THE JANUARY 1938

Nathiwa Lestines

RADEX

The All-wave Radio Log



The Shortest Shortwaves
The Daily Programs
Broadcasting Stations of Oceania
Programs of the Week

JANUARY 1, 1938



RADEX DEX

Reg. U. S. Patent Office ELIZABETH S. BUTLER

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What is a Continent?

OME people DX solely for the enjoyment they derive from hearing stations in far away places, but most DXers get most of their pleasure out of building up their logs, adding up stations heard, countries heard and continents heard.

Nearly all DXers strive to obtain a verification from each continent, and after all continents are confirmed, they aim to see how many more times they can do it. Then they start keeping score, saying they have 2VAC, 6VAC or 50VAC, whatever the case may be, meaning of course that they have verified all continents two times, or six times, or fifty times.

As long as the stations one hears are in countries like France or Egypt, Argentina, China or Australia, there is no difficulty in placing the countries on the proper continent, but when one begins to log stations in Bermuda, Martinique, Sumatra, Hawaii or Pitcairn, then one begins to wonder in which continental area these islands should be counted.

In an attempt to place the boundaries of the continents, we have consulted all the references available, and have found that even geographers are in doubt about the proper placing of some of the land areas. They all agree that the Philippines and Hawaii are to be included in Oceania, however, and most of them consider the West Indies as a part of North America.

The observations following outline the most generally recognized boundaries and can be accepted by DXers as a guide.

According to Funk and Wagnalls, the land of the globe is sometimes divided into two continents, the eastern and western; sometimes into four, Africa, Asia and Europe being separately enumerated; more commonly into five, Australia being reckoned as one; still oftener into six, North America and South America being counted separately; and since 1909, the land about the South Pole as another, the Antarctic, Austral or seventh continent.

It is common practice among DXers to count six continents, as no radio stations exist at the present time in Antarctica. The six continents are North America. South America, Europe. Africa. Asia and Oceania. All the land surfaces in the world (except the South Polar Regions) can be included in these six continents.

North America is bounded on the north by the Arctic Regions. From the North Pole, the boundary passes through the Greenland Sea to a point between Greenland and Jan Mayen Island, then through Denmark Strait and into the Atlantic Ocean. A straight line drawn from Denmark Strait to Georgetown, British Guiana, will determine the eastern boundary of the continent. The southern boundary passes between Venezuela and Trinidad, through the Caribbean Sea parallel to the coast of South America, but north of the Dutch islands off the Venezuelan coast, to the Gulf of Darien. The Panama-Colombia frontier is considered as the southern terminus of the continent. that point a line can be drawn to the intersection of the Equator and the 135th parallel, then from that point to the westerly tip of the Aleutian Islands. The first line will pass to the south of Cocos and Clipperton Islands, but north of the Galapagos. The second line

will pass to the east of the Hawaiians. Then from Attu, which is the most westerly of the Aleutians, the boundary can be considered as following the International Date Line, to the North Pole. It should be noted that the Date Line curves in the Arctic Ocean so that Wrangell Island is included in North America.

It will be noticed that all the West Indies, including the Bahamas, Bermuda, the Greater Antilles, the Leewards and the Windwards, as well as Central America, are considered as parts of the North American Continent.

South America is bounded on the north by the Caribbean Sea, including the Netherland West Indies (Aruba, Curacao, Buen Ayre, La Tortuga and Margarita Islands). The western boundary can be considered as starting at the Panama-Colombia frontier, to the intersection of the Equator and the 120th parallel, then along the 120th degree of longitude, south from the Equator to the Antarctic Ocean. The Galapagos, Rapanui (Easter), Sala y Gomez and intervening islands are included in South America. eastern boundary, from the Venezuelan coast, extends into the Atlantic Ocean towards Sierra Leone in Africa, but only to about 20 degrees west longitude, then south along the 20th parallel to the Ant-This will include arctic Ocean. the islands of St. Paul and Trinidad (both owned by Brazil), the Falklands, South Georgia, the Sandwich Group and the South Shetlands.

Europe is bounded on the west by the Greenland Sea, Denmark Strait and the Atlantic Ocean, including Iceland, Spitzbergen, Jan Mayen, and the Azores. The southern limit of Europe extends from a point south of the Azores, through the Straits of Gibralter, into the Mediterranean Sea and along the coast



Joan Tetzel and Eddie Wragge, just graduated from the NBC's Children's Hour, are now featured players in the weekly series. True Story Court of Human Relations, heard over the Red Network every Friday night.

of Africa, and includes Sicily, Malta, and Crete. The eastern boundary, from the Arctic regions, passes through Kara Sea, Kara Bay, along the Obdorsk Mountains, the Ural Mountains, and the Mugoiar Hills, to the Caspian Sea. Then along the Caucasus Mountains, through the Black Sea, the Bosporus, the Sea the Marmora. Dardanelles. through Aegean Sea to a point east and south of Crete. The Islands of Rodi (Italian) and Cyprus (British) are not included in Europe.

Africa is bounded on the north by the Mediterranean Sea, on the west by the Atlantic Ocean, and includes the Madeiras, the Canaries, the Cape Verdes, Ascension, St. Helena, Tristan da Cunha and Gough Island. The eastern boundary passes through the Suez Canal, the Gulf of Suez, the Red Sea, the Gulf of Aden, west of Socotra Island, and east of the Seychelles, Madagascar,

Mauritius and Rodriguez Islands.

Asia is bounded on the west by Europe and Africa, including the Transcaucasian States. Anatolia. Rodi, Cyprus, the Sinai Peninsula and Socotra Island. The southern limit is in the Indian Ocean, and includes the Laccadive and Maldive Islands and the Bay of Bengal, including the Nicobars and Andamans. The eastern boundary follows the International Date Line, the Japanese coast. to a point between Taiwan and the Philippines, then through the South China Sea to Singapore. From Singapore it goes through the Malacca Strait to the Bay of Bengal.

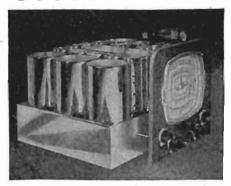
Oceania is a term used by geographers to include Australia, New Zealand and the Islands of the South Pacific. Its divisions are Malaysia, with the Philippines; Australia with Tasmania; New Zealand; Melanesia (New Guinea, New Britain, New Ireland, Admiralty, Solomons, New Hebrides, Santa Cruz, Fiji, Loyalties, New Caledonia); Micronesia (Ladrones); Pelew and Carolines, with Marshall and Gilbert groups; and Polynesia (Samoa, Tonga, Cook, Tahiti, Marquesas, Ellice, Hawaii); and all intervening clusters.

CTIAA Lisbon, Portugal, is now announcing as CS2WA.

A trial membership of 13 weeks in the Globe Circlers' DX Club is now available for only fifty cents, and on its expiration this subscription can be extended for a full year for only \$1.00. The offer is open only to new members. For full particulars address Raphael Geller, 1652 Radcliff Ave., Bronx, N. Y.

The Universal Radio DX Club, 2018 Green St., San Francisco, Calif., announces that dues are \$1.25 per year for the URDXC alone, or a combined membership is available at \$1.60 in the URDXC and the Quixote Radio Club.

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FTER several weeks of uncertain reception, the new DX season finally got going the latter part of October, and the month of November found it in full swing. Static gradually diminished in intensity and, on occasions, even became a negligible factor for the listeners. Signals showed favorable increases in strength and many distant stations pounded through with a potent wallop.

DXers who patrolled the midnight air lanes found many new and interesting catches to be logged. Throughout the United States, dozens of newly-authorized stations ran DX programs and equipment tests. New transmitters in Cuba and Mexico pushed signals through the barrier of domestic broadcasters.

First new catch of the season actually was logged on September 27th, when KPFA, Helena, Mont., showed its face on 1210 kcys. A few days later, October 4th, the 1200 channel gave up the second new station of the infant season—KELO at Sioux Falls, S. D. October 11th found the new KOAM of Pittsburg, Kans., using its kilowatt of power to advantage on 790.

From then on, the early morning hours provided a happy hunting ground for those who cared to tune. From out of the West came a procession which included KHUB,

KELA, KSRO and KTMS, with visits also from KBST, KOKO, KHBG and KAWM. The Middle West was well represented on the log by KRMC, KELO, WGRM, KATE and KSAL. Nearer home, WKAT, WRNL, WAGA, WRTD, WMBS, and WPRA showed to advantage.

Among the Spanish-speaking countries, there appeared to be pronounced activity. Throughout the Middle Atlantic states, a new Cuban caused consternation by parking on 710 and gumming up the WOR programs. Finally identified as CMBL at Havana, the station showed a real sock. Another Cuban causing interference was CMCM, which had a real battle with WWL on 850.

Down in Mexico, several stations cropped XEFW. Tampico, up. Tamps., was heard several times on 1310 kcvs. Out in Mexicali, XECL has been using 1700 watts on 1100 kcys. XELO, Tijuana, appears to have settled down on 670 and asks that reports be sent to P. O. Box 6. San Diego, Calif. Another Tijuana station is XEOK, which is heard regularly Sunday mornings on 760. After a bit of ear straining, the Mex on 1160 was identified as XEP at Juarez, Chih.

A little farther South, our old friend TGW, Guatemala City, has re-appeared on the radio horizon—this time on approximately 1240 kcys.

Europeans Coming In

November brought its share of freakish reception. The morning of the 12th, for example, had all the earmarks of being pretty poor for DX. West Coasters like KFI and KPO showed barely S4 on the "S Meter" of the Super Skyrider, while KNX was just a degree higher. The smaller stations were hardly audible.

Stopping for a moment on 1040 for a few dance selections from what apparently was KRLD, it was a distinct surprise to hear an announcement in French. After a few selections, the station was identified as Rennes. A check-up on other likely frequencies was not uneventful and, within 45 minutes, seven other Europeans were heard.

From Germany, Stuttgart, Munich and Hamburg showed really excellent strength. Besides Rennes, the French Lille, Bordeaux, Nice and Poste Parisien pushed through signals ranging from S4 to S6. The latter station, incidentally, was heard for the first time in several years, and it was nice to find the channel free of XEAW.

On subsequent mornings, reception of from seven to ten Europeans was repeated, and each time the signals showed to best advantage, it was noticed that West Coast stations were below par.

Conversely, on mornings when the smaller Pacific stations were coming in well, signals from the Antipodes were well received. First Zedder of the new season to be logged was the old reliable 2YA, which hadn't been doing so well since it switched from its former 720 channel. However, the latter part of October found 2YA with a good S5 signal on 570.

As static diminished, 1YA and 3YA were other Zedders to be logged. From Australia, 2NR was easily the best of the TP's, with an S5 signal which occasionally was as

high as S7. 2BL, 2CO and 3LO were also heard with signals running from S4 to S6.

From Hawaii, KHBC lived up to its reputation from last year by showing amazing strength for its 250 watts. KGMB ran a good second, while, except for infrequent bursts of strength, KGU was a very poor third.

Radio Rambles

Everything considered, it begins to look as though this is going to be a pretty good season. Ballyhoo about sunspots to the contrary, signals from all points of the compass have been showing a dequate strength and static has not been excessive.

Just about the only limit to DX possibilities is the local noise level. In many instances a weak carrier will be tuned in and the volume advanced, only to have the barrage of man-made interference act as the real barrier. On most any good night, the DXer finds that static and weak signals are the least of his worries. And, fortunately, the listener in the average residential location is in a position to reduce and sometimes eliminate most of the man-made noise.

Too often, however, the DXer is inclined to do little and bemoan a lot when noise interferes with his dialing. He seems to forget that, despite opinion to the contrary, many power companies are quite willing to assist in tracing sources of racket. He fails to remember that most causes of interference may be remedied when located. And, failing all else, a considerable amount of noise may be abolished by an intelligent installation of a good antenna system.

So, when it becomes apparent that another good season is with us and that the only obstacle to real DX is the local noise level, there is no legitimate reason why reports for the year should not show a great

many fine catches.

DX Doings

Dialing during October and November finds a number of regular special programs worthy of attention. Every Saturday morning between 3 and 4 a. m., EST, KRLC. 1390, Lewiston, Idaho, has a DX broadcast. WEAU, Eau Claire, Wis., has a monthly program between 5:30 and 6 a.m., EST, on 1050 keys, on the fourth Friday. WJAG, Norfolk, Neb., 1060 keys, broadcasts between 1:30 and 2 a. m., EST, on the second Friday.

The first Saturday of each month finds two regular programs on tap. From 2:30 to 3 a. m., EST, KSAL, Salina, Kans., tests on 1500 kcys, while CHWK, Chilliwack, B. C., broadcasts between 2:45 and 4 a. m.,

EST, the same morning.

Neat targets for DXers are stations which sign on early every morning, and schedules of several of these have been noted. Coming on at 5 a. m., EST are WICC, Bridgeport, Conn., 600 keys; WEAN, Providence, R. I., 780 kcys; WNAC, Boston, Mass., 1230 keys; and WHIS. Bluefield, W. Va., 1410 kcys. A half hour later, at 5:30 a. m., WIBX, 1200 kcys, Utica, N. Y., signs on-except during the week of the frequency checks, when they come on at 6:30.

Two new stations whose frequency checks were not listed in the schedule which appeared in the Decemer RADEX, are KSRO, Santa Rosa, Calif., and KHBG, Okmulgee, Okla. The former may be heard on 1310 between 6:20 and 6:40 a. m., EST, on the second Monday, while the latter can be logged on 1210 from 3:10 to 3:30 on the second Friday.

Speaking of the frequency checks, a neat bit of CPC work has been accomplished by NNRC Vice President William H. Applegate. When arranging a special from XECZ, 1370 keys, San Luis Potosi, Mr. Applegate decided on the period between 2 and 2:40 a. m., EST, on December 13th. Checking over the schedule of frequency checks, it will be noted that no other station on that channel will be operating at this time—perhaps the only opportunity listeners would have to hear this station.

Credit Where Due

A couple of issues back, it was proposed in this section that DXers form a new Anti-Hi Society. While intended solely as a sly poke at the listeners who have been apeing the lingo of the amateurs, it appears that at least one DXer took us seriously.

"You have received the CDXR bulletins," writes Charles Hesterman, president. "You counted the 13 'hi's' in Volume 1, No. 23. would much prefer you to come right out into the open with any adverse criticism of the CDXR bul-



Fibber McGee, the prince of punsters, the nobleman of nonsense, the tank town tattler of the teeming metropolis of the Midwest, looks out at the world over his glasses and considers what rare philosophic comment he will use on his next NBC-Red Network broadcast. Heard regularly with Molly at 9 pm, EST, on Mondays.

letin. If the numerous 'hi's' cause you great displeasure, I advise that you consign all future copies of the CDXR bulletin immediately to the incinerator. Then you will not be offended by my childish and ridiculous habits. . . In the future, please publish outright the name of an offending bulletin. Don't think that I will rant and rave if it transpires that it is the CDXR. In any case, I don't think for one moment that my numerous 'hi's' are as detrimental to the good of DX as are those 'monitored' veries."

Correct is CDXR President Hesterman in his deduction concerning the identity of "The Bulletin of 13 Hi's." But had his bulletins been disposed of as suggested, it now would be impossible to refer back to them and give credit where due.

As any reader might determine for himself, the CDXR bulletin of August 5th contained 13 hi's. Production was curtailed for two issues. for on September 5th there were only 11 hi's and on September 22nd but five. A new hi (I mean high) was reached when 22 highs (I mean hi's) appeared on October 7th and a like number on October 23rd. At about this time the November RADEX appeared, with its anti-hi movement. It may be a coincidence that the November 9th bulletin contained but six hi's, or it may be significant.

In either case, however, I did want to get the record straight and give proper credit.

The March of Time is being transscribed in French in three halfhour recordings for broadcast to listeners in France. The project is under the supervision of Jean Masson, program editor of Radio Lusembourg, in cooperation with Time, Inc.

The SWL Trading Post

Allyn R. Fisher, 4290 E. 137th St., Cleveland, Ohio (letters).

Ben Follrath, 1419 Pearl St., Alameda, Calif. (exch. correspondence and SWL cards).

Harry G. Forster, Jr., 89 E. Stratford Ave., Lansdowne, Pa., wants to exchange SWL cards and correspondence with any DXer, especially those in Europe, Africa, Asia and Australia.

Gilbert L. Harris, 60 N. Holden St., North Adams, Mass. (SWL cards).

Edward Hughes, 1212 Castlewood Ave., Louisville, Ky. (Correspondence with overseas DXers, especially in Spanish-speaking countries).

Austin M. Rheiner, 500 S. Kolmar Ave., Chicago, Ill. (exch. SWL cards —wants one from each state).

Clyde A. Ritter, 320 Leonard St., Bloomsburg, Pa. (exch. SWL cards). Jack Siringer, 1451 Lincoln Ave., Lakewood, Ohio, will exchange SWL cards and correspondence with s.w. listeners overseas.

Albert Steinmetz, 125 W. 27th St., Bayonne, N. J., wishes to correspond with Hungarian DXers in any part of the world.

The Intermountain BCB DX Club, with headquarters at 1404 Sherman Ave., Salt Lake City, announces that membership fees in their organization are 50c per year, and a club bulletin is available, also at 50c per year, or both membership and subscription for 75c per year.

Yoichi Hiraoka, NBC xylophonist, who is to make a concert appearance at New York's Town Hall November 24, will play the seldom heard and unique Japanese song, Echigo. It was from this song, Hiraoka says, that Puccini took the melody for his celebrated "Madame Butterfly."

ARE SHORT, Short-wave Bands Worth While?

• • By B. FRANCIS DASHIELL

HE realm of the newly popular short, short-wave bands is being explored not only with unbounded enthusiasm by radio fans but with great seriousness by scientists. Here the future of short-wave radio will be found. But just now these very short waves, particularly those of less than 5 meters, are purely experimental and at present offer little of a practical nature to the radio listener. In fact, it is impossible to find a receiver that tunes much below 5 meters, except in the scientific, experimental field.

It is the short-wave band, upwards from 5 meters, that holds much promise to the radio fan. Radio sets that tune as high as 60 megacycles are available in the 1938 models, but in the great majority of cases the average moderate-priced all-wave set offered to the public usually tunes to a frequency of approximately 18 megacycles. Some larger sets, which of course are more expensive, include an additional short-wave band that tunes to about 45 megacycles.

5 And 10 Meters

Many radio listeners are wondering whether it is worth while to purchase a 1938 receiver that tunes down to 5 and 10 meters. The question is often asked: Is this additional wave band necessary, and has it enough interest to the general public? Practically all of the shortwave radio business of the world is conducted on wave lengths greater than 10 meters; this fact alone properly raises the question of whether a set with an additional short, shortwave band covering 25 to 60 megacycles need be purchased.

The 1938 offering of radio receivers discloses that the more expensive types, those ranging from 9 to 12 tubes, and as high as 16 tubes. usually cover, in addition to the broadcast band, the 49, 31, 25, 19 and 13-meter international entertainment bands. Some special custombuilt sets go down to 5 meters, and are strictly "all-wave". number, however, do not include the 13-meter and additional short, shortwave bands. They do, of course, include the popular 20-meter amateur band. But, in most cases, the useful 10 and 5-meter bands that are becoming so sensational, are left off.

International Bands

Practically all sets, except those of inexpensive make, cover the very best of the international short-wave bands, as well as the amateur and commercial zones. So, when a 1938 all-wave set is examined, one need not feel that he has been slighted in the matter of normal all-wave reception. Such a set is best for ordinary household and simple DXing purposes. The wave bands that provide best reception on all international transmissions are the 49, 31, 25 and 19-meter regions. Then, too, there are the 160, 80, 40 and 20-meter amateur bands. The foreign bands work best at different times, for it will be noted that several of the more important stations have separate places in all of the international bands, broadcasting simultaneously on all the different frequencies. If reception should be poor in the 15 megacycles band, for instance, it might turn out to be very good in the 12 or 9 megacycle zones. Therefore, when it is impossible to get

London, Berlin, Rome, Prague, etc., on one frequency, it is likely that the station will be heard, loud and clear, on another of its frequencies.

Below 19 meters, and down to 5 meters, many frequencies are avail-This fact provides radio with thousands of future channels. these stations will be crowded closely, and tuning will be sharp and difficult. Even on 10 meters, with a band spread that will throw all the 2,000 kilocycles available over the entire 180 degrees of the dial, tuning is critically sharp and interferunavoidable. The present trend, therefore, is to the so-called "communications receiver", such as amateurs operate with almost exclusively. These sets are designed for very sharp tuning, with some loss of high fidelity of reproduction, and even then stations cannot always be separated sufficiently for clear reception when the band opens up perfectly. In the ordinary all-wave set. the mechanical separation of stations is not so good since the entire group is squeezed into a tiny spot on the dial. This is an engineering fact, and is to be expected; it is not the fault of the receiver.

20-Meter Amateurs

This does not mean, however, that short-wave bands below meters are jammed with stations. In the 20-meter region are many of the better amateur phone stations. Many can be picked up easily on the all-wave set, but not, of course, as easily or in as great a number as with an amateur communications receiver. Here will be found some of the best known radio experimenters of the day, and radio's hams and engineers may be heard discussing scientific matters pertaining to radio.

The 20-meter region, is subject to certain conditions which man cannot control. When the band "opens up" nicely it provides an interesting evening. As a rule this band is in



A photographic impression of Benny Goodman, who, with his clarinet, leads his orchestra through intricate swing rhythms on his "Swing School" broadcasts each week over the Columbia network.

action all the time—sometimes better than others. But, if the receiver tunes still lower, down to 13 meters, which is the highest of the international frequencies, still more unstable conditions will be experienced. In this zone, and particularly on the busy 10-meter band, freak reception is a common experience. But when the band opens up, it performs in a way that, to the expert listener, seems little short of miraculous.

The Erratic 10 Meters

The amateur stations on the 10-meter band can be heard distances that seem unbelievable, considering the tiny bit of energy that is emitted by the transmitter. Just below 10 meters can be heard two-way conversations, such as the newer police calls. The 10-meter zone is one of radio's most remarkable regions. Natural static seldom troubles, but, of course, automobiles and man-

made static play their annoying part. This band, too, is where all-wave receivers may seem to perform at their worst. Often the fault is not in the design of the receiver, but due to the peculiar conditions which control 10-meter transmission and reception.

The 10-meter band is subject to severe "skip distance" effects. Radio stations, although close at hand, can not be heard, while weak stations, several thousand miles distant, may come pounding in like locals. And the skip distances vary in length, for it frequently is impossible to hear the same station again until many nights have passed. stations are entering the interesting 10-meter band, but patience, even with the best of receivers, is necessary to tune them in. However. an all-wave receiver which tunes down to 10 meters will provide many DX thrills, especially in summer when the longer wave bands are rendered useless with hot-weather static.

Sun Spots

No one knows when the 10-meter band will open up or close down without warning. A study of sun spots has given us some clue to this strange situation. Just now the sunspot maximum is approaching, as it does every 11 years, and it is expected that the short, short waves will carry extremely long distances during this winter. Just what will happen when the minimum of sun spots occurs some years hence is open to question, but it is easy to believe that the opposite will happen, and short-wave reception will be poor. Sun spots, which are believed to be violent solar storms with gas explosions and magnetic effects, change our ionosphere or "radio ceiling", and act to improve or retard its reflecting and conducting action. And the short, short waves are easily affected—either helped along or held back.

When we reach the 5-meter band everything is entirely different. Sun spots seem to have little effect. The ionosphere means nothing. there is little that can be said in favor of adding this band to an allwave receiver. The circuit must be simple: radio-frequency or pre-selectors are not needed; they hinder rather than help reception on 5 Therefore, unless the remeters. ceiver is specially built for short waves, 5-meter reception, while possible to some extent, is rather impracticable for the average listener with his moderate all-wave set.



"Janie" Webb, heard on the Tom Mix Straight Shooters broadcasts over the Blue Chain at 5:45 pm, is interested chiefly in paper dolls, doll furniture and, occasionally, in her school work. Janie firmly states she has no intention of making radio her life work; she thinks she prefers to be a detective.

Visual Radio

The 5-meter band is a zone where reception is limited to very short distances. Strange as it may seem, the 10-meter waves (30 megacycles) carry great distances with very little power, but the 5-meter waves (60

megacycles) travel only short distances with much power behind them. They move out in a straight line from the transmitter to the receiver. The limit of reception on 5 meters is visual, that is, the distance the eye can see. If you can see the point of transmission, you can hear the signal without difficulty. The best receivers for the 5-meter band are specially built, small one or two-tube super-regenerative circuits.

Intervening hills or buildings block 5-meter signals. The curvature of the earth causes the transmitted signal to pass into the air, high above the receiving antenna. In some unexplained freak conditions, however, in the present sunspot era, 5-meter signals have traveled far, once across the Atlantic. But the facts as we see them, then, prevent most persons from hearing 5-meter stations unless the receiver is located in a large city where experimental broadcasting and television work is being accomplished or a number of amateurs are using five meters, often in portable units known as "transceivers"-combinatransmitters and receivers which are now available at small cost.

Scanning the AMATEUR BANDS

● ● By B. L. Ahman, Jr.

We have just returned from a trip through North Carolina and Virginia, and during the trip we found that reception does not vary greatly in those states from reception in the east. The Central and South American stations predominate, however, while in the eastern and central states the European amateurs take only a close second to the Latin Americans. Naturally the northeastern states are more favorable for

Europeans because of the nearness of Europe.

Reports of reception this month were far too scarce. This, no doubt, is due to general poor conditions present on 20 meters. The band did break down one night, however, and ZU6P was heard conversing with several USA amateurs. It was heard on the LF end at 11:30 pm EST with R8 signals.

Merton Meade has a good record of African stations for this month, listing nine South Africans in his calls heard.

Art Judson writes that he heard the Greenland station OX2QY for 55 minutes from 8:00 until 8:55 pm one night. Many of our correspondents are hearing this station. Reports of reception should be addressed to W2QY, Mr. A. G. Sayre, Storm King School, Cornwall-on-Hudson, N. Y. They will be acknowledged next fall.

A report to VO6L's home address was acknowledged very nicely by his father from Montreal. QSL cards will be mailed out probably next year, after VO6L gets his mail. He is located at North West River, Labrador.

Dan Hurley of Philadelphia reports a new one, VO3Z in Newfoundland. Incidentally, Dan is now using a homebuilt TRF set. Station VK2ADE, Australia, was noticed in his list of calls heard—nice reception, Dan, on a TRF set!

Gail Beyer of Chicago says we can now add the Central Time Zone to our November listing of PK6CI as he has a QSL from this station.

Three Australasian SWL card traders descended on us in a group in one day. Add the following to those who will exchange SWL cards: Bob Russell, Taupo Road, Taumarunai, N. Z.; James Mildenhall, Byron Bay, NSW, Australia; and C. O. Pepperell, Rahotu, Taranaki, N. Z.

As usual, Hadley Wilcox of Los Angeles comes through with some news. He adds KA1BH, Manila, heard with R5-7 signals. In the same mail Tony Tarr of Seattle sends along a list, but most interesting is the fact he takes back his statement about not hearing Europeans. At last he heard one, GM5NW, R9 at 2:45 am PST.

Other reporters deserving thanks this month are Arthur Blick, Gilbert Harris, Carroll Weyrich, John Sanderson, Earl Roberts, Wm. Wood, Martin Olthoff, Benjamin Peet, R. Geller, Ed Hughes, Dave Schaller, Dale Smith, Al Steinmetz, the ISWC and the NNRC.

Addresses

Commencing this month we will list the call letters, the frequency and the address of every amateur station mentioned in these columns. Addresses will not be repeated, however, so readers are urged to keep these columns for future reference.

KA1BH: Mrs. Joseph Reich, 2 Escolastica, Pasay, Rizal, P. I.

PK6CI: E. R. Illing, Ambon, Netherland East Indies.

VK2ADE: C. A. Miller, 162 North St., Casino, NSW, Australia.

Pitcairn Isle Radio Station

COLORFUL throw-back to the days of the history-making mutiny of the British frigate "Bounty" is to be found in the life of the natives of lonely, mid-Pacific Pitcairn Island, which is totally inhabited by the descendants of Fletcher Christian, his band of mutineers and their Polynesian wives.

Word has been received from officials of the RCA Manufacturing Company that they were preparing to ship a set of transmitting and receiving radio tubes to Pitcairn

Island for use in modernizing its lone radio station, which is its only direct means of communication with the outside world. The island and its almost fabulous inhabitants were again brought into the international spotlight recently through a motion picture based on "Mutiny on the Bounty".

PITC, the island's only radio station, is in charge of Andrew Young, chief operator, and a group of assistants, all of whom are self taught in Morse code and radio technique. Alan Eurich, writing in the August issue of QST, recounts that even the children of Adamstown, the only village on the isle, are proficient Morse experts, sending messages to each other in the code with whistles.

Young's amateur radio station has been in operation since the early 1920's, and previous to its present modernization operated with one storage battery, which had to be sent to New Zealand, 2500 miles away, to be recharged when its power ran low. But Pitcairn Island has been threatened with even more complete isolation from the outside world because the simple crystal radio receiver and spark transmitter are almost completely outmoded by the modern vacuum tube radio installations on passing ships. ever, a number of radio manufacturers, including RCA, are coming to the rescue by providing sufficient parts to permit the building of a complete new radio communications system.

Pitcairn Island is 3,500 miles from the United States, and supports its citizens by producing some of the most luscious fruit in the world, according to those who have passed that way. There is no harbor—the natives row a perilous course in open boats from their rocky shores to trade their fruit for clothing,

(Please turn to Page 39)

Turning OUR READERS' Dials

● ● By CARLETON LORD

JUDGING by the comment going the rounds of radio circles, the attention of most DXers is centered upon the matter of "monitored veries." Seldom have readers shown as much interest in something which affects the DX hobby. Hardly a letter is received which does not allude to the question in some way, while many a veteran dial twister has skipped his usual report to make known his opinion of the problem.

Oddly enough, while every DXer has reason to defend a policy which may insure his verification from a given station, a huge majority of listeners are coming forward to condemn the scheme which, for a short time, was so favorably received. Or, upon consideration of the matter, perhaps it is not so odd after all.

For, behind the scenes, it is possible to foresee a situation which might easily upset the entire DX applecart. Even at this early stage, there is evidence of seeming abuses which promise little good for the hobby. If permitted to continue through support and sanction of DXers themselves, there is no telling what the final outcome may be.

When Baltimore DXers. two Carroll Wevrich and B. L. Ahman, Jr., undertook to monitor Daventry short wave stations, they were performing what they felt was a real service for listeners who desired verifications from these stations. Daventry had flatly refused to issue confirmations of any nature, and there were many DXers who felt that a "proxy verie" was better than none at all.

Previous attempts by listeners to issue confirmations for non-verifying broadcasters had been received



Annette King, brunette contralto soloist of the NBC Breakfast Club, landed her first job on a small radio station two years ago, and now she is one of NBC's most promising balladists.

with enthusiasm, and there was no reason to believe that this new service would not enjoy an even greater acceptance.

It just happened, however, that an unfortunate arrangement of the wording on the Daventry cards caused critics to claim that the veries were misleading and invalid. Typical protest is the following excerpts from a resolution passed on July 9th by the Golden Gate Chapter of the International DXers Alliance and forwarded by its secretary, Ashley Walcott:

"The members of the Chapter believe that no card or letter, so worded as to imply or indicate in any way that it is an official verification of reception authorized by the owners or operators of the station concerned, when no such authorization has actually been given, should be considered a verification of that station.

"It is the belief of the members of the Chapter that the continuance of the practice, although it was reportedly intended as a courtesy to DXers, will have harmful effects upon the future of DXing . . . that various stations of all types or classes will regard the practice as sufficient excuse to discontinue the issuance of officially authorized verifications of reception . . . that, in the estimation of those station owners or operators, whose sense of honor is offended by the issuance of such unauthorized verifications and their acceptance as valid by listeners, DXers and DXing in general will suffer greatly.

"Therefore be it resolved that the Golden Gate Chapter of the IDA expresses its entire and complete disapproval, and requests that immediate measures be taken to end the practices in question."

This resolution, it will be noticed, refers only to monitored veries which are so worded as to imply that they are sanctioned by the stations in question, when actually no authorization had been made. This, of course, is a direct reference to the type of cards which were sent out by Messrs. Ahman and Weyrich.

In fairness to these gentlemen, it is believed that the exact wording of their cards was inspired by a desire to make the veries impressive, rather than a deliberate attempt to be misleading. After all, listeners were perfectly aware that Weyrich and Ahman monitored the Daventry programs, that the reports were checked against the material which was heard by them, and that the veries were issued by them as individuals and not as agents of the B. B. C.

But there is no reference in the resolution to monitored veries which are not worded to imply official sanction by the stations. We have in mind the type of card which we sent out during the 1937 Mystery DX contest. DXers who received these cards will recall that the call and location of the station was filled "This is to in above the words: verify your reception of this Station on February — 1937. Thanks writing us. THE RADEX PRESS."

This card might be called a "proxy" verie, since the reports were checked against the station log by someone who had no official connection with the broadcasters. Still, there was no pretence that the card was coming from anyone but the Radex Press. Would the resolution of the IDA Golden Gate Chapter denounce this type of verie, even though it made no reference to it?

Granting that the verie which implies authorization which was never received, should not be accepted by DXers, what are we to do about the card which does not imply sanction by the station? Suppose the card merely certifies that a listener's report checks with the program which the monitor has heard. Is there anything wrong with an honest monitoring service which claims to be no more than that?

This question is neatly brought out by Anthony C. Tarr, 909 W. Lee St., Seattle, Wash., who writes:

"When a station announces that it will not verify, is there any reason why a public-spirited individual should not take over the job for those who were unfortunate enough to be left out in the cold? For those who scoff at the authenticity of a confirmation obtained through a monitoring station, may I inquire just what is a verie? There is only one reply to that: a verie is a certificate to the effect that a listener

heard a station at a certain time, as evidenced by his report of musical selections, and attested to by someone with knowledge of the correctness of the report. Whether or not this confirmation is supplied by the station is of little moment, because a monitor is in possession of knowledge of what was broadcast and is, therefore, qualified to issue verifications. No one has yet advanced any argument against the authenticity of the veries themselves!"

It is quite true that there has as yet been no question about the authenticity of the veries, and it is assumed that existing monitors have been conscientious in verifying only reports which check with the program they have heard.

But is it "of little moment" whether or not a confirmation is supplied by the station in question. For many DXers, a verification is more than mere proof that a station was heard at a given time. They are souvenirs of long nights spent at the dials, reminders of thrilling catches, of new horizons passed. And, like stamps or coins, they are authentic only when issued by the proper station officials.

Another side of this slant is propounded by Randolph Hunt, Box 715, Leucadia, Calif., who writes: "Suppose we take the case of the California DXer who is monitoring ZBW. This station has sent out many veries in the past and may do so again at some later date. But whether or not they do, it will make no difference to those who have veries. What is going to cause confusion is to have in circulation Victoria ZBW veries and Beverly Hills The holder of a real ZBW veries. will eventually buck against one which is artificial. To promote conditions such as this may not kill DX, but it surely does not aid the honest, conscientious DXer one iota. And I believe that this

monitoring will tend to lower the status of the North American DXers, especially in the opinions of the lads Down Under."

Verie Clearing House

Moving on from the matter of monitored veries, we come to a situation which is undoubtedly a direct outgrowth of the monitoring idea. At about the time the question first came up for discussion, another verification service came into existence.

As recorded in the December RADEX, the Quixote Radio Club inaugurated a system whereby the club headquarters would accumulate reports for certain Central and South American stations, and then forward the reports in a body to the respective stations. The club announced that it had received the "assurance of some fifteen stations that verification requests via the QRC will be instantly honored."

At first glance, this service may appear to be meritorious. If, as was the case with Daventry, the stations had a policy of not verifying at all, it is reasonable to believe that many listeners would be more than pleased to receive confirmations in this manner. Some DXers conceivably would rather have a verie by proxy than no verie, and they probably have availed themselves of this opportunity to stock up.

But it now develops that the stations lined up with the QRC actually are doing their own verifying. They receive the reports gathered by the QRC and send their cards direct to the listeners. So it is apparent that these are not cases where the stations refuse to verify. On the contrary, they send out their own confirmations.

· Even so, the system might not be so bad. If a radio club is able to procure verifications for members who otherwise might not be successful, they might be commended for being right on the job. However, we learn that, prior to this tie-up with QRC, many of these stations were verifying regular reports. They may have been slow, but the veries were forthcoming eventually. Now it appears that the stations concerned will verify only reports sent via QRC.

A number of readers have written in to say that reports addressed to YV2RA were returned by the station, with the request that all reports be sent via the Quixote Radio Club.

(Editor's Note: After this copy was prepared, several interesting letters were received concerning the QRC Dime Veries. The verifications are sent to the reporters direct from the stations. The QRC sends ten cents to the station for each verification requested, and guarantees to refund the dime to the reporter if his verification is not received.)

New Stations Reported

As the season progresses, many new stations are reported by readers. From all points of the compass, transmitters are coming on the air and changes in existing stations are announced.

From the Postmaster-General's Department at Melbourne, we receive word of five new low-power stations in Australia: 2BE, Bega, N. S. W., 1490 kcys, 100 watts; 2HR, Singleton, N. S. W., 680 kcys, 300 watts; 2KM, Sydney, N. S. W., 980 kcys, 100 watts; 2MW, Murwillumbah, N. S. W., 1470 kcys, 100 watts; and 2XL, Cooma, N. S. W., 880 kcys., 100 watts.

"The New Zealand Government's chain of commercial stations throughout the country is almost completed," advises A. I. Breen, 68 Pine Hill Terrace, Dunedin, N. Z. "3ZB, 100 watts on 1430 kcys, commenced broadcasting on a 6 a. m. to midnight schedule September 28th. 4ZB, Dunedin, 1220 kcys, 1000 watts, began operations on October 5th,

also from 6 a.m. to midnight daily. Effective October 4th, 4ZP, Invercargill, 100 watts, moved from 620 to 680 kcys, to avoid interference from 3AR, which ruined his signal outside his immediate area."

From nearer home, Samuel A. Meyer, Jr., 83 Canterbury Road, Rochester, N. Y., supplies information on Spanish speaking stations. "TIPG in San Jose, C. R., has been heard on 625 kcys," he writes. "It is supposed to use 2000 watts power, and has a short wave relay on 6410 kcys. XEBO, Irapuato, Guan., has moved from 1280 to 1310 kcys; XELO, Tijuana, B. C., from 1110 to 670; and XEFO, Mexico City, from 940 to 930.

"I understand that there is a myriad of flea-power BCB stations in the Dominican Republic and in Honduras. A visitor from the latter country said that Tegucigalpa possessed nearly 20 little stations, some of them being 10-watters. It might be interesting to see a list of them."

Also forwarded by Mr. Meyer was the following clipping from the Laredo (Texas) Times:

"WASHINGTON, Oct. 7.—(AP)—Pan-American tourist traffic over the new International Highway was discussed today at a Communications Commission hearing of an application for a radio station in Laredo.

"M. M. Valentine, Laredo electrical engineer and applicant, told examiner that programs planned for the station included broadcasting Mexican customs, weather and road conditions for the benefit of motoring tourists. He said there was abundant local musical talent. because Laredo's habitants 'are almost wholly of Mexican extraction and nearly all Mexicans are naturally gifted musicians.' He said that the nearest American radio station was in San Antonio, 156 miles North, and that Laredo must now depend largely for its daytime reception

from Mexican stations across the Rio Grande.

"His application is for operation on 1500 kcys, with 100 watts power at night and 250 watts daytime."

While the natural gifts of Mexican musicians are open to question, the plan to furnish information to tourists entering Mexico is indeed a novel idea. And one wonders why this hasn't been considered before.

Station Changes

"XELO, Tijuana, B. C., Mexico, has been giving a series of test programs on 660 kcys," informs David B. Browne, 550 E. Glenarm St., Pasadena, Calif. "From their announcements, I doubt if they plan a return to 1110. This evidently means the end of XEAO, Mexicali, as they have not been heard for several weeks and I don't believe they've changed frequencies."

Recent reports indicate that XELO is on 670, instead of 660, and they are putting out a potent signal

for their power.

"Did WJSV ever get permission to move from Virginia into Maryland and boost their power to 50 KW?" queries a Frederick, Md., reader. "Does WOL, Washington, expect to make that change from 1310 to 1230 and increase power from 100 to 1000 watts? Has W3XJ, College Park, Md., decided on the channel to which they will move from 1060 kcys?"

WJSV is still using 10 KW at its old location at Alexandria, Va. Permission to move and change power has not been granted as yet. WOL expects to make its change in frequency and power boost within the next month. W3XJ is of the nature of a booster station for WBAL, so it is not likely that they will change frequency. We haven't heard that they are contemplating any change.

"KOA's broadcast goes only to 2 a.m., EST, Sunday mornings," avers Kenneth Axelson, 5801 Dorchester Ave., Chicago, Ill., "instead of 3 a.m. as previously listed in RADEX. KMBC, Kansas broadcasts 19 hours daily, but their time on the air is not specified. WJRD is now verifying reception, and very promptly, too. According to a verification, WBAX hopes to have 250 watts soon. The new station at Hammond, Ind., WHIP, on 1480 keys, broadcasts from 7:30 a.m. to 5:30 p.m., EST, daily, and from 9 a.m. to 5:30 p.m. on Sundays. They show greater signal strength than any of the five local 50-kilowatters."

Radex Dedications

Through the efforts of Raymond W. Sahlbach, 4708 A South Compton St., St. Louis, Mo., a number of stations are dedicating their January frequency check broadcasts to the readers of RADEX. Following is the schedule, with all times AM, Eastern Standard:

4:00-4:20 KIUL 1210 Garden City, Kans. 5:30-5:50 WLBC 1310 Muncie, Ind.

There seems to be a question about the KWOS broadcast on January 13th. Normally, this station is

ary 13th. Normally, this station is scheduled for 3:40 to 4:00 a. m., EST, on the second Friday, which would be January 14th. However, the time and date are as reported by Mr. Sahlbach and readers needing

this station might do well to try at both times.

Naturally, RADEX is gratified that these stations are making these dedications, and it is hoped that readers will make a point of writing to the stations after the broadcasts. If a verification is not needed, a thank-you card would be in order.

Why I Verify

"A lot has been written about the question 'Why Verify?'" concedes J. E. Gardner, 1839 E. 79th St., Cleveland, Ohio. "While I have been DXing only about ten months, I have had plenty of experience. I am 67 years old and DXing is a hobby with me—one which I find very instructive, fascinating and inexpensive.

"I do not think I am different from a lot of others who like to have their catches verified. I have a certain pride in showing off the 140 veries which are on my wall, although one guest did think that they were license plates from foreign countries.

"The largest foreign station (England excepted) verify gladly and, as you know, a lot of them ask for reception reports. These stations do not advertise any product, so must from other their revenue get sources. The small stations in Mexico, Cuba, and Central and South America advertise many products and apparently depend upon this income for their support. Of course, it is not expected that a listener in Cleveland is going to buy a Cuban Pepsodent or special on Seltzer, but the chances are that sponsors down there will be impressed by reports from a distance.

"Therefore, when I take the time and trouble to log a station which is advertising Pepsi Cola in Bucamaranga, when I make notes of an hour's broadcast, send out a good report of reception and spend money for a reply coupon, it seems to me

that I am entitled to a verie. As long as the station does not announce that reports will be ignored, they should show the courtesy of a reply merely as a matter of good business.

"I do not hold with the argument that a listener will not tune in on a program once he has received a verie from a certain station. I am glad to tune in on any program, time after time, if it furnishes me with good entertainment. I never fail to get Daventry at 6 p. m. to hear Big Ben strike the hour. PCJ has a good program and I have all their veries on all frequencies, but do not miss it when I think of tuning in on their broadcasts.

"In short, I feel that making notes, sending out a real reception report and enclosing reply coupons should entitle me to a reply. Fortunately, most stations are glad to verify a good report, but we DXers certainly have a kick coming when we cannot raise a reply.

"However, I will continue to try for them and each addition to my collection will bring back memories. My first verie—HJ1ABP—has a place of honor in my collection, and I tune this station frequently for that very reason."

Luck With Frequency Checks

"I have listened to the frequency check programs a good many times in the last few years," states Alf Raymond, Avon, Ill., "but I never had the pleasure of perfect reception until November 10th. On that morning the schedule showed 12 stations which I had not heard, and I was certainly thrilled when I was able to hear every one of them: KAND, WJNO, WKEU. WHLB. KPLT. WJRD. WEOA, WAYX, KRBC, WSAU and KABR."

"I had a good chance to boost my list of stations on the morning of October 11th," recalls Edgar D. Petrie, 1431 Gerrard St. E., Toronto, Ont, "Of the 64 stations which were on for the monthly frequency checks, I was able to log 47. Of these, fifteen were new to me and increased my total to 665. Perhaps the best catches in my log are KHJ, KHQ, KGIR, CMJK, CMCD, CMCW, CKMO, CMHJ, KIDW, KOY and KTFI, as well as many others. Incidentally, I would be grateful if some reader will send me a circuit for a two-tube, battery-operated short wave set."

"Can't someone arrange a series of special programs from the less-frequently heard Canadian stations?" queries Carl E. Sylvester, Box 213, Yale, Mich. "The only ones which I hear at all regularly are CBW, CFCO and CKLW. Those heard occasionally are CRCT, CFRB, and CKOC. Rarely heard are CBO, CRCM, and CKY, with the latter two not heard since they last changed frequency."

"I am 17 years old and have been DXing for about four years," writes Fred Gilbert, 363 Queen St., St. James, Winnipeg, Man. "On August 1. 1936. I received for a birthday present a 5-tube Dictator mantel set, which tunes from 540 to 1940 keys. Since that date, I have received 210 amateurs, 43 police and 279 broadcast stations. I have logged stations in 40 states, six provinces of Canada, as well as Mexico, Cuba and Hawaii. Some of my best catches are CMCD, CMCJ, XEAC, XEAF, KHBC and CKWX."

"I am now using an RCA 9K3 receiver with an RCA doublet aerial," informs Kenneth Page, 292 Richmond Ave., Buffalo, N. Y. "The only real distance that I have logged is KHBC, Hilo, Hawaii. They can be heard nearly every morning from 2 until they sign off at 4 a. m., EST. The other two Hawaiian stations, KGU and KGMB, are very poor, being heard only occasionally."

Mystery Station On 650

"I've been DXing now for a little over six weeks," offers John T.

Crabtree, 203 Santa Fe Ave., Santa Fe, N. M., "and in that time have logged 334 stations on the broadcast band. So far I have received stations in every state but Maine, New Hampshire, Rhode Island and Delaware, as well as several Canadians and Mexicans, 3 Cubans, one in Puerto Rico, all 3 Hawaiians and KFQD, Anchorage, Alaska.

"I am especially proud of this record, as this is without doubt one of the worst DX sections in the country. Our city is situated in a bowl formed by towering mountains, 10,000 feet high, on all sides. Naturally, a lot goes over us, and static is heavy the year round.

"For the past three weeks, I have been hearing an unknown station on 650 kcys. It is not WSM, yet all the announcements are in English. The signal strength is about R3, yet I haven't been able to identify them. Recently I heard an early-morning test from an XEAU at Tijuana, B. Cfa., on 1310 kcys. They were coming in R9, so there was no doubt about the call or location. Do you know about either of these?"

The station on 650 kcys is referred to RADEXers for identification, while the other station is confirmed by J. W. Hansen, 3028 Fairmont Blvd., Riverside, Calif., who writes:

"A new station in Tijuana, XEAU, was heard testing on 1310 kcys early in October. I received a verification from XEAA stating that they have moved permanently from 920 to 750 and are using the same power.

"Reception of the Aussies has been very poor, except for a few nights. The Zedders have been coming in a little better, but nothing to get excited about. The Japs have been very good, with programs heard regularly on 560, 590, 690, 730, 740, 770, 780, 790, 810, 820, 830, 850, 870, 940, and 970. What's happened to XGOA? Haven't heard them yet!"

Reception Good

"Reception has been very good so far this Fall," notes Arthur E. Foerster, 1213 Bosart Ave., Indianapolis, Ind., "with 40 new stations coming in to bring my log up to 865 logged, with practically all of them verified. The Aussies and Zedders have been missing so far and to date the Europeans have failed to put in an appearance, but I have hopes. Reception from the West Coast is the best I have seen since I began DXing five years ago."

"I have finally managed to raise my total of U. S. stations to well over the 400 mark," writes Walter V. Scholz, 33 N. Maple Ave., Webster Groves, Mo., "accomplishing that with the help of the November 11th frequency checks. My best catch so far is KHBC. While I was DXing this morning (November 11th), I came across a Spanish-speaking station on about 950 kcys. I could not catch the call letters, but heard Guatemala mentioned a few times. Could that be TGW on a new frequency?"

Just as we go to press, a letter from Samuel A. Meyer, Jr., of Rochester, N. Y., arrives advising of recent changes in Latin-American stations.

New stations heard are CMBL, 710 kcs, in Havana, Cuba. It is heard nightly from 8 until 11 pm, EST. TIPG in San Jose, Costa Rica, has also been heard on 625 kcs. This station is said to employ 2000 watts power.

XEBO in Irapuato, Gto., has moved from 1280 to 1310 kcs; XELO, Tijuana, B. Cfa., from 1110 to 670 kcs; and XEFO, Mexico City, D. F., from 940 to 930 kcs.

XENT is now using 60,000 watts power. XEBK in Nuevo Laredo, Tams., has decreased power from 100 to 60 watts.

"I am sending two clippings from the Laredo Times," Mr. Meyer's letter continues. "One of the clippings is relative to a new station under construction in Monterrey, Nuevo Leon, and the other about a Laredoan's (Texas) application for a 250-watt local station. There are already four stations in Nuevo Laredo, which has only half the population of Laredo, and to date there is no station on the American side. I believe there is to be a station in Ciudad Victoria, Tams., also, but I have no details.

"XEBK of Nuevo Laredo (1000 kcs) has a power of only 60 watts, although it is licensed for 100 watts. XENT has a power of 60,000 watts (not 150,000, although they hope to have that much some day)."

Sidelights on Eddy Duchin, NBC maestro: Learns a tune by hearing it once, but can't memorize a lyric. . . . Has his hands insured for \$100,000. . . . Organized his first orchestra while working as a waiter in a boys' camp, the group being composed entirely of waiters. . . . Made his microphone debut as pianist with Leo Reisman at the Central Park Casino. . . Dances for his own recreation and spends most of his leisure at the radio, listening to other bands.

Robert R. Irwin, President of the World Wide Dial Club, requests that his club be included in our Roster of DX Clubs which appeared in the November issue. This club is a "get together" organization which meets in Chicago twice a month. The second Wednesday of each month they meet somewhere down town, and on the fourth Wednesday the meeting is at the home of one of the members. For further information DXers in Chicagoland should get in touch with Mr. Irwin at 918 W. Gunnison St.

The Shortwave Review

Belgian Congo

OPM at Leopoldville works with Belgium at 3 am, and from 1 to 4 pm, EST, on 10140 kcs. (RX27).

British Guiana

The Terry-Holden Expedition into the jungles of British Guiana, using the call letters VP3THE, has been heard throughout the United States. A 200 watt transmitter is in use, and the frequency is about 13910 kcs. (RX35).

British Honduras

There is a new station in Belize, ZIK2, operating on 10600 kcs. (RX21).

Bulgaria

LZA at Sofia, 14970 kcs, is heard from 7 to 7:30 am. (RX23).

Canada

A new shortwave station is now in operation in Sydney, N. S. It is CJCX, 6010 kcs, 1000 watts. It is owned by the Eastern Broadcasters, Ltd., Radio Bldg., Sydney. Programs of CJCB are relayed. (RX47).

A number of ship and shore 'phones are heard on 1630 kcs. Three of the shore 'phones are VBB at Sault Ste. Marie, Ont., VBE at Point Edward, Ont., and VBH at Port Arthur, Ont. They broadcast weather at 11 pm, EST. Some of the ships heard working these stations are the Algonquin, Canadian, Toronto, Lethbridge, Weyburn, etc., but none of their call letters are known. They can be heard near midnight. (RX55).

The new address of VE9CS on 6080 kcs is, c/o Station CKFC, Stock Exchange Bldg., Vancouver, B. C. (RX53).

Canary Islands

EAJ43, Tenerife, is heard on 10370 kcs from 9:45 to 10 pm, EST, or sometimes until 10:30 pm (RX25).

Ceylon

VPB in Colombo is on daily on 6160 kcs from 6:30 am, to 12:30



Edward G. Robinson, celebrated for his hard-boiled roles on stage and screen, is shown here with comely Claire Trevor, his co-partner in the new dramatic radio serial of newspaper life, "Big Town." Heard over the CBS every Tuesday from 8 to 8:30 pm, EST.

pm, and on Sundays from 7 am, until 11:30 am, EST. (RX27).

Colombia

HJ1ABE is now broadcasting daily from 6 to 10 pm, and after the regular broadcasting period, they read the names of DXers who have reported them. This station is in Cartagena. (RX48).

HJ7ABD, Bucaramanga, 9610 kcs, announces reception of reports from listeners at 10:30 pm, EST. (RX23).

HJ4ABD has not been heard for some time, but was on 5980 kcs, the last time heard. HJ4ABP is heard on 6028 kcs but may shift back to 6033 to avoid interfering with Germany's DJC. HJ6ABA varies in frequency from 6050 to 6055 kcs. (RX21).

Denmark

The call and frequency of the new Danish station is OZF, 9520 kcs. It is heard daily between 2 and 6:45 pm, the broadcast for the first half hour being directed by special antenna to South America and East Asia. The second part of the program is intended for North America and Greenland. Evening programs are also heard occasionally from Denmark on 11805 kcs, but a call sign and regular schedule has not been assigned this station. (RX27).

Egypt

SUV in Abou Zabal (Cairo) works Europe between 1 and 6 pm, EST, on 10055 kcs. (RX27).

Fiji

VPD2 on 9540 kcs is heard with a good-to-fair signal between 6 and 7 am EST (RX23).

Great Britain

The British Broadcasting Corp. has been considering for some time the question of broadcasting in languages other than English. Inquiries made by representatives abroad have led to the conclusion that broadcasts from Daventry would be welcomed by listeners in Spanish and Portuguese South America, and by Arabic listeners in the Near East.

Changes in Transmissions IV and V from Daventry are announced. Part 1 of Transmission IV, broadcast from 12:20 to 3:45 pm, EST, is now carried over stations GSB 9510, GSD 11750, GSG 17790, GSI 15260 and GSP 15310 kcs. Part 2, from 4 to 6 pm, is radiated over GSB, GSD and GSO 15180 kcs.

GSP on Transmission V has been replaced by GSC on 9580 kcs. The time remains the same, 6 to 8:30 pm, EST.

Guatemala

TGWA in Guatemala City, 9690 kcs, is best heard near 7:45 pm, EST. (RX51-52).

TGWA on 15170 kcs is frequently heard late at night.

Hong Kong

ZBW has been reported, but with a poor signal, on 9525 kcs. (RX23).

Hungary

The Budapest shortwave stations are now using the new directional antenna system and it is expected the signal strength of HAS3 and HAT4 will rival that of other European stations. (RX35).

Italy

The Rome station has extended its broadcasting activities. The American Hour, one of the most popular programs on the shortwaves, is now broadcast daily, commencing at 7:30 pm, EST. The revised schedule of the Rome station is 11810 kcs, daily from 5 am to 12:20 pm. 9653 kcs, daily from 12:30 pm to 9 pm, EST.

Japan

JZJ comes in very well every day, with signals as good as R9 at times. JZK has also been heard, near 1 am, EST, (RX35). JZJ 11800 kcs, is heard daily from 4:30 to 5:30 pm. War news in English, Spanish and Japanese, as well as Japanese music. (RX51). JVH 14600 kcs, is heard from 11 pm, to midnight. (RX23).

Mexico

The newest Mexican is XETW, 6045 kcs, Tampico, Tams. Broadcast band station XEFW on 1310 is relayed. Heard until 11:30 pm, and sometimes later. (RX52).

Paraguay

Our Argentine representative reports that ZP14, Villarica, Paraguay, is now being heard on a frequency of 6040 kcs. The slogan used by ZP14 is "Radio Cultura."

Poland

A new transmitter has been added to the Polish s. w. system. It is SPD, working on a frequency of 11500 kcs. The new station, and SPW on 13635 kcs, are heard from 6 to 7 pm, every night, and on Sundays until 8 pm. Both stations

come in with good signals, but SPD is slightly the better. (RX49).

Portugal

CT1AA is now announcing its new call letters, CS2WA. Their frequency is given over the air as 9650 kcs, and the power as $2\frac{1}{2}$ kw. (RX35).

Siam

HS8PJ Bangkok, transmits from 8 to 10 am, EST, on 19020 kcs, on Mondays only, and at the same time on Thursday on 9510 kcs, with a power of 5 kilowatts. This station is owned by the Post and Telegraph Department, in charge of Colonel Phra Aram. Programs consist of Siamese and European music, and news bulletins. Announcements are in Siamese, English and French. (RX47).

Spain

"Radio Nacional" at Salamanca was heard broadcasting a special program for North America on 10370 kcs. The volume was "terrific." (RX25).

Union of South Africa

The Johannesburg station is now heard in all parts of the country. The programs start off with bugle calls, then setting-up exercises follow. The Town Hall Clock strikes 7 a. m. at midnight, our time. The address is Box 4559, and the schedule of broadcasts is 11:45 pm, to 12:45 am, EST, daily except Saturdays. Two frequencies are used now, announced as 9606 and 6097½ kcs. (RX21-23-35-51-52).

United States

The General Electric Co. has a construction permit for a new international broadcast station to operate on frequencies of 9530 and 15330 kcs with 20 kw. power, un-



The reception room of Radio Hall, the home of Station WHA, located on the campus of the University of Wisconsin. at Madison, Wis.

limited time. The station will be located near Belmont, Calif.

It is reported W2XAD and W2XAF will increase power soon to 100 kw. (RX54).

WWPA at St. Albans, Vt. is heard broadcasting time signals every night at midnight, on 1626 kcs. (RX55).

A complete list of the Police Stations of North America was printed in the September issue of RADEX, and changes and additions to this list are shown in this column every month. Alterations which have taken place since our December issue are shown below:

New

1.642 KASP Little Rock, Ark. (1.)
1.658 WQFR Portable in N. Y. State (.25)
1.674 KHPA Lees Summit, Mo. (1.)
KHPB Macon, Mo. (1.)
KHPD Springfield, Mo. (1.)
KHPE Poplar Bluff, Mo. (1.)
KHPF Jefferson City, Mo. (1.)
WAMF Portable in Pa. (.5)
1.706 WANH Raleigh, N. C. (1.)
WANI Williamston, N. C. (1.)
WANI Williamston, N. C. (1.)
WANK Salisbury, N. C. (1.)
WANK Salisbury, N. C. (1.)
WANL Elizabethtown, N. C. (1.)
WMPR Revere, Mass. (.05)
2.036 WPDM Dayton, Ohio. (.5)

2.044 WPDM Dayton, Ohio. (.5)

2.450 KADH Mangum, Okla. (.05)
 2.458 WDPW Wilmington, N. C. (.1)
 2.474 WKMP Kenton, Ohio. (.05)
 2.490 KSPM Portable in Wash. (.05)
 KSPN Portable in Wash. (.05)
 KSPW Portable in Wash. (.05)

WMPQ Logansport, Ind. (.1)

Frequency
2.466 WRDR Grosse Points, Mich. (.35),

Power

from 2.414

1.712 KACU Longview, Texas, 500 w. from 250 w.

Ohio State Police stations operate on 1596 kcs. They are not shown in our police station index because 1596 is now in the broadcast band. The stations are WPGG Findlay, WPGQ Columbus, WPHC Massillon, WPHK Wilmington, WPHT Cambridge, and WPFT, a portable.

WNYF, New York City Fire station on 1630 kcs, works fire boats in New York Harbor nightly at midnight. The boats reply on 35.6 megs. Some of the fire boats are W2XNA, "Wing," W2XNB, "Hewitt," W2XND, "Willet," W2XNC, F, G and I (RX55).

W2XGB at Hicksville, N. Y., 17310 kcs, is heard at 10:40 am, and 2:30 pm. WMI Lorain Ohio, 6450 and 2560 kcs, gives weather reports at 10 pm. WWOJ at Sault St. Marie, Mich., 2570, also broadcasts weather at 10 pm. (RX23).

Uruguay

CXA8, 9640 kcs, relaying LR3 at 7:40 pm, has ben heard very well. Reports should be sent to Radio Belgrano, Buenos Aires, Argentina. (RX23).

The Reporters

R21, Anthony Tarr;
RX23, Carl and Anne Eder, Minn.
RX25, George Nahas, N. Y.
RX27, Raphael Geller, N. Y.
RX35, Albert Steinmetz, N. J.
RX47, D. H. Dussek, Great Britain.
RX48, Harold Lund, Pa.
RX49, Kenneth Morey, Mass.
RX51, Gilbert Harris, Mass.
RX52 Samuel Meyer, N. Y.
RX53, Rob't. Morrison. Canada
RX55, C. Roman, Illinois.

The Stamp Corner

By David Brockton Browne

MARCHING forward with the New Year, readers of RADEX will in the future find a column devoted to stamp collecting, or philately as some collectors prefer to call it, in each issue.

The column will feature news of current and future postal issues of those countries where radio stations exist; will try to solve some of your stamp collecting problems; and give a few hints and cautions concerning the hobby as well.

The success of a stamp column depends largely upon the support and co-operation of its readers. Your Stamp Editor will do his best to make this department interesting and worthwhile to RADEXERS, and will try to please your desires whenever he can. We shall be very happy to answer briefly any questions that may be worrying readers concerning stamp and cover collecting, if they will write to us in care of this magazine.

We cannot, however, enter into any exchange or lengthy correspondence with our readers on either stamp or radio matters, of any kind. Won't each of you, though, write a few words to RADEX' Editor, and tell him how you like this new venture? Thank you.

New Stamp Issues

1938 promises to be a "stamp-amonth year" for the United States if present predictions materialize. The long-awaited replacement of the regular postage series, in use since 1922, will begin soon after the New Year. Featured will be those Presidents who have never appeared on a U. S. postage stamp before. At least one new value, 4½ c, will appear as this rate is widely used on church envelope mailings, etc. It is possible that an 18c stamp may also be added.

No definite plans for new commemorative issues have been announced as yet, but collectors might well prepare themselves for another Constitution stamp, and one honoring the State of Delaware. Now that the field of military heroes has been explored and the possessions series is finished—serious consideration is being given to a series honoring cultural leaders, such as famous American scientists, authors, inventors, and educators.

An imposing array of nations have chosen to honor the 150th anniversary of the United States Constitution by issuing one or more commemorative stamps. Among these countries are: France, Brazil, Salvador, Guatemala, Eucador, Honduras, and Nicaragua. Undoubtedly, before many more weeks pass, several other nations will be added to this ever-growing list which promises to make an interesting collection all by itself.

Italy has released a pleasing series of ten pictorial stamps honoring five Italian cultural celebrities whose centenaries occur this year. Composers Spontoni and Pergolesi, the painter Giotto, violin-maker Stradivari, and the poet Leopardi, are represented on two stamps each.

Miniature sheets are rapidly growing in number. The Franco government of Spain adds the Ayamonte sheet—5c red and blue—in an imperforate block of four.

Egypt honors the Abolition of Capitulations with three colorful pictorials showing a medallion of a native woman with a water jug. Values and colors are: 5M brown, 15M purple, and 20M deep blue.

Helpful Hints

Do not leave your stamps lying around carelessly in shoeboxes, envelopes, etc.—if you want to keep them in good condition. And condition in a stamp is all-important. There are numerous inexpensive

stamp albums available at your local stationers or stamp dealer that will help preserve your collection. A mounted stamp always makes a better appearance too. But be sure that you mount your stamps with peelable stamp hinges—not with paste or mucilage.

To get the greatest enjoyment from the hobby, every reader interested in stamp collecting should subscribe to a stamp magazine. No philatelic column in magazines or newspapers of general circulation can hope to cover the subject adequately. They can only hope to "hit the high spots."

For detailed information on stamp collecting, we sincerely recommend any of the leading American stamp magazines. Among the better known are-Weekly Philatelic Gossip, Holton, Kansas; Mekeel's Weekly Stamp News, Portland Maine; Stamps Magazine, New York City, N. Y.: Linn's Weekly Stamp News, Columbus, Ohio and The Western Stamp Collector, Albany, Oregon. We are sure that each of these publications will be glad to send a sample copy—without charge—if you will write direct to them. (Please mention RADEX when writing). The average subscription price of the larger stamp magazines is \$1.00 a year.

Philately has many subdivisions. Among the most important is cover collecting—First Day of Issue, First Flight Airmail, Naval, Historical, etc. We shall try to touch briefly on some of these in the next issue of RADEX. Until then, good luck, both on the air waves and in the stamp album. Don't forget to write the Stamp Editor, soon, and tell him what philatelic subjects you would like discussed in future issues. Remember, this is your stamp column.

ZP14, Villarica, Paraguay, is now on 6040 kcs.

Universal DX

Club Corner

● ● By "Pooky"



This month we have with us a little story that needs no comment, so "Pooky" feels that he can slip in another word or two about the contest. Well, there's really not much to say except, "Please write." There must be an idea or a bit of information in your head right now that someone else would like to hear about. Remove it! Put it down on paper and send it along to UDXC Headquarters, 345 Maple Ave., Oradell, N. J. It doesn't have to be a world-shaking idea, and it doesn't have to be written up in ten-league words. Just jot it down and send it. The chances are that we'll print it here in RADEX, with your name and all the trimmings, and if we do we'll send you a very generous reward. The list of prizes we are giving appeared in the September RADEX and will appear again shortly. If you haven't seen it, take our word for it.

What are you doing for the next five minutes?

Well, Virgil F. Foster, of 2100 Rockwell Ave., Alton, Ill., takes the cake this month with a story of amateur radio. The title is ours but the rest of the credit is his. We're awfully glad you wrote, Virge.

Ham and Gob

"A friend of mine living in Maryland Park Addition, a little place near Alton, had an amateur radio station. He was always talking to

me about it, and wanting to send a message somewhere for me. I was skeptical but he kept right at me, until finally I said to myself, 'All right, I'll shut you up!' So I gave him a message for a friend of mine.

"The catch was that I had no idea in the world where this friend of mine was. He was a sailor, an old shipmate of mine, and I knew that he might literally be anywhere in the world. I had neither seen nor heard from him in over a year. The only address I could give was the name of the last ship from which he had been discharged.

"This didn't seem to bother my 'ham' friend a bit. About six months ago he started my message on its way. It went traveling across the United States, pausing here and there, touching every section of the country, but nowhere could my sailor friend be found. Finally, after more than a month, it reached the West Coast, but apparently my friend was not there either. Well, it did not hesitate. It started looking for him overseas.

"And nearly six months after it had left me my message reached him. He was serving on the U.S.S. Black Hawk, on duty in war-torn China! Imagine his surprise, and his shipmates' surprise, when he heard in this way from his buddy back home. And imagine my surprise when I received an answer from him the other day, telling me when and how my voice had reached him.

"This, my dear 'Pooky,' is one of the greatest things I have ever heard of, although I suppose it is not unique. From now on I am not skeptical of anything I hear about amateur radio. I am a solid backer of it. And may I use your column to thank all those 'Hams' who helped to speed my message on its way?"

Indeed you may, OM, and may "Pooky" add his humble "VFB?"

IDA "Programs of the Week"

N THE IDA "Programs of the Week," the International DXers Alliance is attempting to present something new and different in DX broadcasts. Each week throughout the present season, one North American station will transmit a feature program.

Although some of these stations will be attractive from a DX angle, the programs will be arranged primarily for the mass entertainment of the DX fraternity. Each broadcast will be a four-star feature program, and many novel and interesting stunts have been arranged to add variety and zest to the shows.

While sponsored by the IDA, these weekly broadcasts are for the entertainment of all listeners and DXers, regardless of club or nonclub affiliations. It is hoped that listeners everywhere will give support and endorsement to this program series by listening in and forwarding a report, or at least a note of thanks, to the feature station.

As an added inducement for submitting reports, the IDA will award a cash prize of ten dollars to the DXer who receives verifications from the greatest number of "Program of the Week" broadcasts. In the event of a tie, the award will go to the DXer who has made the greatest all-around showing from the standpoint of location and acceptability of reports.

Suggestions for interesting and novel features to be included in these broadcasts will be welcomed by the director of this series, Herbert Tucker, 57 Kenilworth Drive, Akron, Ohio.

Following are the programs arranged to date:

Thursday, December 30th 1:00-2:00 WTAM 1070 Cleveland, Ohio

Sunday January 2
3:00-4:00 CMAB 1340 Pinar del Rio, Cuba Thursday, January 13
2:00-3:00 KFYR 550 Bismarck, N. Dak. Sunday, January 16th WCCO 810 Minneapolis, Minn. Monday, January 24th 3:00-4:00 WHAM 1150 Rochester, N. Y. Sunday, January 30th 7:00-4:00 CHWK 780 Chilliwack, B. C. Sunday, February 6th 7:00-4:00 KWYO 1370 Sheridan, Wyo. Sunday, February 20
3:00-4:00 KECA 1430 Los Angeles, Calif. Sunday, February 27th 3:30-4:00 KGU 750 Honolulu, Hawaii Sunday, March 13th 3:00-4:00 WCKY 1490 Covington, Ky. Sunday, March 27th 3:00-4:00 KFOR 1210 Lincoln, Neb. All times listed are a.m., Eastern

Reports to CHWK must be accompanied by ten cents for verification. Additional programs to complete the series will be announced in the IDA "Globe Circler" as well as

Standard.

Call-o-Gram Solution

other radio publications.

The solution to the Call-o-Gram printed last month is given below:

RCA CQDX CKOC WWL
XEL WRR A ART AWA
KCMC MUSTANG WSJS
R AIR MA TG HIH T
VOAS ARID
W TIU TI OR NOW K
WTEL WINDSOR WAGA
VAS WOC O OIL YSN
AST KRKO KSOO XED

If the music of the La Conga Cuban orchestra that you hear over NBC on Friday nights sounds weird, maybe it's because the instruments they play are weird. Their instruments are a conga, a male drum; repicador, female drum; a bongo, which is two drums attached to each other; concerros (Cuban cowbells) and the quijadas, the jawbones of an ass.

OUR READERS and Their Troubles

• • By the TECHNICAL EDITOR

HAVE a Truetone receiver, model A2, which does not have a phonograph connection. Will you please tell me how to connect the phonograph pickup, and also how to plug in for earphones? I intend to put a pickup arm on a phonograph at home, so tell me how the old spring type motor can run a radio. How is the volume of the phonograph sound controlled?

It is evident that you are not very familiar with the principles of the phonograph pickup. You need make no change in the phonograph you have, as the spring motor will operate the turn-table in the usual manner. But, instead of using the original sound-box and needle as you do when you play the records, you push it aside and set in place the pickup which you must purchase from some reliable radio store or mail-order house. This pickup has the usual needle, but it operates a tiny magneto-like unit that generates a small electric current, instead of the sound producing box and diaphragm of the old phonograph. The weak electric current is fed into the audio amplifying portion of the radio receiver, and the sound comes out of the loud speaker. The volume of the reproduced sound is controlled by the radio volume control in the usual manner. The receiver, of course, is detuned from any radio signal, but usually the connection into the audio portion cuts the circuit so that radio signals cannot come through at the same time.

The receiver chassis must be removed from the cabinet. Turn it over so that the connections to the manual volume control can be seen. This volume control consists of a

resistance of 500,000 ohms with a sliding contact that moves from one end to the other. At one end of the resistance of this control you will find a lead that connects at once to a resistor of 50,000 ohms. This resistor is numbered R-10 should quickly be located. Do not mistake this resistor for another, No. R-14, of 2 megohms (much larger) which also attaches at the same point. Cut the wire connecting the end of the volume control and the first (R-10) resistor. From these two freshly cut ends run two short well-insulated leads to two binding post terminals or a phoneplug jack. When the pickup is used it is connected to these terminals or the jack. When not in use the terminals or jack should be short circuited with a piece of wire or shorted plug. If the leads are shielded, and the shielding grounded, operation will be better. Use a pickup of high impedance, for if a low-impedance pickup is utilized, it must be matched to the circuit through a impedance output-matching transformer. "Astatic" pickup devices are always of high impedance.

We would like to bring to your attention, as well as to the many readers of this department, a device known as a modulated oscillator unit for connecting a phonograph pickup directly to the radio receiver without the necessity of making changes in the circuit. The entire unit may be placed within the cabinet, and the phonograph pickup is permanently attached to it. output of the oscillator unit is fed the receiver, demodulated. amplified, and re-produced through the loud speaker just the same as any radio signal. The volume control of the set is used to control the volume of the phonograph reproduction.

There is also an adapter that can be purchased. By placing it beneath one of the tubes, a pickup can easily be connected to the set. Another device, that fits on the grid cap of one of the tubes, has two tiny contacts into which the phone tips of the pickup are connected. The same situation also exists as to earphones. A simple adapter, that fits under one of the tubes, provides a convenient connection for the tips of the headphone cord. The "Perfect" phone adapter sold by RADEX, is a highly satisfactory unit of this type. You will experience no difficulties in its use. An inexpensive pickup may be purchased as low as \$3.85, while phono-adapters are but 30 to 75 cents. Headphone adapters are somewhat more costly.

On Pre-Selectors

I judge that many D-Xers are interested in pre-selectors but know very little about them from all I can hear. Why not give us an article on pre-selectors? For instance, what type of sets will it work with best? What is the proper number of tubes? What increase in sensitivity can one expect? Will selectivity be improved? Do they aid on fading stations?

This is an interesting subject and we know that it is of interest to our readers for so many of them write us in a similar vein. A pre-selector, it must be remembered, is simply a radio-frequency amplifier. As such it adds its efficiency to that of the radio receiver. A peak pre-selector or preamplifier will add increased efficiency to short-wave receivers or all-wave receivers on the short-wave bands. It increases the sensitivity of the set to weak signals. Most of these devices are best used on the short waves, although there are allwave pre-amplifiers that cover the entire wave band.

It is claimed that a pre-selector

will bring up weak signals to a strength of R-7 and R-8. Atmospheric noises are reduced because additional tuning circuits are utilized, and there is a very narrow frequency band available which tends to eliminate much interference noises and image-frequency faults.

A good pre-selector may be used on the short waves. It should cover at least three bands with separate coils and switching arrangements. These ranges preferably run from 10 to 35 meters; 35 to 75 meters; and 75 to 200 meters. One tube in a pre-selector will not give sufficient amplification. For this reason two tubes are universally utilized. This provides two full stages of radiofrequency tuning and amplification. It is a disadvantage to take the filament and plate voltages direct from the receiver, so the better pre-selector will take its current from a built-in power supply with rectifier tube. RADEX has not undertaken to design and submit to its readers pre-selector circuit, although there has been a demand for such. Radio-frequency circuits are difficult to arrange and assemble, and the relatively inexpensiveness of completed selectors is such as to preclude the thought of building one. However, excellent kits may be obtained, and we shall be glad to recommend manufacturers by mail.

To those who wish to build a very simple one we suggest that a radiofrequency coil, tuned with a variable condenser, both of capacity and inductance to cover the short wave bands, and one battery operated r-f tube, will suffice as an experiment. Feed the plate output of the tube to the antenna post of the receiver through a .002 mfd. bypass condenser. Obtain a shielded coil wound for the short-wave band desired, and use this with a small short-wave tuning condenser shunted across the ends of the coil. The top of the coil is connected to the grid of the tube, and the bottom to the filament or negative A and B terminals. The primary of the coil is connected to the two ends of the doublet, or to the antenna and the ground.

Antenna Location

I am about to erect an RCA "Spiderweb" antenna. It will be about 200 feet from the street where there is a power line, and about 100 feet from my RCA 15-K receiver. Will 200 feet distance from the power line be enough to get away from interference from that source? I have been told that it should run north and south and that it ought to be parallel to the power lines. However, I have sufficient room to run it in any direction. I need additional leadin and how can I arrange this? The antenna will be erected on iron poles about 35 feet high. Is this satisfactory?

Since you are able to erect an antenna at least 200 feet from a street where there is a power line you should consider yourself fortunate indeed. The RCA Spiderweb unit which you have selected consists of a series of doublet antennas cut to different lengths that will cover most of the wave bands very fully. This arrangement requires only 38 feet of horizontal length and 12 feet of vertical clearance. The Spiderweb antenna really is a multiple double-doublet system.

Its directional characteristics are about the same as for any doublet or double inverted "L" antenna. The antenna will respond best to signals that come to it from a direction that is at right angles to its length. Therefore, if you point the antenna north and south it should pick up signals that come from the east and west. However, that does not mean that it will perform only in that direction. We think that for the southern portion of the United States a direction that is northwest

and southeast will be best for European work.

All interference that is picked up by the leadin wires will be cancelled out by the transposition of the two wires. But if the antenna itself is in a noise zone there is nothing that will prevent it from picking up induction noises. power line, if within the zone, will be troublesome. Whenever a power line is nearby, keep the antenna as far off as possible to lessen the chances for inductive pickup. Any doublet antenna or double-doublet has a minimum amount of signal pickup in the direction of its horizontal length. This makes it possible to utilize the rather positive directional effects of the antenna so as to eliminate much man-made in-Therefore, if the anterference. tenna is pointed toward the source of interference, it will pick up a minimum of noise. This applies to power lines which should run at , right angles and not parallel to the doublet antenna. There has been much discussion about this, but it has been rather definitely decided that doublet antennas should point as nearly as may be practicable directly toward the source of manmade interference.

Since you are using two tall iron pipe poles we suggest that you space them sufficiently far apart so that two or three insulators can be placed at the ends of the antenna with a spacing of about 12 inches between each insulator. Iron poles can pick up and reradiate interference and signals to the aerial top. and good insulation and spacing will tend to prevent most of this type of trouble. The matched transmission line must not be cut for any reason. If the line is too short then you might as well erect the antenna farther off and use a second section of leadin of the same length as the first. Any doublet antenna with coupling transformers which are matched to the impedance of the antenna and to the transmission line, must be connected to the receiver by the proper amount of leadin or transmission line.

Static Troubles

I have a 1937 Silvertone 7-tube set. It is used with a single-wire antenna about 75 to 100 feet long and 40 feet high. The leadin is 30 feet and the ground is 7 feet. How can I get a transformer to fit this antenna as I am troubled with static? Is this outfit suitable for D-X work? What do you think of a chemical ground, and how is it made? Does the length of leadin and ground make any difference? Shall I use a twisted leadin, but, if so, how is it connected to the receiver? When I lengthened my antenna I found more stations crowding and also began to hear stations when a local was quiet for announcements.

The receiver you own and the antenna used make a good combination for D-X work. But perhaps a few changes will be in order. It seems that the antenna must be too long, for the fact that stations interfere and are hard to tune out makes it appear so. Try shortening the aerial to 50 feet or even 40 feet. Make it into an inverted "L" shape with the leadin running directly to the receiver. Of course, one of the new doublet combinations will prove very satisfactory. They come in kit form ready to erect. The strong twisted wire is very good for this purpose. If the inverted "L" antenna is used, the wire may be all in one piece, beginning at the far end and passing direct to the radio set. The "L" antenna is slightly directional along the line of the wire towards the end in which the leadin comes down. The longer the flat top and the shorter the leadin, the more directional the antenna will prove. The doublet antenna is directional along a line that is

broadside to the length of antenna wire.

If a transformer is used with your present antenna, you must utilize a shielded leadin wire or twisted pair, such as the Zepp, and two transformers, one up at the antenna and one down at the set. These are useful only in preventing the pickup of man-made static in the neighborhood of the leadin wires. If you are going to try transformers for static elimination, we endorse one of the modern doublet noise-reduc-This, howing antenna systems. ever, will not prevent any static that is picked up by any portion of the antenna top that may remain in the noise zone. Full instructions accompany the antenna kits and vou will have no difficulty in attaching the wires to the set. most cases a ground wire will no longer be necessary.

However, if you are troubled with static that comes into the set through the power line or electric lighting wires, you will need a filtering device that plugs into the electric light socket. The radio cord then plugs into the filter. These units are rather inexpensive, and you should be able to purchase a good one for about four dollars and upward.

We believe that a good ground is always a simple ground. If a copper wire is soldered or clamped to a **b**right spot on a cold-water pipe it should be very satisfactory. However, electrical instruments or devices should not be grounded to the same pipe. Chemical grounds outdoors are satisfactory, but very often a perfect ground can be obtained simply by driving three 6foot lengths of new 1/2" pipe into the earth. These pipes should be spaced several feet, and set into some spot that remains damp most of the time. The top of each pipe is connected to a heavy copper ground wire with clamps or solder.

length of the ground wire to the set should, of course, be kept as short as possible.

Two Antennas

I have an all-wave aerial up at present, but I intend to string another wire beside the first as a single-wire antennaforlongerwave reception. Actually, the two wires will be rather close together. Will this in any way ruin or cause absorption of the all-wave aerial? The all-wave antenna has a transformer at the set. Can I connect a throw switch so that the set may be shifted instantly from one antenna to the other without going through the all-wave antenna transformer?

You will find it a simple matter to erect the additional single-wire antenna adjacent to the present allwave system. However, we suggest that you space the two as far apart as may be practical. Although you will be using but one aerial at a time, there is some truth in the belief that the wires of a closely adjacent system will detract from the maximum efficiency of the aerial. On the other hand, if a wire is placed correctly it might act as a reflector so as to aid reception from some particular point on a certain frequency.

You should procure a double-pole double-throw knife switch porcelain base. The two center contacts are those of the knife blades. The two wires from the radio receiver (antenna and ground) are connected to the center or knife blade contacts. The two outer contacts at one end of the switch should be attached to the terminals of the transmission-line matching transformer. When the switch is thrown to these two contacts, the connection between the set and transformer is completed, and the allwave antenna is then in use. There now remains the two contacts at the opposite end of the switch. Connect one of these to the single leadin from the single-wire antenna, and attach the other to the ground wire. When the switch is thrown to this end, the contacts will connect the antenna and ground terminals of the set to the antenna and ground contacts, respectively, of the switch. Merely by throwing the switch to one end or the other, either antenna may be connected to the receiver.

Whistling Set

The trouble with my set is that when the volume control is turned up the station gives a whistle, and finally the whole band becomes dead. Local stations, too.spread out very badly, as much as 100 kilocycles to either side of the point on the dial where they are supposed to be heard. The locals are distorted and finally die as the volume control is increased. This receiver is a Mental with Hytron tubes, and I would like to know the values of the different resistors.

In most cases, troubles such as you describe would be caused by a defective tube—perhaps the 25A7. We suggest that, first, you have all the four tubes in the set carefully tested. Next, we should have our suspicions about the volume control itself, if the tube that connects to the control tests perfectly. The next following step in analyzing the trouble would be to check the plate voltages of all the tubes, for a failure in some operating voltage can cause whistling. The fading and failure of the set when the volume control is increased to maximum may be due to a great increase in grid biasing, thus rendering the tube in question inoperative. in addition to the above the grid bias must be carefully checked. Any failures in voltages indicate that some resistance is defective, or a bypass condenser is open. In short, a thorough examination of the set by a competent service man seems to be in order.

We regret that we cannot list the proper values of the resistors in this set as the information is not available in our files. However, the units are standard, and the color code, available to every service man, will instantly inform him as to what replacements are required, if any.

Broadtuning, such as you describe, is a bad disorder in the set. When the tubes and volume control have checked and remedied, if necessary, the trouble may correct itself to some extent. However, a realigning of the condensers and units is indicated. The r.f. and i.f. coils and condensers are most likely out of adjustment. But it is our opinion that you cannot expect too much in the way of highly selective tuning and station separation when the locals are on, when a set is constructed of but three tubes, two of which control the entire tuning operation.

Size of Coils

I am building an all-wave set which will use plug-in coils to be tuned with a .00025 variable condenser. I have experienced difficulty in obtaining data as to the correct number of turns of wire for the coils. Can you tell me how to make these coils and the number of turns of wire to be wound on?

You can purchase these coils ready wound from several of the mail-order radio supply houses, and we think this is the easiest way out of your problem. Even if you wind them you must first procure insulated forms, and these cost nearly as much as the completed coils. Finished coils, ready to use, also come completely shielded, and this is quite necessary in your case. However, make the coils the following sizes:

For a plug-in coil to cover the 10-20 meters band, wind 6 turns of 22 wire, each 3/16 inch apart. Skip

1/4 inch and wind 4 turns closely of No. 30 for the primary or tickler coil. For the 20-40 meters coil wind 12 turns on the secondary and 6 turns on the primary. Wind the secondary in a space 1 inch long. For the 40-80 meters coil wind 24 turns on the secondary, at the rate of 16 turns to one inch, and put 7 turns on the primary. The 80-200 meters coil has 45 turns on the secondary, closely wound, and 15 turns on the primary. You can use a small variable condenser for these coilsone of .00015 mfds. The .00025 you have will suffice, but if you remove two of the rotor plates its capacity will come closer to tuning the coils throughout the full movement of the rotor. The condenser you have is too small to cover the entire broadcast band with only one coil. It is best to use a standard coil of about 75 turns, 2 inches in diameter, with a .0005 mfd. condenser. Otherwise you will require two coils to cover the broadcast band properly.



Dorothy Thompson, the wife of Sinclair Lewis, discusses People in the News on the NBC-Red every Friday at 10:45 pm, EST.

PROGRAMS from Hollywood

• • • By BETTY

YOUR Hollywood Parade, a new 52-week series of full hour musical and dramatic broadcasts designed to provide a panoramic radio view of activities in the movie capital, has been launched over the NBC-Red Network on Wednesdays. This program, replacing the Hit Parade, is sponsored by the American Tobacco Company and produced by Warner Brothers Pictures, Inc., with the addition of 15 minutes to round out a full hour.

With Dick Powell as master of ceremonies and central star, and all the talent resources of Warner Bros. Pictures behind it, the new show includes previews of Warner pictures and features guest stars of prominence in all fields.

Rosemary Lane is also starred in the new series. All other Warner screen stars will be heard in Your Hollywood Parade, and directors under contract to Warner will be available in the production of dramatic sketches and picture previews to be heard in the series.

O'Keefe Back

Walter O'Keefe, NBC comedian, who announced lugubriously on Town Hall Tonight that Fred Allen would succeed him on that program "just in time for me to be listed as Number One on the Unemployment Census," isn't worrying any more. He's got a permanent job, as Walter has joined the Hollywood Mardi Gras series over the NBC-Red and co-stars with Lanny Ross and Charles Butterworth.

The new contract for O'Keefe came as a reward for his outstanding success while pinch-hitting for Fred Allen.

In joining the Tuesday night pro-

gram, Walter will be reunited with an old friend and classmate, Charles "Dead-pan" Butterworth, with whom he attended Notre Dame. Walter's addition to the Mardi Gras will not cause any changes in the permanent cast that includes Jane Rhodes, rhythm singer, and Raymond Paige with his orchestra and chorus.

Walter calls Hartford, Conn. his home. He went from there to Notre Dame, where he and Butterworth discussed ambitions for the theater, then turned to newspaper work. Shortly thereafter he suffered an attack of infantile paralysis and during the long months of recuperation he turned his hand to writing comedy lyrics and sketches. Upon recovering he headed for Broadway and broke in through night club work, with Texas Guinan at Barney Gallant's.

More Hollywood

Unusual human interest stories about motion picture stars and exclusive news stories of the film capital are among the "Hollywood Screenscoops" by George McCall, broadcast over the nationwide Columbia network each Tuesday and Thursday from 7:15 to 7:30 pm, EST.

George McCall brings to his radio audience a variety of experience in the theater, newspaper and motion picture fields that lends color to his reporting. In Hollywood he became famous through his "Roamin' Round Hollywood" column. Some of his other ventures included acting as publicity head for a motion picture company; his production of "The Last Moment", the picture which was awarded the French Academy Cinema Award in 1927; his appointment by the Canadian Government

to produce a picture of the opening of the Hudson Bay shipping route as a short cut to Europe; and for writing several feature stories and interviews for newspapers and magazines.

Mental Telepathy

Presenting a unique series of tests and experiments in mental telepathy under the supervision of several of America's leading university scientists, the Zenith Foundation presents its weekly broadcasts over a nationwide CBS chain at 10 pm EST on Sundays.

Conceived and founded by Commander E. F. McDonald, Jr., president of the Zenith Radio Corporation, under whose sponsorship the series is offered, the programs are designed to determine whether telepathy as an extra-sensory power exists and if so, to learn what such powers of the human mind are, how common they may be, to what extent they may be cultivated, and how they function.

The tests consist of the selection of various objects, designs, colors and other things quickly identifiable by the mind, by a mechanical device, the action of which is unpredictable. Ten especially selected telepathic senders then concentrate on the machine's selection and attempt to project the thought to the listening audience. Senders are isolated in a room away from the broadcasting studio, and they alone know the selections the machine has made, which are revealed only after several days have elapsed.

On the Mutual Bandwagon

Morton Gould, Mutual's youthful orchestra leader who has won a name for himself by his smartly sophisticated arrangements, is heard over Mutual from coast-to-coast on Mondays from 8 to 8:30 pm EST.. Jack Arthur is the soloist on this show... Two popular Mutual features formerly heard on Fridays are



The NBC has announced immediate construction of one of the world's greatest studio buildings in the hear! of Hollywood. The architect's sketch shows an ultra modern building, patterned after the motion picture unit plan, to house eight large studios and executive offices. This building will replace modernistic studios built only two years ago.

now broadcast on Saturdays . . . Pat Barnes and his Barnstormers with Paul Roberts, baritone, come to Mutual microphones from 8 to 8:30 pm Saturdays. Olga Baclanova's Continental Revue with Raoul Nadeau and the Chorus, comes to the stage of the Mutual Playhouse from 8:30 to 9 pm on Saturdays . . . Anson Weeks and his ever popular dance orchestra have returned to the Aragon Ballroom and the Mutual Network on Saturdays, succeeding Freddy Martin . . . With Weeks are vocalists Frankie Saputo, Margie Dee and a newcomer, Jack Wells.

Bits about NBC broadcasters: As might be expected, Edward Mac-Hugh, the Gospel Singer, collects hymn books. He has a library of 2,000. . . . Helen Jepson finds relaxation in the kitchen, specializing in fried frogs' legs which dinner guests pronounce a culinary masterpiece. . . . Smilin' Ed McConnell made his professional debut as a trap drummer at the age of nine.

Only the old timers in radio remember that Milton Cross sang as well as announced over NBC. That he is still heard singing IS news. As announcer for Ireene Wicker's Singing Lady programs over the Blue Network he joins her in singing The Song of the Week, a tune chosen by Miss Wicker for her unseen audience to learn and sing.

Inter-Club Plan for 1938

HAVING recently been selected to take charge of the Inter Club Co-operation Plan for the 1937-38 season, I cannot help but feel that I should present my views in regard to the Plan and the good which it can accomplish.

As Clearing House Manager this season, it is my hope to go a little beyond that which has been done in the past.

First of all, I hope by some method to reach an agreement with the all-night broadcasters, whereby they will agree to remain silent for at least one period each month, during which time the various clubs will be able to contact stations operating on the same or adjacent frequencies. In return, I feel that it would be no more than fair for the clubs to refrain from scheduling special programs from other stations on these during the balance of the month. Thus the all-night broadcaster would be assured of a clear channel except when he was silent.

Letters have been sent to each of the all-night stations and a few replies have so far been received. WEXL advises that it broadcasts from 8 a. m. to 4 a. m., EST, daily except Sunday, and also signs off at 2 a. m., EST, during the week of the frequency checks. WNEW says that it is off the air during the following periods: Sunday from 12:30 to 6:30 p. m. and 9 p. m. to 7 a. m. Monday; 2 to 5 and 8 to 10 p. m. on Mondays; and from 4 to 5 a. m. the second Wednesday of each month.

KGFJ observes silent periods during the week of the frequency checks as follows: Monday—5:10 to 6:30 a. m., EST; Tuesday—6:40 to 7 a. m.; Wednesday—5:50 to 6:50 a. m.; Thursday—5:10 to 6:50 a. m.; Friday—5:10 to 6:50 a. m.; and Sat-



Alistair Cooke, brilliant young critic, journalist and radio commentator, is heard over the NBC-Red Network. His talks are light and entertaining reflections of happenings in the worlds of politics, books, theater and the passing scene. Until recently, Mr. Cooke was film critic of the British Broadcasting Corporation.

urday—5:10 to 5:50. WIL advises that it is silent after 2 a. m., EST, on weekday mornings from the 8th to 14th of each month. WABY has no all-night program from the 8th to the 14th.

I have written the Bureau of Standards at Washington to learn about plans for possible test programs from foreign stations, such as were broadcast during the past two winters. It was my intention to aid these tests by seeing that affected channels were kept clear to avoid interference by dedicatory programs.

In reply, the Bureau advises that no European stations will be asked to participate in any tests this winter, but that LR1, Buenos Aires, has been requested to broadcast a series of programs. Just as soon as dates are confirmed, we will be advised ac-

cordingly.

I am further endeavoring to get a complete list of regular test periods from the various stations, that is, any periods which take place outside of the regular frequency checks during the second week of each month. Whenever I am advised of a test, I will attempt to keep the channel clear of other special programs.

It is my hope to be able to conduct this Clearing House on a strictly impartial basis. I will welcome ideas from readers on how the Plan may be bettered, and ask that all suggestions be sent direct to my home at 603 W. Market St., York, Pa.

Station News

KTSM, El Paso, Texas, will become a member of the NBC-Pacific supplementary group, available to either the Red or Blue Network. Lines are now being constructed to KTSM from Albuquerque, N. Mex., and NBC service will start as soon as these are completed, about April 1, 1938.

The two new Canadian stations, CBM and CBF, Montreal, have joined the NBC. CBM (formerly CRCM) carries the Red Network programs in English, and CBF carries the programs of either the Red or Blue Network with French announcements. CFCF, NBC affiliate since 1931, broadcasts Blue Network programs in English.

All the Cincinnati NBC stations are now available to either the Red or Blue Networks. WCKY at Covington, Ky. was formerly a Blue affiliate and WSAI was on the Red Chain. WLW continues as optional

to either network.

KFBK Sacramento and KMJ, Fresno, both owned by the Mc-Clatchey Broadcasting Company, have been granted special experimental authority to operate their regular broadcast transmitters for experimental facsimile signals from 12 midnight to 6:00 a.m. PST on their regularly assigned frequencies.

Station CHAB, Moose Jaw, which broadcasts many CBC programs, is being re-equipped from microphones to antenna. Sparing no expense in obtaining the last word in technical perfection, not one piece of its present equipment will remain in general use. H. Carson Buchanan, a pioneer broadcaster of Western Canada, is station manager.

CFAR, the new station at Flin Flon, Man., on 1370 kcs, is owned by the Arctic Radio Corp., 120 Main St. CFRB, Toronto, 690 kcs, has moved from Bloor St. to 622 Fleet St.

The studios of CHLT, 1210 kcs, are located at 3 Marquette St., Sherbrooke, P. Q.

Studios of CKBI, 1210 kcs, have been moved from the Canada Bldg. to the Sanderson Bldg., Prince Albert, Sask.

New Aerials for Millis

Westinghouse is erecting two modern directional antennas for use by W1XK at Millis, Mass. One aerial will be beamed toward South America and the other towards Europe. The directional aerial, together with an increase in power, will strengthen the signal ten times its present output, according to Walter Evans, manager of the radio division of Westinghouse.

VE9HS Identified

Mr. R. D. Cahoon of the Engineering Division, Canadian Broadcasting Corporation, Keefer Bldg., Montreal, P. Q., kindly forwards us information concerning shortwave station VE9HS. His letter follows:

"I note in your October Radio In-

dex in the section 'Shortwaves in Review', a request for information concerning Canadian shortwave station VE9HS. This station was operated during the summer on board the R. M. S. Nascopie under a portable license, doing experimental work on shortwave 'phone transmission from the Canadian Arctic to Ottawa. This station had an output power of 200-watts 'phone and operated on the following frequencies: 15190, 11705, 9820 kcs, as well as two lower frequencies for local testing.

"These tests were carried out with view to doing a series of broadcasts to be rebroadcast on the Canadian Broadcasting Corporation's network."

Amateur

CALLS HEARD

The names and addresses of persons reporting stations shown in this list are indicated by small letters following the call signs. Key to the small letters is given at the end of the column.

Canadian and United States calls heard are listed here only when reported by listeners not resident in North America. Cuban calls are not listed when heard by listeners in United States or Cuba.

CN8MB (l); EA9AH (bfl).

F3-: HM (l); NF (l); OO (l); F8-: DC (l); JI (l); QD (l); RR (g).

G2AV (f); G2PU (l); G5RV (l); G5ZJ (l); G6-: BW (gl); DL (l); DT (l); GF (l); LK (gl); WP (l); XR (f); G8SB (l).

HC1-: FG (f); JB (fgk); PM (f); HH-: 2B (fl); 2X (fl); 5PA (f); HI-: 3N (dfl); 5X (l); 7A (l); 7G (l); 7I (f); HK-: 1EP (k); HW (f); 2JA (f); 3JA (fk); HP1A (f); HR5C (l).

KA1-: BH (km); HS (k); ME (kl); K4-: EJF (l); SA (g); K6-: BAZ (fk); BNR (fk); CMC (f); GQF (fl); ICL (g); JHD (l); JLV (f); KMB (fk); LCV (g); MZK (f); NTV (g); NZQ (fkl); OJI (f); OQE (fk).

(fk).

LA1G (l); LU-: 1HI (fk); 4BH (f); 5C (l); 6AF (f); 9BV (f); NY2AE (fk).

OA4-: AE (f); AI (g); AL (fg); C (f); ON4VK (fl); OQ5AA (fj); OX2QY (deijl).

PAOZB (g); PK-: 1GL (l); 1MX (a); 2WR (l); 6CI (a); PY2AK (f).

SUISG (f); TI-: 1AF (f); 2AV (fk); 2DC (g); 2FG (i); 2FJ (l); 2KP (f); 2LR (f); 2OFR (f); 2RC (f); 3EA (l).

VK2-: ADE (f); ADT (l); AFQ (f); AGE (l); AP (f); BQ (fm); CP (f); DJ (l); HF (fl); HS (l); OU (l); QR (f); ZC (l); VK3-: AL (fl); AO (l); WA (l); VK4JU (f); VK4VD (f); VK5BP (l); VO-: 2N (f); ZZ (l); 6D (f); 6L (g); VP3BG (l); VP3THE (df); VP7NC (l); VP9R (ghl); VU-: 2CQ (c); 2JN (c); 7FY (c).

XE1-: BC (f); BX (m); CV (g); DT (f); GF (g); GK (f); GS (g); LK (fk); Y (fk); XE2-: AF (g); FC (fg); K (k); XE3AH (g); XE3AR (f).

RADIO AMATEUR CALL BOOK

LATEST EDITION

Lists over 40,000 amateurs in every country in the world as well as complete and accurate lists of all high frequency commercial and broadcasting stations. Every listener interested in amateur stations should have one. 292 pages.





TIME CONVERTER

The RADEX Map of the World with Time Converting Dial is the most useful accessory any radio fan could have around. Just a twirl of the dial shows the correct time at any location in the world. No calculation is necessary; the dial does all the work.

You Can't Get Along Without It.

The price is only

2.5c
(26c in Ohio)

YV4: AB (*l*); AF (*l*); AO (*g*); AX (*l*); **YV5**: AA (*f*); ABA (*l*); ABF (fgln); ABG (*l*); AB (*fl*); AE (*kl*); AM (*fl*); AS (*f*).

ZS3E; ZS5M; ZT5H; ZT5S; ZT6AL; ZT6AN; ZU6AF; ZU6AJ; ZU6P (All heard by f).

The Reporters

(a) Gail Beyer, 3226 Sunnyside A Chicago, Ill. (Hallicrafters SSA)

Chicago, Ill. (Hallicrafters SSA).

(b) Carl and Anne Eder, Willmar, Minn.

(c) Raphael Geller, 1652 Radcliff Ave.,

Bronx, N. Y.

(d) Gilbert Harris, 60 N. Holden St., N. Adams, Mass.
(e) Edward Hughes, 1212 Castlewood Ave., Louisville, Ky.
(f) Merton T. Meade, 819 Wyandotte St.,

Kansas City, Mo. (Stromberg-Carlson Converter).

(g) Martin Olthoff, 212 N. 16th, Inde-

y, Marun Oltholi, 212 N. 16th, Independence, Kans. (REM69).

(h) Benjamin Peet, 352 Pleasant Ave., New York, N. Y.

(i) David Schaller, Biggs Hospital, Ithaca, N. Y.

(j) Jack Siringer. 1451 Lincoln Ave., Lakawood Obio

Lakewood, Ohio. (k) Dale Smith, Route 3, Box 536. Eugene, Ore.
(1) Al Steinmetz,

(l) Al Steinmetz, 125 W. 27th St., Bayonne, N. J. (RCA-ACR 136). (m) Hadley Wilcox, 623 W. 40th Place, Los Angeles, Calif. (Tiffany Tone). (n) William Wood, 817½ Lake St., Oak Park, Ill (Zenith 10-S-160).

Sidelights on Linton Wells, author, adventurer and NBC commentator: Has circumnavigated the globe nine times and visited all but five countries of the world . . . Twelve foreign nations have honored him with decorations and three countries have given him commissions in their armies . . . Has written four books including the current best seller. Blood On the Moon.

Herbert J. Sadler, organist on the CBC Sunday night feature, "The Choristers", is already well-known to Canadian radio audiences as the organist of "The Vesper Hour", a national network programme for over three years. He is a charter member of the Winnipeg Chapter of the Canadian College of Organists. and was the first Winnipeg organist to obtain the associate degree of the College.

Pitcairn Isle

(Continued from Page 12)

meat and other necessities from steamers plying in the Australian trade lanes.

Young has made it his task to arrange with shipmasters to stop at some near distance from the island. He talks with vessels within a 400 mile radius of the tiny isle and has, on occasion, received messages from vessels 1000 miles away. Radiomen regard this as a remarkable feat considering the age of his equipment.

Pitcairn Island is known to radio operators who have heard of it as an amateur's paradise. The nearest automobile interference is 1.000 miles away; and except for PITC's lone storage battery, electricity is unknown on the island. Other interference is at a minimum. PITC is housed in a tiny, iron roofed shack next to Young's home and maintains a watch of more than 10 hours daily.



Broadcasting House, London. This new building houses the studios and offices of the British Broadcasting Corp. Programs originating in this building are heard throughout the entire world through the Empire Shortwave Service.

Ultra-High Frequencies Allocated

S A RESULT of experimentation during the past few years, the Federal Communications Commission has decided to provide allocations of frequencies to various classes of service in the newly developed portion of the radio spectrum from 25,000 kilocycles to 300,000 kilocycles. Heretofore the rules have been confined to that portion of the radio band from 10 kcs. to 25,000 kcs. only.

The new allocation is covered in Orders No. 18 and No. 19. Order No. 18 concerns allocation from 10 to 30,000 kilocycles. No changes have been made in this part of the spectrum, except that the band from 25,600 to 26,600 kcs. has been set aside for broadcasting.

Order No. 19 covers the allocation of frequencies from 30,000 to 300,000 kcs. All the frequencies in this range, except the amateur band between 56,000 and 60,000 kcs., are assigned to specific services for the first time. All the outstanding licenses in this frequency range, except amateur and point-to-point communication in Hawaii, are for experimental services.

Seven channels between 44,000 and 108,000 kcs. are made available for the assignment of television stations. Television broadcast is also assigned twelve channels between 156,000 and 300,000 kcs. Each television channel is 6 megacycles (6000 kcs.) wide, and provides for the picture broadcast as well as the accompanying synchronized sound.

In the band 41,020 to 43,980 kcs., 75 channels are made available for assignment to aural broadcast stations.

Sixteen channels for relay broadcast stations are provided in the band from 30,830 to 39,820 kcs. These channels will enable a continuance of the existing stations, as well as provide additional facilities for the growth of relay broadcast service. This number of channels and limited interference range is such that it will be possible to license every regular broadcast station for two relay stations in this band, the frequencies, of course, being available only on a shared basis.

Police Service

The allocation of frequencies between 30,000 and 40,000 kcs. provides 29 frequencies for assignment to police service. Of these frequencies, 25 will be available to municipal and county government and four to state police agencies. The frequencies will be assigned on a shared basis.

In this same band (30,000-40,000), four frequencies have been set aside primarily for use in instructing student airplane pilots during initial solo flights.

Other services which have been assigned frequencies on these ultrahigh bands are the Forestry Service, Mobile Press Service, Geophysical and Motion Picture Service, Coastal and Ship Harbor, Special Emergency, Marine Fire and other services.

Sidelights on Ted Fio-Rito, music conductor of the new Jack Haley show on NBC: Hobby is medicine and he reads everything on the subject he can lay his hands on . . . Hobnobs with physicians and surgeons and occasionally crashes an operation . . . Is fond of a pet canary he calls "Mr. Peebles" . . . And proud of a night club piano painted white and autographed by more than 2,000 celebrities with whom he has worked.

The Frequency Checks

In o	rder t	o inc	clude many of the				d Tuesday
			ich have recently	2:00-2:20 2:10-2:20	WBAX WDAS	$\frac{1210}{1370}$	Wilkes Barre, Pa. Philadelphia, Pa.
				2:20-2:40	WBBL	1210	Richmond, Va.
			he engineers of the	2:30-2:50	WFBG	1310	Altoona, Pa.
Federa	ıl Cor	nmui	nications Commis-	2:40-3:00	WMBG	1210	Richmond, Va.
sion ha	ave rev	rised	their list of month-	2:50-3:10	WEBR	1310	Richmond, Va. Buffalo, N. Y. Duluth, Minn.
			k-broadcasts. The	3:00-3:20	${f KDAL} \\ {f WLVA}$	1500 1200	Lynchburg, Va.
				3:10-3:30	KPAC	1260	Port Arthur, Tex.
			ith times given in		WBTM	1370	Danville, Va.
Easter	n Star	ıdard	, follows:	3:20-3:40	WKRC	550	Cincinnati, Ohio Rochester, N. Y.
	Th	~ E	id Monday	9.90 0.50	WHEC	1430	Rochester, N. Y.
2:00-2:20	WLNH	1310		3:30-3:50	WNAD WMBC	1010 1420	Norman, Okla. Detroit, Mich.
2:00-2:20	WJBO	1420	Laconia, N. H. Baton Rouge, La.		WRAK	1370	Williamsport, Pa.
2:10-2:30	WBRB	1210	Red Bank, N. J.	3:40-4:00	KFVS	1210	Cape Girardeau, Mo.
	WHBB	1500	Selma, Ala.	0 50 4 40	WJAC	1310	Johnstown, Pa.
2:20-2:40	WMAS	1420	Springfield, Mass.	3:50-4:10	WTAW WBNS	$\frac{1120}{1430}$	College Station, Tex.
2:30-2:50	WIOD	610 1500	Miami, Fla.		WBNY	1370	Columbus, Ohio Buffalo, N. Y.
2:30-2:30	WJBW	1200	Woodside, N. Y. New Orleans, La.	4:00-4:20	WCOL	1210	Columbus, Ohio
2:40-3:00	WOKO	1430	Albany, N. Y.		\mathbf{wbre}	1310	Wilkes Barre, Pa.
	WMBR		Jacksonville, Fla.	4:10-4:30	KLPM	1240	Minot, N. Dak.
2:50-3:10	WCAX	1200	Burlington, Vt.		WPAR WPAY	1420 1370	Parkersburg, W. Va. Portsmouth, Ohio
3:00-3:20	WOPI WMBO	1500 1310	Bristol, Tenn. Auburn, N. Y.	4:20-4:40	KRMD	1310	Shreveport, La.
8.00-8.20	WMSD	1420	Sheffield, Ala.	2120 2110	WOMT	1210	Manitowoc. Wis.
3:10-3:30	WOC	1370	Davenport, Ia.		wsyr	570	Syracuse, N. Y. Decorah, Ia.
	WCAD	1220	Canton, N. Y.	4:30-4:50	KGCA	1270	Decorah, la.
0.00.0.10	WRGM		Grenada, Miss.		WCLE WNBF	610 1500	Cleveland, Ohio
3:20-3:40	KWLC WMBQ	1270 1500	Decorah, Ia. Brooklyn, N. Y. Memphis, Tenn.	4:40-5:00	KTEM	1370	Binghamton, N. Y. Temple, Tex.
	WNBR	1430	Memphis Tenn	2110 0100	KGBU	900	Ketchikan, Alaska
3:30-3:50	KFPW	1210	Fort Smith, Ark.		WGH	1310	Newport News, Va.
	WDBO	580	Orlando, Fla.	4:50-5: 10	KGVO	1260	Missouia, Mont.
0.40.4.00	WMFF	1310	Plattsburg, N. Y.		KRLH WHK	1420	Midland, Tex.
3:40-4:00	KABC WQDM	1420 1390	San Antonio, Tex.		wwsw	1390 1500	Cleveland, Ohio Pittsburgh, Pa.
	WSMB	1320	St. Albans, Vt. New Orleans, La.	5:00-5:20	KGCX	1450	Wolf Point, Mont.
3:50-4:10	WFAS	1210	White Plains, N. Y.		KRMC	1370	Jamestown, N. D.
	WHEF	1500	Kosciusko, Miss.		WSAY	1210	Rochester, N. Y.
4:00-4:20	KFDM KLS	560 1280	Beaumont, Tex.	5:10-5:30	WSPD KAST	1340 1370	Toledo, Ohio Astoria, Ore.
	WAGF	1370	Oakland, Calif.	0.10-0.00	KNET	1420	Palestine, Tex.
	WCAP	1280	Dothan, Ala. Asbury Park, N. J.		WAVE	940	Louisville, Ky.
4:10-4:30	KCRJ	1310	Jerome, Ariz.	5:20-5:40	KCMO	1370	Kansas City, Mo.
	KMLB	1200	Monroe, La. Merced, Calif.		KFJI WXYZ	1210 1240	Klamath Falls, Ore.
4:20-4:40	KYOS KLUF	1040 1370	Merced, Call. Gaiveston, Tex.	5:30-5:50	KIDW	1420	Detroit, Mich. Lamar, Colo.
4.20-4.40	KGDM	1100	Stockton, Calif.	0.00 0.00	KPQ	1500	Wenatchee, Wash.
	WDEV	550	Waterbury, Vt.		WGAR	1450	Cleveland, Ohio
	WDNC	1500	Waterbury, Vt. Durham, N. C.	5:40-6:00	KFIO	1120	Spokane, Wash.
4:30-4:50	KROC KGAR	1310 1370	Rochester, Minn.		\mathbf{KQV} \mathbf{WCAT}	1380 1200	Pittsburgh, Pa.
	KALB	1210	Tucson, Ariz.	5:50-6:10	KLAH	1210	Rapid City, S. Dak. Carlabad N. Mex
4:40-5:00	KOVC	1500	Alexandria, La. Valley City, N. D.		KORE	1420	Carlsbad, N. Mex. Eugene, Ore.
	KROY	1210	Sacramento, Calif.	6:00-6:20	Koos	1200	Marshfield, Ore.
4.50 5.10	WBNO	1200	New Orleans, La.		WLBL	900	Stevens Point, Wis.
4:50-5:10	KEUB KRE	1420 1370	Price, Utah		The	Second	Wednesday
	WLAK	1310	Berkeley, Calif. Lakeland, Fla.	2:00-2:20	WMFJ	1420	Daytona Beach, Fla.
5:00-5:20	KBST	1500	Big Spring, Tex.	2:10-2:30	WAIM	1200	Anderson, S. C.
	CONTRACT.	1450	Eureka, Calif.	2:20-2:40	KVOL	1310	Lafayette, La.
	KIEM						
	WFOY	1210	St. Augustine, Fla.	2:30-2:50	WHBQ	1370	Memphis, Tenn.
5:10-5:3 0	WFOY KDON	$\frac{1210}{1210}$	Monterrey, Calif.	2:40-3:00	WKAQ	1240	Lafayette, La. Memphis, Tenn. San Juan, P. R.
5:10-5:30	WFOY KDON WMIN	1210 1210 1370	Monterrey, Calif. St. Paul, Minn.	2:40-3:00 2:50-3:10	WKAQ WSJS	1240 1310	Winston-Salem, N. C.
	WFOY KDON WMIN WTAL	$\frac{1210}{1210}$	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla.	2:40-3:00	WKAQ	1240	Winston-Salem, N. C. Cincinnati, Ohio
5:20-5:40	WFOY KDON WMIN WTAL KTRH KUMA	1210 1210 1370 1310 1290 1420	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz.	2:40-3:00 2:50-3:10	WKAQ WSJS WCPO WMFD KFIZ	1240 1310 1200 1370 1420	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis.
5:20-5:40	WFOY KDON WMIN WTAL KTRH KUMA WAIR	1210 1210 1370 1310 1290 1420 1250	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30	WKAQ WSJS WCPO WMFD KFIZ WPAX	1240 1310 1200 1370 1420 1210	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga.
	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ	1210 1210 1370 1310 1290 1420 1250 1370	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia.	2:40-3:00 2:50-3:10 3:00-3:20	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO	1240 1310 1200 1370 1420 1210 1370	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo.
5:20-5:40	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ KWG	1210 1210 1370 1310 1290 1420 1250 1370 1200	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia. Stockton, Calif.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO WCLO	1240 1310 1200 1370 1420 1210 1370 1200	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo. Janesville, Wis.
5:20-5:40 5:30-5:50	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ	1210 1210 1370 1310 1290 1420 1250 1370	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia. Stockton, Calif. Gulfport, Miss.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO WCLO WRDW	1240 1310 1200 1370 1420 1210 1370 1200 1500	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo. Janesville, Wis. Augusta, Ga.
5:20-5:40	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ KWG WGCM KGMB KGLO	1210 1210 1370 1310 1290 1420 1250 1370 1200 1210 1320 1210	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia. Stockton, Calif. Gulfport, Miss. Honolulu, T. H. Mason City, Ia.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO WCLO WRDW WQBC KAND	1240 1310 1200 1370 1420 1210 1370 1200 1500 1360 1310	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo. Janesville, Wis.
5:20-5:40 5:30-5:50 5:40-6:00 5:50-6:10	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ KWG WGCM KGMB KGLO KVCV	1210 1210 1370 1310 1290 1420 1250 1370 1200 1210 1320 1210 1200	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia. Stockton, Calif. Gulfport, Miss. Honolulu, T. H. Mason City, Ia. Redding, Calif.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO WCLO WRDW WQBC KAND KPLC	1240 1310 1200 1370 1420 1210 1370 1200 1500 1360 1310 1500	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo. Janesville, Wis. Augusta, Ga. Vicksburg, Miss. Corsicana, Texas Lake Charles, La.
5:20-5:40 5:30-5:50 5:40-6:00	WFOY KDON WMIN WTAL KTRH KUMA WAIR KFGQ KWG WGCM KGMB KGLO	1210 1210 1370 1310 1290 1420 1250 1370 1200 1210 1320 1210	Monterrey, Calif. St. Paul, Minn. Tallahassee, Fla. Houston, Texas. Yuma, Ariz. Winston-Salem, N. C. Boone, Ia. Stockton, Calif. Gulfport, Miss. Honolulu, T. H. Mason City, Ia.	2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40	WKAQ WSJS WCPO WMFD KFIZ WPAX KOKO WCLO WRDW WQBC KAND	1240 1310 1200 1370 1420 1210 1370 1200 1500 1360 1310	Winston-Salem, N. C. Cincinnati, Ohio Wilmington, N. C. Fond du Lac, Wis. Thomasville, Ga. La Junta, Colo. Janesville, Wis. Augusta, Ga. Vicksburg, Miss. Corsicana, Texas

3:50-4:10	KARK	890	Little Rock, Ark.		wows	1370	Champaign, Ill.
	\mathbf{WGPC}	1420	Albany, Ga.	5:50-6:10	KGKB	1500	Tyler, Texas
4:00-4:20	KFJZ	1370	Fort Worth, Tex.		KSUN	1200	Lowell, Ariz.
	WHBU	1210	Anderson, Ind.		WBCM	1410	Bay City, Mich.
	WJNO	1200	W. Palm Beach, Fla.	6:00-6:20	KGFL	1370	Bay City, Mich. Roswell, N. M.
4:10-4:30	WBEO	1310	Marquette, Mich.	6:10-6:30	KGIW	1420	Alamosa, Colo.
#.10-I.00	WCOC	880	Meridian, Miss.	0.10 0.00	KHBC	1400	Hilo T H
		1250		6:20-6:40	KVEC	1200	Hilo, T. H. San Luis Obispo, Calif.
4 00 4 40	WLB		Minneapolis, Minn.	0:20-0:40			
4:20-4:40	KSO	1430	Des Moines, Ia.		, WGL	1370	Fort Wayne, Ind.
	WKEU	1500	Griffin, Ga.	6:30-6:50	KSUB	1310	Cedar City, Utah
	WOSU	570	Columbus, Ohio		The	. E	nd Friday
4:30-4:50	KALB	1210	Alexandria, La.		• • • • • • • • • • • • • • • • • • • •	9 3660	nu Friday
	wexl	1310	Royal Oak, Mich.	2:00-2:20	WGNY	1210	Newhurgh N V
	\mathbf{WHLB}	1370	Virginia, Minn.	2:10-2:30	WCNW	1500	Newburgh, N. Y. Brooklyn, N. Y. Freeport, N. Y.
4:40-5:00	KPLT	1500	Parls, Tex.	2:20-2:40	WGBB	1210	Encepant M. I.
2110 0100	WJMS	1420	Ironwood, Mich.				Freeport, N. 1.
	WJRD	1200	Tuscaloosa, Ala,	2:30-2:50	WABY	1370	Albany, N. Y.
4:50-5:10	KFXR	1310		2:50-3:10	WSYB	1500	Rutland, Vt.
#:90-9:10		1440	Oklahoma City, Okla.	3:00-3:20	WABI	1200	Bangor, Me.
	WBIG		Greensboro, N. C. Springfield, Ill.	3:20-3:40	$\mathbf{w}\mathbf{m}\mathbf{x}$	1200	Utica, N. Y.
	WTAX	1210	Springheid, III.	3:30-3:50	KASA	1210	Elk City, Okla.
5:00-5:20	KFJB	1200	Marshalltown, Ia.		WAGM	1420	Presque Isle, Me.
	WEOA	1370	Evansville, Ind.	3:40-4:00	KWOS	1310	Jefferson City, Mo.
5:10-5:30	\mathbf{KPDN}	1310	Pampa, Tex.	0120 2100	WNBZ	1290	Saranac Lake, N. Y.
	$\mathbf{w}\mathbf{p}\mathbf{z}$	1020	Tuscola, Ill.	3:50-4:10	WJBK	1500	Dotroit Mich
5:20-5:40	KELD	1370	Eldorado, Ark.	3.30-1.10	WMBH	1420	Detroit, Mich. Joplin, Mo.
0.20 0.20	WAYX	1200	Wayeross, Ga.				
	WKBN	570	Youngstown, Ohio	4 00 4 00	WRDO	1370	Augusta, Me.
F.00 F.F0		1210	Dorde Lake N D	4:00-4:20	\mathbf{KIUL}	1210	Garden City, Kans.
5:30-5:50	KDLR		Devils Lake, N. D.		WTHT	1200	Hartford, Conn.
	WADC	1320	Akron, Ohio	4:10-4:30	KICA	1370	Clovis, N. M.
5:40-6:00	KRBC	1420	Abilene, Tex.		WCAZ	1070	Carthage, Ill.
	WSAU	1370	Wausau, Wis.		WNLC	1500	New London, Conn.
5:50-6:10	\mathbf{KFPL}	1310	Wausau, Wis. Dublin, Texas	4:20-4:40	WMFG	1210	Hibbing, Minn.
	WFAM	1200	South Bend, Ind.	4:30-4:50	KIUP	1370	Durango, Colo.
6:00-6:20	KLCN	1290	Blytheville, Ark.	1.00-1.00	WPAD	1420	Paducah, Ky.
.0100 01=0	WELL	1420	Battle Creek, Mich.	4.40 5.00	TANOW	1500	
6:10-6:30	KGBX	1230	Springfield, Mo.	4:40-5:00	KNOW		Austin, Tex.
0.10-0.30	WMPC	1200	Lapeer, Mich.		WEMP	1310	Milwaukee, Wis.
0.00 0.40	KABR	1420	Aberdeen, S. D.	4:50-5:10	WEW	760	St. Louis, Mo.
6:20-6:40					\mathbf{WGRC}	1370	New Albany, Ind.
6:30-6:50	$\mathbf{K}\mathbf{F}\mathbf{X}\mathbf{J}$	1200	Grand Junction, Colo.	5:00-5:20	KlUN	1420	Pecos, Tex.
	The	Second	i Thursday		WEBQ	1210	Harrisburg, Ill.
				5:10-5:30	\mathbf{KGEK}	1200	Sterling, Colo. Ashland, Ky.
2:00-2:20	wsvs	1370	Buffalo, N. Y.		WCMI	1310	Ashland, Ky.
2:10-2:30	WKOK-	1210	Sunbury, Pa.	5:20-5:40	KMAC	1370	San Antonio, Tex.
2:20-2:40	WRAW	1310	Reading, Pa.		w.iw	1210	Akron · Ohio
2:30-2:50	WJTN	1210	Jamestown, N. Y.	5:30-5:50	WJW	1210	Akron, Ohio St. Louis, Mo
2:30-2:50		1210 1210 1310	Jamestown, N. Y.	5:30-5:50	$_{ ext{WIL}}^{ ext{WJW}}$	$\frac{1210}{1200}$	St. Louis, Mo.
2:30-2:50 2:40-3:00	$f WJTN \ WTEL$	1210 1310	Jamestown, N. Y.		$egin{array}{c} \mathbf{WJW} \\ \mathbf{WLBC} \end{array}$	1210 1200 1310	St. Louis, Mo. Muncie, Ind.
2:30-2:50 2:40-3:00 2:50-3:10	WJTN WTEL WHIS	1210 1310 1410	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va.	5:30-5:50 5:40-6:00	WJW WIL WLBC KTOK	1210 1200 1310 1370	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20	WJTN WTEL WHIS WQAN	1210 1310 1410 880	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa.	5:40-6:00	WJW WIL WLBC KTOK WKBB	1210 1200 1310 1370 1500	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30	WJTN WTEL WHIS WQAN WLEU	1210 1310 1410 880 1420	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa.		WJW WIL WLBC KTOK WKBB KANS	1210 1200 1310 1370 1500 1210	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40	WJTN WTEL WHIS WQAN WLEU WBLK	1210 1310 1410 880 1420 1370	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa.	5:40-6:00 5:50-6:10	WJW WIL WLBC KTOK WKBB KANS WHBY	1210 1200 1310 1370 1500 1210 1200	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ	1210 1310 1410 880 1420 1370 1310	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa.	5:40-6:00 5:50-6:10 6:00-6:20	WJW WIL WLBC KTOK WKBB KANS WHBY WACO	1210 1200 1310 1370 1500 1210 1200 1420	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC	1210 1310 1410 880 1420 1370 1310 1200	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa. Bloomington, Ill.	5:40-6:00 5:50-6:10	WJW WIL WLBC KTOK WKBB KANS WHBY	1210 1200 1310 1370 1500 1210 1200	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex. Decatur, Ill.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL	1210 1310 1410 880 1420 1370 1310 1200 1370	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas	5:40-6:00 5:50-6:10 6:00-6:20	WJW WIL WLBC KTOK WKBB KANS WHBY WACO	1210 1200 1310 1370 1500 1210 1200 1420	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex. Decatur, Ill.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL WHAT	1210 1310 1410 880 1420 1370 1310 1200 1370 1310	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas Philadelphia, Pa.	5:40-6:00 5:50-6:10 6:00-6:20 6:10-6:30	WJW WIL WLBC KTOK WKBB KANS WHBY WACO WJBL	1210 1200 1310 1370 1500 1210 1200 1420 1200	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL	1210 1310 1410 880 1420 1370 1310 1200 1370 1310 1420	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas Philadelphia, Pa. Lexington, Ky.	5:40-6:00 5:50-6:10 6:00-6:20 6:10-6:30 6:20-6:40	WJW WIL WLBC KTOK WKBB KANS WHBY WACO WJBL KRQA WHDF	1210 1200 1310 1370 1500 1210 1200 1420 1200 1310	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis, Waco, Tex. Decatur, Ill. Santa Fe, N. M. Calumet, Mich.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00 3:50-4:10	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL WHAT	1210 1310 1410 880 1420 1370 1310 1200 1370 1310 1420	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Clarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas Philadelphia, Pa.	5:40-6:00 5:50-6:10 6:00-6:20 6:10-6:30	WJW WIL WLBC KTOK WKBB KANS WHBY WACO WJBL KRQA	1210 1200 1310 1370 1500 1210 1200 1420 1200 1310	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okia. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex. Decatur, Ill. Santa Fe, N. M.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:00	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL WHAT WLAP KRIS WHDL	1210 1310 1410 880 1420 1370 1310 1200 1370 1310	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Ciarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas Philadelphia, Pa. Lexington, Ky. Corpus Christi, Tex. Olean, N. Y.	5:40-6:00 5:50-6:10 6:00-6:20 6:10-6:30 6:20-6:40	WJW WIL WLBC KTOK WKBB KANS WHBY WACO WJBL KRQA WHDF KGDE	1210 1200 1310 1370 1500 1210 1200 1420 1310 1370 1200	St. Louis, Mo. Muncle, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis. Waco, Tex. Decatur, Ill. Santa Fe, N. M. Calumet, Mich. Fergus Falls. Minn.
2:30-2:50 2:40-3:00 2:50-3:10 3:00-3:20 3:10-3:30 3:20-3:40 3:30-3:50 3:40-4:10 4:00-4:20	WJTN WTEL WHIS WQAN WLEU WBLK WSAJ WJBC KGKL WHAT WLAP KRIS WHDL	1210 1310 1410 880 1420 1370 1310 1200 1370 1310 1420 1330 1400	Jamestown, N. Y. Philadelphia, Pa. Bluefield, W. Va. Scranton, Pa. Erie, Pa. Ciarksburg, W. Va. Grove City, Pa. Bloomington, Ill. San Angelo, Texas Philadelphia, Pa. Lexington, Ky. Corpus Christi, Tex. Olean, N. Y.	5:40-6:00 5:50-6:10 6:00-6:20 6:10-6:30 6:20-6:40	WJW WIL WLBC KTOK WKBB KANS WHBY WACO WJBL KRQA WHDF KGDE	1210 1200 1310 1370 1500 1210 1200 1420 1310 1370 1200	St. Louis, Mo. Muncie, Ind. Oklahoma City, Okla. E. Dubuque, Ill. Wichita, Kans. Green Bay, Wis, Waco, Tex. Decatur, Ill. Santa Fe, N. M. Calumet, Mich.
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4:10-4:30	KFQD	780	Anchorage, Alaska
	KONO	1370	San Antonio, Tex.
	WKBZ	1500	Muskegon, Mich.
4:20-4:40	KRLC	1390	Lewiston, Idaho
	KTSM	1310	El Paso, Tex.
	WBHP	1200	Huntsville, Ala.
4:30-4:50	KOCA	1210	Kilgore, Tex.
	KUJ	1370	Walla Walla, Wash.
4:40-5:00	KCMC	1420	Texarkana, Texas
	KRNR	1500	Roseburg, Ore.
	WGTM	1310	Wilson, N. C.
4:50-5:10	KEEN	1370	Seattle, Wash.
	KWTN	1210	Watertown, S. Dak.
5:00-5:20	KGFF	1420	Shawnee, Okla.
	KIT	1310	Yakima, Wash.
5:10-5:30	KBTM	1200	Jonesboro, Ark.
	KRKO	1370	Everett, Wash.
5:20-5:40	KFRO	1370	Longview, Tex.
	\mathbf{KGEZ}	1310	Kalispel, Mont.
5:30-5:50	KBIX	1500	Muskogee, Okla.
	KFXD	1200	Nampa, Idaho
5:40-6:00	KFJM	1410	Grand Forks, N. D.
	KXRO	1310	Aberdeen, Wash.
5:50-6:10	KGY	1210	Olympia, Wash.
6:00-6:20	KINY	1310	Juneau, Alaska
6:10-6:30	KMED	1410	Medford, Ore.
6:20-6:40	KVOS	1200	Bellingham, Wash.

ZNS, Nassau

A letter from the Superintendent of Telegraphs gives complete information concerning the new broadcasting station in Nassau, Bahamas.

Station ZNS transmits on 540 kcs with 400 watts power, on two daily schedules. The first transmission is from 1:30 to 1:45 pm, EST, and the second from 8:30 to 9:30 pm, EST. Programs from the shortwave station at Daventry are sometimes picked up and relayed at 8:00 pm.

Reports are requested and will be acknowledged. The address is Superintendent of Telegraphs, Box 48, Nassau N. P., Bahamas.

Always Prepay Postage

When writing to overseas stations it is customary to enclose return postage in the form of International Reply coupons. These can be procured from any Post Office for nine cents each, and can be exchanged in any country in the Universal Postal Union for postage stamps on a first class letter to this country. Contrary to some published reports, all countries are members of the



Sheilah Graham, London-born actress, authoress and columnist. Miss Graham studied to be an actress at the Royal Academy of Dramatic Arts, London, and did her first writing in the London Daily Mail.

UPU except Laccadive and Maldive Island, the State of Alaouites, Northern Rhodesia, and Tonga. Radio stations in which we are interested do not exist in any of these localities.

The Spanish Alphabet

A, Ah	O, Oh
B, Bay	P, Pay
C, Say or thay	Q, Koo
D, Day	R, Air-ray
E, Ay	S, Ess-say
F, Ef-fay	T, Tay
G, Hay	U, Oo
H, Ah-chay	V, Vay
I, Ee	W, Doo-ble-vay
J, Ho-tah	X, eckis; ay-kis;
K, Kah	ek-key
L, El-lay	Y, Yay
M, Em-may	Z, Zed.

The Biography of Julius Twisdile

O BEGIN with, Julius is not an ordinary person. At the lovable and tender age of three, when most infants are fumbling with toys, Julius was patiently "pushing the slider" of a self-made crystal set. The neighbors marveled at his prowess and one of the local newspapers gave him front page publicity. All in all, everyone was of the opinion that someday Julius would take his place along with Marconi, Amlie and other great names in radio.

However, greatness was not meant for our hero, for Julius was bitten by the DX bug on his fifth birthday. It seems that he was listening to a local station and another station a thousand miles distant suddenly put in its appearance on an adjoining channel. Although the signals were not strong and identification seemed virtually impossible, Julius stayed at the controls and after three hours of steady vigilance finally succeeded in learning the call and location of the station. With a cry of victory, he ran to tell mamma and papa of his catch, but alas, in his excitement, he had forgotten to remove his headphones and his set lay dashed to bits upon the floor.

Fortunately, Julius had a bighearted papa who consented to purchase him a two tube Blooper so that he could continue his conquest of the ether. In the four years following, Julius heard five hundred and six broadcast stations and made a specialty of collecting pretty cards and letters of confirmation from the stations. Julius was quite revolutionary in his system of verifying. Instead of reporting but once requesting a verification, he attempted to secure twenty-four con-



Martha Tilton's rhythmic vocal interpretations of Benny Goodman's orchestra during the Swing School broadcasts, a part of the Camel Caravan program. Miss Tilton was "discovered" by Goodman when she went to Hollywood to join the Oakie College Glee Club.

firmations from each station heard—one for each hour of the day. In the Spring of 1928 Julius had eleven thousand and thirty-seven veries.

Julius received great criticism from members of the DX fraternity. who pointed out that it was foolish for him to verify a station twenty four times when one veri was sufficient to prove definite reception of any station. Julius, however, was quite satisfied with his system, maintaining that a station was received under different conditions every hour of the day. He also stated that a DXer who counted a transmitter, operating under two different calls, as two stations; or one who counted a slight change in frequency, a change of studio location or a change of call letters as new stations was by no means any more efficient than was he.

In the fall of 1928, the Twisdile heir became interested in short wave reception and proceeded to log stations from all corners of the world -broadcasting, commercial phone, amateur and what have you. Julius found this type of DXing far more interesting and educational than his earlier love, and some claim that he is able to converse in five languages with a reading knowledge of several more. He is well acquainted with the political setup, the geography and the economics of almost every country in the world, and it has been said that he is studying for the diplomatic service.

Julius was also very original in tabulating locations of stations heard. In the first place he never bothered about verifying all continents because he found that in his huge collection he had but one confirmation from Antarctica and was very much ashamed to admit that he had but one VAC. In the second place his method of counting countries was most unique. Every state in the United States, every province in Canada; in fact anyplace which possessed a border was counted as a different country. To say the least, Julius' log of verified countries reached amazing proportions and it is doubtful if any DXer in the entire world could have "touched him."

As you can probably guess, the SWL's Inc. ridiculed our hero and "poo-pooed" his system, stating that a country should consist of this, that and the other thing. Julius, however, was undaunted and replied that his system was, at least, consistent, and that those who counted Baffin Island, Yucatan, Tasmania and the Aleutian Islands as countries the same as The United States, were, in a great degree, far more inconsistent than he.

Tommy Riggs

Tommy Riggs, whose vocal chords harbor the popular little radio star, "Betty Lou," modestly began life in Pittsburgh, Pa., on October 21, 1908.

His father was superintendent of a steel firm in the aptly named "Smoky City." Young Tommy could only think of two things—he wanted to be a football star and an actor. Unlike most childhood ambitions, his were later fulfilled.

Always an agreeable young man, Tommy didn't revolt when his parents suggested he study music. He took voice and piano lessons, which have since stood him in good stead as a radio entertainer.

During his freshman year in high school, he appeared in numerous class dramatic productions but never talked like "Betty Lou" except when entertaining at parties. The little girl voice didn't seem extraordinary to him then, though it always provoked laughter among his friends.

"Betty Lou" was again sidetracked when Tommy went to Bellefonte Academy. The young man with two voices displayed a greater interest in boxing than in entertaining there.

A year at Brown University was followed by study and football at Ohio State. While being rushed by a fraternity at the latter institution one of the "brothers" called Riggs on the phone to ask him over to dinner at the house. Tommy had "Betty Lou" do the answering.

"My daddy will be glad to come," said the child-like voice.

When Tommy arrived, the upperclassman exclaimed, "Why, I didn't know you were old enough to have a youngster!"

"I'm not," said Tommy.

Riggs then changed his voice to the higher register, and "Betty Lou" later became the mascot of the house.

Tommy got out of college at the height of the depression but managed somehow to land a job in Pittsburgh in a business firm. The lure of the theater was still in his blood and business seemed awfully dull to him.

He voluntarily gave up his position for a less lucrative one in a local vaudeville theater. He became a singing master-of-ceremonies, just a few blocks from the theater where Dick Powell was doing the same thing.

"Betty Lou's" radio debut occurred as a result of a mistake. Tommy was rehearsing a comedy act with a radio partner. Things went from bad to worse with the script seeming to get less funny every minute. When he lost his place, Riggs expressed his annoyance in the "Betty Lou" voice.

The producer of the show shouted, "That's great. Where did you get that voice? Use it in the skit."

Tommy did. He titled the show "Tom and Betty," and it remained popular with WCAE listeners for several years before Riggs transferred his act to KDKA. The program got an enthusiastic reception and received the largest fan-mail response ever accorded an air show.

"I had an amusing experience in Pittsburgh," Tommy says. "I went on the air at eleven o'clock at night and one night a labor department representative called on me and demanded I send 'Betty' home to bed where she belonged at that hour. It took me quite a little while to convince them 'Betty' was only my idea child, but at last they believed me and left."

An offer came from Cleveland to do a 15 minute commercial program, five-times-a-week. It looked so good, the "Tom and Betty" act moved to a new locale, broadcasting over WTAM. The same enthusiastic response greeted the one man "pair" with a woman writing in begging to adopt "Betty." It took some tall letter-writing on the part of Riggs to assure the lady "Betty" was really an imaginary character.

Another offer over a more powerful station came to Tommy's attention and once more he packed up bag and baggage, heading this time for Cincinnati and WLW. He arrived with the flood, his first program being the longest and the most difficult he has ever gone through—he had "Betty" appeal for aid to flood-sufferers at intervals during one entire night and morning. The response was tremendous with the people of Cincinnati ever grateful.

Two months later when Tommy offered his photograph to radio listeners 32,000 requests came in immediately. Cincinnati looked mighty good to Tommy then and he felt he wanted to stay on. Besides, he had moved from city to city so often he was about ready to settle down!

Therefore, when he was asked to go to New York to audition for Rudy Vallee's Hour, he got around the trip by sending a set of records.

Senator Fishface and Professor Figgsbottle, daffy comics heard over NBC on Sunday afternoons, have just been signed for another two years by the NBC Artists Service.

Betty Winkler, pretty star of the NBC dramatic serial, Girl Alone, is creator of a new evening gown that caused a sensation in the fashion world. The Winkler creation is a flouncy, white chiffon evening gown with a photographic reproduction of the Chicago skyline ten inches high around the bottom. The hem was sensitized with a photographic solution and the pictures printed in the same manner as regular photographic prints are made.

THE BROADCASTING STATIONS OF OCEANIA

This completely revised list of Australasian stations is compiled from official information supplied by A. I. Breen of Dunedin, New Zealand, and the Postmaster-General's Department of Melbourne, Australia.

Frequencies are given in first column in kilocycles. Call letters are in second column, and power in watts in third column.

The abbreviations are N. Z. for New Zealand, P. l. for the Philippine Islands, and for the Australian states:

F.C.T., Federal Capital Territory
N.S.W., New South Wales
Qsld., Queensland
S. A., South Australia

F.C.T., Federal Capital Territory
Vic., Victoria
W. A., West Australia

550	2CR	10000	Cumnock, N.S.W.	1040	5P1	2000	Crystal Brook, S. A.
560	6WA	10000	Minding, W. A.	1050	2CA	500	Canberra, F. C. T.
570	2YA	60000	Wellington, N. Z.	1060	$^{2\mathrm{BH}}$	100	Broken Hill, N.S.W.
580	3WV	10000	Horsham, Vic.	1070	6WB	2000	Katanning, W. A.
600	FJP	500	Noumea, New Caledonia	1080	2AD	100	Armidale, N.S.W.
010	7ZL	1000	Hobart, Tas.		4MK	100	Mackay, Qsld.
610	KZRM		Manila, Philippines	1090	7HT	300	Hobart, Tas.
620	$_{ m 3AR}$	$\frac{3500}{4500}$	Sydney, N.S.W.	1090	LZB	150	Auckland, N. Z.
630	4QN	7000	Melbourne, Vic. Clevedon, Qsld.	1100	3LK 4LG	2900 500	Lubeck, Vic.
640	5CK	7500	Crystal Brook, S. A.	1100	7LA	300	Longreach, Qsid. Launceston, Tas.
650	1YA	10000	Auckland, N. Z.	1110	2UW	750	Sydney, N.S.W.
660	2DU	100	Dubbo, N.S.W.	1120		1000	Wellington, N. Z.
000	7BU	100	Burnie, Tas.	1,20	4BC	1000	Brisbane, Qsid.
670	2CO	7500	Corowa, N.S.W.	1130	6ML	500	Perth, W. A.
680	2HR	300	Singleton, N.S.W.	1140	$_{2\mathrm{HD}}$	500	Newcastle, N.S.W.
	4ZP	100	Invercargil, N. Z.		4YO	150	Dunedin, N. Z.
690	6WF	3500	Perth, W. A.	1150	2WG	2000	Wagga, N.S.W.
700	2NR	7000	Grafton, N.S.W.		2ZM	15	Gisborne, N. Z.
710	7NT	7000	Kelso, Tas.	1160	2KA	200	Katoomba, N.S.W.
720	3YA	10000	Christchurch, N. Z.		4TO	200	Townsville, Qsld.
	6GF	2000	Kalgoorlie, W. A.	1170	2NZ	2000	Inverell, N. S. W.
730	5CL	4000	Adelaide, S. A.	1180	3KZ	600	Melbourne, Vic.
740	2BL	3000	Sydney, N.S.W.	1190	2CH	1000	Sydney, N. S. W.
750	KGU	2500	Honolulu, Hawaii	1200	3YL	500	Christchurch, N. Z.
760 770	2YB	100 3500	New Plymouth, N. Z.	1210	5KA 2GF	500 100	Adelaide, S. A.
780	3LO KZEG	1000	Melbourne. Vic. Manila, Philippines	1210	3YB	100	Grafton, N. S. W. Warrnambool, Vic.
790	4YA	10000	Dunedin, N. Z.		6KG	500	Kalgoorlie, W. A
800	4QG	2500	Brisbane, Qsld.	1220	4AK	2000	Oakey, Qsld.
820	2ZH	65	Napier, N. Z.		4ZB	1000	Dunedin, N. Z.
830	3G1	7000	Longford, Vic.	1230	2NC	2000	Newcastle, N. S. W.
840	2YC	5000	Wellington, N.Z.	1240	2ZL	20	Hastings, N. Z.
850	5RM	1000	Renmark, S. A.		3TR	1000	Sale, Vic.
860	4AY	500	Ayr, Qsld.		6IX	500	Perth. W. A.
	7HO	120	Hobart, Tas.	1250	1ZM	175	Manurewa, N. Z.
870	2GB	1000	Sydney, N.S.W.	1260	3SR	2000	Shepparton, Vic.
880	1YX	150	Auckland, N. Z.	1270	2SM	1000	Sydney, N.S.W.
	2XL 6PR	100 500	Cooma, N.S.W.	1280	3A W 4ZC	600 20	Melbourne, Vic.
900	KZIB	1000	Applecross, W. A.	1290	4BK	500	Cromwell, N. Z.
900	2LM	500	Manila, P. I. Lismore, N.S.W.	1300	2TM	2000	Brisbane, Qsld. Tamworth, N.S.W.
	2ZP	250	Wairoa, N. Z.	1310	1ZJ	65	Auckland, N. Z.
	7QT	100	Queenstown, Tas.	1010	5AD	500	Adelaide, S. A.
910	4RK	2000	Rockhamton, Qsld.	1320	KGMB	1000	Honolulu, Hawaii
920	z_{JV}	400	Suva, Fiji		3BA	500	Ballarat, Vic.
	2ZR	50	Nelson, N Z.	1330	3SH	100	Swan Hill, Vic.
930	3UZ	600	Melbourne, Vic.		4RO	50	Rockhampton, Qsld.
940	3ZR	400	Greymouth, N. Z.	1340	4WK	100	Warwick, Qsld.
950	2UE	1000	Sydney, N.S.W.		5SE	100	Mount Gambier, S. A.
960	2ZF	250	Palmerston North, N. Z.	1350	3GL	100	Geeiong, Vic.
	5DN	500	Adelaide, S. A.	1360	3MA	100	Mildura, Vic.
970	3BO	200	Bendigo, Vic.		4PM	100	Port Moresby, Papua
980	2KM	100	Kempsey, N.S.W.	1370	$_{2MO}$	100	Gunnedalı, N. S. W.
	2ZJ	200	Gisborne, N. Z.	1380	4BH	1000	Brisbane, Qsid.
000	6AM	2000	Northam, W. A.	1390	2GN	200	Goulburn, N. S. W.
990 1000	2GZ	2000 200	Orange, N.S.W.		4CA	200	Cairns, Qsld.
1000	3UL	500 500	Warragul, Vic.	1400	$_{ m KHBC}^{ m 6PM}$	100 250	Fremantle, W. A.
1010	4GR 3HA	750	Toowoomba, Qsld. Hamilton, Vic.	1400	2ZO	200	Hilo, Hawaii Palmerston North, N. Z
1010	4ZD	55	Dunedin, N. Z.		4MB	100	Maryborough, Qsld.
	4ZM	60	Dunedin, N. Z.	14 10	2KO	500	Newcastle, N. S. W.
1020	2KY	1000	Sydney, N.S.W.	1420	3XY	600	Melbourne, Vic.
1030	3DB	600	Melbourne, Vic.	1430	2WL	300	Wollongong, N. S. W.

	3ZB 4VL	1000 50	Charleville, Qsld.
1440	2QN 4IP	100 100	Deniliquin, N. S. W. Ipswich, Qsld.
1450	$^{4\mathrm{ZR}}_{5\mathrm{MU}}$	100 100	Roma, Qsid. Murray Bridge, S. A.
1460	7UV	300	Ulverstone, Tas.
1470	2MW $2RG$ $3ZM$	100 50 60	Murwillumbah, N.S. W. Griffith, N.S. W. Christchurch, N.Z.
1480	2AY 4BU	100 100	Albury, N. S. W. Bundaberg, Qsld.
1490	2BE 3MB	100 100	Bega, N. S. W. Birchip, Vic.
1500	2BS 3AK	100 200	Bathurst, N. S. W. Melbourne, Vic.
1510	YDA	500	Tandjongpriok, Java, N.E. I.

Arctic and Jungle Linked

REMARKABLE three way conversation spanning the arctic and the tropics was heard over National Broadcasting Company networks on Christmas Eve when scientific expeditions at the North Pole and in the South American jungles exchanged Yuletide greetings with each other and with their respective families assembled in Radio City studios in New York City.

The Holden Expeditions of the American Museum of Natural History, located deep in the Amazonian jungles of British Guiana, and members of the MacGregor Expeditions, located near the North Pole, are both equipped with NBC broadcasting transmitters and both are keeping contact with the outside world through the magic of radio. The Holden group is the first jungle expedition in history to be equipped with radio.

The Holden Expedition is heard through station VP3THE, and the MacGregor Expedition through OX2QY. Both these stations have been heard many times in the 20-meter amateur band.

Tune for Argentina

SOUTH AMERICAN broadcasting stations transmit at the same time as North American stations, and the only time they can be heard is before midnight, EST. Many of the more powerful stations come through, however, and are heard in spite of our own stations.

Station LR10 in Buenos Aires, working on 790 kcs with 10,200 watts, signs off at midnight. LR5 on 830 kcs with 29 kilowatts, signs off nightly at 11:45 pm; this Buenos Aires station is frequently logged through KOA Denver. LR6 in Buenos Aires, on 870 kcs, leaves the air at midnight.

The addresses of these Argentine stations are: LR10, Alberto de Bary y Cia., Florida 570, Buenos Aires. LR5, Alfredo B. Dougall, Maipu 462, Buenos Aires. LR6, "Ciudadela," S. A. La Nacion, Santa Fe 2043, Buenos Aires.

Other Argentine stations which should be heard this winter are LR3 on 950, LR1 on 1070, LS2 on 1190, and LS8 on 1230.

LR3, a 39 kilowatt station on 950 kcs, is owned by Jaime Yankelevich, Belgrano 1841, Buenos Aires. This station signs off at thirty minutes past midnight.

LR1, "Radio El Mundo," is perhaps the best known of all South American stations. It transmits on 1070 with 50 kilowatt power. Radio El Mundo is owned by Empresa Editorial Haynes, Ltda., S. A., Maipu 555, Buenos Aires, and transmits daily from 10 am to 11:30 pm, EST.

LS2, 1190 kcs and 30,000 watts, closes down at midnight. The owner is Teodoro Pietro, Bolivar 1356, Buenos Aires.

"Radio Stentor," LS8, works on 1230 kes with 15 kilowatts, signing off at 11:30 pm EST.

When to Get the DAY'S NEWS

Network News Flashes

E-Midn't., C-11:00 p.m., M-10:00. P-9:00

Don Lee System, Daily
KDB KDON KFRC KFXM KGB
KGDM KHJ KPMC KQW KVOE KXO

E-1:00a.m., C-Midn't., M-11:00 p.m., P-10:00

CBC-Daily To CBC Pacific Network

Don Lee System, Sunday only Same stations as at Midnight.

E-7:30 a.m., C-6:30. M-5:30, P-4:30 Michigan Radio Network, Daily, WXVZ

E-9:25 a.m., C-8:25, M-7:25, P-6:25 CBS-Press Radio, Monday through Friday

CKAC KLRA KMOX WABC WADC WAIM WALA WBIG WCHS WCOC WDAE WDBO WDRC WEEI WESG WFBL WHIO WHP WIBX WJAS WJNO WKBW WLBZ WMAS WMBR WMMN WNBF WOKO WORC WPAR WPG WPRO WQAM WREC WRVA WSBT WSJS

E-9:40 a.m., C-8:40, M-7:40, P-6:40 NBC Red and Blue, Press Radio, Weekdays

To stations available

E-9:55 a.m., C-8:55, M-7:55, P-6:55 CBS-Press Radio, Sat. and Sunday CKAC KLRA KMOX WABC WADC WAIM WALA WCHS WCOC WDAE WDBJ WDBO WEEI WESG WFBL WFBM WHEC WHIO WIBX WJNO WJR WJSV WLBZ WMAS WMBR WMMN WNBF WOKO WORC WPAR WQAM WREC WSVA WSFA WSJS WTOC

E-10:45 a.m., C-9:45, M-8:45, P-7:45 Don Lee System, Daily except Sunday Same stations as at Midnight

E-11:00 a.m., C-10:00, M-9:00, P-8:00 NBC-Blue Press Radie, Sunday To stations available

NBC-Red-Press Radio, Sunday To stations available.

E-Noon, C-11:00 a.m., M-10:00, P-9.00

Michigan Radio Network, Daily WASH WBCM WELL WFDM WIBM WJIM WKZO WOOD WXYZ

E-12:15 p.m., C-11:15 a.m., M-10:15, P-9:15

CBS-Edwin C. Hill, Monday through Friday

KFAB KFH KGKO KLRA KMBC KMOX KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCHS WCOA WCOC WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFBL WGR WGST WHAS WHEC WHIO WHP WIBX WISN WJR WJSV WKBB WKBN WKRC WLAC WLBZ WMAS WMAZ

WMBD WMBR WMMN WNAX WNBF WNOX WOC WOKO WORC WPG WPRO WQAM WREC WRYA WSFA WSJS WTOC WWL WWVA

E-2:00 p.m., C-1:00, M-12:00, P-11:00 CBS-Monday, Wednesday, Friday KFAB KFH KLRA KMOX KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEEI WFBL WFBM WGST WHAS WHEC WHIO WISN WJAS WJR WJSV WKBB WKBW WKRC WLAC WLBZ WMBR WNBF WOKO WORC WPRO WOAM WREC WRVA WWL

E-3:00 p.m., C-2:00, M-1:00, P-Noon Don Lee System, Saturday Same stations as at Midnight

E-3:15 p.m., C-2:15, M-1:15, P-12:15 Don Lee Sys., Mon. through Fri. Same stations as at Midnight

E-5:00 p.m., C-4:00, M-3:00, P-2:00 Michigan Network, Daily WASH WBCM WELL WFDM WIBM WJIM WKZO WOOD WXYZ

E-5:10 p.m., C-4:10, M-3:10, P-2:10 Blue, Monday through Friday To stations available

E-5:30 p.m., C-4:30, M-3:30, P-2:30 CBS-Monday, Wednesday, Friday KFBB KFPY KLZ KMBC KNX KOIN KOL KOY KSFO KSL KVI

E-6:25 p.m., C-5:25, M-4:25, P-3:25 CBS—Press Radio, Thurs. and Sat. Available to entire Network

E-6:30 p.m., C-5:30, M-4:30, P-3:30 CBC—Sunday only To National Network

CBS--Press Radio, Mon., Tues., Fri. KFH KLRA KNOW KOMA KSCJ KSL KTRH KWKH WABC WACO WADC WAIM WALA WBIG WBRC WCCO WCOC WDAE WDBJ WDBO WDOD WHEC WISN WJAS WJNO WJR WKBB WKBW WLBZ WMAS WMBR WOC WORC WPAR WQAM WREC WSFA WSJS WTAQ WTOC WWVA

NBC-Red, Press Radio, Weekdays To all stations available Blue-Saturday only

To all stations available

E-6:40 p.m., C-5:40, M-4:40, P-3:40 CBS—Wednesday only To all stations available

E-6:45 p.m., C-5:45, M-4:45, P-3:45 NBC-Blue-Lowell Thomas, Mon. through Fri.

CRCT KDKA WBAL WBZ WBZA WEAN WEBR WFLA WHAM WIOD WJAX WJZ WLW WMAL WOOD WRTD WSPD WSUN WSYR WTAM WXYZ

Don Lee Sys., Mon. through Fri. Same stations as at Midnight

E-7:30 p.m., C-6:30, M-5:30, P-4:30 CBC-Monday through Friday To CBC French Network

E-7:45 p.m., C-6:45, M-5:45, P-4:45 CBS—Boake Carter, Mon., Wed., Fri. KFAB KFH KLRA KMBC KMOX KNOW KOMA KRLD KRNT KTRH KTSA KTUL WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBO WDOD WDRC WEEI WFAM WFBL WGR WGST WHAS WHEC WHIO WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMBD WMBR WNOX WOKO WORC WPRO WQAM WREC WRVA wwi.

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

Blue-Monday, Thursday KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WREN WSYR WTCN WXYZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 Blue-March of Time, Thursday KDKA KECA KERN KFBK KFEL KFSD KGA KGO KJR KLO KMJ KOIL KSO KWG KWK KXYZ WABY WBAL WBZ WBZA WCKY WCOL WEBR WFIL WHAM WJZ WMAL WMPS WMT WOWO WREN WSPD WSYR WTCN WXYZ

E-9:45 p.m., C-8:45, M-7:45, P-6:45 Don Lee System, Daily Same stations as at Midnight Michigan Network, daily WASH WBCM WELL WFDM WIBM WJIM WKZO WOOD

E-10:00 p.m., C-9:00, M-8:00, P-7:00 Blue—Tuesday, Wednesday KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WLS WMAL WMT WOWO WREN WSPD WSYR WTCN WXYZ

E-10:15 p.m., C-9:15, M-8:15, P-7:15 Michigan Radio Network, Daily WXYZ

E-10:45 p.m., C-9:45, M-8:45, P-7:45 CBC-Daily To National and French Networks

Red-Friday only KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDEL WEAF WFBR WGY WIRE WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WWJ

E-11:00 p.m., C-10:00, M-9:00, P-8:00 Blue, Sunday. Press Radio Available to Entire Network

E-11:15 p.m., C-10:15, M-9:15, P-8:15 CBS-Boake Carter, Mon., Wed., Fri. KFPY KLZ KNX KOIN KOL KSFO KSL KVI WFBM

E-11:30 p.m., C-10:30, M-9:30, P-8:30 Red-Sunday only To all stations available

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WHAT'S ON THE AIR TONIGHT

Fill in the calls and frequencies of the stations through which you best receive the network programs. You can then turn quickly to the one that has the feature you want,

Network '	Stations	,
Canadian (CBC)		
Columbia (C)		
Mutual (M)		
National Red (R)	(
National Blue (B)		

Time: E Eastern: C Central; M Mountain; P Pacific While these programs are correct at the time of going to press, changes are made frequently,

MONDAY

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

CRCT KDKA WBAL WBZ WBZA WFLA WIOD WJAX WJZ WLW WMAL WOOD WRVA WSYR WTAM WXYZ

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

C — Poetic Melodies; Jack Fulton WABC WADC WBT WCAO WCAU WDRC WEAN WEEI WFBL WGR WHK WJAS WJR. WKRC WOKO WSPD WTOC WWVA

R - Amos. 'n' Andy KSD KSTP KYW WBEN WCAE WCSH WEAF WFBR WGY WHO WJAR WLW WNAC WRC WTAG WTAM WTIC WWJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R — Uncle Ezra's Radio Station KARK KFYR KGBX KGNC KPRC KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCKY WCOL WCSH WDAF WDAY WEAF WEBC WFAA WFBR WGBF WGY WHO WIBA WIRE WJAR WKY WMAQ WNAC WOAI WOOD WOW WRO WTAG WTAM WTIC WTMJ

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Lum and Abner

WRZ WBZA WENR WJZ WLW WMC WSM WSYR

M --- The Lone Ranger WFIL WNBF WSYR WOR WXYZ

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

KMBC KMOXKOMA KRLD WABC WBBM WBT WCAU WCCO WDRC WEAN WFBL WGR WHAS WHK WJAS WJR WJSV WKRC WNAC

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Horace Heidt and Orchestra KDB KERN KFAB KFBK KFH

KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KTRH KTSA KTUL KVI KWG WABC WBBM WBRC WBT WCAO WCAU WCCO WDRC WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WKRC WLAC WMBR WNAC WNAX WOKO WREC WWL

- Burns and Allen CRCT KYW WBEN WCAE WCSC

WCSH WEAF WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WJAX WLW WMAO WNAC WPTF WRC WRVA WSOC WTAG WTAM WTAR WTIC WWJ

B — Gen. Hugh Johnson KDKA KOIL KSO KWK WBAL

WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WREN WSYR WTCN WXYZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Pick and Pat

KFAB KMBC WABC WADC WBBM WBT WCAO WCAU WDRC WEAN WFBL WGR WGST WHEC WHK WICC WJAS WHP WJR WJST WKRC WLBZ WMAS WNAC WOKO WORC WSPD

R - Voice of Firestone

CFCF CRCT KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCSC WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBC WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WIBA WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Campana's Grand Hotel

KDKA KFEL KFI KFSD KGA KGO KGW KJR KLO KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT wowo WREN WSPD WSYR WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00

B -- Philadelphia Symphony

KFEL KGO KSO KVOD KWK KXYZ WBAL WBZ WBZA WEAN WEBR WENR WFIL WHAM WJTN WJZ WLS WMAL WREN WRTD WSPD WSYR WTCN WXYZ

C — Lux Radio Theater CFRB CKAC KFAB KFH KFPY KLRA KLZ KMBC KMOX KNOW KNX KOH KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KTUL KVI WABC WADC WBBM WBNS WBRC WBT WCAO WCCO WDAE WDBJ WDRC WEEI WFBL WFBM WGAR WGST WHAS WHEC WHIO WIBX WISN WJAS WJR WJSV WKBW WKRC WLAC WMAS WMBD WNAX WOKO WORC WPRO WQAM WREC WRVA WWL

M - Elder Michaux Available to entire network

- Fibber McGee and Molly KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCOL WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY

WHO WIBA WIS MIOD WIRE WJAR WJAX WJDX WLW WMAQ WMC WNAC WOAI WOOD WOW WPTF · WRC WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R-Phil Spitalny's Girl Orchestra CFCF CRCT KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KVOO KYW WAVE WBEN WCAE WCSH WDAF WFAA WFBR WFLA WGY WEAF WHO WIBA WIOD WIRE WIS WJAR WJAX WLW WMAQ WKY WMC WNAC WOAI WOW WPTF WSB WSM WSMB WRC WRVA WTAG WTAM WTAR WTIC WTMJ ww.i

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Contented Program

CFCF CRCT KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KYW WBEN WCAE WOSH WDAF WEAF WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOW WPTF WRVA WSB WSM WTAG WRC WTAM WTAR WTIC WWJ WWNC

- Warden Lewis E. Lawes KDKA KECA KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WBAL WBZ WBZA WCKY WEAN WEBR WENR WFIL WHAM WHK WICC WJZ WMAL WMT WOWO WREN WSPD WSYR WTCN WXYZ

- Wayne King and Orchestra KDB KERN KFAB KFBK KFPY

KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRNT KSL KVI KWG WAAB WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHK WIBW WJAS WJR WJSV WKBW WKRC WOKO WSPD WWL

MONDAY (Continued)

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Brave New World Available to entire network

R — Burns and Allen

KARK KDYL KFBK KFI KFYR
KFBX KGHL KGIR KGNC KGO
KGW KHQ KMJ KOA KOMO KPO
KPRC KSD KSTP KTAR KTBS
KVOO KWG WAVE WDAF WDAY
WEBC WFAA WIBA WJDX WKY
WMC WOAI WOW WSB WSMB
WTMJ

M — The Lone Ranger KDB KDON KFRC KFXM KGB

KGDM KHJ KPMC KVOE KXO

Available also to West Coast Section

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Poetic Melodies; Jack Fulton
KERN KFAB KFBK KFPY KFRC
KGB KHJ KLRA KLZ KMBC KMOX
KOIN KOL KOMA KRLD KRNT
KSL KTRH KTSA KVI WBBM
WBRC WCCO WFBM WGST WLAC
WREC WWL

R — Amos 'n' Andy

| 1

KDYL KERN KFBK KFI KGW KHQ KMJ KOA KOMO KPO KPRC KSD KWG WDAF WFAA WHO WIRE WKY WMAQ WMC WOAI WOW WSB WSM WSMB

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Boake Carter

KFPY KLZ KNX KOIN KOL KSFO KSL KVI

B — Lum and Abner KECA KERN KEX KFBK KFSD KGA KGO KJR KMJ KWG

E-11:30 p.m., C-10:30. M-9:30, P-8:30 C — Pick and Pat KFPY KGKO KLRA KLZ KMOX KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFO KSL KTUL KVI KWKH WACO WBRC WCCO

TUESDAY

WFBM WHAS WLAC WREC

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

E-7:00 p.m., C-6:00; M-5:00, P-4:00 C — Poetic Melodies, See Monday R — Amos 'n' Andy. See Monday B — Easy Aces

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WHIO WIRE WJZ WMAL WMT WSYR WXYZ

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Geo. McCall, Hollywood Talk
KFAB KFH KLRA KMOX KNOW
KOMA KRLD KRNT KTRH KTSA
KWKH WABC WADC WBEM WBNS
WBT WCAO WCAU WCCO WCHS
WDAE WDBO WDDOD WDRC WEEL
WFBL WGAR WGBI WGST WHAS
WHEC WHIO WIBW WISN WJAS
WJR WJSY WKRC WLAC WMAS
WMBR WOC WOKO WORC WPRO
WQAM WREC WRVA WWL

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C-- Helen Menken, Drama KFAB KFPY KIRO KLZ KMBC KMOX KNX KOIN KRNT KSFO KSL KVI WABC WBBM WCAO WCAU WDRC WEEI WFBL WGAR WGR WHAS WHEC WHIO WJAS WJR WJSV WKRC WOKO WORC WPRO

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Johnny with Russ Morgan

KFYR KPRC KSD KSTP KTBS
KTHS KVOO KYW WAVE WBAP
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WNAC WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WSUN WTAG WTAM WTAR WTIC
WTMI WWJ WWNC

B - Husbands and Wives

KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WABY WBAL WBZ WBZA WCKY WEAN WEBR WFIL WGAR WHAM WICC WJZ WLS WMAL WMT WREN WSYR WXYZ

C — Edward Robinson; Claire Trever
CBM CFRB KFAB KFH KFPY
KIRO KLRA KLZ KMBC KMOX
KNOW KNX KOIN KOMA KRLD
KRNT KSFO KSL KTRH KTSA
KTUL KVI WABC WADC WBBM
WBNS WBRC WBT WCAO WCAO
WCCO WDAE WDBJ WDRC WEEI
WFBL WFBM WGAR WGR WGST
WHAS WHEC WHIO WIBX WISN
WJAS WJR WJSV WKRC WLAC
WMAS WMBD WNAX WOKO WORG
WPRO WQAM WREC WRVA WWL

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Al Jolson; Parkyakarkus

CFRB CRCM KFAB KFH KLRA
KMBC KMOX KNOW KOMA KRLD
KRNT KTRH KTSA KTUL WABC
WADC WBBM WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDRC WEEI WFBL WFBM WGAR
WGR WGST WHAS WHEC WHIO
WIBX WISN WJAS WJR WJSV
WKRC WLAC WMAS WMBD WNAX
WOKO WORC WPRO WQAM WREC
WRYA WWL

R — Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS
KVOO KYW WAVE WBAP WBEN
WCAE WCKY WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WGY
WHO WHIO WIBA WIRE WJAR
WJDX WKY WMAQ WMC WOAI
WOW WRC WSB WSM WSNM
WTAG WTAM WTIC WTMJ WWJ

B — Edgar Guest, It Can Be Done KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Al Pearce and Gang

CFRB CKAC KFAB KFH KGKO
KLRA KMBC KMOX KOMA KRLD
KRNT KSCJ KTRH KTSA KTUL
KWKH WABC WACO WADC WALA
WBBM WBIG WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDRC WEAN
WFBL WFBM WFEA WGST WHAS
WHEC WHK WHP WIBW WIBX
WICC WISN WJAS WJR WJSV
WKBH WKBN WKBW WKRC
WLAC WLBZ WMAS WMBD WMBC
WMBR WMMN WNAC WNAX

WNBF WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL

M — Paul Whiteman Orchestra Available to entire network

R — Vox Pop; Sidewalk Interviews
KSD KYW WBEN WCAE WCKY
WCSH WDAF WEAF WEEI WFBR
WGY WHO WIRE WJAR WMAQ
WOW WRC WTAG WTAM WTIC
WWI

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Jack Oakie's College
KFAB KFH KFPY KGKO KIRO
KLRA KLZ KMBC KMOX KNOW
KNX KOIN KOMA KOY KRLD
KRNT KSCJ KSFO KSL KTRH
KTSA KTUL KVI KVOR KWKH
WABC WACO WADC WALA WBBM
WBIG WBNS WBRC WBT WCAO
WCAU WCCO WCHS WDAE WDBJ
WDBO WDNC WODD WDRC WEEI
WFBL WFBM WGAR WGST WHAS
WHEC WHIO WHP WIBW WIBX
WISN WJAS WJR WJSV WKBB
WKBN WKBW WKRC WLAC WLBZ
WMAS WMBD WMBR WNAX

R—Hollywood Mardi Gras
CFCF CRCT KDYL KFI
KGW KHQ KOA KOMO KPO KPRC
KSD KSTP KTAR KTBS KVOO
KYW WAVE WBAP WBEN WCAE
WCOL WCSC WCSH WDAF WDEL
WEAF WEBC WFBR WFLA WGY
WHO WIBA WIOD WIRE WIS
WJAR WJAX WKY WMAQ WMBG
WMC WNAC WOAI WOOD WOW
WRC WSB WSM WSMB WSOC
WTAG WTAM WTAR WTIC WTMJ
WWJ

WNBF WNOX WOC WOKO WORC WPG WPRO WQAM WREC WRVA

WSBT WSFA WSJS WTOC WWI.

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Benny Goodman's Orchestra

Same stations as Jack Oakie's College, above

B — Gen. Hugh Johnson KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WOWO WREN WSPD WSYR WTCN WXYZ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 M — Witch's Tale; Drama Available to entire network

R — Jimmy Fidler Hollywood Gossip KDYL KFI KGW KHQ KOA KOMO KPO KSD KTAR KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOOD WOW WRC WTAG WTAM WTIC WWJ

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Al Jolson; Parkyakarkus KFPY KLZ KNX KOIN KOL KSFO KSL KVI

E-Midn't; C-11:00, M-10:00, P-9:00 C — Al Pearce and Gang KFBB KFPY KGVO KLZ KNX KOH KOIN KOL KOY KSFO KSL, KVI KVOR

WEDNESDAY

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

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Poetic Melodies, See Monday - Amos 'n' Andy, See Monday B — Easy Aces, See Tuesday

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Hobby Lobby

KMBC WABC WADC WBIG WBNS WBT WCAO WCAU WCHS WDAE WDBJ WDBO WDRC WEEI WFBL WGAR WGBI WGR WHEC WHIO WIBX WJAS WJR WJSV WKBN WKRC WLBZ WMAS WMBR WOKO WORC WPRO WQAM WRVA WWVA

R — Uncle Ezra, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B - Lum and Abner, See Monday M - Lone Ranger, see Mon.

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

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

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KVI KWG WABC WBBM WBNS WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WJAS WJR WJSV WKRC WLAC WMBG WNAC WOKO WTOC

R -- One Man's Family

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WELL WFAA WIDK WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B'- Eddie Duchin's Orchestra KDKA KECA KFEL KFSD KGA KGO KJR KLO KOIL KSO KWK KXYZ WAGA WBAL WBZ WBZA WCKY WDSU WEAN WEBR WFIL WHK WICC WJZ WLS WHAM WMAL WMPS WMT WOWO WREN WSGN WSPD WSYR WXYZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Eddie Cantor; Deanna Durbin CFRB CKAC KFAB KFH KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WIBW WIBX WJAS WJR WJSV WKRC WLAC WIRZ WMAS WMBD WMRG WMBR WNAX WNOX WOKO WORC WOWO WPG WPRO WQAM WREC WWI.

R - Wayne King, See Tuesday

B - Skolsky from Hollywood KDKA KECA KFEL KFSD KGA KGO KGW KJR KLO KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WOWO WREN WSPD WSYR WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Chesterfield; Andre Kostelanetz KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KGMB KHJ KLKA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBG WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBH WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC WWL

R - Town Hall Tonight

KFYR KPRC KSD KSTP KTBS KTHS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C - Crime Crusade: Phil Lord

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KTUL KVI KWG KWKH WARC WACO WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMBG WMBR WNAC WOKO WORC WOWO WQAM WREC WTOC WWL

R — Your Hollywood Parade KDYL KERN KFBK KF1 KFYR KGBX KGHL KGIR KGNC KGU KGW KHO KIDO KMJ KOA KOB KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KWG KYW WAPI WAVE WBEN WCAE WCSC WCSH WDAF WDEL WEAF WEBC WFAA WFBC WFBR WFEA WFLA WGL WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMBG WMC WNAC WOAI WOOD WORK WOW WPTF WRC WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B - Gen, Hugh Johnson, See Tues.

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C - Hobby Lobby; Harry Salter KDAL KFAB KFH KFPY KGKO KIRO KLZ KMOX KNOW KNX KOH KOIN KOMA KRLD KOY KRNT KSFO KSL KTRH KTSA KTUL KVI KWKH WALA WBBM WBRC WCCO WCOC WFBM WGST WHAS WIBW WISN WLAC WMBD WNBF WNOX WOC WREC WSBT WSFA WWL

M - Lone Ranger, see Mon.

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Boake Carter, See Monday

B — Lum and Abner, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 - Eddie Cantor; Deanna Durbin KFBB KFPY KGVO KLZ KNX KOH KQIN KOL KOY KSFO KSL KVI KVOR

THURSDAY

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

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Poetic Melodies, See Monday R — Amos 'n' Andy, See Monday B - Easy Aces, See Tuesday

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C - Geo. McCall, see Tues.

E-7:30 p.m., C-6:30, M-5:30. P-4:30 C — "We, The People."

KFAB KMBC KMOX KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL WABC WBBM WBNS WCAO WCAU WCCO WDAE WDBO WDRC WEEI WFBL WGAR WGR WHAS WHEC WHIO WHP WIBX WISN WJAS WJR WJSV WKRC WMBD WMBR WOC WOKO WPRO WQAM

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Kate Smith: Henny Youngman CFRB CRCM KDAL KFAB KFH KGKO KLRA KMBC KMOX KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WEEI WEOA WFBL WFBM WGAR WGR WGST WHAS WHEC WHIO WHP WIBW WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMBD WMBR WNAX WNOX WOC WOKO WORC WPRO WQAM WRVA WREC WSFA WTAQ WWL

R — Rudy Vallee's Variety Hour CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHO WJAR WLW WMAQ WOW WRC WTAM WTIC WTMJ WWJ

B - Gen. Hugh Johnson, See Mon.

E-8:30 p.m., C-7:30, M-6:30, P-5:30 B - March of Time KDKA KERN KECA KFBK KFEL KFSD KGA KGO KJR KLO KMJ KOIL KSO KWG KWK KXYZ WABY WBAL WBZ WBZA WCKY WCOL WEBR WFIL WHAM WJZ WMAL WMPS WMT WOWO WREN WSPD WSYR WTCN WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Major Bowes' Amateurs CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KMOX KOIN KOL KOMA KRLID KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABG WACO WADC WALA WBMW WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ

WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX

THURSDAY (Continued)

WICC WISN WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNAC WNAX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC WWL

R - MGM Program

CRCT KDYL KERN KFBK KFI
KFYR KGHL KGTR KGNC KGW
KMJ KOA KOMO KPO KPRC KSD
KSTP KTBS KWG KYW WAPI
WAVE WBAP WBEN WCAE WCSB
WDAF WDAY WEBC WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMBG WMC WNAC WOAI WOOD
WOW WPTF WRC WSB WSM
WSMB WSOC WSUN WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00
R — Bob Burns; Bing Crosby
CFCF CRCT KDYL KFI KFYR
KGW KHQ KOA KOMO KPO KPRC
KSD KSTP KTAR KTBS KTHS
KVOO KYW WAVE WBAP WBEN
WCAE WCSH WDAF WDAY WEAR
WEBC WEEI WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTAR WTIC WTMJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — "We, The People." KFPY KIRO KLZ KNX KOIN KOY KSFO KSI KVI

WWJ WWNC

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C—Kate Smith; Henny Youngman KFBB KFPY KGVO KIRO KLZ KNX KOIN KOY KSFO KSL KVI

FRIDAY

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

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C --- Poetic Melodies, See Monday R --- Amos 'n' Andy, See Monday

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

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Lum and Abner. See Monday M — Lone Ranger, see Mon.

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

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

C — Hammerstein Music Hall
KDB KERN KFAB KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRNT
KSL KVI KWG WABC WBBM
WBNS WBRC WBT WCAO WCAU
WCCO WDRC WEAN WFBL WFBM
WFBR WGST WHAS WHK WJAS
WJR WJSV WKRC WMAS WMBG
WNAC WOKO WWL

R — Cities Service Concert
CRCT CFYR KOA KPRC KSD
KSTP KTBS KTHS KVOO KYW

WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WIOD WJAR WKY WMAQ WOAI WOW WRC WRVA WSAI WTAG WTAM WTIC WTMJ WWJ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Hal Kemp: Alice Fave

KFAB KFH KGKO KLRA KMBC
KMOX KOMA KRLD KRNT KSCJ
KTRH KTSA KTUL KWKH WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCOO WCOA WDAE WDBJ WDBO
WDNC WDOD WDRC WEEI WFBL
WFBM WFEA WGR WGST WHAS
WHEC WHIO WHK WHP WIBW
WIBX WISN WJAS WJR
WKBN WKRC WLAC WLBZ WMAS
WMBD WMBG WMBR WMMN
WNAX WNBF WNOX WOC WOKO
WORC WOWO WPG WPRO WQAM
WREC WSFA WSJS WSPD WTOC

B — Death Valley Days
KDKA KDYL KFI KGW KHQ KOIL
KOMO KPO KSO KWK WBAL WBZ
WBZA WFIL WGAR WHAM WJZ
WLS WLW WMAL WMT WREN
WSYR WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Hollywood Hotel

CFRB CKAC KDB KERN KFAB
KFBK KFH KFPY KFRC KGB
KHJ KLRA KLZ KMBC KMJ KMOX
KOIN KOL KOMA KRLD KRNT
KSCJ KSL KTRH KTSA KTUL KVI
KVOR KWG KWKH WABC WADC
WBBM WBNS WBRC WBT WCAO
WCAU WCCO WDAE WDBJ WDBO
WDRC WEAN WFBL WFBM WFEA
WGST WHAS WHEC WHA WHP
WIBW WIBX WICC WJAS WJR
WJSV WKBW WKRC WJAC WLBZ
WMAS WMBD WMBG WMBR
WNAC WNAX WNOX WOKO WORC
WPG WQAM WREC WSPD WWL

R — Frank Munn; Abe Lyman KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

B -- Pontiac Varsity Show

KARK KDKA KECA KERN KFBK KFEL KFSD KFYR KGA KGHF KGHL KGIR KGNC KGO KGW KJR KLO KOB KOIL KPRC KSD KTAR KTBS KTHS KWG KWK WAPI WAVE WBAL WBZ WBZA WCSC WDAY WEAN WEBC WEBR WFAA WFBC WFIL WELA WHAM WIOD WIS WIAX WHK WICC WJDX WJZ WKY WLS WLW WMAL WMC WMT WOAI WOOD WOWO WPTF WREN WSB WSM WSMB WSOC WSPD WSUN WSYR WTAR WTCN WWNC WXYZ

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — True Story Court KSD KYW WBEN WCAE WCSH

KSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

B — Tommy Dorsey's Orchestra KARK KDKA KECA KFSD KGA KGO KJR KLO KOIL KPRC KSO KTBS KTHS KVOD KWK WABY WAVE WBAL WBZ WBZA WCKY WCOL WDSU WEAN WEBR WENR

WFAA WFIL WFLA WHAM WHK
WIBA WICC WIOD WIS WJAX
WJZ WKY WMAL WMPS WMT
WOOD WOWO WPTF WREN WRTD
WSGN WSM WSPD WSOC WSUN
WSYR WTAR WTCN WTMJ WWNC
WXYZ

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Frank Crumit; Kitty Carlisle
KDAL KFAB KFBB KFB KFP
KGRO KGLO KGVO KRLA KLZ
KMOX KNOW KNX KOH KOIN
KOL KOMA KOY KRLD KRNT
KSCJ KSFO KSL KTRH KTSA
KTUL KVI KVOR KWKH WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WDBJ WDBO WDNC WDOD WDRC
WEEJ WEOA WFBL WFBM WGAR
WGBI WGST WHAS WHEC WHIO
WHP WIBW WIBX WISN WJAS
WJNO WJR WJSV WKBB WKBW
WKRC WLAC WLBZ WMS WMBD
WMBR WMMN WNBF WNOX WOC
WOKO WORC WPAR WPG
WQAM WREC WRVAWSBT
WSFA
WSJS WTOC WWL

R — First Nighter; Drama
KDYL KFI KFYR KGW KHQ KOA
KOMO KPO KPRC KSD KSTP
KTBS KTHS KYW WAVE WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFAA WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
MJAX WJDX WKY WLW WMAQ
WMC WPTF WRC WRVA WSB
WSM WSMB WSOC WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 M — Lone Ranger, see Mon.

R - Jimmy Fidler

KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDEL WEAF WFBR WGY WIBA WIRE WJAR WLW WMAQ WNAC WOW WTC WTAG WTAM WTIC WTMJ WWJ

E-10:45 p.m., C-9:45, M-8:45, P-7:45
R — Dorothy Thompson—News
KDYL KFI KGW KHQ KOA KOMO
KPO KSD KSTP KYW WBEN WCAE
WCSH WDAF WDEL WEAF WFBR
WGY WIRE WJAR WLW WMAQ
WNAC WOW WRC WTAG WTAM
WTIC WWJ

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Boake Carter, See Monday B — Lum and Abner, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Hal Kemp; Alice Faye KFBB KFPY KGMB KGVO KLZ KNX KOH KOIN KOL KSFO KSL KVI KVOR

SATURDAY

E-7:00 p.m., C-6:00, M-5:00, P-4:00 C — Saturday Night Swing Club Available to Columbia and Canadian Networks

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Carborundum Band KFAB KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WEEI SATURDAY (Continued)

WFBL WGAR WGR WHAS WJAS WJR WKRC WPRO

B — Uncle Jim's Question Bee KDKA WBZ WBZA WGY WHK WJZ WMAQ

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Your Unseen Friend WABC WADC WBBM WCAU WEEL WFBL WGAR WHEC WHP WJAS

R - "Believe-it-or-not." Ripley KANS KDYL KFYR KGNC KOA KPRC KSD KSTP KYW WAPI WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WDEL WEAF WEBC WFBC WFBR WGY WHO WIBA
WIRE WJAR WKY WLW WMAQ
WMBG WNAC WMC WOAI WOOD
WOW WPTF WRC WSB WSMB
WSOC WSPD WTAG WTAM WTAR WTIC WTMJ WWJ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Johnny Presents Russ Morgan KFAB KFH KMBC KMOX KRNT WABC WADC WBBM WBIG WBNS WBT WCAO WCAU WCCO WCOA WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WISN WJAS WJR WJSV WKRC WMBD WMBG WNBF WOC WOKO WPRO WSBT WWVA

R — Jack Haley; Virginia Verrill KDYL KGNC KOA KPRC KSD KSTP KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDEL WEAF WEBC WFBC WFBR WGY WHO WIBA WIRE WJAR WKY WLW WMAQ WMBG WMC WNAC WOAT wow WPTF WRC WSB WSMB WSOC WSPD WTAG WTAM WTAR WTIC WTMJ WWJ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Prof. Quiz

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI KWG WABC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDBO WDRC WEAN WFBL WFBM WJAS WJR WJSV WKBW WKRC WMBR WOKO WQAM WREC WSPD WWL

B - National Barn Dance

KDKA KOIL KPRC KSO KTBS KTHS KWK WABY WAPI WAVE WBAL WBAP WBZ WBZA WFIL WFLA WHK WHAM WIOD WIRE WIS WJAX WJDX WJZ WKY WIS WMAL WMC WMT WOAI WOOD WPTF WREN WRVA WSB WSMB WSOC WSUN WSYR WTAR WWNC WXYZ

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

C — Saturday Night Serenade KFAB KFH KFPY KGKO KLRA KLZ KMBC KMOX KNOW KNX KOIN KOL KOMA KRLD KSFO KTRH KTSA KTUL KVI KWKH WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBO WDOD WEEI WFBL WFBM WGAR WGST WHAS WHEC WJAS WJR WJSV WKBW WLAC WMBD WMBR WMMN WNOX WOC WQAM WREC WRVA WSFA WTOC WWL WWVA

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C - Your Hit Parade

C — Your Hit Parade
KERN KFAB KFBK KFH KFPY
KFRC KGB KGKO KGMB KHJ
KHAR KLZ KMBC KMJ KMOX
KOH KOIN KOL KOMA KRLD
KRNT KSCJ KSL KTRH KTSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNOX WOC WOKO WORC WPG WOAM WREC WSBT WSFA WSJS WSPD WTOC WWL WWVA

R - NBC Symphony Orchestra Available to entire Red and Blue Network

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — National Barn Dance KDYL KFI KFSD KFYR KGHL

KGIR KGU KGW KHQ KOA KOMO KPO KSTP KTAR WDAY WEBC WIBA WLW WTMJ

CBC - Northern Messenger To Mideast and Western Networks of the CBC

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Johnny Presents Russ Morgan KFBB KFPY KGVO KIRO KLZ KNX KOIN KSFO KSL KVI KVOR

E-12:00 p.m., C-11:00, M-10:00, P-9:00 - Professor Quiz KFBB. KFPY KIRO KNX KOH KOIN KOY KSFO KSL KVI

R -- "Believe-It-Or-Not" Ripley KERN KFBK KFI KGW KHQ KMJ KOMO KPO KWG

SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30 C - Major Bowes' "Family" CFRB KERN KFAB KFBH KFBK KFH KFPY KFRC KGB KGVO KMBC KOH KOL KRLD KSL KTRH KTSA KVI KVOR KWG KWKH WABC WACO WADC WALA WBNS WBRC WCAO WCCO WDAE WDBJ WDBO WDNC WESG WFBL WFEA WHAS WHK WIBX WJAS WJR WMBD WMBR WKRC WLBZ WMMN WOC WOKO WORC WPG WQAM WSBT WSJS WSPD WTOC

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

C - Salt Lake Tabernacle Choir CFRB KFAB KFBB KFBK KFH KFPY KFRC KGB KLZ KOH KOL KRLD KSL KTRH KTSA KVI KVOR KWG WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCCO WDAE WDBJ WDBO WESG WFBL WFEA WGR WHAS WICC WJAS WJR WKRC WLBC WMBR WMMN WOC WOKO WORC WQAM WSBT WSJS WSPD WTOC

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

C - Church of the Air

KFBK KFH KFPY KFRC KGB KHJ KMOX KOH KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KVI KVOR KWG WABC WALA WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDRC WESG WFBL WFBM WGR WHAS WHP WIBX WJAS WJSV WKBN WKRC WLAC WLBZ WMBR WNBF WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTOC WWVA

E-1:45 p.m., C-12:45, M-11:45, P-10:45 C --- Hollywood: Lloyd Pantages KFAB KLZ KMBC KMOX KRNT KSL WABC WBBM WCAU WCCO WEEI WFBM WGAR WGR WHEC WJAS WJR WORC

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

B — Magic Key of RCA
CFCF CRCT KDKA KDYL KFI KFYR KGU KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB

C — The Fun Rug

WXYZ

KDAL KFAB KFH KGKO KMBC KMOX KNOW KOMA KRLD KRNT KTSA KTUL WBBM WCCO WIBW WISN WKBB WNAX WTAQ

WSOC WSYR WTAR WTMJ WWNC

E-2:30 p.m., C-1:30, M-12:30, P-11:30 C — Jean Hersholt, "Dr. Christian." CFRB KFAB KFH KMBC KMOX KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WCHS WDAE WDBO WDRC WEEI WFBL WFBM WGAR WGST WHAS WHEC WHIO WHP WIBW WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WMBR WOKO WORC WPRO WQAM WREC WRVA WWI.

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

CFRB CKAC KFAB KFBB KFH KGKO KGVO KLRA KLZ KMBC KMOX KNOW KOL KRLD KSCJ KSL KTRH KTSA KWKH WABC WADC WALA WBNS WBT WCAO WCCO WCHS WDAE WDBJ WDBO WDRC WEEI WESG WFBL WFBM WHAS WHK WHP WIBW WIBX WJAS WJR WJSV WKBB WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNBF WOC WOKO WORC WPAR WPRO WOAM WSBT WSJS WTAO WTOC WWL

Also on Canadian Network

R — The Radio News Reel

KSD KSTP KYW WBEN WCAE WCSH WDAF WDEL.WEAF WFBR WGY WHO WIRE WJAR WMAQ WNAC WOW WRC WSAI WTAG WTAM WTIC WWJ

E-3:30 p.m., C-2:30, M-1:30, P-12:30 R — Bicycle Party

KARK KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSTP KVOO KYW WAPI WAVE WBEN WCAE WDAF WEAF WFAA WFLA WGY WHO WIOD WIRE WJAX WLW WMAQ WMBG WMC WNAC WOAI WOW WRC WSB WSM WSMB WTAM WTIC WWJ

SUNDAY (Continued)

E-4:30 p.m., C-3:30, M-2:30, P-1:30 R — The World Is Yours; Drama Available to Red Network

E-5:00 p.m., C-4:00, M-3:00, P-2:00 C - The Silver Theater

CFRB CKAC KFAB KFPY KLZ KMBC KMOX KNOW KNX KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KTUL KVI WABC WADC WBBM WBNS WCAO WCAU WCCO WDAE WDRC WEEI WGAR WGR WGST WHAS WHEC WHIO WJAS WJR WJSV WKRC WMBR WOKO WPRO WQAM WWL Also on Canadian Network

- Marion Tailey KDYL KFI KGW KHQ KOA KOMO KPO KSTP KYW WBEN WCAE WCOL WCSH WDAF WDEL WEAF WEBC WFBR WGY WHO WIBA WIRE WJAR WMAQ WNAC WOOD WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

B — Metropolitan Opera Auditions CFCF CRCT KARK KTTA KECA KEX KFEL KFI KFSD KFYR KGA KGIR KGNC KGO KGU KJR KLO KOIL KPRC KSO KTBS KVOO KWK WABY WAPI WAVE WBAL WBAP WBZ WBZA WCKY WCSC WDAY WEAN WEBR WENR WFIL WFLA WHAM WHK WICC WIOD WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WOWO WPTF WREN WRTD WSB WSM WSMB WSOC WSPD WSUN WSYR WTAR WICH WWNC WXYZ

E-5:30 p.m., C-4:30, M-3:30, P-2:30

C — Guy Lombardo and Orchestra KFH KMBC KMOX KOMA KTUL WAAB WABC WBNS WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJR WJSV WMAS WOKO WORC WSPD WWVA

B - Smiling Ed McConnell

KANS KDKA KECA KERN KEX KFBK KFSD KFYR KGA KGIR KGO KJR KLO KMJ KOIL KSO KTAR KWG KWK WAVE WBAL WBZ WBZA WCKY WCOL WDAY WDSU WEAN WEBC WEBR WENR WFIL WHAM WHK WICC WJZ WMAL WMT WREN WRTD WSM WSPD WSYR WTCN WXYZ

R-Joe Rines; Sheila Barrett CFCF CRCT KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTHS KVOO KYW WAPI WBAP WBEN WCAE WCSH WDAF WDEL WEAF WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMBG WMC WNAC WOAI WOW WRC WSB WSMB WSOC WTAG WTAM WTAR WTIC

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Joe Penner; Gene Austin

KFAB KFPY KGLO KLZ KMBC KMOX KNOW KNX KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KVI WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBO WDRC WEEI WFBL WFBM WGAR WGST WHAS WHEC WJAS WJR WJSV WKBW WKRC WOKO WORC WPRO WQAM WREC WRVA

M — George Jessel; Tommy Tucker WLS WMAL WMC WMT WOAI

To entire MBS and Michigan Net- WPTF WREN WRTD WSB WSM To entire MBS and Michigan Networks

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C-Seymour Simon's Orchestra

KDAL KFAB KFBB KFH KFPY KGKO KGVO KLRA KLZ KMBC KMOX KNOW KNX KOH KOIN KOL KOMA KOY KRLD KRNT KSCJ KSFO KSL KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WAIM WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCHS WCOA WCOC WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WEOA WFBL WFBM WGAR WGBI WGST WHAS WHEC WHIO WHP WIBW WIBX WISN WJAS WJNO WJR WJSV WKBB WKBH WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBR WMMN WNAX WNBF WNOX WOC WOKO WORC WPAR WPG WPRO WQAM WREC WRVA WSBT WSFA WSJS WTAQ WTOC WWL WWVA

M — Tim and frene CKLW KWK WBAL WCAE WGN WHK WIRE WOR

R — A Tale of Today WBEN WEAF WGY WJAR WMAQ WOW WRC WTAM

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

C - Jeanette MacDonald

KFAB KFH KFPY KLZ KMOX KNOW KNX KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KTUL KVI KWKH WABC WABC WCAO WCAU WCCO WDRC WEEI WFBL WFBM WGAR WGBI WGR WGST WHAS WHEC WHIO WJAS WJR WJSV WKRC WOKO WPRO WREC WRVA WTOC WWL

R - Jack Benny; Mary Livingstone KSD KYA KYW WBEN WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC ww.j

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

C - Phil Baker; Oscar Bradley KLRA KLZ KRLD KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBX WICC WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WNAC WNOX WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL WWVA

R — Fireside Recitals

KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

B — Ozzie Nelson; Harriet Hilliard KARK KDKA KECA KFEL KEX KFSD KFYR KGA KGO KJR KLO KOIL KPRC KSO KSTP KTAR KTBS KTHS KVOO KWK WABY WAPI WAVE WBAL WBAP WBZ WBZA WCKY WCOL WDAY WEAN WEBC WEBR WFIL WFLA WHAM WHK WIBA WICC WIOD WIS WJAX WJDX WJZ WKY WLEU

WSMB WSOC WSUN WSYR WTAR WTMJ WWMC WXYZ

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

C — Columbia Workshop KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFD KSL KTRH KTSA KTUL KVI KWKH WABC WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WIBX WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBG WMBR WNAX WNBF WNOX WOKO WORC WPRO WQAM WREC WSBT WWL WWVA

Also on Canadian Network

R — Don Ameche; Edgar Bergen CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIBA
WIOD WIRE WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WNAC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — General Motors Concert KANS KDKA KERN KECA KFBK KFEL KFSD KGA KGHL KGIR KGO KGU KJR KLO KMJ KOIL KSO KVOD KWG KWK KXYZ WABY WAGA WBAL WBCM WBOW WBZ WBZA WCKY WCOL WDSU WEAN WEBR WFBR WFEA WFIL WEAR WEBE WIFER WIFER WIFE WGBF WGL WHAM WHE WICC WJBO WJIM WJTN WJZ WLEU WLS WMAL WMPS WMT WORK WROL WRTD WSGN WSMK WSPD WSIIN WSYR WXYZ

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C - Ford Concert

CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WOC WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL WWVA

- Tyrone Power: Drama KDKA KECA KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WEBC WEBR WENR WFIL WGAR WHAM WICC WJZ WLW WMAL

R -- Manhattan Merry-Go-Round CFCF KDYL KFI KFYR KGW KHO KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KYW WAVE WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFAA

WMT WREN WSYR WXYZ

SUNDAY (Continued)

WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJAX WJOX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — Album of Familiar Music CFOF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KYW WAPI WAVE WBEN WCAE WCSH WDAY WBEN WCAE WEEL WFAA WFBR WFLA WGY WHO WIS WJAR WJDX WJDX WJDX

WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

B - Walter Winchell

KDKA KECA KEX KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR WXYZ E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — Irene Rich, Drama

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WENR WFIL WHAM WHK WICC WJZ WMAL WMT WREN WSPD WSYR WTCN WXYZ

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

KFAB KFPY KLRA KLZ KMBC
KMOX KNOW KNX KOIN KOL
KOMA KRLD KRNT KSFO
KSL KTRH KTSA KTUI. KVI
WABC WBBM WBNS WBRC WBT
WCAU WCCO WDAE WDBO WDRC
WEEI WFBL WFBM WGAR WST
WHAS WHEC WJBS WJR WJSV
WKBW WKRC WMBR WNOX
WOKO WORC WPRO WQAM WWL

R — Rising Musical Stars

KDYL KFI KGBX KGW KHQ KOA KPO KPRC KSD KSTP KTAR KTBS KTHS KYW WAVE WBAP WBEN WCAE WCSH WDAF WEAF WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WNAC WOAL WOOD WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ

E-11:00 p.m., C-10:00. M-9:00, P-8:00 B — Irene Rich, Drama

KECA KERN KEX KFBK KFSD KGA KGO KJR KLO KMJ KVOD KWG WAPI WAVE WJDX WMC WSB WSM WSMB

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Walter Winchell KDYL KFI KFSD KGHL KGIR

KDYL KFI KFSD KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 R — Jack Benny-Mary Livingstone KDYL KERN KFPBK KFI KFSD KGHL KGIR KGU KGW KHQ KIDO KMJ KOA KOMO KPO KTAR KWG

B — Tyrone Power; Drama KARK KPRC KTBS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

C-Columbia; R-National (Red); B-National (Blue); M-Mutual

COMEDY

Fred Allen, 9:00 p.m. Wed., Red Phill Baker, 7:30 p.m. Sun., CBS Jack Benny-Mary Livingstone, 7 and 11:30 p.m. Sun., Red Edgar Bergen-Charlie McCarthy, 8 p.m. Sun., Red

Bob Burns, 10:00 p.m. Thurs., Red Burns and Allen, 8 and 10:30 p.m., Mon., Red Charles Butterworth, 9:30 p.m. Tues., Red Eddie Cantor, 8:30 and 11:30 p.m. Wed., CBS Stuart Erwin, 9:30 p.m. Tues., CBS Billy Franz, 2:00 p.m. Sun., CBS Jack Haley, 8:30 p.m. Sat., Red Arlene Harris, 9 and 12 p.m. Tues., CBS George Jessel, 6:00 p.m. Sun., MBS Al Jolson, 8:30 and 11:30 p.m. Tues., CBS Ken Murray and Oswald, 9:00 p.m. Fri., CBS Jack Oakie, 9:30 p.m. Tues., CBS Walter O'Keefe, 9:30 p.m. Tues., Red Parkyakarkus, 8:30 and 11:30 p.m. Tues., CBS Al Pearce, 9 and 12 p.m. Tues., CBS Joe Penner, 6:00 p.m. Sun, CBS Joe Rines, 5:30 p.m. Sun, Red Pinky Tomlin, 8:30 and 11:30 p.m. Wed., CBS Henny Youngman, 8 and 11:15 p.m. Thurs., CBS

CONCERTS

Frank Black, 2:00 p.m. Sun., Blue Ford Sunday Evening Hour, 9:00 p.m. Sun., CBS General Motors Concert, 8:00 p.m. Sun., Blue Andre Kostelanetz, 9:00 p.m. Wed., CBS Metropolitan Opera, Sat. afternoons, NBC Met. Opera Auditions, 5:00 p.m. Sun., Blue NBC Symphony Orchestra, 10:00 p.m. Sat., Red and Blue

N. Y. Philharmonic, 3:00 p.m. Sun., CBS Philadelphia Symphony, 9:00 p.m. Sun., Blue

DANCE BANDS

Robert Armbruster, 8:00 p.m. Sun., Red Oscar Bradley, 7:30 p.m. Sun., CBS Tommy Dorsey, 10:00 p.m. Fri., Blue Eddie Duchin, 8:00 p.m. Wed., Blue Ted Fio Rito, 8:30 p.m. Sat., Red Al Goodman, 10:00 p.m. Sat., CBS Benny Goodman, 10:00 p.m. Tues., CBS Jimmy Grier, 6:00 p.m. Sun., CBS
Gustav Haenschen, 9:30 p.m. Sun., Red: 10:00 p.m.
Fri., CBS
Phil Harris, 7 and 11:30 p.m. Sun., Red
Carl Hoft, 9 and 12 p.m. Tues., CBS
Hal Kemp, 8:30 and 11:30 p.m. Fri., CBS
Wayne King, 8:30 p.m. Tues.. Wed., Red: 10 p.m.
Mon., CBS

Benny Kreuger, 8:30 p.m. Mon., CBS
Guy Lombardo, 5:30 p.m. Sun., CBS
Abe Lyman, 9:00 p.m. Fri., Red
Gugo Mariani, 3:30 p.m. Sun., Red
Frankie Masters, 8:30 p.m. Tues, Blue
Jack Miller, 8 and 11:15 p.m. Thurs., CBS
Russ Morgan, 8:30 and 11:30 p.m. Sat., CBS; 8:00 p.m.
Tues., Red

Ozzie Nelson, 7:30 p.m. Sun., Blue Ray Noble, 8 and 10:30 p.m. Mon., Red Raymond Paige, 9:30 p.m. Tues., Red: 9:00 p.m. Fri., CBS

Jacques Renard, 8:30 and 11:30 p.m. Wed., CBS Joe Rines, 5:30 p.m. Sun., Red B. A. Rolfe, 8:00 and 12:00 p.m. Sat., Red Harry Salter, 8:00 p.m. Sat., CBS; 10:00 p.m. Sat., CBS; 7:15 and 10:30 p.m. Wed., CBS

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CBS: 7:15 and 10:30 p.m. Wed., CBS
Seymour Simons, 6:30 p.m. Sun., CBS
Phil Spitalny, 9:30 p.m. Mon., Red
Georgie Stoll, 9:30 p.m. Tues., CBS
Johnny Trotter, 10:00 p.m. Thurs., Red
Tommy Tucker, 6:00 p.m. Sun., MBS
Rudy Vallee, 8:00 p.m. Thurs., Red

Rudy Vallee, 8:00 p.m. Thurs., Red Peter Van Steeden, 9:00 p.m. Mon., Red Don Voorhees, 8:00 p.m. Wed., CBS Mark Warnow, 7:30 and 10:30 p.m. Thurs.. CBS Ted Weems, 9:00 p.m. Mon., Red

Paul Whiteman, 9:00 p.m. Tues., MBS Meredith Willson, 9:00 p.m. Thurs., Red Victor Young, 8:30 and 11:30 p.m. Tues., CBS

DIALOG

Amos 'n' Andy, 7:00 and 11:00 p.m. Mon. through Fri. Red Easy Aces, 7:00 p.m. Tues., Wed., Thurs., Blue Fibber McGee and Molly, 9:00 p.m. Mon., Red Lum and Abner, 7:30 and 11:15 p.m. Mon., Wed., Fri., Blue

Pick and Pat, 8:30 and 11:30 p.m. Mon., CBS

Tim and Irene, 6:30 p.m. Sun., MBS

DRAMA

Campana's First Nighter, 10:00 p.m. Frl., Red Campana's Grand Hotel, 8:30 p.m. Mon., Blue Columbia Workshop, 8:00 p.m. Sun., CBS Death Valley Days, 8:30 p.m. Frl., Blue Gang Busters, 10:00 p.m. Wed., CBS Eddie Guest, 8:30 p.m. Tues., Blue Jean Hersholt, 2:30 p.m. Sun., CBS Hollywood Hotel, 9:00 p.m. Frl., CBS Hollywood Playhouse, 9:00 and 11:30 p.m. Sun., Blue Lone Ranger, 7:30 and 10:30 p.m. Mon., Wed., Frl., MBS

MBS
Lux Radio Theater, 9:00 p.m. Mon., CBS
Helen Menken, 7:30 p.m. Tues., CBS
One Man's Family, 8:00 p.m. Wed., Red
Tyrone Power, 9:00 and 11:30 p.m. Sun., Blue
Irene Rich, 9:45 and 11:00 p.m. Sun., Blue
Edward G. Robinson, 8:00 p.m. Tues., CBS
Silver Theater, 5:00 p.m. Sun., CBS
A Tale of Today, 6:30 p.m. Sun., Red
Claire Trevor, 8:00 p.m. Tues., CBS
We, The People, 7:30 and 10:30 p.m. Thurs., CBS
Witch's Tale, 10:30 p.m. Tues., MBS
Your Unseen Friend, 8:00 p.m. Sat.. CBS

POPULAR PROGRAMS American Album of Familiar Music, 9:30 p.m. Sun., Believe It Or Not, 8:00 and 12:00 p.m. Sat., Red Bicycle Party, 3:30 p.m. Sun., Red Major Bowes' Amateurs, 9:00 p.m. Thurs., CBS Major Bowes' Family, 11:30 a.m. Sun., CBS Brave New World, 10:30 p.m. Mon., CBS Carborundum Band, 7:30 p.m. Sat., CBS Cavalcade of America, 8:00 p.m. Wed., CBS Chase and Sanborn Hour, 8:00 p.m. Sun., Red Cities Service Concert, 8:00 p.m. Fri, Red Contented Program, 10:00 p.m. Mon., Red Death Valley Days, 8:30 p.m. Fri., Blue Fireside Recitals, 7:30 p.m. Sun., Red Fun Bug. 2:00 p.m. Sun.. CBS Gang Busters, 10:00 p.m. Wed., CBS Jack Haley's Variety Show, 8:30 p.m. Sat., Red Hammerstein Music Hall, 8:00 p.m. Fri., CBS Hobby Lobby, 7:15 and 10:30 p.m. Wed., CBS Hollywood Mardi Gras, 9:30 p.m. Tues., Red Hour of Charm, 9:30 p.m. Mon., Red Husbands and Wives, 8:00 p.m. Tues., Blue It Can Be Done, 8:30 p.m. Tues., Blue Jello Program, 7:00 and 11:30 p.m. Sun., Red Johnny Presents-, 8:00 p.m. Tues., Red; 8:30 and 11:30 p.m. Sat., CBS Kraft Music Hall, 10:00 p.m. Thurs., Red Warden Lawes, 10:00 p.m. Mon., Blue Warden Lawes, 1930 p.m. Mon., Bue Log Cabin Review, 8:30 p.m. Sat., Red Magic Key of RCA, 2:00 p.m. Sun., Blue Manhattan Merry-Go-Round, 9:00 p.m., Sun., Red March of Time, 8:30 p.m. Thurs., Blue MGM Program, 9:00 p.m. Thurs., Red Music From Hollywood, 8:30 and 11:30 p.m., Fri., CBS National Barn Dance, 9:00 and 11:00 p.m. Sat., Blue Northern Messenger, 11:00 p.m. Sat., Bite Northern Messenger, 11:00 p.m. CBC Jack Oakie's College, 9:30 p.m. Tues., CBS L. Pantages Covers Hollywood, 1:45 and 11:00 p.m. Sun., CBS Poetic Melodies, 7:00 and 11:00 p.m. Mon. through Fri., CBS Pontiac Varsity Show, 9:00 p.m. Fri., Blue Professor Quiz, 9:00 and 12:00 p.m. Sat., CBS Radio News Reel, 3:00 p.m. Sun., Red Salt Lake City Tabernacle, 12:30 p.m. Sun., CBS Saturday Night Serenade, 9:30 p.m. Sat., CBS Saturday Night Swing Club, 7:00 p.m. Sat., CBS Kate Smith Hour, 8:00 and 11:15 p.m. Thurs., CBS Songshop, 10:00 p.m. Fri., CBS Station E-Z-R-A, 7:15 p.m. Mon., Wed., Fri., Red Swing School, 10:00 p.m. Tues., CBS

Texaco Town, 8:30 and 11:30 p.m. Wed., CBS

Time of Your Life, 5:30 p.m. Sun.. Red
Town Hall Tonight, 9:00 p.m. Wed., Red
True Story Court, 9:30 p.m. Fri., Red
Uncle Jim's Question Bee, 7:30 p.m. Sat., Blue
Vick's Open House, 7:00 p.m. Sun., CBS
Voice of Firestone, 8:30 p.m. Mon., Red
Vox Pop. 9:00 p.m. Tues., Red
Watz Time, 9:00 p.m. Fri., Red,
Watch the Fun go By, 9:00 and 12:00 p.m. Tues., CBS
We, The People, 7:30 and 10:30 p.m. Thurs., CBS
Your Hollywood Parade, 10:00 p.m. Wed.. Red
Zenith Foundation, 10:00 p.m. Sun., CBS

SINGERS

Stuart Allen, 10:00 p.m. Sat., CBS Gene Austin, 6:00 p.m. Sun., CBS

Kenny Baker, 7:00 and 11:30 p.m. Sun., Red Henry Burr, 9:00 and 11:00 p.m. Sat., Blue Rachel Carlay, 9:00 p.m. Sun., Red Kitty Carlisle, 10:00 p.m. Fri., CBS Jerry Cooper, 9:00 p.m. Fri., CBS Alice Cornett, 10:00 p.m. Fri., CBS Richard Crooks, 8:30 p.m. Mon., Red Bing Crosby, 10:00 p.m. Thurs., Red Frank Crumit, 10:00 p.m. Fri., CBS Jean Dickenson, 9:30 p.m. Sun., Red Deanna Durbin, 8:30 and 11:30 p.m. Wed., CBS Mary Eastman, 9:30 p.m. Sat., CBS Nelson Eddy, 8:00 p.m. Sun., Red Wilbur Evans, 7:00 p.m. Sun., CBS Alice Faye, 8:30 and 11:30 p.m. Fri., CBS Jack Fulton, 7:00 and 11:00 p.m. Mon. through Fri., CBS Freddie Gibson, 10:00 p.m. Sat., CBS Harriet Hilliard, 7:30 p.m. Sun., Blue Al Jolson, 8:30 and 11:30 p.m. Tues., CBS Reed Kennedy, 10:00 p.m. Fri., CBS Dorothy Lamour, 8:00 p.m. Sun., Red Rosemary Lane, 10:00 p.m. Wed., Red Frances Langford, 9:00 p.m. Frl., CBS Pierre Le Kreeun, 9:00 p.m. Sun., Red Nick Lucas, 9:00 and 12:00 p.m. Tues., CBS Lullaby Lady, 10:00 p.m. Mon., Red Lulu Belle, 9:00 and 11:00 p.m. Sat., Blue Jeanette MacDonald, 7:00 p.m. Sun., CBS Helen Marshall, 7:30 p.m. Sun., Red Smiling Ed McConnell, 5:30 p.m. Sun., Blue Lucille Manners, 8:00 p.m. Fri., Red Tony Martin, 8:00 and 10:30 p.m. Mon., Red Frank Munn, 9:30 p.m. Sun., Red; 9:00 p.m. Fri., Red Dick Powell, 10:00 p.m. Wed., Red Martha Raye, 8:30 and 11:30 p.m. Tues., CBS Jane Rhodes, 9:30 p.m. Tues., Red Lanny Ross, 9:30 p.m. Tues., Red Kate Smith, 8:00 and 11:15 p.m. Thurs.. CBS Margaret Speaks, 8:30 p.m. Mon.. Red

TALKS

Marion Talley, 5:00 p.m. Sun., Red Virginia Verrill, 8:30 p.m. Sat., Red

Bert Whaley, 3:30 p.m. Sun., Red

Boake Carter, 7:45 and 11:15 p.m. Mon., Wed., Fri., CBS

Jimp Fidler, 10:30 p.m. Tues., Fri., Red
Gabriel Heatter, 7:30 and 10:30 p.m. Thurs., CBS
Gen. Hugh Johnson, 8:00 p.m. Mon., Thurs., Blue;
10:00 p.m. Tues., Wed., Blue
John B. Kennedy, 8:00 p.m. Sun., Blue
Geo. McCall, 7:15 p.m. Tues., Thurs., CBS
Elder Micha ux. 9:00 p.m. Mon., MBS
Robert L. Ripley, 8:00 and 12:00 p.m. Sat., Red
Sidney Skolsky, 8:30 p.m. Wed., Blue
Deems Taylor, 9:00 p.m. Wed., CBS
Lowell Thomas, 6:45 p.m. Mon. through Fri., Blue
Dorothy Thompson, 10:45 p.m. Fri., Red
Walter Winchell, 9:30 and 11:15 p.m. Sun., Blue

The MONTH'S CHANGES in STATION DATA

This information is compiled just before we go to press, after the forms for most of the other pages are closed. Some very recent changes, received too late to index in this issue, are included here, and will be incorporated next month in our main indices.

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	NORT	H AMERICAN BROADCAST	930	CFAC	Calgary, Alta., 1000 from 100
		NEW	1200	CKNX	Wingham, Ont., 100 from 50
710	CMBL	Havana, Cuba, Radio Cadena Suari-	1450	CFCT	Victoria, B. C., 500 from 50
.10	OMEDI	tos, Calle 25 No. 445, Vedado			REINSTATED
1030	CJBR	Rimouski, P. Q. J. A. Brillant	1400	WARD	Brooklyn, N. Y.
	CMCK	Havana, Cuba, San Miguel 86		WLTH	Brooklyn, N. Y.
1200	CFGP	Grande Prairie, Alta. Northern			NETWORK
		Brdestg. Corp., 906 McLeod Bldg.,	580	CKUA	Edmonton, Alta., new CBC
		Edmonton, Alta.	710	KIRO	Seattle, Wash., new CBS
1210		Greenfield, Mass. John W. Haigis	910	CBF	Montreal, P. Q., new NBC and CBC
1310	KPBM	Poplar Bluff, Mo. Fields McCarthy	1030	CFCN	Calgary, Alta., new CBC
		Co.		CJBR	Rimouski, P. Q., new CBC
1370	CFAR	Flin Flon, Man. Arctic Radio Corp.,	1050	CBM	Montreal, P. Q., new Red
		120 Main St.	1180	WDGY	Minneapolis, Minn., new CBS
		Owen Sound, Ont. Owen Sound Sun-	1220	KTMS	Santa Barbara, Calif., new Blue
		Times	1230	\mathbf{KGBX}	Springfield, Mo., new NBC
1420	CHLN	Three Rivers, P. Q. Three Rivers	1330	WSAI	Cincinnati, Ohio, NBC from Red
		Le Nouvelliste	1490	WCKY	Covington, Ky., NBC from Blue
		FREQUENCY			DELETE
930	XEFO	Mexico City, D. F., from 940	920	\mathbf{WRAX}	Philadelphia, Pa.
1310	XEBO	Irapuato, Guan., from 1280			OWNER
1010	11110	POWER	1240	CJCB	Sydney, N. S. Eastern Broadcasters,
880	CFJC	Kamloops, B. C., 1000 from 100		(77	Ltd., Radio Bldg.
200	CMQ	Havana, Cuba, 25000 from 2500		(Ple	ase turn to Page 95)

SHORTWAVE BROADCASTING STATIONS OF THE WORLD

Frequencies are given in megacycles. Power is given in parentheses in kilowatts. Schedules are shown in Eastern Standard Time by the 24-hour clock. All schedules daily unless otherwise noted.

	to 2.000 XEXP	Amateur Stations.	5.825	TIGPH	(also TIXGP3), San Jose, Costa Rica. 1100-1300; 1800-2200.
2.500		Monterrey, N. L. (.03).	5.850	YV1RB	Maracaibo, Venez. Sun., 1145-1245;
3.500	to 4.000	Amateur Stations.	3.830	IVIKE	Weekdays 0845-0945; 1115-1215;
3.040	YDA -	Tandjong Priok, Java, N.E.I. (10.).			1645-2145.
4.273	ŘV15	Khabarevsk, USSR (Siberia). (20.). 0100-1000.	5.855	HIIJ	San Pedro de Macoris, D. R. (.04). 1200-1400; 1830-2100.
4.600	HC2ET	Guayaquil, Ecuador. Wed., Sat., 2100-2230.	5.875	HRN	Tegucigalpa, Honduras. (.4). Sun., 2030-2130. Weekdays 2030-2200.
4.780	HJ1ABB	Barranquilla, Colembia (.3). Apart-	5.885	HI9B	Santiago, D. R. 1800-2300.
		ado 715.	5.895	YV3RA	Barquisimeto. Venez. 1800-2200.
4.787	HJ2ABC	Cucuta, Colombia. (.25). "La Voz de Cucuta."	5.905	TILS	San Jose, Costa Rica. 1800-2300.
4.810	YDE2	Solo, Java, N.E.I. (.1).	5.913	YV4RH	Valncia, Venez. 1700-0100.
			5.925	HH2S	Port-au-Prince, Haiti, 1900-2208.
4.840	MJSABD	Bogota, Colombia. 1930-2400. Aptdo. 509.	5.935	YV1RL	Maracaibo, Venez. (.3). 1700-2230.
5.415	PMY	Bandoeng, Java, N.E.I. (.45). 0530- 1000.	5.945	TG2X	Guatemala City, Guat. (.2). Sun., 1300-1400; Mon., Thurs., Sat., 1600-
5.500	TI5HH	San Ramon, Costa Rica. (.2). 2009-			1860; 2209-2400.
		2330.	5.947	PJC1	Willemstad, Curacao, N.W.I. (.15) 1835-2035.
5.710	TGS	Guatemala City, Guat. (.2). Wed.,	F 075		
		Thurs., Sat., 1800-2100.	5.975	OAX4P	
5.735	HC1PM	Quito, Ecuador. Sat., 2100-2300.	5.980	HJ4ABD	Medellin, Colombia. 2000-2230.
5.763	YNOP	Managua, Nicaragua. 2000-2130.	5.990	HJ2ABD	Bucaramanga, Colombia. (.67).
5.765	YV2RA	San Cristobal, Venez. 1800-2330.			1900-2300.
5.800	YV5RC	Caracas, Venez. (1.). Sun., 0830- 2330. Weekdays 0700-2230.	6.000	CXA2	Montevideo, Uruguay. (.5).
- 040	TIODIIO			OAX5C	Ica, Peru. (.1).
5.813	11GPH2	San Jose, Costa Rica.		XEBT	Mexico City, D. F. (1.). 1800-2400.

6.005	CFCX	Montreal, P. Q. (.075). 0700-2400. Colon, Panama. 1800-2300.	6.125	
	HP5K VE9DN	Montreal, P. Q. (6.).		2145. HP5H Panama City, Panama
	XZ1GY	Rangoon, Burma.		XEPW Mexico City, D. F. 2100-2400.
6.010	CJCX	Sydney, N. S. (1.).	6.128	OAX7A Cuzco, Peru. (.1).
0,020	coco	Havana, Cuba. (2.5) Sun., 2000-2200.	6.130	COCD Havana, Cuba. (.35). 1700-0100
		Weekdays 1030-1300; 1600-2000.	0.130	VE9HX Halifax, N. S. (.5). 1700-2300.
	OLR2A	Prague, Czechoslovakia. (35.).	6.132	VP3BG Georgetown, British Guiana.
		Mon., Wed., Fri., 1600-1630. Saigon, French Indo-China.	6.137	CR7AA Lourenco Marques, Port. East
c 012		Bogota, Colombia. (1.2), 1800-2300.		Africa. Sun. 0600-0900. Weekdays
6.012			C 120	9500-0700.
6.015	HI3U	Santiago de los Caballeros, D. R. (.025). Mon. 2000-2100. Daily 0730-	6.138 6.140	HJ4ABD Medellin, Colombia. W8XK Pittsburgh, Pa. (40.). 2200-sign off.
		0930; 1200-1430; 1700-1930.	6.145	HJ4ABE Medellin, Colombia (1.). "La Voz
6.020	DJC	Berlin, Germany. (50.). 1040-1630;		de Antioquia." 1800-2230.
0.020		1650-2245	6.150	CJRO Winnipeg, Man. (2.). 1800-2400.
	XEUW	Veracruz, Ver. (.02). 1800-2400.		VPB Colombo, Ceylon. (.3). Sun. 0700- 1130; Weekdays 0630-1230.
6.025	HJ1ABJ	Santa Marta, Colombia. (.05).	6.153	HI5N Ciudad Moca, D. R. (.1). 1900-2000.
		1800-2230.	6.156	YV5RD Caracas, Venez. 1030-1330; 1530-
6.030	HP5B	Panama City, Panama. (.1). 1700-		2200.
		2200.	6.174	XEXA Mexico City, D. F. 1700-2100.
	OLR2B	Prague, Czecho. (35.).	6.190	HI1A Santiago de los Caballeros, D. R. (.05). Weekdays 2000-2200.
	VE9BJ	St. John, N. B. (.05).	6.198	HISQ Trujillo, D. R. 1700-1900.
	XEBQ	Mazatlan, Sin. (.05).	6.200	COKG Santiago, Cuba. (.05). Daily exc.
6.033	нј4АВР	Medellin, Colombia. (2.5). 1800- 2300.		Sat. 0909-2300.
6.038	HJ1ABC	Barranguilla, Colombia. (.15). 1100-	6 205	XEXS Mexico City, D. F.
01000		2300.	6.205 6.215	YV1RI Coro, Venez. (.15). 1700-2200. TG2 Guatemala City, Guat.
6.040	PRA8	Pernambuco, Brazil. (3.). 1500-	6.225	YV1RG Valera, Venez. 1730-1930.
		2000.	6.235	HRD La Ceiba, Honduras. (.25). 2000-
	W1XAL	Boston, Mass. (10.). Daily exc. Sat.		2300.
	W4XB	and Sun., 1900-2100.	6.243 6.250	HIN Trujillo, D. R. (.75). YV5RJ Caracas, Venez.
	YDA	Miami, Fla. (5.). Tandjong Priok, Java, N.E.I. (10.).	6.270	YV5RJ Caracas, Venez. YV5RP Caracas, Venez. (1.2).
6.050	GSA	Daventry, Gt. Britain. (20.).	6.280	HIG Trujillo, D. R. (.05).
0.030		Pereira, Colombia (6054 assigned).	6.282	COHB Sancti-Spiritus, Cuba. (.15). 2100-
		1800-2200.		2300.
6.060	VQ7I O	Nairobi, Kenya. 1100-2430.	6.296 6.300	OAX4G Lima, Peru. (.4). 1900-2130. YV4RD Maracay, Venez. 1700-2300.
		Philadelphia, Pa. (10.). 2000-2300.	6.310	HIZ Trujillo, D. R. (.1).
	W8XAL	Cincinnati, Ohio. (10.). Daily 2300- 0200. Sun. 0800-2000. Weekdays	6.312	ZP14 Villarrica, Paraguay (1.). 1100-1700.
		0200. Sun. 0800-2000. Weekdays 0600-2000.	6.330	COCW Havana, Cuba. 9700-2400.
6.062	SBG	Motala, Sweden. (.5). 1330-1700.	6.335	OAX1A Chiclayo, Peru. (.2). Dally 2000- 2300; Sat. 2000-2400.
6.064	VP3MR	Georgetown, British Guiana. 1700-	6.340	HI1X Trujillo, D. R. (.5). Tues., Fri.,
		2100.		2009-2200.
6.065 6.069	HP5F	Colon, Panama. Johannesburg, Union of S. Africa	6.357	HRP1 San Pedro Sula, Honduras.
0.003		(5.). 2345-0030.	6.365 6.380	YV1RH Maracaibo, Venez. 1988-2460. YV5RF Caracas. Venezuela.
6.070	CFRX	Toronto, Ont. (1.). 1000-2300.	6.400	YV5RF Caracas, Venezuela. YV5RH Caracas, Venezuela.
	HJ3ABF	Bogota, Colombia. (.05). 1900-2230.	6.410	TIPG San Jose, Costa Rica. (1.), 1800-
C 075	YV1RD	Maracaibo, Venez. 1900-2400.		2230.
6.075	XEBW	Guadalajara, Jal. (.045). Guadalajara, Jal.	6.416	YV6RC Bolivar, Venez.
6.077	OAX4Z	Lima, Peru. (10.) (6082 assigned).	6.420 6.425	HI1S Santiago, D. R. (.02). 1800-2300. OAX4K Lima, Peru. (.2).
		1900-2330.	0.423	W3XL Bound Brook, N. J. (100.). Irrreg
6.080	DJM	Berlin, Germany. (50.).		W10XDA Effie M. Morrissey (.1).
	VE9CS	Vancouver, B. C. (.01). 1400-2400. Chicago, III. (20.). Daily 1900-2200.	6.450	HI4V San Francisco de Macoris, D. R.
4	··· JAAA	Weekdays 0600-0730.	C 470	(,025).
6.085	HJ5ABD	Cali, Colombia. 1900-2200.	6.479 6.485	HISA Trujillo, D. R. HIIL Santiago de los Caballeros, D. R.
6.090	CRCX	Toronto, Ont. (1.). 1100-1900.	0.403	"Emisora Nacional." 0830-0800:
	HJ4ABC	Ibague, Colombia. 2000-2200.		1730-1990; 2000-2100.
6.095 6.100	ZGE W3YAL	Kuala Lampur, F.M.S. Bound Brook, N. J. (35.). 2100-0109.	6.479	HISA Trujille, D. R.
0.100	W9XF	Chicago, III. (10.). 1700-2005.	6.500	HIL Trujillo, D. R. (.05).
		Belgrade, Jugoslavia. (1.). 1200-	6.508	YV1RM Maracaibo, Venez. Radio Guardia Civil. Tetuan, Sp. Morocco.
١.		1700.	0.308	1900-2000.
`6.108		Manizales, Colombia. 1808-2490.	6.520	YV4RB Valencia, Venezuela. 1700-2200.
6.110	GSL	London, Gt. Britain. (20.).	6.534	EDR4 Palma, Majorca, Balearic Isl.
6.115	OLR2C	Prague, Czecho. (35.).	6.540	YN1GG Managua, Nicaragua.
6.118 6.120	XEUZ W2XE	Mexico City, D. F. (5.). 2300-0300. New York, N. Y. (10.).	6.545 6.550	YV8RB Bolivar, Venez. 2100-2300. TIRCC San Jose, Costa Rica. (.5). Tues.,
4,120	XEFT	Veracruz, Ver. (.012).	4.550	Thurs., Sat. 1700-1800.
	YDA5	Bandoeng, Java, N.E.I. (1.5).	6.555	HI4D Trujillo, D. R. (.025). 1709-2000.
6.122	HJ3ABX	Bogota, Colombia. 1730-2230.	6.622	Prado Rio Bamba, Ecuador. Thur. 2100-
	OAX6A	Arequipa, Peru. (.1).		2300.

6.630	ніт	Trujillo, D. R. (.2). Weekdays,	9.520	HMARI	l Armenia, Colombia. (1.). 0800-1100:
		1800-2100.	01020	OZF	1800-2200.
6.635	HC2RL	Guayaquil, Ecuador. Sun. 1745- 1945. Tues. 2115-2315.		YSH	Copenhagen, Denmark. 1400-1815. San Salvador, E. S.
6.69 0	TIEP	San Jose, Costa Rica. 1600-2300.			Radio Liberte. 1900-2000.
6.700	TIVL	San Jose, Costa Rica.	9.525	ZBW3	Hong Kong. (2.5). Sat. 2100-2400.
6.720	PMH	Bandoeng, Java, N.E.I. (1.5).			Sun. 0000-0100; 0300-0930. Other
6.730 6.780	HI3C HIH	La Romana, D. R. 1745-2000. San Pedro de Macoris, D. R. (.15).	9.530	LKJ1	days 0400-1000; 2330-0100.
6.780	nın	1900-2000.	3,330	W2XAF	Jeloy, Norway. (1.). 0500-0800. Schenectady, N. Y. (40.). Sat. 1200-
6.800	HI7P	Trujillo, D. R. 1930-2100.			2400. Other days 1600-2400.
0.000	PZH	Paramaribo, N. W. I.			Belmont, Calif. (20.). General
6.850	TIOW	Puerto Limon, Costa Rica. (.4).			Elec. Co. (Under construction).
		Puerto Limon, Costa Rica. (.4). Sun., 1600-1700. Daily 1200-1300.	9.535	JZ1	Nazaki, Japan. (50.). 1500-1600;
6.990	VK8XI	Port Moresby, Papua. (Doubtful).	0.530	VPD2	1630-1730.
	to 7.300	Amateur stations. Papeete, Tahiti. (.2). Tues., Fri	9.536 9.540	DJN DD2	Suva, Fifi. (2.). 0530-0700. Berlin, Germany. (50.). 0005-1000;
7.100	FO8AA	2300-2480.	3.340	2314	1659-2245.
		Guadalajara, Jal. "Voice of the	9.550	OLR3A	Prague, Czecho. (35.). 1430-1630.
		Revolutionary Party."		XEFT	Veracruz, Ver. (.02). 1930-2400.
7.200	YNAM	Managua, Nicaragua. 2000-2400.	9.560	DJA	Berlin, Germany. (50.). 0005-1100;
7.380	XECR	Mexico City, D. F. (20.). Sun.,			1657-2245.
		1800-2000.		HJ1ABE	Barranquilla, Colombia. (,3).
7.540	RKI	Radio Liberte. 1900-2000. Moscow, U. S. S.R. (Assigned 7520).	0.500		Souranaya I., Java, N.E.I. (1.,
7.625		Johannesburg, U. of S. Africa.	9.562	OAX4T	Lima, Peru. (10.). 1130-1330.
		(5.). 2345-0030.	9.565	VUB	Bombay, India. (4.5).
7.797	HBP	Geneva, Switz. (20.). Sat., 1730-	0 570	YV3RB	Barquisimeto, Venez.
		1830.	9.570	KZRM W1XK	Manila, P. I. 0400-1000. Boston, Mass. (10.). Sun. 0800-
7.894 8.400	YSD HC2CW	San Salvador, E. S. 2100-2230.		******	0100. Weekdays 0600-0100.
8.58 0	YNPR	Guayaquil, Ecuador. Managua, Nicaragua. "Radio		W8XK	Pittsburgh, Pa. (40.). (Not used).
0.300) IN IN	Pilot".	9.580	GSC	Daventry, Gt. Britain. (20.). 1800-
8.600	HC1EC-	Quito, Ecuador,			2939; 2109-2300.
8.655	W10XD	A Effie M. Morrissey. (.1).		VK3LR	Melbourne, Australia. (.5). 0100-
8.665	COTK	Camaguey, Cuba. (2.4). 1800-0100.	9.590	PCJ	0945. Huizen, Netherlands. (20.). Sun.
8.950	HCJB	Quito, Ecuador. (.15). Mon., Wed.,	01000	. 03	1490-1530; 1980-2115; Mon. 2100-
9.030	COBZ	Sat., 0200-0400; 1300-1500. Havana, Cuba.			2230; Tues., 1400-1530; 1900-2130;
9.100	COBX	Havana, Cuba.			Wed., 1900-2130; Thurs., 1900-2130.
9.125	HAT4	Budapest, Hungary. (20.). Sun.,		VK2ME	Sydney, Australia. (20.). Sun.,
		Wed., 1900-2000. Sat., 1800-1900.		VKCME	0030-0230: 0430-0830; 0930-1130. Pertn, Australia. (5.). Weekdays
9.195	COBX	Havana, Cuba.		V POINT	0600-0800.
9.340	OAX4J	Lima, Peru. (.2). 1200-1500; 1700- 0100.		W2XE	New York, N. Y.
9.345	HBL	Geneva, Switz. (20.). Fri. 1438-		W3XAU	Philadelphia, Pa. (10.). 1200-2000;
	<u>-</u>	1445; 1930-1945; 2000-2015.		******	Thurs., 2200-2300.
9.350	COBC	Havana, Cuba. Aptdo. 132.		WSXAL	Cincinnati, Ohio. (10.). (Under construction).
	HS8PJ	Bangkok, Siam. Mon., Thurs.,	9.595	HBL	Geneva, Switzerland, (18.). Sat.
9.415	PJC2	0730-1800.			1730-1830.
9.413	PLV	Willemstad, Curacao, N.W.I. Bandoeng, Java, N.E.I. (80.). 1000-		RAN	Moscow, USSR. 1900-2115.
		1100.	9.600	CB960	Santiago, Chile. 1800-1930.
9.428	COCH	Havana, Cuba. (.15). 0700-0100.	9 605	HP5J	Panama City, Panama. (1.). 1830-
9.445	HC2RA	Guayaquil. Ecuador. Sun. 1600-	9.618	HILARD	2300. Cartagena, Colombia. (.75). 1800-
		2200. Daily 2100-2200.	3.010	HIJIABI	2200.
9.450		Guayaguil, Ecuador. 2100 2200.	9.625		Johannesburg, U. of S. Africa (5.).
9.460 9 470	XGOX PJC1	Nanking, China. (.5). Willemstad, Curacao, N.W.I. (.15).			2345-0030.
3 470	1301	Sun. 1035-1235.	9.630	HJ7ABD	Bucaramanga, Colombia. "Radio
9.480	EAR	Madrid, Spain. (20.). Mon. at 2000;			Bucaramanga."
		Tues., Fri. at 2100.	9.635	I2RO	Taihoku. Taiwan. 0430-1030.
	XEDQ	Guadalajara, Jal. 1900-0100.	5.840	CXA8	Rome, Italy. (25.). 1230-2100. Montevideo, Uruguay. 0706-2400.
9.500	EAC	Madrid, Spain.			
	HJIARE	Cartagena, Colombia. 1700-1800;	9.645	HH3W	Port-au-Prince, Haiti. (.03). 1300- 1400; 1900-2000.
	XEWW	2000-2230. Mexico City, D. F. (10.). 0800-2400.	0.050	00011/4	
0 501	PRF5	Rio de Janeiro, Brazil. (60.). 1645-	9.650	CS2WA	Lisbon, Portugal. (2.). Tues Thurs., Sat., 1600-1906.
9.501	FRF5	1745.			
0.504	OL DOD		9.660	CR6AA	Lobito, Angola, Port. West Africa. (.5). Wed., Sat., 1445-1645.
9.504		Prague, Czecho. (35.).			
9.510	GSB	Daventry, Gt. Britain. (20.). 0315-		LRX	Buenos Aires, Argentina. (5.).
		0530; 1220-1545; 1600-2030; 2100- 2300-		T 141	1030-2430.
	HJU	Buenaventura, Colombia. Mon.,	9.670	TI4NRH	Heredia, Costa Rica. 2100-2200; 2330-2400.
		Wed., Fri. 2000-2300.	0.00-	T01111	
	HS8PJ	Bangkek, Siam. Mon., Thurs.,	9.685	TGWA	Guatemala City, Guat. (16.). "Radio Nacional." Sun., 0006-0600.
		0800-1000.			Daily 2000-2400.
	AKSME	Melbourne, Australia. (5.). Week-	9.700	COCA	Havana, Cuba. Relays CMCA.
		days 6400-6760.	3.700	JUUA	
		20			

9.730		"Radio Martinique," Fort de France, Mart. 1845-1945.	11.810	12RO	Rome, Italy. (25.). 0500-1220.
9,750	coco		1.820	GSN	Daventry, Gt. Britain.
9.830		Havana, Cuba. 0700-0100. Havana, Cuba. (Assigned 9833).	11.830	KZRM W2XE	Manila, P. I. New York, N. Y. (10.). Daily 1830-
				WZAE	1900. Sun. 1900-2400.
9.860	EAQ	Madrid, Spain. (20.).		W9XAA	Chicago, III. (20.).
9.925		Darien, Manchukuo. 0715-0800.	11.840	CSW	Lisbon, Portugal. (5.).
9.940	csw	Lisbon, Portugal. (5.). 1900-2000.		KZRM	Manila, P. I. 0400-1800.
10.065	CQN	Macau. Portuguese China.		OLR4A	Prague, Czecho. (35.). Mon.,
10.070		Communistic Station.	44 0		Thurs., 1900-2100. Daily 1400-1415.
10.260	PMN	Bandoeng, Java, N.E.I. (1.5). 0530- 1100.	11.855	DJP	Berlin, Germany. (50.).
10.330	ORK	Brussels, Belgium. (11.). 1330-1500.	11.860	GSE	Daventry, Gt. Britain. (20.).
10.370	EAJ43	Santa Cruz de Tenerife, Canary Isl.	11.870	YDB W8XK	Soerabaja I, Java, N.E.I. (1.). Pittsburgh, Pa. (40.). 1900-2200.
		2000-2100.	11.875	OLR4C	Prague, Czecho. (35.).
	•••••	"Radio Nacional," Salamanca, Spain. 1700-1825; 2000-2045.	11.885	TPA3	Pontoise, France. 0200-0500; 1215-
10 420			11.003	IFAS	1800.
10.430	• • • • • • • • • • • • • • • • • • • •	Pirate station announcing "Radio Wilan."	11.895	HP5I	Aguadulce, Panama. 1930-2130.
10.530	JIB	Taihoku, Taiwan. (6.). 0900-1030.	11.900	CD1190	Valdivia, Chile. 1000-1300; 1900-
10.600	ZIK2	Belize. British Honduras.			2200.
10.660	JVN			OLR4D	Prague, Czecho. (35.).
	CEC	Nazaki, Japan. (50.). Santiago, Chile. (4.).		XEWI	Mexico City, D. F. (.25). 1930-2400.
10.670		_	11.955	IUC	Addis Ababa, Ethiopia.
10.740	JVM "Badia	Nazaki, Japan. (50.).	11.960	HI2X	Trujillo, D. R. (.5). Tues., Fri.,
10.823	Radio	Nacional " Salamanca, Spain. 1630- 1800.			2000-2200. Sun. 0740-1040.
11.000	PLP	Bandoeng, Java, N.E.I. (1.5).	12,000	RNE	Moscow, USSR. (20.). Sun. 1000-
11.040	CSW	Lisbon, Portugal. (5.). 1500-1900.			1100. Sun., Wed., 0600-0700. Sun.,
11.402	нво	Geneva, Switz., Fri. 1400-1415;			Mon., Wed., Fri., 1600-1700.
11.402		Sat. 1845-2030.	12.120		Algiers, Algeria.
11.435	cocx	Havana, Cuba. Sun. 1800-2100. Other days 0800-2400.	12.235	TFJ	Reykjavík, Iceland. (7.5). Sun., 1345-1430.
11.500	SPD	Warsaw, Poland. (2.). Daily 1800-	12,290	GBU	Rugby, Gt. Britain.
11.500	310	1900. Sun. until 2000.	12.295	CB615	Santiago, Chile.
11.698	SBG	Motala, Sweden. (.5). 0100-0130.	12.500	HIN	Trujillo, D. R. (.75).
11.700	CB1170	Santiago, Chile. 1000-1400; 1530-2300.	13.635	SPW	Warsaw, Poland. (10.). Mon., Wed., Fri., 1230-1330. Daily 1800- 1900.
	HP5A	Panama City, Pan. (.5). 2000-2330. Saigon, Fr. Indo-China. 0500-1100.	13.986	DJS	Berlin, Germany. (20.).
11.710	XEWB	Guadalajara, Jal.		to 14.400	
221120	YSM	San Salvador, E. S.	14.400	UPOL	North Pole. 1400-1605.
11.713	TPA4	Pontoise, France. 0615-1300.	14.535	НВЈ	Geneva, Switz. Sat. 1845-2100.
11.718	CR7BH	Lourenco Marques, Port. East	14.900	LZA	Sofia, Bulgaria.
		Africa. (.2). Sun. 0530-0700. Other	15.040	RKI	Moscow, USSR. 1900-2115.
11.720	CJRX	days 0430-0630.	15,110	DJL	Berlin, Germany. (50.). 0000-0200;
11.720	PHI	Winnipeg, Man. (2.). 1800-2400. Hilversum, Netherlands. (23.6).	13,110	DJL	0800-0900; 1040-1630. Sun., 0600-
11.730	XETM	Villahermosa, Tab.			0800.
11.740	HP5L	David, Panama. (.35).	15.116	OLR5C	Prague, Czecho. (35.).
11 750	GSD	Daventry, Gt. Britain. (20.). 0315-	15.120	HVJ	Vatican City. (10.). 1000-1030.
22.00	400	0530; 1045-1200; 1220-1545; 1600- 2030; 2100-2300.	15.140	GSF	Daventry, Gt. Britain. (15.). 0915- 1200.
11.760	OLR4B	Prague, Czecho. (35.).	15.150	YDC	Bandoeng, Java, N.E.I. (3.).
	TGWA	Guatemala City, Guat. (10.). Mon., Thurs., 2000-2200.	15.160	JZK XEWW	Nazaki, Japan. (50.). Mexico City, D. F. (10.).
11.770	DJD	Berlin, Germany. (50.). 1040-1630; 1650-2245.	15.170	CXA14 TGWA	Montevideo, Uruguay. Guatemala City, Guat. (10.).
11.790	W1XAL	Boston, Mass. (10.). Sat. 1345-1830. Sun. 1500-1800. Other days 1645-	15.175 15.180	RV96 GSO	Moscow, USSR. Daventry, Gt. Britain. 0315-0530;
		1830.			0545-0855; 1600-1800.
11.795	DIO	Berlin, Germany. (8.).	15.200	DJB	Berlin, Germany. (8.). Sun. 1110-
11,796		Ica, Peru. (.1). 1200-1600: 1900-2330.			1225. Daily 0005-1100; 1650-2245.
11.800	COGF	Matanzas, Cuba. (1.). 1300-1600;	15.210	W8XK	Pittsburgh, Pa. (40.). 0900-1900.
	JZJ	1800-2200. Nazaki, Japan. (50.). 1500-1600;	15.220	PCJ .	Huizen, Netherlands. (20.). Sun. 0330-0500. Wed. 0800-1030.
	OER2	1630-1730; 0800-0900; 0030-0130.	15,230	OLR5A	Prague, Czecho. (35.). 0930-1130.
	JER2	Vienna, Austria. (1.5). Weekdays 0900-1800.	15.243	TPA2	Pontoise, France. 0600-1100.
11.805		Copenhagen, Denmark. 1830-2100.	15.250		Boston, Mass. (10.). Fri. 2100-
			_550		(200/)

SHORTWAVE BROADCASTING STATIONS OF THE WORLD

15.260	GSI	2200; Sun. 1015-1200; Daily exc. Sat. and Sun. 1415-1600. Daventry, Gt. Britain. 1220-1545; 2100-2300.	17.790	W8XK W9XAA W9XF GSG	Pittsburgh, Pa. (40.). Chicago, III. (5.). Chicago, III. (10.). Daventry, Gt. Britain. (15.). 0315-
15.270	HI3X W2XE	Trujillo, D. R. (.5). Sun., 0800-1100. New York, N. Y. (10.). Sat., Sun.			0530; 0545-0855; 0915-1200; 1220- 1545.
		1430-1800; 2000-2400. Mon. through Fri. 1300-1800; 2030-2400.	19.020	HS8PJ	Bangkok, Siam. (5.). Mon. 0800- 1000.
15.280	DIQ	Berlin, Germany. (50.). Sun. 1110-	21.450	OLR6A	Prague, Czecho. (35.).
		1225. Daily 0005-0545; 0600-0800; 0815-1100; 1650-2245.	21.460	W1XAL	Boston, Mass. (10.). Tests ir- regularly.
15.290 15.300	LRU XEBM	Buenos Aires, Arg. (5.). 0800-1000. Mazatlan. Sin. 1000-2300.	21.470	GSH	Daventry, Gt. Britain. 0545-0855; 0915-1200.
15.310	GSP	Daventry, Gt. Britain. 1345-1545.	21,480	W2XAD	Schenectady, N. Y. (25.).
15.320	OLR5B	Prague, Czecho. (35.).	21.520	W2XE	New York, N. Y. (10.). Sat., Sun.,
15.330	W2XAD	Schenectady, N. Y. (25.). 1100-2100.			0800-1300; Other days 0730-1000.
		Belmont, Calif. (20.). (Under			Philadelphia, Pa.
		construction).	21.530	GSJ	Daventry, Gt. Britain. 0545-0855; 0915-1030.
15.340	DJR	Berlin, Germany. (50.). 0800-0900; 1650-2245.	21.540	W8XK	Pittsburgh, Pa. (40.). 0700-0900.
15.370	HAS3	Budapest, Hungary. (20.). Sun.	21.550	GST	Daventry, Gt. Britain.
		0900-1000.	25.950	W4XH	Spartanburg, S. C. (.05) (WSPA). Los Angeles, Calif. (.1) (KGFJ).
15.440	XEBM	Mazatlan, Sin. (.05). 1000-2300.		WOARG	24 hours daily.
15.555		Tuinicu, Cuba. (2.).		W9XUP	St. Paul, Minn. (1.) (KSTP).
17.310	W3XL	Bound Brook, N. J. (20.).	26.100	GSK	Daventry, Gt. Britain.
17.760	DIE	Berlin, Germany. (50.). Sun. 1110- 1225. Daily 0005-1000.		W9XJL	
	W2XE	New York, N. Y. (10.). 1830-2000.	26.400	W9XAZ	Milwaukee, Wis. (.5) (WTMJ). 1300-2400.
17.770	PHI	Hilversum, Netherlands. (23.6).	26.550	W2XQ0	Flushing, N. Y. (.1) (WMCA).
		Sun., 0725-1025. Mon., Tues., Thurs., Fri., 0825-1000. Sat.,	27.100	W10XD	A Effie M. Morrissey (.1).
		0825-1040.	28.000	to 30.000	Amateurs.
17.780	W3XAL	Bound Brook, N. J. (35.). 0855-1745;	56.000 to 60.000 Amateurs.		
		1800-2100.	110.000	to infini	ty. Amateurs.

Time Conversion Table

The time given in our indices is Eastern Standard

	ga	y the 24-hour	GIOCK.		
EST 24-hr.		1			,
Clock	EST	\mathbf{CST}	MST	PST	GMT
0000	Midn't	11 pm	10 pm	9 pm	0500
0100	1 am	Midn't	11 pm	10 pm	0600
0200	2 am	1 am	Midn't	11 pm	0700
0300	3 am	2 am	1 am	Midn't	0800
0400	4 am	3 am	2 am	1 am	0900
0500	5 am	4 am	3 am	2 am	1000
0600	6 am	5 am	4 am	3 am	1100
0700	7 am	6 am	5 am	4 am	1200
0800	8 am	7 am	6 am	5 am	1300
0900	9 am	8 am	7 am	6 am	1400
1000	10 am	9 am	8 am	7 am	1500
1100	11 am	10 am	9 am	8 am	1600
1200,	Noon	11 am	10 am	9 am	1700
1300	1 pm	Noon	11 am	10 am	1800
1400	2 pm	1 pm	Noon	11 am	1900
1500	$3_{\rm pm}$	2 pm	1 pm	Noon	2000
1600	4 pm	3 pm	, 2 pm	1 pm	2100
1700	5 pm	4 pm	3 pm	2 pm	2200
1800	6 pm	5 pm	4 pm	3 pm	2300
1900	7 pm	6 pm	5 pm	4 pm	2400
2000	8 pm	7 pm	6 pm	5 pm	0100
2100,	9 pm	8 pm	7 pm	<u>6</u> pm	0200
2200	10 pm	9 pm	8 pm	7 pm	0300
2300	11 pm	10 pm	9 pm	8 pm	0400
$2400 \ldots \ldots$	Midn't	11 pm	10 pm	9 pm	0500
		out the entire	e world	consult the	RADEX
Time Convert	er.				

KEY TO SYMBOLS

As shown in the Index by Frequencies and Dial Numbers

Frequency is given in kilocycles; wave lengths in meters. Night power is shown in wates in third column. Daytime power is shown in parentheses in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

```
National "Red" network.
  Second Column Symbols
                                            Weather or time only.
     Verifies reception for return
                                            No information available.
                                                                                    Sunday only.
                                         Fourth Column Symbols
National "Blue" network.
                                                                                   Synchronized.
       postage.
                                                                                   Has permit
                                                                                                    to increase
Ь
     Verifies only occasionally.
     Does not verify.
Verification 10c; letter 25c.
Sends own station stamp
for 10c.
                                            Columbia network.
                                                                                      power.
ď
                                            Day time only.
                                                                                   Has permit to change lo-
                                       Dn Day time with occasional
                                                                                      cation.
                                            evening hours.
Canadian Brdcstg. Corp.
                                                                                    Has permit to change fre-
                                                                              quency.
a-b-c. Small letters show stations
     Sends own station stamp
for 5c.
                                           Mutual Brdestg. Sys.
National "Red" and
"Blue" networks.
                                                                                      using same transmitter.
     Sends own station stamp
                                       N
                                                                               1-2-3. Figures denote stations
       for postage.
                                            Has construction permit
                                                                                      sharing time.
     Has no stamps.
                                              only.
                                                                               .... No information.
     Verifies for 5c.
  The sign-on and sign-off time of stations is shown in Eastern Standard Time. "ss" means "sunset."
```

```
540 kcys. (555.2)
```

CJRM ak 1000 F Regina, Sask. -9:30 am-1:30 am

550 keys. (545.1)

mk	500	F (1)	Fredericton, N. B.	-
ak	500	2(1)	St. Louis, Mo.	-
ak	1000	N (5)	Bismarck, N. Dak.	
ak	1000		Corvallis, Ore.	-
ak	1000		St. Louis, Mo.	
ak	1000	C(5)	San Antonio, Tex.	
ak	500	D	Waterbury, Vt.	
ak	1000	C·(5)		-
ak	1000	C (5)	Cincinnati, Ohio	
ak	500	D `	Harrisonburg ,Va.	
ak	10 0		Merida, Yuc.	
	ak ak ak ak ak ak ak	ak 500 ak 1000 ak 1000 ak 1000 ak 1000 ak 500 ak 1000 ak 500 ak 500	ak 500 2 (Ĭ) ak 1000 N (5) ak 1000 ak 1000 2R (5) ak 1000 C (5) ak 500 D ak 1000 C (5) ak 1000 C (5) ak 500 D	ak 500 2(1) St. Louis, Mo. ak 1000 N(5) Bismarck, N. Dak. ak 1000 Corvallis, Ore. ak 1000 C (5) St. Louis, Mo. ak 500 D Waterbury, Vt. ak 1000 C (5) Buffalo, N. Y. ak 1000 C (5) Cincinnati, Ohio ak 500 D Harrisonburg, Va.

-7:00 am-11:00 pm -8:00 am-Midnight -8:00 am-1:00 am Noon-Midnight

-7:00 am-midnight

560 keys. (535.4)

KFDM KLZ KSFO KWTO WFIL WIND WIS	ak ak ak ak ak ak	500 1000 1000 5000 1000 1000	(1) N C (5) C (5) D BM (5) N (5)	Beaumont, Texas Denver, Colo. San Francisco, Cal. Springfield, Mo. Philadelphia. Pa. Gary, Ind. Columbia, S. C.
WIS	ak	1000	N (5)	Columbia, S. C.
WQAM	ak	1000		Miami, Fla.

-8:30 am-2:00 am -10:00 am-4:00 am

-7:00 am—midnight -6:00 am—4:00 am -7:00 am-midnight 7:00 am-midnight

570 keys. (526.0)

		II Costa
aĸ	5000	Havana, Cuba
ak	250	CY (1) Wichita Falls, Tex
ak	1000	Los Angeles, Calif
ak	1000	C (5) Tacoma, Wash.
ak	500	C1 Youngstown, Ohio
ak	1000	New York, N. Y.
ak	1000	C (5) Yankton, S. Dak.
ak	750	1 (1) Columbus, Ohio
ak	1000	B (WSYU) Syracuse, N. Y.
ak	1000	N Asheville, N. C.
	ak ak ak ak ak ak	ak 250 ak 1000 ak 1000 ak 500 ak 1000 ak 1000 ak 750 ak 1000

-9:00 am-3:00 am

-9:00 am---11:00 pm -7:00 am-1:00 am -7:30 am-1:00 am

580 keys. (516.9)

CFPR	ak	50		Prince Rupert, B. C.
CHRC	ak	100		Ouebec, P. O.
CKCL	ak	100	F	Toronto, Ont.
CKUA	ak	500	Ň	Edmonton, Alta.
KMJ	ak	1000		Fresno, Calif.

-8:00 am-midnight -8:00 am-midnight -8:00 am-midnight -10:00 am-3:00 am

				oznizacije bil i teb
KSAC	ak 5	00 2 (1)	Manhattan, Kans. Charleston, W. Va.	-10:30 am-6:30 pm
WCHS	6 ak 50 0 ak 100	00 2 (1) 00 C (1) 00 C	Charleston, W. Va.	
WIBW	ak 10	00 2C (5)	Orlando, Fla. Topeka, Kans.	-7:00 am—midnight
WILL	ak 10	00 D	Urbana, III.	-9:00 am-ss
WTAC XEMU			Worcester, Mass. Piedras Negras, Coal	—7:30 am—1:00 am
			ricoras riegras, Coas	•••
590	kcys.	(508.	2)	
KHQ	ak 100		Spokane, Wash.	
WEEI WKZO	ak 100	00 C (5) 00 BDX	Boston, Mass.	
WOW	ak 100 ak 100		Kalamazoo, Mich. Omaha, Nebr.	-7:00 am-3:30 am
		(-)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
600	kcys.	(499.	7)	
CBW	ak 50		Windsor, Ont. Montreal, P. Q.	-4:30 pm-11:30 pm
CFCF CJOR	ak 50 ak 50		Montreal, P. Q. Vancouver, B. C.	7.45 0 1.00 0
CMW	ak 140		Havana, Cuba	-7:45 am-1:00 am -7:00 am-midnight
KFSD	ak 100	10 B	San Diego, Calif. Baltimore, Md.	
WCAO WICC	ak 50 ak 50	0 C(1)	Baltimore, Md.	-7:00 am-1:00 am
WMT	ak 100	0 BM (5) Bridgeport, Conn.) Cedar Rapids, Iowa	-6:30 am-1:00 am
WREC	ck 100	00 C (5)	Memphis, Tenn.	—7:30 am—1:00 am
610	kcys.	(491.	5)	
KFRC WCLE	c 100 ak 50		San Francisco, Cal. Cleveland, Ohio.	-7:00 am—ss
WDAF	ak 100	0 R (5)	Kansas City, Mo.	-7:30 am-1:00 am
WIOD	ak 100	9 N(WM	Kansas City, Mo. (BF) Miami, Fla.	7.00
WIP	ak 100	0	Philadelphia, Pa	-7:00 am-1:00 am
620	kcys.	(483.	6)	
KGW	ak 100		Portland, Ore.	-9:00 am-2:00 am
KTAR WFLA	ak 100 ak 100		Phoenix, Ariz.	9:00 am1:15 am 7:00 am1:00 am
WHJB	ak 25		Clearwater, Fla. Greensburg, Pa.	-8:00 am-5:00 pm
WLBZ	ak 50	0 CM (1)	Bangor, Maine	-
WSUN WTMJ	ak 100 ak 100	0 Na (5)	St. Petersburg, Fla. Milwaukee, Wis.	—7:00 am—1:00 am —7:15 am—1:00 am
** 11/13	ak 100	0 11 (5)	minwaukee, wis.	-7.13 am -1.00 am
630	kcys.	(475.	9)	
CFCO	ak 10	0 F	Chatham, Ont.	-8:00 am-10:30 pm -9:00 am-11:00 pm
CFCY CJRC	ak 1000 ak 500		Charlottetown, P.E.I	.—9:00 am—11:00 pm —8:30 am—12:30 am
CKOV	ak 10		Winnipeg, Man. Kelowna, B. C. Havana, Cuba	-11:00 am-1:30 am
CMBC	z		Havana, Cuba	-6:55 am-midnight
KFRU	ak 50		Columbia, Mo. Pierre, S. Dak.	-7:00 am-9:30 pm
KGFX WGBF	ak 20 ak 50	0 D 0 N1 (1)	Evansville, Ind.	
WMAL	ak 250	0 B (.5)	Washington, D. C.	7:00 am2:00 am
WPRO	ak 500	0 C(1)	Providence, R. I.	—7:00 am—2:00 am —7:00 am—1:00 am
XEZ	z 500	υ	Merida, Yuc.	
640	kcys.	(468.	5)	
CMCB	ak 150	0	Havana, Cuba	
KFI	ak 50000	0 0 R	Los Angeles, Cam.	9:45 am3:00 am
WGAN WHKC	z 500 ak 500		Portland, Maine Columbus, Ohio	-6:30 am -8:15 pm
WOI	ak 5000		Ames, Iowa	0.30 am0:13 pm
XEBX	z 250		Sabinas, Coah.	
650 1	kcvs.	(461.3	3)	
WSM	ak 50000) MN	Nashville, Tenn.	-7:30 am-1:00 am

NORTH AM	IERICAN B. C. S	TATIONS BY FRE
660 kcys. (454.3	3)	
WAAW ak 500 D WEAF ak 50000 R XEAL z 1000 XEAO ak 250	Omaha, Nebr. New York, N. Y. Mexico City, D. F. Mexicali, B. Cfa.	-7:00 am-ss -7:30 am-1:00 am
670 kcys. (447.5	5)	
WMAQ ak 50000 R XELO ak 5000	Chicago, III. Tijuana, B. Cfa.	-7:00 am-1:00 am
680 kcys. (440.9	9)	
KPO ak 50000 R	Havana, Cuba St. Joseph, Mo. San Francisco, Cal. Glace Bay, N. S. St. John's, Nfld. Lawrence, Mass. Raleigh, N. C.	7:00 am-midnight 7:00 am-ss 11:00 am-3:00 am
		-7:00 am-11:00 pm
690 kcys. (434.5		
CFRB ak 10000 C CJCJ ak 100 F XET ak 5000	Toronto, Ont. Calgary, Alta. Monterrey, N. L.	-8:00 am-midnight -9:30 am-1:00 am -8:30 am-10:00 pm
700 kcys. (428.3	3)	
WLW ak 500000 MN (W	(8XO) Cincinnati, O.	—6:30 am—1:30 am
710 kcys. (422.)	3)	
CMBL z	Havana, Cuba Seattle, Wash. Beverly Hills, Calif. Newark, N. J.	8:00 am-12:15 am 9:00 am5:00 am 9:00 am4:00 am
720 kcys. (416.4	4)	
WGN ak 50000 M XEH ak 250	Chicago, Ill. Monterrey, N. L.	—10:00 am—9:00 pm
730 keys. (410.7	7)	
CFPL ak 100 F CJCA ak 1000 F CKAC ak 5000 C CKPR ak 100 F CMK ak 3000 XEPN ak 100000	London, Ont. Edmonton, Alta. Montreal, P. Q. Fort William, Ont. Havana, Cuba Piedras Negras, Coah	—9:00 am—3:00 am —9:00 am—2:00 am —7:30 am—1:00 am —9:00 am—11:00 pm
740 keys. (405.2	2)	
KMMJ ak 1000 D KTRB ak 250 D WHEB ak 250 D WSB ak 50000 R	Clay Center, Nebr. Modesto, Calif. Portsmouth, N. H. Atlanta, Ga.	—9:00 am—8:30 pm —6:55 am—1:00 am
750 keys. (399.8	3)	
CMCW dk 150 KGU aj 2500 N WJR ak 50000 C XEAA ak 200 XEAM z 25	Havana, Cuba Honolulu, Hawaii Detroit, Mich. Mexicali, B. Cfa. Matamoros, Tams.	—11:30 am—4:30 am —5:30 am—2:00 am
760 keys. (394.5	5)	
	Winnipeg, Man. Cienfuegos, Cuba	—8:00 am—1:00 am

KXA	
770 kcys. (389.4) CMBS ak 150 Havana, Cuba KFAB ak 10000 CSy Lincoln, Nebr. WBBM ak 50000 CSy Chicago, III. -8:00 am—10:30 pm —7:00 am—1:00 am	i
780 kcys. (384.4)	
CHWK dk 100 F Chilliwack, B. C. CKSO ak 1000 F Sudbury, Ont. CMJK ak 250 Camaguey, Cuba KEHE ak 1000 (5) Los Angeles, Calif. KFDY ak 1000 D Brookings, S. Dak. KFOD ck 250 Anchorage, Alaska KGHL ak 1000 N (5) Billings, Mont. KWLK z 250 DP Longview, Wash. WEAN ak 1000 R (5) Memphis, Tenn. WTAR ak 1000 N Norfolk, Va. XEL z 1000 Mexico City, D. F.	t n
790 kcys. (379.5) CMGH ak 500 Matanzas, Cuba KGO ak 7500 B KOAM z 1000 DN WGY ak 5000 R San Francisco, Cal. Pittsburg, Kans. Schenectady, N. Y. -7:00 am—1:00 am	,
800 kcys. (374.8)	
WBAP ak 50000 Na Fort Worth, Texas —7:00 am—midnigh WFAA ak 50000 Na Dallas, Texas —9:00 am—midnigh WTBO ak 250 D Cumberland, Md. —8:30 am—ss	t
810 kcys. (370.2)	
CMCF ak 600 X Havana, Cuba WCCO ak 50000 C Minneapolis, Minn. —7:30 am—1:00 am WNYC ak 1000 D New York, N. Y. —7:00 am—7:00 pm XEDF z 75 Nuevo Laredo, Tams. —11:00 am—8:15 pm XEXC z 350 Aguascalientes, Ags.	-
820 kcys. (365.6)	
CMHW ak. 100 Cienfuegos, Cuba WHAS ak 50000 C Louisville, Ky. XEBG z 1000 Tijuana, B. Cfa.	
830 kcys. (361.2)	
CMJX ak 500 Camaguey, Cuba —9:00 am—11:30 pm KOA ak 50000 R Denver, Colo. —9:00 am—2:00 am WEEU ak 1000 D Reading, Pa. —8:00 am—5:00 pm WHDH ak 1000 D Boston, Mass. —7:00 am—6:30 pm WRUF ak 5000 D Gainsville, Fla. —7:00 am—6:30 pm	ι
840 keys. (356.9)	
CBL z 50000 P Toronto, Ont. CFQC ak 1000 F Saskatoon, Sask. CRCT ak 5000 FN Toronto, Ont. VOGY ak 400 St. John's, Nfid. XERA ck 350000 Villa Acuna, Coah.	
850 keys. (352.7)	
CMCM z Havana, Cuba —8:00 am—midnigh KIEV ak 250 D Glendale, Calif. WESG ak 1000 CD Elmira, N. Y. —7:30 am—6:00 pm	t

NORTH AMERICAN	D. C. STATIONS BY FRE
WKAR ak 1000 D E. Lansing WWL ak 10000 C New Orlean	
860 kcys. (348.6)	
WABC ak 50000 C (WBOO) New You	ork, N. Y7:30 am-1:00 am
WHB ak 1000 DM Kansas Cli XEMO ak 5000 Tijuana, B XENC z 50 Mexico Cit	ty, Mo. 5. Cfa. —9:45 am—3:00 am
XENC z 50 Mexico Cit	y, D. F.
870 kcys. (344.6)	
WENR ak 50000 Ba Chicago, II WLS ak 50000 Ba Chicago, II	ll. —Noon—midnight
XEFB ak 200 Monterrey	, N. L.
XEJW z Mexico Cit	y, D. F.
880 kcys. (340.7)	
CBO ak 1000 F Ottawa, Or CFJC ak 100 F Kamloops, CMO ak 25000 Havana, C	B. C. —12:30 pm—1:15 am
CMQ ak 25000 Havana, C KFKA ak 500 2M (1) Greeley, Co	uba olo. —7:30 am—1:00 am
KLX ak 1000 Oakland, C KPOF ak 500 2 Denver, Co	alii. —10:30 am—2:30 am
WCOC ak 500 CX (1) Meridian,	Miss.
WCOC ak 500 CX (1) Meridian, WGBI ak 500 C1 (1) Scranton, WQAN ak 500 1 (1) Scranton,	Pa. —12:30 pm—10:30 pm Pa. —12:30 pm—10:00 pm
WKNL ak 500 D Richmond	, va. —7:30 am—ss
(2,	Iowa —10:00 am—11:00 pm
890 kcys. (336.9)	
KARK ak 500 N(1) Little Rock KFNF ak 500 2(1) Shenandoa KFPY ak 1000 C(5) Spokane, V	k, Ark. —7:00 am—1:00 am h, Iowa —7:00 am—1:00 am
KFNF ak 500 2(1) Shenandoa KFPY ak 1000 C(5) Spokane, V KUSD ak 500 2 Vermillion	vash. —9:50 am—3:00 am
WRAA ak 500 (1) W Lafaver	tte, Ind. —Noon—6:00 pm
WGST ak 1000 C(5) Atlanta, G	a.
WJAR ak 1000 R (5) Providence WMMN ak 500 C (1) Fairmont, XEW ak 50000 Mexico Cit	W. Va. —7:00 am—1:00 am
900 kcys. (333.1)	, D. K.
KGBU ak 500 X Ketchikan, KHJ ak 1000 M (5) Los Angele	, Alaska s. Calif.
KHJ ak 1000 M (5) Los Angele KSEI ak 250 (1) Pocatello, I WBEN ak 1000 R (5) Buffalo, N.	Idaho —9:30 am—1:00 am Y. —7:00 am—1:00 am
WELL ak 500 D New Haven	i. Conn. —6:00 am—ss
WFMD ak 500 D Frederick, WJAX ak 1000 N(5) Jacksonvill	Md. —6:30 am—ss le, Fla. —6:45 am—1:00 am
WFMD ak 500 D Frederick, WJAX ak 1000 N (5) Jacksonvill WKY ak 1000 N (5) Oklahoma WLBL ak 5000 D Stevens Po	City, Ok. —7:45 am—1:00 am int, Wis. —9:00 am—2:00 pm
WTAD ak 1000 D Quincy, Ill	-8:00 am-5:45 pm
910 kcys. (329.6)	
CBF z 50000 NP Montreal, CJAT ak 1000 F Trail, B. C.	P. Q.
CJAT ak 1000 F Trail, B. C. XENT ak 150000 Nuevo Lare	—10:00 am—2:00 am do, Tams.
920 kcys. (325.9)	
CMX ak 1000 Havana, Co KFEL ak 500 Ma Denver, Co KOMO ak 1000 R (5) Seattle, Wa	uba —8:00 am—1:00 am lo. —8:00 am—2:30 am
KOMO ak 1000 R (5) Seattle, Wa KPRC ak 1000 R (5) Houston, T	ish.
KPRC ak 1000 R (5) Houston, T KVOD ak 500 Ba Denver, Co	exas lo.
WAAF ak 1000 D Chicago, II WORL ak 500 D Boston, Ma	1. —6:00 am—ss
WPEN ak 1000 Philadelphi	ia, Pa.

		NOR	IH AI	VIERICAN B. C. S	STATIONS BY FRE
WSPA WWJ	ak ak	1000 5000	D R	Spartanburg, S. C. Detroit, Mich.	-6:00 am-12:30 am
930	kcy	ys. ((322.	4)	
CFAC CFCH	ak	1000	F	Calgary, Alta.	—9:00 am—2:00 am
CFLC	ak ak	100 100	F	North Bay, Ont. Prescott, Ont. Halifax, N. S.	-7:00 am-10:00 nm
CFLC	ak	1000	 F	Halifax, N. S.	7:00 am10:00 pm 7:30 am11:00 pm
CKPC KMA	ak ak	100 1000	F (5)	Brantford, Ont. Shenandoah, Iowa	
KROW WBRC	ak	1000	C	Oakland, Calif.	-9:00 am-5:00 am -8:00 am-12:30 am
WDBJ	ak ak	1000 1000	G (5)	Birmingham, Ala. Roanoke, Va.	-8:00 am-12:30 am -7:00 am-midnight
XEBH XEFO	ak ak	500 5000		Hermosillo, Son.	—7:00 am—midnight —1:00 pm—midnight
AEFO	ак	5000	• • • •	Mexico City, D. F.	
940	kcy	ys. ((319.	0)	
KOIN	aķ	1000	C(5)	Portland, Ore. St. John's, Nfld.	
VOAS WAAT	ak ak	100 500	D	Jersey City, N. J.	-6:30 am-6:00 pm
WAVE WCSH	ak	1000	N D (2.5	Jersey City, N. J. Louisville, Ky. Portland, Maine Fargo, N. Dak.	-8:00-1:00 am
WDAY	ak ak	1000 1000	N (5)	Fargo, N. Dak.	-8:00 am-midnight -7:00 am-1:00 am
WHA WICA	ak z	5000 250	D DP	waaison, wis.	-9:00 am-5:30 pm
XEYO	z	500		Ashtabula, Ohio Mexico City, D. F.	
950	kcy	/s. ((315.	6)	
CJOC	ak	100	F	Lethbridge, Alta.	-9:00 am-1:00 am
CMCD CRCK	ak ak	250 1000	F	Havana, Cuba Quebec, P. Q. Hollywood, Calif,	-Noon-1:00 am
KFWB	ak	1000	(5)	Hollywood, Čalif.	
KMBC WHAL	ak z	1000 500	C (5) DP	Kansas City, Mo. Saginaw, Mich.	-6:55 am-1:00 am
WRC	ak	500	RX (1)	Washington, D. C.	
960 1	kcy	s. ((312.	3)	
CFRN	aķ	100	F	Edmonton, Alta.	-9:30 am-2:00 am -7:30 am-11:00 pm
CHNC CRCY	ak ck	1000 100	F F	New Carlisle, P. Q.	−7:30 am−11:00 pm
XEAW		50000		Toronto, Ont. Reynosa, Tams.	
970 1	ксу	s. ((309.	1)	
CMBY	z,	150		Havana, Cuba Seattle, Wash.	-8:55 am-11:00 pm
KJR WCFL	ak ak	5000 5000	B N	Chicago, Ill.	
WIBG	ak	100	D	Glenside, Pa.	
980 1	ксу	s. ((306.	0)	
KDKA		50000	В	Pittsburgh, Pa. Tijuana, B. Cfa.	
XEAC XEFE	ak z	1000 150		Nuevo Laredo, Tams	s .
990 1	ксу	s. ((302.		
WBZ		50000	BSy	Boston, Mass.	-6:30 am-1:00 am
WBZA XEAF	ak ak	1000 750	BSy	Springfield, Mass.	-6:30 am-1:00 am
XEK	ak	100		Nogales, Son. Mexico City, D. F. Tampico, Tams.	
XES	ak	250		Tampico, Tams.	
1000	kc	ys.	(299	.8)	
CMBZ KFVD	ak	500	(1)	Havana, Cuba	-7:45 am-midnight
VOCM	ak z	1000 200	Dn 1006	Los Angeles, Calif. St. John's, Nfld.	-9:00 am-8:15 pm
				•	

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wно
          ak 50000
                      R
                               Des Moines, Iowa
                                                       -7:00 am-1:00 am
 XEBI
XEBK
                               Aguascalientes, Ags.
Nuevo Laredo, Tams. —10:00 am—8:30 pm
          ak
                  25
          ak
                  60
 XEXS
          z
                100
                               Portable in Mexico
 1010 kcys.
                      (296.9)
 CHML
                               Hamilton, Ont.
                                                       -8:00 am-midnight
 CKCD
          ak
                100
                               Vancouver, B. C.
          ak
               1000
                               Regina, Sask.
                                                         -9:30 am—2:00 am
 CKCO
                100
                      F
                               Ottawa, Ont.
Wolfville, N. S
                                                       -Noon-11:30 pm
          ak
 CKIC
          ak
                 50
                              Vancouver, B. C.
Camaguey, Cuba
Coffeyville, Kans.
San Jose, Calif.
 CKWX
                      Fi
          ak
                100
                                                       -Noon-4:00 am
CMJA
                300
          яk
KGGF
KQW
WHN
WNAD
               1000
                      żм
          яk
               1000
          ak
                      M
                                                       -9:30 am-3:00 am
                              New York, N. Y.
Norman, Okla.
               1000
          ak
                      (5)
          ak
               1000
                                                       -3:00 pm-10:15 pm
 WNOX
          ak
               1000
                      \bar{\mathbf{C}} (5)
                              Knoxville, Tenn.
Veracruz, Ver.
                                                       -6:30 am-2:00 am
 XEU
          ak
                250
                                                         -8:00 am—1:00 am
                      (293.9)
 1020
          kcys.
          ak 10000
                               Philadelphia, Pa.
                                                       --7:05 am-10:00 pm
 wdż
                250
                                                       -7:00 am-6:00 pm
                              Tuscola, Ill.
Juarez, Chih.
          ak
               1000
 XEJ
          ak
                      (291.1)
1030 kcys.
                              Calgary, Alta.
Rimouski, P. Q.
Windsor, Ont.
Havana, Cuba
Havana, Cuba
CFCN
          ak 10000
                                                       -6:45 am-1:30 am
CJBR
               1000
                      M
CKLW
          яk
               5000
                                                       -6:45 am-1:30 am
CMCK
          Z
CMCX
                150
                                                       --9:00 am--11:00 pm
          ak 10000
                              Mexico City, D. F.
XEB
                                                       -10:00 am-12:15 am
1040 kcys.
                      (288.3)
KRLD
KWJJ
          ak 10000
                      \mathbf{C}
                              Dallas, Texas
                                                       -7:00 am-1:00 am
                              Portland, Ore.
Merced, Calif.
Hartford, Conn.
          ak
                500
                250
          ah 50000
                      (285.5)
1050
          kcys.
CBM
               5000
                               Montreal, P. Q.
CMKD
                250
                              Santiago, Cuba
Abilene, Kans.
KFBI
KNX
WEAU
          ak
               5000
                      Dn
                                                         -7:00 am--7:45 pm
                              Los Angeles, Calif.
Eau Claire, Wis.
                                                       -9:30 am-3:15 am
          ak 50000
          z
               1000
                      ĎР
                              Indianapolis, Ind.
WGVA
               1000
                      (282.8)
1060
          kcys.
                              Hot Springs, Ark.
St. John's, Nfld.
Baltimore, Md.
Norfolk, Nebr.
College Park, Md.
KTHS
          ak 10000
                                                         -9:00 am-ss
VOAC
WBAL
WJAG
                      1065
          7.
          ak 10000
                                                         -7:00 am-9:00 pm
                      BM
               1000
                                                         -7:30 am—ss
          ak
                      D
                                                         Midnight to 6:00 am
W3XJ
                100
XEAD
          ak
                125
                              Guadalajara, Jal.
XEMG
                100
                              Atzcapotzalco, D. F.
                      (280.2)
1070 kcys.
                500
                              Havana, Cuba
CMBX
          ak
                              Sagua la Grande, Cuba
CMHA
KJBS
          z
                 50
                              San Francisco, Calif. -1:00 am-8:30 pm
          ak
                500
                              Carthage, Ill.
Cleveland, Ohio
                100
WTAM
          ak 50000
                      R
                                                       -6:00 am-midnight
                      (277.6)
1080
          kcys.
          ak 50000
                              Charlotte, N. C.
                                                        -6:45 am—midnight
WCBD
               5000
                      Dnl
                              Chicago, III.
Chicago, III.
          ak
               5000
WMBI
          ak
                      Dnl
XEBA
XEDP
                 20
                              Guzman, Jal.
                      . . . .
          ak
                500
                              Mexico City, D. F.
```

	NOR.	IH AN	MERICAN B. C. S	STATIONS BY FRE
1090	kcys.	(275	5.1)	
KMOX	ak 50000	C	St. Louis, Mo.	7:00 am1:00 am
1100	kcys.	(272	2.6)	
CBR CMCJ KGDM KWKH WBIL WPG XECL	ak 5000 ak 5000 ak 10000 c 10000 ak 5000 ak 5000 z 1700	F DM C 1 C1	Vancouver, B. C. Havana, Cuba. Stockton, Calif. Shreveport, La. New York, N. Y. Atlantic City, N. J. Mexicali, B. Cfa.	9:00 am ss 7:30 am1:00 am
1110	kcys.	(270).1)	
KSOO WRVA	ak 2500 ak 5000	DnN CM	Sioux Falls, S. Dak. Richmond, Va.	—7:00 am—6:45 pm 7:00 am—midnight
1120	kcys.	(267	7.7)	
CHLP CHSJ CKOC	ak 100 ak 500 ak 500	F F (1) F (1)	Montreal, P. Q. St. John, N. B. Hamilton, Ont. Brandon, Man.	—9:00 am—11:00 pm —5:00 am—midnight
CKX CMGF CMKM CRCS KFIO	ak 1000 ak 250 ak 200 ak 100 ak 100	 <u>F</u>	Matanzas, Cuba. Manzanillo, Cuba Chicoutimi, P. Q.	8:00 am10:00 pm
KFSG KRKD KRSC	ak 500 ak 500 ak 250	a (2.5) a (2.5) DP	Los Angeles, Calif. Los Angeles, Calif. Seattle, Wash.	9:00 am3:00 am
KTBC WCOP WDEL WISN WJBO WTAW	z 1000 ak 500 ak 250 ak 250 ak 500 ak 500	DP D R (.5) C (1) B	Spokane, Wash. Los Angeles, Calif. Los Angeles, Calif. Seattle, Wash. Austin, Texas Boston, Mass. Wilmington, Del. Milwaukee, Wis. Baton Rouge, La. College Sta., Tex.	—8:00 am—4:00 pm —9:00 am—11:00 pm —8:00 am—1:00 am
1130	kcys.	(265		١
CMJI KSL WJJD WOV XEJP	ak 150 ak 50000 ak 20000 ak 1000 z 100	C Dn D	Ciego de Avila, Cuba Salt Lake City, Ut. Chicago, Ill. New York, N. Y. Mexico City, D. F.	—Noon—10:00 pm —8:30 am—3:00 am —6:00 am—6:45 pm
1140	kcys.	(263	.0)	
CMBG KVOO WAPI	z 200 ak 25000 ak 5000	N1 R1	Havana, Cuba Tulsa, Okla. Birmingham, Ala.	—10:00 am—10:00 pm
WSPR	ak 5000	ĎΜ	Springfield, Mass.	7:00 am5:45 pm
	kcys.	(260		
CMJF WHAM XEC XEDW	z 200 ak 50000 ak 100 z 20	B	Camaguey, Cuba Rochester, N. Y. Tijuana, B. Cfa. Minatitlan, Ver.	—7:00 am—midnight
1160	kcys.	(258	.5)	
CMHJ CMKG WOWO WWVA XEAS XEBJ XEBZ XED XEP	ak 175 z ak 10000 ak 5000 ak 50 z 20 ad 100 ak 2500 ak 500	B1 C1	Cienfuegos, Cuba Santiago, Cuba Fort Wayne, Ind. Wheeling, W. Va. Saltillo, Coah. Merida, Yuc. Mexico City, D. F. Guadalajara, Jal. Juarez, Chih.	Noonmidnight 9:00 am2:00 am

```
1170 kcys.
                        (256.3)
           ak 500
ak 50000
CMBD
                                  Havana, Cuba
                                                               -7:00 pm-midnight
WCAU
                                 Philadelphia, Pa.
                                                               -7:30 am—1:00 am
1180 kcys.
                        (254.1)
CMJO
           ak
                                 Ciego de Avila, Cuba
                5000
                        B2
                                 Portland, Ore.
Albuquerque, N. M. —1:00 pm—11:00 pm
KEX
KOB
           ak
               10000
                        N2
           ak
WDGY
WINS
                        CDn(5) Minneapolis, Minn.
New York, N. Y.
           ak
                1000
                        c ...
           ak
                1000
WMAZ
           ak
                1000
                                  Macon, Ga.
                                                             -7:00 pm-7:00 pm
XEFA
                  500
                                  Tacuba, D. F.
           z
1190 kcys.
                        (252.0)
                                 Santiago, Cuba
Visalia, Calif.
St. John's, Nfld.
CMKX
KTKC
VONF
                  250
           7
                  500
                        1195
           ak
WATR
                                 Waterbury, Conn.
San Antonio, Tex.
Huntington, W. Va.
                  100
                        DXZ
           ak
WOAI
           ak 50000
                                                               -7:30 am-12:30 am
                                                             -7:00 am-7:00 pm
WSAZ
                1000
                        (249.9)
1200 kcys.
                       ....F
CFGP
                                  Grande Prairie, Alta.
CHAB
CKNX
CKTB
                                 Moose Jaw, Sask.
Wingham, Ont.
           ak
                  100
                                                                9:00 am-12:30 am
                        <u>.</u>...
                                                               -11:00 am—1:00 am
           dk
                  100
                  100
250
           ak
                                 St. Catharines, Ont. -9:30 am-11:30 pm
CMCO
                                 Havana, Cuba
           ad
                        DM
                  100
                                  Ada, Okla,
KADA
           ak
                       (.25) P
N
KBTM
           ak
                  100
                                  Jonesboro, Ark.
KDNC
                  100
                                 Lewistown, Mont.
Sioux Falls, S. Dak.
KELO
                  100
                        (.25)
(.25)
(.25)
DP
KFJB
           ak
                  100
                                  Marshalltown, la.
                                                             —7:00 am—10:00 pm
                                 Nampa, Idaho
Grand Junc., Colo.
Coeur d'Alene, Idaho
Fergus Falls, Minn.
KFXD
           ak
                  100
                                                             -8:00 am-10:00 pm
KFXJ
                  100
           ak
KGCI
KGDE
                  100
           7.
                        (.25)
                  100
                                                            -8:00 am-10:00 pm
           c
                                 Sterling, Colo.
Los Angeles, Calif.
Little Rock, Ark.
Greenville, Texas
                  100
100
           ak
KGEK
                                                             -24 hours daily
KGFJ
           ak
                        (.25)
DP
                  100
KGHI
KGVL
KMLB
                                                               -8:30 am-11:00 pm
           ak
                  100
           Z
                        (.25)
(.25)
(.25)
                  100
           ak
                                 Monroe, La.
Marshfield, Ore.
                                                             -10:00 am-7:45 pm
KOOS
           ak
                  100
KSUN
KVCV
                  100
                                                             -11:00 am-midnight
                                 Lowell, Ariz
           c
                       D
                                 Redding, Calif.
San Luis Obispo, Calif.
Bellingham, Wash.
           2
                  100
KVEC
                  250
KVOS
           dk
                  100
                         M
                                 Stockton, Calif.
Winona, Minn.
Bangor, Maine
KWG
                  100
                        N
                                                             -10:00 am-3:00 am
           ak
KWNO
                  250
                        ĎΡ
                        (.25)
C
(.25)
                  100
WABI
           ak
                        C Anderson, S. C.
(.25) Waycross, Ga.
M (.25) Ponca City, Okla.
.... Huntsville, Ala.
WAIM
WAYX
           ak
                  100
                                                             -6:00 am-10:00 pm
                  100
           ak
WBBZ
                                                             -8:00 am-10:00 pm
           ak
                  100
WBHP
           ak
                  100
                                 New Orleans, La.
Rapid City, S. Dak.
                  100
                                                               -1:00 pm to midnight
WBNO
           ak
WCAT
WCAX
WCLO
                  100
                        Đ
                                                             -Noon-2:00 pm
           ak
                                 Burlington, Vt.
Janesville, Wis.
Cincinnati, Ohio
Superior, Wis.
Easton, Pa.
                        (.25)
(.25)
(.25)
P
           ak
                  100
           ak
                  100
WCPO
                  100
                                                             --7:00 am-11:30 pm
WDSM
                  100
           \mathbf{z}
                        3 (.25)
WEST
                  100
           ak
WFAM
           ak
                  100
                                 South Bend, Ind.
                        (.25)
                                 Kinston, N. C.
Canton, Ohio
Green Bay, Wis.
Utica, N. Y.
St. Louis, Mo.
WFTC
                  100
           ak
WHBC
                  100
                        (.25)
(.25)
           яk
WHBY
           ak
                  100
                                                             -7:00 am-1:00 am
WIBX
           ak
                  100
                        C (.25)
WIL
           ak
                  100
                        (.25)
5 (.25)
WJBC
                  100
                                 Bloomington, III.
                                                             -4:00 pm-8:30 pm
           ak
                                 Decatur, Ill.
New Orleans, La.
                  100
WJBL
           ak
ak
                                                             -2:00 am-9:00 pm
WJBW
                  100
WJNO
                  100
250
                                 W. Palm Beach, Fla.
                                                             -7:00 am-11:00 pm
           ak
                        C (.25)
                                 Tuscaloosa, Ala.
WJRD
           ak
                        3 (,25) Harrisburg, Pa.
(,25) Lynchburg, Va.
D High Point, N. C.
                                                             -8:00 am-11:00 pm
-7:00 am-11:00 pm
                  100
WKBO
           ak
WLVA
           ak
                  100
WMFR
           ak
                  100
                        (.25)
                                 Lapeer, Mich.
WMPC
           ak
                  100
```

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

WOLS	\mathbf{z}	100	\mathbf{DP}	Florence, S. C.	
WRBL	ak	100	(.25)	Columbus, Ga.	-8:00 am-10:30 pm
WSAL	2	250	DP	Salisbury, Md.	P
WTHT	ak	100	M	Hartford, Conn.	-7:00 am-4:15 pm
WTOL	z	100	DP.	Toledo, Ohio	
WWAE	ak	100	8	Hammond, Ind.	

1210 kcys. (247.8)

```
CHLT
                    100
                                     Sherbrooke, P. O. Stratford, Ont. Aklavik, N.W.T. Prince Albert, Sask. Hull, P. O. Cobalt, Ont. Santa Clara, Cuba Alexandria, La. Wichita, Kans. Elk City, Okla. Devils Lake, N. D. Monterrey, Calif.
                                      Sherbrooke, P. O.
CJCS
            ak
                      50
                                                                     -8:00 am-9:00 pm
                            . . . .
                      50
            Z
            ak
                    100
CKBI
                                                                    --9:45 am--1:00 am
                            F
CKCH
             ak
                    100
                                                                    -8:00 am-11:00 pm
CKMC
             ak
                      50
                            . . . .
CMHI
             ak
                    150
                           . . . .
                           N ...
KALB
            ak
                     100
KANS
            ak
                    100
                                                                       -7:30 am-midnight
KASA
KDLR
                    100
                           M
                                                                       -7:00 am-8:00 pm
-7:30 am-9:30 pm
            C
            ak
                    100
                            M
                                      Monterrey, Calif.
Klamath Falls. Ore.
KDON
                    100
            7.
KFJI
            ak
                    100
                           CM(.25) Lincoln, Nebr.
Fort Smith, Ark.
5 (.25) Cape Girardeau, Mo.
            ak
KFOR
KFPW
                    100
                                                                    -8:00 am-11:15 pm
            ak
                    100
KFVS
KFXM
            ak
                    100
                            M2
                                      San Bernardino, Cal. -9:00 am-3:00 am
            ak
                    100
                           C (.25) Mason City, Iowa
M Olympia, Wash.
KGLO
                    100
KGY
            ak
                    100
KHBG
                    100
                           D
                                      Okmulgee, Okla.
            Z
                                      Garden City, Kans.
Carlsbad, N. Mex.
Kilgore, Texas
Helena, Mont.
KIUL
            ak
                    100
                                                                    -8:00 am-10:00 pm
KLAH
            ak
                    100
                            (.25)
                     100
            Z
                           (.25)
2
                    100
            \mathbf{z}
            ak
                    100
                                      Pasadena, Calif
                                                                    -10:00 am-12:30 am
                                     Sacramento, Calif.
Sacramento, Calif.
Ardmore, Okla.
Watertown, S. Dak.
Zanesville, Ohio
                    100
KROY
            ak
KVSO
KWTN
                    100
                           M
            ak
                                                                     -8:00 am-11:00 pm
            ak
                    100
                            . . . .
WALR
            ak
                    100
                                                                    -7:00 am-9:00 pm
WBAX
                    100
                                      Wilkes-Barre, Pa.
            ak
WBBL
                    100
                                      Richmond, Va.
            ak
WBLY
                    100
                                     Lima, Ohio
Red Bank, N. J.
Columbus, Ohio
                                                                    -6:00 am-5:15 pm
            ak
                           Ď
WBRB
            ak
                    100
                           3
N
                             Columbus, Omo
Chicago, III.
(.25) Harrisburg, III.
Chicago, III.
White Plains, N. Y.
(.25) St. Augustine, Fla.
WCOL
WCRW
WEBQ
                                                                    -7:00 am-11:00 pm
                    100
            ak
                                                                       -11:00 am-7:00 pm
            ak
                    100
                           4 5
            ak
                    100
WEDC
            ak
                    100
WFAS
            ak
                    100
                           3
                           (.25)
WFOY
            ak
                    100
WGBB
                    100
                                     Freeport, N. Y. Gulfport, Miss.
            ak
WGCM
WGNY
            ak
                    100
                            (.25)
                                     Newburgh, N. Y.
Grenada, Miss.
            ak
                                                                    -7:30 am-midnight
                    100
WGRM
            ak
                    100
                           (.25)
(.25)
(.25)
WHBF
                                     Rock Island, Ill.
                                                                    -7:00 am-1:05 am
            ak
                    100
                                      Anderson, Ind.
Poynette, Wis.
WHBU
            ak
                    100
WIBU
            ak
                    100
                                                                    -8:00 am-10:30 pm
WJBY
                    100
                            (.25)
                                      Gadsden, Ala.
            ak
WJEJ
            ak
                     50
                            Dn(.1)
                                     Hagerstown, Md.
WJIM
                    100
                           (.25) Lansing, Mich.
B (.25) Jamestown, N. Y.
                                                                    -7:15 am-12:30 am
            \mathbf{z}
WJTN
            ak
                    100
                           (.25)
                                      Akron, Ohio
                                                                    -8:00 am-10:30 pm
-6:00 am-midnight
WJW
            ak
                    100
WKOK
                    100
            ak
                                      Sunbury, Pa.
                           P (.25) Middlesboro, Ky.
WLMU
                    100
            \mathbf{z}
                           (.25)
WMFG
            ak
                    100
                                      Hibbing, Minn.
                                                                    --7:30 am-10:00 pm
WOMT
            ak
                    100
                                      Manitowoc, Wis.
                                    Manitowoc, Wis.
Thomasville, Ga.
Rochester, N. Y.
Chicago, Ill.
Nashville, Tenn.
Bridgeton, N. J.
Charlotte, N. C.
Springfield, Ill.
Parrai, Chih.
Durando, Deo
                           Ď...
WPAX
            ak
                    100
                                                                    -8:00 am-6:00 pm
WSAY
                    100
                           \bar{\mathbf{D}}
            Z
WSBC
WSIX
WSNJ
                                                                       -6:00 am-midnight
            ak
                    100
                           4 (.25)
                                                                     -7:00 am-1:00 am
            ak
                    100
            \mathbf{z}
                    100
                           N (.25)
WSOC
            ak
                    100
                                                                    -7:00 am-midnight
WTAX
            ak
                    100
                           . . . .
XEAT
            ak
                    250
                                                                    --11:00 am-9:00 pm
                           . . . .
                                     Durango, Dgo.
Juarez, Chih.
Puebla, Pue.
XEE
            ak
                     50
                           . . . .
            ak
                    100
                           . . . .
XETH
                    100
            ak
                           DP
                    250
                                     Greenfield, Mass.
            \mathbf{z}
```

```
1220 kcys. (245.8)
CMJE
KFKU
KTMS
                               Camaguey, Cuba
Lawrence, Kans.
Santa Barbara, Cal.
               1000
          āk
                      a (5)
                                                         -3:30 pm-7:30 pm
          Z.
                500
                      R
KTW
                      \tilde{S}_2
          ak
               1000
                               Seattle, Wash.
KWSC
                      2 (5)
                               Pullman, Wash.
Canton, N. Y.
                                                         -9:45 am-12:30 am
          ak
               1000
WCAD
WCAE
                500
                      ñ
          ak
                                                         -12:30 pm-4:00 pm
                      MR (5) Pittsburgh, Pa.
C (5) Tampa, Fla.
                                                            -7:00 am—2:30 am
          ak
               1000
WDAE
WREN
          ak
               1000
                                                          —7:30 am—
                                                            -8:00 am-7:00 pm
          ak
               1000
                      Ba(5)
                               Lawrence, Kans.
XEBL
                 50
                                Mazatlan, Sin.
                               Gra. Anaya, D. F.
Monterrey, N. L.
Veracruz, Ver.
XEDA
          7.
                200
XEG
                250
                      . . . .
XETF
          ak
                 30
                                                         -11:00 am-1:00 am
                      (243.8)
         kcys.
1230
KGBX
                               Springfield, Mo.
Albuquerque, N. M.
                500
          ak
KGGM
KYA
WFBM
               1000
                                                         -9:30 am-11:30 pm
          ak
               1000
                               San Francisco, Cal.
          ak
                               Indianapolis, Ind.
Boston, Mass.
Monterrey, N. L.
               1000
                      Č (5)
R (5)
                                                         -7:30 am-1:00 am
         `ak
               1000
          ak
                                                            6:30 am-1:00 am
XEEL
          ak
                100
                                                           -11:00 am-8:00 pm
1240 keys. (241.8)
                               Syndey, N. S.
Sancti Spiritus, Cuba
CJCB
          ak
              1000
                      F
                                                           -7:00 am-11:00 pm
CMHB
                 50
                               Sancti Spiritus, Cu
Mandan, N. Dak.
Minot, N. Dak.
Fort Worth, Texas
Twin Falls, Idaho
San Juan, P. R.
Detroit, Mich.
KGCU
          ak
                250
KLPM
KTAT
KTFI
                250
                      îXZ
          ak
               1000
                      M
          ak
               1000
          аk
                       . . . .
                      ....
В
WKAO
WXYZ
XEAP
XEAY
XEBS
               1000
                                                          -6:00 am-9:30 pm
          ak
          яk
               1000
                               Obregon, Son.
Mexico City, D. F
                  50
                       . . . .
                100
                 200
                                Mexico City, D. F.
          7
                       . . . .
                               Leon, Guan.
Saltillo, Coah.
                500
XEKL
          7.
                       . . . .
XELA
                      (239.9)
1250
          kcys.
CMCK
                                Santiago, Cuba
Long Beach, Calif.
          ak
                 150
KFOX
               1000
          ak
WAIR
WCAL
WDSU
                                                          --6:00 am--ss
                 250
                                Winst.-Salem, N. C.
          яk
               1000
1000
1000
                      2 XZ
                                Northfield, Minn.
          ah
                       ã
                                New Orleans, La.
                                                          -7:00 am-midnight
          ak
WHBI
                      a (2.5)
2XZ
                               Newark, N. J.
          ak
                               Minneapolis, Minn.
New York, N. Y.
Minneapolis, Minn.
WLB
WNEW
          ak
                1000
                1000
                      a (2.5)
B (5)
          ak
                                                          -7:00 am-midnight
WTCN
          ak
               1000
                                San Luis Pot., S.L.P.
XEXH
                 250
1260 kcys.
                     (238.0)
                                                          -8:00 am-midnight
CMC
                 150
                                Havana, Cuba
                               Missoula, Mont.
Chico, Calif.
Omaha, Nebr.
KGVO
KHSL
                       C
                                                          -9:00 am-1:00 am
          ak
                1000
          ak
                 250
          ak
                1000
                       BM(5)
KOIL
                               Port Arthur, Texas
Weslaco, Texas
Siloam Spgs., Ark.
KPAC
                                                          -6:00 am-5:45 pm
          ak
                 500
                       N
KRGV
                1000
                                                          -8:00 am-11:00 pm
          ak
KUOA
          ak
                5000
                       D
KVOA
                1000
                                Tucson, Ariz.
          ak
WHIO
          ak
                1000
                                Dayton, Ohio
                                                          -6:00 am-1:00 am
WNBX
                 500
                       CM(1) Springfield, Vt.
          аk
               1000
                                Savannah, Ga.
                                                          -7:00 am-midnight
WTOC
1270 kcys.
                      (236.1)
                                Caibarien, Cuba
CMHD
           dk
                 250
                       2D
KGCA
KOL
          ak
                 100
                                Decorah, Iowa
Seattle, Wash.
                                                          -9:30 am-3:30 pm
          ak
                1000
                       M (5)
KVOR
KWLC
                                Colo. Springs, Colo.
Decorah, Iowa
                1000
                                                          -9:00 am-1:00 am
          ak
          ak
                 100
                       2D
                       DaN
                                Grd. Rpds., Mich. Baltimore, Md.
                                                          -7:00 am-midnight
WASH
          яk
                 500
WFBR
          ak
                 500
                       R (1)
```

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

```
1000
 WJDX
                           R (5)
                                    Jackson, Miss.
            ak
                                    Gd. Rapids, Mich. —7:00 am—midnight Jalapa, Ver.
WOOD
XEXB
            ak
                    500
                          Na
            ak
                     50
                                    Jalapa, Ver.
Mexico City, D. F.
 XEXE
                     17
 1280 kcys. (234.2)
                                    Havana, Cuba
 CMCU
            ak
                   500
                                                                  -6:55 am-1:00 am
 CMKO
                                    Holguin, Cuba
Great Falls, Mont.
                          C (5)
 KFBB
            ak
                  1000
                                    Oakland, Calif.
Camden, N. J.
 KLS
                   250
            ak
 WCAM
WCAP
WDOD
            ak
                   500
                                    Asbury Park, N. J.
Chattanooga, Tenn. —7:30 am—12:30 am
Madison, Wis.
            ak
                   500
                          C (5)
N (5)
C
M
            ak
                  1000
                  1000
 WIBA
            ak
 WORC
            ak
                   500
                                    Worcester, Mass.
                                                                 -8:00 am-midnight
 WRR
WTNJ
                                    Dallas, Texas
            ak
                    500
                                                                 -8:00 am-midnight
            ak
                    500
                          1
                                    Trenton, N. J.
Mexico City, D. F.
XEMX
                    100
1290 kcys. (232.4)
                                   Salt Lake City, Ut.
Blytheville, Ark.
Houston, Texas
Duluth, Minn.
KDYL
KLCN
KTRH
                  1000
                          \mathbf{R}\mathbf{X}
                                                                 -8:00 am-3:00 am
            ak
            ak
                   100
                          D
                          C (5)
N (5)
C (5)
                  1000
            ak
                  1000
                                                                 -8:00 am-1:00 am
 WEBC
            ak
 WJAS
            ak
                  1000
                                    Pittsburgh, Pa.
Saranac Lake, N. Y.
                                                                    -7:30 am—12:30 am
WNBZ
                   100
                          \mathbf{p}
                                                                 -9:30 am-
WNEL
                  1000
                          (2.5)
                                    San Juan, P. R.
                                                                    -6:30 am-
                                                                                 -11:30 pm
1300 kcys.
                         (230.6)
KALE
KFAC
KFH
                   500
                          CM
                                    Portland, Ore.
            ak
                 1000
                                     Los Angeles, Calif.
            ak
                          \ddot{\mathbf{C}} (5)
                                    Wichita, Kans.
            ak
                 1000
                                   Brooklyn, N. Y.
New York, N. Y.
New York, N. Y.
Greenville, S. C.
Troy, N. Y.
WBBR
                 1000
            ak
WEVD
WFAB
                 1000
            ak
            ak
                 1000
                 1000
1000
1000
250
                          Ñ (5)
WFBC
WHAZ
           ak
                          1
                                                                 --6:00 pm-midnight
           ak
ak
                                    Sheboygan, Wis.
WHBI.
1310 kcys. (228.9)
                          ....
CHCK
                    50
           ak
ak
                                    Charlottetown, P.E.I.
CJKL
CJLS
                   100
                                    North Bay, Ont.
Yarmouth, N. S.
            ak
                   100
                         F
                                    Quebec, P. Q.
CKCV
           ak
                   100
                                                                 --7:55 am-11:30 pm
                                   Corsicana, Tex.
Fresno, Calif.
Kansas City, Kans.
KAND
                   100
            Z.
KARM
KCKN
                   100
            Z
                   100
           ak
                         (.25)
(.25)
(.25)
(.25)
                                   Jerome, Ariz.
Dublin, Texas
Okla. City, Okla.
Lubbock, Texas
Kalispell, Mont.
Kearney, Nebr.
Watsonville, Calif.
Luneau, Alaska
KCRJ
                   100
            ak
                                                                 -7:00 am-10:45 pm
KFPL
            dk
                   100
KFXR
KFYO
KGEZ
            ak
                   100
                                                                 -8:00 am-midnight
           ak
                   100
                                                                 -8:00 am-10:15 pm
                   100
                                                                   -9:00 am-11:00 pm
           ak
                          . . . .
KGFW
           ak
ak
                   100
                                                                   -7:00 am-10:00 pm
                         Ď...
KHUB
                   250
                  100 XZ Juneau, Alaska
100MXZ(,25) Yakima, Wash
100 D Pampa, Texas
100 DP Lufkin, Texas
KINY
           ak
KIT
            ak
KPDN
           ak
KRBA
                                   Shreveport, La.
Rochester, Minn.
Santa Fe, N. Mex.
Sherman, Texas
                          (.25)(.25)
KRMD
                   100
           ak
KROC
                   100
                                                                 -7:00 am-12:15 am
KRQA
KRRV
                   100
250
           ak
                          Ď
           7.
                   250
                                   Santa Rosa, Calif.
Cedar City, Utah
El Paso, Texas
                          \tilde{\mathbf{D}}
                                                                 -11:00 am-9:00 pm
KSRO
           ak
KSUB
           ak
                   100
                          (.25)
                                                                 -8:30 am-1:00 am
-8:00 am-10:30 pm
KTSM
                   100
                                   Lafayette, La.
Moorhead, Minn.
Jefferson City, Mo.
Aberdeen, Wash.
Laurel, Miss.
KVOL
                   100
           ak
KVOX
KWOS
                   100
           Z
                   100
           7
KXRO
WAML
                          M(.25)
                                                                   -10:00 am-2:00 am
           ak
                   100
                                                                   -8:00 am-8:00 pm
           ak
                   100
                         (.25)
D
                                                                 -10:30 am-5:30 pm
                                   Marquette, Mich.
WBEO
           ak
                   100
```

```
WBOW
                      N (.25) Terre Haute, Ind.
                                                         -7:00 am-midnight
WBRE
          ak
                 100
                               Wilkes-Barre, Pa.
                       P (.25) Pittsfield, Mass.
WBRK
                 100
                                                           -8:00 am—9:30 pm
-6:00 am—11:30 pm
WCLS
                 100
                               Joliet, Ill.
          ak
                      (.25) Ashland, Ky.
S (.25) El Paso, Texas
B (.25) Buffalo, N. Y.
WCMI
          ak
                 100
WDAH
                                                           -11:30 am--10:30 pm (Sun. only)
          ak
                 100
WEBR
          ak
                 100
                                                           -7:00 am—midnight
                               Milwaukee, Wis.
Royal Oak, Mich.
                                                           -7:30 am
 WEMP
          ak
                 100
                      Đ
                      <u>.</u>...
WEXL
          ak
                                                           -8:00 am
                                                                       4:00 am
                               Altoona, Pa.
Flint, Mich.
                                                                      -10:30 pm
-midnight
WFBG
                 100
                                                           -7:00 am-
          ak
WFDF
                 100
                                                           7:00 am
          ak
                      (.25)
D
                               Newport News, Va.
Wilson, N. C.
WGH
                 100
                                                           -7:00 am-
                                                                      -midnight
          яk
WGTM
WHAT
                 100
          7.
                               Philadelphia, Pa.
Johnstown, Pa.
          ak
                 10Ó
                      3 (.25)
                 100
WJAC
          ak
WLAK
                               Lakeland, Fla.
                 100
                      (.25)
M
                               Muncie, Ind.
                                                         -7:00 am-midnight
WLBC
          ak
                 100
                      M Laconia, N. H.
... Auburn, N. Y.
(.25) Plattsburg, N. Y.
M (.25) New Bedford, Mass.
MXZ Washington, D. C.
WLNH
          ak
                 100
WMBO
          ak
                 100
WMFF
          ak
                 100
WNBH
                                                         -7:30 am-11:15 pm
          ak
                 100
WOL
          ak
                 100
WŘÁW
                               Reading, Pa.
Knoxville, Tenn
                                                         -7:00 am-11:00 pm
          àk
                 100
WROL
WSAJ
WSGN
                100
                      N(.25)
          яk
                               Grove City, Pa.
          яk
                 100
                       B (.25) Birmingham, Ala. —8:00 am—midnight
C Winston-Salem, N. C. —8:00 am—10:00 pm
                                                         -8:00 am-midnight
                 100
          ak
                 100
WSJS
          яk
                      C
                                                           8:00 am-midnight
WTAL
WTEL
                               Tallahassee. Fla.
          ak
                 100
          ak
                100
                               Philadelphia, Pa.
Jackson, Tenn.
Elkhart, Ind.
                                                           -8:00 am-midnight
                      (.25)
(.25)
WTJS
                 100
          ak
                                                         -7:00 am-10:30 pm
WTRC
          ak
                 100
XEAG
          z
                               Cordoba, Ver.
                       . . . .
                               Irapuato, Guan.
Mexico City, D. F.
Tampico, Tams.
XEBO
          Z
                       . . . .
XECW
          ak
                  ĩõ
                       . . . .
XEFW
                                                         -11:00 am-10:00 pm
          ak
                250
                       . . . .
                 125
                               Torreon, Coah.
XETB
          яk
                               Monterrey, N. L.
Poplar Bluff, Mo.
                125
XEX
          яk
                      ĎP
                100
          z
1320 kcys.
                      (227.1)
CMOX
                200
          ak
                               Havana, Cuba
                                                         -9:30 am-11:45 pm
-1:30 am-6:00 pm
                               Pueblo, Colo.
Honolulu, Hawaii
KGHF
KGMB
          am
                500
                      ВСМ
          яk
               1000
KID
          ak
                500
                      (1)
C (5)
                               ldaho Falls, Idaho
Des Moines, Iowa
KRNT
                                                           -6:30 am--1:00 am
          ak
               1000
WADC
                               Akron, Ohio
York, Pa.
                                                         -7:00 am-1:00 am
          ak
               1000
                                                           -8:00 am--10:00 pm
WORK
          ak
               1000
                      N
R
WSMB
               1000
                               New Orleans, La.
         kcys.
                      (225.4)
1330
CMHK
                250
                               Cruces, Cuba
               1000
                               San Diego, Calif.
Tacoma, Wash.
                                                           10:00 am-4:00 am
KGB
          ak
                                                           -9:00 am-3:00 am
KMO
               1000
                      M
          ak
                               Corpus Christi, Tex.
KRIS
                500
          7.
                      C (5) Sioux City, Iowa
C (5) Hartford, Conn.
MN(2.5) Cincinnati, Ohio
KSCJ
          ak
               1000
                                                           -7:00 am-1:00 am
               1000
WDRC
                                                           -7:00 am-midnight
          ak
WSAI
               1000
                                                          -7:00 am-1:00 am
          ak
                               Green Bay, Wis.
               1000
WTAO
          ak
1340 kcys. (223.7)
CMAB
                               Pinar del Rio, Cuba
                              Camaguey, Cuba
Dubuque, Iowa
CMJL
                 75
         Z
KDTH
                500
                      ĎΡ
         Z
KGDY
                250
                      D Huron, S. Dak.
N (2.5) Butte, Mont.
                                                         -10:00 am-1:00 am
          ak
KGIR
          ak
               1000
                              Dodge City, Kans.
Pensacola, Fla.
KGNO
          ak
                250
                                                        -8:30 am-midnight
WCOA
         ak
                500
WFEA
         ak
                500
                      MN(1) Manchester, N. H.
                                                        -6:30 am-1:00 am
WSPD
              1000
                      B (5)
                              Toledo, Ohio
Jalapa, Ver.
         ak
XEXD
                350
         z
1350 kcys.
                      (222.1)
CMCA
         ak
                450
                               Havana, Cuba
CMKW
         7
                      . Santiago, Cuba
N (2.5) Boise, Idaho
KIDO
               1000
                                                         --10:00 am—midnight
         ak
                                                        —6:30 am—1:00 am
         ak
               1000
                      BM(5) St. Louis, Mo.
```

```
WAWZ ak
                 500
1000
                                    Zarephath, N. J.
New York, N. Y.
Richmond, Va.
                          1 (1)
WBNX ak
                          I
R
                   500
1360 kcys. (220.4)
CMJH
            dk
                    50
                                    Ciego de Avila, Cuba
                          M
KCRC
            ak
                   250
                                    Enid, Okla.
                                                                   --8:00 am--11:00 pm
KGER
            ak
                  1000
                                    Long Beach, Calif.
                                    Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
                          N (1)
C (5)
                                                                  —7:00 am—midnight
—7:00 am—1:00 am
WCSC
            ak
                   500
WFBL
            ak
                  1000
WGES
            ak
                   500
                          1 (1)
                                                                    8:00 am-9:00 pm
                 1000
                          Ď
                                    Vicksburg, Miss.
South Bend, Ind.
WOBC
           ak
WŠBT
                   500
1370 kcys.
                          (218.8)
                                    Flin Flon, Man.
Moncton, N. B.
Cardenas, Cuba
Astoria, Ore.
Kansas City, Mo.
Seattle, Wash.
                          ....
                   100
CFAR
            z
CKCW
            ak
                   100
CMGE
            ak
                   150
                                                                    -10:00 am-10:30 pm
                                                                  -11:00 am-8:30 pm

-7:00 am-2:00 am

-3:00 pm-1:00 am
                          Ď
KAST
            ak
                   100
KCMO
            ak
                   100
                          ż
KEEN
            ak
                   100
KELD
                   100
                                    El Dorado, Ark
            z
                          .....
N
                                                                    --11:00 am---3:00 am
-7:00 am---2:00 pm
-7:30 am---midnight
KERN
            ak
                   100
                                     Bakersfield, Calif.
                                    Bakersheid, Calif. Boone, Iowa Fort Worth, Texas Longview, Texas Tucson, Arizona Roswell, N. Mex. San Angelo, Texas-Clovis, N. Mex. Durango, Colo. Calveston, Texas
KFGO
            ak
                   100
                          D
KFJZ
            ak
                   100
                          (.25)
                   250
                                                                    -7:00 am-ss
KFRO
            ak
                          (.25)
                   100
KGAR
            яk
KGFL
            ak
                   100
                          (.25)
4
                   100
KGKL
            ak
                                                                  -9:00 am-11:00 pm
KICA
            ak
                   100
                                                                    -10:00 am-11:00 pm
KIUP
            ak
                   100
                          . . . .
                                                                    -9:00 am—midnight
-8:00 am—9:00 pm
KLUF
            ak
                   100
                                    Galveston, Texas
                          5 (.25)
                                    San Antonio, Tex.
Rapid City, S. Dak.
La Junta, Colo.
KMAC
            ak
                   100
                                                                    -8:00 am—midnight
KOBH
            ak
                   100
                          . . . .
KOKO
                   100
            7.
                                    San Antonio, Tex.
Berkeley, Calif.
Everett, Wash.
            ak
                   100
                         (.25)
                                                                  -7:00 am-11:00 pm
                   100
                                                                  -24 hours daily
KRE
            ak
KRKO
            ak
                    50
KRMC
                   100
                          (.25)
M
                                     Jamestown, N. D.
            z
KSLM
            ak
                   100
                                    Salem. Ore.
                                                                  -10:00 am-1:00 am
                                    Temple, Texas
Oklahoma City, Ok.
Walla Walla, Wash.
Great Bend, Kans.
            ak
                   250
KTEM
                   100
KTOK
            bk
                          M
KÜJ
                   100
                                                                    -9:30 am-1:00 am
            ak
KVGB
                   100
            z
                          (.25)P
(.25)
B
                                    Rock Springs, Wyo.
Sheridan, Wyo.
Albany, N. Y.
KVRS
KWYO
                   100
            z
                   100
                                                                    -9:00 am—midnight
            ak
WABY
                   100
250
                                                                  -7:00 am-midnight
            ak
                                    Dothan, Ala.
Atlanta, Ga.
Clarksburg, W. Va.
Buffalo, N. Y.
                                                                  -9:00 am-
WAGF
            ak
                          D
                                                                                  -88
                                                                   -7:00 am-1:00 am
                          (.25)
WATL
            ak
                   100
WBLK
            ak
                   100
                          2 (.25)
(.25)
(.25)
                                                                  -7:30 am-midnight
WBNY
            ak
                   100
                                    Danville, Va.
WBTM
            ak
                   100
           ak
WCBM
                   100
                                    Baltimore, Md
                          (.25)
D
                                    Philadelphia, Pa.
Champaign, Ill.
                   100
                                                                    -8:00 am—midnight
WDAS
            яk
WDWS
                   100
            ak
                          C(.25)
                                    Evansville, Ind.
WEOA
                   100
                                                                  -8:00 am-9:00 pm
WFOR
            ak
                   100
                                    Hattiesburg, Miss.
                                    Fort Wayne, Ind.
WGL
            ak
                   100
                                    New Albany, Ind.
Memphis, Tenn.
Calumet, Mich.
Virginia, Minn.
                   250
WGRC
            ak
            ak
                   100
                                                                    -8:00 am-11:30 pm
WHBQ
                          (.25)
(.25)
(.25)
                   100
                                                                   -10:30 am-6:30 pm
WHDF
            ak
WHLB
            ak
                           (.25) Jackson, Mich.
MSy(.25) Lowell, Mass.
                                                                  -6:30 am-12:30 am
-7:30 am-midnight
-7:30 am-midnight
WIBM
            ak
                   100
WLLH
            ak
                   100
                          C (.25) Jacksonville, Fla.
D Wilmington, N. C.
WMBR
            ak
                   100
WMFD
            ak
                   100
                                                                  -8:00 am-6:30 pm
-7:00 am-1:00 am
-7:00 am-1:00 am
                   100
                                    Decatur, Ala.
St. Paul, Minn.
WMFO
            ak
                          (.25) St. Paul, Minn.
C (.25) Davenport, Iowa
WMIN
            ak
                   100
                   100
            ak
\mathbf{w}oc
                   100
                                    Portsmouth, Ohio
Mayaguez, P. R.
WPAY
                                                                    -7:00 am-10:15 pm
            ak
                          (.25)
(.25)
M
WPRA
                   100
            z
                                    Williamsport, Pa.
Augusta, Maine
Racine, Wis.
WRAK
            ak
                    109
                                                                  -8:00 am-11:15 pm
WRDO
            ak
                    100
                                                                    -8:25 am-midnight
-7:00 am-11:15 pm
WRJN
WSAU
            ak
                   100
                          (.25)
                                    Wausau, Wis.
Buffalo, N. Y.
San L. Pot., S.L.P.
            ak
                   100
WSVS
                    50
                          2D
            ak
                   100
XECZ
            7.
```

```
Morelia, Mich.
Mexico City, D. F.
Lawrence, Mass.
XEI
          ak
                 125
XELZ
                 100
          \bar{z}_{2}^{10-100}
                       SyP
                                Owen Sound, Ont.
1380 kcys.
                      (217.3)
                       C
C1
C (1)
                                Reno, Nevada
Pittsburgh, Pa.
Mobile, Ala.
                                                           —11:00 am—3:00 am
—7:00 am—10:00 pm
кон
          ak
                 500
KOV
WALA
WKBH
WNBC
               500
500
1000
          ak
                                                           -8:30 am-midnight
          ak
                                La Crosse, Wis.
New Britain, Conn.
          ak
                       \mathbf{c}
                 250
          ak
                       D
                                                           -7:00 am-ss
                 200
WSMK
                       Č 1
          ak
                                Dayton, Ohio
1390 kcys. (215.7)
                       F
                                                           -8:30 am-12:30 am
CJGX
                                 Yorkton, Sask
CMJC
                 150
                                Camaguey, Cuba
Little Rock, Ark.
          z
                       C (5)
KLRA
          ak
               1000
KOY
KRLC
          ak
               1000
                       Č
                                Phoenix, Ariz.
                                                            -9:00 am-12:15 am
          ak
                                Lewiston, Idaho
                 250
                       BM(2.5) Cleveland, Ohio
D St. Albans, Vt.
WHK
          ak
               1000
                                                           -7:00 am-midnight
WODM
          dk
               1000
1400 keys. (214.2)
CMGC
          ad
                 150
                                                           -8:00 am-11:00 pm
                                Matanzas, Cuba
                               Matanzas, Cuba
Santiago, Cuba
Hilo, T. H.
Ogden, Utah
Tulsa, Okla.
Brooklyn, N. Y.
Brooklyn, N. Y.
Uladiananolis I.
CKKR
KHBC
                 100
                       CM
          ak
                 250
KLO
          ak
                 500
                       B
                                                            -10:00 am-1:00 am
KTUL
                 500
          ak
                       \bar{\mathbf{C}} (1)
WARD
WBBC
          ak
                 500
                 500
                       2(1)
          ak
                 250
WHDL
          ak
                       MR (5) Indianapolis, Ind.
WIRE
          ak
                1000
                                                           -7:30 am-1:00 am
                                Brooklyn, N. Y.
Brooklyn, N. Y.
WLTH
                 500
                       22
                 500
WVFW
          ak
1410 kcys.
                       (212.6)
          ak
                                Vancouver, B. C
CKMO
CMCO
          ak
                 100
                       5
                                Vancouver, B. C.
                                Havana, Cuba
Grand Forks, N. D.
          ak
                 250
KFJM
KGNC
                 500
                       (1)
          ak
                       (1) Grand Forks, N.
(2.5) N Amarillo, Texas
N Medford, Ore.
M (1) Boston, Mass.
(1) Bay City, Mich.
(1) Bluefield, W. Va.
(1) Rockford, Ill.
          ak
                1000
KMED
                 250
          ck
WAAB
WBCM
          ak
                 500
                                                             24 hours daily
                                                             9:00 am—12:30 am
          ak
                 500
WHIS
                 500
          ak
                 500
WROK
          ak
                                                             -7:30 am—midnight
                       (1)
C (1)
                 500
                                                           -7:30 am-midnight
WSFA
                                Montgomery, Ala.
1420 kcys.
                       (211.1)
CHLN
                 100
                                Three Rivers, P. Q.
CKGB
          ak
                 100
                                North Bay, Ont.
                                                           -11:00 am-11:30 pm
-7:00 am-12:15 am
                       (.25)
XZ
KABC
                 100
                                San Antonio, Texas
          ak
KABR
                 100
                                Aberdeen, S. D.
          ak
                                Albert Lea, Minn.
Portland, Ore.
KATE
KBPS
                 250
                       D
          7.
                 100
                                                           -2:00 pm-8:00 pm
          ak
KCMC
                 100
                       (.25)
                                Texarkana, Tex.
          ak
                                Price, Utah
St. Cloud, Minn
KEUB
          ak
                 100
                                                           —9:30 am—midnight
KFAM
                 100
KFIZ
KGFF
          ak
                 100
                                Fond du Lac. Wis.
                       (.25) M Shawnee, Okla.
                 100
                                                            -8:00 am-10:00 pm
          ak
KGGC
          ak
                 100
                                San Francisco, Cal.
                                Alamosa, Colo.
Lamar, Colo.
Pecos, Texas
KGIW
          ak
                 100
                                                             9:30 am-10:30 pm
KIDW
                 100
                                                           -9:00 am-8:00 pm
          ak
                       1
          ak
                 100
                                                           -8:00 am-10:00 pm
                       (.25) P La Grande, Ore.
D Palestine, Texas
KLBM
                 100
          ak
KNET
                 100
                                Eugene, Ore.
Abilene, Texas
Midland, Texas
                       M
KORE
          ak
                 100
KRBC
          ak
                 100
                       (.25)
                                                           -8:00 am-10:00 pm
KRLH
                 100
          z
KTRI
                 100
                       (.25) P Sioux City, Iowa
KUMA
          ak
                 100
                                 Yuma, Ariz.
```

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

```
KWBG
            ak
                   100
                                   Hutchnison, Kans.
KXL
WACO
WAGM
WAPO
                         4 (.25) Portland, Ore.
C Waco, Texas
Presque Isle, Me.
            ak
                   100
                  100
            ak
                                                               -11:00 am-7:00 pm
           яk
                   100
                         (.25)
                                  Chattanooga, Tenn.
Hazleton, Pa.
                                                                -7:00 am--7:00 pm
-9:00 am--10:00 pm
                   100
           ak
 WAZL
           ak
ak
                  100
                         (.25)
 WCBS
WCHV
                                                                8:00 am—11:00 pm
                  100
                                   Springfield, Ill.
                                  Charlottesville, Va.
Rocky Mount, N. C.
Battle Creek, Mich.
                         3 (.25)
3 (.25)
           ak
                  100
                                                                7:00 am—midnight
 WEED
            ak
                  100
 WELL
           ak
                  100
                                                              -7:30 am-midnight
                                  Albany, Ga.
Cicero, Ill.
Wilmington, Del.
 WGPC
                   100
                       wilmington, Del.
Ironwood, Mich.
(.25) B Erie. Pa.
(.25) B Erie. Pa.
(.25) Springfield, Mass.
(.25) Detroit, Mich.
Joplin. M
 WHFC
           ak
                  100
                                                                -7:00 am-1:00 am
 WILM
           aj
ak
                  100
 WJMS
                   100
 WLAP
           ak
                  100
 WLEU
           ak
                  100
 WMAS
           ak
                  100
                                                              -7:00 am-midnight
 WMBC
           ak
                  100
                                                              -7:30 am-midnight
 WMBH
           ak
                  100
           ak
 WMBS
                  250
                                                              -6:00 am-6:00 pm
 WMFJ
           ak
                  100
                                  Daytona Bch., Fla.
 WMSD
           ak
                  100
                                  Sheffield, Ala.
                                                              -8:00 am-11:00 pm
                         (.25) P
                                  Watertown, N. Y.
WNNY
                  100
WPAD
WPAR
           ak
                  100
                         (.25)
C
                                  Paducah, Ky.
                                                              -7:00 am-midnight
                                  Parkersburg, W. V.
                  100
           ak
                         (.25)
                  100
                                  Ponce, Puerto Rico
1430 kcys. (209.7)
CMJP
                                  Moron, Cuba
           ak
                         (5) B
                                 Los Angeles, Cal.
North Platte, Neb.
KECA
KGNF
                 1000
                                                             -10:00 am-3:00 am
-8:00 am-6:15 pm
           ak
                 1000
           ak
                        BM(2.5) Des Moines, Iowa
C (1)X Columbus, Ohio
C (1) Rochester, N. Y.
C (1) Harrisburg, Pa.
KSO
           ak
                  500
WBNS
           ak
                  500
                                 Rochester, N. Y.
Harrisburg, Pa.
Memphis, Tenn.
WHEC
           ak
                  500
                                                             -7:00 am-midnight
-6:30 am-midnight
           ak
                  500
WMPS
                        (1) B
C (1)
                                 Memphis, Ter
Albany, N. Y.
           ak
                  500
woko
           ak
                  500
                                                              ---8:00 am--1:00 am
1440 keys. (208.2)
                                 Havana, Cuba
Casper, Wyo.
Centralia-Chehalis, Wn.
Houston, Texas
Greensboro, N. C. —6
Allentown, Pa. —7
CMOA
                  150
KDFN
                  500
           ak
KELA
                  500
                        MР
           7.
KXYZ
           āk
                1000
                        В
WBIG
                1000
                        \tilde{\mathbf{C}}
                                                              -6:30 am-11:30 pm
           ak
                 500
                                                             -7:30 am-11:30 pm
-7:00 am-midnight
WCBA
WMBD
           aj
ak
                1000
                        C(5)
                                  Peoria, Ill.
                                  Allentown, Pa
                                                              —1:00 pm—11:30 pm
WSAN
XEFI
                 500
                        Na
          aj
ak
                                 Chihuahua, Chih.
                 250
1450 keys. (206.8)
                                                              -10:45 am-12:15 am
CFCT
           яk
                   50
                                 Victoria, B, C.
                                 Summerside, P.E.I.
Cienfuegos, Cuba
Wolf Point, Mont.
CHGS
                   50
                        F
                                                             -6:30 am-10:00 pm
           ak
                 100
CMHM
           Z
KGCX
KIEM
           ak
                1000
                                                             --10:00 am--1:00 am
--7:30 am -1:00 am
                        M(1)
                 500
                                 Eureka, Calif.
KTBS
                1000
                                 Shreveport, La.
WAGA
WGAR
                 500
                        B (1)
                                 Atlanta, Ga.
           ak
                 500
                        C (1)
                                 Cleveland, Ohio
                                                               -7:00 am---midnight
           ak
                                 Jersey City, N. J.
Fall River, Mass.
Juarez, Chih.
                                                             -7:00 am-midnight
WHOM
                 250
          ak
WSAR
          ak
                1000
                        M
XEF
                 100
1460 kcys. (205.4)
                                Holguin, Cuba
St. Paul, Minn.
Washington, D. C.
CMKF
           ak 10000
                                                             -7:00 am-2:00 am
KSTP
                        R (25)
           ak 10000
1470 kcys.
                       (204.0)
                5000
                                 Spokane, Wash.
WLAC
          ak
               5000
                                 Nashville, Tenn.
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1480	kcys.	(202	.6)	
KOMA	ak 5000	C	Oklahoma City, Ok.	-7:30 am-1:00 am
WHIP WKBW	z 5000 ak 5000	DP C	Hammond, Ind. Buffalo, N. Y.	—7:30 am—1:00 am —7:30 am—5:30 pm —8:00 am—1:00 am
	_		->	
1490	kcys.	(201	.2)	
KFBK WCKY	ak 5000 ak 10000	N X N	Sacramento, Calif. Covington, Ky.	7:00 ammidnight
				The annual mining in
1500	kcys.	(199)	.9)	
CJIC	ak 100		S. S. Marie, Ont. Gallup, N. Mex.	-10:00 am-10:00 pm
KAWM KBIX	z 100 ak 100	 М	Gallup, N. Mex. Muskogee, Okla.	-8:00 am-11:00 pm
KBST	z 100	<u>с</u>	Big Spring, Texas Duluth, Minn.	p
KDAL KDB	ak 100 ak 100	M(.25)	Santa Barbara, Cal.	
KGFI	ak 100 ak 100	M(.25) (.25) (.25)	Santa Barbara, Cal. Brownsville, Tex.	
KGKB KGKY	ak 100 ak 100	(.25)	Tyler, Texas Scottsbluff, Neb.	-8:30 am-11:00 pm
KNEL KNOW	ak 250 ak 100	D C	Brady, Texas Austin, Texas	-8:00 am-6:00 pm
KOTN	ak 100 ak 100	Ď	Pine Bluff, Ark.	-8:00 am-ss
KOVC	ak 100	(.25)	Valley City, N. D.	-8:00 am-10:00 pm
KPLC KPLT	ak 100 z 250	Ď	Lake Charles, La. Paris, Texas	
KPQ KRNR	ak 100M	1(.25) 1(.25)	Wenatchee, Wash.	
KROD	ak 100M ak 100	P	Roseburg, Ore. El Paso, Texas	
KSAL `	ak 100	(.25)	Salina, Kans.	
KUTA KVOE	z 100 ak 100	P M	Salt Lake City, Ut. Santa Ana, Calif.	-Noon to 2:00 am
KXO WCNW	ak 100		El Centro, Calif.	—11:00 am—midnight
WDNC	ak 100 ak 100	1 (.25) C	El Centro, Calif. Brooklyn, N. Y. Durham, N. C.	—9:00 am—midnight —7:30 am—12:30 am
WGAL	ak 100	(.25)	Lancaster, Pa.	
WHBB WHEF	ak 100 ak 100	(.25)	Selma, Ala. Kosciusko, Miss.	—7:30 am—ss —7:30 am—10:00 pm
WJBK WKAT	ak 100	(.25) P	Detroit Mich.	-24 hours daily
WKBB	z 100 ak 100	(.25)	Miami Beach, Fla. E. Dubuque, Ill. Richmond, Ind.	
WKBV WKBZ	ak 100	(.25) (.25)	Richmond, Ind.	7.00 10.00
WKEI	ak 100 ak 100	(.25) D	Muskegon, Mich. Griffin, Ga.	-7:00 am-10:00 pm
WMBQ WMEX	ak 100 ak 100	(25)	Brooklyn, N. Y. Boston, Mass.	
WNBF	ak 100	(.25) C(.25) DM	Binghamton, N. Y.	
WNLC WOMI	ak 100 z 100	DM P	Binghamton, N. Y. New London, Conn.	
WOPI	ak 100	-	Owensboro, Ky. Bristol, Tenn. Augusta, Ga.	-7:00 am-10:30 pm
WRDW WRGA	ak 100 ak 100	C(.25)	Augusta, Ga.	—7:00 am—10:30 pm —7:00 am—9:00 pm —8:00 am—11:00 pm
WRTD	z 100	B	Rome, Ga. Richmond, Va.	—8:00 am—11:00 pm
WSYB WTMV	ak 100 ak 100	(.25)	Richmond, Va. Rutland, Vt.	10:00 am9:00 pm
WWRL	ak 100	(.25) (.25) (.25)	E. St. Louis, Ill. Woodside, N. Y.	-8:00 am-midnight
wwsw	ak 100	(.25)	Pittsburgh, Pa.	
1510	kcys.	(198	6)	
	•	•	,	
CFRC CKCR	ak 100 ak 100	F 	Kingston, Ont. Waterloo, Ont.	Noon11:00 pm 8:00 am11:00 pm
1520	1-0	/106	α \	
1530	•	(196	.0)	
KXBY WBRY	ak 1000 ak 1000	<u>й</u>	Kansas City, Mo. Waterbury, Conn.	8:00 am3:30 am 8:00 ammidnight
1550	kcys.	(193.	.4)	
KPMC		M	Bakersfield, Calif.	-10:00 am-2:00 am
WQXR	ak 1000	• • • •	New York, N. Y.	—10:00 am—9:15 pm
				70

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Frequency in kilocycles in second column. Night power in waits in third column. Net work affiliations in fourth column. C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian.

M Mutual.

ALABAMA	CALIFORNIA	Santa Barbara	FLORIDA
Birmingham	Bakersfield	KDB 1500 100M KTMS 1220 500 B	Clearwater
WAPI 1140 5000 R	KERN 1370 100 N	Santa Rosa	WFLA 620 1000 N
WBRC 930 1000 C WSGN 1310 100 B	KPMC 1550 1000M Berkeley	KSRO 1310 250	Daytona Beach WMFJ 1420 100
Decatur	KRE 1370 100	Stockton KGDM 1100 1000M	Gainesville
WMFO 1370 100 Dothan	Beverly Hills KMPC 710 500	KWG 1200 100 N	WRUF 830 5000
WAGF 1370 250	Chico KHSL 1260 250	Visalia KTKC 1190 250	Jacksonville WJAX 900 1000 N
Gadsden WJBY 1210 100	El Centro KXO 1500 100	Watsonville	WMBR 1370 100 C
Huntsville	Eureka	KHUB 1310 250	Lakeland WLAK 1310 100
WBHP 1200 100 Mobile	KIEM 1450 500M Fresno	COLORADO	Miami WIOD 610 1000 N
WALA 1380 500 C	KARM 1310 100 KMJ 580 1000 N	Alamosa KGIW 1420 100	WMBF 610 1000
Montgomery WSFA 1410 500 C	Glendale KIEV 850 250	Colorado Springs	WQAM 560 1000 C Miami Beach
Selma	Hollywood	KVOR 1270 1000 C Denver	WKAT 1500 100
WHBB 1500 100	KFWB 950 1000 Long Beach	KFEL 920 500M	Orlando WDBO 580 1000 C
Sheffield WMSD 1420 100	KFOX 1250 1000 KGER 1360 1000	KLZ 560 1000 C KOA 830 50000 R	Pensacola
Tuscaloosa WJRD 1200 250	Los Angeles	KPOF 880 500 KVOD 920 500 B	WCOA 1340 500 C
	KEHE 780 1000	Durango KIUP 1370 100	St. Augustine WFOY 1210 100
ALASKA	KFAC 1300 1000 KFI 640 50000 R	Grand Junction	St. Petersburg WSUN 620 1000 N
Anchorage KFOD 780 250	KFSG 1120 500 KFVD 1000 1000	KFXJ 1200 100 Greeley	Tallahassee WTAL 1310 100
Juneau	KGFJ 1200 100	KFKA 880 500M La Junta	Tampa
KINY 1310 100 Ketchikan	KMTR 570 1000	KOKO 1370 100	WDAE 1220 1000 C West Palm Beach
KGBU 900 500	KNX 1050 50000 C KRKD 1120 500	Lamar KIDW 1420 100	WJNO 1200 100 C
ARIZONA	Merced KYOS 1040 250	Pueblo KGHF 1320 500 B	GEORGIA
Jerome	Modesto	Sterling KGEK 1200 100	Albany
KCRJ 1310 100	KTRB 740 250 Monterey	CONNECTICUT	WGPC 1420 100 Atlanta
Lowell KSUN 1200 100	KDON 1210 100M Oakland		WAGA 1450 500 WATL 1370 100
Phoenix KOY 1390 1000 C	KLS 1280 250 KLX 880 1000	Bridgeport WICC 600 500M	WGST 890 1000 C WSB 740 50000 R
KTAR 620 1000 N	KROW 930 1000	Hartford WDRC 1330 1000 C	Augusta WRDW 1500 100 C
Tucson KGAR 1370 100	Pasadena KPPC 1210 100	WTIC 1040 50000 R WTHT 1200 100M	Columbus
KVOA 1260 1000	Redding KVCV 1200 100	New Britain	WRBL 1200 100 Griffin
Yuma KUMA 1420 100	Sacramento	WNBC 1380 250	WKEU 1500 100 Macon
	KFBK 1490 5000 N KROY 1210 100	New Haven WELI 900 500	WMAZ 1180 1000 C
ARRANSAS	San Bernardino KFXM 1210 100M	New London	Rome WRGA 1500 100
Blytheville KLCN 1290 100	San Diego	WNLC 1500 100M Waterbury	Savannah WTOC 1260 1000 C
El Dorado	KFSD 600 1000 B KGB 1330 1000M	WATR 1190 100	Thomasville
KELD 1370 100 Fort Smith	San Francisco	WBRY 1530 1000M	WPAX 1210 100 Waycross
KFPW 1210 100	KFRC 610 1000M KGGC 1420 100	DELAWARE	WAYX 1200 100
Hot Springs KTHS 1060 10000 N	KGO 790 7500 B	Wilmington WDEL 1120 250 R	HAWAII
Jonesboro	KPO 680 50000 R	WILM 1420 100	Hilo
KBTM 1200 100 Little Rock	KSFO 560 1000 C KYA 1230 1000	DISTRICT OF	KHBC 1400 250M Honolulu
KARK 890 500 N KGHI 1200 100	San Jose	COLUMBIA	KGMB 1320 1000 C KGU 750 2500 N
KLRA 1390 1000 C	KQW 1010 1000M San Luis Obispo	Washington	
Pine Bluff KOTN 1500 100	KVEC 1200 250	WJSV 1460 10000 C WMAL 630 250 B	ІДАНО
Siloam Springs	Santa Ana KVOE 1500 100M	WOL 1310 100M WRG 950 500 R	Boise KIDO 1350 1000 N
KUOA 1260 5000	EACE 1200 100M	750 500 K	11110 1330 1000 N

NORTH	AMERICAN B. C. S	STATIONS BY LOC	ATIONS
Coeur d'Alene KGCl 1200 100	Fort Wayne WGL 1370 100 N	Kansas City	MAR YLAND
KGCl 1200 100 Idaho Falls	WGL 1370 100 N WOWO 1160 10000 B	KCKN 1310 100 Lawrence	Baltimore
KID 1320 500	Gary	KFKU 1220 1000	WBAL 760 2500 B WBAL 1060 10000 B
Lewiston KRLC 1390 250	WIND 560 1000 Hammond	WREN 1220 1000 B Manhattan	WCAO 600 500 C
Nampa	WHIP 1480 5000	KSAC 580 500	WCBM 1370 100 WFBR 1270 500 R
KFXD 1200 100	WWAE 1200 100	Pittsburg KOAM 790 1000 N	College Park
Pocatello KSEI 900 250	Indianapolis WFBM 1230 1000 C	KOAM 790 1000 N Salina	W3XJ 1060 100
Twin Falls	WGVA 1050 1000 WIRE 1400 1000 R	KSAL 1500 100	Cumberland WTBO 800 250
KTFI 1240 1000	Muncie	Topeka WIBW 580 1000 C	Frederick WFMD 900 500
LLINOIS	WLBC 1310 100	Wichita	WFMD 900 500 Hagerstown
Bloomington	New Albany WGRC 1370 250	KANS 1210 100 B KFH 1300 1000 C	WJEJ 1210 50
WJBC 1200 100	Richmond		Salisbury WSAL 1200 250
Carthage WCAZ 1070 100	WKBV 1500 100 South Bend	KENTUCKY	
Champaign	WFAM 1200 100	Ashland	MASSACHUSETTS
WDWS 1370 100 Chicago	WSBT 1360 500 Terre Haute	WCMI 1310 100	Boston WAAB 1410 500M
WAAF 920 1000	WBOW 1310 100 N	Covington WCKY 1490 10000 N	WBZ 990 50000 B
WBBM 770 50000 C WCBD 1080 5000	West Lafayette WBAA 890 500	Lexington	WCOP 1120 500 WEEL 590 1000 C
WCFL 970 5000 N WCRW 1210 100		WLAP 1420 100 Louisville	WHDH 830 1000 WMEX 1500 100
WEDC 1210 100	IOWA	WAVE 940 1000 N	WNAC 1230 1000 R
WENR 870 50000 B WGES 1360 500	Ames WOI 640 5000	WHAS 820 50000 C Middlesboro	WORL 920 500
WGN 720 50000M	WOI 640 5000 Boone	WLMU 1210 100	Fall River WSAR 1450 1000M
WLS 870 50000 B	KFGQ 1370 100	Owensboro	Greenfield 1210 250
WMAQ 670 50000 R WMBI 1080 5000	Cedar Rapids WMT 600 1000 B	WOMI 1500 100 Paducah	Lawrence
WSBC 1210 100	Davenport	WPAD 1420 100	WLAW 680 1000 1370 10-100
Cicero WHFC 1420 100	WOC 1370 100 C	LOUISIANA	Lowell WLLH 1370 100M
Decatur	Decorah KGCA 1270 100		New Bedford
WJBL 1200 100 East Dubuque	KWLC 1270 100	Alexandria KALB 1210 100	WNBH 1310 100M Pittsfield
WKBB 1500 100	Des Moines KRNT 1320 1000 C	Baton Rouge	WBRK 1310 100 Springfield
East St. Louis WTMV 1500 100	KSO 1430 500 B WHO 1000 50000 R	WJBO 1120 500 B	WBZA 990 1000 B
Harrisburg	Dubuque	Lafayette KVOL 1310 100	WMAS 1420 100 C WSPR 1140 500M
WEBQ 1210 100	KDTH 1340 500	Lake Charles	Worcester WORC 1280 500 C
Joliet WCLS 1310 100	lowa City WSUI 880 500	KPLC 1500 100 Monroe	WTAG 580 1000 R
Peoria	Marshalltown KFJB 1200 100	KMLB 1200 100	MICHIGAN
WMBD 1440 1000 C	KFJB 1200 100 Mason City	New Orleans WBNO 1200 100	Battle Creek
Quincy WTAD 900 1000	KGLO 1210 100 C	WDSU 1250 1000 B WJBW 1200 100	WELL 1420 100
Rockford WROK 1410 500	Shenandoah KFNF 890 500	WSMB 1320 1000 R	Bay City WBCM 1410 500
Rock Island	KMA 930 1000	WWL 850 10000 C	Calumet
WHBF 1210 100 Springfield	Sioux City KSCJ 1330 1000 C	Shreveport KRMD 1310 100	WHDF 1370 100 Detroit
WCBS 1420 100	KTR1 1420 100	KTBS 1450 1000 N KWKH 1100 10000 C	WJBK 1500 100
WTAX 1210 100 Tuscola	KANSAS	KWKII 1100 1000 C	WJR
WDZ 1020 250 Urbana	Abilene	MAINE	WWJ 920 5000 R
WILL 580 1000	KFBl 1050 5000	Augusta	East Lansing
INDIANA	Coffeyville KGGF 1010 1000M	WRDO 1370 100M	WKAR 850 1000 Flint
	Dodge City	Bangor WABI 1200 100	WFDF 1310 100
Anderson WHBU 1210 100	Garden City	WLBZ 620 500 C	Grand Rapids WASH 1270 500 N
Elkhart WTRC 1310 100	KIUL 1210 100 Great Bend	Portland WCSH 940 1000 R	WOOD 1270 500 N Ironwood
Evansville	KVGB 1370 100	WGAN 640 500	WJMS 1420 100
WEOA 1370 100 C WGBF 630 500 N	Hutchinson KWBG 1420 100	Presque Isle WAGM 1420 100	Jackson WIBM 1370 100

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Kalamazoo	Kansas City	Atlantic City	WBOQ 860 50000
WKZO 590 1000 B	KCMO 1370 100 KMBC 950 1000 C	WPG 1100 5000 C	WEAF 660 50000 R WEVD 1300 1000
Lansing	KMBC 950 1000 C KXBY 1530 1000	Bridgeton	WEVD 1300 1000 WFAB 1300 1000
WJIM 1210 100	WDAF 610 1000 R	WSNJ 1210 100	WHN 1010 1000
Lapeer WMPC 1200 100	WHB · 860 1000M	Camden WCAM 1280 500	WINS 1180 1000
Marquette	Poplar Bluff 1310 100	Jersey City	WJZ 760 50000 B WMCA 570 1000
WBEO 1310 100	St. Joseph	WAAT 940 500	WNEW 1250 1000
Muskegon	KFEQ 680 2500	WHOM 1450 250	WNYC 810 1000
WKBZ 1500 100	St. Louis KFUO 550 500	Newark	WOV 1130 1000 WOXR 1550 1000
Royal Oak	KFUO 550 500 KMOX 1090 50000 C	WHBI 1250 1000	
WEXL 1310 50	KSD 550 1000 R	WOR 710 50000M	Olean WHDL 1400 250
Saginaw	KWK 1350 1000 B	Red Bank WBRB 1210 100	Plattsburg
WHAL 950 500	WEW 760 1000 WIL 1200 100	Trenton	WMFF 1310 100
MINNESOTA	Springfield	WTNJ 1280 500	Rochester
	KGBX 1230 500 N	Whippany	WHAM 1150 50000 B
Albert Lea	KWTO 560 5000	W3XDD 50000	WHEC 1430 500 C WSAY 1210 100
KATE 1420 250	MONTANA	Zarephath WAWZ 1350 500	Saranac Lake
Duluth KDAL 1500 100 C		WAWZ 1330 300	WNBZ 1290 100
WEBC 1290 1000 N	Billings KGHL 780 1000 N	NEW MEXICO	Schenectady
Fergus Falls	KGHL 780 1000 N Butte	Albuquoqquo	WGY 790 50000 R
KGDE 1200 100	KGIR 1340 1000 N	Albuquerque KGGM 1230 1000	Syracuse
Hibbing WMFG 1210 100	Great Falls	KOB 1180 10000 N	WFBL 1360 1000 C
Minneapolis	KFBB 1280 1000 C	Carlsbad	WSYR 570 1000 B
WCCO, 810 50000 C	Helena KPFA 1210 100	KLAH 1210 100	Troy WHAZ 1300 1000
WDGY 1180 1000 C WLB 1250 1000	Kalispell	Clovis	Utica
WTCN 1250 1000 B	KGEZ 1310 100	KICA 1370 100	WIBX 1200 100 C
Moorhead	Lewistown KDNC 1200 100	Gallup KAWM 1500 100	Watertown
KVOX 1310 100 Northfield	Missoula	Roswell	WNNY 1420 100
WCAL 1250 1000	KGVO 1260 1000 C	KGFL 1370 100	White Plains
Rochester	Wolf Point KGCX 1450 1000	Santa Fe KRQA 1310 100	WFAS 1210 100
KROC 1310 100 St. Cloud			Woodside WWRL 1500 100
KFAM 1420 100	NEBRASKA	37mm 220mm	W WILL 1500 100
	TIDDICIDALII	NEW YORK	
St. Paul			NORTH CAROLINA
St. Paul KSTP 1460 10000 R	Clay Center KMMJ 740 1000	Albany	
St. Paul KSTP 1460 10000 R WMIN 1370 100	Clay Center KMMJ 740 1000 Kearney		NORTH CAROLINA Asheville WWNC 570 1000 N
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100	Albany WABY 1370 100 WOKO 1430 500 C Auburn	Asheville WWNC 570 1000 N Charlotte
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona	Clay Center KMMJ 740 1000 Kearney	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C
St. Paul KSTP 1460 10000 R WMN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 Durham WDNC 1500 100 C Greensboro
St. Paul KSTP 1460 10000 R WMN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winoma KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WCNW 1500 100 WLTH 1400 500	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBQ 1500 100 WVFW 1400 500	Asheville WWNC 570 1000 N Charlotte WBT 1980 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBO 1500 100 WVFW 1400 500 Buffalo	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBQ 1500 100 WVFW 1400 500 Buffalo WBEN 900 1000 R	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winoma KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBO 1500 100 WVFW 1400 500 Buffalo	Asheville WWNC 570 1000 N Charlotte WBT 1980 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattlesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMFO 1500 100 WLTH 1400 500 Buffalo WBEN 1370 100 WBEN 1370 100 WBEN 1310 100 B WGRW 1370 100 WEBR 1310 100 B WGR 550 1000 C	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winoma KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBR 1300 1000 WCNW 1500 100 WCNW 1500 100 WCNW 1500 100 WLTH 1400 500 WMBO 1500 100 WYFW 1400 500 Buffalo WBEN 900 1000 R WBN 1370 100 WEBR 1310 100 B WGR 550 1000 C WKBW 1480 5000 C	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100
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St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WGOC 880 500 C Vicksburg	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBR 1300 1000 WCNW 1500 100 WCNW 1500 100 WCNW 1500 100 WCNW 1400 500 WMBQ 1500 100 WYFW 1400 500 Buffalo WBEN 900 1000 R WBNY 1370 100 WEBR 1310 100 B WGR 550 1000 C WKBW 1430 5000 C WKSVS 1370 50 Canton WCAD 1220 500	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100 Wilson WGTM 1310 100 Winston-Salem WAIR 1250 250
St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winoma KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WCOC 880 500 C	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno KOH 1380 500 C NEW HAMPSHIRE	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBO 1500 100 WVFW 1400 500 Buffalo WBEN 1370 100 R WBNY 1370 100 R WBNY 1370 100 B WGR 550 1000 C WKBW 1480 5000 C WKBW 1480 5000 C WKSW 1480 5000 C WSVS 1370 50 Canton WCAD 1220 500	Asheville WWNC 570 1000 N Charlotte WBT 1980 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100 Wilson WGTM 1310 100 Winston-Salem
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St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WGOC 880 500 C Vicksburg	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno KOH 1380 500 C NEW HAMPSHIRE Laconia WLNH 1310 100M Manchester	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBO 1500 100 WVFW 1400 500 Buffalo WBEN 1370 100 R WBNY 1370 100 R WBNY 1370 100 B WGR 550 1000 C WKBW 1480 5000 C WKBW 1480 5000 C WKSW 1480 5000 C WSVS 1370 50 Canton WCAD 1220 500	Asheville WWNC 570 1000 N Charlotte WBT 1980 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100 Wilson WGTM 1310 100 Winston-Salem WAIR 1250 250 WSJS. 1310 100 C
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St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WGOC 880 500 C Vicksburg WGBC 1360 1000 MISSOURI Cape Girardeau	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno KOH 1380 500 C NEW HAMPSHIRE Laconia WLNH 1310 100M Manchester WFEA 1340 500 N Portsmouth	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBR 1300 1000 WCNW 1500 100 WCNW 1500 100 WCNW 1500 100 WLTH 1400 500 WMBQ 1500 100 WVFW 1400 500 Buffalo WBEN 900 1000 R WBNY 1370 100 WEBR 1310 100 B WGR 550 1000 C WKBW 1480 5000 C WSVS 1370 50 Canton WCAD 1220 500 Elmira WESG 850 1000 C Freeport WGBB 1210 100 Jamestown	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100 Wilson WGTM 1310 100 Winston-Salem WAIR 1250 250 WSJS 1310 100 C NORTH DAKOTA
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St. Paul KSTP 1460 10000 R WMIN 1370 100 Virginia WHLB 1370 100 Winona KWNO 1200 250 MISSISSIPPI Grenada WGRM 1210 100 Gulfport WGCM 1210 100 Hattiesburg WFOR 1370 100 Jackson WJDX 1270 1000 R Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WGOC 880 500 C Vicksburg WOBC 1360 1000 MISSOURI Cape Girardeau KFVS 1210 100 Columbia KFRU 630 500 Jefferson City KWOS 1310 100	Clay Center KMMJ 740 1000 Kearney KGFW 1310 100 Lincoln KFAB 770 10000 C KFOR 1210 100 C Norfolk WJAG 1060 1000 North Platte KGNF 1430 1000 Omaha KOIL 1260 1000 B WAAW 660 500 WOW 590 1000 R Scottsbluff KGKY 1500 100 NEVADA Reno KOH 1380 500 C NEW HAMPSHIRE Laconia WLNH 1310 100M Manchester WFEA 1340 500 N PORTSMOUTH WHEB 740 250 NEW JERSEY	Albany WABY 1370 100 WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBF 1500 100 C Brooklyn WARD 1400 500 WBBR 1300 1000 WCNW 1500 100 WCNW 1500 100 WCNW 1500 100 WCNW 1400 500 Buffalo WBBN 900 1000 R WBNY 1370 100 WEBR 1310 100 B WGR 550 1000 C WSVS 1370 50 Canton WCAD 1220 500 Elmira WESG 850 1000 C Freeport WGBB 1210 100 Jamestown WJTN 1210 100 B New Work WASC 860 50000 C	Asheville WWNC 570 1000 N Charlotte WBT 1080 50000 C WSOC 1210 100 N Durham WDNC 1500 100 C Greensboro WBIG 1440 1000 C High Point WMFR 1200 100 Kinston WFTC 1200 100 Raleigh WPTF 680 1000 N Rocky Mount WEED 1420 100 Wilmington WMFD 1370 100 Wilson WGTM 1310 100 Winston-Salem WAIR 1250 250 WSJS 1310 100 C NORTH DAKOTA Bismarck KFYR 550 1000 N Devils Lake KDLR 1210 100 Fargo WDAY 940 1000 N
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Jamestown KRMC 1370 100	Tulsa KTUL 1400 500 C	Reading WEEU 830 1000	Chattanooga WAPO 1420 100
Mandan	KVOO 1140 25000 N	WRAW 1310 100	WDOD 1280 1000 C
KGCU 1240 250 Minot	OREGON	Scranton WGBI 880 500	Jackson WTJS 1310 100
KLPM 1240 · 250	Astoria	WQAN 880 500 Sunbury	Knoxville WNOX 1010 1000 C
Valley City KOVC 1500 100	KAST 1370 100 Corvallis	WKOK 1210 100	WROL 1310 100 K
ОНІО	KOAC 550 1000	Uniontown WMBS 1420 250	Memphis WHBQ 1370 100
	Eugene KORE 1420 100M	Wilkes-Barre	WMC 780 1000 R WMPS 1430 500 B
Akron WADC 1320 1000 C	Klamath Falls KFJI 1210 100	WBAX 1210 100 WBRE 1310 100	WREC 600 1000 C
WJW 1210 100 Ashtabula	La Grande KLBM 1420 100	Williamsport WRAK 1370 100	Nashville WLAC 1470 5000 C
WICA 940 250	Marshfield KOOS 1200 100	York	WSIX 1210 100 WSM 650 50000 N
Canton WHBC 1200 100	Medford	WORK 1320 1000 N	
Cincinnati	KMED 1410 250 N Portland	PUERTO RICO	TEXAS
WCPO 1200 100 WKRC 550 1000 C	KALE 1300 500 C KBPS 1420 100	Mayaguez WPRA 1370 100	Abilene KRBC 1420 100
WLW 700 500000 N WSAI 1330 1000 N	KEX 1180 5000 B	Ponce	Amarillo
W8XO 700 500000	KOIN 940 1000 C	WPRP 1420 100 San Juan	KGNC 1410 1000 N Austin
Cleveland WCLE 610 500M	KWJJ 1040 500 KXL 1420 100	WKAO 1240 1000 WNEL 1290 1000	KNOW 1500 100 C
WGAR 1450 500 C WHK 1390 1000 B	Roseburg KRNR 1500 100M	RHODE ISLAND	KTBC 1120 1000 Beaumont
WTAM 1070 50000 R	Salem		KFDM 560 500 N
Columbus WBNS 1430 500 C	KSLM 1370 100M	Providence WEAN 780 1000M	Big Spring KBST 1500 100
WCOL 1210 100 N	PENNSYLVANIA	WJAR 890 1000 R WPRO 630 500 C	Brady
WHKC 640 500 WOSU 570 750	Allentown WCBA 1440 500	SOUTH CAROLINA	KNEL 1500 250 Brownsville
Dayton WHIO 1260 1000 C	WCBA 1440 500 WSAN 1440 500 N		KGFI 1500 100
WSMK 1380 200 C	Altoona WFBG 1310 100	Anderson WAIM 1200 100 C	College Station WTAW 1120 500
Lima WBLY 1210 100	Easton	Charleston WCSC 1360 500 N	Corpus Christi KRIS 1330 500 N
Portsmouth	WEST 1200 100	Columbia	Corsicana
WPAY 1370 100 Toledo	Erie WLEU 1420 100 B	Florence	KAND 1310 \ 100 Dallas
WSPD 1340 1000 B	Glenside WIBG 970 100	WOLS 1200 100 Greenville	KRLD 1040 10000 C
WTOL 1200 100 Youngstown	Greensburg	WFBC 1300 1000 N Spartanburg	WFAA 800 50000 N WRR 1280 500M
WKBN 570 500 C Zanesville	WHJB 620 250 C Grove City	WSPA 920 1000	Dublin KFPL 1310 100
WALR 1210 100	WSAJ 1310 100	SOUTH DAKOTA	El Paso
OKLAHOMA	Harrisburg WHP 1430 500 C	Aberdeen	KROD 1500 100 KTSM 1310 100
Ada	WKBO 1200 100	KABR 1420 100 Brookings	WDAH 1310 100
KADA 1200 100M Ardmore	Hazleton WAZL 1420 100	KFDY 780 1000 Huron	Fort Worth KFJZ 1370 100
KVSO 1210 100M Elk City	Johnstown WJAC 1310 100	KGDY 1340 250	KTAT 1240 1000M WBAP 800 50000 N
KASA 1210 100M	WJAC 1310 100 Lancaster	Pierre KGFX 630 200	Galveston
Enid KCRC 1360 250M	WGAL 1500 100	Rapid City KOBH 1370 100	KLUF 1370 100 Greenville
Muskogee KBIX 1500 100M	Philadelphia KYW 1020 10000 R	WCAT 1200 100 Sioux Falls	KGVL 1200 100 Houston
Norman	WCAU 1170 50000 C WDAS 1370 100	KELO 1200 100 N	KPRC 920 1000 R
WNAD 1010 1000 Oklahoma City	WFIL 560 1000 B	KSOO 1110 2500 N Vermillion	KTRH 1290 1000 C KXYZ 1440 1000 B
KFXR 1310 100 KOMA 1480 5000 C	WHAT 1310 100 WIP 610 1000	KUSD 890 500 Watertown	Kilgore KOCA 1210 100
KTOK 1370 100M	WPEN 920 1000 WTEL 1310 100	KWTN 1210 100	Longview
WKY 900 1000 N Okmulgee	Pittsburgh	Yankton WNAX 570 1000 C	KFRO 1370 250 Lubbock
KHBG 1210 100 Ponca City	KDKA 980 50000 B KOV 1380 500 C	TENNESSEE	KFYO 1310 100 Lufkin
WBBZ 1200 100M	WCAE 1220 1000 R		KRBA 1310 100
Shawnee KGFF 1420 100M	WJAS 1290 1000 C WWSW 1500 100	Bristol WOPI 1500 100	Midland KRLH 1420 100

NORTH	AMERICAN B. C.	STATIONS BT LOC	ATTONS
Palestine KNET 1420 100 Pampa	WRTD 1500 100 B WRVA 1110 5000 C Roanoke	La&rosse WKBH 1380 1000 C Madison	Winnipeg CJRC 630 500 F CKY 760 15000 F
KPDN 1310 100 Paris	WDBJ 930 1000 C	WHA 940 5000 WIBA 1280 1000 N	NEW BRUNSWICK
KPLT 1500 250 Pecos	WASHINGTON	Manitowoc WOMT 1210 100	Fredericton
KIUN 1420 100	Aberdeen	Milwaukee	CFNB 550 500 F Moncton
Port Arthur KPAC 1260 500	KXRO 1310 100M Bellingham	WEMP 1310 100 WISN 1120 250 C	CKCW 1370 100 F
San Angelo KGKL 1370 100	KVOS 1200 100M Centralia-Chehalis	WTMJ 620 1000 N Poynette	St. John CHSJ 1120 500 F
San Antonio	KELA 1440 500M	WIBU 1210 100	N. W. TERRITORY
KABC 1420 100 KMAC 1370 100	Everett KRKO 1370 50	Racine WRJN 1370 100	
KONO 1370 100 KTSA 550 1000 C	Longview KWLK 780 250	Sheboygan WHBL 1300 250	Aklavik CJCU 1210 50
WOAI 1190 50000 N Sherman	Olympia	Stevens Point WLBL 900 5000	NOVA SCOTIA
KRRV 1310 250	KGY 1210 100M	Superior	
Temple KTEM 1370 250	Pullman KWSC 1220 1000	Wausau	Glace Bay VAS 685 2000
Texarkana KCMC 1420 100	Seattle KEEN 1370 100	WSAU 1370 100	Halifax CHNS 930 1000 F
Tyler KGKB 1500 100	KIRO 710 1000 C	WYOMING	Sydney CJCB 1240 1000 F
Waco	KJR 970 5000 B KOL 1270 1000M	Casper	Wolfville
WACO 1420 100 C Weslaco	KOMO 920 1000 R KRSC 1120 250	KDFN 1440 500 Rock Springs	CKIC 1010 50 Yarmouth
KRGV 1260 1000 N Wichita Falls	KTW 1220 1000	KVRS 1370 100 Sheridan	CJLS 1310 100
KGKO 570 250 C	KXA 760 250 Spokane	KWYO 1370 100	ONTARIO
UTAH	KFIO 1120 100 KFPY 890 1000 C	CANADA	Brantford
Cedar City	KGA 1470 5000 B	ALBERTA	CKPC 930 100 F Chatham
KSUB 1310 100 Ogden	KHQ 590 1000 R Tacoma		CFCO 630 100 F Cobalt
KLO 1400 500 B	KMO 1330 1000M KVI 570 1000 C	Calgary CFAC 930 1000 F	CKMC 1210 50 Fort William
Price KEUB 1420 100	Walla Walla	CFCN 1030 10000 CJCJ 690 100 F	CKPR 730 100 F
Salt Lake City KDYL 1290 1000 R	KUJ 1370 100 Wenatchee	Edmonton CFRN 960 100 F	Hamilton CHML 1010 100 F
KSL 1130 50000 C KUTA 1500 100	KPQ 1500 100M	CJCA 730 1000 F CKUA 580 500	CKOC 1120 500 F Kingston
VERMONT	Yakima KIT 1310 100M	Grande Prairie	CFRC 1510 100 F London
	WEST VIRGINIA	CFGP 1200 100 Lethbridge	CFPL 730 100 F
Burlington WCAX 1200 100	Bluefield	CJOC 950 100 F	North Bay CFCH 930 100 F
Rutland WSYB 1500 100	WHIS 1410 500	BRIT. COLUMBIA	CJKL 1310 100 CKGB 1420 100
St. Albans WQDM 1390 1000	Charleston WCHS 580 500 C	Chilliwack	Ottawa CBO 880 1000 F
Springfield	Clarksburg	CHWK 780 100 F Kamloops	CKCO 1010 100 F
WNBX 1260 500 C Waterbury	WBLK 1370 100	CFJC 880 100 F Kelowna	Owen Sound 1370 100
WDEV 550 500	Fairmont WMMN 890 500 C	CKOV 630 100 F	Prescott CFLC 930 100
VIRGINIA	Huntington WSAZ 1190 1000	Prince Rupert CFPR 580 50	St. Catharines
Charlottesville	Parkersburg	Trail CJAT 910 1000 F	Sault Ste. Marie
WCHV 1420 100 Danville	WPAR 1420 100 C Wheeling	Vancouver CBR 1100 5000 F	CJIC 1500 100 Stratford
WBTM 1370 100	WWVA 1160 5000 C	CJOR 600 500	CJCS 1210 50 Sudbury
Harrisonburg WSVA 550 500	WISCONSIN	CKCD 1010 100 CKFC 1410 50	CKSO 780 1000 F
Lynchburg		CKMO 1410 100 CKWX 1010 100 F	Toronto CBL 840 50000
WLVA 1200 100 Newport News	Eau Claire WEAU 1050 1000	Victoria	CFRB 690 10000 C CKCL 580 100 F
WGH 1310 100	Fond du Lac	CFCT 1450 50	CRCT 840 5000 N
N7 - C 11-	KFIZ 1420 100	MANITOBA	CRCY 960 100 F Waterloo
Norfolk WTAR 780 1000 N	Green Bay		
WTAR 780 1000 N Richmond	Green Bay WHBY 1200 100	Brandon	CKCR 1510 100
WTAR 780 1000 N		Brandon CKX 1120 1000 F Flin Flon	CKCR 1510 100 Windsor CBW 600 500 F

NORTH	AMERICAN B. C. S	STATIONS BY LOC	ATIONS
Wingham	XELO 670 50000	MICHOACAN	Camaguey
CKNX 1200 100	XEMO 860 5000 XEOK 760 2500	Moralia	CMJA 1010 300 CMJC 1390 150
PRINCE EDWARD	XEOK 760 2500	Morelia XEI 1370 125	CMJE 1220 50
ISLAND	CHIHUAHUA		CMJF 1150 200
		NUEVO LEON	CMJK 780 250
Charlottetown	Chihuahua		CMJL 1340 75
CFCY 630 1000 F	XEFI 1440 250	Monterrey XEFB 870 200	CMJX 830 500
CHCK 1310 50 Summerside	Juarez	XEFB 870 200 XEFJ 1230 100	Cardenas
CHGS 1450 50 F	XEFV 1210 100 XEF 1450 100	XEG 1220 250	CMGE 1370 150
	XEJ 1020 1000	XEH 720 250	Ciego de Avila
QUEBEC	XEP 1160 500	XET 690 5000	CMJH 1360 50
	Parral	XEX 1310 125	CMJI 1130 150 CMJO 1180 50
Chicoutimi	XEAT 1210 250	DITEDIA	
CRCS 1120 100 F Hull		PUEBLA	Cienfuegos CMHJ 1160 175
CKCH 1210 100 F	COAHUILA	Puebla	CMHM 1450 100
Montreal	Piedras Negras	XETH 1210 100	CMHW 820 100
CBF 910 50000 N	XEMU 580		CMHX 760 200
CBM 1050 5000 F	XEPN 730 100000	SAN LUIS POTOSI	Cruces
CFCF 600 500 B	Sabinas	Com Lorio Bonosi	CMHK 1330 250
CHLP 1120 100 F CKAC 730 5000 C	XEBX 640 250	San Luis Potosi XECZ 1370 100	Havana
CKAC 730 5000 C New Carlisle	Saltillo	XEXH 1250 250	CMBC .630
CHNC 960 1000 F	XEAS 1160 50 XELA 1240 50	<u>XEXII 1230 230</u>	CMBD 1170 500
Quebec	XELA 1240 50 Torreon	SINALOA	CMBG 1140 200
CHRC 580 100	XETB 1310 125		CMBL 710
CKCV 1310 100 F	Villa Acuna	Mazatlan	CMBS 770 150 CMBX 1070 500
CRCK 950 1000 F	XERA 840 350000	XEBL 1220 50	CMBY 970 150
Rimouski CJBR 1030 1000 F		SONORA	CMBZ 1000 500
CJBR 1030 1000 F Sherbrooke	D. F.		CMC 1260 150
CHLT 1210 100	Atmontostanlan	Hermosillo	CMCA 1350 450
Three Rivers	Atzcapotzalco XEMG 1060 100	XEBH 930 500	CMCB 640 150
CHLN 1420 100	Gra. Anaya	Nogales	CMCD 950 250 CMCF 810 600
O LOW LINGSYDYN LAI	XEDA 1220 200	XEAF 990 750	CMCG 680 1000
SASKATCHEWAN	Mexico City	Obregon XEAP 1240 50	CMCJ 1100 500
Moose Jaw	XEAL 660 1000	AEAI 1240 30	CMCK 1030
CHAB 1200 100 F	XEAY 1240 100 XEB 1030 10000	TAMAULIPAS	CMCM 850 .
Prince Albert	XEBS 1240 200	Matamana	CMCO 1200 250 CMCO 1410 250
CKBI 1210 100 F	XEBZ 1160 100	Matamoros XEAM 750 25	CMCQ 1410 250 CMCU 1280 500
Regina	XECW 1310 10	Nuevo Laredo	CMCW 750 150
CJRM 540 1000 CKCK 1010 1000 F	XEDP 1080 500	XEBK 1000 60	CMCX 1030 150
Saskatoon	XEFO 930 5000 XEJP 1130 100	XEDF 810 75	CMCY 570 5000
CFOC 840 1000 F	XEJW 870	XEFE 980 150	CMK 730 3000
Yorkton	XEK 990 100	XENT 910 150000 Reynosa	CMOA 1440 150 CMOX 1320 200
CJGX 1390 100 F	XEL 780 1000	XEAW 960 50000	CMO 880 25000
	XELZ 1370 100	Tampico	CMW 600 1400
NEWFOUNDLAND	XEMX 1280 100	XEFW 1310 250	CMX 920 1000
St. John's	XENC 860 50 XEW 890 50000	XES 990 250	Holguin
VOAC 1065 40	XEXE 1270 17	VERACRUZ	CMFK 1460 250 CMKO 1280
VOAS 940 100	XEYO 940 500		Manzanillo
VOCM 1006 200	Tacuba	Cordoba	CMKM 1120 200
VOGY 840 400	XEFA 1180 500	XEAG 1310 10	Matanzas
VONF 1195 500 VOWR 681 500		Jalapa XEXB 1270 50	CMGC 1400 150
VOVIK 001 500	DURANGO	XEXD 1340 350	CMGF 1120 250 CMGH 790 500
MEXICO	Durango	Minatitlan	CMGH 790 500 Moron
	XEE 1210 50	XEDW 1150 20	CMJP 1430 75
AGUASCALIENTES		Veracruz	Pinar del Rio
Aguascalientes	GUANAJUATO	XETF 1220 30 XEU 1010 250	CMAB 1340
XEBI 1000 25		XEU 1010 250	Sagua la Grande
XEXC 810 350	Irapuato	YUCATAN	CMHA 1070 50
BAJA CALIFORNIA	XEBO 1310 25 Leon		Sancti Spiritus CMHB 1240 50
BAJA CALIFORNIA	XEKL 1240 500	Merida	Santa Clara
Mexicali	1210 000	XEBJ 1160 20	CMHI 1210 150
XEAA 750 200	JALISCO	XEFC 550 100	Santiago
XEAO 660 250		XEZ 630 500	CMKC 1250 150
XECL 1100 1700	Guadalajara	CUBA	CMKD 1050 250
Tijuana XEAC 980 1000	XEAD 1060 125 XED 1160 2500	CODA	CMKG 1160 CMKR 1400 100
XEBG 820 1000	Guzman	Caibarien	CMKW 1350
XEC 1150 100	XEBA 1080 20	CMHD 1270 250	CMKX 1190

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		0000		CJAT 910	1000 .		CKSO 780 100	Ю
	Montreal, P. Q. CBL 840 5	0000		Trail, B. C. CJBR 1030	1000	\vdash	Sudbury, Ont. CKTB 1200 10	10
	Toronto, Ont.			Rimouski, P. Q.			St. Catharines, Ont.	
	CBM 1050 Montreal, P. Q.	5000		CJCA 730 Edmonton, Alta.	1000		CKUA 580 50 Edmonton, Alta.	10
		1000	$\overline{}$	CJCB 1240	1000		CKWX 1010 10	00
	Ottawa, Ont.	L		Sydney, N. S.		\Box	Vancouver, B. C.	
	CBR 1100 Vancouver, B. C.	5000	- 1	CJCJ 690 Calgary, Alta.	100	1	CKX 1120 100 Brandon, Man.	10
	CBW 600	500		CJCS 1210	50		CKY 760 1500	10
	Windsor, Ont.			Stratford, Ont.			Winnipeg, Man.	
'	CFAC 930 Calgary, Alta.	1000		CJCU 1210	50		CMAB 1340 Pinar del Rio, Cuba	
	CFAR 1370	100		Aklavik, N. W. T. CJGX 1390	100	-	CMBC 630	
	Flin Flon, Man.	. L		Yorkton, Sask.	100		Havana, Cuba	
	CFCF 600	500		CJIC 1500	100		CMBD 1170 50 Havana, Cuba	10
	Montreal, Que. CFCH 930	100		S. Ste. Marie, Ont.	100	-	CMBG 1140 20	10
	North Bay, Ont.			North Bay, Ont.			Havana, Cuba	
	CFCN 1030 1 Calgary, Alta.	0000		CJLS 1310	100		CMBL 710	
	CFCO 630	100		Yarmouth, N. S.	100		Havana, Cuba CMBS 770 15	50
	Chatham, Ont.			Lethbridge, Alta.	100		Havana, Cuba	-
	CFCT 1450	50		CJOR 600	500		CMBX 1070 50	10
	Victoria, B. C. CFCY 630	1000		Vancouver, B. C. CJRC 630	500	-, -	Havana, Cuba CMBY 970 15	
	Charlottetown, P.E.	.I.		Winnipeg, Man.	300		Havana; Cuba	
	CFGP 1200	100		CJRM 540	1000		CMBZ 1000 50	10
	Grande Prairie, Alta	100		Regina, Sask. CKAC 730	5000		Havana, Cuba CMC 1260 15	50
	Kamloops, B. C.			Montreal Que.	5000		Havana, Cuba	
	CFLC 930	100		CKBI 1210	100		CMCA 1350 45	60
	Prescott, Ont.	500		Prince Albert, Sask CKCD 1010	100		Havana, Cuba CMCB 640 15	50
	Fredericton, N. B.			Vancouver, B. C.	100		Havana, Cuba	
	CFPL 730	100		CKCH 1210	100		CMCD 950 25	9
	London, Ont. CFPR 580	50		Hull, Que. CKCK 1010	1000	\vdash	Havana, Cuba CMCF 810 60	10
	Prince Rupert, B. C			Regina, Sask.			Havana, Cuba	,-
	CFQC 840 Saskatoon, Sask.	1000		CKCL 580	100		CMCG 680 100	10
		0000		Toronto, Ont. CKCO 1010	100		Havana, Cuba CMCJ 1100 50	30
	Toronto, Ont.	L		Ottawa, Ont.			Havana, Cuba	
	CFRC 1510 Kingston, Ont.	100		CKCR 1510	100	1	CMCK 1030 Havana, Cuba	
	CFRN 960	100		Waterloo, Ont. CKCV 1310	100		CMCM 850	
	Edmonton, Alta.			Quebec, Que.			Havana, Cuba	
	CHAB 1200	100		CKCW 1370	100		CMCO 1200 25 Havana, Cuba	50
\vdash	Moose Jaw, Sask.	50		Moneton, N. B.	50		CMCQ 1410 25	50
-	Charlottetown, P.E.			Vancouver, B. C.	••		Havana, Cubu	
	CHGS 1450	50		CKGB 1420	100		CMCU 1280 50 Havana, Cuba	10
	Summerside, P.E.I.	100		North Bay, Ont. CKIC 1010	50		CMCW 750 19	30
	Three Rivers, P. Q.			Wolfville, N. S.	•••		Havana, Cuba	
	CHLP 1120 Montreal, Que.	100		CKLW 1030	5000		CMCX 1030 15 Havana, Cuba	90
	CHLT 1210	100		Windsor, Ont. CKMC 1210	50		CMCY 570 500	00
	Sherbrooke, P. Q.			Cobalt, Ont.	•-		Havana, Cuba	
	CHML 1010	100		CKMO 1410	100			50
	Hamilton, Ont.	1000		Vancouver, B. C. CKNX 1200	100		Matanzas, Cuba CMGE 1370 1	50
	New Carlisle, Que.			Wingham, Ont.			Cardenas, Cuba	
		1000		CKOC 1120	500			50
	Halifax, N. S. CHRC 580	100		Hamilton, Ont.	100		Matanzas, Cuba CMGH 790 50	00
	Quebec, Que.			Kelowna, B. C.	230	'	Matanzas, Cuba	
	CHSJ 1120	500		CKPC 930	100			50
	St. John, N. B. CHWK 780	100		Brantford, Ont. CKPR 730	100			эа 50
	Chilliwack, B. C.	-00		Fort William, Ont.	200		Sancti Spiritus, Cuba	
	•	_		•				

	CMHD 1270 250		CRCY 960	100		KELD 1370 100
— —	Caibarien, Cuba CMHI 1210 150		Toronto, Ont.	100		El Dorado, Ark. KELO 1200 100
	Santa Clara, Cuba		San Antonio, Texas			Sioux Falls, S. Dak.
	CMHJ 1160 175		KABR 1420	100		KERN 1370 100
	Cienfuegos, Cuba CMHK 1330 250		Aberdeen, S. Dak. KADA 1200	100		Bakersfield, Calif. KEUB 1420 100
-	Cruces, Cuba		Ada, Okla.			Price, Utah
	CMHM 1450 100		KALB 1210	100		KEX 1180 5000
	Cienfuegos, Cuba CMHW 820 100		Alexandria, La KALE 1300	500		Portland, Ore. KFAB 770 10000
1	Cienfuegos, Cuba		Portland, Ore.			Lincoln, Neb.
	CMHX 760 200		KAND 1310	100		KFAC 1300 1000
	Cienfuegos, Cuba CMJA 1010 300		Corsicana, Texas KANS 1210	100		Los Angeles, Callf. KFAM 1420 100
	Camaguey, Cuba		Wichita, Kans	100		St. Cloud, Minn.
	CMJC 1390 150		KARK 890	500		KFBB 1280 1000
	Camaguey, Cuba CMJE 1220 50		Little Rock, Ark. KARM 1310	100		Great Falls, Mont. KFBI 1050 5000
	Camaguey, Cuba		Fresno, Calif.	200		Abilene, Kans.
	CMJF 1150 200		KASA 1210	100		KFBK 1490 5000
	Camaguey, Cuba CMJH 1360 50		Elk City, Okla. KAST 1370	100		Sacramento, Calif. KFDM 560 500
1	Ciego de Avila, Cuba		Astoria, Ore.	-00		Beaumont, Texas
	CMJI 1130 150		KATE 1420	250		KFDY 780 1000
	Ciego de Avila, Cuba		Albert Lea, Minn. KAWM 1500	100		Brookings, S. D. KFEL 920 500
	Camaguey, Cuba		Gallup, N. Mex.	100		Denver, Colo.
	CMJL 1340 75		KBIX 1500	100	-	KFEQ 680 2500
	Camaguey, Cuba		Muskogee, Okla. KBPS 1420	100		St. Joseph. Mo. KFGQ 1370 100
	CMJO 1180 50 Ciego de Avila, Cuba	l	Portland, Ore.	100		Boone, Iowa
	CMJP 1430 75		KBST 1500	100		KFH 1300 1000
	Camaguey, Cuba		Big Spring, Texas KRTM 1200	100		Wichita, Kans. KFI 640 50000
	CMJX 830 500 Camaguey, Cuba		Jonesboro, Ark.	100		KFI 640 50000 Los Angeles, Calif.
	CMK 730 3000		KCKN 1310	100		KFIO 1120 100
	Havana, Cuba		Kansas City, Kans. KCMC 1420	100		Spokane, Wash. KFIZ 1420 100
	CMKC 1250 150 Santiago, Cuba		Texarkana, Texas	100		Fond du Lac, Wis.
	CMKD 1050 250		KCMO 1370	100		KFJB 1200 100 Marshalltown, lowa
	Santiago, Cuba CMKF 1460 250		Kansas City, Mo. KCRC 1360	250		KFJI 1210 100
	Holguin, Cuba		Enid, Okla.	-55		Klamath Falls, Ore.
	CMKG 1160		KCRJ 1310	100		KFJM 1410 500
	Santiago, Cuba CMKM 1120 200		Jerome, Ariz. KDAL 1500	100		Grand Forks, N. D. KFJZ 1370 100
	Manzanillo, Cuba		Duluth, Minn.			Fort Worth, Texas
	CMKO 1280		KDB 1500	,,100		KFKA 880 500
	Holguin, Cuba CMKR 1400 100		Santa Barbara, Cali KDFN 1440	500		Greeley, Colo. KFKU 1220 1000
	Santiago, Cuba		Casper, Wyo.			Lawrence, Kans.
	CMKW 1350 Santiago, Cuba		11011/1 000 0	0000		KFNF 890 500 Shenandoah, Iowa
	CMKX 1190		Pittsburgh, Pa. KDLR 1210	100		KFOR 1210 100
	Santiago, Cuba		Devils Lake, N. D.			Lincoln, Neb.
	CMOA 1440 150		KDNC 1200 Lewistown, Mont.	100		KFOX 1250 1000
	Havana, Cuba CMOX 1320 200		KDON 1210	100		Long Beach, Calif. KFPL 1310 100
	Havana, Cuba		Monterrey. Calif.			Dublin, Texas
	CMQ 880 25000		KDTH 1340	500		KFPW 1210 100
	Havana, Cuba CMW 600 1400		Dubuque, lowa KDYL 1290	1000		Fort Smith, Ark. KFPY 890 1000
	Havana, Cuba		Salt Lake City, Utah			Spokane, Wash.
	CMX 920 1000			1000		KFQD 780 250
	Havana, Cuba CRCK 950 1000		Los Angeles, Calif. KEEN 1370	100		Anchorage, Alaska
	CRCK 950 1000 Quebec, Que.		KEEN 1370 Seattle, Wash.	100		KFRC 610 1000 San Francisco, Calif.
	CRCS 1120 100		KEHE 780	1000		KFRO 1370 250
	Chicoutimi, Que.		Los Angeles, Calif.			Longview, Texas
	CRCT 840 5000 Toronto, Ont.		KELA 1440 Centralia-Chehalis,	500 Wn.		KFRU 630 500 Columbia, Mo.
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KFSD 600 1000	KGGM 1230 1000	KIT 1310 100
San Diego, Calif. KFSG 1120 500	Albuquerque, N. M. KGHF 1320 500	Yakima, Wash, KIUL 1210 100
Los Angeles, Calif. KFUO 550 500	Pueblo, Colo KGHI 1200 100	Garden City, Kans.
St. Louis, Mo	Little Rock, Ark.	Pecos, Texas
KFVD 1000 1000 Los Angeles, Calif.	KGHL 780 1000 Billings, Mont.	KIUP 1370 100 Durango, Colo.
KFVS 1210 100	KGIR 1340 1000	KJBS 1070 500
Cape Girardeau, Mo KFWB 95 1000	Butte, Mont. KGIW 1420 100	San Francisco, Calif.
Hollywood, Calif.	Alamosa, Colo.	Seattle, Wash.
Nampa, Idaho	KGKB 1500 100 Tyler, Texas	KLAH 1210 100 Carlsbad, N. Mex.
KFXJ 1200 100 Grand Junction, Coio.	KGKL 1370 100 San Angelo, Texas	KLBM 1420 100 La Grande, Ore.
KFXM 1210 100	KGKO 570 250	KLCN 1290 100
San Bernardino, Calif. KFXR 1310 100	Wichita Falls, Texas KGKY 1500 100	Blytheville, Ark.
Oklahoma City, Okla.	Scottsbluff, Neb.	Ogden, Utah
KFYO 1310 100 Lubbock, Texas	KGLO 1210 100 Mason City, Iowa	KLPM 1240 250 Minot, N. D.
KFYR 550 1000	KGMB 1320 1000	KLRA 1390 1000
Bismarck, N. D. KGA 1470 5000	Honolulu, T. H. KGNC 1410 1000	Little Rock, Ark. KLS 1280 250
Spokane, Wash.	Amarillo, Texas	Oakland, Calif.
KGAR 1370 100 Tucson, Ariz.	KGNF 1430 1000 North Platte, Neb.	KLUF 1370 100 Galveston, Texas
KGB 1330 1000	KGNO 1340 250	KLX 880 1000
San Diego, Calif. KGBU 900 500	Dodge City, Kans. KGO 790 7500	Oakland, Calif. KLZ 560 1000
Ketchikan, Alaska KGBX 1230 500	San Francisco, Calif.	Denver, Colo. KMA 930 1000
Springfield, Mo.	Honolulu, T. H.	Shenandoah, Iowa
KGCA 1270 100 Decorah, Iowa	KGVL 1200 100 Greenville, Texas	KMAC 1370 100 San Antonio, Texas
KGCI 1200 100	KGVO 1260 1000	KMBC 950 1000
Coeur d'Alene, Idaho KGCU 1240 250	Missoula, Mont. KGW 620 1000	Kansas City, Mo. KMED 1410 250
Mandan, N. D. KGCX 1450 1000	Portland, Ore.	Medford, Ore. KMJ 580 1000
Wolf Point, Mont.	Olympia, Wash.	Fresno, Calif.
KGDE 1200 100 Fergus Falis, Minn.	KHBC 1400 250 Hilo, T. H.	KMLB 1200 100 Monroe, La.
KGDM 1100 1000	KHBG 1210 100	KMMJ 740 1000
Stockton, Calif. KGDY 1340 250	Okmulgee, Okla. KHJ 900 1000	Clay Center, Neb.
Huron, S. D.	Los Angeles, Calif.	Tacoma, Wash.
KGEK 1200 100 Sterling, Colo.	KHQ 590 1000 Spokane, Wash.	KMOX 1090 50000 St. Louis. Mo.
KGER 1360 1000	KHSL 1260 250	KMPC 710 500
Long Beach, Calif. KGEZ 1310 100	Chieo, Calif. KHUB 1310 250	Beverly Hills, Calif. KMTR 570 1000
Kalispell, Mont.	Watsonville, Calif.	Los Angeles, Calif. KNEL 1500 250
Shawnee, Okla	Clovis, N. M.	Brady, Texas
KGFI 1500 100 Brownsville, Tex.	KID 1320 500 Idaho Falls, Idaho	KNET 1420 100 Palestine, Texas
KGFJ 1200 100	KIDO 1350 1000	KNOW 1500 100
Los Angeles, Calif. KGFL 1370 100	Boise, Idaho KIDW 1420 100	Austin, Texas KNX 1050 50000
Roswell, N. M.	Lamar, Colo.	Los Angeles, Calif.
KGFW 1310 100 Kearney, Neb.	KIEM 1450 500 Eureka, Calif.	KOA 830 50000 Denver, Colo.
KGFX 630 200	KIEV 850 250	KOAC 550 1000
Pierre, S. D. KGGC 1420 100	Glendale, Calif. KINY 1310 100	Corvallis, Ore. KOAM 790 1000
San Francisco, Calif.	Juneau, Alaska	Pittsburg, Kans.
KGGF 1010 1000 Coffeyville, Kans.	KIRO 710 1000 Seattle, Wash.	KOB 1180 10000 Albuquerque, N. M.

	KOBH 1370 100 Rapid City, S. Dak.		KRLC 1390 250 Lewiston, Idaho		KTMS 1220 500
-					Santa Barbara, Calif. KTOK 1370 100
	KOCA 1210 100 Kilgore, Texas		KRLD 1040 10000 Dallas, Texas		Oklahoma City, Okla.
	KOH 1380 500		KRLH 1420 100		KTRB 740 250
	Reno, Nev.		Midland, Texas		Modesto, Calif.
	KOIL 1260 1000		KRMC 1370 100		KTRH 1290 1000
<u> </u>	Omaha, Neb. KOIN 940 1000		Jamestown, N. Dak. KRMD 1310 100		Houston, Texas KTRI 1420 100
1	KOIN 940 1000 Portland, Ore.		KRMD 1310 100 Shreveport, La.	1 1	Sioux City, Iowa
	KOKO 1370 100	 	KRNR 1500 100		KTSA 550 1000
	La Junta, Colo.		Roseburg, Ore.		San Antonio, Texas
	KOL 1270 1000		KRNT 1320 1000		KTSM 1310 100
	Seattle, Wash.		Des Moines, Iowa		El Paso, Texas
	KOMA 1480 5000		KROC 1310 100	l 1	KTUL 1400 500 Tulsa, Okia.
	Oklahoma City, Okla. KOMO 920 1000		Rochester, Minn. KROD 1500 100	-	KTW 1220 1000
	Seattle, Wash.		El Paso, Texas		Seattle, Wash.
	KONO 1370 100		KROW 930 1000		KUJ 1370 100
	San Antonio, Texas		Oakland, Calif.		Walla Walla, Wash.
	KOOS 1200 100		KROY 1210 100		KUMA 1420 100 Yuma, Ariz.
	Marshfield, Ore. KORE 1420 100		Sacramento, Calif. KRQA 1310 100		KUOA 1260 5000
	Eugene, Ore.		Santa Fe. N. Mex.		Siloam Springs, Ark.
	KOTN 1500 100		KRRV 1310 250		KUSD 890 500
	Pine Bluff, Ark.		Sherman, Texas		Vermillion, S. Dak.
	KOVC 1500 100		KRSC `1120 250		KUTA 1500 100
	Valley City, N. Dak.		Seattle, Wash.		Salt Lake City, Utah KVCV 1200 100
	KOY 1390 1000 Phoenix, Ariz.		KSAC 580 500 Manhattan, Kans.		KVCV 1200 100 Redding, Calif.
	KPAC 1260 500		KSAL 1500 100		KVEC 1200 250
	Port Arthur, Texas		Salina, Kans.		San Luis Obispo, Cal.
	KPDN 1310 100		KSCJ 1330 1000		KVGB 1370 100
	Pampa, Texas		Sioux City, Iowa		Great Bend, Kans.
	KPFA 1210 100		KSD 550 1000		KVI 570 1000 Tacoma, Wash.
	Helena, Mont. KPLC 1500 · 100		St. Louis, Mo. KSEI 900 250		KVOA 1260 1000
	Lake Charles, La.		Pocatello, Idaho		Tucson, Ariz.
	KPLT 1500 100		KSFO 560 1000		KVOD 920 500
	Paris. Texas		San Francisco, Calif.		Denver, Colo.
1 1	KPMC 1550 1000 Bakersfield, Calif.		KSL 1130 50000	1 1	KVOE 1500 100 Santa Ana, Calif.
	KPO 680 50000		Salt Lake City, Utab KSLM 1370 100		KVOL 1310 100
	San Francisco, Calif.		Salem, Ore.		Lafayette, La.
	KPOF 880 500		KSO 1430 500		KVOO 1140 25000
	Denver, Colo.		Des Moines, Iowa		Tulsa, Okla.
	KPPC 1210 100		KSOO 1110 2500		KVOR 1270 1000 Colorado Springs, Colo.
	Pasadena, Calif. KPQ 1500 100		Sioux Falls, S. Dak. KSRO 1310 250		KVOS 1200 100
	Wenatchee, Wash.		Santa Rosa, Calif.		Bellingham, Wash.
	KPRC 920 1000		KSTP 1460 10000		KVOX 1310 100
	Houston, Texas		St. Paul, Minn.		Moorhead, Minn.
	KQV 1380 500		KSUB 1310 100		KVRS 1370 100
	Pittsburgh, Pa. KQW 1010 1000		Cedar City, Utah		Rock Springs, Wyo. KVSO 1210 100
	KQW 1010 1000 San Jose, Canf.		KSUN 1200 100 Lowell, Ariz.		Ardmore, Okla.
	KRBA 1310 100		KTAR 620 1000		KWBG 1420 100
	Lufkin, Texas		Phoenix, Ariz.		Hutchinson, Kans.
	KRBC 1420 100		KTAT 1240 1000		KWG 1200 100
	Abilene, Texas		Fort Worth, Texas		Stockton, Calif.
	KRE 1370 100 Berkeley, Calif.		KTBC 1120 1000 Austin, Texas		KWJJ 1040 500 Portland, Ore.
	KRGV 1260 1000		KTBS 1450 1000		KWK 1350 1000
	Weslaco, Texas		Shreveport, La.		St. Louis, Mo.
	KRIS 1330 500		KTEM 1370 250		KWKH 1100 10000
	Corpus Christi, Tex.		Temple, Texas		Shreveport, La.
	KRKD 1120 500		KTFI 1240 1000		KWLC 1270 100
	Los Angeles, Calif. KRKO 1370 50		Twin Falls, Idaho KTHS 1060 10000		Decorah, Iowa KWLK 780 250
	Everett, Wash.		KTHS 1060 10000 Hot Springs, Ark.		KWLK 780 250 Longview, Wash.
			KTKC 1190 250		KWNO 1200 250
			Visalia, Calif.		Winona, Minn.
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	KWOS 1310 100 Jefferson City, Mo.		WAIR 1250 250 Winston-Salem, N. C.		WBOQ 860 50000 New York, N. Y.
	KWSC 1220 1000		WALA 1380 500	\vdash	WBOW 1310 100
_	Pullman, Wash.		Mobile, Ala.		Terre Haute, Ind.
1	Watertown, S. Dak.		WALR 1210 100 Zanesville, Ohio	1	WBRB 1210 100 Red Bank, N. J.
	KWTO 560 5000		WAML 1310 100		WBRC 930 1000
	Springfield, Mo. KWYO 1370 100		Laurel, Miss. WAPI 1140 5000		Birmingham, Ala.
	Sheridan, Wyo.		Birmingham, Ala.	L	WBRE 1310 100 Wilkes-Barre, Pa.
	KXA 760 250		WAPO 1420 100		WBRK 1310 100
	Seattle, Wash. KXBY 1530 1000		Chattanooga, Tenn. WARD 1400 500		Pittsfield, Mass. WBRY 1530 1000
	Kansas City, Mo.		Brooklyn, N. Y.		Waterbury, Conn.
1	KXL 1420 100 Portland, Ore.		WASH 1270 500 Grand Rapids, Mich.		WBT 1080 50000 Charlotte, N. C.
	KXO 1500 100		WATL 1370 100		WBTM 1370 100
	El Centro, Calif. KXRO 1310 109		Atlanta, Ga. WATR 1190 100		Danville, Va.
l	Aberdeen, Wash.		WATR 1190 100 Waterbury, Conn.	1	WBZ 990 50000 Boston, Mass.
	KXYZ 1440 1000		WAVE 940 1000		WBZA 990 1000
	Houston, Texas KYA 1230 1000		Louisville, Ky.		Springfield, Mass. WCAD 1220 500
	San Francisco, Calif.		Zarephath, N. J.		Canton, N. Y.
1 1	KYOS 1040 250 Merced, Calif.		WAYX 1200 100 Waycross, Ga.	ľ	WCAE 1220 1000
	KYW 1020 10000		WAZL 1420 100		Pittsburgh, Pa. WCAL 1250 1000
	Philadelphia, Pa.		Hazleton, Pa.		Northfield, Minn.
	VAS 685 2000 Glace Bay, N. S.		WBAA 890 500 West Larayette, Ind.		WCAM 1280 500 Camden, N. J.
	VOAC 1065 40		WBAL 760 2500		WCAO 600 500
	St. John's, Nfld. VOAS 940 100		Baltimore, Md. WBAL 1060 10000	-	Baltimore, Md. WCAP 1280 500
	St. John's, Nfld.		Baltimore, Md.		Asbury Park, N. J.
	VOCM 1006 200 St. John's, Nfld.	1	WBAP 800 50000 Fort Worth, Texas	1	WCAT 1200 100 Rapid City, S. Dak.
	VOGY 840 400	,	WBAX 1210 100		WCAU 1170 50000
-	St. John's, Nfld.		Wilkes-Barre, Pa. WBBC 1400 500		Philadelphia, Pa.
	St. John's, Nfld.		Brooklyn, N. Y.		WCAX 1200 100 Burlington, Vt.
	VOWR 681 500 St. John's, Nfld.		WBBL 1210 \ 100		WCAZ 1070 100
	WAAB 1410 500		Richmond, Va. WBBM 770 50000		Carthage, Ill. WCBA 1440 500
	Boston, Mass. WAAF 920 1000		Chicago, Ill.		Allentown, Pa.
	WAAF 920 1000 Chicago, Ill.		WBBR 1300 1000 Brooklyn, N. Y.		WCBD 1080 5000 Chicago, Ill.
	WAAT 940 500		WBBZ 1200 100		WCBM 1370 100
	Jersey City, N. J. WAAW 660 500		Ponca City, Okla. WBCM 1410 500		Baltimore, Md. WCBS 1420 100
	Omaha, Neb.		Bay City, Mich.		Springfield, Ill.
	WABC 860 50000 New York, N. Y.		WBEN 900 1000		WCCO 810 50000
	WABI 1200 100		Buffalo, N. Y. WBEO 1310 100		Minneapolis, Minn. WCFL, 970 5000
	Bangor, Maine		Marquette, Mich.		Chicago, Ill.
	WABY 1370 100 Albany, N. Y.	\	WBHP 1200 100 Huntsville, Ala.		WCHS 580 500 Charleston, W. Va.
	WACO 1420 100		WBIG 1440 1000		WCHV 1420 100
	Waco, Texas WADC 1320 1000		Greensboro, N. C. WBIL 1100 5000		Charlottesville, Va. WCKY 1490 10000
	Akron, Ohio		New York, N. Y.		Covington, Ky.
1	WAGA 1450 500 Atlanta, Ga.		WBLK 1370 100 Clarksburg, W. Va.		WCLE 610 500 Cleveland, Ohio
	WAGF 1370 250		WBLY 1210 100		WCLO 1200 100
	Dothan, Ala. WAGM 1420 100		Lima, Ohio		Janesville, Wis.
	Presque Isle, Me.		WBNO 1200 100 New Orleans, La.		WCLS 1310 100 Joliet, Ill.
	WAIM 1200 100		WBNS 1430 500		WCMI 1310 100
	Anderson, S. C.		Columbus, Ohio WBNX 1350 1000	\vdash	Ashland, Ky. WCNW 1500 100
			New York, N. Y.		Brooklyn, N. Y.
			WBNY 1370 100 Buffalo, N. Y.		
			24-40, 11. 1.		

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	WCOA 1340 500 Pensacola, Fla.	1	WEEU 830 Reading, Pa.	1000	WGCM 1210 Gulfport, Miss.	100
	WCOC 880 500		WELI 900	500	WGES 1360	500
	Meridian, Miss.		New Haven, Conn.		 Chicago, Ill.	
	WCOL 1210 100 Columbus, Ohio		WELL 1420 Battle Creek, Mich	100 h.	WGH 1310 Newport News, Va.	100
	WCOP 1120 500		WEMP 1310	100	 WGL 1370	100
	Boston, Mass. WCPO 1200 100		Milwaukee, Wis. WENR 870	50000	 Fort Wayne, Ind. WGN 720	50000
	WCPO 1200 100 Cincinnati, Ohio		Chicago, Ill.	30000	Chicago, Ill.	30000
	WCRW 1210 100		WEOA 1370	100	WGNY 1210	100
	Chicago, Ill.	<u> </u>	Evansville, Ind.	4000	 Newburgh, N. Y.	
1 1	WCSC 1360 500 Charleston, S. C.	i	WESG 850 Elmira, N. Y.	1000	WGPC 1420 Albany, Ga.	100
	WCSH 940 1000		WEST 1200	100	WGR 550	1000
	Portland, Me.		Easton, Pa. WEVD 1300	1000	 Buffalo, N. Y. WGRC 1370	250
1 1	WDAE 1220 1000 Tampa, Fla.		New York, N. Y.	1000	New Albany, Ind.	250
	WDAF 610 1000		WEW 760	1000	WGRM 1210	100
	Kansas City, Mo.	<u> </u>	St. Louis, Mo. WEXL 1310	50	 Grenada, Miss. WGST 890	1000
	WDAH 1310 100 El Paso, Texas		Royal Oak, Mich.	30	Atlanta, Ga.	1000
	WDAS 1370 100		WFAA 800	50000	WGTM 1310	100
	Philadelphia, Pa.		Dallas, Texas WFAB 1300	1000	 Wilson, N. C.	****
	WDAY 940 1000. Fargo, N. Dak.		New York, N. Y.	1000	WGVA 1050 Indianapolis, Ind.	1000
	WDBJ 930 1000		WFAM 1200	100	WGY 790	50000
	Roanoke, Va.		South Bend, Ind.	400	 Schenectady, N. Y	
	WDBO 580 1000 Orlando, Fla.		WFAS 1210 White Plains, N. Y.	100	WHA 940 Madison, Wis.	5000
\vdash	WDEL 1120 250		WFBC 1300	1000	WHAL 950	500
	Wilmington, Del.		Greenville, S. C.	400	 Saginaw, Mich.	
1 1	WDEV 550 500		WFBG 1310 Altoona, Pa.	100	WHAM 1150 Rochester, N. Y.	50000
-	Waterbury, Vt. WDGY 1180 1000		WFBL 1360	1000	WHAS 820	50000
	Minneapolis, Minn.		Syracuse, N. Y.	1000	 Louisville, Ky.	400
	WDNC 1500 100 Durham, N. C.		WFBM 1230 Indianapolis, Ind.	1000	WHAT 1310 Philadelphia, Pa.	100
	WDOD 1280 1000		WFBR 1270	500	WHAZ 1300	1000
	Chattanooga, Tenn.		Baltimore, Md.	100	 Troy, N. Y. WHB 860	1000
1 1	WDRC 1330 1000 Hartford, Conn.		Flint, Mich.	100	Kansas City, Mo.	1000
	WDSM 1200 100		WFEA 1340	500	WHBB 1500	100
	Superior, Wis.	<u> </u>	Manchester, N. H WFIL 560	1000	 Selma, Ala. WHBC 1200	100
	WDSU 1250 1000 New Orleans, La.	ĺ	Philadelphia, Pa.	1000	Canton. Ohio	100
	WDWS 1370 100		WFLA 620	1000	WHBF 1210	100
	Champaign, Ill.		Clearwater, Fia. WFMD 900	500	 Rock Island, Ill.	1000
1 1	WDZ 1020 250 Tuscola, Ill.		Frederick, Md.		Newark, N. J.	
	WEAF 660 50000		WFOR 1370	100	WHBL 1300	250
-	New York, N. Y. WEAN 780 1000	ļ	Hattiesburg, Miss. WFOY 1210	100	 Sheboygan, Wis. WHBQ 1370	100
	Providence, R. I.		St. Augustine, Fla.		Memphis, Tenn.	100
	WEAU 1050 1000		WFTC 1200	100	WHBU 1210	100
	Eau Claire, Wis. WEBC 1290 1000		Kinston, N. C.	100	 Anderson, Ind.	100
	Duluth, Minn.		Lancaster, Pa.		Green Bay, Wis.	
	WEBQ 1210 100		WGAN 640	500	WHDF 1370	100
	Harrisburg, Ill. WEBR 1310 100		Portland, Me. WGAR 1450	500	 Calumet, Mich. WHDH 830	1000
1 1	Buffalo, N. Y.		Cleveland, Ohlo	500	Boston, Mass.	2000
	WEDC 1210 100		WGBB 1210	100	WHDL 1400	250
	Chicago, Ill.		Freeport, N. Y. WGBF 630	500	 Olean, N. Y. WHEB 740	250
	WEED 1420 100 Rocky Mount, N. C.		Evansville, Ind.	500	Portsmouth, N. H.	200
	WEEI 590 1000		WGBI 880	500	WHEC 1430	500
\vdash	Boston, Mass.		Scranton, Pa.		 Rochester, N. Y. WHEF 1500	100
					Kosciusko, Miss.	100
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	WHFC 1420 Cicero, Ill.	100		WJBC 1200 100 Bloomington, Ill.		WLAP 1420 100 Lexington, Ky,
	WHIO 1260	1000		WJBK 1500 100		WLAW 680 1000
	Dayton, Ohio			Detroit, Mich.		Lawrence, Mass.
	WHIP 1480	5000		WJBL 1200 100		WLB 1250 1000
	Hammond. Ind. WHIS 1410	500		Decatur, Ill. WJBO 1120 500		Minneapolis, Minn. WLBC 1310 100
	Bruefield, W. Va.	300	1	WJBO 1120 500 Baton Rouge, La.		WLBC 1310 100 Muncie, Ind.
	WHJB 620	250		WJBW 1200 100		WLBL 900 5000
	Greensburg, Pa.			New Orleans, La.		Stevens Point, Wis.
	WHK 1390	1000		WJBY 1210 100 Gadsden, Ala.		WLBZ 620 500 Bangor, Me.
	Cleveland, Ohio WHKC 640	500		WJDX 1270 1000	-	WLEU 1420 100
	Columbus, Ohio	500		Jackson, Miss.		Erie, Pa.
	WHLB 1370	100		WJEJ 1210 50		WLLH 1370 100
<u> </u>	Virginia, Minn.	1000		Hagerstown, Md.		Lowell, Mass.
	WHN 1010 New York, N. Y.	1000		Lansing, Mich.		WLMU 1210 100 Middlesboro, Ky.
	WHO 1000	50000		WJJD 1130 20000		WLNH 1310 100
	Des Moines, Iowa			Chicago, Ill.		Laconia, N. H.
	WHOM 1450	250		WJMS 1420 100		WLS 870 50000
-	Jersey City, N. J. WHP 1430	500		Ironwood, Mich.		Chicago, Ill.
	Harrisburg, Pa.			W. Palm Beach, Fla.		Brooklyn, N. Y.
	WIBA 1280	1000		WJR 750 50000		WLVA 1200 180
	Madison, Wis.			Detroit, Mich.		Lynchburg, Va.
	WIBG 970 Glenside, Pa.	100	1	WJRD 1200 250 Tuscaloosa, Ala.	- 1	WLW 700 500000 Cincinnati, Ohio
	WIBM 1370	100		WJSV 1460 10000		WMAL 630 250
	Jackson, Mich.		1	Washington, D. C.		Washington, D. C.
	WIBU 1210	100		WJTN 1210 100		WMAQ 670 50000
	Poynette. Wis. WIBW 580	1000		Jamestown, N. Y. WJW 1210 100	-	Chicago, Ill.
	WIBW 580 Topeka, Kans.	1000		Akron, Ohio	- 1	WMAS 1420 100 Springfield, Mass.
	WIBX 1200	100		WJZ 760 50000		WMAZ 1180 1000
	Utica, N. Y.			New York, N. Y.		Macon, Ga.
1	WICA 940 Ashtabula, Ohio	250		WKAQ 1240 1000 San Juan, P. R.	1	WMBC 1420 100 Detroit, Mich.
	WICC 600	500		WKAR 850 1000		WMBD 1440 1000
	Bridgeport, Conn.			East Lansing, Mich.		Peoria, Ill.
	WIL 1200	100		WKAT 1500 100		WMBF 610 1000
	St. Louis, Mo. WILL 580	1000	├	Miami Beach, Fla. WKBB 1500 100		Miami, Fla. WMBG 1350 500
1	Urbana, Ill.	1000		East Dubuque, Ill.		Richmond, Va.
	WILM 1420	100		WKBH 1380 1000		WMBH 1420 100
	Wilmington, Del.			LaCrosse, Wis.		Joplin, Mo.
	WIND 560 Gary, Ind.	1000		WKBN 570 500 Youngstown, Ohio	1	WMBI 1080 5000 Chicago, Ill.
	WINS 1180	1000		WKBO 1200 100		WMBO 1310 100
	New York, N. Y.			Harrisburg, Pa.		Auburn, N. Y.
	WIOD 610	1000		WKBV 1500 100		WMBQ 1500 100
	Miami, Fla.	1000		Richmond, Ind.	-	Brooklyn, N. Y. WMBR 1370 100
	WIP 610 Philadelphia, Pa.	1000		WKBW 1480 5000 Buffalo, N. Y.		Jacksonville, Fla.
	WIRE 1400	1000		WKBZ 1500 100		WMBS 1420 250
	Indianapolis, Ind.			Muskegon, Mich.		Uniontown, Pa.
	WIS 560	1000		WKEU 1500 100	1	WMC 780 1000 Memphis, Tenn.
$\overline{}$	Columbia, S. C. WISN 1120	250		Griffin, Ga.		WMCA 570 1000
	Milwaukee, Wis.	200		Sunbury, Pa.		New York, N. Y.
	WJAC 1310	100		WKRC 550 1000		WMEX 1500 100
	Johnstown, Pa. WJAG 1060	1000		Cincinnati, Ohio		Boston, Mass.
	Norfolk, Neb.	1000		WKY 900 1000 Oklahoma City, Okla.		WMFD 1370 100 Wilmington, N. C.
	WJAR 890	1000		WKZO 590 1000		WMFF 1310 100
	Providence, R. I.			Kalamazoo, Mich.		Plattsburg, N. Y.
	WJAS 1290	1000		WLAC 1470 5000		WMFG 1210 100
	Pittsburgh, Pa. WJAX 900	1000		Nashville, Tenn. WLAK 1310 100		Hibbing, Minn. WMFJ 1420 100
	Jacksonville, Fla.	¥000		Lakeland, Fla.		Daytona Beach, Fla.
						WMFO 1370 100
						Decatur, Ala.

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WMFR 1200 10 High Point, N. C.	0	WOV 1130 New York, N. Y.	1000		WSAI 1330 1000 Cincinnati, Ohio
WMIN 1370 10 St. Paul, Minn.	0	WOW 590 Omaha, Neb.	1000		WSAJ 1310 100 Grove City, Pa.
WMMN 890 50		WOWO 1160	10000		WSAL 1200 250
Fairmont, W. Va.	,	Fort Wayne, Ind. WPAD 1420	100		Salisbury, Md. WSAN 1440 500
Lapeer, Mich.		Paducah, Ky.			Allentown, Pa.
WMPS 1430 50 Memphis, Tenn.	0	WPAR 1420 Parkersburg, W. V	100 'a.		WSAR 1450 1000 Fall River, Mass.
WMSD 1420 10 Sheffield, Ala.	0	WPAX 1210 Thomasville, Ga.	100		WSAU 1370 100 Wausau, Wis.
WMT 600 100	• -	WPAY 1370	100		WSAY 1210 100
Cedar Rapids, Iowa WNAC 1230 100		Portsmouth, Ohio	1000		Rochester, N. Y. WSAZ 1190 1000
Boston, Mass. WNAD 1010 100	, \	Philadelphia, Pa. WPG 1100	5000		Huntington, W. Va. WSB 740 50000
Norman, Okla.		Atlantic City, N.	J.		Atlanta, Ga.
WNAX 570 100 Yankton, S. D.	0	WPRA 1370 Mayaguez, P. R.	100		WSBC 1210 100 Chicago, Ill.
WNBC 1380 25	0	WPRO 630	500		WSBT 1360 500
New Britain, Conn. WNBF 1500 10	, 	Providence, R. I. WPRP 1420	100		South Bend, Ind. WSFA 1410 500
Binghamton, N. Y. WNBH 1310 10	. —	Ponce, P. R.			Montgomery, Ala.
New Bedford, Mass.		Raleigh, N. C.	1000		WSGN 1310 100 Birmingham, Ala.
WNBX 1260 50 Springfield, Vt.	0	WQAM 560 Miami, Fla.	1000		WSIX 1210 100 Nashville, Tenn.
WNBZ 1290 10	0	WQAN 880	500		WSJS 1310 100
Saranac Lake. N. Y. WNEL 1290 100	, 	Scranton, Pa. WQBC 1360	1000		Winston-Salem, N. C. WSM 650 50000
San Juan, P. R. WNEW 1250 100		Vicksburg, Miss. WQDM 1396	1000		Nashville. Tenn. WSMB 1320 1000
New York, N. Y.		St. Albans, Vt.	1000		New Orleans, La.
WNLC 1500 10 New London, Conn.	•	WQXR 1550 New York, N. Y.	1000		WSMK 1380 200 Dayton, Ohio
WNNY 1420 10 Watertown, N. Y.	0	WRAK 1370	100		WSNJ 1210 100 Bridgeton, N. J.
WNOX 1010 100	0	Williamsport, Pa. WRAW 1310	100		WSOC 1210 100
Knoxville, Tenn.	,	Reading, Pa. WRBL 1200	100		Charlotte, N. C. WSPA 920 1000
New York, N. Y.		Columbus, Ga.			Spartanburg, S. C.
WOAI 1190 5000 San Antonio, Texas	' L	Washington, D. C	500		WSPD 1340 1000 Toledo, Ohio
WOC 1370 10 Davenport, lowa	0	WRDO 1370 Augusta, Me.	100		WSPR 1140 500 Springfield, Mass.
WOI 640 500	0	WRDW 1508	100		WSUI 880 500
Ames, Iowa WOKO 1430 50	0	Augusta, Ga. WREC 600	1000		lowa City, Iowa WSUN 620 1000
Albany, N. Y. WOL 1310 10	,	Memphis, Tenn. WREN 1220	1000		St. Petersburg, Fla. WSVA 550 500
Washington, D. C.		Lawrence. Kans.			Barrisonburg, Va.
WOLS 1200 10 Florence, S. C.	9	Rome, Ga.	100	. [WSVS 1370 50 Buffalo, N. Y.
WOMI 1500 10 Owensboro, Ky.	•	WRJN 1370	100		WSYB 1500 100 Rutland, Vt.
WOMT 1210 10	, 	Racine, Wis. WRNL 880	500		WSYR 570 1000
Manitowoc, Wis.	, 	Richmond, Va. WROK 1410	E00		Syracuse, N. Y. WTAD 900 1000
Grand Rapids, Mich.		Rockford, Ill.	500		Quincy, Ill.
WOPI 1500 10 Bristol, Tenn.		WROL 1310 Knoxville, Tenn.	100		WTAG 580 1000 Worcester, Mass.
WOR 710 5000 Newark, N. J.	0	WRR 1280	500		WTAL 1310 100
WORC 1280 50	,	Dalias, Texas WRTD 1500	100		Tallahassee, Fla. WTAM 1070 50000
Worcester, Mass. WORK 1320 100	,	Richmond, Va. WRUF 830	5000		Cleveland, Ohio WTAQ 1330 1000
York, Pa.		Gainesville, Fla.			Green Bay, Wis.
WORL 920 50 Boston, Mass.	'	WRVA 1110 Richmond, Va.	5000		WTAR 780 1000 Norfolk, Va.
WOSU 570 75)	1			WTAW 1120 500
Columbus, Ohio		1			College Station, Tex.

WTAX 1210 100 Springfield, Ill.	XEAW 960 50000 Reynosa, Tams.	XEI 1370 125 Morelia, Mich.
WTBO 800 250	XEAY 1240 100	XEJ 1020 1000
Cumberland, Md. WTCN 1250 1000	Mexico City, D. F. XEB 1030 10000	Juarez, Chih. XEJP 1130 100
Minneapolis, Minn.	Mexico City, D. F.	Mexico City, D. F.
WTEL 1310 100 Philadelphia, Pa.	XEBA 1080 20 Guzman, Jal.	Mexico City, D. F.
WTHT 1200 100 Hartford, Conn.	XEBG 820 1000	XEK 990 100
WTIC 1040 50000	Tijuana, B. Cfa. XEBH 930 500	Mexico City, D. F. XEKL 1240 500
Hartford, Conn. WTJS 1310 100	Hermosillo, Sonora XEBI 1000 25	Leon, Guan. XEL 780 1000
Jackson, Tenn.	Aguascalientes, Ags.	Mexico City, D. F
WTMJ 620 1000 Milwaukee, Wis.	XEBJ 1160 20 Merida, Yuc.	XELA 1240 50 Saltillo, Coah.
WTMV 1500 100 East St. Louis, III.	XEBK 1000 60 Neuvo Laredo, Tams.	XELO 670 50000 Tijuana, B. Cfa.
WTNJ 1280 500	XEBL 1220 50	XELZ 1370 100
Trenton, N. J. WTOC 1260 1000	Mazatlan, Sin. XEBO 1310 25	Mexico City, D.F. XEMG 1060 100
Savannah, Ga.	Irapuato, Guan.	Atzeapotzalco, D. F.
WTOL 1200 100 Toledo, Ohio	XEBS 1240 200 Mexico City, D. F.	XEMO 860 5000 Tijuana, L. C.
WTRC 1310 100	XEBX 640 250	XEMU 580
Elkhart, Ind. WVFW 1400 500	Sabinas, Coah. XEBZ 1160 100	Piedras Negras, Coah. XEMX 1280 100
Brooklyn, N. Y. WWAE 1200 100	Mexico City, D. F. XEC 1150 100	Mexico City, D. F. XENC 860 50
WWAE 1200 100 Hammond, Ind.	Tijuana, L. C.	Mexico City, D. F.
WWJ 920 5000 Detroit, Mich.	XECL 1100 1700 Mexicali, B. Cfa.	XENT 910 150000 Nuevo Laredo, Tams.
WWL 850 10000	XECW 1310 10	XEOK 760 2500 Tijuana, L. C.
New Orleans, La. WWNC 570 1000	Mexico City, D. F. XECZ 1370 100	XEP 1160 500
Asheville, N. C. WWRL 1500 100	San Luis Potosi, S.L.P. XED 1160 2500	Juarez, Chih. XEPN 730 100000
Woodside, N. Y.	Guadalajara, Jal.	Piedras Negras, Coah.
WWSW 1500 100 Pittsburgh, Pa.	XEDA 1220 200 Gra. Anaya, D. F.	XERA 840 350000 Vilia Acuna, Coah.
WWVA 1160 5000	XEDF 810 75	XES 990 250 Tampico, Tams.
Wheeling, W. Va. WXYZ 1240 1000	Nuevo Laredo, Tams. XEDP 1080 500	XET 690 5000
Detroit. Mich.	Mexico City, D. F. XEDW 1150 20	Monterrey, N. L. XETB 1310 125
Whippany, N. J.	Minatitlan, Ver.	Torreon, Coah.
W3XJ 1060 100 College Park, Md.	XEE 1210 50 Durango, Dgo.	XETF 1220 30 Veracruz, Ver.
W8XO 700 500000	XEF 1450 100	XETH 1210 100
Cincinnati, Ohio XEAA 750 200	Juarez, Chih. XEFA 1180 500	Puebla, Pue. XEU 1010 250
Mexicall, B. C.	Tacuba, D. F. XEFB 870 200	Veracruz, Ver.
Tijuana, L. C.	Monterrey, N. L.	Mexico City, D. F
XEAD 1060 125 Guadalajara, Jal.	XEFC 550 100 Merida, Yuc.	XEX 1310 125 Monterrey, N. L.
XEAF 990 750	XEFE 980 150	XEXB 1270 50
Nogales, Son. XEAG 1310 10	Laredo, Tams. XEFI 1440 250	Jalapa, Ver. XEXC 810 350
Cordoba, Ver.	Chihuahua, Chih.	Aguascalientes, Ags. XEXD 1340 350
Mexico City, D. F.	XEFJ 1230 100 Monterrey, N. L.	Jalapa, Ver.
XEAM 750 25 Matamoros, Tams.	XEFO 930 5000 Mexico City, D. F.	XEXE 1270 17 Mexico City, D. F.
XEAO 660 250	XEFV 1210 100	XEXH 1250 . 250 San Luis Potosi, S.L.P.
Mexicali, B. C. XEAP 1240 50	Juarez, Chih. XEFW 1310 250	XEXS 1000 100
Obregon, Son.	Tampico, Tams. XEG 1220 250	Portable in Mexico XEYO 940 500
XEAS 1160 50 Saltillo, Coah.	Monterrey, N. L.	Mexico City, D. F.
XEAT 1210 250 Parral, Chih.	XEH 720 250 Monterrey, N. L.	XEZ 630 500 Merida, Yuc.
Tarrai, Cam.		

Special DX Calendar

 $T^{
m HE}$ time given in the DX Calendar following is in EST by the twenty four hour clock.

DX Tips Periods

Mon., 2115-2130, CJCJ, 690 kcs. Tues., 1735-1800, W2XAF, 9530 kcs, and W2XAD, 15330 kcs. Wed., 0035-0045, KOY, 1390 kcs.

Wed., 0035-0045, KOY, 1390 kcs. 1345-1400, WTAR, 780 kcs. Thur., 0230-0245, KGMB, 1320 kcs.

Sat., 0015-0030, W8XK, 6140 kcs. 0230-0245, KLS, 1280 kcs.

"Programs of the Week"

The IDA "Programs of the Week", broadcast each Sunday morning, are full-hour programs, full of surprises, thrills, and laughs. Don't miss any of them. (CHWK requires ten cents for a verification.)

Dec. 23 (Thurs.), 0300-0400, WJJD, 1130 kcs.

Dec. 30 (Thurs.), 0100-0200, WTAM, 1070 kes.

Jan. 16 (Sun.), 0300-0400, WCCO, 810 kcs.

Jan. 24 (Mon.), 0300-0400, WHAM, 1150 kcs.

Jan. 30 (Sun.), 0300-0400, CHWK, 780 kcs.

Feb. 6 (Sun.), 0300-0400, KWYO, 1370 kcs.

Feb. 27 (Sun.), 0330-0400, KGU, 750 kcs.

Mar. 13 (Sun.), 0300-0400, WCKY, 1490 kcs.

Mar. 27 (Sun.), 0300-0400, KFOR, 1210 kes.

Special Broadcasts

Jan. 1, 0245-0400, CHWK, 780 kcs (UDXC).

Jan. 11, 0510-0530, KAST, 1370 kcs (UDXC).

Feb. 5, 0245-0400, CHWK, 780 kcs (UDXC).

Feb. 8, 0510-0530, KAST, 1370 kcs (UDXC).

Mar. 5, 0245-0400, CHWK, 780 kcs (UDXC).

Apr. 2, 0245-0400, CHWK, 780 kcs (UDXC).

May 7, 0245-0400, CHWK, 780 kcs (UDXC).

June 4, 0245-0400, CHWK, 780 kcs (UDXC).

The Month's Changes

(Continued from Page 58)

1260 WNBX Springfield, Vt. Twin States Brdestg.
Corp., 39 Main St.
PERMIT TO CHANGE FREQUENCY

Waterpury, Conn., to 1290 Minot, N. Dak., to 1360 1190 WATR 1240 KT.PM 1250 WCAL Northfield, Minn., to 760 WLB Minneapolis, Minn., to 760 Minicapolis, Minit., 10 700
CINY Juneau, Alaska, to 1430
CI Yakima, Wash., to 1250
OL Washington, D. C., to 1230
ABR Aberdeen, S. Dak., to 1390
PERMIT TO CHANGE POWER
MINICAPOLIS MINITAL TO THE POWER
MINITAL MINITAL TO THE POWER IN THE POW KINY 1310 KIT WOL 1420 KABR **WKZO** 590 250 (1)

590 WKZO Kalamazoo, Mich. 250 (
810 CMCF Havana, Cuba. 5000
880 WCOC Meridian, Miss. 1000
900 KGBU Ketchikan, Alaska. 1000

950 WRC Washington, D. C. 1000 (5) 1190 WATR Waterbury, Conn. 250 1240 KLPM Minot, N. Dak. 500 (1) 1250 WCAL Northfield, Minn. 5000

1340 WCOA Pensacola, Fla. 1000 1420 KABR Aberdeen, S. Dak. 500 (1) 1430 WBNS Columbus, Ohio. 1000 (5) 1490 KFBK Sacramento, Calif. 10000 PERMIT TO CHANGE LOCATION

570 KGKO Wichita Falls, Tex., to Fort Worth FOREIGN BROADCAST

(Excluding Oceania, which is listed complete in this issue) NEW

1122 Stagshaw, Gt. Britain. 60000 w. 1357 Genoa No. 2, Italy. 5000 Rome No. 3, Italy. 1000 FREQUENCY

| TREQUENCY | TREAD |

1420 PRB2 Curityba, Brazil, from 1480
 1470 PRE6 Nictheroy, Brazil, from 1170
 POWER

850 Sofia, Bulgaria, 100.000 from 1000 1220 PRA9 Rio de Janeiro, Brazil, 25000 from 1000 DELETE

 580
 PRF8
 San Salvador, Brazil

 620
 PRB3
 Juiz de Fora, Brazil

 630
 PRF6
 San Salvador, Brazil

 1122

 Newcastle, Gt. Britain

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	Time on the AirJan. '38, p. 63
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hamas, on 540 kcs, daily from 8:30	Broadcasters, with Time on Air Jan. '38, p. 58
to 9:30 pm, EST.	North American Police Sept. '37, p. 59 1.6 megs. to 6 megs Feb. '37, p. 53
	6 megs. to 400 megs
WICA, 940 Ashtabula, Ohio is now	Owners and Addresses June '37, p. 50
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CMQ, Havana, has moved to 600 kcs.	Foreign Broadcast
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1	1
INSURE YOUR RA	DIO ENJOYMENT
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The Radex Press	LANK TODAY
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