THE APRIL 1932

(25°)

Girdling the Globe with Two Tube Set
Getting Rid of Radio Noise
New List of World Stations

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#### APRIL 1, 1932



# RADIO INDEX

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FRED CLAYTON BUTLER

Editor and Publisher



### GETTING RID of RADIO NOISES

by B. Francis Dashiell

TRANGE noises appear from time to time in every radio receiver. Because of the sensitivity of modern sets, and particularly superheterodynes, a higher ratio of noises is to be expected. The more or less normal noise in a receiver—the noise level—is offset by the ability to receive extremely weak signals. But when this level increases because of defects and faults in the set or electric sources without, the noise-becomes so excessive that all radio reception is spoiled or impossible.

Radio noises may be given several classifications. First are those sounds which arise from without the receiver and cannot well be controlled; second, the abnormal electrical and mechancal disturbances of the set itself; and, third, the annoying hum caused by alternating current sources and difficulties within the radio set.

Noise, without doubt, is the most discussed of all radio troubles. Service men are called up more frequently to discover and correct noises than for any other kind of defects. And this magazine, through its question columns, receives many communications calling for assistance in the eternal battle against radio noises.

When a receiver commences to sound excessively noisy it is proper to suspect it of something more than its inherent noise level. What, then, is the nature of these noises; what shall be done to locate the trouble; and how is it to be remedied? It is best always to remember that modern radios have a great many

sources of noise trouble, and that while some cases are obvious enough to indicate the cure, there are others so exasperating and stubborn as to call for the services of expert repairmen. However, since we can do no more than brush over the whole subject in a general way, we shall endeavor to explain the noises which are more commonly experienced.

The first duty is an attempt to isolate the trouble for immediate correction. Remove the aerial and turn on the set to full volume on a local station. If the noise persists it is obvious that the source is in the ground or the set. Replace the aerial and remove the ground; if the noise again persists it must therefore be in the set. If the noise stops at the removal of the aerial and ground or



Clara, Lu'n' Em, entertaining gossipers, daily except Saturday and Sunday, 10:15 a.m. NBC-WJZ

either one, then look for trouble in these essentials. The aerial may be loose and touching some object, or another aerial may have fallen across it. This frequently happens in apartment house conditions. Or the wires may be loosely joined without perfectly soldered connections. The ground may be loose or imperfect. A long and bare ground wire that touches some metallic surface between the point of grounding and the set will give considerable noise.

Noise that persists in the set after the removal tests for aerial and ground is caused by external or internal troubles. The external sources are practically eliminated when no aerial or ground is used and the set is carefully shielded to exclude all electric waves. It is obvious, therefore, that good metallic shielding is necessary to prevent many noises from penetrating the radio coils. A careful examination of all shielding joints and groundings is essential in diagnosing radio troubles.

Noises brought into the receiver from external sources through the aerial and ground may be due to atmospheric conditions such as static and stormy weather, or to what is commonly called "manmade static." All electrical apparatus are a great source of trouble; motors, fans, oil heaters, vacuum cleaners, bells, X-ray and violet ray apparatus (both of which are very annoying), light switches, elevators, automatic refrigerators, loosely held electric lamps, power lines (usually producing hum), street cars, motor cars, and telephone lines, give much grief.

#### Filters for Power Devices

But these sources can be controlled. The remedy for troublesome motors and sparking brushes is an overhauling and cleaning, and the installation of filter condensers across the offending circuits to absorb the sparks that transmit the static waves. Noise filters for power lines—large condensers with choke coils—may be purchased and easily installed. Some electric induction is hard or impossible to eliminate, but shielded aerial and ground leads can be used with a certain degree of satisfaction.

Radio tubes are primary sources of noise. When they fail or do not fit well in their sockets a popping and clicking noise is heard, or there is a bedlam of howls and squeals. Test all tubes and replace those that appear defective. Tube prongs may not fit perfectly in the sockets, or the internal wires soldered to the ends of the prongs may be loose and cause open circuits. Internal tube troubles cause many peculiar sounds which cannot be remedied.

#### Howls and Squeals

Howling is one of the most annoying radio troubles. It sometimes increases steadily after the set is turned on. This is known as microphic howl and is caused by internal vibration that sets the tubes, generally the detector, into oscillation. Replacing the detector tube with a new one sometimes stops the noise, or the tube may be covered with a "howl arrester." The speaker often sets up this vibration and may require some additional cushioning to stop the microphonic howls. Howling may be induced by electric vibrations from adjacent parts of the circuit and is a more complex matter.

Other howls and squeals come from poor contacts or breaks in circuits leading to grids of tubes. Too low plate voltages such as may be experienced with run-down B batteries or defective eliminators cause howl. Again a too high plate voltage especially on the detector tube plate, will cause howling. All wires in the grid circuits, and in the secondaries of intermediate radio-frequency coils in superheterodynes, and r. f. coils of other sets, must be examined for breaks.

The volume control of a set sometimes becomes noisy. Due to wear or the looseness of its parts this device may need replacing. Grease or dirt in the bearing or on the contact arm will give an easily overlooked source of noise and howl.

Noise accompanying the moving of the tuning dial of the set is due to defective condensers and contacts and connections. Dirt, such as dust particles, between the plates of the variable condenser will cause loud clicks when the condensers are turned. Crooked or warped plates, or faulty connections to

(Continued on page 29)

### GIRDLING the GLOBE on TWO TUBES

CLAIM the championship of the East for DX reception on small receivers. I use a two-tube set which I made, and have received and verified stations from over both seas, Central and South America, and stations located in islands on both the Pacific and Atlantic. Among my best receptions have been 1RO, Rome, Italy, on 680 kcys., heard at 8:20 p.m., EST, and CX-26, Montevideo, Uruguay, heard at 7 p.m. in the evening.

If any of your readers have a better record than mine for a two-tube receiver, or any small set, I should appreciate

hearing from them.

On the Pacific coast I have received and confirmed to date exactly 60 stations. These range from 50 watts up and from Kelowna and Vancouver to Tia Juan, in Baja California. Across the Pacific, Japan, Australia, New Zealand and Hawaii have been received and specifically confirmed in nice personal letters from the stations themselves.

#### Here's How

Here is how to receive these distant stations. All those on the far shores of the Pacific are heard early in the early morning hours here in Eastern United States. Between 4 a.m. and daylight is the best time to try for them, and this is practically the only time that these stations can be heard. Hawaii is one exception; it may be heard as early as 2 a.m., EST. As for Europe, I find they will come in during the evenings here in the East if it is possible to get a clear wave for them. The ideal time to catch them is around 9 p.m. EST. However. to hear Europe at this time it is necessarv for the station heard to be giving a test or DX program, as it would then by 2 or 3 a.m. their time. I say that this is the ideal time to hear them because it is then complete darkness between the points of transmission and reception. South America may come in during the evening if you can get a clear wave for them. Reception of early morning programs of the European and South American stations is not so successful, although it can be done.

How George Lilley Does It

Of course, in all DXing the dialer must know exactly what wave he is on, what stations come on the particular waves, and have up-to-date information on these stations. I always have RADEX open in front of me when DXing.

It may help your readers to know a little about my aerial and ground. My aerial is exactly 150 feet long including the lead in. It is 55 feet high and runs north and south. 150 feet seems to be



Walter Winchell, the Gossip of Broadway. Master of Ceremonies on Lucky Strike. 10:00 p.m. EST Tuesdays, Thursdays and Saturdays

plenty long enough for the best of DXing; if it is longer, the set becomes much less selective and hinders the evening reception. Height and insulation of the aerial are much more important factors than the length of it. My ground is made up of as much buried metal, wire, and pipes as I could find. These are all soldered together, taped, and one wire connects them all to my set.

Although my receiver is only two (Continued on page 30)

### STATION KUKU is Broadcasting

# The Cheese Hour By SUSIE SEXTON

A LTHOUGH Raymond Knight, director, author, announcer and leading man of Station KUKU's Kut-Ups on the National Broadcasting Company's network has half a dozen college degrees in law, theology and the drama, his most prized possession is the honorary title of Doctor of Sound Effects, conferred on him by acclaim at the behest of radio fans and executives.

Mr. Knight, who is the tallest and most educated man before the microphone today-quite apart from his personal popularity with all classes and conditions of fans-can express any crises in the lives of human beings from Hamlet to Ed Wynn by tearing a Number 16 collar, carefully starched, in the proper direction. By tap-dancing on last season's straw lid, crunching the crown in his fist, or masticating the brim with fury he can imitate anything from the roar of the fast freight to the last gasp of poor, unhappy Camille. And with one package of assorted sandpaper purchased for a dime, it is said, he can depict as much human anguish as Conan Doyle or George Bernard Shaw ever put into thirty-five volumes.

#### The Big Cheese Himself

Professionally, at least among the KUKU Kut-Ups who make merry in behalf of the Blue Moon Cheese Spread every Saturday afternoon at 5:30, Mr. Knight enunciates as Ambrose J. Weems, the Big Cheese Himself. But he is much more than that to Station KUKU. The staff of that unit which broadcasts under the wings of a cuckoo is that madly hilarious group which includes Mrs. Pennyfeather, the palpitating, saccharine damsel who gives the benefit of her advice-unasked- to "dear perturbed people" everywhere, Dolly Gray, Percival Pother, the Green Monster, Fetlock Soames of Scotland's Back Yard and the Sing-Up-A-Tree-O. These delightfully whimsical merrymakers poke fun with rare art at most of the foibles of humans

including the recipe girls, gasp-and-go sports madmen, London broadcasts, commercial credits, the poets who will recite "Trees" and bedtime couplets no matter what happens, crooners and those good old traditions—the detective yarn and five-and-ten melodrama.

Mr. Knight's active brain is responsible for all of these activities as well as the sound effects. He writes, directs, acts the parts of Eddie McGurk and the Green Monster, announces as Ambrose J. Weems, and sings in the Tree-O for the Kut-Ups as well as being the life of half a dozen other broadcasts, including Raising Junior. For a while he was Bill Borealis of the Cliquot Club Eskimos. His film for Pathe on sound effects used in the studios ran for five weeks at the Palace Theatre in New York.

Like all men with an irrepressible sense of humor and original wit, Mr. Knight himself looks very sad indeed.



Raymond Knight, as Professor Ambrose J. Weems, playing the "Melody in H" and the Cuckoos listen entraneed. Following the well-known left to right we have Robert Ambruster, Jack Arthur, the Big Cheese, Eustace Wyatt, Mary McCoy and Adelina Thomason. The KUKU program is broadcast each Saturday at 5:80 p.m. EST over the NBC-WEAF network.



His dress is as fastidious as that of the Prince of Wales. And he has a pleasant naturalness of manner.

"Where did you get the idea for Station KUKU?" I asked.

"Somebody in the studio thought they wanted a cuckoo program," was the reply. "I was delegated to write it. We went on the air two years ago on New Year's Day. At first it was a sustaining feature and originally we were on the air in the evening, Early this year we began broadcasting for the Blue Moon product.

"At first I wrote the sketches, announced the program and acted several parts. Then they decided I must be a director.

"Now it is an unwritten law in broadcasting studios that a continuity writer, which was my particular job, cannot be a director. In order to get around this predictment they made me a director who writes continuities, thus avoiding a tense situation.

"Our first dramatic efforts included Fetlock Soames of Scotland's Back Yard 'Pitting His Wits Against the Green Monster,' 'The Face on the Grandfather Clock' and 'Who Stole the Fence From Scotland's Back Yard.'

"I write my own sketches. Usually they are ready weeks in advance. I direct them, too. But I never know beforehand just what I am going to write about. Usually I just sit down at the typewriter and write a line or two of dialogue. Start any conversation between two people and something in the way of a plot is bound to develop before very long."

He went on-

"The radio has brought in a new whimsical and satirical type of humor. And the quiet chuckle seems preferable to the noisy guffaw on the air. In those early days of the movies a comedian had to shave with charlotte russe, toboggan on custard pies and dive into flour barrels to hold his public. The radio is more subtle and less spectacular."

Station KUKU has laughed with and at everything and everybody. But there are three subjects at which its arrow-like wit is never aimed. History, religion and the D. A. R.

You cannot even snicker at the events or men who made our country—funny as they may seem now or in the past. The public won't let you, declares Mr. Knight. And Mr. Knight knows his laughs and laughers.

Americans may roar merrily at the Volstead law, matrimony, Senators, gangsters, leap year and men in top hats, but they never get even a grin out of the Fathers of their Country, no matter how funny they are. The last characters of history who sent a chuckle round the world were Hannibal, Nero and Julius Caesar.

Nothing later than the old Romans is eligible as fun material on the air.

But Mr. Knight admits that some of our history past and present is pretty funny. He cannot explain the public aversion to talking about it out loud.

Incidentally the KUKU Kut-Ups have one of the largest and most cosmopolitan audiences on the air. Their greatest admirers are college professors and children although all classes and conditions write in. Tickets for the broadcasts are gone ten weeks in advance. Albert Payson Terhune never misses them if he can possibly get to the radio. Particularly he enjoys the yarns featuring the detective of Scotland's Back Yard.

Tickles the Kids

Children are the most enthusiastic listeners. Mr. Knight has a boy and a girl of his own in a rambling old house one hundred and sixty-five years old which is hidden near Redding Ridge, ten miles south of Danbury, Conn. They love the stories about Dolly Gray and Blue Riding Hood, whose grandmother had a diamond dog collar and ate the wolf to end the depression.

When plans were on foot recently to change the KUKU period from 5:30 Saturday afternoon a dreadful hullabaloo arose. The youngest generation protested against losing the feature before they went to bed.

"The love of nonsense is pretty universal," declares Mr. Knight. "Of course, some people never could understand us. But our fan mail contains comments from illiterates who can barely write, farmers, clerks, bankers, educators, actresses, housemaids and debutantes."

Mr. Knight, by the way, had no mean reputation as a playwright when he undertook the whimsicalities of the KUKU's. Indeed back in 1927 he won a prize for the best experimental one-act play of the year presented annually by the Drama League of America.

His collegiate degrees laid end to end perpendicularly would rival his own striking altitude. His path to the broadcasting studios was a zigzag trail leading from the Law School at Boston University and a law practice of two years in Boston to the Harvard Theological School for one year. From the Church

it detoured to the theatre when Mr. Knight decided to study drama under Professor Baker. Immediately he became stage manager of the famous 47 Workshop. Later he went to Yale to study playwriting under Professor Baker.

One of his most unusual experiences was that of professor of miscellaneous subjects at Ruston Academy in Havana during Professor Baker's sabbatical year. There he instructed the young idea in everything he knew nothing about and "ducked" after class so that his pupils would not ask questions.



Remember Lee Sims and his ever-changing piano rhythms back in the old "crystal" days. Here is Lee and his beautiful partner, Ilomay Bailey; have five periods a week on the NBC.

The cast of the KUKU Kut-Ups is just as remarkable as Mr. Knight himself. All of the actors are young people. There is Robert Armbruster, the maestro, Adeline Thomason as Mrs. Pennyfeather, Mary McCoy as Dolly Gray, Eustace Wyatt as Percival Pother and Jack Arthur, who sings on many programs.

At the age of eleven young Bob Armbruster made his debut as a child prodigy with the old Philadelphia Symphony Orchestra. He is a splendid pianist and director as well. At one time he

(Continued on page 30)

### PUZZLE PAGE IS POPULAR

T is too early in the month as we write this, to know how difficult our readers are finding the March puzzles. The new call from Newfoundland was all that made possible the "J" puzzle, the correct solution being as follows:

> CKCV K O M O WRJN XEFA

It is possible our puzzlers may find other solutions but we believe this to be the only one.

Mr. Pheasey's "magic square" ought to prove much more difficult. When it was received, the puzzle editor doubted if it could be worked and so he took it home without the key and what a tussle he got out of it. His method of solving it may be of interest to those who tried it and failed. On a large sheet of paper he drew six squares and in these he entered the frequencies of all the calls beginning with the initial letters of that square. KV having but four frequencies-1260, 1140, 1270 and 1200—he took each of

#### Get Your RADEX Free

these in turn and added it to each of the frequencies for CJ and subtracted from 3540. If the answer appeared in the WO square, that frequency was checked as a possible solution. Continuing the process, the possible answers were checked in each square after which it was not difficult to find those which added to 3540 in all directions. It was a corking good puzzle.

The four states in Raymond Corbett's problem were Florida, Arizona, Alabama and New York. This, too, was very well designed.

#### The April Problems

The No. 1 cross-call this month was designed by Carl Forestieri, Bronx, N. Y. It is of excellent design and enough calls have been reversed to get away from the hackneyed combinations of KWKH-CKWX. This puzzle should give our readers a struggle. Following is the key to the calls.

24 62 W 78 B

- Across
- 1 50 k. w. on the blue. 2 Shares time with another 50-watter.
- 6 Four share on this wave.
- 10 Reverse. Recently traded calls with sister station.
- 12 Reverse. 24 other 100-watters on
- this wave. 14 Reverse. Half a k. w. in the West.
- 15 Its newspaper is in French.
- 18 Another newspaper.
- 20 All 100-watters on this wave but six.
- 22 Seeds.
- 27 Reverse, In Wisconsin.
- 27 Four stations in same city share time.
- 30 A newspaper on the red.
- 31 On the Potomac.
- 35 Reverse. Daytime on clear wave.
- 39 Reverse. Little but important. 41 Has half a clear wave.
- 46 Reverse. Station has two calls.
- 49 Reverse. In western part of western state.
- 49 Newspaper station in the CBS.
- 52 Reverse. Has two owners. 52 Portable Wireless Telephone.
- 58 Reverse. Shares time with three on
- same island.
- 59 Near 100 on most dials. 64 Belongs to NBC.
- 67 This station is a "wow."
- 70 While this one is a "ham." 73 And this one a "key."
- 76 It interferes with Akron.
- 79 Reverse. In Jersey. 82 Reverse. Its wave is 1725.72 feet long.

84 Reverse. Just changed its call and moved to another state.

86 Reverse. A Missouri blue.

86 In California.

90 Reverse. Monumental radio. 90 On 1210.

92 150 watts 93 Reverse. On 1420.

93 Daytime on key wave. 99 Reverse. Only 50 watts. 99 Synchronized with its sister.

1 City of the same name. 5 Andres Martinez. 6 One of four CBS synchronized.

8 Whole wave is CBS.

10 100 watts on 1310. 12 In the Red River Valley. 16 Interstate broadcasting.

22 Blue in the West 26 Reverse. St. Olaf's 27 Reverse. Ditto with 10.

30 Reverse. Call stands for state. 35 Shuman of Nebraska.

37 Shares with a doctor. 39 Reverse. An NX station. 40 500 watts in California. 41 Reverse. Same four letters as anoth-

er station on same wave. 46 Shares time with 37.

47 Two on this wave. 49 Last three letters stand for city and state.

57 Reverse. University with 750.

60 Reverse. 12,500.

64 A motion picture booking agency. 65 Uses a split frequency.

69 A CX station.

70 An agricultural college. 73 The Sun-Telegraph. 75 A phantom.

76 Interferes with another Columbia.
79 Ditto with 41.
82 Only NBC in the state.

85 1 k. w. but no chain. 86 Reverse. A Dn station. 90 Reverse, 100 on 1370.

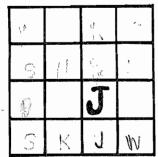
91 Reverse. Call has three letters alike. 95 Reverse. Three cities in one state share time.

No. 2

#### AAC CCCF FGGG GKKK KLM MOOR RVV WWW www wwxx

No. 2 is a clever little thing designed by Carl Schmidt of Scranton, Pa. It is a palindrome which, the dictionary tells us, is a word or sentence which reads the same beginning at either end. Thus WMCA-CMW is a palindrome. The problem is to arrange the letters given into ten station calls so the letters will be in the same order both left to right and right to left.

And in No. 3 we have our old friend, the J puzzle with new requirements. The problem is to fill in eight station calls of four letters each with every other line and every other column reversed. That is, the first and third lines read left to right and the other two right to left; the first and third columns read down and the other two read up.



All of the calls in these puzzles are contained in the regular index of the March issue of this magazine. Get the answers to these problems to us by April 20th and have your subscription extended one issue, a free copy of the May RADEX or a radio map of North America. Be sure to specify which. We'll be waiting for you "when the moon comes over the mountain."

#### Aerials and Grounds

(Continued from page 10) Park Place, St. Joseph, Mo. "I got

WEAF one Sunday afternoon at 4 o'clock, also at 6 a.m. with KFEQ, a 2000-watt local only two channels distant. I can now get WABC, WEAF and WJZ almost at will."

"I have tried all kinds of grounds and aerials," says Wm. F. Zimmerman, Route 4, Oshkosh, Wis., "but the best yet is to take about sixty feet of No. 22 d. c. c. wire and wrap it around the electric cord that goes to the wall plug from your set." This idea of Mr. Zimmerman's sounds very good and should be well worth trying. It is, of course, the induction principle.

#### SPECIAL INTRODUCTORY OFFER



We need immediately 100,000 users the country over to tell their friends of PENTODE the improvement of using Pentode tubes in place of

245's, particularly in sets using 245 push-pull.

There is a tremendous improvement in depth of tone and set sensitivity. The improved amplification brings in weak signals.

The Pentode Tube is inserted in Na-ald 954KPC adapter and the adapter put in the socket in the set. No change in wiring.

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ten people that order from any town we will send two adapters for \$1.00 or—two pentode tubes and

two adapters postpaid for \$3.00.

If after trying them in your set, you are not more than pleased with the results, return your purchase any time within five days and your money will be instantly refunded.

This ad probably will not appear again. Order today. ALDEN MANUFACTURING COMPANY 719 Center St. Brockton, Massachusetts

### EXPERIMENTS with Aerials and Grounds

### Some Interesting Conclusions

THE subject of Aerials and Grounds will always be a live one for several reasons. In the first place is the importance of these two factors in the perfect operation of any set. Second, the best aerial and the best ground can be found only by experiment, for what is best for one will not be for another. Third, some want distance and some want volume and some want beauty of tome and therefore the ideal is a matter of taste.

In this article we are giving the opinions of some of our readers who have done a great deal of experimenting in the antenna-ground field. Some of them point out that volume often increases with the removal of the ground. This is true, although we have found this increase in volume applied only to certain parts of the dial with the other parts reduced by the removal of the ground.

#### **About Removing Ground**

We feel that we should warn our readers that removing the ground is a risky experiment, as some sets are so constructed that the ground is a sort of safety-valve and such sets should never be operated for any length of time without a ground or it is subject to very serious damage. Before using your set without a ground, study your instruction book carefully to see whether the manufacturer has warned against such operation. It is impossible for the layman to tell from a set whether or not it may safely be used without a ground. The Philco is one of the sets which issues a warning against using without a ground, although this may or may not apply to all Philco receivers. The Model 55 Atwater Kent is another. Our book on Radio Theory and Modern Practice says: "Ground connection must be used with Model 55. This set also will not operate with either aerial post connected to the ground."

"In your article 'In the Wide Field of Radio,' I certainly agree with Mr. Owens

as to aerial length, the longer the better in my opinion," states Roger Causse, Radio Operator, SS. Thermo, care P. O. Box 6688, Lester, Pa. "Here on the ship I have an aerial 750 feet long and using the 'world's best ground,' the ocean. I can get stations on my three-tube set, and with a volume unbelievably strong, which I cannot even hear on my Victor R32 at home. I have not the facilities of erecting a longer aerial at home or I would. With the present day sharpness of sets, the longer the aerial, the better."

#### Uses 600-Foot Antenna

"I have been very much interested in the various items appearing in RADEX concerning the topics of Long Aerials Short Aerials,' and 'Waterpipe vs. vs. Specially Constructed Grounds Grounds'," writes Richard D. Caddell. 605 Ridge Ave. N. S., Pittsburgh, Pa. "To begin with, I have been experimenting with different types of grounds and aerials for fourteen years now, in many different localities, both in the United States and Canada, and also



Chester Lauck (right) and Norris Goff, "Lum and Abner" who have rocketed to popularity in less than a year, At 2:00 p.m. EST, Monday, Tuesday and Wednesday, NBC-WJZ

abroad. I have experimented with over seventy different types and lengths of aerials ranging from 2300 feet to 10 feet in length, and numerous systems of grounds.

"You may tell your radio audience not to condemn one particular type of ground, or an aerial of a certain type of length, just because they might not give the best results in the location they are used, as the identical ground and aerial might bring the very best results in another location. I have studied grounds and aerials and have found that the best results cannot be expected simply by erecting one aerial and ground and then expect to receive foreign reception. It may take at least a dozen or so of grounds and aerials to find the combination best suited to that particular location.

#### Ground Helps and Hinders

"I have also found that in some locations a ground connection will reduce the volume on some sets when used. It will also be found that on certain nights a ground will boost up the volume of a set, and again the next night reduce the volume. For good DX reception a knife switch should be connected to the ground connection of a set, as many stations never heard before can be tuned in by simply using the knife switch, thus disconnecting the ground. I highly recommend a ground when a short aerial is in use, or if the set owner lives in a poor location. A ground is at its best in those two instances.

"A ground is nothing more than a filter, and consequently when used with a perfect aerial has a tendency to drain part of the signal strength, in some cases. However, all in all, it is up to the set owner himself to experiment and find out which system of ground and aerial is most suited to his set and its location. I am at present using a 600-foot aerial and would use a longer one but for lack of space. I use no ground."

It will be seen from the above that Mr. Caddell takes exactly the opposite view regarding grounds from that advocated by Ollie Ross of California, who has stated his belief in several issues of this magazine, that the ground is perhaps the one most important factor in proper reception.

#### **Uses Three Antennas**

"The discussion regarding short and long antennas finds me on the long end," reports Robert R. Rawstron, 296 Main St., Claremont, N. H. "My aerial at present is 350 feet long, some 50 feet high, with 25 feet of lead-in. My own experience reveals that 200 feet is much stronger in volume that 100 feet and that while 300 feet is stronger in volume than 200 feet, the difference is not so marked. I feel well repaid with my efforts in putting up a longer aerial than is considered customary."

"For some time I have used three antennas, about 100 feet each, with 40-foot lead-in each, to a single throw switch each on wall panel; a single r. c. wire connects radio with the three switches." advises Chase Pulsifer, Box 576, Yuma, Ariz. "Have demonstrated to many local fans, on several makes of radios, from 6 to 10-tube, the jump in volume of reception as each additional antenna is switched on. The jump is especially noticeable when a. c. current is turned low before each addition. Arizona, especially Yuma, has a hot, dry climate and very many periods of static. The small amount of a. c. volume required to operate with long antenna, as noted above, frequently changes log from 'excess static on one antenna' to 'clear reception on three antennas'."

"You who have A-K 70 receivers or similar models and can't use long aerials for fear of spoiling your selectivity, try my trick," suggests Richard F. Miller, 2705 Pennsylvania Ave., Dallas, Texas. "Take about 15 inches of insulated copper wire, lav it across the leads from the r. f. coils to the condensers. This will cause an oscillation which can be governed by raising or lowering as desired, according to amount of volume you use. I have mine fixed on a lever which is controlled from beneath the cabinet, and now I can get CMK and WSB on either side of XER, which is pretty good for this location."

"I have tried winding the aerial and ground spirally together and connecting opposite ends, and it works swell," reports Richard Douglas, (1125 Krug (Continued on page 8)

# BETTY'S PAGE of GOSSIP

I Thas been thirteen years since Billy Jones and Ernie Hare first met; eleven years since their first broadcast, yet they are still together and still radio headliners. Singing together, joking together, they have laughed and jested their way into the acquaintance of millions. They have seen a whole decade of changing public taste, and have remained successful and inseparable.

They were born on the same day of the month, and although not related their mothers had the same maiden name. They are the same height, the same weight, and are even beginning to look alike. Both had a try at business before taking the advice of friends and going on the stage.

Ernie Hare was born in Norfolk, Va. As a boy he sang in church choirs, but

#### Meet the Folks You Hear

for a career he selected the baking powder business. He became a traveling salesman, but failed to down the desire to sing. Whenever he found himself stranded in a small town over Sunday he always hurried around to the nearest church and offered his services as a soloist. Once he gained sufficient faith in his voice, he lost no time in breaking into the theatrical profession. He made Broadway in four years and his record there includes fourteen musical shows, among them "Sinbad," in which he understudied Al Jolson. Then he met Billy Jones.

Jones was born in New York City, and he, too, sang as a choir boy during his early school days, but abandoned the

thought of a music career and went to work in the Custom House; then to a bank, and later to hard labor. He herded sheep in Wales. mined ore in New York State, climbed poles for the telephone company and made cable for Western Union. All the time he continued to sing for his fellow workers and friends. Eventually they persuaded him to give his voice a real trial, and finally he was launched on a theatrical career.

After several seasons in vaudeville, he reached Broadway and scored a real success in musical shows. More musical shows, vaudeville and concert tours followed. Then he started



making phonograph records. Meanwhile Ernie Hare was also making records, and it was in a recording laboratory that Gustave Haenschen, now an NBC orchestra director, introduced them.

The team of Jones and Hare was born that afternoon. Haenschen wanted someone to sing a duet for a record his orchestra was making. Billy and Ernie offered to assist him before going their separate ways. To their surprise, they found that their voices blended exceptionally well. They liked each other's songs; they liked each other's jokes; in fact, they liked each other. They left the laboratory together, and before reaching the street corner had decided to stay together. For a while they appeared in vaudeville. Then, more for the fun of it than anything else, they faced a microphone "that looked like a tomato can hanging on a hook" and gave a ninetyminute program in the studio of the old WJZ station in Newark, N. J. This was in 1921. One broadcast led to another, and today the boys claim the distinction of being the first entertainers ever to be paid for radio work.

Listen in for this famous pair any night, except Saturday and Sunday, at 7:45 p.m. EST over the NBC-WJZ network. And for Rocky Mountain and Pacific Coast listeners at 12:45 a.m. EST.



Vivien Ruth was born on January 22, 1913, which makes her just 19, but numerologists ought to figure out just what 22 means in Vivien's life. Her mother and father celebrated their birthdays on June 22 and February 22, respectively. And, oddly enough, they were married on July 22. When Vivien was still wearing long curls her father passed away—on August 22. Another milestone in her life occurred last December 22, when, as a result of her singing at a private party, she made her radio debut over a New Jersey station. And exactly one month later—January 22—the singer first poured her songs into a Columbia microphone, singing as an exclusive artist with that network the same day. Also, if we may mention it, it was on February 22, three years ago, that Vivien parted with a misbehaving appendix, and just what "22" holds in store for her remains to be seen.

Stepped Into Big-Time

Vivien professes to have been a tomboy always. When a youngster in Passaic, N. J., her home-town, she never played with the girls, but would find delight in playing games with the boys. From her mother, a talented pianist, she inherited her musical ability. Vivien reached her third year in high school, imbued with a desire to become a physical training teacher, but that unruly appendix brought her to the hospital. She never returned to school, choosing instead to become a homebody. After a while she became restless and decided to seek employment. Two positions awaited her-one in a Ford agency at \$25 weekly, and the other in the agency of a higher-priced car which offered \$20. She took the second.

Last December she happened to be singing at a party which was attended by a friend who was associated with radio in New Jersey. He suggested she try microphone singing, and arranged for her debut over a local station. Her success was instantaneous. On that eventful January 22, Vivien Ruth stepped into the "Big-time" with her first broadcast over the Columbia network. She wasn't a bit nervous on the occasion, nor does she ever get mikefright, at least so she says. Peter B. Kyne

is her favorite author. Though she can't read a note, she only has to hear a song but once to know it. Her pet is a Maltese cat, and her pet songs are "Sleepy Time Down South" and "The Rosary." Vivien can be heard at 5 p.m. on Tuesdays, over the Columbia network.



FRANK KNIGHT

You've probably heard Frank Knight do a lot of announcing, but now we are pleased to announce Frank Knight. Frank was born in St. Johns, Newfoundland, on May 10, 1894, the son of one of the town's most prominent barristers. After his graduation from St. Bonaventure's he settled in the town of hisbirth and took up life as a bank clerk.

At the outbreak of the war in 1914 he enlisted with the Royal Newfoundland Regiment. During his three years overseas he took part in action on the Western front and about Gallipoli, and was wounded in the battle of the Somme. Returning home broken in health, Frank was faced with the problem of readjustment, His health was slow to return and after months of recuperation he became restless and anxious to break away from what he considered the tedium of banking. Knight enrolled at McGill University for a course in medicine, but the long hours of study and strenuousness of that calling forced him to abandon his studies during the second year. Then Frank went to New York. He had vaguely thought many times that he would like to be actor. He had little training for the theatre other than courage, but it was just that abstract quality that won for him a place behind the footlights. After playing numerous minor roles in road companies of Broadway productions, he appeared opposite such stars as Francine Larrimore and Nance O'Neill.

#### From Hobby to Business

Frank went into radio at first only as a hobby. He played occasional small parts in radio dramas, but as time went on he gave more and more serious attention to its possibilities. But there were hardly enough radio dramas to justify giving up the theatre altogether. He was still doubtful when he yielded to the advice of his close friend, Ted Husing, to join the ranks of WABC announcers. Although he occasionally misses the glamour of the stage, Knight never has regretted the move.

Frank is tall and good-looking. His hair is black, greying a bit around the temples. His bearing instantly suggests his military training. He is quiet and well-poised. Frank Knight is Columbia's British-accented announcer with an all-American following.



Burns and Allen

Have you heard Gracie, the "Dumb Dora" of the team of Burns and Allen? Gracie provides the laughs and George "feeds" her the lines. Although George Burns and Grace Allen are one of the most popular and widely-known comedy teams that have appeared in vaudeville and talkie shorts, it was only a short

(Continued on page 28)

### IN THE EDITOR'S SANCTUM

#### The Monthly Confab

E have gotten into trouble several times by changing our index upon reports from our readers particularly regarding change of frequencies. Oftentimes the frequency of a station shown on their verification card or letter is incorrect, being an old one. We are therefore including these reports in The Month's Changes under the head "Heard on Other Frequencies." As fast as these can be officially verified the index will be changed but not otherwise. Readers should therefore watch these rumored changes in their DX work.

"Could you please help me about my set," requests John J. Barlow, 2803 Woolsey St., Berkeley, Calif. "It is an Apex (6-tube and rectrifier) Neutrodyne. This set has a wonderful tone, but is extremely broadtuning. On a 12-foot indoor aerial many of the locals take up many spaces while when I use my outdoor aerial the locals, especially KRE and KGO, take up from 5 to 20 spaces , on my dial. About the only distant stations that I can get when the locals are on are KFI, KNX, KSL and, once in a while, XER, WTAM, KWJJ, KEX and KJR. I have put a small fixed condenser between my aerial and set, but this does not seem to help. I have talked to several radio men about wave traps. etc., but they all say that my set is too broad to be helped by any of those appliances."

Perhaps the most frequent inquiry that comes to us from our readers is how they can sharpen the tuning of their set. It is a difficult question to answer helpfully and if any of our readers have succeeded in this problem with their own sets, we would like to have them write us about it.

"In your index the symbol after WCFL, Chicago, is 'Dn,' but I have often received it after midnights," reports I. H. Nixon, 265 Pacific Ave., Toronto, Ont. The symbol D indicates a daytime station but Dn indicates a daytime station which may use evening hours by

special arrangement. Most restrictions on all stations are waived after midnight. In addition to this, this magazine carried a notice an issue or two ago that under special arrangement with KJR in Seattle, WCFL would try out night hours to see if they could broadcast nights without interference. RADEX gives the information you want if you will follow it closely. Very often someone who evidently buys a copy only now and then writes us for information that has appeared in our pages just recently. If you are truly interested in Radio, you cannot afford to miss a single issue of "The Radio Fan's Own Magazine."

#### Set Won't Bring Japan

"Why can't I get Japan?" is the cry that comes to us frequently from readers all over the continent. Thus Robert Rosenberger, 17 Jansen Place, Kansas City, Mo., writes: "The set I use is a Kolster, six-tube. It has gotten KFSD in San Diego, CMBS, KTAR, WSYB and 100-watters in South Dakota. Illinois and Alabama. Why cannot this set get over the seas?" We might answer this question by asking another. "I use the same kind of golf clubs and the same balls as a friend of mine. He got a hole in one; why can't I?" It isn't so much the set one uses, for we have reports of transoceanic reception on many different kinds of set. Perhaps with the very best set one may never tune in European or Asiatic stations in the b. c. band, but if one does it will be a combination of infinite patience, tuning at the right time and-luck.

#### WGM Passes Out

WGM, Jeannette, Penna., just won't play the game with us. We refused to list them when they were on the air and then when we did finally include them, they seem to have gone off the air. Says K. Vance Shaffer, 463 Center St., Morgantown, W. Va.:

"WGM's owner, Mr. Spencer, was convicted of interfering with other stations and appealed his case. When it came into Federal Court in February, Mr. Spencer was paroled for two years by the Federal judge and ordered to discontinue operations of WGM.

"Their last broadcast was February 17th and they will be back on the air soon if they can get a license. I heard their last broadcast and got this information from their lawyer on the broadcast."

#### Here's That GZ7

Here's a report on the mysterious GZ7 from Elmer C. Roth, 1294 W. Grand Blvd., Detroit, Mich. "This is the call assigned to the Armory for experimental purposes. It is located at Brush and Larned Streets in Detroit. They have been given permission to use 635 kcys. It is on the air every Monday and Friday evenings from 7:00 to 8:00 p.m. EST." This doesn't exactly clear up the mystery, for where do they get a "G" call and why are they permitted on a split frequency in the broadcast band? We have a hunch the armory boys are trying to slip something over.

George Fabian, 1463 Virginia Park, Detroit, adds the following regarding this station: "GZ7 is the station of the Michigan National Guard, 182nd Field Artillery. February 1st they broadcast their own band, played well-known marches, asked for criticism and promised music every Friday at 8:00 p.m. EST. They are on 640 and 1275 kcys. Come in best on 640."

#### The Early Worms

Up in Toronto, a radio person by the name of Al Leary has conceived a fantastic idea. He has inaugurated the Early Worms club. The idea is that the Early Worms go on the air at 2:30 o'clock Saturday morning and the feature of the program is the initiation of some New York radio star into the club. This is done by calling the person to be initiated on long distance telephone and broadcasting the conversation between Toronto and New York. If your set will bring in CKCL in Toronto, you'll probably hear a most amazing program every Saturday morning.

Chas. E. Summers, Sr., 28 Gallatin Ave., Buffalo, N. Y., thinks that The Stebbins Boys, Amos 'n' Andy, and other programs must be from records because he hears the same program twice each evening, "word for word." There are, of course, a number of programs on the air

which come through electrical transcription, such as the Seiberling Singers, but such programs are seldom if ever given a "spot," that is they do not appear regularly at any certain hour but are used to "fill-in" in periods not otherwise taken. The features Mr. Summers names are separate performances by actual artists. Careful rehearsal accounts for the "word by word."

#### One Station with Two Powers?

"I believe you are wrong," writes an anonymous reader from Des Moines, Iowa, "in listing WBAP with only 10,000 watts and WFAA with 50,000 as



Bess Johnson, leading lady of "The Witching Hour," a spooky program. At 9:45 p.m. EST, Saturdays, CBS

they are the same station using same transmitter and power." It is true that both transmitters are located at Grapevine, Texas, which is between Dallas and Fort Worth, but the Radio Commission always shows the power as 10 k. w. for WBAP and 50 k. w. for WFAA. If they use one transmitter, why are they given different ratings? Can some of our Texas readers advise us?

"I have a Philco Baby Grand," writes F. L. Askew, Ocean Falls, B. C. "From 550 to 1200 every station comes in where it should but KGA at 1470 comes in at

1380 and KPQ at 1500 comes in at 1400, KSTP at 1460 comes in at 1400, etc." We have pointed out before how difficult it is to mark dials in kilocycles and have stations on all channels come in accurately. In fact, if there is a set on which stations come in as marked from 550 to 1500, we have never seen it. But the trouble experienced by Mr. Askew is exceptional.

#### XER Wants Whole Dial

Dr. John R. Brinkley, Kansas goat gland specialist, today announced plans for increasing power of his station XER in Villa Acuna, Mexico, to 150,000 watts, says a newspaper clipping sent us by Richard F. Miller, 2705 Pennsylvania Ave., Dallas, Texas. So set aside about one-quarter of your dial for the good doctor. Mr. Miller thinks southern readers should be able to tune in CFCN Friday nights at midnight CST. If you want to hear a program that's different try WCKY at 1490 at 7:30 every night except Monday, CST, adds Mr. Miller.

There was a real KUKU, says Donald Cohoon, 48 Close Ave., Toronto, Ont. It was a portable set operated by a sound-movie company in the wilds of Brazil which used these call letters. It was in constant touch with U. S. amateurs during its sojourn there.

A traveler who always carries a portable radio set asked the clerk at the hotel, "Do you have A. C. or D. C. current here?" and got this reply: "Neither of 'em registered."

#### That "Fraudulent" Mail

"For the benefit of the Prairie State DX Club, perhaps the letters they mailed to XER and XED contained currency," writes Mrs. Roy Schanck, El Paso, Texas. "If so, that is the reason they were returned. XED broadcasts the Tamaulipas State Lottery and the sale of tickets. Uncle Sam returns the letters to the senders if they are addressed to the Radio Station. One can gamble in Wall Street on stocks, but purchasing lottery tickets, even though in a foreign country, and it's fair and square, is forbidden, at least by mail."

If your volume control is noisy or makes poor contact, here's a suggestion from Keith L. Freas, 17 Pullman Ave., Kenmore, N. Y.: "Wipe the resistance

winding off with a cloth dampened with cigar lighter fluid to clean it, and oil it sparingly with Nujol or American oil. This lubricant is the one recommended by the set manufacturers, as it contains no acid, does not become rancid, or does not gum. The oil is to be applied with a soft cloth. Don't ever try to use sand or emery paper to clean this fine wire, as you will be sure to wreck it."

"I have some 'dope' on pepping up Radiola 44 sets." suggests George Buckman, Hillside and College Aves., So. Nyack, N. Y., "which will prove helpful to DXers with such sets. Some simple soldering and a 75-cent resistor are all that is required. On my set I increased sensitivity so much that KPCB came in the very first time I DXed after the change. Previously KFI had been my only coaster with that set. DXers may have this information if they will enclose postage in any letters I may receive."

#### Reception by Arithmetic

Many of our readers jump to the natural conclusion that one ought to be able to estimate reception mathematically but radio is too temperamental to be figured out thus easily. "How is it that I can't hear WCAU, Philadelphia, when WPG with half the power is further away and comes in fine?" asks John Videberg, 375 Waterville St., Waterbury, Conn. Distance and power are only two factors. Geographical, metereological and even geological conditions have greater influence. Radio reception is peculiar and just cannot be estimated by distance and power.

From Wm. E. Johnson, Vinalhaven, Maine, comes the report that radio reception is considered very good there. "We get Chicago stations in the day-time, when reception is good," he says. "I have tuned a number of coast stations, but as yet haven't got any foreigners, outside, of course, of the Mexicans, etc. My best catch was last February when I tuned in TJW, Hamilton, Bermuda, with 7½ watts power. I also have CNRV, Vancouver."

"In the November RADEX Herbert Haussler claimed Pacific DXers bragged too much of their Japanese catches, and wished to know if any Pacific Coaster (Continued on page 26)

### The TROUBLE DEPARTMENT

# Conducted by The Technical Editor

#### All Wave Set Is Inefficient on Short Waves

Can you help me out on my Tyrmen, model 80, all wave receiver? It does not work well on short waves, and is noisy and interfering on higher waves. Can you tell me how to rewire it for standard waves, or just for short waves, so that it will work hetter?

The circuit of your receiver is conventional, and should give as good results as possible for such a set. We believe, however, that the shielding of the tubes, which seems to be in contact through some insulating material, touches the metal tip of the screen grid tubes. If this is the case, that material ought to be removed so that the cap is freely projected out through the top of the shield can. This touching of the tube cap may be responsible for considerable loss of energy at the low waves.

Your tubes should be checked, and perhaps a new oscillator will help matters. You cannot substitute new -35s for the -24s in this circuit. An automatic volume control cannot be installed, unless a complete change of wiring is undertaken. We know of no method by which the wiring can be changed to make a standard broadcast receiver without practically creating a new circuit. Even then, its efficiency would not be improved. We are sorry that we know very little of this set, and cannot furnish you with the present location of the factory. It is likely that they are no longer in business.

#### **Short Wave Converter**

I have just purchased a short wave converter to use with my R. C. A. superheterodyne receiver. I have a lot of trouble in
finding a good spot to work the converter
on my receiver. Can I use a wave trap
between the converter and the set?

You cannot use a wave trap between the aerial and the converter so as to make the superheterodyne tune more sharply and respond to the short waves. The wave trap could be used if the converter were discarded. But the converter responds to only the short waves, and the wave trap most likely responds only to the higher waves.

The receiver should be set at about 1,000 kilocycles before attempting to tune the converter. You do not say what kind of converter you use. In other words, your set is tuned to its intermediate frequency, or heterodyne signal wave length, and the converter then acts as an oscillator to drive the short



One appearance as guest artist made her star of "Today and Yesterday." Gladys Britain, soprano. CBS Friday at 8:30 p.m. EST

wave signals, after beat note conversion, through the broadcast receiver.

#### Signals Louder Without Ground

I have a model 80 R. C. A. set. Would you advise me to change to the -35 tubes, and put in a -50 in place of the -45s? Why does WJAY at Cleveland come in louder when the ground wire is removed, but all other stations best with a ground?

We do not recommend any changes in the tubes of this receiver. Leave well enough alone. You could not replace the -45s with a -50 without considerable rewiring and power output alterations. It is impracticable.

Occasionally a freak of nature bobs up in radio reception. All stations should be received best when a ground wire is in place. The trouble may be due to a fault in the ground wave coming from WJAY, making reception best on the reflected atmospheric wave. Do others observe the same freakishness? We are at a loss to account for it. Of course,

defective tuning or extra capacity in the receiver, may account for some freaks of radio tuning.

#### Those Crackling Noises

I have an Atwater Kent model 67 receiver which now makes sharp crackling sounds at times. This set has been overhauled and seems to be perfect, but now these sounds have started. They do not vary with operation of the volume control. What do you advise me to do?

We infer that these sounds have not been heard for very long. This type of noise can come from a defective "B" battery. When one cell in the battery breaks down it causes much noise. Test the battery with a voltmeter set in place for some time. As each noise comes from the speaker notice to see if the indicator hand of the meter shows some deflection. The obvious remedy is a new battery, or the removal of the defective cell.

You will also find coming from the secondary of the output transformer two colored wires that lead to the voice coil of the speaker. The wires are yellow with black traces through them. Test for looseness, and also test out the speaker coils. Noise may also come from the tubes in their sockets, particularly the two -71A power tubes. Disconnect the aerial and if the noise stops then the trouble is in the aerial; it may be loose or touch some metallic object.

#### **Noisy Condensers**

I have a Knight eight-tube set that is noisy when the dial is turned, but the sounds stop as soon as I cease tuning in a station. The set also howls when it is being tuned to certain stations. What must I do to remedy these annoyances?

The Knight receiver uses three -24s, two -27s, two -45s, and one -80, and if these tubes are set tightly in their sockets and have been tested and found satisfactory, the trouble is elsewhere in the set. Therefore, we believe that loose contacts in the variable condensers or grease and oil in the shaft bearings is the cause of this annoyance. Spring connections between the rotor plates and the stationary parts of the condensers frequently cause tuning noises. Check for perfect electrical conductivity. Also, one

of the condenser plates may be touching and rubbing as it moves in and out when the dial is turned. There are three of the variable condensers tuned with a single dial and shaft.

Howls and squeals that are noticed when the set is tuned, especially at the high end of the dial, may be due to imperfect grounds, particularly the brackets that hold the radio frequency coils and choke coils. Each bracket should be grounded to the metal chassis. If the trouble is microphonic then the tube that is in trouble should be covered with a "howl" arrester. This tube may be found by grasping it when the howls are being heard.

#### Patience Is Needed

My 726 All-Wave Silver-Marshall receiver seems to have considerable noise and does not get many short wave stations. There is a nearby station in Pittsburgh that I cannot get on this set. What can I do to make this set work better?

The set you are using is one of the best receivers of this combination type procurable. If the set is new it might be best to take the matter up with the local dealer. But one of the principal difficulties of short wave reception is the inability to pick up short wave stations with ease. Short waves require an infinite amount of patient tuning, for they are very sharp and may be passed over without knowledge of their presence. Turn the dials very slowly, and be sure that you set the broadcast receiver tuning dial to about 650 kilocycles.

The noise may be due to the great sensitivity of the set. There is a certain amount of noise level which cannot be avoided in these sets. Do not turn the volume control of the broadcast receiver up too far. The converter portion of the set is a short wave detector and oscillator using -24 and -27 tubes. The incoming wave is heterodyned to the radio frequency to which the broadcast set is tuned. This gives the entire outfit a series of three detectors, two oscillators, and five other tubes in the radio and audio circuits. Noise must be expected in such a sensitive hook-up. However, check your power tubes (47s) and speaker for faults.

(Continued on page 23)

### TUNING IN with the RADEXERS

ELL, how many of our DXers pulled in KXRO and 10-BQ on their special broadcasts for RADEX listeners? And who will prove to have either station at the greatest distance? If these two tests were successful in interesting considerable numbers of our readers, arrangements will be made for similar programs in the future, probably with the coming of the next DX season.

In the meantime, let's see what our DXers are doing and thinking about.

"I see some of the radio fans boasting about their wonderful radio reception, comments Cecil Westcott, 1318 Third Ave. No.; Lethbridge, Alta., "and thought I would say how well I have been receiving stations. I have only had my radio the last three weeks and I have had from coast to coast. It is only a seven-tube set (no pentode tubes either). During the three weeks I have logged seven Mexican stations, besides many U. S. and Canadian stations. WABC comes in pretty regularly, as does WTIC and WCAM. Another eastern station received is WCAD. Canton, N. Y."

"My log now consists of 242 stations collected in six months of DXing," says Thayer Bartlett, Borodino, N. Y. "These have been brought in over a loudspeaker with an Atwater Kent Model 84-F Superheterodyne. My log includes KPO, KFI, KFOX, KNX, KOA, KSL, XER, XED, XEW, XEO and CMK. I have tried grounds connected to the aerial post, inside aerials, and outside aerials, and of these I get the best results with the inside aerial, of seven-strand copper wire, non-directional, strung in a loop in the attic of my home, about 95 feet long."

#### Ten Watter Reaches Out

"Mr. Leigh wonders how far WNBW, the ten-watt station Carbondale, Pa., was heard," recalls James Fogarty, 143 Wilkins Ave., Port Chester, N. Y. "While listening in to one of their DX programs, I heard the announcer read a telegram from a listener in California,

#### What the Log Builders are Doing

saying they were enjoying the program and requesting a number played." Which shows how a ten-watter can reach out and how many more stations our DXers can log with great patience. "How is this for a DX prize?" queries Mr. Fogarty further. "A two-pound package of date prunes from KPQ in Wenatchee, Wash., for the first report on their DX program of January 24th from the state of New York." It's not everybody that can tune in a box of prunes, James.

#### Verification Without Reception

Robert E. Moran, 31 Rochester St., Ottawa, Ont., must DX in his sleep. He has just received a verification from CMBG, Havana, stating his reception of that station was correct. "But the funny part of it is," says Robert, "I have never heard this station and I have never corresponded with him in any way." Life is like that—one fellow gets a verification he never earned and others write twenty letters to get one that is coming to them. Mr. Moran postscripts to Richard W. Mitchell, Three Rivers, Que., that the station he heard was CMCD from the Hotel Palace (not the Statler) in Havana. And to Wm. Scholer his KDK was undoubtedly KGEK, Yuma, Colo., as that station has been coming through fine lately.

#### Gets Sydney for Breakfast

"I have a Marconi DeLuxe Model 27 S. W. all-wave radio and have done considerable DXing with it, but have had no luck with the Canadian West. Mexico, California, Texas, Spokane, Wash., and all those stations come in. but no Canadian West stations. Could any of your readers help with time on the air for Winnipeg, Vancouver, or any others?" asks Fred W. Harp, 52 Dundas St., Brantford, Ont. I get VK2MC, Sydney, Australia, every Sunday morning between 5:30 and 6:30 EST. Would be very glad if you could inform me as to where I could get a good short-wave log with time on the air (universal)."

"DX reception has been very peculiar here this year," reports Edw. C. Houlgate, 351 Adelaide St., London, Ont. "Static has been very bad at times, and although we have had some real good nights, reception has not been as consistent as in other years. In a little over six months I have logged 486 stations. Have some good catches, such as KGFJ, KJBS, KPCB, KGCX, CKMO, CMCY, CMGF, etc. Have 121 stations using 100 watts, and 19 using 50 watts or less. My only station off the continent is KGU and I was lucky to get them. The morning I tuned them in (January 19th), WDAY was shooting their carrier wave out, every few minutes, testing."

#### Some Good Records

"I have a radio which was five years old last November," writes 14-year-old Ray Duerling, 2102 Harford Ave., Baltimore, Md. "It is an A. C. Dayton five-tube set. My set may be old, but in the last two years I have brought in 128 stations of good distances. My best catch was KFI, Los Angeles, which is 2282 miles from here. CFRB, Toronto; CHYC, Montreal; CKCK, Regina, Sask., are three of my eight Canadian catches. I have also brought in CMX, CMK and CMC, Havana, and XER, Villa Acuna, and XEO and XEW, Mexico City."

"I am very proud of what I received on Sunday morning, February 14th," says C. Herbert Herr, 957 W. College Ave., York, Pa. "On this occasion I heard five new stations in California: KGER, KSFG, KTM, KELW and KMPC. KELW came on immediately after KTM signed off. On the same morning I got WWRL, Woodside, N.Y.; WCOA, Pensacola, Fla.; WJTL, Atlanta, Ga.; KFEL, Denver, and KGCX, Wolf Point, Mont., all new ones. I am most proud of this last station, as it is only a 100-watter."

"I was sure surprised February 2nd," writes Earl R. Roberts, 712 So. 9th St., Cambridge, Ohio. "A letter came from 4-RK, Rockhampton, Australia, and verified my reception of that station on Monday, November 14th, from 5:28 to 6:01 a.m. EST. The letter was postmarked January 2, 1932, and was just one month in travel. 4-RK came in on

the loudspeaker, although very weak and fady at times. I also heard this same station the next morning at 5:30 and so had two mornings for verification."

"My husband is the DX fan and I'm the puzzle fan," confesses Mrs. M. N. Deacon, 20 Hammond St., North Bay, Ont. "In all sincerity I can say that every month we can see some added improvement in RADEX. We've used it ever since we got our radio and I think my husband has logged some fine catches, including WNBW (10 watts) Carbondale, Pa., CKMO (100 watts) in Vancouver, also nearly every state in the U. S. and Mexico, and nearly all the provinces in Canada."

"Although I haven't a short-wave set, I get short-wave station W5XA of Shreveport, La.," reports Russell N. Ely, 2488 Whitney Ave., Niagara Falls, N. Y. "My dial is graduated up to 1600 kcys. They verified my letter and would like to hear from other fans. At present their daily time on the air is 4 to 5 a.m. and 1:30 to 2:30 p.m. CST. It is an experimental station broadcasting on 1594 kcys., with various amount of power up to 100 watts."

#### He Gets 2YA, Too

"I am very interested in the letter of Arthur Collins, Buffalo, N. Y.," writes Harold G. Lorang, Darien Center, N. Y. "He has a really wonderful record and 2YA is a great catch, but he is wrong in thinking that he is the only one in this locality to reach New Zealand. I have a verification from 1YA at Auckland, New Zealand, and I also have JOCK, JOGK, LR4 and CMGB (7½ watts, Matanzas, Cuba), all-verified."

"Have been reading with great interest the DX pages for a couple of years," writes M. H. Deacon, 20 Hammond St., North Bay, Ont., "and wish to give you a few of what I call good catches and all verified. Have a Stromberg-Carlson, which I got last fall, and have stations from coast to coast, in Canada and the United States, and also have one Cuban. Have a log of over 350 stations now and if announcements were more frequent, could add another hundred this month."

"You're to blame for getting me to stay up until dawn breaks, getting new stations," accuses S. H. Parsons, Jr., Box 289, University, Ala. "I've verified 262 since October. I've yet to try and not get at least one new station each time I sit up late. My five-tube Gloritone has pulled in KXRO, KPCB, KHQ, KVI, KEX, VAS and 54 of 100 watts or less, the lowest being CMJE, Camaguey, Cuba, a 20-watter."

"I have had a nine-tube RCA Model 80 for 16 days," postcards Richard P. Tickell, Jr., 1443 E. Wood St., Decatur, Ill., "and have logged 247 stations. My list contains 15 California stations, 13 Canadian, 6 Cuban and 6 Mexican. I recently caught KPCB, a 100-watter in Seattle; KRMD, Shreveport, and CKPR, Port Arthur, Ont., both 50 watts. I have every channel except 540.

"On January 1, 1932, I had a log of 222 stations, with 79 verifications," reports Rexford Newcomb, Jr., 605 W. Nevada St., Urbana, Ill. "Today, February 18th, I have a log of 329 stations with 197 verifications. That's pretty good improvement, I think. I am trying to hit the 250 mark on verifications before the current DX season is ended."

"For the past five weeks I have been using an Apex model 7-A seven-tube Superheterodyne and have logged more than 180 stations on all broadcast channels except 540 kcys.," comments G. W. Peeler, 509 No. Main St., Elk City, Okla. "There is nothing exceptional about my log, although I do drag in a few 100-watters on the west coast."

"I would like to know what all you DX fans think of my list of stations," inquires Milford Voss, 940 E. Fulton St., Grand Rapids, Mich. "Who can beat this for being 1800 miles away? I have 33 California stations of the 41 listed; 22 Mexican stations; 7 Cuban, and 38 Canadian. In all I have 579 stations."

"Those west coast stations come in better than ever before," writes A. W. Snyder, 3216 W. 38th Place, Chicago, Ill. I used to think KOAC, KTM, KMTR, etc., were good catches last year, but this year I bring in KFVD almost every night and have heard KGFJ, KFXM and KREG very clearly at times."

Jameson Lewis, 215 West 2nd St., Dayton, Ohio, submits a long list of

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stations he has received this season on his Victor R-32. His farthest east is the new WRDO at Augusta, Maine. His best western is KPCB which came through from Seattle one morning in January at 5:00 a.m. with excellent volume for a hundred-watter.

"When I bought my first RADEX I had only 125 stations. Within a month, I doubled my total and at present I have logged 324 stations. I have been DXing only since about the first of November. I use a Philco nine-tuber." Edward Friedman, Jr., 92-13 Boulevard, Rockaway Beach, N. Y.

A log of 163 stations since Christmas is the record of Arthur G. Turner, 36 Arlington Ave., Beverly, Mass., with his new RCA-Victor. He wants time on the air for a number of stations. He will just have to watch the columns of RA-DEX for this information as it appears from time to time.

"I now have 429 stations (since last January a year ago) in North America." reports Russell R. Quaintance, 720 Gibbard Ave., Columbus, Ohio. "Am using a Majestic 131 TRF radio. That is on broadcast wave only. I have many more on short wave with a converter."

"I am a thorough DXer," admits I. H. Nixon, 265 Pacific Ave., Toronto, Ont., "owning a single-peanut-tube set, which, I think, has given me wonderful DX. My only opportunity to use this is on week-ends, but even with this handicap, I have had 175 stations."

"I received the headphone adapter all right," writes C. E. Lyons, Handley, W. Va., "I picked up several new stations from fifty watts to 250 and at 11:20 EST, my boy got London, England, direct."

WHEC still uses the WABO call on tests, Tuesdays from 5:30 to 5:45 a.m. EST, according to R. R. Rawstron, Claremont, N. H.

"I am writing to you about a station on 1000 keys, that answers the description to the one Sam Kiamie of New York wrote about which appeared in the RADEX," writes December Paynter, 30 Daniel St., Dayton, Ohio. "I have been hearing this station for some time but never could get the call letters clearly until Wednesday morning, February 10th, He was giving stock quotations and sounded like a rebroadcast from a foreign country, but as soon as he quit giving stock quotations he said, 'WWAS, Cincinnati,' then went silent." WWAS is the Department of Commerce station at Cincinnati.

Here are some tips from R. H. Van Beynum, Wilbraham Academy, Wilbraham, Mass. "CMCD, CKCJ, CMCY, CMCU can all be received after mid-

(Continued on page 25)

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Enclosed find \$for which send me postpaid my choice of your off as checked below:	ers
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Write Name Plainly	
58 City and State	

#### Trouble Department

(Continued from page 18)

Certain short waves cannot be heard at nearby points for they are subject to what is known as the "skip distance," which causes signals to pass over without being heard. This may be the case with the nearby Pittsburgh short wave station that cannot be heard.

#### **Automatic Volume Control**

I have a General Electric model H-31 receiver. Can I put on an automatic volume control. You said in the December RADEX that this could be done, but the General Electric Company advises that the change is impracticable. What is the information you have about it?

If you will again read the question and answer on page 29 of the December issue of RADEX you will see that the word "automatic" is not used, and the question does not refer to automatic volume control. Your receiver cannot be changed to use the volume control which is known as automatic. This scheme is an integral part of the circuit and is entirely different than the usual manually operated volume control. There is no way to install automatic volume control on your receiver without a great deal of unsatisfactory work. The circuit of the set must be designed for this form of control, and all circuits cannot use it.

#### Two Sets and One Speaker

I have a short wave and also a broadcast set but only one loud speaker. How can I place these two sets and the speaker in a cabinet so as to use the speaker with either one of the sets at will?

You have not stated whether your sets are battery operated or a. c. operated. And if the speaker is of the magnetic type the solution is simple. Procure a double-pole double-throw knife switch of small size. Connect the speaker leads to the two center blade contacts. Then connect the two contacts at one end of the switch to the outlets of the short wave set, and the opposite end of the switch to the outlets of the broadcast receiver. Just throw the switch to either set when it is being used.

However, if the set uses a dynamic speaker you must install two of the double-throw double-pole switches set side by side so as to provide four blades. Connect the wires from the speaker to the center blade contacts. Two of these are from the speaker voice coil and two from the output transformer. Connect the proper four wires from the short wave set to the four terminals at one end of the two switches, and the four wires from the long wave set to the remaining four contacts. If the sets have plugs and sockets for speaker connections the work will be simplified. Some sets have only three wires, such as is found on certain Philco types. Use only three knives and contacts in such cases. The practicability of this scheme depends upon the similarity of the audio circuits of the two separate receivers.

#### Our Long Wave Receiver

How shall I connect a "C" battery in the long wave set that was described in the January issue of RADEX? A circular coming with the tube I bought said to use 4½ volts C battery.

Do not use a "C" battery with the receiver described in the January RA-DEX for the tube acts only as a detector and does not require a negative grid bias voltage. And a C battery of  $4\frac{1}{2}$  volts would be too much for the filament of a -30 tube. Use only two volts on the tube and 45 volts on the plate. A 15 ohm rheostat may be used to cut down the three volts of two dry cells to the proper two volts for the tube.

#### **Loose Condenser Contacts**

My Gloritone set gives a loud vibrating sound when a station is tuned in, and when the dial is being moved. It does not do this when the tuning operation has been completed.

We assume your set to be the model 26P chassis which is a five-tube circuit employing the -47 pentode in the last stage. We suggest that you examine the connections for loose wires on the condensers, particularly in the "pig tail" springs between the rotary parts and the frame of the variable condensers. Then look after the tubes, and have them tested. See that they fit snugly in their sockets. The shielding surrounding the tubes may be poorly caught in the socket

made for it. Clean the plates of the variable condensers with pipe cleaners which will pass easily between the plates so as to remove all large flakes of dust.

#### Long Wave Government Station Interferes

A Department of Commerce airways radio station nearby broadcasts frequent weather information to planes in the air. It is a great source of interference. How can I change my Airline seven-tube set so as to eliminate this source of annoyance in my radio reception?

It will be difficult to overcome this trouble. The airport station probably broadcasts on approximately 900 meters. There are harmonics which cause interference, and the nearness and power of the station create a situation that is hard to overcome. Any changes in coils or condensers in your set will be reflected in unsatisfactory reception from other distant stations. We cannot recommend any changes in wires, coils or condensers in your Airline receiver. Try shortening your aerial to about 30 feet and inserting a small fixed condenser in series with the aerial. A wave trap should be of some assistance.

#### Changing to Two-Volt Tubes

How can I change a Silver-Marshall model 720 receiver over to the more economical two-volt tubes, if this can be done?

The change can be made. Replace the three -22s with three -32s; the -12A with a -30; the first -71A with a -30; and the last power -71A with a power -31 tube. The present 45 volt (red-maroon) wire leading to the screen-grids of the tubes must connect to a B battery of 67.5 volts. There is a 1.5 ohm resistor in series with a wire that leads to the three filaments of the -22 tubes which must be removed and replaced with a piece of wire. Or the resistor may be short-circuited with a wire.

You must use 90 volts B battery on the plate of the detector (a black-red wire), and 4.5 volts C battery negative bias on the grid of the first audio tube (the brown wire) in place of the three volts now used. Use 90 volts instead of 135 in the plate of the first audio tube (a maroon wire).

There is a wire from the old 135-volt plate terminal post of the set which leads to plates of the present -22 tubes. This wire must be cut from other parts of the circuit. This makes a new 135 volts lead instead of being tied as at present with the maroon wire of 135 volts which must be changed to 90 volts as mentioned in the preceding paragraph. Use 22.5 volts C battery on the grid of the power (-31) tube (green wire), and 135 volts on the plate in place of the 180 volts now used. Two volts only must be applied to the A (black) positive and A (black-green) negative wires. Turn the rheostat on full way when in use.

#### Long Aerial

What do you think of an aerial 600 feet in length with the lead-in taken off the center?

We do not consider a 600-foot aerial practicable and necessary for broadcast reception. It might do if there were only a few broadcasting stations operating. A 50-foot aerial is much more satisfactory. The 600-foot wire would respond to natural wave lengths of lower frequencies and may be better for longwave code reception. Its tuning would be very broad.

#### **Battery Chargers**

Are battery chargers expensive to run? What is the best type to use, and what about the generator type run with an engine?

All battery chargers cost something to operate. If one charges a battery at a rate of five amperes an hour it consumes about as much electricity as a 75-watt lamp bulb. The trickle chargers take very little current for they charge at the rate of about half an ampere an hour and take as much current as a small 10-watt bulb. The tungar tube type of charger is believed by many to be very satisfactory. At least it delivers a high rate and is relatively quiet. The magnetic type is also good but is quite noisy with a constant buzzing sound. Dry rectifier chargers of the trickle types are quiet, but are slow in their results. The generator charger with engine power is necessarv when either a. c. or d. c. house sources are not available. This form of

electricity is perhaps the most expensive to create.

#### Installing Push-Pull Amplification

How can I change my Silver-Marshall model 720 receiver so as to use the pushpull method of power amplification?

If you wish to use push-pull amplification in the 720 set you must replace the last stage audio transformer with an output push-pull transformer with a split secondary. The two outer ends of the secondary go to the grids of two power tubes instead of the single one now used. You will also need another output transformer with a split primary to connect to the two plates of the tubes. The secondary goes to the voice coil of the speaker. Some slight changes in wiring must be made but the work is not difficult.

### Answers to Inquiries

"In answer to a query by Mr. Erlbeck in the February RADEX, CKCD goes on the air every evening, except Sunday, from 8:30 to 8:50 p.m. PST, to give the news of the day," advises Fred Pheasey, 1625 Hollywood Crescent, Victoria, B. C., Can. "On Sundays, by arrangement with CKFC, the news is broadcast a few minutes before 9 p.m., depending upon the time the church service broadcast from CKFC is brought to a close. I do not think CKFC has any regular broadcast other than the Sunday services."

H. Montgomery, 215 Reifert St., Pittsburgh, Pa., sends in answers to two questions in last month's "Mill": "Tell Harry Durand that WWAP is an air station at Bettis Field in Pittsburgh. The frequency is 254 kcys. or approximately 1200 meters. Also tell Frank Claro his station was WRDO, Augusta. Maine."

"The Mexican station H. Durand heard on 1315 was XEFB. Monterrev." thinks Lester R. Reinmund, 1120 South 76th St., West Allis, Wis., who adds. "W. Scholer heard KGEK, Yuma, Colo., which broadcasts a DX program every Friday night and continuing until 1:30 a.m. Saturday, MST."

In answer to the inquiry of C. W.

Thomas as to whether WJSV is ever on the air when WLAC and KSTP are silent, C. D. Cook, 133 13th St., N. E., Washington, D. C., says: "The present broadcast period of WJSV is from 6:00 a.m. until 11:30 p.m. EST."

Kenneth Peterson, 184 Francis Ave., Pontiac, Mich., submits the following answer to a previous inquiry: For John J. Swatko, WFK is in Frankfort, Mich., and is used for broadcasting to boats

and other commercial stations.

For George B. Holland: WEEU is on from sunrise to sunset EST and HIX can be heard on Wednesday between 9:00 and 9:30 p.m. EST. This information is from Ores Zoniades, 147 Steger St., Nutley, N. J.

#### With the Radexers

(Continued from page 22)

night on Saturday. WWAE and WBOW can be received until one on Sunday mornings. KFYR has been testing on Sunday mornings recently and comes in with a big crash. WJTL goes late Sunday mornings. KFWI can be played for a few minutes after WFIW signs off on Sunday mornings. The former never signs off promptly, so try it sometime. WHBC comes in very loud at 6:30 a.m. weekdays."

"I recently played WHBC, the tenwatter in Canton, Ohio, and in their verification they said their hours were 6:30 a.m. to noon and 3:30 p.m. to 10:00 p.m. daily, EST," is the information that comes from James Fogarty, 143 Willins Ave., Port Chester, N. Y. "The station Mr. Scholer had was KGEK in Yuma, Colo., which broadcasts the Jack Rabbits from 11:00 p.m. to 1:00 a.m. MST, Friday nights and Saturday mornings." Mr. Fogarty wants the time on the air for WABI in Bangor, Maine.

The following tips come from T. J. Johnson, Bowlegs, Okla.: XEFB broadcasts a test program every morning except Monday on 1312 keys, from 1:00 to 4:00 a.m. CST. Try for the Worms' Club DX program from CKCL about 2:00 a.m. CST Thursdays. KPQ has been coming in fine here every Saturday night after midnights PST. Tell your readers to address XED at Hidalgo. Texas, if they want their letter delivered to the station.

The information given in a previous issue by Arthur Collins of Buffalo regarding the time on the air of VOWR, St. John's, Newfoundland (Sundays 11:00 a.m. to 6:30 p.m., Tuesdays and Thursdays at 8:00 p.m.) is correct says G. N. Rose, of St. John's, but the time is Newfoundland time which is an hour and a half faster than EST.

Under the new arrangement by the Commission, the following hours are given to WHAD, Milwaukee and WISN gets all those not used by WHAD: Daily, 9:30 to 10:15 a.m. and 3:00 to 4:00 p.m., Mondays, Tuesdays and Wednesdays, 8:30 p.m. to 9:00; Thursdays 8:30 to 9:30 p.m. and Fridays 8:30 to 11:00 p.m., all CST.

"I have a card from KGU in Honolulu on which they say: 'KGU broadcasts daily from 8:15 a.m. to 11:00 p.m. When it is 6:00 o'clock in Honolulu it is 8:30 PST, 9:30 MST, 10:30 CST and 11:30 EST"." This message comes from A. J. Parfitt, 1933 East 69th St., Cleveland, Ohio.

WOPI, Bristol, Tenn., 1500 kcys., 100 watts, broadcasts a special DX program the first Wednesday of each month from 3:00 a.m. to 6:00 a.m. EST. "It's a very good program," reports W. K. Shaw, 560 Birr St., Rochester, N. Y.

WPFB, The Voice of the Pines, Hattiesburg, Miss., will have DX programs on April 16th and April 30th from midnight to 5:00 a.m., writes R. H. Seidel, 2828 Washington St., Lincoln, Nebr. We assume this means Sunday mornings and that the time is given in CST.

#### They Keep the Dimes

WFEA, Manchester, N. H., does not answer requests for verifications, says Wm. F. Zimmerman, Route 4, Box 57, Oshkosh, Wis. He sent them two letters with postage and two cards but no answer. What will we do with these stations that do not answer letters? Many readers have suggested a black-list, but when we publish such an item as this we always receive letters from other readers protesting that such a station verified them promptly. It's a problem.

"Don't send CMCY, Havana, Cuba, any money for verification unless you want to get stung," warns P. E. Donnelly, 901 Third Ave., Los Angeles, Calif. "I sent them 10c for verification of the Newark News Radio Club DX Special December 28th and they kept the money and never did answer."

Mail for XER for verification should be addressed to XER, P. O. Box 1083, Del Rio, Texas, says Dr. A. A. Dewey, 44 Prospect St., Bristol, Conn.

Correspondence Wanted

Particular subject or interest and age are given in parenthesis.

Wm. Frazier (16), 225 Menominee St., Chicago, Ill.

Joseph H. Ronzone (Earl 41 owners), 1847 Narragansett Ave., Bronx Heights, New York, N. Y.

H. Montgomery, 215 Reifert St., Detroit, Mich.

Arthur B. McBride, La Habra, Calif. Thayer Bartlett, Borodino, N. Y. Russell R. Quaintance, 720 Gibbard Ave., Columbus, Ohio.

A. Hayter, Apt. 3, Lorane Apts., 610 Ontario St., Toronto, Ont.

"Radio Reception Reporters," 6262 Fraser St., Vancouver, B. C.

Ernest Byers (Trans-Pacific DXers), 210½ Maple St., Waterloo, Iowa. George J. Barmann, 232 West Second

St., Chillicothe, Ohio.

Selwyn A. Adamson, Care Canadian Press, 272 Bay St., Toronto, Ont.

### The Editor's Sanctum

(Continued from page 16)

ever heard any Atlantic station," writes Blaine Menth, 1003 E. Union Ave., Olympia, Wash. "I have heard several Atlantic stations. In New York, WHAM, WJZ, WKBW, WEAF, WGY, WABC and WBZ. In Pennsylvania, KDKA and WVAU. Others I have heard are WHAS, WBT, WRVA, WOR, WTIC, WJSV, WLAC, WSM, WSB and WCKY. Does this answer the question?"

"I use for a ground a piece of water pipe," says Clarence Wakefield, Wiarton, Ont. "First I dug a hole and put a big tile upright in the ground. Then I drove the water pipe into the ground in the center of the tile. I put cement in the

bottom and then filled the tile with water. I have heavy electric wire for ground wire. It is spirally wound around the water pipe, up the pipe, down the pipe, up the pipe again and into the set. I have it clamped to the water pipe. It works fine."

#### More Outlaws

Regarding outlaw stations, Meyer Tuchinsky, 3436 Filbert St., Philadelphia, Pa., writes: "If anyone asks about a station WIRE on 830, tell them there was such a station but no more. There's another outlaw in McKees Rocks, Pa., right now, using 840 and other channels and the call is WMKR. On January 3rd, WIRE came in on 720 at 4:20 a.m., then moved to 770, then to 790 and back to 780 where he remained until 5:00 a.m. EST."

W. D. Flagg, 1005 Northampton St., Holyoke, Mass., offers a correction of the slogan given in RADEX for CMHC. Mr. Flagg states: "You give it as, 'If you hear the koo of the Cuckoo, you are in Tuinucu.' As I get it over the air repeatedly, it comes in thus: 'When you hear the coo of the Cuckoo you're in tune with Tuinucu.' Tuinuco is pronounced slowly and as if spelled 'Tune-oo-coo.'

"For the information of all who are troubled in various ways with long and short outside aerials, let me suggest switching to the good old hot water heating system," suggests H. R. Howlett, 9 Southview Ave., Toronto, Ont. "I have a wire from the radiator to my aerial post (no ground used) and defy all comers for reception results between 500 and 1500 kcys."

#### A Shut-In's Club

"Would you please ask your readers to write me?" request Fred D. Fisher, 434 N. Boots St., Marion, Ind. "I am a young man 21 years old and am paralyzed in my legs and one arm. I am starting a club for cripples and shut-ins like myself. Age limit six to sixty. The name is to be "The Shut-Ins of the World Radio Club." Have all the shut-ins get in touch with me please. Will you give us a boost?"

"XEFD on 1020 kcys., here in Tijuana, is not yet in operation," informs J. D. Ramos, P. O. Box 5, Tijuana,

Mexico. "I called them up a few minutes ago and they told me that they were going on the air 'in two or three days.' It is rumored that Station XEFD, Tijuana, is to be financed by the Rev. Bob Schuler, of Los Angeles, who has recently been outlawed by the Federal Radio Commission."

"I use an RCA Victor R. A. E. 59 Combination," writes G. M. Rice, Belvidere, N. J., "by using a six-inch record which takes one and a half minutes to record, I take their talk and call letters at the end of the program, and then I play them wheneve I wish. Received a letter from KFI in Los Angeles yesterday asking me to send them one which I had recorded from their program. Will send it out this week."

"I am using only a few feet of antenna (just about 800 feet, that's all)." writes Bruce P. Lundy, Jr., R. D. 2, Box 66, Jersey Shore, Pa. "But I have to use that much to cut down the noise I get from the high-powered lines which pass by the front of our house, and it just about does away with it entirely during the night, but I still have some trouble during the day. It sure works swell"

#### Wanted Reports Collect

"WAGM, Presque Isle, Maine, made a mistake the other night when they asked for phone calls 'collect'," says Samuel F. Owens, 233 Roberts Ave., Glenside, Pa. "They got one, anyway. I guess that call cost them a couple of dollars, but they were both surprised and glad to get the call. They didn't think they were reaching out this far."

"On January 24th," advises Rexford Newcomb, Jr., 605 W. Nevada St., Urbana, Ill., "KGCX gave an early Sunday morning DX all-request program. When anyone phoned in a request, they put their telephone receiver in front of the 'mike' so that the listener phoning in could hear his own voice coming over the radio a fraction of a second later."

Frank E. Switalski, 2819 Victoria Ave., Cincinnati, Ohio, sends us a letter he received from Station XER which graphically illustrates the high standard of ethics which guides that broadcaster. It reads: "We doubt if WSB increases their power to 50,000 watts. If they do,

XER will increase to 150,000." Their slogan is "The Sunshine Station Between the Nations." If this be sunshine, give us darkness.

"I have noticed right along that the frequency changes and location changes that you publish are not wrong, but just previous to the actual change. In other words RADEX is so up-to-date that it is ahead of the changes," says Don Turner, Box 655, Taft, Calif.

#### Only Three Waves Then

"Speaking of reminiscences," reminisces T. J. Johnson, Drawer E. Bowlegs, Okla., "I dug out an old map which was the very latest in 1923. There were only three wave-lengths used by broadcasting stations then. Our local stations in Dallas were all silent on Wednesday nights to allow us to hear DX stations."

"Just a tip to the readers of RADEX," suggests Ralph H. Schiller, President, Transcontinental DX Club, Hawthorne, N. J. "If they send their reports of reception to XEQ, Eagle Broadcasting Co., Suite 1202, Mills Bldg., El Paso, Texas, this will save time and all reports of reception will be acknowledged with verification."

"I would like to join a DX club such as is run by the Newark News," suggests Rexford Newcomb, Jr., 605 W. Nevada St., Urbana, Ill., "but I could not have much chance to be a super-ace, as there's no station in the United States, Canada, Cuba or Mexico that is 2000 miles away from here."

#### s away mom here.

Hungarian Programs

To the gentleman inquiring about Hungarian programs Arthur G. Regan, 120 Paris Ave., Brooklawn, Gloucester, N. J., replies as follows: "WOR has a Hungarian program at 7:30-8 p.m. EST on Wednesdays, and WDAS (formerly WELK) has a program of Hungarian songs with Hungarian orchestra at 9:45 p.m. EST Wednesdays."

The Director of Radio Service at Ottawa is good enough to advise us in answer to Rexford Newcomb's letter in February, that the mail address for CKOC is the Wentworth Radio Broadcasting Co., Ltd., Room 1120, Royal Connaught Hotel, Hamilton, Ont. It seems strange that Mr. Newcomb's

letters to Hamilton should have been returned.

WPOE, Patchogues, N. Y., is being deleted by the Radio Commission "for failure to make application for renewal of license." We are killing this station accordingly, but probably it will continue on the air "without benefit of Commission," the same as WHDL did. And WGM also.

"WJSV, about 40 miles from here, is loud and steady during the daytime, but at night it fades badly, and it uses 10,000 watts besides," reports Thomas Kelley, 27 Monumental Road, Dundalk, Md.

"In re: Chandler B. Stewart, page 23, January issue," postcards T. Kenneth Meadway, Route No. 1, Collegeville Pa., "that station with the rooster crowing is XEW, City of Mexico, 910 meters."

"KFBI sent me a very useful souvenir," says Louis Alexander, Jr., 10 South Ridgewood Ave., South Orange, N. J. But he'll have to go to Kansas to use it. It's a pass on all air lines owned, leased and operated by the owners of KFBI.

KSMR which was recently moved to Bakersfield with the call of KERN, advises F. Barker, Jr., 435 So. Marguerita Ave., Alhambra, Calif., that they have not been on the air for several weeks. We are not advised whether the new KERN is yet operating.

From Russell Heller, 42 N. 5th St., Emaus, Pa., "Tell Donald Brinkey that he heard station CMCY, Havana, on December 27th. I had this station on the 27th also and am waiting for verification."

"WHHN of Noonan, N. D., 1500 keys., is off the air for good," advises O. Ingmar Oleson, Ambrose, N. D. "They did not obtain commercial license."

#### Betty's Gossip

(Continued from page 13)

time ago that they made their debut as broadcasters. In private life Burns and Allen are Mr. and Mrs. They first became acquainted nine years ago at Union Hill, N. J., when Burns was appearing in vaudeville with a partner, and Miss Allen was a member of an Irish repertoire company. His home was in

New York, while she had come from San Francisco.

They had known each other but a short time when it was decided to form the team of Burns and Allen. As he wrote the material, their original act presented him as a comedian with the feminine half in the "straight" role. However, three years found the tables reversed with George playing "straight man" for the young lady who was now his wife. It has remained this way ever since. In addition to playing in vaudeville throughout the country, the pair have been featured in several musical shows and have made twenty or more talkie shorts. Eddie Cantor terms this act the "best comedy team in vaudeville." Burns and Allen are featured with Guy Lombardo's orchestra over the Columbia network on Mondays at 10 p.m. EST.

#### Getting Rid of Noise

(Continued from page 2)

the rotor plates give grating sounds and sharp bursts of static. At times the set will howl or squeal. The hair-spring contact to the rotor plates may be loose or broken; grease may be on the bearings or wiping contact points. Clean the bearings and between the plates with cotton pipe cleaners to remove the accumulation of dust. The open backs of radio sets permit the entrance of quantities of unwanted dust.

Poor shielding of the cans covering tubes and coils may be responsible for hum, howls and squeals. There must be perfect grounding of these parts to the chassis at all times. Look for loose and poorly grounded contacts in all coil brackets when loud squeals and howls appear.

Filter condensers in powerpacks of electric sets will become defective and cause crackling and sputtering sounds, and the set may fail to operate at all. The obvious remedy is replacement of the troublesome unit.

Noise and distortion may come from a defective loud speaker. A cracked diaphragm or cone, or torn and imperfectly stretched material will cause the sound to be distorted. Rattling is due to poorly centered voice coil armatures in dynamic speakers.

Exhausted dry disc rectifiers of both A and B eliminators will cause excessive sputtering noises. Gassing storage batteries and B batteries with one or more corroded cells get very noisy and are very apt to be overlooked in the search for noise sources.

#### **Defective Resistors**

The by-pass condensers and resistances in electric sets cause sputtering and clicking noises. Open screen grid bypass condensers cause regenerative howls. Other crackling and frying sounds (not external static) are due to imperfect contacts between parts of the system having different potentials. This will occur when resistors are broken or defective and permit the current to pass at irregular intervals. Momentary short circuits; open grid bias resistors; short circuits across dust and dirt between terminals of high voltage condensers, chokes, jacks, etc., cause loud crackling sounds. Switches, rheostats, potentiometers, volume controls, plugs, jacks. and sockets, can all become noisy.

Blocking, the starting and stopping in a receiver, may be corrected by installing new grid condensers and leaks. Motorboating, with its characteristic "putt, putt," may be due to some regenerative feedback in the audio circuit and may be remedied by reducing the plate voltage—a complicated task in many cases for the novice. Regeneration howls and squeals occur in tuned radio frequency sets when the neutralizing condensers and coils get out of adjustment or repair.

Fluctuation in the 110-volt line voltage can cause annoying clicks in some sets when the receiver is tuned to high frequencies. Voltage surges and other interference noises can be eliminated by placing a pair of low resistance choke coils in each of the two wires leading to the set. Two fixed condensers of 1 mfd. capacity are connected in series between the two power wires but on the house side of the choke coils. A wire connecting the yoke between the two series condensers should be grounded. Such a compact filter device can be purchased and easily installed.

There are a number of devices sold to aid in noise suppression when that trouble is not caused by defective parts within the receiver. An aerial filter is said to prevent static noises and some interference; a tone control tunes out some of the unwanted stations and noises; an antenna adjusting coil assists tuning and checks some static; power line filters eliminate many of the line noises and interferences that enter the set over the lighting circuits; antenna selecting devices reduce interference between stations; substitute antennas tend to sharpen tuning; and special adapters for the new pentode tubes improve the qualities of reception by preventing many amplification noises.

Noise within a broadcast receiver due to defects and faulty apparatus cannot be overcome with these auxiliary devices, many of which have distinctive trade names that we cannot give here. Location, repair and replacement is the only remedy. And hum—the most baffling and annoying of all radio noises-is such an important subject that it will be the topic of separate article to be discussed next month.

#### Station KUKU

(Continued from page 6)

conducted a symphonic jazz orchestra and in this capacity one of his most remarkable accomplishments was an orchestration of "Yes, We Have No Bananas," which converted that lowly ditty into Ravel's Bolero.

Fluttering, palpitating, syrupy Mrs. Pennyfeather, who can solve anything from wrinkles to floor polish with perfect poise was perfected by Adeline Thomason through much experience in a stock company. Miss Thomason writes her own parts relating to the too-nice club woman and her ups and downs.

Mary McCoy is an excellent singer, appearing on many other programs. She sings on the American Album of Familiar Music program and was formerly on the Campbell's Soup Hour. Jack Arthur has sung for WOR as well as NBC. Eustice Wyatt is an English actor of wide experience.

"Making the Movies," a weekly series

of burlesque sketches dealing with events in a moving picture studio as imagined by Ray Knight, can be heard every Sunday at 9:45 p.m. EST over an NBC-WJZ network. Knight, already well known to listeners as the cuckoo comedian of nonsense and absurdity, prepares the scripts and plays the role of the moving picture director who "makes the movies." Mary McCoy, also of the cuckoos, is heard as the "movie Robert Armbruster and his orchestra supplies the musical numbers. This new program is sponsored by the Kelly-Springfield Tire Company.

#### On a Two Tube Set (Continued from page 3)

tubes. I have constructed it with the best of care, and I find it more sensitive than that of the factory type. The circuit is one especially for DX reception; others may say that reception from far corners of the world is done by multitube receivers. This may be true, but from my own DXing I find that it is also done by a good little set, careful DXing, and use of RADEX.

#### Their Time On the Air

Your	Your Where Time is Given as			
Zone	EST	CST	MST	PST
EST CST MST PST	Subt. 1 hr. Subt. 2 hrs.	Subt. 1 hr.	Add 2 hrs. Add 1 hr. Subt. 1 hr.	Add 2 hrs. Add 1 hr.
State		City	Call K	cys. Watts
California	Berl	celey	KRE 1	370 100
Sunda	ay, 10 a.m4	p.m.; 6:45-	9:45 p.m., P	ST.
	, 8-9 a.m.; 1			
Iowa	Boo	ne ]	KFGQ 1	310 100
Specia	al DX progra	am, Tuesday	s. 4-5 a.m.,	CST.
•		Oak		420 100
Daily	(ex. Sunday	) 6 a.m1 p.	.m.; 5-10 p.n	a., CST.
Maryland	Balt	imore	WBAL 1	060 10000
Sunda	ay, 8 a.m7:	30 p.m., ES	г	
Mono	lay, Wednes	day, Friday,	7:30 a.m4	p.m.
Tueso	day, Thursda	y, Saturday	4-12 mid.	-
Michigan	Lan	peer	WMPC 1	500 100
Daily	(ex. Saturda	ay) 10 a.m2	2 p.m.; 3:30-	6 p.m.; 7:30-
10:	30 p.m., CS	ST.		
(Su	indays on til	l 11 p.m.; T	hursdays off	at 6 p.m.)
Montana	Kali	spell	KGEZ 1	310 100
Daily	7, 8 a.m9 p.	m., MST.		
New Jerse	ey Zare	phath	WAWZ 1	350   250
Sund	ay, 6-9 a.m.;	11-12:30 p.:	m., 7:30-9 p.	m., EST.
Mono	day, 6-9 a.m.	; 7:30-9 p.m	١.	
Tueso	day, 7:45-8:4	5 a.m.; 12 n.	-1:30 p.m.; 7	lest program
5-6	a m			

Wednesday, 6-9 a.m.; 3-4 p.m.; 6-9 p.m. Thursday, 6-9 a.m.; 3-5:30 p.m.; 10:30-12 mid. Friday, 6-9 a.m.; 7:30-8:30 p.m. Saṭurday, 7:45-8:45 a.m.

KLPMNorth Dakota Minot 1240Sunday, 9 a.m.-12 n.; 1:30-2:30 p.m.; 5-8 p.m., CST. Daily, 7 a.m.-1 p.m.; 6-7:45 p.m.

State City Call Kcys. Watts
State         City         Call         Kcys.         Watts           Texas         College Station WTAW         1120         500           Sunday. 11 a.m12 n., CST.         Mon., Wed., Fri., 11 a.m12 n.; 8-9 p.m.         1200         100           Wisconsin         Green Bay         WHBY         1200         100           Sunday, 10 a.m8 p.m., CST.         Daily, 7 a.m10 p.m.         CANADA           British Columbia Vancouver         CKFC         730         50
Mon., Wed., Fri., 11 a.m. 12 n.; 8-9 p.m. Wisconsin Green Bay WHBY 1200 100
Sunday, 10 a.m8 p.m., CST. Daily, 7 a.m10 p.m.
VEOCE 6070 100
Sunday only, 10:45 a.m5:30 p.m.; 7:30-9 p.m., PST. (VE9CS on till 10:30 p.m.)
Sunday only, 10:45 a.m5:30 p.m.; 7:30-9 p.m., PST.  (VE9CS on till 10:30 p.m.)  Nova Scotia Halifax VCX 690 100  Daily, 8 a.m1:30 p.m. AST. (Atlantic time is one hour
head of Eastern.)  Newfoundland St. Johns VOAS 810 75  Daily (ex. Sunday) 11 a.m12 n.; 4-5:30 p.m., Newfoundland time.
Daily (ex. Sunday) 11 a.m12 n.; 4-5:30 p.m., Newfoundland time.
(Saturdays also on from 7:45-9:30 p.m.) (Newfoundland time is 1½ hours ahead of Eastern.)
Reported by Readers
Sunday, 10 a.m11:30 p.m., CST. Daily, 7 a.m11 p.m.
Sunday, 10 a.m11:30 p.m., CST.  Daily, 7 a.m11 p.m.  Dist. of Col. Washington WOL 1310 100  Daily, 7 a.m1 p.m.; 3-9 p.m., EST.  Florida Pensacola WCOA 1340 500
Florida Pensacola WCOA 1340 500 Daily, 8:30 a.m10 p.m., CST.
Daily, 8:30 a.m10 p.m., CST.  Tampa WDAE 1220 1000  Daily, 8 a.m12 mid., EST.
Illinois Chicago WAAF 920 500 Daily, 6 a.mlocal sunset, CST. WGES 1360 500
WGES 1360 500 Sunday, 8-10:15 a.m.; 11:45 a.m1 p.m.; 3:30-7 p.m.;
Sunday, 8-10:15 a.m.; 11:45 a.m1 p.m.; 3:30-7 p.m.; 11 p.m2 a.m., CST. Saturday, 8:30-11 a.m.; 3:30-7 p.m.; 11 p.m2 a.m. Balance of week, 8:30-11 a.m.; 3:30-8 p.m. Urbana WILL 890 250
Balance of week, 8:30-11 a.m.; 3:30-8 p.m. Urbana WILL 890 250
Sunday, 9:30-10:30 a.m., CST. Saturday, 11 a.m12:15 p.m.
Urbana WILL 890 250 Sunday, 9:30-10:30 a.m., CST. Saturday, 11 a.m12:15 p.m. (First Saturday night of each month, 12 mid2 a.m.) Balance of week, 8-9 a.m.; 11 a.m12:15 p.m.; 5-6 p.m. Zion WCBD 1080 5000 Sunday, 8:30-10:45 a.m.; 2:30-3:45 p.m., CST. Tuesday, 1-1:30 p.m. Thursday, 1:30-3 p.m. Massachusetts Worcester WORC 1200 100 Daily, 8:45 a.m12 mid. EST.
Zion WCBD 1080 5000 Sunday, 8:30-10:45 a.m.; 2:30-3:45 p.m., CST.
Tuesday, 1-1:30 p.m. Thursday, 1:30-3 p.m.  Massachusetts Worcester WORC 1200 100
Daily, 10:15-10:35 a.m. (Wed. and Fri., 8-9 p.m.)  WCAL 1250 1000
Minnesota Northfield KFMX 1250 1000 Sunday, 7-8 p.m., CST. Daily, 10:15-10:35 a.m. (Wed. and Fri., 8-9 p.m.) WCAL 1250 1000 Sunday, 8:15-9:30 a.m.; 3-4 p.m., CST. Daily, 9:45-10:15 a.m. (Monday, 8-10 p.m.) St. Paul. B 1250 1000 Monday, 12:30-1 p.m.; 7-8 p.m., CST. Tuesday and Thursday, 8-9 p.m. Wednesday, 10:35-11:30 a.m.; 12:30-1 p.m. Friday, 12:30-1 p.m.; 4-5 p.m. New Jersey Camden WCAM 1280 500 Sunday, 10:15 a.m12:30 p.m., EST.
St. Paul. WLB 1250 1000
Tuesday and Thursday, 8-9 p.m. Wednesday, 10:35-11:30 a m : 12:30-1 p.m.
Friday, 12:30-1 p.m.; 4-5 p.m. New Jersey Camden WCAM 1280 500
New York  New York  Sunday, 10:15 a.m12:30 p.m., EST.  Monday, 11:30 a.m12 n.; 2-5 p.m.; 8-12 mid.  Tuesday and Thursday, 2-5 p.m.  Wednesday. 11:30 a.m12 n.; 2-5 p.m.  Friday, 11:30 a.m12 n.; 2-5 p.m.; 9-12 mid.  New York  Ithaca  WEAI  1270  1000
Tuesday and Thursday, 2-5 p.m. Wednesday, 11:30 a.m12 n.: 2-5 p.m.
Friday, 11:30 a.m12 n.; 2-5 p.m.; 9-12 mid. New York Ithaca WEAI 1270 1000
New York   Ithaca   WEAI   1270   1000
Utica WIBX 1200 100 Sunday 10:50 a.m9 p.m. EST.
Sunday, 10:50 a.m9 p.m., EST. Daily, 7 a.m10:30 p.m. Oregon Eugene KORE 1420 100
Sunday, 10 a.m9 p.m., PST. Daily, 7:45 a.m9 p.m. Pennsylvania York WORK 1000 1000
Pennsylvania York WORK 1000 1000 Daily, 6 a.m6:45 p.m., EST.
Daily, 6 a.m6:45 p.m., EST.  Vermont Burlington WCAX 1200 100  Daily, ex. Sunday, 12 n1 p.m., EST.
Daily, ex. Sunday, 12 n1 p.m., EST. Monday, Wednesday, Fri., 6-9 p.m. CUBA
Havana CMC 842 500

Daily, 12 n.-3 p.m.; 9 p.m.-12 mid., EST. (Saturday on from 11:30 p.m.-3 a.m.)

Daily (ex. Tuesday and Saturday), 7-11 p.m., EST.

CMCD

### Classified Index to Programs

#### Time in Eastern Standard

#### BANDS

Carborundum, 9 p.m., Saturday. Prvor's, 9 p.m., Saturday.

#### CHILDREN

Lady Next Door. 4:30 p.m., Daily, except Sunday. Orphan Annie, 5:45 and 6:45 p.m., Daily, except Sunday. Raising Junior, 6 p.m., Daily, except Wednesday. Skippy, 5:15 p.m., Daily, except Sunday.

#### CONCERTS

CONCERTS

Howard Barlow. 11 p.m., Daily, except Sat. and Sun.

Major Bowes, 11:30 a.m., Sunday.

Cities Service, 8 p.m., Friday.

Civic Concert, 8 p.m., Saturday.

Davey Tree, 4:30 p.m., Sunday,

Walter Damrosch 1 p.m., Sunday, and 11 a.m., Friday.

Familiar Music, 9:15 p.m., Sunday.

Golden String, 10:15 p.m., Sunday.

L'Heure Exquise; 7 p.m., Sunday.

L'Heure Exquise; 7 p.m., Sunday.

Walter Logan, 1:45 p.m., Sunday.

Old Singing Master, 10:15 p.m., Sunday.

Waldorf-Astoria, 6 p.m., Daily, except Sunday.

#### DANCE BANDS

Gus Arnheim, 12 mid., Tuesday. Ben Bernie, 9 p.m., Tuesday, 12 mid., Monday and Friday. Columbian, 10 p.m., Monday. Coon-Sanders, 12 mid., Wed., Thurs., Fri., Sat. Countess of Orsay, 8:30 p.m., Saturday.
Jack Denny, 9 p.m., Sunday.
Eddie Duchin, 12 mid., Wednesday and Sunday.
Happy-Rose Orchestra, 10 p.m., Tues., Wed. and Sat.
Isham Jones, 12:30 a.m., Saturday. Isham Jones, 12:30 a.m.. Saturday.

Wayne King, 3 p.m., Sunday and 5:30 p.m., Wednesday.
Howard Lanin, 7:15 p.m. Daily, except Sat. and Sun.
Baron Lee Orchestra. 11:45 p.m., Monday and Thursday.
Guy Lombardo, 8:15 and 10 p.m., Monday 12 mid. Thursday; 7:30 p.m., Saturday.
Vincent Lopea, 11:30 p.m., Wednesday; 11 p.m., Friday.
Lucky Strike, 10 p.m., Tuesday, Thursday, Saturday.
Abe Lyman, 8:15 p.m., Tuesday, Thursday, Saturday.
Maytag, 9 p.m., Monday.
Geo. Olsen, 11:30 p.m., Tuesday, Thursday, Friday.
Don Redman, 11:35 p.m., Sat.; 11:30 p.m., Wed.
Joe Reichman, 12:30 a.m., Friday.
Freddie Rich, 7:15 p.m., Tuesday.
Buddy Rogers' Orchestra, 12 mid., Tues.; 11:30 p.m., Sat
Noble Sissle, 12:30 a.m., Monday.
Harold Stern, 6:15 p.m., Wednesday.
Harold Stern, 6:15 p.m., Wednesday. Rudy Vallee, 8 p.m., Thursday. Club Valspar, 9:30 p.m., Saturday. Paul Whiteman, 10 p.m., Friday.

#### DIALOG

DIALOG

Amos 'n' Andy, 7 p.m., and 11 p.m., Daily, except Sunday. Big Time, 8 p.m., Wednesday.
Clara, Lu and Em, 10:15 a.m., Daily, except Sat. and Sun. Phil Cook, 8:15 and 9:15 a.m., Daily, except Sunday. Easy Aces, 7:30 p.m., Mon., Wed. and Fri. (9:30 WGN). Gene and Glenn, 8 and 9 a.m., Daily, except Sunday. The Goldbergs, 7:45 p.m., Daily, except Sunday. Jones and Hare. 7:45 p.m., and 12:30 a.m., Daily, except Saturday and Sunday.
KUKU Club, 5:30 p.m., Saturday.
Making Movies, Ray Knight, 9:45 p.m., Sunday.
Myrt and Marge, 7 and 10:45 p.m., Daily, except Saturday and Sunday. and Sunday.

O'Leary Irish Minstrels, 7 p.m., Saturday.

Ray Perkins, 6:30 p.m., Juesday. Real Folks, 5 p.m., Sunday. Royal Vagabonds, 6:30 p.m., Monday, Wednesday, Friday. Sinclair Weiner Minstrels, 9 p.m., Saturday.

Sisters of Skillet, 8:45 p.m., Tuesday, Thursday, Friday. Stebbins Boys, 7:30 p.m., and 12:45 a.m., Daily, Except Saturday and Sunday. Col. Stoopnagle and Budd., 8:45 p.m., Sun, Mond., Wed. Tastyeast Jesters, 7:15 p.m., Monday and Saturday. Three Bakers, 7:30 p.m., Sunday.

#### DRAMATIC

DRAMATIC

Arabesque, 9 p.m., Monday.
Blue Coal Revue, 5:30 p.m., Sunday.
Canada's Mounted, 10 p.m., Monday.
Careless Love, 12:30 p.m., Sunday.
Crime Club, 9:30 p.m., Tuesday and Wednesday.
Danger Fighters, 8 p.m., Saturday.
Death Valley, 8:30 p.m., Monday.
First Nighter, 9:30 p.m., Saturday.
Friendship Town, 9 p.m., Friday.
Household Finance, 9 p.m., Tuesday.
"K-7," 6:30 p.m., Sunday.
Love Story, 9:30 p.m., Thursday.
Moonshine and Honeysuckle, 2:30 p.m., Sunday.
Rin-Tin-Tin, 8:15 p.m., Thursday. Rin-Tin-Tin, 8:15 p.m., Thursday. Sherlock Holmes, 9 p.m., Wed.; 9:30 p.m., Thurs.; 12 mid. Mon. Silver Flute, 1:30 p.m., Sunday. Soconyland, 8 p.m., Monday. Today and Yesterday, 8:30 p.m., Friday. True Story, 8:30 p.m., Tuesday.

#### ORGAN

Jesse Crawford, 11:15 p.m., Wed., 11:30 p.m., Sun., Mon.; 11 p.m., Tues., Thurs., Sat. Ann Leaf, 3 and 9:30 p.m., Sun.; 3:15 and 9:30 p.m., Wed. Melo-Clarion Twins, 8:15 p.m., Wednesday.

#### PIANO

Fray-Braggiotti, 8 p.m., Saturday. Ernest Hutcheson, 10:45 p.m., Sunday.

#### POPULAR PROGRAMS

A. & P. Gypsies, 9 p.m., Monday, 10 p.m., Thursday. Armour Program, 9:30 p.m., Friday. Beau Bachelor. 10 p.m., Friday. Big Six, 9 p.m., Thursday. Bright Spot, 2:15 p.m., Sunday. Bright Spot, 2:15 p.m., Sunday. Buick Revelers, 9:45 p.m., Sunday. Chase & Sanborn, 8 p.m., Sunday. Cliquot Club, 9 p.m., Friday. Coca Cola, 10 p.m., Wednesday. Collier's Hour, 8:15 p.m., Sunday. Contented Program, 8 p.m., Monday. Collier's Hour, 8:15 p.m., Sunday.
Contented Program, 8 p.m., Monday.
Enna Jettick, 8 p.m., Sunday.
Evening in Paris, 9:30 p.m., Monday.
Farm and Home, 12:30 p.m., Daily, except Sunday.
Friendly Five, 9:45 p.m., Friday.
Jack Frost, 8:30 p.m., Wednesday.
Frostilla Rehearsal, 9:15 p.m., Monday.
Fuller Man 9:30 p.m. Tuesday Jack Frost, 320 p.m., Wednesday.
Frostilla Rehearsal, 9:15 p.m., Monday.
Fuller Man, 9:30 p.m., Tuesday.
Funnyboners, 10:45 p.m., Tuesday and Friday.
The Gauchos, 11:30 p.m., Sunday.
G.E. Circle. noon Daily, except Saturday and Sunday.
Gerardine, 8:45 p.m., Tuesday.
Gold Medal, 9 p.m., Wednesday.
Goodyear, 8:30 p.m., Wednesday, 9 p.m., Saturday.
Hind's Romance, 7:15 p.m., Thursday.
Edna Wallace Hopper, 10 p.m., Sunday.
International Revue, 10:30 p.m., Sunday.
Luden's Novelty, 7:30 p.m., Sunday.
Manhattan Serenaders, 7:15 p.m., Thursday.
Maxwell House, 7:15 and 11:15 p.m., Mon., Wed., Fri;
9:30 p.m., Thursday.
McKesson Magazine, 9 p.m., Tuesday.
Mobiloil, 9:30 p.m., Wednesday.
Mobiloil, 9:30 p.m., Wednesday.
Music That Satisfies, 10:30 p.m., Mon., Tues., Thurs., Fri.,
10 p.m., Wed. and Sat.
Nestle's Program, 8 p.m., Friday.
Parade of States, 9:30 p.m., Monday.
Pennzoil Parade, 8 and 11:30 p.m., Sunday.
Fillsbury Pageant, 9 p.m., Friday. Pillsbury Pageant, 9 p.m., Friday. Pond's Program, 9:30 p.m., Friday.

Reis & Dunn, 6:15 p.m., Tuesday and Thursday RKO Theatre, 10:30 p.m., Friday.

San Felice. 9:45 p.m., Monday and Wednesday.
Sheaffer Revue, 4:30 p.m., Sunday.
Simoniz Guardsmen, 5:30 p.m., Sunday.
Simoniz Guardsmen, 5:30 p.m., Sunday.
Smith Bros., 8:30 p.m., Friday; 9:30 p.m., Saturday.
Society's Playboy, 10:30 p.m., Wednesday.
Sylvanians, 7:45 p.m., Wednesday.
To the Ladies. 9:30 p.m., Friday.
Trumpeters, 10 p.m., Thursday.
Voice of Thousand Shades, 10 p.m., Tuesday.
Waves of Melody, 10:30 p.m., Monday and Friday.
Willys-Overland, 7 p.m., Sunday.
Yardley Program, 2 p.m., Sunday.
Yeast Foamers, 2:30 p.m., Sunday.

#### QUARTETTES

Bayuk Stags, 9:15 p.m., Sunday.
Four Clubmen, 8:30 p.m., Monday.
Dixic Spirituals, 8 p.m., Thursday.
Eton Boys, 6 p.m., Sunday.
Heel Huggers, 8:30 p.m., Tuesday.
Lumber Jacks, 7 p.m., Monday and Thursday.
Mills Baythars, 0 p.m., Monday and Thursday. Mills Brothers, 9 p.m., Monday and Thursday.

#### RELIGIOUS

Cathedral Hour, 1 p.m., Sunday. Catholic Hour, 6 p.m., Sunday. Chicago Knights, 5:30 p.m., Sunday. Church of the Air, 2:30 p.m., Sunday. Dr. Fosdick, 5 p.m., Sunday. Hymn Sing, 7 p.m., Tuesday. National Youth Conference, 3 p.m., Sunday. Seth Parker, 10:45 p.m., Sunday.

SINGERS Ben Alley, 11:45 a.m., Daily, except Wed., Sat., Sun. Belle Baker, 9 p.m., Sunday.
Irene Beasley, 9:15 p.m., Thursday; 6 p.m., Sunday.
Connie Boswell, 6 p.m., Wednesday; 5:45 p.m., Saturday.
Boswell Sister, 10:30 p.m., Monday and Thursday.
Bing Crosby, 6:45 p.m., Mon., Wed., Fri.; 11:45 p.m.,
Thurs. Thurs.
Vaughn de Leath, 6:15 p.m., Monday; 8:45 p.m., Saturday.
Morton Downey. 7:45 and 11:30 p.m., Daily, except Sun.
Rutt Etting, 10:00 p.m., Wednesday and Saturday.
Sylvia Froos, 7:30 p.m., Tuesday and Thursday.
Alex Gray, 10:30 p.m., Tuesday and Friday.
Tito Guizar, 11:30 p.m., Sun.; 5 p.m., Thurs.; 9:30 p.m.. Elsie Janis, 7:15 p.m., Wednesday and Friday. Arthur Jarrett, 10:45 p.m., Thursday and Saturday Artnur Jarrett, 10:45 p.m.. Thursday and Saturday.
Alice Joy, 7:30 and 11:15 p.m., Daily, except Sunday.
Modern Male Chorus, 10:15 p.m., Tuesday.
Pickens Sisters, 10:45 p.m., Daily, except Sat. and Sun.
Salon Singers, 7 p.m., Friday.
Sanderson-Crumit, 8 p.m., Tuesday; 9 p.m., Thursday.
Singing Sam, 8:15 p.m., Monday, Wednesday and Friday.
Kate Smith, 8:30 p.m., Mon., Tues., Wed., Thurs.
Sons of Eli, 2 p.m., Sunday.
Street Singer, 10:45 p.m., Mon., Wed.; 12:45 p.m., Sun.;
9 p.m. Fri 9 p.m., Fri Lawrence Tibbett, 8:30 p.m., and 11:30 p.m., Monday.

Z,

TALKS
Believe It or Not, 7:15 p.m., Wednesday and Friday.
Halsey-Stewart, 9 p.m., Wednesday,
Hoosier Editor, 8:30 p.m., Saturday.
Kattenborn, 6 p.m., Monday,
David Lawrence, 9 p.m., Sunday and Thursday.
Great Personalities, 9:30 p.m., Tuesday.
Political Situation, 7 p.m., Saturday.
Political Situation, 7 p.m., Saturday.
Public Affairs, 10:15 p.m., Saturday.
Radio in Education, 7 and 8:30 p.m., Saturday.
Nellie Revell, 11 p.m., Wednesday.
Nellie Revell, 11 p.m., Wednesday.
Margaret Santry, 8 p.m., Daily, except Sat. and Sun.
Lowell Thomas, 6:45 p.m., Daily, except Sat. and Sun.
Travelog, 4 p.m., Sunday.
Count Von Luckner, 9:30 p.m., Sunday.

#### WHAT'S ON THE AIR TONIGHT?

Fill in calls and dial numbers for those stations through which you best receive the three chains. You can then turn quickly to the one that has the feature you want.

COLUMBIA (C)\_\_\_\_WABC

NATIONAL, Red (R)\_\_\_WEAF

NATIONAL, Blue (B) .... WJZ

Call	Dial	Call	Dial
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Call	Dial	Call	Dial

#### MONDAY

E-8:00 a.m., C-7:00, M-6:00, P-5:00 R - Gene and Glenn WBEN WCAE WCSH WEAF WEEI
WFI WFLA WGY WIS WJAR WJAX
WPTF WRC WRVA WSAI WTAG WTAM WTIC WWJ WWNC

E-8:15 a.m., C-7:15, M-6:15, P-5:15 B — Phil Cook, Quaker Man KDKA WBAL WBZA WGAR WJR WJZ WLW

E-8:30 a.m., C-7:30, M-6:30, P-5:30 R -- Cheerin CFCF CKGW KPRC WAPI WBEN WCAE WCFL WCKY WCSH WDAF WEEI WFBR WEAF WFI WFLA WGY WHAS WIOD WIS WJAR WJAX WJDX WKY WOAI WOW

WPTF

WWNC

WRC

WRVA WSMB WTAG WTAM WTIC WWJ E-9:00 a.m., C-8:00, M-7:00, P-6:00 R — Gene and Glenr K-Gene and Gielin KFYR KPRC KSD KSTP KVOO WAPI WDAF WDAY WEBC WFAA WHAS WHO WIBA WJDX WKY WLS WMC WOAI WOC WOW WSB WSM

WSB

WSM

WSMB WTAM WTMJ E-9:15 a.m., C-8:15, M-7:1 B — Phil Cook, Quaker Man C-8:15, M-7:15, P-6:15 KFYR KOIL KPRC KTHS KVOO WDAY WEBC WFLA WIBA WIOD

WDAY WEBC WFLA WIBA WIOD WIS WJDX WKY WLS WMC WOAI WREN WSB WSM WSMB WTMJ E-10:15 a.m., C-9:15, M-8:15, P-7:15

B — Clara, Lu and Em KDKA KFYR KOA KDKA KFYR KOA KOIL KPRC KSL KVOO KWK WAPI WBAL WBAP WDAY WEBC WFLA WGAR WHAM WHAS WIBA WIOD WIS
WJAX WJDX WJR WJZ WKY
WMAQ WMC WOAI WPTF WREN
WRVA WSB WSM WSMB WTMJ WHAM

E-11:45 a.m., C-10:45, M-9:45, P-8:45

C — Ben Alley, Tenor CFRB KDYL KFH KFJF KLZ KMBC KMOX KOH KSCJ KTSA KVOR WABC WACO WBCM WBT WCAH KVOR WCAO WCAU WDBO WDRC WEAN WFBL WHEC WHP WIBW WISN WJAS WKBN WKBW WLAP WLBW WLBZ WMAL WMT WNAC WOKO WORC WPG WQAM WREC WSPD WTAQ WTAR WTOC WWVA WXYZ

E-12:00, C-11:00, M-10:00, P-9:00 R — General Electric Circle

K — General Electric Circle
KFI KFSD KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSL KSTP
KTAR KTHS KVOO WAPI WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WENR WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT

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

E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Farm and Home Hour B-Farm and Home Hour KDKA KFYR KOA KOIL KPRC KSTP KTHS KVOO KWK KYW WAPI WBAL WBZA WCKY WDAY WDAY WEBC WFLA WGAR WHAM WHAS WHO WIBA WIOD WJAX WJDX WJR WJZ WLW WMC WOC WOW WPTF WRC WREN WRVA

E-4:30 p.m., C-3:30, M-2:30, P-1:30 R—Lady Next Door WBEN WCSH WEAF WEEI WENR WFBR WJAR WRC WTAG WTAM WWJ

WSB WSM WSMB

E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Skippy, Children's Program WBEN WCAE WCSH WEAF WEEI WFBR WGY WJAR WLIT WRC WEEI WRC WSAI WTAG WTAM WTIC WWJ

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Little Orphan Annie
WBAL WFLA WGAR WHAM WIOD
WJAX WJZ WLW WPTF WRVA E-6:00 p.m., C-5:00, M-4:00, P-3:00 B — Raising Junior. See Sunday.

B — Raising Jumor. See Sunday.

R — Waldorf-Astoria Orchestra

CKGW KFSD KGO KSD KSL WAPI

WCAE WEAF WEEI WENR WFI

WHAS WIOD WIS WJDX WKY

WRC WSM WTAM

C — Current Events, Kaltenborn

KFH KFJF KOH KRLD KSCJ KTRH KVOR WAAB WABC WACO WADC WBT WDAE WDBO WDRC WFBL WHP WKRC WLAP WLBW WLBZ WMAL WOKO WORC WQAM WREC WSPD WTAQ WTAR WTOC

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C-Vaughn de Leath KFJF KOH KRLD KSCJ KVOR WAAB WABC WACO WADC WBRC WBT WCAO WDAE WDBO WDRC WFAN WFBL WGR WHEC WHK WIP WISN WLBW WLBZ WHP WMAL WOKO WORC WQAM WREC WSPD WTAQ QTAR WTOC WWVA

E-6:30 p.m., C-5:30, M-4:30, P-3:30 B — Royal Vagabonds, Ward Wilson KOIL KWK WHAY WHAL WHAM WHAS WJZ WLW WMAQ WOAI WREN WSB WTMJ

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Bing Crosby
CFRB KFAB KFH KFJF KLZ KMOX CFRB KFAB KFH KFJF KLZ KMOZ KOH KKLD KVOR WAAB WABC WACO WADC WBBM WBCM WBIG WBRC WBT WCAH WDBJ WDOD WDSU WFAN WFBL WFBM WGL WHEC WHP WIP WISN WJAS

WKBN WKBW WLAC WLAP WLBW WLBZ WMT WOKO WQAM WREC WSBT WTAQ WTOC WWVA

B - Lowell Thomas, Literary Digest KDKA WBBL WBZA WHAM WJZ WLW

B — Little Orphan Annie KFYR KOIL KPRC KSTP KWK WDAY WEBC WENR WKY WOAI

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Myrt and Marge KMOX WABC WADC WCAO WCAU WDRC WFBL WGR WJAS WKRC WMAL WNAC WOKO WSPD WWVA - Vermont Lumber Jacks

WBEN WCAE WCSH WEAF WEEI WENR WFBR WGY WJAR WLIT WSAI WTAG WTIC WWJ

B — Pepsodent, Amos 'n' Andy CFCF CKGW KDKA WBAL WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WPTF WRC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Maxwell House Program WABC WADC WBT WCAO WCAU WDAE WDBJ WDBO WDRC WEAN WFBL WGR WJAS WKRC WMAL WNAC WOKO WQAM WSPD WTAR

R — Campbell, Howard Lannin Orch.
CFCF CKGW WBEN WCSH WDAF
WEAF WENR WFBR WGY WHO
WJAR WLIT WOC WOW WRC WSAI
WTAG WTAM WWJ

B — Tastyeast Jesters KDKA WBAL WBZA WCKY WGAR WJZ WREN

E-7:30 p.m., C-6:30, M-5:30. P-4:30

C.—Easy Aces
KMBC KMOX WABC WCAO WCCO
WFBM WGR WHK WJAS WKRC
WMAL WNAC WOKO WCAU

R — Prince Albert, Alice Joy KECA KFYR KGA KJR KOA KPO KSL KSTP KTAR WBEN WCSH
WDAF WDAY WEAF WEBC WEEI
WFBR WFLA WGY WIBA WIOD
WIS WJAR WJAX WKY WLIT
WOAI WPTF WRC WRVA WSAI
WTAG WTAM WTMJ WWJ WWNC

B — Swift, Stebbins Boys KOIL KSTP KWK V WBAL. WENR WFAA WGAR WHAM WJZ WKY WMC WOAI WREN WSB WSM WSMB

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C-Camel, Morton Downey
KFH KFJF KLRA KMBC KMOX
KRLD KSCJ KTRH WABC WACO
WADC WBIG WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WEAN
WFBL WFBM WGR WGST WHEC
WHK WHP WIRW WISN W188 WHK WHP WIBW WISN WJAS WKRC WLAC WLAP WLBZ WMAL WMT WNAC WNAX WNOX WOKO

Monday—Continued

WORC WQAM WREC WSPD WTAR WTOC WWVA WXYZ

 The Goldbergs WBEN WCAE WCSH WDAF WEAF WENR WGY WHO WJAR WOC WOW WSAI WTAM WWJ

 Jones and Hare KDKA KOIL KPRC KWK WBAL WFAA WFLA WGAR WHAM WHAS WIS WJAX WJDX WJZ WKY WMAQ WMC WPTF WREN WSB WSM WSMB WWNC

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C—Bath Club, Margaret Santy KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WGST WHK WISN WIAS WKRC WMAL WNAC WOKO WSPD WXYZ

R — Soconyland Sketches WBEN WCSH WEEI WGY WJAR WTAG WTIC WEAF

 The Contented Program CKGW KOIL KPRC KWK KYW WBAL WCKY WDAY WFLA WHAS WIBA WIOD WJAX WJR WJZ WREN WRVA WSB WTMJ WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C—Singin' Sam, Barbasol Man KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WSPD

C—Guy Lombardo and Orchestra KLRA WBIG WBRC WBT WDAE WDBJ WDBO WDOD WDSU WFIW WGST WLAC WODX WPG WQAM WREC WTAR WTOC

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C—La Palina, Kate Smith KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHEC WHK WISN WJAS WKRC WLAP WMAL WSPD WXYZ

C -- Four Clubmen, Quartette KSCJ WAAB WBCM WDAE WDRC R — Firestone, Lawrence Tibbett CFCF CKGW KPRC KSD KTHS

KVOO WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFBR WFLA WGAP WHAS WHO WYAY WJAX WJDX WKY WOAI WOC WSAI WSAI WSAI WIOD WIS WJAN WMAQ WMVA WRVA WLIT WOW WRC WRVA .WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ

B — Death Valley Days

KDKA KPI KFSD KFYR KGO

KGW KHQ KOA KOIL KOMO

KSL KSTP KTAR KWK WBAL

WBZA WCKY WEBC WGAR WHAM WIBA W.IZ WLS WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C—Col. Stoopnagle and Budd
CFRB KMBC KMOX WABC WADC
WCAO WCAU WDRC WEAN WFBL
WGN WGR WHK WJAS WNAC WOWO WSPD WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Vapex, Mills Bros. KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WSPD WXYZ

C — Arabesque, Desert Play
WBCM WBRC WBT WDAE WDBO
WQAM WREC WTAR WTOC

R-A. & P. Gypsies
KSD WBEN WCAE WCSH WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

B — Maytag Orchestra
KDKA KFI KFYR KGO KGW
KHQ KOA KOMO KPRC KSL KSTP WEBC WFAA WGAR WHAM WJR
WJZ WKY WLS WMC WOAI WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Frostilla Broadcast Rehearsal CFRB KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WJAS WKBW WKRC WMAL WNAC WOKO WOWO WRR WSPD WXYZ

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Bourjois, Evening in Paris KMBC KMOX WABC WADC WBT WCAO WCAU WEAN WFBL WGN WHEC WHK WJAS WKBW WKRC WMAL WMT WNAC WOWO WSPD R — Parade of the States

R—Parade of the States
KFI KFYR KGO KGW KHQ KOA
KOMO KPRC KSD KSL KSTP
WBEN WCAE WCSH WDAF WEAF
WEEI WENR WFAA WGY WHAS
WHO WJAR WJAX WKY WLIT
WMC WOAI WOC WOW WRC
WSAI WSB WSM WTAG WTAM
WTIC WTMJ WWJ
PROSTRICT WORD WAN

B — Story of Women's Names
KOIL KWK WBAL WGAR WHAM
WJR WJZ WLW WREN KYW

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — San Felice, Bob Nolan KDKA KOIL WBAL WGAR WHAM WJR WJZ WMAQ WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C-Robert Burns, Lombardo KDYL KFJF KFPY KFRC KHJ KLZ KMBC KMOX KOIN KOL KRLD KTRH KTSA WABC WADC WBBM WCAO WCAU WCCO WDRC WBM WFBL WFBM WHK WJAS WKBW WKRC WMAL WNAC WOWO WSPD WXYZ WSPD WXYZ

WSTD WAIZ
C.— The Columbians, Freddie Rich
WBCM WBRC WBT WDBO WREC
WTAR WTOC

R - National Radio Forum KFSD KFYR KGHL KGIR KGO KGW KOMO KPRC KSD KSL KGW KSTP KTAR WBAP WBEN WCAE
WCSH WDAY WEAF WEBC WEEI
WENR WFLA WGY WHAS WHO
WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOC WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTIC WTMJ WWJ WWNC

- With Canada's Mounted KDKA KWK WBAL WBZA WGAR WHAM WJR WJZ WLW WMAQ WREN

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Music That Satisfies
KDYL KFH KFJF KFPY KFRC
KGB KHJ KLRA KLZ KMBC KMOX
KOH KOIN KOL KSCJ KTRH KTSA
WAAB WABC WACO WADC WBBM
WBCM WBRC WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDBO
WDOD WDRC WDSU WEAN WFBL
WFBM WGST WHEC WHK WHP
WIBW WISN WJAS WKBW WKRC
WIAC WLBW WLBZ WMAL WMT
WNAX WNOX WOKO WORC WOWO
WPG WQAM WREC WRR WSPD
WTAR WTOC WXYZ

R — Mr. Bones and Company
WBEN WCAE WCSH WEAF WEEI
WENR WFBR WFLA WGY WHO
WIS WJAR WLIT WOC WRC WSAI
WTAG WWJ WWNC - Waves of Melody

CFCF CKGW KDKA KOIL KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C—Street Singer CFRB KFH KGB WAAB WABC WADC WBRC WBT WCAO WCAU WDAE WDBO WDRC WEAN WFBL WHEC WHP WJAS WKBW WLBZ WMAL WMT WOKO WORC WPG WQAM WREC WTAR WTOC

WQAM WREC WIAR WIOC
C—Myrt and Marge
KDYL KFPY KFRC KHJ KLZ
KMBC KOIN KOL WBBM WCCO
WLAP WXYZ
B— Pickens Sisters
KDKA KWK WBAL WJR WJZ
E-11:00 p.m., C-10:00, M-9:00, P-8:00

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C—Howard Barlow Symphony CFRB KDYL KFAB KFH KFJF KFPY KLRA KLZ KMBC KOH KOIN KOL KTSA KVOR WAAB WABC WACO WACO WDAE WBT WCAH WCAO WCCO WDAE WDBJ WDOD WDRC WDSU WEAN WPAN WFBL WFBM WHEC WHP WIBW WIP WISN WKBH WKBN WKBW WLAC WLAP WLBW WLBZ WKBW WIF WISH WABN WKBW WLAC WLAP WLBW WLBZ WMBD WMT WNAX WNOX WOKO WORC WOWO WOAM WREC WSBT WSPD WTAR WTOC WXYZ

WSFD WTAR WTOC WXYZ

B — Pepsodent, Amos 'n' Andy
KFI KFSD KGO KGW KHQ KOA
KOIL KOMO KPRC KSL KSTP
KTHS KWK WBAP WDAF WEBC
WENR WHAS WIBA WJDX WKY
WMAQ WMC WOAI WREN WSB
WSM WSMB WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C--- Maxwell House Program KFAB KFH KFJF KLRA KMBC
KMOX KTRH KTSA WACO WBRC
WCCO WDOD WFIW WGN WGST WLAC WLAP WNOX WOWO WREC WRR

R - Prince Albert, Alice Joy K — Frince Albert, Alice Joy KECA KEX KGA KGIR KJR KOA KPO KPRC KSD KTAR KTHS WAPI WBAP WENR WHAS WHO WJDX WMC WOC WOW WSB WSM

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Camel, Morton Downey KDYL KFPY KLZ KOH KOIN KOL KTSA WGN WOWO

KTSA WGN WOWO

R. Jesse Crawford, Organ

KSD WCKY WEAF WJAR WRC

WSM WTIC WWJ

R. Firestone, Lawrence Tibbett

KFI KFSD KFYR KGHL KGHR

KGO KGU KGW KHQ KOA KOMO

KSL KTAR WEBC WIBA WTMJ

B. Jane Froman and Orchestra

KOUL KEPC WFBAL WEND WIZ KOIL KPRC WBAL WENR WJZ WREN

E-11:45 p.m., C-10:45, M-9:45, P-8:45 R—Baron Lee and Orchestra
KSD WBEN WCKY WEAF WEEI
WGY WJAR WMAQ WRC WTIC WWJ

E-12:00 m., C-11:00, M-10:00, P-9:00 C — Ben Bernie, Orchestra KDYL KFH KLZ KOH KSCJ KTRH KVOR WABC WCAU WCCO WEAN

Monday—Continued WFBL WHP WIBW WISN WKBN WKBW WKRC WLAP WLBW WMT WNAC WNAX WOKO WSPD R — Sherlock Holmes KFI KFSD KGO KGW KHQ KOA KOMO KSL KTAR

E-12:30 a.m., C-11:30, M-10:30, P-9:30 C—Noble Sissle, Park Central Orch KDYL KFH KLZ KMBC KOH KSCJ KTRH KVOR WABC WCAU WCCO WEAN WFBL WHP WIBW WISN WKBN WKBW WLAP WLBW WNAC WNAX WOKO WSPD - Jones and Hare

KFI KFSD KGO KGW KHQ KOA KOMO KSL KTAR

E-12:45 p.m., C-11:45, M-10:45, P-9:45 B — Swift, Stebbins Boys KFI KGO KGW KHQ KOMO KSL

#### TUESDAY

E-8:30 a.m., C-7:00, M-6:00, P-5:00 R - Gene and Glenn, See Monday

E-8:15 a.m., C-7:15, M-6:15, P-5:15 B - Phil Cook, See Monday

E-8:30 a.m., C-7:30, M-6:30, P-5:30 R — Cheerio, See Monday

E-9:00 a.m., C-8:00, M-7:00, P-6:00 B — Phil Cook, See Monday R — Gene and Glenn, See Monday

E-10:15 a.m., C-9:15, M-8:15, P-7:15 B — Clara, Lu and Em, See Monday E-11:45 a.m., C-10:45, M-9:45, P-8:45

C - Ben Alley, See Monday E-12:00 m., C-11:00, M-10:00, P-9:00 R — General Electric, See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30

B - Farm and Home, See Monday E-4:30 p.m., C-3:30, M-2:30, P-1:30 R — Lady Next Door, See Monday

E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Skippy, See Monday

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Orphan Annie, See Monday

C-Gronal Anne, See Modelay
E-6:00 p.m., C-5:00, M-4:00, P-3:00
C-Art Jarrett, Freddie Rich, Orchestra
CFRB KFH KFJF KLZ KOH KSCJ
KTRH KVOR WAAB WABC WACO
WADC WBBM WBRC WBT WCAH
WCCO WDAE WDBO WFBL WHP
WKRC WLAP WLBW WLBZ WMAL
WOKO WORC WQAM WREC WTAQ
WTAR WTOC WTAR WTOC

B - Raising Junior, See Sunday R - Waldorf Orchestra, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C-Reis and Dunn CFRB KFH KFJF KMOX KOH KSCJ KTRH KVOR WAAB WABC WACO WADC WBRC WBT WCAO WCCO WDAE WDBO WFBL WGR WHP WISN WLAP WLBW WLBZ WMAL WOKO WORC WQAM WREC WTAQ WTAR WTOC WWVA

E-6:30 p.m., C-5:30, M-4:30, P-3:30 B — Ray Perkins, Old Topper
KGO KGW KHQ KOA KOIL KOMO
KSL KWK WBZA WGAR WHAM

WJZ WLW WMAQ WREN E-6:45 p.m., C-5:45, M-4:45, P-3:45 B — Lowell Thomas See Monday B — Orphan Annie, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday R — Mid-Week Hymn Sing KEX KGA KGIR KJR KOA K KSTP KTAR WEAF WFI WJ WSAI WSB WSM WTAG WTIC KPO WJDX

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C—Freddie Rich and Orchestra KMBC KMOX WABC WCAO WCAU WCCO WFBM WGN WGR WJAS WKRC WMAL WNAC WOKO R - Campbell-Lanin, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 R — Alice Joy, See Monday C — Richman Bros., Sylvia Froos KMBC KMOX WAAB WABC WADC

WBBM WCAU WCCO WFBL WFBM WGR WHK WISN WJAS WKBN WLAP WSPD WWVA WXYZ B - Stebbins Boys, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Morton Downey, See Monday R — The Goldbergs, See Monday

B - Jones and Hare, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Bath Club, See Monday

R — Blackstone, Sanderson-Crumit
KSD KSTP KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEEI
WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WTIC

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C—Sterling, Abe Lyman's Band
KFJF KMBC KMOX WABC WADC
WCAO WCAU WCCO WDRC WDSU
WEAN WFBM WGN WGR WGST
WHK WJAS WKRC WMAL WNAC WREC WSPD WXYZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Kate Smith, See Monday

C—Kate Smith, See Monday
R—True Story, Mary and Bob
WBEN WCSH WDAF WEAF
WFBR WFI WGY WHAS WHO
WIOD WJAR WJDX WMC WOC
WOW WRC WSAI WSM WSMB
WTAG WTAM WTIC WWNC

B— Heel Hugger Harmonies KFI KFSD KGW KHQ KOA KOIL KOMO KPO KSL KTAR WHAM WJZ WLS WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Gerardine, Ed Sullivan KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBM WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ

B — Sisters of the Skillet KDKA KFYR KOIL KPRC KSTP KVOO KWK WBAP WBZA WDAY WHAM WIBA WJZ WKY WLS WOAI WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C—Ben Bernie, Orchestra
KDYL KFH KFJF KFPY KFRC
KHJ KLZ KMBC KOIN KOL KTSA
WABC WADC WBRC WBT WCAO

WCAU WCCO WDRC WDSU WEAN WGN WHK WJAS WKBN WKBW WKRC WLAC WMAL WNAC WOWO WRR WSPD WXYZ KTRH

R — McKesson Musical Magazine KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KTAR WTH WILL WILL WAR WAS WHO WILL WILL WILL WAS WILL WAS WHO WILL WAS WILL WILL WAS WILL WILL WAS WILL WILL WAS WI WKY WLS WMC WOAI WOC WOW

WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ
B — Household Finance
KDKA KWK WBAL WBZA WHAM
WJR WJZ WMAQ WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C—Eno Crime Club CFRB KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOWO WSPD WXYZ R — The Fuller Man K — Ine Fuller MAIN
KFI KGO KGW KHQ KOA KOMO
KSD KSL KSTP KYW WBAP WBEN
WCAE WCSH WDAF WEAF WEBC
WEEI WFI WGY WHO WJAR WKY
WOAI WOC WOW WRC WSAI WSB WTAG WTAM WTIC WTMJ WWJ B — Great Personalities, Frazier Hunt KDKA KOIL KWK WBAL WBZA WENR WGAR WHAM WJR WJZ

WLW WREN WRVA E-10:00 p.m., C-9:00, M-8:00, P-7:00 C-Voice of Thousand Shades CFRB CKAC KDB KDYL KERN KFBK KFRC KHJ KLZ KMBC KMJ\_KMOX KOIN KOL KSCJ

KMJ KMOX KOIN KOL KSCJ KTRH KWG WAAB WABC WBBM WBT WCAH WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGST WHEC WHK WHP WISN WJAS WKBW WKRC WLAP WMAL WMT WOKO WXYZ

WORD WAIL R
— Lucky Strike, Walter Winchell
KFI KFSD KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSL KSTP
KTAR WAPI WBEN WCAE WCSH
WDAF WDAY WEAF WEBC WEEL
WEND WFAA WERD WEI WILA WDAY WBAF WEBC WEBI
WENR WFAA WFBR WFI WFLA
WGY WHAS WHO WIBA WIOD
WIS WJAR WJAX WJDX WKY
WMC WOAI WOC WRC WRVA
WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B—Happy-Rose Orchestra
CFCF CKGW KDKA KOIL KWK
WBAL WCKY WGAR WHAM WJR
WJZ WMAQ WREN

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C—Society's Playboy CFRB CKAC KMBC KMOX KRLD KTRH WAAB WABC WADC WBBM
WBT WCAO WCAU WCCO WDRC
WFBL WFBM WGST WHK WJAS
WKBW WKRC WLAP WMAL WOKO WOWO WSPD WXYZ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Music That Satisfies, See Monday

B -- Paris Night Life KDKA KOIL KYW WBZA WCKY WGAR WHAM WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marg, See Monday

C—Myrt and Marg, See Monday
C—Funnyboners
CFRB KLRA WAAB WABC WADC
WBIG WBRC WBT WCAO WDAE
WDBJ WDOD WDRC WDSU WHEC
WHP WJAS WKBW WLBW WLBZ
WMAL WNOX WODX WOKO WORC
WPG WQAM WREC WTAR WTOC
R—Pièters Sieters See Monday B - Pickens Sisters, See Monday

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday

C — Howard Barlow, See Monday R — Jesse Crawford, Organ WEAF WFI WIOD WJAR WRC WTIC

E-11:15 p.m., C-10:15, M-9:15 P-8:15 R — Alice Joy, See Monday

Tuesday—Continued E-11:30 p.m., C-10:30 M-9:30, P-8:30 E-11:30 p.m., C-10:300 In:31:30, F-0:300
C — George Olsen, Orchestra
WAAB WABC WBCM WBRC WBT
WCAO WCAU WDAE WDBO WDRC
WLBZ WMAL WORC WQAM WREC WTAR WTOC Morton Downey, See Monday

E-12:00 m., C-11:00, M-10:00, P-9:00 - Gus Arnheim and Orchestra C-Gus Arnheim and Orchestra
KDYL KFAB KFBK KFJF KLZ
KMBC KMOX KOH KOIN KSCJ
KVOR WABC WCAU WCCO WEAN
WFBL WHP WIBW WISN WKBN
WKBW WKRC WLAP WLBW WMAL
WMBD WMT WNAC WNAX WOKO

E-12:05 p.m., C-11:05, M-10:05, P-9:05 R — Buddy Rogers Orchestra KOA KSD KVOO WEAF WSM KOA KSD I

E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Jones and Hare. See Monday

E-12:45 p.m., C-11:45, M-10:45, P-9:45 B — Stebbins Boys, See Monday

#### WEDNESDAY

E-8:00 a.m., C-7-00, M-6:00, P-5:00 R - Gene and Glenn, See Monday E-8:15 a.m., C-7:15, M-6:15, P-5:15 B — Phil Cook, See Monday

E-8:30 a.m., C-7:30, M-6:30, P-5:30 R — Cheerio, See Monday

E-9:00 a.m., C-8:00, M-7:00, P-6:00 R - Gene and Glenn, See Monday E-9:15 a.m., C-8:15, M-7:15, P-6:15 B — Phil Cook, See Monday

E-10:15 a.m., C-9:15, M-8:15, P-7:15

B - Clara, Lu and Em, See Monday E-12:00 m., C-11:00, M-10:00, P-9:00 R - General Electric, See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Farm and Home, See Monday

E-3:15 p.m., C-2:15, M-1:15, P-12:15 C — Ann Leaf and Ben Alley CFRB KDYL KFBK KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOIN KOL KRLD KTRH KTSA KVI WABC WADC WBRC WCAH WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHK WHP WGN WGR WGST WHE WHP WISN WJAS WKBN WKRC WLAC WLAP WMAL WNAC WOKO WORC WOWO WPG WREC WSPD WTAR WWVA: WXYZ

E-4:30 p.m., C-3:30, M-2:30, P-1:30 R -- Lady Next Door, See Monday

E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Skippy, See Monday

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Orphan Annie, See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3:00 R — Waldorf Orchestra, See Monday

B — Music Treasure Box
KFYR KTHS WBAL WENR WHAM
WJDX WJZ WRC WREN WSB WSM

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Harold Stern's Orchestra KFH KFJF KMOX KOH KRLD KSCJ C-5:15, M-4:15, P-3:15

KFH KFJF KMOX KOH AKUJI ANGU KTRH KVOR WAAB WABC WACO WADC WBRC WBT WDAE WDBO WDRC WEAN WFAN WFBL WGE WHEE WHP WISN WLAP WLBW WLBZ WMAL WOKO WORC WALW WEAD WEDD WTAO WTAD WQAM WREC WSPD WTAQ WTAR WTOC WWVA

E-6:30 p.m., C-5:30, M-4:30, P-3:30 E-9:30 p.m., C-8:30, M-7:30, P-6:30 B—Royal Vagabonds, See Monday C—Crime Club, See Tuesday E-6:45 p.m., C-5:45, M-4:45, P-3:45 B — Lowell Thomas, See Monday B — Orphan Annie, See Monday - Bing Crosby, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Myrt and Marge, See Monday B — Amos 'n' Andy, See Monday

E-7:15 p.m. C-6:15, M-5:15, P-4:15 R — Campbell-Lanin, See Monday

K — Campuell-Lanin, See Monday
C — Maxwell House, See Monday
B — Esso Program, Elsie Janis
KDKA WBAL WBZA WHAM WIS

WJZ WLW WPTF WRVA WWNC E-7:30 p.m., C-6:30, M-5:30, P-4:30 C— Easy Aces, See Monday

- Reis and Dunn KLRA WBIG WBRC WBT WDAE WDBJ WDBO WDOD WDSU WFIW WGST WLAC WNOX WODX WTAR WTOC

R — Alice Joy, See Monday B — Stebbins Boys, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Morton Downey, See Monday R — The Goldbergs, See Monday - Jones and Hare, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Bath Club, See Monday R — Big Time, Humorous Sketch

K — Dig I line, rumnorous sketch KSD WBEN WCSH WEAF WEEL WFBR WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAM WWJ

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Singin' Sam, See Monday B — Melo-Clarions, Twin Organs KFYR KOA KOIL KPRC KSL KSTP

KVOO KWK KYW WBAL WBAP WBZA WCKY WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIOD WJAX WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

WSB WSM WSMB WTMJ WWNC
E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Kate Smith, See Monday
R — Goodyear
KPYR KGO KGW KHQ KOA KOMO
KPRC KSD KSL KSTP KVOO KYW
WBEN WCAE WCSH WDAF WDAY
WBAF WEBC WEEL WFBR WFLA
WGY WHAS WHO WIBA WIOD
WIS WJAR WJAX WJDX WKY
WLIT WMC WOAL WOC WOW
WRC WSAI WSB WSMB WTAG
WTAM WTIC WTMJ WWJ WWN C
B — Jack Frost. Melody Moments B - Jack Frost, Melody Moments KDKA WBAL WGAR WHAM WJR

WJZ WLS WLW

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Col. Stoopnagle, See Monday

C-Col. Stodyngage, Ose monday
E-9:00 p.m., C-8:00, M-7:00, P-6:00
C-Gold Medal Fast Freight
KFH KMBC KMOX KSCJ WABC
WADC WCAO WCAU WCCO WDBJ
WDRC WEAN WFBL WFBM WGN
WHK WJAS WKBW WKRC WMAL
WMT WNAC WOKO WOWO WSPD
B- Halers Stowat From ym

R — Halsey-Stewart Program
CKGW KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSL KSTP KYOO KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WHAS WHO WJAR WJAX WLIT WMC WOAI WOC WOW WRC WRVA WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

B — Sherlock Holmes KDKA KWK WBAL WBZA WGAR C — Myrt and Marge, See Monda WHAM WJR WJZ WLW WMAQ B — Pickens Sisters, See Monday

C— Crime Citin, see Tuesday
C— Ann Leaf at the Organ
KFRC KSCJ WBCM WBRC WBT
WDAE WDBO WPG WQAM WREC
WTAR WTOC

R - Mobiloil Concert KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEEI WFAA WFBR WFA WIAN WHAS WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ B - Story of Women's Names, See Mon.

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — San Felice, See Monday

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Music Satisfies, Ruth Etting C— MUSIC SATISHES, AGLI ELLING
KDB KDYL KERN KFBK KFJF
KFPY KFRC KGB KGMB KHJ
KLRA KLZ KMBC KMJ KMOX
KOH KOIN KOL KOY KSCJ KTRH KOH KOIN KOL KOY KSCJ KTRH
KTSA KVOR KWG WAAB WABC
WACO WADC WBBM WBCM WBIG
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDBO WDOD
WDRC WDSU WEAN WFBL WFBM
WFIW WGST WHEC WHK WHP WFIW WGST WHEC WHK WHP
WIBW WISN WJSS WKBH WKBW
WKRC WLAC WLAP WLBW WLBZ
WMAL WMBD WMT WNAX WNOX
WOKO WORC WOWO WPG WQAM
WREC WRR WSPD WTAR WTOC WXYZ

R—Coca Cola
KFI KFSD KGO KGW KHQ KOA
KOMO KPRC KSD KSL KSTP
WAPI WBAP WBEN WCAE WCSH
WDAF WEAF WEBC WEEI WENR
WFBR WFLA WGY WHAS WHO
WIOD WIS WJAR WJAX WJDX
WLIT WMC WOAI WOC WOW
WRC WSAI WSB WSM WSMB WTAG
WTAM WTMI WWIY I WNC WTAM WTMJ WWJ WWNC B - Happy-Rose Orchestra, See Tues.

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Modern Male Chorus WDBJ WDBO WDOD WDSU WFIW
WGST WLAC WNOX WPG WREC
WTAR WTOC

E-10:30 p.m., C-9:30, M-8:30, [P-7:30 R — NBC Artists Program

CFCF CKGW KGO KOA KSD KSTP WBEN WCAE WCSH WEAF WENR WFBR WGY WHO WJAR WOAI WOC WOW WRC WTAG WTAM WWJ WWNC

B — Hollywood Nights KDKA KOIL KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

C - Manhattan Serenaders C-Firb KDYL KFBK KFJF KFPY
KLRA KLZ KMOX KTSA KVOR
WABC WADC WBCM WBRC WBT
WCAH WCAO WCCO WDAE WDBJ
WDOD WDRC WDSU WEAN WFBM
WLD WIDW WAD WEAN WFBM WHP WIBW WISN WJAS WKBH
WKBW WLBW WLBZ WMAL WMBD
WMT WNAX WOKO WORC WOWO
WQAM WREC WSBT WTAR WTOC WXYZ

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Street Singer, See Monday C — Myrt and Marge, See Monday

Wednesday—Continued E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday — Nellie Revell WEAF WGY WJAR WOW WRC WTAM WWJ B — Amos 'n' Andy, See Monday C — Howard Barlow, See Monday E-11:15 p.m., C-10:15, M-9:15, P-8:15 R — Alice Joy, See Monday C — Maxwell House, See Monday E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Don Redman, Orchestra WAAB WABC WBCM WBRC WBT WCAO WCAU WDAE WDBO WDRC WLBZ WMAL WORC WPG WQAM WREC WTAR WTOC C — Morton Downey, See Monday R — Vincent Lopez, Orchestra
KFYR KPRC WAPI WBEN WCFL
WCKY WEAF WGY WIBA WJAR WOW WRC WTMJ WWJ E-12:00 m., C-11:00, M-10:00, P-9:00 C — Eddie Duchin, See Sunday E-12:05 a.m., C-11:05, M-10:05, P-9:05 WAPI WEAF THURSDAY

R — Coon-Sanders, Orchestra KFSD KHQ KOA WAP WENR WGY WRC WSB E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Jones and Hare, See Monday E-12:45 p.m., C-11:45, M-10:45, P-9:45 B — Stebbins Boys, See Monday E-8:00 a.m., C-7:00, M-6:00, P-5:00 R - Gene and Glenn, See Monday E-8:15 a.m., C-7:15, M-6:15, P-6:15 B — Phil Cook, See Monday E-8:30 a.m., C-7:30, M-6:30, P-5:30 R - Cheerio, See Monday E-9:00 a.m., C-8:00, M-7:00, P-6:00 R — Gene and Glenn, See Monday E-9:15 a.m., C-8:15, M-7:15, P-6:15 B — Phil Cook, See Monday E-10:15 a.m., C-9:15, M-8:15, P-7:15 B - Clara, Lu and Em, See Monday E-11:45 a.m., C-10:45, M-9:45, P-8:45 WJZC - Ben Alley, See Monday E-12:00 m., C-11:00, M-10:00, P-9:00 R — General Electric, See Monday E-12:30 p.m., C-11:30, M-10:30, P-9:30 B - Farm and Home, See Monday E-4:30 p.m., C-3:30, M-2:30, P-1:30 R — Lady Next Door, See Monday E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Skippy, See Monday E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Orphan Annie, See Monday

B - Raising Junior, See Sunday C — Connie Boswell C-Connie Boswell
CFRB KFJF KFJF KLZ KOH KRLD
KVOR WAAB WABC WACO WADC
WBCM WBIG WBRC WBT WCAH
WDAE WDBJ WDOD WDRC WDSU
WFAN WFBL WGL WGN
WHP WIP WISN WJAS WKBH WIP WISN WLAC WLAP WLBW WLBZ WMBD WOKO WORC WQAM WREC WSBT WTAQ WTOC E-6:15 p.m., C-5:15, M-4:15, P-3:15 C—Reis and Dunn, See Tuesday

E-6:00 p.m., C-5:00, M-4:00, P-3:00 R — Waldorf Orchestra, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45 B — Lowell Thomas, See Monday B — Orphan Annie, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C - Myrt and Marge, See Monday

R - Lumber Jacks, See Monday E-7:15 p.m. C-6:15, M-5:15, P-4:15 R — Campbell-Lanin, See Monday B — Hind's Romance Exchange KDKA KOIL KVOO WAPI WBAP WBZA WENR WHAS WJDX WJZ WLW WMC WOAI WREN WSB WLW WMC WSM WSMB

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Richman Bros., See Tuesday B — Stebbins Boys, See Monday R — Alice Joy, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Morton Downey, See Monday R — The Goldbergs, See Monday B - Jones and Hare, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Bath Club, See Monday

R — Fleischmann, Rudy Vallee CFCF CKGW KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KOA KOMO KRC KSJ ASL KSIF KTAR WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WFLA WGY WHAS WHO WIOD WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ B — Dixie Singers

KDKA KOIL KWK WBAL WBZA WCKY WGAR WHAM WJZ WLS WREN WRVA

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Abe Lyman, See Tuesday B - Rin Tin Tin Thriller KDKA KOIL KWK WBZA WGAR WHAM WJZ WLS WLW WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Kate Smith, See Monday E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Angelo Patri, Your Child, See Sun. B - Sisters of Skillet. See Tuesday

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Mills Bros., See Monday B — Blackstone, Sanderson-Crumit KDKA WBAL WBZA WCKY WHAM

R — Big Six of the Air KFI KFSD KFYR WGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WIBA WIOD WIS WJAR WJAX WJAX WWAQ WMC WOC WOW WPTF WRC WSAI WSB WSM WSAF WOAI WRVA WTAG WTAM WTIC WTMJ WWJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Irene Beasley, Freddie Rich KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WSPD WXYZ

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C—Love Story Hour
KMBC KMOX WABC WADC WBBM
WCAO WCAU WDRC WEAN WFBL
WGN WHK WJAS WKBW WKRC WMAL WNAC WOWO WSPD WXYZ R — Sherlock Holmes CFCF CKGW KSD WBEN WCAE WCSH WDAF WEAF WEEL WENR WFI WGY WHO WJAR WOC WOW

WRC WSAI WTAG WTAM WTIC B — Maxwell House Ensemble KDKA KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSL

KSTP KTAR KWK KYW WAPI WBAL WBAP-WBZA WEBC WFLA WGAR WHAM WHAS WIOD WJAX WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC.

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C-H.S.M. Trumpeters KFJF KLZ KMBC KMOX KRLD WAAB WABC WADC WBBM WCAO WCCO WDRC WDSU WEAN WFBL WGST WHK WJAS WKBW WKRC WLAP WMAL WMT WOWO WSPD R- Lucky Strike, See Tuesday

WHAP WMAL WMI WOWO WSPD
R — Lucky Strike, See Tuesday
B — A. & P. Gypsies
KDKA KWK WBAL WBZA WGAR
WHAM WJR WJZ WLW WMAQ E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Music Satisfies, See Monday

B — Paris Night Life, See Tuesday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marge, See Monday C — Arthur Jarrett

KLRA WAAB WABC WADC WBIG WBRC WBT WCAO WDAE WDBJ WDOD WDRC WEAN WFAN WFBL WHEC WHP WIP WJAS WKBN WKBW WLAC WLBW WLBZ WMAL WODX WOKO WORC WOAM WREC WTAR WTOC

B — Pickens Sisters, See Monday E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy. See Monday C — Howard Barlow, See Monday R — Jesse Crawford, See Tuesday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 R — Alice Joy, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Geo. Olson, Orchestra, See Tuesday C — Morton Downey, See Monday

E-11:45 p.m., C-10:45, M-9:45, P-8:45 C — Bing Crosby KDYL KFAB KMBC KOH KDYL KFAB KFPY KLRA KLZ
KMBC KOH KOIN KOL KVOR
WAAB WABC WADC WBCM WBCM
WBT WCAH WCAO WCAU WDAE
WDBJ WDOD WDRC WDSU WEAN WFBL WFBM WGL WHK WHP WIBW WISN WKBN WKBW WKRC WLAC WLAP WLBW WLBZ WMAL WFBM WGL WHK WMBD WMT WNAX WNOX WODX WOKO WORC WPG WQAM WREC WSBT WSPD WTAR WTOC WXYZ R - Baron Lee and Orchestra, See Mon.

E-12:00 m., C-11:00, M-10:00, P-9:00
C-Guy Lombardo, Royal Canadians
KDYL KFH KGB KLZ
KMBC
KSCJ KTRH KVOR WABC
WCCO WEAN WFBL WHK WHP
WISN WKBN WKBW WKRC WLAP
WLBW WMT WNAC WNAX WOKO E-12:05 a.m., C-11:05, M-10:05, P-9:05 R - Coon-Sanders, See Wednesday

E-12:30 p.m., C-I1:30, M-10:30, P-9:30 C - Joe Reichman and Orchestra KDYL KGB KLZ KMBC KYOR WABC WBBM WCAU WCCO WEAN WFBL WFBM WGL WIBW WISN WKBN WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO

WSBT WSPD B - Jones and Hare, See Monday

E-12:45 p.m., C-11:45, M-10:45, P-9:45 B — Stebbins Boys, See Monday

FRIDAY

E-8:00 a.m., C-7:00, M-6:00, P 5:00 R — Gene and Glenn, See Monday E-8:15 a.m., C-7:15, M-6:15, P-5:15 B — Phil Cook, See Monday

Friday—Continued E-8:30 a.m., C-7:30, M-6:30, P-5:30 R — Cheerio, See Monday E-9:00 a.m., C-8:00, M-7:00, P-6:00 R — Gene and Glenn, See Monday E-9:15 a.m., C-8:15, M-7:15, P-6:15 B - Phil Cook, See Monday E-10:15 a.m., C-9:15, M-8:15, P-7:15 B — Clara, Lu and Em, See Monday E-11:45 a.m., C-10:45, M-9:45, P-8:45 C — Ben Alley, See Monday E-12:00 m., C-11:00, M-10:00, P-9:00 R — General Electric, See Monday E-12:30 p.m., C-11:30, M-10:30, P-9:30 B - Farm and Home, See Monday E-4:30 p.m., C-3:30, M-2:30, P-1:30 R.— Lady Next Door, See Monday C-4:15, M-3:15, P-2:15 E-5:15 p.m., C-4:15, M R — Skippy See Monday E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Orphan Annie, See Monday E-6:00 p.m., C-5:00, M-4:00, P-3:00 R — Waldorf Orchestra, See Monday B - Raising Junior, See Sunday E-6:30 p.m., C-5:30, M-4:30, P-3:30 B — Royal Vagabonds, See Monday E-6:45 p.m., C-5:45, M-4:45, P-3:45 B — Lowell Thomas, See Monday B — Orphan Annie, See Monday C — Bing Crosby, See Monday E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Myrt and Marge, See Monday B - Amos 'n' Andy, See Monday Salon Singers KFSD KFYR KGHL KGO KOA KOMO KTAR WCFL WCSH WEAF WFBR WJAR WWJ E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Maxwell House, See Monday B — Esso Program, See Wednesday R - Campbell-Lanin, See Monday E-7:30 p.m., C-6:30, M-5:30, P-4:30 R — Alice Joy, See Monday C - Easy Aces, See Monday B -- Stebbins Boys, See Monday E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Morton Downey, See Monday - The Goldbergs, See Monday B - Jones and Hare, See Monday E-8:00 p.m., C-7:00, M-6:00, P-5:00 C-Bath Club, See Monday R -- Cities Service Orchestra KGO KGW KHQ CKGW KECA KOA KOMO KSD KSL KSTP KTHS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WGY WHO WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ KPRC B - Nestle's Program KDKA KOIL KWK WBAL WBZA WCKY WGAR WHAM WJR WJZ WLS WREN E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Singin' Sam, See Monday C — Modern Male Chorus KGB KLRA WBRC WBT WDAE WDBJ WDBO WDOD WLAC WNOX WPG WQAM WREC WTAR WTOC E-8:30 p.m., C-7:30, M-6:30, P-5:30 C—Today and Yesterday, Drama KMBC KMOX WABC WADC WCAU WCAU WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOKO WOWO WSPD WXYZ B — Smith Bros., Trade and Mark WBAL WGAR WJR WJZ WLS WLW E-8:45 p.m., C-7:45, M-6:45, P-5:45 B — Sisters of Skillet, See Tuesday

WRR WSPD WTAR WXYZ WRK WSPD WIAR WARE

R—Cliquet Club

KSD WBEN WCAE WCSH WDAF

WEAF WEEI WGY WHO WJAR

WLIT WLS WOC WOW WRC WSAI WTAG WTIC WWJ B — Friendship Town
CFCF CKGW KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KWK KYW WAPI WBAL WBZA WDAY WEBC WFLA WGAR WHAM WHAS WIBA WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC E-9:30 p.m., C-8:30, C - To the Ladies WCAO WCAU WCCO WDRC WEAN
WFBL WGN WGST WHK WJAS
WKBW WKRC WMAL WNAC WOKO WOWO WSPD WXYZ R—Pond's Program, Leo Reisman KSD WBEN WCAE WCSH WDAF WEAF WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM B — Armour Program KDKA KFI KGO KGW KHO KOA KOIL KOMO KPRC KSL KSTP KWK KYW WAPI WBAL WBZA WEBC WFAA WGAR WHAM WHAS WIOD WJAX WJDX WJR WJZ WEBC WFAA WGAR WHAM WHAS WIOD WJAX WJDX WJR WJZ KWY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ E-9:45 p.m., C-8:45, M-7:45, P-6:45 C—Friendly Five Footnotes KFJF KLZ KMBC KMOX KRLD WABC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WGN WHK WJAS WKBW WKRC WLAC WMAL WMT WNAC WNOX WREC E-10:00 p.m., C-9:00, M-8:00, P-7:00 — Beau Bachelor C—Beau Bachelor
KDB KDYL KERN KFBK KFJF
KFPY KFRC KHJ KLZ KMJ KMOX
KOIN KOL KRLD KWG WAAB
WABC WADC WBBM WBT WCAO
WCAU WCCO WDRC WEAN WFBL
WHEK WIAS WKFBW WKFBC WAAA WEAF

WHK WJAS WKBW WKRC WMAL WOKO WOWO WREC WSPD WXZY R — Sampler Orchestra, Andy Sannella KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WWJ - Paul Whiteman's Chieftains KDKA KHQ KFI KFSD KFYR KHQ KOA KOIL I KOMO KPRC KSL KSTP KTAR KVOO KWK WBAL WBAP WBZA WCKY WDAY WEBC WENR WFLA WGAR WHAM WHAS WIOD WJAX WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ E-10:30 p.m., C-9:30, M-8:30, P-7:30

WIOD WIS

WJAX

M-7:30, P-6:30

C - Music Satisfies, See Monday R - RKO Theatre of the Air KFI KFSD KFYR KGO KGW KHQ KOA KOMO KSD KSL KTAR WBEN KOA KOMO KSD KSL KTAR WBEN WCAE WCSH WDAY WEAF WEEI WENR WFBR WFILA WGY WHAS WHO WIBA WIOD WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C—Pillsbury, Arthur Tracy
KFJF KMBC KMOX WABC WADC
WBT WCAO WCAU WCCO WDBJ
WDRC WEAN WFBL WGN WGST
WHK WJAS WKBW WKRC WMAL
WNAC WOKO WORC WOWO WREC
WDD WSDD WTAD WYY77
E-11:00 p.m., C-18:00, M-3:00, P-8:00 E-11:00 p.m., C-10:00, M-9:00, P-8:00 R — Vincent Lopez and Orchestra KSD WBEN WCFL WCKY WDAF WEAF WEEI WIOD WJAR WOW WRC WTAM WWJ WWNC C — Howard Barlow, See Monday B — Amos 'n' Andy, See Monday E-11:15 p.m., C-10:15, M-9:15, P-8:15 R — Alice Joy, See Monday C — Maxwell House, See Monday E-11:30 p.m., C-10:30, M-9:30, P-8:30 C-George Olsen, See Tuesday C - Morton Downey, See Monday E-12:00 m., C-11:00, M-10:00, P-9:00 C — Ben Bernie, See Monday E-12:05 a.m., C-11:05, M-10:05, P-9:05 R - Coon-Sanders, Orch., See Wed. E-12:30 p.m., C-11:30, M-10:30, P-9:30 C—Isham Jones and Orchestra
KDYL KFPY KGB KLZ KMBC
KOH KVOR WABC WCAU WCCO
WEAN WFBL WFBM WGL WHK
WIBW WISN WKBN WKBW WKRC
WLAP WLBW WMAL WMBD WMT
WNAC WNAX WOKO WSBT WSPD B — Jones and Hare, See Monday E-12:45 p.m., C-11:45, M-10:45, P-9:45 B - Stebbins Boys, See Monday

SATURDAY E-8:00 a.m., C-7:00, M-6:00, P R — Gene and Glenn, See Monday P-5:00 E-8:15 a.m., C-7:15, M-6:15, P-5:15 B — Phil Cook, See Monday

E-8:30 a.m., C-7:30, M-6:30, P-5:30 R — Cheerio, See Monday E-9:00 a.m., C-8:00, M-7:00, P-6:00 R — Gene and Glenn, See Monday

E-9:15 a.m., C-8:15, M-7:15, P-6:15 B — Phil Cook, See Monday E-12:30 p.m., C-11:30, M-10:30, P-9:30

B - Farm and Home, See Monday E-4:45 p.m., C-3:45, M-2:45, P-1:45 R - Lady Next Door, See Monday, 4:30 E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Skippy, See Monday

E-5:30 p.m., C-4:30, M-3:30, P-2:30 R — Station KUKU

WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLIT WOC WOW WRC WTAG WTAM WTMJ

E-5:45 p.m., C-4:45, M-3:45, P-2:45 C — Connie Boswell C-Conne boswell KFBK KFH KFJF KGB KLYL KFBK KFH KFJF KGB KLRA KLZ KMBC KMOX KOH KOIN<sup>J</sup> KVI KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WCAH WCAH WCAU WORD WFBL WGL WDOD WDRC WDSU WFBL WGL WHEC WHP WIBW WISN WJAS WKBH WKBN WKBW WKRC WKBH WKBN WKBW WKRC WLAC WLAP WLBW WLBZ WMT WOKO WORC WPG WREC WSBT WSPD WTAQ WTAR WTOC WWVA B - Orphan Annie, See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3: R — Waldorf Orchestra, See Monday B - Raising Junior, See Sunday

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Leon Belasco and Orchestra KFAB KFBK KFH KFJF KFRC KGB KHJ KLZ KOH KOL KSCJ

Saturday—Continued
KVI KVOR WAAB WABC WBCM
WBIG WBT WCAH WCAO WDBJ
WDOD WDSU WFBL WFBM WHW
WGST WHP WIBW WISN WJAS
WKBN WKBW WLAC WLAP WLBW
WLBZ WMBD WMT WNOX WOKO
WORC WREC WSPD WTOC WXYZ E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Political Situation in Washington
KDYL KFBK KFH KFJF KFRC
KGB KHJ KMBC KMOX KOH
KSCJ KVI KVOR WABC WADC
WBCM WBIG WBT WCAH WCAO
WCAU WDAE WDBJ WDBO WDOD
WDRC WDSU WEAN WFBL WFBM
WCFP WGST WHEC WHP WIRW C-6:00, M-5:00, P-4:00 WGR WGST WHEC WHP WIBW WJAS WKBH WKBN WKRC WLAC WLAP WLBW WLBZ WMAL WMT WNAC WNAX WOAM WREC WTAR WTOC WWVA WXYZ

B — Amos'n' Andy, See Monday
R — O'Leary's Irish Minstrels
KEX KGA KJR KOA KPO WEAF
WEEI WKY WSB WTAG WTIC

E-7:15 p.m., C-6:15, M-5:15, P-4:15
R—Laws That Safeguard Society
KECA KFSD KFYR KGA KJR
KOA KPO KTAR KTHS WAPI
WBEN WCSH WDAY WEAF WEBC
WENR WFI WFLA WHO WIOD
WJAR WJAX WJDX WOC WOW
WPTF WRVA WSAI WTAG WIIC
PT TATES LET B - Tastyeast Jesters, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Bright Spot, Guy Lombardo KMBC KMOX WABC WADC WCAO WCAU WCCO WDRG WEAN WFBL WGN WGR WHK WJAS WKRC WGN WGR WHK WJAS WKRC WMAL WNAC WOKO WSPD WXYZ R - Alice Joy, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Morton Downey, See Monday R — The Goldbergs, See Monday

K—I he Velddergs, see Mionay
E-8:00 p.m., C-7:00, M-6:00, P-5:00
C—Fray and Braggiotti, Pianists
CFRB KDYL KFAB KFH KFJF
KFRC KGB KHJ KLRA KMBC
KOH KOL KRLD KSCJ KVI KVOR
WABC WADC WBCM WBIG WBT
WCAH WCAO WCAU WDAE WDBJ
WDBD WDOD WDRC WDSU WFBL
WFBM WGR WGST WHEC WHP
WIBW WISN WJAS WKBN WKRC
WLAC WLAP WLBZ WMT
WNAC WNAX WOKO WPG WREC
WSPD WTAQ WTAR WTOC WWVA
WXYZ KFBK WXYZ KFBK

R - Civic Concerts CKGW KSD WCAE WCSH WDAF WEAF WFBR WFI WHO WIOD WIS WJAR WJAX WMAQ WOC WOW WRC WTIC WWJ WWNC

B — Danger Fighters KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KWK WAPI KSL KSTP KTAR KWK WAPI WBAP WCKY WDAY WEBC WHAM WIBA WJDX WJZ WKY VMC WOAI WREN WSB WMC WOAI WSM WSMB WTMJ

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Abe Lyman, See Tuesday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Hoosier Editor CFRB KDYL KFH KFJF KFPY KGB KHJ KLZ KMBC KMOX KOH KRLD KSCJ KTSA KVOR WABC WADC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBO

WEAN WFBL WGR WHEC WHP
WIBW WISN WJAS WKBN WLAP
WLBW WLBZ WMAL WMT WNAC
WNAX WOKO WORC WPG WQAM
WREC WTAQ WTAR WTOC WWVA
R—Radio in Education

KFI KFSD KFYR KGHL KGIR KGO KFI KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOMO KPRC KSD
KSL KSTP KTAR KYW WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFI WFLA
WGY WHAS WHO WIBA WIOD
WJAR WJAX WJDX WKY WMC
WOC WOW WRC WRVA WSAI
WSB WSM WSMB WTAG WTAM
WTIC WTMJ WWJ WWNC WIS
R PORTE CONVERS FORSY

B - Dance, Countess D'Orsay CFCF CKGW KDKA KWK WBAL WBZA WGAR WHAM WJR WJZ

WLW WMAQ WREN
E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Vaughn De Leath
KDYL KFAB KFBK KFH KFJF KDYL KFAB KFBK KFH KFJF KFPY KGB KHJ KLRA KLZ KMOX KVOR WABC KOHKVI WBCM WBIG WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDOD WDRC WDSU WEAN WFBL WFDM WGR WHEC WHK WHP WIBW WISN WJAS WKBN WLAC WLAP WLBW WLBZ WMAL WMT WNAC WNOX WORC WOWO WPG WQAM WREC WSBT WTAR WTOC WXYZ WOKO

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Carborundum Band KMOX WAAB WABC WCAU WGN WHK WKBW WXYZ

WHK WKBW WXYZ

R—Goodyear, Pryor's Band

KFI KFSD KFYR KGHL KGIR KGO

KGW KHQ KOA KOMO KPRC KSD

KSL KSTP KTAR KYW WAPI

WBAP WBEN WCAE WCSH WDAF

WDAY WEAF WEBC WEEI WFBA

WFI WFLA WGY WHAS WHO

WIBA WIOD WIS WJAR WJAX

WINY WYW WOOD WOOD WOOD WJDX WKY WMC WOAL WOC WOW WRC WRVA WSAI WSB WSMB WTAG WTAM WTIC WTMJ WWJ

B - Sinclair Weiner Minstrels KDKA KOIL KWK WBAL WGAR WHAM WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C—Smith Bros., Trade and Mark KFH KFJF KLZ KMBC WAAB WABC WADC WCAO WCAU WCCO WDRC WEAN WGN WGST WHEC WHK WHP WJAS WKBW WKRC WLAP WLBZ WMT WOWO WSPD

WILLIA WILLIA WHI WOWN WSFE R—Club Valspar CFCF CKGW KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

B - First Nighter KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KSL KSTP KTAR KWK KYW WBAL WBZA WDAY WEBC WGAR WHAM WJR WJZ WLW WREN WTMJ

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Ruth Etting, See Wednesday

R — Lucky Strike, See Tuesday B — Happy-Rose Orchestra, See Tues. E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Public Affairs Institute

KDYL KFBK KFH KFJF KLRA KLZ KMBC KOH KSCJ KVOR WAAB WABC WADC WBCM WBIG WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFIW WGST WHEC WHP WIBW WISN WAS WKBH WKBN WKBW WKRC WLAC WLAP WLBW WLBZ WMAL WMBD WMT WNAX WNOX WOKO WORC WPG WREC WSPD WTAQ WTAR WTOC WWVA WXYZ

B — Snoop and Peep CFCF CKGW KOIL KWK WCKY WGAR WHAM WJR WJZ WREN E-10:30 p.m., C-9:30, M-8:30, P-7:30 B — Hollywood Nights, See Wednesday E-10:45 p.m., C-9:45, M-8:45, P-7:45 B—Twenty Fingers of Harmony CFCF KDKA WBAL WHAM WJR WJZ WREN

C - Arthur Jarrett, See Thursday E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday

B — Amos 'n' Andy, See Monday
C — Don Redman, Orchestra
CFRB KDYL KFJF KFPY KFRC
KLZ KMBC KOH KSCJ KVOR
WAAB WABC WACO WADC WBRC
WBT WCAO WCAU WDAE WDBO
WDRC WEAN WFBL WHEC WHP
WIBW WISN WKBN WKBW WKRC
WLAP WLBW WLBZ WMT WNAX
WOKO WORC WQAM WREC WSPD
WTAR WTOC WWVA WXYZ
R — Jesse Crawford, See Tuesday R — Jesse Crawford, See Tuesday

E-11:15 p.m., C-10:15, M:9:15, P-8:15 R — Alice Joy, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Morton Downey, See Monday C— Morton Downey, See Monday
R— Buddy Rogers and Orchestra
KEX KGA KGHL KJR KPO KSD
WBEN WCAE WCFL WCKY WDAF
WEAF WEEI WFBR WFI WGY
WHO WIBA WKY WOC WRC WTIC

WWJ E-12:00 m., C-11:00, M-10:00, P-9:00 C — Guy Lombardo, See Thursday

E-12:05 a.m., C-11:05, M-10:05, P-9:05 R - Coon-Sanders, See Wednesday

E-12:30 a.m., C-11:30, M-10:30, P-9:30 C— Harold Stern, Orchestra KDYL KFH KFPY KGB KLZ KMBC KOH KOL KSCJ KVOR WABC WEAN WFBL WISN WKBN WKBW WKRC WLAP WLBW WMT WNAC WNAX WOKO WSPD

#### SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30 R — Major Bowes' Capitol Family KEX KFYR KGA KGHL KJR KOA KPO KPO KPRC KSTP WAPI WCSH WDAF WDAY WEAF WENR WFBR
WFI WFLA WGY WHAS WHO
WIOD WJAR WKY WMC WOC
WPTF WRC WSM WSMB WTAM
WTIC WTMJ WWJ WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30 C — International Broadcast C — International Broadcast
CFRB KFH KFJF KFPY KLZ KMBC
KOH KOL KSCJ KTSA KVI KVOR
WAAB WABC WADC WBT WCAH
WCAO WCAU WCCO WDAE WDBC
WDRC WFBL WGR WHEC WHK
WHP WIBW WISN WJAS WKBN
WIAP WLBW WLBZ WMAL WMT
WOKO WORC WPG WQAM WSPD
WTAO WTAR WWAY WTAQ WTAR WWVA

B — Careless Lover, Negro Drama KEX KGA KJR KOA KOIL KPO KPRC KSL KTAR WCKY WHAM WJZ

E-12:45 p.m., C-11:45, M-10:45, P-9:45 C — Street Singer CFRB KFH KFJF KFPY KLZ KMBC KOH KOL KSCJ KTSA KVI KVOR Sunday—Continued
WABC WADC WBRC WCAH
WCAO WCAU WCCO WDAE WDBO
WFBL WGR WHEC WHP WIBW
WISN WKBN WLAP WLBW WLBZ
WMAL WMT WOKO WORC WOWO
WPG WQAM WSPD WTAQ WTAR
WTOC WWVA

E-1:00 p.m., C-12:00, M-11:00, P-10:00 C — Cathedral Hour

C—Cathedrai rour
CFRB KDYL KFH KFJF KFPY
KLZ KMBC KMOX KOH KOL
KRLD KSCJ KTRH KVI WAAB
WABC WBT WCAH WCAU WCCO
WDAE WDBO WDRC WFBL WGR
WHEC WHP WIBW WJAS WKBN
WLAP WLBW WLBZ WMAL WMT
WOKO WPG WQAM WREC WTAQ
WTAR WTOC WWVA WXYZ

B — Walter Damrosch Symphony
KDKA KFI KFSD KFYR KGO
KGW KOMO KSL KSTP KVOO
KWK WBAL WBZA WDAY WEBC
WFLA WGAR WHAS WIBA WIOD
WIS WJDX WJR WJZ WKY WLW
WMAQ WOAI WPTF WREN WRVA
WSB WTMJ WWNC

E-1:30 p.m., C-12:30, M-11:30, P-10:30 R—Silver Flute WBEN WCAE WDAF WEAF WFI WGY WJAR WRC WTAG WTIC WWJ

E-1:45 p.m., C-12:45, M-11:45, P-10:45 R — Pop Concert, Walter Logan KPYR KGO KSD KVOO WCAE WDAY WEAF WFAA WHAS WIBA WIOD WIS WJAX WRVA WSB WSM WTAM WTMJ WWN WNO

E-2:00 p.m., C-1:00, M-12:00, P-11:00 C — Eight Sons of Eli

KFAB KMBC KMOX KRLD WABC
WADC WBBM WBRC WBT WCAO
WCAU WCCO WDRC WDBU WEAN
WGR WHK WJAS WKRC WLAC
WMAL WNAC WOKO WOWO

WMAL WARD WAS NOT WAS

E-2:15 p.m., C-1:15, M-12:15, P-11:15
R — Sunday Bright Spot
CFCF CKGW KFI KFSD KFYR
KGO KGW KHQ KOA KPRC KSD
KSL KSTP KTAR KVOO KYW
WAPI WBEN WCAE WCSH WDAF
WDAY WEAF WEBC WEEI WFAA
WFBR WFLA WGY WHAS WHO
WIOD WJAR WJAX WJDX WKY
WLIT WMC WOAI WOC WOW
WPTF WRC WRVA WSAI WSB
WSM WSMB WTAG WTAM WTIC
WTMJ WWJ

E-2:30 p.m., C-1:30, M-12:30, P-11:30 C--Church of the Air KDYL KFH KFJF KFPY KGB KLZ KMBC KOH KOL KSCJ KTRH KVOR WAAB WABC WACO WBT WCAO WCCO WDAE WDBO WDRC WFBL WHEC WHP WIBW WJAS WKBN WKBW WKRC WLAP WLBW WLBZ WMAL WMT WOKO WORC WQAM WREC WTAQ WTAR WTOC R--Moonshipe and Horeywickle

R-Moonshine and Honeysuckle
KSD WCAE WCKY WCSH WDAF
WEAF WEEI WFBR WGY WJAR
WMAQ WRC WTAG WTAM WTIC
WWJ

B—Yeast Foamers, Herbie Kay
KDKA KFI KFSD KGHL KGIR
KGW KHQ KOA KOIL KPO KPRC
KSL KSTP KTAR KTHS KVOO KWK
KYW WAPI WBAL WBZA WEBC
WFAA WFLA WGAR WHAM WHAS
WIOD WIS WJAX WJDX WJR WJZ

WKY WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

R — WAYDE KING AND Orchestra KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

B — National Youth Conference KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KTAR KTHS KVOO KWK WAPI WBAL WCKY WFLA WGAR WIBA WIOD WIS WJAX WJDX WJZ WKY WMAQ WMC WOAI WPTF WREN WRVA WSB WSMB WWNC

E-3:15 p.m., C-2:15, M-1:15, P-12:15 C—N.Y. Philharmonic Symphony CFRB KDYL KFAB KFBK KFH KFJF KFRC KGB KLRA KLZ KMBC KOH KOIN KSCJ KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDOD WDSU WEAN WFBL WFBM WFIW WGST WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WKBW WKRC WLAC WLAP WLBZ WMAL WMBD WMT WNOX WODX WOKO WORC WQAM WREC WSPD WTAQ WTAR WTOC WWYA WXYZ

E-3:30 p.m., C-2:30, M-1:39, P-12:30 R — Dr. S. Parkes Cadman KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTHS KYW WBEN WCAE WCSH WDAF WDAF WBC WEI WFBR WFLA WGY WHAS WIOD WIS WJAR WJAX WJAX WJAX WJAX WSA WJAX WSA WSAI WSB WSA WSAB WTAG WTAM WTIC WWJ WWNC KVOO

B — Swift Garden Party<sup>1</sup> KOIL KWK WBAL WBZA WGAR WJR WJZ WLW WMAQ WREN

E-4:00 p.m., C-3:00, M-2:00, P-1:00 B — Travelogue CFCF CKGW KDKA KOIL KWK KYW WBAL WBZA WJZ WREN

E-4:30 p.m., C-3:30, M-2:30, P-1:30 R — Davey Tree Hour CFCF CKGW WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

B—Sheaffer Lifetime Revue
KDKA KFI KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KTAR KTHS KVOO KWK
WAPI WBAI. WBAP WCKY WDAY
WEBC WHAM WHAS WIDA WJDAW
WJZ WKY WMAQ WMC WOAI
WREN WSB WSM WSMB WTMJ

E-5:00 p.m., C-4:00, M-3:00, P-2:00 C-Real Folks KFJF KMBC KRLD KTRH KTSA WABC WADC WBBM WBT WCAO WCAU WHK WJAS WKRC WMAL WOWO WSPD WXYZ WGST

WOWO WSFLD WALL WGGI B — National Vespers, Dr. Fosdick CKGW KFI KFSD KFYR KGIR KGO KGW KHQ KOMO KPRC KSTP KTHS KVOO KWK WBAL WBZA WCKY WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJDX WJZ WKY WMAQ WOAI WPTF WREN WRVA WSB WSM WSMB WWNC

E-5:30 p.m., C-4:30, M-3:30, P-2:30 C — Blue Coal Revue CFRB WAAB WABC WBRC WCAO WCAU WEAN WFBL WGR WHEC WHP WOKO WORC

WHP WOKO WORC

R—General Electric Circle

KECA KEX KFYR KGA KJR KOA

KPO KPRC KSD KSL KSTP KTAR

KVOO WAPI WBAP WBEN WCAE

WOSH WDAF WDAY WEAF WEBC

WEEL WENR WFBR WFI

WFLA

WGY WHAS WHO WIBA

WIDX WKY

WMC WOAL WOC WOW WFTF

WRC WRVA WSAI WSB WSM

WSMB WTAG WTAM WTIC WTMJ

WWJ WWNC

B—Simoniz Guardsmen
KOIL KWK KYW WBAL WBZA
WGAR WHAM WJZ WLW WREN

C—Chicago Knights

KDYL KFAB KFBK KFJF KFPY

KGB KHJ KLZ KOH KOL KRLD

KTSA KVOR WBBM WCAH WIBW

WJAS WKBH WLAP WMT WWVA

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Four Eton Boys, Irene Beasley WBIG WBRC WBT WDAE WDBJ WDOD WDSU WLAC WNOX WQAM WREC WTAR WTOC R — Catholic Hour

CFCF CKGW KPRC KSD KSTP KTHS KVOO WBEN WCAE WCSH WDAF WEAF WEBC WFAA WFLA WGY WHAS WHO WIOD WJAR WJDX WKY WLIT WLS WMC WOAI WOC WOW WRC WSAI WSB WSMB WTAG WTAM WTIC WTMJ WWJ B -- Raising Junior

WTAG WTAM WTIC WTMJ WWJ
B-Raising Junior
KWK KYW WBAL WEBC WGAR
WHAM WIBA WJR WJZ

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Columbia Concerts Program KVI WAAB WABC WADC WBIG WBRC WBT WCAU WDAE WDOD WDSU WEAN WFBL WFIW WGST WHEC WHP WJAS WKBW WLAP WLBZ WNOX WODX WOKO WQAM WREC WTAR WTOC

B-"K-7, War Drama
KWK WCKY WJR WJZ WMAQ
WREN
C-Barredall M

C — Barnsdall Musical Memories KFH KFJF KMBC KMOX KSCJ WCCO WGL WGN WIBW WISN WMT WSPD WXYZ

 Sunday—Continued

WNAX WNOX WOKO WPG WQAM WREC WSBT WSPD WTAR WTOC WWVA

B - Willys-Overland Orchestra CFCF KDKA KFI KFSD KFYR KGHL KGO KGW KHQ KOA KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WBAL WBZA WCKY WDAY WEBC WGAR WHAM WHAS WIBA WJDX WJR WJZ WMC WOAI WREN

WSB WSM WSMB WTMJ R — L'Heure Exquise CFCF WEAF WFBR WFLA WGY WIS WJAR WLS WRVA WSAI WTAG WTIC WWJ WWNC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 E-7:15 p.m., C-6:15, M-5:15, P-4:15
R— Resail Program
CFCF KFI KFYR KGHL KGIR KGO
KGW KHQ KOA KOMO KSD KSL
KVOO WCAE WCSH WDAF WDAY
WEAF WEBC WFBR WFLA WGY
WIOD WIS WJAR WJAX WJDX
WKY WLIT WMAQ WMC WPTF
WRC WRVA WSAI WSB WSM
WSMB WTAG WTIC WTMJ WWJ
WWNC

E-7:30 p.m., C-6:30, M-5:30, P-3:30 C-Luden's Novelty Orchestra C-Luden's Novelty Urchestra
KDYL KLZ KMBC KMOX KRLD
WABC WBT WCAO WCAU WCCO
WDSU WFBM WGN WGR WGST
WHK WKBH WKRC WMAL WNAC
WNAX WREC WXYZ

B — Three Bakers

CFCF KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIRA WIOD WIDY WID WHAS WIBA WIOD WJDX WJR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — The Sylvanians KMBC KMOX WABC WCAO KMBC KMOX WABC WCAO WCCO WDRC WGL WGN WGR WJAS WKRC WNAC WOKO WXYZ WCAU

E-8:00 p.m., C-7:00 M-6:00, P-5:00 C — Pennzoil Parade C—remizen rarade KFJF KLRA KMOX KTSA WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WGST WHK WJAS WKRC WMAL WNAC WNOX WOKO WSPD WXYZ R—Chesa Scham

R - Chase & Sanborn CFCF CKGW KPRC KSD KSTP KTHS KVOO WBEN WCAE WCSH WDAF WEAF WEBC WFAA WFLA WGY WHAS WHO WJDX WKY WLIT WOAI WOC WOW WHO WIOD WLIT WLS WOW WRC WJAR WMC WSAI WSB WSMB WTAG WTAM WTIC WTMJ WWJ

B - Enna Jettick Melodies

CFCF CKGW KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KGW KPRC KHQ KOA KOIL KOMO KSL KSTP KTAR KTHS KWK KYW WBAL WBZA KVOO WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WICHAWITH WHAM WIR WJZ WKY WLW WMC WOAL WREN WRVA WSB WSM WSMB WTMJ WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15 B - Collier's Radio Hour B — Collier's Radio From KHQ KOA KFI KGO KGW KHQ KOA

CFRB KFBK KFJF KFRC KGB
KHJ KLRA KLZ KMBC KMOX
KOH KOIN KVOR WABC WADC
WBCM WBIG WBRC WBT WCAH
WCAO WCCO WDAE WDBJ WDBO
WDRC WDSU WEAN WFAN WFBL
WFBM WGR WGST WHK WHP
WIBW WIP WISN WJAS WKBN
WLAP WLBW WLBZ WMAL WMT
WNAX WODX WOKO WORC WQAM
WREC WSPD WTAR WTOC WXYZ

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Angelo Patri, "Your Child" KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ

C — Col. Stoopnagle and Budd WBCM WDAE WDBO WDRC WQAM WREC WTAR WTOC

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Everready, Jack Denny KDB KDYL KERN KFBK KFPY KDYL KERN KFSK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KWG WABC WADC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WGST WHK WJAS WKRC WMAL WNAC WOKO WOWO WRR WSPD WXYZ

WSI WALL R — Our Government, David Lawrence KVOO WCSH WEAF WENR WFAA WFBR WFI WFLA WGY WOOW WIS WJAR WJDX WOC WOW WRC WSAI WWNC KSD

E-9:15 p.m., C-8:15, M-7:15, P-6:15 R — Album of Familiar Music KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS KVOO WAPI WBEN
WCAE WCSH WDAY WEAF WEBC
WENR WFBR WFI WFLA WGY
WHAS WHO WIBA WIOD WJAR
WJAX WJDX WKY WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

B — Bayuk Stag Party KDKA KWK KYW WBAL WBZA WGAR WJR WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C—Count Von Luckner, "Sea Devil" CFRB KDYL KFPY KFRC KHJ KLZ KMOX KOIN KOL WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ KMBC

C—Ann Leaf at the Organ
WBCM WBRC WBT WDAE WDBO
WQAM WREC WTAR WTOC

E-9:45 p.m., C-8:45, M-7:45, P-6:45 R — Buick Revelers KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KUAR KOMO KPRC KSD KSL KSTE KTAR WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WENR WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC

WTMJ WWJ

B — Making Movies, Ray Knight
KDKA KOIL KWK KYW WBAL
WBZA WGAR WHAM WJR WJZ WLW WREN

WBZA WGAR WHAM WJR WJZ
WLW WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C— The Metropolitans
CFRB KFBK KFJF KFRC KGB
KHJ KLRA KLZ KMBC KMOX
KOH KOIN KVOR WABC WADC
WBGW WKRC WLAP WLBZ WMPL
WBCM WBIG WBRC WBT WCAH
WOK OWDRE WDRC WMPD
WKBW WKRC WLAP WLBZ WMPL
WKBW WKRC WLAP WLBZ WMPL
WKBW WKRC WLAP WBRZ WMPL WOKO WORC WOWO WREC WSPD

> E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Old Singing Master KDKA KFI KFSD KGO KGW KHQ KDKA KFI KFSD KGO KGW KHQ
> KOA KOLL KOMO KTAR KWK
> WBAL WBZA WGAR WHAM WJZ
> WLW WMAQ WREN
> R—Gordon String Quartet
> CKGW KTBS WBEN WCAE WCSH
> WDAF WEFI WFI WGY
> WJAR WOW WRC WTAG WTAM

E-10:30 p.m., C-9:30, M-8:30, P-7:30 — International Revue

KMOX WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHK WJAS WKBW WKRC WMAL WOKO WREC WRR WSPD WXYZ

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Ernest Hutcheson, Pianist CFRB KDYL KFAB KFBK KFH CFRB KDYL KFAB KFBK KFH
KFJF KFPY KGB KLRA KLZ KMOX
KOH KOIN KVOR WAAB WABC
WADC WBCM WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDOD
WDRC WDSU WEAN WFBL WFBM
WGL WGR WHEC WHK WHP
WIBW WISN WJAS WKBN WLAC
WLAP WLBW WJ.BZ WMAL WMT
WNAX WNOX WOKO WORC WOWO
WPG WQAM WREC WSBT WSPD
WTAR WTOC WXYZ
R — Sunday at Seth Parker's

R — Sunday at Seth Parker's CKGW KFSD KFYR KGHL KGIR CAGW KFSD AFYR RGHL RGIR KGO KGW KOA KPRC KSL KSTP KTAR KYW WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAM WTMJ WWJ WWNC

E-11:15 p.m., C-10:15, M-9:15, P-8:15 R—Ralph Kirbery, Dream Singer WCAE WDAF WEAF WENR WFBR WFI WGY WHO WOC WOW WWJ

E-11:30 p.m., C-10:30, M-9:30, P-8:30 KFJF KLRA WABC WADC WBCM
WBRC WBT WCAO WCAU WDAE
WDBJ WDOD WDRC WDSU WEAN WFBL WGL WGR WHEC WHP WIBW WISN WKBN WLAC WLBW WLBZ WMAL WMT WNOX WOKO WPG WQAM WREC WSPD WTAR WTOC WXYZ

C - Pennzoil Parade KDB KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOL KOY KWG

R — Jesse Crawford at Organ WCAE WCKY WDAF WEAF WENR WFBR WGY WHO WJAR WOC WOW WRC WTAM WWJ

E-12:00 m., C-11:00, M-10:00, P-9:00 C—Eddie Duchin, Casine Park Orch. KPH KOH KTRH WABC WCAU WCCO WEAN WFBL WGR WHP WIBW WISN WKBN WKRC WLAP WLBW WMT WNAC WNAX WOKO WSPD WTAR

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#### KEY

Frequency in kilocycles. Wavelengths in meters. Night power in watts in third column. Second column symbols: \*Verifies reception for postage or sends station stamp for 10c. †Verifies for postage; no stamp. \$ Stamp only. ‡ Does not verify. \$ Does not reply. \$ Verification 25c, reply card 10c. Fourth column symbols: D, Daytime only. Dn, Daytime but may use some evening hours. S, Sunday only. X, Has permit to increase power. † Uses greater power in daytime. CP, Has construction permit only. Z, Has permit to change frequency. Y, has permit to change location. These stations are synchronized. 1-2-3, Small figures indicate stations sharing time. a-b-c, Small letters indicate stations with two sets of calls. Some Canadian, Cuban and Mexican stations have odd frequencies; correct frequency shown in fourth column. Dashes (\_-\_) Official information not received.

E40 Irilaavalas EEE 6 matans	
540 kilocycles 555.6 meters	B B L L L L L L L L L L L L L L L L L L
500 + Windsor, Ontario	Essex Broadcasters, Ltd.
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       2R       St. Louis, Mo.         WGR       *       1000       C       Buffalo, N. Y.         WKRC       †       1000       C       Cincinnati, Ohio	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	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 Hollywood, Cal. KXA * 500 Seattle, Wash. TGW 50 Guatamala	Wichita Falls Broadcasting Co. KMTR Radio Corp. American Radio Tel. Co.
WEAO † 750 1 Columbus, Ohio WKBN * 500 1C Youngstown, Ohio WMAC _ 250 2a Syracuse, N. Y.	Ohio State University WKBN Broadcasting Corp. Clive B. Meredith Knickerbocker Broadcasting Co., Inc.
WMCA         *         500         3         New York City           WNAX         *         1000         C         Yankton, S. D.           WNYC         †         500         3         New York City           WSYR         _         250         2a         Syracuse, N. Y.           WWNC         *         1000         N         Asheville, N. C.	House of Gurney, Inc. Dept. of Plants and Structures Clive B. Meredith Citizens Broadcasting Co., Inc.
580 kilocycles 516.9 meters [	
CFCL 500	Dominion Battery Co. The Island Radio Co. Christian and Missionary Alliance The Dominion Battery Co. University of Alberta Dana McNeil State Agricultural College Topeka Broadcasting Assn., Inc. WOBU, Inc. WSAZ, Inc. Telegram Publishing Co.

590 kilocycles 508.2 meters		
CMW        1400       588       Havana, Cuba         KHQ        1000       +N       Spokane, Wash.         WCAJ       *       500       1       Lincoln, Nebr.         WBEI       †       1000       R       Boston, Mass.         WKZO       *       1000       D       Kalamazoo, Mich.         WOW       *       1000       1N       Omaha, Nebr.	Columbus Commercial & Radio Co. Louis Wasmer, Inc. Nebraska Wesleyan University Edison Elec. Illuminating Co. WKZO, Inc. Woodmen of the World	MTRS. 447.5
600 kilocycles 499.7 meters		DIAL '
CNRO † 500 Ottawa, Ont.  KFSD * 500 +N San Diego, Cal.  WCAC † 250 2+ Storrs, Conn.  WCAO * 250 C Baltimore, Md.  WICC * 250 2+ Bridgeport, Conn.  WMT * 500 C Waterloo, Iowa  WREC * 500 +C Memphis, Tenn.	Canadian National Railways Airfan Radio Corp. Conn. Agricultural College Monumental Radio, Inc. Bridgeport Broadcasting Station, Inc. Waterloo Broadcasting Co. WREC, Inc.	,
610 kilocycles 491.5 meters		
KFRC         *         1000         C         San Francisco, Cal.           VPN         -         500         Nassau, Bahama           WDAF         *         1000         N         Kansau, Bahama           WFAN         *         500         Ca         Philadelphia, Pa.           WIP         *         500         Ca         Philadelphia, Pa.           WJAY         †         500         D         Cleveland, Ohio	Don Lee, Inc. Development Board Kansas City Star Co. Keystone Broadcasting Co., Inc. Gimbel Bros. Co. Cleveland Radio Broadcasting Corp.	
620 kilocycles 483.6 meters		
KGW         *         1000         +N         Portland, Ore.           KTAR         *         500         +N         Phoenix, Arizona           KZRM         -         1000         618.5         Manila, P. I.           WFLA         *         1000         +Na         Clearwater, Fla.           WLBZ         *         500         C         Bangor, Maine           WSUN         *         1000         +Na         St. Petersburg, Fla.           WTMJ         *         1000         +N         Milwaukee, Wis.	Oregonian Publishing Co KTAR Broadcasting Co. Erlanger & Galinger, Inc. Chamber of Commerce Maine Broadcasting Co., Inc. Chamber of Commerce Milwaukee Journal	
630 kilocycles 475.9 meters		
CFCT * 50 Victoria, B. C. CJGX 500 Yorkton, Sask. CKOC * 500 +aZ Hamilton, Ont. CKTB 500 +aZ St. Catherines, Ont. CNRA * 500 Moncton, N. B. HIX 1000 Santo Domingo KFRU * 500 1 Columbia, Mo. WGBF † 500 1 Evansville, Ind. WMAL * 250 +C Washington, D. C. WOS * 500 1 Jefferson City, Mo. XETF 500 Veracruz, Ver.	Victoria Broadcasting Association Winnipeg Grain Exchange Wentworth Radio Broadcasting Co. Taylor & Bate, Ltd. Rafael Rodriquez Canadian National Railways Dominican Republic Stephens College Evansville on the Air, Inc. M. A. Leese Radio Corp. John D. Heiny Manuel Angel Fernandez & Cia.	CUT OUT ON DOTTED LINES
640 kilocycles 468.5 meters		Ð
CHRC - 100 645a Quebec, Que. CKCI † 100 645a Quebec, Que. CKCR - 100 645 Waterloo, Ont. CMHJ - 40 645 Cienfuegos, Cuba KFI * 50000 N Los Angeles, Cal. WAIU * 500 C Dn Columbus, Ohio WOI * 5000 D Ames, Iowa	E. Fontaine Le "Soleil," Ltd. Mitchell & Liddle Arturo Hernandez Earle C. Anthony, Inc. Associated Radiocasting Corp. State College of Agriculture	LINES
650 kilocycles 461.3 meters		
KPCB * 100 Dn Seattle, Wash. WSM * 5000 NX Nashville, Tenn.	Queen City Broadcasting Co. National Life & Accident Ins. Co.	
660 kilocycles 454.3 meters		
CHWK † 100 665 Chilliwack, B. C. CJRM † 500 665 Moose Jaw, Sask. CJRW † 1000 665 Fleming, Sask. CMCO _ 250	Chilliwack Broadcasting Co., Ltd. Jas. Richardson & Sons, Ltd. Jas Richardson & Sons, Ltd. J. L. Stowers Juan Fernandez de Castro Republic of El Salvador Omaha Grain Exchange National Broadcasting Co., Inc. Travelers Broadcasting Service, Inc.	
670 kilocycles 447.5 meters	Wesley Helted Chysch	
VOWR - 500 675 St. Johns, N. F. WMAQ 5000 N Chicago, III.	Wesley United Church National Broadcasting Co.	
r 40 1		

Scroggin & Co., Bank   Hale Bros. & The Chronicle Durham Life Insurance Co. Sria. de Guerra y Marina	680 kilocycles 440.9 meters	
CFRC - 5000 1 Calgary, Alta. CFRB * 4000 Ca Toronto, Ont. CICI * \$ 500 1 Calgary, Alta. CRX * 4000 a Toronto, Ont. NAA - 1000 685 NET + 500 Monterey, Mexico VCX - 100 Monterey,	KFEQ * 2500 D St. Joseph, Mo. KPO † 5000 NX San Francisco, Cal.	Durham Life Insurance Co.
CFRC - 5000 1 Calgary, Alta. CFRB * 4000 Ca Toronto, Ont. CICI * \$ 500 1 Calgary, Alta. CRX * 4000 a Toronto, Ont. NAA - 1000 685 NET + 500 Monterey, Mexico VCX - 100 Monterey,	690 kilocycles 434.5 meters	
WILW   * 50000 B   Cincinnati, Ohio   Crosley Radio Corp.	CFAC 500 1 Calgary, Alta.  CFRB * 4000 Ca Toronto, Ont.  CJCJ * 500 1 Calgary, Alta.  CNRX * 4000 a Toronto, Ont.  NAA 1000 - Arlington, Va.  VAS † 2000 685 Glace Bay. N. S.	Rogers-Majestic Corp., Ltd. Albertan Publishing Co., Ltd. Canadian National Railways U. S. Navy Canadian Marconi Co. Mexico Music Co., S. A.
	700 kilocycles 428.3 meters	
KMPC * 5000 Dx Newark, N. J. Mexico City.  720 kilocycles 416.4 meters WGN † 25000 C Chicago, Ill.  730 kilocycles 410.7 meters CHLS - 100 lb Vancouver, B. C. CHYC * 5000 Sa Montreal, Que. CKAC † 5000 Ca Montreal, Que. CKAC † 5001 l Vancouver, B. C. CKWX † 100 l Vancouver, B. C. CKWX † 100 l Vancouver, B. C. CKMX † 3150 Havana, Cuba CNRM * 5000 a Montreal, Que. CNRM * 5000 a Montreal, Qu	WLW * 50000 B Cincinnati, Ohio	Crosley Radio Corp.
WOR * 5000 X Newark, N. J.  720 kilocycles 416.4 meters WGN + 25000 C Chicago, III.  730 kilocycles 410.7 meters CHLS - 100 1b Vancouver, B. C. CKAC * 5000 Ca Montreal, Que. CKCD - 100 1b Vancouver, B. C. CKKPC * 5 5 1 Vancouver, B. C. CKWX † 100		
Vancouver, B. C. Chicago, III.   Chicago Tribune	KMPC         *         500         Dn         Beverly Hills, Cal.           WOR         *         5000         X         Newark, N. J.           XEN         †         1000         711         Mexico City	Bamberger Broadcasting Service, Inc.
730 kilocycles 410.7 meters  CHLS	720 kilocycles 416.4 meters	
CHIS 1000 Sa Montreal, Que. CKAC † 5000 Sa Montreal, Que. CKAC † 5000 Ca Montreal, Que. CKCD 100 1b Vancouver, B. C. CKCD 100 1b Vancouver, B. C. CKMC † 50 1 Vancouver, B. C. CKMC † 50 1 Vancouver, B. C. CKMC † 100 1 Vancouver, B. C. CKMX † 100 1 Vancouver, B. C. CKWX † 100 1 Vancouver, B. C. CKWX † 3000 a Montreal, Que. CRNR   5000   735 Villa Acuna, Mex.  740 kilocycles   405.2 meters CJCA * 500 745 Edmonton, Alta. KMMJ * 1000 Dn Clay Center, Nebr. WSB   5000 NX Atlanta, Ga. WHEB   250 CPD Portsmouth, N. H.  750 kilocycles   399.8 meters WJR † 10000 BX Detroit, Mich. XEQ   5000 NX Atlanta, Ga. WHEB   1000 Dn Tacoma, Wash. WBAL * 1000 B B Baltimore, Md. WEW * 1000 D B B Baltimore, Md. WEW * 1000 B B Baltimore, Md. WEW * 1000 B B Baltimore, Md. WEW * 1000 D CDn New York City  770 kilocycles   389.4 meters KFAB * 5000 IXC Lincoln, Nebr. WBBM * 25000 IC Chicago, Ill.  780 kilocycles   384.4 meters KFAB * 5000 IXC Lincoln, Nebr. CKY   5000 a Winnipeg, Manitoba KELW * 500 2 + C Winnipeg, Manitoba KELW * 500 2 + C Winterel, Que. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Balv Vancouver Dally Province United Church of Canada Sprott-Shaw Radio Co. Vancouver Bc. Vancouver Bc		Chicago Tribune
CKCD - 100 1 Vancouver, B. C. CKMO - 100 1 Vancouver, B. C. CKWX † 100 1 Vancouver, B. C. CKY * 5000 ** A Montreal, Que. XER - 75000 735 Villa Acuna, Mex.  740 kilocycles 405.2 meters CJCA * 500 745 Edmonton, Alta. KMMJ * 1000 Dn Clay Center, Nebr. WSB - 5000 NX Atlanta, Ga. WHEB - 250 CPD Portsmouth, N. H.  750 kilocycles 399.8 meters KVI * 1000 BD Baltimore, Md. WBW * 1000 BD St. Louis, Mo. WJZ † 30000 BD New York City  770 kilocycles 389.4 meters KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, Ill.  780 kilocycles 384.4 meters CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW * 500 2+ Los Angeles, Cal. WEAN * 500 1b Norfolk, Va. WTAR Radio Corp. WTAR Radio Corp. WTAR Radio Corp. WTAR Radio Corp.	730 kilocycles 410.7 meters	
CJCA * 500 745 Edmonton, Alta. KMMJ * 1000 Dn Clay Center, Nebr. WSB _ 5000 NX Atlanta, Ga. WHEB _ 250 CPD Portsmouth, N. H.  750 kilocycles 399.8 meters  WJR † 10000 BX Detroit, Mich. XEQ _ 5000 _ Juarez, Chih.  760 kilocycles 394.5 meters  KVI * 1000 CDn Tacoma, Wash. WBAL * 1000 B B Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B New York City  WJZ † 30000 B New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, Ill.  780 kilocycles 384.4 meters  CKY _ 5000 a Winnipeg, Manitoba CNRW _ 5000 2 B Burbank, Cal. KTM * 500 2 Los Angeles, Cal. KTM * 500 2 + Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WMC _ 500 + N Memphis, Tenn. WPOR _ 500 1C Norfolk Va. WTAR Radio Corp.	CHLS         100         1b         Vancouver, B. C.           CHYC         * 5000         Sa         Montreal, Que.           CKAC         † 5000         Ca         Montreal, Que.           CKCD         - 100         1b         Vancouver, B. C.           CKFC         † 50         1         Vancouver, B. C.           CKMO         - 100         1         Vancouver, B. C.           CKWX         † 100         1         Vancouver, B. C.           CMK         - 3150         - Havana, Cuba           CNRM         * 5000         a         Montreal, Que.	Northern Electric Co., Ltd. La Presse Publishing Co., Ltd. Vancouver Daily Province United Church of Canada Sprott-Shaw Radio Co. Western Broadcasting Co., Ltd. Cuban Broadcasting Co., Hotel Plaza Canadian National Railways
CJCA * 500 745 Edmonton, Alta. KMMJ * 1000 Dn Clay Center, Nebr. WSB _ 5000 NX Atlanta, Ga. WHEB _ 250 CPD Portsmouth, N. H.  750 kilocycles 399.8 meters  WJR † 10000 BX Detroit, Mich. XEQ _ 5000 _ Juarez, Chih.  760 kilocycles 394.5 meters  KVI * 1000 CDn Tacoma, Wash. WBAL * 1000 B B Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B New York City  WJZ † 30000 B New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, Ill.  780 kilocycles 384.4 meters  CKY _ 5000 a Winnipeg, Manitoba CNRW _ 5000 2 B Burbank, Cal. KTM * 500 2 Los Angeles, Cal. KTM * 500 2 + Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WMC _ 500 + N Memphis, Tenn. WPOR _ 500 1C Norfolk Va. WTAR Radio Corp.	740 kilocycles 405.2 meters	
WJR † 10000 BX Detroit, Mich. Juarez, Chih.  760 kilocycles 394.5 meters  KVI * 1000 CDn Tacoma, Wash. WBAL * 1000 B B Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, Ill.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WEAN * 250 + C Providence, R. I. WMC - 500 † N Memphis, Tenn. WPOR - 500 1b Norfolk Va. WTAR Radio Corp.  WTAR Radio Corp.  WJR, The Goodwill Station, Inc. Feliciano Lopez Islas	CJCA * 500 745 Edmonton, Alta. KMMJ * 1000 Dn Clay Center, Nebr. WSB 5000 NX Atlanta, Ga.	The M. M. Johnson Co. Atlanta Journal Co.
WJR † 10000 BX Detroit, Mich. Juarez, Chih.  760 kilocycles 394.5 meters  KVI * 1000 CDn Tacoma, Wash. WBAL * 1000 B B Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, Ill.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WEAN * 250 + C Providence, R. I. WMC - 500 † N Memphis, Tenn. WPOR - 500 1b Norfolk Va. WTAR Radio Corp.  WTAR Radio Corp.  WJR, The Goodwill Station, Inc. Feliciano Lopez Islas	750 kilocycles 399.8 meters	
KVI * 1000 C Dn Tacoma, Wash. WBAL * 1000 B □ Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B □ New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, III.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WEAN * 250 + C Providence, R. I. WMC - 500 + N Memphis, Tenn. WPOR * 500 1Cb Norfolk Va.  WTAR Radio Corp.	WJR † 10000 BX Detroit, Mich. XEQ - 5000 Juarez, Chih.	WJR, The Goodwill Station, Inc. Feliciano Lopez Islas
KVI * 1000 C Dn Tacoma, Wash. WBAL * 1000 B □ Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ † 30000 B □ New York City  770 kilocycles 389.4 meters  KFAB * 5000 1XC Lincoln, Nebr. WBBM * 25000 1C Chicago, III.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WEAN * 250 + C Providence, R. I. WMC - 500 + N Memphis, Tenn. WPOR * 500 1Cb Norfolk Va.  WTAR Radio Corp.		
KFAB * 5000 1XC Lincoln, Nebr. Chicago, III. KFAB Broadcasting Co. WBBM * 25000 1C Chicago, III. KFAB Broadcasting Corp.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WMC - 500 + N Memphis, Tenn. WPOR - 500 1b Norfolk, Va. WTAR Radio Corp.  WTAR * 500 1Cb Norfolk Va. WTAR Radio Corp.	KVI * 1000 C Dn Tacoma, Wash.  WBAL * 1000 B Baltimore, Md.  WEW * 1000 D St. Louis. Mo.	Consolidated Gas, Elec. & Power Co. St. Louis University
KFAB * 5000 1XC Lincoln, Nebr. Chicago, III. KFAB Broadcasting Co. WBBM * 25000 1C Chicago, III. KFAB Broadcasting Corp.  780 kilocycles 384.4 meters  CKY - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WMC - 500 + N Memphis, Tenn. WPOR - 500 1b Norfolk, Va. WTAR Radio Corp.  WTAR * 500 1Cb Norfolk Va. WTAR Radio Corp.	770 kilocycles 389.4 meters	
CKY - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 +C Providence, R. I. WMC - 500 +N Memphis, Tenn. WPOR - 500 1b Norfolk, Va. WTAR * 500 1Cb Norfolk Va. WTAR Radio Corp.	KFAB * 5000 1XC Lincoln, Nebr.	
CKY - 5000 a Winnipeg, Manitoba CNRW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 +C Providence, R. I. WMC - 500 +N Memphis, Tenn. WPOR - 500 1b Norfolk, Va. WTAR * 500 1Cb Norfolk Va. WTAR Radio Corp.	780 kilocycles 384.4 meters	
• • • •	CKY - 5000 a Winnipeg, Manitoba CNRW - 5000 a Winnipeg, Manitoba KELW * 500 2 Burbank, Cal. Los Angeles, Cal. WEAN * 250 + C Providence, R. I. WMC - 500 +N Memphis, Tenn. WPOR - 500 1b Norfolk, Va. WTAR * 500 1Cb Norfolk Va.	Canadian National Railways Magnolia Park, Ltd. Pickwick Broadcasting Corp. Shepard Broadcasting Service, Inc. Memphis Commercial-Appeal, Inc. WTAR Radio Corp. WTAR Radio Corp.

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790 kilocycles 379.5 meters		
CMBS 150 Havana Cuba	Enrique Artalejo	
CMHC 100 Funucu, Cupa	Emilio Perera Frank H. Jones National Broadcasting Co., Inc.	
KGO † 7500 N San Francisco, Cal. WGY † 50000 R Schenectady, N. Y.	National Broadcasting Co., Inc. General Electric Co.	
800 kilocycles 374.8 meters		
WBAP † 10000 IXN Fort Worth, Texas	Carter Publications, Inc.	
WFAA & 50000 IN Dallas, Texas	News & Journal	KONO
810 kilocycles 370.2 meters		KCYS. 880
CHNS * 500 Za815 Halifax, N. S. CNRH 500 Za815 Halifax, N. S.	Maritime Broadcasting Co., Ltd. Canadian National Railways	MTRS.
WCCO * 5000 CX Minneapolis, Minn.	Northwestern Broadcasting, Inc.	340.7
XFC 250 Aguascalientes, Mexico	Eastern Broadcasters, Inc. Gobierno del Estado de Aguascalientes	
VOAS 75 St. John's, N. F.	Ayre & Sons, Ltd.	DIAL
820 kilocycles 365.6 meters		[
WHAS † 10000 NX Louisville, Ky. XFI 1000 818 Mexico City	Courier-Journal & Times Sria, de Ind., Commercio y Trabajo	İ
_	Sha. de Ind., Commercio y Trabajo	
830 kilocycles 361.2 meters		
CMGA - 100 834 Colon, Cuba KOA † 12500 NX Denver, Colo.	Leopoldo V. Figueroa	
KOA † 12500 NX Denver, Colo. WEEU - 1000 D Reading, Pa.	National Broadcasting Co., Inc. Berks Broadcasting Co.	
WEEU - 1000 D Reading, Pa. WHDH - 1000 D Boston, Mass. WRUF * 5000 Dn Gainesville, Fla.	Matheson Radio Co., Inc. University of Florida	1
840 kilocycles 356.9 meters		
CKGW * 5000 Na Toronto, Ont.	Gooderham & Worts, Ltd.	1
CKLC † 1000 b Red Deer, Alta. CMC * 500 842 Hayana, Cuba	Alberta Pacific Grain Co., Ltd.	
CNRD † 1000 b Red Deer, Alta. CPRY 5000 a Toronto, Ont.	Cuban Telephone Co. Canadian National Railways Canadian Pacific Railways	1
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850 kilocycles 352.7 meters		H
KWKH * 10000 i Shreveport, La. WWL * 10000 i New Orleans, La.	Hello World Broadcasting Corp. Loyola University	Q
	Loyota Chiversity	TO
860 kilocycles 348.6 meters		Ž
CMJE - 20 856 Camaguey, Cuba KMO + 500 + Dn Tacoma, Wash. WABC * 50000 Ca New York City	Manuel Fernandez KMO, Inc.	l ŏ
WROO 50000 a New York City	Atlantic Broadcasting Corp. Atlantic Broadcasting Corp.	13
WHB * 500 D Kansas City, Mo.	WHB Broadcasting Co.	🖁
XFX 500 867 Mexico City, Mexico	Secretaria de Educacion Publica	15
870 kilocycles 344.6 meters		CUT OUT ON DOTTED LINES
WENR _ 50000 1N Chicago, III. WLS † 50000 1B Chicago, III.	National Broadcasting Co., Inc. Agricultural Broadcasting Co.	
XFF _ 500 875 Chihuahua, Chih.	Gobierno del Estado de Chihuahua	
880 kilocycles 340.7 meters		
CHML * 50 4 Hamilton, Ont. CJCB * 50 Sydney, N. S.	Maple Leaf Radio Co., Ltd. N. Nathanson	
CKCV † 50 a Ouebec, Oue.	G. A. Vandry	
CKPC † 100 4 Preston, Ont. CNRQ † 50 a Quebec, Que.	Cyrus Dolph Canadian National Railways	
KFKA † 500 2+ Greeley, Colo.	Midwestern Radio Corp.	
KPOF * 500 2 Denver, Colo.	Tribune Publishing Co. Pillar of Fire, Inc.	
WCOC * 500 + Meridian, Miss. WGBI * 250 1 Scranton, Pa.	Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc.	
WQAN * 250 1 Scranton, Pa.	Scranton Times	
WSUI • 500 lowa City, lowa	University of Iowa	

890 kilocycles 336.9 meters	
CFBO * 500 St. John, N. B.	C. A. Munro, Ltd. Dr. G. M. Geldert
CKCO ‡ 100 3 Ottawa, Ont. CKPR _ 50 3 Ft. William, Ont.	Dr. G. M. Geldert Dougall Motor Car Corp.
CMCF † 250 Havana, Cuba	Raoul Karman
Civilia 1000 000 Havaila, Caba	Francisco Lavin
KARK * 250 Little Rock, Ark. KFNF 500 2+ Shenandoah, Iowa	Arkansas Radio & Equipment Co. Henry Field Co.
KUSD * 500 2 Vermillion, S. D.	University of South Dakota
WGS1 * 250 +C Atlanta, Ga.	Georgia School of Technology
WILL † 250 2+ Urbana, III. WJAR * 250 +R Providence, R. I.	University of Illinois The Outlet Co.
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900 kilocycles 333.1 meters	
KGBU † 500 Ketchikan, Alaska	Alaska Radio & Service Co.
	Don Lee, Inc. Radio Service Corp.
WBEN * 1000 R Buffalo, N. Y.	WBEN, Inc.
WJAX * 1000 N Jacksonville, Fla.	City of Jacksonville
WKY * 1000 N Oklahoma City WLBL † 2000 D Stevens Point, Wis.	WBEN, Inc. City of Jacksonville WKY Radiophone Co. Wisconsin Dept. of Markets
	Wisconsin Dept. of Markets
910 kilocycles 329.6 meters	
CFLC * 100 915 Prescott Ont.	Radio Association
CFOC - 500 a Saskatoon, Sask. CJGC * 5000 b London, Ont. CNRL * 5000 b London, Ont.	The Electric Shop, Ltd.
CJGC * 5000 b London, Ont. CNRL * 5000 b London, Ont.	Free Press Printing Co., Ltd. Canadian National Railways
CNRS 500 a Saskatoon, Sask.	Canadian National Railways
CNRS 500 a Saskatoon, Sask. TICR 50 911 San Jose, Costa Rica XEW † 5000 Mexico City	Mexico Music Co.
920 kilocycles 325.9 meters	
HHK * 1000 Port au Prince Haiti	Republic of Haiti
KFEL † 500 1 Denver, Colo. KFXF * 500 1 Denver, Colo. KOMO † 1000 N Seattle, Wash.	Eugene P. O'Fallon, Inc. Colorado Radio Corp.
KFXF * 500 1 Denver, Colo. KOMO † 1000 N Seattle, Wash. KPRC * 1000 +N Hutston Tevas	Fisher's Blend Station, Inc.
KPRC * 1000 +N Houston, Texas	Houston Printing Co.
WAAF _ 500 D Chicago, Ill. WBSO _ 500 D Needham, Mass.	Drovers' Journal Publishing Co. Babson Service Organization, Inc.
WWJ † 1000 R Detroit, Mich.	The Detroit News
930 kilocycles 322.4 meters	
930 kilocycles 322.4 meters	
CFCH 100 3 North Bay, Ont.	NT
CERC 50 3+ Kingston Ont	Northern Supplies, Ltd.
CFRC 50 3+ Kingston, Ont. CKX † 500 Brandon, Man,	Queen's University
CFRC 50 3+ Kingston, Ont. CKX † 500 Brandon, Man.	Queen's University Manitoba Telephone System Angel Bertematy
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CMCD _ 250 925 Havana, Cuba CMCF _ 250 925 Havana, Cuba CMJF _ 50 Camaguey, Cuba KFWI † 500 I San Francisco, Cal. KGBZ _ 500 2+ York, Nebr. KMA * 500 2+ Shenandoah, Iowa KROW * 500 1+X Oakland, Cal. WBRC * 500 +C Birmingham, Ala.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co.
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CMCD 250 925 Havana, Cuba CMCN 250 925 Havana, Cuba CMIF 50 Camaguey, Cuba KFWI † 500 1 San Francisco, Cal. KGBZ 500 2+ York, Nebr. KROW * 500 1+X Oakland, Cal. WBRC * 500 +C Birmingham, Ala. WDBJ * 250 +C Roanoke, Va. WIBG * 25 D Elkins Park, Pa.  940 kilocycles 319.0 meters KGU † 1000 NXZ Honolulu, Hawaii KOIN * 1000 C Portland, Oregon KZRC 500 937.5 Cebu, P. I. WAAT 300 D Jersey City, N. J. WCSH * 1000 R+ Portland, Maine WDAY * 1000 N Fargo, N. D.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  Marion A. Mulrony KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co.
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CMCD 250 925 Havana, Cuba CMCN 250 925 Havana, Cuba CMIF 50 Camaguey, Cuba KFWI † 500 1 San Francisco, Cal. KGBZ 500 2+ York, Nebr. KROW * 500 1+X Oakland, Cal. WBRC * 500 +C Birmingham, Ala. WDBJ * 250 +C Roanoke, Va. WIBG * 25 D Elkins Park, Pa.  940 kilocycles 319.0 meters KGU † 1000 NXZ KOIN * 1000 C Portland, Oregon KZRC 500 937.5 Cebu, P. I. WAAT 300 D Jersey City, N. J. WCSH * 1000 R+ Portland, Maine WDAY * 1000 N Fargo, N. D. WFIW * 1000 C Hopkinsville, Ky. WFIW * 1000 C Hopkinsville, Ky. WHA 750 D+ Madison, Wis. XEO 5000 Mexico City  950 kilocycles 315.6 meters	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  Marion A. Mulrony KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW, Inc. University of Wisconsin National Revoluncionario Party
CMCD 250 925 Havana, Cuba CMCN 250 925 Havana, Cuba CMIF 50 Camaguey, Cuba KFWI † 500 1 KGBZ 500 2+ York, Nebr. KROW * 500 1+X Oakland, Cal. WBRC * 500 +C Birmingham, Ala. WDBJ * 250 +C Roanoke, Va. WIBG * 25 D Elkins Park, Pa.  940 kilocycles 319.0 meters KGU † 1000 NXZ KOIN * 1000 C Portland, Oregon KZRC 500 937.5 Cebu, P. I. WAAT 300 D Jersey City, N. J. WCSH * 1000 R + Portland, Maine WDAY * 1000 N Fargo, N. D. WFIW * 1000 C Hopkinsville, Ky. WHA 750 D+ Madison, Wis. XEO 5000 Mexico City	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  Marion A. Mulrony KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW. Inc.

INDEX BI FREQUENCIES AL	ND DIAL NOWBERS	
KGHL       -       1000       N       Billings, Mont.         KMBC       *       1000       C       Kansas City, Mo.         VONA       -       30       St. John's, N. F.         WRC       †       500       N       Washington, D. C.	Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. Lane, Gillard & Avery National Broadcasting Co., Inc.	
960 kilocycles 312.3 meters		
	W. E. Breeke & I. E. Comon	
CHCK - 100 - Charlottetown, P. E. I. CHWC * 500 3 Regina, Sask,	W. E. Burke & J. E. Gesner R. H. Williams & Sons, Ltd.	
CHWC * 500 3 Regina, Sask. CJBR _ 500 3a Regina, Sask. CKCK † 500 3a Regina, Sask.	R. H. Williams & Sons, Ltd. Cooperative Wheat Producers, Ltd.	
CKCK † 500 3a Regina, Sask. CKNC * 500 Toronto, Ont.	Leader-Post, Ltd. Canadian National Carbon Co., Ltd.	
CMBC 150 965 Havana, Cuba CMBD 250 965 Havana, Cuba	Domingo Fernandez Luis Perez Garcia	
CNDD 500 3a Ragina Sack	Canadian National Railways	
XED * 10000 965 Reynosa, Mexico	International Broadcasting Co.	
070 1-:1		
970 kilocycles 309.1 meters		
CMGF 50 977 Matanzas, Cuba KJR * 5000 B Seattle, Wash.	Bernabe R. de la Torre Northwest Broadcasting System, Inc.	
KJR * 5000 B Seattle, Wash. WCFL 1500 R Dn Chicago, III.	Chicago Federation of Labor	
000 1 11 1 207 0		
980 kilocycles 305.9 meters		KCYS.
CFCN _ 10000 985 Calgary, Alta. KDKA _ 50000 B Pittsburgh, Pa.	W. W. Grant & H. G. Love	1020
KDKA _ 50000 B Pittsburgh, Pa. TI4NRH _ 15 _ Heredia, C. R.	Westinghouse Elec. & Mfg. Co. Armando Cespedes	MTRS.
·		293.9
990 kilocycles 302.8 meters [		293.9
WBZ † 25000 B□X Boston, Mass.	Westinghouse Elec. & Mfg. Co.	DIAL
WBZA † 1000 B□X Springfield, Mass. XEK 101 Mexico City	Westinghouse Elec. & Mfg. Co. Arturo Martinez	
1000 kilocycles 299.8 meters		
KFVD * 250 Dn Culver City, Cal.	Los Angeles Broadcasting Co.	
WHO * 5000 N□X Des Moines, Iowa	Central Broadcasting Co.	
	Central Broadcasting Co. York Broadcasting Co.	
WORK - 1000 D York, Pa. XEA - 100 Guadalajara, Jal.	Alberto Palos Sauza	i
XEC 50 Toluca, Mex. XEE * 105 Oaxaca, Oax.	Jesus R. Benavides Alfonso Zorilla B. Rafael T. Carranza	
	Rafael T. Carranza Feliciano Lopez Islas	
XEFI - 100 - Chihuahua, Chih.  XEFS - 40 - Queretaro, Qro.  XEI * 101 - Morelia; Mexico  XEJ * 100 - Juarez, Chih.  XEL - 25 - Saltillo, Coah.  XETC - 100 - Jalapa, Ver.	Salvador Sanchez	
XEFS 40 Queretaro, Qro. XEI * 101 Morelia, Mexico XEJ * 100 Juarez, Chih. XEL 25 Saltillo, Coah. VETC 100 Saltillo, Coah.	Carlos Gutierrez M. Juan G. Buttner	
XEL 25 Saltillo, Coah.	Antonio Garza Castro	Š
XETC . 100 Jalapa, Ver.  XETG . 100 Torreon, Coah,  XEU 100 Veracruz, Ver.  XEV 100 Puebla, Pue.	Juventino Sanchez Feliciano Lopez Islas	100
XEU 100 Torreon, Coah. XEU 100 Veracruz, Ver. XEV 100 Puebla, Pue. VEV 105 Modal, Ve.	Fernando Pazos	ĮĞ
XEV _ 100 _ Puebla, Pue. XEY _ 105 _ Merida, Yuc.	Ciro Molina Partido Socialista S. E.	17
ADI 1. 100 1.1 Merida, ruc.	Tartido Socialista S. D.	ž
1010 kilocycles 296.8 meters		CUT OUT ON DOTTED
CVIC EO Wolfwill N C	Acadia University	ΙĦ
CMBW 150 Havana, Cuba	Modesto Alvarez	H
CMBZ 150 Havana, Cuba KGGF † 500 2 S. Coffeyville, Okla.	Manual y G. Salas Powell & Platz	B
KQW * 500 San Jose, Cal.	Pacific Agricultural Foundation, Ltd.	LINES
WHN * 250 1 New York City WIS * 500 +N Columbia, S. C.	Marcus Loew Booking Agency South Carolina Broadcasting Co., Inc.	H
WNAD * 500 2 Norman Okla.	University of Oklahoma	S
WPAP * 250 1 New York City WQAO 250 1 New York City	Palisades Amusement Park Calvary Baptist Church	
WOAO - 250 1 New York City WRNY - 250 1 New York City	Aviation Radio Station, Inc.	1
1020 kilocycles 293.9 meters		
CMJH 15 1017 Ciego de Avila, Cuba	Luis Marauri	
KFKX * 10000 Na Chicago, III. KYW * 10000 Na Chicago, III.	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co.	
WRAX † 250 D Philadelphia, Pa.	WRAX Broadcasting Co.	
XEFD 300 Tiajuana, B. C.	Carlos de la Sierra	1

1030 kilocycles 291.1 meters	
CMC * 150 N Montreal, Que.  CMKC * 150 1034 Santiago de Cuba  CNRV † 500 Vancouver, B. C.  XEB † 1000 Mexico City, Mexico	Canadian Marconi Co. M. P. Martinez Canadian National Railways El Buen Tono, S. A.
1040 kilocycles 288.3 meters	
KRLD * 10000 C1 Dallas, Texas KTHS † 10000 N1 Hot Springs, Ark. WKAR * 1000 D East Lansing, Mich.	KRLD Radio Corp. Chamber of Commerce Michigan State College
1050 kilocycles 285.5 meters	
KFBI * 5000 Dn Milford, Kansas KNX * 5000 Hollywood, Cal. XEFC 10 Merida, Yuc.	Farmers & Bankers Life Insurance Co. Western Broadcast Co. Hugo Molina Font.
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.	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         CMCB        150        Havana, Cuba         KJBS       *       100       D       San Francisco, Cal.         WCAZ       *       50       D       Carthage, Ill.         WTAM       *       50000       R       Cleveland, Ohio         XEG       -       250        Mexico City, Mexico	Francisco Garrigo Antonio Capablanca Julius Brunton & Sons Co. Superior Broadcasting Service James L. Bush National Broadcasting Co., Inc. Miguel Yarza
1080 kilocycles 277.6 meters	
WBT * 5000 CX Charlotte, N. C. WCBD * 5000 1 Dn Zion, Ill. WMBI * 5000 1 Dn Chicago, Ill.	Station WBT, Inc. Wilbur Glenn Voliva Moody Bible Institute
1000111 1 2551	
1090 kilocycles 275.1 meters	
1090 kilocycles 2/5.1 meters KMOX * 50000 C St. Louis, Mo.	Voice of St. Louis, Inc.
KMOX * 50000 C St. Louis, Mo.  1100 kilocycles 272.6 meters	
KMOX * 50000 C St. Louis, Mo.	Voice of St. Louis, Inc.  E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.
KMOX * 50000 C St. Louis, Mo.  1100 kilocycles 272.6 meters  KGDM * 250 DX Stockton, Cal.  WLWL * 5000 1 New York City WPG * 5000 1C Atlantic City, N. J.  1110 kilocycles 270.1 meters	E. F. Peffer
KMOX * 50000 C St. Louis, Mo.  1100 kilocycles 272.6 meters  KGDM * 250 DX Stockton, Cal.  WLWL * 5000 1 New York City WPG * 5000 1C Atlantic City, N. J.  1110 kilocycles 270.1 meters	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz
KMOX * 50000 C St. Louis, Mo.  1100 kilocycles 272.6 meters  KGDM * 250 DX Stockton, Cal.  WLWL * 5000 1 New York City  WPG * 5000 1C Atlantic City, N. J.  1110 kilocycles 270.1 meters  CMHI 15 Santa Clara, Cuba  KSOO * 2500 Dn Sioux Falls, S. D.  KZKA 1000 N Manilla, P. I.  WRVA * 5000 N Richmond, Va.	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.
The large of the	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.
Toronto, Ont.   California	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.
Toronto, Ont.   Call.   Call	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson
Toronto, Ont.   Toronto, Ont	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways Spokane Broadcasting Corp.
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Toronto, Ont.   Toronto, Ont	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways Spokane Broadcasting Corp.
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Toronto, Ont.   Care    E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways Spokane Broadcasting Corp. Echo Park Evang, Assn. Dalton's, Inc. Radio Sales Corp. Rice Hotel Orlando Broadcasting Co., Inc.	
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Toronto, Ont.   Color   Colo	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways 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
Toronto, Ont.   Color   Colo	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.  Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.  Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways 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

KCYS. 1200 MTRS. 249.9 DIAL

INDEX BY FRE	QUENCIES AND DIAL NUMBERS
1140 kilocycles 263.0	) meters
KVOO * 5000 1NX Tulse WAPI * 5000 1NX Birm XETA _ 500 Mexic	n, Okla. Southwestern Sales Corp. Alabama Polytechnic Institute Co City Manuel Espinosa Tagle
1150 kilocycles 260.2	meters
CMCQ - 600 Hava CMQ † 250 Hava WHAM * 5000 BX Roch 10-AT 25 1155 Trail,	na, Cuba na, Cuba seter. N. Y. Andres Martinez Jose Fernandez Stromberg-Carlson Tel. Mfg. Co.
1160 kilocycles 258.5	meters
WOWO * 10000 1C Ft. W WWVA * 5000 1C Whee	Agyne, Ind.  Main Auto Supply Co.  West Virginia Broadcasting Corp.
1170 kilocycles 256.3	3 meters
	delphia, Pa. Universal Broadcasting Co.
1180 kilocycles 254.1	meters
KEX * 5000 2B Port1	and, Ore. Western Broadcasting Co.
KOB * 20000 2 State WDGY * 1000 Dn Minr	College, N. M. College of Agriculture X Mech. Arts papelis, Minn.
WINS * 500 New	York City American Radio News Corp. Southeastern Broadcasting Co., Inc.
4400444 4 670	meters
	Antonio, Texas Southern Equipment Co.
1200 kilocycles 249.9	meters
CKOV 100 Kelov	wna, B. C. J. W. B. Browne
CMGB 7.5 1205 Mata	nzas, Cuba Jose Anorga aguey, Cuba Pedro Nogueras
KBTM 100 D Parag	gould, Ark. W. J. Beard's Lemple of Music
KFJB † 100 + Mars	halltown, Iowa Marshall Electric Co., Inc.
IZCIDE # 100 ! Form	is Follo Minn I I I I I I I I I I I I I I I I I I
KGDY 100 - Huro	n S D Voice of South Dakota
KGEK † 100 9 Yum KGEW † 100 9 Fort	a, Colo.  Beehler Elec. Equipment Co.  City of Fort Morgan  Medishan  Ben S. McGlashan
KGFJ 100 Los A KGHI * 100 Little	ngeles, Cal. Ben S. McGlashan
KGY † 100 + Olym	pia, Wash. KGY, Inc.
KWG * 100 Stock WABI † 100 Bang	
WABI † 100 Bang WABZ * 100 1 New	Orleans, La. Samuel D. Reeks
WBBZ * 100 - Ponc WBHS - 50 10CP Hunt	a City, Okla. C. L. Carrell sville, Ala. The Hutchens Co.
WCAT † 100 Rapid	City, S. D. State School of Mines
WCLO † 100 lanes	ville. Wis. WCLO Radio Corp.
WCLO † 100 Jane: WCOD † 100 3 Harr: WFAM * 100 8 Soutl	sburg, Pa. Keystone Broadcasting Corp. 1 Bend, Ind. South Bend Tribune
WFBC * 50 10 Knox	ville, l'enn. Virgil V. Evans
WFBE 100 + Cinci WHBC † 10 Cant	nnati, Ohio Post Publishing Co. on, Ohio St. John's Catholic Church on Bay, Wis. St. Norbert's College
WHBC † 10 Cant WHBY † 100 Gree WIBX * 100 + Utics	on, Ohio St. John's Catholic Church a Bay, Wis. St. Norbert's College b, N. Y. WIBX, Inc.
57TI + 100 F! C+ I	ouis, Mo. Missouri Broadcasting Corp.
WJBC * 100 6 La Sa WJBL † 100 6 Deca	ouis, Mo. Missouri Broadcasting Corp. Alle, III. Kaskaskia Broadcasting Co. Commodore Broadcasting, Inc.
WJBL         †         100         6         Deca           WJBW         †         100         1         New*           WKJC         *         100         3         Lanc           WLAP         †         250         C         Louis	Orleans, La. Charles C. Carlson, Jr.
	ville, Ky. American Broadcasting Corp. of Ky.
	sburg, Va. WLBG, Inc.
WNBO * 100 Wash WNBW † 10 Carb WNBX † 10 2 Sprir WORC * 100 CX Word	ington, Pa. John Brownlee Spriggs ndale, Pa. Home Cut Glass & China Co, Igfield, Vt. First Congregational Church ester, Mass. Alfred Frank Kleindienst
WNBX † 10 2 Sprir WORC * 100 CX Word	gneig, vt. First Congregational Church ester, Mass. Alfred Frank Kleindienst
WRBL † 50 Colum WWAE * 100 8 Ham	mbus, Ga. WRBL Radio Station, Inc. mond, Ind. Hammond-Calumet, Broad. Corp.
10-AB 25 Moos	ham, Ont. W. T. Cruickshank
10-BP † 15 Wing 10-BQ 15 Bran	e Jaw, Sask. Moose Jaw Radio Assn. ham. Ont. W. T. Cruickshank tford, Ont. Thomas Brown, Mgr.

1210 kilocycles	247.8 meters	
CECO 250 8	Chatham, Ont.	Western Ontario "Better Radio" Club
CFNB * 50 CJOR * 500	Fredericton, N. B.	James S. Neill & Sons, Ltd.
CKMC 100 8	Vancouver, B. C. Cobalt, Ont.	G. C. Chandler R. L. MacAdam
KDFN † 100 XZ	Cobalt, Ont. Casper, Wyo. Devil's Lake, N. D.	Donald Lewis Hathaway
KDLR † 100 KFJI † 100 KFOR * 100 +	Devil's Lake, N. D.	KDLR,Inc.
KFJI † 100 KFOR * 100 + KFVS * 100 6	Klamath Falls, Ore Lincoln, Nebr.	KFJI Broadcasters, Inc. Howard A. Shuman
KFVS * 100 6	Cape Girardeau, Mo.	Hirsch Battery & Radio Co.
KFXM † 100 9 KGCR † 100 KGNO * 100	San Bernardino, Cal.	Hirsch Battery & Radio Co. J. C. & E. W. Lee
KGCR † 100 KGNO * 100	Watertown, S. D. Dodge City, Kansas	Greater Kampeska Radio Corp. Dodge City Broadcasting Co.
KMI * 100	Fresno, Cal.	James McClatchy Co.
KPPC \$ 50 9 KWEA * 100	Pasadena, Cal.	Pasadena Preshvterian Church
KWEA * 100 WALR * 100	Shreveport, La. Zanesville, Ohio	Hello World Broadcasting Corp. Roy W. Waller
WBAX * 100 1	Wilkes-Barre, Pa.	John H. Stenger, Jr.
WBBL † 100 7S WCBS * 100 2	Richmond, Va. Springfield, Ill.	John H. Stenger, Jr. Grace Covenant Pres. Church
WCBS * 100 2 WCOH * 100 3	Yonkers, N. Y.	H. L. Dewing & Chas. Messter Westchester Broadcasting Corp. Clinton R. White
WCRW * 100 4	Chicago. Ill.	Clinton R. White
WEBQ * 100 6	Harrisburg, Ill.	First Trust & Savings Bank
WEDC 100 4 WGBB * 100 3	Chicago, Ill. Freeport, N. Y.	Emil Denemark, Inc. Harry H. Carman
WGCM * 100	Freeport, N. Y. Gulfport, Miss.	Great Southern Land Co., Inc.
WHBF * 100	Rock Island, Ill.	Beardsley Specialty Co. Anderson Broadcasting Corp.
WHBU † 100 WIBU * 100	Anderson, Ind. Poynette, Wis.	Anderson Broadcasting Corp. Wm. C. Forrest
WJBI 100 3	Red Bank, N. J.	Monmouth Broadcasting Co.
WJBU * 100 1	Lewisburg, Pa.	Bucknell University
WJBI _ 100 3 WJBU * 100 1 WJBY * 100	Gadsden, Ala. Mansfield, Ohio Ithaca, N. Y.	Gadsen Broadcasting Co., Inc.
WLCI * 50	Ithaca. N. Y.	Mansfield Broadcasting Assn. Lutheran Assn. of Ithaca
WMBG * 100 /C	Richmond, Va.	Havens & Martin, Inc.
WMRJ * 100 3 WOCL * 50	Jamaica, N. Y.	Peter J. Prinz A. E. Newton
WOCL * 50 WOMT * 100	Ithaca, N. Y. Richmond, Va. Jamaica, N. Y. Jamestown, N. Y. Manitowoc, Wis. Providence B J	Francis M. Kadow
WPRO * 100 5	I I OVIGETICE, IX. I.	Francis M. Kadow Cherry & Webb Broadcasting Co.
WODX * 100	Inomasville, Ga.	Stevens Luke
WRBQ † 100 + WSBC * 100 4	Greenville, Miss. Chicago, Ill.	J. Pat. Scully World Battery Co., Inc.
WSEN † 100	Columbus, Ohio	Columbus Broadcasting Co.
WSIX * 100	Columbus, Ohio Springfield, Tenn. Gastonia, N. C.	638 Tire & Vulcanizing Co.
WSOC † 100 WTAX † 100 2	Springfield, Ill.	WSOC, Inc. WTAX, Inc.
XEX 500	Mexico City	Excelsior, Cia Editorial S. A.
1220 kilocycles	245.8 meters	
CMBY 350 122		Callejas-Cosculluela
CMCA _ 150 122 KFKU * 500 1		Manuel Cruz
KTW 1000	Lawrence, Kansas Seattle, Wash.	University of Kansas First Presbyterian Church
KWSC * 1000 + WCAD * 500 D	Pullman, Wash.	State College of Washington
KWSC * 1000 + WCAD * 500 D WCAE * 1000 R	Pullman, Wash. Canton, N. Y.	St. Lawrence University
WCAE * 1000 R WDAE * 1000 C	Pittsburgh, Pa. Tampa, Fla.	Pittsburgh Sun-Telegraph Tampa Publishing Co.
WREN * 1000 1B	Lawrence, Kansas	Jenny Wren Co.
1230 kilocycles	243.8 meters	
KFQD 100	Anchorage, Alaska	Anchorage Radio Club
KGGM † 250 +	Albuquerque, N. Mex.	New Mexico Broadcasting Co.
KYA * 1000	San Francisco, Cal.	Pacific Broadcasting Corp.
WBIS * 1000 a WFBM * 1000 1C	Boston, Mass.	Shepard Broadcasting Service, Inc. Indianapolis Power & Light Co. Shepard Broadcasting Service, Inc.
WNAC * 1000 aC	Indianapolis, Ind. Boston, Mass. State College, Pa.	Shepard Broadcasting Service, Inc.
WPSC * 500 D	State College, Pa.	Pennsylvania State College
WSBT † 500 1C XETQ - 100	South Bend, Ind. Mexico, Mex.	South Bend Tribune Carlos G. Caballero
1240 kilocycles	241.8 meters	,
		Francisco Martiner
KCCII 250 3	9 Pinar del Rio, Cuba Mandan, N. D. Minot, N. D.	Francisco Martinez Mandan Radio Assn.
KLPM † 250 3	Minot, N. D.	Mandan Radio Assn, John B. Cooley S. A. T. Broadcast Co.
KTAT † 1000 1	Ft. Worth, Texas	S. A. T. Broadcast Co.
KTFI 250 1+ WACO † 1000 1C	Twin Falls, Idaho Waco, Texas	Radio Broadcasting Corp. Central Texas Broadcasting Co., Inc.
WACO † 1000 1C WXYZ † 1000 C	Detroit, Mich.	Kunsky-Trendle Broadcasting Corp.

TZ EVY T		100		Count Investiga Colo	Western Claus Buildes de cotto Co
KFXJ KFXR KGBX	1	100 100	<del></del>	Grand Junction, Colo.	Western Slope Broadcasting Co.
KCRX	1	100		Oklahoma City	Exchange Ave. Baptist Church
KGCX	ŧ	100	+	Wolf Point, Mont.	First State Bank of Vida
KGEZ	÷	100		St. Joseph, Mo. Wolf Point, Mont. Kalispell, Mont.	KGBX, Inc. First State Bank of Vida Donald C. Treloar
KGFW	Ť	100		Kearney, Nebr. Yakima, Wash. Medford, Ore.	Central Nedraska broadcasting Cord.
KIT	†	100		Yakima, Wash.	Carl E. Haymond Mrs. W. J. Virgin Robert M. Dean
KMED	†	100		Medford, Ore.	Mrs. W. J. Virgin
KRMD	I	50	9 .	Shreveport, La. Houston, Texas El Paso, Texas	Robert M. Dean
KTLC	Ţ.	100	2	Fl Door Town	Houston Broadcasting Co. W. S. Bledsoe & W. T. Blackwell
KTSM KWCR	1	100 100	7	Cedar Rapids, Iowa	Coder Porido Proedeset Co
KXRO	ŧ	100	•	Aberdeen, Wash.	Cedar Rapids Broadcast Co. KXRO, Inc.
WBEO		100		Marquette, Mich.	Lake Superior Broadcasting Co.
WBOW	*	100		Terre Haute, Ind.	Lake Superior Broadcasting Co. Banks of Wabash, Inc.
WBRE		100		Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	*	100	ī	Ioliet, III.	WCLS, Inc.
WDAH	‡	100	2	El Paso, Texas	Bledsoe & Blackwell
WEBR		100	+	El Paso, Texas Buffalo, N. Y. Royal Oak, Mich.	Howell Broadcasting Co., Inc.
WEXL	‡	50	$\bar{3}\bar{X}$	Royal Oak, Mich.	Royal Oak Broadcasting Co. Wm. F. Gable Co.
WFBG WFDF	*	100 100		Altoona, Pa. Flint, Mich.	Frank D. Fallain
WFDV		100	<u> </u>	Rome, Ga.	Rome Broadcasting Corp.
WGAL	‡	100	5	Lancaster, Pa.	WGAL, Inc.
WGH	*	100		Lancaster, Pa. Newport News, Va. Philadelphia, Pa. Johnstown, Pa.	Hampton Roads Broadcasting Corp
WHAT	‡	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
WIAC		100	3	Johnstown, Pa.	Johnstown Automobile Co
WJAK WKAV	*	50	6	Eiknart, ind.	Truth Publishing Co., Inc.
WKAV	*	100	z	Laconia, N. H.	Laconia Radio Ciub
WKBB WKBC	*	100	1	Joliet, Ill.	Sanders Bros. Radio Station
WKBC	*	100 100		Birmingham, Ala.	R. B. Broyles Furniture Co
WKBS WLBC		50	6	Galesburg, Ill.	Permil N. Nelson
WMBO	‡	100		Muncie, Ind. Auburn, N. Y.	Donald A. Burton WMBO, Inc.
WNBH	*	100		New Bedford, Mass.	New Bedford Broadcasting Co.
WOL.	*	100		New Bedford, Mass. Washington, D. C.	American Broadcasting Co.
WRAW	*	100	5X	Reading, Pa.	American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co.
WROL	‡	100		Knoxville, Tenn.	Stewart Broadcasting Co.
WSAJ WSJS WTEL		100		Grove City, Pa. Winston-Salem, N. C.	Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co.
WSJS	*	100	4	Winston-Salem, N. C.	Winston-Salem Journal Co.
WIEL		100 100	4	Philadelphia, Pa. Jackson, Tenn.	Foulkrod Radio Engineering Co.
WTJS WTSL	†	100	+	Jackson, Tenn. Laurel, Miss.	Sun Publishing Co.
XEFB		50	1315	Monterrey, N. L.	G. A. Houseman Quintanilla y Stevenson
11212		00	1010	Monterrey, 14. D.	Quintainna y Stevenson
1320	1-:1-	202701	00 1	<b>227.1</b> meters <b>[</b>	
1020	KIIC	JCyCi	C3 4	cer.i ineceis	
KGHF	†	250	+	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGMB	Ť	250	ċ	Pueblo, Colo. Honolulu, Hawaii	C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd.
KID	*	250	C N	Idaho Falls, Idaho	KID Broadcasting Co.
WADC	İ	1000	C	Akron, Ohio	Allen T. Simmons
WSMB	*	500	N	New Orleans, La.	WSMB, Inc.
1220	1 •1	. 1	,	335.4	·
1330	Kilo	ocyci	es a	225.4 meters	
KGB	*	500	С	San Diego, Cal.	Don Lee Inc
KSCI	*	1000	ĭ+c	Sioux City Iowa	Don Lee, Inc. Perkins Bros. Co.
KSCJ WDRC	*	500	i+c c	Sioux City, Iowa Hartford, Conn.	WDRC. Inc.
WSAI	*	500	Ř+ IC	Cincinnati, Ohio	WDRC, Inc. Crosley Radio Corp., Lessee
WTAQ	*	1000	1C	Cincinnati, Ohio Eau Claire, Wis.	Gillette Rubber Co.
1340	kild	ocvel	es í	223.7 meters	
CMCG		30	1345	Havana, Cuba	Jose Justo Moran
CMCR		150.	1345	Havana, Cuba Havana, Cuba	Aurelio Hernandez
CMCY KFPW	ţ-	50 50	13 <b>45</b> D	Fort Smith Ark	M. D. Autran
KFPY	*	1000	č	Spokane Wash	Southwestern Hotels Co. Symons Broadcasting Co.
WCOA	*	500		Fort Smith, Ark. Spokane, Wash. Pensacola, Fla.	Pensacola Broadcasting Co.
WSPD	*	1000	Ċ	Toledo, Ohio	Toledo Broadcasting Co.
1350	kilo	ocvc1	es 2	222.1 meters	
KIDO		1000			Poice Proceducation Station
KWK	<b>†</b>	1000	B	Boise, Idaho St. Louis, Mo.	Boise Broadcasting Station
KWK WAWZ	*	250	ĭ	Zarephath, N. I.	Greater St. Louis Brdcstg Corp. Pillar of Fire
WBNX		250	Īа	New York City	Standard Cahill Co., Inc.
WCDA	*	250 ·	ī	Zarephath, N. J. New York City New York City	Italian Educ. Broadcasting Co., Inc.
WEHC	*	500	D	Emory, Va. New York City	Emory & Henry College
WMSG		250	1a	New York City	Madison Sq. Garden Brdctg. Corp.

		ширг	M D.	i PiceQuercies	AND DIAL NONDERG	
1360	kil	ocycl	es	220.4 meters		
KGER KGIR	* '	1000 500	Ñ-	Long Beach, Cal. Butte, Montana	Consolidated Broadcasting Corp. KGIR, Inc.	
WCSC	į.	500		Charleston, S. C.	South Carolina Broadcasting Co., Inc.	
WFBL WGES	*	1000 500	CX 1+	Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Gary, Ind.	Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp.	
WJKS WQBC	*	1000	1+ 1+z	Gary, Ind.	Johnson-Kennedy Radio Corp.	
WQBC	t	500	D	Vicksburg, Miss.	Delta Broadcasting Co., Inc.	
	kil	ocyc1		218.7 meters		
CMAC CMGE		30 30	1375 1375	Pinar del Rio, Cuba Cardenas, Cuba	Oscar S. Mechoso Genaro Sebater	
CMGH		150		Matanzas, Cuba	Alberto Alvarez	
HRB KCRC	† *	2300 100	2 <del>-</del>	Tegucigalpa, Hond. Enid, Okla. Everett, Wash.	United Fruit Co. Enid Radiophone Co.	
KFBL		50 100	3	Everett, Wash. Grand Forks, N. D.	Leese Bros. University of North Dekote	
KFJM KFJZ KFLX	<b>†</b>	100		Ft. Worth, Texas Galveston, Texas	University of North Dakota Ralph S. Bishop	
KFLX KGAR	 *	100 100	<del></del>	Galveston, Texas Tucson, Arizona	George Roy Clough Tucson Motor Service Co.	
KGDA		100		Mitchell, S. D.	Mitchell Broadcasting Corp.	
KGFG	† † †	100 50	24	Oklahoma City Raton, N. M.	Oklahoma Broadcasting Co., Inc.	
KGFL KGKL	ł	100		San Angelo, Texas Clovis, N. Mex.	KGFL, Inc. KGKL, Inc. W. E. Whitmore W. W. McAllister	
KICA KMAC	¥-	100 100	4CP 5	Clovis, N. Mex.	W. E. Whitmore W. W. McAllister	
KONO	Ī	100	5	San Antonio, Texas San Antonio, Texas	Mission Broadcasting Co.	
KOOS KRE	*	100 100		Marshfield, Ore.	H. H. Hanseth, Inc. First Congregational Church	
KUI	Ť	100		Marshfield, Ore. Berkeley, Cal. Walla Walla, Wash.	KUJ, Inc. KVL, Inc.	
KVĽ KWKC		100 100	3	Seattle, Wash. Kansas City, Mo. Glens Falls, N. Y.	KVL, Inc. Wilson Duncan Broadcasting Co.	
WRGF	Ť	50		Glens Falls, N. Y.	Wilson Duncan Broadcasting Co. W. N. Parker and H. H. Metcalfe	
WBTM WCBM	ţ	100 100	7 +Z	Danville, Va. Baltimore, Md.	Piedmont Broadcasting Corp. Baltimore Broadcasting Corp.	
WDAS	é *	100	+ <b>z</b> + <b>c</b>	Philadelphia, Pa.	WDAS Broadcasting Station, Inc.	
WGL WHBD		100 100	C	Fort Wayne, Ind. Mount Orab, Ohio	WDAS Broadcasting Station, Inc. Fred Z. Zieg F. P. Moler	
WHBQ WHDF	‡	100		Memphis, Tenn. Calumet, Mich. Jackson, Mich. Detroit, Mich.	Broadcasting Station WHBO, Inc.	
WHDF		100 100	+ 1	Calumet, Mich. Jackson, Mich.	Upper Michigan Broadcasting Co. WIBM, Inc. James F. Hopkins, Inc.	
WIBM WJBK WJTL WLEY	*	50	ĩ	Detroit, Mich.	James F. Hopkins, Inc.	
WLEY		100 100	 プ	Atlanta, Ga. Lexington, Mass.	Oglethorpe University Lexington Air Stations	
WLVA	‡	100		I was alabassare Va	Lynchburg Broadcasting Corp.	
WMBR WPFB	‡	100 100		Tampa, Fla. Hattiesburg, Miss. St. Albans, Vt. Williamsport, Pa	F. J. Reynolds Hattiesburg Broadcasting Co.	
WQDM WRAK	*	100 100	D	St. Albans, Vt.	A. J. St. Antoine C. R. Cummins Wilmington Radio Association	
WRAM	*	100		Williamsport, Pa. Wilmington, N. C.	Wilmington Radio Association	
WRDO	†	100 100		Augusta, Maine Racine, Wis.	WRDO, Inc. Racine Broadcasting Corp.	
WRJN WSVS	*	50		Buffalo, N. Y.	Seneca Vocational School	
1200	1_!1	1		217 24	,	
1380	KII	-		217.3 meters		KCYS.
CMJC KOH KQV KSO	Ŧ-	150 500	1382 C	Camaguey, Cuba Reno, Nevada Pittsburgh, Pa.	Feliciano Isaac The Bee, Inc.	1400
KQV	Ì	500	2	Pittsburgh, Pa.	The Bee, Inc. KQV Broadcasting Co.	1400
WKBH	*	500 1000	1 1C	Clarinda, Iowa La Crosse, Wis.	Iowa Broadcasting Co. WKBH. Inc.	MTRS.
WSMK	*	200	2	Dayton, Ohio	WKBH, Inc. Stanley M. Krohn, Jr.	214.2
XETB		125		Torreon, Coah.	Jose A. Berumen	DIAL
1390	kil	ocyc1	es	215.7 meters		DIAL
KLRA	*	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.	
KOY KUOA		500 1000	C 1	Phoenix, Arizona Fayetteville, Ark.	Nielson Radio & Sporting Goods Co. University of Arknasas	<b>2</b> ~
WHK	‡	1000	Ĉ	Cleveland, Ohio	Radio Air Service Corp.	CUI
1400	1_:1	1		21/1 2 +00 =4 ====		CUT OU
1400	KII			214.2 meters		
CMBI CMBN		30 30	1405 1405	Havana, Cuba Havana, Cuba	Francisco Mayorquim Armado Romeu	T ON
CMCH		15	1405	Havana, Cuba	Hernani Torralbas	ESZ

	INDE	XBY	FREQUENCIES	AŅ	D DIAL NUMBERS
CMCM	15	1405	Havana, Cuba		Martinez-Madicu
KLO *	500		Havana, Cuba Ogden, Utah		Interstate Broadcasting Corp.
KOCW * WBAA †	250 500	+ 1+	Chickasha, Okla. Lafayette, Ind. Brooklyn, N. Y.		College for Women
WBAA † WBBC *	500 500	$\frac{1+}{2a}$	Lafayette, Ind.		Purdue University
WCGU *	500 500	2a	Brooklyn, N. Y.		Brooklyn Broadcasting Corp. U. S. Broadcasting Corp.
WCMA †	500	1	Culver, Ind.		General Broadcasting Corp.
WEOV	500	2	Brooklyn, N. Y.		Paramount Broadcasting Co.
WKBF † WLTH *	500	1	Indianapolis, Ind. Brooklyn, N. Y.		Paramount Broadcasting Co. Indianapolis Broadcasting, Inc.
	500	2	Brooklyn, N. Y.		The Voice of Brooklyn, Inc.
XEP	200		Laredo, Mexico		La Voz Latino
1410 kild	ocyc1	es :	212.6 meters		
KFLV †	500	4	Rockford, Ill.		Rockford Broadcasters, Inc.
	1000	1	Rockford, Ill. Amarillo, Texas		Gish Radio Service
WAAB *	500 500	C C 1 4	Boston, Mass.		Bay State Broadcasting Corp.
WBCM * WDAG *	1000	1	Bay City, Mich. Amarillo, Texas		James E. Davidson National Radio & Broadcasting Corp.
WHBL *	500	4	Shebovgan, Wis.		Press Pub. Co.
WHIS †	250	2	Sheboygan, Wis. Bluefield, W. Va.		Press Pub. Co. Daily Telegraph
WODX *	500	3C	Mobile, Ala.		Mobile Broadcasting Corp.
WRBX *	250	2	Roanoke, Va.		Richmond Development Corp.
WSFA †	<b>50</b> 0	3C	Montgomery, Ala.		Montgomery Broadcasting Co., Inc.
1/20 1-:1/	202701	00 '	711 1 motors	Γ.	
1420 kilo		.65	211.1 meters		
KABC † KBPS	100	ā	San Antonio, Texas	~	Alamo Broadcasting Co.
KCMC	100 100	<b>4</b>	Portland, Ore.		Benson Polytechnic Institute
KCMC KFIZ *	100		Texarkana, Ark. Fond du Lac, Wis.		North Mississippi Broadcasting Corp.
KFXD *	100		Nampa, Idaho		Reporter Printing Co. Frank E. Hurt Albert H. Scherman
KFXD * KFXY	100		Flagstaff, Arizona		Albert H. Scherman
KFYO †	100	+YZ	Nampa, Idaho Flagstaff, Arizona Abilene, Texas		T. E. Kirksev
KGFF †	100	5	Shawnee, Okla.		KGFF Broadcasting Co.
KGGC † KGIW †	100 100		San Francisco, Cal. Trinidad, Colo.		Leonard F. Wilson
KFYO † KGFF † KGGC † KGIW † KGIX † KGKX † KGKX † KGKX † KGVO †	100		Las Vegas, Nevada		Golden Gate Broadcasting Co. Leonard E. Wilson Las Vegas, Nevada, Radio Corp. W. W. Von Cannon, Trustee
KGKX † KGVO †	100		Sand Point, Idaho		W. W. Von Cannon, Trustee
KGVO †	100	D	Missoula, Montana Red Oak, Iowa Eugene, Ore.		Mosby's Incorporated Red Oak Radio Corp.
	100		Red Oak, Iowa		Red Oak Radio Corp.
KORE * KXL *	100 100	<b>ä</b>	Portland Ore		Eugene Broadcasting Station KXL Broadcasters, Inc.
KXYZ	100		Portland, Ore. Houston, Texas Presque Isle, Maine Waterbury, Vt.		Harris County Broadcast Co.
KXYZ WAGM	100		Presque Isle, Maine		Aroostook Broadcasting Corp.
WDEV	50	D	Waterbury, Vt.		Aroostook Broadcasting Corp. Harry C. Whitehill WEHS, Inc.
WEHS	100	a	Cicero, Ill. Battle Creek, Mich.		WEHS, Inc.
WELL † WERE *	50 100	$\mathbf{x}$	Eria Do	`	Enquirer-News Co.
WFDW *	100		Erie, Pa. Anniston, Ala.		Erie Dispatch-Herald Raymond G. Hammett
WHDL *	<b>10</b> 0	Ď	Tupper Lake, N. Y		Tupper Lake Broadcasting Co. Inc.,
WLIEC	100	a	Cicero, Ill.		WHFC, Inc.
WIAS † WILM *	100		Ottumwa, Iowa		Iowa Broadcasting Co.
	100		Wilmington, Del.		Delaware Broadcasting Co., Inc.
WJBO *	100 100	$\tilde{\mathbf{D}}^{-}$	New Orleans, La. Ironwood, Mich.		Valdemar Jensen
WJMS WKBI *	100	a	Cicero, Ill.		Valdemar Jensen Marius Johnson WKBI, Inc.
WLBF †	100		Kansas City, Kansas	:	WLBF Broadcasting Co.
	100	#	Detroit, Mich. Joplin, Mo.		Michigan Broadcasting Co., Inc.
WMBH	100	+	Joplin, Mo.		Edwin Dudley Aber Paducah Broadcasting Co.
WPAD †	100	-,	Paducah, Ky.		Paducah Broadcasting Co.
WSPA * WTBO *	100 100	<del></del>	Spartanburg, S. C. Cumberland, Md.		Voice of South Carolina
WIBO 4	100	Ď	Americus, Ga.		Associated Broadcasting Corp. Americus Broadcast Co.
4 400 4 14				_	
1430 kild			209.7 meters		
KECA † KGNF † WBAK †	1000	Й	Los Angeles, Cal. North Platte, Nebr. Harrisburg, Pa. Columbus, Ohio		Earle C. Anthony, Inc.
WRAF +	500 500	D	Harrichurg Do		Great Plains Broadcasting Co.
WBAK † WCAH *	500 500	I+ C□ C	Columbus Obio		Penna. State Police Commercial Radio Service Co.
WFEA *	500	$\tilde{\mathbf{c}}^{\Box}$	Manchester, N. H.		New Hampshire Broadcasting Co
WHEC *	500	$\mathbf{c}$	Manchester, N. H. Rochester, N. Y.		WHEC, Inc.
WHP *	500	1C+[	∃ Harrisburg, Pa.		WHEC, Inc. WHP, The Harrisburg Telegraph Memphis Broadcasting Co.
WNBR * WOKO †	500	Č.	☐ Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.		Memphis Broadcasting Co.
	500		Albany, N. I.		WOKO, Inc.
1440 kilo	ocyc1	es	208.2 meters		
KLS *	250	D	Oakland, Cal.		Warner Bros.
WBIG *	500	С	Greensboro, N. C.		North Carolina Broadcasting Co.

WCBA * 250 a WMBD * 500 3+0 WSAN * 250 a WTAD † 500 3	Allentown, Pa. Peoria Heights, Ill. Allentown, Pa. Quincy, Ill.	B. B. Musselman Peoria Broadcasting Co. Allentown Call Publishing Co., Inc. Illinois Broadcasting Corp.	
1450 kilocycles	206.8 meters		
KTBS * 1000 N WBMS † 250 1 WGAR † 500 B WHOM * 500 1 WNJ * 250 1 WSAR * 250 WTFI 500	Shreveport, La. Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga.	Tri-State Broadcasting System, Inc. WBMS Broadcasting Corp. WGAR Broadcasting Co. New Jersey Broadcasting Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Broadcasting Co.	
1460 kilocycles	205.4 meters	(	
KSTP * 10000 N WJSV * 10000	St. Paul, Minn. Alexandria, Va.	National Battery Broadcasting Co. WJSV, Inc.	
1470 kilocycles	204.0 meters [		
KGA † 5000 B WLAC * 5000 C	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co.	
1480 kilocycles	202.6 meters [		
KFJF * 5000 C WKBW * 5000 C	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Buffalo Broadcasting Co., Lessees	
1490 kilocycles	201.2 meters [		
WCHI * 5000 1 WCKY * 5000 1N	Chicago, Ill. Covington, Ky.	Midland Broadcasting Company L. B. Wilson, Inc.	
1500 kilocycles	199.9 meters [		
CMBL - 20 CMBQ - 50 CMBR - 15 KDB * 100 C KGFI * 100 + KGFK † 50 KGKB - 100 KGKB - 100 KGKY * 100 KNOW † 100 KPJM * 100 KPJM * 100 KPJM * 100 KPJM * 100 KPJM * 100 KRPG † 100 WKBZ † 50 WKBZ * 100 + WKBZ * 100 + WMBA † 100 WMBA † 100 WMBA † 100 WMBQ * 100 1 WMIL + 100 1 WMIL + 100 1 WMPC † 100 WNBF * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WPEN * 100 WWRL * 100 1 WWRL * 100 1	Havana, Cuba Havana, Cuba Havana, Cuba Santa Barbara, Cal. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Nebr. Austin, Texas Prescott, Arizona Wenatchee, Wash. Santa Ana, Cal. El Centro, Cal. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boston, Mass. Newport, R. I. Brooklyn, N. Y. Brooklyn, N. Y. Lapeer, Mich. Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa. Coyoacan, D. F.	Julio C. Hidalgo Gali-Sardinas Tomas Basail Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Brdcstg. Co. Hilliard Co., Inc. KNOW Broadcasting Co. A. P. Miller Wescoast Broadcasting Co. J. S. Edwards E. R. Irey and F. M. Bowles Knox Battery & Electric Co. K. L. Ashbacker John N. Brahy Boston Broadcasting Co. LeRoy Joseph Beebe Paul J. Gollhofer Arthur Faske First M. P. Church Howitt, Wood Radio Co., Inc. Radiophone Brdcstg. Station, Inc. Wm. Penn Broadcasting Co. Musicove, Inc. Philip Weiss Music Co. Long Island Broadcasting Corp. Walker & Downing Radio Corp. Manuel Zetina	ксүs. 1500 мтгs, 199.9 DIAL

ALABAMA	Watts		Kcys.	San Jose J-1	500	KQW	1010
Anniston O-22	100	WFDW	1420	Santa Ana M-3 Santa Barbara M-2	100 100	KREG KDB C	1500~ 1500 <del>~</del>
Birmingham O-21	5000 500	WAPI N WBRC C	1140~ 930~	Stockton J-2	250 100	KGDM	1100 1200 -
Gadsden O-21	100 100	WKBC	1310 1210	Holy City	100	KWG KFQU	1200 -
Huntsville N-21	50	WJBY WBHS	1200	COLORADO			
Mobile Q-20 Montgomery P-21	500 500	WODX C WSFA C	1410~ 1410	Colorado Springs K-11   Denver K-11	1000 500	KVOR C KFEL	1270~ 920~
					500	KFXF	920-
ALASKA				,	1000 12500	KLZ C KOA N	560- 830-
Anchorage	100	KFQD	1230	Fort Morgan J-11	500 100	KPOF KGEW	880⊶ 1200
Ketchikan	500	KGBU	900	Grand Junction K-9	100	KFXJ	1310∽
				Greeley J-11 Pueblo L-11	500 250	KFKA KGHF	880~ 1320-
ARIZONA				Trinidad L-11	100	KGIW	1420-
Flagstaff M-7 Jerome M-6	100 100	KFXY KCR I	1420- 1310-	Yuma J-12	100	KGEK	1200⊶
Phoenix N-6	500	KCRJ KOY C KTAR N	1390~	CONNECTICUT			
Prescott M-6	500 100	KPJM	620- 1500-	Bridgeport H-27	250	WICC	600
Tucson O-7	100 500	KGAR KVOA	1370≒ 1260⊶	Hartford H-27	500 50000	WDRC C WTIC R	1330 1060
1	500	RVON	1200-	Storrs H-28	250	WCAC	600
ARKANSAS			l	DELAWADE			
Blytheville M-19	50 1000	KLCN KUOA	1290 1390-	DELAWARE	250	WDEX	1120
Fayetteville M-16 Fort Smith N-16	50	KFPW	1340-	Wilmington J-26	250 100	WDEL WILM	1120 1420
Hot Springs N-17 Little Rock N-17	10000 250	KTHS N KARK	1040~	DIOMBIOM OF A			
Dittio XOCK 11-17	100	KGHI	890- 1200-	DISTRICT OF (			
Paragould M-18	1000 100	KLRA C KBTM	1390- 1200-	Washington J-26	250 500	WMAL C WRC N	630 950
Texarkana O-17	100	KCMC	1420-		100	WOL	1310
OAT IDODNILA				FLORIDA			
CALIFORNIA	. 100	KEDN C	1200	Clearwater R-24	1000	WFLA N	620-
Bakersfield L-3 Berkeley J-2	100 100	KERN C KRE	1200 1370	Gainesville Q-24 Jacksonville Q-24	5000 1000	WRUF WJAX N	830 900
Beverly Hills M-3 Burbank M-3	500 500	KMPC KELW	710 780	Miami T-25	$\frac{1000}{1000}$	WIOD N WQAM C	1300 560
Culver City M-3	250	KFVD KXO	1000-	Orlando R-24	250	WDBO C	1120-
El Centro N-4 Fresno K-2	100 100	KMJ	1500- 1210-	Pensacola Q-21 St. Petersburg S-24	500 1000	WCOA WSUN N	1340- 620-
Hollywood M-3	1000 500	KFWB KMTR	950 570∽	Tampa R-24	1000 100	WDAE C WMBR	620- 1220- 1370-
	5000	KNX	1050∞		100	WINDK	13/0~
Long Beach M-3	1000 1000	KFOX KGER	1250~ 1360~	GEORGIA			
Los Angeles M-3	1000	KECA N	1430~	Americus P-22 Athens O-23	100 500	WTFI	1420 1450~
	1000 50000	KFAC KFI N	1300 640	Atlanta O-22	250	WGST C	890-
	500 100	KFSG KGFJ	1120≕ 1200≈		100 5000	WJTL WSB N	1370~ 740~
	1000	KHJ C	900∞	Augusta O-23	100	WRDW	1500-
	500 500	KRKD KTM	1120∞ 780∞	Columbus O-22 Macon O-23	50 500	WRBL WMAZ	1200~ 1180
Oakland J-1	250	KLS	1440	Rome N-22 Savannah O-24	100 500	WFDV WTOC C	1310 <del>-</del> 1260 <b>-</b>
	500 500	KLX KROW	880∞ 930	Thomasville Q-22	100	WQDX	1210-
Pasadena M-3	50 100	KPPC KFBK	1210 1310∞	HAWAII			
Sacramento J-2 San Bernardino M-3	100	KFXM	1210∞	Honolulu	250	ксмв с	1320
San Diego N-3	500 500	KFSD N KGB C	600₩ 1330₩		1000	KGU R	940
San Francisco J-1	1000	KFRC C	610~	IDAHO			
	500 100	KFWI KGGC	930~ 1420	Boise G-5	1000	KIDO	1350
	7500 100	KGO N	790- 1070-	Idaho Falls G-7 Nampa G-5	250 100	KID KFXD	1320- 1420-
	5000	KJBS KPO N	680	Pocatello H-7	250	KSEI	900
•	1000 1000	KTAB KYA	560- 1230-	Sand Point D-6 Twin Falls H-6	100 250	KGKX KTFI	1420 1240~
	2000		-200	- ;,	200		

ILLINOIS	Watts		Kcys.	Shenandoah J-16	500 500	KFNF	890 930
Carthage J-18 Chicago I-20	50 10000 10000	WCAZ KFKX N KYW N	1070- 1020 1020-	Sioux City I-15 Waterloo I-17	1000 500	KMA KSCJ C WMT C	1330
	500 25000	KYW N WAAF WBBM C	920 770	KANSAS			
	1500 5000	WCFL R WCHI	970~ 1490~	Dodge City L-13	100	KGNO	1210-
	100 100	WCRW WEDC	1210 1210	Kansas City K-16 Lawrence K-16	100 500	WLBF KFKU	1420- 1220-
	50000 500	WENR N WGES	870 1360	Manhattan K-15	1000 500	WREN B KSAC	1220- 580-
	25000 1000	WGN C	720- 560-	Milford K-14 Topeka K-16	5000 1000	KFBI WIBW C KFH C	1050 580
	50000	WLS B	870-	Wichita L-15	1000	KFH C	1300-
	5000 5000	WMAQN WMBI	670~ 1080~	KENTUCKY			
	500 100	WPCC WSBC	560 1210-	Covington K-22 Hopkinsville M-20	5000 1000	WCKYN WFIW C	1490~ 940~
Cicero I-20	100 100	WEHS WHFC	ا 1420 1420	Louisville L-21	10000 250	WHAS N WLAP C	820- 1200-
Decatur K-19	100 100	WKBI WJBL WKBS	1420 1200-	Paducah M-19	100	WPAD	1420-
Galesburg J-18 Harrisburg L-19	100 100	WEBQ	1310 <b>-</b> 1210∞	LOUISIANA			
Joliet I-19	100 100	WCLS WKBB	1310 1310	Monroe P-18 New Orleans R-19	100 100	KMLB WABZ	1200- 1200-
La Salle J-19 Mooseheart I-19	100 20000	WJBC WJJD WMBD C	1200° 1130°	The orients K-19	1000 100	WDSII C	1250- 1420-
Peoria Heights J-19 Quincy K-18	500 500	WMBD C WTAD	1440- 1440-		100	WJBO WJBW WSMB N	1200
Rockford I-19 Rock Island I-18	500 100	KFLV WHBF	1410- 1210-	C	10000 10000	WWL	1320- 850-
Springfield K-19	100 100	WCBS WTAX	1210	Shreveport P-17	50 1000	KRMD KTBS N	1310- 1450-
Tuscola K-20	100 250	WDZ WILL	1210- 1070 890-		$\begin{array}{c} 100 \\ 10000 \end{array}$	KWEA KWKH	1210 <u>~</u> 850 <u>~</u>
Urbana J-20 Zion I-20	5000	WCBD	1080-	MAINE			
				Augusta F-28 Bangor F-29	100 100	WRDO WABI WLBZ C	1370 1200
INDIANA				Portland F-28	500 1000	WCSH R	620 940
Anderson J-21 Connersville K-21	100 100	WHBU WKBV	1210 1500	Presque Isle D-29	100	WAGM	1420
Culver I-20 Elkhart I-21	500 50	WCMA	1400- 1310-	MARYLAND			
Evansville L-20 Fort Wayne J-21	500 100	WJAK WGBF WGL C	630- 1370	Baltimore J-26	10000 250	WBAL B WCAO C	1060 <b>~</b> 600
	10000 1000	WOWO C	1160- 1360-		100 500	WCBM WFBR R	1370 1270
Gary I-20 Hammond I-20	100	WJKS WWAE	1200-	Cumberland J-25	100	WTBO	1420
Indianapolis J-21	1000 500 500	WFBM C WKBF WBAA	1230- 1400-	MASSACHUSE'	TTS		
Lafayette J-20 Muncie J-21	50	WLBC	1400- 1310-	Boston G-28	500 1000	WAAB C WBIS	1410 1230
South Bend I-20	100 500	WFAM WSBT C	1200- 1230-		25000 1000	WBZ B WEEI R	990- 590
Terre Haute K-20	100	WBOW	1310-	•	1000	$\mathbf{W}\mathbf{H}\mathbf{D}\mathbf{H}$	830
					100 1000	WLOE WNAC C	1500 1230-
IOWA	5000	Wor	640	Fall River H-28 Lexington G-28	250 100	WSAR WLEY	1450 1370
Ames I-17 Boone I-17	5000 100	WOI KFGQ	640- 1310-	Needham G-28 New Bedford H-28	500 100	WBSO WNBH	920 1310
Cedar Rapids I-18 Clarinda J-16 Council Bluffs J-16	100 500	KWCR KSO	1310- 1380-	Springfield H-27 Worcester G-28	1000 100	WBZA B WORC C	990 <b>~</b> 1200
Davenport I-18	1000 5000	KOIL B WOC N	1260- 1000-		250	WTAG R	580
Decorah H-18	50 100	KGČA KWLC	1270- 1270-	MICHIGAN			
Des Moines I-17 Fort Dodge I-16	5000 100	WHO N	1000- 1310	Battle Creek I-21 Bay City H-22	50 500	WELL WBCM C	1420~ 1410
Iowa City I-18 Marshalltown I-17	500 100	KFJY WSUI KFJB	880- 1200	Bay City H-22 Calumet E-19 Detroit H-22	100 50	WHITE	1370 1370
Ottumwa J-17 Red Oak J-16	100 100 100	WIAS KICK	1420- 1420-	200000 23-22	10000 100	WJBK WJR B WMBC	750 1420-
Ned Oak J-10	100	KICK	14207		100	WINDC	1420-

Detroit H-22	1000 1000	WWJ R		NEVADA	Watts		Kcys.
East Lansing H-21 Flint H-22	1000 100	WKAR WFDF	1040- 1310	Las Vegas L-5 Reno I-3	100 500	KGIX KOH C	1420~ 1380~
Grand Rapids H-21	500 500	WASH WOOD	1270- 1270-	NEW HAMPSH	IRE		
Ironwood F-18 Jackson I-21	100 100	WJMS WIBM	1420 <u>~</u> 1370	Laconia G-28 Manchester G-28	100 500	WKAV WFEA C	1310 1430~
Kalamazoo I-21 Lapeer H-22	1000 100	WKZO WMPC	590 1500	Portsmouth G-28	250	WHEB	740
Ludington H-20 Marquette F-19	50 100	WKBZ WBEO	1500- 1310-	NEW JERSEY			
Royal Oak H-22	50	WEXL	1310	Asbury Park I-27	500 5000	WCAP WPG C	1280 1100
MINNESOTA				Camden I-26	500	WCAM	1280 1450-
Fergus Falls F-15 Minneapolis G-17	100 5000	KGDE	1200- 810-	Hackensack I-27 Jersey City I-27	250 300	WBMS WAAT	940-
Willingapons G-17	1000	WCCO C WDGY	1180~	Newark I-27	500 1000	WHOM WAAM	1450 1250-
Moorhead F-15	1000 50	WRHM KGFK	1250 1500 1250		250 250	WGCP WNJ	1250 1450-
Northfield G-17	1000 1000	KFMX WCAL	1250	Paterson I-27	5000 1000	WOR WODA	710- 1250
St. Paul G-17	1000 10000	WLB KSTP N	1250 1460~	Red Bank I-27 Trenton I-26	100 500	WJBI WOAX	1210 1280
MISSISSIPPI				Zarephath I-27	250	WAWZ	1350~
Greenville O-18	100	WRBQ	1210-	NEW MEXICO			
Gulfport Q-19 Hattiesburg Q-19	100 100	WGCM WPFB	1210- 1370- 1270-	Albuquerque N-7 Clovis N-11	250 100	KGGM KICA	1230 1370
Hattiesburg Q-19 Jackson P-19 Laurel P-20	1000 100	WJDX N WTSL	1310-	Raton M-11 State College P-9	50 20000	KGFL KOB	1370 1180 <del>-</del>
Meridian P-20 Vicksburg P-18	500 500	WCOC WQBC	880~ 1360	NEW YORK			
Tupelo		WDIX	~	Albany H-27	500	<b>w</b> око с	1430
MISSOURI Cp. Girardeau L-19	100	KFVS	1210-	Auburn H-25 Binghamton H-26	100 100	WMBO WNBF	1310 <del>-</del> 1500-
Columbia K-17 Grant City J-16 Jefferson City L-17	500 100	KFRU KGIZ WOS	630~ 1500~	Brooklyn I-27	500 1000	WBBC WBBR	1400 1300
Jefferson City L-17 Joplin M-16	500 100	WMBH	630~ 1420~	ĺ	500 500	WCGU WFOX	1400 1400-
Kansas City K-16	1000 100	KMBC C KWKC	950- 1370-		500 100	WLTH WMBQ	1400 1500
	1000 500	WDAF N WHB	610~ 860~	Buffalo H-24	100 1000	WMIL WBEN R	1500 900~
St. Joseph K-16	1000 2500	WOQ KFEQ	1300≃ 680∽		100 1000	WEBR WGR C	1310 550
St. Louis L-18	100 500	KGBX KFUO	1310- 550⊷		5000 50	WKBW C WSVS	1480~ 1370
ou bodis 2 10	100 50000	KFWF KMOX C	1200 1090-	Canton F-26 Freeport I-27	500 100	WCAD WGBB	1220 1210
	500 1000	KSD R KWK B	550~ 1350~	Glens Falls G-27	50 1000	WBGF	1370
	1000	WEW WIL	760- 1200-	Ithaca H-25	50	WEAI WLCI	1270 <b>-</b> 1210
MONTANA	100	WIL	1200	Jamaica H-27 Jamestown H-24	100 50	WMRJ WOCL	1210 1210
Billings F-9 Butte F-7	1000 500	KGHL N KGIR N	950 <u>~</u> 1360~	Long Island City I-27 New York City I-27	100 50000	WLBX WABC C	1500 <b>-</b> 860 <b>-</b>
Great Falls E-8	1000	KFBB	1280		250 50000	WBNX WBOQ	1350. 860~
Kalispell D-7 Missoula E-7	100 100	KGEZ KGVO	1310 1420-		250 50000	WCDA WEAF R	1350 660∽
Wolf Point E-11	100	KGCX	1310-		500 500	WEVD	1300 1180
NEBRASKA Clay Center J-14	1000	KMMJ	740-		1000 250	WINS WHAP WHN	1300- 1010
Kearney J-14 Lincoln J-15	100 5000	KGFW KFAB C	1310- 770-		30000 5000	WJZ B WLWL	760- 1100-
Lincom J-15	100	KFOR	1210-		500	WMCA	570 <del>~</del>
Norfolk I-15	500 1000	WCAJ WJAG	590- 1060-		500 500	WMSG WNYC	1350 570
North Platte J-13 Omaha J-15	500 500	KGNF WAAW	1430 660		1000 250	WOV WPAP	1130 1010
Scottsbluff I-11	1000 100	WOW N	590~ 1500~		500 250	WPCH WQAO	810 1010
York J-15	500	KGBZ	930™		250	WRNY	1010

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Rochester G-25	5000	WHAM B	1150-	Portland E-3	5000	KEX R	1180-
Saranac Lake F-26	500 50	WHEC C WNBZ	1430 <b>-</b> 1290		100 500	KBPS KF IR	1420 1300
Schenectady G-27	50000	WGY R	790∞		1000	KFJR KGW N KOIN C	620-
Syracuse G-25	1000	WFBL C WMAC	1360		1000 500	KOIN C KTBR	940- 1300
	250 250	WSYR	570 570		500	KWII	1060~
Troy G-27	500	WHAZ	1300~		100	KWJJ KXL	1420-
Tupper Lake F-26	100	WHDL	1420∞ 1200∽	L			
Utica G-26 Woodside I-27	100 100	WWRL	1500~	PENNSYLVANI.	A		
Yonkers I-27	100	WCOH	1210		250	WOD 4	1440:-
				Allentown I-26	250 250	WCBA WSAN	1440- 1440-
NORTH CAROL	INA			Altoona I-25	100	WFBG	1310
Asheville M-23	1000	WWNCN	570	Carbondale H-26	10	WNBW	1200
Charlotte M-24	5000	WBT C	1080-	Elkins Park I-26 Erie H-24	25 100	WIBG WERE	930 1420-
Gastonia M-24 Greensboro M-24	100 500	WSOC WBIG C	1210 <b>-</b> - 1440	Grove City 1-24	100	WSAJ	1310
Raleigh M-25	1000	WPTF N	680-	Harrisburg I-25	500 100	WBAK WCOD	1430 1200
Wilmington N-26	100	WRAM	1370		500	WHP C	1430-
Winston-Salem M-24	100	wsjs	1310~	Johnstown J-24	100	WJAC WGAL	1310
110mmr. D.477.00				Lancaster I-26	100 100	WGAL	1310- 1200-
NORTH DAKO				Lewisburg I-26	100	WKJC WJBU WLBW C	1210
Bismarck F 13	1000	KFYR N	550-	Oil City I-24	500	WLBW C	1260
Devils Lake E-14 Fargo F-15	100 1000	KDLR WDAY N	1210 940	Philadelphia I <sub>7</sub> 26	10000 100	WCAU C WDAS	1170 <b>∽</b> 1370
Grand Forks E-15	100	KFIM	1370_		500	WFAN C	610-
Mandan F-13	250	KGCU	1240- 1240-		500	WFI R	560
Minot E-13	250	KLPM	1240		100 500	WHAT WIP C	1310 610
0.7.7.0					500	WLIT R	560
OHIO					100	WPEN	1500
Akron I-23	1000	WADC C WHBC	1320 1200		250 100	WRAX WTEL	1020 1310
Canton I-23 Cincinnati K-22	10 100	WFBE	1200	Pittsburgh J-24	50000	KDKA B	980 ↔
	1000	WKRC C	550-		500	KQV WCAE R	1380
	50000 500	WLW B WSAI R	700 1330	i e	1000 1000	WCAE R	1220 1290
Cleveland I-23	500	WGAR B	1450-	6	100	WJAS C WWSW	1500
	1000	WHK C	1390-	Reading I-26	1000	WEEU	830
	500 50000	WJAY WTAM R	610~ 1070~	Scranton H-26	100 250	WRAW WGBI	1310 880~
Columbus J-22	500	WAIU C	640~		250	WOAN	880-
	500	WCAH C	1430-	State College I-25	500	WPSC WNBO	1230
	750 100	WEAO WSEN	570 1210	Washington J-24 Wilkes-Barre I-26	100 100	WBAX	1200- 1210
Dayton J-22	200	WSMK	1380⊷		100	WBRE	1310-
Dayton J-22 Mansfield J-22	100	WJW WHBD	1210 1370-	Williamsport I-25 York J-26	100 1000	WRAK WORK	1370 1000
Mount Orab K-22 Toledo I-22	100 1000	WSPD C	1340-	101K J=20	1000	WORK	1000
Youngstown I-23	500	WKBN C	570				
Zanesville J-23	100	WALR	1210	PHILIPPINES			
•			- 1	Cebu	500	KZRC	937.5
OKLAHOMA				Manila	1000 1000	KZKA KZDM	1110
Chickasha N-14	250	KOCW	1400		1000	KZRM	618. <b>5</b>
Enid M-14	100 500	KCRC WNAD	1370 = 1010	PORTO RICO			
Norman N-15 Oklahoma N-15	5000	KFIF C	1480				
	100	KFXR	1310=	San Juan W-34	250	WKAQ	890
	100 1000	KGFG WKY N	1370 ···				
Ponca City M-15	1000	WKY N WBBZ	1200-	RHODE ISLAN	0		
S. Coffeyville M-15	500	KGGF	1010-			3378 APD A	1500
Shawnee N-15	100	KGFF	1420-	Newport H-28 Providence H-28	100 250	WMBA WEAN C	1500 780
Tulsa M-15	5000	KVOO N KGMP	1140		250	WJAR R	890
E/k City	1.0	WO/11			100	WPRO	1210
OREGON		****					
Corvallis E-2	1000 100	KOAC KORE	550~ 1420	SOUTH CAROL	INA		
Eugene F-2 Klamath Falls G-3	100	KFJI	1210-	Charleston O-25	500	WCSC	1360~
Marshfield F-1	100	KFJI KOOS	1370	Columbia N-24	500	WIS N	1010
Medford G-2	100	KMED	1310	Spartanburg N-23	100	WSPA	1420-
				<u> </u>			

SOUTH DAKOT	ΓA Watt	9	Ксуз.	VIRGINIA	Watts		Ксуз.
Brookings H-15	500	KFDY	550-	Alexandria K-26	10000	WISV	1460-
Huron H-14	100	KGDY	1200-	Arlington J-25	1000	WJSV NAA	690
Mitchell H-14	100	KGDA	1370	Danville L-25	100	WBTM	1370-
Pierre G-13 Rapid City H-12	200 100	KGFX WCAT	580 1200	Emory L-23 Lynchburg L-25	500 100	WEHC WLVA	1350 1370
Sioux Falls H-15	2500	WCAT KSOO	1110-	Newport News L-26	100	WGH	1310
Vermillion I-15	500	KUSD	890-	Norfolk L-26	500	WPOR	780
Watertown G-15	100 1000	KGCR WNAX C	1210- 570-	Determine I 26	500	WTAR (	780 1200
Yankton I-15	1000	WINAA C	3,07	Petersburg L-26 Richmond K-26	100 100	WBBL	1210-
WENT TO CORD			- 1	100000000000000000000000000000000000000	100	WMBG	C 1210-
TENNESSEE				D	5000		N 1110-
Bristol L-23	100	WOPI	1500-	Roanoke L-24	250 250	WDBJ (	C 930 1410-
Chattanooga N-21 Jackson N-20	1000 100	WDOD C	1280- 1310-		200	WICDZE	1410~
Knoxville M-22	50	WTJS WFBC	1200	WASHINGTON			
	1000	WNOX C	560	Aberdeen D-2	100	KXRO KVOS	1310-
14 11 11 10	100 100	WROL	1310 <b>~</b> 1370	Bellingham C-3	100	KVOS	1200
Memphis N-19	500	WHBQ WMC N	780~	Everett C-3 Olympia D-3	50 100	KFBL KGY	1370 1200
	500	WNBR	1430~	Pullman E-5	1000	RWSC	1220-
	500	WREC C	600~	Seattle C-3	5000	KJR R	970-
Nashville M-21	5000 5000	WLAC C WSM N	1470- 650-		1000 1000	KOL C KOMO N	1270 <u>-</u> 920 <del>-</del>
Springfield M-20	100	WSIX	1210-	!	100	KPCB	650-
Memphis		WEBC		<b>1</b> ,	50	KRSC	1120-
TEXAS		'	- 1	l '	1000	KTW	1220
	100	KFYO	1420-		100 500	KVL KXA	1370. 570
Abilene P-13 Amarillo N-12	100 1000	KGRS	1420-	Spokane D-5	100	KFIO	1120-
Initialities 11-12	1000	WDAG	1410-		1000	KFPY C	1340~
Austin Q-14	100	KNOW	1500-		5000 1000	KGA R KHQ N	1470- 590-
Beaumont R-17 Brownsville U-15	500 500	KFDM KWWG	560- 1260-	Tacoma D-3	500	KMO	860
College Sta. O-15	500	WTAW	1120		1000	KVI C	760
College Sta. Q-15 Corpus Christi S-14	100	KGFI	1500	Walla Walla E-5	100	KUJ	1370-
Dallas P-15	10000 50000	KRLD C WFAA N	1040 800	Wenatchee D-4 Yakima D-4	50 100	KPQ KIT	1500~ 1310
	500	WRR C	1280-				1010
Dublin P-14	100	KFPL	1310-	WEST VIRGINI	$\mathbf{A}$		
El Paso P-9	100	KTSM WDAH	1310- 1310	Bluefield L-24	250	WHIS	1410-
Fort Worth P-15	100 100	KFJZ	1370-	Charleston K-23	250	WOBU	580-
rott worth 1-10	1000	KTAT	1240	Fairmont J-24	250 250	WMMN WSAZ	890→ 580~
64 . 74	10000	WBAP N	800~	Huntington K-23 Wheeling J-24	5000	WWVA C	1160_
Galveston R-16	100 500	KFLX KFUL	1370- 1290-				
Greenville O-15	15	KFPM	1310-	WISCONSIN			
Harlingen T-14	500	KRGV	1260-	Eau Claire G-18	1000	WTAQ C	1330-
Houston R-16	1000 100	KPRC N KTLC	920 <del>-</del> 1310	Fond du Lac H-19 Green Bay G-19 Janesville I-19	100	KFIZ	1420
	500	KTRH C	1120-	Green Bay G-19	100 100	WHBY WCLO	1200- 1200-
	100	KXYZ	1420-	La Crosse H-18	1000	жквн с	
San Angelo Q-13	100	KGKL	1370~	Madison H-19	750	WHA	940-
San Antonio R-14	100 100	KABC KMAC	1420-	11 20	500	WIBA N	1280~
	100	KONO	1370- 1370-	Manitowoc H-20 Milwaukee H-19	100 250	WOMT WHAD	1210 1120
	1000	KTSA C	1290-	Willwaukee 11-19	250	WISN C	1120
m 4 m 46	50000	WOAI N	1190-		1000	WTMJ N	620-
Tyler P-16	100 1000	KGKB WACO C	1500 1240	Poynette H-19	100	WIBU	1210-
Waco Q-15 Wichita Falls O-14	250	KGKO	570-	Racine I-20 Sheboygan H-20	100 500	WRJN WHBL	1370 1410
***************************************	200	110210		Stevens Point G-19	2000	WLBL	900
TITALI			i	Superior F-17	1000	WEBC N	1290→
UTAH	<b>5</b> 00	WI C	1400	WYONENG			
Ogden I-7 Salt Lake City I-7	500 1000	KLO KDYL C	1400- 1290-	WYOMING			
Sait Lake City 1-/	5000	KSL N	1130-	Casper H-10	100	KDFN	1210-
TIEDA (ONTE	- 000			043	TAT 4		
VERMONT				CAN	IADA		
Burlington F-27	100	WCAX	1200 1500-	ALBERTA			
Rutland G-27 St. Albans F-27	100 100	WSYB WODM	1370	Calgary B-7	500	CFAC	690
Springfield G-27	10	WQDM WNBX	1200		10000	CFCN	985~
Waterbury F-27	50	WDEV	1420		500	CJCJ	690

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Edmonton A-8	250	СНМА	580		Watt		Ксуз.
	500	CJCA CKUA	745	Quebec D-27	100	CHRC	645
Lethbridge C-8	500 100	CKUA	580 1120	Quenes 2 2.	100	CKCI CKCV	645
Red Deer A-8	1000	CKLC	840	,	50 50	CKCV	880 880
DDITTOIL COLL	1000	CNRD	840	SASKATCHEW		CINIC	000
BRITISH COLU				Fleming C-13	1000	CIRW	665-
Chilliwack B-3 Kamloops B-5	100	CHWK	665 1120	Moose Jaw C-11	500	CJRW CJRM	665
Kelowna C-5	100	CFJC CKOV	1200-	D1 C 12	25	10-AB	1200-
Trail C-6	25	10-AT	1155	Regina C-12	500 500	CHWC	960 <b>-</b> 960
ancouver B-3	100 500	CHLS	730 1210~		500	CJBR CKCK	960
	100	CJOR CKCD	730 730		500	CNRR	960
	50	CKFC	730	Saskatoon B-11	500 500	CFQC CNRS	910 910
	100 100	CKMO CKWX	730 730	Yorkton B-13	500	CJGX	630
	500	CNRV	1030	NEWFO	TATEST	AND	
ictoria C-3	50	CFCT	630			VOAS	810
MANITOBA				St. Johns A-35	75 30	VONA	950
Brandon D-14	500	CKX	930		500	VOWR	675.
Vinnipeg D-15	5000	CKY	780-	CENTRAL	A % #	EDICA	
NEW DDINGWI	5000	CNRW	780		AIVI	LINICA	
NEW BRUNSWI		OFF TO	1010	COSTA RICA			
redericton D-29 Moncton D-30	50 500	CFNB CNRA	1210   630	Heredia FF-23	15	TI4NRH	980
st. John D-30	500	CFBO	890	San Jose FF-23	50	TICR	911
NOVA SCOTIA				GUATAMALA			
	2000	VAS	685	Guatamala CC-19	50	TGW	<b>570</b>
Glace Bay C-32 Ialifax E-31	500	CHNS	815	HONDURAS			
	500 100	CNRH VCX	815 690	Tegucigalpa CC-21	2300	HRB	1370
ydney C-32	50	CJĈB CKIC	880		2000	,	10,0
Volfville D-31	50	CKIC	1010	SALVADOR			
ONTARIO				Salvador CC-19		RUS	664
rantford H-23	15	10-BQ	1200-	- MEXICO			
hatham H-22 obalt E-23	250 100	CFCO CKMC	1210 1210	AGUASCALIEN	TES		
t. William E-19	50	CKPR	890-	Aguascalientes W-10		XFC	810
lamilton H-24	50	CHML	880	BAJA CALIFOR		0	010
ingston G-25	500 50	CKOC; CFRC	635 930	Tiajuana N-3	300	XEFD	1020
ondon H-23	5000	ČĴĠČ	910-		300	ALFD	1020
	5000	CJGC CNRL	910	CHIHUAHUA			
lorth Bay E-23 Ittawa F-25	100 100	CFCH CKCO	930 890	Chihuahua R-9	100	XEFI	1000
	500	CNRO	600	Juarez P-9	250 101	XFF	875 <b>-</b> 1000 <b>-</b>
rescott F-25	100 100	CFLC CKPC	915 880	Juanez 1 - 9	5000	XEFI XFF XEJ XEQ	750~
reston H-23 t. Catherines H-24	500	CKTB CFCA	635	COAHUILA			
oronto G-24	500	CFCA	1120	Saltillo, Coah. U-12	25	XEL	1000
	500 4000	CFCL CFRB C	580 690-	Torreon U-11	125	XETB	1380
	500	CKCL	580-	Villa Acuna R-12	100 75000	XETG XER	1000 735-
	5000	CKGW N	840-		, 5000	ALL	/ 00 -
	500 500	CKNC CNRT	960 1120	D. F.			
	4000	CNRX	690	Coyoacan Y-13	100	XETZ XEB	1500
	5000	CNRX CPRY	840	Mexico City Y-13	1000 250	XEB XEFA	1030 1250
aterloo G-23	100	CKCR	645		250 250	XEG	1070-
Vindsor H-22 Vingham G-23	500 15	10-BP	540 1200~		101	XEG XEK	990-
PRINCE EDWA			1200-		1000	XEN	711-
	500	CFCY	580		5000 500	XEO XETA	940~ 1140
harlottestown C_21	100	CHCK	960		100	XETQ	1230
harlottestown C-31		CHGS	1120		5000	XETQ XEW	910-
	100	01100			500	XEX	1210
ummerside C-31	100	01100			500	YE7	700
ummerside C-31 QUEBEC			1030		500	XEX XEZ XFG	780
Summerside C-31 QUEBEC	500 5000	CFCF N	1030 730		500 2000 1000	XFG XFI	780 638 818
Charlottestown C-31 Summerside C-31 QUEBEC Montreal E-26	500	CFCF N	1030 730 730 730 730	Toluca. Y-12	500 2000	XFG	780 638

CITIC			
CFAC 690	CKCI 645	CMCA 1225	CNRL 910
Calgary, Alta.	Quebec, Que.	Havana, Cuba	London, Ont.
CFBO 890	CKCK 960	CMCB 1970	CNRM 730
St. John, N. B.	Regina, Sask.	Havana, Cuba CMCD 925	Montreal, Que. CNRO 600
CFCA 1120	CKCL 580 Toronto, Ont.	Havana, Cuba	Ottawa, Ont.
Toronto, Ont. CFCF 1030	CKCO 899	CMCF 890	CNRQ 880
Montreal, Que.	Ottawa, Ont.	Havana, Cuba	Quebec, Que.
CFCH 930	CKCR 645	CMCG 1345	I CNRR 960
North Bay, Ont.	Waterloo, Ont.	Havana, Cuba	Regina, Sask.
CFCL 580	CKCV 880	CMCH 1405	CNRS 910
Toronto, Ont.	Quebec, Que.	Havana, Cuba CMCJ 630	Saskatoon, Sask. CNRT 1120
CFCN 985	CKFC 730	Hovens Cubs	Toronto, Ont.
Calgary, Alta. CFCO 1210	Vancouver, B. C. CKGW 840	Havana, Cuba CMCM 1405	CNRV 1030
Chatham, Ont.	Toronto, Ont.	Havana, Cuba	Vancouver, B. C.
CFCT 630	CKIC 1010	I CMCN 925   1	CNRW 780
Victoria, B. C.	Wolfville, N. S.	Havana, Cuba	Winnipeg, Man.
CFCY 580	II CKLC 840	CMCO 660	CNRX 690
Ch'lottet'n,P.E.I.	Red Deer, Alta. CKMC 1210	Havana, Cuba	Toronto, Ont.
CFJC 1120	CKMC 1210	CMCQ 1150	CPRY 840
Kamloops, B. C.	Cobalt, Int.	Havana, Cuba	Toronto, Ont.
CFLC 915	CKMO 730	CMCR 1345 Havana, Cuba	HHK 920 Port au Prince, H.
Prescott, Ont.	Vancouver, B. C. CKNC 960	CMCU 1285	HIX 630
CFNB 1210 Fredericton, N.B.	Toronto, Ont.	Havana, Cuba	Santo Domingo
CFQC 910	CKOC 635	CMCW 1285	HRB 1370
Saskatoon, Sask.	Hamilton, Ont.	Havana, Cuba	Tequeigalpa
CFRB 590	CKOV 1200	CMCY 1345	KABC 1420
Toronto, Ont.	Kelowna, B. C.	Havana, Cuba	San Antonio, Tex. KARK 890
CFRC 930	CKPC 880	CMDC 660	KARK 890
Kingston, Ont.	Preston, Ont. CKPR 890	Havana, Cuba CMGA 834	Lit. Rock, Ark. KBPS 1420
CHČK 960 Ch'lottet'n,P.E.I.	Ft. William, Ont.	Colon, Cuba	Portland, Ore.
CHGS 1120	CKTB 635	CMGB 1205	KBTM 1200
Sum'rside, P.E.I.	St. Cath., Ont.	Matanzas, Cuba	Paragould, Ark.
CHLS 730	CKUA 580	CMGE 1375	KCMC 1420
Vancouver, B.C.	Edmonton, Alta.	Cardenas, Cuba	Texarkana, Ark.
CHMA 580	CKWX 730	CMGF 977	KCRC 1370
Edmonton, Alta.	Vancouver, B. C. CKX 930	Matanzas, Cuba CMGH 1370	Enid, Okla. KCRJ 1310
CHML 880 Hamilton, Ont.	Brandon, Man.	Matanzas, Cuba	Jerome, Ariz.
CHNS 815	11 CKY 780	CMHC 790	KDB   1500
Halifax, N. S.	Winnipeg, Man CMAB 1249	Tuinucu, Cuba	S. Barbara, Cal.
CHRC 645	CMAB 1249	CMHD 950	KDFN   1210
Quebec, Que.	Pinar del Rio, Cu	Caibarien, Cuba	Casper, Wyo.
CHWC 960	CMAC 1375 Pinar del Rio, Cu	CMHI 1110 Santa Clara, Cu	KDKA 980
Regina, Sask. CHWK 665	CMBC 965	CMHJ 645	Pittsburgh, Pa. KDLR 1210
Chilliwack, B. C	Havana, Cuba	Cienfuegos, Cuba	Devils Lake, N.D.
CHYC 730	CMRD   965	CMJC 1382	KDYL 1290
Montreal, Que.	Havana, Cuba	Camaguey, Cuba	Salt Lake City
CJBR 960	CMBG 1070	CMJE 856	KECA 1430
Regina, Sask.	Havana, Cuba	Camaguey, Cuba	Los Angeles, Cal. KELW 780
CJCA 745	CMBI 1405	CMJF 930	RELW 780
Edmonton, Alta	Havana, Cuba CMBL 1500	Camaguey, Cuba CMJG 1200	Burbank, Cal. KERN 1200
CJCB 880 Sydney, N. S.	Havana, Cuba	Camaguey, Cuba	Bakersfield, Cal.
CJCJ 690	CMBN 1405	CMJH 1017	KEX 1180
Calgary, Alta.	Havana, Cuba	Ciego de Avila, C.	Portland, Ore.
CJGC 910	CMBQ 1500	CMK 730	KFAB 770
London, Ont.	Havana, Cuba	Havana, Cuba	Lincoln, Nebr.
CJGX 630	CMBR 1500	CMKC 1034	KFAC 1300
Yorkton, Sask.	Havana, Cuba	Santiago, Cuba CMQ 1150	Los Angeles, Cal.
CJOC 1120	CMBS 790	Havana, Cuba	KFBB 1280
Lethbridge, Alta. CJOR 1210	Havana, Cuba CMBT 790	CMW 588	Great Fls., Mont KFBI 1050
Vancouver, B. C.	Havana, Cuba	Havana, Cuba	Milford, Kans.
CJRM 665	CMBW 1010	CMX 885	KFBK 1310
Moose Jaw, Sask.	Havana, Cuba	Havana, Cuba	Sacramento, Cal.
CJRW 665	CMBY 1225	CNRA 630	KFBL 1370
Fleming, Sask.	Havana, Cuba	Moneton, N. B.	Everett, Wash.
CKAC 730	CMBZ 1010	CNRD 840 Red Deer, Alta.	KFDM 560
Montreal, Que.	Havana, Cuba	CNRH 815	Beaumont, Tex KFDY 550
CKCD 730 Vancouver, B. C.	CMC   842	Halifax, N. S.	Brookings, S. D.
vancouver, D. O.	Havana, Cuba		D.OORINGS, S. D.
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KLEL		A COM DETE	11100	A DI CHEL EL	LILL		ND
KFEL 920	ı	KFWI 930		KGHF 1320	1	KMAC 1370	
Denver, Colo.		San F'ncisco, Cal.		Pueblo, Colo.		San Antonio, Tex.	
KFEQ 680 St. Joseph, Mo.		KFXD 1420		KGHI 1200 Little Rock, Ark.	- 1	KMBC 950	
KFGQ 1310		Nampa, Idaho KFXF 920		KGHL 950		Kan. City Mo. KMED 1310	
Boone, Iowa		Denver, Colo.		Billings, Mont.		Medford, Ore.	
KFH 1300		II KFXJ 1310		KGIR 1360		KMJ 1210	
Wichita, Kansas KFI 640		Grand Junc., Col. KFXM 1210	<u> </u>	Butte, Mont. KGIW 1420		Fresno, Cal. KMLB 1200	
KFI 640 Los Angeles, Cal.		San Ber'd no, Cal.	1	Trinidad, Colo.		Monroe La	
KFIO 1120		KFXR 1310		KG1X 1420		I KMMI 740	
Spokane, Wash.		Oklahoma City		Las Vegas, Nev.		Clay Ctr., Nebr. KMO 860	
KFIZ 1420		KFXY 1420	'	KGIZ 1500		Tacoma, Wash.	
Fond du Lac, Wis. KFJB 1200		Flagstaff, Ariz. KFYO 1420		Grant City, Mo KGKB 1500		KMOX 1090	
Marshalltown, Ia.		Abilene, Texas		Tyler, Texas		St. Louis, Mo.	Ì
KFJF 1480		KFYR 55 Bismarck, N D KGA 1470		11 KGKL 1370		I KMPC 710	
Oklahoma City		Bismarck, N D		San Angelo, Tex. KGKO 570		Beverly Hills, Cal KMTR 570	
KFJI 1210		KGA 1470		KGKO 570		Hollywood Col	
Klamath Falls Ore KFJM 1370		Spokane, Wash. KGAR 1370		Wichita Flls., Tex. KGKX 1420		Hollywood, Cal. KNOW 1500	
Grd. Forks, N.D.		Tucson, Arizona		Sand Point, Idaho		Austin, Tex.	[
KFJR 1300		KGB 1330		KGKY 1500		KNX 1050	
Portland, Ore.		San Diego, Cal.		Scottsbluff, Nebr. KGMB 1320		Hollywood, Cal. KOA 830	
KFJY 1310		KGBU 900		KGMB 1320		KOA 830	
Fort Dodge Ia. KFJZ 1370		Ketchikan, Al'ka KGBX 1310		Honolulu, T. H. KGNF 1430		Denver, Colo. KOAC 550	
Ft. Worth, Tex.		St. Joseph, Mo.		No. Platte, Nebr.	- 1	Corvallis, Ore.	l
KFKA 880				KGNO 1210		EOD 1100	
Greeley, Colo.		York, Nebr.		Dodge City, Kas. KGO 790		State Col., N. M.	
KFKU 1220		KGCA 1270		KGO 790		KOCW 1400	
Lawrence, Kans. KFKX 1020		Decorah, Iowa KGCR 1210		San F'ncisco, Cal. KGRS 1410		Chickasha, Okla. KOH 1380	
KFKX 1020 Chicago, Ill.		Watertown, S. D.		Amarillo, Texas	- 1	Reno Nevada	
KFLV 1410		KGCU 1240		KGU 940		I KOII. 1260	
Rockford, Ill.		Mandan N D		Honolulu, Hawaii		Council Bluffs, Ia.	
KFLX 1370		KGCX 1310 Wolf P't, Mont.		KGVO 1420	- 1	KOIN 940	
Galveston, Tex. KFMX 1250		KGDA 1370		Missoula, Mont. KGW 620		Portland, Ore. KOL 1270	
N'thfield, Minn.		Mitchell, S. D.	l	Portland, Ore.	1	Seattle, Wash.	
KFNF 890		II KGDE 1200		KGY   1200		Seattle, Wash. KOMO 920	
Shenandoah, Ia.		Fergus Falls, Minn		Olympia, Wash.		Seattle, Wash.	<u> </u>
KFOR 1210		KGDM 1100		KHJ 900	1	KONO 1370	
Lincoln, Nebr. KFOX 1250		Stockton, Cal. KGDY 1200		Los Angeles, Cal. KHQ 590		San Antonio, Tex. KOOS 1370	
Long Beach, Cal.		Huron, S. D.	)	Spokane, Wash.		Marshfield, Ore.	
KFPL 1310				II KACA 1370 I		KORE 1420	
Dublin, Texas		Yuma, Colo. KGER 1360		Clovis, N. M.		Eugene, Ore.	
KFPM 1310 Greenville, Texas		KGER 1360		KICK 1420 Red Oak, Iowa	- 1	KOY 1390 Phoenix, Arizona	ļ
KFFW 1340		Long Beach, Cal. KGEW 1200		U KID - 1320		KPCB 650	
Ft. Smith, Ark.		Ft.Morgan, Colo.		Idaho Falls, 'da. KIDO 1350		Seattle, Wash.	
KFPY 1340		KGEZ		KIDO 1350		I KPJM 1500	
Spokane, Wash.		Kalispell, Mont.		Boise, Idaho		Prescott, Ariz.	
KFQD 1230 Anchorage, Alas.		KGFF 1420 Shawnee, Okla.		KIT 1310 Yakima, Wash.		KPO 680 San F'ncisco, Cal.	
KFRC 610		KGFG 1370		KJBS 1070		I KPOF 880	
San F'ncisco, Cal.		Oklahoma City		San F'ncisco, Cal.		Denver, Colo.	
KFRU 630		KGFI 1500		KJR 970		KPPC 1210	
Columbia, Mo.		Corp's Ch'st, Tex KGFJ 1200		Seattle, Wash.		Pasadena, Cal. KPQ 1500	
KFSD 600 San Diego, Cal.		KGFJ 1200 Los Angeles, Cal.		KLCN 1290 Blytheville, Ark.		Wenatchee, Wash	
KFSG 1120		KGFK 1500		KLO   1400		I KPRC 920	<del>-</del>
Los Angeles, Cal.		Moorhead, Minn.		Ogden, Utah		Houston, Texas	
KFUL 1290		II KCFI 1270		KLPM   1240		KQV   1380	
Gaiveston, Texas		Raton, N. M.		Minot, N. Dak.		Pittsburgh, Pa.	
KFUO 550 St. Louis, Mo.		KGFW 1310 Kearney, Nehr.		KLRA 1390 Little Rock, Ark.		KQW 1010 San Jose, Cal.	
E DVID 1000		KGFX 580		KLS 1440		KRE 1370	
Cuiv City, Cal.		Pierre, S. D. KGGC 1420		Oakland, Cal.		Berkeley, Cal.	
D1 10 1210		KGGC 1420		KLX 880		KREG 1500	
Cape Gir'rd'u, Mo		San F'ncisco, Cal.		Oakland, Cal.		Santa Ana, Cal.	
KFWB 959		KGGF 1010		KLZ 560		KRGV 1260	l
Hollywood, Cal. KFWF 1200		Coffeyville, Okla. KGGM 1230		Denver, Colo. KMA 930		Harlingen, Texas KRKD 1120	
St. Louis, Mo.		Albuq'rque, N.M.		Shenandoah, Ia.		Los Angeles, Cal.	
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KRLD 1040	KWKC 1370	WAPI 1140	WCAP 1280
Dallas, Texas KRMD 1310	Kansas City, Mo. KWKH 850	Birmingham, Ala. WASH 1270	Asbury Pk., N. J WCAT 1200
Shreveport, La. KROW 930	Shreveport, La.	Gr. Rapids Mich.	Rapid City, S. D.
KROW 930	KWLC 1270	WAWZ 1350	I W CAU 1170
Oakland, Cal. KRSC 1120	Decorah, Iowa KWSC 1220	Zarephath, N. J. WBAA 1400	Philadelphia, Pa. WCAX 1200
Seattle, Wash.	Pullman, Wash.	Lafayette, Ind.	Burlington, Vt.
KSAC 580	KWWG 1260	WBAK 1430	WCAZ 1070
Manh'tt'n, Kans KSCJ 1330	Brownsville, Tex	Harrisburg, Pa WBAL 760-1060	Carthage, Ill. WCBA 1440
Sioux City, Ia.	KXA 570 Seattle, Wash.	Baltimore, Md.	WCBA 1440 Allentown, Pa.
KSD 550	KXL 1420	WBAP   800	WCBD 1080
St. Louis, Mo.	Portland, Ore.	Fort Worth, Tex.	Zion, Ill.
KSEI 900 Pocatello, Idaho	KXO 1500 El Centro, Cal.	WBAX 1210 Wilkes-Barre, Pa.	WCBM 1370 Baltimore, Md.
KSL 1130	KXRO 1310	WBBC 1400	WCBS 1210
Salt Lake City	Aberdeen, Wash.	Brooklyn, N. Y.	Springfield, Ill.
KSO 1380 Clarinda, Iowa	Houston, Texas	WBBL 1210 Richmond, Va.	WCCO 810
KSOO 1110	I KVA 1230	WBBM 770	Minneap., Minn. WCDA 1350
Sioux Falls, S. D.	San F'ncisco, Cal.	Chicago, Ill.	New York City
KSTP 1460	KYW 1020	WBBR 1300	WCFL 970
St. Paul, Minn. KTAB 560	Chicago, Ill. KZKA 1110	Brooklyn, N. Y. WBBZ 1200	Chicago, Ill. WCGU 1400
San F'ncisco, Cal.	Manilla, P. I.	Ponca City, Okla	Brooklyn, N. Y.
KTAR 620	KZRC 937.5	WBCM 1410	I WCHI 1490
Phoenix, Ariz.  KTAT 1240	Cebu, P. I. KZRM 618.5	Bay City, Mich. WBEN 900	Chicago, Ill. WCKY 1490
Ft. Worth, Tex. KTBR 1300	Manila, P. I.	Buffalo, N. Y.	Covington, Ky.
	NAA 690	WBEO 1310	WCLO 1200
Portland, Ore. KTBS 1450	Arlington, Va. RUS 664	Marquette, Mich WBGF 1370	Janesville, Wis. WCLS 1310
Shreveport, La.	Salvador	Glens Falls, N. Y.	Joliet. Ill
KTFI 1240	TGW 570	I WBHS 1200   I	Joliet, Ill WCMA 1400
Twin Falls, Ida. KTHS 1040	Guatamala TICR 911	Huntsville, Ala. WBIG 1440	Culver, Ind. WCOA 1340
Hot Spgs., Ark.	San Jose, C. R.	Greensboro, N.C.	Pensacola, Fla.
Hot Spgs., Ark. KTLC 1310	TI4NRH 980	Greensboro, N.C WBIS 1230	WCOC 880
Houston, Texas KTM 780	Heredia, C. R. 685	Boston, Mass. WBMS 1450	Meridian, Miss. WCOD 1200
Los Angeles, Cal.	Glace Bay, N. S.	WBMS 1450 Hackensack, N.J.	Harrisburg, Pa.
KTRH 1120	VCX 690	WBNX 1350	WCOH 1210
Houston, Texas KTSA 1290	Halifax, N. S. VOAS 810	New York City WBOQ 860	Yonkers, N. Y. WCRW 1210
San Antonio, Tex.	St. John's, N. F.	New York City	Chicago, Ill.
San Antonio, Tex. KTSM 1310	VONA 950	WBOW 1310	Chicago, Ill. WCSC 1360
El Paso, Texas KTW 1220	St. John's, N. F.	Terre Haute, Ind WBRC 930	Charleston, S. C
Seattle, Wash.	VOWR 675 St. Johns, N F.	Birmingham, Ala.	Portland, Maine
KILI 1370	WDM C10	WBRE 1310	WDAE 1220
Walla Wal., Wash.	Nassau, B. I	Wilkes-Barre, Pa.	Tampa, Fla.
KUOA 1390 Fayette <del>vi</del> lle, Ark.	WAAB 1410 Boston, Mass.	WBSO 920 Needham, Mass.	WDAF 610 Kansas City, Mo.
KUSD 890	WAAF 920	WBT 1080	I WDAG 1410
Vermillion, S. D.	Chicago, Ill.	Charlotte, N. C.	Amarillo, Texas
XVI 760	WAAM 1250	WBTM 1370	WDAH 1310 El Paso, Texas
Tacoma, Wash.	Newark, N. J. WAAT 940	Danville, Va WBZ 990	WDAS 1370
Seattle, Wash.	Jersey City, N. J. WAAW 660	Boston, Mass.	Philadelphia, Pa.
CVOA 1260	WAAW 660	WBZA 990	WDAY 940
Tucson, Arizona KVOO 1140	Omaha, Nebr WABC 860	Springfield, Mass WCAC 600	Fargo, N. D. WDBJ 930
Tulsa, Okla.	New York City	Storrs, Conn.	Roanoke, Va.
XVOR 1270	WABI 1200	WCAD 1220	WDBO 1120
Col. Sp'gs, Colo.	Bangor, Maine	Canton, N. Y.	Orlando, Fla. WDEL 1120
KVOS 1200 Bellingh'm, Wash.	WABZ 1200 New Orleans, La.	WCAE 1220 Pittsburgh, Pa.	WDEL 1120 Wilmington, Del.
WCR 1310	II WACO 1940	WCAH 1430	WDEV 1420
Cedar Rapids, Ia.	Waco, Texas WADC 1320	Columbus, Ohio	Waterbury, Vt. WDGY 1180
WEA 1210 Shreveport, La.	WADC 1320	WCAJ 590 Lincoln, Nebr.	Minneap., Minn.
KWG 1200	Akron, Ohio WAGM 1420	WCAL 1250	[ WDOD 1280
Stockton, Cal.	Presque Isle, Me	Northfield, Minn.	Chattan'ga, Tenn
KWJJ 1060	WAIU 640	WCAM 1280	WDRC 1330
Portland, Ore. KWK 1350	Columbus, Ohio WALR 1210	Camden, N. J. WCAO 600	Hartford, Conn.
St. Louis, Mo.	Zanesville, Ohio	Baltimore, Md.	
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WDSU		A COMITEE IE	111062	CALL LE	LILL	S W	LEI
WDSU 1250		WGAL 1310		WHN 1010		WJJD 1130	
New Orleans, La.		Lancaster, Pa.		New York City		Mooseheart, Ill.	
WDZ 1070		WGAR 1450 Cleveland, Ohio		WHO 1000		WJKS 1360	
Tuscola, Ill. WEAF 660		WGBB 1210		Des Moines, Ia. WHOM 1450		Gary, Ind. WJMS 1420 Ironwood, Mich.	<del></del>
New York City		WGBB 1210 Freeport, N. Y.		Jersey City, N. J. WHP 1430		Ironwood, Mich.	1
WEAI 1270 Ithaca, N. Y. WEAN 780		WGBF 630 Evansville, Ind.	1	WHP 1430		WJR 750 Detroit, Mich.	
WEAN 780		WGBI 880		Harrisburg, Pa. WIAS 1420		WJSV 1460	
Providence, R. I. WEAO 570		Scranton, Pa.		Ottumwa, Iowa		Alexandria, Va. WJTL 1370	
WEAO 570		Scranton, Pa. WGCM 1210 Gulfport, Miss. WGCP 1250		W1BA   1280		WJTL 1370	
Columbus, Ohio WEBC 1290		WGCP 1250		Madison, Wis. WIBG 930		Atlanta, Ga.	
Superior, Wis. WEBQ 1210		Newark, N. J.		Elkins Park, Pa. WIBM 1370		WJW 1210 Mansfield, Ohio WJZ 760	
WEBQ 1210		WGES 1360		WIBM 1370		WJZ 760 New York City	
Harrisburg, Ill. WEBR 1310		Chicago, Ill.		Jackson, Mich. WIBO 560		New York City	
Buffalo, N. Y.		WGH 1310 Newp't News, Va.	\ \ \	Chicago III		San Juan, P. R.	
Buffalo, N. Y. WEDC 1210		I WGL 1370		WIBU 1210 Poynette, Wis. WIBW 580		WKAR 1040	
Chicago, Ill.		Ft. Wayne, Ind. WGN 720		Poynette, Wis.		E. Lansing, Mich.	
WEEI 590 Boston, Mass.		I Chiango III		WIBW 580 Topeka, Kansas		WKAQ 890 San Juan, P. R. WKAR 1040 E. Lansing, Mich. WKAV 1310 Laconia, N. H. WKRR 1310	}
WEEU 830		WGR 550		WIBX 1200			
Reading, Pa.		Buffalo, N. Y.		WIBX 1200 Utica, N. Y. WICC 600		Joliet, Ill. WKBC 1310	
WEHC 1350		WGST 890 Atlanta, Ga.		WICC 600		WKBC 1310 Birmingham, Ala.	1
WEHC 1350 Emory, Va. WEHS 1420				Bridgeport, Conn WIL 1200		WKBF 1400	
Cigoro III		Schenec'dy, N. Y. WHA 940		St. Louis, Mo.		Indianapolis, Ind.	
WELL 1420 Battle C'k, Mich.		WHA 940				WKBH 1380	
WENR 870		Madison, Wis. WHAD 1120		Urbana, Ill. WILM 1420		WKRI 1420	
Chicago, Ill.		Milwankee Wis		Wilmington, Del.		La Crosse, Wis. WKBI 1420 Cicero, Ill. WKBN 570	
WERE 1420		WHAM .1150 Rochester, N. Y.		WINS 1180		WKBN 570	
Erie, Pa. WEVD 1300 New York City WEW 760		WHAP 1300		New York City WIOD 1300 Miami, Fla.		Youngstown, O. WKBS 1310	
New York City		New York City		Miami, Fla.		Galesburg, Ill. WKBV 1500	
WEW 760		WITTER COO		I WIP 610		WKBV 1500	
WEW 760 St. Louis, Mo. WEXL 1310		Louisville, Ky. WHAT 1310		Philadelphia, Pa. WIS 1010		Connersville, Ind.	
WEXL 1310 Royal Oak, Mich. WFAA 800 Dallas, Texas WFAM 1200 So. Bend, Ind. WFAN 610		l Philadelphia Pa		Columbia, S. C.		WKBW 1480 Buffalo, N. Y. WKBZ 1500	
WFAA 800		WHAZ 1300 Troy, N. Y. WHB 860				WKBZ 1500	
Dallas, Texas		Troy, N. Y.	·	Milwaukee, Wis. WJAC 1310		Ludington, Mich. WKJC 1200	
So. Bend, Ind.	'	Kansas City, Mo. WHBC 1200		Johnstown, Pa.		Lancaster Po	
WFAN 610 Philadelphia, Pa.		WHBC 1200		Johnstown, Pa. WJAG 1060		WKRC 550 Cincinnati, Ohio WKY 900	
WFRC 1200		Canton, Ohio WHBD 1370		Norfolk, Nebr. WJAK 1310		WKY 900	
WFBC 1200 Knoxville, Tenn WFBE 1200 Cincinnati, Ohio		Mt. Orab, Ohio WHBF 1210		Elkhart, Ind.		Oklahoma City	
WFBE 1200		WHBF 1210				WKZO 590	
WFBG 1310		Rock Island, Ill. WHBL 1410		Providence, R. I. WJAS 1290		Kalamazoo, Mich. WLAC 1470 Nashville, Tenn.	
Altoona, Pa.		Sheboygan, Wis.		Pittsburgh, Pa.		Nashville, Tenn.	
WFBL 1360 1		WHBL 1410 Sheboygan, Wis. WHBQ 1370 Memphis, Tenn. WHBU 1210 Anderson, Ind. WHBY 1200 Creen Pow Wis			·		
Syracuse, N. Y. WFRM 1230		WHRII 1910		Jacksonville, Fla. WJAY 610		Louisville, Ky. WLB 1250 St. Paul, Minn.	
WFBM 1230 Indianapolis, Ind.		Anderson, Ind.		Cleveland, Ohio WJBC 1200		St. Paul. Minn.	
WFBR 1270		WHBY 1200		WJBC 1200		WLBC 1310 Muncie, Ind.	
Baltimore, Md. WFDF 1310		WHDF 1370	I	La Salle, Ill.		Muncie, Ind. WLBF 1420	
Flint, Mich.		Green Bay, Wis. WHDF 1370 Calumet, Mich.		Red Bank, N. J.		Kansas City, Ks.	
WFDV 1310				WJBK 1370		WLBF 1420 Kansas City, Ks. WLBG 1200	
Rome, Ga. WFDW 1420		Boston, Mass		Detroit, Mich. WJBL 1200		Ettrick, Va. WLBL 900 Stevens Pt., Wis. WLBW 1260	
Anniston, Ala.		WHDL 1420 TupperLake, N.Y.		Decatur, Ill.		Stevens Pt Wig	
WFEA 1430		WHEB 740		WIRO 1420		WLBW 1260	
Manchester, N.H. WFI 560		Portsmouth, N.H.		New Orleans, La.			
WFI 560 Philadelphia Pa		WHEC 1430 Rochester, N. Y.		WJBU 1210 Lewisburg, Pa.		WLBX 1500	
Philadelphia, Pa. WFIW 940				WJBW 1200		WLBZ 620	·
Hopkinsville, Ky.		Cicero, Ill. WHIS 1410		New Orleans, La.		WLBX 1500 L. I. City, N. Y. WLBZ 620 Bangor, Maine WLCI 1210 Ithaca, N. Y. WLEY 1370	
WFLA 620		WHIS 1410		WJBY 1210		WLCI 1210	1
Clearwater, Fla. WFOX 1400		Bluefield, W. Va. WHK 1390		Gadsden, Ala. WJDX 1270		WLEY 1370	
Brooklyn, N. Y.	]	Cleveland, Ohio		Jackson, Miss.		Lexington, Mass.	
1				,		, , , , , , , , , , , , , , , , , , , ,	
					7		

VLIT 560 Philadelphia, Pa.	WNOX 560 Knoxville, Tenn.	WQDX 1210	WSUN 620
VLOE 1500	WNYC 570	Thomasville, Ga. WRAK 1370	St. Petersb'g, Fla. WSVS 1370
Boston, Mass.	New York City	Williamsport, Pa.	Buffalo, N. Y.
VLS 870 Chicago, Ill.	WOAI 1190 San Antonio, Tex.	WRAM 1370 Wilmington, N.C.	Rutland, Vt.
VI/I'H 12.00	WOAX 1280	WRAW 1310 Reading, Pa.	H WSYR 570
rooklyn, N. Y.	Trenton, N. J.	Reading, Pa.	Syracuse, N. Y.
VLVA 1370	WOBU 580	WRAX 1020 Philadelphia, Pa.	WTAD 1440 Quincy, Ill.
ynchburg, Va. VLW 700	Charlest'n, W.Va. WOC 1000	WRBL 1200	I WTAG 580
lincinnati. Ohio	Davenport, Iowa WOCL 1210	Columbus, Ga.	Worcester, Mass.
VLWL 1100 New York City	WOCL 1210	II WRBQ 1210	WTAM 1070
VMAC 570	Jamestown, N. Y. WODA 1250	Greenville, Miss WRBX 1410	Cleveland, Ohio WTAQ 1330
yracuse, N. Y.	WODA 1250 Paterson, N. J. WODX 1410	Roanoke, Va.	Eau Claire, Wis. WTAR 780
VMAL 630	WODX 1410	WRC 950	WTAR 780
Vashington, D.C VMAQ 670	Mobile, Ala.	Washington, D.C WRDO 1370	Norfolk, Va. WTAW 1120
Thiones Til	Amon Town	Augusta, Maine	College Sta., Tex. WTAX 1210
VMAZ 1180 Aacon, Ga.	WOKO 1430 Albany, N. Y. WOL 1310	WRDW 1500	WTAX 1210
VMBA 1500	Albany, N. Y.	Augusta, Ga. WREC 600	Springfield, Ill. —— WTBO 1420
Townset D T	Washington, D.C.	Memphis, Tenn.	Cumberland, Md.
VMBC 1420	WOMT   1210	Memphis, Tenn. WREN 1220	WTEL 1310
VMBC 1420 Detroit, Mich.	Manitowoc, Wis. WOOD 1270	Lawrence, Kans.	Philadelphia, Pa.
Peoria HghtsIll.	Gr. Rapids, Mich.	WRHM 1250 Minneap., Minn.	WTFI 1450
Peoria Hghts,,Ill. VMBG 1210	Gr. Rapids, Mich. WOPI 1500	II WRJN 1370	Athens, Ga. WTIC 660-1060
Richmond, Va. VMBH 1420	_ Bristol. Tenn.	Racine, Wis.	Hartford, Conn.
onlin Mo	WOQ 1300	WRNY 1010 New York City WROL 1310	WTJS 1310 Jackson, Tenn.
oplin, Mo. VMBI 1080	Kansas City, Mo. WOR 710	WROL 1310	I WTMJ 620
hicago, Ill.	II Newark, N. J.	Knoxville, Tenn.	Milwaukee, Wis.
MBO 1310 uburn, N. Y.	WORC 1200	WRR 1280	WTOC 1260
VMBQ 1500	Worcester, Mass. WORK 1000	Dallas, Texas WRUF 830	Savannah, Ga. WTSL 1310
moolelym N V	_ York, Pa.	Gainesville, Fla.	Lourel Miss
VMBR 1370	II WOS 630	II WRVA 1110	WWAE 1200
VMC 780	Jeff's'n City, Mo. WOV 1130	Richmond, Va. WSAI 1330	Hammond, Ind
Iemphis, Tenn.	II New York City	Cincinnati, Ohio	Detroit, Mich.
VMCA 570	II WOW 590	II TX/C/A T 1910	II WWL 850
New York City VMIL 1500	Omaha, Nebr. WOWO 1160	Grove City, Pa. WSAN 1440	New Orleans, La. WWNC 570
Brookiyn, N. Y.	Ft. Wayne, Ind. WPAD 1420	Allentown, Pa.	Asheville, N. C.
VMMN 890	WPAD 1420	WSAR 1450	I WWRL 1500
Cairmont, W. Va.	Paducah, Ky. WPAP 1010	Fall River, Mass WSAZ 580	Woodside, N. Y WWSW 1500
Apper, Mich.	New York City	Hunt'gton, W.Va.	Pittsburgh, Pa.
VMRJ 1210	WPCC 560	il WSB 740	WWVA 1160
amaica, N. Y. VMSG 1350	Chicago, Ill. WPCH 810	Atlanta, Ga. WSBC 1210	Wheeling, W. Va WXYZ 1240
lew York City	New York City	Chicago, Ill.	Detroit, Mich.
VMT 600	WPEN 1500	WSBT   1230	XEA 1000
Vaterioo, Iowa	Philadelphia, Pa.	South Bend, Ind.	Guad'l'jara, Mex.
VNAC 1230 Boston, Mass.	WPFB 1370 Hattiesb'g., Miss.	WSEN 1210	XEB 1030 Mexico City
VNAD 1010	WPG 1100	Columbus, Ohio WSFA 1410	XEC 1000
orman, Okla.	Atl'ntic City, N.J.	Montgomery, Ala.	Toluca, Mexico
VNAX 570 Vankton, S. D.	WPOR 780	WSIX 1210 Springfield, Tenn.	XED 965
VNBF 1500	Norfolk, Va. WPRO 1210	II WSJS 1330	Reynosa, Mexico
Singh'mt'n, N.Y.	Providence, R. I.	WinstSal., N. C.	Oaxaco, Mexico
VNBH 1310	WPSC 1230	II WSM 650	II XEFA 1250
lew B'df'd, Mass VNBO 1200	State College, Pa. WPTF 680	Nashville, Tenn. WSMB 1320	Mexico City XEFB 1315
Vashington, Pa.	Raleigh, N. C.	New Orleans, La.	Monterrey, Mex.
VNBR 1430	II W QAM 560	WSMK 1380	XEFC   1050
Iemphis, Tenn.	Miami, Fia. WQAN 880	Dayton, Ohio	Merida, Mex.
VNBW 1200 Carbondale, Pa.	WQAN 880 Scranton, Pa.	WSOC 1210 Gastonia, N. C.	XEFD 1020 Tijuana, Mex.
UNDV 1900	WQAO 1010	WSPA 1420	XEFE 1000
pringfield, Vt. VNBZ 1290	WQAO 1010 New York City	Spartanburg, S.C.	Laredo, Mexico
VNBZ 1290 sar'n'c L'ke,N.Y.	WQBC 1360	WSPD 1340	XEFI   1000
VNJ 1450	Vicksburg, Miss. WQDM 1370	Toledo, Ohio	Chihuahua, Mex XEFS 1000
lewark, N. J.	St. Albans, Vt.	Iowa City, Iowa	Queretaro, Mex.
	21	II .	1

XEG 1070  Mexico, Mex.  XEH 1132  Monterrey, Mex.  XEI 1000  Morelia, Mexico  XEJ 1000  Juarez, Mexico  XEK 990  Mexico City  XEL 1000  Saltillo, Mexico  XEM 1300  Tampleo, Mexico  XEN 711	XEP 1400 Laredo, Mexico XEQ 750 Jusrez, Mexico XER 735 Villa Acuna, Mex. XES 899 Tampico, Mexico XET 690 Monterrey, Mex. XETA 1140 Mexico City XETB 1380 Torreon, Mex. XETC 1000	XETG 1000 Torreon, Mex. XETQ 1230 Mexico, Mex. XETZ 1500 Coyoacan, Mex. XEU 1000 Veracruz, Mex. XEV 1000 Puebla, Mexico XEW 910 Mexico City XEX 1210 Mexico City XEY 1000	Aguascal'ntes, M. XFF 875 Chihuahua, Mex. XFG 683.3 Mexico City XFI 818 Mexico City XFX 867 Mexico City 10-AB 1200 Moose Jaw, Sask. 10-AT 1155 Trail, B. C. 10-BP 1200	-
Tampico, Mexico	Torreon, Mex. XETC 1000 Jalapa, Mex. XETF 630 Veracruz, Mex.	Mexico City	 Trail, B. C.	

(Continued from page 59)

JALISCO	Watts		Kcys.	Ciego de Avila W-26	15 CMJH 40 CMHJ	1017 645
Guadalajara, Jal. X-10	101	XEA	1000	Cienfuegos W-25 Colon W-24	100 CMGA	834
MICHOACAN				Havana W-23	150 CMBC 250 CMBD	965 965
Morelia, Mich. Y-12	101	XEI	1000		150 CMBG	1070-
,	101	1101	1000		30 CMBI 20 CMBL	1405 1500
NEUVO LEON					30 CMBN	1405
Monterrey, N. L. U-13	50	XEFB	1315 1132		50 CMBQ 15 CMBR	1500 1500-
	1000 500	XEH XET	690-		150 CMBS 500 CMBT	790 790
OAXACA					150 CMBW	1010
Oaxaca, Oak. AA-14	105	XEE	1000		350 CMBY 150 CMBZ	1225 1010
PUEBLA					500 CMC	842-
Puebla Z-13	101	XEV	1000		150 CMCA 150 CMCB	1225- 1070
OUERETARO	202				250 CMCD 250 CMCF	925 890
•	40	VEE	1000		30 CMCG	1345
Queretaro X-12	40	XEFS	1000		15 CMCH 250 CMC1	1405 630
TAMAULIPAS					15 CMCM	1405
N. Laredo S-13	101	XEFE XEP	1000		250 CMCN 225 CMCO	925 660
Reynosa, Tams. T-14	200 10000	XED	1400 965		600 CMCQ	1150
Tampico, Tams. W-14	500 500	XEM XES	730 890 <b>∽</b>		150 CMCR 150 CMCU	1345 .1285-
VERA CRUZ	300	ALG	890-	•	150 CMCW 50 CMCY	1285 1345~
	100	VETO	1000		500 CMDC	660
Jalapa Y-14 Veracruz, Ver. Z-14	100 500	XETC XETF	1000 630	i	3150 CMK 250 CMO	730 1150~
	101	XEU	1000		1400 CMW	588
YUCATAN				Matanzas W-24	1000 CMX 7.5 CMGB	885 1205
Merida, Yuc. X-19	105	XEY	1000		50 CMGF	977
WEST	INDI	IES		Pinar del Rio W-22	150 CMGH 20 CMAB	1370 1249
BAHAMA	A. 120				30 CMAC	1375
Nassau, U-26	500	VPN	610	Santa Clara W-25 Santiago X-28	15 CMHI 150 CMKC	1110 1034
	300	VPIN	010	Tuinucu	100 CMHC	790
CUBA	25-	0) ((1)	0.50	DOMINICAN R	EDUDI IC	
Caibarien W-25 Camaguey W-26	250 150	CMHD CMJC	950 1382	Santo Domingo X-31	1000 HIX	630
	20	CMJE	856		1000 HIA	030
	50 30	<b>C</b> MJF CMJG	930 1200	HAITI		
Cardenas W-24	30	CMGE	1375	Port au Prince X-30	1000 HHK	920

## Broadcasting Stations of the World Compiled by U. S. Department of Commerce

eoi	ITH AME	DICA	~, ~.		Country and City	Call	Kcys.	М.	Watts
Country and City	JTH AME Call	KICA Kcys.	M.	Watts	COLOMBIA	Can	Acys.	141.	rr acco
ARGENTINA		-			Barranquilla	HKA	6160	48.7	
Bahia Blanca	LU2	789	380	500	Barranquilla	$_{ m HKD}$	5837	51.4	• • • • •
Buenos Aires	LP4	670	480	5000	Danata	HJN	$6050 \\ 685$	49.6 437	2000
Buenos Aires Buenos Aires	$_{ m LR1}^{ m LP6}$	590 790	509 380	500	Bogota Bogota	HKC	6275	47.8	50
Buenos Aires	LR2	870	345	10000	Bogota	HKF	1304	230	
Buenos Aires Buenos Aires Buenos Aires	LR3	950	316	5000			7616	39.4	
Buenos Aires	LR4	990	330	10000			8692	34.5	
Buenos Aires	$rac{ ext{LR5}}{ ext{LR6}}$	830 990	361 330	500 5000	Bogota	HKM	7143	42.0	
Buenos Aires Buenos Aires	LR7	750	400	7000	Manizales	HKT	7139	42.0	25
Buenos Aires	LR8	1150	261	10000	Medellin	HKN	11712	25.6	71/2
Buenos Aires	LR9	1030	291	10000	ECUADOR				
Buenos Aires	LSOR	9810	30.6	20000	El Prado		7538	39.8	
Buenos Aires Buenos Aires	LSX LS1	$\frac{10382}{710}$	$\frac{28.9}{423}$	5000 5000					
Buenos Aires	LS2	1190	$\frac{120}{252}$	10000	PARAGUAY Asuncion	ZP1	1363	220	
Buenos Aires	LS3	1270	236	1000		211	1000	220	
Buenos Aires	LS5	1069	280	10000	PERU	OACTT	1704	170	90
Buenos Aires	LS6	1349	222	3000	Arequipa Lima	OA6U OAX	$\frac{1764}{790}$	170 380	$\begin{array}{c} 20 \\ 1500 \end{array}$
Buenos Aires Buenos Aires	LS8 LS9	$\frac{1229}{1388}$	$\frac{244}{216}$ .	10000 10000	Lima	OA4M	1428	210	12
Concordia	LT1	810	370	1000	URUGUAY				
Concordia	LT1 LT2	1360	226	400	Montevideo	CX6	650	462	1000
Cordoba	LV2	911	329	1000	Montevideo	CX10 CX12 CX14 CX16 CX18	730	411	1000
Cordoba	LV3 LV4	• • • •	• • • •	1000 1000	Montevideo	CX12	770	390	500
Cordoba General Pico	LT7	1441	208	1000	Montevideo	CX14	810	370	1000
La Plata	LP8	685	438	1000	Montevideo Montevideo	CX10	850 890	$\frac{353}{337}$	250
Los Molinos	LV8				Montevideo	CX20	930	323	2000
Mar del Plata	LU1 LT4	1414	213	100	Montevideo	CX20 CX22	970	309	250
Mendoza Parana	LT5	$759 \\ 1249$	$\frac{394}{240}$	500 500	Montevideo	CX24	1010	297	1000
Rosario	LT3	1080	275	2000	Montevideo Montevideo	CX26	$\frac{1050}{1130}$	$\frac{286}{266}$	$\frac{2000}{250}$
Rosario	LV5	1388	216	500	Montevideo	CX32	1170	256	200
Rosario	LT9	1075	279	100	Montevideo	CX34	1210	248	500
San Juan	${ m LT6} \ { m LV7}$	730 881	$\frac{411}{340}$	5000 500	Montevideo	CX26 CX30 CX32 CX34 CX36	1250	240	250
Tucuman Villaguay	$\stackrel{\text{L}}{\text{LP2}}$	1140	263	65	Montevideo Montevideo	CX38 CX40 CX42 CX44 CX46	$1290 \\ 1330$	$\frac{233}{226}$ -	$\begin{array}{c} 100 \\ 100 \end{array}$
		-110	-00	•••	Montevideo Montevideo	CX42	1370	219	500
BOLIVIA La Paz	CPX	1350	226	1000	Montevideo	CX44	1410	213	20
	OLA	1000	220	1000	Montevideo	CX46	1450	207	100
BRAZIL	DDAM	620	470	50	Montevideo	CX48 CW40	$\frac{1490}{1340}$	$\frac{201}{224}$	50 3 <b>0</b>
Amparo Bahia	$\frac{PRAM}{PRAH}$	$\frac{638}{674}$	445	50 50	Paysandu Paysandu	CW44	1420	211	30
Bello Horizonte	PRAQ	1090	275		Salto	CW32	1180	254	30
Campinas		1170	256	20	Salto	CW34	1220	246	50
Curityba	PRAN	882	340	50	Salto	CW36	1260	238	30
Franca	PRAZ PRAJ	1110 857	$\begin{array}{c} 270 \\ 350 \end{array}$	$\frac{50}{200}$	Salto Tucuarembo	CW38 CW30	$\frac{1300}{1140}$	231 263	30
Juiz de Fora Mogy das Cruzes	PRAY	1000	300	50	Tucuarembo	CW46	1460	206	20
Para	PRAF	842	356	250	VENEZUELA	0 11 20			
Pelotas	PRAD	920	326	50	Caracas	YV1BC	960	312	
Pernambuco	PRAP	706	425	3000	Caracas	YV2BC	6061	49.5	400
Porto Alegre Ribeirao Preto	$rac{ ext{PRAG}}{ ext{PRAI}}$	706 1070	$\frac{425}{280}$	3000 10	Valencia	YV4BV	11700	25.6	
Rio de Janeiro	PRAA	750	400	1000		EUROPE			
Rio de Janeiro	PRAB	937	320	500	AUSTRIA				
Rio de Janeiro	PRAC	857	350	500	Graz	• • • • • • • •	851	353	7000
Rio de Janiro	$\frac{PRAK}{PRAX}$	1153 1364	$\frac{260}{220}$	1000 1000	Innsbruck Klagenfurt		$\begin{array}{c} 1058 \\ 662 \end{array}$	284 453	500 500
Rio de Janeiro Santos (Miramir)	PRAS	887	338	1000	Linz-an-der-Donau		1220	246	500
Sao Paulo	PRAS PRAE	815	368	1000	Vienna (Rosenhuegel)	UOR2	11801	25.4	
Sao Paulo	PRAR	1006	298	500			6072	49.4	15000
BRITISH GUIANA					Vienna (Rosenhuegel)	• • • • • • • • • • • • • • • • • • • •	581	516	• • • • •
Georgetown	VRY	6726	52.4	200	BELGIUM	OMED	14	000	**
CHILE					Antwerp (Berchem)	ON4ED	$1455 \\ 1375$	$\frac{206}{218}$	50 100
Antofagasta					Brussels Brussels	ON4GT ON4RB	539	509	3600
Santiago	CMAB	625	480	1000	Brussels	ON4RB ON4RC	1448	207	100
Santiago	$\mathbf{CMAC}$	804	373	1000	Brussels (Schaerbeck)	ON4FO	1219	246	100
Santiago	CMAK	1333	225	100	Chatelineau	ON4CE	1388	216	200
Santiago Santiago	$\begin{array}{c} { m CMAO} \\ { m CMAQ} \end{array}$	$1016 \\ 1224$	$\frac{295}{245}$	250 100	Dampremy Ghent	ON4FG ON4RG	$\frac{1455}{1219}$	$\frac{206}{246}$	$\frac{250}{400}$
Valparaiso	CMAJ	1034	290	100	Liege	ON4RW	1219	246	200
. Sipurato	2			-00					-00

						-			
Ottomont (Adriemont	ONARY	1388	216	100	Breslau		923	325	1700
Velthem	, 01111111	589	509	15000	Cologne		1319	227	1700
Verviers	ON4CE	1455	206	100	Dresden		941	319	300
CZECHOSLAVAKIA	011101	1100	200	200	Flensburg		1373	219	600
Bratislava	OVD	1075	279	12000	Frankfort		770	390	1700
Brno	OKR OKB	878	342	36000	Freiburg		527	569	300
Kosice	OKK	1023	293	2500	Gleiwitz		1157	259	5600
Prague	OK1MPI	5169	58	2000	Hamburg		806	372	1700
Prague (Strasnice)	OKP	616	487	5000	Hanover		530	566	300
DANZIG	OIL	010	101	0000	Heilsburg		1085	277	60000
	משט	000	459	250	Kaiserslautern		1112	270	300
Danzig .	PTB	662	453 -	200	Kassel		1220	246	300
DENMARK					Kiel		1292	232	300
Copenhagen	0770 077	7.00==	40.		Konigsberg		1085	277	1700
(Skamleback)	OX0-OX		49.5		Langenburg	• • • • • • •	635	473	17000
		9488	31.6		Leipzig	· · · · · · · ·	1184	253	2300
G1		15300	19.6	500	Magdeburg		1058	284	600
Copenhagen		1007	001	1000	Stuttgart		833	360	60000
(Axelborg)	• • • • • • • •	1067	281	1000	(Muehlacker)	· · · · · · · · ·		$\frac{300}{227}$	600
Kallundborg		1150	960	7500	Muenster		1319		
(Gisselore)		1153	260	7500	Munich	· · · · · · · · · · · ·	563	$\frac{533}{239}$	$\begin{array}{c} 1700 \\ 2300 \end{array}$
Soro	• • • • • • • • • • • • • • • • • • • •	309	971	2000	Nuremburg	• • • • • • •	$\frac{1256}{1058}$	284	600
ESTONIA					Stettin		1058	284	000
Tallinn		1013	296	10000	HUNGARY		٠	2	00000
Tallinn		250	1200	100	Budapest		545	550	20000
Tartu		735	408	2200	Szekesvehervar	HAT	9125	32.9	
FINLAND					ICELAND				
Abo		1220	246		Reykjavik	TFA	1200	250	500
Bjorneborg		1220	246	1500	Reykjavik		240	1250	21000
Helsingfors					IRISH FREE STATE				
(Fredriksberg)		840	358	10000	Cork	6CK	1337	225	1000
Jakobstad		1220	246	750	Dublin	2RN	726	413	1500
Lahti		167	1796	40000		21111	120	110	1000
Tammerfors				1000	ITALY	4470.4			
Viborg		1031	291	750	Bari	11BA		450	200
FRANCE		•			Bolzano	IBZ	<b>662</b>	<b>453</b>	200
Angers		1091	275	250	Firenze	I1FL		212	1500
Beziers		1364	220	1500	Genoa	IGE	959	313	8500
Biarritz		1515	198	250	Milan ·	IMI	599	501	
Bordeaux		1199	250	5000	Naples	INA	905	331	$\frac{1500}{4000}$
Bordeaux		986	304	1500	Palermo	I1PA	554	542 45	4000
Caen		1080	278	200	Rome	IIAX	6667 680	441	7500
Fecamp					Rome	I1RO I2ROʻ	3750	80	7000
Grenoble		914	328	1500	Rome		11010	25.4	9000
Lille		1132	265	500	Trieste	I1TR	$11810 \\ 1211$	248	15000
Limoges		1022	293	500	Turin	ITO	1013	296	8500
$_{ m Lyon}$	YR	1030	291		Vatican City	HVJ	15112	19.8	0000
		7463	40.2	500	vatican City	11.10	5965	50.3	10000
Lyon (La Doua)	YN	644	466	3000	V 477777 4		0000	00.0	20000
Mont-de-Marsan		750	400	250	LATVIA	YLZ	571	525	10000
Marseille		950	316	500	Riga	ILU	3/1	323	10000
Montpellier	(	1049	286	200	LITHUANIA				
Nice (Juan-les-Pins)		1219	248	250	Kovno	RYK	155	1935	7000
Nimes	TOT	1250	240	500	LUXEMBURG				
Paris (Eiffel Tower)	FL	6124	49.0	4000 <b>0</b>	Luxemburg	LOAA	1344	223	10000
Paris		174	1705	19500	_	20121			
(Les Essarts de Roi) Paris	•••••	174 901	$\begin{array}{c} 1725 \\ 331 \end{array}$	13500 500	NETHERLANDS		1000	940	
Paris	FPTT	671	448	1000	Bloemendaal	• • • • • • • •	1220	246	
Paris	F8GC	825	368	1000	Amsterdam (Hilvorgum)	PFBI	1004	298	
* ****	2000	4262	61	1500	(Hilversum)	Trui	160	1875	7000
Paris		.968	310	1000	Amsterdam		100	1010	,000
~ 4-20		7317	41	2000	(Hilversum)	PCJ	9590	31.3	
Paris (Pontoise)	FYA	15235	19.7		Amsterdam (Huisan)		17775	16.9	40000
_ 3210 (2 021010)		11899	25.2		Amsterdam (Huizen) Amsterdam (Huizen)	PH9	1004	298	10000
		11308	25.6		Ambordam (Huizen)		160	1875	6400
Rennes		1103	272	1500	The Hague		1000	300	350
Rheims		777	386	500	Scheveningen	PCF	280	1071	2000
St. Etienne		1364	220	250		_ 01	_00	20.2	
Strasburg (Brumath)	SPTT	867	345	6000	NORWAY	TTZ	071	447	200
Toulon		1200	250	500	Aalesund	LKA	671	447	300
Toulouse	MRD	1175	255	1500	Bergen	LKB	824	264	1000
Tou ouse		770	381	8000	Bodo	LKD	662	453	500
GERMANY				3	Fredrikstad	LKF	837	358	700
Aix la Chappelle		1319	227	300	Hamar Voictionscend	LKH	511	587	800 500
Augsburg		536	560		Kristianssand	LKK	1274	236	
Berlin		716	419	300 1700	Notodden Orlo	LKN LKO	$\frac{671}{279}$	$\begin{array}{c} 447 \\ 1071 \end{array}$	900 75000
Berlin (Zeesen)		1635	184	35000	Oslo Porgamund	LKP	662	453	800
Berlin (Zeesen) Berlin (Zeesen) Berlin (Magdeburger	•••••	9560	31.38	30000 30000	Porsgrund Pinkon	LKP	$\begin{array}{c} 662 \\ 671 \end{array}$	453 447	
Berlin (Magdaburgan		8000	91.38	00000	Rjukan Stavanger	LKK	1247	241	$\begin{array}{c} 170 \\ 500 \end{array}$
Platz)		1058	284	600		LKM	662	453	110
Bremen		950	316	300	Tromsoe Trondelag	LKM	608	493	500
271 (111011		000	010	300	Tronderag	1/11/1	000	100	300

					HAUTED VINCDOM				
POLAND Katowice		734	409	10000	UNITED KINGDOM Aberdeen	G2BD	995	301	1000
Krakow .		959	313	1500	Belfast	G2BE	1238	242	1000
Lwow		779	385		Bournemouth	G6BM	1040	288	1000
Poznan		896 9836	$\frac{335}{30.5}$	1500	Cardiff Chelmsford	G5WA	$968 \\ 11750$	$\begin{array}{c} 310 \\ 25.5 \end{array}$	1000
Warsaw (Raszyn)		203	1412	25000	Daventry	G5GB	626	479	25000
Wilna		779	385	500	Daventry	G5XX	193	1554	25000
PORTUGAL					Dundee Edinburgh	G2DE G2EH	$\frac{1040}{1040}$	$\frac{288}{288}$	130 350
${f Lisbon}$	CT1AA	1056	284	2000	Glasgow	G5SC	752	399	1000
Lisbon	CT1AN	$6995 \\ 1056$	$\frac{42.9}{284}$	2000 10	Hull '	G6KH	1040	288	130
Lisbon	CT1BO	1056	284		Leeds and Bradford	G2LS	1500	200	
		10710	28	150	Liverpool	G6LV	1040 1040	288 288	130 130
Lisbon	CT1DH	1056	284 284	30	London	COLI	1010	200	100
Lisbon Lisbon	CT1EB CT1GL	1056 909	330		(Brookman's Park)	G2LO	842	356	
Oporto	PRP1	1249	240		M = 3	COTT	1150	261	30000
Oporto		1448	207	3000	Manchester Huddersfield	G2ZY	797	376	1000
RUMANIA					(Moorside Edge)		626	479	
Bucharest	• • • • • • •	759	394	12000			996	301	30000
SPAIN	EAJ18	1195	251	200	Newcastle Plymouth	G5NO G5PY	$\frac{1148}{1040}$	$\frac{261}{288}$	10000 130
Almeria Barcelona	EAJI8	1195	201	200	Sheffield	G6FL	1040	288	160
(Mt. Tibidado)	EAJ1	860	349	7500	Stoke-on-Trent	G6ST	1040	288	130
Barcelona	EZJ13	1119	268	10000	Swansea	G5SX	1040	288	130
Barcelona	EAJ25	6000	50		YOGOSLAVIA				
Barcelona Cartagena	EAR25 EAJ15	$6124 \\ 1219$	· 49.0 246	100	Belgrade		696 10000	431 30	
Madrid	EAJ2	750	400	750	Llujbljana		569	527	3000
Madrid	EAJ7	708	424	1500	Zagreb		977	307	700
Madrid	EAM	9772	30.7 43	• • • • •	RUSSIA				
Mad <del>r</del> id Madrid	EAR100 EAR125	$6976 \\ 7025$	42.7		Achkabad	RW19	334	898	4000
Oviedo	EAJ19	1119	268	30	Alma Ata	RW60	310	968	10000
San Sebastian' Monte				1000	Arkhangelsk Armavir	RW36	770 587	$\frac{390}{511}$	10000 1000
Igualdo	EAJ8 EAJ5	$\frac{662}{815}$	$\frac{453}{368}$	1000	Artemovsk	RV50 RV26	811	370	1200
Seville Valencia	EWaa	1118	268	1500	Astrakhan	RW35	435	690	1000
SWEDEN					Baku Baku	RW8 RW43	238 238	$\begin{array}{c} 1261 \\ 1261 \end{array}$	$10000 \\ 1200$
Boden	SBE	250	1200	600	Bogorodsk	RA8	750	400	700
Boras	SCA	1301	229	150	Dneipropetrovsk	RW30	511	587	4000
Eskilstuna Falun	SCB SCC	$\begin{array}{c} 1220 \\ 932 \end{array}$	$\frac{246}{332}$	200 500	Erivan	RV21 RW40	343	875	4000
Gavle	SCE	1470	204	200	Gomel Groznyi	RW23	621 636	483 444	$\frac{1200}{1200}$
Goteborg	SBB	932	322	10000	Imeni Pop	RV58	273	1100	8000
Halmstad	SCE	1391	$\frac{216}{231}$	200 200	Irkutsk	RW14	188	1600	100 <b>00</b>
Halsingborg Horby	SCG SBH	1301 1166	257	10000	Ivanovo-Vosnesensk Kazan	RW31 RW17	$\frac{604}{551}$	497 545	1200 1000
Hudiksvall	SCF	1112	270	150	Kazan Kharbarovsk	RW54	$\frac{331}{4273}$	70.2	20000
Jonkoping	SCH	1490	202	250	Kharbarovsk		1053	285	500
Kalmar	SCI SAS	$1220 \\ 11760$	246 52.5	200	Kharkov	RW4	320	938	16000
Karlsborg Karlskrona	SCJ	1530	196	200	Kharkov	RW20 RW9	$\begin{array}{c} 704 \\ 368 \end{array}$	$\begin{array}{c} 426 \\ 815 \end{array}$	4000 10000
Karlstad	SCK	1373	218	250	Kiev Kiev	RW9	290	1034	36000
Kiruna	SCL	1220	246	200	Koursk	RA34	521	575	1000
Kristinehamn	SCM	1480 689	$\frac{203}{436}$	$\begin{array}{c} 250 \\ 60 \end{array}$	Krasnodar	RW33	650	462	1000
Malmberget Malmo	SCN SBC	1301	231	60	Leningrad Leningrad	RW3 RV36	300 856	1000 350	20000 1200
Motala	SBG	222	1348		Leningrad (Kolpinsk)		300	1000	100000
		3030	99	20000	Makhatch Kala	RW27	796	377	1000
Nowkoni	SCO	$6065 \\ 1112$	$\begin{array}{c} 49.5 \\ 270 \end{array}$	.30000 250	Minsk	RW10	429	700	4000
Norrkoping Orebro	SCV	1265	237	200	Minsk Moscow	RW62 RW1	6420 203	46.7 1481	100 100000
Ornskoeldsvik	SCW	1373	218	200	Moscow	RW2	417	720	20000
Ostersund	SBF	770	390	600	Moscow	RW37	793	379	100 <b>0</b>
Saffle	SCP	1220	246	400 75000	Moscow	RW38	5515	54.4	300
Stockholm (Spanga) Stockholm	SBA	689	436	1000	Moscow Moscow	RW39 RW49	793 230	$379 \\ 1304$	300 100000
Sundsvall	SBD	554	542	10000	Moscow	RW61	51724	5.8	750
Trollhattan	SCQ	1112	266	250	Moscow	RW58	269	1117	
Uddevalla	SCR SCS	$1058 \\ 1301$	$286 \\ 231$	50 20	37	DWES	273	1110	40000
Umea Upsala	SCT	662	251 453	150	Moscow	RW59 RW51	6000	$\begin{smallmatrix} 50\\ 401\end{smallmatrix}$	2000 <b>0</b> 1200
Varberg	SCU	1058	283	300	Nalchik Nizhni Novgorod	RW42	$\begin{array}{c} 748 \\ 394 \end{array}$	761	400 <b>0</b>
SWITZERLAND					Nikolaev	RV43	820	366	
Basel		244	1229	500	Novorossiisk	RA33	268	1117	4000
Berne		246	1220	500	Novo Sibirsk	RW6 RW13	230 668	$\frac{1260}{450}$	4000
Beromunster		653 395	459 760	60000 1200	Odessa Omsk	RW 13	472	636	4000 1200
Geneva (Lancy) Lausanne		441	680		Orenburg	RW45	462	650	100 <b>0</b>
Sottens	:	743	408	25000	Oufa	RW22	444	675	200 <b>0</b>

Penza	RW56	640	469	1200	Okayama	JOKK	700	429 400	500 10000
Petropavlovsk Petrozavodsk	RW46 RW29	687 469	437 640	1200 1200	Osaka Sapporo	JOBK JOIK	750 830	361	.10000
Piatigorsk	RW24	865	347	1200	Sendai	JOHK	770	390	10000
Pokrovsk	RW55	730	411	1000	Shidzuoka	JOPK	778	386	500
Rostov on Don Rostov on Don	RW12	354 271	849 1106	4000 4000	Taihoku, Formosa (Taipeh, Taiwan)	JFAB	7590	39.5	
Samara	RW16	522	575	1200	Tokyo-	JFAK	670	448	10000
Samarkand	RW18 RA32	343	875	2000	Tokyo	JIAA JOAK	8105 870	$\begin{array}{c} 37 \\ 345 \end{array}$	· · · · •
Saratov Sevastopol	RA32 RA9	$\frac{714}{375}$	420 800	200 250	Tokyo	JOAK	590	508	10000
Simferopol	RW52	630	476	4000	NETHERLAND EAST	INDIES			
Smolensk	RW24	531	565	2000	Bandoeng	PLE	9410	31.9	30
Stalino Stavropol	RW26 RW32	370 608	$\begin{array}{c} 810 \\ 493 \end{array}$	$\frac{1200}{1200}$	D Ja	IBR	18860 5170	15.9 58	1000
Stchelkovo	RV49	320	937		Bandoeng Batavia	PK1AA	3998	77.5	500
Sverdlovsk	RW5	364	825	36000	Djokjakarta	PK2AF	5996	50	500
Sverdlovsk Tashkent	RV43 RW11	$\frac{541}{256}$	554 1170	25000	Makassar	PK6KZ PLF	11993 17640	25 17	500
Tashkent	RW47	421	712	2000	Malabar Palembang	PK4PA	59964	5	240
Tiflis	RW7	280	1071	10000	Semarang	PK2AG	7890	38	• • • • •
Tiraspol Tomsk	RW57 RW48	838 645	$\begin{array}{c} 354 \\ 564 \end{array}$	$\frac{4000}{1200}$	Surabaya	PK3AN PK3CH	$6040 \\ 662$	49.7 45	250
Tver	RA44	690	435	1200	Surabaya Surabaya		$\frac{002}{2142}$	140	500
Ulyanovsk	RA51	600	500	20	Tandjong Priok		6045	49.6	• • • • •
Veliki Oustug	RW41 RW28	560	$\begin{array}{c} 535 \\ 472 \end{array}$	1200 300			9579 15336	$31.3 \\ 19.6$	
Vladivostok Vologda	RA41	636 338	875	1200			19990	19.0	
Voronezh	RW25	386	778	3000	SIAM Bangkok	HSP1	856	350	2500
	ASIA				Bangkok	HSP2	9500	31.6	*****
BRITISH MALAYA	ASIA					TTOWN	7300 923	$\frac{41}{325}$	2500
Johore Baru	VS3AB	7055	42.5		Bangkok	HS7PJ	923 810	370	
Kuala Lumpur	7701 A D	÷			Bangkok	HSP3	937	320	
Singapore	VS1AB	7260	41.3		Bangkok	HS2PJ	10167	29.5	500
CEYLON Colombo		600	500	1750	Bangkok (Sala Daeng)	HS11PJ	882	340	400
		000	300	1100		<b>OCEANIA</b>			
CHINA Canton	CAB	689	435	1000	AUSTRALIA		4040	000	
Hangehow	XGY	895	335	250	Adelaide	VK5AD	$\frac{1310}{229}$	$\frac{229}{417}$	300
Harbin	COHB	674	445	1000	Adelaide	VK5CL	730	411	1000
Mukden	COMK XGZ	$\begin{array}{c} 723 \\ 606 \end{array}$	$\begin{array}{c} 415 \\ 495 \end{array}$	2000 500	Adelaide	VK5DN	960	313	100
Nanking Peking	XOPP	937	320	1000	Adelaide	VK5KA VK2AY	1200 1320	$\begin{array}{c} 250 \\ 227 \end{array}$	200
Shanghai	NKS	952	315	50	Albury	VIZAI	1480	203	50
Shanghai Shanghai	KSMS RSC	$\frac{1088}{1277}$	$\begin{array}{c} 277 \\ 235 \end{array}$	50 50	Ballarat	VK3BA	1300	231	50
Shanghai	XGX_	1071	280	50	Ballarat	VK3BZ VK4BC	880	341	
Shanghai	XGAH	938	320	50	Brisbane	V L4DC	1145	262	600
Shanghai Shanghai	$\begin{array}{c} { m SCBL} \\ { m XCTE} \end{array}$	5000	60	• • • • •	Brisbane	VK4BH	1380	217	600
Shanghai		870	345		Brisbane	VK4BK	1230 760	$\begin{array}{c} 233 \\ 395 \end{array}$	$\begin{array}{c} 200 \\ 2500 \end{array}$
Tientsin	XOL	625	480	500	Brisbane Broken Hill	VK4QG VK2XL	1365	219	50
FRENCH INDO-CHIN	NA.				Canberra (Kingston)	VK2CA	1050	286	50
Haiphong	FZG	3446 13010	$\begin{array}{c} \bf 87 \\ \bf 25 \end{array}$	2500	Geelong	VK3GL VK2MO	1400 1330	$\begin{array}{c} 214 \\ 226 \end{array}$	50
Saigon Saigon	FZR	12010	$\frac{20}{20.5}$		Gunnedah	VILLINIO	1500	200	···.50
Saigon (Chi Hoa)	F31CD	6119	49.1		Hamilton	VK3HA	1010	297	200
		840	358	12000	Hobart	VK7HO	890 1160	$\begin{array}{c} 337 \\ 259 \end{array}$	50
HONG KONG	ZBW	845	355	1500	Hobart	VL7ZL	580	517	600
Victoria INDIA	LD W	849	300	1900	Kalgoorlie	VK6KG	1220	246	100
Bombay	VUB	840	357		Launceston	VK7LA	1100 1080	$\begin{array}{c} 273 \\ 278 \end{array}$	20
•		6114	49.1	3000	Lismore	VK2XN	1340	224	50
Calcutta	VUC	810	370		Mackay	VK4MK	1190	252	100
Lahore	VUL	11870 882	$\begin{array}{c} 25.3 \\ 340 \end{array}$	3000 100	Melbourne	VK3AR	610 1180	492 255	1000 100
Madras	VUM	770	390	200	Melbourne Melbourne (Carlton)	VK3DB VK3KZ	1350	222	200
JAPAN					Melbourne	VK3LO	800	<b>375</b>	
Dairen, Manchuria	JQAK	760	395	1000		**************************************	9369	32	1000
Fukuoka Winania	JÓLK JHBB	680 7995	441	500	Melbourne	VK3ME VK3UZ	9500 930	$\begin{array}{c} 31.6 \\ 322 \end{array}$	
Hirasio Hiroshima	JOFK	7995 850	37.5 353	10000	Melbourne	11300	8820	34	100
Kanazawa	JOJK	710	423	300	Melbourne	VK3YB	1145	262	25
Keijo, Chosen			40"	1000	Moss Vale	VK2MV	$\frac{1220}{1460}$	246 205	50
(Seoul, Korea) Kokura	JODK JOSK	690 741	$\begin{array}{c} 435 \\ 408 \end{array}$	1000 1000	Newcastle	VK2HD	1110	270	200
Kumamoto	JOGK	790	380	10000	Newcastle	VK2KO	1415	<b>212</b>	200
Nagano	TONTZ	635	472	500	Newcastle	VK2NC	1245	241	2000
	TOOTE		050			TITE CLET	1010	207	
Nagoya Nilgata	JONK JOCK JOQK	810 625	472 370 480	10000 500	Perth	VK6ML	1010 1135	297 264	300

Do-4h	VK6PR	880	341	200	MADAGASCAR
Perth Perth	VK6WF	690	435	1000	Tananarive 5552 54 500
Rockhampton	VK4RK	910	330	2000	MOROCCO '
Swan Hill	VK3SH	1080	278	50	Casablanca CNO 983 305 25
Sydney	VK2BL	855 9230	$\begin{array}{c} 351 \\ 32.5 \end{array}$	1000	Casablanca AIN 5879 51
Sydney	VK2FC	665	451		Casablanca F8MC 10710 28
-		10520	28.5	1000	Rabat 724 416
Sydney	VK2GB	950 1070	316	600 300	6877 43.6 2000
Sydney Sydney	VK2KY VK2ME	9590	280 31.3	300	Rabat 12830 23.4 6000
бушеу	4 12214113	10527	28.5		Rabat 9300 32.3 6
		16330	18.4		TUNISIA
Sydney	VK2UE VK2UW	1025	293	50	Carthage TNU 162 1850
Sydney	VK2UW	1125	267	100	Constantine F8KR 7005 42.8 Tunis TUA 235 1275 500
Sydney Toowoomba	VK3BO VK4GR	970 1000	309 300	200 50	UNION OF SOUTH AFRICA
Townsville	VK4TO	1170	256	200	Bloemfontsine 588 510 750
Trafalgar	VK3TR	1280	234	50	Cape Town ZTC 810 370 1000
Wangaratta	VK3TR VK3WR	1260	238	50	Durban ZTD 731 410 1000
Wollongong	VK2WL	1435	209	50	Johannesburg
FIJI					(Maraisburg) ZTJ 667 450 6098 49.2 15000
Suva	VPD	14420	20.8		6098 49.2 15000 Pretoria 1000 300 50
NEW ZEALAND					11000110 1000 000 00
Auckland	ZL1YA	910	329	500	
Auckland	ZL1ZB ZL1ZJ	1090	275	18	The Month's Changes
Auckland	ZLIZJ	1320 1190	$\frac{227}{252}$	26 13	•
Auckland Auckland	$_{ m ZL1ZQ}$ $_{ m ZL1ZR}$	1090	275	40	Frequencies
Christchurch	ZL3YA	980	306	500	540 Windsor, Ont., from 630. 790 CMBT Havana, Cuba, from 970. 930 CKX Brandon, Man., from 540.
Christchurch	ZL3ŶA	980	306	500	790 CMBT Havana, Cuba, from 970. 930 CKX Brandon, Man., from 540.
Christchurch	ZL3ZC	1200	250		1070 XEG Mexico City, Mexico, from 1360.
	# 0#T	6000	50	250	1070 XEG Mexico City, Mexico, from 1360. 1420 KCMC Texarkana, Arkansas, from 1500.
Dannevirke	$egin{smallmatrix} \mathbf{ZL}2\mathbf{Z}\mathbf{U} \\ \mathbf{ZL}4\mathbf{Y}\mathbf{A} \end{smallmatrix}$	1100 648	$\frac{273}{461}$	7½ 500	Power
Dunedin Dunedin	ZLAZB	1080	279	20	890 WJAR Providence, R. L. from 500 to 250
Dunedin	ZL4ZL	1220	246	180	965 CMBD Havana, Cuba, from 150 to 250.
Dunedin	ZL4ZM	1080	278	45	1070 XEG Mexico City, Mexico, from 100 to 250.
Dunedin	ZL4ZO	1080	278	30	1120 WDBO Orlando, Florida, from 500 to 250.
Ekatehuana	$egin{smallmatrix} \mathbf{ZL2ZE} \ \mathbf{ZL2ZJ} \end{smallmatrix}$	$\frac{1210}{1150}$	248 260	$\begin{smallmatrix} 5\\20\end{smallmatrix}$	Calls 1000 WORK York, Pa., from WGEO,
Gisborne Gisborne	ZL2ZM	1147	261	110	1000 WORK York, Pa., from WGEO. 1420 WERE Erie, Pa., from WEDH.
Greymouth	ZL3ZR	820	366	20	1500 KNOW Austin, Texas, from KUT.
Hamilton	ZL1ZH	630	476	50	New
Hastings	ZL2ZI	1330	226	15	690 VCX Halifax, N. S.
Hastings	ZL2ZL	1330	226	15	740 Portsmouth, N. H.
Invercargill	ZL4ZI ZL1ZM	$\frac{1160}{1210}$	$\frac{259}{248}$	8 10	1420 Americus, Ga.
Manurewa Masterton	ZL2ZD	1180	254	216	Deleted
Napier	ZL2ZH	1260	238	23/2 15	830 WGM Jeanette, Pa.
New Plymouth!	ZL2YB	1230	244	100	1210 WPAW Pawtucket, R. I. 1310 KFUP Denver, Colo.
North Invercargill	ZLAZP	1160	259	16	
Palmerston North	$egin{smallmatrix} \mathbf{ZL2ZF} \\ \mathbf{ZL2ZO} \end{smallmatrix}$	$\frac{1050}{1120}$	286 268	150	Owners 618.5 KZRM Manila, P. I., to Erlanger & Galinger, Inc.
Palmerston North Wairoa	ZL2ZP	820	366	10 4	1200 WFBC Knoxville, Tenn., to Virgil V. Evans.
Wanganui	ZL2ZK	600	500	120	Chains
Wanganui Wellington	zlw	10990	27.3		1200 KERN Bakersfield, Cal., new CBS.
Wellington	ZL2XX	4776	62.8	*****	1210 WMBG Richmond, Va., new CBS.
Wellington	ZL2YA	720	416	5000	1430 WFEA Manchester, N. H., new CBS.
Wellington	ZL2ZR ZL2ZW	600 112 <b>0</b>	500 268	150	1450 KTBS Shreveport, La., new NBC.
Wellington		1120	400	••••	1900 KDD Santa Darbara, Cal., new CDG.
SAMOA					Permit to Change Frequency
Apia	5ZA	940	319	• • • • •	580 KGFX Pierre, S. D., to 630.
	AFRICA				940 KGU Honolulu, Hawaii, to 750. 1210 KDFN Casper, Wyo., to 1440.
ALGERIA	AFRICA				1210 KDFN Casper, Wyo., to 1440. 1420 KFYO Abilene, Texas, to 1310.
Algiers		824	<b>364</b>	2400	Permit to Increase Power
Algiers	F8KR	6667	45	200	940 KGU Honolulu, Hawaii, from 1000 to 2500.
CANARY ISLANDS					Permit to Change Location
Las Palmas	EAR5	1071	280	500	1420 KFYO Abiline, Texas, to Lubbock, Texas.
Teneriffe	EAR58	7211	41.6	500	Heard on Other Waves
			,		CFCH North Bay, Ont. 930 on 960.
EGYPT	SUS	9110	32.8		CHGS Prince Edward 1120 on 1135.
Cairo Cairo		3110	94.8	1000	CHNS Halifax, N. S. 815 on 925.
Cairó				1000	CMBR Havana, Cuba 1500 on 1460.
					CMCA Havana, Cuba 1225 on 1235.
KENYA Nairobi	VQ7LO	6000	50		CMCJ Havana, Cuba 620 on 630. CMCU <u>H</u> avana, Cuba 1285 on 1270.
11411001	1 61110	6134	48.9		CMCU Havana, Cuba 1285 on 1270. CMDC Havana, Cuba 660 on 675.
		9616	31.2		WFDV Rome, Ga. 1310 on 1370.
		750	400	1000	XEB Mexico City 1030 on 1070.

₹:

### FILTERED AERIAL

A revolutionary antenna composed of a solid straight wire insulated, and over the insulation is helically-wound enameled wire the entire length.

The straight inside wire is connected to a ground at each end, while one end of the helically - wound wire goes to the aerial post of the set.

Working on the transformer principle, the Filtered Aerial picks up very weak signals and amplifies them.

Coil contains 60 feet, but the helically-wound wire is considerably longer due to winding.

Price, \$1.50, postpaid

# RADIO THEORY MODERN PRACTICE

A New Book in Simple Terms Profusely Illustrated

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