates to put on make-up.

He sits down when he broadcasts.

His favorite gag is the one he uses every day. "All the News That's Print to Fit." Gets fifteen letters a week telling him he is still making the same mistake on that phrase.

Whistles during his broadcast, but if something strikes him as funny, he has to smile so he has an understudy available if his whistle is erased by a grin.

Eats his breakfast between his two broadcasts in the morning. Likes lots of coffee.

He likes to work.

Light on LKO at Oslo

THE following interesting comment on foreign station reception comes from Don Townsend, 1421 Arch Street, Berkeley, Calif.

"I have a letter from radio headquarters at Oslo, Norway, which reads as follows: "There never was a station LKO at Oslo operating on 608 kcs. In fact, there is not and never was any station in Oslo operating on the regular broadcast band. Our high-powered Oslo station, using 75 kilowatts operates on the low frequency of 280 kilocycles, and hence cannot be received in America. Furthermore *no European stations announce call letters, aside from commercial code*

stations. We are sure that there must be some mistake about anybody ever having heard a station LKO at Oslo, and are positive that no verification has ever been sent out for such a station. Our relay station at Trondheim, on whose program you have reported, operates on 608 kilocycles with only 13.5 kilowatts, so your reception is remarkable indeed considering the vast stretch of land between the statue of Liberty and the Golden Gate."

"Those fans who have heard a station that they believe to be Oslo on 608 meters and have no verification might try writing to Trondheim for one, as it might have been that station they heard instead of Oslo. They sent me a very nice verification together with a complete list of Europe's two hundred and forty odd broadcasting stations in operation at the present time with their wave length and power. At any rate, the above letter seems to establish the fact definitely that there is not and never was any high-powered station at Oslo, and I am quite sure it is correct coming directly from the Norwegian radio headquarters at Oslo.

"Although I have received eight European stations with verifications for the six mentioned above, all three of my aeriels are strongly favorable to Australia and trans-Pacific stations. This, together with a favorable location out here on the coast has been largely responsible for the sixteen stations in Australia which I have verified—every one of them during the last year. Station 3.G.L., at Geelong, Victoria, Australia, has asked me to mention their station to my radio friends, and ask them to report on their programs if they are successful in picking them up. Although they say they are only using 50 watts of power, they have a wonderful location, and come in over here as loud as 3.A.R. who uses 5000. They are operating on 214.2 meters daily from 1:15 to 4:30 a.m. A verification that is well above the ordinary, it is well worth the trouble of reporting to them should any fans succeed in picking them up. Reception on all Australian stations is at its best around 3:00 to 3:30 a.m., PST."

RADIO NEWS from Our Readers

WHY do you not list programs from the NBC key studios in Chicago which are WLS in the daytime and WENR during the evening," asks Lorne Chaput, Kapuskasing, Ont. "During a recent talk they claimed to have stations assigned to their network." While the greater part of the NBC features take the air through WEAf and WJZ and are carried to other stations on the network by telephone wires, yet many of their programs originate in Chicago studios. Many others are picked up in various other cities such as Salt Lake City, Cleveland and others. It is immaterial where a program originates. No one can possibly tell whether it is taking the air from Chicago and then going to New York by wire or going to New York by wire first and thence to Chicago by wire again. The programs come from all stations on the net simultaneously. RADEX enters all programs for which it has space regardless of where they may originate. To print all the programs of the NBC and CBS chains would require every page of this magazine. We must necessarily eliminate some of them giving preference to those during the evening hours and those with five or more stations on the chain.

Experiments With Grounds

G. A. Doerflinger, 419 Wyomissing Blvd., Berkshire Heights, Pa., has been conducting very extensive experiments with grounds. Among those he has tried are the cold-water pipe, Ford radiator, copper fire extinguishers, U. S. Standard, 12-way pipe, iron pipe filled with water, iron pipe filled with salt, B-batteries, A-battery and copper plate buried in rock salt. "About a month ago," he writes, "I decided to try Ollie Ross' ground of copper tubing and test it against some of the grounds I have experimented with. In direct competitive tests this ground gave an extremely low background noise—almost negligible. The reason lies in the condenser effect which takes place after signal has passed through receiver to ground. The

What the Mail Man Brings Us

Ross ground has a high degree of sensitivity and selectivity with tonal quality beyond compare. I can readily see where a large part of Mr. Ross' success in his DX record lay as this ground combines several excellent features which make it revolutionary. It is the closest thing to perfection I have experimented with so far. I would like to say in behalf of Mr. Ross: 'He knows his radio!'

Dr. Brinkley's New Station

In spite of the statement of the builders of his new station, as published in the June RADEX, Dr. John R. Brinkley, former owner of KFKB, Milford, Kansas, denies that he has any intention of operating his new Mexican station on WDAF's frequency. Mr. Eugene Martin, Radio Editor of the *Wichita Eagle*, sends us a clipping of an interview with Brinkley in which he says: "How anybody could think that Mrs. Brinkley and I would disgrace ourselves by usings 610 kcs. is more than I can understand." The new Brinkley station, XER, will have a split frequency, 665 kcs., thus coming halfway between WEAf on 660 and WMAQ on 670. The station is licensed by the Mexican government for 100,000 watts, but will go on the air with 65,000, thus making it the most powerful station on the continent. It is now being installed at Villa Acuna on the south bank of the Rio Grande, with studios on both the American and Mexican sides. The opening date is set for early October.

The Ross Record

A defense of the record of Ollie Ross comes from David F. Thomas, Proctorville, Ohio, himself a prominent DXer, when he writes:

"A word about total number of stations that our friend Mr. Ollie Ross claims. Some of your readers seem to be of the opinion that this includes every station in the world on the broadcast band. Mr. Ross could add several hundred more and still not have *all stations that broadcast on the broadcast*

band. How many of your readers ever had FN on the broadcast band? WKK, DV, GI, VAR, OA, DD and dozens of others. How many ever had AW5, BEI and several more located right here in the United States, using special call letters, besides N, W or K. These are all licensed stations, not amateur nor experimental. So you see it was easy for Mr. Ross to log 1309 or even more stations on the broadcast band. He is an honest DXer I am sure, if not, he would never have admitted that he traveled all over the country.

Two Stations at Once

"Why do WOWO Ft. Wayne and WWVA Wheeling, broadcast at the same time in the evenings when they are both on the same wave length?" inquires Robt. L. Rankins, 116 Holmes Ave., Springfield, Ohio. "Eight o'clock p.m. and the Camel Quarter Hour is just ended and I can't tell which station broadcast it is as both stations announced at the same time." Many stations operating on the same wave are given permission to broadcast simultaneously during the daytime. After a certain hour they must divide time. This hour is later in summer than in winter. After September first the division of time between WOWO and WWVA is as follows:

DAY: Both stations operate simultaneously until 6:45 p.m. EST.

NIGHT: WWVA operates alone from 6:45 p.m. to 8:30 p.m. EST daily and from 10:30 p.m. to 1:00 a.m. EST on Mondays, Wednesdays and Saturdays. WOWO operates alone daily except Sunday from 8:30 to 10:30 p.m. EST and from 10:30 p.m. to 1:00 a.m. on Sundays, Tuesdays, Thursdays and Fridays.

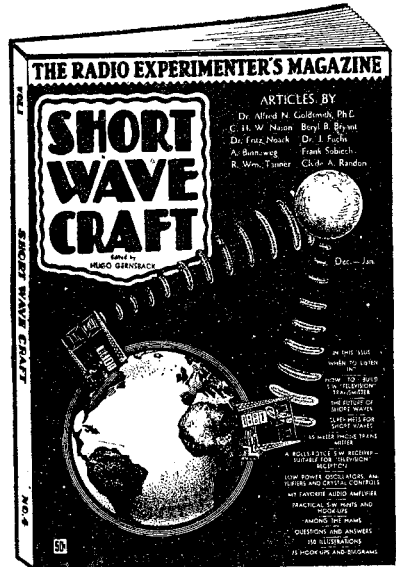
"I wonder if any one else has had this experience when DXing," asks 'Miss B.', of Illinois. "About 9:30 p.m. Sunday, August 16th, I tuned in WGY. Almost at once I heard a voice say 'From the NBC in New York' followed by two other voices, one 'This is KGO San Francisco, California' and the other 'WGY Schenectady, New York.' Evidently it was a chain broadcast taken by both KGO and WGY, and I, near

(Continued on page 28)

The Radio Experimenter's MAGAZINE

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

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TED HUSING



WHEN Queen Marie of Roumania got lost in New York on her way to the studios of the Columbia Broadcasting System, Ted Husing took the microphone and filled the awkward moment with a flow of lively chatter which completely satisfied a large and expectant audience. Columbia sat back beaming and said with pride, "Our Ted." When Helen Morgan was ill at ease before broadcasting for Columbia, Husing—judge of human nature and connoisseur of celebrities—made La Morgan comfortable by slipping a piano beneath her and a handkerchief in her hand.

Not many years, but much experience, has developed in him this trick of doing the right thing at the right moment. Edward Britt Husing was born twenty-eight years ago in a town just nicely inside the border at Deming, N. M. He grew up in Gloversville, N. Y.

Here young Ted developed sturdy lungs and an active body. The Erie canal, built for shipping, is equally excellent for swimming and skating. It

was only a step to the banks of the canal and Ted was in the thick of everything—swimming, wrestling, boxing, football and baseball. He became the leader of his gang and Husing's gang won all the Gloversville championships.

When his family moved to New York, Ted went to Stuyvesant High School. In spite of the fact that he had to study hard he starred at baseball, basketball, soccer and football. Football was his forte. Twice in succession he was selected as all-scholastic center.

When he was preparing to enter college, the United States went into the World War. Ted added a few years to his age and landed not on the western front, but in the intelligence service on Governor's Island, New York, where he distinguished himself as a boxer and was retained to teach other soldiers to box. The Armistice left him without a single inspiration for the future. College he considered out of the question and business he would not consider.

For a year he played professional football and basketball, but gave it up to sell furniture. He had not mastered the quick jab and thrust of his fighting tongue and was fired when his employer found it was easier for him to dance for his customers than to sell chairs. His next job was teaching aviation to the New York police force. This came to an abrupt end in a smash when his ship slipped out of control and went into a nose dive. The future announcer emerged dripping mud and pollywogs.

Real Estate to Radio

Still in search of a vocation edged with excitement, Husing went to Florida. Instead of selling real estate, however, he taught gymnastics and Charleston dancing.

The call of the South soon palled and Husing headed back to New York. He arrived in time to join 609 other applicants for the job of announcer at station WJZ. He got the job and his success was immediate. Within six months he was introducing the President of the United States to 50,000,000 people. He became one of the speediest "ad lib" announcers in the country. The secret of his tre-

mendous speed is softness of tone.

Ted likes to regulate his pace to the tempo of the event he is describing. He has kept up with the whistle during a basketball game, one of the fastest of sports. In the studio one day, he improvised an imaginary prize fight for the entertainment of visitors. So convincing was his performance that his listeners placed bets on the outcome.

Husing regards his report of the Floyd Bennett funeral as his best achievement in radio work. It was almost an impossible task at the outset. The plans were made only the evening before and permission had to be obtained from Government officials, the director of Arlington Cemetery and Mrs. Bennett.

On the morning of the funeral he

received Mrs. Bennett's wired consent, whereupon he hastened to Arlington to supervise the laying of 17,000 feet of wire over hill, stream, and forest to the nearest transmitter. From a small tent, which offered scanty shelter from the wind and rain, and with his hat shielding the microphone, Husing gave an unforgettable description of the ceremonies. Thousands of letters were received from listeners. These were appreciated because for two weeks Ted was in bed with the grippe.

His very good friend Paul Whiteman gave Ted a portable victrola and every night as he works on forthcoming programs, including his own "Sportsplants," he plays band records over and over again.



He is the first announcer to describe a golf match stroke by stroke. For the nation's golf fans he broadcast a complete account of the National Open Golf Championship at Minneapolis. Husing carried a knapsack transmitter on his back and a microphone in his hand. It was worth a lame back he said. Columbia again took a deep breath and exclaimed with pride, "Our Ted!"



And here is Ted hard at work looking completely fatigued with the day's labor. The young women are some of the entrants in the bathing beauty contest of the Eastern Michigan Water Carnival at Bay City. It's a hard life, wot?

"Best Minds" WANT RADIO CONTROL

Plan to Educate Us

ACCORDING to the National Advisory Committee on Radio in Education, the American people do not know what they want in radio and ought not to have it if they do. According to some of these professional educator-lobbyists, nothing should be allowed over the radio which is not educational or at least informative. They think American radio should be placed in governmental hands with censors composed of our "best minds" such as the gentlemen of the N. A. C. on R. I. E. As a starter they have had a bill introduced by Senator Fess of Ohio, chairman of the National Republican Committee, which would set aside fifteen per cent of the broadcast band, or 13.5 frequencies, for the use of educational institutions.

Mr. Armstrong Perry, director of the Committee, believes that "the use of radio would increase if the state governments, the federal governments, the institutions of higher learning, the public schools and educational organizations could have reserved channels so that they would have an opportunity to develop programs which would be free from even the suspicion of commercial objectives." We can just imagine people hastening home after the day's toil to tune in an address by Mr. Perry on "The Quest of the Ultimate" or the "Joy of the Higher Life." What these censors would do to poor old Amos 'n' Andy is awful to contemplate. For once give these self-appointed leaders fifteen per cent of the radio field and they would immediately start lobbying for the other eighty-five. Without the least doubt, their objective is censorship of all radio programs.

These lobbyists are trained workers in impressing Congressmen that the people are back of them. They depend upon the people, that is you and I, being too busy or too indifferent to let our representatives know that we are not.

The minimum consequences of enacting the Fess bill would at one extreme mean putting out of existence about 30 stations on clear channels, most of them on high power representing large investments, in view of the fact that no additional wave lengths are yet available and that the wave lengths sought would have to be cleared of their present occupants to make way for the proposed educational services. At the other extreme, the report continues, it would force the elimination of 240 local stations of 100 watts or less, plus about 50 regional stations of from 250 to 1,000 watts.

"Between the two extremes a large number of variations would, of course, be possible. It is difficult to calculate the loss both financially to station owners and in terms of broadcasting to the listening public. Many communities that now receive only one program would find themselves without any service (except possibly one of continuous educational matter). Other communities that now have a choice of two or three programs (e.g., one from either of the network systems and a local program) would find themselves exceedingly reduced.

Even if given the 13.5 channels sought, the educators, according to the committee, could not use them to afford satisfactory reception to more than a comparatively small fraction of the area of the United States. Sponsors of the Fess bill, who have been centering their attack largely around charges of over-commercialism and monopoly in radio, are said to have no plan or program for putting their proposal into effect, and are charged with conducting their campaign for wave lengths "on the strength of plausible utterances which, if carefully studied, would be declared unsound by the departments of physics of every one of the educational institutions in behalf of which they profess to speak."

Special Far North Broadcasts

The Saturday night broadcasts to the Far North from Station KDKA Pittsburgh, and its short wave auxiliary, W8XK, will be expanded on October 7 to include similar programs from WBZ, Springfield, and WBZA, Boston, and their short wave auxiliary, W1XAZ. The latter stations will broadcast messages to missionaries, fur trappers, mounted police and others dwelling in the Arctic every Wednesday night at 11:15 EST.

Anyone having relatives or friends living in the isolated regions of the North may send messages to the stations to be read into the microphone. In addition, KDKA is embarking on a special schedule, beginning October 3, of similar programs destined to be heard by United Presbyterian missionaries in India, Ethiopia and other countries. Not only those to whom the messages are destined, but the regular audiences of KDKA, WBZ and WBZA can tune in the programs. The Westinghouse Company has furnished this service from KDKA for the last eight years.

Chicago Stations Go to Court

THREE of Chicago's leading broadcasting stations have gone to court over the issuance of temporary licenses to them by the Federal Radio Commission as an outgrowth of the high-power radio controversy. Appeals from the Commission's action of July 7, inserting conditional clauses in the renewal licenses of Stations WENR, WLS and WGN, have been taken to the Court of Appeals of the District of Columbia. The wave length occupied by the former two stations is being sought by Station WTMJ, at Milwaukee, while WGN's channel has been applied for by Station WCFL, of the Chicago Federation of Labor.

Because it has not yet decided the high power case, in which more than two dozen stations are seeking the eight vacant assignments for the 50,000-watt

maximum power, the Commission inserted the temporary clauses in the licenses, dated August 1.

Louis Titus, representing both Station WENR, operated by the National Broadcasting Co., and WLS, operated by the Agricultural Broadcasting Co. under a working arrangement with the N. B. C., and Louis G. Caldwell, representing WGN, operated by the Chicago Tribune, in their appeals challenge the Commission's authority to issue conditional licenses without hearing. They also challenge the constitutionality of the action, claiming it violates the Fifth Amendment to the Constitution, in that the stations may not be deprived of property without compensation and due process of law. In addition, Mr. Caldwell contends that the clause is void because the action was not taken by a quorum of the Commission, but by one commissioner. The Commission adjourned over the summer on June 26, he said, and the action was outside the scope of less than a quorum of its membership.

Did She Sing It?

To Natalie Towers, Columbia's "Miss Television," belongs the distinction of winning what is perhaps television's first proffer of a "date." An electrical engineer in a nearby city, who had been tuning in the visual signals of W2XAB, New York, wrote to Miss Towers that seeing and hearing her "has won my heart." Then the romantic youth asked her to show evidence that she was interested by singing "Lover Come Back to Me" on one of her programs. If she did, he said, he would wire when he would come to New York and meet her.

NEW STATION IN MONTE CARLO

Europe's tiniest independency, Monaco, home of Monte Carlo, is planning to erect a powerful new broadcasting station.

GOSSIP from BEHIND THE "MIKE"

By "Betty"

COL. STOOPNAGLE and Budd, otherwise known as the Tastyeast Gloom Chasers, must have their jokes even at the expense of their colleagues at the Columbia studios. "Something just awful," sobbed the Colonel, "happened to Arthur Pryor tonight." "Why, what was that?" asked Budd sympathetically. "Didn't you hear?" came back Stoopnagle, "Somebody stole a march on him." These two irrepressible wags, by the way, have received an elaborately prepared fan letter bearing an intricately painted coat-of-arms and much Chinese writing, as well as a discourse on the death of Schultz, signed by a gentleman who calls himself "Ay Fuey," which must have taken much time to prepare. And speaking of television brings to light another gag from the famous Colonel. "Well," a friend asked him, "What do you think of television?" Just then the beautiful and blonde Harriet Lee passed by. "I don't know much about it," replied Stoopnagle, "but I can certainly tell-a-vision when I see one."

* * *

You may see Ann Leaf in the movies soon, as she has just made a series of shorts. "Little Organ Annie," as she is playfully called by her studio friends, has among her souvenirs, the latest book of the novelist, A. Hamilton Gibbs, one of her favorite writers, inscribed, "To Ann Leaf, who can say it on the organ better than I can on the typewriter." Incidentally, these two have never met. Another admirer of the diminutive Ann is the famous Phil Baker, vaudevillian and accordionist, who admits that she is the only radio performer to whom he ever addressed a fan letter.

* * *

Artells Dickson, who is the McHeather of the Nit-Wits and Mr. Fixit, is an accomplished performer of dialect songs of all types, especially the songs of the cowboys of his native Oklahoma, and Scotch ballads. After one of his concerts

in Chicago a reviewer paid him the compliment of saying that he closed his eyes and imagined he was listening to the eminent Sir Harry Lauder. Artells is much in demand for television, being programmed as "The Wandering Vagabond."

* * *

Andre Baruch, one of Columbia's rising young announcers, was one of Columbia University's best athletes not so very long ago. . . Henry Burbig refers to announcer John Mayo as Mr. Mayonnaise. . . . It was through Burbig that John got his start in radio.

* * *

The Boswell Sisters are on a road tour, appearing on the stage of the RKO theaters in Cincinnati, Chicago, Cleveland, St. Louis, Pittsburgh and New Orleans. The last named is their home town, and it will be their first visit there since they skyrocketed to radio fame. This is not bad news, however, for their fans, as they will continue their regular broadcasts, to originate in the Columbia studios of the various cities visited. It was in Chicago that this trio scored their first success after leaving their native New Orleans several years ago.

* * *

Jack Miles, cheerful leader of the Hollywood Gardens Orchestra, whose danceable tunes are heard on the Columbia chain, was for a long time trombonist with Guy Lombardo's Royal Canadians. He is the only musician ever to play with that band who is not still with the Lombardos, whom he left to start his own organization. . . . Saxophonist Victor, the youngest of the Lombardos, has become engaged, and thus romance has struck a member of the orchestra the second time in a month or so.

* * *

Bert Lown, director of the Biltmore Hotel orchestra, can't read or write a note of music, yet he has composed three song hits within a year—"Bye Bye Blues," "By My Side," and "You're the One I Care For." He has sixteen

other dance units working under his direction. He's only 27 and is an ex-cash register salesman. Bert has one of the longest contracts ever allotted an orchestra leader, if not the longest. New York's Biltmore Hotel signed him to a ten-year contract, and he's now in his second year.

* * *

Bing Crosby, baritone, newcomer to radio stardom, can be heard in six programs weekly over the Columbia network. Bing is noted for the intriguing quality of his "torch" ballads. Back of the signing of Crosby is an unusual story. Last June Mr. Wm. S. Paley, President of Columbia, took a trip abroad to seek out new foreign talent, and while aboard the S.S. Europa, heard one of Bing's phonograph records, and immediately dispatched radiograms to New York for information concerning this unusual baritone. Crosby was working busily in California, where he and his orchestra were in demand at clubs, recording studios and the movie lots where shorts were being made. Back in New York finally, Mr. Paley arranged with a motion picture company to preview a series of reels just completed by Crosby. A few minutes later a Columbia representative in California received certain definite instructions, and the next day Crosby started east.

* * *

Jesse Crawford, the well-known organist, is to be heard nightly over NBC coast-to-coast network. Crawford, now completing his fifth year with the Paramount Theatre in New York, has signed for exclusive radio appearances from the theatre where he will soon play his 250th weekly program on Broadway. Crawford married Helen Anderson, of Chicago, in 1923. Mrs. Crawford is also a recognized organist and composer. They have a daughter, Jessie Darlene, five years old.

* * *

Professional entertainers and artists have been thriving during the depression, judging from the report of a single booking agency which reveals that returns from engagements secured for its artists have totalled \$10,000,000

during the past year. Three hundred performers have profited from these booking returns. They include concert artists, lecturers, dancers, popular orchestras, radio stars, vaudeville entertainers, and public personalities representing the fields of exploration, aviation, literature and science. George Engles, director of NBC Artists reports that those mostly in demand are Post and Gatty, Sir Hubert Wilkins, Frank Hawks, Irvin Cobb and Deems Taylor. Rudy Vallee leads in his particular field in popularity. He has more invitations for appearances than he can fill. "Seth Parker," radio character created by Phillips Lord, has built up a following of millions in a brief span of two years. He is booked to make a trans-continental tour of twelve weeks with his Jonesport folks. Floyd Gibbons is also an enormously popular figure both in person and over the radio.

* * *

Daddy and Rollo. Nick Dawson, the "Daddy," was christened in Vineland, N. J., as George C., but he's never been called George since his third grade teacher told him he was worse than Old Nick. Nick was a second lieutenant in the United States Infantry. . . . Studied portrait painting at the Pennsylvania Academy of Fine Arts, then got a job painting scenery for a theatrical stock company, and graduated from scene painting to leading man in one night. Donald Hughes, 11 years old, "Rollo" is one of the youngest radio performers to have been put under exclusive contract with a broadcasting company. His hobbies are stamp collecting, swimming, fishing and reading hair-raising scientific fiction; he also likes the movies and baseball. He's not superstitious, but never tires of having his horoscope charted, his palm read, or his fortune told by cards. Does it just to see if they all come out the same. He played part of Kurt in Channing Pollack's "The Enemy," and thereafter named a succession of assorted dogs, Kurt I, Kurt II, etc. He also appeared in "Street Scene" for two weeks in Chicago, but says he prefers radio work to the stage.

(Continued on page 30)

Newspapers AND SMALL POTATOES

“ONE of the most annoying things that has happened in Radio lately,” comments E. O. Cutler, New York City, “is the action of newspapers in not naming the sponsors of programs.

“Personally, and I think it is the same with most listeners, I always think of a program as ‘the General Electric,’ ‘the Lucky Strike,’ ‘the Westinghouse,’ etc. I don’t know and don’t give a darn whether they have Itchkzy’s, or Solomon’s or Tony Macaroni’s orchestras. ‘Palm Olive’ and ‘Cities Service’ are synonymous with certain programs and we look for them automatically under those names.

“The New York papers go so far as to give in their radio columns the ‘Palm Olive’ program as ‘Virginia Rea,’ which happens to be the real name of Olive Palmer, which latter is her radio name by which she is known to millions, yet the papers will not use even ‘Olive Palmer.’

“This confusion in identifying the real programs with the artist’s names is being discussed everywhere. What do you think of it?”

As the title of this little article indicates, we think it is pretty “small potatoes” on the part of the newspapers. Except in a few instances the names of the artists or the names of the orchestras mean nothing to newspaper readers. The papers might just as well give every program a number of a “nom de plume” of their own and they wouldn’t confuse their readers any more. Of course our newspapers are conducted by the “great minds” of the world and who are we to criticize them?

This new policy of hiding the identity of certain programs is nation-wide and this indicates that it is the result of a policy adopted by the newspaper associations. Imagine a meeting of big business men debating how they can muddy up their news columns so as to prevent giving Atwater Kent, for instance, any credit for the beautiful programs he gives to the people. After long and due deliberation the mountain labored and

Should Readers have Radio Programs?

brought forth this mouse—they solemnly decided to cut out Atwater Kent’s name and bill the program as “Osternick’s Orchestra” or some such designation. Shades of Horace Greeley!

If the publishers of a newspaper could look into the homes of their readers they would find one single section of their paper laid aside for the evening’s reference—the radio section. Other parts are used to wrap up the garbage but the radio section is carefully saved. Yet when the reader of that paper looks for the “Dutch Master’s” program they find only “9:30 Walter Scanlon.”

Evidently they fear that Mr. Atwater Kent may somehow make a profit if they mention his name. Next they will delete the names of the orchestras and artists for their incomes grow with their reputations and their reputations are created by publicity. Perhaps soon the newspapers will index the evening’s programs as “8:30 Songs. 9:00 Music. 9:30 Talk.”

Mr. Cutler goes on, “You have in RADEX several pages under the title ‘What’s On the Air Tonight?’ Will it be too complicated to carry on as in the past with the sponsor’s name but put in brackets the name of leading artists or name of orchestra, when such are available?”

It is the policy of this magazine to give the programs the title by which they are best known, whether it be “Rudy Vallee” on one hand or “Gold Medal Fast Freight” on the other. This we will continue to do and wherever possible we will follow Mr. Cutler’s suggestion and give both. As the newspapers refuse to give their readers proper information, those interested in radio will look more and more to this magazine for the complete and unexpurgated programs of the evening’s entertainment.

KOCW, Oklahoma College for Women, Chickasha, Okla., is granted permission to be off the air for indefinite time.

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

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

State	City	Call	Kcys.	Watts			
California	Burbank	KELW	780	500			
Daily, 5-8 p.m.; 10 p.m.-1 a.m., PST.	Los Angeles	KFI	640	5000			
Daily, 7 a.m.-11:15 p.m., PST.	Los Angeles (Beverly Hills)	KMPC	710	500			
Daily, 7 a.m.-Sunset; 9 p.m.-1 a.m., PST.	Oakland	KLX	880	500			
Sunday, 11 a.m.-11 p.m., PST.	Denver	KLZ	560	1000			
Daily, 7 a.m.-12 midnight.	Florida	MIAMI	560	1000			
Sunday, 8 a.m.-12 midnight, EST.	Daily, 7 a.m.-12 midnight.	Illinois	CHICAGO	560 1000			
Sunday, 7:30-10 a.m.; 12:30-6 p.m.; 7-8 p.m.; 12-1:30 a.m. CST.	Daily, 6:30 a.m.-1 a.m.	Indiana	EVANSVILLE	630 500			
Sunday, 9 a.m.-10:30 p.m., CST.	Monday, Wednesday, Friday, 6:30 a.m.-6:45 p.m.	Tuesday, Thursday, 6:30 a.m.-11 p.m.	Saturday, 6:30 a.m.-12 midnight.	Iowa	WATERLOO	600 500	
Sunday, 7:00 a.m.-11 p.m., CST	Daily, 6:00 a.m.-12 midnight.	Missouri	COLUMBIA	630 500			
Sunday, 7:30 a.m.-noon; 5-6:15 p.m., CST.	Mon., Tues., Thur., 6-9 a.m.; 4-6 p.m.; 7-8 p.m.	Wednesday, Friday, 6-9 a.m.; 4-6 p.m.	Saturday, 6-9 a.m.; 4-6 p.m.; 7-9 p.m.	Daily, 6 a.m. to sunset, CST.	North Carolina	ASHEVILLE	570 1000
Daily, 8 a.m.-12 midnight, CST.	Raleigh	WPTF	680 1000				
Sunday, 10 a.m.-9:15 p.m., EST.	Daily, 6:45 a.m.-9:15 p.m.	Oregon	CORVALLIS	550 1000			
Mon., Tues., Wed., Fri., 12-3:30 p.m.; 6:30-8 p.m. PST.	Thursday, 12-4 p.m.; 6:30-8 p.m.	Saturday, 12-1 p.m.; 6:30-7 p.m.	South Dakota	BROOKINGS	550 500		
Daily (except Sunday), 12:30-2 p.m., CST.	Yankton	WNAX	570 1000				
Sunday, 8 a.m.-12 midnight, CST.	Daily, 6 a.m.-12 midnight.	Washington	SEATTLE	650 100			
Daily, 7 a.m.-7 p.m.; 10 p.m.-4 a.m., PST.	Tacoma	KMO	860 500				
Sunday, 10 a.m.-3:30 p.m., PST.	Daily, 6:45-7 p.m.; 9-12 p.m.	Walla Walla	KUJ	1370 100			
Daily, 9 a.m.-2 p.m.; 5-9 p.m., PST.	West Virginia	CHARLESTON	580 250				
Sunday, 10 a.m.-7:30 p.m., EST.	Daily, 9 a.m.-12 noon; 2-4 p.m.; 8:30-12 midnight.						

World Broadcasting Stations

(Continued from page 68)

Country and City	Call	Kcys.	Meters	Watts
Djakakarta	PK2AF	5996	50	500
Makassar	PK6KZ	7313	41	500
Malabar	PLF	17640	17	.....
Palembang	PK4PA	59964	5	240
Semarang	PK2AG	6662	45	250
Surabaya	PK3CH	2142	140	500
SIAM				
Bangkok	HSP1	967	310	2500
	HSP2	7890	38	2500
		7313	41	
	HS2PJ	10167	29.5	500
	HS11PJ	882	340	400
TURKEY				
Angora		150	2000	5000
Istanbul		250	1200	5000
OCEANIA				
AUSTRALIA				
Adelaide	5AD	1310	229	300
	5CL	730	411	1000
	5DN	960	313	100
	5KA	1200	250	200
Albury	2AY	1320	227	50
Ballarat	3BA	1300	231	50
	3BZ	.....	.....	.....
Bathurst	2MK	1155	260	50
Brisbane	4BC	1290	233	200
	4BK	1380	217	40
	4QG	760	393	2500
Canberra	2CA	.....	.....	.....
Carlton	3KZ	1350	222	200
Geelong	3GL	1400	214	50
Gunnedah	2MO	1330	226	50
Hobart	7HO	890	337	50
	7ZL	580	517	600
Launceston	7LA	1100	273	20
Lismore	2XN	1340	224	50
Mackay	4MK	.....	.....	.....
Melbourne	3AR	620	484	1000
	3DB	1180	255	100
	3LO	936	32	1000
		800	375	
		930	322	100
Moss Vale	2MV	1221	246	50
Newcastle	2HD	1415	212	200
	2NC	1245	241	2000
Perth	6WF	690	435	1000
	6ML	1010	297	300
Rockhampton	4RK	930	322	2000
Sydney	2BL	9225	32.5	1000
		855	351	
		10520	28.5	1000
		665	451	
		950	316	600
		1070	280	300
		1025	293	50
		1125	267	100
Toowoomba	4GR	1020	294	50
Trafalgar	3TR	.....	.....	.....
Wangaratta	3WR	1260	238	50
FIJI				
Suva	.....	.....	(Short)	.....
NEW ZEALAND				
Auckland	1YA	910	329	500
	1ZB	1090	275	18
	1ZJ	1320	227	26
	1ZQ	1190	252	13
	1ZR	1090	275	40
Christchurch	3YA	980	306	500
	3ZC	1200	250	250
	2ZU	1100	273	7.5
Dunedin	4YA	648	461	500
	4ZB	1080	279	20
	4ZL	1220	246	180
	4ZM	1080	278	45
	4ZO	1080	278	30
Ecatehuana	2ZE	1210	248	5

(Continued on next page)

(Continued from page 23)

Country and City	Call	Keys.	Meters	Watts
Gisborne	ZZJ	1150	261	20
	ZZM	1147	261	110
Greymouth	3ZR	820	366	20
Hamilton	1ZH	630	480	50
Hastings	ZZI	1330	226	15
	ZZL	1330	226	10
Invercargill	4ZI	1160	259	5
Manurewa	1ZM	1210	248	15
Masterton	ZZD	1180	254	2.8
Napier	ZZH	1260	238	15
New Plymouth	ZYB	1230	244	100
North Invercargill	4ZP	1160	259	16
Palmerston North	ZZF	1050	286	150
	ZZO	1050	286	10
Wairoa	ZZP	820	366	4
Wangunui	ZZK	600	500	120
Wellington	ZYA	720	416	5000
	ZZR	600	500	150
AFRICA				
ALGERIA				
Algiers	.....	824	364	2400
CANARY ISLANDS				
Las Palmas	EAR5	1071	280	500
EGYPT				
Cairo	.....	869	342	.....
	.....	909	330	.....
KENYA				
Nairobi	7LO	{ 9640	{ 31.1	{ 1000
		{ 750	{ 400	
MADAGASCAR				
Tananarive	.....	7495	40	500
MOROCCO				
Casablanca	AIN	5870	51	.....
	CNO	983	305	25
Rabat	.....	{ 6877	{ 43.6	{ 2000
		{ 724	{ 414	
TUNISIA				
Carthage	TNU	162	1850	.....
Constantine	8KR	7005	42.8	.....
Tunis	TUA	240	1250	500
UNION OF SOUTH AFRICA				
Cape Town	ZTC	800	375	1000
Durban	ZTD	789	407	1000
Johannesburg	ZTJ	{ 9369	{ 32	{ 15000
		{ 666	{ 450	

Atwater Kent's Plans

THOUGH his plans are indefinite at this time, A. Atwater Kent, the radio manufacturer, through his Washington representative, announces that he has no intention of deserting his sponsorship of classical programs on the radio. The Atwater Kent Sunday night concerts on the N. B. C. network, suspended June 21 as a measure of economy after having continued an unbroken weekly schedule for nearly six years, will be resumed in latter September.

"The frequency and character of the programs have not been determined," the representative said. "But Mr. Kent has no intention of deserting grand opera, though he may alternate the classical programs with programs of a different kind. However, he has already engaged such artists as Martinelli, Lily

Pons, Rosa Ponselle and others, and they will be featured in network programs to be offered on a regular schedule."

The Pentode Tube

(Continued from page 3)

or socket connection, for it is attached directly to the center of the filament or cathode. This suppressor-grid assumes the potential of the filament. It prevents all slow speed electrons and ions from leaving the plate and reaching the surrounding screen or screen-grid. This phenomenon takes place when the plate reaches a certain potential, and is known as secondary emission. It retards the development of full power in four-electrode tubes, but the removal of such limitations in the pentode tube through the addition and action of the suppressor-grid has greatly extended the range of usefulness of power tubes in radio receivers. The fourth element, or screen-grid of the tetrode tube, because of the new suppressor-grid of the pentode tube, can be operated at a positive potential equal to that of the plate—about 250 volts.

The pentode -47 tube far exceeds any other in power sensitivity. Therefore, it is possible to eliminate the first audio stages and pass the detector output directly into the pentode control-grid, usually through some conventional external coil or resistance coupling. The output of the pentode then passes directly into the speaker circuit or output transformer. A push-pull amplifier with a pair of -47 tubes may be used if greater power output is required. This, however, is seldom necessary, except in large multi-tube sets such as some super-hetrodines. The high power-sensitivity of the pentode is of great economic importance, and a comparison of power tubes and their sensitivity shows the fact that the pentode leads its nearest rival by 400 per cent! The pentode tube (-47 type) has a relative sensitivity of .133; the -45 power tube has only .036, while the type -71A has .029.

A midget receiver, using a single power tube immediately following the detector, benefits greatly by the introduction of the pentode tube. It is necessary to

deliver a maximum supply of plate current directly to the speaker coils without distortion. The -47 tube meets this requirement fully.

In addition to the -47 type of pentode, made especially for use on a. c. sources in connection with other a. c. tubes in all-electric sets, a battery pentode has also been developed. It is known as the -33 type, and may be used in connection with other 2-volt battery tubes—the -30, -31 and -32 types. It has a power output of 650 milliwatts (.650 watt) as compared to its power tube counterpart (-31 tube), which has an output of only 170 milliwatts (.170 watts). The base used is the standard UY.

For automobile purposes another pentode has been brought to the market. It is the -38 type and takes its place with the family group of -36 and -37 types. They are designed primarily for use in d. c. automotive receivers, or on d. c. house supplies. The -38 pentode has a power output of 375 milliwatts (.375 watt) which is considerably less than the -33 2-volt type tube. These automobile tubes give a very good putput considering the 6.3 volts automobile battery supply available and limited plate battery. Overcharges in voltage from the charging generator do no harm to the tubes. The battery drain is an important item in automotive radio equipment. The socket for the -38 tube is the same as used for the -47 and -33 tubes—the standard UY.

Questions and Answers

(Continued from page 7)

the device is clean and properly adjusted no harm can result. No lightning arrester can filter static or eliminate electric fields that may happen to surround the receiver. If the grounded electrode is nicely adjusted it will carry off any static sparks induced by lightning nearby and thus save the set possible damage. The choke coil and condenser mounted in your arrester cannot possibly filter static, and if in the antenna circuit it will interfere with the passage of radio signals. If the set works well with the lightning arrester connected to

the antenna it is just as well to allow it to remain for all time. Make sure that all connections in the antenna circuit are electrically and mechanically perfect. The arrester ground should be well made, the wire large, and the earth connections beyond question. This wire, of course, should be entirely out of doors.

Redesigning a Receiver

Tell me how to get more service out of my Crosley 8-tube set. Can I change the coils or get new coils to make the set more selective? If I add more wire to the primary and secondary I am sure I will get greater distance.

We are unable to suggest a change in the wiring of the coils in your receiver so as to get greater distance. Adding wire to the secondaries and primaries of the coils increases the wave length to which the coils will respond; removing some of the wire cuts down the wave lengths. The amount of wire determines only the impedance or high frequency resistance of the coils. Distance is determined by the sensitivity of the set as a whole. The set you refer to should be quite satisfactory, and perhaps it is not working as well as it might. Have you tested the tubes, speaker, and operating voltages? Have you a good aerial and ground? Have your dealer test the set alongside satisfactory ones of the same make. Are you expecting too much of the receiver? You have not stated what results are now being obtained.

What Rectifier to Use

I have a model A-250 Argus receiver. Please tell me what rectifier to use in this set and where to obtain one.

Practically all modern receivers now use the -80 type of full wave rectifying tube. It has four prongs and is designed for use in the standard UX socket. The socket has two filament connections, and one for the plate and one for an additional plate. The half-wave rectifier, type -81, uses only one plate connection and the remaining socket terminal is left open. The -80 rectifier may be substituted for most any kind of older full-wave rectifier. Your receiver is not listed in the sets provided with tubes by leading manufacturers, so we cannot

give definite advice. Your local dealer can fit the necessary rectifier in your set after an examination of the socket and wiring as outlined above.

Short Wave Adapter Wiring

In the diagram for a short-wave adapter in the May issue should not the tickler coil be attached directly to the plate instead of through the choke coil? Which ends of the tickler, primary and secondary connect to the plate, antenna and grid, respectively? When is the closest coupling between the tickler and plug-in coil obtained?

The diagram of the short-wave adapter as published in the May issue of RADEX is in error. The radio frequency currents from the plate of the detector tube do not pass through the radio-frequency choke coil before passing to the tickler. A wire should run from the plate directly to the tickler, and another to one end of the choke. The other end of the choke connects to the plate prong of the adapter. This method keeps the high frequency current out of the audio circuits and forces them into the tickler where they are needed to give regeneration.

Either end of the tickler may be connected to the plate, but if regeneration is not obtained, these ends should be reversed. The lower end of the primary goes to the ground, and the lower end of the secondary—the high tension end—connects to the grid. The closest coupling is when the tickler encircles the secondary at its lower end.

More Short Wave Troubles

I have built a short wave adapter and can only get two stations on the regular broadcast coil. I have tried the Pilot short wave coils with the same results. The Pilot Wasp hook-up makes no improvement.

Broadcast waves between 200-500 meters are not received satisfactorily on short-wave sets. Such receivers are built primarily for short-wave reception—below 200 meters. A coil that covers the range of regular broadcasting is always furnished because by its use one should be able to listen to local stations and a few of the more powerful stations not too far distant. The circuit of a short-wave set precludes any possibility of

efficient reception between 200 and 550 meters. Your inability to receive many broadcast stations is, therefore, not unusual. However, it seems to us that somewhat better results ought to be obtained, but we cannot offer you much encouragement. You have failed to state what results are had on the short waves, for which the set was designed. Tuning stations on the short wave is a tedious matter, and requires patience and care. The commercial receiver you mention is very efficient, and one of the best obtainable. Have you a small aerial, good connections, sound tubes and proper battery current?

Pilot Light Out

The pilot light in my Brandes B-15 receiver went on and off. I put in a new one which does not light at all. The set operates satisfactorily, but will the light being out injure the set?

No harm can come to the set because the pilot light is out provided there is no short circuit in the wires coming from the "A" current supply to the light socket. If this was the case it would be indicated immediately through a failure of the set. As long as the set operates you can be assured that the socket is defective or there is a break in one of the wires leading to the socket from the transformer or switch. Check over the wiring and the socket and repair the connection. If the light burns out each time then the trouble is either that the light is too low a voltage or the supply current to the socket is accidentally too high.

Whistles and Howls

My set howls and even whistles at times and then stops. It seems to appear for about 30 seconds after turning on. It stops when I put my hand on the tube. Have installed a new screen-grid tube, but with no success.

Many a. c. sets howl when first turned on. Try retarding the control for volume as this sometimes prevents preliminary squeals. The fact that your hand with its capacity stops the howl leads us to believe that a "howl arrester" slipped over the tube in question will stop the nuisance. A grid lead to one of the tubes may be open or imperfect. Insufficient

plate voltage on the radio-frequency and detector tubes is also a cause. Try reducing the plate voltage on the detector tube as a last resort, for some tubes will not operate on much plate voltage. This is unusual, as a rule. Then again, the radio frequency tubes tend to oscillate if the plate voltage is too great. Our guess is, however, that the trouble is microphonic and the metal tube-covering suggested above should quiet the set.

DX Doings

(Continued from page 9)

Box 514, Lafayette, La. "I received KSRO Lincoln, Nebr., on 1210 kc.; why isn't it listed in RADEX?" Anybody know KSRO?

"With only a three-tube set I have had KFI without an aerial and with a fifteen-foot inside aerial, I picked up KOA and KFXF Denver, KTM, KGO and KPO California," reports Nick Birchick, 47 Komorn St., Newark, N. J. He uses 199 tubes.

"Using a Philco consolette No. 20 (seven tubes), I have received 236 stations since last April," writes Oliver W. Todd, 5646 Haddington St., Philadelphia. Mr. Todd would like to correspond with other DXers.

Joe Ziglinsky, 37 River Ave., Natrona, Pa., with 276 stations on his log, would like to exchange hints with other DXers.

All states but Wyoming and Vermont is the record of Miss Pearl Wilkinson, R. F. D. 7, Box 132, Durham, N. C.

Notes and Comments

"I have a verification from experimental station W9XV on 1604 kc. with only two watts power," says S. R. Lewis, Route 3, Box 688a, Toledo, Ohio. "They are located in Centerville, Mo., and are on the air almost every morning from five to six a.m. I have a very nice letter from TIC San Jose, Costa Rica. They are on from 6:30 to 10:30 p.m. EST." Mr. Lewis has verifications from every state in the U. S. He has verified CKMO, a fifty-watter of British Columbia, KPQ in Wenatchee, Wash., and four hundred-watters on the Pacific Coast. He uses a wave-trap of his own make which he finds increases both volume and selectivity.

Because of world-wide requests for information regarding the hour of Vatican broadcasts the Vatican has issued the following statement:

"We do not or will not, have regular broadcast programs, We have, however, fixed hours for radiophonic exercises, which are 11 a.m. central European time upon wave length 19.84 and again at 8 p.m., wave length 50.26. At these times we give news, notices and read letters to the missions.

"On Sunday and other feast days at 11 a.m. we read liturgical and spiritual letters aimed especially for the sick."

Le Briton Fader, 125 Henry St., Halifax, N. S., says he has heard WGN on Tuesday and Friday mornings from five to seven a.m. CDT for the last two weeks broadcasting on about 6000 kcys. We find no short waves assigned to WGN; who can answer this one? Mr. Fader asks for information also about KUX and KGWE.

"CFRB Toronto is installing new equipment to bring their power up to 15,000 watts," reports Ian Murdoch, 17 Main St., West, Grimsby, Ont., who first started DXing in 1928, but did not either log or verify until last February. Since then he has logged 434 stations in seven countries. He has all the provinces and all states in the U. S., except Nevada, Vermont and Wyoming.

"Why list Cuban and Mexican stations of less than fifty watts?" asks Sam Kiamie, 2857 Sampson Ave., New York City. "How can anyone except those living near the station receive them? I think it is useless for anyone even to try to get these stations." Mr. Kiamie likes the way WHAS verifies reception with a series of five different stamps.

William McLain, 100 Maple Tree Lane, Wheeling, W. Va., thinks that NRH Heredia, Costa Rica, is on 1010 kcys. instead of 948. He reports the station is owned by Amando Cespedes Marin, whose address is Apartado 40, and that it broadcasts between 9:30 and 10:30 p.m. EST daily.

A letter from Stanley E. Wharton, Apt. 3, 315 Robert St., Hamilton, Ont., says "WWL New Orleans comes in strongly practically every night and I have had KFI Los Angeles three times

in the ten days I have had my new DeForest Crosley eight-tube 'Rondo'."

E. O. Cutler, 32 W. 40th St., New York City, reports that XEW Mexico City comes through with great volume and clarity and with fine programs and that KFI Los Angeles using 25,000 watts on its new 50,000-watt transmitter, is received nicely every decent night in New York after midnight EST.

"Tell the DX fans to try for KJBS San Francisco," writes James Hulquist, 146 East San Carlos St., San Jose, Calif. "They are on every night and early morning of the week from midnight until six a.m."

"I note you list WWO, Cleveland Airport station, at 1030 keys., but I received a verification from them stating they broadcast on 344 keys. with 1500 watts," advises George Selden, 1484 E. 107th St., Cleveland, Ohio.

How about this? David F. Thomas, Proctorville, Ohio, says, "You do not hear airport stations direct on the BC band. They are not licensed to work on the BC band. You are getting their harmonics only."

Don Townsend, 1421 Arch St., Berkeley, Calif., with sixteen verifications from Australia, contributes the following "time on the air" for the Aussie stations:

- 3.U.Z., Melbourne; 319 meters; 500 watts; daily 9:30 p.m. to 5:00 a.m., PST.
- 2.G.B., Sydney; 316 meters; 3000 watts; daily 11:30 p.m. to 4:00 a.m. PST.
- 2.U.W., Sydney; 267 meters; 300 watts; daily 11:15 p.m. to 4:30 a.m. PST.
- 2.K.Y., Sydney; 280 meters; 1500 watts; daily except Sunday 1:00 a.m. to 4:00 a.m. PST.
- 2.B.L., Sydney; 353 meters; 5000 watts; daily 12:15 to 4:30 a.m., Saturday to 6:00 a.m., Sunday 10:30 p.m. to 4:00 a.m.
- 2.F.C., Sydney; 451 meters; 5000 watts; daily 11:45 p.m. to 5:30 a.m. PST.
- 2.N.C., Newcastle; 241 meters; 2000 watts; daily 11:45 p.m. to 5:00 a.m. PST.
- 4.Q.G., Brisbane; 395 meters; 5000 watts; daily 12:00 to 5:00 a.m. PST.
- 5.A.D., Adelaide; 229 meters; 1000 watts; daily 12:00 to 5:00 a.m. PST.

6.W.F., Perth; 435 meters; 5000 watts; 2:00 a.m. to 7:00 a.m. PST.

3.L.O., Melbourne; 375 meters; 5000 watts; 11:45 p.m. to 5:30 a.m. PST.

3.A.R., Melbourne; 484 meters; 5000 watts; 12:15 to 5:00 a.m. PST.

2.H.D., Melbourne; 270 meters; 500 watts; 2:00 a.m. to 4:00 a.m. PST.

3.D.B., Melbourne; 229 meters; 500 watts; 11:30 p.m. to 4:45 a.m. PST.

2.U.E., Sydney; 293 meters; 500 watts; 1:00 a.m. to 4:15 a.m. PST.

7.Z.L., Hobart; 516 meters; 3000 watts; 1:00 a.m. to 5:00 a.m. PST.

Nearly all stations sign off one hour earlier on Sunday morning (Sunday night in Australia). Station 2.B.L. is by far the best received of any of them with 4.Q.G. and 2.F.C. running seconds. 3.L.O., 2.G.B. and 2.N.C. are also received quite well. There are times when 2.B.L. and 4.Q.G. break through the Japanese stations with fine volume, which is very good considering the Jap stations come in so loud they can be heard all over the house. All the above information is taken directly from the verifications received from the above stations.

News from Readers

(Continued from page 15)

Chicago, heard all three announcements. I have tried often since but could not bring them all in again."

Verifications

"I certainly was glad to see Mr. Van Velsor's letter saying that G5SW takes three or four months to verify," comments Henry Whittaker, 1988 Plymouth St., Philadelphia. "I have written several letters to G5SW and it didn't look as though I were going to get any reply, but as it is only three months since I wrote my first report, I will now expect to receive a verification from them. I don't mind waiting a long time for a verification from a station like G5SW that really verifies. Some stations will send a prompt acknowledgement but that is not a verification. G5SW surely was coming in well today. I listened to them from about 4:30 to 6:00 p.m. EST and I am sending another report consisting of the title of one vocal

number and the titles of fourteen numbers played by their dance orchestra. Maybe I will receive their verification as a Christmas present!"

From Charles H. Kramer, 1906 Hanover Ave., Allentown, Pa.: "On the same day that I received my new RADEX I also received a verification that I never expected to get. It was from Patchogue, New York. I sent to them on February 14, 1931, when they were on the air with a test program and they told people to write and that they would answer promptly. I have now one station to hear from yet and I do not think it is worth the while waiting for it as many are kicking about Station XETY in Mexico. The trouble is that they said that they would answer and verify all letters in which a ten-cent piece was enclosed."

Meyer Tuchinsky, 3436 Filbert St., Philadelphia, reports that he has sent a report to the new hundred-watter in Presque Isle, Maine, four times and each time his letter has been returned by the post office. "Tuch" is having lots of trouble getting verifications from Cuba, neither CMCB nor CMW answering his letters. His log totals 609 stations with 453 verified.

Another Outlaw in Trouble

Donald Hill, Broken Bow, Nebr., and

John H. Steinhammer, 2215 20th St., Columbus, Nebr., send us newspaper clippings which read as follows:

"Edwin Miles, 17, of Gretna, and Joy P. Miller, of Ashland, today were under federal charges of operating a radio station (KMRS, Ashland) without license.

"The two radio operators were served with federal warrants last night by U. S. Marshall McClung. The warrants were drawn up by District Attorney Van Pelt.

"Charges placed against the pair were operating a radio station without a station license and broadcasting programs without operator's license.

"Interstate broadcasting was brought into the case by citation of a program heard at Pacific Junction, Iowa."

About This and That

A radio fan who turned Good Samaritan is Mrs. Ray Miller, 1929 Bertley Place, N. E., Canton, Ohio. "An old lady lives next to me who is a 'shut-in' so last year I had wires run over to her house and got a speaker for her so now she has music any time I do and can listen or not as she pleases," writes Mrs. Miller. "This is the way I fixed it. I put adapters with speaker cord of the necessary length, under power tube 245. I use rubber-covered wire to run from my place to hers."

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.....

John Malone, Sparland, Ill., has figured out a way whereby we can devote more space to DX letters (by cutting down the space devoted to What's On the Air). At the same time other readers want us to give more space to programs by cutting down on DX. We are trying to do both without cutting down either. How many noticed that RADEX celebrated its seventh birthday by adding four more pages?

"RADEX ought to put a better picture on the cover such as some great ham or pictures of radio stations—you know, with antenna masts and a little shack in the middle—instead of a *girl*—Blah!" Thus writes Andy Curilovic, Jr., 1008 E. 66th Place, Cleveland, Ohio. We will bet an old condenser that Andy is under sixteen.

"Why is it that so many of the large stations on the NBC network, such as WEAf, KPO, WGN, KGO, WJR, etc., do not issue stamps?" demands Fred W. Janssen, Ventura, Calif. "It sure cripples a man's stamp collection. Something ought to be done about it. Seems to me the stations couldn't lose money on issuing them at ten cents a crack."

The following readers would like to join some DX club: Sam Kiamie, 2857 Sampson Ave., New York City; Oliver W. Todd, 5646 Haddington St., Philadelphia, Pa.; Robert Emch, 1237 E. 114th St., Cleveland, Ohio; Charles H. Kramer, 1906 Hanover Ave., Allentown, Pa. Club secretaries please note.

The secretary of one of the big DX clubs writes to an inquirer: "We all use RADEX for our DX work; it is the most complete log we can find and the most accurate." With several thousand correspondents DXing all the time, how could it be otherwise?

"Kindly state in your widely read magazine," writes XEW, The Voice of Latin America from Mexico, "that we do not answer mail without return postage." Let us repeat that U. S. stamps are worthless in Mexico. Use pennies.

Some Questions

"Your magazine will certainly 'double the pleasure of radio' for me if you can

tell me of programs of a Czecho-Slovakian nature in the East, giving their location and time on the air," writes R. Drevojan, 634 East St., Rensselaer, N. Y. Respectfully referred to our readers.

"In answer to Major R. L. Foster, I would say that he was hearing WGY on 790," advises Walter C. Snyder, 799 State St., Schenectady, N. Y. "A considerable portion of WGY's programs originate in Albany hotels and theatres, especially during early evening and late hours of the night."

"Does WJAZ Chicago ever broadcast?" asks Richard Good, 529 Sandusky St., Ashland, Ohio. "If so can you tell me when?"

Radio Gossip

(Continued from page 21)

Kate Smith, known as the "Songbird of the South," has made a hobby of collecting perfumes. At present she has more than 600 bottles of various styles and sizes. She has for her pets two parrots, which she keeps in her Park Avenue apartment. Because of the enthusiastic response of listeners to her daily "memory" songs, Kate has arranged to present a weekly program composed entirely of such requests for her 7 o'clock Wednesday broadcasts over Columbia. She will continue to feature one "memory" song on all her other programs. Thousands of letters a week pour in from radio listeners everywhere, asking for their favorite tunes.

* * *

James Melton, popular tenor, has been signed for the new Firestone series. . . . Ben Bernie will make another short New York visit before his return to Chicago, for he is to appear on the stage of the Paramount after the close of the racing season at Saratoga, where he is now playing. . . . The mysterious "Street Singer" has been identified. He is Arthur Tracy, and in the short time he has been broadcasting over Columbia his voice has attracted so much attention that listeners demanded that he be unmasked.

KEY TO CHAIN STATIONS

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

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

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

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

150 Days Daily

6:45-8:00 Tower Health Exercises (ex. Sun.)
 WFAF WEEI WFI WGY WCAE WRC
 WBEN CKGW

8:00-8:15 Gene and Glenn (ex. Sun.)
 WFAF WTAM WTIC WJAR WTAG WEEI
 WCSH WFI WRC WGY WCAE WBEN

8:15-8:30 Morning Devotions (ex. Sun.)
 WFAF WTIC WRC WCAE WGY WHAS
 WCSH WJAR WWJ WPTF WIOD WFLA
 WSUN WTAG WGN WJAX WJDX WRVA
 WBEN WFI KFYR WOW WCKY WIBA

8:30-9:00 Cheerio (ex. Sun.)
 WFAF WTIC WEEI WRC WCKY WWJ
 KPRC WFI WSB WSM WJAX WPTF
 WTAG WOAI WBEN WRVA WIOD CKGW
 WHAS WFLA WSUN WTAM WJDX WJAR
 WGY WOV WCAE WCSH WSMB WDAF
 KSTP WGN WDAY KFYR WAPI

9:45-10:00 A. & P. Program (ex. Sun.)
 WFAF WTIC WJAR WTAG WCSH WRC
 WGY WCAE WTAM WWJ WOC KSD
 WHO WDAF WTMJ WIBC WRVA WPTF
 WIOD WFLA WSUN WHAS WSM WMC
 WSB WSMB WJDX WOAI WKY WBEN
 WEEI KSTP WBO WGN WOV KPRC
 WFI WFAA WAPI WJAX

12:00-12:30 Don Bigelow and His Orchestra (ex. Sun.)
 WABC WOKO KFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WPG WCAU
 WHP WJAS WLBW WMAL WCAO WTAR
 WDBJ WKBN WNBC WBT WTOC WDBO
 WXYZ WBCM WSPD WDOD WREC WLAC
 WBRC WDSU WISN WTAQ WFBM KSCJ
 KMOX KMBC KLRA KOLL KFH KJFF
 KRLD K TSA WACO KVDL KFOR

12:30-1:00 Columbia Revue (ex. Sat. and Sun.)
 WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WNAC WORC WPG WIP-
 WFAN WHP WJAS WLBW WMAL WCAO
 WTAR WDBJ WKBN WNBC WBT WTOC
 WDBO WXYZ WSPD WDOD WREC WLAC
 WDSU WISN WTAQ WWOV WJAX WFBM
 KMBC KLRA KOLL KFH KJFF KRLD
 K TSA WACO KVDL KFOR

1:30-2:30 National Farm and Home Hour (ex. Sun.)
 WJZ WHAM WJR KSTP WRVA WHAS
 WBC WAPI WOV WOC WMC KVOO
 WKY WOAI WRC WGAR WHO WDAF
 WJDX WBAL WSB KWK KOA WBZ
 WBZA KTHS WFLA WSUN WJAX KFAB
 KPRC KDKA WLW WPTF WSM WDAY
 KFYR WSMB WFAA WTMJ WIOD WIBA
 KYW

3:00-3:30 Columbia Salon Orchestra (ex. Sat. and Sun.)
 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 KLRA KFH KJFF
 KTRH K TSA KVI KFPY KFRC KLZ
 KFOR

3:00-4:00 Woman's Radio Review (ex. Sat. and Sun.)
 WFAF WTIC WEEI WJAR WSAI KYW
 KSD WOC WTAG WCSH WFI WRC
 WGY WBEN WCAE WTAM WWJ WHO
 WOV WDAF

5:00-5:30 The Lady Next Door (ex. Sun.)
 WFAF WTAG WJAR KSD WRC WTAM
 WENR

6:00-6:25 Waldorf-Astoria Orchestra (ex. Sun.)
 WFAF WCAE WTIC WTAG WEEI WJAR
 WGY WOC WHO WDAY KSD WWJ
 WKY WENR

6:45-7:00 Swift Program—Stebbins Boys (ex. Sat. and Sun.)
 WFAF WCAE WTIC WTAG WEEI WJAR
 WCSH WFI WRC WGY WBEN WDAF

6:45-7:00 Literary Digest—Lowell Thomas (ex. Su.)
 WJZ WBZ WBZA WHAM KDKA WLW
 WBAL

7:00-7:15 Amos 'n' Andy (ex. Sun.)
 WJZ WHAM KDKA WBZ WBZA WRC
 CKGW WCKY WLW WBAL CFOP WRVA
 WPTF WJAX WIOD WFLA WSUN

7:00-7:15 Bing Crosby—Young's Orchestra (ex. Sun.)
 WABC WOKO WFBL WKBW WLBZ WDRC
 WAAB WORC WHP WJAS WLBW WMAL
 WCAO WTAR WDBJ WADC WHK WKBN
 WNBC WBT WTOC WQAM WDAE WXYZ
 WBCM WREC WLAC WBRW WDSU WISN
 WFBM KSCJ WMT KMOX WNAX KOIL
 WIBW KJFF KRLD K TSA WACO KOH
 KFOR KGB KFPY KFRC KDYL KLZ

7:15-7:30 Limit Orchestra (ex. Sat. and Sun.)
 WABC WOKO WFBL WHEC WGR WEAN
 WDRC WNAC WORC WCAU WJAS WMAL
 WCAO WADC WKRC WSPD WBBM WCCO
 WMT KMOX KMBC KOLL CFBR

7:30-7:45 Phil Cook, The Quaker Man. (ex. Sat. and Sun.)
 WJZ WBZ WBZA WENR KFYR WDAY
 WBAL WGAR KDKA WREN KWK KFAB
 WTMJ KSTP WHAM WIBC WLW WRC
 KOA KSL

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

7:45-8:00 The Goldbergs—Comedy Sketch (ex. Sun.)
 WFAF WSAI WWJ WENR WGY WBEN
 WCAE

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

10:30-10:45 Clara, Lu and Em (ex. Sun. and Mon.)
 WJZ WBAL WHAM KDKA WJR KWK
 WREN WGAR WBZ WBZA WGN

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

11:15-11:30 Swift Program—Stebbins Boys (ex. Sa. & Su.)
 KSD WHO WOC WSB WBAP WGN
 WSAI WTAM WFAA WWJ WMC WSMB

11:15-11:30 Literary Digest—Lowell Thomas (ex. Sun.)
 WGAR WJR WENR KWK WREN WDAY
 KFYR KFAB KSTP WBC

11:15-11:30 Pryor's Creemo Military Band (ex. Sun.)
 WKBN WGST WBCM WLAP WDOD WREC
 WLAC WBRC WDSU WISN WWOV WFBM
 WMAQ WCCO KSCJ WMT KMOX KMBC
 KLRA WNAX KOIL WIBW KFJF WRR
 KTRH K TSA WACO KOH KMJ KFBK
 KOL KVI KFPY KOIN KFRC KHJ
 KDYL KLZ

11:30-11:45 Camel Quarter Hour—Morton Downey (ex.Su.)
 WGST WDOD WREC WLAC WNOX WBRC
 WDSU WISN WFBM WCCO KSCJ WMT
 KMOX KLRA WNAX KOIL WIBW KFJF
 WRR KTRH K TSA WACO KOH KOL
 KVI KFPY KOIN KFRC KHJ KDYL
 KLZ KGB

11:30-11:45 Russ Columbo
 WJZ WBAL WHAM WJR WENR WRC
 KFJR WBA WSB

12:30-1:00 Ann Leaf at the Organ
 WABC WOKO WKBW WEAN WNAC WPG
 WCAO WTAR WDBJ WADC WKBN WBT
 WTOC WQAM WDBO WDAE WXYZ WREC
 WLAC WDSU WISN WFBM WCCO WMT
 KMBC WNAX KOIL WIBW KFJF
 KRLD K TSA KOH KFOR KOL KFPY
 KDYL KLZ

Sunday

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

12:30-1:00 Troika Bells
 WJZ WBAL KWK WGAR KDKA WLW
 KFAB KFJR KOMO KFSD WHAM WTMJ
 WPTF WFLA WSUN WSM WAPI WKY
 KOA KECA K TAR KPO WHAS WSMB
 KGO KSTP

1:15-1:45 Pop Concert — Walter Logan
 WEAF WTIC WEEI WJAR WCSH WFI
 WRC WGY WBEN KGW KOMO KPO
 KECA KGO KOA WHAS KFJR WDAY
 WCAE WTAM WWJ WIBO WOC WHO
 WDAF WTMJ WENR WSMB WAPI KSL

1:30-2:00 Gypsy Trail
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WORC WPG WCAU
 WHP WJAS WMAL WDBJ WHK WKBN
 WWNC WBT WTOC WDBO WXYZ WBCMU
 WSPD WDOD WREC WLAC WBRC WDSU
 WISN WTAQ WGL WMAQ WCCO KSCJ
 WMT KMOX KMBC KOIL KFJF KTRH
 K TSA KVI KFPY KDYL KLZ KFOR

2:00-2:30 Ann Leaf at the Organ
 WABC WOKO WFBL WKBW WLBZ WEAN
 WDRC WNAC WORC WHP WJAS WMAL
 WDBJ WWVA WADC WHK WKBN WBT
 WTOC WQAM WDBO WDAE WXYZ WBCMU
 WREC WLAC WBRC WDSU WISN WTAQ
 WCCO KSCJ WMT KMBC KOIL WIBW
 KFJF K TSA KOH KOL KVI KFPY
 KDYL KLZ CFRB

2:15-2:30 The Caribbeans — Dance Band
 WEAF WTIC WTAG WEEI WJAR WLIT
 WRC WGY WBEN WCAE WTAM WWJ
 WDAF KSTP WDAY WHAS WSM WAPI
 WSMB KOA KGO KGW KECA KFSD
 K TAR KFJR KSL

2:30-3:00 NBC Artists Service Program
 WEAF WTIC WOV WWJ KSD WRC
 WTAM WCSH WDAF WLIT WBEN WEEI
 CKGW

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

2:30-3:00 Columbia Church of the Air
 WABC WOKO WFBL WKBW WLBZ WEAN
 WDRC WNAC WORC WPG WHP WJAS
 WCAO WDBJ WWVA WADC WKBN WBT

WTOC WQAM WDBO WDAE WXYZ WBCMU
 WREC WLAC WDSU WISN WTAQ WCCO
 KSCJ WMT KMBC KOIL WIBW KFJF
 K TSA KOH KOL KVI KFPY KDYL
 KLZ CFRB

3:00-3:30 Moonshine and Honeysuckle
 WEAF WTIC WEEI WJAR WTAG WLIT
 WRC WTAM WWJ KYW KSD WOC
 WGY WBEN WHO WDAF WOV CFCF
 WCSH WCAE CKGW

3:00-4:00 Symphonic Hour — Tasha Seidel
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WAAB WCAU WHP WJAS
 WLW WMAL WCAO WDBJ WKBN WWNC
 WBT WTOC WDBO WXYZ WBCMU WSPD
 WDOD WREC WLAC WBRC WDSU WISN
 WTAQ WGL WFBM WMAQ WCCO KSCJ
 WMT KMBC KLRA KOIL KFJF
 KRLD KTRH K TSA KFOR KOL KFPY
 KDYL KLZ KFOR

3:00-4:00 The Friendly Hour
 WJZ WBAL KDKA KWK WREN KFAB
 WRVA WJAX KFJR WIOD KVOO WFLA
 WSUN KOA KSTP WBCB WKY KHQ
 WSB WGAR WDAY WJDX WSMB WFAA
 WBZ WBZA WSM WMC KGO WOAI
 WIBO WIBA (KTHS off 3:30)

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

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

4:00-5:00 National Sunday Forum
 WEAF WTIC WEEI WJAR WCSH WTAG
 KOA WOV WKY WOAI WSAI WJAX
 WHAS WJDX KPRC WBCB WDAF WWJ
 WLIT WFLA WSUN KHQ KOMO WHO
 WOC WRC KGW WGY WSM WSB
 WSMB WBEN WRVA WIOD KPO WDAY
 KFJR KSD WFAA

5:00-5:30 Pastoral — Andre Kostelanetz, Conductor
 WABC WOKO WFBL WGR WEAN WDRC
 WNAC WORC WHP WJAS WLBW WCAO
 WDBJ WADC WHK WKBN WWNC WBT
 WTOC WQAM WDBO WDAE WXYZ WBCMU
 WREC WBRC WDSU WISN WOWO WFBM
 KSCJ KMBC KOIL WIBW KFJF
 KRLD KOH KFOR KDYL KLZ CFRB

5:00-6:00 Sabbath Reveries
 WJZ WBAL WHAM KWK WIOD WJDX
 KOMO WFLA WSUN K TAR KGO KHQ
 WLW WREN CKGW KGW WOAI WBZ
 WBZA WGAR WJAX WSMB WDAY WRVA
 KFAB WSM WMC WBAP WKY KDKA
 WBCB WIBA

5:00-6:00 Gilbert and Sullivan Gems
 WEAF WTIC WJAR WTAG WRC WCSH
 WGY WWJ WFI WBEN WTAM WSAI
 WOC WHO WDAF CFCF WCAE WEEI
 WOV

6:00-7:00 Catholic Hour
 WEAF WTIC WEEI WJAR WTAG WRC
 WCSH WGY WWJ WBCB WIOD WKY
 WJDX WSMB KSTP WCAE KOMO KSD
 KGW WOC KECA K TAR WHO WDAY
 WJAX WFLA WSUN WMC WSB WBAP
 KPRC WOAI WRVA WDAF KOA KVOO
 WSM KPO WBEN WOV WENR KFJR
 WLIT KTHS WSAI

6:35-7:00 Radio Luminaries — Breen and de Rose
 WJZ WREN KFAB WBAL CKGW (WHAM
 WGAR WJR WBZ WBZA on 6:45)

7:00-7:25 Russian Singers
 WEAF WTIC WCSH WRC WCAE WWJ
 WSAI WOC WHO WDAF WTAG WJAR
 WBEN WENR WOV

7:00-7:30 Over Jordan

WJZ WHAM WJR KWK WREN KFAB
 CFCE KSTP WDAY KFYY WRVA WJAX
 WIOD WFLA WSUN WHAS WSM WSB
 WAPI WJDX KVOO KPRC WKY WIBO
 WSMB

7:15-7:30 Fray and Braggiotti — Piano Team

WABC WOKO WFBL WGR WBLZ WEAN
 WDRC WNAC WORC WHP WJAS WLBW
 WMAL WCAO WTRAR WDBJ WVA WADC
 WWNC WBT WTOC WQAM WDAE WXYZ
 WBCM WLAC WRBC WDSU WTAQ WOWO
 WFBM WCCO KSCJ WMT KMOX KMBC
 KOIL WIBW KFJ KFJF WACO KOH
 KVOR KGB KOL KVI KFPY KHJ
 KDYL KLZ

7:30-7:45 Daddy and Rollo

WABC WFBL WGR WEAN WNAC WCAU
 WLBW WMAL WCAO WADC WHK WKRC
 WXYZ WSPD WISN WOWO WFBM WBBM
 WCCO KMOX KMBC KOIL

7:30-8:00 Iodent Club of the Air

WEAF WJAR WTAG WCSH WLIT WRC
 WGY WBN WCAE WWJ WSAI WLS

7:45-8:00 The Boswell Sisters

WABC WOKO WFBL WHEC WGR WLBZ
 WEAN WDRC WORC WHP WFAN WHP
 WJAS WLBW WMAL WCAO WDBJ WHK
 WKBN WWNC WBT WTOC WDBO WXYZ
 WBCM WSPD WOOD WREC WLAC WRBC
 WDSU WISN WOWO WFBM WCCO KSCJ
 WMT KMOX KMBC KLRA KOIL KFJ
 KFJF 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 CFCE WTMJ KSTP WBCB WDAY
 KFYY WRVA WPTF WIOD WFLA WSUN
 WHAS WSM WMA WSB WAPI WSMB
 WJDX KTHS WFAA KPRC KVOO WOI
 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
 WNAC WCAU WJAS WMAL WCAO WADC
 WHK WKRC WGST WXYZ WSPD WREC
 WRBC WDSU WISN WOWO WFBM WMAQ
 WCCO KSCJ KMOX KMBC KOIL WIBW
 WRR KTHS KOL KVI KFPY KOIN
 KFRC KHJ KLZ

8:00-9:00 Chase and Sanborn

WEAF WTIC WJAR WTAG WCSH WRC
 WGY WCAE WWJ WSAI KSD WOW
 WIOD KSTP WHO WOC WHAS WBCB
 WMC WSB WSMB KTHS KPRC WTMJ
 WTAM WJDX WFLA WSUN WDAF WBN
 WPTF CFCE WOI WKY WLIT WLS
 KVOO WFAA WRVA

8:15-9:15 Collier's Radio Hour

WJZ WBAL WBZ WBZA WHAM KDKA
 WGAR WLW KYW KWK WREN KOA
 KSL KGO KFI KGW KOMO KHQ

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

WEAF WTAG WCSH WGY WSAI
 WSB WMC WOW WJDX WFLA WSUN
 WOC WHO WBO KVOO WCAE WDAY
 WJAR WENR WBN WFI WSMB WKY
 WIOD WEEI WPTF

9:00-9:30 The Dutch Masters

WABC WOKO WFBL WHEC WGR WEAN
 WDRC WNAC WCAU WMAL WCAO WADC
 WHK WKRC WCAH WXYZ WSPD WOWO
 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

9:15-10:15 Thru the Opera Glass

WEAF WEEI WRC WFI WGY WTAG
 WJAR WWJ WSAI WOW WOC WHO
 WBN CKGW WCSH WCAE WTAM WDAF
 CFCE WIOD KOA WENR WSB WJDX
 WSM KPRC KGO KHQ KFSD

9:30-10:00 Around the Samovar

WABC WOKO WFBL WKBW WLBZ WEAN
 WDRC WNAC WORC WJAS WLBW WMAL
 WCAO WTRAR WDBJ WADC WHK WKBN
 WBT WTOC WQAM WDBO WDAE WXYZ
 WLAC WRBC WDSU WISN WOWO WFBM
 WCCO WMT KMOX KMBC WNAK KOIL
 WIBW KFJF KRLL KRTA KOH KVOR
 KGB KOL KVI KFPY KFRC KHJ
 KDYL KLZ CFRB

9:45-10:15 Kellogg Slumber Music

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

10:15-10:45 Ted Weem's Orchestra

WEAF WEEI WTIC WJAR WTAG WCSH
 WFI WRC WGY WBN WCAE WTAM
 WWJ WSAI KYW WOC WHO WOW
 WDAF WTMJ KSTP WBCB WHAS WSM
 WMC WSB WAPI WSMB WJDX WOI
 WKY KOA KDAY KFPY KGO KGW
 KOMO KHQ KTRAR KFSD KFI KPRC
 KSL

10:30-11:00 The Gauchos

WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WORC WCAU WHP
 WJAS WLBW WMAL WCAO WDBJ WHK
 WWNC WBT WTOC WDBO WXYZ WSPD
 WDOB WREC WLAC WRBC WDSU WISN
 WOWO WFBM WCCO KSCJ WMT KMOX
 KMBC WNAK KOIL KFJF KRLL KTRH
 KRTA KVI KFPY KFRC KDYL KLZ
 KVOR

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

WEAF WEEI WCSH WRC WGY WDAF
 CKGW WTMJ KSTP WCAE WTAM WWJ
 KYW WSM WHO WBCB WMC WIOD
 WHAS WOB WJDX KPRC WKY KOA
 KGO KGW KTRAR WSB KSD WRVA
 KFSD WJAX WOC WFLA WSUN KECA
 WFI WBN WJAR WAPI WDAY KFYR
 KHQ WPTF WOI WSAI WFAA

11:00-11:30 Continental String Quartette

WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WPG WCAU WHP
 WLBW WMAL WDBJ WWNC WBT WTOC
 WDBO WXYZ WSPD WDOB WREC WRBC
 WDSU WISN WFBM WCCO KSCJ WMT
 KMOX KLRA WNAK KOIL KFJF KRLL
 KTRH KRTA KVI KFPY KDYL KLZ
 KVOR

11:30-12:00 Red Nichols and His Orchestra

WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WPG WCAU WHP
 WLBW WMAL WCAO WTRAR WDBJ WKBN
 WWNC WBT WTOC WDBO WXYZ WSPD
 WDOB WREC WLAC WRBC WDSU WISN
 WFBM WCCO KSCJ WMT KMOX KMBC
 KLRA WNAK KOIL KFJF KRLL
 KTRH KRTA KFPY KDYL KLZ KVOR

Monday

6:15-6:30 Kate Smith and Her Swanee Music

WABC WOKO WFBL WGR WLBZ WDRC
 WAAB WORC WHP WLBW WMAL WCAO
 WDBJ WVA WWNC WBT CFRB WTOC
 WQAM WDBO WDAE WBCM WREC WLAC
 WRBC WDSU WTAQ WOWO WCCO KSCJ
 WMT KMBC KOIL WIBW KFH KFJF
 KRLL KRTA KOH KVOR KDYL KLZ

6:15-6:45 Mormon Tabernacle Choir and Organ

WJZ WBAL WSM KOA KOMO KFAB
 KGW CKGW KSTP KTRAR KPO KFSD
 WSMB WHAM WIBO KFPY KGO KWK
 WREN WDAY WJDX KECA WRC WLW
 KSL

7:00-7:30 Current Events — H. V. Kaltenborn

WABC WOKO WFBL WKBW WLBZ WAAB
 WORC WJAS WLBW WMAL WCAO WDBJ
 WVA WWNC WBT WTOC WDBO WDAE
 WBCM WREC WLAC WDSU WTAQ WCCO
 KSCJ WMT KOIL KFH KFJF KRLL
 KRTA KOH KVOR KDYL KLZ CFRB

7:00-7:30 Archer Gibson—Concert Organist
 WFAF WTAG KSD KOA WOW CFCF
 WHAS WJAR KSL KGO WJDX

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 Miller and Lyles—Comic Negro Dialogues
 WABC WFBL WGR WLBZ WORC WJAS
 WLBW WMAL WTAR WDBJ WADC WHK
 WKBN WUNC WBT WTOC WQAM WDAE
 WXYZ WBCM WREC WLAC WBRC WDSU
 WISN WTAQ WOWO WFBM WCCO KSCJ
 KMOX KMBC KOIL KFH KJFJ KRLD
 KOH KVR KOR KLZ CFRB

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

8:00-8:30 Soconyland Sketches
 WFAF WTIC WTAG WEEI WJAR WCSH
 WBEN WGY

8:30-9:00 Death Valley Days
 WJZ WBZ WBZA WBAL WHAM KDKA
 WGAR WJR WCKY WLS WREN KWK
 KFAB CKGW CFCF

8:30-9:00 Voice of Firestone
 WFAF WTIC WTAG WEEI WJAR WCSH
 WLIT WRC WGY WBEN WCAE WTAM
 WWJ WSAI KYW KSD WOC WHO
 WOW WBAP CKGW CFCF WRVA WPTF
 WJAX WIOD WFLA WSM WMC WSB
 WJDX WSMB KTHS KVOO

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

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

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

9:00-9:30 Maytag Orchestra
 WJZ WBZ WBZA WHAM KDKA WJR
 KWK WREN KSTP WBCB WKY WOA
 KYW KOA KSL KGO KECA KGW
 KHQ ROMO KVOO WLW WFAA KPRC
 WGAR WDAY KFJR WSM WMC WBAL
 WTMJ

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

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

10:00-10:30 Gold Medal Express
 WJZ WBAL WBZ WBZA WHAM KDKA
 WGAR WJR WLW KYW KWK WREN
 KSTP WBCB WRVA WPTF WJAX WIOD
 WFLA WSUN WSM WMC WSB WJDX
 KVOO WFAA WCAE WKY KOA KSL
 KGO KFI KGW KOMO KHQ KFSB
 KTAR

10:00-10:30 Burns Panatela Program—Guy Lombardo
 WABC WFBL WKBW WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WHK
 WKRC WXYZ WSPD WOWO WFBM WMAQ

WCCO KMOX KMBC KOIL KFJF KRLD
 KTRH K TSA KDYL KLZ

10:00-10:45 True Story—Mary and Bob
 WFAF WJAR WEEI WTAG WCSH WLIT
 WRC WGY WBEN WCAE WTAM WWJ
 WSAI WENR WOC KSD WHO WOW

10:30-11:00 Chesebrough Real Folks
 WJZ WBZ WBZA WBAL WHAM KDKA
 WJR WGAR WREN WLW KYW WRVA
 KFJR WDAY WBCB WTMJ WBA KWK
 CKGW WMC WSB WSMB WJD KPRC
 KOA KFI KOMO WJAX WIOD WFLA
 WSUN WHAS KGO KGW KHQ KFSB
 KTAR KYW WKY

10:30-11:00 Arabesque—Desert Play
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WNAC WRC WCAU WHP
 WJAS WLBW WMAL WDBJ WWNC WBT
 WTOC WDBO WXYZ WBCM WSPD WODD
 WREC WBRC WDSU WBSN WFBM WMT
 WNAK KOIL KFH KJFJ KRLD KTRH
 K TSA KVI KPFY KPRC KDYL KVR

10:45-11:00 The Simoniz Guardsmen
 WFAF WTIC WEEI WJAR WCSH WLIT
 WWJ WRC WGY WBEN WSAI WCAE
 KSD WTAM WENR WOC WHO WOW
 WDAF CFCF WTAG

11:45-12:00 Bert Lown and His Orchestra
 WABC WOKO WFBL WHEC WKBW WLBZ
 WDRC WAAB WORC WCAU WHP WLBW
 WMAL WCAO WTAR WDBJ WWNC WBT
 WTOC WDBO WXYZ WBCM WSPD WODD
 WREC WLAC WBRC WDSU WBSN WLA
 WFBM WCCO KSCJ WMT KMBC KRLA
 WNAK KFJF KTRH K TSA WACO KDYL

12:00-12:30 Paul Whiteman and His Orchestra
 WFAF WRC KYW WTMJ WSM WOW
 WSB WGY WAPI

Tuesday

7:00-7:30 Mid-Week Federation Hymn Sing
 WFAF WTIC WTAG WFI KSD WJDX
 KOA KGO KECA KGW WEEI WBEN
 WCAE WSAI WBO WPTF WIOD WFLA
 WSUN WSB WAPI WKY

7:30-7:45 Corner Drug Store
 WFAF WTIC WEEI WJAR WTAG WRC
 WCSH WBEN WGY WFI WCAE WSAI
 WOC WHO WOW WDAF

7:45-8:00 Back of the News in Washington
 WJZ WHAM WENR WREN KFAB WEBC
 KFJR WRVA KFSB WPTF WIOD WFLA
 WSUN WSM WMC WSB WAPI WSBM
 KHQ WBAL WJR WRC WHAS KTHS
 WFAA KPRC KOA KGO KECA

8:00-8:30 Armstrong Quakers
 WJZ WBAL WBZ WBZA WHAM KDKA
 WJR WRC WREN WLW WLS KFAB

8:00-8:30 Blackstone Plantation
 WFAF WTIC WEEI WJAR WTAG WCSH
 WFI WRC KSD WOC WGY WBEN
 WCAE WTAM WWJ WSAI WHO WDAF
 WOW WBCB KSTP KYW

8:15-8:30 Sterling Products—Abe Lyman's Band
 WABC WFBL WGR WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WKRC
 WSPD KMOX KMBC KOIL

8:30-9:00 National Dairy Virtuoso
 WFAF WRC WFI WEEI WTIC WJAR
 WJDX WSB WAPI WMC WSM WDAF
 WHAS WSB WTAG WCSH WGY WBEN
 WCAE WTAM WWJ WSAI KSD WOC
 WHO WOW KPRC KYW

8:45-9:00 Sisters of the Skillet
 WJZ WBZ WBZA KDKA WTMJ WDAY
 WGAR WJR WLS KWK WREN KFAB
 KSTP KPRC WBCB KFJR WOA KVOO
 WHAM WLW

8:45-9:00 Walter Winchell
 WABC WFBL WGR WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WXYZ
 WSPD WOWO WJJD KMOX KOIL

9:00-9:30 Thrillers
 WFAE WTIC WEEI WTAG WCSH WFI WADC WHK WKBN WWNC WBT WTOC
 WRC WBEN WTAM WOV KOA KSL WQAM WDBO WDAE WXYZ WBCM WREC
 KGO KTAR KFSB KGW KOMO WAOI WLAC WBRC WDSU WISN WTAQ WFBM
 WOC WHO KSTP WCAE WJAR WMC KFH KFJF KRLD K TSA WACO KOH
 WDAY KVOO WKY WGY WECB WIOD WQRV KVB KVI KFYR WBSB WOC
 WFLA WSUN WSM WSB WLS KFI KDYL KLZ CFRB

9:00-9:30 Henry-George
 WABC WOKO WFBL WHEC WGR WEAN WABC WOKO WFBL WHEC WGR WEAN
 WDRC WNAC WCAU WHP WJAS WMAL KECA WGY WBEN WCSH WENR KFYR
 WCAO WADC WHK WKRC WXYZ WSPD WIBA WSM WJDX

9:15-7:30 Boscol Moments with Mme. Alda
 WFAE WTIC WEEI WJAR WCSH WLIT
 WRC WBEN WENR WCAE WTAM

7:30-7:45 The Frigidarians
 WFAE WLIT KSD WTAG WHAS WSB
 WAPI WJDX WJAR CFCF WFAA WTIC
 WCSH WFBR WRC WWJ WSAI WBO
 WOC WHO WOV WRVA WPTF WJAX
 WJOD WFLA WSUN WSM WMC WSBM
 KTHS KVOO KPRC WOAI WKY

7:45-8:00 Esso Program "Believe It or Not!" Ripley
 WJZ WBAL KDKA WLW WRVA WITF
 WBZ WBZA WHAM

8:15-8:30 Snoop and Peep
 WFAE WCSH WLIT WDAF KGO KGW
 WHO WTAG WIOD WFAA KOA WCAE
 CKGW WSM WOC

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 WCOO KMOX KMBC KOIL

8:30-8:45 Kate Smith - La Palina
 WABC WOKO WKBW WLBZ WDRC WAAB
 WORC WJAS WLBW WMAL WCAO WDBJ
 WVVVA WADC WKBN WWNC WBT WTOC
 WQAM WDBO WDAE WBCM WREC WLAC
 WBRC WDSU WTAQ WCCO KSCJ WMT
 KMOX KOIL KFJF KFLA KRLD K TSA
 KOH KVOR KDYL KLZ CFRB

8:30-9:00 Mobiloil Concert
 WFAE WEEI WJAR WCSH WTAG WLIT
 WRC WSAI KSD WOV WTAM KOA
 KVOO WFAA WOAI WKY WTIC KSL
 WGY WECB WDAF WCAE WHO WOC
 WJZ WBEN KSTP WTMJ WDAY KFYR
 KYW

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

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

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 WOV
 WFBM WMAQ WCCO KSCJ WMT KMOX
 KMBC KOIL KFJF

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

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

9:30-10:00 Dutch Masters Program
 WJZ WBAL WBZ WBZA WHAM WJAR WGR
 KDKA WJR WLW WENR WKW WREN

9:30-10:30 Palmolive Hour
 WFAE WTIC WEEI WJAR WTAG WCSH
 WLIT WRC WGY WCAE WSAI WGN
 KSD WOC WOV WSBM WTMJ KSTP
 CKGW WHAS WSM WMC WDAF WHO
 WSB WOAI KOA KSL KGO KOMO

9:00-9:30 Danger Lines of History
 WJZ WBAL WCKY WREN WBZ WBZA
 WHAM WENR KDKA WIOD CKGW

10:00-10:15 Ben Bernie and His Orchestra
 WABC WFBL WEAN WDRC WNAC WCAU
 WJAS WMAL WCAO WADC WHK WKRC
 WKBW WBT WXYZ WSPD WLAC WBRC
 WDSU WWOV WBBM KMBC KOIL KFJF
 KFJF KRLD K TSA KMJ KOI KVI
 KFPY KOIN KFRC KHJ KDYL KLZ

10:00-11:00 Lucky Strike Dance Orchestra
 WFAE WTIC WEEI WJAR WTAG WCSH
 WFI WRC WCAE WWJ WSAI KSD
 WOC WHO WTMJ WECB WRVA WJAX
 WIOD WFLA WSUN WHAS WSM WMC
 WSB WSMB WJDX WOAI KOA KGO
 WKY KGW KHQ KOMO KTAR KFSB
 WDAF KVOO WTAM WBEN WOV WDAY
 KFI KSL KFYR KSTP WENR WPTF
 WGY WBAP WIBA (KPRC on 10:45 to 11:00)

10:30-11:00 Nit Wit Hour
 WABC WOKO WFBL WKBW WLBZ WEAN
 WNAC WORC WPG WHP WJAS WLBW
 WMAL WCAO WDBJ WADC WKBN WWNC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WBCM WREC WLAC WBRC WDSU WISN
 WWOV WFBM WCCO KSCJ WMT KMOX
 KMBC WNAX KOIL WIBW KFJF KFLA
 KRLD K TSA KOH KVOR KFYR KDYL
 KLZ CFRB WDRC WTAR

11:45-12:00 Asbury Park Casino Orchestra
 WABC WOKO WFBL WHEC WKBW WLBZ
 WEAN WDRC WAAB WORC WCAU WHP
 WLBW WMAL WCAO WTAR WDBJ WKBN
 WWNC WBT WTOC WDBO WXYZ WBCM
 WSPD WDDOD WREC WLAC WBRC WDSU
 WISN WGL WFBM WCCO KSCJ WMT
 KMBC KLRA WNAX KFJF KFLA KRLD
 KTRH K TSA WACO KVOR KFYR KDYL
 KLZ

12:00-12:30 Romanelli and His Orchestra
 WABC WFBL WHEC WKBW WLBZ WEAN
 WNAC WPG WCAU WHP WLBW WCAO
 WTAR WDBJ WKBN WWNC WBT WTOC
 WDBO WXYZ WBCM WSPD WDDOD WREC
 WLAC WBRC WDSU WISN WGL WFBM
 WCCO KSCJ WMT KMOX KMBC KLRA
 WNAX KOIL KFJF KFLA KRLD KTRH
 K TSA WACO KVOR KFYR KFRC KDYL
 KLZ

12:00-12:30 Rudy Vallee and His Connecticut Yankees
 WFAE WTIC WRC WDAF WDAY WBEN
 WWJ WIBA KFYR WHAS

3:45-4:30 Synopacted Silhouettes - Nat Brusiloff's Orch.
 WABC WOKO WGR WEAN WDRC WAAB
 WPG WHP WMAL WCAO WDBJ WVVVA

Wednesday

KHQ WWJ WTAM WBEN KFI KVOO
 WFAA KPRC WBA 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 WLAP WREC WLAC WBRC
 WDSU WISN WOWO WFBM WBBM WCOO
 KMOX KMBC KOIL KFH KFJF KRLD
 KTRH K TSA KOL KVI KFPY KOIN
 KFRC KHJ KDYL KLZ

10:15-10:30 Hernandez Brothers
 WABC WOKO WFBL WHEC WKBW WLZB
 WEAN WDRC WNAC WORC WCAU WHP
 WJAS WLWB WMAL WCAO WTAR WDBJ
 WWNC WBT WTOC WXYZ WBCM WSPD
 WDOD WREC WLAC WBRC WDSU WISN
 WOWO WFBM WMAQ WCOO KSCJ KMBC
 WNAX KOIL KFH KFJF KRLD KTRH
 K TSA KOL KVI KFPY KFRC KDYL
 KLZ

10:30-11:00 Savino Tone Pictures
 WABC WOKO WKBW WLZB WEAN WDRC
 WNAC WORC WPG WHP WJAS WLWB
 WMAL WCAO WTAR WDBJ WADC WWNC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WBCM WREC WLAC WBRC WDSU WISN
 WOWO WFBM WCOO KSCJ WMT KMBC
 WNAX KOIL KFH KFJF KRLD K TSA
 WACO KOH KFOR KGB KOL KFPY
 KHJ KDYL KLZ CFRB

10:30-11:00 Coca Cola Program
 WFAF WEI W TIC WCSH WLIT WRC
 WCAE WSAI WOC WERC WKY KYW
 KSD WRVA WJAX KSTP WIOD WSM
 KFRC WQAI KOA WFLA KSL KGO
 KGW KHQ KOMO KFSD WJDX WDAF
 WHAS WTAM WHO WOW WMC WPTF
 WSB WWJ WAPI WBEN KFI WGY
 WTMJ WJAR WFLA WSUN K TAR KVOO
 CPFC WSMB WTAG

11:00-11:15 "The Voice of Radio Digest"
 WFAF KSD WOC WHO WRC WEI
 WJAR WCSH WGY WBO WIOD WOW
 WTAM

11:30-12:00 Vincent Lopez and His Orchestra
 WFAF WRC WEI WTAM WDAF WWJ
 WOC WHO WAPI WQAI WOV WIOD
 WENR

11:45-12:00 Huston Ray and His Orchestra
 WABC WOKO WKBW WLZB WDRG WAAB
 WORC WPG WHP WLWB WMAL WCAO
 WTAR WDBJ WWVA WADC WWNC WBT
 WTOC WQAM WDBO WDAE WXYZ WBCM
 WREC WLAC WBRC WDSU WISN WFBM
 WCOO KSCJ WMT KMBC WNAX WBW
 KFJF KRLD K TSA KOH KFOR KFPY
 KFRC KDYL KLZ

Thursday

4:30-5:00 Maze of Melody
 WJZ WBAL WGAR WJR WLW WENR
 WKW WRC KSTP WDAY KFYR WJAX
 WSM WMC

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

8:00-8:15 Dixie Spiritual Singers
 WJZ WBZ WBZA KFAB KWK WREN
 WBAL KDKA WGAR WJR WCKY WHAM
 WENR WLS WRVA

8:00-9:00 Fleischmann Hour—Rudy Vallee
 WFAF W TIC WEI WTAG WJAX WJDX
 WJAR WCSH WFI WRC WGY WHO
 WOV WWJ WHAS WMC WSAI WJAR
 WSB WSMB WEBC KOA WRVA KTHS
 KSL KOMO WQAI WSM WOC WAPI
 KOA KHQ WTAM KECA KSD CKGW
 WGN KGW WBEN KPRC WIOD WPTF
 WFLA WSUN WCAE CPFC KVOO
 (WDAF on 8:45 to 9:00) (KSTP on 8:15) (WKY,
 WBAP off 8:30) (WTMJ on 8:30)

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

8:30-8:45 Henry Burbig—Nat Brusiloff's Orchestra
 WABC WOKO WFBL WGR WLZB WEAN
 WDRC WNAC WORC WPG WHP WJAS
 WLWB WMAL WCAO WTAR WDBJ WWVA
 WADC WKBW WNAC WBT WTOC WQAM
 WDAE WXYZ WBCM WREC WLAC WBRC
 WDSU WTAQ WFBM WCOO KSCJ WMT
 KMOX KMBC WNAX KOIL KFH KFJF
 WACO KOH KFOR KGB KVI KFPY
 KFRC KHJ KDYL KLZ CFRB

8:45-9:00 Sisters of the Skillet
 WJZ WREN KFAB WBAL WBZ WBZA
 WHAM KDKA WGAR WJR WLW WLS
 KWK

9:00-9:15 Rhythm Chorists—Freddie Rich's Orchestra
 WABC WOKO SFBL WKBW WEAN WDRC
 WNAC WORC WHP WJAS WLWB WMAL
 WCAO WTAR WDBJ WWVA WADC WHK
 WKBW WNAC WBT WQAM WDAE WXYZ
 WBCM WLAC WBRC WDSU WISN WTAQ
 WFBM WMT KMBC WNAX KOIL WBW
 KFH KFJF KRLD K TSA KOH KFOR
 KGB KVI KFPY KFRC KDYL KLZ
 CFRB

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

9:00-9:30 Arco Dramatic Musicals
 WFAF W TIC WEI WJAR WTAG WCSH
 WFI CKGW WRC WGY WSM WIOD
 WJAX WQAI WKY KOA WBAP WRVA
 WWJ WSAI KSD WDAF KYW WERC
 WOW WSM WJDX WOC WHO KGO
 KECA KOMO KHQ KGW WAPI WTAM
 WBEN K TAR KFSD KSTP WSB WMC
 WPTF KSL WHAS WCAE

9:15-9:30 Coty Melody Girl—Welcome Lewis
 WABC WFBL WKBW WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC KMOX
 WHK WKRC WXYZ WSPD WOWO WBBM
 KMBC KOIL

9:30-10:00 Grand Opera Miniature
 WABC WOKO WFBL WKBW WEAN WDRC
 WORC WHP WJAS WLWB WMAL WCAO
 WTAR WDBJ WADC WHK WKBW WNAC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WBCM WLAC WBRC WDSU WISN WTAQ
 WBBM WMT KMBC WNAX WBW KFH
 KFJF KRLD K TSA KOH KFOR KVI
 KFPY KFRC KDYL KLZ CFRB

9:30-10:00 Adventures of Sherlock Holmes
 WFAF W TIC WTAG WJAR WCSH CKGW
 WFI WRC WGY WCAE WWJ WSAI
 WENR

9:30-10:00 Maxwell House Ensemble
 WJZ WBZ WBZA WBAL WKY WTMJ
 WERC WHAS WSM WJAX KPRC KOA
 WRVA KSTP WSB WBAP WREN KWK
 WIOD WJR WSMB WQAI KECA KGW
 KOMO KHQ WAPI WMC WHAM WJDX
 WSUN WFLA KDKA KSL KGO K TAR
 KFSD KYW

10:00-10:15 The Boswell Sisters
 WABC WOKO WFBL WKBW WLZB WEAN
 WDRC WORC WPG WHP WJAS WLWB
 WMAL WTAR WDBJ WADC WKRN WWNC
 WTOC WQAM WDBO WDAE WXYZ WBCM
 WREC WLAC WBRC WDSU WISN WFBM
 KSCJ WMT KMBC WNAX KOIL WBW
 KFH KFJF KRLD K TSA KOH KFOR
 KOIL KVI KFPY KFRC KDYL KLZ
 CFRB KHJ

10:00-10:30 A. & P. Gypsies
 WJZ WLW WBAL WBZ WBZA KDKA
 WGAR WJR KYW WREN

10:00-11:00 Lucky Strike Dance Orchestra
 WFAF W TIC WEI WJAR WTAG WCSH
 WFI WRC WGY WCAE WWJ WSAI
 WBEN WBAP KSD WCOV WKY WQAI
 KOA KSL WTMJ WIOD WHAS WSM

WMC WSMB WJDX KVOO WDAF WJAX
 KPRC WTAM WIBC WRVA WFLA WSUN
 WSB WPTF WFAA KGO KGW WOC
 WHO KFI KOMO KHQ KFSD KTAR
 WENR WDAY KFYZ WAPI KTFPS on 10:30)
 WIBA (KSTP WHAS WSM KPRC off 10:30)

10:15-10:30 The Columbians — Freddie Rich's Orchestra
 WABC WOKO WFBL WKBW WLBZ WEAN
 WDRC WORC WPG WHP WJAS WLBW
 WMAL WJAR WDBJ WKBN WNBC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WBCM WLAC WBCR WDSU WISN WFBM
 WCCO KSCJ WMT KMBC WNAX KOIL
 WIBW KFH KFFJ KRLD K TSA KOH
 KFOR KGB KOL KVI KFPY KFRC
 KHJ KDYL KLZ CFRB

10:30-10:45 Tito Guizar — Tenor
 WABC WFBL WKBW WLBZ WEAN WDRC
 WNAC WORC WPG WHP WJAS WLBW
 WMAL WCAO WTAR WDBJ WADC WKBN
 WNBC WBT WTOC WQAM WDBO WDAE
 WXYZ WBCM WREC WLAC WBCR WDSU
 WISN WCCO KSCJ WMT KMOX KMBC
 WNAX KOIL WIBW KFH KFFJ KRLD
 K TSA KOH KFOR KGB KOL KFPY
 KHJ KDYL KLZ CFRB KCAC

10:45-11:00 Peter's Parade — Irene Beasley Contralto
 WABC WKBW WJAS WCAO WDBJ WADC
 WHK WKRC WCAH WKBN WNBC WBT
 WIS WGST WTOC WQAM WDBO WDAE
 WXYZ WBCM WSPD WLAP WDOB WREC
 WLAC WNOX WBCR WDSU WISN WOWO
 WBBM WCCO KSCJ WMT KMOX KMBC
 WNAX KOIL WIBW KFH KFFJ KRLD
 WRR KTRH KOH KGB KOL KFPY
 KOIN KFRK KHJ KDYL KLZ WMBG

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

11:45-12:00 Radio Roundup
 WABC WOKO WFBL WHEC WKBW WDRC
 WAAB WORC WCAU WHP WLBW WMAL
 WCAO WTAR WDBJ WNBC WTOC WDBO
 WXYZ WBCM WSPD WREC WLAC WBCR
 WDSU WISN WCCO KSCJ WMT KMBC
 KLRA WNAX KOIL KFFJ KRLD KTRH
 K TSA KFOR KHJ KDYL KLZ

Friday

7:00-7:45 Major Bowes' Family
 WEAFF WJAR WCHS WCAE WWJ WENR
 WOC WHO KOA WSMB WOW KSD
 WTAG WRC WGY WBEN WIBA WFLA
 WSUN WHAS WSB WJDX WFAA WSM

7:30-7:45 Red Nichols and His Orchestra
 WFBL WDRC WORC WCAU WHP WLBW
 WCAO WTAR WDBJ WKBN WNBC WBT
 WTOC WDBO WXYZ WBCM WSPD WREC
 WLAC WBCR WDSU WISN WTAG WFBM
 KSCJ KMBC KOIL KFH KFFJ KTRH
 KFOR 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 W TIC WEEI WRC KTHS KGW
 KVOO WGY WLIT WCAE WJAR WCHS
 WOW KYW WDAF KSD KSTP WTMJ
 WKY WOC WIBC KOA WOAI KOMO
 KGO KHQ WTAG KSL CKGW WSAI
 WHO KECA WTAM WBEN WWJ KTHS
 (WFAA KPRC off 8:30) KTAR

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 KMBC KOIL

8:30-9:00 March of Time
 WABC WFBL WGR WEAN WDRC WNAC
 WCAU WJAS WMAL WCAO WADC WHK
 WKRC WBT WXYZ WSPD WLAC WDSU
 WCCO KMOX KMBC KOIL KOL KVI
 KFPY KOIN KFRK KHJ KDYL KLZ

9:00-9:30 Interwoven Program
 WJZ WHAM WMC KDKA WJAX WKY
 WREN KPRC KWK WBZ WBZA WSMB
 EKW WIOD WFLA WSUN KSTP WHAS
 KYW WIBC WCKY WSB WAPI WBAL
 WOAI KSL KGO KOMO KHQ KFSD
 KTAR WGAR KFI KOA WRVA WTMJ

9:00-9:30 Cluquet Club
 WEAFF W TIC WEEI WJAR WTAG WCHS
 WLIT WRC WOW WCAE WSAI KSD
 WBO WWJ WDAF WOC WHO WGY

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

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

9:30-10:00 Armour Program
 WJZ WBZ WBZA WJR KYW WREN
 KSTP WIBC WRVA WMC WSB WOAI
 KOA KSL KGO WKY WHAS KGW
 KHQ KOMO KDKA WJAX WJDX WPTF
 WIOD WTMJ WAPI WHAM KFI WSM
 WLW WMBW 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 WKRC WGST WXYZ
 WSPD WREC WOWO WMAQ WCCO KMOX
 KMBC KOIL KFFJ KRLD KOL KVI
 KFPY KOIN KFRK KHJ KDYL KLZ

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

10:30-10:45 The Bon Bons — Negro Quartette
 WABC WOKO WFBL WKBW WLBZ WEAN
 WDRC WNAC WORC WPG WHP WJAS
 WMAL WCAO WTAR WDBJ WADC WNBC
 WBT WTOC WQAM WDBO WDAE WXYZ
 WBCM WLAC WBCR WDSU WOWO KSCJ
 WMT KMBC WNAX KOIL WIBW KFH
 KFFJ K TSA KOH KFOR KGB KOL
 KFPY KHJ KDYL KLZ CFRB WLBW

10:30-11:00 RKO Theater of the Air
 WEAFF W TIC WJAR WTAG WLIT WGY
 WCAE WWJ WSAI WBO KSD WDAF
 WRVA WJAX WIOD WMC WSB WSMB
 WOC WJDX KGO KTS WOAI WKY
 WRC WCHS WTMJ KOA KGW KFI
 KHQ KOMO KTAR KFSD WHO WOV
 WTAM KSL WFLA WSUN WBEN WDAY
 KFYR WEEI WPTF WAPI WENR WHAS
 WIBA

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 WEEI WBEN KFYR
 WDAF WFLA WSUN

11:45-12:15 Jack Denny and His Orchestra
 WJZ WBAL WHAM KSTP KDKA WGAR
 KOA WJR WENR WREN CFCF KFYR
 WIBA WSM

Saturday

4:00-4:30 Ann Leaf at the Organ
 WABC WOKO WFBL WGR WEAN WDRC
 WAAB WPG WHP WMAL WCAO WDBJ
 WWVA WADC WHK WKBN WNBC WBT

WTOC	WQAM	WDBO	WDAE	WXYZ	WBCM	KPRC	WOAI	KOA	WTMJ	KSL	KGO
WREC	WLAC	WBRC	WDSU	WISN	KOIL	KFI	KGW	KOMO	KHQ	KTAR	KFSD
WIBW	KFJF	KRLD	WACO	KOH	KVOR	WLW	WOC	WJDX	WDAY	KFYR	WPTF
KGB	KOL	KVI	KFPY	KHJ	KDYL	WIOD					
KLZ	CFRB	WFBM	KSCJ	KMOX	KMBC						
5:30-5:45 Song Shoppe	WEAF	WTIC	WWJ	WCAE	KSTP	WRC					
	WBEN	KSD	WJAR	WENR	WTAG	KOA					
	WSB	WTAM	WOW	WDAY	KFYR						
7:00-7:15 Nick Lucas	WEAF	WTIC	WFI	WCAE	WWJ	WSB					
	KOA	KGO	WCSH	WENR	KFYR	KSD					
7:15-7:30 Political Situation in Washington—Frederic William Wile	WABC	WOKO	WFBL	WGR	WLBZ	WDRC					
	WAAB	WORC	WHP	WJAS	WLBW	WMAL					
	WDBJ	WNAC	WTOC	WQAM	WDBO	WDAE					
	WXYZ	WBCM	WREC	WLAC	WDSU	WISN					
	WTAQ	WOWO	WCCO	KSCJ	KMOX	KMBC					
	KOIL	KFH	KFJF	KRLD	KOH	KVOR					
	KGB	KOL	KVI	KFPY	KFRC	KHJ					
	KLZ	WBT									
7:15-7:30 Laws That Safeguard Society	WEAF	WJAR	WTAG	WCSH	WFI	WGY					
	WBEN	WOC	WEO	WECB	WOAI	KOA					
	KGO	WEEI	KECA	KOMO	KTAR	WTIC					
	WJDX	WDAY	WENR	WOW							
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 Sonata Recital	WJZ	WHAM	WREN	WGAR	KGO	WLW					
	KDKA	KWK	KFAB	KOA	KPO	KGW					
	KECA	KFSD									
7:30-7:45 Lee Morse—Crooner	WEAF	WOC	WHO	WJAR	WDAF	WOW					
	WRVA	CFCF	WTIC	WTAG	WCSH	WFI					
	WRC	WGY	WBEN	WTAM	WSM	WENR					
8:00-8:30 Civic Concerts Service Program	WEAF	WTIC	WTAG	WGY	WCAE	KSD					
	WOC	WHO	WOW	WEEI	WWJ	WSAI					
	WDAF	WJAR	WCSH	WFI	WBEN	WTAM					
8:00-8:30 Teddy Black's Orchestra	WJZ	WBAL	WHAM	WJR	KWK	WREN					
	CKGW	CFCF	WIBO	WRVA	WFLA	WSUN					
	WMC	KTHS	WOAI	KOA	KSL						
8:15-8:30 Sterling Products—Abe Lyman's Band	WABC	WFBL	WGR	WEAN	WDRC	WNAC					
	WCAU	WJAS	WMAL	WCAO	WADC	WKRC					
	WSPD	KMOX	KMBC	KOIL	WORC						
8:30-8:45 Kate Smith and La Palina	WABC	WFBL	WHEC	WDRC	WAAB	WORC					
	WPG	WCAU	WHP	WLBW	WTAR	WDBJ					
	WKBN	WNAC	WBT	WDBO	WXYZ	WBCM					
	WSPD	WLAC	WBRC	WDSU	WISN	WTAQ					
	WFBM	WMAQ	KSCJ	WMT	KMOX	KMBC					
	KLRA	WNAX	KOIL	KFH	KFJF	KTRH					
	WACO	KVOR	KVI	KFPY	KFRC	KDYL					
8:30-9:00 Silver Flute	WEAF	WTIC	WGY	KSD	WDAF	WOW					
	WJAR	WWJ	WSAI	WTAG	WCSH	WFI					
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	KMBC						
9:00-9:15 The Boswell Sisters	WABC	WOKO	WFBL	WHEC	WKBW	WEAN					
	WDRC	WNAC	WORC	WPG	WCAU	WHP					
	WLBW	WMAL	WCAO	WTAR	WDBJ	WHK					
	WKBN	WNAC	WBT	WTOC	WDBO	WXYZ					
	WBCM	WSPD	WREC	WLAC	WBRC	WDSU					
	WISN	WTAQ	WFBM	WMAQ	WCCO	KSCJ					
	WMT	KMOX	KMBC	WNAX	KOIL	KFH					
	KFJF	KTRH	KTSA	KVOR	KVI	KFPY					
	KFRC	KDYL									
9:00-9:30 General Electric Program	WEAF	WTIC	WJAR	WTAG	WCSH	WFI					
	WRC	WGY	WBEN	WCAE	WTAM	WWJ					
	WSAJ	WIBO	KSD	WOC	WHO	WDAF					
	KSTP	WECB	WRVA	WJAX	WFLA	WSUN					
	WHAS	WMC	WSB	WAPI	WSMB	WBAP					
9:30-10:00 The First Nighter	WJZ	KDKA	KSL	KGO	WTMJ	KFI					
	KGW	KOMO	KHQ	KFSD	KTAR	KWK					
	WREN	WJR	WLW	WECB	WDAY	KFYR					
	WIBA	KOA	WGAR	KYW	KSTP	WBZ					
	WBZA	WHAM	WBAL								
9:30-10:00 National Radio Forum from Washington, D. C.	WABC	WOKO	WFBL	WKBW	WLBZ	WEAN					
	WDRC	WNAC	WORC	WPG	WHP	WJAS					
	WLBW	WMAL	WTAR	WDBJ	WADC	WKBN					
	WWNC	WBT	WTOC	WQAM	WDBO	WDAE					
	WXYZ	WBCM	WFLC	WDSU	WISN	WTAQ					
	WOWO	WFBM	KSCJ	WMT	KMOX	KMBC					
	WNAX	KOIL	KIBW	KFH	KFJF	KTSA					
	KOH	KVOR	KGB	KOL	KVI	KFPY					
	KFRC	KHJ	KDYL	KLZ							
9:30-10:00 Club Valspar	WEAF	WTIC	WJAR	WTAG	WCSH	WFI					
	WRC	WGY	WBEN	WCAE	WTAM	WWJ					
	WSAJ	WEEI	KSD	WOC	WHO	WDAF					
	KSTP	WECB	WRVA	WJAX	WHAS	WMC					
	WSB	WAPI	WSMB	WBAP	KPRC	WOAI					
	WOW	WTMJ	CKGW	WPTF	WIOD	WFLA					
	WSUN	WKY	WJDX	WDAY	KFYR						
10:00-10:30 Cuckoo	WJZ	WBZ	WBZA	WHAM	WGAR	WIBO					
	KWK	WREN	CFCF	CKGW	WJR	WCKY					
10:00-11:00 Hank Simmons' Show Boat	WABC	WOKO	WFBL	WHEC	WKBW	WEAN					
	WDRC	WNAC	WORC	WPG	WCAU	WLBW					
	WMAL	WTAR	WDBJ	WHK	WKBN	WWNC					
	WBT	WTOC	WDBO	WXYZ	WBCM	WSPD					
	WREC	WLAC	WBRC	WDSU	WISN	WFBM					
	WCCO	KSCJ	WMT	KMOX	KMBC	WNAX					
	KOIL	KFH	KFJF	KRLD	KTRH	KT A					
	WACO	KVOR	KVI	KFPY	KFRC	KDYL					
10:00-11:00 Lucky Strike Dance Orchestra	WEAF	WTIC	WEEI	WJAR	WTAG	WCSH					
	WFI	WRC	WGY	WBEN	WCAE	WTAM					
	WWJ	WSAI	WGN	KSD	WOC	WHO					
	WOW	WDAF	WTMJ	KSTP	WECB	WRVA					
	WJAX	WIOD	WFLA	WSUN	WHAS	WMC					
	WSB	WSMB	WJDX	KVOO	WFAA	WOAI					
	WKY	KOA	KSL	KGO	KFI	KGW					
	KOMO	KHQ	KTAR	KFSD	WDAY	KFYR					
	WIBA	KPRC									
11:00-11:15 Little Jack Little	WEAF	WTIC	WFI	WCAE	KSD	WGY					
	WTAM										
11:30-12:00 Lloyd Huntley and His Orchestra	WEAF	WTIC	WRC	KSD	WOC	WHO					
	WOW	WMC	WSB	KPRC	WEEI	WFI					
	WTAM	WGY	WWJ	WDAF	WCAE	CFCF					
	WIOD										
11:45-12:00 Huston Ray and His Orchestra	WABC	WOKO	WFBL	WKBW	WLBZ	WEAN					
	WDRC	WAAB	WORC	WPG	WHP	WLBW					
	WMAL	WCAO	WWVA	WADC	WHK	WWNC					
	WBT	WTOC	WQAM	WDBO	WDAE	WXYZ					
	WBCM	WREC	WLAC	WBRC	WDSU	WISN					
	WFBM	WCCO	KSCJ	WMT	KMBC	WNAX					
	KOIL	WIBW	KFH	KFJF	KRLD	KTSA					
	KOH	KVOR	KFPY	KFRC	KDYL	KLZ					
	WTAR										
12:00-12:30 Jack Pettis and His Orchestra	WABC	WOKO	WFBL	WKBW	WLBZ	WEAN					
	WNAC	WPG	WHP	WLBW	WMAL	WCAO					
	WTAR	WRVA	WADC	WHK	WKBN	WWNC					
	WBT	WTOC	WQAM	WDBO	WDAE	WBCM					
	WREC	WLAC	WBRC	WDSU	WISN	WFBM					
	WCCO	KMT	KMOX	KMBC	WNAX	KOIL					
	WIBW	KFJF	KRLD	KTSA	KOH	KVOR					
	KFPY	KDYL	KLZ	WXYZ							
12:00-12:30 Sherbo's Continentals	WEAF	WTIC	WGY	WBEN	WTAM	KSD					
	WWJ	WOW	WMC	KPRC	KOA	WRC					
	WDAY	WIBA									

+ good at 11 = fine
X no
next 15

(1931)

INDEX BY FREQUENCIES AND DIAL NUMBERS

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KEY

Frequency in kilocycles. Wave lengths in meters. Second column symbols: * Verifies receptions 2c; sends station stamp 10c; † Verifies 2c; no stamp; ‡ Sends stamp but does not verify otherwise; † Does not verify; § Did not reply. § Verification 25c, reply card 10c. Third column shows right 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
XEY	--	101	547	Merida, Mexico

		X
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

		X
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	C	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.

		X
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.
TGW		50	---	Guatemala
WEOA	†	750	1	Columbus, Ohio
WKBN	*	500	1C	Youngstown, Ohio
WMAC	--	250	2	Syracuse, N. Y.
WMCA	*	500	3	New York City
WNAK	*	1000	C	Yankton, S. D.
WNYC	†	500	3	New York City
WSYR	†	250	2	Syracuse, N. Y.
WWNC	*	1000	†-N	Asheville, N. C.

		X
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	--	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
WOBW	*	250	1+	Charleston, W. Va.
WSAZ	*	250	1	Huntington, W. Va.
WTAG	*	250	N	Worcester, Mass.

		X
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. WOBW, Inc. WSAZ, Inc. Telegram Publishing Co.		

INDEX BY FREQUENCIES AND DIAL NUMBERS

KCYS.
670
MTRS.
447.5
DIAL

590 kilocycles 508.2 meters

590	1/1000		
-----	--------	--	--

CMW	--	1400	588
KHQ	--	1000	+N
WCAJ	*	500	1
WEEI	†	1000	N
WKZO	*	1000	D
WOW	*	1000	1N
XEZ	*	500	588

Havana, Cuba
Spokane, Wash.
Lincoln, Nebr.
Boston, Mass.
Kalamazoo, Mich.
Omaha, Nebr.
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.

600 kilocycles 499.7 meters

600	3/1000		
-----	--------	--	--

CNRO	†	500	---
KFSD	*	500	+N
WCAC	†	250	2+
WCAO	†	250	C
WICC	*	250	2+
WMT	*	500	C
WREC	*	500	+C

Ottawa, Ont.
San Diego, Cal.
Storrs, Conn.
Baltimore, Md.
Bridgeport, Conn.
Waterloo, Iowa
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

610			
-----	--	--	--

KFRC	*	1000	C
WDAF	†	1000	N
WFAN	†	500	2C
WIP	*	500	2C
WJAY	†	500	D

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

620	2/1000		
-----	--------	--	--

KGW	*	1000	+N
KTAR	*	500	+N
WFLA	*	1000	1+N
WLBZ	†	500	C
WSUN	*	1000	1+N
WTMJ	*	1000	+N

Portland, Ore.
Phoenix, Arizona
Clearwater, Fla.
Bangor, Maine
St. Petersburg, Fla.
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

630			
-----	--	--	--

CFCT	*	50	---
CJGX	*	500	---
CNRA	*	500	---
KFRU	*	500	1
WGBF	†	500	1
WMAL	*	250	+C
WOS	*	500	1

Victoria, B. C.
Yorkton, Sask.
Moncton, N. B.
Columbia, Mo.
Evansville, Ind.
Washington, D. C.
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

640	15/1000		
-----	---------	--	--

CHRC	--	100	645
CKCI	†	100	645
CKCR	†	50	645
CMHU	†	40	645
KFI	*	50000	N
WAIU	*	500	C Dn
WOI	*	5000	D
XFG	--	2000	638

Quebec, Que.
Quebec, Que.
Waterloo, Ont.
Cienfuegos, Cuba
Los Angeles, Cal.
Columbus, Ohio
Ames, Iowa
Mexico City

E. Fontaine
Le "Soleil," Ltd.
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

650			
-----	--	--	--

KPCB	*	100	Dn
WSM	†	5000	N

Seattle, Wash.
Nashville, Tenn.

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

660 kilocycles 454.3 meters

660	3/1000		
-----	--------	--	--

CHWK	†	100	---
CJRM	†	500	665
CJRW	†	500	665
CMCO	--	225	---
RUS	*	500	664
WAAW	†	500	D
WEAF	†	5000	N
WTIC	*	5000	N

Chilliwack, B. C.
Moose Jaw, Sask.
Fleming, Sask.
Havana, Cuba
Salvador
Omaha, Nebr.
New York City
Hartford, Conn.

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

670 kilocycles 447.5 meters

670	1/1000		
-----	--------	--	--

HIX	--	100	669
VOWR	†	500	675
WMAQ	†	5000	Cm
XER	--	101	674

Santo Domingo
St. Johns, N. F.
Chicago, Ill.
Mexico City

Dominican Republic
Wesley United Church
WMAQ, Inc.
Armida y Cia.

CUT OUT ON DOTTED LINES

Wgn - 720 3/4
 CKM - 735 0
 CKG - 735 1/2
 - 1 dec 10
 734
 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

5	5	12	mm	
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.
CJCH	*	500	1	Calgary, Alta.
CKGW	*	5000	2N	Toronto, Ont.
CNRC	*	500	1	Calgary, Alta.
CPR Y	--	5000	2	Toronto, Ont.
NAA	†	1000	---	Arlington, Va.
VAS	†	10000	685	Glace Bay, N. S.
XET	†	500	---	Monterrey, Mexico

6	—	18	mm	
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	W*	5000	N	Cincinnati, Ohio
-----	----	------	---	------------------

7	0	—	—	
Crosley Radio Corp.				

710 kilocycles 422.3 meters

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

7	1	5	3	mm
R. S. MacMillan Bamber Broadcasting Service, Inc Cia. Civil de Inversiones				

720 kilocycles 416.4 meters

WGN	†	25000	---	Chicago, Ill.
-----	---	-------	-----	---------------

7	2	5	2	9
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

7	3	5	2	9
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.

7	4	2	2	6
The M. M. Johnson Co. Atlanta Journal Co.				

750 kilocycles 399.8 meters

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

7	5	2	2	6
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

7	6	4	3	
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	W*	25000	1C	Chicago, Ill.
WJBT	--	25000	1S	Chicago, Ill.

7	7	0	—	
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.

7	8	0	—	
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.

790 379.5 ✓
 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

800 374.8 ✓
 Carter Publications, Inc.
 News & Journal
 Fernando Pazos
 Gobierno del Estado de Aguascalientes

810 kilocycles 370.2 meters

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

810 370.2 ✓
 Northwestern Broadcasting, Inc.
 Eastern Broadcasters, Inc.

820 kilocycles 365.6 meters

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

820 365.6 ✓
 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.

830 361.2 ✓
 Leopoldo V. Figueros
 National Broadcasting Co., Inc.
 Berks Broadcasting Co.
 Matheson Radio Co., Inc.
 University of Florida

840 kilocycles 356.9 meters

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

840 356.9 ✓
 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.

850 352.7 ✓
 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

860 348.6 ✓
 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 1N Chicago, Ill.

870 344.6 ✓
 National Broadcasting Co., Inc.
 Agricultural Broadcasting Co.

880 kilocycles 340.7 meters

CHML * 50 --- Hamilton, Ont.
 CJCB * 50 --- Sydney, N. S.
 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

880 340.7 ✓
 Maple Leaf Radio Co., Ltd.
 N. Nathanson
 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

KCYS. 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	3	Ottawa, Ont.
CKPR	---	50	3	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. Munro, Ltd.
Dr. G. M. Geldert
Dougall Motor Car Corp.
Raoul 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

CFQC	---	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.
KFFX	*	500	1	Denver, Colo.
KOMO	†	1000	N	Seattle, Wash.
KPRC	*	1000	+N	Houston, Texas
WAFF	---	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.
Drovers' Journal Publishing Co.
Babson Statistical Organization, Inc.
The Detroit News
Gobierno del Estado de Chihuahua

930 kilocycles 322.4 meters

CFCH	---	50	3	North Bay, Ont.
CFLC	*	50	3	Prescott, Ont.
CFRC	---	50	3	Kingston, Ont.
CJCA	*	500	---	Edmonton, Alta.
KFWI	†	500	1	San Francisco, Cal.
KGBZ	---	500	2+	York, Nebr.
KMA	*	500	2+	Shenandoah, Iowa
KROW	*	500	1+X	Oakland, Cal.
WBRC	*	500	+C	Birmingham, Ala.
WDBJ	*	250	+C	Roanoke, Va.
WIBG	*	25	S	Elkton 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.
WFTW	*	1000	C	Hopkinsville, Ky.
WHA	---	750	D+	Madison, Wis.
XEO	---	5000	---	Mexico City

Marion A. Mulrony
KOIN, Inc.
Bremer Broadcasting Corp.
Congress Square Hotel Co.
WDAY, Inc.
WFTW, 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.

				✓

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

National Broadcasting Co., Inc.

INDEX BY FREQUENCIES AND DIAL NUMBERS

960 kilocycles 312.3 meters

CFRB	*	5000	2C
CHWC	*	500	3
CJBR	*	500	3
CKCK	†	500	3
CMBG	--	150	965
CMBD	--	150	965
CNRR	*	500	3
CNRX	*	5000	2
XED	*	10000	965

Toronto, Ont.
Regina, Sask.
Regina, Sask.
Regina, Sask.
Havana, Cuba
Havana, Cuba
Regina, Sask.
Toronto, Ont.
Reynosa, Mexico

960									
Rogers-Majestic Corp., Ltd.									
R. H. Williams & Sons, Ltd.									
Cooperative Wheat Producers, Ltd.									
Leader Publishing Co., Ltd.									
Domingo Fernandez									
Luis Perez Garcia									
Canadian National Railways									
Canadian National Railways									
International Broadcasting Co.									

970 kilocycles 309.1 meters

CMGF	--	50	977
KJR	*	5000	
WCFL	--	1500	N Dn

Matanzas, Cuba
Seattle, Wash.
Chicago, Ill.

970									
Bernabe R. de la Torre									
Northwest Broadcasting System, Inc.									
Chicago Federation of Labor									

980 kilocycles 305.9 meters

CFCN		10000	985
KDKA	✓	50000	N
XEFE	--	101	---

Calgary, Alta.
Pittsburgh, Pa.
Laredo, Mexico

980									
Western Broadcasting Co.									
Westinghouse Elec. & Mfg. Co.									
Rafael T. Carranza									

990 kilocycles 302.8 meters

WBZ-A	†	15000	1N
XEK	--	101	---

Springfield-Boston
Mexico City

990									
Westinghouse Elec. & Mfg. Co.									
Arturo Martinez									

KCYS. 1050

1000 kilocycles 299.8 meters

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

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

1000									
Los Angeles Broadcasting Co.									
Central Broadcasting Co.									
Central Broadcasting Co.									
Carlos Gutierrez M.									

MTRS. 285.5
DIAL

1010 kilocycles 296.8 meters

CHCK	--	100	---
CHCS	--	500	3
CKIC	--	50	---
CKOC	*	500	3+
CMBW	--	150	---
CMBZ	--	150	---
KGGF	†	500	2
KQW	*	500	---
WHN	*	250	1
WIS	*	500	1
WLAP	†	250	C
WNAD	*	500	2
WPAP	*	250	1
WQAO	--	250	1
WRNY	--	250	1
XEQ	--	1000	1015

Charlottetown, P. E. I.
Hamilton, Ont.
Wolfville, N. S.
Hamilton, Ont.
Havana, Cuba
Havana, Cuba
S. Coffeyville, Okla.
San Jose, Cal.
New York City
Columbia, S. C.
Louisville, Ky.
Norman, Okla.
New York City
New York City
New York City
Juarez, Mexico

1010									
W. E. Burke									
The Hamilton Spectator									
Acadia University									
Wentworth Radio Broadcasting Co.									
M. Alvarez									
Manual y Salas									
Powell & Platz									
Pacific Agricultural Foundation, Ltd.									
Marcus Loew Booking Agency									
South Carolina Broadcasting Co., Inc.									
American Broadcasting Corp. of Ky.									
University of Oklahoma									
Palisades Amusement Park									
Calvary Baptist Church									
Aviation Radio Station, Inc.									
Feliciano Lopez Islas									

1020 kilocycles 293.9 meters

KFKX	✓	10000	1N
KYW	✓	10000	1N
WRAX	†	250	D

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

1020									
Westinghouse Elec. & Mfg. Co.									
Westinghouse Elec. & Mfg. Co.									
WRAX Broadcasting Co.									

1030 kilocycles 291.1 meters

CFCF	†	1650	N
CMKC	*	150	1034
CNRV	†	500	---
XEB	†	1000	---
XEV	--	101	1034

Montreal, Que.
Santiago de Cuba
Vancouver, B. C.
Mexico City, Mexico
Puebla, Mexico

1030									
Canadian Marconi Co.									
M. P. Martinez									
Canadian National Railways									
El Buen Tono, S. A.									
Ciro Molina									

1040 kilocycles 288.3 meters

KRLD	*	10000	1C
KTHS	†	10000	1N
WKAR	*	1000	D
WMAK	*	1000	Dn

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

1040									
KRLD Radio Corp.									
Chamber of Commerce									
Michigan State College									
Buffalo Broadcasting Corp.									

1050 kilocycles 285.5 meters

KFBI	*	5000	Dn
KNX	*	5000	---

Milford, Kansas
Hollywood, Cal.

1050									
Farmers & Bankers Life Insurance Co.									
Western Broadcast Co.									

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

1060 kilocycles 282.8 meters

KWJJ	*	500	Dn	Portland, Ore.
WBAL	10000	IN		Baltimore, Md.
WJAG	*	1000	Dn	Norfolk, Nebr.
WTIC	*	50000	IN	Hartford, Conn.

70				
----	--	--	--	--

KWJJ Broadcast Co., Inc.
Consolidated Gas Elec. & Pwr. Co.
Norfolk Daily News
Travelers Broadcasting Service Corp.

1070 kilocycles 280.2 meters

CMBG	--	150	---	Havana, Cuba
CMBT	--	150	---	Havana, Cuba
CMCB	--	150	---	Havana, Cuba
KJBS	*	100	D	San Francisco, Cal.
WCZA	*	50	D	Carthage, Ill.
WDZ	+	100	D	Tuscola, Ill.
WTAM	+	50000	N	Cleveland, Ohio

1070				
------	--	--	--	--

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	Charlotte, N. C.
WCBD	*	5000	1 Dn	Zion, Ill.
WMBI	*	5000	1 Dn	Chicago, Ill.

1080				
------	--	--	--	--

Station WBT, Inc.
Wilbur Glenn Voliva
Moody Bible Institute

1090 kilocycles 275.1 meters

KMOX	*	50000	C	St. Louis, Mo.
XEL	--	10	1091	Saltillo, Mexico

1090				
------	--	--	--	--

Voice of St. Louis, Inc.
Antonio Garza Castro

1100 kilocycles 272.6 meters

CMKD	--	20	---	Santiago, Cuba
KGDM	*	250	DX	Stockton, Cal.
WLWL	*	5000	1	New York City
WPG	+	5000	1C	Atlantic City, N. J.

1100				
------	--	--	--	--

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

1110 kilocycles 270.1 meters

CMHI	--	15	---	Santa Clara, Cuba
KSOO	*	2500	Dn	Sioux Falls, S. D.
WRVA	+	5000	N	Richmond, Va.

1110				
------	--	--	--	--

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

1120 kilocycles 267.7 meters

CFJC	--	100	---	Kamloops, B. C.
CHGS	--	100	---	Summerside, P. E. I.
CJOC	+	100	---	Lethbridge, Alta
KFIC	+	100	D	Spokane, Wash.
KFSG	*	500	3	Los Angeles, Cal.
KMCS	*	500	3Y	Inglewood, Cal.
KRSC	+	50	D	Seattle, Wash.
KTRH	+	500	2C	Houston, Texas
WDBO	*	500	+C	Orlando, Fla.
WDEL	+	250	+X	Wilmington, Del.
WHAD	*	250	1	Milwaukee, Wis.
WISN	+	250	1C	Milwaukee, Wis.
WTAW	+	500	2	College Station, Texas

1120				
------	--	--	--	--

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	Salt Lake City
WJJD	*	20000	C Dn	Mooseheart, Ill.
WÖV	--	1000	D	New York City
XEE	*	105		Oaxaca, Mexico
XEH	--	5000	1132	Monterrey, Mexico

1130				
------	--	--	--	--

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	---	Matanzas, Cuba
KVOO	*	5000	1N	Tulsa, Okla.
WAPI	*	5000	1N	Birmingham, Ala.
XETA	--	500	---	Mexico City

1140				
------	--	--	--	--

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

1150 kilocycles 260.7 meters

CMCQ	--	600	---	Havana, Cuba
CMHA	--	200	1154	Cienfuegos, Cuba
CMQ	+	250		Havana, Cuba
WHAM	*	5000	N	Rochester, N. Y.

1150				
------	--	--	--	--

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

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209 **1160 kilocycles 258.5 meters**

WOWO * 10000 1C
 WVVA * 5000 1C

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

			✓
--	--	--	---

Main Auto Supply Co.
 West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

CMKG 30 1176
 WCAU * 10000 C

Santiago de Cuba
 Philadelphia, Pa.

			✓
--	--	--	---

Ricardo Arnaldo
 Universal Broadcasting Co.

1180 kilocycles 254.1 meters

CMGB -- 7.5 1185
 KEX * 5000 2
 KOB * 20000 2
 WDJY * 1000 1 Dn
 WGBS † 500
 WHDI † 500 1 Dn
 WMAZ † 500

Matanzas, Cuba
 Portland, Ore.
 State College, N. M.
 Minneapolis, Minn.
 New York City
 Minneapolis, Minn.
 Macon, Ga.

1182	75 May		✓
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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

1229	5		✓
------	---	--	---

Southern Equipment Co.

1200 kilocycles 249.9 meters

CMKB -- 15
 KBTM 100 D
 KFJB † 100 +
 KFWF † 100 5+
 KGDE * 100 +
 KGDY † 100
 KGEK † 100 9
 KGEW † 100 9
 KGJF † 100
 KGHI * 100
 KGY † 10
 KMLB -- 100 D
 KSMR -- 100
 KVOS * 100
 KWG * 100
 WABI † 100
 WABZ * 100 1
 WBBZ * 100
 WBHS -- 50 10CP
 WCAT † 100
 WCAX * 100 2
 WCLO † 100
 WCOD † 100 3
 WEPS † 100 7
 WFAM * 100 8
 WFBC * 50 10
 WFBE † 100 +
 WHBC † 10 4S
 WHBY † 100
 WIBX * 100 +
 WIL * 100 5+
 WJBC * 100 6
 WJBL † 100 6
 WJBW † 100 1
 WKJC † 100 3
 WLBG * 100 +
 WNBO * 100 4
 WNBW † 10
 WNBX † 10 2
 WORC * 100 7CX
 WRBL † 50
 WVAE † 100 8
 XEA -- 101

Santiago de Cuba
 Paragould, Ark.
 Marshalltown, Iowa
 St. Louis, Mo.
 Fergus Falls, Minn.
 Huron, S. D.
 Yuma, Colo.
 Fort Morgan, Colo.
 Los Angeles, Cal.
 Little Rock, Ark.
 Lacey, Wash.
 Monroe, La.
 Santa Maria, Cal.
 Bellingham, Wash.
 Stockton, Cal.
 Bangor, Maine
 New Orleans, La.
 Ponca City, Okla.
 Huntsville, Ala.
 Rapid City, S. D.
 Burlington, Vt.
 Janesville, Wis.
 Harrisburg, Pa.
 Worcester, Mass.
 South Bend, Ind.
 Knoxville, Tenn.
 Cincinnati, Ohio
 Canton, Ohio
 Green Bay, Wis.
 Utica, N. Y.
 St. Louis, Mo.
 La Salle, Ill.
 Decatur, Ill.
 New Orleans, La.
 Lancaster, Pa.
 Petersburg, Va.
 Washington, Pa.
 Carbondale, Pa.
 Springfield, Vt.
 Worcester, Mass.
 Columbus, Ga.
 Hammond, Ind.
 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. Limer
 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 8
 CFNB * 500
 CJOR * 500
 CKMC -- 100 8
 CKPC † 50 8+
 KDFN † 100

Chatham, Ont.
 Fredericton, N. B.
 Sea Island, B. C.
 Cobalt, Ont.
 Preston, Ont.
 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.
WBBL	†	100	7S	Richmond, Va.
WCBS	†	100	2	Springfield, Ill.
WCOH	†	100	3	Yonkers, N. Y.
WCRW	†	100	4	Chicago, Ill.
WDWF	†	100	5	Providence, R. I.
WEBQ	†	100	6	Harrisburg, Ill.
WEDC	†	100	4	Chicago, Ill.
WGBB	†	100	3	Freeport, N. Y.
WGCM	†	100	---	Gulfport, Miss.
WHBF	†	100	---	Rock Island, Ill.
WHBU	†	100	---	Anderson, Ind.
WIBU	†	100	---	Poynette, Wis.
WJBT	†	100	3	Red Bank, N. J.
WJBU	†	100	1	Lewisburg, Pa.
WJBY	†	100	---	Gadsen, Ala.
WJW	†	100	---	Mansfield, Ohio
WLCI	†	50	---	Ithaca, N. Y.
WMBG	†	100	7	Richmond, Va.
WMRJ	†	100	3	Jamaica, N. Y.
WOCL	†	25	---	Jamestown, N. Y.
WOMT	†	100	---	Manitowoc, Wis.
WPAW	†	100	5	Pawtucket, R. I.
WPRO	†	100	5	Providence, R. I.
WQDX	†	100	---	Thomasville, Ga.
WRBQ	†	100	+	Greenville, Miss.
WSBC	†	100	4	Chicago, Ill.
WSEN	†	100	---	Columbus, Ohio
WSIX	†	100	---	Springfield, Tenn.
WSOC	†	100	---	Gastonia, N. C.
WTAX	†	100	2	Springfield, Ill.
XEX	---	500	---	Mexico City

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
 Cherry & Webb Broadcasting Co.
 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
 Gadsen Broadcasting Co., Inc.
 Mansfield Broadcasting Assn.
 Lutheran Assn. of Ithaca
 Havens & Martin, Inc.
 Peter J. Prinz
 A. E. Newton
 Francis M. Kadow
 Shartenburg & Robinson Co.
 Cherry & Webb Broadcasting 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

1232 6 m... 11

M. Cruz
 Angel Bertamaty
 Antonio Gnard
 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.
WPSG	*	500	D	State College, Pa.
WSBT	†	500	1	South Bend, Ind.

1245

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.

1255

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.

1265

Carleton College
 Nichols & Warinner, Inc.

INDEX BY FREQUENCIES AND DIAL NUMBERS

KIDO	†	1000	---	Boise, Idaho
WAAM	*	1000	1+X	Newark, N. J.
WCAL	**	1000	2	Northfield, Minn.
WDSU	†	1000	C	New Orleans, La.
WGCP	--	250	1	Newark, N. J.
WLB	†	1000	2	St. Paul, Minn.
WODA	*-*	1000	1	Paterson, N. J.
WRHM	**	1000	2	Minneapolis, Minn.
XEFA	--	250	---	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 Broadcasting Corp.
Luis F. Murguia

1260 kilocycles 238.0 meters

KOIL	*	1000	C	Council Bluffs, Iowa
KRGV	**	500	I	Harlingen, Texas
KVOA	†	500	D	Tucson, Arizona
KWVG	**	500	1	Brownsville, Texas
WLBW	**	500	C+	Oil City, Pa.
WTOC	*	500	C	Savannah, Ga.

1233
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	Ciego de Avila, Cuba
KGCA	†	50	2D	Decorah, Iowa
KOL	†	1000	C	Seattle, Wash.
KVOR	**	1000	C	Colorado Springs, Colo.
KWLC	**	100	2D	Decorah, Iowa
WASH	**	500	1	Grand Rapids, Mich.
WEAI	**	1000	D	Ithaca, N. Y.
WFBF	*-*	500	N	Baltimore, Md.
WJDX	*-*	1000	N	Jackson, Miss.
WOOD	†	500	1	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.
Kunsky-Trendle Broadcasting Corp.

1280 kilocycles 234.2 meters

CMBJ	--	15	1285	Havana, Cuba
CMBM	--	15	1285	Havana, Cuba
CMCG	--	30	1285	Havana, Cuba
CMCH	--	15	1285	Havana, Cuba
CMCR	--	20	1285	Havana, Cuba
KFBB	**	1000	+	Great Falls, Mont.
WCAM	**	500	1	Camden, N. J.
WCAP	**	500	1	Asbury Park, N. J.
WDOD	**	1000	+C	Chattanooga, Tenn.
WIBA	**	500	+N	Madison, Wis.
WOAX	**	500	1	Trenton, N. J.
WRR	†	500	C	Dallas, Texas

1280
Jesus Lopez
Jose Leiro
Jose Justo Moran
Hernani Torralbas
Aurelio Hernandez
Buttrety 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	Salt Lake City
KFUL	**	500	1	Galveston, Texas
KLCN	**	50	D	Blytheville, Ark.
KTSA	†	1000	1+C	San Antonio, Texas
WBCB	**	1000	+N	Superior, Wis.
WJAS	**	1000	C+	Pittsburgh, Pa.
WNBZ	--	50	D	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
DIAL

1300 kilocycles 230.6 meters

KFAC	*	1000	4	Los Angeles, Cal.
KFH	*	1000	2C	Wichita, Kansas
KFJR	*	500	3	Portland, Ore.
KGEF	*	1000	4	Los Angeles, Cal.
KTBR	**	500	3	Portland, Ore.
WBRR	**	1000	1	Brooklyn, N. Y.
WEVD	**	500	1	New York City
WHAP	**	1000	1	New York City
WHAZ	**	500	1	Troy, N. Y.
WIOD	**	1000	N	Miami, Fla.
WOQ	**	1000	2	Kansas City, Mo.
XETY	--	2000	---	Mexico City

3
Los Angeles Broadcasting Co.
Radio Station KFH 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.

1310 kilocycles 228.9 meters

KCRJ	†	100	---	Jerome, Arizona
KFBK	†	100	---	Sacramento, Cal.
KFGO	†	100	7	Boone, Iowa
KFJY	†	100	7	Ft. Dodge, Iowa
KFPL	†	100	---	Dublin, Texas
KFPM	†	15	---	Greenville, Texas
KFUP	--	100	8	Denver, Colo.
KFXJ	†	100	8	Grand Junction, Colo.

Chas. C. Robinson
Jas. McClatchy Co.
Boone Biblical College
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
KGBX	*	100	---	St. Joseph, Mo.
KGEX	†	100	---	Wolf Point, Minn.
KGCX	†	100	---	Kalispell, Mont.
KGFE	†	100	---	Ravenna, Nebr.
KGFW	†	100	---	Yakima, Wash.
KIT	†	50	---	Medford, Ore.
KMED	†	100	---	Shreveport, La.
KRMD	†	50	9	Houston, Texas
KTLC	*	100	---	Shreveport, La.
KTSL	†	100	9	El Paso, Texas
KTSM	†	100	2	Cedar Rapids, Iowa
KWCR	†	100	7	Aberdeen, Wash.
KXRO	†	100	---	Marquette, Mich.
WBEO	†	100	CP	Terre Haute, Ind.
WBOW	*	100	---	Wilkes-Barre, Pa.
WBRE	†	100	---	Joliet, Ill.
WCLS	*	100	1	El Paso, Texas
WDAH	†	100	2	Buffalo, N. Y.
WEBR	*	100	+	Royal Oak, Mich.
WEXL	†	50	---	Royal Oak, Mich.
WFBG	*	100	3X	Altoona, Pa.
WDFD	*	100	---	Flint, Mich.
WDFW	†	100	D	Rome, Ga.
WGAL	*	100	5	Lancaster, Pa.
WGH	*	100	---	Newport News, Va.
WHAT	†	100	4	Philadelphia, Pa.
WJAC	*	100	3	Johnstown, Pa.
WJAK	*	50	6	Marion, Ind.
WKAV	*	100	---	Laconia, N. H.
WKBB	*	100	1	Joliet, Ill.
WKBC	*	100	---	Birmingham, Ala.
WKBS	*	100	---	Galesburg, Ill.
WLBC	†	50	6	Muncie, Ind.
WNBO	†	100	---	Auburn, N. Y.
WNBH	*	100	---	New Bedford, Mass.
WOL	*	100	---	Washington, D. C.
WRAW	*	100	5X	Reading, Pa.
WROL	†	100	---	Knoxville, Tenn.
WSAJ	*	100	---	Grove City, Pa.
WSTJ	*	100	---	Winston-Salem, N. C.
WTEL	*	100	4	Philadelphia, Pa.
WTJS	†	100	+	Jackson, Tenn.

Exchange Ave. Baptist Church
KGBX, Inc.
First State Bank of Vida
Treloar-Church Broadcasting Co.
Central Nebraska Broadcasting Corp.
Carl E. Haymond
Mrs. W. J. Virgin
Robert M. Dean
Houston Broadcasting Co.
G. A. Houseman
W. S. Bledsoe & W. T. Blackwell
Harry F. Paar
KXRO, Inc.
Lake Superior Broadcasting Co.
Banks of Wabash, Inc.
Louis G. Baltimore
WCLS, Inc.
Bledsoe & Blackwell
Howell Broadcasting Co., Inc.
Royal Oak Broadcasting Co.
Wm. F. Gable Co.
Frank D. Fallain
Dolies Goings
WGAL, Inc.
Hampton Roads Broadcasting Corp.
Independence Broadcasting Co.
Johnstown Automobile Co.
Marion Broadcasting Co.
Laconia Radio Club
Sanders Bros. Radio Station
R. B. Broyles Furniture Co.
Permil N. Nelson
Derald A. Burton
Radio Service Laboratories
New Bedford Broadcasting Co.
American Broadcasting Co.
Reading Broadcasting Co.
Stewart Broadcasting Co.
Grove City College
Winston-Salem Journal Co.
Foultrod Radio Engineering Co.
Sun Publishing 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	1+	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.
KSCJ	*	1000	1+C	Sioux City, Iowa
WDRG	*	500	C	Hartford, Conn.
WSAI	*	500	N	Cincinnati, Ohio
WTAQ	*	1000	1C	Eau Claire, Wis.
XEC	--	50	1333	Toluca, Mexico

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Don Lee, Inc.
Perkins Bros. Co.
WDRG, Inc.
Crosley Radio Corp., Lessee
Gillette Rubber Co.
Jesus R. Benavides

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.
KFPY	*	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.
WAWZ	*	250	I	Zarephath, N. J.
WBNW	--	250	I	New York City
WCDA	*	250	I	New York City
WEHC	*	500	D	Emory, Va.
WMSG	--	250	I	New York City

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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

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.
WBCM	*	500	C	Bay City, Mich.
WDAG	*	1000	1	Amarillo, Texas
WHBL	*	500	4	Sheboygan, Wis.
WHIS	†	250	--	Bluefield, W. Va.
WRDX	*	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	5--	Fond du Lac, Wis.
KFQU	*	100	5--	Holy City, Cal.
KFXD	*	100	--	Nampa, Idaho
KFXV	*	100	--	Flagstaff, Arizona
KFYU	†	100	+	Abilene, Texas
KGFF	†	100		Shawnee, Okla.
KGCC	†	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	--	Anniston, 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.
WLBK	†	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.
W. E. Riker
Frank E. Hurt
Albert H. Scherman
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.
WLBK 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.
WBIG	*	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.
WOKO	†	500	2C	Albany, N. Y.
WSAN	*	250	1	Allentown, Pa.
WTAD	†	500	3	Quincy, Ill.

Peoria Broadcasting Co.
WOKO, Inc.
Allentown Call Publishing Co., Inc.
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.

Arturio 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	*	10000	---	Alexandria, Va.

National Battery Broadcasting Co.
Independent Publishing Co.

1470 kilocycles 204.0 meters

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

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

1480 kilocycles 202.6 meters

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

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.

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
KPO	†	50	---	Wenatchee, Wash.
KREG	†	100	---	Santa Ana, Cal.
KUT	†	100	---	Austin, Texas
KXO	*	100	---	El Centro, Cal.
WDIX	--	100	---	Tupelo, Miss.
WKBV	--	100	+	Connersville, 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.
WOPI	*	100	---	Bristol, Tenn.
WPEN	*	100	+	Philadelphia, Pa.
WRDW	*	100	---	Augusta, Ga.
WSYB	†	100	---	Rutland, Vt.
WWRL	*	100	1	Woodside, N. Y.
WWSW	--	100	---	Pittsburgh, Pa.

Julio C. Hidalgo
Tomas Basail
Martinez y Madico
Alberto Fernandez
Santa Barbara Broadcasters, Ltd.
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

1544 W 20 A 9.900 Jan 23 1954

INDEX BY LOCATIONS WITH MAP KEY

ALABAMA							
Anniston O-22	100	WFDW	1420	San Jose J-1	500	KQW	1010
Birmingham O-21	5000	WAPI	1140	Santa Ana M-3	100	KREG	1500
	500	WBRC	930	Santa Barbara M-2	100	KDB	1500
	100	WKBC	1310	Santa Maria L-2	100	KSMR	1200
Gadsden O-21	100	WJBY	1210	Stockton J-2	250	KGDM	1100
Huntsville N-21	50	WBHS	1200		100	KWG	1200
Mobile Q-20	500	WODX	1410	COLORADO			
Montgomery P-21	500	WSFA	1410	Colorado Springs K-11	1000	KVOR	1270
ALASKA				Denver K-11	500	KFEL	920
Anchorage	100	KFQD	1230		100	KFUP	1310
Ketchikan	500	KGBU	900		500	KFXF	920
ARIZONA					1000	KLZ	560
Flagstaff M-7	100	KFXY	1420		12500	KOA	830
Jerome M-6	100	KCRJ	1310		500	KPOF	880
Phoenix N-6	500	KOY	1390	Fort Morgan J-11	100	KGEW	1200
	500	KTAR	620	Grand Junction K-9	100	KFXJ	1310
Prescott M-6	100	KPJM	1500	Greeley J-11	500	KFKA	880
Tucson O-7	100	KGAR	1370	Pueblo L-11	250	KGHF	1320
	500	KVOA	1260	Trinidad L-11	100	KGIW	1420
ARKANSAS				Yuma J-12	100	KGEK	1200
Blytheville M-19	50	KLCN	1290	CONNECTICUT			
Fayetteville M-16	1000	KUOA	1390	Bridgeport H-27	250	WICC	600
Fort Smith N-16	50	KFPW	1340	Hartford H-27	500	WRDC	1330
Hot Springs N-17	10000	KTHS	1040		50000	WTIC	660-1060
Little Rock N-17	100	KGHI	1200	Storrs H-28	250	WCAC	600
	250	KGJF	890	DELAWARE			
	1000	KLRA	1390	Wilmington J-26	250	WDEL	1120
Paragould M-18	100	KBTM	1200		100	WILM	1420
CALIFORNIA				DISTRICT OF COLUMBIA			
Berkeley J-2	100	KRE	1370	Washington J-26	250	WMAL	630
Burbank M-3	500	KELW	780		500	WRC	950
Culver City M-3	250	KFVD	1000		100	WOL	1310
El Centro N-4	100	KXO	1500	FLORIDA			
Fresno K-2	100	KMJ	1210	Clearwater R-24	1000	WFLA	620
Hollywood M-3	1000	KFWB	950	Gainesville Q-24	5000	WRUF	830
	5000	KNX	1050	Jacksonville Q-24	1000	WJAX	900
Holy City K-1	100	KFQU	1420	Miami T-25	1000	WIOD	1300
Inglewood M-3	500	KMCS	1120		1000	WQAM	560
Long Beach M-3	1000	KFOX	1250	Orlando R-24	500	WDBO	1120
	1000	KGER	1360	Pensacola Q-21	500	WCOA	1340
Los Angeles M-3	1000	KECA	1430	St. Petersburg S-24	1000	WSUN	620
	1000	KFAC	1300	Tampa R-24	1000	WDAE	1220
	50000	KFI	640		100	WMBR	1370
	500	KFSG	1120	GEORGIA			
	1000	KGEF	1300	Atlanta O-22	250	WGST	890
	100	KGFJ	1200		5000	WSB	740
	100	KHJ	900	Augusta O-23	100	WRDW	1500
	500	KMPC	710	Columbus O-22	50	WRBL	1200
	500	KMTR	570	Macon O-23	500	WMAZ	1180
	500	KTM	780	Rome N-22	100	WFDV	1310
Oakland J-1	250	KLS	1440	Savannah O-24	500	WTOC	1260
	500	KLX	880	Thomasville Q-22	100	WQDX	1210
	500	KROW	930	Tifton P-23	100	WJTL	1370
	50	KPPC	1210	Toccoa N-23	500	WTFI	1450
Pasadena M-3	100	KFBK	1310	HAWAII			
Sacramento J-2	100	KFXM	1210	Honolulu	250	KGMB	1320
San Bernardino M-3	500	KFSB	600		1000	KGU	940
San Diego N-3	500	KGB	1330	IDAHO			
San Francisco J-1	1000	KFRC	610	Boise G-5	1000	KIDO	1250
	500	KFWI	930	Idaho Falls G-7	250	KID	1320
	100	KGGC	1420	Nampa G-5	50	KFXD	940
	7500	KGO	790	Pocatello H-7	250	KSEI	920
	100	KJBS	1070	Sand Point D-6	100	KGKX	1420
	5000	KPO	680	Twin Falls H-6	250	KTFI	1320
	1000	KTAB	560				
	1000	KYA	1230				

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		500	KMA 930
	10000	KYW	1020	Sioux City I-15	1000	KSCJ 1330
	500	WAAF	920	Waterloo I-17	500	WMT 600
	25000	WBBM	770	KANSAS		
	1500	WCFL	970	Dodge City L-13	100	KGNO 1210
	5000	WCHL	1490	Kansas City K-16	100	WLBZ 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	WBW 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	WFIV 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	1000	WDSU 1250
	100	WKBI	1420		100	WJBO 1420
	100	WJBL	1200		100	WJBW 1200
	100	WKBS	1310		500	WSMB 1320
	100	WEBQ	1210		5000	WWL 850
	100	WCLS	1310	Shreveport P-17	50	KRMD 1310
	100	WKBB	1310		1000	KTBS 1450
	100	WJBC	1200		100	KTSL 1310
	20000	WJJD	1130		100	KWEA 1210
	500	WMBD	1440		10000	KWKH 850
	500	WTAD	1440	MAINE		
	500	KFLV	1410	Augusta F-28	100	WRDO 1370
	100	WHBF	1210	Bangor F-29	100	WABI 1200
	100	WCBS	1210		500	WLBZ 620
	100	WTAX	1210	Portland F-28	1000	WCSH 940
	100	WDZ	1070	Presque Isle D-29	100	WAGM 1420
	250	WILL	890	MARYLAND		
	5000	WCBZ	1080	Baltimore J-26	10000	WBAL 760-1060
INDIANA					250	WCAO 600
Anderson J-21	100	WHBU	1210		100	WCBM 1370
Connersville K-21	100	WKBV	1500		500	WFBR 1270
Culver I-20	500	WCMA	1400	Cumberland J-25	100	WTBO 1420
Evansville L-20	500	WGBF	630	MASSACHUSETTS		
Fort Wayne J-21	100	WGL	1370	Boston G-28	500	WAAB 1410
	10000	WOWO	1160		1000	WBIS 1230
Gary I-20	1000	WJKS	1360		1000	WEEL 590
Hammond I-20	100	WWAE	1200		1000	WHDH 830
Indianapolis J-21	1000	WFBM	1230		100	WLOE 1500
	500	WKBF	1400		1000	WNAC 1230
Lafayette J-20	500	WBAA	1400	Fall River H-28	250	WSAR 1450
Marion J-21	50	WJAK	1310		100	WLEY 1370
Muncie J-21	50	WLBC	1310	Needham G-28	500	WBSO 920
South Bend I-20	100	WFAM	1200	New Bedford H-28	100	WNBH 1310
	500	WSBT	1230	Springfield H-27	15000	WBZ-A 990
Terre Haute K-20	100	WBOW	1310	Worcester G-28	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	KFGO	1310	Bay City H-22	500	WBGM 1410
Cedar Rapids I-18	100	KWCR	1310	Calumet E-19	100	WHDF 1370
Clarinda J-16	500	KSO	1380		50	WJBK 1370
Council Bluffs J-16	1000	KOIL	1260	Detroit H-22	5000	WJR 750
Davenport I-18	5000	WOC	1000		100	WMBC 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			
	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	WFDF	1310				
Grand Rapids H-21	500	WASH	1270	NEW HAMPSHIRE			
	500	WOOD	1270	Laconia G-28	100	WKAV	1310
Ironwood F-18	100	WJMS	1420	Manchester G-28	500	WFEA	1430
Jackson I-21	100	WBIM	1370				
Kalamazoo I-21	1000	WKZO	590	NEW JERSEY			
Lapeer H-22	100	WMPC	1500	Asbury Park I-27	500	WCAP	1280
Ludington H-20	50	WKBC	1500	Atlantic City J-27	5000	WPG	1100
Marquette F-19	100	WBEO	1310	Camden I-26	500	WCAM	1280
Royal Oak H-22	50	WEXL	1310	Hackensack I-27	250	WBMS	1450
				Jersey City I-27	300	WAAT	940
MINNESOTA					500	WHOM	1450
Fergus Falls F-15	100	KGDE	1200	Newark I-27	1000	WAAM	1250
Minneapolis G-17	5000	WCCO	810		250	WGCP	1250
	1000	WDGY	1180		250	WNJ	1450
	500	WHDI	1180		5000	WODA	710
	1000	WRHM	1250	Paterson I-27	1000	WJBI	1210
Moorhead F-15	50	KGFK	1500	Red Bank I-27	100	WJBI	1210
Northfield G-17	1000	KFMX	1250	Trenton I-26	500	WOAX	1280
	1000	WCAL	1250	Zarephath I-27	250	WAWZ	1350
St. Paul G-17	1000	WLB	1250				
	10000	KSTP	1460				
				NEW MEXICO			
MISSISSIPPI				Albuquerque N-7	250	KGGM	1230
Greenville O-18	100	WRBQ	1210	Raton M-11	50	KGFL	1370
Gulfport Q-19	100	WGCM	1210	State College P-9	20000	KOB	1180
Hattiesburg Q-19	10	WRBJ	1370				
Jackson P-19	1000	WJDX	1270	NEW YORK			
Meridian P-20	500	WCOC	880	Albany H-27	500	WOKO	1440
Tupelo N-20	100	WDIX	1500	Auburn H-25	100	WMBO	1310
Vicksburg P-18	500	WQBC	1360	Binghamton H-26	100	WNBF	1500
				Brooklyn I-27	500	WBBC	1400
MISSOURI					1000	WBRR	1300
Cp. Girardeau L-19	100	KFVS	1210		500	WCGU	1400
Columbia K-17	500	KFRU	630		500	WFOX	1400
Grant City J-16	100	KGJZ	1500		500	WLTH	1400
Jefferson City L-17	500	WOS	630		100	WMBQ	1500
Joplin M-16	100	WMBH	1420		100	WMIL	1500
Kansas City K-16	1000	KMBC	950	Buffalo H-24	1000	WBEN	900
	100	KWKC	1370		100	WEBR	1310
	1000	WDAF	610		1000	WGR	550
	500	WHB	860		5000	WKBW	1480
	1000	WOQ	1300		1000	WMAK	1040
St. Joseph K-16	2500	KFEQ	680		50	WSVS	1370
	100	KGBX	1310	Canton F-26	500	WCAD	1220
St. Louis L-18	500	KFUO	550	Freeport I-27	100	WGBB	1210
	100	KFWF	1200	Glens Falls G-27	50	WBGF	1370
	50000	KMOX	1090	Ithaca H-25	1000	WEAI	1270
	500	KSD	550		50	WLCI	1210
	1000	KWK	1350	Jamaica H-27	100	WMRJ	1210
	1000	WEW	760	Jamestown H-24	25	WOCL	1210
	100	WIL	1200	Long Island City I-27	100	WL BX	1500
MONTANA				New York City I-27	5000	WABC	860
Billings F-9	1000	KGHL	950		250	WB NX	1350
Butte F-7	500	KGIR	1360		5000	WBOQ	860
Great Falls E-8	1000	KFBB	1280		250	WCDA	1350
Kalispell D-7	100	KGEZ	1310		50000	WEAF	660
Missoula E-7	100	KGVO	1420		500	WEVD	1300
Wolf Point E-11	100	KG CX	1310		500	WGBS	1180
					1000	WHAP	1300
NEBRASKA					250	WHN	1010
Clay Center J-14	1000	KMMJ	740		30000	WJZ	760
Lincoln J-15	5000	KFAB	770		5000	WLWL	1100
	100	KFOR	1210		500	WMCA	570
	500	WCAJ	590		250	WMSG	1350
Norfolk I-15	1000	WJAG	1060		500	WNYC	570
North Platte J-13	500	KGNF	1430		1000	WOV	1130
Omaha J-15	500	WAAW	660		250	WPAP	1010
	1000	WOW	590		500	WPCH	810
Ravenna J-14	100	KGFW	1310		250	WQAO	1010
Scottsbluff I-11	100	KGKY	1500		250	WRNY	1010
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	WFBL	1360
	250	WMAC	570
	250	WSYR	570
Troy G-27	500	WHAZ	1300
Utica G-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	WBIG	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	WFBE	1200
	1000	WKRC	550
	50000	WLW	700
	500	WSAI	1330
Cleveland I-23	500	WGAR	1450
	1000	WHK	1390
	500	WJAY	610
	50000	WTAM	1070
Columbus J-22	500	WAIU	640
	500	WCAH	1430
	750	WEOA	570
	100	WSEN	1210
	200	WSMK	1380
Dayton J-22	100	WJW	1210
Mansfield J-22	100	WHBD	1370
Mount Orab K-22	100	WIBR	1420
Steubenville J-23	50	WSPD	1340
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	KFJF	1480
	100	KFXR	1310
	100	KGFG	1370
	1000	WKY	900
Ponca City M-15	100	WBBZ	1200
S. Coffeyville M-15	500	KGGF	1010
Shawnee N-15	100	KGFF	1420
Tulsa M-15	5000	KVOO	1140

OREGON

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

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

PENNSYLVANIA

Allentown I-26	250	WCBA	1440
	250	WSAN	1440
Altoona I-25	100	WFBG	1310
Carbondale H-26	10	WNBW	1200
Elkins Park I-26	25	WIBG	930
Erie H-24	100	WEDH	1420
Grove City I-24	100	WSAJ	1310
Harrisburg I-25	500	WBAK	1430
	100	WCOD	1200
	500	WHP	1430
Johnstown J-24	100	WJAC	1310
Lancaster I-26	100	WGAL	1310
	100	WKJC	1200
	100	WJBU	1210
Lewisburg J-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	KQV	1380
	1000	WCAE	1220
	1000	WJAS	1290
	100	WWSW	1500
Reading I-26	1000	WEEU	830
	100	WRAW	1310
Scranton H-26	250	WGBI	880
	250	WQAN	880
State College I-25	500	WPSC	1230
Washington J-24	100	WNBO	1200
Wilkes-Barre I-26	100	WBAX	1210
	100	WBRE	1310
Williamsport I-25	100	WRAK	1370

PHILIPPINES

Cebu	500	KZRC	1300
Manila	1000	KZIB	1153
	1000	KZKA	1110
	500	KZRM	625

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	WPRO	1210

SOUTH CAROLINA

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

INDEX BY LOCATIONS WITH MAP KEY

Edmonton A-8	250	CHMA	580
	500	CJCA	930
	500	CKUA	580
Lethbridge C-8	100	CJOC	1120
Red Deer A-8	1000	CHCT	840
	1000	CKLC	840
	1000	CNRD	840

BRITISH COLUMBIA

Chilliwack B-3	100	CHWK	665
Kamloops B-5	100	CFJC	1120
Sea Island	500	CJOR	1210
Vancouver B-3	50	CHLS	730
	50	CKCD	730
	50	CKFC	730
	50	CKMO	730
	100	CKWX	730
	500	CNRV	1030
Victoria C-3	50	CFCT	630

MANITOBA

Brandon D-14	500	CKX	540
Winnipeg D-15	5000	CKY	780
	5000	CNRW	780

NEW BRUNSWICK

Fredericton D-29	500	CFNB	1210
Moncton D-30	500	CNRA	630
St. John D-30	500	CFBO	890

NEWFOUNDLAND

St. Johns A-35	500	VOWR	675
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NOVA SCOTIA

Glace Bay C-32	10000	VAS	685
Halifax E-31	500	CHNS	910
	500	CNRH	910
Sydney C-32	50	CJCB	880
Wolfville D-31	50	CKIC	1010

ONTARIO

Chatham H-22	100	CFCO	1210
Cobalt E-23	100	CKMC	1210
Hamilton H-24	500	CHCS	1010
	50	CHML	880
	500	CKOC	1010
Kingston G-25	50	CFRC	930
London H-23	5000	CJGC	910
	500	CNRL	910
North Bay	50	CFCH	930
Ottawa F-25	100	CKCO	890
	500	CNRO	600
Port Arthur E-19	50	CKPR	890
Prescott F-25	50	CFLC	930
Preston H-23	50	CKPC	1210
Toronto G-24	500	CFCA	840
	500	CFCL	580
	5000	CFRB	960
	500	CKCL	580
	5000	CKGW	690
	500	CKNC	580
	500	CNRT	840
	5000	CNRX	960
	5000	CPRY	690
Waterloo G-23	50	CKCR	645

PRINCE EDWARDS ISLAND

Charlottetown C-31	250	CFCY	580
	100	CHCK	1010
Summerside C-31	100	CHGS	1120

QUEBEC	Watt	Keys.
Montreal E-26	1650	CFCF
	5000	CHYC
	5000	CKAC
	5000	CNRM
Quebec D-27	100	CHRC
	100	CKCI
	50	CKCV
	50	CNRQ

SASKATCHEWAN

Fierning C-13	500	CJRW	665
Moose Jaw C-11	500	CJRM	665
Regina C-12	500	CHWC	960
	500	CJBR	960
	500	CKCK	960
	500	CNRR	960
Saskatoon B-11	500	CFQC	910
	500	CNRS	910
Yorkton B-13	500	CJGX	630

CENTRAL AMERICA

COSTA RICA

Heredia FF-23	75	NRH	948
San Jose FF-23	50	TIC	900

GUATAMALA

Guatamala CC-19	50	TGW	570
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HONDURAS

Tegucigalpa CC-21	2300	HRB	1370
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SALVADOR

Salvador CC-19	500	RUS	664
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MEXICO

AGUASCALIENTES

Aguascalientes W-10	350	XFC	805
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CHIHUAHUA

Chihuahua, Chih. R-9	250	XFF	915
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COAHUILA

Juarez P-9	101	XEJ	857
	1000	XEQ	1015
Saltillo, Coah. U-12	10	XEL	1091

D. F.

Mexico City Y-13	1000	XEB	1030
	250	XEFA	1250
	101	XEK	990
	1000	XEN	711
	5000	XEO	940
	101	XER	674
	500	XETA	1140
	100	XETO	1360
	2000	XETY	1300
	500	XEX	1210
	5000	XEW	910
	500	XEZ	588
	2000	XFG	638
	1000	XFI	818
	500	XFX	860
Toluca. Y-12	50	XEC	1333

JALISCO

Guadalajara, Jal. X-10	101	XEA	1200
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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 645	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	CNRA 630
Victoria, B. C.	Quebec, Que.	Havana, Cuba	Moncton, N. B.
CFCY 580	CKFC 730	CMCD 1225	CNRC 690
Ch'lottet'n, P.E.I.	Vancouver, B. C.	CMCF 890	Calgary, Alta.
CFJC 1120	CKGW 690	CMCG 1285	CNRD 840
Kamloops, B. C.	Toronto, Ont.	CMCH 1285	Red Deer, Alta.
CFLC 930	CKIC 1010	CMCM 1500	CNRH 910
Prescott, Ont.	Wolfville, N. S.	Havana, Cuba	Halifax, N. S.
CFNB 1210	CKLC 840	CMCN 1225	CNRL 910
Fredericton, N.B.	Red Deer, Alta.	CMCO 660	London, Ont.
CFQC 910	CKMC 1210	CMCQ 1150	CNRM 730
Saskatoon, Sask.	Cobalt, Int.	Havana, Cuba	Montreal, Que.
CFRB 960	CKMO 730	CMCR 1285	CNRO 600
Toronto, Ont.	Vancouver, B. C.	Havana, Cuba	Ottawa, Ont.
CFRC 930	CKNC 580	CMCT 1500	CNRQ 880
Kingston, Ont.	Toronto, Ont.	Havana, Cuba	Quebec, Que.
CHCA 690	CKOC 1010	CMCU 1345	CNRR 960
Calgary, Alta.	Hamilton, Ont.	Havana, Cuba	Regina, Sask.
CHCK 1010	CKPC 1210	CMCY 1345	CNRS 910
Ch'lottet'n, P.E.I.	Preston, Ont.	Havana, Cuba	Saskatoon, Sask.
CHCS 1010	CKPR 890	CMGA 834	CNRT 840
Hamilton, Ont.	Port Arthur, Ont.	Colon, Cuba	Toronto, Ont.
CHCT 840	CKUA 580	CMGB 1185	CNRV 1030
Red Deer, Alta.	Edmonton, Alta.	Matanzas, Cuba	Vancouver, B. C.
CHGS 1120	CKWX 730	CMGD 1140	CNRW 780
Sum'rside, P.E.I.	Vancouver, B. C.	Matanzas, Cuba	Winnipeg, Man.
CHLS 730	CKX 540	CMGE 1375	CNRX 960
Vancouver, B. C.	Brandon, Man.	Cardenas, Cuba	Toronto, Ont.
CHMA 580	CKY 780	CMGF 977	CPRY 690
Edmonton, Alta.	Winnipeg, Man	Matanzas, Cuba	Toronto, Ont.
CHML 880	CMAB 1249	CMGH 780	HHK 920
Hamilton, Ont.	Pinar del Rio, Cu	Matanzas, Cuba	Port au Prince, H.
CHNS 910	CMAC 1375	Matanzas, Cuba	HIX 669
Halifax, N. S.	Pinar del Rio, Cu	Cienfuegos, Cuba	Santo Domingo
CHRC 645	CMBA 1345	Matanzas, Cuba	HRB 1370
Quebec, Que.	Havana, Cuba	Matanzas, Cuba	Tequicigalpa
CHWC 960	CMBC 965	Matanzas, Cuba	KABC 1420
Regina, Sask.	Havana, Cuba	Matanzas, Cuba	San Antonio, Tex.
CHWK 665	CMBD 965	CMHA 1154	KBPS 1420
Chilliwack, B. C.	Havana, Cuba	Cienfuegos, Cuba	Portland, Ore.
CHYC 730	CMBF 1345	CMHC 790	KBTM 1200
Montreal, Que.	Havana, Cuba	Tuinucu, Cuba	Paragould, Ark.
CJBR 960	CMBG 1070	CMHI 1110	KCRC 1370
Regina, Sask.	Havana, Cuba	Santa Clara, Cu	Enid, Okla.
CJCA 930	CMBI 1405	CMHJ 645	KCRJ 1310
Edmonton, Alta.	Havana, Cuba	Cienfuegos, Cuba	Jerome, Ariz.
CJCB 880	CMBJ 1285	CMJB 1276	KDB 1500
Sydney, N. S.	Havana, Cuba	Ciego de Avila	S. Barbara, Cal.
CJCY 690	CMBK 1405	CMJC 1321	KDFN 1210
Calgary, Alta.	Havana, Cuba	Camaguey, Cuba	Casper, Wyo.
CJGC 910	CMBL 1500	CMJE 856	KDKA 980
London, Ont.	Havana, Cuba	Camaguey, Cuba	Pittsburgh, Pa.
CJGX 630	CMBM 1285	CMK 730	KDLR 1210
Yorkton, Sask.	Havana, Cuba	Havana, Cuba	Devils Lake, N.D.
CJOC 1120	CMBN 1405	CMKA 1450	KDYL 1290
Lethbridge, Alta.	Havana, Cuba	Santiago, Cuba	Salt Lake City
CJOR 1210	CMBQ 1405	CMKB 1200	KECA 1430
Sea Island, B. C.	Havana, Cuba	Santiago, Cuba	Los Angeles, Cal.
CJRM 665	CMBR 1500	CMKC 1034	KELW 780
Moose Jaw, Sask.	Havana, Cuba	Santiago, Cuba	Burbank, Cal.
			KEX 1180
			Portland, Ore.

KFAB 770
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.
KFIZ 1420
Fond du Lac, Wis.
KFJB 1200
Marshalltown, Ia.
KFJF 1480
Oklahoma City
KFJI 1370
Astoria, Ore.
KFJM 1370
Grand Forks, N.D.
KFJR 1300
Portland, Ore.
KFJY 1310
Fort Dodge Ia.
KFJZ 1370
Ft. Worth, 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
KFFM 1310
Greenville, Texas
KFPW 1340
Ft. Smith, Ark.
KFPY 1340
Spokane, Wash.
KFQD 1230
Anchororage, Alas.
KFQU 1420
Holy City, Cal.
KFRC 610
San F'nisco, Cal.
KFRU 630
Columbia, Mo.

KFSD 600
San Diego, Cal.
KFSG 1120
Los Angeles, Cal.
KFUL 1290
Galveston, Texas
KFUO 550
St. Louis, Mo.
KFUP 1310
Denver, Colo.
KFVD 1000
Culver City, Cal.
KFVS 1210
Cape Gir'rd'u, Mo.
KFWB 950
Hollywood, Cal.
KFWF 1200
St. Louis, Mo.
KFWI 930
San F'nisco, Cal.
KFXD 1420
Nampa, Idaho
KFXF 920
Denver, Colo.
KFXJ 1310
Grand Junc., Cal.
KFXM 1210
San Ber'd no, Cal.
KFXR 1310
Oklahoma City
KFXY 1420
Flagstaff, Ariz.
KFYO 1420
Abilene, Texas
KFYR 550
Bismarck, N. D.
KGA 1470
Spokane, Wash.
KGAR 1370
Tucson, Arizona
KGB 1330
San Diego, Cal.
KGBU 900
Ketchikan, Al'ka
KGBX 1310
St. Joseph, Mo.
KGBZ 930
York, Nebr.
KGCA 1270
Decorah, Iowa
KGC R 1210
Watertown, S. D.
KGCU 1240
Mandan, N. D.
KGCX 1310
Wolf P't, Mont.
KGDA 1370
Mitchell, S. D.
KGDE 1200
Fergus Falls, Minn
KGD M 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.

KFGF 1370
Oklahoma City
KGFI 1500
Corp's Ch'sti, Tex
KGFJ 1200
Los Angeles, Cal.
KGFK 1500
Moonhead, Minn.
KGFL 1370
Raton, N. M.
KGFV 1310
Ravenna, Nebr.
KGFY 580
Pierre, S. D.
KGGC 1420
San F'nisco, Cal.
KGGF 1010
Coffeyville, Okla.
KGGM 1230
Albuq'rque, N.M.
KGGH 1320
Pueblo, Colo.
KGGI 1200
Little Rock, Ark.
KGGJ 950
Billings, Mont.
KGR 1360
Butte, Mont.
KGIW 1420
Trinidad, Colo.
KGLX 1420
Las Vegas, Nev.
KGLZ 1500
Grant City, Mo.
KGFJ 890
Little Rock, Ark.
KGRB 1500
Tyler, Texas
KGLL 1370
San Angelo, Tex.
KGO 570
Wichita Fls., Tex.
KGGX 1420
Sand Point, Idaho
KGGY 1500
Scottsbluff, Nebr.
KGRB 1320
Honolulu, T. H.
KGRM 1210
Elk City, Okla.
KGNF 1430
No. Platte, Nebr.
KGRN 1210
Dodge City, Kas.
KGO 790
San F'nisco, Cal.
KGRS 1410
Amarillo, Texas
KGRU 940
Honolulu, Hawaii
KGRV 1420
Missoula, Mont.
KGRW 620
Portland, Ore.
KGRY 1200
Lacey, Wash.
KGRZ 900
Los Angeles, Cal.
KHQ 590
Spokane, Wash.
KICK 1420
Red Oak, Iowa
KID 1320
Idaho Falls, Ida.
KIDO 1250
Boise, Idaho

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

KPO 680 San F'nsciso, Cal.	KUOA 1390 Fayetteville, Ark.	WABI 1200 Bangor, Maine	WCAE 1220 Pittsburgh, Pa.
KPOF 880 Denver, Colo.	KUSD 899 Vermilion, S. D.	WABZ 1200 New Orleans, La.	WCAH 1430 Columbus, Ohio
KPPC 1210 Pasadena, Cal.	KUT 1500 Austin, Texas	WACO 1240 Waco, Texas	WCAJ 590 Lincoln, Nebr.
KPQ 1500 Wenatchee, Wash	KVI 760 Tacoma, Wash.	WADC 1320 Akron, Ohio	WCAL 1250 Northfield, Minn.
KPRC 920 Houston, Texas	KVL 1370 Seattle, Wash.	WAGM 1420 Presque Isle, Me.	WCAM 1280 Camden, N. J.
KQV 1380 Pittsburgh, Pa.	KVOA 1260 Tucson, Arizona	WAU 640 Columbus, Ohio	WCAO 600 Baltimore, Md.
KQW 1010 San Jose, Cal.	KVOO 1140 Tulsa, Okla.	WALR 1210 Zanesville, Ohio	WCAP 1280 Asbury Pk., N. J.
KRE 1370 Berkeley, Cal.	KVOR 1270 Col. Sp'gs, Colo.	WAPI 1140 Birmingham, Ala.	WCAT 1200 Rapid City, S. D.
KREG 1500 Santa Ana, Cal.	KVOS 1200 Bellingh'm, Wash.	WASH 1270 Gr. Rapids, Mich.	WCAU 1170 Philadelphia, Pa.
KRGV 1260 Harlingen, Texas	KWCR 1310 Cedar Rapids, Ia.	WAWZ 1350 Zarephath, N. J.	WCAX 1200 Burlington, Vt.
KRLD 1040 Dallas, Texas	KWEA 1210 Shreveport, La.	WBAA 1400 Lafayette, Ind.	WCAZ 1070 Carthage, Ill.
KRMD 1310 Shreveport, La.	KWG 1200 Stockton, Cal.	WBAK 1430 Harrisburg, Pa.	WCBA 1440 Allentown, Pa.
KROW 930 Oakland, Cal.	KWJJ 1060 Portland, Ore.	WBAL 760-1060 Baltimore, Md.	WCBD 1080 Zion, Ill.
KRSC 1120 Seattle, Wash.	KWK 1356 St. Louis, Mo.	WBAP 800 Fort Worth, Tex.	WCBM 1370 Baltimore, Md.
KSAC 580 Manh'tt'n, Kans.	KWKC 1370 Kansas City, Mo.	WBAX 1210 Wilkes-Barre, Pa.	WCBS 1210 Springfield, Ill.
KSCJ 1330 Sioux City, Ia.	KWKH 850 Shreveport, La.	WBBC 1400 Brooklyn, N. Y.	WCCO 810 Minneapolis, Minn.
KSD 550 St. Louis, Mo.	KWLC 1270 Decorah, Iowa	WBBL 1210 Richmond, Va.	WCDA 1350 New York City
KSEI 900 Pocatello, Idaho	KWSC 1220 Pullman, Wash.	WBBM 770 Chicago, Ill.	WCFL 970 Chicago, Ill.
KSL 1130 Salt Lake City	KWWG 1260 Brownsville, Tex.	WBHR 1300 Brooklyn, N. Y.	WCGU 1400 Brooklyn, N. Y.
KSMR 1200 Santa Maria, Cal.	KXA 570 Seattle, Wash.	WBHZ 1200 Ponca City, Okla.	WCHI 1490 Chicago, Ill.
KSO 1380 Clarinda, Iowa	KXL 1420 Portland, Ore.	WBCM 1410 Bay City, Mich.	WCKY 1490 Covington, Ky.
KS00 1110 Sioux Falls, S. D.	KXO 1500 El Centro, Cal.	WBEN 900 Buffalo, N. Y.	WCLO 1200 Janesville, Wis.
KSTP 1460 St. Paul, Minn.	KXRO 1310 Aberdeen, Wash.	WBEO 1310 Marquette, Mich.	WCLS 1310 Joliet, Ill.
KTAB 560 San F'nsciso, Cal.	KXYZ 1420 Houston, Texas	WBGF 1370 Glens Falls, N. Y.	WCMA 1400 Culver, Ind.
KTAR 620 Phoenix, Ariz.	KYA 1230 San F'nsciso, Cal.	WBHS 1200 Huntsville, Ala.	WCOA 1340 Pensacola, Fla.
KTAT 1240 Ft. Worth, Tex.	KYW 1020 Chicago, Ill.	WBIG 1440 Greensboro, N.C.	WCOC 880 Meridian, Miss.
KTBR 1300 Portland, Ore.	NAA 690 Arlington, Va.	WBIS 1230 Boston, Mass.	WCOD 1200 Harrisburg, Pa.
KTBS 1450 Shreveport, La.	RUS 664 Salvador	WBMS 1450 Hackensack, N.J.	WCOH 1210 Yonkers, N. Y.
KTPI 1320 Twin Falls, Ida.	TGW 570 Guatemala	WBNX 1350 New York City	WCRW 1210 Chicago, Ill.
KTHS 1040 Hot Spgs., Ark.	TIC 900 San Jose, C. R.	WBOQ 860 New York City	WCSC 1360 Charleston, S. C.
KTLC 1310 Houston, Texas	VAS 585 Glace Bay, N. S.	WBOW 1310 Terre Haute, Ind.	WCSH 940 Portland, Maine
KTM 780 Los Angeles, Cal.	VOWR 675 St. Johns, N. F.	WBRC 930 Birmingham, Ala.	WDAE 1220 Tampa, Fla.
KTRH 1120 Houston, Texas	WAAB 1410 Boston, Mass.	WBRE 1310 Wilkes-Barre, Pa.	WDAF 610 Kansas City, Mo.
KTSA 1290 San Antonio, Tex.	WAAF 920 Chicago, Ill.	WBSO 920 Needham, Mass.	WDAG 1410 Amarillo, Texas
KTSL 1310 Shreveport, La.	WAAM 1250 Newark, N. J.	WBT 1080 Charlotte, N. C.	WDAH 1310 El Paso, Texas
KTSM 1310 El Paso, Texas	WAAT 940 Jersey City, N. J.	WBTM 1370 Danville, Va.	WDAY 940 Fargo, N. D.
KTW 1220 Seattle, Wash.	WAAW 660 Omaha, Nebr.	WBZ-A 990 Springfield, Mass.	WDBJ 930 Roanoke, Va.
KUJ 1377 Walla Wal., Wash.	WABC 860 New York City	WCAC 600 Storrs, Conn.	WDBO 1120 Orlando, Fla.
		WCAD 1220 Canton, N. Y.	WDEL 1120 Wilmington, Del.

WDEV 1420
Waterbury, Vt.
WDGY 1180
Minneapolis, Minn.
WDIX 1500
Tupelo, Miss.
WDDO 1280
Chattanooga, Tenn.
WDRS 1330
Hartford, Conn.
WDSU 1250
New Orleans, La.
WDWF 1210
Providence, R. I.
WDZ 1070
Tuscola, Ill.
WEAF 660
New York City
WEAI 1270
Ithaca, N. Y.
WEAN 780
Providence, R. I.
WEAO 570
Columbus, Ohio
WEBC 1290
Superior, Wis.
WEBQ 1210
Harrisburg, Ill.
WEBR 1310
Buffalo, N. Y.
WEDC 1210
Chicago, Ill.
WEDH 1420
Erie, Pa.
WEEL 590
Boston, Mass.
WEUU 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 1200
Knoxville, Tenn.
WFBE 1200
Cincinnati, Ohio
WFBG 1310
Altoona, Pa.
WFLB 1360
Syracuse, N. Y.
WFBM 1230
Indianapolis, Ind.
WFBR 1270
Baltimore, Md.
WFDF 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.
WGL 1310
Lancaster, Pa.
WGAR 1450
Cleveland, Ohio
WGBB 1210
Freeport, N. Y.
WGBC 1430
Memphis, Tenn.
WGBF 630
Evansville, Ind.
WGBI 880
Scranton, Pa.
WGBS 1180
New York City
WGCM 1210
Gulfport, Miss.
WGCP 1250
Newark, N. J.
WGES 1360
Chicago, Ill.
WGH 1310
Newsp'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.
WBDH 830
Boston, Mass

WHDI 1180
Minneapolis, 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
Atumwa, 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.
WJDD 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 899
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.
WKES 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, Mo.
WLBG 1200
Etrick, Va.
WLBL 900
Stevens Pt., Wis.

WLBW 1260 Oil City, Pa.	WNBO 1200 Washington, Pa.	WPTF 680 Raleigh, N. C.	WSM 650 Nashville, Tenn.
WLBX 1500 L. I. City, N. Y.	WNBR 1430 Memphis, Tenn.	WQAM 560 Miami, Fla.	WSMB 1320 New Orleans, La.
WLBZ 620 Bangor, Maine	WNBW 1200 Carbondale, Pa.	WQAN 880 Scranton, Pa.	WSMK 1380 Dayton, Ohio
WLCI 1210 Ithaca, N. Y.	WNBX 1200 Springfield, Vt.	WQAO 1010 New York City	WSOC 1210 Gastonia, N. C.
WLEY 1370 Lexington, Mass.	WNBZ 1290 Sar'n'e L'ke, N.Y.	WQBC 1360 Vicksburg, Miss.	WSPA 1420 Spartanburg, S.C.
WLIT 560 Philadelphia, Pa.	WNJ 1450 Newark, N. J.	WQDM 1370 St. Albans, Vt.	WSPD 1340 Toledo, Ohio
WLOE 1500 Boston, Mass.	WNOX 560 Knoxville, Tenn.	WQDX 1210 Thomasville, Ga.	WSUI 880 Iowa City, Iowa
WLS 870 Chicago, Ill.	WNYC 570 New York City	WRAK 1370 Williamsport, Pa.	WSUN 620 St. Petersburg, 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	WOBU 580 Charlest'n, W.Va.	WRAX 1020 Philadelphia, Pa.	WSYR 570 Syracuse, N. Y.
WLWL 1100 New York City	WOC 1000 Davenport, Iowa	WRBJ 1370 Hattiesburg, Miss.	WTAD 1440 Quincy, Ill.
WMAC 570 Syracuse, N. Y.	WOCL 1210 Jamestown, N. Y.	WRBL 1200 Columbus, Ga.	WTAG 580 Worcester, Mass.
WMAK 1040 Buffalo, N. Y.	WODA 1250 Paterson, N. J.	WRBQ 1210 Greenville, Miss.	WTAM 1070 Cleveland, Ohio
WMAL 630 Washington, D.C.	WODX 1410 Mobile, Ala.	WRBX 1410 Roanoke, Va.	WTAQ 1330 Eau Claire, Wis.
WMAQ 670 Chicago, Ill.	WOI 640 Ames, Iowa	WRC 950 Washington, D.C.	WTAR 780 Norfolk, Va.
WMAZ 1180 Macon, Ga.	WOKO 1440 Albany, N. Y.	WRDO 1370 Augusta, Maine	WTAW 1120 College Sta., Tex.
WMBA 1500 Newport, R. I.	WOL 1310 Washington, D.C.	WRDW 1500 Augusta, Ga.	WTAX 1210 Springfield, Ill.
WMBC 1420 Detroit, Mich.	WOMT 1210 Manitowoc, Wis.	WREC 600 Memphis, Tenn.	WTBO 1420 Cumberland, Md.
WMBD 1440 Peoria Hghts., Ill.	WOOD 1270 Gr. Rapids, Mich.	WREN 1220 Lawrence, Kans.	WTEL 1310 Philadelphia, Pa.
WMBG 1210 Richmond, Va.	WOPI 1500 Bristol, Tenn.	WRHM 1250 Minneap., Minn.	WTFI 1450 Toccoa, Ga.
WMBH 1420 Joplin, Mo.	WOQ 1300 Kansas City, Mo.	WRJN 1370 Racine, Wis.	WTC 660-1060 Hartford, Conn.
WMBI 1080 Chicago, Ill.	WOR 710 Newark, N. J.	WRNY 1010 New York City	WTJS 1310 Jackson, Tenn.
WMBO 1310 Auburn, N. Y.	WORC 1200 Worcester, Mass.	WROL 1310 Knoxville, Tenn.	WTMJ 620 Milwaukee, Wis.
WMBQ 1500 Brooklyn, N. Y.	WOS 630 Jeff's'n City, Mo.	WRR 1280 Dallas, Texas	WTOC 1260 Savannah, Ga.
WMBR 1370 Tampa, Fla.	WOV 1130 New York City	WRUF 830 Gainesville, Fla.	WVAE 1200 Hammond, Ind.
WMC 780 Memphis, Tenn.	WOW 590 Omaha, Nebr.	WRVA 1110 Richmond, Va.	WWJ 920 Detroit, Mich.
WMCA 570 New York City	WOWO 1160 Ft. Wayne, Ind.	WSAI 1330 Cincinnati, Ohio	WWL 850 New Orleans, La.
WMIL 1500 Brooklyn, N. Y.	WPAD 1420 Paducah, Ky.	WSAJ 1310 Grove City, Pa.	WWNC 570 Asheville, N. C.
WMMN 890 Fairmont, W. Va.	WPAP 1010 New York City	WSAN 1440 Allentown, Pa.	WWRL 1500 Woodside, N. Y.
WMPC 1500 Lapeer, Mich.	WPAW 1210 Pawtucket, R. I.	WSAR 1450 Fall River, Mass.	WWSW 1500 Pittsburgh, Pa.
WMRJ 1210 Jamaica, N. Y.	WPCC 560 Chicago, Ill.	WSAZ 580 Hunt'gton, W.Va.	WWVA 1160 Wheeling, W. Va.
WMSG 1350 New York City	WPCH 810 New York City	WSB 740 Atlanta, Ga.	WXYZ 1240 Detroit, Mich.
WMT 600 Waterloo, Iowa	WPEN 1500 Philadelphia, Pa.	WSBC 1210 Chicago, Ill.	XEA 1200 Guad'l'jara, Mex.
WNAC 1230 Boston, Mass.	WPG 1100 Atl'ntic City, N.J.	WSBT 1230 South Bend, Ind.	XEB 1030 Mexico City
WNAD 1010 Norman, Okla.	WPOE 1370 Patchogue, N. Y.	WSEN 1210 Columbus, Ohio	XEC 1333 Toluca, Mexico
WNAX 570 Yankton, S. D.	WPOR 780 Norfolk, Va.	WSFA 1410 Montgomery, Ala.	XED 965 Reynosa, Mexico
WNB 1500 Bingh'm't'n, N.Y.	WPRO 1210 Providence, R. I.	WSIX 1210 Springfield, Tenn.	XEE 1132 Oaxaco, Mexico
WNBH 1310 New B'd'd, Mass.	WPSC 1230 State College, Pa.	WSJS 1310 Winst.-Sal., N. C.	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 59)

Location	Watts	Call Letters	Kcys.	Location	Watts	Call Letters	Kcys.
MICHOACAN				Havana W-23	50	CMBQ	1405
Morelia, Mich. Y-12	101	XEI	1000		15	CMBR	1500
NEUVO LEON					150	CMBS	790
Laredo, N. L. S-13	101	XEFE	980		150	CMBT	1070
	2500	XEP	1400		150	CMBW	1010
Monterrey N. L. U-13	5000	XEH	1132		30	CMBX	1405
	500	XET	690		100	CMBY	1405
OAXACA					150	CMBZ	1010
Oaxaca, Oak. AA-14	105	XEE	1132		500	CMC	840
PUEBLA					150	CMCA	1225
Puebla Z-13	101	XEV	1034		150	CMCB	1070
TAMAULIPAS					250	CMCD	1225
Reynosa, Tams. T-14	10000	XED	965		250	CMCF	890
Tampico, Tams. W-14	500	XEM	730		30	CMCG	1285
	500	XES	890		15	CMCH	1285
VERA CRUZ					15	CMCM	1500
Veracruz, Ver. Z-14	500	XETF	680		250	CMCN	1225
	101	XEU	800		225	CMCO	660
YUCATAN					600	CMCQ	1150
Merida, Yuc. X-19	105	XEY	547		20	CMCR	1285
					5	CMCT	1500
WEST INDIES					50	CMCU	1345
BERMUDA					15	CMCY	1345
Hamilton M-35	7.5	TJW	1490		3150	CMK	730
CUBA					250	CMQ	1150
Cardenas W-24	30	CMGE	1375		1400	CMW	588
Camaguey W-26	15	CMJC	1321		500	CMX	890
	20	CMJE	856	Holguin W-27	30	CMKF	1363
Ciego de Avila W-26	20	CMJB	1276	Matanzas W-24	7.5	CMGB	1185
Cienfuegos W-25	200	CMHA	1154		5	CMGD	1140
	40	CMHJ	645		50	CMGF	977
Colon W-24	100	CMGA	834		60	CMGH	780
Havana W-23	50	CMBA	1345	Pinar del Rio W-22	20	CMAB	1249
	150	CMBC	965		30	CMAC	1375
	150	CMBD	965	Santa Clara W-25	15	CMHI	1110
	7.5	CMBF	1345	Santiago X-28	20	CMKA	1450
	150	CMBG	1070		15	CMKB	1200
	30	CMBI	1405		150	CMKC	1034
	15	CMBJ	1285		20	CMKD	1100
	15	CMBK	1405		250	CMKE	1249
	15	CMBL	1500		30	CMKG	1176
	15	CMBM	1285	Tuinucu	250	CMKH	1327
	30	CMBN	1405		500	CMHC	790
				DOMINICAN REPUBLIC			
				Santo Domingo X-31	1000	HIX	669
				HAITI			
				Port au Prince X-30	1000	HHK	920

Principal Broadcasting Stations of the World

As Compiled by the Bureau of Foreign and Domestic Commerce,
Electrical Equipment Division, U. S. Department of Commerce

Country and City	Call	Keys.	Meters	Watts	Country and City	Call	Keys.	Meters	Watts
SOUTH AMERICA									
ARGENTINA									
Buenos Aires	LP4	669	448	5000		CX20	930	323	2000
	LR1	789	380	500		CX22	970	309	250
	LR2	870	345	10000		CX24	1010	297	1000
	LR3	949	316	5000		CX26	1050	286	2000
	LR4	990	303	10000		CX30	1130	265	250
	LR5	828	362	2000		CX32	1170	256	200
	LR6	909	330	5000		CX34	1210	248	500
	LR7	750	400	7000		CX36	1250	240	250
	LR8	1106	271	10000		CX38	1290	233	100
	LR9	1030	291	10000		CX40	1330	226	100
	LS1	709	423	5000		CX42	1370	219	500
	LS2	1190	252	10000		CX44	1410	213	20
	LS3	1270	236	1000	Paysandu	CX46	1450	207	100
	LS5	1069	280	10000		CX48	1490	201	50
	LS6	1349	222	3000		CW40	1340	224	30
	LS8	1229	244	10000	Salto	CW44	1420	211	30
	LS9	1388	216	10000		CW32	1180	254	50
Concordia	J2	1327	226	400		CW34	1220	236	50
	LT2	810	370	1000		CW36	1260	238	30
Cordoba	LV2	911	329	1000		CW38	1300	231	30
General Pico	LT7	.....	.....	.....	Tucuaurembo	CW46	1460	206	20
La Plata	LT2	685	438	1000	VENEZUELA				
Los Molinos	LV8	.....	.....	.....	Caracas	YYIBC	960	312	.....
Mendoza	LT4	759	395	500		YY2BC	6061	49.5	400
Parana	LT5	1249	240	50	EUROPE				
Rosario	LT3	1090	275	3000	AUSTRIA				
	LV5	1369	279	500	Graz	.....	851	353	7000
	LV6	1079	279	100	Innsbruck	.....	1058	284	500
	LT6	730	411	5000	Koagenfurt	.....	667	453	500
San Juan	LP2	1140	263	65	Linz-Donau	.....	1220	246	500
Villaguay					Vienna	UONZ	{ 6073	{ 49.4	{ 15000
							{ 581	{ 516	
BOLIVIA					BELGIUM				
La Paz	CPX	1350	226	1000	Antwerp	ON4ED	1455	206	50
BRAZIL					Brussels	ON4GT	1375	218	100
Ampara	PRAM	.....	.....	50		ON4RB	589	509	3600
Bahia	PRAH	674	445	50		ON4RC	1448	207	100
Campanas	.....	1171	256	20		ON4FO	1219	246	100
Curytiba	PRAÑ	882	340	50	Chatelineau	ON4CE	1338	216	200
Franca	PRAZ	1110	270	50	Dampremy	ON4FG	1455	206	25
Juiz de Fora	PRAJ	857	350	200	Ghent	ON4RG	1219	246	400
Para	PRAF	842	356	250	Liege	ON4RW	1219	246	200
Pelotas	PRAD	920	326	50	Ottomont	ON4EX	1388	216	100
Pernambuco	PRAP	706	425	3000	Velthem	.....	589	509	15000
Porto Alegre	PRAG	706	425	3000	Verviers	ON4CF	1455	206	100
Ribeirao Preto	PRAI	1071	280	10	CZECHO-SLOVAKIA				
Rio de Janeiro	PRAA	750	400	1000	Bratislava	OKR	1075	279	12500
	PBAB	937	320	500	Brunn	OKB	878	342	36000
	PBAC	857	350	500	Kosice	OKK	1023	293	2500
	PBAK	1153	260	1000	Prague	OK1MPI	5169	58	5000
	PBAX	1363	220	1000		OKP	616	487	5000
Santos	PBAS	895	335	1000	DANZIG				
Sao Paulo	PRAE	815	368	1000	Danzig	PTB	662	453	250
	PRAR	1006	298	500	DENMARK				
BRITISH GUIANA					Copenhagen	.....	1067	281	1000
Georgetown	VRY	6832	43.86	8	Kalundborg	.....	260	1153	7500
CHILE					Skamleback	.....	{ 15300	{ 19.6	{ 500
Santiago	CMAB	625	480	1000			{ 6057	{ 49.5	
	CMAC	804	373	1000			{ 9488	{ 31.6	
	CMAK	1333	225	100	Soro	.....	3088	971	2000
	CMAO	1016	295	250	ESTONIA				
	CMAQ	1224	245	100	Tallinn	.....	1013	296	10000
Valparaiso	CMAJ	1034	290	100		.....	250	1200	100
COLOMBIA					Tartu	.....	735	408	2200
Bogota	HJN	706	425	2000	FINLAND				
	HKF	7688	39	50	Abo	.....	1219	246	.....
PERU					Bjorenborg	.....	1219	246	1500
Arequipa	OA6U	1764	170	20	Helsingfors	.....	1357	221	10000
Lima	OAX	790	380	1500	Jakobstad	.....	1219	246	750
	OA4M	1428	210	12	Lahti	.....	166	1756	40000
					Tammerfors	.....	.....	.....	1000
URUGUAY					Vipuri	.....	1030	291	750
Montevideo	CX6	650	462	1000	FRANCE				
	CX10	730	411	1000	Agen	FzBD	{ 963	{ 312	{ 500
	CX12	770	390	500			{ 9761	{ 30.75	
	CX14	810	370	1000	Angers	.....	1091	275	250
	CX18	890	337	250					

Country and City	Call	Keys.	Meters	Watts	Country and City	Call	Keys.	Meters	Watts
Beziere	.....	1364	220	1500	LATVIA				
Biarritz	.....	1515	198	250	Riga	YLZ	571	525	10000
Bordeaux	.....	1199	250	5000	LITHUANIA				
Caen	.....	986	304	1500	Kovno	RYK	155	1935	7000
Grenoble	.....	1080	278	200	LUXEMBURG				
Juan les Pins	.....	914	328	1500	Luxemburg	LOAA	1344	223	10000
Lille	.....	1219	248	250	NETHERLANDS				
Limoges	.....	1132	265	500	Bloemendaal		1220	246	.....
Lyons	YN	1022	293	500	Hilversum	PFBI	1004	298	7000
	YR	644	466	3000			160	1875	.....
		1030	291	500			9500	31.28	.....
		7463	40.2	.....	Huizen	PCI	17775	16.9	40000
Marsan	.....	750	400	250		PH9	1003	298	6200
Marseille	.....	950	316	500			160	1875	.....
Montpellier	.....	1049	286	200	Scheveningen	PCF	280	1071	2000
Nimes	.....	1250	240	500	The Hague		1000	300	350
Paris	.....	174	1725	13500	NORWAY				
		113	2650	.....	Aalesund	LKA	671	447	400
		901	331	500	Bergen	LKB	824	364	1200
	FPTT	671	448	1000	Bodo		662	453	625
	FL	113	2650	15000	Fredriksstad	LKF	815	368	800
		207	1446	.....	Hamar	LKH	811	587	800
		9375	32	.....	Kristianssand		1273	236	500
	F8GC	825	368	1500	Nidaros		662	453	1350
		4262	61	.....	Notodden	LKN	671	447	900
		968	310	2000	Oslo	LKO	279	1071	75000
		7317	41	.....	Porsgrund	LKP	662	453	800
Pontoise	.....	15235	19.68	.....	Rjukan	LKR	671	447	170
		11899	25.20	.....	Stavanger		1240	241	500
		11308	25.63	.....	Tromsøe	LKM	662	453	110
Rennes	.....	1103	272	1500	POLAND				
Rheims	.....	777	386	500	Katowice		734	409	10000
St. Etienne	.....	1364	220	250	Krakow		959	313	1500
Strasbourg	.....	867	345	6000	Lwow		779	385	.....
Toulon	.....	1200	250	500	Poznan		896	335	1500
Toulouse	MRD	1175	255	1500	Warsaw		1412	203	25000
		770	381	8000	Wilna		779	385	500
GERMANY					PORTUGAL				
Aix-la-Chapelle	.....	1319	227	300	Lisbon	CT1AA	942	319	1000
Augsburg	.....	536	560	300	RUMANIA				
Berlin	.....	716	419	1700	Bucharest		759	394	12000
		1635	184	35000	SPAIN				
		9560	31.38	30000	Almeria	EAJ18	1195	251	200
		1058	284	600	Barcelona	EAJ1	855	349	7500
Bremen	.....	950	316	300		EAJ13	1119	268	10000
Breslau	.....	923	325	1700	Cartagena	EAJ15	1219	246	100
Cologne	.....	1319	227	1700	Madrid	EAJ2	750	400	750
Dresden	.....	941	319	300		EAJ7	708	424	1500
Flensburg	.....	1373	219	600		EAM	9772	30.7	.....
Frankfurt	.....	770	390	1700	Oviedo	EAJ19	815	368	30
Freiburg	.....	527	469	300	San Sebastian	EAJ5	809	365	1000
Gleiwitz	.....	1157	259	5600	Seville		809	365	.....
Hamburg	.....	806	372	1700	SWEDEN				
Hanover	.....	530	566	300	Boden	SBE	250	1200	600
Kaiserslautern	.....	1112	270	300	Boras	SCA	1301	229	150
Kassel	.....	1220	246	300	Eskilstuna	SCB	1220	246	200
Kiel	.....	1292	232	300	Falun	SCC	932	332	500
Konigsberg	.....	1085	277	1700	Gavle	SCE	1470	204	200
Langenburg	.....	635	473	17000	Goteborg	SBB	932	322	10000
Leipzig	.....	1184	253	2300	Halmstad	SCE	1391	216	200
Magdeburg	.....	1058	284	600	Helsingborg	SCG	1301	231	200
Muehlfacker	.....	833	360	60000	Horby	SBH	1166	257	10000
Muenster	.....	1319	227	600	Hudiksvall	SCF	1112	270	150
Munich	.....	563	553	1700	Jankoping	SCH	1490	202	250
Nuremberg	.....	1256	239	2300	Kalmar	SCI	1220	246	200
Stettin	.....	1058	284	600	Karlsborg	SAS	11760	52.5	.....
HUNGARY					Karlskrona	SCJ	1530	196	200
Budapest	.....	545	550	20000	Karlstad	SCK	1378	218	250
ICELAND					Kiruna	SCL	1220	246	200
Reykjavik	TFA	1200	250	500	Kristinehamn	SCM	1480	203	250
IRISH FREE STATE					Malmberget	SCN	689	436	250
Cork	60K	1337	224	1000	Malmö	SBC	1301	231	60
Dublin	2RN	726	413	1500	Motala	SBG	223	1348	30000
ITALY					Norrkoping	SCO	1112	270	250
Bolzano	IBZ	62	453	2000	Orebro	SCV	1265	237	200
Genoa	IGE	779	385	1200	Ornskoldsvik	SCW	1373	218	2000
Milan	IMI	599	501	7000	Ostersund	SBF	770	390	600
Naples	INA	905	331	1500	Saffle	SCP	1220	246	600
Palermo	.....	.....	.....	3000	Stockholm	.....	.....	.....	75000
Rome	IRC	680	441	3000		SBA	659	436	1000
	11AX	6667	45	.....	Sundsvall	SBD	554	542	10000
Turin	ITO	1031	272	7000	Trollhattan	SCQ	1112	266	250

Country and City	Call	Keys.	Meters	Watts	Country and City	Call	Keys.	Meters	Watts
Uddevalia	SCR	1058	286	50	Nalchik	RA67	279	1075	1200
Umea	SCS	1384	231	20	Nizhni-Novgorod	RA13	357	840	1800
Uppsala	SCT	662	458	150	Novorossisk	RA33	268	1117	4000
Varberg	SCU	1058	283	300	Odessa	RA10	308	975	1200
SWITZERLAND					Orenburg	RA25	469	640	1000
Basel	.....	244	1010	500	Petrozavodsk	RA64	857	350	45
Berne	.....	{1210 9375}	{246 32}	500	Petrozavodsk	RA46	302	765	2000
Beromunster	.....	651	459	60000	Rostov-on-Don	RA14	366	820	4000
Geneva	.....	395	760	1200	Samara	RA22	333	900	1200
Sollens	.....	743	404	25000	Saratov	RA32	714	420	200
Zurich	H9XD	{3529 9375}	{85 32}	.....	Sevastopol	RA9	375	800	250
.....	.....	653	459	630	Simferopol	.....	667	450	.....
UNITED KINGDOM					Smolensk	RA68	909	30	20
Aberdeen	2BD	995	301	1000	Stalino	RA72	1999	150	800
Belfast	2BE	1238	242	1000	Stavropol	RA77	411	730	1200
Bournemouth	6BM	1040	288	1000	RA20	RA20	545	550	1200
Cardiff	5WA	968	310	1000	Sverdlovsk	RA15	226	1050	500
Chelmsford	.....	.....	.....	.....	Tashkent	RA27	419	715	2000
Daventry	5GB	626	479	25000	Tiflis	RA11	345	870	4000
.....	5XX	193	1553	25000	Toms	RA21	1000	300	150
Dundee	2DE	1040	288	130	Tver	RA44	435	690	1200
Edinburgh	2EH	1040	288	350	Ulyanovsk	RA51	600	600	20
Glasgow	5SC	752	399	1000	Vel Ustjuk	RA16	461	650	1200
Huddersfield	.....	{626 996}	{479 301}	{30000 130}	Vladivostok	RA17	625	480	1500
Hull	6KH	1040	288	130	Vologda	RA41	343	875	1200
Leeds and Bradford	.....	{1040 1500}	{88 200}	130	Voronezh	RA12	316	950	1200
Liverpool	6LV	1040	288	130	ASIA				
London	2LO	{842 1150}	{356 261}	30000	BRITISH MALAYA	VS3AB	7055	42.5	.....
Manchester	2ZY	797	376	1000	Johore	VSIAB	7260	41.3	.....
Newcastle	5NO	1148	261	130	Singapore	.....	600	500	1750
Plymouth	5PY	1040	288	130	CEYLON	.....	600	500	1750
Sheffield	6FL	1040	288	130	Colombo	.....	600	500	1750
Stoke on Trent	6ST	1040	288	130	CHINA	.....	.....	.....	.....
Swansea	5SX	1040	288	130	Canton	CAB	689	435	1000
VATICAN CITY					Hangchow	XGY	895	335	250
HVJ	.....	{15112 5965}	{19.84 50.26}	10000	Harbin	COHB	674	445	1000
YUGOSLAVIA					Mukden	COMK	723	415	2000
Belgrade	.....	695	432	2500	Nanking	XGZ	606	495	500
Ljubljana	.....	527	569	3000	Peking	COPK	937	320	1000
Zagreb	.....	977	700	.....	Shanghai	NKS	967	310	50
RUSSIA					KRC	890	338	250	.....
No authentic list of Russian broadcasting stations, official or otherwise, is available, but the following information is provided for such use as may be made of it. The power ratings are evidently the measurement at the generator. Which is usually five to ten times the antenna input rating, shown for other countries.									
RUSSIA					KSMS	1082	277	50	.....
Achabad	RV19	334	898	.....	RSC	1276	235	50	.....
Archangelsk	.....	586	511	.....	SSC	1071	280	50	.....
Armavir	RV50	580	511	200	XAH	1240	240	50	.....
Artemovsk	RV26	811	370	1200	XCBL	.....	.....	250	.....
Astrakhan	RV35	435	760	1000	Tientsin	CRC	1071	280	500
Baku	RV8	217	1381	4000	COTN	625	480	500	.....
Bogorodsk	RA8	400	750	700	FRENCH INDO-CHINA				
Dnepropetrovsk	RV30	784	382	1000	Haihong	.....	3446	87	2500
Erivan	RV21	400	750	1200	Saigon	.....	6119	49	.....
Gomel	RV40	621	483	1200	HONG KONG				
Groznyi	RV23	797	377	8000	Victoria	ZBW	845	355	1500
Imeni Pop	RV58	273	1100	.....	INDIA				
Irkutsk	RV14	185	1621	500	Bombay	VUB	840	357	3000
Ivanovo-Vosnesensk	RV31	892	336	900	Calcutta	VUC	810	370	3000
Kazan	RV17	616	487	4000	JAPAN				
Kharbarovsk	RV54	{1053 176}	{285 1790}	4000	Dairen	JQAK	760	395	500
Kiev	RA45	397	755	1200	Fukuoka	JOLK	680	441	500
Kolpinsk	.....	.....	.....	100000	Hirasio	JHBB	7995	.....	.....
Koursk	RA34	521	575	1000	Hiroshima	JOFK	850	353	10000
Krasnodar	RA38	584	513	1000	Kanazawa	JOJK	710	422	3000
Leningrad	RA42	300	1000	10000	Keijo	JODK	690	435	6000
.....	RA51	1999	150	350	Kumamoto	JOGK	790	380	10000
.....	RA18	349	860	1200	Kyoto	JOOK	625	480	500
Minsk	RA1	207	1450	40000	Nagano	JONK	635	472	500
Moscow	RA2	666	450	500	Nagoya	JOCK	810	370	10000
.....	RA4	666	450	300	Okayama	JOKK	700	429	500
.....	.....	.....	.....	.....	Osaka	JOBK	750	400	10000
.....	.....	.....	.....	.....	Sapporo	JOIK	830	361	10000
.....	.....	.....	.....	.....	Sendai	JOHK	770	390	10000
.....	.....	.....	.....	.....	Shidzuoka	JOPK	778	386	500
.....	.....	.....	.....	.....	Taihoku	JFAB	7590	39.5	.....
.....	.....	.....	.....	.....	Tokyo	JFAK	670	448	10000
.....	.....	.....	.....	.....	.....	JOAK	{590 870}	{508 345}	10000
.....	.....	.....	.....	.....	NETHERLAND EAST INDIES				
.....	.....	.....	.....	.....	Bandoeng	PLE	{18860 9410}	{15.93 31.86}	30
.....	.....	.....	.....	.....	.....	IBR	5170	58	1000
.....	.....	.....	.....	.....	Batavia	PK1AA	3998	75	500

(Continued on page 23)

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 with greatest clarity and with

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

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

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

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

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

Now we tune in some other station, proceeding 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

KHO	1900	Spokane, Wash.
WJSA	500	Linton, N.C.
WEEI	500	Boston, Mass.
WOW	1000	Genoa, N.Y.
WMC	1000	Berlin Springs, Mich.

76	74
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Leola Warner, Inc.
Nebraska Wesleyan University
Edison Elec. Illuminating Co.
Woodmen of the World
Amnesiac Missionary College

600 kilocycles 499.7 meters

CFCH	350	Troquais Falls, Ont.
KFBU	500	Laramie, Wyo.
KFSD	500	San Diego, Calif.
WJAC	350	Baltimore, Md.
WTFW	250	Lawrence, Kans.
WEEC	500	Memphis, Tenn.
WTFG	350	Hartford, Conn.

75	73
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Abilene Power & Paper Co.
Richard N. S. Thomas
Alford Radio Corp.
Monumental Radio Co., Inc.
Seaboard College
Washburn School of Music
Washburn, Wyo.
Transier Insurance Co.

610 kilocycles 491.5 meters

KFRC	1000	San Francisco, Calif.
WVAV	1000	Omaha, Neb.
WFSN	500	Philadelphia, Pa.
WOP	1000	Kansas City, Mo.

74	72
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Don Lee, Inc.
Emmie Curtis Exchange
Raymond Broadcasting Co., Inc.
Clifford Brown, Inc.
Unity School of Christianity

620 kilocycles 483.6 meters

EPAD	500	Phoenix, Ariz.
KJW	1000	Portland, Ore.
WJBE	1000	Tampa, Fla.
WDD	1000	Orlando, Fla.
WJLZ	500	Beverly Hills, Cal.
WTMJ	1000	Milwaukee, Wis.

73	71
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Electrical Equipment Co.
Oregonian Publishing Co.
Tampa Publishing Co.
Rollins College, Inc.
Thompson L. Greening
Milwaukee Journal

630 kilocycles 475.9 meters

CFCT	500	Victoria, B. C.
GJCK	500	Yorkton, Sask.
CKRA	500	Moncton, N. B.
CYR	250	Marquette, Mich.
KFRU	500	Columbia, Mo.
WJLW	500	Indianapolis, Ind.
WJAL	250	Washington, D. C.
WJIB	500	Jacksonville, Fla.

72	70
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Victoria Broadcasting Ass'n.
Winnipeg Grain Exchange
Canadian National Railways
Carleton Place, Ont.
Preprietors College
Executive Office of Air, Inc.
M. A. Laver Co.
Race Marketing Bureau

640 kilocycles 468.5 meters

KYAU	500	Columbus, Ohio
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70	68
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Belle C. Anthony, Inc.
American Insurance Union

650 kilocycles 461.3 meters

WSM	5000	Nashville, Tenn.
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69	67
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National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

WEAF	50000	New York City
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68	66
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National Broadcasting Co., Inc.

670 kilocycles 447.5 meters

WMAO	5000	Chicago, Ill.
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67	65
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Chicago Daily News, Inc.

680 kilocycles 440.9 meters

KPO	5000	San Francisco, Cal.
WTFY	5000	Raleigh, N. C.

66	64
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Hale Bros. & The Chicago's
Metropolitan Life Insurance Co.



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

I Thought Radio Was a Plaything

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

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

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

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

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

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

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

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

"You're kidding me," I said.

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

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

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

Since that time I've gone right on up. They would have given me just as much help too if I had wanted to follow

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

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

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

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

Take another tip—No matter what your plans are, no matter how much or how little you know about Radio—clip the coupon below and look their free book over. It is filled with interesting facts, figures, and photos, and the information it will give you is worth a few minutes of anybody's time. You will place yourself under no obligation—the book is free and is gladly sent to anyone who wants to know about Radio. Just address J. E. Smith, President, National Radio Institute, Dept. 1KO, Washington, D. C.

J. E. SMITH, President,
National Radio Institute. Dept. 1KO,
Washington, D. C.

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