THE FEBRUARY 1933

RADEX

THE ALL-WAVE RADIO MAGAZINE



25°

How to Attach Phones to Your Set Substituting the New Type Tubes Time on the Air of Trans-Pacifics The 100 Best Short Wave Stations Friday's Time on the Air

FEBRUARY 1, 1933



RADIO INDEX



Reg. U. S. Patent Office

FRED CLAYTON BUTLER
Editor and Publisher

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ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE

USING PHONES

• • • For Elusive Signals

By B. FRANCIS DASHIELL

HIS magazine receives many communications from its readers who wish to attach headphones to their modern a.c. radio sets. While manufacturers persist in offering new receivers without provision for headphone operation, there are many thousands of enthusiastic listeners who would like to DX for elusive signals if they could substitute sensitive telephone sets for noisy loud speakers. This is especially true late at night when the speaker may prove to be an annoyance to others.

It is impossible to brush over the whole field of modern radio sets in an article such as this. The directions must necessarily be rather general in their scope and require individual interpretation and adaption to meet the peculiar characteristics of the radio receiver in question. However, anyone should be able quickly to attach a pair of headphones to any a.c. or

battery operated set.

The headphones should be selected with care; they should be light in weight, fit snugly to exclude external noises, and yet not be uncomfortable after some hours of wear. The resistance must be from 2,000 to 3,000 ohms. Sensitivity can be tested by moistening the cord tips on the tongue and then touching them together; a sharp click should be heard. The cord ought to be heavy, long, and well insulated. Reverse the diaphrams beneath the caps occasionally to prevent warping under the constant pull of the magnets.

The uninitiated listener need only know the location of the power tube in order to install headphones. But the typical circuit diagrams shown herewith will provide a more complete explanation, for the diagrams that accompany new sets will be found similar in most respects to those portions of the standard circuits illustrating this text. The additional wiring and parts necessary to install headphones are indicated by the broken lines. It is necessary only to identify the audio output and tube, make the connection to the plate or grid by means of a thin wafer adapter permanently placed beneath the tube, and place a small switch to silence the speaker.

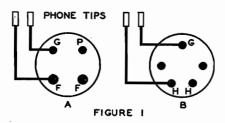
Many of our readers have used the plug-in type of telephone adapter. It simplifies the connection of headphones to radio sets, but does not give the volume obtained by the methods to be described. And a certain difficulty arises from the use of



Yes, this is Gracie herself, Radio's inimitable comic. Burns and Allen, Wednesdays at 9:30 p.m. EST on the CBS

plug adapters due to the fact that a tube must be removed from its socket. This may seriously change the potentials and balancing of the receiver power and filter unit, and most manufacturers are emphatic in their warnings of such procedure.

When a plug-in adapter is used in the first audio tube socket the volume of sound in the headphones will be less than when used in the last power tube socket, and it will be much less if used in the second detector tube socket. Figure 1 shows the internal connections of the adapter. The telephone tips are connected directly to the grid prong and to one of the filament terminals. Adapter "A" has four prongs and may be inserted in sockets taking tube types -10, -12A, -20, -26, -30, -31, -45 and -71A.



Adapter "B" shows a 5 prong base for use in sockets taking -27, -33, 46, -47 and 56 type tubes. These adapters cannot be used in sockets for tubes having the control-grid cap on the top, such as types -22, -24A, -32, -35, -36, -38, -39, 57 and 58.

It must be remembered that headphones cannot be attached in place of a dynamic loud speaker. Ordinary phones with a current capacity of only 5 milliamperes will not handle the high potentials of modern a.c. receivers. The coils of extremely fine wire are quickly overloaded and the phones become hot and soon are damaged. Headphones can be used only in output circuits where plate potentials do not exceed 135 volts, in connection with -01A, -12A, -20, -30, -31, and -71A types of tubes. Even then, in excess of 90 volts, the use of an output transformer, with phones connected across the secondary, is recommended.

Headphones cannot be connected in high voltage circuits unless suitable blocking condensers and resistors are utilized to keep harmful direct currents out of the windings. Only the surges of pulsating, or alternating current, which actually vibrate the diaphrams of the phones, are permitted to pass. Care must be exercised to avoid the high voltages present in the plate circuits with the resulting risk of severe shocks through the telephones, or short circuits and serious damage.

Insulated installation is all that is necessary when attaching wafer adapters, condensers, resistors and extension wiring. The headphone-tip connections should be provided at some convenient location in the cabinet, while a small switch is used to turn off the loudspeaker at will.

Connections to tubes and sockets are made with permanently placed "wafer adapters," This form of adapter is a contacting device made of a thin sheet of insulating material with either four or five holes punched through so as to fit over the prongs of the tube. It then fits snugly between the tube base and the socket without further removal of the tube. Contacts to the tube prongs are provided for in the holes, and there are projecting lugs to which the connecting wires are soldered.

Figure 2 shows an arrangement of such sockets, looking down upon the tops, and which correspond to the holes in the wafer adapters. These will serve as a guide when making headphone connections to the plates or grids of the tubes when the proper prong locations are not known. Adapter "A" may be used with tube types -10, -12A, -20, -26, -30, -31,

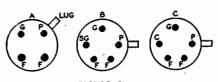
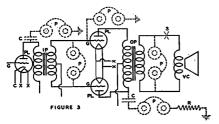
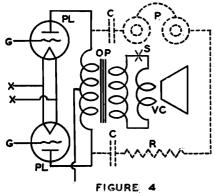


FIGURE 2



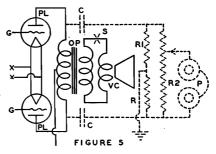
-45 and -71A; "B" with types -33, 46 and -47; and "C" with types -27 and 56.

A typical power stage is shown in Figure 3. The telephones P may be attached in several positions. Tube at left is a first audio stage, and phones can be connected between its plate PL and the ground, chassis frame, or cathode terminal. A .1 to .5 microfarad blocking condenser C must be connected between the plate and the phones. A very simple arrangement is to place the phones across the grids of the two push-pull tubes, or the secondary of the input transformer IP. Likewise, phones may be placed across the secondary of the output transformer OP. phones are connected to plate PL, of either of the power tubes, at least a .25 mfd. condenser C must be used in series with a 2-watt resistance R of 15,000 ohms and the ground or chassis.



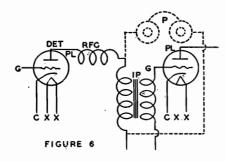
Good results will be obtained when the phones P are connected across the two power tube plates, as shown in Figure 4. Use two .1 to .5 mfd. blocking condensers C (300 volts) with a 25,000 ohm resistor R in series. This connection may also be made directly across the primary of the output transformer OP if tube socket leads are not practicable.

Figure 5 shows an adjustable arrangement. The .25 blocking condensers C are connected to adapter lugs under the power tubes. They in turn connect to the terminals of a 500,000 ohm potentiometer R2. The phones P are placed in the circuit between the grounded end of the potentiometer and its movable arm. Two 100,000 ohm resistors R and R1, each of two watts capacity, are also connected in series between the condensers, but have their common terminal grounded. The adjusting knob varies the current passing through the phones and regulates the volume of sound.



When headphones are placed in the circuit of a second detector, ahead of the driver or first audio tube, they should be attached as shown in Figure 6—across the primary of the audio transformer IP. Radio sets that utilize batteries with fixed-magnet dynamic speakers should have the phones attached to the plate PL of the power tube and then to the ground through a .1 mfd. condenser C, as shown in Figure 7.

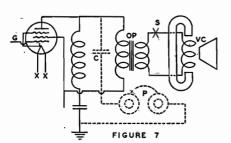
Connecting headphones to the plates of power tubes with blocking condensers in series will keep out the dangerous high voltages, and the volume of sound will be at its maximum. But such capacity coupling, with all tubes properly in place, also permits the usual current to flow in the



speaker circuit which operates at full volume. This is a disadvantage and requires additional treatment. The use of adapter plugs, previously mentioned, connects the phones into the grid circuit with less volume of sound, but the removal of the tube effectively silences the loud speaker.

The speaker can be silenced by preventing the voice voil VC, shown in Figures 3, 4, 5, and 7, from operating by opening one of the wires leading to the secondary of the output transformer OP and inserting small snapswitch at S. This switch is opened when the headphones are being used. In most receivers the transformer OP and voice coil VC are mounted closely adjacent in a single unit, and it will be necessary to locate one of the short wires, which, after cutting, must be extended to some convenient place in the cabinet where the switch can be placed.

(Publisher's Note—If the wafer adapters cannot be secured from a radio dealer, they are available through this magazine for fifty cents each. Be sure to specify four-hole or five-hole.)



DXing on the High Seas

AN interesting letter comes to us from Wm. S. Vincent, a member of the crew of the ocean-going freight steamer, S. S. Bessemer-City, of the Isthmian Steamship Co., who writes: "Our trips are not over any one route. We never know where we are going next trip. Letters are forwarded to us from the home office but magazines are not so I look for RADEX whenever I am in a U. S. port. port. The October number I purchased here (Honolulu).

"I am using a receiver made by Nathaniel Baldwin of Salt Lake City. When closed up it is a small suit case. It uses eight tubes, two 24s and six 27s. I am using it on direct current from the ship's generators and I might say that it has exceeded my highest hopes both in port and at sea.

"Some of the freak distances that I have received would astonish Mr. Ripley himself. My standbys are KFI, KOA, KSL, KMOX, WENR from the Pacific. The best Canadian is CFCN. Of course XER is heard plainly. WOAI is good on the two oceans. On the Atlantic our best are KDKA, WLW, WEAF, WABC, WPG and WBZ. These stations are dependable and consistent.

"I noticed with interest the mention you made of the Tobe Filterette in the October issue. They are good. I am using their No. 110 P. O., 110 volts, 5 amps. Have used it for a year now. Without it my set is almost useless-electric fans, pumps, machine shop motors, etc., added to the noise from generators. The Tobe eliminates all that. Remember my current comes direct from the dynamo with nothing but a couple of fuse plugs between. I use a lead covered lead in wire with soldered ioints."

Mr. Vincent has sailed the seas for over ten years, two of them on his present ship.

Short Wave Antennas

By JAMES MILLEN, M. E.

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HE importance of a good short wave antenna cannot be overstated if the full possibilities of enjoyable reception are to be realized. Commercial companies have spent millions of dollars in the development of suitable short wave aerial systems, while the average short wave experimenter is content with a shoddy installation which experience has taught him works fairly well on his broadcast receiver.

Because an antenna is effective on the lower broadcast frequencies, it does not follow that it is a satisfactory short wave aerial. Induced currents, man-made static and leakage effects which would not be annoying on 300 meters, will seriously impair reception at 30 meters. The peculiar carrying power of the very high frequencies, which makes short wave reception possible on almost any kind of an antenna, is responsible for the slipshod aerial systems, which, in turn, are largely responsible for noisy reception and a retarded acceptance of short wave reception on the part of the average radio fan.

Wherever choice is possible the short wave receiving station should be located away from power lines, electrically operated machinery of any kind and isolated, as far as practical, from roads carrying automobile traffic and monitored by traffic lights.

While the antenna should be carefully installed, it need not be in any way elaborate. A single horizontal wire, T or L type, twenty-five to fifty feet in length will provide ample pickup. If possible, the antenna should be erected in the open, and as high as practical. It should be well insulated, at each end, and of fairly heavy wire—say number 14, insulated or bare. It should be erected as far away as

and Grounds

circumstances will permit from possible sources of noise interference, and should not parallel power lines. It should preferably run at right angles to the nearest road. It should be clear of tree branches in the strongest wind.

The leadin should be well supported, thoroughly insulated, and should be brought indoors through a leadin insulator not of the window strip variety. The lightning arrestor should be of the highest quality. Any joints in the antenna system—aerial, leadin and ground—should be soldered. It is particularly important that the leadin be kept as far away as possible from power lines, elevator shafts and electrical machines of all descriptions.

Equal care and attention should be directed to the ground connection. Where several possible grounds are available, they should be tried individually and in groups for the least noisy connection. The ground leads should be soldered to the clamps and the clamps themselves soldered to the pipes.

Indoor antennas are very effective, but obviously it is seldom possible to erect them as far away from interference inducing sources as an outdoor The indoor antenna is antenna. really nothing more than "leadin"and it is appreciated that the ordinary leadin will pick-up noise. The main idea of the outdoor antenna is to obtain a noise free pick-up so that the signal to noise ratio will be improved. If an indoor antenna is erected, the same precautions as to rigidity, insulation and preferred location should be observed.

Under no circumstances use any form of "patented" aerial tacked to the walls, under rugs, or socket type antennas and expect satisfactory short wave results.

GOSSIPING ABOUT RADIO

With the Editor

EGINNING with this issue of your favorite radio magazine, we are changing our entire method of distribution throughout North America. One of our objects is to try to have each issue on the newsstand by the first day of the month. If our readers find that we are failing to achieve this goal in any particular city, we ask that they advise us and thus help us to eliminate any causes of delay.

Copies will be mailed to our subscribers between the 20th and 24th of the previous month and these should be in their hands by the 28th excepting in the far western states and parts of Canada. Certainly all subscribers should have their copies by the last day of the month.

So great has been the demand for the map of the world with time converting dial that our edition is entirely exhausted but a second issue is now on the press. Our New Zealand and Australian readers will be able to secure one of the map-converters from the Radio Record of Wellington, N. Z., who have been licensed under our copyright to produce an Oceanic edition.

Those DX Rules

In our next issue we will try to summarize the opinions of our readers in regard to the DX rules suggested and analyzed in the January number. At present there is a sharp division of opinion in regard to most of the rules which we shall seek to harmonize.

From time to time we receive requests from our readers asking our help in identifying certain stations whose programs consisted of phonograph records without announcements. In almost every case these are stations testing merely for their own information. After midnight stations may conduct tests for the improvement of their transmission. It is, of course, quite impossible for us to identify such programs as they may come from any one of the several stations on the given frequency. This replies to T. J. Johnson, Bowlegs, Okla., James Ottenberg, 161 West 86th St., New York, and others.

In this connection we have found that it is quite useless for us to publish requests as to "what station did I hear" with the name of the selection. Few if any of our readers note down selections heard and most selections are played over and over by various stations. For us to help you identify the program heard must be something out of the ordinary like the cricket game, the source of which we are now trying to find.

How Much Postage?

"Could you put a list of countries in RADEX giving the postage rates?" asks Joe Tamele, 13201 Coath Ave., Roughly, first-class let-Cleveland. ters to any country in North America require three cents postage. The two exceptions are Bermuda and British Honduras which like the other parts of the British Empire including Australia and New Zealand, require five cents. The other European countries are likewise five cents, with the exception of Spain and the Spanish colonies which are still three cents. South American countries are still three cents with the exception of British and Dutch possessions there. These are five cents.

Next to increasing their distance our readers are most interested in the elimination of man-made noises which spoil their reception and reports of success on the part of listeners in remedying this problem are always welcome.

"I purchased a new Philco radio model 71-D, 7-tube super in October and had noisy reception with little distance, due to very poor conditions around me," reports Fred D. Thompson, 11 Ave. A., Johnson City, N. Y. "I live in an apartment with a barber shop, and a restaurant using a large electric refrigerator below me, and three factories less than two blocks distant. In November I installed a Tobe Filterizer and the results have been truly remarkable. Stations I could not get before came tumbling in every night. Have dialed 150 so far, including 12 Canadian, 2 Cuban Among the Canaand 3 Mexican. dians are CFAC and CJCA in Alberta, and CKPC, CFCH, CHCH, three 100watters, and CKIC, Wolfville, N. S., using 50 watts. Another 50-watt station I logged was WEXL, Royal Oak, Mich. I would advise Eugene Delmore who wrote you in November issue to try this Tobe Filterizer and to increase his aerial to at least forty feet, the length I use. I have my receiver and the shielded lead-in grounded to a ten-foot pipe driven in the ground and the Filterizer unit is connected between the receiver and electric power supply grounded to a water pipe. This gives best results."

Delco Interference

From O. L. Hart, 251 Walnut Street, Greenville, Ohio, an agent for the "Delco" products, comes the following information: "On page 4 of the December issue, you describe the Delco radio which was placed on the market in August, 1931. March, 1932, the B battery 140 volt was discarded and replaced with an electrifier operating off 32 volt pulling 32 watts and producing 140 volt current, making a complete 32 volt electric receiver. In August 1932 new models came on the market including a 7-tube superheterodyne in two models with twin speakers and single speaker; also two models for 110 volt a. c. 9-tube. On page 20 of the December number someone asks about Delco interference. I wish to inform you that the Delco Appliance Corp. of Rochester, N. Y., gave to their dealers a set of interference



Big Chief Harry Reser and a few of his tribe of Eskimos ready for their seventh radio winter. Cliquot Club program NBC-WEAF Fridays, 9:00 p.m. EST

eliminators for Delco lighting systems and power motors. If this Delco user will just go to his Delco service man he should be able to get the required eliminators."

"DX fans bothered by man-made static," suggests George Fabian, 1463 Virginia Park, Detroit, Mich., "may be interested to know that a G.E. noise eliminator kit greatly improved the operation of our 1932 G.E. 12-tube receiver. The kit is not a 'cure for all' but troubles are minimized and sixty hours of DX brought 43 new stations."

With the DX Clubs

Ray LaRocque, 135 Highland Street, Worcester, Mass., Chairman of the Courtesy Programs Committee of the New England Radio Club, sends us some interesting information in regard to the activities of that organization. The Club meets the last Saturday of each month at 306 Main Street, Worcester. DX tip sheets are mailed to all members twice a month

from September to May and once a month during the summer. The dues are \$1.50 yearly and no set number of stations is required to be logged

before joining.

"A group of us fellows have organized the Greater Chicago DX Club," says Irving R. Butler, 3759 N. Lavergne Ave., Chicago, Ill. They pass on to us several tips of DX programs which unfortunately reach us too late to serve our readers. It is necessary for us to have notice of DX programs by the fifth of the previous month in order to be sure of getting them in our DX calendar.

After serving the Buffalo Evening News DX Club for several years as Secretary-Treasurer, Mrs. M. L. Ellis has resigned and Keith L. Freas, 400 Fargo Ave., Buffalo, N. Y., has been

elected to that office.

That 915 Mystery

"For the benefit of Paul Cintrat and Raymond Bell, their Spanish station on 915 kcs. is most likely CMCD. I always pick him up there," volunteers L. E. Wallace, 110 N. Duval Street, Tallahassee, Fla. But I. E. Beitman, 249 Gates Ave., Elvria, Ohio, thinks this "mystery" station on 915 is CFLC, Prescott, Ont., whose announcer, he states, speaks in French which might easily be mistaken by some listeners for Spanish. "Count me as one who has received the mystery station on 915. It could hardly be TICR with a one-tube set. This Spanish station occasionally comes in very distinctly," adds Ivor H. Nixon, 265 Pacific Ave., Toronto, Ontario.

"The Spaniard inquired about so much on 915 kcys.," advises Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio, "is CMCD, Havana. I have noticed also that these Cubans are always off wave. CMCJ comes in on 1185 kcys. now; CMK on 725; CMC on 835, etc. Even those Canadians are getting that way now, as I always hear CKCL on 575; CFCA on 1125; CKCO on 885; CKPR on 895; CFCO on 1195 and HHK on 925.

CMCQ is usually on 775 also, and CMCB on 1055 where XES belongs."

"This business of stations not announcing is getting awful," complains P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind. "I listened to CJGX for an hour and CKY for one hour and a half before I heard a call. KWKC has started 'hogging' 1370 kcys. and rarely announces. They just say, 'We continue the program.'"

This is a Strong One

Page Lowell Thomas; here is an entry for his "Tall-Story Club"—a Mexican station so strong that the program came from a pair of disconnected headphones away up in Cincinnati.

"In experimenting with earphones on a Midwest 16-tube set, at 2.12 A. M. Wednesday morning, December 7th, several queer things happened." says Frank E. Switalski, 2819 Victoria Ave., Cincinnati, Ohio. speakers were cut off by means of switches, and a pair of 4000-ohm headphones was lying on the table next to the chassis. Although the leads were close to the '46 tubes, they made no contact whatever with the chassis; but when the set was turned on, the speakers sizzled, the power tubes flickered until they almost blew out, and speech came from the disconnected phones. The volume was tremendous and I waited only long enough for the announcement. which was the new one, XEPN, Piedras Negras. Mexico, on 885 keys."

Another Shake-up Coming?

The broadcasting band may be widened in a possible radio conference between representatives of the United States, Canada, Mexico and Cuba. If this is done, the sentiment of engineers is that it must be toward the lower frequencies and not the higher. Failure to effect a treaty will, it is held, precipitate a radio war which would bring chaos into the ether far worse than the nightmare

(Continued on page 32)

With the STARS and STOOGES

By "BETTY"

NE of the funniest individuals on stage and radio, Jack Benny, is a most serious person in real life. He seems continually steeped in worries. Whereas most of radio's comics have but one program weekly, Jack has his Canada Dry broadcasts on two nights a week. This, he says, would worry anybody: his fellow comedians who point towards one microphone appearance every seven days agree with him. Once, when asked why he doesn't crack jokes with his friends, he replied: "I'm too busy thinking them up for my broadcasts."

The Mary Livingstone of his programs is Mrs. Jack Benny. She and the stage were total strangers until her marriage six years ago. Then Jack, wishing to find something to keep her time occupied, gave her a "bit" in his act. She took to the footlights as an operatic soprano takes to the high notes. Like several other comedians' wives, she became a



Jack Bennu

"stooge" for her husband. For his first thirteen weeks on the radio last spring, Jack performed without "Mary," but she became microphonestruck. She pleaded for a chance on the air. Jack usually accedes to her whims and fancies, and this was no exception, and Mary made a hit with audiences.

The Bennys' closest friends belong to the theatrical and radio professions. They and George Burns and Gracie Allen are inseparable. Jay C. Flippen and the Benny Rubins also may be found at the Benny's Central Park apartment almost any night. When not engaged in working on his radio programs, Jack takes Mary to the latest shows. Her real name is Sadie.

His Fun is Work

When he works with his collaborators on his radio scripts, Jack wears his blue dressing-gown and paces up and down his living room floor. His grayish hair mussed, he resembles more the banker struggling with problems of finance, than a funny man reaching for gags. He never strives to amuse at rehearsals, but when on the air he is at his best—hat perched on head, and clowning all over the studio.

Jack was born in Waukegan, Illinois, on February 14, 1894. Benny was not his family name. That, he says, he's forgotten how to spell. His tag, in fact, has since undergone several changes. Once he was known to vaudeville patrons as Ben Benny, but this monicker caused him to be confused with a chap named Ben Bernie. Both played the violin and indulged in wise-cracks. This bewildered audiences and even bookers. So the present "nickel-back" comedian came to be addressed as Jack Benny. Now, in radio, listeners mix him up with Jack Denny, the bandleader, and to make matters worse

for Jack Benny, his voice and Goodman Ace's (Easy Aces) are similar.

Jack lived in Waukegan for twenty years. He admits his early life was uneventful. The only really important things that happened to him, he reveals, are birth, marriage and radio. He first went into vaudeville as a violinist with a piano-player. The act was known as Benny and Wood. They played around Chicago and were moderately successful. With the advent of the war, he joined the Navy at the Great Lakes Naval Training Station. Instead of seeing the world, he saw the country, touring the theatres with a Navy show for the benefit of the Seaman's Fund. After the war, when he returned to vaudeville, he kept adding jokes to his violin routine. Soon the fiddle became only an added attraction for Jack, now a full-fledged master-of-ceremonies. After a tour, he opened at the Palace Theatre, New York. His success on Broadway resulted in a contract that called for engagements from coast to coast, landing him in Los Angeles, where he first met "Mary." Several years later, when in Chicago, he happened to meet "Mary" again and they happened to get married.

Into the Movies

Then came a period when he served under the Shubert banner in "Great Temptations." Afterwards, he opened at the Orpheum Theatre in Los Angeles as master-of-ceremonies, where his smart humor became very popu-Then he was engaged by M-G-M for pictures, appearing in the "Hollywood Revue," "Chasing Rainbows" and in "The Medicine Man." Back to New York and Earl Carrol's Vanities in which he was starred. Later he played an engagement in England, where he found the audiences very responsive to his type of wit. Back in this country, he toured with Vanities, suddenly decided that it was about time he tried radio, and asked for his release. This was given and he returned to Manhattan to prepare for a long siege of auditions. But he only gave one sample of his

work and was signed by Canada Dry. This was last May. He clicked from the start. And now, on the Columbia network, backed by the tunes of Ted Weems' Orchestra, he is continuing to click.



William O'Neal

William O'Neal is the latest contribution to the ranks of radio stars from the State of Louisiana. Born in New Orleans twenty-seven years ago, Bill O'Neal was the fifth of nine children. With four to the right of him and four to the left of him in the family line-up, he says there is ample explanation of the fact, that he's a middle-of-the-roader. His father was an hotel owner, so the youthful William early came into contact with various kinds of entertainment, and no sooner had he been taken to the opera than the ambition to appear on the lyric stage possessed him.

He did not, however, take the shortest cut to the fulfillment of this ambition. In the first place, it was not a very stable desire, for it vied with a yearning to become a fireman—explained by the fact that he liked fires. When his parents talked him out of this and a career as a singer seemed somewhat impracticable, Bill

decided to take up electrical engineering, and it was with transformers and rheostats in mind for the future that he entered Louisiana State University.

His singing advanced more rapidly than his knowledge of electricity, however, and both were superior to his performance on the gridiron. He played football, and with his physical set-up—his 200-odd pounds are distributed along more than six feet of length—he should have been a success among the scrubs, at any rate, but a bent and broken nose made him get out of the game and stay out.

The Singing Electrician

Soon after his graduation from L. S. U., Bill found that as an electrician he sang successfully and well. Friends in his work paid him the lefthanded compliment of telling him he "ought to be in the opera"; the people who heard him sing in churches, at club musicales, at charity events and college reunions told him the same thing. Eventually, he set out for New York and submitted himself for an audition with the Shuberts. He got the job and was picked to understudy for Walter Woolf in "The Lady in Ermine." From this he graduated to "May Flowers" and "The Desert Song." After touring this country and the Continent in these plays, and appearing in "The New Moon," he turned to vaudeville, and was equally well received.

During the run of "The Desert Song" Bill made his first broadcast at a benefit performance and was scared stiff of the mike. When he joined the Columbia Broadcasting System constellation he still objected to singing before the "dead pan gadget," preferring an audience to warm up to. Gradually he's overcoming this aversion, but he still likes to have an audience in the studio while he is on the air.

William O'Neal is now being costarred with Col. Stoopnagle and Budd on the weekly Pontiac broadcasts over the C. B. S. Thursdays at 9:30 P. M. EST.

How They Got Into Radio

Ruth Etting, who has never given an audition in her life, was invited to make "Music That Satisfies" on the basis of her work on the stage, in the movies and on recordings.

Irene Beasley entered broadcasting for the purpose of "plugging" a tune

she had written.

It was no break that got Georgie Price in radio. He spent eleven months and dropped \$25,000 in vaudeville salaries trying to break into broadcasting. Eventually he got an audition from a man who had never heard of him.

George Burns and Gracie Allen first broadcast when their friend, Eddie Cantor, invited them to appear on his show.

Ted Husing hurried to New York because his father was undergoing an operation. While in Manhattan he saw a newspaper advertisement for an announcer.

Chase Taylor was sitting with his feet on a desk in a Buffalo station when his friend, Wilbur Hulick, an announcer, rushed in and asked him to help fill fifteen minutes because the network line had broken down. At that moment "Colonel Lemuel Q. Stoopnagle" was born.

Connie Boswell and her sisters won a newspaper talent contest for children. The prize was a week's appearance on a New Orleans station.

Jay C. Flippen was toastmaster at a banquet that was broadcast, when someone phoned and asked if he wanted to go on the air regularly.

Andre Kostelanetz first got into radio when he was called at the last minute to play the piano as accompaniment for Bonelli, the opera star.

Editor's Note—Since "Betty's" article was written, word has been received that the Canada Dry program featuring Jack Benny and Ted Weems' Orchestra on the CBS will go off the air January 26th. No reason for the discontinuance of this popular program was given. Jack Benny has notified NBC of his willingness to accept a program on that network.

The Monthly RADIO CLINIC

• • • by the TECHNICAL EDITOR

I HAVE a Majestic model 72 receiver which is badly troubled with local electric static received through the lighting circuits and from a trolley line nearby. The set also seems to lack selectivity. What do you recommend?

We believe you can improve reception by utilizing one of the line filters now on the market. The October issue (page 6) of RADEX has a description of a very good device to eliminate troublesome electric noises coming over the electric lines.

It appears that you have too large a spread over your dial when powerful stations are received, for from 40 to 70 kilocycles range is proof of a lack of selectivity. Shorten your aerial to about 40 feet. There are several types of wave traps that should give some aid in making the tuning more selective. All wave trap devices have some use indicated when reception is unusually broad.

Re-Tubing the Philco

I wish to replace the older tubes in my model 86 Philco with the latest types of tubes. Is this practicable?

The present -26 tubes in your set cannot be replaced with newer types. but the -27 should be replaced with the new type 56. The two -71s in pushpull can be replaced by two pentode -47, if use is made of a pair of suitable adapters which can be procured at radio supply houses. This set of adapters is arranged so that the filament of the -47s are connected in series, for each -47 takes only 2.5 volts, while a single -71A takes 5.0 volts. The screen holes of the top of the adapter are connected through to the plate prongs; other connections go through. The adapters, therefore, have 5 holes in the top and 4 prongs beneath to fit into the -71A sockets. The amperage of the two new -47s is

in excess of that required for the old -71As, and some drain and heating may result in unsatisfactory operation of the powerpack unit.

Also, you may use two -45s in the push-pull if you change the filament connections to the sockets so as to have the two -45 filaments in series instead of parallel as at present. The current drain will be somewhat less than when -47s are used, but the value of the -47 over the -45 is well known.

New Tubes in Radiola

I have a 7-tube Radiola 33 receiver and desire to replace the older tubes with newer ones, if practicable. Please advise me.

You cannot substitute for the -26s, since they use only 1.5 volts each while the newer ones require 2.5 volts. This would require a rebuilding and readjustment of the powerpack unit of the set. The -27 type tube should be replaced with a 56 which will fit into the same socket, and take less current.

The -71A may be replaced with a -47 by using a proper adapter. There is a 5-hole 4-prong adapter which has a resistance in series to reduce the 5 volts used on the -71A tube to 2.5 volts necessary for the -47 type.

Short Wave Operation

Can a Crosley Show-Box receiver be changed into a short-wave receiver? Where can I get an a.c. shortwave adapter (not converter) to use with this set if it cannot be rebuilt?

The Crosley Show-Box model 706 receiver is not so well adapted to short-wave conversation. This always is a difficult feat for it calls for practically an entire rebuilding and rewiring. We are of the opinion that short-wave kits for building a proper receiver can be purchased as cheaply as rebuilding an old set at this particular time.

There is a device known as the A-C

Dayton Fleweling short-wave adapter which is being sold for approximately five dollars. Try the Federated Purchaser, 25 Park Place, New York City, N. Y. This small adapter should work nicely with your set.

Pentode Power Tubes

In making what is known as the "Megadyne" one-tube pentode loudspeaker set using a -38 power tube, can I substitute a 2-volt tube instead?

While not being familiar with this circuit we see no reason why a -34 pentode power tube cannot be used in place of the -38 pentode of the 6.3-volt series when building this set. But a 15-ohm rheostat must be placed in series between the tube and battery when two dry cells of 3 volts are used on the filament of the -34 pentode tube. The -34 has a 4-prong base with the cathode and suppressor grid tied together to the -A side of the filament. Your circuit calls for this arrangement, and there is no difference in this respect between the type -38 and the type -34 tubes.

Hum and Weak Signals

When I touch the trimmer condensers of my Philos 87 receiver a loud hum takes place. Does this indicate that a readjustment is necessary? Also, the set brings in stations best between 700 and 1500 kilocycles. What is the reason for this?

When you touch the compensating condenser in your set you ground the lead connecting this plate to the grid of one of the tubes, most likely the detector. An instant hum is created, as always the case when the controlgrid lead is not well insulated.

Your reception of weaker signals below 700 kilocycles on the dial is more or less natural. These are the longer waves, and stations are fewer and less energetic in this section of the dial. No set brings in as many stations as they do between 700 and 1500 kcs. While such is a natural result, it may also indicate that readjustment should be made by a competent service man. See page 22 of the June issue of RADEX.



The Songfellows of the Armour program, Fridays at 9:30 on the NBC-WJZ

Phones, Aerial and Static

I have a Crosley model 603 receiver and wish to know how to use headphones with the detector tube. Also, what is the best aerial wire, and how can I stop static created by my 6-volt wind-mill driven electric generator?

We believe you can use headphones in the plate circuit of the detector tube of your set without adapters, condensers or an output transformer. An adapter may be more convenient. If you wish more power you may connect a 1.0 mfd. fixed condenser to the plate terminal of the power audio tube socket and place the phones in series between this condenser and the ground or -B end of the circuit. The primary of the output transformer must not be changed since this circuit provides the high voltage B current to the tube plate, but if a speaker is connected to the secondary, a switch may be placed in the circuit to cut out the speaker voice coil.

A solid copper wire, about number 12 or 14, is sufficient for an aerial.

Stranded wire of the same size is more flexible and stronger, but it holds more ice and sleet in winter. There is no advantage in using peculiar types of antenna wires. An aerial about 100 feet in length in regions where there is little interference is all that is necessary.

Polish the commutator and brushes of your 6-volt wind-mill driven electric generator so excessive sparking does not take place. Connect two 0.5 mfd. fixed condensers in series across the two wires leading from the generator, and place a grounded wire to the series connection between the two condensers. Shielding of the entire generator in a grounded metallic box will also help. If the dynamo is driven by a friction belt then the frame of the machine must be grounded.

Phones With Bosch Receiver

Will it be safe to connect headphones to my Bosch model 58 tuned radio frequency receiver, and if so, how can it be accomplished? What is the proper way to cut out the speaker without unbalancing the receiver?

The proper method of cutting out your speaker without causing any maladjustments in the set is to open the voice coil lead and insert a small switch. This causes no change in the output plate current or voltage elsewhere in the receiver. When an audio stage precedes the final output a headphone adapter is not advised in connection with the -45 power sockets simply because enough power already is available at the output of the first audio amplifier. No strain will be placed on the powerpack unit by this method, of course, if it should be used, but there is constant risk of overloading and heating the headphones and coupling condenser. It is sufficient to connect headphones to the socket of the first audio tube, and, in fact, usually to the detector tube. The added power of the audio tubes does not increase the sensitivity of the set to signals that cannot be heard through the detector tube.

Short Wave Converter

I have a Stewart Warner model 301A short wave converter which I use in connection with a Bosch broadcast receiver. It does not bring in any stations between 42 and 50 meters, yet seems to work fairly well on the other wave lengths. What can be done to correct this defect?

Your receiver is acting in accordance with the usual principles of radio, and without changing the design of the equipment you are using, no great improvement can be expected. We assume that the circuit with converter attached is equally sensitive over its entire operating wave band, yet, there is no proof that good signals can be expected on all waves. Aside from the natural causes for unreliable reception there are other factors which enter into the problem. Self-resonance of the antenna and associated circuits seriously. attenuate certain bands of frequencies, and in fact, it is almost impossible to design any radio receiver or circuit of wide-band coverage which will not favor or disfavor some frequency band. It is im-



Marian Anderson of the "March of Time" on the CBS Fridays at 8:30 p.m. EST

possible to advise as to the exact electrical constants which are causing this band loss. It may be overcome to some extent by the use of a variable condenser in series with the aerial, but, then, the tuning of the converter may require some readjustments that will throw the dial out of alignment for other established wave bands and cause variations in the permanent station log.

Where Is Audio Tube?

Can you advise me which tube is the first audio tube in my Kennedy 9-tube receiver? Also, what is the output transformer and how should it be connected back into the circuit from which it has been dismantled?

The Kennedy receiver you own is, we believe, the old model 80 "Royal." It has four -26 tubes used in the radio frequency circuit; one -27 detector tube; one -26 first audio amplifier tube; and two 71-As in push-pull power amplification. So, then, the only -26 tube, between the -27 detector and the two -71As, is the first audio stage tube.

The transformer with a three-tap input coil and a two-tap outlet coil is The two the output transformer. wires coming from the two plates of the two -71A tubes in the push-pull audio stage are connected to the two outer terminals of the primary of the transformer. The 180-volt line connects to the central terminal. two terminals on the secondary side go to the voice coil of the cone of the loud speaker. There are, also, two other leads from the powerpack to connect to the field magnet coil of the speaker.

Our Short-Wave Adapter

I built the short-wave adapter described in the May, 1931, issue of RADEX. It does not oscillate well. Is the choke coil connected properly? It seems to me different from the usual method. I am using 23 plate condensers in the circuit. Are they too large?

The plate of the -21 detector tube must connect directly to the tickler coil. The choke coil is incorrectly



Out of the eerie pages of Sax Rohmer's novels, the sinister Dr. Fu Manchu comes to life in the person of John C. Daly, CBS Mondays at 8:30 p.m. EST

shown in this path. It must be separate, and is connected to the plate and then to the plate prong of the adapter plug which is to be inserted in place of the -27 detector tube in the broadcast receiver.

You have too much capacity in the variable condensers, and especially the one used to control regeneration between the tickler and the cathode of the -27 tube. Remove all plates on the rotating part except 5 from the far end. The 23 plates now in use are far too many. This change permits of easier motion and less noise, as well as the clearing up of the voice signals.

In case you fail to get good oscillation try reversing the two wires leading to the two ends of the tickler coil. Very often failure of oscillation is due to reversal of tickler coils. If the set then persists in too much oscillation remove a few turns of wire from the tickler coil, or remove still another one of the rotor plates of the oscillation condenser.

The Tubes in Majestic 20
I have a Majestic model 20 chassis

receiver, but it seems to be impossible to locate the tubes in the set from the wiring diagram, because there are several tubes of the same type in the set. Can you describe and locate the different tubes in this set?

Stand at the back of the receiver with the chassis in front of you but with the dials and front away from you. The type -27 tube in the upper left-hand corner is the oscillator: the -51 tube in the lower left-hand corner is the intermediate frequency tube; the three tubes in a row extending · across the center in a line away from you are: The -27 farthest away is the second detector; the middle -51 tube is the first detector; and the -51 tube nearest to you is the radio frequency. At the right are the two -45 power amplifier push-pull audio tubes, and in the lower right-hand corner is the -80 rectifier.

Freak Reception

At times my set has brought in some exceptional distance. Is it possible that the A and B battery eliminators in use have made a superheterodyne of my set at these times?

The use of A and B eliminators cannot in any way make a superheterodyne receiver of your set if it is some other kind of circuit. The superheterodyne circuit is one that is of special design and cannot be created by outside influences. It may be that changes in voltage from the eliminators caused higher filament and plate currents and potentials at times because of some defective operation, and thus caused the tubes in the set to become more sensitive and powerful for a short interval. This, and other freak situations, are not uncommon in radio reception, and, when they do occur, tend to change the operating characteristics of the receiver without damaging the tubes and wiring.

Beat Notes and Inside Aerials

At times my receiver gives out throbbing and wavering signals. Why is this? I use an inside aerial and some radio men have told me that this is hard on my radio. What do you think about it, and will it cause the quivering and fading just men-

The wavering and throbbing-beating-of incoming signals, which often cause the radio speaker to sound as if he were covering his mouth with his hand at rapid intervals while talking, is due to a "beat" phenomenon. When two stations are being received on almost, or, in fact, the identical wave length, they interfere and cause beats. For instance, a station on 1460 kilocycles and another on 1461 kilocycles cause a frequency difference of 1 kilocycle or a beat whistle of 1,000 cycles per second. This carrier wave, modulated at a lower frequency, will therefore throb at a lower frequency, often about two or three beats a second. Music or voice will rise and fall in volume at a rapid rate and appear meaningless. If all stations operated exactly on their assigned frequencies, with 10 kilocycles separation, beats of this character would be almost unknown, provided the radio set was reasonably selective. Then, too, harmonics and other interferences, cause throbbing, wavering reception of signals and interfering whistles and hums.

The inside aerial cannot in any way be hard on your radio set. It is likely that your advisers intended to convey the belief that an inside aerial, because of its small pick-up capacity, delivered a comparatively weak signal and therefore made necessary the advancing of the volume control to obtain signals equal in strength to those received by larger, outdoor aerials with less advance of the volume control and, consequently, less power consumption in the audio stages.

More DX Tips

The Transcontinental Radio DX Club advises us they have arranged with LV1, San Juan, Argentina, for a special DX program on 1430 kcs. with 500 watts, Wednesday morning, February 1 from 3:00 to 5:00 a. m.

They are arranging a "Missouri on the Air" for the morning of February 4, "Rocky Mountain on the Air" for the morning of the 11th, and "New York on the Air" for the mornings of the 18th and 25th.

FROM OVER THE PACIFIC

• • • On the B. C. Band

OST of our reports of the reception of Trans-Pacific stations come from our West Coast readers, but this month we are starting off with a couple from the Atlantic side.

"Australian reception has been remarkable here from September 6th to November 5th," comments Clyde W. Ham, 1002 So. Lafayette St., Shelby, N. C. "I have heard the "I have heard the following stations in that time: 2UW, 4BH, 4TO, 2HD, 4BC, 5CK, 4QG, 2CO, all are new to me. I also heard a very weak station in New Zealand, on 820 kcys., October 8th. They were broadcasting a wrestling match. I have written to both 3ZE and 3ZR. listed on 820 kcys. My tenth verification from Australia was 4BC, and it was the nicest letter I have had the pleasure of receiving from any station. I would be very glad if you would print it for me to show your readers how much a station likes to get good reports. Here is the letter from 4BC:

"Dear Sir:

We have your favor of the 6th of September reporting successful reception of the old time dance programme broadcast by this station on September 6th on 1145 k. c., the time mentioned, and relayed from the Trocadero Dansant. South Brisbane.

As this station only uses 600 watts aerial dissipation, your reception was remarkably creditable, particularly considering the seasons prevailing, and we congratulate you on your

excellent reception.

Further adjustments have been made to our transmitter within the course of the last few weeks, and we would be glad to have further reports from you on receipt of this letter, if you pick up our transmissions again, and any comparisons you would care to make with the reception of September 6th would be useful to us.

us. Many thanks for the dime, which we have handed to the manager of the Trocadero Dansant and he has framed it⊕as a memento of the reception of the music from the dance hall so many thousands of miles away. Yours faithfully, Chandlers Broadcasting Service, per R. F. Roberts, Manager.'

"I note with interest," comments Wm. E. Johnson, Vinalhaven, Maine, "that quite a few of the listeners are picking up Australia, so I wish to state that on the mornings of November 14th and 15th I received my first Aussie. This was 2BL, and since then I have heard a few others but not good enough to warrant trying for a verification. The past three nights I have been getting 1BC between 6 and 7 P. M. I was surprised with their volume. These are my first real good catches, and other catches this winter are KJBS, KGFJ, KWSC and CKCK. For the benefit of other DXers who may be interested, I use a Radiola 20 with four tubes, using headphones and I use but one 45 v. B-battery. When regeneration doesn't handle well on weak signals I cut the plate voltage on my detector to 22 ½ v. My antenna is 150 feet of No. 14 bare copper wire between poles 40 feet high and about 60 feet more of lead-in.



Bernardine Flynn and Arthur Van Harvey in "Vic and Sade." Every weekday at 9:30 a.m.
EST on the NBC-WJZ network

My ground is copper buried four feet in the soil."

"This winter up to December 16th I have WKAQ, KGU, 5CK, 3AR, 4QG, 2UE, 4RK, 2BL, and 4BC all verified," writes Jimmy Blake, Box 868, Kenora, Ont., "2YA and 4BC come in best. One morning I had 2YA coming in with almost as good volume as WGN; in fact, I thought it really was WGN testing."

"Here is a real DX tip," suggests Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "VQ7LO broadcasts a special DX program the first Tuesday of each month on 750 kcys., from 3 to 4 a. m. EST. That would be broad daylight there, so I doubt if it will come in. Am very pleased with my RADEX map of the world and time converter. Sure is a great invention. Seems to me that RADEX gets better every issue. Wish there were 100 pages. That time on the air is one of the handiest features of all and certainly helpful."

And now back to the West Coast.

OK California!

"This season so far I have received the following New Zealanders," reports Don H. Townsend, 1421 Arch "1YA, 2YA, St., Berkeley, Calif. 3YA, 4YA, 2ZD. I had already verified 2YA and I have written the other four and expect verifications back any day now. I received, about three weeks ago, a verification from JOLK so I now have the following Japanese verified: JOAK, JOCK, JOFK, JOGK, JOIK, JOPK, and, last but not least, JOLK. I have written JOHK, JOBK, and JFAK several different times, but have never had even a reply to any of my letters, but am still trying."

"I have been DXing since December, 1930, but this is the first time I have ever written to RADEX," admits Frank Macedo, 1011 Burdette Ave., Victoria, B. C. "I use a two-tube battery set but I have gathered quite a few veries with it. Some of my best include HIX, HHK, 1BC, 2YA, JOAK, JOCK, JOFK, JOIK, JOLK, JOPK and XGOA, China. Many of your readers may be receiv-

ing this new 75,000 watt Chinese in Nanking and not know it because of similarity to the Japs. They sent me a very nice verification." Mr. Macedo sends us the daily schedule of XGOA. It is typewritten in English and shows the station on the air from 8:00 a. m. to 10:00 p. m., Nanking time. Nanking is in Zone 42 on the RADEX Time Converter. The daily features are varied, including news, foreign and Chinese music, code practice, talks on radio, the home, electricity, agriculture, language, stories for children, talks in English and Japanese-a very well balanced daily program. The station operates on 440 meters (about 680 kcs.).

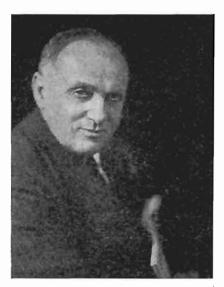
"I have received six Japanese stations in one morning," states Louie Sani, 307 Eleventh St., Sacramento, Calif., "JOCK, JONK, JOGK, JOIK, JOAK, and JOHK, all verified. I also have KGU, 2YA, CMK. I hear Casper, Wyoming, every night. I now have a total of 236 on my 8-tube

Earl radio."

That Filipino

And here are some reports on the "K" station in the Far East:

"As to KZRM, Manila," writes Fred Pheasey, Inverness P. O., Skeena River, B. C., Canada., "this station is hard to get and static is usually bad even when Australia and Japan are as clear as locals. Have picked him up about 2:30 a. m. PST, playing recordings between announcements in favor of local advertisers. For the benefit of eastern listeners who have not had much success with trans-Pacific stations, I would suggest the following as easiest to pick up almost any night after about 1:00 A. M. PST, when most of the b. c. stations on this side have signed off for the night: VK4QG, Brisbane, Australia, 760 kcys.; VK5CL, Adelaide, Australia, 730 kcys.; ZL2YA, Wellington, N. Z., 720 kcys.; 5CK, Crystal Brook, Australia, 635 kcys.; JOAK, Tokyo, Japan, 870 kcys.: JOFK, Hiroshima, Japan, 850 kcys.; JOIK, Sopporo, Japan, 830 kcys.; JOCK, Nagoya, Japan, 810 kcys.



Roxy (S. L. Rothafel) Radio Impresario and Showman Extraordinary, in full charge of "Radio City" broadcasts with his "gang" every Sunday at 12:15 p.m. EST over NBC-WJZ

Many others can be received, but do not appear to be such consistently good performers, at least in my experience.

"May I commend your very fair presentation of the case for real DX? Anyone who has spent much time at this knows that the power rating of a station is of little consequence compared with the influence of freak weather conditions and a location and installation favorable to reception.

"Seattle, Portland, Tacoma, Los Angeles and San Francisco are practically on the same air-line from this spot, yet note the following peculiarities in reception. I have held Seattle stations all day only to lose them completely after sundown, when reception from California is strong. I have received KOMO, Seattle, when KJR in the same city faded out completely, and vice versa. Some days Seattle is strong and Portland and Tacoma, both near by, are quite inaudible, and again vice versa. one dare say what is or is not possible in radio reception, at least, no

one but a novice without experience."

"Just to let you know that on Saturday morning, November 19th, I received KZRM, Manila, P. I.," says Raymond Corbett, 619 12th St., Sacramento, Calif. "The time was 3:58 A. M. Reception was clear, but not very loud. In my opinion anything is possible in radio, and I thoroughly disagree with any DXer who believes the contrary."

"In regard to KZRM," postcards Homer G. Gosney, 431 S. Elena Ave., Redondo Beach, Calif., "I have their verification in the form of a blue card under date of June 2, 1930, which is receiving date here. I logged this station in May, but unfortunately I have destroyed the date. Mr. A. E. Armstrong, Glendale, Calif., and myself played KZRM the same morning and compared notes. Why bother with them if they are not interested to hear from the American fans?"

The Radio Map of North America is now reduced to 15 cents.



Roy Atwell is the fellow who gets his tongue all twisted up in the "Bath Club" Sundays at 9:00 p.m. EST on CBS-WABC. If he wanted to say "Show this lady to a seat," it would come out "Sew this lady to a sheet"

Among the SHORT WAVE COILS

• • • DXing in H. F.

ANY plaintive calls for help come to us from shortwavers who are unable to bring in foreign stations. Too many people have been led to believe that if they will only buy a s. w. set, foreign stations will come tumbling in at a turn of the dial. Successful reception of the signals on the higher frequencies is an entirely different problem from b. c. tuning. The dials require most skillful manipulation and everything about the receiver must be in the best possible condition. An aerial which may be quite satisfactory for b. c. logging may be entirely inefficient in the short waves particularly with the distant foreign stations. In this issue we are publishing an article on s. w. antennas which we hope will be helpful.

Big changes have been made in the British s. w. system. "G5SW, Chelmsford, the Experimental station of the British Broadcasting Corporation" is a call that will never be heard again. On Monday, December 19th, the new Empire s. w. station at Daventry, England, transmitted the first program of the Empire broadcasting service, replacing the experimental service given by G5SW for over five years.

Two powerful s. w. stations have been erected by the BBC at Daventry which will use a complicated system of directional aerials. The Empire has been divided into five zones and different programs will be ar-These proranged for each zone. grams will take the air over the particular antenna designed to reach the zone for which it is intended. According to World-Radio, the publication of the BBC, eight different wavelengths will be used, each of which will use a special call as follows: GSA 49.6 m. (6045 kcs.); GSB 31.5 m. (9519 kcs.); GSC 31.3 m. (9570 kcs.); GSD 25.5 m. (11760 kcs.); GSE 25.3 m. (11852 kcs.); GSF 19.81 m. (15.140 kcs.); GSG 16.9 m. (17740 kcs.); and GSH 13.97 m. (21465 kcs.) The five zones are Australia, India, South Africa, West Africa and Canada. The times of broadcast are as yet purely tentative.

"I received your very thorough description of my set and your instructions for improving the short-wave adapter," remarks E. L. Merten, 315 E. Fountain St., Colorado Springs, Colo., "and I want to thank you for the trouble that you went to and to tell you how much I appreciate it. I have connected the Kennedy, as you said, and it works great! I wound a coil, as you said, for the 25 meter band, and at 2:00 p. m. on Thanksgiving Day I picked up W8XK on 25.25 meters. I am afraid that with only the last two stages of a



Tom Howard, the droll wise boob and his partner, George Shelton, who's wiser still. On the CBS Tuesdays and Fridays, 9 p.m. EST

Stewart-Warner TRF, it isn't enough amplification. I heard an amateur in Providence, Bowmanville, Montreal, and VE9CS, 100 watts, in Vancouver. Lots of amateurs, police, of course, one side of a phone to the Leviathan, and KEJ relaying to KGU. On the broadcast band, I have much better luck, for the Stewart-Warner 801 is pretty sensitive, for an old set. have heard about 525 stations, 150 of these 100 watts or less, and 25 of these 50 watts or less. The best. I guess, is WEDH, Erie, when they used 30 watts. I have heard all states except Delaware, Vermont, Maine and Rhode Island, and all the chan-I have 40 in Canada, 24 in Mexico, and 9 in Cuba. I have letters of confirmation from RUS, WKAQ and VAS. Have heard 9 in Japan, and several in Australia, with letters from 4QG and JOAK."

The New Panaman

"While listening via the short waves this morning, Saturday, December 3rd," comments E. A. Wright, 10 Esther St., Brantford, Ont., "I heard a station, the call letters of which I believe were RXT. This station was heard at approximately 11:15 A. M. EST and they announced a great many times that the station was RXT testing with Miami. gave their frequency as 14,485 keys. Could you please advise me if this station is listed and where I could write for verification? The radio I have is a Marconi 11-tube Model SW-27, and can certainly bring in the stations. Some of the short-wave stations I have received are as follows: VE9JR, VE9DR, G5SW, FYA, 12RO, GBW, GBS, WEL-WEJ, KKZ, GBB, GBC, W3XAL, W3XAU, W9XF and a large number of other American stations. We have listened to a great many 'hams' and enjoy hearing them as much as the regular broadcasts."

"In your December issue, Charles Horton reported hearing EAQ and WCCO with two sets on the same aerial," writes Carleton Lord, 137 N. Highland Ave., Akron, Ohio. "I think

I can go him one better by hearing WEAF and VK2ME on the same set at the same time. Sound ridiculous? The explanation is simple. My set is a Silver-Marshall 726-SW and has two tuning controls, one for short waves and the other for the broadcast band. In order to listen to the short-wave end, it is necessary to set the b. c. dial at approximately 650 kcys. and do the tuning with the other dial. If enough power is used and the b. c. dial is set to the exact frequency of some b. c. station, that station will come through in the background. Thus, with the b. c. dial set at 660 kcvs. and VK2ME tuned in, the two stations can be heard simultaneously on one receiver using one aerial."

"Have just recently purchased a Marconi SW-33 receiver," advises M. L. Griffith, Deaf School, Winnipeg, Man. "My first attempt at short waves and have had good results from the States and Canada, but have not been able to get foreigns as yet. On the long wave could not be better. Brings in 100-watters from 600 to 800 miles. Am using three aerials, 60 feet, 90 feet, and 110 feet. My 110-foot is 70 feet from the ground and is a straight single wire and is by far the best."

Grounds to the River

"I have a Pilot all-wave set, tubes, and am wondering if such a set is powerful enough to receive foreign reception," inquires Ralph H. Heiss, Manitowoc, Wis. "This being my first real attempt to do some DXing, I would like to hear from someone who has a set similar to mine and as to their luck on short-wave The set is new and I reception. have a very good ground which is right in a river, which is supposed to be very good. I have two aerials running at right angles or nearly so, each about fifty feet in length, but separated by a switch so that I can use either aerial alone. Am using this set on a boat which is docked in the downtown district. Would the location have much to do with the reception?"

"Just another line in appreciation of your magazine and the short-wave end of it," states Francis Orcutt. 127 South Ave., Penn Yan, N. Y. "I have DXed on the b. c. b. for three years, totaling 575 stations, all over the U. S., Mexico, Canada, Cuba, Porto Rico and Salvador and Dominica, and every state in the Union except that old sticker, Wyoming. This new season I have not done much on the old receiver due to a new attraction. For about a year I have been licensed with the call W8GWT. I wish you would publish my interest in short waves, and the fact that I have an amateur station. I will be glad to correspond with any interested fan either short or broadcast waves."

From Prince Edward Island

"Reception is good here on short waves," writes Anthony Arsenault, 9 Spring St., Summerside, P. E. I. "On a 2-tube home-made receiver using 230 tubes, here's a list of the farthest 20 and 75 meter amateur phones I heard: W4TM, W9ARK, W4ACY, W5ABO, W6CNE, W9CJJ, W9JI, W4MK, W9EGU, W9FKE, W4IB. W4AAD, W4WM, W4MU, W9CSH, W9GFQ, W9GXI, W4ZF, W9EKU, W9DHK, W4WL, W8DSO, W8UD, W9HAV, W4RS, W5ZA, W4LU. W4TR. I heard about 225 in all, but this is a list of the farthest ones. Here's a list of the six best amaphones Ι heard: W1BIC. W2DKA, W3IS, W1BES. W1AUK."

"Received a Canadian in the 160meter amateur band broadcasting an organ program from 10:45 to 11 p. m. EST, and an orchestra from Toronto afterwards," reports Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "Faded badly and is weak. They are on the Central Canada network, but I have not yet heard their call. Picked them up twice lately on Monday night."

Many inquiries have been received in regard to the short-wave converter built by Edward C. Houlgate as de-

(Continued on page 33)

Substituting the New Tubes

≺HE flood of new radio tubes has raised a question that seems highly controversial to many radio servicemen. Readers of RA-DEX, as well as dealers and radio engineers, wonder just how far they may go toward the substitution of tubes such as 46s, 56s, 57s, 58s and 82s for -45s, -27s, -24As, -35s and -80s. There are many factors involved, and it is obvious that we cannot attempt to go into the special requirements of hundreds of models of receivers in order to advise what tubes can or cannot be substituted for older types.

Generally speaking, however, any of the new tubes can be used to replace older ones, except that adapters are necessary for all but the 56 type. And, of course, all the new types consume less current than the older, which means increased economy of operation. It is practicable, and usually profitable, to utilize the 56 in place of the -27 in most cases except oscillators. Even then this tube will perform satisfactorily, but there are times when, due to its characteristics, there will arise an unbalancing of some sets which will throw them into oscillation. The 56 is a good grid-bias second detector and audio amplifier, especially in resistance-coupled stages. In such circuits it is recommended as a substitute for the -27. However, it may be necessary in nearly every case to change the cathode bias resistor to one having a resistance of 3,000 ohms.

In general, it is not recommended that other new types be substituted in receivers designed for older tubes. The electrical characteristics of the 57s and 58s are somewhat different from those of -24As and -35s. However, substitutions may be made by means of adapters, but it will be too much to expect the improved results which the superiority of the tubes might lead one to believe can be at-

tained in old receivers built for older

types of tubes.

To obtain the advantages of the new tube designs, radio receivers must be especially designed for the tube characteristics. It is then that super-results are obtained. But in t.r.f. circuits the 57s and 58s can be substituted if proper adapters are used, and the results will be equal to or slightly better than -24As and -35s. In some superheterodynes the 57 is best utilized as a radio frequency amplifier or a biased second detector. It is not recommended in any other positions. It cannot be used as a first detector. The type 58 can be substituted in radio frequency stages, intermediate stages, and also as a first detector. Neither the 57 nor 58 must be substituted in oscillator. automatic volume control, or audio amplifier sockets. It is seldom that 57s or 58s can be substituted for -24As or 35s, for the special adapter adds to the total height of the tubes and prevents their clearing the overhead shielding.

In the case of substitution of the 46 for the -45 there is no advantage in old receivers. The main purpose of the 46, in all class A power output circuits, lies in its flexibility of design, which permits a receiver to be designed with the least number of different types of tubes. The change is not necessary or recommended. Same applies to the substitution of the 82 rectifier tube for the type -80.

Too Much VOLUME

E are often asked how one can get more volume but here is an inquiry as to how to get less! "Local stations come in altogether too loud even without an aerial," says George W. Otto, 447 Fourth Street, Beaver, Pa. "With an aerial the volume is so great that when I was in a sanatarium recently. I used one of your headphone adapters and connected up 75 sets of phones to it without any trouble." Mr. Otto does not say what receiver he uses but as the "local" stations of which he speaks must be those in Pittsburgh, 25 miles away, his set certainly has some pick-up. The only possible remedy for reducing the volume of local stations seems to lie in "de-tuning," that is turning the dial a mark or two off the correct read-The fault with Mr. Otto's set evidently is lack of proper shielding. A set should be shielded so perfectly that with aerial and ground disconnected even powerful local stations should give either not a peep or the faintest whisper. When a receiver brings stations in without an aerial it is evidence of a fault and not a virtue. If it will bring in signals that happen to be wanted, it will also bring those in that are not wanted.



Buck Rogers and Wilma
Deering watch the hypnotelevisor at work on the Mongolian Princess. A scene from
"Buck Rogers in the Year
4322," a funtastic, imaginative tale a la Jules Verne,
on the Columbia duily except
Saturday and Sunday at 7:15
p.m. EST

Turning the Illuminated DIAL

With the Radexers

"I PURCHASED a RADEX the other night and what is this DXing there is so much about in the log?" inquires a new friend, R. A. Mabe, Box 283, Ozark, Mo. "Please explain what it is all about. The fellows' records seem so interesting."

If Mr. Mabe and others for whom his inquiry speaks, will get the October issue of this magazine and read "Radio DX as a Hobby" and the November article on "Rules and Regulations of DX," they will have the whole story. A full description of the possibilities of radio as explained at length in these two articles, cannot be repeated here. But if they want to get the fullest enjoyment from their radio sets, they should read these two stories and then join our Radexers.

"I never knew DXing was so much

fun until I started buying RADEX," says James Reese, 2037 Seventh Ave., New York City. "DXing is fun, interesting and enjoyable. I have been DXing since October 12th and have logged 140 stations. I have a 5-tube battery set, using B 135 v. and Abattery. I use two speakers. The name of this set is W.K.O.W., King of Waves. I have a good antenna. It is shaped like a zeppelin, 50 feet long and 50 feet high, using steam pipe for a ground."

"I am ardent DX fan," confesses Alfredo Rozzundo, R. F. D. 1, Fayette City, Pa. "With my Apex 9-tube set I have received 430 stations in every state except Wyoming. I have never reached Honolulu, Porto Rico and Santo Domingo. Will someone tell me the best time to try for them?"

"I am only a beginner at DXing, having only started in October,"

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writes Dudley Clarke, 1962 Tupper St., Montreal, Que. "A friend of mine got me interested and I am now a confirmed DXer. My total is only 197, but I hope to increase it steadily. Have logged 63 new stations since October 24th. I operate an 8-tube Bosch Model 58 CB, and I am planning to purchase a Stewart-Warner SW converter. I'd be pleased to hear from any DXer who operates such a set and converter."

"Have been a DX hound for ten years," says Ross Huffman, 901 Main St. East, Hamilton, Ont., "Use a Philco 9-tube with Cameron loop antenna. Since October first have logged 223 stations, and, thanks to your DX calendar, CKX, Brandon, and CHGS, a 100-watter in Summerside, P. E. I. Would like to hear of DX program from Newfoundland."

"I have been pulling them in since broadcasting got fairly started," writes Lt. Donald M. Gildersleeve, 2518 Webb Ave., New York City. "WDY, Roselle Park, N. J.; WWZ, Wanamaker's, New York City; WDT, Ship Owners' Radio Service, Inc.; WNO, Jersey Journal, Jersey City, etc. In 1926 I threw away a log of nearly 400 stations. Began, just over a year ago, a new log that is now in process of rearrangement (cross-index) and which carries some 300 plus stations, with about 90 of 100 watts power or less."

From French Canada

"For a year and a half I have been very much interested in your RA-DEX," comments F. Gaston Fortier, C.S.E., 80 de Salaberry Ave., Quebec, Que. "I have it reserved every month at my newspaper dealer. I read it all over. The experiences of DXers mentioned therein are always more and more interesting. I must tell you the truth in saying that RA-DEX is the most interesting Radio Booklet I have found on our Canadian market. I had it adopted by two friends who now buy it every month.

"I am not an expert in any way, but I like very much to tune-in distant stations as far as my receiver can take. After using a Radiola, Brunswick, Fada, and Rogers, I now have secured, since the end of September last, a 1933 Model 30-A Stromberg-Carlson 10-tube receiving set. The results with this set are wonderful considering our locality here. Since September 30th last, up to the 12th of December, inclusively, my list of broadcasting stations tuned-in total 310. I have already 8 Canadian provinces out of 9; 42 American states of 48; 3 stations from District of Columbia; one from Porto Rico.

"The weather conditions are not too bad here, but still it takes a strong set to reach very distant stations. This is why I find that U.S. recordmen are very much better situated in U.S. for the purpose of recording a great number of stations, considering the fact that, only in U. S., there are approximately 675 stations broadcasting. Do you think that my presumption is correct? Since four or five months I have taken the habit of collecting your RADEX issues instead of giving them away. I like to refer to them by and I hope they will always be as interesting as they are since the time I started to read them regularly."

Being an artist of no mean ability, Chas. L. Morgan, 800 East 179th St., New York City, draws his own individual verification stamps, each one of different design. He sends these to the station and asks them to sign them. Naturally this gives him a stamp book of unusual interest but we fear not many Radexers would be able to draw such attractive verifications. We would like to reproduce two or three of the designs but as they are in colors we cannot do so. Mr. Morgan has logged every state and the provinces from Prince Edward Island to British Columbia, Alaska, Hawaii and several countries in Central and South Amer-He still uses an RCA 5-tube battery Radiola.

Early Morning DX "I rented an old table type Philco

7-tube superhet a week ago," comments Yeoman H. Condict, 130 N. Center College St., Yellow Springs, Ohio. "Am not in college this division so have plenty of time on my hands. Since a week ago last Saturday, I've logged 211 stations. Yesterday afternoon, logged Canton, N. Y. and Camden, N. J., new stations, and at 5 o'clock KSOO on Richmond's wave. Early this morning KGER, Long Beach, Calif., was very loud. I also received new KFAC, KECA, KFVD and KGFJ, of Los Angeles, the latter being the 100-watt perpetual motion station. As 6 A. M. approached I decided to get the sunrise programs. I listened for WABI, Bangor, on 1200 kcys., but heard WIBX, Utica, instead. Up to 7:45 Texas was coming in well, a sunrise devotional service, from WACO and KFPL, a 100-watter of Dublin, Texas. I'll never hear that again probably. I listened on 635 keys, for Australia in accordance with the letter from the lady in Mississippi, but not a peep, although KGFI, Los Angeles, 100 watts, was swell. However, I heard the faintest of murmurs on 650 kcys., but could not identify. My suggestion to DXers is that they go to bed early once in a while and get up at 5:45 to catch the sunrise programs. You hear 100-watters such as WSIX, WIBX, and KFPL, which may be hard to get otherwise."

Wants Station Honor Roll

"I now have a total log of 391 stations, of which 268 are verified," comments Rexford Newcomb, Jr., 605 "I have Nevada St., Urbana, Ill. logged every station in the United States on 41 of the 96 channels, all on a Trav-ler midget with a 4-foot copper wire as both ground and aerial. This fall, I logged and have since verified KGGM, Albuquerque, at 7 P. M. WILL broadcasts an hour of dance music from Bradley Hall each Saturday evening from 11 P. M. to midnight and keeps going until 2 A. M. the first Saturday night of each month. KGHI ruins DX on the 1200 kcy. channel for me every morning. Wish they would shut down at midnight for about a month and give me a chance on that channel for a while. I think we ought to have an honor roll for such stations as WNBH. WAAT, KFWI, WGBI, KOMO and others that send very prompt and courteous replies to requests for veri-Since I started DXing I fication. have written 282 letters to stations. including follow-up letters when necessary, and I've received positive verificataions from 268 of them, so I think my postage is rather well spent. Can you name several short-wave converters suitable to operate with the type of set I use?"

His Greatest Winter

"This is the greatest winter I have ever experienced for DX work," says Wm. Ellis, Box 13, Hughson, Calif. "Any night (or rather evening) after 4:30 P. M. PST, I am able to listen to WBT, Charlotte, N. C., WGN, WOWO, WCAU, KMOX, WLW, WTAM, (with KGDM, Stockton, a local only 10 keys, away). After dusk and when it gets dark, well, the sky is the limit. WABC, WJZ, WENR, WEAF, etc., are like locals. I have heard WCCO announced as early as 3:45 P. M. PST. and WCCO are two favorite stations in our home. Several times I have heard a foreign station broadcasting between WTAM and WTIC. I wonder who he is? WTAM interferes too much to understand him clearly. It most certainly sounds like Spanish speaking. Perhaps some southern DXer may know of such a station. This cold weather brings in the JO's in Japan like locals. Any morning after 2:00 PST, eight to twelve of the Japs may be heard. I am going to start to verify them next week when I again listen to them. I have not considered verifying them before. but perhaps ten or eleven JOverifications will look good."

Time Converter Helps

"For quick reference for time in other zones," remarks H. S. Trumble, Rt. 1, Box 147, Port Arthur, Texas, "the RADEX time converter dial is

certainly worth the money for radio and DX fans, and RADEX is absolutely indispensible to those who want to get the most out of radio. I heartily agree with Mr. A. Curror of Schenectady, N. Y., in that DX fans should mention make of receiver when writing in their DX catches. I am using a Philco 11-tube '31 model and have logged 257 stations since February 1, 1931. The Gulf Coast climate is not very favorable for DX reception. Only when a cold wave is on can we expect to have staticfree reception. I am using at present a 4-wire bare copper, single strand, large gauge wire, wires spaced 16 inches apart on spreaders and 92 feet between spreaders, 34 feet high T-type antenna, with an Ollie Ross ground. My prize catch so far has been CHLS, 730 kcys., 50 watts, Vancouver, B. C., 2000 air miles from Port Arthur, Texas, on local switch, and it came in strong."

It Brought His Aussies

"I have secured the last two copies of your RADEX and find it the most complete and up-to-date publication of its kind," comments Paul F. Klingman, 88 Forsyth St. S. W., Atlanta, "In fact, I do not intend to be without it hereafter. The information is indeed helpful and was responsible for my tuning in one of the Australians two nights in succession, December 5th and 6th, the station at Northampton, call letters of which I do not have before me just now. While I have been a DXer for about nine years, I have not gone in for this very much lately until inspired by your first-hand information. During the past few weeks, however, I have not had my share of sleep, tuning for the weak stations and those of long distance. My best catch, along with the Australian, is 10-BQ, a 15-watter at Brantford, Ont. My log includes numerous west coast stations, some 100-watters, stations in Canada, Mexico, Cuba and Porto Rico."

Likes His "Gloritone"

"I purchased my radio, a 5-tube

midget set U. S. Gloritone made by the United States Radio & Television Co., on October 15th and since then have a log of 150 stations with only three nights of late dialing," reports Ruth E. Kroeger, 94 Burton Ave., Akron, Ohio. "My set is not an allwave, but above 1500 on the dial I can go to about 1900. In this space I have police calls of Chicago, Cincinnati, Pittsburgh, St. Louis, Michigan police at East Lansing, and Massachusetts police. I also had W1XAU, the Boston Television station, broadcasting a program. I would like to hear from others who are using a U. S. Gloritone and what success they have had in distant reception. Mvmost distant stations are CMAF. Havana, 500 watts, and CHRC, Quebec, 100 watts, several Mexican and about ten in California and the West Coast."

"It is a regular occurrence to receive CMC, Havana, each night, with strong volume, using a 15-foot No. 14 wire attached to antenna post and no ground," states Edwin F. Dreher, Box 26, La Mesa, Calif. "This area is so sensitive to radio impulses that elaborate aerials are a handicap. WJZ may be received at 4 P. M. as a local. WBAL's call invariably follows WJZ's. JONK, Nagano, Japan, 500 watts, is a good catch, using a 90-foot aerial. Tokyo (JOAK) seems much stronger on its new 590 kc. frequency than formerly at 870 kcys. XET, Monterrey, is also strong. With XER off the air there is a hairbreadth's difference between channel of CKAC, Montreal, and Havana. CMK, Otherwise XER blankets a good many stations. The set used is an Edison C-2."

Ground Aerial Best

"I wish to answer Archie Ferrie and Stewart Stowell," says Albert C. Port, 37 Elm St., Salisbury, Md. "I've picked up W1XO and WEY, also WMP, WRDS and WBAK, police. Then WIEH, a portable transmitter which I've picked up several times, once on the Hudson River in New York, and another was at the Polo

Grounds. Then I also have 30 amateurs and 3 television stations on my log, all on a Crosley b. c. set, the Playboy. DXing since June and all told have 257 on my log. My best catch is KGHI on 1200, a 100-watter, at Little Rock, Ark. In this section an aerial is an encumbrance and a ground works best on aerial post."

"Since writing you last, I have increased my log from 356 to 414," writes Howard R. Garrett, 171 Hillsdale Ave., East, Toronto, Ont. "Some of my best catches are 4QG, YV1BC, WKAQ, KJBS, and KWG. In answer to Mr. Rosenberger's query in November RADEX, let me say that the call he heard was CNRO, Ottawa. CNRO is the key station for a number of chain programs that CFRB broadcasts. I have only Vermont and Wyoming left to log in the U.S. and would appreciate any tips on them. Also would some fan be good enough to tell me when WNBZ is broadcast-I am interested in forming a DX club in Northeastern U. S. and Canada and wish some others would communicate with me with this object in view."

Only One Refusal

"I use an RCA 42 and in the past two years have received 422 stations with about 400 verified to date," writes Kenneth Vetter, 964 Waukegan Road, Deerfield, Ill. "Including all those which have replied I have had only one refusal to verify, which I believe is fairly good. My DX this vear does not at all compare with last. I have had much trouble with manmade static caused by an electrical appliance of some neighbor. Among my best catches this season have been CKWX, 10-BI, KGGM, WLEY, KFSG, KTFI, CFCF and CFAC. These are not impressive and the twenty or so other are less so."

"With the help of your magazine I expect to increase my log of 225 radio stations to a greater number," promises Robert Osborne, Stellarton, N. S., Canada. "My best so far have been WKAQ, KFVD (250 watts), XEW, WCAZ (50 watts), CMCD, WALR, WJW, XER, CMX."

Long Antenna Helps

"The threat I made in my last letter to get 150 new stations this season is starting well," admits T. J. Johnson, Bowlegs, Okla. "I now have 31 new ones, including two more in Australia, and YV1BC which everyone else also seems to get. My new 200foot antenna is a great help on the distant stations. Your DX calendar is getting better every month. Station KGFF, 1420 keys., Shawnee, Okla., will broadcast DX tips including Newark News Club tips, every Thursday morning on their DX program, from 1:30 to 3:30 a.m. CST; the tips will probably go out about 2 a. m."

Trying for Europe

"I hear the Japs, Aussies, and Newzies once in a while," reports Meyer Tuchinsky, 3436 Filbert St., Philadelphia, Pa., "but can't get them as regularly as some people can, probably due to location. Have only one European, and haven't been lucky enough to hit another yet; still trying, though, as I have figured that there is one that should come in, since he is on a wave that is absolutely clear in North America after 1:30 a. m. EST. Station is in Stockholm, on 689 kcys., with 55 KW (input?)."

"I have logged over 300 stations on the b.c. band in the last three months," reports Steve Nemeth, 5326 Turney Road, Garfield Heights, Ohio. "My best catch is KROW, at 7 a. m. EST, verified. Plenty of 100-watters with KLCN using 7½ watts, and 10 BQ, 15 watts. Have about twenty west coast stations nearly all verified. Have tuned in a station on 760 kcys. that does not give any call letters. Have had it several times with the same result. I am using a Grebe 5-tube set now."

Good for a Midget

Six Radexers in La Grange, Ill., are in friendly competition with each other and each of them gets a big kick out of pulling in some station the others haven't got. One of them, Bob Wais, 51 N. Brainard Street, tells us he has a ten dollar midget with only

four tubes on which he has received 240 stations in less than a year. Among his scalps are the little tenner, WHBC in Canton, Ohio, CHML, 10BQ and KGFK with 50 watts in Moorhead, Minn.

"Wish to report an unusual DX daylight reception," postcards George D. Kitzinger, Piedmont Hotel, Atlanta, Ga. "On Thursday, November 3rd, at 4:20 p. m., CST, I picked up CKAC, Montreal. This is unusual because WSB, our local station, is on 740 kcys. and I got Canada on 730 kcys. with WSB going full blast. I stayed with CKAC until 5 o'clock. I'm using a Zenette No. 230 8-tube set, located in my room, with plenty of motors, streetcars, electric signs, etc., all around me."

"I recently purchased a new Lafayette ten-tube super," writes William E. May, 14 Burnett Place, Nutley, N. J. "I am using an aerial about 150 feet long and a cold-water pipe ground. I have no trouble in getting distance, and have added 46 new stations to my log since I bought the set less than a month ago, making my total 426. These include three 100-watters on the coast, a 25-watter in Saskatchewan, and about 12 other higher powered stations on the coast."

Some Prize Catches

"My total thus far is 465 stations," reports Charles F. Kyle, 392 Preble St., South Portland, Maine. "My two best catches of this season are WBIG and 10-BP. Have received KOB at last but still fishing for Nevada and Wyoming. In reply to the question of John R. Carter, Erie, Pa., regarding KFPM in the May RADEX, I received this station March 24th and in their letter of verification they stated they used only 15 watts during that test and received 89 reports on it."

"During the past year I have logged 381 stations in 45 states," reports Ken Boord, Box 255, Smithfield, W. Va. "Canada, Cuba, Haiti, Mexico, Porto Rico and South America. I have verifications from the most distant. These are some of my best ones: YV-BC, Caracas, Venezuela; WKAW, San

Juan, Porto Rico; HHK, Port-au-Prince, Haiti; VAS, Glace Bay, N. S.; CJOR, Sear Island, B. C.; CFBO, St. John, N. B.; XFI, XEW, XETY, XEN, XER, XEH, XED and XEB, Mexico."

"My log now stands at 329, including 3 Aussies, 1 New Zealand, 2 Japs, and 2 in Great Britain, received at 3 a. m. MST last March," reports Russell N. Johnson, 535 Ave. J No, Saskatoon, Sask. "Find on my R-32 10-tube bc. receiver that the Aussies come in better after daylight in the morning, and just at sunrise about 5 a. m. Have four aerials and four switches hooked up with an aerial tuner, and can use each aerial separately or collectively as desired."

Likes DX Calendar

"Thanks to RADEX'S reliable DX calendar I was able to log KGMB, Hawaii; CKOV, British Columbia; 10-BQ, Ontario; 10-AB, Saskatchewan; KPJM, Arizona, and KPCB in the State of Washington," comments Rudolph Kure, 3633 Vine St., Cincinnati, Ohio. "My log has reached the 700 mark. Received in this morning's mail my verification from KFXM, San Bernardino, Calif., 100 watts."

"I started DXing about January 8th and have 261 stations logged with 101 verifications to date," writes Jack Varner, 1114 Rugby Blvd., Roanoke, Va. "33 states, with 234 stations, 14 in Canada, 4 in Cuba, and 4 in Mexico, also 5 short-wave stations. I have a Victor R-15 7-tube T.R.F. set and would like to hear from owners of the same model, and any other DXer."

"Increased my list of 459 stations to 496 up to the time of writing," comments E. D. Petrie, 916 Dundas St., E., Toronto, Ont. "In the months of October 16th to November 25th a total of 37 stations in about forty days DXing. Pretty good DX I think, don't you? Some of the best are YV1BC, KPCB, CKMO, KXA, XEF, KCRC, CMCU, CMBY verified. Am using a 7-tube Sonora C-34."

A Twelve Day Record In twelve days Robert Rosenberger's

new Majestic 9-tube has brought in CMGA, CMCD, CMDE, WKAQ, CMBL, CMBN, TICR, CMGB, CPX (Bolivia), LR4 and LR6 (Argentine). He claims four kc. separation on distant stations and ten on locals, daylight reception of WFBL and 120 stations in twelve days. His address is 17 Janssen Place, Kansas City, Mo.

"Last year's record 597 stations, with the freak chances verified," says C. G. Colby, 92 West St., Concord, N. H. "Have logged every state but Nevada and Wyoming, and all wavelengths but 1340. Really enjoy DXing and find that RADEX is just the thing to help dig out the wanted DX stations. I use a Majestic No. 71."

Two at Once

"Have just logged KGEK, Yuma, Colo., and KGHI, Little Rock, Ark., both 100-watters and broadcasting at the same time," says B. L. Ahman, Jr., 3313 Westerwald Ave., Baltimore, Md. "I am waiting for a verification from each, as I could separate each station and yet hear both distinctly, although they are supposed to be on the same frequency."

"My reception so far this season been excellent," says D. H. Shatzes, 45 Flax St., Delaware, Ohio. "New stations received are KGU, YV1BC, KGB, WENC, WHET and Looks like a great season. KGU is my most distant station. WENC is on every Thursday night

after midnight CST."

"My radio is a homemade, 5 tubes, A.C. and have 344 stations to date," reports George J. Barmann, 232 West 2nd St., Chillicothe, Ohio. "My best catches are KGFJ, KERN, KDFN, KFIO, CHGS, KFVD and about 120 100-watters from coast to coast. should like to correspond with readers of RADEX. Will answer promptly."

"I have a new Kolster 10-tube superheterodyne," says R. E. Stromberg, 24 Argyle Place, Arlington, N. J., "and have logged over 100 stations in two weeks; received stations from the west coast. KFI coming in the best: XER from Mexico, also other stations from the west, Mexico and Canada."

"I bring in CMK, XER, and most any station in the U.S., but not so many Canadian stations," writes Harold Wheelock, 725 Orinsby St., Adrian, Mich. "I have a Victor R-32. I have used everything possible for an aerial. I would like to know if any DXer on your list uses a receiver similar to mine."

Robert L. Bridge, 66 Chestnut Street, Turtle Creek, Pa., wants any other owner of a similar set to tell him how he can make his Courier receiver more selective. His log has passed the 300 mark, seven of them being hundred-watters on the Pacific Coast and eleven Mexicans.

In three weeks, with his Emerson Model T four-tuber, M. E. Borah, 495 N. Main St., Ashland, Oregon, has brought in 154 stations including seven Jo's, 2YA and 10 AT. He has logged all states west of the big river and ten east of it. Wants to hear from other Emersonians.

"I have tuned in every state in the Union except Rhode Island, Wyoming and Idaho," comments Russell Hicks, 105 Navarre St., Monroe, Mich. two years and 11 months I have tuned in 394 stations in U.S., Canada, Mexico, Cuba, Porto Rico and Venezuela."

"I am a newcomer to DX, but since October 21st I have logged 177 stations," writes Morris J. Flashman, 120 Rose Ave., Syracuse, N. Y. "I have at least one station on each of the 97 channels and have almost completed my roster of stations."

Needs Three States

"I have a Buckingham 8-tube allelectric receiver," reports Carl Heyn, 2738 West 22nd St., Chicago, Ill. "and I have to date 465 stations in North America. I have all the states except Maine, Rhode Island and Nevada."

R. Hodge, 24 Briggs Street, Buffalo. N. Y., and his wife are Radexers who would like to join some DX club and hear from other owners of Scott.

Zenith or Howard receivers.

"I have listened to KTFI at Twin Falls, Idaho, this morning at 1:35 a. m. EST. It came in at eaxactly 1240 kcys. with good volume and tone," postcards Charles Keinath, 38. Prospect St., Newark, Ohio. "They were having a DX program and were reading a list of DX fans who had written in. I dropped them a line and hope to hear my name from their station next Sunday morning as announced. I also received a station, WRL, which I cannot find listed. They said they wanted to hear from DX listeners. They were on a low wave on the broadcast band. I didn't think to write down the frequency."

"WRAM has been ordered by the FRC to broadcast frequency checks on the mornings of January 6th and 20th, between 2 and 3 a. m. EST," reports Meyer Tuchincky, 3436 Filbert St., Philadelphia, Pa. "Advise all readers to look for stations in North Carolina, South Carolina, Tennessee, Georgia, Alabama and Florida, on these same nights; also WKAQ. This is the old fourth district."

Can't Locate XETQ

"XETQ ought to be deleted," says Meyer Tuchinsky, 3436 Filbert St., Philadelphia, Pa. "I wrote to this station after copying an hour's program on 1230 kcys., and getting the first three letters of the call XET. My letter came back from Mexico City after a month and a half, with about a dozen postmarks on it, from every part of that city, advising that the station could not be located."

"CMCW is now on 955 keys.," advises Meyer Tuchinsky, 3436 Filbert St., Philadelphia, Pa. "This is their fourth frequency, as they were formerly on 1270, 1325, and 1375 keys. They are now on the air every Tuesday and Saturday morning from 1 to 2 EST, announcing in English and Spanish, and come through fine."

CFBO broadcasts the weather reports from the Maritime Provinces from 6:00 a.m. to 6:05 AST, is information that comes from George E. Lowry, David Street, Brampton, Ont., who also reports that KROW will give another DX program on January 21st but the hours are not known. Mr. Lowry now has 376 on his log.

More About CRICKET

STILL the inquiries come in regarding that cricket game mention in the last issue. We are hopeful that some reader will yet give us the station which broadcast this game before the forms for this number are closed. But at the moment of writing, it is still a mystery. VK2ME broadcast this series on the short waves but what station carried it in the broadcast band?

P. J. Hauss, 221 S. Butler Ave., Indianapolis, Indiana, thinks it was 4RK as it came in as the Aussies usually do. L. E. Wallace, 110 N. Duval St., Tallahassee, Fla., reports picking it up on approximately 915 kcs. and that the announcer had a marked British accent. Another announcer who gave the record of each of the players, also had the typical English pronunciation.

Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio, thinks he has solved the problem. "A friend has located the station I heard December 2nd, 3rd, and 6th, on 910-915 kcs. broadcasting a ball game," he writes. "It was Poste Parisien, Paris, France. How's that for a record? My first European and heard with really fine volume three mornings in succession. It came in from 1 a.m. to 3 a.m. EST and was loud enough so that nearly every word could be understood easily until after 2:00 when it faded continually." We can hardly believe, in view of the number of readers reporting the reception, that this program came from Paris. If it was a foreign station, it was much more likely one of the Australians. Mr. Roberts receives a number of the VK's such as 4BC, 4QG and others.

The first likely tip on the source of the cricket game comes from Bill Vornkahl, Westport, Conn., who says: "That station was a Canadian because the announcer said that the reports

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were being read from cables and that we were hearing them but a few minutes after the plays were made. I did not hear any call letters but my guess is that it was CFQC at Saskatoon."

WITH THE EDITOR . . .

(Continued from page 8)

period in the United States in the fall of 1928. It is possible that the band from 160 kcs to 224, now used in Europe, may be set aside for broad-

casting in North America.

Canadian Industries Limited, Box 1260, Montreal, Que., have published a most beautiful book regarding the 1932-1933 season of the "C-I-L Opera House of the Air," which interested listeners may secure upon request. This cycle of operas concludes with "A Midsummer Night's Dream" on January 29th and "Merrie England" on February 5th. It may be brought in between 9:00 and 10:00 p. m. EST. over stations CFRB, CKOC, CJGC, CNRO, CFCF or CKAC.

A number of readers of whom Clarence Markel, 622 North 7th St., Quincy, Ill., is one, have received station UYR on about 1740 kcs. The official Canadian list does not show any UYR but we believe this is a new station in Montreal, possibly a police. Will some of our Quebec readers please advise us? Right this minute comes a letter from Heinz Milark, 102-10 185th St., Richmond Hill, N. Y., with the information direct from Montreal police that VE9BM is the test call for their station UYR. Our guess was a good one.

G. Wightman, 1171 West 32nd Ave., Vancouver, B. C., wants to know what readers are tuning the long waves above the b. c. band and what success they are having. He has built a two-tuber to tune up to

15,000 meters.

"We have a Victor R. 30 battery set, using five 230 tubes and three 232 screen-grid," writes P. J. Hoffmann, Annaheim, Sask. "At times we experience considerable trouble cutting out nearby stations (cross talk) and were wondering if the set could not be supplied with the 234 R.F. pentode tubes, the same as are now flurnished with the latest Victor Model R. 68. These latter tubes are intended to cut out the cross talk, I understand."

If any of our readers have had experience with the tubes mentioned, will they give their opinion to Mr. Hoffmann?

Calibrating a Set

TY set never was calibrated at John H. Madigan, 379 Rockall accurately," complains ingham Street, Rochester, N. Y. "It is o. k. from 550 kcs. to 1000 and then it begins to read less than it should until WHAM comes in at 1115 instead of 1150 and WHEC is at 1345 instead of 1430 as it should be. The local agency told me that if the set calibrated all right at but one end of the dial, that was as much as I could expect! Is this trouble caused by misalignment?" We have often said before that there is nothing more annoying about a radio receiver than inaccuracy in calibration thus causing the operator to go through a sort of arithmetical calisthenics every time he wants to tune a station in. Before we bought any receiver, we should insist upon a demonstration. Fortunately this is an easy fault to detect before the purchase is made. Tune in a few stations and note whether they come in exactly where they should upon the dial. If they do not, then pass that receiver up as you would a bad check. No matter how faithful the tone or how beautiful the cabinet, if the dial is inaccurate you are just buying a constant source of annoyance.

Now what can be done about it? It is utterly out of the question to think of making any changes in the receiver to match the dial. The only recourse is to make the dial match the receiver. If all stations from

540 to 1500 read either too high or too low, they could be brought into position by changing the position of the dial upon the condenser shaft. But if some read too high and others too low or if some are right and others are wrong, there is no possible adjustment that will bring them into line. You will have to make a new scale.

Tune in as many different channels as you can and mark down their exact readings even to fractions. Now remove the old celluloid scale from your dial and use it as a pattern for cutting a new one. On the new scale mark your frequencies, not in accordance with the old scale, but in accordance with the channel log you have made. Your dial may not be beautiful when you have finished but at least it will be accurately calibrated.

If set manufacturers cannot calibrate their dials correctly in kilocycles, they should mark them with numbers from zero to 100. Perhaps some day the manufacturers will bring out a dial on which the kilocycle markings are adjustable and may be moved slightly either way so that the owner may calibrate his own set. Until then the moral is "Do not buy any set that is not calibrated accurately."

The Bogota Program

"ON Saturday morning, December 17th, at 4:15 a.m. EST, I heard a man describing Colombia, then the man announced in Spanish and the station signed off at 5:10 a.m.," reports Derek Wharton, 22 Elmwood Ave., Rye, N. Y. "The station operated on 665 kcs."

Charles E. Head, Route 2, Box 74, Derry, N. H., reports the same program. "It came in at about 660 to 663 kcs. and appeared to be coming from Colombia, South America. I tuned in at about 4:15 a. m. and listened to this station until it closed at 5:05 a. m. EST. There was some

music and then quite a lot of talk describing Colombia, a good part of which was in English. They described the coffee they grow there and spoke of the temperature averaging nearly 100 degrees all the year. At no time did I hear them announce their call letters. They spoke of the different DX clubs such as the Atlantic and the International at Miami. They closed by playing their national anthem.

Others reporting this station were William E. Johnson, Vinalhaven, Maine, and Francis Kline, 608 Juniper Street, Quakertown, Pa.

Earl R. Robert, Cambridge, Ohio, answers these inquirers by saying: "Last Saturday morning, December 17th, I was lucky enough to pick up HJN, Bogota, Colombia, on 675 kcs. (The world list of broadcasting stations in the October RADEX shows HJN on 685 kcs.) This program was at my request dedicated to the Atlantic Radio Club. It was also dedicated to the Newark News and the International Radio clubs."

On The Short Waves

(Continued from page 22)

scribed in his article in the November issue of this magazine. Mr. Houlgate advises us that he took this circuit from another magazine and we have been trying to secure permission to republish it but so far without success. Unless such permission can be secured, we regret that we cannot give out copies of the diagram.

"I have tried three makes of short-wave converters," advises L. A. Brodhecker, Brownstown, Ind., "and found the Stewart-Warner the most satisfactory. With this set I pulled in EATH, a station in Buenos Aires, several Mexican stations; Bowman-ville, Canada, comes in great. I have had IRO, Rome, Italy; EAQ, Madrid, Spain, and G5SW, Chelmsford, England."

FEBRUARY DX CALENDAR

A. M. time is given as of the night before. Thus early Monday morning programs are listed under Sunday night. Time is given in Eastern Standard so that programs may be listed in proper sequence.

SUNDAY NIGHT Feb. 17th Feb. 5th 5:00-6:00-WJBU, 1210, Lewisburg, Pa. 3:00-5:00-KPCB, 650, Seattle, Wash. Feb. 24th Feb. 24th 3:00-4:00-KDLR, 1210, Devils Lake, N. D. 3:00-4:00-WHA, 940, Madison, Wis. 4:30-6:30-10-BP, 1199, Wingham, Ont. Feb. 37d 10th, 17th 24th 12:30-1:30-WCAJ, 590, Lincoln, Neb. 1:00-2:00-CFCN, 985, Calgary, Alta. 1:00-3:00-CKCI, 580, Toronto, Ont. 1:00-2:00-WENC, 1420, Americus, Ga. 1:30-3:30-KGEK, 1200, Yuma, Colo. 4:30-5:00-CMJH, 1150, Ciego de Avila, Cuba Feb. 19th 2:30-5:00-10-BI, 1200, Prince Albert, Sask. 12:00-1:00—WSAZ, 580, Huntington, W. Va. 12:30-1:00—KSOO, 1110, Sioux Falls, S. D. 1:00-3:00—WGES, 1360, Chicago, Ill. MONDAY NIGHT Feb. 6th 4:45-5:00-WEAO, 570, Columbus, Ohio Feb. 6th, 20th 5:00-6:00-WAWZ, 1350, Zarephath, N. J. SATURDAY NIGHT 3:00-4:00—WOL, 1310, Washington, D. C. 4:00-5:00—WRDW, 1500, Augusta, Ga. 5:00-6:00—KOOS, 1370, Marshfield, Ore. Feb. 20th 2:00-3:00-WQAN, 880, Scranton, Pa. Feb. 27th 12:30-2:00—CJCJ, 690, Calgary, Alta. 4:00-5:00—KPOF, 880, Denver, Colo. Feb. 4th 12:00-2:00—CMCH, 1355, Havana, Cuba 12:00-4:00—WRBX, 1410, Roanoke, Va. 1:00-3:00—WILL, 890, Urbana, III. 1:30-2:30-CHGS, 1120, Summerside, P. E. I. 2:00-3:00—CHML, 880, Hamilton, Ont. 2:00-4:00—10-BQ, 1200, Brantford, Ont. 3:00-4:00—KVOR, 1270, Colorado Springs 6:30-7:30—WCAL, 1250, Northfield, Minn. Feb. 6th, 13th, 20th, 27th 12:00-2:30—WMIL, 1500, Brooklyn, N. Y. 1:00-5:00—WABZ, 1200, New Orleans, La. 2:00-4:00—KOY, 1390, Phoenix, Ariz. 5:15-5:30—WHP, 1430, Harrisburg, Pa. TUESDAY NIGHT Jan. 31st 2:00-9:00—KGIR, 1360, Butte, Mont. 3:00-5:00—LV-1, 1430, San Juan, Arg. Feb. 4th, 18th 1:00-5:00—WJEJ, 1210, Hagerstown, Md. 2:30-4:30—10-AB, 1200, Moose Jaw, Sask. Feb. 7th 3:00-6:00-WOPI, 1500, Bristol, Tenn. Feb. 11th 1:05-4:00—WNAD, 1010, Norman, Okla. 1:30-3:00 YV1BC, 960, Caracas, Venz. Feb. 14th 2:00-3:00—WJMS, 1420. Ironwood, Mich. 2:00-4:00—WHET, 1210, Troy, Ala. 4:00-5:00—KFBI, 1050, Abilene, Kans. Feb. 11th, 25th 1:00-3:00-KUSD, 890, Vermilion, S. D. Feb. 21st Feb. 18th 2:30-3:30-WCLO, 1200, Janesville, Wis. 2:00-3:00-WTOC, 1260, Savannah, Ga. Jan. 31st, Feb. 28th Feb. 25th 12:00-4:00—WIBW, 580, Topeka, Kan. 2:00-2:30—WFAS, 1210, White Plains, N. Y. 4:00-5:00-KGAR, 1370, Tucson, Ariz. Feb. 7th, 14th, 21st, 28th 2:00-1:00—XEH, 1132, Monterrey, Mex. 1:00-4:00—WSUI, 880, Iowa City, Iowa 3:00-4:00—CFJC, 1120, Kamloops, B. C. 3:00-4:00—KFGQ, 1310, Boone, Iowa 12:00-4:00—WIBW, 580, Topeka, Kan. 2:00-2:30—WFAS, 1210, White Plains, N. Y. Feb. 4th 11th, 18th, 25th 12:00-1:00—WJBK, 1370, Detroit, Mich. 12:00-2:00—WGH, 1430, Columbus, Ohio 12:00-2:00—WGBI, 880, Scranton, Pa. 12:00-3:00—WWRL, 1500, Woodside, N. Y. 12:00-3:00—WWRL, 1500, Woodside, N. Y. 12:00-5:00—WFIF, 1450, Athens, Ga. 1:00-1:30—WKY, 900, Oklahoma, City 1:00-2:00—KQY, 1380, Pittsburgh, Pa. 1:00-2:00—KQV, 1380, Pittsburgh, Pa. 1:00-2:00—KQV, 1380, Pittsburgh, Pa. 1:00-2:00—WGBF, 630, Bvansville, Ind. 1:30-3:00—KMAC, 1370, San Antonio, Tex. 1:00-3:00—WGBF, 1360, Chicago, Ill. 1:00-3:00—WHBG, 930, Glenside, Pa. 1:00-3:00—WGBF, 1360, Chicago, Ill. 1:00-3:00—WHBG, 930, Glenside, Pa. 1:00-3:00—WHBG, 930, Glenside, Pa. 1:00-3:00—WGBF, 1360, Longar, Cuba 2:00-3:00—WWF, 590, Denver, Colo. 2:00-4:00—WWAF, 1210, Manitowoc, Wis. 2:00-3:00—WFFL, 920, Denver, Colo. 2:00-4:00—WTRC, 1310, Elkhart, Ind. 2:3:04-2:00—KFFL, 920, Denver, Colo. 2:00-4:00—WTRC, 1310, Elkhart, Ind. 2:3:00-4:00—CFCT, 630, Victoria, B. C. 3:00-4:00—CFCT, 630, Victoria, B. C. 3:00-4:00—KBF, 130, San Barbara, Calif. 3:00-4:00—KBF, 130, San Bernardino, Calif. 3:00-4:00—KGER, 1360, Long Beach, Calif. 3:00-4:00—KGER, 1360, Long Beach, Calif. 3:00-6:00—KGCX, 1310, Wolf Point, Mont. 4:00-6:00—KYOA, 1260, Tucson, Ariz. 12:00-1:00-WEDNESDAY NIGHT Feb. 1st 9:00-9:00—WEBQ, 1210, Harrisburg, Ill. 1:00-3:00—KFJZ, 1370, Ft. Worth, Tex. 2:00-3:00—CHWK, 665, Chilliwack, B. C. 2:30-4:30—KXO, 1500, El Centro, Calif. Feb. 8th, 22nd 1:00-2:30—WCBD, 1080, Zion, Ill. Feb. 22nd 1:00-4:00-WWNC, 570, Asheville, N. C. Feb. 1st, 8th, 15th, 22nd 11:30-1:00-KFUO, 550, 8t. Louis, Mo. 12:00-1:00-WHBL, 1410, Sheboygan, Wis. 2:00-3:00-KFXJ, 1310, Grand Junction, Colo. 2:30-4:30-CKWX, 730, Vancouver, B. C. 2:30-4:30-KGFF, 1420, Shawnee, Okla. THURSDAY NIGHT Feb. 2nd, 18th 11:30-3:00—WMBC, 1420, Detroit, Mich. Feb. 9th 3:00-5:00-WHBF, 1210, Rock Island, Ill. Feb. 2nd, 9th, 16th, 23rd 12:00-1:00—WTEL, 1310, Philadelphia, Pa. 2:00-3:00—CFAC, 690, Calgary, Alta. 3:00-4:00—CKOV, 1200, Kelowna, B. C.

FRIDAY NIGHT

Feb. 3rd, 17th 1:00-5:00—KASA, 1210, Elk City, Okla.

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										
				,							

TIME-E Eastern Standard; C Central Standard; M Mountain Standard; P Pacific Standard. RADEX is the only publication listing stations in alphabetical order for your convenience.

Editor's Note: These programs are correct at the time of going to press but are subject to change thereafter.

MONDAY

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Little Orphan Annie CKGW KDKA WBAL WBZA WCKY WGAR WHAM WIS WJAX WJR WJZ WRVA WWNC

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Freddie Rich's Orchestra

CFRB CKOK KFH KLZ KSCJ KSL
KTRH KVOR WAAB WABC WADC
WBCM WBIG WBRC WBT WCAO
WDAE WDBO WDOD WDSU WFAN
WFEA WHEC WICC WIP WIAS WJSV WKBH WKBN WKBW WLBW WLBZ WNAX WODX WOKO WORC WOAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC

R— Waldorf-Astoria Orchestra
CKGW KFYR KGO KOA KPRC
KSD KTBS WBEN WCAE WCKY
WCSH WDAF WEAF WENR WFBR
WFI WHO WIBA WIOD WJAR WFI WHO WIBA WIOD WJAR WKY WMC WOAI WOC WRC WSB

WSMB WTAG WWNC

B — Del Lampe and Orchestra

KOIL KSO KWCR WBAL WJZ WMAQ WREN

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Reis and Dunn

CFRB CKOK KFAB KFH KLZ KMBC KSCJ KSL KTRH KVOR WAAB WADC WBCM WBIG WBRC WAAB WADC WBCM WBIG WBRU
WBT WCAO WDAE WDBO WDOD
WDSU WEAN WFAN WGR WHEC
WIP WISN WJAS WJSV WKBH
WLBW WLBZ WNAX WOKO WORC
WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Vaughn De Leath CFRB CKOK KTRH WAAB WABC WADC WBCM WBIG WBRC WBT WDBO WDOD WDSU WEAN WFEA WGR WJSV WKBN WLBW WLBZ WOKO WORC WOAM WSFA WSJS WSPD WTAR WTOC

R — Al Bernard, Minstrel Man KFSD KGO KOA WBEN WDAF WEAF WFBR WIOD WIS WMAQ WMC WRC WSB WSMB

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Buddy Harrod and Orohestra CFRB CKOK WAAB WABC WADC WBCM WDSU WFAN WFBA WHEC WHK WIP WJAS WJSV WKBN WKBW WLBW WLBZ WOKO WORC WSBT WSPD WTOC

R --- Rhythm String Quartet WBEN WCAE WCSH WEAF WFBR WFI WJAR WRC WSAI WTAG WTAM WTIC WWJ

B — Lowell Thomas CKGW KDKA WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WLW B — Little Orphan Annie

KFYR KOIL KPRC KSO KSTP KTBS KWCR KWK WBAP WDAY WEBC WENR WKY WOAI WREN

E-7:00 p.m., C-8:00, M-5:00, P-4:00 C — Myrt and Marge CKOK KRLD WABC WADC WCAO WOAU WDRC WEAN WFBL WGR WHK WJAS WJSY WKRC WNAC WOKO WSBT WSPD WWVA

WCAE WCSH WEAF WFBR WSM

B — Amos 'n' Andy
CKGW KDKA WBAL WBZ WBZA
WCKY WFLA WGAR WHAM WIOD
WJAX WJR WJZ WLW WPTF WRC WRVA WWNC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Buck Rogers in Year 2432 CKOK WABC WGR WHK WNAC

R — Wheatenaville Ray Knight
WDAF WEAF WEEI WGY
WJAR WLIT WMAQ WOC WOW WRC WTAM WWJ

B — Tastyeast Jesters
KDKA WBAL WBZ WBZA WCKY
WHAM WJZ

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Dolf Martin's Orchestra

WABC WCAO WCAU WDRC WEAN WFBL WFEA WGR WHEC WHP WJAS WLBZ WNAC WOKO WORC

WSJS R — Melody Keepsakes WCAE WEAF WEEI WFBR WGY WHO WJAR WMAQ WOC WOW
WRC WTAG WWJ

B Five Star Theatre

KDKA KTBS WBAL WBZ WBZA WHAM WIS WJZ WMAL WMC WPTF WRVA WSAZ WSMB WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C—Boake Carter, News Flashes CKOK KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJSV WNAC

R — The Goldbergs KFYR KPRC WBEN WCAE WCSH WEAF WEEI WFAA WFBR WGY WJAR WKY WLIT WOAI WRC WTAG WTAM WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Whispering Jack Smith CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHAS WJAS WJSV WKRC WNAC WOKO WSPD

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

B — Clicquot Club Eskimos

KDKA KOIL KSO KWCR KWK

WBAL WBZ WBZA WCKY

WHAM WJZ WLS WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C --- Singin' Sam

CKOK KMBC KMOX WABC WADC WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WJSV WKRC WNAC WOKO WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Fu Manchu Mystery CFRB CKOK KMBC KMOX KRLD WABC WADC WBT WCAO WCAU WDRC WEAN WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD R - Voice of Firestone

CFCF CKGW KPRC KTRS KVOO WBEN WCAE WCSH WEAF WEEI WFAA on 8:45 WFBR WFLA WGY WHO WIOD WIS WJAR WJDX WKY WLIT WLW WMAG WJOX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

B — Jack Fulton KDKA KSO WBAL WBZ WBZA WJR WJZ WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45 B — Phillips Lord in Gountry Doctor KDKA KOIL KWCR KWK WBAL WBZ WBZA WGAR WJR WJZ WLS WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterfield Program CKOK KBD KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WADC WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDRC WDSU WEAN WFBJ
WFBM WGN WGST WHAS WHEC
WHK WISN WJAS WJSV WKBW WKRC WLAC WLBZ WMBG WMT WNAC WOKO WORC WOWO WPG WQAM WREC WSPD WTAR WTOC A. & P. Gypsies | Max | WDAF KSD WBEN

MONDAY—Continued

WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

- Sinclair Wiener Minstrels B — Sinclair Wiener Ministrels
KDKA KFYR KOIL KPRC KSO
KSTP KTBS KTHS KVOO KWCR
KWK WAPI WBAL WBZ WBZA
WDAY WBC WFAA WFLA WGAR
WHAM WIBA WIOD WIS WJAX
WJDX WJR WJZ WKY WLW WMC
WOAI WREN WRVA WSB WSM
WSMB WTMJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C—The Mills Brothers CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WSPD

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Mysteries in Paris CKOK KMBC KMOX WABC WADC WBT WCAO WCAU WEAN WFBL WGN WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD R — Paul Whiteman and Orchestra KDDYL KEJ KFBD KFVR KGHL n—rau writeman and o'ronesua KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTHS WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFBA WFIA WGY WHO WIRA WIOD WFIA WEDU WEEL WFAA WFBM WFIA WGY WHO WIBA WIOD WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WRC WRYA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC B — Jack Frost's Melody Moments KDKA WBAL WENR WGAR WHAM WJR WJZ WLW

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Morton Downey
CFRB CKOK KLZ KMBC KSCJ
KTSA KVOR WABC WADC WBCM
WBIG WBRC WBT WCAO WCAU
WDAE WDBO WDOD WDRC WDSU
WEAN WFBM WFEA WHEC WICC
WJAS WJSV WKBH WKBW WKBW
WLBW WLBZ WNAX WODX WOKO
WORC WPG WQAM WSPD WTAR WTOC

WIDUC
R—Contented Program
CFCF CKGW KFYR KPRC KSD
KSTP WBEN WCAE WDAF WEAK
WEBC WENR WFAA WFLA WGY
WHO WIOD WIAX WKY WMC
WOAI WOC WRVA WSAI WSB
WSM WTAM WTMJ WWJ
B—Alice Joy, Contralto
KDKA KOA KOLI. KSO KWCR

KDKA KOA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ WREN

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Columbia Revue
CFRB CKOK KLZ KMBC KSCJ
KTRH KTSA KVOR WAAB WABC
WADC WBBM WBCM WBIG WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDRC WDSU WEAN
WFBM WFEA WHEC WIBW WICC
WISN WAS WISY WKBH WKBN
WKBW WLBW WLBZ WMBD WNAX
WODX WOKO WORC WQAM WSJS
WSPD WTAR WTOC WSPD WTAR WTOC

R - National Radio Forum WEEN WCSH WDAF WEAF WEEL WENR WFBR WFLA WIBA WIOD WIS WJAR WJDX WKY WOAL WIS WJAR WJDX WKY WOAI WRC WRVA WSAI WTAG WTAM WWJ WWNC

B — Archer Gibson, Organist CFCF KDKA KWCR KWK WBAL WBZ WBZA WCKY WJR WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marge KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WBBM WCCO WDSU WFBM WHAS WLAC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Howard Barlow's Symphony
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBRC
WBT WCAO WDOD WDRC WDSU
WEAN WFAN WFBM WHK WIBW
WICC WIP WISN WJAS WJSD
WKBN WKBW WLBW WJBZ WMBD
WNAX WODX WOKO WORC WQAM
WSBT WSJS WSPD WTAR WTOC
R — Ted Weems and Orchestra
KFYR KGO KOA KSD WBEN WCAE

n — 1eu weems and Urenestra KFYR KGO KOA KSD WBEN WCAE WCKY WDAF WEAF WEBC WFBR WGY WHO WIBA WJAR WOC WRC WTAG WTAM WWJ B — Amos 'n' Andy KDYL KFI KFSD KGO KGW KHQ

KOA KOIL KOMO KPRC KSTP KTHS KWK WBAP WDAF WENR WJDX WKY WMAQ WMC WOAI WREN WSB WSM WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Gesare Sodero Concert Orchestra KFI KFSD KFYR KGO KOA KPRC KSO KTBS KWCR KWK WBAL WCKY WEBC WENR WFLA WGAR WHAM WIBA WJAX WJR WJZ WKY WMC WOAI WSB WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 CFRB CKOK KFAB KFH KLZ
KMBC KMOX KSCJ KSL KTRH
KVOR WAAB WABC WACO WBCM
WBRC WBT WCAO WCAU WCCO
WDOD WDRC WDSU WEAN WFBM WHK WIBW WICC WISN WISW WKBN WKBW WLBW WLBZ WMBD WNAC WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC

R — Jack Denny and Orchestra WEAF WFBR WJAR WRC WTAG WTIC

R — Voice of Firestone KDYL KFI KFSD KFYR KGHL KGIR KGO KGU KGW KHQ KOA KOMO KSTP KTAR WDAY WIBA WTMJ

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Abe Lyman and Orchestra
CKOK KFAB KLZ KMBC KMOX
KRLD KSCJ KSL, KTRH KVOR
WABC WBRC WBT WCAU WCCO
WDOD WDSU WIBW WICC WISN
WJSV WKBW WLBW WMBD WNAC
WNAX WOKO WPG WSBT WSPD WTOC

R — The Goldbergs KDYL KECA KEX KGA KJR KOA KP0

B — Russ Columbo and Orchestra KDKA KOIL KWCR KWK KYW WBZ WBZA WGAR WJZ WRC WREN

TUESDAY

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

E-6:00 pm., C-5:00, M-4:00, P-3:00
C—H. V. Kaltenborn
CKOK KFH KSCJ KSL KTRH KVOR
WAAB WABC WADC WBBM WBCM
WBIG WBRC WBT WCAO WDAE
WDBO WDOD WDRC WDSU WEAN
WFEA WHEC WICC WISN WJAS
WJSV WKBH WKBN WKBW WLBW
WJBZ WNAX WODX WOKO WORC
WQAM WSBT WSFA WSJS WSPD
WTAQ WTAR WTOC
R—Waldorf-Astoria, See Monday
B—Gus Van and Joe Furst
KDKA KOIL KSO KWCR WBZ
WBZA WJZ WMAQ WREN

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Reis and Dunn, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30 R — Mid-Week Hymn Sing KFYR KGO KOA KOMO KTBS KTHS KVOO WBEN WDAF WEAF WFBR WFI WIS WMAQ WMC WOAI WPTE WSB WSMB WTAG WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:45 R — Back of the News WBEN WEAF WFFE WFI WIS WJAR WPTF WRC WSM WTAG WWJ 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 — Jay Dennis and Ted Reese KDYL KFI KGIR KGO KHQ KOA KTAP KTSS KYOO WDEN WOSH KTAR KTBS KVOO WBEN WCSH WDAF WEAF WFBR WIBA WJAR WJDX WSAI WSB WSM WTAG WWJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C - Buck Rogers, See Monday R - Wheatenaville, See Monday Radio in Education KDKA KDYL KECA KEX KFSD KFYR KGA KGIR KJR KOA KOIL KPO KTBS KVOO KWCR WBZ
WBZA WENR WFLA WIBA WIS
WJDX WJZ WMC WOAI WPTF
WREN WSB WSM WSMB WWNC

E-7:30 p.m., C-6:30, M-5:30, P-4:30 R — Irene Taylor WBEN WCAE WEAF WFBR WFI WGY WJAR WRC WTAG WTAM

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Boake Carter, See Monday R — The Goldbergs, See Monday B — Anson Weeks and Orchestra
CFCF CKGW KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WIOD WIS WJZ WREN WSMB

TUESDAY—Continued

E-8:00 p.m., C-7:00, M-6:00, P-5:00

E-8:300 p.m., C-7:300, M-8:300, P-5:300
C— Easy Aces
CKOK KDB KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMY
KMOX KOIN KOL KSL KVI KWG
WAAB WABC WADC WCAO WCAU
WCCO WDRC WEAN WFBL WFBM
WGN WHAS WHK WJAS WJSV
WEBW WKRC WOKO WOWO WSPD

Blocktone Seafgron Cumit

R Blackstone, Sanderson-Crumit
KSD KSTP KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEEI
WFI WGY WHO WJAR WCO WOW
WRC WSAI WTAG WTAM WWJ B — Eno Crime Club

KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJZ WLW WMAQ WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Magic Voice CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

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

CKOK KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHAS WHEC WHK WISN WJAS WJSV WKBH WKRC WOKO WOWO WSPD

WASH WARC WORD WOWO WSPD

R— Wayne King and Orchestra

KSD KSTP WBEN WCAE WCKY
WCSH WEAF WEBC WEEI WFBR
WFI WGY WHO WIBA WJAR
WMAQ WOC WOW WRC WSAI
WTAG WTAM WTMJ WWJ

THE WISH MASH TARK

B — Horlick-Health Talks KDKA KOIL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Abe Lyman and Orchestra
CKOK KMBC KMOX WABC
WCAO WCAU WDRC WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WOWO WSPD wowo WSPD

B - Phillips Lord, See Monday

E-9:00 p.m. C-8:00, M-7:00, P-6:00 C — Chesterfield, See Monday R — Ben Bernie and Orchestra

R—Ben Bernie and Orchestra KFYR KOA KPRC KSTP WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEEL WFBR WFL WGY WHO WJAR WKY WLS WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WYAG WTAM WWJ.

WIAM WWJ B — Household Musical Memories KDKA KSO KWK WBAL WBZ WBZA WHAM WJR WJZ WMAQ

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Threads of Happiness C — Threads of Happiness
CKOK KDB KERN KFBK KFH
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOMA
KRLD KSL KTRH KTSA KVI KWG
WABC WADC WBRC WBT WCAO
WCAU WCCO WDAE WDBO WDOD
WDRC WDSU WEAN WFBL WFBM
WGN WGST WHAS WHEC WHK
WJAS WJSV WKBW WKRC WLAC

WNAC WOKO WOWO WOAM WREC WSPD WTAR WTOC

E-9:30 p m., C-8:30, M-7:30, P-6:30 R — Ed Wynn-Don Voorhees CFCF KDYL KFI KFSD KFYR

CFCF KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WEBU WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WRC WRVA WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

WTAM WTMJ WWJ WWNC

C— California Melodies

CFRB CKOK KFH KLZ KMBC

KMOX. KSCJ KSL KTRH KTSA

WABC WBCM WBIG WBRC WBT

WOAO WCAU WCCO WDAE WDOD

WDRC WEAN WFBM WFEA WHEC

WHK WIBW WJAS WKBH WKBN

WLBW WLBZ WMBD WNAC WNAX

WODX WOKO WQAM WSJS WTAR WTOC

B — Garcia's Novelty Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C—Five Star Theatre
KLRA WABC WBIG WBT WCAO
WCAU WDBJ WDOD WDRC WDSU
WEAN WFBL WFEA WHP WICC
WJAS WJSV WKBW WLAC WMBG
WNAC WNOX WOBU WOKO
WREC WSIS WTAR

- Luck Strik Hour

R — Lucky Strike Hour KDYL KFI KFSD KFYR KGO KGU KDYL KFI KFSD KFYR KGO KGU
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTBS KTHS WAPI
WBAP WBEN WCAE WCSH WDAY
WDAY WEAF WEBC WEEI WENR
WFBR WFI WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLW WMC WOAI
WOC WRC WRVA WSB WSM WSMB
WTAG WTAM WTMJ WWJ WWNC
PROBLEM WOO WAR WSMB
WTAG WTAM WTMJ WWJ WWNC
PROBLEM WOO WRC WRVA WSB WSM WSMB
WTAG WTAM WTMJ WWJ WWNC

B - Morin Sisters CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WCKY WGAR WHAM WJR WJZ WREN

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Sigmund Spaeth, Song Sleuth CFCF KSO KWCR WBAL WCKY WJZ WREN

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

CFRB CKOK KFH KLZ KMBC KSCJ KTRH KTSA WAAB WABC WADC WBBM WBCM WBIG WBRC WADC WBBM WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBO WDOD WDSU WEAN WFAN WFBM WFEA WHEC WHK WIBW WICC WIP WISN WJAS WJSV WKBH WKBN WKBW WLBW WLBZ WMBD WNAX WODX WOKO WORC WPG WQAM WSJS WSPD WTAR WTOC R— Ilonay Bailey. SONTAIN

B — Ilomay Bailey, Soprano
KSO KWCR KWK WBAL WCKY
WGAR WHAM WJR WJZ WMAQ

E-10-45 p.m., C-9:45, M-8:45, P-7:45 C — William O'Neal, Tenor CFRB CKOK WAAB WABC WADC WBCM WBT WCAU WEAN WFEA WHEC WHK WICC WJAS WJSV

WKBN WKBW WLBW WLBZ WOKO WORC WPG WSBT

C - Myrt and Marge See Monday

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B— Lanny Ross, Tenor
CKGW WBAL WFLA WGAR WHAM
WIOD WIS WJAX WJZ 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 B — Cesare Sodero, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C— Isham Jones and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH WAAB
WABC WADC WBCM WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRC WDSU WEAN WFBM
WHEC WHK WIBW WICC WISN
WJSV WKBN WKBW WLBZ
WMBD WNAX WODX WOKO WORC
WPG WQAM WSJS WSPD WTAR
WTOC WWVA

E-12:00 m., C-11:00, M-10:00, P-9:00 C — Don Redman and Orchestra C—Don Redman and Urchestra
CKOK KFAB KLZ KMBC KMOX
KRLD KSCJ KSL KTRH WABC
WBRC WBT WCAU WDAE WDOD
WDSU WEAN WIBW WICC WISN
WISV WEBW WLBW WMBD WNAC
WNAX WOKO WPG WSBT WSPD WTOC

R — The Goldbergs, See Monday B — Cab Calloway and Orchestra
KDKA KOIL KPRC KSO KTBS
KWCR KWK WAPI WBZ WBZA WFLA WGAR WIOD WJR WJZ WKY WMC WREN WSB WSM WSMB WWNC

E-12:30 a.m., C-11:30, M-10:30, P-9:30 R—Sam Robbins and Orchestra
WAPI WCAE WEAF WFBR WFI
WFLA WIOD WJAR WMAQ WMC
WRC WSB WSM WSMB WTAM
WWNC

R — Ben Bernie and Orchestra KFI KFSD KGO KHQ KOMO KSD KTAR

WEDNESDAY

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

E-8:00 p.m., C-5:00, M-4:00, P-3:00 C— Vaughn DeLeath CFRB CKOK KFH KMOX KSCJ KSL KTRH KVOR WAAB WABC WADC WBBM WBCM WBIG WBT WADU WBBM WBCM WBIG WBI WCAO WDAE WDBO WDDO WDRC WDSU WFAN WFEA WHEC WIP WISN WJAS WJSV WKBH WKBN WKBW WLBW WLBZ WNAX WODX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTOC

R — Waldorf-Astoria See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15
C — George Hall and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WADC WBCM WBIG WBRC
WBT WCAO WDAE WDBO WDOD
WDRC WDSU WFAN WGR WHEC
WIBW WIP WISN WJAS WJSV

WEDNESDAY—Continued

WKBH WLBZ WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTOC

E-6:45 p.m., C-5:45, M-4:45, P-3:45

C-The Funnyboners
CFRB CKOK KLZ KMBC WABB
WADC WBCM WDSU WFAN WFEA
WHEC WIP WJAS WJSV WKBN
WKBW WLBW WLBZ WOKO WORC WSPD WTOC

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

E-7:15 p.m. C-6:15, M-5:15, P-4:15 C — Buck Rogers See Monday B — Wheatenaville, See Monday
B — Carson Robison, Barbasol
KDKA KOIL KWK WBAL WBZ
WBZA WENR WJZ

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Three X Sisters

WABC WCAO WCAU WDRC WEAN WFBL WFEA WGR WHEC WHP WJAS WJSV WLBZ WNAC WOKO WORC

B - Five Star Theatre, See Monday

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

E-8:00 p.m. C-7:00 M-6:00, P-5:00 C — Whispering Jack Smith, See Mon. R — Royal Vagabonds, Ken Murray KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WJAR WLIT WLIS WOW WRC WSAI WTAG WTAM WTIC WWJ

B - Eno Crime Club, See Tuesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Singin' Sam, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Kate Smith, See Tuesday R — The Shadow, Mystery Drama WBEN WCSH WEAF WEEI WFBR WGY WJAR WLIT WRC WTAG WGY

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Abe Lyman, See Tuesday B — Phillips Lord, See Monday

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterfield, See Monday

C — CHESTETHEID, SEE MODICAY
R — Symphony Concert
KDYL KFI KFSD KFYR KGO KHQ
KOA KOMO KSD KTAR KTBS
KVOO WBEN WCAE WCSH WDAF
WEAF WFBR WFLA WHO WIBA
WIOD WIS WJAR WKY WLIT
WMG WALL WOG WOW WPGC WSB WMC WOAI WOC WOW WRC WSB WSM WTAG WTAM WWJ WWNC B — Sherlock Holmes

CFCF CKGW KDKA KOIL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Edwin C. Hill CFRB CKOK KFH KMBC KRLD KSCJ KSL KTSA KVOR WABC WADC WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFAN WFBM WFEA WIBW WICC WIP WISN WJAS WJSV WKBH WKBW WLBW WLBZ WNAC WNAX WODX WOKO WORC WQAM WSJS WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Guy Lombardo-Burns and Allen CKOK KMBC KMOX KOMA KRLD KTRH KTSA WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

WSB WSM WSMB

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Boswell Sisters

C—Boswell Sisters
CFRB CKOK KMBC KSCJ KSL
KTSA KVOR WABC WADC WBCM
WBIG WBRC WBT WCAO WCAU
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFBM WFEA WHK
WICC WJAS WJSV WKBH WKBW
WLBW WLBZ WNAX WODX WOKO
WORC WPG WQAM WSPD·WTAR
WTOC WTOC

R — Corn Cob Pipe Club KDYL KFI KGHL KGIR KGO KGW KHO KOA KOMO KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WLIT WLW WOC WOW WRC WRVA WTAG WTAM WTIC WWJ

B - D. W. Griffith's Hollywood KDKA KOIL KPRC KWK WBAL WBZ WBZA WFAA WGAR WJR WJZ WKY WMAQ WMC WREN WSB WSMB

E-10:15 p.m., C-9:15, M-8:15, P-7:15
B — Alice Joy, Contralto
KFYR KSO KTBS KWCR WBAL
WBZ WBZA WCKY WDAY WEBC
WFLA WGAR WIBA WIS WJZ WKY
WREN WSB WSMB WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Columbia Revue, See Monday - Carveth Wells

KDYL KFYR KGA KGHL KGIR KOA KPRC KSD KSTP KTHS WDAF WDAY WEBC WFAA WFBR WHO WIBA WKY WMAQ WOAI WOC WOW WTMJ_

B — L'Heure Exquise CFCF KDKA KSO KWCR WBAL WCKY WENR WFLA WHAM WIOD WIS WJAX WJR WJZ WRC WREN WWNC

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

E-11:00 p.m. C-10:00, M-9:00, P-8:00 C — Howard Barlow See Monday

R — Nellie Revell, Interview

KSD WCAE WCKY WEAF WFBR

WGY WJAR WLIT WRC WTAM WWJ

B - Amos 'n' Andy See Monday

E-11:15 p.m. C-10:15 M-9:15 P-8:15 B - Cesare Sodero, See Monday

E-11:30 p.m., C-10:30 M-9:30 P-8:30 C - Isham Jones, See Tuesday

E-12:00 p.m., C-11:00 M-10:00, P-9:00 C — Don Redman See Tuesday

R — The Goldbergs, See Monday B — Ben Bernie and Orchestra

KDKA KFYR KOIL KSO KWCR KWK WBZ WBZA WEBC WENR WFLA WGAR WIBA WIOD WJZ WREN WWNC

E-12:15 a.m. C-11:15, M-10:15, P-9:15 B — Sherlock Holmes KDYL KFI KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KTAR

THURSDAY

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 C — H. V. Kaltenborn, See Tursday R — Waldorf-Astoria, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Harold Stern and Orchestra C-HAROII Stern and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WADC WBIG WBRC WBT
WCAU WDAE WDOD WDRC WDSU
WGR WHEC WISN WJAS WJSV
WKBH WLBW WLBZ WNAX WOKO
WORC WQAM WSBT WSJS WSPD
WTAQ WTAR WTOC

E-6:30 pm., C-5:30, M-4:30, P-3:30 C-Better Reception—O. H. Galdwell
CFRB CKOK WABC WBCM WBIG
WBRC. WBT WCAO WDBO WDOD
WEAN WGR WJSV WKBN WLBZ
WORC WQAM WSFA WSJS WSPD WTAR

E-6:35 p.m., C-5:35, M-4:35, P-3:35 R — Donald Novis, Tenor KJR WEAF WFI WMAQ WRC WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Joe Haymes and Orchestra CFRB CKAC KFH KLZ KMBC KSCJ

WOOD WDSU WFAN WFEA WHEC WIP WISN WJAS WKBN WLBW WLBZ WNAX WOKO WORC WQAM WSFA WSJS WSPD WTAQ WTAR WWVA

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 — Jane Froman, See Monday B - Amos 'n' Andy, See Monday

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E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Buck Rogers, See Monday R — Wheatenaville, See Monday

- Carson Robison, See Wednesday E -- 7:30 p.m., C-6:30 M-5:30, P-4:30 THURSDAY—Continued

B—Louise Bernhardt, Contralto KDKA KEX KGA KJR KOA KOIL KPO KSO KTBS KWCR KWK WBAL WBZ WBZA WGAR WIBA WIS WJZ WOAI WREN WSM WSMB WWNC

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

E-8:00 p.m. C-7:00, M-6:00; P-5:00
R — Rudy Vallee and Orchestra
CFCF CKGW KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR WAPI WBAP
WBEN WCAE WCKY WCSH WDAF
WDAY WEAF WEBC WEEI WFBR
WFI WFLA WGY WHO WIOD WJAR
WIAY WIDY WKY WMAO WMC WIAX WJDX WGY WMAQ WMAC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

C - Easy Aces, See Tuesday

WREN

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E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Kate Smith, See Tuesday B — Rin Tin Tin Thriller KDKA KOIL KWK WBZ WBZA WGAR WHAM WJZ WLS WLW

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Abe Lyman, See Tuesday B — Howard Thurston, Magician KDKA KOIL KWK WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00 E-9:00 p.m., C-8:00, M-7:00, P-6:00
R — Maxwell House Showboat
KDYL KFI KFSD KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTAR KTBS WAPI WBEN WCAE
WCKY WCSH WDAF WEAF WEEI
WFBR WFI WFLA WGY WHO
WIOD WIS WJAR WJAX WJDX
WKY WMAQ WMC WOAI WOC
WOW WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWNC
C Chesterfield See Mondow

C - Chesterfield, See Monday B — Death Valley Days KDKA KOIL KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C - Mills Brothers, See Monday

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Col. Stoopnagle and Budd CKOK KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KSCJ KSL KTRH KTAT
KTSA KVI KWG WABC WADC
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBO WDRC WDSU
WEAN WFBL WFBM WGN WGST
WHAS WHEC WHK WJAS WJSV
WKBW WKRC WLAC WNAC WOKO
WOWO WQAM_WREC_WRR WSPD WTAR

B — Len Joy's Dancing Strings KDKA KFSD KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJZ WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Five Star Theatre, See Tuesday R — Lucky Strike, See Tuesday B — Mr. Twister, Jim Jordan CFCF CKGW KDKA KOIL KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ

WREN

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Edwin C. Hill, See Tuesday B — Ilomay Bailey, See Tuesday

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C—Charles Carlile, Tenor
CFRB CKOK WAAB WABC WADC
WBCM WCAU WDRC WDSU WEAN
WFEA WHEC WHK WICC WJAS
WJSV WKBN WLBW WLBZ WOKO
WORC WSPD
C—Mythand Marge See Meether C - Myrt and Marge, See Monday

E-11:00 p.m. C-10:00, M-9:00, P-8:00 C — Howard Barlow, See Monday

R — Don Bestor and Orchestra WDAF WEAF WHO WJAR WOC WOW WTAG B — Three Keys WBAL WHAM WIS WJZ WWNC B - Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Cesare Sodero, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Isham Jones, See Tuesday R — Jack Denny, See Monday

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C – Abe Lyman See Monday R — The Goldbergs, See Monday

FRIDAY

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 C — Vaughn DeLeath, See Wednesday R — Waldorf-Astoria, See Monday B — Del Lampe, See Monday

E-6:15 p.m, C-5:15, M-4:15, P-3:15 C — George Hall See Wednesday

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 — Jane Froman, See Monday B — Amos 'n' Andy, See Monday

E-7:15 p.m. C-6:15 M-5:15 P-4:15 C — Buck Rogers, See Monday R — Borrah Minevitch, Harmonica WCFL WDAF WEAF WJAR WOW WRC

E-7:30 p.m. C-6:30, M-5:30, P-4:30 C — Three X Sisters, See Wednesday B - Five Star Theatre, See Monday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Trade and Mark

C— Frace and Mark
CKOK KLZ KMBC KMOX KSL
WABC WADC WCAO WCAU WCCO
WDRC WEAN WFBL WFBM WGN
WGR WHAS WHK WJSV WKRC
WNAC WOKO WSPD
NC LINE SON IN COLUMN

R — Cities Service Concert R—Cities Service Concert
CKGW KDYL KOA KPRC KSD
KSTP KTBS KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEBL
WFAA WFBR WGY WHO WJAR
WKY WLIT WOAI WOC WOW WRC
WSAI WTAG WTAM WTIC WTMJ WWJ

W WJ B — Nestle's Program KDKA KOIL KWK WBAL WBZ WBZA 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

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — March of Time G — March of Time
CKOK KDB KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KVJ KWG
WABC WADC WCAO WCAU WCCO
WDRC WEAN WFBL WFBM WGN
WGR WHAS WHK WJAS WJSV
WKRC WNAC WOKO WOWO WSPD
B — MOZING FROMEN SO TOOGRE B - Horlick Program, See Tuesday

E-8:45 p.m., C-7:45, M-6:45, P-5:45 B — Howard Thurston, See Thursday

E-9:00 p.m., C-9:00, M-7:00, P-6:00 C — Chesterfield, See Monday B — First Nighter, Drama KDKA KDYL KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTAR KTBS KWK WAPI WBAL WBZ WBZA WCKY WEBC WGAR WHAM WJR WJZ WKY WLS WOAI WREN WSB WSM WSMB

WTMJ

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — William Hall, Do Re Mi
CFRB CKOK KFH KLZ
KMOX KRLD KSCJ KSL KTSA
WABC WADC WBCM WBIG WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDSU WEAN WFBM
WFEA WHEC WHK WICC WISN
WJAS WJSV WKBH WLBW WLBZ
WNAC WNAX WOKO WORC WQAM
WSJS WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 E-9:30 p.m., c-8:30, M-1:30, P-6:30

C— Inside Story—Edwin C. Hill
CKOK KFH KLRA KMBC KMOX
KOMA KRLD KTRH KTSA WAAB
WABC WADC WBCM WCAH WCAO
WCAU WCCO WDRC WEAN WFBL
WFBM WGN WGR WHAS WHEC
WHK WHP WIBW WISN WJAS
WJSV WKBH WLBW WLBZ WMBD
WOKO WORC WOWQ WSPD WOKO WORC WOWO WSPD

R — Pond's Program
KSD WBEN WCAE WCSH WDAF
WEAF WENR WFBR WGY WHO
WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WWJ

B - Eddie and Ralph KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KWK WAPI WBAL WBZ WBZA WEBC WFAA WGAR WHAM

FRIDAY—Continued

WIOD WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Chevrolet—Al Joison KDYL KFI KFSD KFYR KGHL KDYL KFI KFSD KFYR AGHLL KGIR KGO KGW. KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBEN WOAE WCSE WENR WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAX WAY WLIT WLW WMC WOAI WOC WOW WRC WRVA WSB WSM WYMR WTAG WTAM WIS WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

C — Morton Downey, See Monday
 B — Alice Joy, See Monday

E-10:30 p.m. C-9:30, M-8:30, P-7:30 C — Columbia Revue, See Monday B - Concert Orchestra

KDKA KPRC KSO KWCR WBAL WGAR WHAM WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marge, See Monday KSD WCAE WCKY WEAF WFBR
WGY WOW WRC WTAG WTAM

WWJ

E-11:90 p.m., C-10:00, M-9:00, P-8:00 C — Howard Barlow, See Monday R — Anson Weeks and Orchestra
KSD WCAE WCKY WEAF WFBR
WRC WTAG WWJ
B — Amos 'n' Andy See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 E-11:15 J.m., G-10:15, M-5:16, P-5:15

B — Aileen Stanley, Soprano
CFCF CKGW KDYL KEX KFSD
KFYR KGA KJR KOA KPO KPRC
KSO KTBS KWCR WBAL WBAP
WBZ WBZA WCKY WEBC WENR
WFLA WIBA WIS WJZ WMC WREN

WSMB WWNC

E-11:30 p.m., C-10:30, M-9:30, P-8:30

E-11:30 p.m., e-10:30, m-9:30, p-8:30
C— Abe Lyman and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBRC
WBT WCAO WCAU WCOO WDAE
WDBO WDOD WDRC WDSU WEAN
WFBM WHEC WHK WICC WISN
WISSU WIL DIE WWEND WNAY WJSV WLBW WLBZ WMBD WNAX WOKO WORC WQAM WSBT WSJS WSPD WTAR WTOC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C — Ben Pollack and Orchestra CHOK KFAB KIZ KMBC KRLD
KSCJ KSL KTRH KVOR WABC
WBRC WBT WCAU WCCO WDAE
WDOD WDSU WICC WISN WJSV
WLBW WMBD WNAC WNAX WOKO WPG WSBT WSPD WTOC

R — The Goldbergs, See Monday B — Cab Calloway, See Tuesday

SATURDAY

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 C — America's Grub Street CFRB CKOK KFAB KFH KSCJ KSL KTRH KVOR WAAB WABC WADC

WBBM WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRC WDSU WEAN WFEA
WHEC WICC WISN WJSV WKBH
WLBW WLBZ WNAX WOKO WORC
WQAM WSBT WSFA WSJS WSPD
WTAQ WTAR WTOC WWVA
B— Waldorf-Asteria. See Monday

R — Walderf-Asteria, See Monday - Little German Band

KDKA KOIL KSO KWCR WBAL WENR WJR WJZ WREN

E-6:30 p.m., C-5:30, M-4:30, P-3:30 B -- Laws That Safeguard KDYL KEX KFSD KFYR KGA KGIR KJR KOA KOIL KPO KPRC KSO KSTP KTAR KTBS KTHS KWCK KWK WBAL WBZ WBZA WCKY WEBC WFLA WIBA WIOD WIS WJAX WJR WJZ WKY WMAQ WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Funnyboners, See Wednesday - Fields and Hall

WBAL WGAR WHAM WIOD WIS WJR WJZ WMC

B - Orphan Annie, See Monday

WSMB WWNC

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C -- Frederick William Wile

KMBC KRLD KTRH WABC WADC WBBM WBCM WBIG WBRC WBT WBBM WBCM WBIG WBRC WBT WCAO WCAU WDAE WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGR WHEC WHK WICC WJAS WJSV WLBW WLBZ WNAC WOKO WQAM WSFA WSPD WTAR WWVA R — Jackie Heller, Tenor WEAF WFBR WFI WJAR WRC

WTAG

- Anson Weeks and Orchestra CFCF CKGW KDKA KSO KWK WBAL WBZ WBZA WCKY WFLA WGAR WHAM WJZ WLW WOAI WSB WWNC

E-7:15 p. m., C-6:15, M-5:15, P-4:15 C — William Hall, Baritone CFRB CKOK KTRH WABC WADC WBCM WBIG WBRC WCAO WCAU WDAE WDOD WDC WDSU WEAN WEBBA WEBBA WOO WILL WFBM WFEA WGR WICC WASS WJSV WLBW WLBZ WNAC WOKO WORC WQAM WSFA WSJS WSPD WTAR WWVA

R — Ozzie Nelson and Orchestra
CKGW KGO KOA WBEN WACE
WCKY WDAF WEAF WFBR WFI WHO WJAR WOC WTAG WWJ

B - Merle Thorpe Talk KDYL KECA KEX KFSD KFYR KGA KJR KOA KOIL KPO KPRC KGA KJR KOA KOIL KPO KPRC KSTP KTBS KWCR KWK WBAL WBZ WBZA WEBC WENR WFLA WGAR WHAM WIBA WIOD WIS WJDX WJZ WKY WMC WREN WSB WSMB WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Street Singer

C—Street Singer
CFRB CKOK KMBC KMOX KRLD
KSCJ KSL KTRH KVOR WABC
WADC WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRC WDSU WEAN WFBM
WFEA WGR WHEC WISN WJAS
WJSV WKBH WLBW WLBZ WNAC
WOKO WQAM WSFA WSPD WTAQ
WTAR WTOC

B — Guckoo—Ray Knight CKGW KFYR KSO KWCR KWK WBAL WBZ WBZA WCKY WEBC WFLA WGAR WHAM WIBA WIOD WIS WJDX WJZ WMC WREN WSB WSMB WWNC

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Easy Aces See Tuesday R — Archer Gibson Organist

KEX KGA KJR KOA KPO KPRC KSD KTBS WBEN WDAF WEAF WEBC WEEI WFI WHO WIBA WIS WJAR WMAQ WMC WOAI WOC WSB WSMB WTAG WTAM WWJ WWNC

B — American Taxpayers' League KDKA KDYL KEX KFSD KFYR KGA KGHL KGIR KJR KOA KOIL KPO KPRC KTAR KWK WAPI WHAM WIBA WIOD WJAX WJDX WJZ WLS WRC WREN WSM WSMB WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Magic Voice, See Tuesday B— Boston Symphony Orchestra CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Alexander Haas Gypsy Ensemble CFRB CKOK KFH KLZ KMBC C—Alexander Haas Gypsy Ensemble
CFRB CKOK KFH KLZ KMBC
KSCJ KSL KTRH KTSA KVOR
WABC WADC WBCM WBIG
WBT WCAO WCCO WDAE
WDBO
WDOD WDRC WDSU WEAN WFBM
WFEA WGR WHEC WICC WISN
WJSV WKBH WLBW WLBZ WNAX
WOKO WORC WPG WQAM WSBT
WSFA WSPD WTAQ WTAR WTOC
R—Economic World Today
KDYL KFSD KFYR KGA KGHL
KGIR KJR KOA KFPC KSD

KGIR KJR KOA KPO KPRC KSD KSTP WAPI WBAP WBEN WCSH WDAF WDAY WEAF WEBC WEEI WEBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJDX WKY WMAQ WMC WOAI WOC WOW WRC WSAI WSMB WTAG WTAM WWJ WWNC

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterlield, See Monday

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Edwin C. Hill

C-EAWIN C. HIII
CFRB CKOK KFH KLZ KMBC
KRLD KSCJ KSL KTRH KTSA
KVOR WABC WADC WBBM WBCM
WBIG WBRC WBT WCAO WCCO
WDAE WDBO WDOD WDRC WDSU
WEAN WFAN WFBM WFEA WHEC WHK WICC WIP WISN WJAS WJSV WKBH WLBW WLBZ WNAX WOKO WORC WQAM WSBT WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C - Carborundum Band

CKOK KMBC KMOX WAAB WABC WCAO WCAU WCCO WGN WHAS WHK WJAS WKBW WKRC WSPD

WHK WJAS WKBW WKRC WSPD

R— George Olsen and Orchestra

KDYL KFI KFSD KFYR KGO KGW

KHQ KOA KOMO KSD KSTP WBAP

WBEN WCAE WCSH WDAF WBAY

WEAF WEBC WEEI WFBR WFI

SATURDAY—Continued

WGY WHO WIBA WJAR WKY WLW WMAQ WOAI WOC WOW WRO WMAQ WOAI WOC WOW WRO WSAI WSB WTAG WTAM WTMJ

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Boswell Sisters, See Wednesday R — Lucky Strike, See Tuesday

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Public Affairs Institute

KFH KLZ KSCJ KTRH KTSA KVOR WAAB WBAC WADC WBBM WBCM WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBM WFEA WHEC WICC WIAS WISV WKBH WLBW WLBZ WMBD WNAX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA B — Salon Singers

B — Saion Singers CFCF CKGW KDKA KOIL KSO KWCR WBAL WBZ WBZA WGAR WHAM WJZ WMAQ WREN

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B — Harding Sisters, Piano CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WGAR WHAM WJZ WMAQ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 B — Pickens Sisters CKGW KDKA KOIL KSO KWK WBAL WHAM WJZ WMAQ WREN

E-11:00 p.m., C:10:00, M-9:00, P-8:00
C — Guy Lombardo and Orchestra
CFRB CKOK KFAB KIZ KSCJ KSL
KTRH KVOR WAAB WABC WADC
WBCM WBRC WBT WCAO WCAU
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFBM WHEC WHK
WICC WISN WJAS WJSV WJBW
WLBZ WMBD WNAX WOKO WORC
WPG WQAM WSBT WSJS WSPD
WTAR WTOC WWVA
B — Jack Denny and Orchestra

WIAL WIDO WWYAL

R — Jack Denny and Orchestra

KSD WBEN WCAE WCKY WDAF

WEAF WEEI WFBR WFI WGY

WHO WJAR WOC WRC WSAI WTAG WWJ

B — Buccaneers, Vocal Trio
CFCF KDKA KOIL KSO KWCR
KWK WBAL WBZ WHAM WJZ WREN

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Lew White Organist

KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WRC WREN

E-11:30 p.m., C-10:80, M-9:30, P-8:30 C — Harold Stern and Orchestra

CFRB CKOK KFAB KLZ KSCJ KSL KTRH KVOR WAAB WABC WADC WBCM WBRC WBT WCAO WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFAN WFBM WHEC WICC WID WIGN WEDD WIDD WIND WIP WJSV WKBH WLBW WLBZ WNAX WOKO WORC WQAM WSBT WLBZ WSJS WSPD WTAR WTOC WWVA

R - Paul Whiteman and Orchestra KSD WEAF WEEI WFBR WFI WGY WHO WJAR WMAQ WQC WTAG WWJ

E-12:00 p.m., @-11:00, M-10:00, P-9:00

— Ted Fiorito and Orchestra CKOK KFAB KFH KLZ KRLD KSCJ WEAN WEBM WHK WICC WISN
WJSV WLBW WMBD WNAX WOKO WPG WSBT WSPD WTOC

– Ted Weems and Orchestra

K— 160 Weems and Uronestra KDYL KFSD KFYR KGA KGHL KJR KOA KPO KPRC KSD KSTP KTAR KTBS WCAE WCKY WDAF WDAY WEAF WFAA WFBR WFI WGY WHO WIBA WIOD WJAR WJAX WMAQ WMC WOAI WOC WRC WSB WSMB WTAG WTAM WWNC

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

R — Vincent Lopez and Orchestra KDYL KEX KFYR KGA KJR KPO KPRC KSD KSTP KTBS KVOO
WBEN WCAE WCKY WDAF WEAF
WEBC WFBR WFI WFLA WHO
WIBA WIOD WJAR WJAX WKY
WMC WOAI WOC WSB WSBM WTAG WTAM WWNC

SUNDAY

E-11:15 a.m., C-10:15, M-9:15, P-8:15 R — Major Bowes' Family KDYL KEX KFSD KFYR KGA KJR KOA KPO KPRC KVOO WBAP WDAF WDAY WEAF WFBR WFLA WGY WHO WIOD WJAR WJAX WKY WMC WOC WRC WSM WSMB WTAG WTAM WTMJ WWJ WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C — Salt Lake Tabernacle Choir

CFRB CKOK KFAB KLZ KSCJ KSL KTRH KTSA KVOR WABC WADC WBCM WBIG WBT WCAO WCAU WCCO WDAE WDBO WDOD WDRO WDSU WEAN WFEA WGR WHEC WHK WIBW WISN WJAS WJSV WKBH WKBN WLBW WLBZ WMBD WNAC WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAQ WTAR WWVA

E-12:30 p.m., C-11:30, M-10:80, P-9:30 R - Southland Sketches

CKGW KDYL KEX KFSD KFYR KGA KGHL KGIR KJR KOA KPO KPRC KTAR WCKY WCSH WDAF WDAY WEAF WGAR WHO WIOD WIS WJAX WOC WSMB WTAG WTAM WWJ WWNC

E-12:45 p.m., C-11:45, M-10:45, P-9:45 C — Street Singer

CFRB CKOK KFAB KLZ KMBC KSCJ KSL KTRH KTSA KVOR KSCJ KSL KTRH KTSA KVOR WABC WADC WBCM WBIG WBT WCAO WCCO WDAE WDBO WDOD WDSU WGR WHEC WHK WIBW WISN WJAS WJSV WKBH WKBN WLBW WLBZ WMBD WNAX WODX WOKO WPG WQAM WSJS WSPD WTAQ WTAR WTOC WWVA

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

C—Thirty Minute Men
CFRB CKOK KFAB KLZ KMBC
KSCJ KTRH KTSA KVOR WAAB
WABC WADC WBCM WBRC WCCO
WDAE WDBO WDOD WDRC WDSU WFBM WGR WHEC WHK WIBW WISN WJAS WJSV WKBH WKBN WLBW WLBZ WNAX WODX WOKO WPG WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WWVA

R - K-7 Drama

WBEN WCAE WCKY WCSH WDAF WEAF WFBR WFI WGY WJAR WRC WSAI WTAG WTAM WWJ

E-1:30 p.m., C-12:30, M-11:30, P-10:30

C — Columbia Church of the Air CFRB CKOK KLZ KSCJ KSL KTRH KTSA KVOR WAAB WABC WADC WBCM WBIG WCAO WCCO WDAE WDBO WDOD WDRC WDSU WGR WHEC WIBW WIAS WISV WKBH WLBW WLBZ WNAX WODX WKW WPG WQAM WSBT WSIS WSPD WTAQ WTAR WTOC WWVA

R— Walter Logan Pop Concert
KSD WBEN WCAE WCKY WCSH
WDAF WEAF WFBR WFI WGY
WJAR WOW WRC WSAI WTA
WTAM WWJ

E-2:00 p.m., C-1:00, M-12:00, P-11:00

C—Smiling Ed McConnell
CKOK KERN KFBK KFPY KFRC
KGB KHJ KLJ KMBC KMOX KOIN
KOL KSL KVI KWG WABC WBBM
WBT WCCO WDSU WGR WGST
WHAS WHEC WJAS WJSV WKRC
WLAC WNAC WOWO WQAM WRR

- International Radio Forum CFCF CKGW KFI KFSD KGO KGW KHQ KOA KOMO KSD KTBS WAPI RHQ KOA KOMO KSD KTBS WAPI WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFAA WFBR WFLA WGY WIOD WIS WJAR WJAX WJDX WMC WOAI WOW WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

B — Monarch Mystery Tenor KDKA KDYL KFI KFYR KGO KOA KOIL KSO KSTP KWCR KWK WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIBA WJAR WJAX WJR WJAWAO WJBN WJAY WJAY WJZ WMAQ WREN WTMJ WWNC

E-2:15 p.m., C-1:15, M-12:15, P-11:15

C — Victor Arden and Orchestra CKOK KMBC KMOX WABC WBBM WCAO WCAU WGR WHEC WHK WJAS WKRC WNAC WOKO WOWO

R — Clyde Doerr's Saxophone Octet
CFCF CKGW KFI KFSD KGO KGW
KHQ KOA KOMO KPRC KSD KTBS
KYW WAPI WBEN WCAE WCKV KYW WAPI WBEN WCAE WCKY WCSH WDAF WEAF WFAA WFBR WFLA WGY WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

E-2:30 p.m., C-1:30, M-12:30, P-11:30

R — Moonshine and Honeysuckle CFCF CKGW WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WMAQ WOC WOW WRC WTAG WTAM WWJ

B - Yeast Foamers KDKA KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KFYR KOIL KOMO KPRC KSO KSTP KTAR KTHS KVOO KWCR KWK KYW WAPI WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLW WMC

SUNDAY—Continued

WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

E-2:45 p.m., C-1:45, M-12:45, P-11:45 C — Hoosier Editor

U— Hoosier Editor
KERN KFAB KFBK KFPY KFRC
KGB KHJ KIZ KMBC KMOX KOIN
KOL KOMA KSL KVI KWG WABC
WBBM WCAH WCAO WCAU WCCO
WGR WHAS WHK WJAS WJSV
WKRC WMT WNAC WOWO WRR

E-3:00 p.m., C-2:00, M-1:00, P-12:00 C — N. Y. Philharmonic Orchestra

CFRB CKOK KFAB KFH KLZ KMBC CFRB CROR KFAB KFH KLZ KMBC KRLD KSCJ KSL KTRH KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBO WDOD WDRC WDSU WFAN WFFM WFEA WHEC WHK WIBW WICC WIF WISN WJAS WJSV WKBH WKBN WKBW WLBZ WMBD WODX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA

R — Wayne King and Orchestra KDYL KFI KGO KGW KHQ KOA KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS KVOO KYW WBEN WCAE WCKY WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ

B — Our American Music

WGAR WIOD WJAX WJZ WMAQ WREN WRVA WSB WSM WSMB WWNC

E-3:30 p.m., C-2:30, M-1:30, P-12:30 R — Dr. S. Parkes Cadman

R — Dr. S. Parkes Gadman
KDYL KFSD KFYR KGHL KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTHS KVOO WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WGY WHO
WIBA WJAR WKY WLIT WOAI
WOC WOW WRC WSAI WTAM WWJ

B — Manhattan Merry-Go-Round KDKA KOIL KWCR KWK KYW WBAL WBZ WBZA WHAM WJZ WREN

E-4:00 p.m., C-3:00, M-2:00, P-1:00 -Father Coughlin

—Fatter Cougnin
KMOX KSTP KYW WCAO WCAU
WDRC WEAN WFBL WFEA WGAR
WGR WHB WICC WJAS WJR WLBZ
WLW WMT WNAC WNBH WOC
WOL WOKO WOR WORC

R --- Iodent-Jane Froman

KDYL KFI KFSD KFYR KGHL

B — Temple of Song CFCF KDKA KFI KFSD KFYR KGHL KGO KGW KOA KOLL KSO KSTP KTBS KWCR KWKAWBAL WBZ WBZA WCKY WEBC WGAR WHAM WIBA WIOD WIS WJAX WJR WJZ WKY WMAQ WMC WREN WRVA WSB WSM WSMB WWNC

E-4:15 p.m., C-3:15, M-2:15, P-1:15 R — Wildroot Vee Lawnhurst R—WIdroot—Vee Lawnhurst
KDYL KFI KGO KGW KHQ KOA
KOMO WBEN WCAE WCSH WDAF
WEAF WEEI WFBR WGY WJAR
WLIT WMAQ WOW WRC WSAI
WTAG WTAM WWJ

E-4:30 p.m., C-3:30, M-2:30, P-1:30
R — Squibb's Program
WBEN WCAE WCSH WDAF WEAF
WEEI WFBR WGY WJAR WMAQ
WOW WRC WTAG WTAM WWJ
B — National Youth Conference
KDVI. KFSD KFYR KGHL KGO
KGW KHQ KOA KOIL KOMO KPRC
KSO KSTP KTAR KVOO KWCR
KWK WAPI WBAL WBZ WBZA
WDAY WEBC WENR WHAM WIOD
WIS WJAX WJDX WJZ WKC WOAI
WPTF WREN WRVA WSB WSM

E-5:00 p.m., C-4:00, M-3:00, P-2:00
° C — Roses and Drums
CKOK KMBC KMOX KRLD WAAB
WABC WADC WCAO WCCO WDSU WGN WGR WHAS WHK WJAS

R — Lowell Thomas
WBEN WCAE WEAF WEEI WFBR
WGY WJAR WRC WSAI WTAG
WTAM WWJ

WTAM WWJ

B— National Vespers

KFSD KFYR KGHL KGO KGW

KHQ KOA KOIL KOMO KPRC KSO

KTAR KTBS KWCR KWK WAPI

WBAL WBAP WBZ WBZA WEBC

WFLA WGAR WIOD WIS WJAX

WJDX WJZ WOAI WPTF WREN

WSB WSM WSMB WWNC

E-5:15 p.m., C-4:15, M-3:15, P-2:15 R — Big Ben's Dream Dramas WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WJAR WMAQ WRC WSAI WTAG WTAM WWJ

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

B — Pages of Romance, Drama KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WJR WJZ WLW WREN

B — Josef Koestner's Orchestra KDYL KFI KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSTP KTAR KTBS KVOO WAPL WBAP WDAF WDAY WEBC WIBA WJDX WKY WMC WOAI WSB WSM WSMB WTMJ

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — H. V. Kaltenborn, See Tuesday R — Catholic Hour

KDYL KEX KFYR KGHL KGIR KJR KOA KPRC KSD KTAR KTBS KYOO WAPI WBAP WBEN WCAE
WCKY WCSH WDAF WDAY WEAF
WEBC WEEI WENR WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLIT WMC
WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

B — Josef Koestner's Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WREN

E-8:15 p.m., C-5:15, M-4:15, P-3:15
C— Little Jack Little
CFRB CKOK KFAB KFH KLZ
KRLD KSCJ KSL KVOR WADC
WBBM WBCM WBIG WBRC WBT
WCAO WCAU WDBO WDOD WDRC
WDSU WEAN WFEA WHEC WIBW
WICC WISN WJAS WJSV WKBH
WKBN WLBW WLBZ WNAX WOKO
WORC WPG WQAM WSBT WSFA
WSJS WSPD WTAR WTOC WWVA

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Cathedral Hour

C—Cathedral Hour

CFRB CKOK KFH KLZ KMBC

KRLD KSCJ KSL KVOR WAAB

WABC WADC WBBM WBCM WBIG

WBRC WBT WCAO WCAU WCCO

WDAE WDBO WDOD WDRC WDSU

WFBM WFEA WHEC WIBW WICC

WISN WAS WISV WKBH WKBN

WKBW WLBW WLBZ WNAX WOKO

WORC WQAM WSFT WSFA WSJS

WSPD WTAR WTOC WWVA

R—Our American Schools

KDYL KECA KEEX KFSD KFYR

KGA KOA KPO KPRC KSD KSTP

KTBS KVOO WBAP WBEN WCAE

WCSH WDAY WEAF WEBC

WENR WFBR WFLA WGY

WIBA

WOOD WJAR WKY WLIT WMC

WOAI WOW WPTF WRC WRVA

WSAI WSM WSMB WTAG WWJ

WNC

WWNC

W WNO

B—Paul Whiteman's Rhythmic Concert
CFCF CKGW KOIL KSO KWCR
KWK WBAL WBZ WBZA WCKY
WGAR WHAM WJR WJZ WREN

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — World's Business, Dr. Klein
KFH KLZ KMBC KRLD KSCJ KSL
KTRH KVOR WABC WACO WADC
WBCM WBIG WBRC WBT WCAO
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFAM WFBM WFEA
WGR WHEC WIBW WICC WIP
WISN WIAS WISV WKBH WKBN
WLBW WLBZ WNAC WNAX WOKO
WORC WPG WQAM WSBT WSFA
WSJS WSPD WTAR WTOC WWVA
R — Borrah Minevitch, Harmonica
KDYL KFI KFSD KFYR KGO KGW
KOA KPRC KTBS KVOO WBEN

KOA KPRC KTBS KYOO WBEN KOA KPRC KTBS KVOO WBEN WCAE WCKY WDAF WDAY WEAF WEBC WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WMAQ WOAL WRC WSMB WTAM WWJ WWNC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Walter Smith and Concert Band CKOK KFH KLZ KMBC KRLD KSCJ KSL KTRH KVOR WABC WADC WBCM WBIG WBRC WBT

WADC WBCM WBIG WBRC WBT
WCAO WCCO WDAE WDBO WDOD
WDRC WDSU WEAN WFAN WFBM
WFFA WGR WHEC WIBW WICC
WIP WJSV WKBN WKBW WLBW
WLBZ WNAC WNAX WOKO WQAM
WSBT WSFA WSJS WSPD WTAR
WTOC WWYA

Companying See Monday

R - Wheatenaville, See Monday

SUNDAY—Continued

E-7:30 p.m., C-6:30, M-5:30, P-4:30 R — Pickens Sisters CFCF KSD WBEN WCAE WDAF WEAF WFBR WGY WHO WJAR WOC WRC WSAI WTAG WTIC WWJ

WOC WRC WSAI WTAG WTIC WWJ
B— Groat Moments in History
KDKA KDYL KFI KFSD KFYR
KGO KGW KHQ KOA KOIL KOMO
KPRC KSTP KTAR KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WEBC WFAA WFILA WGAR WHAM
WIBA WIOD WJAX WJDX WJR
WJZ WKY WLS WLW WMC WOAI
WPTF WREN WRVA WSB WSM
WSMB WTMJ WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Angelo Patri, Your Child CKOK KMBC KMOX WABC WCAO WOAU WCCO WFBL WGN WGR WHAS WHK WJAS WJSV WKRC

 Trade and Mark WSAI WTAG WTAM WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Chase and Sanborn—Eddie Cantor R—Chase and Sanborn—Eddie Cantor CFCF CKGW KDYL KFT KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B — Russian Gaities KDKA KOIL KSO KWCR WBAL WBZ WBZA WGAR WJR WJZ WLS WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C—Andre Kostelanetz Presents
CKOK KLZ KMBC KMOX KRLD
KSCJ KSL KTRH KTSA KVOR
WABC WADC WBBM WBCM WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDRC WDSU WEAN
WFBM WFEA WGR WHEC WHK
WIBW WISN WJAS WJSV WKBH
WLBW WLBZ WNAC WNAX WOKO
WORC WSBT WSFA WSJS WSPD
WTAR WTOC WWVA

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C—Foregin Legion CKOK KLRA KMBC KRLD KSCJ KSL KTSA WABC WBCM WBT WCAH WCAO WCAU WCCO WDBJ WDBO WDOD WDRC WDSU WEAN WEEM WCEFA WCQD WCSO WHENO WPBM WFEA WGR WGST WHEC WHK WHP WIBW WICC WISN WJAS WKBH WKBN WLBW WLBY WMT WNAC WNAX WODX WOKO WORC WREC WSFA WSJS WSPD B. Bed Addres Prome

B — Red Adams Drama KDKA KSO KWCR WBAL WBZ WBZA WGAR WJR WJZ WLS WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Fred Allen's Bath Club CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KSCJ KSL KVI KWG WABC WADC WBT WCAH WCAO WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WHEC WHK WISN WIAS WISV WKRC WLAC WMT WNAC WOKO WORC WOWO WQAM WREC WSPD WTAR

R - General Electric Concert M — General Electric Concert
KDYL, KFI KFSD KFYR KGO KGW
KHQ KOA KOMO KPRC KSD KSTP
KTAR KTBS KTHS WAPI WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WENR WFAA WFBR WFI
WFLA WGY WHO WIBA WIS WJAR
WIAY WIDY WKY WOAJ WOC

B — Warden Lawes-Sing Sing KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Pennzoil Parade

G — Pennizon Parade
CKOK KIRA KMBC KMOX KOMA
KTSA WABC WADC WBRC WBT
WCAO WCAU WCCO WDRC WEAN
WFBL WGN WGR WGST WHAS
WHEC WJAS WJSV WKRC WLAC
WLBZ WNAC WOKO WSPD
R — Album of Familiar Music
KDYL KET KGO KGW KHO KOA

K—Album of raminar music KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTHS WAPI WBEN WCAE WCKY WCSH WEAF WENR WFAA WFBR WFI WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

B — Walter Winchell
KDKA KOIL KSO KWCR KWK
KYW WBAL WBZ WBZA WGAR
WHAM WJR WJZ WLW WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00 B — D. W. Griffith, See Wednesday

E-10:15 p.m., C-9:15, M-8:15, P-7:15 E-10:19 p.m., c-9:19, m-6:19, F-(:19 R — David Lawrence KSD KTBS KVOO WEAF WENR WFBR WFI WFLA WGY WHO WIOD WIS WJAR WJDX WKY WOAI WOC WOW WRC WSAI WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C— Ernest Hutcheson, Pianist
CFRB CKOK KFH KLZ KMBC
KSCJ KTRH KTSA KVOR WAAB
WABC WADC WBCM WBT WCAO
WCAU WCCO WDAE WDBO WDOD
WDRC WDSU WEAN WFBM WFEA
WGR WHEC WHK WIBW WICC
WISN WJAS WJSV WKBN WJBW
WJBZ WMBD WODX WOKO WORC
WPG WQAM WSJS WSPD WTAR
WTOC
R — ROMANGES

R — Romances KSD WBEN WCAE WDAF WEAF WEEI WFBR WFI WGY WHO WIOD WIS WJAR WJAX WMAQ WOC WOW WRC WTAG WTAM WWJ WWNC

B — Orange Lantern Drama CFCF CKGW KDKA KSO KWCR KWK WBAL WGAR WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 R — Sunday at Seth Parker's CFCF CKGW KDYL KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KPRC KSTP KTAR KTBS KTHS KYW WAPI WBAP WBEN WCAE

WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WEDG WEEL WFBR WFLA WFLAR WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WMC WOAI WOC WOW WRC WRVA WSAI WSB WSMB WTAG WTAM WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — The Gauchos

C—The Gauchos
CKOK KFAB KFH KLZ KSCJ KTRH
KVOR WAAB WABC WADC WBCM
WBRC WBT WCAO WDAE WDBO
WDOD WDRC WDSU WEAN WFAN
WFBM WGR WHEC WIBW WICC
WIP WISN WJAS WJSV WKBN
WILBU WLBZ WMBD WNAX WODX
WOKO WPG WQAM WSJS WSPD
WTAR WTOC

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Angelo Patri, Your Child KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KOIN KOL KSL KVI

KWG

B — Sam Herman, Zylophonist CFCF CKGW KOIL KSO KWCR KWK WBAL WGAR WHAM WJR KWK WBAL WGAR WHAM WJR WJZ WMAQ WREN B — Walter Winchell KDYL KFI KGHL KGIR KGO KGW

KHQ KOA KOMO KPRC KTAR KTBS KTHS WAPI WBAP WJDX WKY WMC WOAI WSB WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C— Isham Jones and Orchestra CFRB KTRH WABC WADC WBCM WBRC WBT WCAO WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WGR WICC WISN WJSV WKBN WLBZ WNAC WOKO WPG WQAM WSBT WSJS WSPD WTAR WTOC

C — Pennzoil Parade KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL

KSL KVI KWG R — Melodic Serenade KDYL KFSD KFYR KGHL KGO KHQ KPRC KSTP KTAR KTBS WAPI WBAP WCAE WCSH WDAF WEAF WEBC WENR WFBR WFLA WGY WHO WIBA WIS WJAR WMC WOC WOW WRC WSB WSMB WTAG WTAM WTIC WWNC

B — Jesse Crawford, Organist KDKA KOIL KSO KWCR KYW WBAL WBZ WBZA WCKY WHAM WJZ WREN

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C — Ben Pollack and Orchestra

CHOK KFAB KLZ KMOX KSCJ KTRH KVOR WABC WBRC WBAN WGAU WCCO WDAE WDOD WBAN WGR WIBW WICC WISN WJSV WLBW WMDD WNAC WNAX

WOKO WPG WSBT WSPD

R — Gus Van and Joe Furst

WCAE WEAF WFBR WGY WJAR

WOW WTAM

B — William Stoess and Orchestra B — William Steess and Orchestra KFYR KGHL KGO KGW KHQ KOA KOLL KOMO KPRC KSTP KTBS KWCR KWK WBZ WBZA WDAY WEBC WENR WFLA WGAR WHAM WIBA WIOD WIS WJR WJZ WKY WLW WMC WREN WSB WSM WSMB WWNC

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

Carborundum Band, 9:30 p.m., Saturday, C. Little German Band, 6:00 p.m., Saturday, B.

CONCERTS

Howard Barlow, 11:00 p.m., daily, ex. Sat. and Sun., C. Boston Symphony, 8:15 p.m., Saturday, B. Concert Footlights, 7:30 p.m., Thursday, B. Concert Orchestra, 10:30 p.m., Friday, B. Gauchos, 11:00 p.m., Sunday, C. General Electric, 9:00 p.m., Saturday, C. Alexander Haas, 8:30 p.m., Saturday, C. L'Heure Exquise, 10:30 p.m., Sunday, R. Walter Logan, 1:30 p.m., Sunday, R. N. Y. Philharmonic, 3:00 p.m., Sunday, C. Russian Gaieties, 8:00 p.m., Sunday, B. Walter Smith Concert, 7:15 p.m., Sunday, C. Cesare Sodero, 11:15 p.m., daily, ex. Fri., sat. and Sun., B. Symphony Concert, 9:00 p.m., Wednesday, R. Waldorf-Astoria, 6:00 p.m., daily, ex. Fri., sat.

DANCE BANDS Ben Bernie, 12 mid., Wed., B; 9:00 p.m. and 12:30 a.m. Tuesday, R.

On Bestor, 11:00 p.m., Thursday, R.

Cab Calloway, 12 mid., Tues. and Fri., B.

Jack Denny, 11:30 p.m., Mon. and Thurs.; 11 p.m., Sat., R.

Clyde Doerr, 2:15 p.m., Sunday, R.

Ted Fiorito, 12 mid., Saturday, C.

George Hall, 6:15 p.m., Wed. and Fri., C.

Buddy Harrod, 6:45 p.m., Monday, C.

Joe Haymes, 6:45 p.m., Thursday, C.

Joe Haymes, 6:45 p.m., Thursday, C.

Jaham Jones, 11:30 p.m., Sun.; Tues., Wed. and Thurs., C.

Len Joy, 9:30 p.m., Thursday, B.

Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues., R.

Del Lampe, 6:00 p.m., Mon. and Fri., B.

Guy Lombardo, 11:30 p.m., Mon.; 9:30 p.m., Wed.; 11:00 p.m., Sat., C. Tuesday, R. Guy Lombardo, 11:30 p.m., Mon.; 9:30 p m., Wed.; 11:00 p.m., Sat., C. Vincent Lopez, 12:30 a.m., Saturday, R. Abe Lyman, 12 mid., Mon. and Thurs.; 11:30 p.m., Fri.; 8:45 p.m., Tues., Wed. and Thurs., C. Doif Martin, 7:30 p.m., Monday, C. Ozzie Nelson, 7:15 p.m., Saturday, R. George Olsen, 9:30 p.m., Saturday, R. Ben Pollack, 12 mid., Sun. and Fri., C. Don Redman, 12 mid., Tues. and Wed., C. Harold Stern, 11:30 p.m., Saturday, B. Rudy Vallee, 8:00 p.m., Thursday, R. Anson Weeks, 7:45 p.m., Tues.; 7:00 p.m., Sat., B; 11:00 p.m., Fri., R. Ted Weems, 11:00 p.m., Mon.; 12 mid., Sat., R. Paul Whiteman, 6:30 p.m., Sun., B; 9:30 p.m., Mon.; 11:30 p.m., Sat., R.

DIALOG
Fred Allen, 9:00 p.m., Sunday, C.
Amos 'n' Andy, 7 and 11 p.m., daily, ex. Sat. and Sun., B.
Burns and Allen, 9:30 p.m., Wednesday, C.
Cuekoo, 7:45 p.m., Saturday, B.
Easy Aces, 8:00 p.m., Tues., Thurs. and Sat., C.
Howard and Shelton, 9:00 p.m., Tues. and Fri., C.
Marx Brothers, 7:30 p.m., Monday, B.
Baron Munchausen, 10:00 p.m., Thursday, R.
Ken Murray, 8:00 p.m., Wednesday, R.
Ken Murray, 8:00 p.m., Wednesday, R.
Reis and Dunn, 6:15 p.m., Mon. and Tues., C.
Stoopnagle and Bud, 9:30 p.m., Thursday, C.
Mr. Twister, 10:00 p.m., Thursday, B.

DRAMA

Red Adams, 8:30 p.m., Sunday, B.
Big Ben, 5:15 p.m., Sunday, R.
Death Valley Days, 9:00 p.m., Thursday, B.
Eno Crime Club, 8:00 p.m., Tues. and Wed., B.
First Nighter, 9:00 p.m., Friday, B.
Foreign Legion, 8:30 p.m., Sunday, C.
Fu Manchu Mystery, 8:30 p.m., Monday, C.
Goldbergs, 7:45 p.m. and 12 mid, daily, ex. Sat. and Sun., R.
Great Moments in History, 7:30 p.m., Sunday, B.
Griffith's Hollywood, 10:00 p.m., Sun. and Wed., B.

Sherlock Holmes, 9:00 p.m. and 12:15 a.m., Wednesday, B. K.-7, 1:00 p.m., Sunday, R. Phillips Lord, 8:45 p.m., Mon., Tues. and Wed., B. Magic Voice, 8:15 p.m., Tues. and Sat., C. March of Time, 8:30 p.m., Friday, C. Moonshine and Honeysuekle, 2:30 p.m., Sunday, R. Myrt and Marge, 7:00 and 10:45 p.m., daily, ex. Sat. and Sun., C. Mysteries in Paris, 9:30 p.m., Monday, C. Orange Lantern, 10:30 p.m., Sunday, B. Pages of Romance, 5:30 p.m., Sunday, B. Rin Tin Tin, 8:30 p.m., Thursday, B. Rin Tin Tin, 8:30 p.m., Thursday, B. Buck Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C. Roses and Drums, 5:00 p.m., Sunday, C. The Shadow, 8:30 p.m., Wednesday, R. Soconyland Sketches, 8:00 p.m., Monday, R. Squibb's, 4:30 p.m., Sunday, R. Wheatenaville, 7:15 p.m., daily, ex. Fri. and Sat., R.

PIANO AND ORGAN

Jesse Crawford, 11:30 p.m., Sunday, B.
Archer Gibson, 10:30 p.m., Mon., B; 8:00 p.m., Sat., R.
Harding Sisters, 10:30 p.m., Mon., B; 8:00 p.m., Sat., R.
Harding Sisters, 10:30 p.m., Saturday, B.
Ernest Hutcheson, 10:30 p.m., Sunday, C.
Vee Lawnhurst, 4:15 p.m., Sunday, R.
Ohman and Arden, 2:15 p.m., Sun, C.; 9:30 p.m., Sun. R.
Lew White, 11:15 p.m., Saturday, B.

POPULAR PROGRAMS

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R.
Album of Familiar Music, 9:30 p.m., Sunday, R.
Bath Club, 9:00 p.m., Sunday, C.
Bue Coal Revue, 5:30 p.m., Sunday, C.
Major Bowes' Family, 11:15 a.m., Sunday, R.
California Melodies, 9:30 p.m., Tueeday, C.
Chase and Sanborn, 8:00 p.m., Sunday, R.
Cities Service, 8:00 p.m., Friday, R.
Clicquot Club Eskimos, 8:00 p.m., Monday, R.
Clicquot Club Eskimos, 8:00 p.m., Monday, R.
Corn Cob Pipe Club, 10:00 p.m., Monday, R.
Corn Cob Pipe Club, 10:00 p.m., Monday, R.
Firestone, 8:30 and 11:30 p.m., Monday, R.
Firestone, 8:30 and 11:30 p.m., Monday, R.
Five Star Theatre, 10:00 p.m., Tues, and Thurs., C.; 7:30 p.m., Mon, Wed, and Fri., B.
Jack Frost's Melody, 9:30 p.m., Monday, B.
Garcia's Novelty Orchestra, 9:30 p.m., Tuesday, B.
San Herman, 11:15, p.m., Sunday, B.
Household Musical Memories, 9:00 p.m., Tuesday, B.
Household Musical Memories, 9:00 p.m., Tuesday, B.
Lucky Strike, 10:00 p.m., Sunday, R.
Lucky Strike, 10:00 p.m., Tues, Thurs, and Sat., R.
Manhattan Merry-Go-Round, 3:30 p.m., Sunday, B.
Matinee of the Air, 2:15 p.m., Sunday, C.
Maxwell House, 9:00 p.m., Thursday, R.
Borrah Minevitch, 7:00 p.m., Sunday, B.
Pennzoil Parade, 9:30 and 11:30 p.m., Sunday, C.
Pond's Program, 9:00 p.m., Friday, R.
Royal Vagabonds, 8:00 p.m., Friday, R.
Royal Vagabonds, 8:00 p.m., Wednesday, R.
Sinclair Minstrels, 9:00 p.m., Monday, R.
Ed Wynn, 9:30 p.m., Tuesday, R.
Yeast Foamers, 2:30 p.m., Sunday, B.

QUARTETS

Mills Brothers, 9:15 p.m., Mon. and Thurs., C. Revelers, 4:30 p.m., Sunday, R. Singing Cylinders, 5:30 and 6:00 p.m., Sunday, B. Southernaires, 12:30 p.m., Sunday, R.

RELIGIOUS

Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R. Cathedral Hour, 6:30 p.m., Sunday, C. Catholic Hour, 6:00 p.m., Sunday, R. Church of the Air, 1:30 p.m., Sunday, C. Rev. Charles E. Coughlin, 4:00 p.m., Sunday, C. Rev. Charles E. Coughlin, 4:00 p.m., Sunday, Mid-Week Hymn Sing, 6:30 p.m., Tuesday, R. National Youth Conference, 4:30 p.m., Sunday, B. Our Church Music, 3:00 p.m. Sunday, B. Our Church Music, 3:00 p.m. Sunday, B. Our Church Music, 3:00 p.m., Sunday, B.

Seth Parker's, 10:45 p.m., Sunday, R. Salt Lake Choir, 12 noon, Sunday, C. Temple of Song, 4:00 p.m., Sunday, B.

SINGERS

SINGERS

Ilomay Bailey, 10:30 p.m., Tues. and Thurs., B. Al Bernard, 6:30 p.m., Monday, R. Louise Bernhardt, 7:30 p.m., Thursday, B. Boswell Sisters, 10:00 p.m., Wed. and Sat., C. Buccaneers, 11:00 p.m., Saturday, B. Eddie Cantor, 8:00 p.m., Sanday, R. Eddie Cantor, 8:00 p.m., Sunday, R. Charles Carlile, 10:45 p.m., Thursday, C. Russ Columbo, 12 mid., Monday, B. Richard Crooks, 8:30 and 11:30 p.m., every other Mon., R. Bing Crosby, 9:00 p.m., Wed. and Sat., C. Vaughn De Leath, 6:30 p.m., Mon.; 6:00 p.m., Wed. and Fri., C. Dennis and Reese. 7:00 p.m. Dennis and Reese, 7:00 p.m., Tuesday, R. Do Re Mi Girls, 9:15 p.m., Friday, C. Morton Downey, 10:00 p.m., Mon. and Fri., C; 9:30 p.m., Morton Downey, 10:00 p.m., Mon. and Fin., O, 5.50 p.m., Wed., B. Jessica Dragonette, 8:00 p.m., Friday, R. Mary Eastman, 8:15 p.m., Sunday, C. Eddie and Ralph, 9:30 p.m., Friday, B. Ruth Etting, 9:00 p.m., Mon. and Thurs., C. Fields and Hall, 6:45 p.m., Saturday, B. Jane Froman, 4:00 p.m., Sun.; 7:00 p.m., Mon., Thurs. and Fri R. Jane Froman, 4:00 p.m., Saturday, B. Mon., Thurs. and Fri. R. Jack Fulton, 8:30 p.m., Monday, B. Funnyboners, 6:45 p.m., Wed. and Sat., C. William Hall, 9:15 p.m., Fri.; 7:15 p.m., Sat., C. Jackie Heller, 7:00 p.m., Saturday, R. Al Jolson, 10:00 p.m., Friday, R. Al Jolson, 10:00 p.m., Friday, R. Al Jolson, 10:00 p.m., Mon and Fri.; 10:15 p.m., Wed., B. Little Jack Little, 6:15 p.m., Sunday, C. Nino Martini, 11:00 p.m., Wed. and Fri., C. Smiling Ed McConnell, 2:00 p.m., Sunday, C. Tommy McLaughlin, 9:15 p.m., Tuesday, C. Monarch Mystery Tenor, 2:00 p.m., Sunday, B. Morin Sisters, 10:00 p.m., Tuesday, B. Morin Sisters, 10:00 p.m., Wed., B; 6:35 p.m., Thurs., R. Donald Novis, 9:30 p.m., Wed., B; 6:35 p.m., Thurs., R. Chickens Sisters, 10:45 p.m., Sat., B; 7:30 p.m., Thurs., C. Pickens Sisters, 10:45 p.m., Sat., B; 7:30 p.m., Sun., R. Carson Robison, 7:15 p.m., Wed. and Thurs., B. Lanny Ross, 11:00 p.m., Tues., B; 9:00 p.m., Thurs.; 10:45 p.m., Fri., R. Salon Singers, 10:15 p.m., Saturday, B. Sanderson-Crumit, 8:00 p.m., Tuesday, R.
Ethel Shutta, 9:30 p.m., baturday, R.
Singin' Sam, 8:15 p.m., Mon, Wed. and Fri., C.
Kate Smith, 8:30 p.m., Tues., Wed. and Thurs., C.
Aileen Stanley, 11:15 p.m., Friday, B.
Street Singer, 12:45 p.m., Friday, B.
Street Singer, 12:45 p.m., Sun.; 7:45 p.m., Sat., C.
Tastyeast Jesters, 7:15 p.m., Monday, B.
Irene Taylor, 7:30 p.m., Tuesday, R.
Three Keys, 11:00 p.m., Thursday, B.
Three X Sisters, 7:30 p.m., Wed. and Fri., C.
Lawrence Tibbett, 8:30 and 11:30 p.m., every other Mon. R.
Trade and Mark, 8:00 p.m., Fri., C; 7:45 p.m., Sun., R.
Gus. Van, 6:00 p.m., Tues., B; 12:00 mid., Sun.; 9:30 p.m.,
Sat., R. Sat., R. Whispering Jack Smith, 8:00 p.m., Mon. and Wed., C.

TALKS

TALKS

America's Grub Street, 6:00 p.m., Saturday, C.
American Taxpayers' League, 8:00 p.m., Saturday, B.
Better Reception, 6:30 p.m., Thursday, C.
Boake Carter, 7:45 p.m., daily, ex. Sat. and Sun., C.
Economic World Today, 8:30 p.m., Saturday, R.
William Hard, 6:45 p.m., Tuesday, R.
Edwin C. Hill, 10:30 p.m., Tues. and Thurs.; 9:15 p.m.,
Wed.; 9:30 p.m., Fri, 9:15 p.m., Sat., C.
Horlick's Health, 8:30 p.m., Tues. and Fri., B.
International Forum, 2:00 p.m., Sunday, R.
H. V. Kaltenborn, 6:00 p.m., Sunday, C.
Dr. Julius Klein, 7:00 p.m., Sunday, C.
Frederick Landis, 2:45 p.m., Sunday, C.
Warden Lawes, 9:00 p.m., Sunday, R.
Laws That Safeguard, 6:30 p.m., Sunday, R.
Laws That Safeguard, 6:30 p.m., Sunday, R.
National Radio Forum, 10:30 p.m., Sunday, R.
Our American Schools, 6:30 p.m., Sunday, R.
Angelo Fatri, 7:45 and 11:15 p.m., Sunday, C.
Radio in Education, 7:15 p.m., Tuesday, B.
Nellie Revell, 11:00 p.m., Wednesday, R.
Sigmund Spaeth, 10:15 p.m., Tuesday, B.
Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., B;
5:00 p.m., Sunday, R.
Merle Thorpe, 7:15 p.m., tearday, B.
Howard Thurston, 8:45 p.m., Thurs. and Fri., B.
Carveth Wells, 10:30 p.m., Saturday, C.
Frederic William Wile, 7:00 p.m., Saturday, C.

KEY TO SYMBOLS

As Shown in the Index by Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in killowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. R-C indicates Remote Control. Where space permits, names of hotels or other buildings used in announcements are shown in parenthesis. These are not mail addresses.

Second Column Symbols

- Verifies reception for return post-
- Verifies only occasionally. Does not verify.
- Verification 10c; letter 25c.
- Sends Ekko stamp for 10c.
- Sends Ekko stamp for 5c. Sends Ekko stamp for postage. Sends own station stamp for 10c.
- Sends own station stamp for 5c. Sends own station stamp for post-
- k Has no stamps.
 - No information available.

Fourth Column Symbols

These stations are synchronized.

- National "Blue" network.
- Columbia network.
- Daytime only. Dn Daytime with occasional evening
- hours Trans-Canada network
- Canadian National Railways network.
- All Canadian networks. \mathbf{H} Yankee network.
- Orange and gold network. Mexican networks.
- Canadian Pacific Ry. network
- (Dominion). Canadian Radio Corp. network.
- National "Red" and "Blue" networks.

- Has construction permit only.
- Great Lakes network. National "Red" network.
- Sunday only.
- Don Lee System. Dixie network.
- Maritime Broadcasting network. Curtis-Indiana network.
- Has permit to increase power. Has permit to change location. Has permit to change frequency.
- a-b-c. Small letters show stations using same transmitter. 1-2-3. Figures denote stations sharing
- time. No information.

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FOR KEY TO SYMBOLS SEE PAGE 45

				FOR I	KEY TO SYMBOLS SE	EE PAGE 45
	540 1	tiloc	ycle	s 555.	.2 meters	
	CKOK	ae z	5000 105	CG 546.8	Windsor, Ont. Merida, Mex.	Essex Broadcasters, Ltd. Partido Socialista S. E.
	550 1	tiloc	ycle	s 545.	.1 meters 🗌	
	KFDY KFUO KFYR KOAC KSD WDEV WGR WKRC	ae ah ak ak ae ae ak	500 500 1000 1000 500 500 1000	(1)1 2(1) 1N(2.5) 2R D C C	Brookings, S. D. St. Louis, Mo. Bismarck, No. Dakota Corvallis, Ore. St. Louis, Mo. Waterbury, Vt. Buffalo, N. Y. Cincinnati, Ohio	South Dakota State College Evangelical Lutheran Church Meyer Broadcasting Co. Oregon State Agricultural College Pulitzer Publishing Co. Harry G. Whitehill Buffalo Broadcasting Corp. WKRC, Inc., Hotel Alms
	560 1	tiloc	ycle	s 535	.4 meters	
=	KFDM KLZ KTAB WFI WIBO WLIT WNOX WPCC WQAM	ak ae ae ae ak ak ak	500 1000 1000 500 1000 500 1000 500 1000	(1) C IR (1.5)a IR C(2) Sa C	Beaumont, Texas Denver, Colo. San Francisco, Calif. Philadelphia, Pa. Chicago, Ill. Philadelphia, Pa. Knoxville, Tenn. Chicago, Ill. Miami, Fla.	Sabine Broadcasting Co., Inc. Reynolds Radio Co., Inc. Associated Broadcasters, Inc. WFI Broadcasting Co. Nelson Bros. Bond & Mtg. Co. Lit Bros. Broadcasting System, Inc. So. Carolina Broadcasting Co., Inc. North Shore Congregational Church Miami Broadcasting Co.
	570 1	ciloc	ycle	s 526	.0 meters	
	KGKO KMTR KVI TGW WEAO WKBN WMCA WNAX WNYC WSYR WWNC	z aeh ae z ae ak ak ae ak ak	250 500 500 500 750 500 500 1000 500 250 1000	(.5) C 11C 3 C 3 R2 N	Wichita Falls, Texas Hollywood, Calif. Tacoma, Wash. Guatamala Columbus, Ohio Youngstown, Ohio New York, N. Y. Yankton, S. D. New York, N. Y. Syracuse, N. Y. Asheville, N. C.	Wichita Falls Broadcasting Co. KMTR Radio Corp. Puget Sound Broadcasting Co. Ohio State University WKBN Broadcasting Corp. Knickerbocker Broadcasting Co., Inc. House of Gurney, Inc. Dept. of Plant & Structures Central N. Y. Brdcstg. Corp. Citizens Broadcasting Co., Inc.
	580 1	ciloc	ycle	s 516	.9 meters 🗀	
77	CFCY CHMA CKCL CKUA CMDD CMW KMJ WBO WBO WBW WOBU WSAZ WTAG	ae ak aj ak z ae ak ae ak ae	500 250 500 500 1400 500 250 1000 250 250 250 250	E 4S 4F 588 585 585 CT 2(1) CU C2 1(.5) 1(.5) R(.5)	Charlottetown, P. E. I. Edmonton, Alta. Toronto, Ont. Edmonton, Alta. Havana, Cuba Havana, Cuba Fresno, Calif. Manhattan, Kans. Orlando, Fla. Topeka, Kans. Charleston, W. Va. Huntington, W. Va. Worcester, Mass.	Island Radio Broadcasting Co., Ltd. Christian & Missionary Alliance The Dominion Battery Co. University of Alberta G. deSequeira Troncos y Gil McClatchy Radio Stations (Fresno Bee) State Agricultural College Orlando Broadcasting Co., Inc. Capper Publications WOBU, Inc., Ruffner Hotel WSAZ, Inc. Worcester Telegram Pub. Co., Inc.
	590 1	ciloc	ycle	s 508	.2 meters	
_	CJGC •KHQ WCAJ WEEI WKZO •WOW	ae ak ae ak ae aeh	5000 1000 500 1000 1000 1000	595GZ N(2) 1 R D 1R	London, Ont. Spokane, Wash. Lincoln, Neb. Boston, Mass. Kalamazoo, Mich. Omaha, Neb.	Free Press Printing Co., Ltd. Louis Wasmer, Inc. Nebraska Wesleyan University Edison Electric Illuminating Co. WKZO, Inc., Burdick Hotel Woodmen of the World

INDEX BY F	REQUENCIES ANI	D DIAL NUMBERS	
600 kilocycles 499	.7 meters 🗀		KCYS.
CNRO ak 500 F	Ottawa, Ont. San Diego, Calif. Storrs, Conn. Baltimore, Md. Bridgeport, Conn. Waterloo, Iowa Memphis, Tenn.	Canadian National Railways Airfan Radio Corp. Connecticut Agricultural College Monumental Radio Co. Bridgeport Bdctg. Station, Inc. Waterloo Broadcasting Co. WREC, Inc.	680 MTRS 440.9 DIAL
610 kilocycles 491	.5 meters 🗀]
KFRC ae 1000 C WDAF ae 1000 R WIP ak 500 C WJAY ae 500 D XETR z 1000	San Francisco, Calif. Kansas City, Mo. Philadelphia, Pa. Cleveland, Ohio Mexico City, Mexico	Don Lee Broadcasting System Kansas City Star Co. Pennsylvania Bdctg. Co. (WFAN) Cleveland Radio Broadcasting Corp. Cia. Difusora Mexicana S. A.	
620 kilocycles 483	6 meters] [
—KGW ae 1000 N —KTAR ae 500 NJ(1) WFLA ae 1000 Na(2.5) WLBZ ak 500 C WSUN ae 1000 Na(2.5) WTMJ ae 1000 N(2.5)	Portland, Ore. Phoenix, Ariz. Clearwater, Fla. Bangor, Maine St. Petersburg, Fla. Milwaukee, Wis.	Oregonian Publishing Co. KTAR Broadcasting Co. Florida West Coast Bdctg. Co., Inc. Maine Broadcasting Co., Inc. Florida West Coast Bdctg. Co., Inc. Journal Company	
630 kilocycles 475	.9 meters	1] !
CFCT ae 500 G CJGX ae 500 FL CKOC ae 1000 635aG CKTB ae 1000 635aL CMCU z 150 CNRA ae 700 F HIX ah 1000 *KFRU ak 500 I KGFX z 200 D WGBF ae 500 W WMAL ae 250 (.5) WOS ak 500 ID XETF ak 500 K XFG z 2000 638.3	Victoria, B. C. Yorkton, Sask. Hamilton, Ont. St. Catharines, Ont. Havana, Cuba Havana, Cuba Moncton, N. B. Santo Domingo, D. R. Columbia, Mo. Pierre, S. D. Evansville, Ind. Washington, D. C. Jefferson City, Mo. Veracruz, Ver., Mexico Mexico City, Mexico	KFRU, Inc. Dana McNeil Evansville On the Air, Inc. M. A. Leese Radio Corp., Inc.	CUT OUT ON DO
640 kilocycles 468	.5 meters		DOTTED
CHRC ak 100 645aG CKCI ck 100 645a CKCR ak 100 645G 	Quebec, Que. Quebec, Que. Waterloo, Ont. Los Angeles, Calif. Columbus, Ohio Ames, Iowa	CHRC, Ltd., Victoria Hotel Le Soleil, Ltd. Mitchell & Liddle Earls C. Anthony, Inc. American Insurance Union State College of Agriculture	ID LINES
650 kilocycles 461	.3 meters	12	1!
WSM aej 50000 N	Seattle, Wash. Nashville, Tenn.	Queen City Broadcasting Co. National Life & Accident Ins. Co.	- [
660 kilocycles 454	.3 meters		-
CHWK ak 100 665 CJRM z 500 665 CJRW z 1000 665 RUS z 500 664 WAAW agh 500 D WEAF ak 50000 R	Chilliwack, B. C. Moose Jaw, Sask. Fleming, Sask. Salvador Omaha, Neb. New York City	Chilliwack Broadcasting Co., Ltd. Jas. Richardson & Sons, Ltd. Jas. Richardson & Sons, Ltd. Republic of El Salvador Omaha Grain Exchange National Broadcasting Co., Inc.	
	.5 meters]
-WMAQ ae 5000 N	Chicago, Ill.	WMAQ, Inc. (NBC Lessees)	-, I
	.9 meters	International Brandonstine C-	⊿¦
CMAF ak 1000 —KFEQ ae 2500 D —KPO ak 5000 N WPTF ae 1000 N Dn	Havana, Cuba St. Joseph, Mo. San Francisco, Calif. Raleigh, N. C.	International Broadcasting Co. Scroggin & Co., Bank National Broadcasting Co., Inc. Durham Life Insurance Co.	

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600 1-111	121 E	
690 kilocycles		
CFAC ak 500 10 CFRB ae 10000 C	M Toronto, Ont.	Calgary Herald, Ltd. Rogers-Majestic Corp., Ltd.
CFRB ac 10000 C CJCJ ak 500 11 NAA z 1000	LE Calgary, Alta.	Albertan Publishing Co., Ltd. U. S. Navy
VAŞ z 2000 68	Arlington, Va. Glace Bay, N. S.	Canadian Marconi Co.
XET ck 500	Monterrey, Mexico	Cadena Radio Difusora Mexicana S. A.
700 kilocycles	428.3 meters	
→WLW ae 50000 N	Cincinnati, Ohio	The Crosley Radio Corporation
710 kilocycles	422.3 meters	
WOR ak 5000 X	n Beverly Hills, Calif. Newark, N. J.	R. S. MacMillan Bamberger's Broadcasting Service, Inc.
-XEN agj 1000 71	Newark, N. J. 11K Mexico City	Cerveceria Modelo S. A.
720 kilocycles	416.4 meters	
WGN ak 25000 C		WGN, Inc., Drake Hotel
730 kilocycles	410.7 meters	-
CHLS ak 100 11		W. G. Hassell (Province Bldg.)
CHYC z 5000 S	a Montreal, Que.	Northern Electric Co., Ltd. La Presse Publishing Co., Ltd.
CKCD z 100 11	h Vancouver, B. C.	Vancouver Daily Province
CKFC ak 50 1 —CKMO z 100 1	vancouver. B. C.	United Church of Canada Sprott-Shaw Radio Co.
EKWX ak 100 1		Sprott-Shaw Radio Co. Western Broadcasting Co., Ltd.
CMK ach 3150 XEF-XER z 75000 73	Havana, Cuba 35-665 Villa Acuna, Mexico	National Broadcasting Co. of Cuba Villa Acuna Broadcasting Co., Inc.
740 kilocycles	405.2 meters	
	45EL Edmonton, Alberta	Edmonton Journal, Ltd.
KMMJ bk 1000 D	n Clay Center, Neb.	M. M. Johnson Co. (R/C Lincoln)
WSB ach 5000 N WHEB ak 250 D	Atlanta, Ga. Portsmouth, N. H.	Atlanta Journal, Biltmore Hotel Granite State Broadcasting Co.
750 kilocycles	399.8 meters	
ECH at 2500 N	X Honolulu Hawaii	Advertiser Publishing Co.
VOWR ak 750	St. John's, N. F. Detroit, Mich.	Wesley United Church WJR, The Goodwill Station, Inc.
WJR ak 10000 B XEAN ach 5000	Juarez, Chih., Mexi	Wesley United Church WJR, The Goodwill Station, Inc. ico Radio Difusora National S. A.
760 kilocycles	394.5 meters	
	5) Seattle, Wash.	American Radio Tel. Co.
WBAL ae 10000 B	A Baltimore, Md. St. Louis, Mo.	(See 1060 kcys. also) St. Louis University
WEW ae 1000 D wJZ ck 30000 B	A New York City	National Broadcasting Co., Inc.
770 kilocycles	389.4 meters	
KFAB ae 5000 10	C Lincoln, Neb.	KFAB Broadcasting Co.
		WBBM Bdctg. Corp. (Wrigley Bldg.)
780 kilocycles	384.4 meters	Note to Title 1
C) (D) (150	Winnipeg, Man. Havana, Cuba	Manitoba Telephone System Enrique Artalejo
	Havana, Cuba	Andres Martinez
✓KTM ae 500 20	Burbank, Calif. 1) Los Angeles, Calif.	Magnolia Park, Ltd. Pickwick Broadcasting Corp., Ltd.
WBAN ak 250 C	(1) Los Angeles, Calif. H(.5) Providence, R. I. (1) Memphis, Tenn.	Shepard Broadcasting Service, Inc.
WPOR ach 500 b	Portsmouth, Va.	Memphis Commercial Appeal, Inc. WTAR Radio Corp. (Norfolk)
WTAR ach 500 b	C Norfolk, Va. Mexico City	WTAR Radio Corp. Cia. Difusora de Mexico S. A.
790 kilocycles	379.5 meters	
CMHC z 250	Tuinucu, Cuba	Frank H. Jones
CMJK z 300	Camaguev, Cuba	Tano Gomez
─KGO ak 7500 N ─WGY ak 50000 R	San Francisco, Cali Schenectady, N. Y.	f. General Electric Co. (Opr. NBC) General Electric Co.
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		INDE	X BY F	REQUENCIES AN	ND DIAL NUMBERS	i
800 1	kilo			.8 meters]
-WBAP -WFAA	ak ak	50000 50000	Na Na	Fort Worth, Texas Dallas, Texas	Carter Publications, Inc. Dallas News-Dallas Journal	
810 1	kilo	cycle	s 370	.2 meters	. <u> </u>].
CHNS CNRH VOAS -WCCO WPCH XFC XFI	ae ak ae ae ak z	500 500 200 50000 500 350 1000	815aZG 815aZ D C D	Halifax, N. S. Halifax, N. S. St. John's, N. F. Minneapolis, Minn. New York City Aguascalientes, Mex. Mexico City, Mexico	Maritime Bdctg, Co., Ltd. Oprs. Canadian National Railways Ayre & Sons, Ltd. Northwestern Broadcasting, Inc. Eastern Broadcasters, Inc. Gobierno del Estado de Aguascaliente Sria. de Ind. C. y Trabajo	s KCYS.
820 1	kilo	cycle	s 365	5.6 meters		MTRS.
-CMGC -WHAS	z aj	30 25000	ċ	Matanzas, Cuba Louisville, Ky.	Oscar S. Mechoso The Louisville Times Co., Inc.	336.9
830 1	kilo	cycle	s 361	.2 meters		DIAL
CMGA KOA WEEU WHDH WRUF XETW	ak ae ae z	100 12500 1000 1000 5000 500	834 NJ D DY DnC	Colon, Cuba Denver, Colo. Reading, Pa. Boston, Mass. Gainesville, Fla. Mexico City, Mexico	L. Valdes Figueroa General Electric Co. (NBC Opr.) Berks Broadcasting Co. Matheson Radio Co., Inc. State of Florida (Univ. of Fla.) Rafael M. Pena	
840 1	kilo		s 356	.9 meters		∐
CHNC CKGW CKLC CMC CMC XETH XETM XFB	z ae ak z ae z z z	5000 5000 1000 500 5000 100 15000 500	a NEa G La P845	Toronto, Ont. Toronto, Ont. Red Deer, Alta. Havana, Cuba Toronto, Ont. Puebla, Mexico Matamoros, Mex. Jalapa, Mexico	Canadian National Carbon Co., Ltd. Gooderham & Worts, Ltd. Alberta Pacific Grain Co., Ltd. Cuban Telephone Co. Canadian Pacific Co., Royal York Hote Ramon Huerta Miguel Musquiz, A. Estado de Vera Cruz	1
×850 1	xilo	cycle	s 352	.7 meters] [
KIEV KWKH WWL	z ae ak	100 10000 10000	D 1 1DnX	Glendale, Calif. Shreveport, La. New Orleans, La.	Cannon Systems, Inc. Hello World Broadcasting Corp. WWL Development Co. (Loyola Univ.)	
860 1	cilo	cycle	s 348	.6 meters] [8
VOGY WABC WBOQ WHB XFX	z ae ae ae z	500 50000 50000 500 500	P aC a D	St. John's, N. F. New York City New York City Kansas City, Mo. Mexico City, Mexico	Atlantic Broadcasting Corp. Atlantic Broadcasting Corp. (tests) WHB Broadcasting Co. Secretaria de Educacion Publica	TOUT ON DOTTED LINES
		ycle		.6 meters] S
WENR	ak ae	50000 50000	Na Na	Chicago, Ill. Chicago, Ill.	Great Lakes Bdctg. Co. NBC Opr. Agricultural Broadcasting Co.	
880 1	ciloc	ycle	s 340	.7 meters		
CHML CJCB CKCV CKPC KFKA KLX KPOF WCOC WGBI WQAN WSUI XEPN	ae ak ak ae ae ae ah ak ae	50 100 100 100 500 500 500 500 250 250 500	4G G 4L 2(1) (1) Q1 1	Hamilton, Ont. Sydney, N. S. Quebec, Que. Preston, Ont. Greeley, Colo. Oakland, Calif. Denver, Colo. Meridian, Miss. Scranton, Pa. Scranton, Pa. Iowa City, Iowa Piedras Negras, Mex.	Maple Leaf Radio Co., Ltd. Nathansan's Radio Headquarters Vandry, Inc. Cyrus Dolph Mid-Western Radio Corp. Tribune Publishing Co. Pillar of Fire Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times State University of Iowa (Yolanda Hotel, Eagle Pass, Tex.)	NES I I I I I I I I I I I I I I I I I I I
890 k	ciloc	ycle	s 336	.9 meters 🗌		
CFBO CKCO CKPR CMCF CMX KARK KFNF KSEI KUSD	z ak ak ae ak ak ae	500 100 100 250 500 250 500 250 500	3 3G 1 1 2(1) (.5) 2	St. John, N. B. Ottawa, Ont. Fort William, Ont. Havana, Cuba Havana, Cuba Little Rock, Ark. Shenandoah, Iowa Pocatello, Idaho Vermillion, S. Dak.	C. A. Munro, Ltd. Dr. G. M. Geldert Dougall Motor Car Co., Ltd. Raoul Karman, Casa DelaPorte Casa "Lavin"Francisco A. Lavin, Adm. Arkansas Radio & Equipment Co. Henry Field Company Radio Service Corporation University of South Dakota	

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5.1

VOGT WGST WILL WJAR WMMN XETU	ae ak ae aeh	400 250 250 250 250 250 100	893 C(.5) 2(.5) (.5)R (.5)	Wabana, N. F. Atlanta, Ga. Urbana, Ill. Providence, R. I. Fairmont, W. Va. Pachuca, Mexico	The Gaiety Theatre Southern Broadcasting Co. University of Illinois The Outlet Co. A. M. Rowe, Inc. Rodrigo Mariquez
900 1	kiloo	cycle	s 333	.1 meters	
KGBU KHJ WBEN WJAX WKY WLBL	ak ae ae aeh ae	500 1000 1000 1000 1000 2000	CT R N N D	Ketchikan, Alaska Los Angeles, Calif. Buffalo, N. Y. Jacksonville, Fla. Oklahoma City, Okla. Stevens Point, Wis.	Alaska Radio & Service Co. Don Lee Broadcasting System WBEN, Inc., Buffalo Evening News City of Jacksonville Oklahoma Publishing Co. Wis. Dept. Agriculture & Markets
910 1	kiloo	cycle	s 329	.6 meters	
CFQC CFLC TICR XEW XFF	z ae z ak z	500 100 50 5000 500	915 911 915	Saskatoon, Sask. Prescott, Ont. San Jose, Costa Rica Mexico City, Mexico Chihuahua, Mex.	The Electric Shop, Ltd. Radio Association of Prescott Cadena Radio-difusora Mexicana S. A. Gobierno del Estado de Chihuahua
920 1	kilo	_		.9 meters	
CMBW CMCN CMDE HHK KFEL KFXF KOMO KPRC WAAF WBSO WWJ	z z z ak ae aj ae ak ae ak	150 250 250 1000 500 1000 1000 500 500 1000	925 925 925 1 1 N N(2.5) D R	Havana, Cuba Havana, Cuba Havana, Cuba Port au Prince, Haiti Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Babson Park, Mass. Detroit, Mich.	Alvarez-Moris Antonio Ginard Evilio Villar Republic of Haiti Gene O'Fallon (Albany Hotel) Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. (Houston Post Drovers Journal Publishing Co. Broadcasting Service Org., Inc. The Detroit News
930 1	kiloo	cycle	s 322	.4 meters 🗌	
CFCH CFRC CKX CMJF KFWI KGBZ KMA KROW WBRC WDBJ WIBG	ak ak z aj ak ae ak ae ae	100 50 500 200 500 500 500 500 500 250 25	3LM 3(.2) E 1 2(1) 2(1) 1(1) C(1) C(.5) D	North Bay, Ont. Kingston, Ont. Brandon, Manitoba Camaguey, Cuba San Francisco, Calif. York, Neb. Shenandoah, Iowa Oakland, Calif. Birmingham, Ala. Roanoke, Va. Glenside, Penna.	Northern Supplies, Ltd. Queen's University Manitoba Telephone System John L. Stowers Radio Entertainments, Ltd. Dr. Geo. R. Miller Earl E. May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Bdctg. Co., Inc. Times-World Corp. WIBG, Inc. (Keswick Bldg.)
940 1	kiloo	cycle	s 319	.0 meters 🗌	
KOIN WAAT WCSH WDAY WFIW WHA XEFO	zk ae ae ae ak ak	1000 300 1000 1000 1000 1000 5000	CT D R(2.5) N C D (3.5)	Portland, Ore. Jersey City, N. J. Portland, Maine Fargo, No. Dakota Hopkinsville, Ky. Madison, Wis. Mexico City, Mexico	KOIN, Inc. (New Heathman Hotel) Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. (Black Bldg.) WFIW, Inc. University of Wisconsin National Revolucionario Party (XFO)
950 1	kiloo	cycle	s 315	.6 meters	
CMHD KFWB KGHL KMBC VONA WRC	z ak ak ak z ak	250 1000 1000 1000 1000 500	NJ(2.5) C	Caibarien, Cuba Los Angeles, Calif, Billings, Mont. Kansas City, Mo. St. John's, N. F. Washington, D. C.	Manual Alvarez Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co. Midland Bdctg. Co. (Pickwick Hotel) Lane, Gillard & Avery National Broadcasting Co., Inc.
960 1			S 312	.3 meters	I A Course & W. F. Books
CHCK CHWC CKNC CMAY CMBD CMCW XEAW CMJL YVIBC	ak ak ak z z ak z ak z	100 500 500 500 150 150 150 10000 50	V 3FL 3FL M 965 965 965	Charlottetown, P.E. I. Regina, Sask. Regina, Sask. Toronto, Ont. Havana, Cuba Havana, Cuba Havana, Cuba Reynosa, Mexico Camaguey, Cuba Caracas, Venezuela	J. A. Gesner & W. E. Burke R. H. Williams & Sons, Ltd. Leader Post, Ltd. (Leader Bldg.) Canadian National Carbon Co., Ltd. Efigenio Oliver Luis Perez Garcia Vilarino y Cervantes International Broadcasting Co. Enrique Artimes Broadcasting Caracas

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		INDE	X BY F	REQUENCIES	AND DIAL NUMBERS	
9 7 0	kilo	cycle	es 309	.1 meters	राष्ट्री	
- KJR - WCFL	ae ak	5000 1500	N RX	Seattle, Wash. Chicago, Ill.	Northwest Broadcasting System, Inc. Chicago Federation of Labor	
980	kilo	cycle	es 303	.9 meters		
CFCN CMGF KDKA	ak z ak	10000 100 50000	985FL 987 B	Calgary, Alberta Matanzas, Cuba Pittsburgh, Pa.	The Voice of the Prairies, Ltd. Bernabe R. de la Torre Westinghouse Elec. & Mfg. Co.	
990	kilo	cycle	s 302	.8 meters	<i>i</i>	
WBZA XEK	ak ak z	25000 1000 101	BA BA	Boston, Mass. Springfield, Mass. Mexico City, Mexic	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. Arturo Martinez	
1000	kil	ocyc1	es 29	9.8 meters		
KFVD WHO WOC WORK XEA XEC XEFE XEFI XEFI	ak z ak aj ak z z z	250 5000 5000 1000 100 50 100 100 100	Dn	Los Angeles, Calif. Des Moines, Iowa Davenport, Iowa York. Pa. Guadalajara, Mexi Toluca. Mexico N. Laredo, Tams., N Chihuahua, Mexico Monterrey, Mexico Queretaro, Mexico	York Broadcasting Co. York Broadcasting Co. Radiofonografica de Guadalajara, S.A. Jesus R. Benavides Mex. Rafael T. Carranza 285.5	
XEFS XEJ XEL XETC	z ak ak z	100 100 100	к 	Queretaro, Mexico Juarez, Mexico Saltillo, Mexico Jalapa, Ver. Mexico	Juan G. Buttner & Leo Allande	-
1010	kilo	ocycl	es 290	6.9 meters		
CFCO CKIC CMBZ CMCX KGGF KOW WHN WIS WNAD WPAP WOAO WRNY XEU	ak ak z ak ae ae ae ae ae ae	250 50 150 150 500 500 250 500 500 250 250 250	2(i) T 1 N(1) 2 1a 1a 1	Chatham, Ont. Wolfville, N. S. Havana, Cuba Havana, Cuba Coffeyville, Kans. San Jose, Calif. New York City Columbia, S. C. Norman, Okla. New York City New York City New York City Veracruz, Mexico	John Beardall (Wm. Pitt Hotel) Acadia University Manuel & Guillermo Salas Diario "El Mundo" Powell & Platz Pacific Agricultural Foundation, Ltd. Marcus Loew Booking Agency WIS, Inc. University of Oklahoma Jersey Boulevard Corp. Jersey Boulevard Corp. Aviation Radio Station, Inc. Baltasat Pazos Sosa	
1020	kilo	ocycl	es 293	3.9 meters	<u> </u>	
WRAX XEFD	ae ae z	10000 250 300	N D	Chicago, III. Philadelphia, Pa. Tiajuana, Mex.	Westinghouse Elec. & Mfg. Co. (KFKX) Z WRAX Broadcasting Co. Carlos de la Sierra	
1030	kilo	ocyclo		.1 meters	Carlos de la Sierra Canadian Marconi Co.	
CFCF CMHI CMKC CNRV XEB	ae ck z ak ak	500 30 150 500 1000	NG a 1034a	Montreal, Que. Santa Clara, Cuba Santiago de Cuba Vancouver, B. C. Mexico City, Mexico	Laviz & Paz Pinol Batlle y Co. Canadian National Railways	Assembly of the Little Control
1040	kilo	cycle	es 288	3.3 meters		
CMGH RRLD KTHS WESG WKAR	z ae ae ae	15 10000 10000 1000 1000	IC IN D	Matanzas, Cuba Dallas, Tex. Hot Springs, Ark. Elmira, N. Y. East Lansing, Mich	O. y J. Alvarez KRLD Radio Corp. (Adolphus Hotel) Chamber of Commerce WESG, Inc. Michigan State College	
	kilo	cycle	es 285	5.5 meters		
CMJG KFBI RNX XEFC XES	z ae ae z dk	50 5000 25000 10 250	Dn X 1055K	Camaguey, Cuba Abilene, Kans. Hollywood, Calif. Merida, Yuc. Tampico, Mexico	Jose Antonio Lefran Farmers & Bankers Life Ins. Co. Western Broadcast Co. Hugo Molina Font Emilio Balli, Jr.	

•	INDEX D	I PREQUENCIES A	ND DIAL NUMBERS
1060 kil	ocycles	282.8 meters	
WBAL se WJAG sk WTIC sk	500 Dn 10000 1B 1000 Dn 50000 1R		KWJJ Broadcast Co., Inc. Consolidated Gas, Elec. L. & Pwr. Co. Norfolk Daily News Travelers' Bdctg. Service Corp.
10 7 0 kil	ocycles	280.2 meters	
CMBG z CMCB af KJBS ac WCAZ ac WDZ ak WTAM ak XEG z	100 D 50 D 100 D 50000 R 250 107	Havana, Cuba Havana, Cuba San Francisco, Calif Carthage, Ill. Tuscola, Ill. Cleveland, Ohlo Mexico City, Mexico	Superior Bdctg. Service, Inc. James L. Bush National Broadcasting Co., Inc.
1080 kil	ocycles	277.6 meters	
WBT ae WCBD ae WMBI ck	25000 CU 5000 1Dr 5000 1Dr	Charlotte, N. C. Zion, Ill.	Station WBT, Inc. Wilbur Glenn Voliva Moody Bible Institute
1090 kil	ocycles	275.1 meters	
→KMOX ak	50000 C	St. Louis, Mo.	Voice of St. Louis, Inc.
1100 kil	ocycles	272.6 meters	
KGDM ak WLWL ae WPG ae	250 D 5000 1 5000 1C	Stockton, Calif. New York City Atlantic City, N. J.	E. F. Peffer Missionary Society of St. Paul Municipality of Atlantic City
1110 kil	ocycles	270.1 meters	
CMJO zKSOO ae VONF zWRVA ae	15	(2.5) Ciego de Avila, Cuba (2.5) Sioux Falls, So. Dak. St. John's, N. F. Richmond, Va.	Rey-Borges Sioux Falls Broadcast Assn., Inc.
XENT z	150000 111	Neuvo Laredo, Mex.	Larus & Bros. Co., Inc. Compania Industrial Universal, S. A.
1120 kil		267.7 meters	
CFCA ak CFJC ak CHGS ce CJOC ak CMHJ ae KFIO se KFIO se KRKD ak KRKD ak KRKD ak WDEL sj WHAD ac WHAD ac WISN ak	100 D 500 2C 250 (.5) 250 1C 250 1C 500 2	Spokane, Wash. Los Angeles, Calif. Los Angeles, Calif. Seattle, Wash. Houston, Tex. Wilmington, Del. Milwaukee, Wis. College Station, Texa	Harold R. Carson Victorino Lopez (Hotel Bristol) Spokane Broadcasting Corp. Echo Park Evangelistic Assn. Fireside Broadcasting Co. Radio Sales Corp. (Wash. Ath. Club) KTRH Broadcasting Co. (Rice Hotel) WDEL, Inc. Marquette University American Radio News Corp.
1130 kile	ocycles	265.3 meters	
WJJD ze WOV ae XEH ak	50000 C 20000 Dn 1000 D 250 113	Salt Lake City, Utah Chicago, Ill. New York City Monterrey, Mexico	Radio Service Corp. of Utah WJJD, Inc. (Palmer House) International Broadcasting Corp. Tarnava & Cia
1140 kild	ocycles	263.0 meters	
CMBJ z CMCD aeh KVOO ae WAPI aj XETA z	150	Havana, Cuba Havana, Cuba Tulsa, Okla. Birmingham, Ala Mexico City, Mexico	Emilio Perera Angel Bertematy y Garcia Southwestern Sales Corp. WAPI Broadcasting Corp. Manuel Espinosa Tagle
1150 kilo	ocycles	260.7 meters	5
CMJH ak WHAM ae XED z	50 5000 BX 500 1155 25 1155		Luis Marauri Mendoza Stromberg-Carlson Tel. Mfg. Co. International Broadcasting Co. Trail Amateur Radio Assn.

	1160	1-:14	ocycl	00	258	.5 meters] ,
		ae	10000		200	· ·		Main Au	o Supply Co.	' 	J
_	-WOWO -WWVA	ae ae	5000	1C 1C		Fort Wayne, Ind. Wheeling, W. Va.		West Virg	inia Broadcast	ing Corp.	_
	1170	kilo	ocycl	es	256	.3 meters] .
	CMJE ₩CAU	z ae	50000	1175 C		Camaguey, Cuba Philadelphia, Pa.		Manuel F Universal	ernandez Broadcasting	Corp.	•
	1180	kilo	ocycl	es	254	.1 meters					
	CMCJ KEX KOB WDGY WINS WMAZ	z ak ae ak ae ak	250 5000 20000 1000 500 500	1185 2N 2 Dn		Havana, Cuba Portland, Ore. Albuquerque, N. M Minneapolis, Minn New York City Macon, Ga.	i .	N. M. Col George W American	Broadcasting C l. of Agr. & Med	chanical Arts orp.	•
	1190	kilo	ocycl	es	252	2.0 meters					
_	-WOAI		50000	N		San Antonio, Texas	s	Southern	Equipment Co).	-
	1200	kilo	ocycl	es	249	.9 meters			. •]
	CHCH	z	100	2	_			Montreal	Radio Corp.		-
	CHLP CKOV	z ak	100 100	2		Montreal, Que. Montreal, Que. Kelowna, B. C.		La Patrie Okanaga	, Lta. 1 Broadcasters,	Ltd.	
	CMGB	z	30	1205		Matanzas, Cuba Paragould, Ark.		Jose Ano	rga		
	KBTM KERN	ak	100 100	D CT		Paragould, Ark. Bakersfield, Calif.			emple of Musi rsfield Broadca		
	KFJB	ak ak	100	(.25)		Marshalltown, low	а	Marshall	Electric Co., In	ic.	
_	KFWF	ak	100	5		St. Louis, Mo.		St. Louis	Truth Center, Hurt (R/C Boi	Inc.	KCYS.
\overline{z}	KFXD	ae	100	• • • •	• •	Nampa, Idaho Grand Junction, Co	10	Frank E.	Slope Brdcstg.	se) Co	1210
M	KFXJ KGDE	ak ae	100 100	(.25)	• •	Fergus Falls, Minn	o10.	Jaren Dr	ag Co.	CO.	
	KGDY	ak	100			Huron, S. D.	•	Voice of S	ug Co. South Dakota,	Inc.	MTRS.
_	KGEK	ak	100	9		Yuma, Colo.		Beehler E	lectrical Equip	ment Co.	247.8
_	KGEW	ak ae	100 100	9		Ft. Morgan, Colo. Los Angeles, Calif.		Ben. S. N	ort Morgan IcGlashan	G	217.0
	KGFJ KGHI	ak	100			Little Rock, Ark.		O. A. Coc	k		DIAL
_	KGVO.	ak	100		••`	Missoula, Mont.		Mosby's,	Inc. roadcasting Sta		
	KMLB	ae	100	• • • •	• •	Monroe, La.		KVOS, Ir	roadcasting St	ation, Inc.	
	KVOS KWG	z ak	100 100	ĊŤ	• •	Bellingham, Wash. Stockton, Calif.		McClatch	y Newspapers		- 1
	WABI	ak	100			Bangor, Maine		First Uni	versalist Societ	У	!
	WABZ	ak	100	1		New Orleans, La.		Samuel I). Reeks		!
	WBBZ	ak	100 100	4	• •	Ponca City, Okla.		Redio St	rell (R/C varionation WBHS, In	us cities;	1
	WBHS	ak ak	100	Ď		Huntsville, Ala. Rapid City, S. D.		State Sch	ool of Mines		1
	WCAT WCAX	ak	100			Rapid City, S. D. Burlington, Vt. Janesville, Wis.		Burlingto	n Daily News		i
	WCLO	ak	100	<u>.</u>		Janesville, Wis.		WCLO R	dio Corp. (R/C	Beloit)	1
	WCOD WFAM	ae ak	100 100	3 8C		Harrisburg, Pa. South Bend, Ind. Greenville, S. C.		South Re	Broadcasting nd Tribune (W	SBT)	Ω
	WFBC	ak Z	50	\mathbf{x}		Greenville, S. C.		News-Pie	dmont Co.	,	iΞ
	WFBE	ak	100	(.25)		Cincinnati, Unio		The Post	Publishing Co	., Opr.	[]
	WHBC	ak	10	• • • •	• •	Canton, Ohio		Edward H	. Graham nc. nc.		Įζ
	WHBY WIBX	ak z	100 100	(.3)	• •	Green Bay, Wis. Utica, N. Y.		WIBX.	ic.		I'd
	WIL	ae	100	5(.25	5)	St. Louis, Mo.		Missouri	Broadcasting (CUT OUT ON
	WJBC	ae	100	6		LaSalle, Ill.			a Broadcasting		14
	WJBL WJBW	ae	100	6		Decatur, Ill.		Commod C. C. Car	ore Broadcastii Ison	ng, Inc.	DOTTED LINES
	WKJC	ak ae	100 100	1 3		New Orleans, La. Lancaster, Pa.			r Bdctg. Servic	e. Inc.	13
	WLAP	ae	100	(.25)		Louisville, Ky.		American	Broadcasting	Corp. of Ky.	旧
	WNBO	aeh	100			Washington, Pa.		Spriggs S WNBW, I	ymplex		įΰ
	WNBW	z	10	(.1)		Carbondale, Pa.		WNBW, I	nc. indianet		i⊑
	WORC WPHR	ak ae	100 100	CH (.25)		Worcester, Mass. Petersburg, Va.		WLBG I	nc.		ΙŻ
	WRBL	ak	100		••	Petersburg, Va. Columbus, Ga. Hammond, Ind.		WRBL R	nc. Idio Station <u>,</u> I	nc.	ıπ
	WWAE	aeh	100	8		Hammond, Ind.		Hammon	d-Calumet Bd	ctg. Corp.	١٠,
-	10-AB	ak	25	• • • •	• •	Moose Jaw, Sask.		Moose Ja	w Radio Assn. gins Elec. & Ra	adio Co	1
	10-AK 10-BI	ak ak	15 25	••••	• •	Stratford, Ont. Prince Albert, Sask	ī.	Prince A	bert Radio Clu	b	ĺ
	10-BP	ak	25	1199	• •	Wingham, Ont.		W. T. Cr	uickshank		i
	10-BQ	ak	15		• •	Wingham, Ont. Brantford, Ont.		Tom Bro	wn & Harold B	rown	-
	10-BU	z	15	• • • •	• •	Canora, Sask.		Canora F	adio Assn.	:	_
	1210	kild	ocycl	es	247	'.8 meters] !
			-				_	Iamas S	Neill & Sons,	Ltd	- İ
	CFNB	ae	100	E		Fredericton, N. B.		James 5.	TAGIL OF SOLIS'	ou.	•

]	INDE	K BY	FF	REQUENCIES ANI	D DIAL NUMBERS
CJOR	ak	500	E	ke sa	Vancouver, B. C.	George C. Chandler
CKMC	ak	100	8	••	Cobalt, Ont.	R. L. McAdam
-KASA	ak	100			Elk City, Okla.	E. M. Woody (Casa Grande Hotel)
KDLR	ak	100			Devils Lake, N. Dak.	KDLR, Inc.
WEOD	ak	100	(.25)		Klamath Falls, Ore.	KFJI Broadcasters, Inc. Howard A. Shuman
KFOR KFPW	ak ak	100 100			Lincoln, Neb. Fort Smith, Ark.	Southwestern Hotel Co.
KFVS	ae	100	6		Cape Girardeau, Mo.	Oscar C. Hirsch
- KFXM	ak	100	š		San Bernardino, Calif.	
KGCR	ah	100			Watertown, S. Dak.	Greater Kampeska Radio Corp.
-KGNO	ak	100			Dodge City, Kans.	Dodge City Broadcasting Co.
KGY	ak	100	<u></u>		Olympia, Wash. Eureka, Calif.	KGY, Inc. (Capitol Park Bldg.)
KIEM	z.	100	DP		Eureka, Calif.	Harold H. Hanseth
**KPPC	ak	50	9		Pasadena, Calif.	Pasadena Presbyterian Church
KWEA WALR	z ae	100 100	• • • • • •		Shreveport, La. Zanesville, Ohio	Hello World Broadcasting Corp. WALR Broadcasting Corp.
WBAX	ae	100	i	2	Wilkes-Barre, Pa.	John H. Stenger, Jr. (Morris Bldg.
WBBL	ak	100	7S		Richmond, Va.	Grace Covenant Pres. Church
WCBS	ak	100	2	•	Richmond, Va. Springfield, Ill.	WCBS, Inc.
WCRW	ae	100	4		Chicago, Ill.	Clinton R. White
WEBQ	ae	100	6		Harrisburg, Ill.	Harrisburg Broadcasting Co.
WEDC	z	100	4		Chicago, Ill.	Emil Denemark, Inc.
WFAS	ak	- 100	3		White Plains, N. Y.	Westchester Broadcasting Corp.
WGBB	ae				Freeport, N. Y.	Harry H. Carman
WGCM		100	5		Gulfport, Miss.	Great Southern Land Co.
WGNY	z	50	P		Chester Twp., N. Y. Rock Island, Ill.	Peter Goelet
WHBF	ae	100	• • • • • •		Anderson (nd	Rock Island Broadcasting Co. Anderson Broadcasting Corp.
WHBU WHET	aj ak	100 100	Ď		Anderson, Ind. Troy, Ala.	Troy Broadcasting Co.
WIBU	ae	100	_		Poynette, Wis.	Wm. C. Forrest
WJBI	ak	100	3		Red Bank, N. J.	Monmouth Broadcasting Co., Inc.
ŴĴBÛ	ae	100	ĭ		Lewisburg, Pa.	Bucknell University
WJBY	aeh	100			Gadsden, Ala.	Ingrams Broadcasting Co.
WJEJ	aeh	100	D		Hagerstown, Md.	A. V. Tidmore
WJEJ WJW	ae	100	 5		Akron, Ohio	John F. Weimer J. Pat Scully
WKFI	ak	100	5_		Greenville, Miss.	J. Pat Scully
WMBG	aj	100	ŽC		Richmond, Va.	Havens & Martin, Inc.
WOCL	ak	50	• • • • • •		Jamestown, N. Y.	A. E. Newton
WOMT	ae	100 100			Manitowoc, Wis.	Francis Mangin Kadow Cherry & Webb Broadcasting Co.
WPAW WPRO	ak ak	100	a a		Providence, R. I.	Cherry & Webb Broadcasting Co.
	z	100			Thomasville, Ga.	Stevens Luke
WQDX WSBC	z ·	100	4		Chicago, Ill.	World Battery Co., Inc.
WSEN	ak	100			Columbus, Ohio	Columbus Bdctg. Corp. (Seneca Hotel)
WSIX	ae	100			Springfield, Tenn.	638 Tire & Vulc. Co. (R/C WLW)
WSOC	ae	100			Gastonia, N. C.	WSOC, Inc. WTAX, Inc.
WTAX	ae	100	2		Springfield, Ill.	WTAX, Inc.
XEX	z	500	• • • • • •		Mexico City, Mexico	Excelsior, Cia Editorial S. A.
		_	_		-	· · · · · · · · · · · · · · · · · · ·
1220	kilo	cvcle	2s 2	.4 5	5.8 meters 🗌	
		-				V. Villaneuva
CMHK	z	15	122 5 1		Cruces, Cuba	University of Kansas
KFKU KTW	ae z	500 1000	2S		Lawrence, Kans. Seattle, Wash.	First Presbyterian Church
KWSC	ae	1000	2(2)		Pullman, Wash.	State College of Washington
WCAD	ak	500	$\mathbf{D}^{(2)}$		Canton, N. Y.	St. Lawrence University
WCAE	ae	1000	Ŕ		Pittsburgh, Pa.	WCAE, Inc. and Sun-Telegraph
-WDAE		1000	R C		Tampa, Fla.	Tampa Daily Times (Tampa Terrace)
-WREN	ak	1000	1B		Lawrence, Kans.	Jenny Wren Co.

1230 kilocycles 243.8 meters

350 150 250 250 1000 1000 Havana, Cuba Havana, Cuba Anchorage, Alaska CMBY CMCA KFQD KGGM 1235 1235 z z aj ak (.5) N 1C CH 1C Anchorage, Alaska Albuquerque, N. M. San Francisco, Calif. Indianapolis, Ind. Boston, Mass. South Bend, Ind. KYA WFBM WNAC WSBT ae aeh 1000 ae 500 ak

Callejas-Estefani Manuel Cruz Manuel Cruz
Anchorage Radio Club, Inc.
New Mexico Broadcasting Co.
Pacific Broadcasting Co.
Indianapolis Power & Light Co.
Shepard Broadcasting Service, Inc.
South Bend Tribune (WFAM)

1240 kilocycles 241.8 meters

CMAB KGCU KLPM 20 250 250 1249 3 3 z ak

Pinar del Rio, Cuba Mandan, N. Dak. Minot, N. Dak.

Jose Silvera Mandan Radio Assn. John B. Cooley



uere.	INDEX BY FREQUENCIES AND DIAL NUMBERS										
KTAT ak KTFI ak WACO ak WKAO ae WXYZ ak XEFW z	1000 IC 1000	Fort Worth, Texas Twin Falls, Idaho Waco, Texas San Juan, P. R. Detroit, Mich. Tampico, Mex.	KTAT Broadcast Co., Inc. Radio Broadcasting Corp. of Idaho Central Texas Broadcasting Co. Radio Corp. of Porto Rico Kunsky-Trendle Broadcasting Corp. Jose Expedito Martinez	***							
1250 kil	locycles 2	39.9 meters									
KFMX aj KFOX ae WAAM ae WCAL ae WDSU ak WGCP ak WLB ak WODA z WRHM ac XEFA z	1000 1(2.5) 1000 2 1000 C 250 1 1000 2 1000 1	Northfield, Minn. Long Beach, Calif. New Ark, N. J. Northfield, Minn. New Orleans, La. Newark, N. J. Minneapolis, Minn. 'Paterson, N. J. Minneapolis, Minn. Mexico City, Mexico	Carleton College Nichols & Warinner, Inc. WAAM, Inc. St. Olaf College Jos. H. Uhalt May Radio Broadcasting Co. University of Minnesota Richard E. O'Dea Minnesota Broadcasting Corp. Eduardo Limon Segui								
1260 kil	locycles 2	38.0 meters									
CMJI ak KOIL ak KRGV ak KVOA ak KWWG z WLBW ac WNBX ak WTOC ac	1000 B 500 1 500 P 500 1 500 C(1) 250 D	Ciego de Avila, Cuba Council Bluffs, Iowa Harlingen, Texas Tucson, Arizona Brownsville, Texas Erie, Pa. Springfield, Vt. Savannah, Ga.	Gilberto Gessa Lopez Mona Motor Oil Co. KRGV, Inc. (Rio Grande Na. Life Bldg.) Robert M. Riculfi Frank P. Jackson Broadcasters of Pennsylvania, Inc. WNBX Broadcasting Corp. Savannah Broadcasting Co., Inc.								
1270 kil	locycles 2	36.1 meters 🗌									
CMBC ae CMJN z KGCA ak KOL ae KVOR ae KWLC ak WASH ak WFBR ae WJDX ak	50 100 D2 1000 CT 1000 C 100 D2 500 a 500 R	Havana, Cuba Camaguey, Cuba Decorah, Iowa Seattle, Wash. Colorado Springs, Col. Decorah, Iowa Grand Rapids, Mich. Baltimore, Md. Jackson, Miss. Grand Rapids, Mich.	Domingo Fernandez E. de Ugarriza Chas. W. Greenley Seattle Broadcasting Co. Reynolds Radio Co., Inc. Luther College Kunsky-Trendle Broadcasting Corp. Baltimore Radio Show, Inc. Lamar Life Insurance Co. Kunsky-Trendle Broadcasting Corp.	KYCS.							
1280 kil	ocycles 2	34.2 meters		1300 MTRS.							
WCAM ae WCAP ae WDOD ae WIBA ae WOAX ael	500 IC 1000 C(2.5) 500 N(1) h 500 I	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas	Buttrey Broadcast, Inc. City of Camden (City Hall Tower) Radio Industries Broadcast Co. WDOD Bdctg. Corp. (Hotel Patten) Badger Broadcasting Co., Inc. Trenton Broadcasting Co. City of Dallas (Hilton Hotel)	230.6 DIAL							
1290 kil	ocycles 2	32.4 meters 🗀		ł							
CMHL z KDYL ak KFUL ak KLCN z KTSA ak WEBC ae WJAS ak WNBZ z	500 1 50 D 1000 1C(2.5) 1000 N(2.5)	Cienfuegos, Cuba Salt Lake City, Utah Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y.	Oscar Zayas Intermountain Broadcasting Corp. News Publishing Co. (Buccaneer Hotel) C. L. Lintzenich Southwest Broadcast Co. (Plaza Hotel) Head of the Lakes Broadcasting Co. Pittsburgh Radio Supply House Smith & Me ce	CUT OUT ON I							
1300 kil		30.6 meters		T001							
CMKJ z KALB ak KFAC aj KFH (ae KFJR ag WBBR ae WEVD ae WFAB z WHAZ ae WIOD ae WOQ ae	500 1 1000 1 500 1	Guantanamo, Cuba Portland, Ore. Los Angeles, Calif. Wichita, Kans. Portland, Ore. Brooklyn, N. Y. New York City New York City Troy, N. Y. Miami, Fla. Kansas City, Mo.	Luis Morlote KALE, Inc. Los Angeles Broadcasting Co. Wichita Eagle—Hotel Lassen Ashley C. Dixon—KFJR, Inc. Peoples Pulpit Assn. Debs Memorial Radio Fund, Inc. Fifth Avenue Broadcasting Corp. Rensselaer Polytechnic Institute Isle of Dreams Broadcasting Corp. Unity School of Christianity	DOTTED LINES							

-1310	-kilo	cvc1e	25 228	3.9 meters	
CMIP	z				Cesar Canals
CMJP KCRJ KFBK	ak	7.5 100	Ď	Moron, Cuba Jerome, Arizona	Chas. C. Robinson
KFBK	ak	100	C 7	Sacramento, Calif.	Jas. McClatchy Co. Boone Biblical College
KFGQ KFPL	ak	100		Boone, Iowa	Boone Biblical College
KFPM	ck ae	100 15	·····	Dublin, Texas	C. C. Baxter New Furniture Co-
KFXR	ak	100	(.25) (.25)Z	Greenville, Texas Oklahoma City, Okla	a. Exchange Ave. Baptist Church
KFXR KFYO	ak	100	(.25)Z	Lubbock, Texas	Kirksey Brothers KGBX, Inc. First State Bank of Vida Donald C. Treloar
KGBX	ae	100		Springfield, Mo. Wolf Point, Mont.	KGBX, Inc.
-KGCX -KGEZ	ak	100 100	(.25)	Wolf Point, Mont.	First State Bank of Vida
KGFW	aj* ah	100		Kalispell, Mont. Kearney, Neb.	Central Nebraska Edeta Corn
KIFH	z	100		Juneau, Alaska Yakima, Wash. Medford, Ore.	Juneau Broadcasting Co. Valley Broadcasters, Inc. Mrs. W. J. Virgin KRMD, Inc. (Jefferson Hotel)
KIT	ak	100	• • • • • •	Yakima, Wash.	Valley Broadcasters, Inc.
-KMED KRMD	ak ak	100 100		Medford, Ore.	Mrs. W. J. Virgin
KTSM	z	100	a	Shreveport, La. El Paso, Texas	Tri-State Broadcasting Co., Inc.
KXRO	ak	100		Aberdeen, Wash.	KXRO, Inc. (Hotel Morck)
WBEO	z	100	• • • • • •	Marquette, Mich.	Lake Superior Broadcasting Co. Banks of Wabash, Inc.
WBOW	ak	100	• • • • • •	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE WCLS	z ae	100 100	ь	Wilkes-Barre, Pa. Joliet, Ill.	Louis G. Baltimore WCLS, Inc.
-WDAH	z	100	я	El Paso, Texas	Tri-State Broadcasting Co., Inc.
WEBR	ae	100	Q(.25)	El Paso, Texas Buffalo, N. Y. Royal Oak, Mich.	Howell Broadcasting Station
-WEXL	ak	50		Royal Oak, Mich.	Royal Oak Broadcasting Co. The Gable Broadcasting Co.
WFBG WFDF	ae ae	100 100	3	Altoona, Pa. Flint, Mich.	Frank D. Fallain (Union Ind. Bldg.)
WGAL	ae	100	<u>.</u>	Lancaster. Pa.	WGAL, Inc. (Lancaster Newsp. Bldg.
WGAL WGH	ae	100		Lancaster, Pa. Newport News, Va. Philadelphia, Pa.	Hampton Roads Broadcasting Corp.
WHAT	ak	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
WIAS	ak	100	7 3	Ottumwa, Iowa	Iowa Bdctg. Co. (Hotel Ottumwa)
WKAV	ae ae	100 100	3	Johnstown, Pa.	WJAC, Inc. Laconia Radio Club
WJAC WKAV WKBB	ae	100	bYZ	Laconia, N. H. Joliet, Ill.	Laconia Radio Club Richard W. Hoffman
WKBC	Z	100		Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS WLBC	Z 01-	100	6	Galesburg, III.	Permil N. Nelson
WMBO	ak ak	50 100	0	Muncie, Ind.	D. A. Burton—A. J. Marriott WMBO, Inc. (Masonic Temple) New Bedford Bdctg. Co. (N. B. Hotel) American Broadcasting Co.
WMBO WNBH	ae	100	H(.25)	Auburn, N. Y. New Bedford, Mass. Washington, D. C.	New Bedford Bdctg. Co. (N. B. Hotel)
WOL	ae	100		Washington, D. C.	American Broadcasting Co.
WRAW	ak	100	5X	Reading, Pa.	Reading Broadcasting Co.
WROL	ak ae	100 100	• • • • • •	Knoxville, Tenn.	Stuart Bdctg. Co. (Farragut Hotel) Grove City College Winston-Salem Journal Co. Foulkrod Radio Eng. Co., Inc. Sun Publishing Co. (Sun Bldg.) Elkhart Daily Truth
WSAJ WSJS	ae	100	Ċ	Grove City, Pa. Winston-Salem, N. C	. Winston-Salem Journal Co.
WTEL	ae	100	4	Philadelphia, Pa.	Foulkrod Radio Eng. Co., Inc.
WTJS	ak	100	(.25)	Jackson, Tenn. Elkhart, Ind. Laurel, Miss.	Sun Publishing Co. (Sun Bldg.)
WTRC WTSL	ak z	50 100	6 (.1)	Elkhart, Ind.	Elkhart Daily Truth Southland Radio Corp.
XEFB	ak	100	1315	Monterrey, N. L., Mex	. Quintanilla y Stevenson
XEFB XEI	ak	150		Morelia, Mexico	Carlos Gutierrez M.
4000		_			
1320	kilo	cycle	es 227	'.1 meters 🗌	
CMBF	z	150	1325	Havana, Cuba	Ramon Bardales
CMCY	ak	1000	1325	Havana, Cuba Pueblo, Colo.	M. D. Autran
-KGHF	ak	250 250	(.5) C	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGMB KID	ak ae	250 250	(.5)	Honolulu, Hawaii Idaho Falls, Idaho	Honolulu Broadcasting Co. KID Broadcasting Co., Inc.
WADC	ae	1000	(.5), C	Akron, Ohio	Allan T. Simmons
WSMB	ae	500	N	New Orleans, La.	WSMB, Inc.
1330	kilo	cycle	s 225	.4 meters	
					Den I as Brandonstina Susta
KGB KMO	ae ak	1000 250	CT	Tacoma Wash	Don Lee Broadcasting System KMO, Inc. (Hotel Winthrop)
KSCJ	ah	1000	1C(2.5)	Sioux City. Iowa	Perkins Bros. Co.
WDRC	ae	500	1C(2.5) CH	San Diego, Calif. Tacoma, Wash. Sioux City, Iowa Hartford, Conn.	WDRC, Inc.
WSAI	ae	500	R(1) 1C	Cincinnati, Unio	The Crosley Radio Corp.
WTAQ	ae	1000	IC	Eau Claire, Wis.	The Gillette Rubber Co.
1240	1-:1-	ovv = 1 =		7 ot =	
	KHO	cycle		.7 meters	
-KFPY	ae.	1000	CT	Spokane, Wash.	Symons Bdctg. Co. (Symons Bldg.)
-WCOA WSPD	agj.	500 1000	ċ	Pensacola, Fla.	Pensacola Bdctg. Co. (San Carlos Hot.)
W.SPD	ae	1000	C	Toledo, Ohio	Toledo Bdctg. Co. (Com. Perry Hotel)

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1350	kilo	cycl	es 2	22.1 meters		
KIDO	ak	1000		Boise, Idaho	C. G. Phillips & Frank Hill	
-KWK WAWZ	ae ·	1000 250	В 1	St. Louis, Mo. Zarephath, N. J.	Thomas Patrick, Inc. (Hotel Chase) Pillar of Fire	
WBNX WCDA	ae	250 250 250 500	1a '1a	New York City New York City	New York Met. Broadcasting Corp. Italian Educ. Bdctg. Co., Inc.	
WEHC	ae ae	500	DY	Emory, Va. New York City	Emory & Henry College New York Met. Broadcasting Corp.	
WMSG	ae	250	1a	New York City	New York Met. Broadcasting Corp.	
						*
1360	kilo	ocyclo	es 2	20.4 meters	24.5	
KGER	ah	1000	,,,,,,,,	Long Beach, Calif.	Consolidated Bdctg. Co. (R/C Los An.)	
-KGIR -WCSC	ak ae	500 500	NJ	Butte, Mont. Charleston, S. C.	KGIR, Inc. So. Carolina Broadcasting Co., Inc.	
WFBL	ak	1000	C(2.2)	Syracuse, N. Y.	Onondaga Radio Broadcasting Corp.	
-WGES WJKS	ae agj	500 1000	1(1) 1Z	Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Gary, Ind. Vicksburg, Miss.	Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp.	
WOBC XEFH	ak	500 250		Vicksburg, Miss.	Delta Bdctg. Co. (Post-Herald Station) Francisco Hornedo	
211111	2	200	•	Mexico City, Mexico	Trancisco Hornedo	
1050			_	100	<u> </u>	
1370	kilo	ocyclo	es 2	18.8 meters		
CMCR	z	150	1375	Havana, Cuba	Aurelio Hernandez	
-KCRC	z ak	30 100	1375 2(.25)	Cardenas, Cuba Enid, Okla.	Genaro Sebater Enid Radiophone Co. (Oxford Hotel)	
KFBI.	aj	50	3	Enid, Okla. Everett, Wash. Grand Forks, N. Dak Fort Worth, Texas Galveston, Texas	Leese Bros.	
KFJM- KFJZ KFLX	zk - ae	100 100		Fort Worth, Texas	. University of North Dakota Fort Worth Broadcasters, Inc.	
KFLX -KGAR	z ae	100 100	(.25)	Galveston, Texas	George Roy Clough	
KGDA	ak	100	2	Mitchell, S. Dak	Mitchell Broadcasting Corp.	
-KGFG KGFL	bk zk	100 100	2 4-Y	Oklahoma City, Okla Santa Fe, N. Mex.	a. Oklahoma Broadcasting Co., Inc. KGFL, Inc.	
KGKL	-ak	100		San Angelo, Texas	KGKL, Inc. (St. Angelus Hotel)	
KICA	z ak	100 100	4 5	Clovis, N. Mex. San Antonio, Texas	Southwest Broadcasting Co. Walmac Co., Inc. (Blue Bonnet Stud.)	
-KONO	ak	100 100	5	San Antonio, Texas San Antonio, Texas Marshfield, Ore.	Walmac Co., Inc. (Blue Bonnet Stud.) Mission Broadcasting Co. H. H. Hanseth, Inc. (Hall Bidg.)	
-KRE	ae ak	100		Berkeley, Calif.	First Cong. Church of Berkeley	
-KSO - -KUJ -	≠z •ak	100 100	B(.25) D	Des Moines, Iowa	Inst Cong. Church of Berkeley Iowa Broadcasting Co. KUJ, Inc. (Marcus Whitman Hotel) KVL, Inc.	
KVL	z	100	3	Seattle, Wash. Kansas City, Mo.	KVL, Inc.	
TKWKC WBTM	z ak	100 100	ż	Kansas City, Mo. Danville, Va.	Piedmont Broadcasting Corn.	
WCBM WDAS	ae aeh	100	7 Z(.25) (.25) Y(.1)	Baltimore, Md.	Baltimore Broadcasting Corp. WDAS Bdctg. Sta., Inc. (Elks Hot el) O. T. Griffin & G. F. Bissell F. C. Zieg	
WGLC	z	100 50	Y(.1)	Philadelphia, Pa. Hudson Falls, N. Y.	O. T. Griffin & G. F. Bissell	
WGL WHBD	aeh bk	100 100	C	Fort Wayne, Ind. Mount Orab, Ohio	F. C. Zieg F. P. Moler	
WHBO	ak	100		Memphis, Tenn.	Station WHBO, Inc. (Hotel Claridge)	KCYS.
WHDF	ak aeh	100 100	(.25) 1	Memphis, Tenn. Calumet, Mich. Jackson, Mich.	Upper Michigan Broadcasting Co. WIBM, Inc. (Otsega Hotel)	1380
WJBK	ae	50	1Q 6P	Detroit, Mich.	James F. Hopkins, Inc. (Curtiss Bldg.)	
WJEQ WJTL WLEY	z ae	100 100		Williamsport, Pa. Atlanta, Ga.	Sun-Gazette Broadcasting Co. Oglethorpe University	MTRS
WLEY	aeh ck	100 100	(.25) 7	Lexington, Mass.	Lexington Air Station Lynchburg Broadcasting Corp.	217. 3
WMBR	ak	100		Lynchburg, Va. Tampa, Fla.	F. J. Reynolds	DIAL
WPFB WQDM	ak ae	100 100	Ď	Hattiesburg, Miss. St. Albans, Vt.	Hattiesburg Broadcasting Co.	DIAL
WRAK	ak	100	6	Williamsport, Pa. Wilmington, N. C.	A. J. St. Antoine & E. J. Regan C. R. Cummins (Penn Central Bldg.)	ŗ
WRAM WRDO	ae ae	100 100		Wilmington, N. C. Augusta, Maine	Wilmington Radio Assn., Inc. WRDO, Inc. (Augusta House)	!
WRJN WSVS	ae	100		Augusta, Maine Racine, Wis.	Racine Bdctg. Corp. (Hotel Racine)	[윤
XEFV	ak z	50 50		Buffalo, N. Y. Juarez, Mexico	Seneca Vocational School Jose Onofre Meza	10
					-	검을
1390	12:10	cycle	20 2	17.3 meters		CUT OU
				l	Patrices Trees	ĪĢĞ
CMJC KOH	z ak	150 500	1382 C	Camaguey, Cuba Reno, Nevada	Feliciano Isaac McClatchy Newspapers	
KQV WKBH	ak	500 1000	2 1C	Pittsburgh, Pa.	KOV Bdctg. Co. (Investment Bldg.)	
-WSMK	aj ak	200	2	LaCrosse, Wis. Dayton, Ohio	WKBH, Inc. (Radio Bldg.) Stanley M. Krohn, Jr.	1"
XETB	, z	125	• • • • • •	Torreon, Coah., Mex.	Jose A. Berumen	

		INDE	X BY F	REQUENCIES AN	D DIAL NUMBERS
	kilo	cycl	es 21	5.7 meters	
CMCH CMCM	ak z	50 15	1395 1395	Havana, Cuba	Wifredo & Hum. Fontanals Sanchez Aurelio Balino
CMDB	ž	40	1395	Havana, Cuba Havana, Cuba	Julio Powers
-KLRA KOY	.ae	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.
KUOA	ae bk	500 1000	C 1	Phoenix, Arizona Fayetteville, Ark.	Nielson Radio & Sporting Goods Co. Southwestern Hotel Co. (Ft. Smith)
WHK	ae	1000	C(2.5)	Cleveland, Ohio	Radio Air Service Corp. (Higbee Store)
1400	kilo	cycl	es 21	4.2 meters	
KLO KOCW	ae	500		Ogden, Utah	Interstate Bcg. Corp.
WBAA	z ak	250 500	(.5) 1	Chickasha, Okla. Lafayette, Ind. Brooklyn, N. Y. Brooklyn, N. Y.	J. T. Griffin Purdue University
WBBC	ae	500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU WCMA	ak ak	500 500	2	Brooklyn, N. Y.	United States Broadcasting Corp.
WFOX	ak	500	2	Culver, Ind. Brooklyn, N. Y.	General Broadcasting, Inc. Paramount Broadcasting Co.
WKBF	ak	500	īW	Indianapolis, Ind. Brooklyn, N. Y.	Indianapolis Broadcasting, Inc. Voice of Brooklyn, Inc.
WLTH	ae	500	2	Brooklyn, N. Y.	Voice of Brooklyn, Inc.
1410	kilo	cycl	es 21	2.6 meters 🗌	
KFLV KGRS	ak ' ae	500 1000	4	Rockford, Ill. Amarillo, Texas	Rockford Broadcasters, Inc. E. B. Gish
WAAR		500	CH	Boston, Mass.	Bay State Broadcasting Corp.
WBCM	ae	500	С	Bay City, Mich. Amarillo, Texas	· James E. Davidson National Radio & Bdctg. Corp.
WDAG	ae ae	1000 500	1 4	Amarillo, Texas Sheboygan, Wis	The Press Publishing Co.
WHIS	ak	250	2	Sheboygan, Wis. Bluefield, W. Va.	Daily Telegraph
WODX	ea ae	500	3CU	Mobile, Ala.	Mobile Broadcasting Corp.
WSFA	ak	250 500	žС	Roanoke, Va. Montgomery, Ala.	Richmond Development Corp. Montgomery Broadcasting Co., Inc.
1420			os 21	1.1 meters	
		_	CS 21		Alama Bata Ca. Las (Taras Thank)
KABC KBPS	ak aj	100 100	4	San Antonio, Texas Portland, Ore.	Alamo Bctg. Co., Inc. (Texas Theatre) Student Body Benson Polytech. School
KCMC	ak	100		Texarkana, Ark.	Tevarkana (Jazette & Daily News
KFIZ					The state of the s
KCEE	ak ok	100	• • • • • •	rond du Lac. Wis.	Reporter Printing Co.
KGFF KGGC	ak ak	100 100	 5	Shawnee, Okla. San Francisco, Calif.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co.
™ KGGC ™ KGIW	ak ak ak	100 100 100		Shawnee, Okla. San Francisco, Calif.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson
₩KGGC ₩KGIW ₩KGIX	ak ak ak ak	100 100 100 100	5 1	Shawnee, Okla. San Francisco, Calif.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson
KGGC KGIW KGIX KGKX KICK	ak ak ak ak z z	100 100 100 100 100 100	5 1 Y	Shawnee, Okla. San Francisco, Calif.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp.
KGGC KGIW KGIX KGKX KICK KIDW	ak ak ak ak z z ak	100 100 100 100 100 100 100	5 1 Y	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar. Colo.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co.
KGGC KGIW KGIX KGKX KICK KICK KIDW KORE	ak ak ak ak z z ak aeh	100 100 100 100 100 100 100	5 1 Y	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar, Colo.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co. Frank L. Hill & Curtis G. Phillips
KGGC KGIW KGIX KGKX KICK KIDW KORE KUMA	ak ak ak ak z z ak	100 100 100 100 100 100 100 100 100	5 1 Y 1 B(.25)	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar, Colo. Eugene, Ore. Yuma, Arizona Cedar Rapids, Iowa	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co. Frank L. Hill & Curtis G. Phillips Dr. Albert H. Schermann Cedar Rapids Broadcast Co.
KGGC KGIW KGIX KGKX KICK KIDW KORE KUMA KWCR	ak ak ak z z ak aeh ak ae	100 100 100 100 100 100 100 100 100 100	5 1 Y 1	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar, Colo. Eugene, Ore. Yuma, Arizona Cedar Rapids, Iowa	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co. Frank L. Hill & Curtis G. Phillips Dr. Albert H. Schermann Cedar Rapids Broadcast Co. KXL Broadcasters (Hotel Multnomah)
KGGC KGIX KGIX KICK KICK KORE KUMA KWCR KXL WAGM	ak ak ak z z ak aeh ak ae ae	100 100 100 100 100 100 100 100 100 100	5 1 Y 1 B(.25)	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar, Colo. Eugene, Ore. Yuma, Arizona Cedar Rapids, Iowa Portland, Ore. Presque Isle, Maine	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co. Frank L. Hill & Curtis G. Phillips Dr. Albert H. Schermann Cedar Rapids Broadcast Co. KXL Broadcasters (Hotel Multnomah) Aroostook Broadcasting Corp.
KGGC KGIW KGIX KICK KICK KIDW KORE KUMA KWCR KXL WAGM WAMC WAMC	ak ak ak z ak aeh ak ae ae af ae	100 100 100 100 100 100 100 100 100 100	5 1 Y 1 B(.25) 4 	Fond du Lac, Wis. Shawnee, Okla. San Francisco, Calif. Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa Lamar, Colo. Eugene, Ore. Yuma, Arizona Cedar Rapids, Iowa Portland, Ore. Presque Isle, Maine Anniston, Ala Hazleton, Pa.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co. Leonard E. Wilson J. M. Heaton Sand Point Broadcasting Co. Red Oak Radio Corp. Lamar Broadcasting Co. Frank L. Hill & Curtis G. Phillips Dr. Albert H. Schermann Cedar Rapids Broadcast Co. KXL Broadcasters (Hotel Multnomah) Aroostook Broadcasting Corp. Raymond C. Hammett (Alabama Hot. Hazleton Brdcstg. Service. Inc.
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KGIZ KGKB	ak	100 100		Grant City, Mo.		Grant City Park Corp.	m.	
KGKY KNOW	bk ck	100		Scottsbluff, Neb.		East Texas Broadcasting Co. Hilliard Co., Inc.		
KNOW KPIM	ak . ak	100 100		Austin, Texas		KUT Bdctg. Co. (Driskill Ho Scott & Sturm	tel)	
KPJM KPQ KREG	aj	100		Wenatchee, Wash.		Wescoast Broadcasting Co.		
KXO	ak az	100 100		El Centro, Calif.		Voice of Orange Empire, Inc. E. R. Irey and F. M. Bowles		
WFDV WHEF	ak ak	100 100	(.25)	Rome, Ga. Kosciusko, Miss.		Rome Broadcasting Corp. Attala Milling & Produce Co	1	KC YS.
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WMBQ WMIL	ae ak	100 100	1 1	Brooklyn, N. Y. Brooklyn, N. Y.		Paul J. Gollhofer Arthur Faske		199.9
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WPEN WRDW	ae	100 100	(.25)	Philadelphia, Pa Augusta, Ga.		Musicove, Inc. (Relays WLW)	
WSYB WWRL	aeh ak	100 100	i			Philip Weiss Music Co. Long Island Broadcasting Co.		
WWSW XEFZ	ae ae	100 100 100	X(.2	5) Pittsburgh. Pa.		Walker & Downing Radio Co Manuel Zetina	rp.	

ALABAMA	***			Watts Kcvs.
	Watts		Kcys.	
Anniston O-21 tr	_100	WAMC		San Jose J-1 500 KQW 1010 Santa Ana M-3 100 KREG 1500
Birmingham O-21	5000	WAPI WBRC	N 1140 C 930	Santa Ana M-3 100 KREG 1500 Santa Barbara M-2 100 KDB C 1500
	500 100	WKBC	1310	Stockton J-2 250 KGDM 1100
Gadsden O-21	100	WIBY	1210	100-KWG C 1200
Huntsville N-21 c	100	WJBY WBHS	1200	— COLORADO
Mobile Q-20	500-	-wodx	C 1410	
Montgomery P-21 Troy P-21 rc	5 00	WSFA	C 1410	Colorado Springs K-11-1000-KVOR C 1270
Troy P-21 rc	100	WHET	1210	Denver K-11 — 500 KFEL 920 500 KFXF 920
AT ACTZA				-1000 KLZ C 560
ALASKA				12500 KOA N 830
Anchorage	250	KFQD	1230	500 KPOF 880
Juneau	100	KIFH	1310	Fort Morgan J-11 100 KGEW 1200
Ketchikan	500	KGBU	900	Grand Junction K-9 lc 100 KFXJ 1200
ARIZONA				Greeley J-11 500 KFKA 880 Lamar L-12 lc 100 KIDW 1420
				Lamar L-12 lc — 100 KIDW 1420
Jerome M-6	100	KCRJ KOY	1310	Pueblo L-11 ——250 KGHF 1320 Trinidad L-11 ——100—KGIW 1420
Phoenix N-6	500	KTAR	C 1390 N 620	Yuma J-12 —100 KGEK 1200
Prescott M-6	500 100-	- KIAK	N 620 1500	1 unit j-12 100 ktobit 1200
Tucson O-7	100	KPJM KGAR	1370	CONNECTICUT
1 desoit 0 - 7	500	KVOA	1260	
Yuma O-5 tl	100-	-KUMA	1420	Bridgeport H-27 250 WICC C 600 Hartford H-27 500 WDRC C 1330
				50000 WTIC R 1060
—— ARKANSAS		₹.	. ?	Storrs H-28 250 WCAC 600
Blytheville M-19	50	KLCN	1290	200 11 20 000
Fayetteville M-16	1000	KUOA	1390	DELAWARE
Fort Smith N-16	100	KFPW	1210	Wilmington J-26 250 WDEL 1120
Hot Springs N-17	10000	KTHS KARK	N 1040	100 WILM 1420
Little Rock N-17	250 100	KGHI	890 1200	100 ((15))
	1000	KLRA	C 1390	—DISTRICT OF COLUMBIA
Paragould M-18	100	KBTM	1200	Washington J-26 —10000—WJSV C 1460
Texarkana O-17 bl	100	KCMC	1420	250 WMAL 630
CALIEODNIA				250 WMAL 630 500 WRC N 950
CALIFORNIA				100 WOL 1310
Bakersfield L-2 br	100	KERN	C 1200	FLORIDA
Berkeley J-2 Beverly Hills M-3 bl	100	KRE	1370	
Beverly Hills M-3 bi	500 500	KMPC KELW	710 780	Clearwater R-24 1000 WFLA N 620 Gainesville O-24 ——5000—WRUF C 830
El Centro N-4	100	KXO	1500	Gainesville Q-24 ——5000—WRUF C 830 Jacksonville Q-24 1000 WJAX N 900
Eureka H-1 tc	100	KIEM	1210	Jacksonville Q-24 1000 WJAX N 900 Miami T-25 1000 WIOD N 1300
Fresno K-2	500	KMJ	C 580	1000 WQAM C 560
Glendale M-3	100	KIEV	850	Orlando R-24 250 WDBO C 580
Hollywood M-3	500	KMTR KNX	570	Pensacola Q-21 —500 WCOA 1340 St. Petersburg S-24 1000 WSUN N 620
	25000	KNX	1050	St. Petersburg S-24 1000 WSUN N 620 Tampa R-24 1000 WDAE C 1220
Long Beach M-3	1000 1000	KFOX	C 1250	Tampa R-24 —1000 WDAE C 1220
Los Angeles M-3	1000	KGER KECA	1360 N 1430	100 WMBR 1370
LOS Arigeres WI-3	1000	KFAC	1300	GEORGIA
	.50000	KFI	N 640	Americus P-22 c 100 WENC 1420
	500	KFSG	1120	Athens N-23 bc — 500—WTFI 1450
	250	KFVD	1000	Atlanta O-22 250 WGST C 890
	1000	KFWB	950	100 WJTL 1370
	100	KGFJ	1200	-5000 WSB N 740
	1000 500	KHJ KRKD	C 900 1120	Augusta O-23 100 WRDW 1500 Columbus O-22 100 WRBL 1200
	500 500	KKKD	780	Columbus O-22 100 WRBL 1200 Macon O-23 500 WMAZ 1180
Oakland J-1	250	KLS	1440	Rome N-22 100 WFDV 1500
Cariand J-1	500	KLX	880	Savannah O-24 500 WTOC C 1260
	500	KROW	930	Thomasville Q-22 100 WQDX 1210
Pasadena M-3	50	KPPC	1210	
Sacramento J-2 San Bernardino M-3	100	KFBK	C 1310	HAWAII
San Bernardino M-3	100	KFXM	1210	Honolulu 250 KGMB C 1320
San Diego N-3	1000	KFSD	N 600	1000 KGU N 750
San Francisco J-1	1000 1000	KGB KFRC	C 1330 C 610	
San Francisco J-1	500	KFWI	930	——IDAHO
	100	KGGC	1420	Boise G-5 — 1000 KIDQ 1350
	7500	KGO	N 790	Idaho Falls G-7 250 KID 1320
	100	KJBS	1070	Nampa G-5 -100-KFXD 1200
	5000	KJBS KPO	N 680	Pocatello H-7 — 250 KSEI 890
	1000	KTAB	560	Lewiston E-5 rc 100 KGKX 1420 Twin Falls H-6 500 KTFI 1240
	1000-	-KYA	N 1230	1 WILL PAIRS 11-0 500 IC 11-1 1240

£		
ILLINOIS	***	KANSAS Watts Kovs
	Watts Kcys.	11170
Carthage J-18	50 WCAZ 1070	Abilene K-15 bl — 5000 KFBI 1050
Chicago I-20	10000 KFKX 1020 10000 KYW N 1020	Coffeyville M-15 tr — 500—KGGF 1010 Dodge City L-13 — 100 KGNO 1210
	10000 KYW N 1020 500 WAAF 920	Dodge City L-13 — 100 KGNO 1210 Kansas City K-16 — 100 WLBF 1420
	25000 WBBM C 770	Lawrence K-16 500 KFKU 1220
	1500 WCFL R 970	
	100 WCRW 1210	Manhattan K-15500KSAC 580
	100 WEDC 1210	Topeka K-16 ——1000 WIBW C 580
	50000 WENR N 870	Wichita L-15 ——1000—KFH C 1300
	500 WGES 1360	
	25000WGN C 720 1000 WIBO 560	KENTUCKY
	1000 WIBO 560	765
	20000 WJJD 1130 50000 WLS N 870	Covington K-22 ——5000—WCKY N 1490 Hopkinsville M-20 ——1000 WFIW C 940
	5000 WLS N 670	Hopkinsville M-20 ——1000 WFIW C 940 Louisville L-21 ——25000 WHAS C 820
	5000 WMBI 1080	100 WLAP 1200
	500 WPCC 560	Paducah M-19 100 WPAD 1420
	100 WSBC 1210	
Cicero I-20	100 WEHS 1420	ŁOUISIANA
	100 WHFC 1420	
	100 WKBI 1420	Monroe P-18 100 KMLB 1200
Decatur K-19	100 WJBL 1200	New Orleans R-19 100 WABZ 1200
Galesburg J-18	100 WKBS 1310 100 WEBQ 1210	1000 WDSU C 1250
Harrisburg L-19	100 WEBQ 1210 100 WCLS 1310	100 WJBO 1420 100 WJBW 1200
Joliet I-19	100 WCLS 1310 100 WKBB 1310	100 WJBW 1200 500 WSMB N 1320
La Salle J-19	100 WJBC 1200	-10000-WWL 850
Peoria J-19	500-WMBD C 1440	Shreveport P-17 100 KRMD 1310
Quincy K-18	500 WTAD 1440	-1000 KTBS N 1450
Rockford I-19	500-KFLV 1410	100 KWEA 1210
Rock Island I-18	100 WHBF 1210	10000 KWKH 850
Springfield K-19	100 WCBS 1210	
	100 WTAX 1210	MAINE
Tuscola K-20	100 WDZ 1070	Augusta F-28 100 WRDO 1370
Urbana J-20	250 WILL 890	Bangor F-29 100 WABI 1200
Zion I-20	5000 WCBD 1080	500 WLBZ C 620
		Portland F-28 1000 WCSH R 940
INDIANA		Presque Isle D-29 lc 100 WAGM 1420
Anderson J-21	100 WHBU 1210	
Connersville K-21	100 WKBV 1500	MARYLAND
Culver I-20	500 WCMA 1400	Baltimore J-26 10000 WBAL B 1060
Elkhart I-21 bc	50 WTRC 1310	250 WCAO C 600
Evansville L-20	500 WGBF 630	100 WCBM 1370
Fort Wayne J-21	100 WGL C 1370	500 WFBR R 1270
	10000 WOWO C 1160	Cumberland J-25 — 100—WTBO 1420
Gary I-20	1000 WJKS 1360 100 WWAE 1200	Hagerstown J-25 rc 100 WJEJ 1210
Hammond I-20 be	100 WWAE 1200 1000 WFBM C 1230	
Indianapolis J-21	500-WKBF 1400	MASSACHUSETTS
Lafayette J-20		Babson Park G-28 500 WBSO 920
Muncie J-21	50 WLBC 1310	Boston G-28 500 WAAB C 1410
South Bend I-20	100 WFAM C 1200 500 WSBT C 1230	25000 WBZ B 990
		1000 WEEI R 590
Terre Haute K-20	100 WBOW 1310	1000 WHDH 830
		100 WLOE 1500 1000 WNAC C 1230
TOWA		1000 WNAC C 1230 Fall River H-28 250 WSAR 1450
IOWA		Lexington G-28 100 WLEY 1370
Ames I-17	5000-WOI 640	New Bedford H-28 100 WNBH 1310
Boone I-17	100 KFGQ 1310	Springfield H-27 —1000 WBZA B 990
Cedar Rapids I-18	100 KWCR B 1420	100 WMAS 1420
Council Bluffs J-16	KOIL B 1260	Worcester G-28 100 WORC C 1200
Davenport I-18	5000 WOC R 1000	250 WTAG R 580
Decorah H-18	100 KGCA 1270 100 KWLC 1270	
Des Moines I-17	100 KWLC 1270 	MICHIGAN
Ses Montes 1-1/	-5000 WHO R 1000	Battle Creek I-21 50 WELL 1420
Iowa City I-18	500-WSUI 880	
Marshalltown I-17	100 KFJB 1200	I Calumet E-19 100 WHDF 1370
Ottumwa J-17	100 KFJB 1200 100 WIAS , 1310	Detroit H-22 50 WJBK 1370
Red Oak J-16	-100 KICK 1420	Detroit H-22 50 WJBK 1370 10000 WJR B 750
Shenandoah J-16	500KFNF 890	100 WMBC 1420
	500 KMA 930	
Sioux City I-15	-1000 KSCJ C 1330	1000 WXYZ 1240
Waterloo I-17	500 WMT C 600	East Lansing H-21 1000 WKAR 1040

Watts Kcys.	NEVADA Watts Kcvs.
Flint H-22 100 WFDF 1310	NEVADA Watts Kcys. Las Vegas L-5 100 KGIX 1420
Grand Rapids H-21 500 WASH 1270	Reno I-3 -500 KOH C 1380
500 WOOD 1270 I	
Ironwood F-18 rc 100 WJMS 1420 Jackson I-21 100 WIBM 1370	NEW HAMPSHIRE
Kalamazoo I-21 tl 1000 WKZO 590	Laconia G-28 lc 100 WKAV 1310
Lapeer H-22 100 WMPC 1500	Manchester G-28 500 WFEA C 1430
Ludington H-20 100 WKBZ 1500 Marquette F-19 100 WBEO 1310	Portsmouth G-28 tc 250 WHEB 740
Royal Oak H-22 50 WEXL 1310	
	NEW JERSEY
MINNESOTA	Asbury Park I-27 500 WCAP C 1280
Fergus Falls F-15 100 KGDE 1200	Atlantic City J-27 5000 WPG C 1100
Minneapolis G-17 50000 WCCO C 810 1000 WDGY 1180	Camden I-26 500 WCAM 1280 Jersey City I-27 300 WAAT 940
1000 WLB 1250	250 WHOM 1450
1000 WRHM 1250	Newark I-27 1000 WAAM 1250
Moorhead F-15 100 KGFK 1500 Northfield G-17 1000 KFMX 1250	250 WGCP 1250 5000 WOR 710
1000 WCAL 1250	Paterson I-27 1000 WODA 1250
St. Paul G-17 10000 KSTP N 1460	Red Bank I-27 100 WJBI 1210
	Trenton I-26 500 WOAX 1280 Zarephath I-27 250 WAWZ 1350
MISSISSIPPI	Zarephath 1-27 250 WAWZ 1550
Greenville O-18 100 WKFI 1210 Gulfport O-19 400 WGCM 1210	NEW ACTION
	NEW MEXICO
Jackson P-19 1000 WJDX N 1270	Albuquerque N-7 250 KGGM 1230 20000 KOB 1230
Kosciusko O-19 bc 100 WHEF 1500	Clovis O-11 tr 20000 KOB 1230
Laurel P-19 br 100 WTSL 1310 Meridian P-20 500 WCOC 880	Santa Fe M-10 100 KGFL 1370
Meridian P-20 500 WCOC 880 Vicksburg P-18 500 WQBC 1360	
	- NEW YORK
MISSOURI	Albany G-27 bl 500 WOKO C 1430
Cp. Girardeau L-19 100 KFVS 1210	Auburn H-25 100 WMBO 1310
Columbia K-17	Binghamton H-26 100 WNBF 1500 Brooklyn I-27 500 WBBC 1400
Jefferson City L-17 500 WOS 630	Brooklyn I-27 500 WBBC 1400 1000 WBBR 1300
Joplin M-16 ************************************	500 WCGU 1400
Kansas City K-16 —1000 KMBC C 950 —100 KWKC 1370	500 WFOX 1400
1000 WDAF R 610	500 WLTH 1400 100 WMBO 1500
500 WHB 860	100 WMIL 1500
St. Joseph K-16 2500 KFEQ 680	Buffalo H-24 1000 WBEN R 900 100 WEBR 1310
St. Louis L-18 500 KFUO 550	1000 WCD C 550
100 KFWF 1200	5000 WKBW C 1480
50000 KMOX C 1090 500 KSD R 550	50 WSVS 1370 Canton F-26 500 WCAD 1220
1000 KWK B 1350	Canton F-26 500 WCAD 1220 Chester Twp. 50 WGNY 1210
1000 WEW 760	Elmira H-25 c 1000 WESG 1040
100 WIL 1200 Springfield M-17 100 KGBX 1310	Freeport I-27 100 WGBB 1210
Springheid M-17 100 RGBA 1510	Hudson Falls G-27 50 WGLC 1370 Jamestown H-24 50 WOCL 1210
MONTANA	New York City I-27 -50000 WABC C 860
Billings F-9 1000 KGHL N 950	250 WBNX 1350
Butte F-7 500 KGIR N 1360	50000 WBOQ 860 250 WCDA 1350
Great Falls E-8 1000 KFBB 1280	250 WCDA 1350 50000 WEAF R 660
Kalispell D-7 100 KGEZ 1310 Missoula E-7 100 KGVO 1200	500 WEVD 1300
Wolf Point E-11 100 KGCX 1310	1000 WFAB 1300 500 WINS 1180
'	. 250 WHN 1010
- NEBRASKA	30000 WIZ B 760
Clay Center J-14 1000 KMMJ 740	5000 WLWL 1100
Kearney J-14 bc 100 KGFW 1310 Lincoln J-15 5000 KFAB C 770	500 WMCA 570 250 WMSG 1350
100 KFOR 1210	500 WNYC 570
500 WCAJ 590	1000 WOV 1130
Norfolk I-15 ——1000 WJAG 1060 North Platte J-13 ——500 KGNF 1430	250 WPAP 1010 500 WPCH 810
Omaha J-15500 WAAW 660	
****1000 WOW R 590 I	250 WRNY 1010
Scottsbluff I-11 100 KGKY 1500 York I-15 500 KGBZ 930	Rochester G-25 5000 WHAM B 1150 500 WHEC C 1430
York J-15 500 KGBZ 930	300 WILE C 1430

250 WMAC 570 250 WSYR R 570 Troy G-27 500 WHAZ 1300 Tupper Lake F-26 100 WHDL 1420	00 KALE 00 KEX 00 KBPS 00 KFJR 00 KGW		00 80 20 00 20 40 60
PENNSYLVANIA			
Asheville M-23 1000 WWNC N 570 Charlotte M-24 25000 WBT C 1080 Gastonia M-24 100 WSOC 1210 Greensboro M-24 500 WBIG C 1440 Raleigh M-25 1000 WPTF N 680 Wilmington N-26 100 WRAM 1370 Winston-Salem M-24 100 WSJS C 1310 Harrisburg I-25 2 Hazleton I-26 lc 1	00 WFBG 10 WNBW 00 WLBW 25 WIBG 00 WSAJ 00 WBAK 00 WCOD 00 WHP 00 WAZL 00 WJAC	144 144 133 126 C 126 93 133 143 126 C 143 142 133	40 10 00 60 30 10 30 00 30
Lancaster I-26 1	00 WGAL 00 WKJC 00 WJBU	131 120 121 C 117 C 61 R 56 131 C 61	10 00 10 70 70 10 10 10
Canton I-23 100 WJW 1210 Cincinnati K-22 100 WFBE 1200 1000 WKRC C 550 1000 WSAI R 1330 Cleveland I-23 500 WGAR B 1450 1000 WHK C 1390 500 WJAY 610 500 WJAY 610 500 WJAY 610 5000 WTAM R 1070 Columbus J-22 500	50 WRAX 00 WTEL 00 KDKA 00 KQV 00 WCAE	102 131 B 98 138 R 122 C 129 156 83 131	20 10 80 80 20 90 90 10 80 80
Dayton J-22	00 WBAX 00 WBRE 00 WRAK 00 WJEQ 00 WORK	127 133 137 137 100	10 10 70 70 00
Chickasha N-14 Eik City N-13 Enid M-14 Norman N-15 Oklahoma N-15 Oklahom		111 618 124	.5
Tulsa M-15	50 WJAR 00 WPAW 00 WPRO		90 10 10 10

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

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SOUTH DAKOTAWatts Keys.	VIRGINIA Watts Kcys.
Brookings H-15 500 KFDY 550	IF
Huron H-14 100 KGDY 1200	Arlington J-25 1000 NAA 690 Danville L-25 100 WBTM 1370
Mitchell H-14 100 KGDA 1370	II Emory L-23 500 WEHC 1350
Pierre G-13 200 KGFX 630 Rapid City H-12 100 WCAT 1200	Lynchburg L-25 100 WLVA 1370 Newport News L-26 100 WGH 1310
Rapid City H-12 100 WCAT 1200 Sioux Falls H-151000 KSOO 1110	Newport News L-26 100 WGH 1310 Norfolk L-26 500 WTAR C 780
Vermillion I-15 — 500 KUSD 890	Petersburg L-26 100 WPHR 1200
Watertown G-15 100 KGCR 1210	Portsmouth L-26 tc 500 WPOR 780
Yankton I-15 —— 1000 —WNAX C 570	Richmond K-26 100 WBBL 1210
	100 WMBG C 1210
TENNESSEE	Roanoke L-24 250 WDBJ C 930
Brietol I -23 100 WODI 1500	—250 -WRBX 1410
Chattanooga N-211000 WDOD C 1280	
Jackson M-19 br 100 WTJS 1310	∥WASHINGTON
Knoxville M-22 50 WFBC 1200	Aberdeen D-2 ——100—KXRO 1310
1000 WNOX C 560 100 WROL 1310	Il Bellingham C-3 100 KVOS 1200
Memphis N-19 100 WHBQ 1370	Everett C-3 50 KFBL 1370 Olympia D-3 tl 100 KGY 1210
500 WMC N 780	Olympia D-3 tl 100 KGY 1210 Pullman E-5 1000 KGY 1220
500 WNBR 1430	Seattle C-3 — 5000 KJR N 970
Nashville M-21 — 500 WREC C 600 WLAC C 1470	1000KOL C 1270
50000 WSM N 650	
Springfield M-20 100 WSIX 1210	
	-1000 KTW 1220
— TEXAS	100 KVL 1370
	—250—KXA 760
Amarillo N-12 —1000 KGRS 1410 1000 WDAG 1410	
Austin O-14 100 KNOW 1500	-5000 KGA B 1470
Beaumont R-17 500 KFDM 560	
Brownsville U-15 500 KWWG 1260	
College Sta. Q-15 — 500 WTAW 1120 Corpus Christi S-14 100 KGFI 1500	Walla Walla E-5 —500 KVI C 570 —100—KUJ 1370
Dallas P-15 —10000 KRLD C 1040	Wenatchee D-4 100 KPO 1500
50000 WFAA N 800	Yakima D-4 — 100 — KIT 1310
Dublin P-14 100 KFPL 1310	
Dublin P-14 100 KFPL 1310 El Paso P-9 100 KTSM 1310	WEST VIIIGHTIII
100 WDAH 1310	II Bluefield L-24 250 WHIS 1410
	Charleston K-23 250 WOBU 580
Fort Worth P-15 —100 KFJZ 1370	
- 1000 KTAT 1240	Fairmont J-24 ——250—WMMN 890
- 1000 KTAT 1240 - 50000 WBAP N 800	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 250 WSAZ 580
Galveston R-16 — 1000 KTAT 1240 -50000 WBAP N 800 100 KFLX 1370 -500 KFUL 1290	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160
-1000 KTAT 1240 -50000 WBAP N 800 Galveston R-16 100 KFLX 1370 -500 KFUL 1290 Greenville O-15 15 KFPM 1310	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 250 WSAZ 580 Wheeling J-24 ——5000 — WWVA C 1160 —WISCONSIN
Galveston R-16 1000 KTAT 1240 Galveston R-16 100 KFLX 1370 Greenville O-15 15 KFPM 1310 Harlingen T-14 —500 KRGV 1260	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 ——250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 —WISCONSIN Eau Claire G-18 1000 WTAQ C 1330
Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24
Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24
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Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24 —WISCONSIN Eau Claire G-18 Fond du Lac H-19 Janesville I-19 La Crosse H-18 Madison H-19 —250 —WMMN 890 WSAZ 580 WSAZ 160 WSAZ 1
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Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 —WISCONSIN Eau Claire G-18 1000 WTAQ C 1330 Green Bay G-19 100 WHBY 1200 Janesville I-19 100 WCLO 1200 La Crosse H-18 1000 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 1210 Milwaukee H-19 250 WHAD C 1120
Galveston R-16 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16 Lubbock O-12 tr San Angelo Q-13 San Antonio R-14 San Antonio R-14 Galveston R-16 -500 KRGV -500 KRGV -1000	Fairmont J-24 Huntington K-23 Wheeling J-24 —WISCONSIN Eau Claire G-18 Fond du Lac H-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Milwaukee H-19 Meling J-24 —250 WMMN 890 WSAZ 580 100 WSAZ 120 40 40 40 40 40 40 40 40 40 40 40 40 40
Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 Huntington K-23 250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 —WISCONSIN Eau Claire G-18 1000 WTAQ C 1330 Green Bay G-19 100 WHBY 1200 Janesville I-19 100 WCLO 1200 La Crosse H-18 1000 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 210 Milwaukee H-19 250 WHAD C 1120 Milwaukee H-19 250 WISN C 1120 Poynette H-19 100 WTMJ N 620 Poynette H-19 100 WIBU 1370
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Calveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24 —WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Poynette H-19 Racine I-20 Stevens Point G-19 Stevens Point G-19 Love WMMN SWAZ S80 WSAZ S80 WSAZ S80 WSAZ S80 WTAQ C 1330 KFIZ 1420 WHBY 1200 WHBY 1200 WHBH C 1380 —1000 WKBH C 1120 1000 WTMJ N 620 1000 WRJM 1210 1000 WRJM 1370 Stevens Point G-19
Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KFIZ 1420 Green Bay G-19 100 WHBY 1200 100 WCLO 1200 WKBH C 1380 Madison H-19 100 WKBH C 1380 Manitowoc H-20 Milwaukee H-19 250 WIBA N 1280 WIBA N 1280 WIBA C 1120 Poynette H-19 1000 WTMJ N 620 Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17 1000 WEBC N 1290 ——WYOMING
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Galveston R-16	Fairmont J-24 ——250 —WMMN 890 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KFIZ 1420 Green Bay G-19 100 WKBH C 1380 MAISON H-19 100 WKBH C 1380 WKBH C 1380 WKBH C 1380 WIBA N 1280 MAISON H-19 100 WOMT 1210 MISWALE H-19 250 WIBA N 1280 WIBA N 1370 Sheboygan H-20 Stevens Point G-19 Superior F-17 1000 WEBC N 1290 ——WYOMING Casper H-10 ——500—KDFN 1440
Galveston R-16	Fairmont J-24 ——250 WMMN 890 Huntington K-23 250 WSAZ 580 Wheeling J-24 ——5000—WVVA C 1160 WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KFIZ 1420 Green Bay G-19 100 WHBY 1200 La Crosse H-18 1000 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 1210 Milwaukee H-19 250 WHAD C 1120 250 WISN C 1120 250 WHAD C 1200 250 WISN C 1120 250 WISN C 1120 250 WHAD C 1200 250 WHBL 1410 2000 WLBL 900 250 WHBL 1410
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KFIZ 1420 Green Bay G-19 100 WHBY 1200 Janesville I-19 100 WCLO 1200 WKBH C 1380 Madison H-19 1000 WKBH C 1380 ——500 WIBA N 1280 WIBA N 1280 WIBA N 1280 WIBA C 1120 WIBM C 1120 MIN C 1120 WIBM C 1120 Poynette H-19 1000 WTMJ N 620 Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17 1000 WEBC N 1290 ——WYOMING Casper H-10 ——500—KDFN 1440 CANADA
Galveston R-16	Fairmont J-24 ——250 WMMN 890 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KFIZ 1420 Green Bay G-19 100 WHBY 1200 100 WCLO 1200 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 1210 Milwaukee H-19 250 WISA C 1120 250 WHAD C 1120 Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17 1000 WEBC N 1290 ——WYOMING Casper H-10 ——500—KDFN 1440 ——CANADA ——ALBERTA
Galveston R-16	Fairmont J-24 Huntington K-23 Wheeling J-24 —WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17 —WYOMING CANADA —ALBERTA Calgary B-7 —S000—WMMN S92 1000 WTAQ C 1330 FINAL C 1330 WHBY 1200 WRBH C 1380 WRBH C 1380 WWBH C 1210 WWMIN 1370 S100 WWBU 1210 W
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 ——250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KF1Z 1420 Green Bay G-19 100 WCLO 1200 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 250 WIBA N 1280 WIBA N 1290 WIBA N 1290 WIBA N 1290 WIBA N 1290 WYOMING Casper H-10 ——500—KDFN 1440 CANADA ——ALBERTA Calgary B-7 500 CFAC 690 WIBA N 1290 WYOMING CANADA
Galveston R-16	Fairmont J-24 ——250 —WMMN 890 ——250 WSAZ 580 Wheeling J-24 ——5000—WWVA C 1160 ——WISCONSIN Eau Claire G-18 Fond du Lac H-19 100 KF1Z 1420 Green Bay G-19 100 WCLO 1200 WKBH C 1380 Madison H-19 1000 WKBH C 1380 Manitowoc H-20 100 WOMT 250 WIBA N 1280 WIBA N 1290 WIBA N 1290 WIBA N 1290 WIBA N 1290 WYOMING Casper H-10 ——500—KDFN 1440 CANADA ——ALBERTA Calgary B-7 500 CFAC 690 N 1290

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

Watts	Kcys.	Watts	Kcys.
Edmonton A-8 250 CHMA	580	Quebec D-27 100 CHRC	645
	745	I 100 CKCI	645
500 CKUA Lethbridge C-8 100 CJOC	580 1120	100 CKCV	880
Lethbridge C-8 100 CJOC Red Deer A-8 1000 CKLC	840	SASKATCHEWAN	
BRITISH COLUMBIA		Canora B-13 t1 15 10-BU Fleming C-13 1000 CJRW	1200 665
Chilliwack B-3 100 CHWK	665	Moose Jaw C-11 -500 -CJRM	665
Kamloops B-5 100 CJFC Kelowna C-6 t1 100 CKOV	1120 1200	2510-AB Prince Albert A-11 rc 25 10-BI	1200 1200
Trail C-6 c -25 10-AT	1155	Regina C-12 500 CHWC	960
Vancouver B-3 ——100 CHLS	<i>7</i> 30	500 CKCK	960
—500 CJOR 100 CKCD	1210 730	Saskatoon B-11 500 CFQC Yorkton B-13 500 CJGX	910 630
50 CKFC	730		030
-100 CKMO -100 CKWX -500 CNRV	730 730	NEWFOUNDLAND	
—100—CKWX —500—CNRV	1030	St. Johns A-35 200 VOAS 500 VOGY	810 860
Victoria C-3 —500 CFCT	630	100 VONA	950
MANITOBA		500 VONF 750 VOWR	1115
Brandon D-14 500 CKX	930	Wabana A-35 400 VOGT	750 893
Winnipeg D-15 5000 CKY	780		,
NEW BRUNSWICK		CENTRAL AMERICA	
Fredericton D-29 100 CFNB	1210	COSTA RICA	
Moncton D-30 700 CNRA	630	San Jose FF-23 50 TICR	911
St. John D-30 500 CFBO	890	GUATAMALA	
NOVA SCOTIA		Guatamala CC-18 tr 50 TGW	57 0
Glace Bay C-32 2000 VAS	685	SALVADOR	
Glace Bay C-32 2000 VAS Halifax E-31 500 CHNS 500 CNRH	815 815	Salvador CC-19 br 500 RUS	664
Sydney C-32 500 CNRH 100 CJCB	815 880		004
Wolfville D-31 50 CKIC	1010	MEXICO	
ONTADIO		AGUASCALIENTES	·
ONTARIO Brantford H-23 tr 15 10-BO	1200	Aguascalientes W-11 bc 350 XFC	805
Chatham H-22 250 CFCO	1010	BAJA CALIFORNIA	
Cobalt E-23 100 CKMC	1210	Tiajuana N-3 bc 300 XEFD	1020
Ft. William E-19 bl 100 CKPR Hamilton H-24 50 CHML	890 880	— EHIHUAHUA	
1000 CKOC	635	Chihuahua R-9 100 XEFI	1000
Kingston G-25 50 CFRC London H-23 5000 CJGC	930 595	250 XFF	915
North Bay F-23 c 100 CFCH	930	250 XFF Juarez P-9 -5000 XEAN 50 XEFV	750
Ottawa F-25 100 CKCO 500 CNRO	890 600	50 XEFV ——100 XEJ	1370 1000
Prescott F-25 100 CFLC	915	——COAHUILA	
Preston H-23 100 CKPC	880	Piedras Negras S-12 tr 100000 XEPN	885
St. Catherines H-24 tl 1000 CKTB Stratford H-23 tc 15 10-AK	635 1200	Saltillo, Coah. U-12 10 XEL Torreon U-11 tl 125 XETB	1000 1380
Toronto G-24 500 CFCA	1120	Villa Acuna R-12 c -75000 XER-XEF	735
10000 CFRB 5000 CHNC	C 690 840	—D. F.	
500 CKCL	580	Coyoacan Y-13 100 XEFZ	1500
5000CKGW	N 840	Mexico City Y-13 ——1000 XEB	1030
500 CKNC 5000 CPRY	960 840	500 XEFA 250 XEFH	1250 1360
Waterloo G-23 100 CKCR	645	250 XEG	1075
Windsor I-22 tc 5000 CKOK Wingham G-23 25 10-BP	C 540 1199	100 XEK 1000 XEN	990
	1177		711 940
PRINCE EDWARD ISLAND	F0.0	1000 XEP	<i>7</i> 80
Charlottestown C-31 500 CFCY 100 CHCK	580 960	250 XETA 1000 XETR	1140 610
Summerside C-31 100 CHGS	1120	500 XETW	830
OUEBEC		5000 XEW 500 XEX	910 1210
Montreal E-26 500 CFCF	N 1030	2000 XFG	638
, 100 CHCH	1200	1000 XFI	818
100 CHLP 5000 CHYC	1200 730	5000 XFO 500 XFX	940 860
5000 CKAC	C 730	Toluca Y-12 50 XEC	1000
~	1		

INDEX BY LOCATIONS WITH MAP KEY

Kcys: 1300 6880 965 1270 1270 1140 1485 1444 1444 1444 1423 1235 1010 840 1235
1300 680 965 1270 965 1325 1070 1140 780 780 925 1235 1010 840
680 965 1270 965 1325 1070 1140 1485 1444 1500 780 925 1235 1010 840
965 1270 965 1325 1070 1140 1485 1444 1500 780 925 1235 1235
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890 1395
1185
1395
925
780 1375
630
965
1010 1325
1395
588
925 730
630
5 85
890
1205 820
987
1040
1310
1249 1030
1034
<i>7</i> 90
630
000
920
960

Map Key: For locating cities not shown on the RADEX Map of North America, use the small letters following the square in which that city is located thus: tl top left, tc top center, tr top right, bl bottom left, bc bottom center, br bottom right, l left, c center, r right.

TIME CONVERSION TABLE

Atlantic	.1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
Eastern	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
Central	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	, 9:00	10:00
Mountain	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
Pacific	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00

	TO INDEED I	<u> </u>	BDITERE III B III		
CFAC	690 Calgary, Alta., MST. 7:30-9 a.m.; 11:30 a.m1:30 p.	CKCD	730 Vancouver, B. C. 645 Quebec, Que., EST. 1-1:30 p.m.	CMCH	1395 Havana, Cuba, <i>EST</i> . 5-9 p.m. 1185 Havana, Cuba.
CFBO CFCA	m.; 4:30-6 p.m. 890 St. John, N. B. 1120 Toronto, Ont., EST.	+CKCK	9-10 a m : 11 a m - noon: 1-3:30:	CMCM CMCN	1395 Havana, Cuba. 925 Havana, Cuba.
CFCF	7:15-noon; 1 p.mmid. 1030 Montreal, Que., EST.	CKCL	5:30-mid. 580 Toronto, Ont., EST 8:30 a.mmid.	CMCQ CMCR CMCU	780 Havana, Cuba. 1375 Havana, Cuba. 630 Havana, Cuba.
CFCH	8 a.mmid. 930 North Bay, Ont., EST.	CKCO	890 Ottawa, Ont.	CMCW	965 Havana, Cuba, EST.
CFCN	8-8:30 a.m.; noon-1 p.m.; 5-8 985 Calgary, Alta., MST.	CKCR	645 Waterloo, Ont., EST. 10 a.m1:15 p.m.; 4-10 p.m.	CMCX	1-3 a.m.; 11 a.m6 p.m. 1010 Havana, Cuba. 1325 Havana, Cuba, EST.
CFCO	7:30 a.m1:30 p.m.; 5 p.mmid. 1010 Chatham, Ont., EST.	CKCA	880 Quebec, Que., EST. Noon-2 p.m.; 6:30-11 p.m. 730 Vancouver, B. C.	CMCY	8:30-10:30 p.m.
OPCT	7:15-7:30 p.m.; 9:45-11 p.m. 630 Victoria, B. C., PST.	CKFC	Silent	CMDB	1395 Havana, Cuba. 588 Havana, Cuba.
	8:30 a.m12:30 p.m.; 6-8 p.m.;		840 Toronto, Ont., EST. 6:45 a.mmid.	CMDE CMGA	925 Havana, Cuba. 834 Colon, Cuba.
CFCY	10-11 p.m. 580 Charlottetown, P. E. I. AST.	CKIC.	1010 Wolfville, N. S., AST. 7:30-8:30 a.m.; 12:15-1:15 p.m.;	CMGB CMGC	1205 Matanzas, Cuba. 820 Matanzas, Cuba.
CFJC	11:30 a.mnoon; 4:30-8 p.m. 1120 Kamloops, B. C., <i>PST</i> .	eKLC	6-7 p.m. 840 Red Deer, Alta., MST.	CMGE	1375 Cardenas, Cuba, EST. noon-2; 8-10 p.m. 987 Matanzas, Cuba.
	7:30-9:30 a.m.; noon-2 p.m.; 5:30-7 p.m.; mid2 a.m. 915 Prescott Ont., EST.	CKMC	8 a.m8 p.m. 1210 Cobalt, Ont., EST.	CMGF CMGH	
CFLC	8-10 a.m.; noon-2 p.m.; 5-7:30	-EKMO	7-8 p.m. 730 Vancouver, B. C. 960 Toronto, Ont., EST.	CMHC CMHD	790 Tuinucu, Cuba. 950 Caibarien, Cuba.
CFNB	p.m.; 8-10 p.m. 1210 Fredericton, N. B., AST.	CKNC		CMHI	1030 Santa Clara, Cuba, EST 11 a.m1 p.m.; 8-10 p.m.
CFQC	8:30-9:30 a.m.; 12:30-2 p.m.	CKOC	8 a.m12:30 p.m.; 2:30-11:15. 635 Hamilton, Ont., EST. 8 a.m10:30 p.m.	CMHJ	1125 Cienfuegos, Cuba, EST. 11 a.m1 p.m.; 7-9 p.m.
CFRB	910 Saskatoon, Sask. 690 Toronto, Ont., EST. 8 a.mmid.	CKOK	540 Windsor, Ont., EST. 7:30 a.mmid.	CMHK CMHL	1225 Cruces, Cuba. 1290 Cienfuegos, Cuba.
CFRC CHCH	930 Kingston, Ont. 1200 Montreal, Que.	CKOV	1200 Kelowna, B. C., PST.	CMJC	1382 Camaguey, Cuba.
CHCK	960 Charlottetown, P. E. I.	CKPC	8-9 a.m.; 11:30 a.m2 p.m.; 4:30-7:30 p.m. 880 Preston, Ont., EST.	CM1E CM1E	1175 Camaguey, Cuba. 930 Camaguey, Cuba. 1050 Camaguey, Cuba.
CHGS	Noon-2 p.m.; 5-7:30 p.m., AST. 1120 Summerside, P. E. I. 6:30 a.m2 p.m.; 4-8 p.m., AST.	CKPR	10 a.m2 p.m. 890 Ft. William, Ont., EST.	CMJH	1150 Ciego de Avila, Cuba. 10 a.m2 p.m.; 5-10 p.m., EST
CHLP	1200 Montreal, Que. 730 Vancouver, B. C., PST.	CKTB	9 a.m2 p.m.: 5:30-11 p.m.	CMJI	1250 Ciego de Avila, Cuba.
BHLS	8:50-9 p.m.	CKUA	635 St. Catharines, Ont., 1:30-5 p.m.; 6:30-8 p.m., EST. 580 Edmonton, Alta., MST	CMJK CMJL	10 a.m1:30 p.m.; 6-10, EST. 790 Camaguey, Cuba. 960 Camaguey, Cuba.
CHMA CHML		-ckwx	4-9 p.m.	CMIN	1270 Camaguey, Cuba. 1110 Ciego de Avila, Cuba.
CHNC	3-11 p.m.	ORUX	730 Vancouver, B. C., PST. 8-8:30 a.m.; 10:30 a.mnoon; 4:30-8:30 p.m.; 9-10:30 p.m.	CMJP CMK	1310 Moron, Cuba. 730 Havana, Cuba, EST.
CHNS	840 Toronto, Ont. 7:15-7:30 p. m.	CKX	930 Brandon, Man., CST. 8:30-9:30 a.m.; 7:45-10 p.m.	CMKC	10 a.mnoon; 6 p.mmid. 1034 Santiago, Cuba.
CHRC	815 Halifax, N. S., AST. 8 a.m4 p.m.; 6 p.mmid.	CKY	780 Winnipeg, Man., CST.	CMKJ CMQ	1300 Guantanamo, Cuba.
	645 Quebec, Que., EST. 9 a.m2 p.m.; 5 p.mmid. 960 Regina, Sask., MST.	CMAB CMAF	8:30 a.m2:15; 3:30-10:45 p.m. 1249 Pinar del Rio, Cuba. 680 Havana, Cuba, EST.	CMW	 630 Havana, Cuba. 585 Havana, Cuba, EST. 7:30 a.m11:30 p.m.
CHWC	7-9 a.m.; 10-11 a.m.; noon-1 p.	CMAY	5-11:30 p.m.	CMX	890 Havana, Cuba, EST .
CHWK	m.; 3:30-6:30 p.m. 665 Chilliwack, B. C., PST.	CMBC	1270 Havana, Cuba, EST.	CNRA	11 a.m2 p.m.; 7-11 p.m. 630 Moneton, N. B., AST.
CHYC	Noon-8 p.m. 730 Montreal, Que. 745 Edmonton Alta MST	CMBD CMBF	4 a.m11 p.m. 965 Havana, Cuba. 1325 Havana, Cuba.		12:30-2 p.m.; 6:15-7:15 p.m.; 8:30-10 p.m.
CJCA	7:45-9:30 a.m.: noon-1 p.m.:	CMBG	1070 Havana, Cuba.	CNRH	815 Halifax, N. S., AST Silent.
CJCB	3:30-4:30 p.m.; 5-10 p.m. 880 Sydney, N. S., AST.	CMBJ	1140 Havana, Cuba. 1485 Havana, Cuba. 1444 Havana, Cuba, <i>EST</i> .	CNRO	600 Ottawa, Ont., EST. Noon-1 p.m.; 6-11 p.m.
C1C1	10 a.m2 p.m.; 6-10 p.m. 690 Calgary, Alta., MST.	CMBL	7-9 p.m. 1444 Havana, Cuba, EST.	CNRV	1030 Vancouver, B. C., PST.
CJGC	9-11:30 a.m.; 1:45-3 p.m.; 6-8. 595 London, Ont., EST.	CMBN	2-3 p.m.	CPRY	2-3:30 p.m.; 5:30-8:30 p.m. 840 Toronto, Ont., EST. 1-1:30 p.m.; 10-10:30 p.m.
CIGX	8:45 a.m1:15 p.m.; 5:30-10. 630 Yorkton, Sask., CST.	CMBR CMBS	1500 Havana, Cuba. 780 Havana, Cuba.	HHK HIX	920 Port-au-Prince, Haiti. 630 Santo Domingo, EST.
	8:30-9:15 a.m.; 10:30-10:45 a. m.; 12:40-1:45 p.m.; 6:45-8 p.m. 1120 Lethbridge, Alta., MST.	CMBY	925 Havana, Cuba. 1235 Havana, Cuba.		8:25-9:40 p.m.
C10C	8:45-10 a.m.: noon-1:15 p.m.:	CMBZ	1010 Havana, Cuba, EST. 9-10:30 a.m.; noon-2 p.m.; 4-5	KABC	1420 San Antonio, Tex., CST. 6:45 a.m1:30 p.m.; 4-11:30 p.m.
CJOR	3-4 p.m.; 6-8 p.m. 1210 Vancouver, B. C., PST.	-CMC	p.m.; 6-7 p.m.; 8-11 p.m. 840 Havana, Cuba.	~KALE	1300 Portland, Ore. PST. 7-10:30 a.m.; 2:30-5; 6-7 p.m.;
CJRM	7:30 a.m1 p.m.; 4-11:30 p.m. 665 Moose Jaw, Sask., MST.	CMCA CMCB	1070 Havana, Cuba, EST.	KARK	890 Little Rock, Ark., CST. 7:30 a.m9 p.m. 1210 Elk City, Okla., CST.
, > 1	\$-10:30 a.m.; noon-2:30 p.m. 9-10:30 p.m.		11:30 a.m1 p.m.; 5-6 p.m.; 7:30-10 p.m.	KASA	/ a.mv p.m.
CJRW	665 Fleming, Sask., MST. Noon-1 p.m.; 4:30-7:30 p.m.	CMCD	1140 Havana, Cuba, <i>EST</i> . Noon-3 p.m.; 8 p.mmid.	KBPS	1420 Portland, Ore., <i>PST</i> .
CKAC	730 Montreal, Que., EST. 7:30 a.mmid.	CMCF	890 Havana, Cuba, EST. 5-8 p.m.; 9-11 p.m.	KBTM	11 a.m12:30 p.m.; 3-5 p.m. 1200 Paragould, Ark., CST. 7:30 a.m3 p.m.
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<u>KC</u>	MIC IND	EA DI CALI	LETTERS AND FRI	DAII	IME KGNO
KCMC	1420 Carantar a 4-la	. com velv	1970 Columnton Town	KOGA	1970 Decemb Is COM
KUMU	1420 Texarkana, Ark	., CST. KFLX o.m. KFMX	1370 Galveston, Texas. 1250 Northfield, Minn., CST.	KGCA	1270 Decorah, Iowa, CST. 8:30-9:45 a.m.; 10:45-11:30 a.
← KCRC	6:45 a.m2 p.m.; 4-9 r 1370 Enid, Okla., CS	T.	10:15-10:35 a.m.; 8-9 p.m.		m.; 12:30-2:30 p.m.
	10 a.m2 p.m.: 3:45-7	45 p.m. — KFNF	890 Shenandoah, Iowa, CST.	KGCR	1210 Watertown, S. D., CST.
KCRJ	10 a.m2 p.m.; 3:45-7	AST.	5-8 a.m.; 9-10 a.m.; 12:15-5 p.m.; 6-8 p.m.; 9-10 p.m.		6:30 a.m3 p.m.; 5-9.
	7:30-9:30 a.m.; noon	-1 p.m.:	p.m.; 6-8 p.m.; 9-10 p.m.	KGCU	6:30 a.m3 p.m.; 5-9. 1240 Mandan, N. D., MST.
WDD.	3:45-6 p.m.	C "FOR	1210 Lincoln, Nebr., CST.	- 4004	Noon-5 p.m.; 6:45-9 p.m. 1310 Wolf Point, Mont., MST
KDB	1500 Santa Barbara,	-KFOX	7 a.m10 p.m.	KGCX	6-20 0 c m . 11-20 2 . 6 0 m m
-KDFN	8 a.mmid., <i>PST</i> . 1440 Casper, Wyo., <i>M</i>		1250 Long Beach, Calif., PST.	KGDA	6:30-9 a.m.; 11:30-3; 6-9 p.m. 1370 Mitchell, S. D., CST.
110111	9 a.m.=9 n.m.	KFPL	6 a.mmid. 1310 Dublin, Texas, CST.	KUDA	8 a.m4:30 n.m.: 5:30-9.
KDKA	9 a.m9 p.m. 980 Pittsburgh, Pa., 7 a.m12:30 a.m. par	EST.	6 a.m10:30 p.m.	KGDE	8 a.m4:30 p.m.; 5:30-9. 1200 Fergus Falls, Minn.
			1310 Greenville, Texas, CST.		7 a.m9 p.m., CST.
KDLR	1210 Devils Lake, N. 7 a.m3 p.m.; 5:30-9:3 1290 Salt Lake City,	D.,CST.	7:45-9 a.m.: 1-2:45 p.m.: 0-9.	KGDM	1100 Stockton, Calif., PST.
	7 a.m3 p.m.; 5:30-9:	80 p.m. KFPW	1210 Fort Smith, Ark., CST.		6 a.msunset. 1200 Huron, S. D., CST.
KDYL	1290 Salt Lake City,	Utah.	1210 Fort Smith, Ark., CST. 6:30 a.m2 p.m.; 5-10:30 p.m. 1340 Spokane, Wash., PST.	KGDY	1200 Huron, S. D., CST.
KECA	6:30 a.m1 a.m., MST	KFPY	1340 Spokane, Wash., PST.	V0EV	7 a.m2 p.m.; 4-9 p.m. 1200 Yuma Colo., MST.
REUA	1430 Los Angeles, Cal	$\Pi_{\bullet}, PST_{\bullet}$	7 a.m12:30 a.m. next day.	-KGEK	1200 1 uma Colo., MST.
KELW	9 a.m11 p.m.	PST KFQD	1230 Anchorage, Alaska. 6 p.mmid. (Zone 6) 610 San Francisco, Calif.	KGER	11:30 a.mmid. 1360 Long Beach, Calif., <i>PST</i>
K== **	780 Burbank, Calif. 10 a.m1 p.m.; 5-8 p.n 1200 Bakersfield, Cal	n. —KFRC	610 San Francisco Calif	KGEN	fig m -mid
-KERN	1200 Bakersfield, Cal	if PST.	7 a.m1 a.m., PST.	KGEW	6 a.mmid. 1200 Ft. Morgan, Colo., MST
	7:30 a.mmid.	-KFRU	630 Columbia, Mo., CST.		6:30-9:30 p.m.
KEX	1180 Portland, Ore.,	PST.	6:30-9 a.m.; 4-7:30 p.m.; 9	KGEZ	6:30-9:30 p.m. 1310 Kalispell, Mont., MST.
	7 a.mnoon; 1 p.mm	id	p.mmid.		8 a.m9 p.m.
KFAB	((U Lincoln, Neb., (ST. KFSD	600 San Diego, Calif., PST.	KGFF	1420 Shawnee, Olda., CST.
KFAC	6 a.m10:30 p.m. 1300 Los Angeles, Cal	t nam	7:30 a.mmid.	KGFG	7:30 a.m9 p.m.
KFAU	7 a.mmid.	if., PST. —KFSG	1120 Los Angeles, Calif., PST.	-KGFG	1370 Oklahoma City, Okla.
KFBB	1280 Great Falls, Mor	nt., MST -KFUL	1:30-3 p.m. 1290 Galveston, Texas, CST.		7:15-10 a.m.; 3-3:45 p.m.; 7:45-
	8 a.m3 n.m.: 5-10 n.	m.	8-9:30a.m.;11a.m1p.m.;2:30-4	KGFI	10 p.m., CST. 1500 Corpus Christi, Texas.
-KFBI	8 a.m3 p.m.; 5-10 p. 1050 Abilene, Kans.,	CST.	p.m.: 5:30-8 p.m.: 10:15-mid.		7 a.m3 p.m.: 6-10 p.m CST.
	5 a.m9 p.m.	KFUO	p.m.; 5:30-8 p.m.; 10:15-mid. 550 St. Louis, Mo., CST. 6:30-7 a.m.: 12:15-12:40 p.m.;	KGFJ	7 a.m3 p.m.; 6-10 p.m., <i>CST</i> . 1200 Los Angeles, Calif.
KFBK	1310 Sacramento, Cal	if., <i>PST</i> .	6:30-7 a.m.: 12:15-12:40 p.m.;		24 hours daily.
eren.	7 a.m11 p.m.	D077	9:30-10:30 p.m.	KGFK	1500 Moorhead, Minn., CST.
KFBL	13/U Everett, Wash.	PST. KFVD	1000 Los Angeles, Calif., PST.	KGFL	8 a.m9 p.m. 1370 Santa Fe, N. M., <i>MST</i> .
KFDM	550 Resument Tor	.; о-о а.ш. . CST. KFVS	6 a.m6:45 p.m.; 10 p.mmid. 1210 Cape Girardeau, Mo.	KULL	9-10 a.m.; 11 a.m3 p.m.; 4-5:30
KIDM	1370 Everett, Wash., 8:30 a.mnoon; 3-6 p.m. 560 Beaumont, Tex. 7 a.m2 p.m.; 4:30-10		0 s m -noon: 4-8:30 n m CST		n.m.: 7:30-9
KFDY			9 a.mnoon; 4-8:30 p.m., CST. 950 Los Angeles, Calif., PST.	KGFW	1310 Kearney, Neb., CST.
	12:30-2 p.m.	,	7:30 a.mmid.		p.m.; 7:30-9. 1310 Kearney, Neb., CST. 7:30 a.m1:30 p.m.; 5-10:30
KFEL	12:30-2 p.m. 920 Denver, Colo., 7 7-8:30 a.m.: 10 a.m12	MST. KFWF	7:30 a.mmid. 1200 St. Louis. Mo., <i>CST</i> .		p.m.
			9:45-11:15 a.m.	KGFX KGGC	630 Pierre, S. D.
	3-4:30 p.m.; 6-7:30 mid.	p.m.; 9KFWI	930 San Francisco, Calif. 7-8 a.m.; 9 a.m1 p.m.; 6-7:30	Nuuc	1420 San Francisco, Calif. 9 a.m9 p.m., <i>PST</i> .
KFEQ	680 St. Joseph, Mo.	GST		KGGF	1010 Coffevville Kans. CST.
. *	6 a.m7:45 n.m.	KEYD	8:30 p.m1 a.m., <i>PST</i> . 1200 Nampa, Idaho, <i>MST</i> .		1010 Coffeyville, Kans., CST. 7:30 a.m2 p.m.; 5-10:30.
KFGQ	1310 Boone, Iowa, C. 6-7:30 a.m.; 1:30-2:30	ST.	7 a.m9 p.m.	-KGGM	1230 Albuquerque, N. M.
	6-7:30 a.m.; 1:30-2:30	p.m. —KFXF	920 Denver, Colo., MST.		8 a.m2 p.m.; 4-10 p.m., MST.
──KFH	1300 Wichita, Kans.,	CST.	8:30-10 a.m.; 12:30-3; 4:30-6;	KGHF	1320 Pueblo, Colo., MST.
	7-8:30 a.m.; 9-11 a.n	1.; 11:30	7:30-9 p.m.	Kom	7 a.m1 p.m.; 4-10 p.m.
	a.m2 p.m.; 3-6 p p.m.; 10-11 p.m.	······································	1200 Grand Jet., Colo., MST.	KGHI	1200 Little Rock, Ark., CST
KFI	640 Los Angeles, Cal	if <i>PST</i> .	1200 Grand Jet., Colo., MST. 8 a.m2 p.m.; 6-9 p.m.		8:30 a.m1:30 p.m.; 5-9; mid 3 a.m.
	6:30 a.mmid.	KFXM	1210 San Bernardino, Calif	KGHL	950 Billings, Mont., MST.
~KFIO	1120 Spokane, Wash.	PST.	7 a.mmid. <i>PST</i> .	17-01100	7:30 a.m4 p.m.; 5:30-11.
	6 a.msunset.	-KFXR	1310 Oklahoma City, Okla.	KGIR	1360 Butte. Mont MST.
KFIZ	6 a.msunset. 1420 Fond du Lac, W	is., CST.	7:30 a.m2 p.m.; 4-10, CST. 1310 Lubbock, Texas, CST. 6 a.m2 p.m.; 4-10 p.m.		7 a.mmid. 1420 Trinidad, Colo., MST. 6-8 a.m.; 10-2 p.m.; 5-8 p.m.
V= 10	10 a.m1 p.m.; 4-10 p. 1200 Marshalltown, I	m. —KFYO	1310 Lubbock, Texas, CST.	KGIW	1420 Trinidad, Colo., MST.
KFJB	1200 Marshalltown, 1	0Wa.	6 a.m2 p.m.; 4-10 p.m.		6-8 a.m.; 10-2 p.m.; 5-8 p.m.
KFJI	6-9 a.m.; noon-3 p.m.; 1210 Klamath Falls,	6-9 p.m. —KFYR	550 Bismarck, N. D., CST. 6:30 a.m12:30 p.m.; 2-11 p.m.	KGIX	1420 Las Vegas, Nev., PST.
- 171.01	7:30 a.m9 p.m., PST	7		KGIZ	6-9 a.m.; noon-3 p.m.; 6-9 p.m. 1500 Grant City, Mo., CST.
-KFJM	1370 Grand Forks, N	∴D. —KGA	1470 Spokane, Wash., PST.	1412	7-11 a.m.; noon-5 p.m.; 6-9 p.m.
	7 a.m9 p.m., CST.	VA	6 à.mmid.	KGKB	1500 Tyler, Texas, CST.
KFJR	7 a.m9 p.m., <i>CST</i> . 1300 Portland, Ore., A	PST. —KGAR	1370 Tucson, Ariz., MST.		7 a.m2 p.m.; 4-10 p.m.
	10:30 a.m2:30 p.m.;	56 n.m.:	7 a.m1:30 p.m.; 4-11.	KGKL	7 a.m2 p.m.; 4-10 p.m. 1370 San Angelo, Texas, CST
	7 p.mmid.	KGB	1330 San Diego, Calif., PST.		8 a.m9:30 p.m.
KFJZ	1370 Fort Worth, Tex	28, CST.	7 a.mmid.	KGKO	570 Wichita Falls, Texas.
-VEVA	7 a.m11 p.m.	KGBU KGBU	900 Ketchikan, Alaska. (Zone 8), 10 a.m3 p.m.; 5-7;	KGKX	1420 Lewiston, Idaho.
TKFKA	880 Greeley, Colo., A	ию <i>1</i> .	(Zone 8), 10 a.m3 p.m.; 5-7; 10 p.m3 a.m.	KGKY	1500 Scottsbluff, Neb., MST.
	6-7:30 a.m.; 9 a.m2: 8-11 p.m.	ог р.ш.; KGBX	1310 Springfield, Mo., CST.	KGMB	1320 Honolulu Hawaii
KFKU	1220 Lawrence, Kans	CST.	6:30-9:30 a.m.; 11 a.m2 p.m.;	RUMB	7-9 a.m.: 10:40 a.m11 n.m
	2:30-3 p.m.; 6-6:30 p.m	., -~-· 1.	4-10 p.m.		6:30 a.m2 p.m.; 4:30-9. 1320 Honolulu, Hawaii. 7-9 a.m.; 10:40 a.m11 p.m. (Zone 5)
KFKX	1020 Chicago, Ill.	KGBZ	930 York, Neb., CST.	KGNF	1430 North Platte, Neb.
-KFLY	1410 Rockford, Ill., C	ST.	7:30-9:30 a.m.; 11 a.m12:30 p.		7 a.msunset, MST.
	10 a.m12:30 p.m.; 3	-6 p.m.;	m.; 2-3:30 p.m.; 5-6:30 p.m.;	~ KGNO	1210 Dodge City, Kans.
	8-10 p.m.		8:30-10 p.m.		7:30 a.m3:30 p.m.; 5-9, MST

				241120
-KGO	790 San Francisco, Calif. 7 a.m12-30 a.m., PST.	KMTR	570 Hollywood, Calif., PST. — KSAC 6:30 a.mmid.	580 Manhattan, Kans., CST. 8-9 a.m.; 10-10:30 a.m.; 12:30-
KGRS	7 a.m12-30 a.m., PST. 1410 Amarillo, Texas, CST. 6-8 a.m.; 10 a.m12:30 p.m.;	KNOW	1500 Austin, Texas, CST. 7:30 a.m1 p.m.; 5-11 p.m. —KSCJ	1:30 p.m.; 4:30-5:30 p.m. 1330 Sioux City, Iowa, CST.
we.	2:15-7:30 p.m.; 9-10 p.m.	-KNX	1050 Hollywood, Calif., PST.	6:30 a.m11 p.m.
, KGU	750 Honolulu, Hawaii. 6:15-10:30 a.m.: noon-1 p.m.:	—KOA	6:30 a.m1 a.m. next day. 830 Denver, Colo., MST.	550 St. Louis, Mo., CST. 7 a.m12:15 p.m.; 12:40-11 p.m.
i	6:15-10:30 a.m.; noon-1 p.m.; 4:45-11 p.m. (Zone 5)	KOAC	7 a.mmid.	890 Pocatello, Idaho, MST.
KGVO	1200 Missoula, Mont., MST.	KOAC	550 Corvalis, Ore., PST. 6:30 a.m4 p.m.; 6-8:30 p.m. — KSL	8 a.m11 p.m. 1130 Salt Lake City, Utah.
KGW	6 a.mmid. 620 Portland, Ore., PST.	— КОВ	1180 Albuquerque, N. M.	7 a.mmid., <i>MST</i> .
	6:30 a.mmid.	KOCW	7 a.m9 p.m., <i>MST</i> . 1400 Chickasha, Okla. KSO	1380 Des Moines, Iowa. 1110 Sioux Falls, S. D., <i>CST</i> .
KGY	1210 Olympia, Wash., <i>PST</i> . 6 p.mmid.	— кон	1380 Reno, Nev., <i>PST</i> .	6 a.m8 p.m.
— KHJ	900 Los Angeles, Calif., PST	KOIL	8 a.m9 p.m. 1260 Council Bluffs, Ia., CST	1460 St. Paul, Minn., CST. 6:30 a.m12:30 a.m. next day
	7 a.m1 a.m. next day.	- KOIN	6 a.m1 a.m.	560 San Francisco, Calif.
-KHQ	590 Spokane, Wash., <i>PST</i> . 7 a.mmid.	- KOIN	940 Portland, Ore., PST. 6 a.m1 a.m. next day.	6:45 a.m1 a.m., PST.
KICA	1370 Clovis, N. M.	KOL	1270 Seattle, Wash., PST.	620 Phoenix, Ariz., MST. 7 a.m11:15 p.m.
KICK	1420 Red Oak, Iowa.	-KOMA	6:45 a.mmid. 1480 Oklahoma City, Okla.	1240 Ft. Worth, Texas.
KID	Silent. 1320 Idaho Falls, Idaho, MST.		7 a.m11 p.m., CST. 920 Seattle, Wash., PST.	7-9 a.m.; noon-1:30 p.m.; 4-7 p.m.; 9-mid.
	9 a.mmid.	—KOMO	920 Seattle, Wash., PST. 6:55 a.m12:30 a.m. next day.	1450 Shreveport, La., CST.
KIDO	1350 Boise, Idaho, <i>MST</i> . 7 a.m9:30 p.m.	-KONO	1370 San Antonio, Tex., CST.	6 a.mmid. 1240 Twin Falls, Idaho, <i>MST</i> .
-KIDW	1420 Lamar, Colo., MST.		1.20-4 n m : 6-7 n m : 8-10	6:30 a.m11 p.m.
VIPM	6-8 a.m.; 2-6 p.m.; 8-10.	KOOS	1370 Marshfield, Ore., PST. —KTHS	1040 Hot Springs, Ark., CST.
-KIEV	1210 Eureka, Calif., PST. 850 Glendale, Calif., PST.	KORE	9 a.m9 p.m. 1420 Eugene, Ore., <i>PST</i> .	9-10 a.m.; 11 a.m12:30 p.m.; 1:45-2:15 p.m.; 4:30-5:30 p.m.; 6:30-7:30 p.m.; 9-10:45
KIFH	1310 Juneau, Alaska.	KURE	7:45 a.m8:30 p.m.	p.m.; 6:30-7:30 p.m.; 9-10:45
KIT	1310 Yakima, Wash., PST. 7 a.m11 p.m.	—KOY	1390 Phoenix, Ariz., MST.	p.m. 780 Los Angeles, Calif., <i>PST</i> .
KJBS	1070 San Francisco, Calif.	-KPCB	7 a.m10 p.m. 650 Seattle, Wash., PST.	6-10 a.m.; 1-5 p.m.; 8 p.m
-KJR	Mid. to local sunset, PST. 970 Seattle, Wash., PST.		5:30 a.m8 p.m.; 10 p.m4 a.m. —KTRH	4 a.m. next day. 1120 Houston, Texas, CST.
	7 a.mmid.	KPJM	1500 Prescott, Ariz., MST. 9 a.m9 p.m. ——KTSA	6:30-11 a.m.; noon-11:30 p.m. 1290 San Antonio, Tex., CST.
KLCN- KLO	1290 Blytheville, Ark. 1400 Ogden, Utah.	KPO	680 San Francisco, Calif.	6-8 a m + 0.20-11.20 a m + 3-5
	8:30 a.m10:30 p.m., MST.	KPOF	7:30 a.mmid., PST.	p.m.; 7-10 p.m. 1310 El Paso, Texas. 1220 Seattle, Wash. 1370 Walla Walla, Wash. 6 a m support PST
KLPM	1240 Minot, N. D., CST. 7 a.m1 p.m.; 6-7:45 p.m.; 10-	Krur	880 Denver, Colo., MST. 7:30-9 a.m.; 2:30-4:30 p.m.; KTW 	1220 Seattle, Wash.
	11:30 p.m.	- KDD0	6-8- p.m.	6 a.msunset, PST.
KLRA	1390 Little Rock, Ark., CST. 8-11 a.m.; 1-5 p.m.; 6:30-11 p.m.	KPPC	1210 Pasadena, Calif., PST. —KUMA	1420 Yuma, Ariz., MST.
-KLS	1440 Oakland, Calif., PST.	KPQ	1500 Wenatchee, Wash., PST.	7-9 a.m.; noon-3 p.m.; 6-9 p.m. 1390 Fayetteville, Ark., CST.
KLX	8:30 a.m7:30 p.m. 880 Oakland, Calif., PST.	- KPRC	420 Houston Toros CST	7-8 a.m.; 11 a.m1 p.m.; 5-6:30.
REA	7 a.m11 p.m.	KI NO	6:30 a.mmid.	890 Vermillion, S. D., CST.8-9 p.m.
KLZ	560 Denver, Colo., MST. 6:30 a.m11:30 p.m.	KQV	1380 Pittsburgh, Pa., EST. —RVI	570 Tacoma, Wash., <i>PST</i> .
KMA	930 Shenandoah, Iowa, CST.	KQW	8:30 a.m1 p.m.; 2-11 p.m. 1010 San Jose, Calif., PST. —KYL	6:30 a.mmid.
	6-7:30 a.m.; 9:30-11 a.m.;12:30-		7 a.m3 p.m.; 4:30-10 p.m. ——KVOA	1370 Seattle, Wash. 1260 Tucson, Ariz. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.
	2 p.m.; 3:30-5 p.m.; 6:30-8:30 p.m.; 10 p.mmid.	KRE	1370 Berkeley, Calif., PST. 6:30-9:30 a.m.; noon-3 p.m.;KVOO	6-9 a.m.; noon-3 p.m.; 6-9 p.m.
-KMAC	1370 San Antonio, Tex., CST.		6-9 p.m.	1140 Tulsa, Okla., CST. 7 a.m7:45 p.m.; 9 p.mmid.
	7-8:30 a.m.; 10-11 a.m.; noon- 1:30 p.m.; 4-6 p.m.; 7-8 p.m.;	KREG	1500 Santa Ana, Calif., PST. —KVOR 9 a.m11 p.m.	1270 Colorado Springs, Colo.
	10 p.mmid.	KRGV	1260 Harlingen, Texas, CST. KVOS	7 a.m10 p.m., <i>MST</i> . 1200 Bellingham, Wash.
KMBC	950 Kansas City, Mo., <i>CST</i> . 6:15 a.mmid.		7-9:30 a.m.; 12:30-3:30 p.m.; KWCR	1420 Cedar Rapids, Ia., CST.
-KMED	1310 Medford, Ore., PST	KRKD	6:30-9:30 p.m. 1120 Los Angeles, Calif., PST. KWEA	6:30 a.mmid. 1210 Shreveport, La.
-KMJ	8 a.m9:30 p.m. 580 Fresno, Calif., PST.	-KRLD	6 a.m1:30 p.m.; 3 p.mmid. 1040 Dallas, Texas, CST. 6-7:15 a.m.; 7:45-9 a.m.; 10-11	1200 Stockton, Calif., PST
	7 a.mmid.	KILD	6-7:15 a.m.; 7:45-9 a.m.; 10-11	7 a.mmid.
KMLB	1200 Monroe, La., CST. 7 a.m10 p.m.		a. m. 12:30-12:45 p.m.; 1:15- 4:30 p.m.; 5:30-6:30 p.m.;	1060 Portland, Ore. 1350 St. Louis, Mo., CST.
→ KMMJ	740 Clay Center, Neb., CST.		7:30-9 p.m.; 10:45 p.m12:15	6:55 a.m12:15 a.m. next day.
-кмо	5:45 a.msunset. 1330 Tacoma, Wash., <i>PST</i> .	KRMD	a.m. 1310 Shreveport, La., CST. — KWKC	
	6:30 a.m11 p.m.		7 a.m1 p.m.; 5-8 p.m.	8:30 p.mmid.
-KMOX	1090 St. Louis, Mo., CST. 6:45 a.m12:45 a.m. next day.	~ KROW	930 Oakland, Calif., PST. 8-9 a.m.; 1-6 p.m.; 7:30-8:30	1270 Decorah, Iowa, CST. 6:45-8 a.m.; 10:30-9:30 p.m.;
-KMPC	710 Beverly Hills, Calif.		p.m.	11:30 a.m12:30 p.m.
	6:30 a.m5:15 p.m.; 8-1 a.m. <i>PST</i> .	KRSC	1120 Seattle, Wash., PST. ——KWSC Sunrise to local sunset.	1220 Pullman, Wash., PST. 6:45-8 a.m.; 10:30 a.m9:30 p.m.
	101.		Dumine to local Builset.	0:20-0 a.m.; 10:00 a.m9:00 p.m.

	77				7, 2220
KWWG	1260 Brownsville, Texas. 760 Seattle, Wash., PST.	- WBAK	1430 Harrisburg, Pa., EST 10:30-11:30 a.m.; 1:30-2:30; 4-	WCBA	1440 Allentown, Pa., EST. 7:30 a.m1 a.m.
-KXL	7 a.msundown; 9 p.mmid. 1420 Portland, Ore., PST.	WBAL	4:30 p.m. 1060 Baltimore, Md., EST.	₩CBD	1080 Zion, Ill., CST. 7:30-10:30 a.m.; 1:30-2 p.m.;
KXO KXRO	7 a.mmid. 1500 El Centro, Calif. 1310 Aberdeen, Wash., PST	WBAP	7 a.mmid. 800 Ft. Worth, Texas, CST. 8:30-10:30 a.m.; 12:30-3 p.m.;	WCBM	4-4:45 p.m. 1370 Baltimore, Md., EST.
	7:30 a.m.=10 n.m.		4:30-5:30 p.m.; 9 p.mmid.	WCBS	7 a.m1:30 p.m.; 5-11 p.m. 1210 Springfield, Ill., CST.
#KXYZ	1440 Houston, Texas, CST.	WBAX	1210 Wilkes Barre Pa., EST.	WCCO	11:30 a.m3 p.m.; 6:45-9 p.m.
	7-10 a.m.; 11 a.m1:15 p.m.; 3:30-10:30 p.m. 1230 San Francisco, Calif.	WBBC	7:30-11 a.m. 1400 Brooklyn, N.Y., EST.		810 Minneapolis, Minn. 6:45 a.mmid., CST.
KYA	1230 San Francisco, Calif. 7:30 a.mmid., <i>PST</i> .		4-6 p.m.; 10 p.m1 a.m.	WCDA	1350 New York City, EST.
~~KYW	1020 Chicago, Ill., CST.	WBBL	1210 Richmond, Va., EST. Silent.	WCFL	9 a.m4 p.m. 970 Chicago, Ill., CST.
KZRM	7 a.m1 a.m. next day. 618.5 Manila P. I.	-WBBM	770 Chicago, Ill, CST.		6 a.mmid.
	618.5 Manila, P. I. 6:30-7:30 a.m.; 12:15-1:15; 3-		6:45 a.m10 p.m.; 11:30 p.m 2 a.m.	WCGU	1400 Brooklyn, N. Y., EST. 11:15 a.m1:30 p.m.; 6-7:30
NAA	10:30 p.m. 690 Arlington, Va.	WBBR	1300 Brooklyn, N. Y., EST.		p.m.
RUS TGW	664 Salvador. 570 Guatamala.	WBBZ	10 a.mnoon: 6-8 p.m. 1200 Ponca City, Okla., CST.	WCKY	1490 Covington, Ky., CST. Midmid.
TICR	911 San Jose C. R.		6 a.m10 p.m.	WCLO	1200 Janesville, Wis., CST.
VAS	685 Glace Bay, N. S., AST. 1-1:15 p.m.; mid12:15 a.m. 810 St. Johns, N. F.	WBCM	1410 Bay City, Mich., EST.	WCLS	7:30 a.m3:30 p.m.; 5-9 p.m. 1310 Joliet, Ill., CST.
VOAS	810 St. Johns, N. F.	WBEN	8 a.mmid. 900 Buffalo, N. Y, EST.		11 a.mnoon; 3-8 p.m.; 10 p.m mid.
	11 a.m12:30 p.m.; 4-5:30 p.m. (Zone 19).	WBEO	6:45 a.mmid. 1310 Marquette, Mich., CST.	WCMA	1400 Culver, Ind., CST.
VOGT	893 Wabana, N. F. Silent.	WBHS	9:30 a.m1:15 p.m.; 5-7 p.m. 1200 Huntsville, Ala., CST.		6-6:30 a.m.; 1:15-4:15 p.m.; 10:30-mid.
VOGY	860 St. Johns, N. F.		8 a.m2 p.m.: 5-9:30 p.m.	WCOA	1340 Pensacola, Fla., CST.
VOÑA	950 St. Johns, N. F. 12:30-2 p.m.; 6:30-8 p.m.	WBIG	1440 Greensboro, N. C., EST. 8 a.m3 p.m.; 5-11 p.m. 1350 New York City, EST.	wcoc	9 a.m10:30 p.m. 880 Meridian, Miss., CST.
	(Zone 19)	WBNX	1350 New York City, EST.	WCOD	7:30 a.m2 p.m.; 5-11 p.m.
VONF	1115 St. Johns, N. F. 1-2 p.m.; 6:30-8 p.m. (Zone 19)	WBOQ	4:00-7:30 p.m.; 8:30-10:30 p.m. 880 New York City. 1310 Terre Haute, Ind., CST.	WCOD	1200 Harrisburg, Pa., EST. 8-11 a.m.; 3-6 p.m.; 8-11 p.m.
VOWR	750 St. Johns, N. F.	WBOW	1310 Terre Haute, Ind., CST.	WCRW	8-11 a.m.; 3-6 p.m.; 8-11 p.m. 1210 Chicago, Ill., CST. 7-8:30 a.m.; 11:30 a.m1:30
WAAB	Silent. 1410 Boston, Mass., EST.	WBRC	7 a.m2 p.m.; 4-11 p.m. 930 Birmingham, Ala., CST.		p.m.; 6-7 p.m; 9-10 p.m. 1360 Charleston, S. C., EST.
WAAF	7:45 a.mmid. 920 Chicago, Ill., CST.	WBRE	7 a.m11 p.m. 1310 Wilkes Barre, Pa.	WCSC	8 a.m3 p.m.: 6-11 p.m.
	6 a.mlocal sunset.	WBSO	920 Babson Park, Mass.,	WCSH	8 a.m3 p.m.; 6-11 p.m. 940 Portland, Maine, EST.
MAAM	1250 Newark, N. J., EST. 7-9 a.m.; 10 i.mnoon; 2-4:30	WBT	7 a.m5 p.m., <i>EST</i> 1080 Charlotte, N. C., <i>EST</i>	WDAE	7:45 a.m1 p.m.; 2-10:45 p.m. 1220 Tampa, Fla., EST.
***	p.m.; 9 p.mmid.	WBTM	7 a.mmid. 1370 Danville, Va., <i>EST</i> .	WDAF	8 a.mmid. 610 Kansas City, Mo., CST.
WAAT	940 Jersey City, N. J., EST.6 a.m6 p.m.	WBZ	7:30 a.m1 p.m.; 4-6:30 p.m.	WDAG	6:26 a.mmid.
WAAW	660 Omaha, Neb., CST. 6 a.m6 p.m.		990 Boston, Mass., <i>EST</i> . 7 a.mmid.		1410 Amarillo, Texas, CST. 8-10 a.m.; 12:30-2:15 p.m.; 7:30-
-WABC	860 New York City, EST.	-WBZA	990 Springfield, Mass., EST. 7 a.mmid.	-WDAH	9 p.m.; 10 p.mmid. 1310 El Paso, Texas.
WABI	7:30 a.m2 a.m. next day. 1200 Bangor. Maine, EST.	WCAC	600 Storrs, Conn., EST.	WDAS	1370 Philadelphia, Pa., EST.
	9 a.m2 p.m.; 6-10 p.m.	WCAD	12:30-1 p.m.; 7-8 p.m. 1220 Canton, N. Y., EST.	WDAY	9 a.m10:30 p.m. 940 Fargo, N. D., CST.
WABZ	1200 New Orleans, La., CST. Noon-4 p.m.; 8 p.mmid.	WCAE	12:30-1:20 p.m. 1220 Pittsburgh, Pa., EST.	WDBJ	6 a.m. 11 p.m. 930 Roanoke, Va., EST.
WACO	1240 Waco, Texas, CST.		6:45 a.mmid.		8 a.mmid.
	6-7 a.m.; 9-noon; 1:30-4 p.m.;	~ ₩CAH	1430 Columbus, Ohio, <i>EST</i> . 7:45 a.mmid.	WDBO	580 Orlando, Fla., EST. 7 a.mmid.
WADC	7-9 p.m." 1320 Akron, Ohio, EST.	WCAJ	590 Lincoln, Neb., CST.	WDEL	1120 Wilmington, Del., EST.
WAGH	8:30 a.mmid. 1420 Presque Isle, Me., <i>EST</i> .		10-10:45 a.m.; 3:30-4:30 p.m.; 11:30 p.mmid.	WDEV	9 a.m10 p.m. 550 Waterbury, Vt., EST.
121 A	10 a.m1 p.m.; 4:30-9:30 p.m.	WCAL	1250 Northfield, Minn., CST. 9:45-10:15 a.m.	WDGY	9:30-11 a.m.; noon-2 p.m. 1180 Minneapolis, Minn.
WAIU	640 Columbus, Ohio, EST. 7 a.msunset.	WCAM	1280 Camden, N. J., <i>EST</i> .		6:30 a.m8:15 p.m., CST.
WALR	1210 Zanesville, Ohio, EST.		11 a.mnoon; 2-5 p.m.; 9 p.m mid.	WDOD	1280 Chattanooga, Tenn. 7:30 a.m11 p.m., CST.
WAMC	9 a.m10 p.m. 1420 Anniston, Ala., CST.	WCAO	600 Baltimore, Md., EST.	WDRC	1330 Hartford, Conn., EST.
	7-10:30 a.m.; noon-9 p.m.	WCAP	7 a.mmid. 1280 Asbury Park, N. J., <i>EST</i> .	WDSU	8 a.mmid. 1250 New Orleans, La., CST.
WAPI	1140 Birmingham, Ala., CST. 6 a.m9 p.m.	WCAT	9-11 a.m.; 5-9 p.m. 📲		7 a.m11:45 p.m.
WASH	1270 Gd. Rapids, Mich., EST.		1200 Rapid City, S. D., CST. 1:30-2:30 p.m.	WDZ	1070 Tuscola, Ill., CST. 7 a.m4:30 p.m.
WAWZ	7 a.mmid. 1350 Zarephath, N. J., <i>EST</i> .	WCAU	1170 Philadelphia, Pa., EST.	WEAF	660 New York City, EST.
	6-9 a.m.; 7:30-8:30 p.m.	WCAX	8 a.m1 a.m. next day. 1200 Burlington, Vt., EST.	WEAN	6:45 a.m1 a.m. next day. 780 Providence, R. I., EST.
	1420 Hazelton, Pa., EST.		Noon-1 p.m.; 6-9 p.m.		7:30 a.m1 a.m. next day.
WBAA	1400 Lafayette, Ind., <i>CST</i> . 7-8 pm.	WCAZ	1070 Carthage, Ill., CST. 9:30 a.m3:30 p.m.	WEAO	570 Columbus, Ohio, <i>EST</i> . 9-11 a.m.; 7 p.mmid.

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١	WEBC	1290	Superior, Wis., CST.	WGBF	630 Eva	nsville, Ind., CST.	WHK	1390	Cleveland, Ohio, EST.
١	WEBQ	1210	11 p.m. Harrisburg, Ill., CST.	WGBI	7-9 p.m.	3 p.m.; 4-6:45 p.m.;	WHN	7 a.m.	New York City, EST.
١	WEBR	1310	m.; neon-4 p.m.; 8:30-mid. Buffalo, N. Y., <i>EST</i> .	HUDI	9:30 a.m	anton, Pa., <i>EST</i> . 12:30 p.m.; 1:30-4:30 ,		1000	o.m1 a.m. Des Moines, Iowa.
,	WEDC	7 a.m 1210	2 a.m. next day. Chicago, Ill.	WGCM	1210 Gul	30-8 p.m. fport, Miss., <i>CST</i> .	WHOM		Jersey City, N. J., EST. a.m.; noon-3 p.m.; 8-10
	NEEL	690	Boston, Mass., EST.	WGCP	8 a.m2 p. 1250 Nev	m.; 3-9 p.m. wark, N. J., <i>EST</i>	WHP	p.m 1430	Harrisburg, Pa., EST.
-	VEEU	830	Reading, Pa., EST.	~~WGES	2-5 p.m.; 8	3-10 p.m. cago, Ill., <i>CST</i> .		8:30-1	0:30 a.m.; 11:30-1:30; 0-4; 4:30-1 a.m.
١	NEHC	1350	-8 p.m. Emory, Va., <i>EST</i> .	WGH	8 a.m12:	30 p.m.; 6:15-8:30 wport News, Va.	WIAS	1310	Ottumwa, Iowa, CST. .m1:30 p.m.; 4-9 p.m.
			m.; 11 a.m2 p.m.; 4-7. Cicero, Ill., CST.	WGL	7 a.m2 p	.m.; 5-11 p.m., <i>EST</i> . t Wayne, Ind., <i>CST</i> .	WIBA	1280	Madison, Wis., CST.
	WELL	4-6 p.	m. Battle Creek, Mich.	WGLC	6:15 a.m	9:30 p.m. dson Falls, N. Y., EST.	WIBG	930	.m11:30 p.m. Glenside, Pa., <i>EST</i> .
		1420	Americus, Ga., EST.	WGN	720 Chi	cago, III., CST.	WIBM	1370	Jackson, Mich., EST.
	WENR	870	2 p.m.; 4 p.msunset. Chicago, Ill., CST.	-WGNY	1210 Che	1:30 a.m. next day. ster, N. Y., <i>EST</i> .		mi d	a.m8:15 p.m.; 11 p.m
		10:15 8:3	-11:45 a.m.; 3:30-7 p.m.; 0 p.m1 a.m. next day.	WGR	7:30 a.m1	falo, N. Y., <i>EST.</i> mid.	MIBO	560 6:30 a	Chicage, Ill., CST. .mmid. Poynette, Wis., CST.
٠ ،	WESG	1040 Varia	Elmira, N. Y. ble	WGST		anta, Ga., CST.	WIBU	1210 9 a.m.	Poynette, Wis., CST.
١	WEVD	1300	New York City, EST. .m.; 3-6 p.m.; 8-9 p.m.;	₩GY	790 Sch	nenectady N.Y., EST.		o a.m.	9 p.m. Topeka, Kans., <i>CST</i> mid.
		10-	11 p.m.	AH#	940 Ma	1 a.m. next day. dison, Wis., CST.	WIEX	1200 600	Utica, N. Y. Bridgeport, Conn., EST
	WEW	8 a.m	St. Louis, Mo., CST.	WHAD	8 a.m3:30 1120 Mil	waukee, Wis., CST.	WIL	7:30 :	s.mmid. St. Louis, Mo., CST.
	WEXL	8 a.m	Royal Oak, Mich., EST. 11 p.m.; 1:30-5 a.m.		9:30-10:15 9:30 p.n	a.m.; 3-4 p.m.; 8:30-	WILL	7-9:48	a.m.; 11:15 a.mmid. Urbana, Ill., CST.
	NFAA	800	Dallas, Texas, CST. :30 a.m.; 10:30 a.m12:30	MAHW		chester, N. Y., EST.	WILM	10 a r	n -12·15 n.m.: 5-6 n.m.
	NFAB	p.m.;	3-5 p.m.; 5:30-9 p.m. New York City.	WHAS	820 Lou	nsville, Ky., CST.	WINS	7:30 a	Wilmington, Del., EST. .m2 p.m.; 4:30-10 p.m. New York City, EST.
		1200	South Bend, Ind., CST.	WHAT	7 a.mmid 1310 Phi	l. ladelphia, Pa., <i>EST</i> .		7 a.m	10:15 p.m.
	į	5:3	10:15 a.m.; noon-3 p.m.; 0-8:30 p.m.		p.m.	m.; 1-2 p.m.; 5-6:30	WIOD	7 a.m	Miami, Fla., EST.
	WFAN	9 a.m	Philadelphia, Pa., EST.	WHAZ	Silent.	y, N. Y., <i>EST</i> .	WIP	9 a.m	
'	WFAS	1210 Silent	White Plains, N. Y.	WHB	860 Kar 6 a.msun	nsas City, Mo., <i>CST</i> . set.	WIS	7 a.m	Columbia, S. C., <i>EST</i> 1:30 p.m.; 5:30-11 p.m.
	NFBC NFBE		Knoxville, Tenn. Cincinnati, Ohio, EST.	WHBC	1200 Car	nton, Ohio, EST. noon-3 p.m.; 6-9 p.m.	WISN	7-9:30	Milwaukee, Wis., CST. a.m.; 10:15 a.m3 p.m.;
	WFBG	7 a.n	n11:30 p.m. Altoona, Pa.	WHBD	1370 Mt.	Orab, Ohio, EST. noon-5 p.m.; 6-9 p.m.	WJAC	1310	30 p.m.; 9:30 p.mmld. Johnstown, Pa., EST.
	ž.	10:30	a.m4:30 p.m.; 6:15-9:15	WHBF	.1210 Roc	k Island, Ill., CST. p.m.; 5 p.mmid.	~s	9:1	10:30 a.m.; 4:30-6:15 p.m.; 5 p.mmid.
	WFBL	7:30 €	Syracuse, N. Y., EST.	₩HBL	1410 She	boygan, Wis., CST.	WJAG	1060 6 a.m	Norfolk, Neb., CST. sunset. Providence, R. I., EST.
'	MERW	7:30-	Indianapolis, Ind., CST. 10:15 a.m.; noon-3 p.m.;		p.m.	; 12:30-3 p.m.; 6-8	WJAR	8 a.m.	-mid.
,	WFBR	1270	0 p.mmid. Baltimore, Md., EST.		7:55 a.m	mphis, Tenn., CST. 10:30 p.m.	WJAS	7:30 a	Pittsburgh, Pa., EST.
,	WFDF	1310	mid. Flint, Mich., EST.		7 a.m1 p	derson, Ind., CST. .m.; 3-9 p.m.	WJAX	7 a.m	Jacksonville, Fla., EST -11 p.m.
,	WFDV	7 a.m	11 p.m. Rome, Ga., CST.		1200 Gre 7 a.m10	en Bay, Wis., CST. p.m.	WJAY	610	Cleveland, Ohio, EST.
		6-9 a.	m.; noon-3 p.m.; 6-9 p.m. Manchester, N. H., EST.	WHDF	§1370 Cal	umet. Mich., CST. m.; noon-1 p.m.; 4:40-	MIBC	1290 8-9 a	-6:45 p.m. LaSalle, Ill., <i>CST</i> . .m.; 10 a.m12:30 p.m.
	WFI	9 a.m	11 p.m. Philadelphia, Pa., EST.	WHDH	7:30 p.n	n. eton, Mass., EST.	WJBI	6:30	0-10 p.m. Red Bank, N. J., <i>EST</i> .
,	4 11	6:45-9	9 a.m.; 9:45-11 p.m.; 1-2 a.; 3-4:30 p.m.; 6-7 p.m.		8 a.m12:	45 p.m.; 2:45-7:15.	WJBK	9 a.m.	-noon; 3 p.mmid. Detroit, Mich., EST.
,	WFIW	940	Hopkinsville, Ky., CST.		7:45 a.m	pper Lake, N. Y., <i>EST</i> 1 p.m.; 3-7:45 p.m.	WJBL	7 a.m.	11 p.m.
,	WFLA	620	3 p.m.; 5 p.mmid. Clearwater, Fla, EST.	WHEB	10 a.msu		HODE	6:30-8	Decatur, Ill., CST. 3 a.m.; 9-10 p.m.; 12:30-3;
,	WFOX	7:15 ₺	n.m11 a.m. Brooklyn, N. Y., EST.	WHEC	8 a.mmid	chester, N. Y., EST.	WJBO	1420	0-6:30 p.m. New Orleans, La.
		8-11:	15 a.m.; 7:30-9 p.m. Lancaster, Pa., <i>EST</i> .	WHEF WHET		sciusko, Miss. oy, Ala., <i>CST</i> .	WJBU	1210 Noon-	Lewisburg, Pa., EST. 2 p.m.; 4-10 p.m.
		10 a.ı	n12:45 p.m.; 1:30-6 p.m.; 1 p.m.		6-8 a.m.;	11 a.m5 p.m. ero, Ill., CST.	WJBW	1200	New Orleans, La., CST. -noon; 4-8 p.m.
,,,,,,,	WGAR	1450	Cleveland, Ohio, EST	#1170	7 a.m1:3	0 p.m.; 6-9 p.m.; 11	WJBY	1210	Gadsden, Ala., CST.
1	WGBB	1210	1 a.m. next day. Freeport , N. Y., EST	WHIS	1410 Blu	n.m. next day. nefield, W. Va., <i>EST</i> .	WJDX	1270	Jackson, Miss., CST.
		Silent			8-9 a.m.;	noon-2 p.m.; 6-8 p.m.		6:1 5- 1	10 a.m.; 11:30 a.m10 p.m

WJI	2) INDEX B	LCALL	LETTERS AND FRI	DAII.	IME W QAIVI
	1010 H	WIGE	1500 Dester Mars 1997	www	500 YZ 111 M C/G/M
M1E1	1210 Hagerstown, Md.	WLUE	1600 Boston, Mass., EST. 10 a.m1:30 p.m.; 4:30-10 p.m.	WNOX	560 Knoxville, Tenn., CST.
WJEQ	7 a.m5 p.m. 1370 Williamsport, Pa.	₩LS	870 Chicago, III., CST.	WNYC	6:45 a.m11 p.m. 570 New York City, EST.
MIJD	1130 Chicago, Ill., CST.		6-10:15 a.m.; 11:45 a.m3:30 p.m.; 7-8:30 p.m.		11 a.mnoon: b-7:30 p.m.
******	6 а.т8:30 р.т.	****	p.m.; 7-8:30 p.m.	- WOAI	1190 San Antonio, Tex CST.
MIKS	1380 Gary, Ind., CST. 12:30-6-15 p.m.; 8:30 p.mmid. 1420 Ironwood, Mich., CST.	WLTH	1400 Brooklyn, N. Y., EST.		6:30-9:30 a.m.; 11:15-3 p.m.;
WJMS	1420 Ironwood Mich CST	WLVA	1:30-4 p.m.; 9-10 p.m. 1370 Lynchburg, Va., EST.	WOAX	4:45-11:30 p.m. 1280 Trenton, N. J., EST.
	7 a.m2:30 p.m.; 4:30 p.msun-		1-3 p.m.; 6:30-10 p.m.	HOAA	Noon-2 p.m.
	set.	WLW	700 Cincinnati, Ohio, EST.	WOBU	580 Charleston, W.Va., EST.
─ WJR	750 Detroit, Mich., EST.	**** ****	6:30 a.m1 a.m. next day.		9 a.mnoon; 2-4 p.m.; 8:30 p.m
WJSV	6:00 a.m1 a.m. nextday.	WLWL	1100 New York City.	Woc	mid.
- M 194	1480 Washington, D. C., <i>EST</i> 7:30 a.m1 a.m. next day.	WMAC	2-3 p.m.; 6-8 p.m., EST. 570 Syracuse, N. Y.	WUG	1900 Davenport, Iowa, CST.
WJTL	1370 Atlanta, Ga., CST.	WMAL	630 Washington, D. C., EST.	WOCL	7 a.m11 p.m. 1210 Jamestown, N. Y., EST.
	6:45 a.mmid.		8 a.mmid.		Noon-mid.
M1M	1210 Akron, Ohio, EST.	WMAQ		WODA	
WJZ	8 a.m10 p.m. 760 New York City, <i>EST</i> .	WMAS	7 a.m1 a.m. next day. 1420 Springfield, Mass., EST	- WODX	1410 Mobile, Åla., CST.
	7:30 a.m1 a.m. next day.		7:45 a.mmid.	W01	9 a.m4 p.m.; 9-11 p.m. 640 Ames, Iowa CST.
WKAQ		WMAZ	1180 Macon, Ga., EST.		6:30 a.m1:30 p.m.
	2:30-4:30 p.m.; 6:30-10:30 p.m. 1040 E Liansng, Mich., EST.	WHEE	7 s.m9:30 p.m.	WOKO	6:30 a.m1:30 p.m. 1430 Albany, N. Y., EST.
WKAR	1040 E Liansng, Mich., EST.	W MDC	1420 Detroit, Mich., EST.	WOL	9 a.m1 a.m. next day.
WKAV	Noon-12:30 p.m. 1310 Laconia, N. H., EST.	WMBD	7:30 a.mmid. 1440 Peoria, Ill., CST. 6-9:30 a.m.; 1-2:30 p.m.; 8-mid. 1210 Richmond, Va., EST.	WOL	1310 Washington, D. C., <i>EST</i> 7 a.m1 p.m.; 3-9 p.m.
	9 a.m1 p.m.: 3-8 p.m.		6-9:30 a.m.; 1-2:30 p.m.; 8-mid.	WOMT	1210 Manitowoc, Wis., CST
WKBB	9 a.m1 p.m.; 3-8 p.m. 1310 Joliet, Ill., CST.	WMBG	1210 Richmond, Va., EST.		7 a.m9 p.m. 1270 Gd. Rapids, Mich., EST.
	8-11 a.m.: noon-3 p.m.: 8-10		7:30 a.m1:30 p.m.; 5-11 p.m. 1420 Joplin, Mo.	WOOD	1270 Gd. Rapids, Mich., EST.
WKBC	p.m. 1310 Birmingham, Ala. 1400 Indianapolis Ind. CST	WMDII	Noon-2 p.m.: 6-9:30 p.m., CST.	WOPI	7 a.mmid. 1500 Bristol, Tenn., EST.
- WKBF	1400 Indianapolis, Ind., CST.	WMBI	Noon-2 p.m.; 6-9:30 p.m., CST. 1080 Chicago, Ill., CST.		7 a.m2 p.m.: 4-9 p.m.
	6:30 a.m1:15 p.m.; 4:15-10:30		7-7:30 a.m.: 10:30-11:30 a.m.:	-woq	1300 Kansas City, Mo., CST
WKBH	1380 LaCrosse, Wis., CST.		noon-1:30; 2-4:30; 5:30-8		1300 Kansas City, Mo., CST 6-7 a.m.; 8:35-9:05 a.m.;
WKBI	7:30 a.m10 p.m.	WMBO	p.m.; mid1 a.m. 1310 Auburn, N. Y., EST.		11:30 a.m.; 2-3 p.m.; 6-7 p.m.; 9-10 p.m.; 11:30-12:30 a.m. 710 Newark, N. J., EST.
MKDI	1420 Cicero, Ill., CST. 1:30-4 p.m.; 9-11 p.m.		9 a.m9 p.m. 1500 Brooklyn, N. Y., EST.	WOR .	710 Newark, N. J., EST.
WKBN	570 Youngstown, Ohio, EST.	MMBQ	1500 Brooklyn, N. Y., EST.		6:45 a.mmid.
	7-9 a.m.; 11 a.m7 p.m.	WMBR	9-11 a.m. 1870 Tampa, Fla., EST.	WORC	1200 Worcester, Mass., EST.
WKBS			6:45 a.m10 p.m.	WORK	8 a.mmid. 1000 York, Pa., <i>EST</i> .
MKRA	1500 Connersville, Ind., CST. 10 a.mnoon; 6-10 p.m.	WMC	780 Memphis, Tenn., CST.		7:55 a.msunset.
WKBW	1 1480 Buffalo, N. Y., EST	WMCA	7 a.m11 p.m. 570 New York City, <i>EST</i> .	WOS	630 Jefferson City, Mo.
	9:15 a.m1 a.m. next day.	WMCA	8-11 a.m.; noon-6 p.m.; 7:30-2	WOV	9 a.m4 p.m., <i>CST</i> . 1130 New York City, <i>EST</i> .
WKBZ	1500 Ludington, Mich., CST.		a.m.	#O1	8 a.m6 p.m.
WKFI	9 a.m9 p.m. 1210 Greenville, Miss., CST.	WMIL	1500 Brooklyn, N. Y., EST.	WOW	590 Omaha, Neb., CST.
WKI I	7 a.m2 p.m.; 4-9 p.m.		2-6 p.m.; 8-10 p.m.		6:15-10 a.m.; 10:45-3:30; 4-11:30
MK1C	1200 Lancaster, Pa. EST.	WMWN	890 Fairmont, W. Va., EST.	 wowo	p.m. 1160 Fort Wayne, Ind., CST.
	11 a.m3 p.m.; 6-8 p.m.	WHEN	7 a.m9 p.m.		7:30 a.m7:45 p.m.; 9:15 p.m
WKRC		WMPC	1600 Lapeer. Mich EST. 10 a.m2 p.m.; 3:30-6 p.m.; 7-		mid.
WKY	6:45 a.mmid. 900 Oklahoma City, Okla		10:30 p.m.	WPAD	1420 Paducah, Ky., CST.
- WKI	6:30 s.m.=11:30 n.m. <i>CST</i>	WMSG	1350 New York City, EST.		7-9:30 a.m.; 11 a.m2 p.m.
WKZO	590 Kalamazoo, Mich EST		10:30 p.mmid.	WPAP	4-10:30 p.m. 1010 New York City, EST.
	6:30 a.m8:15 p.m.	-WMT	600 Waterloo, Iowa, CST.	W. A.	9:30 a.m1:30 p.m.
WLAC	1470 Nashville, Tenn., CST.		7 a.m11 p.m.	WPAW	1210 Providence, R. I., <i>EST</i> .
WLAP	7 a.m11 p.m. 1200 Louisville, Ky., CST.	WNAC	1230 Boston, Mass., EST.	WDOO	9 a.m1:45 p.m.; 3 p.mmid.
W LAI	6:30 a.m11 p.m.	-WNAD	8 a.m1 a.m. next day. 1010 Norman, Okla.	WPCC	560 Chicago, Ill. Silent.
WLB	1250 Minneapolis, Minn.,	WILL	Silent.	WPCH	810 New York City, EST.
	12: 3 0-1 p.m.; 4-5 p.m., <i>CST</i> .	WNAX	570 Yankton, S. D., CST.		8 a.msunset.
WLBC	1310 Muncie, Ind., CST.		6 a.mmid.	WPEN	1500 Philadelphia, Pa., EST.
WLBF	7 a.m11 p.m. 1420 Kansas City, Kans.	WNBF	1500 Binghamton, N.Y., EST.		7:30 a.m10:30 p. m.
	7 a.m11 p.m CST.		7 a.m10 p.m.	WPFB	1370 Hattiesburg, Miss., CST.
WLBL	7 a.m11 p.m., <i>CST</i> . 900 Stevens Point, Wis.	WNBH	1310 New Belford, Mass,	WPĠ	7 a.m2 p.m.; 4-9 p.m. 1100 Atlantic City, N.J., EST.
WIPW	8 a.m3:30 p.m., CST.		EST. 8:30 a.m1:10 p.m.; 3-11 p.m.		8:15 a.m2 p.m.: 3-6 p.m.:
M'TR M	7 1260 Erie, Pa., EST. 8 a.m1 a.m. next day.	WNRO	1200 Washington, Pa., EST.		8 p.m1 a.m. 1200 Petersburg, Va., EST.
WLBZ	620 Bangor, Maine, EST.	WINDU	9 a.mnoon; 3-6 p.m.; 9 p.m	WPHR	1200 Petersburg, Va., EST.
******	8:30 a.mmid.		mid.	WPOR	7-11 a.m.; noon-5 p.m.; 6-9 p.m. 780 Norfolk, Va.
WLEY		WNBR	1430 Memphis, Tenn., CST.	WPOR	1210 Providence, R. I., EST.
	Noon-3 p.m.; 6-9 p.m.		7:30 a.m12:30 p.m.; 3-10:15		9 a.m1:45 p.m.; 3 p.mmid.
WLIT	560 Philadelphia, Pa., EST.		1200 Carbondale, Pa.	WPTF	680 Raleigh, N. C., EST.
	9-9:45 a.m.; 11 a.m1 p.m.; 2-3	WNBX	1260 Springfield, Vt., EST.		6:45 a.m8:45 p.m.
	p.m.; 4:30-6 p.m.; 7-12:15	WND-	6 a.msunset.	WQAM	560 Miami, Fla., EST.
	a.m.	M MBT	1290 Saranac Lake, N. Y.		7 a.mmid.

<u> </u>					10 20
WQAN	880 Scranton, Pa., EST.	WSMK	1380 Dayton, Ohio, EST. 7 a.m8 p.m.; 10 p.mmid.	XEFB	1315 Monterrey, Mex., CST. 11 a.m2 p.m.; 6-10 p.m.
WOAG	9-9:30 a.m.; 12:30-1:30 p.m.; 4:30-5:30 p.m.; 8-11 p.m. 1010 New York City, EST.	WSOC	1210 Gastonia, N. C., <i>EST</i> .	XEFC	1050 Merida, Mex.
WQAU	Silent.	WSPA	8 a.m10 p.m. 1420 Spartanburg, S. C., EST.	XEFD XEFE	1020 Tijuana, Mex. 1000 Laredo, Mex.
W QBC	Silent. 1360 Vicksburg, Miss., CST. 7:30 a.m2:30 p.m.; 5-10 p.m. — 1370 St. Albans, Vt., EST.		7:30 a.m11 p.m.	XEFH	1360 Mexico City, Mex.
WODM	7:30 a.m2:30 p.m.; 5-10 p.m	-WSPD	1340 Toledo, Ohio, EST.	XEFI	1000 Chihuahua, Mex.
	0-9 a.m.: 11 a.m2 p.m	wsui	7:30 a.mmid. 880 Iowa City, Iowa, CST.	XEFJ XEFO	1000 Monterrey, Mex. 940 Mexico City, Mex., CST
WUUX	1210 Thomasville (+a.		 880 Iowa City, Iowa, CST. 9-10 a.m.; 11-12:30; 2-4; 6-10 620 St. Petersburg, Fla., EST. 		2-3 p.m.; 7-11 p.m.
	1370 Williamsport, Pa., EST. 8:30 a.m2:30 p.m.; 4:30-10:30. 1370 Wilmington, N. C., EST.	WSUN	620 St. Petersburg, Fla., EST. 7:15 a.m1 a.m.	XEFS"	1000 Queretaro, Mex., CST.
WRAM	1370 Wilmington, N. C., EST. 7:30 a.m3 p.m.; 6:30-11 p.m.	WSVS	1370 Buffalo, N. Y., EST. 8:30 a.m10 a.m.; 2-3 p.m.	XEFV	7:30-11 p.m. 1370 Juarez, Mex.
WRAW	1310 Reading Pa. EST.	weva	8:30 a.m10 a.m.; 2-3 p.m.	XEFW	1240 Tampico, Mex.
was	1310 Reading , Pa., EST. 7:30-9:30 a.m.; 6-8 p.m.	WSYB	1500 Rutland, Vt., EST. 10 a.m1 p.m.; 5-9 p.m.	XEFZ	1500 Coyoacan, Mex., CST.
WRAX	1020 Philadelphia, Pa., EST. 7 a.msunset.	WSYR	570 Syracuse, N. Y., <i>EST</i> .	XEG	8-11 p.m. 1075 Mexico City, Mex.
WRBL	7 a.msunset. 1200 Columbus, Ga., <i>CST</i> .	WTAD	7 a.m3 p.m.; 4-11 p.m. 1440 Quincy, Ill., CST.	XEH	1132 Monterrey, Mex., CST.
-WRBX	7 a.m9 p.m. 1410 Roanoke, Va., EST.		9:30 a.m1 p.m.; 2:30-8 p.m.	XEI	9 a.m1:30 p.m.; 6-10 p.m. 1310 Morelia, Mex., CST.
	9 a.mnoon; 3-0 p.m.; 8 p.m1.	WTAG	580 Worcester, Mass., EST. 8 a.m11:15 p.m.		2-3:30 p.m.; 8:30-10:30 p.m. 1000 Juarez, Mex., CST.
WRC	950 Washington, D.C., EST. 6:45 a.m1 a.m. next day.	-WTAM	1070 Cleveland, Ohio, EST.	-XEJ	1000 Juarez, Mex., CST.
WRDO	1370 Augusta, Maine, EST. 7-9:30 a.m.; 10:30 a.m1:30	WTAQ	6:30 a.m1 a.m. next day. 1330 Eau Claire, Wis., CST.	XEK	11 a.m4 p.m.; 6-11 p.m. 990 Mexico City, Mex.
	7-9:30 a.m.; 10:30 a.m1:30 p.m.; 3:30-10 p. m.	-	7 a.m8 p.m.	XEL	1000 Saltillo, Mex., CST. 11 a.m1 p.m.: 6-9 p.m.
WRDW	1500 Augusta, Ga., <i>EST</i> .	WTAR	780 Norfolk, Va., EST. 7 a.mmid.	XEN	711 Mexico City, Mex., CST
WREC	8 a.m2 p.m.; 5-11 p.m. 600 Memphis. Tenn.	WTAW	1120 College Station, Texas.	XENT	10 a.mnoon; 2-4 p.m.; 7-11
-WREN	1220 Lawrence, Kans., CST.	WTAX	12:30-1:30 p.m.; 8-9 p.m. 1210 Springfield, Ill., CST.	XEP	780 Mexico City, Mex.
WDUM	7 a.mmid.	WIAX	7-11:30 a.m.; 3-6:45; 9-mid.	XEPN	885 Piedras Negras, Mex.
warin	1250 Minneapolis, Minn. 6:15-9:45 a.m.; 10:35 a.m12:30	WTBO	1420 Cumberland, Md., EST. 7 a.m1:30 p.m.; 2:30-8 p.m.	-XER	735 Villa Acuna, Mex. 24 hours daily.
	p.m.; 1-4 p.m.; 5-8 p.m.; 9-1	WTEL	1310 Philadelphia Pa. EST	KES	1055 Tampico, Mex., CST.
WRJN	p.m.; 1-4 p.m.; 5-8 p.m.; 9-1 a.m., CST. 1370 Racine, Wis., CST.	WTE1	7-9 a.m.; noon-1 p.m.; 6:30-9 1450 Athens, Ga., EST. 8 a.m4 p.m.; 6-10 p.m. 1060 Hartford, Conn., EST.		9-10:30 a.m.; noon-2 p.m.; 7-15- 10 p.m.
WRNY	8 a.m10:30 p.m.	WTFI	8 a.m4 p.m.: 6-10 p.m.	XET	690 Monterrey, Mex., CST.
	1310 Knoxville, Tenn., CST.	-WTIC	1060 Hartford, Conn., EST.	XETA	9 a.m2 p.m.; 6-10 p.m. 1140 Mexico City, Mex.
-WRR	7 s m -10 n m	WTJS		XETB	1380 Torreon Mex.
WNN	1280 Dallas, Texas, CST. 6:30 a.m11 p.m.	WTMJ	1310 Jackson, Tenn., CST. 7 a.m1 p.m.; 3-9 p.m. 620 Milwaukee, Wis., CST.	XETC XETF	1000 Jalapa, Mex. 630 Veracruz, Mex., CST. 7-8 a.m.; noon-2 p.m.; 7 p.m.
-WRUF	830 Gamesville, Fla., EST.	A I WY	6:45 a.m12:30 a.m.		7-8 a.m.; noon-2 p.m.; 7 p.m.
WRVA	8 a.m 7:30 p.m. 1110 Richmond, Va., EST.	WTOC	1260 Savannah, $Ga., EST$.	XETH	mid. 840 Puebla, Mex.
	7 a.mmid.	WTRC	7 a.mmid. 1310 Elkhart, Ind., CST.	XETM	845 Matamoros, Mex.
- WSAI	1330 Cincinnati, Ohio, EST.	WTO	7:30 a.m7:30 p.m.	XETR XETU	610 Mexico City, Mex. 890 Pachuca, Mex.
WSAJ	8 a.m11 p.m. 1319 Grove City, Pa.	WTSL WWAE	1310 Laurel, Miss. 1200 Hammond, Ind., CST.	XETW	Mexico City Mex.
	5-6 p.m.		7 a.m8:30; 11-1 p.m.; 4-11:30	XEU	1010 Veracruz, Mex., CST. 7-8 a.m.; 10-11 a.m.; ncon-3
WSAN	1449 Allentown, Pa., EST. Silent.	-WM1	920 Detroit, Mich., EST.		p.m.: 6-mid.
WSAR	1450 Fall River, Mass., EST.	- WWL	7:30 a.mmid.	-XEW	910 Mexico City, Mex., CST
	8 a.m3:30 p.m.; 5-10 p.m.	- 446	850 New Orleans, La., CST. 8 a.m8:30 p.m.	XEX	10 a.mmid. 1210 Mexico City, Mex.
WSAZ	580 Huntington, W. Va., EST.	WWNC	570 Asheville, N. C., CST.	XEY XFB	546.8 Mexida, Mex. 840 Jalapa, Mex.
	6-9 a.m.; noon-2 o .m.; 4-8:30.	WWRL	7 s.mmid. 1500 Woodside, N. Y., EST.	XFC	805 Aguascalientes, Mex.
WSB	740 Atlanta, Ga., CST.		5-9 a.m.: 11 a.mnoon: 10-mu.	XFG	638.3 Mexico City, Mex.
WSBC	7 a.mmid. 1210 Chicago, Ill.	MM2M	1500 Pittsburgh, Pa., EST. 8 a.m1:30 p.m.; 3-11:30 p.m.	XFI XFO	818.1 Mexico City, Mex.
WSBT	1230 South Bend, Ind., CST.	~WWVA	1160 Wheeling, W. Va., <i>EST</i> .	XFX	940 Mexico City, Mex. 860 Mexico City, Mex.
	6-7:30 a.m.; 10:15 a.mnoon;	WXYZ	7:30 a.m9 p.m. 1240 Detroit, Mich., EST.	YV1BC	960 Caracas, Venz.
WSEN	3-5:30 p.m. 1210 Columbus, Ohio, <i>EST</i> .		7:30 a.mmid.		11 a.m1:30 p.m.; 5:45-10:30 p.m.
	8 a.m11 p.m.	XEA	1000 Guadalajara, Mex., CST.	10-AB	1200 Moose Jaw, Sask., MST.
WSFA	1410 Montgomery, Ala., CST.	-XEAN	1000 Guadalajara, Mex., CST. 11 a.mnoon; 2-3 p.m.; 5-11. 750 Juarez, Mex., MST.	10-AK	5:30-7 p.m. 1200 Stratford, Ont., EST.
WSIX	6 a.m9 p.m. 1210 Springfield, Tenn., CST	XEAW	9 a.m2 p.m.: 5-11 p.m.		0-8 p.m.
11014	6 a.m3 p.m.; 6-9 p.m.	XEB	965 Reynosa, Mex. 1030 Mexico City, Mex., CST.	-10-AT	
WSJS	1310 Winston-Salem, N. C.		8 a.mmid. 1000 Toluca, Mex.	10-Bi	1200 Prince Albert, Sask. Noon-1 p.m.; 6-8 p.m., MST.
wen	8 a.mmid., EST.	XEC -XED	1000 Toluca, Mex. 1155 Guadalajara, Mex.	10-BP	1199 Wingham, Ont., EST.
WSM	6:30 a.mmid.	XEF	735 Villa Acuna, Mex.	10-BQ	Silent. 1200 Brantford, Ont., EST.
WSMB	1320 New Orleans, La., CST.		24 hours daily.	•	8-10 p.m.
	7 a.mmid.	XEFA	1250 Mexico City, Mex.	10-BU	1200 Canora, Sask.
	1			4	,

Trans-Pacific Broadcasting Stations by Frequencies—With Their Time on the Air

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Note-	In some cases the power is figured differently than	Kcs.	Call Power City and Country Zone
ia 41	he rule in the United States, making it four or five	855	
		003	
tıme	es as much as American stations of the same wattage.		National Broadcasting Station, 96-98 Market St.,
Kee.	- Call Power City and Country Zone.		Daily, 9:45 a.mMidn.; Sun., 12:30 p.m4:30
			p.m., 6-6:30; 8-11:30
560	2CQ 7500 Corowa, N.S.W. 46	070	p.m., 0-0.00, 0-11.00
	National Broadcasting Station, relaying 3LO and	870	JOAK 10000 Tokyo, Japan 44 6PR 200 Perth, W. Aus. 42
	3AR.	880	6PR 200 Perth. W. Aus. 42
			Nicholagna I td Barroak St daily 8 n m 2 a m .
580	7ZL 3000 Hobart, Tasmania 46		Nicholsons Ltd., Barrack St., daily, 8 p.m2 a.m.;
	National Broadcasting Service, Elizabeth Street,		Sun. 10 p.m1:30 a.m.
	Daily: 12:30-3:30 p.m., 7:30 p.m12:30 a.m.,	890	7HO 50 Hobart, Tas. 46 Commercial Broadcasters, Ltd., 82 Elizabeth St., daily, 7:30 p.mMidn.; Sun. 9:30 p.m11. p.m.
	Dany. 12.00-0.00 p.m., 7.00 p.m12.00 a.m.,		Communical Descriptions Table 90 Tilling both Ct
	Suns., Noon-1 p.m., 4:30-6 p.m., 9:30-11:30 p.m.		Commercial Droadcasters, Ltd., 82 Elizabeth St.,
590	JOAK 10000 Tokyo, Japan 44		daily, 7:30 p.mMidn.: Sun. 9:30 p.m11, p.m.
	07K 1000 10kyo, oapan 17	900	27D 500 Wairon Hawke's Bay N Z 49
600	2ZK 120 Wanganui, N. Z. 49	000	TI A D 1000 Halloa, Hawke 5 Day, It. 21. 49
	D. A. Morrison & Co., Victoria Ave., Mon. to Fri.,		 E. A. Perry, 128 Queen St., daily, ex. Tues. 7 a.m
	7-8 p.m.		9 a.m.; Tues. 7 a.m9 a.m.; 6-10:30 p.m.
	7-0 p.m.	910	ARK 9000 Deel-be-rates Outside AC
610	3AR 5000 Melbourne, Victoria 46 National Broadcasting Station, 120A Russell St.,	910	4RK 2000 Rockhampton, Queens. 46 National Broadcasting Station. Relays 4QG.
	National Broadcasting Station, 120A Bussell St.		National Broadcasting Station. Relays 4QG.
	Della 0 45 a as Mide a Cata to 1 a as Come	920	JOQK 500 Nugata, Japan 44
	Daily: 9-45 a.mMidn.; Sats., to 1 a.m., Suns.,		out 500 Magata, Vapan 44
	12:30-11:30 p.m.	930	3UZ 500 Melbourne, Vict. 46
625	JOTK 500 Matsue, Japan 44		Oliver J. Nilsen & Co., 45 Bourke St., daily, 9
	47 TT TT TT		Oliver J. Nilsen & Co., 45 Bourke St., daily, 9 a.m12:30 a.m.; Sun. 7:15 p.m11:15 p.m. 2GB 3000 Sydney, N. S. W. 46 Theosophical Broadcasting Station, 29 Bligh St.,
630	12H 45 Hamilton, N. Z. G. S. Anchor, 165 Victoria St., Mon., Thur., Fri., Noon-1; 8-10 p.m., Tue., Noon-1; 7:30-10 p.m.,		a.m12:00 a.m., bun. 7:10 p.m11:10 p.m.
	G. S. Anchor, 165 Victoria St., Mon., Thur., Fri.,	950	2GB 3000 Sydney, N. S. W. 46
	Noon-1: 8-10 n.m. Tue Noon-1: 7:30-10 n.m.		Theosophical Broadcasting Station, 29 Bligh St.
	Noon-1, 6-10 p.m., 1 de., Noon-1, 2.50-10 p.m.,		deiler 9-20 a - 10-45 a - Com 9-20 a
	wed., Noon-1 p.m.		daily, 8:30 a.m12:45 a.m.; Sun., 8:30 a.m
635	JONK 500 Nagano, Japan 44 5CK 7500 Crystal Brook, S. Aus. 45		11:30 p.m.
005	5CK 7500 Crystal Brook, S. Aus. 45	960	JOOK 300 Kyoto, Japan. 44
	5CK 7500 Crystal Brook, S. Aus. 45		
	National Broadcasting Station, Relays 5CL.	960	5DN 500 Adelaide, S. Aus. 45
645	JOUK 300 Akita, Japan 44		Hume Broadcasters Ltd Franklin St. Parkside
040			Man to This Come 1.00 Cat 7.00
	JQAK 500 Dairen, Manchuria 42		Hume Broadcasters, Ltd., Franklin St., Parkside, Mon. to Fri., 6 p.m1:20 a.m.; Sat., 7:30 p.m
650	4YA 500 Dunedin, N. Z. 49		1 a m · Sun (1(L11:30) n m
	Notice of December 1 D	970	3BO 200 Bendigo, Vict. 46
	National Broadcasting Service, Stuart St., almost	310	200 Dendigo, Vicu.
	continuous, 10 a.m10 p.m. week days; till 11 p.m., Mons., Thurs.; Sat. 3-11 p.m.; Sun. 2-10		380 200 Bendigo, Viet. 46 Amalgamated Wireless, Ltd., Kangaroo Flat, daily, 9 p.mmid.; Sun., 8:30-10:30 p.m.
	nm Mong Thurs Set 3-11 nm Sun 2-10		daily, 9 p.mmid.: Sun., 8:30-10:30 p.m.
	p.m., 110ms., 11ms., bav. 0-11 p.m., bun. 2-10	980	3YA 500 Christchurch, N. Z. 49
	p.m. 2FC 5000 Sydney, N. S. W. 46	500	3YA 500 Christchurch, N. Z. 49
665	2FC 5000 Sydney, N. S. W. 46		National Broadcasting Service, daily, 10 a.m
	National Broadcasting Station, 96-98 Market St.,		National Broadcasting Service, daily, 10 a.m 10 p.m.; Tues. and Wed., till 11 p.m.; Sat.,
	Total of the control		10 p.m.; Tues. and Wed., till 11 p.m.; Sat., 3-11 p.m.; Sun., 2-10 p.m. 4GR 50 Toowoomba, Queens. 46 Gold Radio Service, Ruthven St., daily, 7:30- 11:30 p.m.; Sun., 8:30-11:30 p.m. 2HA 200 Hamilton, Vict. Western Province Radio Co., 37 Gray St., daily,
	Daily, 9:30-9:45 a.m., Noon-1 a.m., almost continuous. Suns., 12:30-2 p.m., 4:30-6, 7:30-	4000	400 -11 p.m., bum., 2-10 p.m.
	tinuous. Suns., 12:30-2 p.m., 4:30-6, 7:30-	1000	4GR 50 Toowoomba, Queens. 46
	Midn.		Gold Badio Service, Buthyen St., daily, 7:30-
676	MIGH. ;		11.20 mm . Sun 9.20 11.20 mm
670	JFAK 10000: Taihoku, Formosa 42		11:30 p.m.; Sun., 5:30-11:30 p.m.
680	JOLK 500 Fukuoka Japan 44	1010	3HA 200 Hamilton, Vict. 46
•	JOVK 500 Hakodate, Japan 44		Western Province Radio Co., 37 Gray St., daily,
	JUYK 500 Hakodate, Japan 44		O O-10 Con O-10 Con On One of Cital Dia, Carry,
	JOVK 500 Hakodate, Japan 44 XGOA 75000 Nanking, China 42 6WF 5000 Perth, W. Aus. 42		8 p.mmid.; Sun., 8:30 p.mmid. 2UE 1000 Sydney, N. S. W. 46 Radio House, 617 George St., daily, 8:30 a.m 1:30 p.m., 7:15-mid.; Sun., 11:30 a.m1:30
690	6WF 5000 Perth, W. Aus. 42	1025	2UE 1000 Sydney, N. S. W. 46
	National Broadcasting Station, Hay St., Daily,		Radio House 617 George St. daily 8:30 a m -
	National Broadcasting Bushon, Hay Bu, Dany,		1.00 - 7.17 - 11 Congo Du, dairy, 0.00 a.m.
	9:30 p.m2:30 a.m.; Sun., same JODK 1000 Keijo, Korea 44		1:30 p.m., 7:15-mid.; Sun., 11:30 a.m1:30
	JODK 1000 Keijo Korea 44		p.m.; 9:30-11:45 p.m.
700	IOVY 500 Obsessmen Tenen	1041	5Pl 50 Port Pirie, S. Aus. 45
700	JOKK 500 Okayama, Japan 44	1041	
710	JOJK 3000 Kanazawa, Japan 44		Midland, Ellen St., daily 7:30 p.mmid.
720	2YA 5000 Wellington, N. Z. 49	1050	2CA 50 Canberra, N. S. W. 46
120	ZIA 5000 Weinigon, N. Z.		
	National Broadcasting Service, Featherston St.,		A. J. Ryan, Kingston, daily 9-11:30 p.m.; Sun.,
	Mon. and Fri., 10 a.m11 p.m.; Tue., Wed.,		9:30-11:30 p.m.
	The 10 and 10 and Cat 2 11 and Can		2ZF 150 Palmerston North, N. Z. 49
	Thur., 10 a.m10 p.m., Sat., 3-11 p.m., Sun.,		Manual Della Club Trian Ct. Manual Communication of the Communication of
	2-4:30 p.m., 6-10 p.m.		manawatu Kadio Club, King St., Mon., Thur.,
	JORK 500 Kochi, Japan 44		Sat., 8 p.m10 p.m.: Wed., 6:30 p.m10 p.m.:
730			Fri 7 n m -10 n m · Sun 7 n m -0.20 n m
130			Manawatu Radio Club, King St., Mon., Thur., Sat., 8 p.m10 p.m.; Wed., 6:30 p.m10 p.m.; Fri., 7 p.m10 p.m.; Sun., 7 p.m9:30 p.m.
	National Boadcasting Station, Hindmarsh Sq.,	1050	220 200 Palmerston North, N. Z. 49
	National Boadcasting Station, Hindmarsh Sq., Daily, 7:50 p.m12:30 a.m.; Sun., 5 p.m12:30		I V Kyle 50 Waldegrave St. Tues 7 nm -
	p.m12.00		J. V. Kyle, 50 Waldegrave St., Tues., 7 p.m 9:30 p.m.; Sat., 1 p.m2:30 p.m.; Sun., 10 a.m
	a.m.		9:30 p.m.; Sat., 1 p.m2:30 p.m.; Sun., 10 a.m
735	JOSK 1000 Kokura, Japan 44		12:30 p.m.
750	JOBK 10000 Osaka, Japan 44		
130		1060	4MB 50 Maryborough, Queens. 46
760	4QG 5000 Brisbane, Queens. 46		Maryborough Brdcstg. Co., Wynnes' Station.
	National Broadcasting Station, State Ins. Bldg.,	4070	are dead of the state of the st
		1070	2KY 1500 Sydney, N. S. W. 46 Trades & Labor Council, Goulburn St., daily,
			Trades & Labor Council Goulburn St. daily
750	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m.		Trades & Labor Country. Goulder Dr., dany.
770	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44		7.20 mid · Sun 8.30 mid
	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44		7:30-mid.; Sun., 8:50-mid.
778	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44	1080	7:30-mid.; Sun., 8:30-mid. 3SH 50 Swan Hill, Vict. 46
778 790	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44	1080	7:30-mid.; Sun., 8:30-mid. 3SH 50 Swan Hill, Vict. 46
778	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44	1080	7:30-mid.; Sun., 5:30-mid. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdcstg. Co., daily, 9-11:30 p.m.; Sun.,
778 790	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44	1080	7:30-mid.; Sun., 8:30-mid. 3SH 50 Swan Hill, Vict. 46
778 790	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka Japan 44	1080	7:30-ma.; Sun., 8:30-mid. S\$H 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m.
778 790 800	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOGK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn.	1080	7:30-ma.; sun., s:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. 49
778 790 800	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOGK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn.	1080	7:30-ma.; sun., 8:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. 49 Laidlaw & Gray, Ltd., 123 George St., daily, 9-
778 790 800 810	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK	1080	7:30-ma.; sun., 8:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. 49 Laidlaw & Gray, Ltd., 123 George St., daily, 9-
778 790 800	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK	1080	7:30-ma.; 5un., 5:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-
778 790 800 810	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOGK 10000 Kumamoto, Japan 44 SLO 5000 Melbourne, Viet. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 IYA Auckland, N.Z. 48 Radio Broadcasting Board, Karangahape Road,	1080	7:30-ma.; sun., 5:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6
778 790 800 810	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOGK 10000 Kumamoto, Japan 44 SLO 5000 Melbourne, Viet. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 IYA Auckland, N.Z. 48 Radio Broadcasting Board, Karangahape Road,	1080	7:30-ma.; 5un., 5:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-
778 790 800 810	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOGK 500 Shidzuoka, Japan 44 SLO 5000 Melbourne, Viet. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 IYA Auckland, N.Z. Radio Broadcasting Board, Karangahape Road, Daily, 10 a.m10 p.m.; Tue. and Wed. until 11	1080	7:30-ma.; sun., 8:30-ma. 3SH 50 Swan Hill, Vict. 46 Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. 48 Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6 p.m.
778 790 800 810 820	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOPK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 1YA Auckland, N.Z. Radio Broadcasting Board, Karangahape Road, Daily, 10 a.m10 p.m.; Tue. and Wed. until 11 p.m.; Sat., 3-11 p.m.; Sun., 2-10 p.m.	1080	7:30-ma.; sun., 5:30-ma. 3SH 50 Swan Hill, Vict. 5wan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6 p.m. 4ZB 20 Dunedin, N. Z. 49
778 790 800 810 820	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOPK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 17A Auckland, N.Z. Radio Broadcasting Board, Karangahape Road, Daily, 10 a.m10 p.m.; Tue. and Wed. until 11 p.m.; Sat., 3-11 p.m.; Sun., 2-10 p.m. 10000 Sapporo, Japan 44 10000 Sapporo, Japan 10000	1080	7:30-ma.; sun., 5:30-ma. Swan Hill, Vict. Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6 p.m. 4ZB 20 Dunedin, N. Z. Otago Radio Assn., 182 Rattray St., Wed., 6:30-
778 790 800 810 820	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOPK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 17A Auckland, N.Z. Radio Broadcasting Board, Karangahape Road, Daily, 10 a.m10 p.m.; Tue. and Wed. until 11 p.m.; Sat., 3-11 p.m.; Sun., 2-10 p.m. 10000 Sapporo, Japan 44 10000 Sapporo, Japan 10000	1080	7:30-ma.; sun., 5:30-ma. Swan Hill, Vict. Swan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6 p.m. 4ZB 20 Dunedin, N. Z. Otago Radio Assn., 182 Rattray St., Wed., 6:30-
778 790 800 810 820	Daily, 9 a.m12:30 a.m.; Sun., Noon-11:30 p.m. JOHK 10000 Sendai, Japan 44 JOPK 500 Shidzuoka, Japan 44 JOPK 10000 Kumamoto, Japan 44 3LO 5000 Melbourne, Vict. 46 National Broadcasting Station, 120A Russell St., Daily, 8:30 a.m1 a.m.; Sun, 11:30 a.mMidn. JOCK 10000 Nagoya, Japan 44 1YA Auckland, N.Z. Radio Broadcasting Board, Karangahape Road, Daily, 10 a.m10 p.m.; Tue. and Wed. until 11 p.m.; Sat., 3-11 p.m.; Sun., 2-10 p.m.	1080	7:30-ma.; sun., 5:30-ma. 3SH 50 Swan Hill, Vict. 5wan Hill Brdestg. Co., daily, 9-11:30 p.m.; Sun., 5:45-11:30 p.m. 4ZF 10 Dunedin, N. Z. Laidlaw & Gray, Ltd., 123 George St., daily, 9-9:55 a.m.; 1-2 p.m.; Mon., 3-5 p.m.; Tues., 6-7:30 p.m.; Wed., 3-5 p.m.; 11-mid.; Sun., 5-6 p.m. 4ZB 20 Dunedin, N. Z. 49

Kcs.	Call Power City and Country Zone 4ZM 45 Dunedin, N. Z. 48 McCooken & Wells 17 Course St. doily av	Kcs. 1190	Call Power City and Country Zon 4MK 100 Mackay, Queens. 48 Williams' Agencies, Ltd., P. I. Box 165, daily, 8:30-11 p.m. 8:30-11:45 p.m.; Sun., 8:30-11 p.m. 170 170 25 Aughland N. Z. 49
	47M 45 Dunedin, N. Z. McCracken & Walls, 17 George St., daily ex. Tues, 10-11:45 a.m.; Tues, 10 a.m11:45 a.m.; 3-5; 7:30-11 p.m.; Sun, 2-5 p.m.; 6-10 p.m. 470 40 Dunedin, N. Z. 49 Barnett's Radio Supplies, Ltd., The Octagon, daily, ex. Fri., noon-1; 5-6 p.m.; Fri, noon-1; 5-6; 7-11 p.m. 50 Dunedin, N. Z. 49		
	Barnett's Radio Supplies, Ltd., The Octagon, daily, ex. Fri., noon-1; 5-6 p.m.; Fri, noon-1; 5-6. 7-11 p.m.	1200	Atwaters Piano Co., Ltd., Civic Square, daily, 8 a.m10:30 p.m.; Sun., 4-6 p.m.; 7:30-10 p.m. 5KA 300 Adelaide, S. Aus. Sport Radio Brdeste, Co., 81 Flinders St., daily, 4:45 p.m12:15 a.m.; Sun., 5-6 p.m.; 9-11:30
	42W 50 Dunedin, N. Z. A. E. E. Clarke, 19 Dowling St., Mon., Tues,, Wed., and Thur., 2-3 p.m.; Fri., 2-4:30 p.m.; 6-7 p.m.; Sat., 2-3 p.m.; 7-mid.; Sun., noon-		4:45 p.m12:15 a.m.; Sun., 5-6 p.m.; 9-11:30 p.m. 3ZC 250 Christchurch, N. Z. 49
1090	6-7 p.m.; Sat., 2-3 p.m.; 7-mid.; Sun., noon- 2 p.m. 1ZR 80 Auckland, N. Z. 49 Lewis Eady, Ltd., 192 Queen St., daily, ex. Sat.,		N. Z. Farmers Cooperative Assn. of Canterbury, Ltd., 212-226 Cashel St., Mon., noon-2 p.m.;
	Lewis Eady, Ltd., 192 Queen St., daily, ex. Sat., 10:30 a.m., 2-m.; Mon., 5-7:30 p.m.; Tues. and Fri., 5-10 p.m.; Wed., 5-8 p.m.; Thurs. and Sat., 5-11 p.m.; Sat., 10:30-1:30 p.m.; 2:30-4 p.m.; Sun., 9-10:30 a.m.; 2:30-4 p.m.; 6-9:30		8-10 p.m.; Tues., 10-11:30 a.m.; noon-2 p.m.; 2:30-4 p.m.; 5:30-10:30 p.m.; Wed., 10-11:30 a.m.; 5:30-10 p.m.; Thurs., 10-11:30 a.m.; noon-2 p.m.; 6:15-7:15 p.m.; 8-10 p.m.; Fri.,
		1210	2:30-4 p.m.; 5:30-10:30 p.m.; Weat, 10-11:30 a.m.; noon-2 p.m.; 6:15-7:15 p.m.; 8-10 p.m.; Fri., noon-2 p.m.; 8st., 5:30-11 p.m.; Sun., 10-11:30 a.m.; 6:15-7:15 p.m.; 8-10 p.m.
1100	7LA 200 Launceston, Tasm. 46 Findlay & Willis Pty., Ltd., 67 Brisbane St., daily, 7 p.mmid.; Sun., 7:30-11:30 p.m. 48 PhD 200 Newcastle, N. S. W. 46		2CH 1000 Sydney, N. S. W. 46 Council of Churches, 77 York St., daily, 11:30 a.m-mid.; Sun., 11:30 a.m1:30 p.m. 2ZE 10 Eketahuna, N. Z. 49
1110	p.m11:45 p.m.; Sun., 8:30-10:30 p.m.	1210 1220	2ZE 10 Eketahuna, N. Z. 49 G. R. S. Allen, Main St., Sun., 4:30-6 p.m. 5KG 100 Kalgoorlie, W. Aus. 42 Goldfields Broadcasters, Ltd., Bourke St., daily, 42
1111 1120	JFBK 1000 Tainan, Japan. 44 2ZW 400 Wellington, N. Z. 49 2ZW Brdestg, Service, Ltd., 89 Willis St., Mon. and Tues., 78:30 a.m.; 10 a.m2 p.m.; 7-11		3 p.m1:30 a.m.
	and Tues., 7-8:30 a.m.; 10 a.m2 p.m.; 7-11 p.m.; Wed., 7-8:30 a.m.; 10 a.m2 p.m.; 5-6 p.m.; 7-11 p.m.; Thurs., 7-8:30 a.m.; 10 a.m2 p.m.; 3-4:15 p.m.; 5-6 p.m.; 7-11 p.m.; Fri., 7-8:30 a.m.; Sat., 7-8:30 a.m.; 10 a.m2 p.m.; 7 p.m.; 3-2:11 a.m.; p.m.; 6:30-10 p.m.		Radio Service, Ltd., 243 McAndrews Road, Mon., 7-9 a.m.; 7:30-11 p.m. Tues., Wed., and Fri., 7-9 a.m.; Thurs. and Sat., 7-9 a.m.; 3-5 p.m.;
	2 p.m.; 3-4:15 p.m.; 5-6 p.m.; 7-11 p.m.; Fri., 7-8:30 a.m.; Sat., 7-8:30 a.m.; 10 a.m2 p.m.; 7 p.mmid.; Sun., 11 a.mnoon; 6:30-10 p.m.	1230	Sun., 8-10 a.m. 2YB 100 New Plymouth, N. Z. 49 North Taranaki Radio Society, Empire Bldg.,
1125	7-5:00 a.m.; Sat., 7-5:30 a.m.; 10 a.m10 p.m. 7 p.mmid; Sun, 11 a.mnoon; 6:30-10 p.m. 2UW 1500 Sydney, N. S. W. 45 Radio Broadcasting, Ltd., Palings Bldg., Ash St., daily 9 a.mmid; Sun., noon-mid. 5ML 300 Perth, W. Aus. 42	1245	King St., Mon., 7-10 p.m.; Wed., 6:30-10 p.m.; Sat., 6:30-10 p.m.; Sun., 6-6:45 p.m.; 7-10 p.m. 2NC 2000 Newcastle, N. S. W. 46
1135	9:15 p.m1:30 a.m.; Sun., 10:30 p.m1:30 a.m.	1260	National Brdestg. Service, relays 2FC and 2BL. 3WR 50 Wangaratta, Vict. Wangaratta Brdestg. Fty., Ltd., Reid St., Mon., to Sat., 7:30-11:30 p.m.; Sun., 9:30-11:15 p.m.
1145	Mobile Brdestg. Service, 430 Little Collins St., daily 8:30 p.mmid.		17M 10 Augkland N.Z. 49
	48C 600 Brisbane, Queens. 46 J. B. Chandler & Co., 43 Adelaide Road, daily, 8:30 a.m1:30 a.m.; Sat. and Sun., 7:15 p.m		V. V. Rodgers, Massey Road, Manurewa, Mon., 9-11:30 a.m.; 2-5 p.m.; 7-10 p.m.; Tues. Wed., Thurs. and Fri., 9-11:30 a.m.; 7-8 p.m.; Sat., 9 a.m2 p.m.; 7-8 p.m.; Sun., 10 a.mnoon;
1150	11:30 p.m. 2ZJ 75 Gisborne, N. Z. 49 G. T. C. Hands, 229 Gladstone Road, M. O. P. A.,	1270	8 a.mnoon.
	Mon. and Sat., 2:30-4:30 p.m.; 7-8 p.m.; Tues., noon-1:30 p.m.; 7-8 p.m.; Wed., noon-1:30 p.m.; 7-8 p.m.; Thurs., 7-8 p.m.; Fib. 15-15 p.m.; 7-8 p	1210	2SM 1000 Sydney, N. S. W. Catholic Brdestg. Co., Carrington St., daily, 8.30-10 a.m.; 2:30-3:30 p.m.; 7-mid.; Sun., 12:30-3 p.m.; 7:30-11:45 p.m.
	Mon. and Sat., 2:30-4:30 p.m.; /-8 p.m.; t ues., noon-1:30 p.m.; 7-8 p.m.; Wed., noon-1:30 p.m.; 7-8 p.m.; 8:15-10 p.m.; Thurs., 7-8 p.m.; Fri., 4-5:15 p.m.; 7-8 p.m.; 8:15-10 p.m. 2ZM 110 Gisborne, N. Z. Atwater Kent Radio Service, Ltd., 258 Gladstone Boad M. O. P. A., Mon. Fri., and Sat. 6:45-	1280	3TR 50 Trafalgar, Vict. 46 Gippsland Brdestg. Service, P. O. Box 89, daily, 7:30-11:45 p.m.; Sun., 8:30-11:30 p.m.
	Road, M. O. P. A., Mon., Fri. and Sat., 6:45-7:45 a.m.; 12:30-1 p.m.; Tues., 6:45-7:45 a.m.; 2:30-4:30 p.m.; Wed., 6:45-7:45 a.m.; Thurs., 6:45-7-45 a.m.; 12:30-1 p.m.; 7-10 p.m.; Sun.,		42C 20 Otago, N. Z. 49 John I. Bilton, Lowburn Ferry, Cromwell, Mon., Tues., Wed. and Fri., noon-1;30 p.m.; Thurs.,
1155	12:30-1 p.m.; 7-10 p.m. 2WG 50 Wagga, N. S. W. 46 Riverina Brdestg. Co., 16 Fitzmaurice St., daily,	dana /	noon-1:30 p.m.; 7-10 p.m.; Sat., noon-1:30 p.m.; 5:30-7 p.m.; Sun., 9-11 a.m.
1160	8:30-11:30 p.m. 4ZP 125 Invercargill, N. Z. R. T. Parsons, 155 Layard St., Mon., Tues. and	1290	48K 200 Brisbane, Queens. Brisbane Brdesrg. Co., King House, Queen St., Mon. to Fri., 6 p.m12:30 a.m.; Sat., 7:15 p.m 10:20 a.m.; Sat., 7:15 p.m
	Thurs., 10 a.mnoon; 1-4 p.m.; 5-10 p.m.; Wed., 10 a.mnoon; 1-4 p.m.; 5-8 p.m.; Fri., 10 a.mnoon; 1-4 p.m.; 5-11 p.m.; Sat., 10 a.m		12:30 a.m.; Sun., 8:30-11:30 p.m. 2ZB 7.5 Napier, N. Z. T. H. Boston, 116 Wellesley Road, Mon., Thurs. and Sat., 6-7 p.m.; Sun., 10:30 a.mnoon.
	noon; 2-4 p.m.; 5-8 p.m.; 10:15 p.mmid.; Sun., 11 a.mnoon; 6:30-10 p.m.		C R Hanson & Co. 50 Lathern St. Mon. Tues.
1170	421 8 Invercargill, N. Z. 49 G. C. Batchelor, 130 Dee St. 4TO 100 Townsville, Queens. 46 Amalgamated Wireless Ltd., daily, 8-8:30 p.m.;		and Fri., noon-2 p.m.; 7-10:30 p.m.; Wed., noon-2 p.m.; 6:20-10:30 p.m.; Thurs., noon-2 p.m.; Sat., 10 a.m5 p.m.; 7-11p.m.; Sun., noon-3 p.m.; 6:30-10 p.m.
1180	9-11:45 p.m.; Sun., silent. 3DB 500 Melbourne, Vict. Broadcasting Station Pty., 36 Flinders St., daily, 8:30 am12:15 a.m.; Sun., 7:30 a.m11:15 p.m.	1300	noon-3 p.m.; 6:30-10 p.m. 3BA 50 Ballarat, Vict. 46 Ballarat Broadcasters Pty., Ltd., Sturt St., daily,
,	8:30 am12:15 a.m.; Sun., 7:30 a.m11:15 p.m. 2ZD 2:5 Masterton, N. Z. 49		8:30-mid.; Sun., 8-11:30 p.m. 3ZE 50 Greymouth, N. Z. Schaef's Ltd., Mackay St., Mon. and Wed., 12:30-
	2ZD 2.5 Masterton, N. Z. 49 W. D. Ansell, 7 Rimu St., daily, 7:30-9 a.m.; 7-10 p.m.; Sat., 7-10:30 p.m.; Sun., 8-10 p.m.		1:30 p.m.; Fri., noon-2 p.m.; Sat., 9:15-11 p.m.

Kcs.	Call Power Sity and Country Zone 3ZR 80 Greymouth, N. Z. West Coast Radio Society, Bright St., Cobden, Mon to Fri., 7-9 a.m.; 3-15 p.m.; 6-19 p.m.; Sun., noon-1:30 p.m.; 3-9 p.m.	Kcs. 1380	Call. Power 4BH City and Country 2one 46 4BH 200 Brisbane, Queens. Broadcasters, Ltd., 90-92 Queen St., daily, 7:30 p.mmid.; Sat., to 12:30 a.m.; Sun., 8:30-11:30 p.m. 2GN 2GN 50 Goulburn, N. S. W. 46 Goulburn Brdestg. Co., Auburn St., Tues. and
1310	5AD 300 Adelaide, S. Aus. Advertiser Newspaper, Ltd., Weymouth St., daily, 8 p.m1 a.m.; Sun., 7:30-mid. 2MO 50 Gunnedah, N. S. W. 46 M. J. Oliver, P. O. Box 78, daily, 8:30-10:30 p.m.; Sun., 9:30-11-30 p.m.;	1400	Thurs., 8-8:30 p.m.; 9:30-11:30 p.m.; Sat., 8 p.mmid.; Sun., 9:30-11 p.m. 3GL. 50 Geelong, Vict. Geelong Brdesg, Pty., Ltd., Nat'l Mutual Bldg., daily, 7 p.mmid.; Sun., 8:30-11:30 p.m.
1330	1ZJ 26 Auckland, N. Z. 48 Johns, Ltd., Chancery St., Tues. and Thurs., noon-2 p.m.; Wed., 7:30-9:30 p.m. 4RO 250 Rockhampton, Queens. 46 Rockhampton Brdestg. Co., daily, 7:30-11:30	1415	27L 20 Hastings, N. Z. 49 Lockyer's Radio Stores, Ltd., 815 Lawrence St., Thurs., 6:30-10 p.m. 200 Newcastle, N. S. W. 260 Newcastle, N. S. W. 46 Newcastle Brdestg. Co., 57 Hunter St., daily, 8-11:30 p.m.; Sun., 8:30-10:30 p.m.
1340	p.m. 27. 15 Hastings, N. Z. Sutcliffe, Ltd., Heretaunga St. 2XN 50 Lismore, N. S. W. G. W. Exton, P. O. Box 138b, daily, 8-10 p.m.;	1420	1ZB 20 Auckland, N. Z. 49 La Gloria Gramophones, Ltd., 157 Karangahape Road, Mon., 7:30-10 p.m.; Wed., 8-10 p.m. 1ZS 5 Auckland, N. Z. 49 McCabe's Radios, Mon. to Fri., 7:30-9 a.m.; 2-3 p.m.; Sat., 7:30-9 a.m.;
	Sun., church services. Occasionally relays 4BK. 4ZR 5 Otaga, N. Z. B. R. Renton & C. G. Clark, Clyde St., Balclutha, Thurs., 8-11 p.m.; Fri., 2-3 p.m.; Sun., 10 a.m noon; 6-8:30 p.m.	1425	3AW 300 Melbourne, Vict. Vogue Brdestg. Co., Ltd., His Majesty's Theatre, daily 4 p.m12:30 a.m.; Sat., till 1 a.m.; Sun., 6 p.mmid. 2WL Wollongong, N. S. W. 46 Wollongong Brdestg. Co., 149 Crown St., daily,
1350 1360	3KZ 200 Melbourne, Vict. 3KZ Broadcasting Station, 40 Victoria St., daily, 7:30 p.m12:30 a.m.; Sun., 7:30-11:30 p.m. 2ZR 50 Nelson, N. Z. 49	1480	8-11:30 p.m.; Sun., 8:30-10:30 p.m. 2AY 50 Albury, N. S. W. 46 Charles Rice, 610 Dean St., daily, 8:30 p.m mid.; Sun., 9-11:30 p.m.
1900	N. D. Braithwaite, Begg & Co. Bldg., Trafalgar St., Mon., Tues. and Thurs., noon-2 p.m.; 5-11 p.m.; Wed., noon-2 p.m.; 5-10 p.m.; Sat., on till mid.; Fri., noon-2 p.m.; 5-10 p.m.; Sun., 6-10 p.m.	1500	70V 200 Ulverstone, Tasm. 46 North Western Tasmanian Broadcasters, Ltd. 3AK 50 Melbourne, Vict. 46 Akron Broadcasting Service, Ltd., 490 Elizabeth St., Mon. to Fri., 1-3:30 a.m.; Sat., mid-4:30 a.m.; Sun., 11:30 p.m1:30 a.m.

One Hundred Best Short Wave Stations

By Frequencies and Wave Lengths

Submitted by our readers as being most regularly received. Times are given in Eastern Standard. First column gives frequency in megacycles (for kilocycles read the decimal point as a comma) and the second column, wave-lengths in meters.

For complete lists of short-wave stations see the following issues of this magazine: September: Foreign stations arranged by countries. October: Complete list by frequencies and waves.

November: American stations by states.

December: Canadian stations by provinces and Complete list by call letters.

Broadcast B. Phone P.

2.735	109.62	VE9CI London, Ontario. Daily 9-11 p.m.;	6.050	49.56	GSA Daventry, England, To Canada 8-10
		Sun. 11 a.m7	0.000	20100	p.m. B
3.998	75.00	HCJB Quito, Ecuador, 7:30-9:45 a.m. B	6.057	49.50	CMCI Havana, Cuba, 9-11 p.m. B
4.273	70.65	RV15 Khabarovsk, USSR 3 a.m9 a.m. B	6.060	49.48	VQ7LO Nairobi, Kenya, 11 a.m3:30 p.m.;
4.283	70.00	ICEJ S. S. "Rex" P			Tues. 3-4 a.m.; Thur. 8-9 a.m. B
4.792	62.56	VE9BY London, Ontario, Sat. midn1 a.m.	6.060	49.48	W8XAL Cincinnati, O. Relays WLW 6-10;
		В			30 a.m.;1:30-3:30 p.m.; 7 p.m1:30 a.m. B
4.975	60.27	GBC Rugby, England. Phones ships irregu-	6.070	49.39	VE9CS Vancouver, B. C., Fri. 12:30-1:45
	FO 40	larly P			a.m.; Sun. 11 a.m7 p.m. B
5.045	59.42	VRT-ZFA Hamilton, Bermuda. Phones	6.076		W9XAA Chicago, Ill., Sun. 11 a.m9 p.m. B
F 144	E0 00	WNB-GMBJ nights P	6.090	49.23	VE9BJ St. John, N. B., 5 p.m. and 11 p.m.
5.144			6 000	40.00	VEOCITY Demonstrate Onto 111
5.766	52.00	XAM Merida, Yucatan. Tests XDA 10 a.m.	6.092	49.22	VE9GW Bowmanville, Ont., 5-11 p.m.;
5.879	51 00	8 p.m. irreg. P XDA Mexico City. Tests XAM 10 a.m.	0 005	40.10	Sun. 1-7 p.m. B
0.019	31.00	8 p.m. irreg.	0.095	49.18	W9XF Chicago, Ill., 4:30-8 p.m.; 9:30 p.m 2 a.m.
5.925	50.60	HKO Medellin, Colombia, TuesThur	6 006	49.17	W3XAL Boundbrook, N. J., Sat. 4:30 p.m
0.020	00.00	Sat. 8-10 p.mSun. 6-8 p.m. B	0.000	49.17	1a.m. B
5.968	50.26		6 110	49.00	YV1BC Caracas, Venz. Relays 960 kcs.
0.000	00120	a.m. B	0.110	10.00	10:30 a.m1 p.m.; 5:15-10 p.m. B
5.996	50.00	HKD Barranquilla, Col., 8-10 p.m. B	6.125	48.95	YV11BMO Maracaibo, Venz., 8-11 p.m. B
6.005	49.93	VE9DR Drummondville, Que., 7 p.m	6.140		W8XK Pittsburgh, Pa. Relays KDKA 4-11
		mid. B			p.m. B
6.036	49.67	W4XB Miami, Fla. Reported 5-11 p.m. B	6.335	47.35	VE9AP Drummondville, Que. B
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6.386 6.426	$\frac{46.96}{46.65}$	W3XL Boundbrook, N. J. Experimental B VE9BY London, Ontario, Wed. 8:30-9:30	11.760	25.50	XDA Mexico City. Tests XAM 1 p.m. and
6.611	45.35	p.m.; Fri. 7-8 p.m.; Sat. 8-11 p.m. B TGW Guatamala City, TuesThurFri.	11.780 11.800	$25.44 \\ 25.40$	VE9DR Drummondville, Que. B I2RO Rome, Italy, 11 a.m12:30 p.m.;
6.61 8	45. 31	PRADO Riobamba, Ecuador, Thur. 9-11	11.865	25.27	2:30-5:30 p.m. B GSE Daventry, England, To India 9:30-
6.648 6.675	45.10 44.91	p.m. IAC, Coltano, Italy. Testing irregularly P DGK Nauen, Germany. Heard 9 p.m. with	11.872	25.25	11:30 a.m. B W8XK Pittsburgh, Pa. Relays KDKA 4-10 p.m. B
6.888	43.54	WEJ P KEQ Kahuku, Hawaii. Phones California	11.898	25.20	FYA Paris, France, 11:30 a.m2:30 p.m. (Pontoise) B
7.139	42.00	nights P HJ4ABB Manizales, Colombia, Sat. 10	$12.000 \\ 12.490$	$\frac{24.98}{23.81}$	FZS Saigon, Indo-China, 9-10 a.m. P DAN Norden, Germany. Talks to ships P
7.312	41.03	p.mmid. B CM5RY Matanzas, Cuba, Sat. 10:45-11:30	12.780	23.46	GBC Rugby, England. Phones ships irregularly
7.518	39.89	p.m. B KDK-KKH Kahuku, Hawaii, 9 p.m. and	12.820	23.38	CNR Rabat, Morocco, Sun. 7:30 a.m 9 a.m. B
7.610	39.40	2 a.m. P HJ3ABF Bogota, Colombia, 7 p.m11 p.m.	13.074	22.93	J1AA Tokyo, Japan. Phones, experimental
7.790	38.49	HBP Geneva, Switzerland, Sun. 5-5:45 p.m.	13.296 13.500	$\frac{22.55}{22.09}$	CGA Drummondville, Que., 9 a.m2 p.m. P GBB Rugby, England. Talks Canada day-
8.180	36.65	PSK Rio de Janeiro, Brazil, Reported work-	13.816	21.70	times. SUZ Cairo, Egypt, 7 a.m. and 3:30 p.m. P
8.566	35.00	ing WOK P ICEJ S. S. "Rex" P	14,450 14.550	$20.75 \\ 20.60$	GBW Rugby, England, 6 a.m. and 6 p.m. P HBJ Geneva, Switzerland P
8.645	34.68	VE9BY London, Ontario, Mon. 3-4 p.m. B	14.550	20.60	RXC Panama City, Afternoons P
8.950	33.50 33.27	TGX Guatamala City, Sat. 10 p.mmid. B KEJ, Bolinas, Calif. Tests irregularly P	14.682	20.42	PSS Rio de Janeiro, Brazil, 5-6 p.m. P
$\frac{9.012}{9.276}$	32.32	CNR Rabat, Morocco, Sun. 3 p.m6 p.m. B	14.760	20.32	HJB Bogota, Colombia, 11 a.m. 5 p.m. P
9.480	31.63	PLW Bandoeng, Java. Phones Australia	14.796 15.066	20.27 19.90	WMB Miami, Fla., 1-5 p.m. P TI4NRH Heredia, Costa Rica, SatSun.
		3-8 a.m. irreg. P	10.000	10.00	11-noon B
9.492	31.58	PRBA Rio de Janeiro, Brazil, 6-6:15 p.m. B	15.120	19.83	HVJ Vatican City, 5-5:15 a.m. B
9.503	31.55	VK3ME Melbourne, Australia, Wed. 5-6:30	15.140	19.81	GSF Daventry, England B
0.510	91 59	a.m.; Sat. 5-7 a.m. B	15.190	19.73	DJB Zeesen, Germany, 8 a.mnoon B
9.510	31.53	GSB Daventry, England. To Canada 8-10	15.204	19.72	W8XX Pittsburgh, Pa. Relays KDKA
9.520 9.530	$\frac{31.49}{31.46}$	p.m. B OXY Skamleback, Denmark, 2-6:30 p.m. B W2XAF Schenectady, N. Y., 5:15-11 p.m.;	15.234	19.68	9 a.m4 p.m. B FYA Paris, France, 8 a.m11 a.m. (Pon- toise) B
9.552	31.38	SatSun., 4-11 p.m. B	15.320	19.57	W2XAD Schenectady, N. Y. Daily 1-3
9.555	31.37	DJA Zeeoen, Germany, 2 p.m6:30 p.m. B VE9DR Drummondville, Que. B	15.410	19.46	p.m.; SatSun. to 4 B
9.560	31.36	W1XAZ Springfield Mass., 4 p.m12:30	10.110	10.10	KWO Dixon, Calif. Phones Hawaii 2-7 p.m.
9.570 9.580	31.33 31.30	a.m. B SR1 Poznan, Poland, Tues. 6 a.m8 a.m. B HBL Geneva, Switzerland, Sun. 5-5:45 p.m.	15.760 16.150 17.080	19.02 18.56 17.55	J1AA Tokyo, Japan. Phones experimental B GBX Rugby, England, 4 p.m. and 11 p.m. P GBC Rugby, England. Talks with ships
9.5 85 9.585	$\frac{31.28}{31.28}$	GSC Daventry, England B VK2ME Sydney, Australia, Sun. 1-2 a.m.;	17.770	16.90	irregularly P GSG Daventry, England. To India 9:30- 11:30 a.m. B
9.592	31.25	5-9 a.m.; 9:30-11 a.m. B CT1AA Lisbon, Portugal, TuesFri., 5-7	17.772 17.830	16.87 16.82	W3XAL Boundbrook, N. J., 8 a.m4 p.m. B PCV Kootwijk, Holland, 6-9 a.m. P
9.670	31.00	p.m. B TI4NRH Heredia, Costa Rica, week days	18.170 18.296	$16.50 \\ 16.39$	PMC Bandoeng, Java, 3:30-9 a.m. P YVQ Maracaibo, Venezuela. Heard about
9.862	30.40	10-11 p.m.; SatSun., 11-noon B EAQ Madrid, Spain, 6:30-8 p.m. B	18.400	16.29	PCK Kootwijk, Holland. Phones Java
9.862 9.895	30.40 30.30	J1AA Tokyo, Japan, 5-7:45 a.m. B LSN Buenos Aires, Argetina, 6 p.m. and	18.444	16.25	about 7 a.m. P HJY Bogota, Colombia, 11 a.m. and 4 p.m.
9.928	30.20	6 a.m. P HJY Bogota, Colombia. Phones OCI eve-	18.670	16.06	OCI Lima, Peru, 2 p.m. P
10.060	29.80	nings irregularly P VRT-ZFA Hamilton, Bermuda. Phones	18.820	15.93	PLE Bandoeng, Java, TuesFri. 5:40-10:40 a.m.
10.090	29.70	WNB days OPM Leopoldsville, Africa. Phones ORK	18.958	15.82	LSR Buenos Aires, Arg., 11 a.m. and 4 p.m.
10.212	29.35	9-11 a.m.; 3-6 p.m. P PSH Rio de Janeiro, Brazil. Tests W2XBJ	19.270	15.57	PPU Rio de Janeiro, Brazil, 10:30 a.m. and
10.046	00.00	evenings P	10.000		3:30 p.m. P
10.246	29.26	DIQ Nauen, Germany B	19.282	15.55	FTM St. Assise, France, 10 a.m2 p.m. P
10.285 10.340	$29.15 \\ 28.99$	DJQ Koenigswusterhausen B ORK Brussels, Belgium, Phones OPM 2-4.	19.678	15.24	CEC, Santiago, Chile, 11 a.m. and 4 p.m. P
10.010	20.00	9-11 a.m.: 3-6 n.m. P	19.684	15.23	EAQ Madrid, Spain. Phones Sat. 1-3 p.m. B
10.830	27.68	KWV Dixon, Calif. Phones Hawaii irregularly	19.895	15.07	LSG Buenos Aires, Argentina, 10:30 a.m 3:30 p.m. P
11.174	26.83	CT3AQ Funchel, Maderia, Tues, Thur., 5-6:30 p.m.; Sun. 10:30-noon B	20.028	14.97	DHO Nauen, Germany. Phones LSG 7 a.m11 a.m. irregularly P
11.530	26.00	XAM Merida, Yucatan P	20.500	14.63	W9XF Chicago, Ill., 4:30-8 p.m.; 9:30 p.m
11.644	25.75	PPQ Rio de Janeiro, Brazil. Heard testing 6 p.m. P	20.820	14.40	2 a.m. B LSY Buenos Aires, Argentina. Heard 10
11.680	25.67	YVQ Maracaibo, Venzuela. Tests Germany 5-7 p.m. P	21.020	14.27	a.m. to 2 p.m. P LSN, Buenos Aires, Argentina, 8 a.m. and
11.710	25.60	DGT Koenigswusterhausen B			4 p.m. P
11.710	25.60	VE9JR Winnipeg, Manitoba, Tues. 6:30-	21.054	14.24	WKA Lawrenceville, N. J., 8 a.m-4 p.m. P
		8:30 p.m.; Fri. to 9 B	21.069	14.23	PSA Rio de Janeiro, Brazil, 8 a.m. P
11.750	25.51	GSD Daventry, England. To Oceania 4-30:	21.400	14.01	WKK Lawrenceville, N. J., 8 a.m4 p.m. P
١	· `	6:30 a.m. B	21.470		
T	ie Tin	ne Converter will turn these hours	ınstantl	y into	the time used by the station.

The Hundred Best S. W. Stations by Calls . . .

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CEC Santiago, Chile * P	GSG Daventry, England B 17.770 16.90 Broadcasts for India	PLE Bandoeng, Java P 18.820 15.93 Tues., Fri., 5:40-
CEC Santiago, Chile * P 19.678 15.24 11 a.m4 p.m.	17.770 16.90 Broadcasts for India	18.820 15.93 Tues., Fri., 5:40-
CGA Drummondville, Que. P 13.296 22.55 9 a.m. to 2 p.m.	9:30-11:30 a.m. GSH Daventry, England B	PLW Bandoeng, Java P
CMCI Havana, Cuba B	21.470 13.96	9.480 31.63
CMCI Havana, Cuba B 6.057 49.50 9 p.m11 p.m. CM5RY Matanzas, Cuba B	HBJ Geneva, Switzerland P	PMC Bandoeng, Java P 18.170 16.50 3:30-9 a.m.
CM5RY Matanzas, Cuba B 7.312 41.03 S a t . 10:45-11:30	14.550 20.60 HBL Geneva, Switzerland B	PPQ Rio de Janeiro, Brazil P
n m	9.580 31.30 Sun. 5-5:45 p.m.	11.644 25.75
CNR Rabat, Morocco B 9.276 32.32 Sun. 3 p.m6 p.m. 12.820 23.38 Sun. 7:30-9 a.m.	HBP Geneva, Switzerland B	PPU Rio de Janeiro, Brazil P
9.276 32.32 Sun. 3 p.m6 p.m. 12 820 23 Sun. 7:30.0 a m	7.790 38.49 Sun. 5-5:45 p.m.	19.270 15.57 10:30 a.m3:30 p.m. PRADO Riobamba, Ecuador B
CT1AA Lisbon, Portugal B 9.592 31.25 TuesFri. 5-7 p.m.	HCJB Quito, Ecuador B 3.998 75.00 7:30-9:45 a.m.	6.618 45.31 Thurs., 9-11 p.m.
9.592 31.25 TuesFri. 5-7 p.m.	HJB Bogota, Colombia P	PRBA Rio de Janeiro, Brazil B
CT3AQ Funchel, Maderia B 11.174 26.83 TuesThur. 5-6:30	14.760 20.32 11 a.m5 p.m.	9.492 31.58 6-6:15 p.m. PSA Rio de Janeiro, Brazil P
p.m.; Sun. 10:30-	HJY Bogota, Colombia P	21.069 14.23 8 a.m.
noon	9.928 30.20 18.444 16.25 11 a.m4 p.m.	PSH Rio de Janeiro, Brazil P 10.212 29.35
DAN Norden, Germany P 12.592 23.81 Talks to ships	HJ3ABF Bogota, Colombia B	PSK Rio de Janeiro, Brazil P
DGK Nauen, Germany P	HJ3ABF Bogota, Colombia B 7.610 39.40 7 p.m11	8 180 + 36 65
6.675 44.91 DGT_Koenigswusterhausen B	HJ4ABB Manizales, Colombia B	PSS Rio de Janeiro, Brazil P 14.682 20.42 5-6 p.m. RV-15 Khabarovsk, USSR. B
11.710 25.6	7.139 42.00 Sat. 10 p.mmid. HKD Barranguilla, Colombia B	RV-15 Khabarovsk, USSR. B
DHO Nauen, Germany P	HKD Barranquilla, Colombia B 5.996 50.00 8-10 p.m.	4.273 70.65 3-9 a.m.
20.028 14.97 DIO Nauen, Germany B	HKO Medellin, Colombia B	RXC Panama City, Panama P
DIQ Nauen, Germany B 10.246 29.26	5.925 50.60 MonWedFri. 8-10	14.550 20.60 p.m. SR-1 Poznan Poland B
DJA Zeesen, Germany B	p.m.; TuesThur SatSun. 6-8 p.m.	9.570 31.33 Tues., 6-8 a.m.
DJA Zeesen, Germany B 9.552 31.38 2 p.m6:30	HVJ Vatican City B 5.968 50.26 2-2:15 p.m.; Sun., 5-5:30 a.m.	SUZ Cairo, Egypt P 13.816 21.70 7 a.m3:30 p.m.
DJB Zeesen, Germany B 15.190 19.73 8 a.mnoon	5.968 50.26 2-2:15 p.m.; Sun.,	13.816 21.70 7 a.m3:30 p.m.
DJQ Koenigswusterhausen B	5-5:30 a.m. 15.120 19.83 5-5:15 a.m.	13.816 21.70 7 a.m3:30 p.m. TGW Guatamala City B 6.611 45.35 Tues., Thurs., Fri.,
10.285 29.15	IAC Coltano, Italy P	6.611 45.35 Tues., Thurs., Fri., 10:30-mid.
EAQ Madrid, Spain B	6.648 45.10	TGX Guatamala City B
9.862 30.40 6:30-8 p.m. 19.684 15.23 Phones Sat. 1-3 p.m.	ICEJ S. S. "Rex" P 8.566 35.00	8.950 33.50 Sat. 10 p.mmid.
FTM St. Assise, France P	4.283 70.00	TI4NRH Heredia, Costa Rica B 9.670 31.00 Weekdays 10-11 p.m
19.282 15.55 10 a.m2 p.m.	I2RO Rome, Italy B	15.066 19.90 Sat., Sun. 11 a.m
FYA Pontoise, France B	11.800 25.40 11 a.m12:30 p.m.;	noon.
11.898 25.20 11:30 a.m2:30 p.m. 15.234 19.68 8:00 a.m11 a.m.	2:30-5:30 p.m. J1AA Tokyo, Japan B	VE9AP Drummondville, Que. B 6.335 47.35
FZS Saigon, Indo-China P	9.862 30.40 5:00-7:45 a.m.	VE9BJ St. John, N. B. B
12.000 24.98 9-10 a.m.	13.074 22.93 Phones	VE9BJ St. John, N. B. B 6.090 49.23 5 p.m11 p.m.
GBB Rugby, England P 13.500 22.09	15.760 19.02 Phones KDK-KKH Kahuku, Hawaii P	VE9BY London, Ont. B
GBC Rugby, England P	7.518 39.89 9 p.m2 a.m.	6.426 46.65 Wed. 8:30-9:30 p.m.
GBC Rugby, England P 4.975 60.27	KEJ Bolinas, Calif. P	Fri. 7-8 p.m.; Sat.
12.780 23.46 17.080 17.55	9.012 33.27	8-11 p.m. 8.645 34.68 Mon. 3-4 p.m.
GBW Rugby, England P	KEQ Kahuku, Hawaii P 6.888 43.54	VE9CI London, Ont. B
14.450 20.75 6 a.m6 p.m.	KWO Dixon, Calif. P	2.735 109.62 Daily 9-11 p.m.;
GBX Rugby, England P	15.410 19.46 2-5 p.m.	Sun. 11 a.m7 p.m
16.150 18.56 4 p.m11 p.m.	KWV Dixon, Calif. P	VE9CS Vancouver, B. C. B 6.070 49.39 Fri. 12:30-1:45 a.m.;
GSA Daventry, England B 6.050 49.56 Broadcasts for South	10.830 27.68 LSG Buenos Aires, Arg. P	Sun. noon-mid.
Africa 1.00-3.00	LSG Buenos Aires, Arg. P 19.895 15.07 10:30 a.m3:30 p.m.	VE9DR Drummondville, Que. B
p.m.; West Africa 3:30 - 5:30 p.m.;	LSN Buenos Aires, Arg. P	6.005 49.93 7 p.mmid. 9.555 31.37
3:30 - 5:30 p.m.; Canada 8-10 p.m.	9.895 30.30 6 p.m6 a.m.	9.555 31.37 11.780 25.44
GSB Daventry England B	21.020 14.27 8 a.m4 p.m.	
0 E10 21 E2 Drondonata for Courth		VE9GW Bowmanville, Ont. B
9.510 31.53 Broadcasts for South	LSR Buenos Aires, Arg. P	6.092 49.92 Daily 5-11 p.m.;
Africa 1.00-3.00	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m.	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m.
Africa 1.00-3.00	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m.
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m.	LSR Buenos Aires, Arg. P 18,958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9.
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m.	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9.
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England 9.585 31.28 B	LSR Buenos Aires, Arg. P 18,958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9
Africa 1:00-3:00	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m. OPM Leopoldsville, Africa P 10.090 29.70 ORK Brussels, Belgium P	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne. Australia B
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28 GSD Daventry, England 11.750 25.51 Broadcasts for Australasia 4:30-6:30	LSR Buenos Aires, Arg. 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m. OPM Leopoldsville, Africa 10.090 29.70 ORK Brussels, Belgium P 10.340 28.99	6.092 49.92 Daily 5-11 p.m.; VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne, Australia B 9.503 31.55 Wed. 5-6:30 a.m.;
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28 GSD Daventry, England B 11.750 25.51 Broadcasts for Australasia 4:30-6:30 a.m.	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m. OPM Leopoldsville, Africa P 10.090 29.70 ORK Brussels, Belgium P 10.340 28.99 OXY Skamleback, Denmark B	6.092 49.92 Daily 5-11 p.m.; VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne, Australia B 9.503 31.55 Wed. 5-6:30 a.m.;
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28 GSD Daventry, England B 11.750 25.51 Broadcasts for Australasia 4:30-6:30 a.m.	LSR Buenos Aires, Arg. 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P. 20.820 14.40 OCI Lima, Peru P. 18.670 16.06 2 p.m. OPM Leopoldsville, Africa P. 10.090 29.70 ORK Brussels, Belgium P. 10.340 28.99 OXY Skamleback, Denmark 9.520 31.49 2-6:30 p.m. B	6.092 49.92 Daily 5-11 p.m.; VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne, Australia B 9.503 31.55 Wed. 5-6:30 a.m.;
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28 GSD Daventry, England B 11.750 25.51 Broadcasts for Australasia 4:30-6:30 a.m. GSE Daventry, England B 11.865 25.27 Broadcasts for India 9:30-11:30 a.m.	LSR Buenos Aires, Arg. P 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m. OPM Leopoldsville, Africa P 10.090 29.70 ORK Brussels, Belgium P 10.340 28.99 OXY Skamleback, Denmark B 9.520 31.49 2-6:30 p.m. PCK Kootwijk, Holland P 18.400 16.29	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne, Australia B 9.503 31.55 Wed. 5-6:30 a.m.; Sat. 5-7 a.m. VQ7LO Nairobi, Kenya B 6.060 49.48 Daily 11 a.m3:30
Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p. m.; Canada 8-10 p.m. GSC Daventry, England B 9.585 31.28 GSD Daventry, England B 11.750 25.51 Broadcasts for Australasia 4:30-6:30 a.m. GSE Daventry, England B 11.865 25.27 Broadcasts for India	LSR Buenos Aires, Arg. 18.958 15.82 11 a.m4 p.m. LSY Buenos Aires, Arg. P 20.820 14.40 OCI Lima, Peru P 18.670 16.06 2 p.m. OPM Leopoldsville, Africa P 10.090 29.70 ORK Brussels, Belgium P 10.340 28.99 OXY Skamleback, Denmark 9.520 31.49 2-6:30 p.m. PCK Kootwijk, Holland P	6.092 49.92 Daily 5-11 p.m.; Sun. 1-7 p.m. VE9JR Winnipeg, Man. B 11.710 25.60 Tues. 6:30-8:30 p.m. Fri. to 9. VK2ME Sydney, Australia B 9.585 31.28 Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m. VK3ME Melbourne. Australia B

VRT-ZFA Hamilton, Bermuda P 5.045 59.42	17.772 16.87 8 a.m4 p.m.	6.076 49.34 Sun. 11 a.m9 p.m. W9XF Chicago, Ill. B
10.060 29.80 WKA Lawrenceville, N. J. P	W3XL Boundbrook, N. J. B	6.095 49.18 4:30-8 p.m.; 9:30-2
21.054 14.24 8 a.m4 p.m.	6.386 46.96	XAM Merida, Yucatan P
WKK Lawrenceville, N. J. P	W4XB Miami, Fla. B 6.036 49.67	5.766 52.00
21.400 14.01 8 a.m4 p.m.	W8XAL Cincinnati, Ohio B	11.530 26.00
WMB Miami, Fla. P	6.060 49.48 Relays WLW 6 a.m	XDA Mexico City P
14.796 20.27 1-5 p.m.	10:30 a.m.: 1:30-	5.879 51.00
W1XAZ Springfield, Mass. B	3:30 p.m.; 7 p.m	11.760 25.50
9.560 31.36 4 p.m12:30 a.m.	1:30 a.m.	YVQ Maracaibo, Venz. P
W2XAD Schenectady, N. Y. B	W8XK Pittsburgh, Pa. B	11.680 25.67 5-7 p.m. 18.296 16.39
15.320 19.57 Daily 1-3 p.m.; Sat.,	6.140 48.83 Relays KDKA 4-11	YV1BC Caracas, Venz. B
Sun. to 4.	p.m.	
W2XAF Schenectady, N. Y. B	11.872 25.25	6.080 49.32 Relays 960 kcs.; 10:30 a.m1 p.m.;
9.530 31.46 Daily 5:15-11 p.m.;	15.204 19.72 Relays KDKA 9 a.	
Sat., Sun. 4-11.	m4 p.m.	5:15-10 p.m YV11BMO Maracaibo, Venz. B
W3XAL Boundbrook, N. J. B		6.125 48.95 8-11 p.m.
WOARL DOUNGDFOOK, N. J. D	W9XAA Chicago, Ill. B	0.125 46.95 6-11 p.m.

The Month's Changes

			FREQUENCY	1310	KFYO	Lubbock, Tex., to Kirksey Bros.
	546.8	3 XEY	Merida, Mex., from 1000	1370	KICA	Clovis, N. M., to South West Broad-
		CMW	Havana, Cuba, from 1185			casting Co.
		3 XFG	Mexico City, from 680	1420	WAZL	Hazleton, Pa., to Hazleton Broadcasting
	780	XEP	Mexico City, from 1400			Service, Inc.
	860		Mexico City, from 867	1420	WJB0	New Orleans, La., to Baton Rouge Broad-
	925	CMBW	Havana, Cuba, from 1140	1420	HUDO	easting Co., Inc.
	925	CMCN		1500	KREG	Santa Ana, Calif., to Voice of the Orange
	965	CMBD	Havana, Cuba, from 1270	1900	KLEG	
			Havana, Cuba, from 1270			Empire, Inc.
	965	CMCW	Havana, Cuba, from 1365			POWER
	965	XEAW	Reynosa, Mex., from 955	600	KFSD	San Diego, Calif., 500 to 1000
	1000	XEA	Guadalajara, Mex., from 1155	610	XETR	Mexico Čity, 2500 to 1000
	1010	CFCO XEU	Chatham, Ont., from 1210	780	XEP	Mexico City, 200 to 1000
	1010		Veracruz, Mex., from 1007	800	WBAP	Fort Worth, Tex., 10,000 to 50,000
	1075	XEG	Mexico City, from 1070	810	\mathbf{XFC}	Aguascalientes, Mex., 250 to 350
	1140	CMCD	Havana, Cuba, from 925	1000	XEA	Guadalajara, Mex., 500 to 100
	1185	CMCJ	Havana, Cuba, from 1180	1050	XES	Tampico, Mex., 500 to 250
	1200	KFXJ	Grand Junction, Colo., from 1310	1132	XEH	Monterrey, Mex., 1000 to 250
	1235	CMBY	Havana, Cuba, from 1230	1140	XETA	Mexico City, 500 to 250
	1235	CMCA	Havana, Cuba, from 1230	1180	KOB	Albuquerque, N. M., 10,000 to 20,000
	1270	CMBC	Havana, Cuba, from 965	1250	XEFA	Mexico City, 250 to 500
	1325	$_{\mathrm{CMBF}}$	Havana, Cuba, from 1365	1310	XEI	Morelia, Mex., 150 to 125
	1375	CMCR	Havana, Cuba, from 1325	1390	WHK	Cleveland, Ohio, to 2500 days
	1370	KSO	Des Moines, Iowa, from 1380	1450	WGAR	Cleveland, Ohio, to 1000 days
	1395	EMCH	Havana, Cuba, from 1405	1200	11 01120	
	1395	\mathbf{CMCM}	Havana, Cuba, from 1405	010	TETT	NEW
		CMDB	Havana, Cuba, from 1405	818	XFI	Mexico City
	1500	\mathbf{CMBR}	Havana, Cuba, from 1480	830	XETW	Mexico City
	1500	XEFZ	Coyoacan, Mex., from 1370		XETH	Puebla, Mex.
			LOCATIONS	840	XFB	Jalapa, Mex.
	780	XEP		890	XETU	Pachuca, Mex.
	1200	WFBC	Laredo, Mex., to Mexico City	1000	\mathbf{xefj}	Monterrey, Mex.
	1370	KSO	Greenville, s. C., from Knoxville, Tenn.	1200	CHLP	Montreal, Que.
	1910		Des Moines, Iowa, from Clarinda, Iowa	1240	\mathbf{xefw}	Tampico, Mex.
			IIT TO CHANGE LOCATION	1310	KIFH	Juneau, Alaska
	1370	\mathbf{KGFL}	Sante Fe, N. M., to Roswell, N. M.	1360	\mathbf{XEFH}	Mexico City
			OWNERS	1370	\mathbf{xefv}	Jaurez, Mex.
	570	WSYR	Syracuse, N. Y., to Central New York			DELETED
	910	WELL	Broadcasting Corp.	780	XEZ	Mexico City
	780	XEP	Mexico City, to Cia. Difusora de Mexico.	1000	XEE	Oaxaca, Mex.
	100	AEI		1000	XETG	
	0.05	CMCW	S. A.	1000	XEV	Torreon, Mex.
1	965		Havana, Cuba, to Vilarino y Cervantes			Puebla, Mex.
	1010	WIS	Columbia, S. C., to WIS, Inc.	1230	XETQ	Mexico City
	1050	XES	Tampico, Mex., to Emilio Balli, Jr.	1300	XEM	Tampico, Mex.
	1075	\mathbf{XEG}	Mexico City, to Ricardo Gonzales	1420	WERE	Erie, Pa.
	***	TENTEN	Montero.			
	1120	KRKD	Los Angeles, Calif., to Fireside Broad-		7777 4 37	CALLS
	4000	TITTO O	easting Co.	750	XEAN	Jaurez, Mex., from XEQ
	1200	WFBC	Greenville, S. C., to Greenville News-			
			Piedmont Co.			CHAINS
	1250	\mathbf{XEFA}	Mexico City, to Eduardo Limon Segui	700	wlw	Cincinnati, Ohio, from Blue to N.

Last Minute DX Tips

Here is some good news for those that missed YV1BC on their last program. They advise us they will give another special DX program the night of Saturday, Feb. 11th, from 2:00 to 3:30 a.m. Caracas time.

WNAD, "The Voice of Soonerland," honor us with a special DX program on the morning of Feb. 12th, from 2:05 to 3:00 CST. They promise an excellent program and will send pictures of studio and history of the station to all who report reception. They want at least 500 replies.

KVOR, "The Voice of the Rockies," will be on the air from 1:00 to 2:00 a. m. MST the morning of Sunday, Feb. 5th, with a special DX program. Here is a fine opportunity to add Colorado to your log.

KGER, Long Beach, Calif., is now presenting a series of DX programs beginning at midnight every Saturday and concluding at 1:00 or 1:20 a.m. PST. If you want to verify be sure to send three cents return postage or ten cents for an Ekko.

The International Radio Club of Miami tells us that they are now on the air regularly three times a week over station WIOD on 1300 kcs. the nights of Monday, Wednesday and Friday at one o'clock. They give DX talks and tips.

CFCO, Chatham, Ont., tell us they have finally succeeded in securing allocation on 1010 kcs. which they feel sure will greatly increase their coverage. If you couldn't get them on 1210, try them now on 1010.

WEXL, Royal Oak, Mich., now has an early morning schedule every day of the week except Saturday and Sunday, from 1:30 to 5:00 a.m. EST.

Have you logged WJW yet at its new location in Akron, Ohio? They will have a DX special early Saturday morning, Feb. 4th, from 3:00 to 4:00 a. m. EST.

Here are some foreign DX specials arranged by the International DXers

Alliance of Bloomington, Ill., given us by T. Colegrove of Frankfort, Mich. We assume the times are those of the night before. All time is a. m. EST.

Jan. 29th, 12:00- 1:30 Bordeaux, France, 986 kcs.
11:30- 1:00 Sottens, Switzerland, 743 kcs.
Jan. 30th, 12:00- 1:30 London National, 1147 kcs.
Jan. 31st, 12:00- 1:30 North National, Eng-

Jan. 31st, 12:00- 1:30 North National, England, 995 kcs.
Feb. 1st, 1:00- 2:30 Brussels, Belgium, 887 kcs.
Feb. 2nd, 2:00- 3:30 Stuttgart, Germany,

Feb. 3rd, 12:30- 2:00 Scottish Regional,

797 kcs. Feb. 4th, 12:00- 1:30 Stockholm, Sweden, 689 kcs.

Feb. 5th, 11:15-12:45 London Regional, 843 kcs.

12:00- 1:30 Beromuenster, Switzerland, 653 kcs.
Feb. 6th, 12:00- 1:30 Budapest, Hungary, 545 kcs.

Feb. 7th, 12:30- 2:30 Poste Parisien, France, 914 kcs.

Regarding CMGE, J. J. Connolly, Rosedale, L. I., writes: "Here is a Cuban who is looking for reports and will 'play ball' with the boys on the 'veri' end of it."

Two mysteries in Texas for our readers to solve. "I have heard a station testing on 980 kcs. have no call letters as yet and call themselves 'Capital X.' They are located in the Alamo Hotel here in Austin." This report comes from Hardy Pattillo of that city. "Yesterday and today I listened to a new station in Texas called either KNTX or DNTX. They were on 970 kcs. and are located in the Southern Hotel in Denton, Texas." This one is from O. D. Duncan, Denison, Texas. More outlaws?

KPOF has changed its DX program from Monday, Feb. 27th, to Thursday, Feb. 23rd.

WBSO, 920, Needham, Mass., will have a DX program on Sunday night, Feb. 19th, from 2:00 to 4:00 a. m.

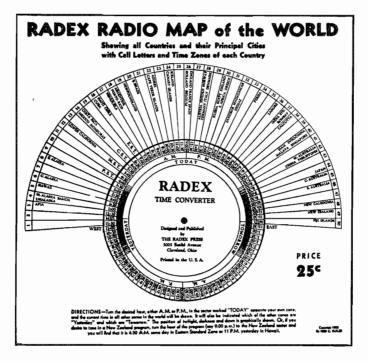
CHGS, 1120, Summerside, P. E. I., Friday night, Feb. 3rd, at 4:00 to 5:00 a.m.

10-BQ, 1170, Brantford, Ontario, Saturday night, Feb. 18th, at 4:00 to 5:00 a. m.

TELLS THE TIME For the Whole World

Just set the dial for the hour of the day in your zone and—presto—there is the time for every country in the world. No adding nor subtracting. Shows which times are yesterday, today and tomorrow.

Shows where twilight, darkness and dawn lie.



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Sometimes I think there ought to be a law to make everyone do a little studying every week. I didn't think that a year ago because it looked like all the cards were stacked against me. But I am certainly rolling in the money now. Maybe my story will show you the way to larger earnings also.

I Thought Radio Was a Plaything

But Now My Eyes Are Opened, and I'm Making Over \$75.00 a Week!

\$50 a week! Man alive, a year ago I thought anyone making that much was just plain lucky.

Twelve months ago I was just barely getting

Twelve months ago I was just barely getting by. It was the same old story—a little job; a salary as small as the job.

If you had told me that twelve months later I would be making \$75 a week in my own Radio business—I'd thought you were crazy.

But I am getting ahead of my story—let me tell you how it all started. I was hard up a year ago because I had been kidding myself—that's all—not because I had to be. I thought a fellow either had to be lucky or have a string of college degrees a half a mile long to make good money.

One day I picked up a magazine and the headline of an ad attracted me because it seemed to fit my case. It said, 'I will show you how to start a spare time or full time Radio business of your own WITHQUT CAPITAL."

"They're trying to kid somebody," I thought, "but I'll find out what it is all about anyway."

I wrote in and within a few days received a 64-page book telling about the opportunities in Radio, how I could prepare right at home in my spare time, and how they would show me how to start making money in my neighborhood selling and repairing Radio sets. It would probably have sounded too good to be true if the promises had not been backed up by 100 letters from fellows who had taken their course and were very enthusiastic about it.

What has happened since seems almost like a dream to me now. I took their course and in about a month I was ready to start making money in my neighborhood—as much as \$5 and \$15 a week. It wasn't long until I had saved enough money to start a little business of my own.

That business has since grown to the point where I am clearing an average of \$75 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for other lines—in case I wasn't interested in having my own business. Broadcasting stations, Radio Manufacturers, Operating on Board Ship, Servicing Sets, Aircraft Radio, Television and Talking Movies

are other fields their training covers. And to think, until the day, I wrote for that book, I'd been wailing, "I have never had a chance—will never have one because I have no pull and have never had the advantage of a good education!"

Friend—you may not be as bad off as I was but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next ten years at the same salary? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

Take my tip—write for theif book. It won't cost you anything—only a three-cent stamp. It shows you a lot of things which I don't believe you know now—a lot of facts and figures on the opportunities in this new, fast-growing field. Where the jobs are, what they pay, how to get ready for one. Beginners as well as experienced men are making as much as \$1,000 to \$2,000 a year more as a result of N. R. I. training. You place yourself under no obligation because the book is free and is gladly sent to anyone who is ambitious and wants to get ahead. Just address J. E. Smith, President National Radio Institute, Dept. 3BO, Washington, D. C.

ł	J. E. Smith, President, National Radio Institute, Dept. 3BO, Washington, D. C.
	Dear Mr. Smith: Send me your free book, "Rich Rewards in Radio," which points out the opportuni-
	ties for spare time and full-time jobs in Radio and your famous 50.50 method of training men to be-
	come Radio Experts through home study. I under- stand this request places me under no obligation.
	Name
	Address
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