# THE JANUARY 1938 <br>  

The All-wave Radio Log


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


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## CON'TEN'IS

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## What is a Continent?

SOME 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 $2 \mathrm{VAC}, 6 \mathrm{VAC}$ or 50 VAC , 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 east-
ern 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. From that point a line can be drawn to the intersection of the Equator and the 135 th 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 considared 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 PanamaColombia 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. The 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 20 th parallel to the Antarctic Ocean. This will include the islands of St. Paul and Trinidad (both owned by Brazil), the Falk. lands, 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 of Marmora, the Dardanelles, through Aegean Sea to a point east and south of Crete. The Islands of Rodi (Italian) and Cyprus (Brit. ish) 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 east ern 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 cnly 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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AFTER 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 41 h , 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 up. XEFW, Tampico, Tamps., was heard several times on 1310 kcys. 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 reg. ularly 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 keys.

## Europeans Coming In

November brought its share of freakish reception. The morning of the 12 th, 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 S 4 to S 6 . 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 ivas 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 2 YA , 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 $\mathbf{S} 5$ signal on 570.

As static diminished, 1YA and 3YA were other Zedders to be Iogged. 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 adequate 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 kcys, on the fourth Friday. WJAG, Norfolk, Neb., 1060 kcys, 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 kcys; WEAN, Providence, R. I., 780 kcys; WNAC, Boston, Mass., 1230 kcys; and WHIS, Bluefield, W. Va., 1410 keys. 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 be-
tween 2 and 2:40 a. m., EST, on De cember 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 $C D X R$ bulletins," writes Charles Hesterman, president. "You counted the 13 'hi's' in Volume 1, No. 23. I 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 rave 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 9 th 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 50 c per year, and a club bulletin is available, also at 50 c per year, or both membership and subscription for 75 c 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? 

\author{

-     - By B. FRANCIS DASHIELL
}

THE 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 shortwave radio will be found. But just now these very short waves, particularly those of less than 5 mecers, 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 fieid.

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 adaitional 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". A large 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 available. This fact provides radio with thousands of future channels. But 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 interference unavoidable. 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 the short-wave bands below 20 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, leade his orchestra throngh intricate swin! 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 remarkabie regions. Natural static seldom troubles, but, of course, automobiles and man-
made static play their annoying part. This band, too, is where allwave 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. More 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. And 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 meters. Therefore, unless the receiver 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 $5: 45 \mathrm{pm}$, is interesterf 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 stralght 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"-combination transmitters and receivers which are now available at small cost.

## Scanning the

## AMATEUR BANDS

\author{

-     - 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

ACOLORFUL 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 as. sistants, 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 Adams. town, 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. However, 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 some. thing 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 two Baltimore DXers, Carroll Weyrich and B. L. Ahman, Jr., undertook to monitor the 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 smull radio station two years ago, and now she is one of NRC's most promising ballatists.
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 9 th 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 sta. tion 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 in above the words: "This is to verify your reception of this Station on February - 1937. Thanks for 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 lnowledge 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 ZBW veries. The holder of a real verie eventually will buck up 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 keys, 100 watts; 2HR, Singleton, N. S. W., 680 keys, 300 watts; 2KM, Sydney, N. S. W., 980 keys, 100 watts; 2 MW , Murwillumbah, N. S. W., 1470 keys, 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. " $3 Z \mathrm{ZB}, 100$ watts on 1430 kcys, commenced broadcasting on a $6 \mathrm{a} . \mathrm{m}$. to midnight schedule September 28 th. 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 $3 A R$, 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 elec. trical 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 natural ly 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 keys, 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 lias not been granted as yet. WOL expects to make its change in frequency and power boost within the nex1 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 Dor-
chester Ave., Chicago, Ill., "instead of 3 a.m. as previously listed in RADEX. KMBC, Kansas City, broadcasts 19 hours daily, but their time on the air is not specified. W.JRD 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 kcys, 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."

## Katex 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 broalcasts to the readers of RADEX. Following is the schedule, with all times AM, Eastern Standard:

January 6
2:00-2:30 KWOS 1310 Jefferson City, Mo. January 8
4:10-4:30 WKBZ ${ }^{1500}$ Muskegon, Mich. 5:10-5:30 KBTM 1200 Jonesboro. Ark. 5:30-5:50 KFXD 1200 Nampa, Idaho 5:40-6:00 KFJM 1410 Grand Forks, N. D. January 10
4:20-4:40 KLUF 1370 Galveston, Texas
4:50-5:10 KEUB 1420 Price, Utah
5:50-6:10 KGLO 1210 Mason City, Iowa
January 11
3:10-3:30 KPAC 1260 Port Arthur, Texas 4:10-4:30 KLPM 1360 Minot, N. D.
4:20-4:40 KRMD 1310 Shreveport. La.
5:00-5:20 KRMC 1370 Jamestown, N. D.
5:40-6:00 KQV 1380 Pittsburgh, Pa.
5:50-6:10 KLAH 1210 Carlsbad, N. M.
January 12
3:10-3:30 WPAX 1210 Thomasville, Ga.
4:40-5:00 KPLT 1500 Paris, Tevas
5:00-5:20 KFJB 1200 Marshalltown,
anuary lowa
2:00-2:30 KWOS 1:310 Jofferson City, Mo. January 14
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 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 get their revenue from other 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 special on Pepsodent or Alka 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': 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, KPDN, 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, CMIHJ, KIDW, KOY and KTFI, as weil 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 lessfrequently 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 CEO, 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 9 K 3 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 oft 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 $D X$ 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. Pecently 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 exciterl 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 kes, 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 kes; XELO, Tijuana, B. Cfa., from 1110 to 670 kes; 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 let-
ter 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 kes) 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, $6010 \mathrm{kcs}, 1000$ 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 kes from 9:45 to 10 pm , EST, or sometimes until $10: 30 \mathrm{pm}(\mathrm{RX} 25)$.

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 scieen, 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 kes, 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 kes but may shift back to 6033 to avoid interfering with Germany's DJC. HJ6ABA varies in frequency from 6050 to 6055 kes . (Rざ21)

## Denmark

The call and frequency of the new Danish station is OZF, 9520 kes. 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 $6 \mathrm{pm}, \mathrm{EST}$, 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 $3: 45 \mathrm{pm}$, 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 kes. The time remains the same, 6 to $8: 30 \mathrm{pm}$, EST.

## Guatemala

TGWA in Guatemala City, 9690 kes, 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 $12: 20 \mathrm{pm} .9653 \mathrm{kcs}$, 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 $5: 30 \mathrm{pm}$. 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 kes, Tampico, Tams. Broadeast 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 kes, 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 kes, and the power as $21 / 2 \mathrm{kw}$. (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 kes, 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 $11: 45 \mathrm{pm}$, to 12:45 am, EST, daily except Saturdays. Two frequencies are used now, announced as 9606 and $6097^{1 / 2}$ kes. (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 kes 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 kes. (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 Springfleld, 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.)
WANJ Williamston, N. C. (1.)
WANK Salisbury, N. C. (1.)
WANL Elizabethtown, N. C. (1.)
1.712 KAPM Wailuku. Hawaii. (1.)

WMPR Revere, Mass. (.05)
2.036 WPDM Dayton, Ohio. (.5)
2.040 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. (.015) WMPQ Logansport, Ind. (.1)

## Frequency

2.466 WRDR Grosse Points, Mich. (.35), from 2.414

## Power

1.712 KACU Longview, Texas, 500 w. from 250 w .
Ohio State Police stations operate on 1596 kes. 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 $10: 40 \mathrm{am}$, 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. II. Dussek, Great Britaln.
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

\author{

-     - 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 hap. py 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, $4^{1 / 2} \mathrm{c}$, 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: 5 M brown, 15 M purple, and 20 M 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 bet. ter 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 Gos. sip, 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 <br> Club Corner

\author{

-     - 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"

IN 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
3:00-4:00 WCCO 810 Minneapolis, Minn. Monday, January 24th
3:00-4:00 WHAM 1150 Rochester, N. Y. Sunday, January 30th
3:00-4:00 CHWK' 780 Chilliwack, B. C. Sunday, February 6th
3:00-4:00 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 Standard.

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 other radio publications.

## Call-o-Gram Solution

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

$$
\begin{aligned}
& \text { RCA CQDX CKOC WWL } \\
& \text { XEL WRK A ART AWA } \\
& \text { KCMC MUSTANG wSJS } \\
& \text { R AIR MA TG HIH T } \\
& \text { VOAS ARID } \\
& \text { W TIU TI OR NOW K } \\
& \text { WTEL WINDSOR WAGA } \\
& \text { VAS WOC O OIL YSN } \\
& \text { ASTKRKO KSOO XED }
\end{aligned}
$$

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

IHAVE 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 orig. inal 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 controiled 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 $\mathrm{R}-10$ and 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 high 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. The output of the oscillator unit is fed into 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 casily 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 wll 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 sensi. fivity can one expect? Will selecfivity 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 a 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, luned 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. A 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 interference. Therefore, if the antenna 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-reducing antenna systems. This, however, 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 you will have no difficulty in attaching the wires to the set. In 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 bright 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 6 foot lengths of new $1 / 2^{\prime \prime}$ 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. The
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 antenna for longerwave 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-uave 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 refiector so as to aid reception from some particular point on a certain frequency.

You should procure a double-pole double-throw knife switch with 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 stutions, too, are spread out very badly, as much as 100 kilocycles to either side of the point on the dial where they are sup. posed 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. So, 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.

Broadiuning, such as you describe, is a bad disorder in the set. When the tubes and volume control have been 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 phug-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
$1 / 8$ 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 canacity 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

\author{

-     - 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 com edy lyrics and sketches. Upon recov ering he headed for Broadway and broke in through night club work, with Texas Guinan at Barney Gal. lant's.

## More Hollywood

Unusual human interest stories about motion picture stars and exclusive news stories of the film capital are among the "Holly. wood Screenscoops" by George McCall, broadcast over the nationwide Columbia network each Tuesday and Thursday from $7: 15$ to $7: 30 \mathrm{pm}$, 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 serics 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 Corpora. tion, 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 $8: 30 \mathrm{pm}$ 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 heart 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 $8: 30 \mathrm{pm}$ on 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 MacHugh, 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 announce over NBC. That he is still heard singing IS news. As announcer for Ireene Wicker's Singing Lady programs over the Slue 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

-     - By Robert H. Weaver

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 $9 \mathrm{p} . \mathrm{m}$. to 7 a . m. Monday; 2 to 5 and 8 to $10 \mathrm{p} . \mathrm{m}$. on Mondays; and from 4 to $5 \mathrm{a} . \mathrm{m}$. 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 happening.s 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 14 th of each month. WABY has no all-night program from the 8 th 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 accordingly.

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

K'TSM, 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 (formeriy 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, broarlcasts Blue Network programs in English.

All the Cincinnati NBC stations are now available to either the Red or Biue 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 McClatchey Broadcasting Company, have been granted special experi-
mental 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 $C B C$ 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 kes, is owned by the Arctic Radio Corp., 120 Main St.

CFRB, Toronto, 690 kes, has moved from Bloor St. to 622 Frleet St.

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

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

## New Aerials for Millis

Westinghouse is arecting two modern directional antemas for use by W1XK at Millis, Mass. One aerial will be beamed toward South America and the other towards Europe. The directional acrial, 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 transmis sion from the Canadian Arctic to Ottawa. This station had an output power of 200 -watts 'phone and operated on the following frequencies: $15190,11705,9820 \mathrm{kcs}$, 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.

$$
\mathbf{C - E}
$$

CN8MB ( $l$ ); EA9AH $(b f l)$
F3-: HM (l); NF $\underset{(l)}{\mathbf{F}}$; 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). H
HC1-: FG $(f) ; J B(f g k) ;$ PM ( $f) ;$ HH-: 2B ( $f l$ ) ; 2X $(f l)$; 5PA ( $f$ ); HII-: 3N ( $d f l$ ): 5X (l); 7A ( $l$ ) : 7G ( $l$ ); 71 ( $f$ ); HK-: 1EP ( $k$ ) ; 1MV ( $f$ ) ; 2JA ( $f$ ); 3JA ( $f k$ ); HP1A (f); HR5C (1).

KA1-: BH ( $k m$ ); HS $(k)$; ME ( $k l$ ); K4-: EJF (l); SA ( $g$ ); K 6 (i-: BAZ ( $f k$ ); BNR ( $f k$ ); CMC ( $f$ ) ; GQF ( $f l$ ); ICL ( $g$ ); JHD ( $l$ ) ; JLV ( $f$ ) ; KMB ( $f k$ ) : LCV ( $q$ ) ; MZK (f); NTV ( $g$ ); NZQ (fkl); OJI ( $f$ ); OQE ( $f / r$ ).

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

OA4-: AE $(f) ;$ AI ( $g$ ); AL ( $f g$ ); C $(f)$; ON4VK (fl); OQ5AA (fj): OX2QY (deijl). PAOZB ( $g$ ); PK-: 1GL ( $l$ ); 1MX (a); 2WR (l); 6CI (a); PY2AK (f)

## S-T

SU1SG ( $f$ ); TI-: 1AF $(f) ; 2 \mathrm{AV}(f k) ; 2 \mathrm{DC}$ ( $g$ ) ; 2FG (i); 2FJ ( $l$ ) ; 2KP ( $f$ ); 2LR ( $f$ ); 2OFR ( $f$ ) ; 2RC ( $f$ ) ; 3EA (l).
VK2-: $\operatorname{ADE}(f) ; \operatorname{ADT}(l) ; \operatorname{AFQ}(f) ; \operatorname{AGE}$ (l) ; AP (f); BQ (fm); C'P (f); DJ (l); HF ( $f l$ ); HS ( $l$ ) ; OU ( $l$ ); QR ( $f$ ); ZC ( $l$ ) VK3-: AL ( $f l$ ) ; AO ( $l$ ); WA (l); VK4JU ( $f$ ); VK4VD ( $f$ ); VK5BP ( $l$ ); VO-: 2 N (f); 2Z (l);6D (f);6L (g); VP3BG (l); VP3THE (df); VPTNC ( $l$ ); VP9R ( $g h l$ ); VU-: $2 \mathrm{CQ}(c) ; 2 \mathrm{JN}(c) ; 7 \mathrm{FY}(c)$.

XE1-: BC $(f) ; \mathrm{BX}(m): \mathrm{CV}(g) ; \mathrm{DT}(f)$; GF $(g)$; GK' $(f)$; GS $(g)$; LK' ( $f k$ ); ${ }^{\prime}$ (fk); XE2-: AF ( $g$ ); FC ( $f g$ ); K ( $\mathcal{K}$ ); XE3AH ( $g$ ); XE3AR ( $f$ ).

## RADIO AMATEUR CALL BOOK

LATEST EDITION
Lists over $40,000 \mathrm{am}-$ ateurs in every country in the world as well as complete and accurate lists of all high frequency commercial and broadcasting stations. Every ifstener interested in amateur stations should have one. 292 pages.
We pay the postage,

## TIME CONVEIRTER

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 2.5 e (26c in Ohlo)

YV4-: AB (l); AF $\stackrel{(l}{\mathbf{Y}}$ ); AO ( $g$ ); AX (l); YV5-: AA $(f) ; \mathrm{ABA}(l) ; \mathrm{ABF}$ (fgln); ABG ( $l$ ) ; ABJ ( 1 ): ABS ( 7 ); AD ( $f l$ ); AE ( $k l$ ) ; AM ( $f l$ ); AS (f).

## Z

ZS3E; ZS5M; ZT5H; ZT5S; ZT6AL; ZTGAN; ZU6AF; ZU6A.J; ZU6P (All heard by $f$ ).

## The Reporters

(a) Gail Beyer, 3226 Sunnyside Ave., Chicago, Ill. (Hallicrafters S8A).
(b) Carl and Anne Eder, Willmar, Minn.
(c) Raphael Geller, 1652 Radeliff Ave., Bronx, N. Y.
(d) Gilbert Fiarris, 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 .16 th , 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., Lakewood, Ohio.
(k) Dale Smith, Route 3, Box 536, Eugene, Ore.
( 1 A Steinmetz, 125 W. 27 th St., Bavonne, N.J. (TCA-ACR 136).
( $m$ ) Hadley Wilcox, 623 W 40 th Place, Los Angeles, Callf. (Tiffany Tone).
( $n$ ) William Wood, $8171 / 2$ Lake St., Oak Park, IIl (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 fiom 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

$\mathrm{A}^{\mathrm{s}}$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 kes. 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 $26,600 \mathrm{kcs}$. has been set aside for broadcasting.
Order No. 19 covers the allocation of frequencies from 30,000 to 300 ,000 kes. 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 $108,000 \mathrm{kcs}$. are made available for the assignment of television stations. Television broadcast is also assigned twelve channels between 156,000 and 300,000 kes. 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 $39,820 \mathrm{kcs}$. 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 limit. ed interference range is such that it will be possible to license every regular broadcast station for two relay stations in this band, the fre quencies, 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 order to include many of the new stations which have recently come on the air，the engineers of the Federal Communications Commis－ sion have revised their list of month－ ly frequency check broadcasts．The latest schedule，with times given in Eastern Standard，follows：

| The Second Monday |  |  |  |
| :---: | :---: | :---: | :---: |
| 2：60－2：20 | WLNH | 1310 | l．aconia，N．H． |
|  | WJBO | 1420 | Haton Rouge，La． |
| 2：10－2：30 | WBRB | 1210 | Red Bank，N．J． |
|  | W1L13 3 | 15（1） | Selma．Ala． |
| 2：20－2：40 | WMAS | 1420 | suringfield，Mass． |
|  | WIOD | 610 | Blami，Fla， |
| 2：30－2：50 | HWRE． | 1600 | Woodside，N．Y． |
|  | WJころV | 12001 | New Orleans，La． |
| 2：40－3：00 | WOKO | 1430 | Albany，N．Y． |
|  | WMER | 1370 | Jacksonville，Fla． |
| 2：50－3：10 | WCAX | 1200 | Burlington，Vt． |
|  | WOPI | 1500 | Bristol，Tenn． |
| 3：00－3：20 | WMBO | 1310 | Auburn，N．Y． |
|  | （WMSJ） | 1420 | Sheffield，Ala． |
| 3：10－3：30 | WOC | 1370 | 1）arenport，Ia． |
|  | WCAD | 1220 | Canton，N．Y． |
|  | WIRGM1 | 1210 | Grenada，Miss． |
| 3：20－3：40 | KWLC | 1270 | Decorab，Is． |
|  | WabQ | 1500 | 13 rooklyn，N．Y． |
|  | WNBR | 1430 | Memphis，Tenn． |
| 3：30－3：50 | KIPW | 1210 | Fort smith，Ark． |
|  | WDBO | 580 | Orlando．Fla |
|  | WMFY | 1310 | Jlattsburk．N．Y |
| 3：40－4：00 | KABC | 1420 | San Antonio，Tex． |
|  | WQDM | 1390 | St．Albans，Vt |
|  | WSMB | 1320 | New Orleans，La． |
| 3：50－4：10 | WFAS | 1210 | White Plains，N．Y． |
|  | WHEF | 1500 | Kosciusko，Miss． |
| 4：00－4：20 | KFDM | 560 | Beaumont．Tex． |
|  | KTAS | 1280 | Oakland，Calif． |
|  | WAGF | 1370 | Dothan，Ala． |
|  | WCAl＇ | $12 \times 0$ | Asbury Park，N．J． |
| 4：10－4：30 | KCRJ | 1310 | Jerome，Ariz． |
|  | K\ILI3 | 1200 | Monroe，La． |
|  | KYOS | 1040 | Merced，Catif． |
| 4：20－4：40 | KLUF | 1370 | Galveston，Tex． |
|  | KGIMM | 1100 | Stockton，Calif． |
|  | WDEV | 550 | Waterbury，Vt． |
|  | WDNC | 15（K） | Durham，N．C． |
| 4：30－4：50 | KROC | 1310 | Sochester，Minn． |
|  | KGA12 | 1370 | Tucson Ariz． |
|  | ckATB | 12101 | Slexandrin Ert |
| 4：40－5：00 | KOVC | 1500 | Valley City，N．D． |
|  | kRO）Y | 1210 | Sacramento，Calli． |
|  | WBNO | 1200 | New Orleans，Ls． |
| 4：50－5：10 | KEV13 | 1420 | Price．Utah |
|  | KIRE | 1370 | Berkeley，Callf． |
|  | WLAK | 1310 | Lakeland．Fla |
| 5：00－5：20 | KBST | 1500 | Big Spring．Tex． |
|  | KIES | 1450 | Eurekr，Calif． |
|  | WHOY | 1210 | St．Augustine，Fla． |
| 5：10－5：30 | KDON | 1210 | Monterrey，C＇alif． |
|  | WMIN | 1370 | St．Paul，Minn． |
|  | WTAL | 1310 | Tailahassee，Fla． |
| 5：20－5：40 | KTRH | 1290 | Houston，Texas |
|  | KUMA | 1420 | Yuma，Ariz． |
|  | W゙AIR | 1250 | Winston－Salem，N．C． |
| 5：30－5：50 | KFGQ | 1370 | Boone，Ia． |
|  | KWG | 1200 | Stockton，Calif． |
|  | WGCM | 1210 | Gulfport．Miss． |
| 5：40－6：00 | KGMB | 1320 | Honolulu，T．H． |
| 5：50－6：10 | KGLO | 1210 | Mason City，Ia． |
|  | KVCV | 1200 | Redding，Calif． |
| 6：10－4：30 | KADA | 1200 | Ada，Okia． |


| The Second Tuesday |  |  |  |
| :---: | :---: | :---: | :---: |
| 2：00－2：20 | WBAX | 1210 | Wilkes Barre，Ps． |
| 2：10－2：20 | WDAS | 1370 | Philadelphia．Pa． |
| 2：20－2：40 | WHBL | 1210 | Richmond，Va． |
| 2：30－2：50 | WFBG | 1310 | Altoola，Pa． |
| 2：40－3：00 | WMisG | 1210 | Richmond，Va． |
| 2：50）－3：10 | WEBR | 1310 | Buffalo，N．Y． |
| 3：00－3：20 | KINAL | 1500 | Duluth，Minn． |
|  | WLVA | 1200 | L，ynchburg，Va． |
| 3：10－3：30 | KPAC | 1260 | Port Arthur．Tex． |
|  | WB＇TMI | 1370 | Danvile，Va． |
| 3：20－3：40 | WKRC | 550 | Cincinnata，Ohio |
|  | WHEC | 1430 | Rochester，N．Y． |
| 3：30－3：50 | WNAI） | 1010 | Norman，Okla． |
|  | WMBC | 1420 | Detroit．Mich． |
|  | WRAK | 1370 | W＇illiamsport，Pa． |
| 3：40－4：00 | KPVE | 1210 | Cape Girardeau，Mo． |
|  | WJAC | 1310 | Johnstown，P＇a． |
| 3：50－4：10 | WTAW | 1120 | College Station，Tex． |
|  | WHNS | 1430 | Columbus，Ohio |
|  | WBNY | 1370 | Buffalo，N，Y， |
| 4：00－4：20 | WCOL， | 1210 | Columbus，Ohio |
|  | WBRE | 1310 | Wilkes Barre，Pa． |
| 4：10－4：30 | KL1＇M | 1240 | Minot，N．Dak． |
|  | WPAR | 1420 | Parkersburg，w．Va． |
|  | WPAY | 1370 | Portsmouth，Ohio |
| 4：20－4：40 | KRMI） | 1310 | Shreveport，La． |
|  | WOMIT | 1210 | Manitowoc，Wis． |
|  | WSYR | 570 | Syracuse，N．Y． |
| 4：30－4：50 | KGCA | 1270 | Decorah，Ia． |
|  | WCLE | 610 | Cieveland，Ohio |
|  | WNBF | 1500 | l3inghamton，N．Y |
| 4：40－5：00 | KTEM | 1370 | Temple，Tex． |
|  | KGBU | 900 | Ketchikan，Alaska |
|  | WGH | 1310 | Newport News，Va． |
| 4：50－5：10 | KGVO | 1260 | Missoula，Mont． |
|  | KRIH | 1420 | Midland，Tex． |
|  | WHK | 1390 | Cieveland，Ohio |
|  | WWSW | 1500 | Plttsburgh，l＇a． |
| 5：00－5：20 | KGCX | 1450 | Wolf Polnt，Mont． |
|  | KRAC | 1370 | Jamestown，N．D． |
|  | WSAY | 1210 | Rochester，N．Y． |
|  | WSPD | 1340 | Toledo．Ohlo |
| 5：10－5：30 | KAST | 1370 | Astoria．Ore． |
|  | KNET | 1420 | Palestine，Tex． |
|  | WAVE | 940 | Louisville，Ky． |
| 5：20－5：40 | KCMO | 1370 | Kansas City，Mo． |
|  | KFJI | 1210 | Klamath Falls，Ore． |
|  | WXY\％ | 1240 | Detroit，Mich． |
| 5：30－5：50 | KIDW | 1420 | Lamar，Colo． |
|  | KPQ | 1500 | Wenatchee，Wash． |
|  | WGAR | 1450 | Cleveland，Ohio |
| 5：40－6：00 | KFIO | 1120 | Spokane，Wash． |
|  | KQV | 1380 | Pittsburgh，Pa． |
|  | WCAT | 1200 | Rapid City，S．Dak， |
| 5：50－6：10 | KLAII | 1210 | Carlsbad，N．Mex． |
|  | KORE | 1420 | Eugcne，Ore． |
| 6：00－6：20 | Koos | 1200 | Marshfield，Ore． |
|  | WLBL | 900 | Stevens Point，Wis． |
|  | The Second Wednesday |  |  |
| 2：00－2：20 | WMFJ | 1420 | Daytona Beach，Fla． |
| 2：10－2：30 | WAIM | 1200 | Anderson，S．C． |
| 2：20－2：40 | KVOL | 1310 | Lafayette，La． |
| 2：30－2：50 | WHBQ | 1370 | Memphis，Tenn． |
| 2：40－3：00 | WKAQ | 1240 | San Juan，l＇，R． |
| 2：50－3：10 | WSJS | 1310 | Winston－Salem，N．C． |
| 3：00－3：20 | WCPO | 1200 | Cincinnati，Ohlo－ |
|  | WMFD | 1370 | Wilmington，N．C． |
| 3：10－3：30 | KFlZ | 1420 | Fond du Lac，Wisfe |
|  | WPAX | 1210 | Thomasville，Ga． |
| 3：20－3：40 | KOKO | 1370 | La Junta，Colo． |
|  | WCLO | 1200 | Janesville，Wis．－ |
|  | WRDW | 1500 | Augusta．Ga． |
| 3：30－3：50 | WQBC | 1360 | Vicksburg，Miss． |
| 3：40－4：00 | －KAND | 1310 | Corsicana，Texas |
|  | KPLC | 1500 | Lake Charles，La， |
|  | い HBC | 1200 | Canton，Ohio |



| 4:10-4:30 | KFQD | 780 | Anchorage, Alaska |
| :---: | :---: | :---: | :---: |
|  | KONO | 1370 | San Antonio, Tex. |
|  | - W KBZ | 1500 | Muskegon, Mich. |
| 4:20-4:40 | - RLC | 1390 | Lewiston, ldaho |
|  | KTSM | 1310 | El Paso, Tex. |
|  | - | 1200 | Huntsville. Ala. |
| 4:30-4:50 | HOCA | 1210 | kilgore, Tex. |
|  | - KUJ | 1370 | Waila Walla. Wash. |
| 4:40-5:00 | -кСМС | 1420 | Texarkana, Texas |
|  | KRNR | 1500 | Roseburg. Ore. |
|  | - | 1310 | Wilson, N. C. |
| 4:50-5:10 | KEEN | 1370 | Seattle, Wash. |
|  | WWTN | 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 | - KFiRO | 1370 | Longview. Tex |
|  | KGEZ | 1310 | Kalispel, Mont. |
| 5:30-5:50 | KBIX | 150 | Muskogee, Okla. |
|  | KFXD | 1200 | Nampa, 1daho |
| 5:40-6:00 | - KFJMi | 1410 | Grand Forks, N. D. |
|  | - KXRO | 1310 | Aberdeen. Wash. |
| 5:50-6:10 | KGY | 1210 | Olympia, Wash. |
| 6:00-6:20 | K1NY | 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 kes with 400 watts power, on two daily schedules. The first transmission is from 1:30 to $1: 45 \mathrm{pm}$, EST, and the second from 8:30 to $9: 30 \mathrm{pm}$, EST. Programs from the shortwave station at Daventry are sometimes picked up and relayed at $8: 00 \mathrm{pm}$.

Reports are requested and will be acknowledged. The address is $\mathrm{Su}-$ perintendent 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. |
| N, En-nay |  |

## The Biography of Julius Twisdile

TO 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 orches. tra 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 loca-
tion 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 re-
sponse 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.

Freguencies 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. I. for the Philippine Islands, anc for the Australian states:

I.C.T., Federal Carifal Territory N.S.W., New South Wales Qsld.. Queensland<br>S. A., South Australia

| 550 | 2 CR | 10000 | Cumnock, N.S.IV, | 1040 | 51'I | 2000 | Crystal larook. S. A. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 560 | 6 WA | 10000 | Minding. W. A. | 1050 | 2 CA | 500 | Canberra, F. C. T. |
| 570 | 2 Y A | 60000 | Welling ton, N. $Z$. | 1060 | 2 SH | 100 | Broken Hill, NS.W. |
| 580 | 3 WV | 10000 | Horsham, Vic. | 1070 | 6 WB | 2000 | Katannom, W. A. |
| 600 | F'JP | 501 | Nournea, New Сrledoula | 1080 | 2AD | 100 | Mackay Qsld |
|  | 77.L. | 1000 | Hobmrt. Tas. |  | 4NKK | 300 | Hoburt Tas. |
| 610 | KZRM | 50000 | Mania, Philipplaes | 1090 | 7 HP | 150 | Auckiand, X. Z. |
|  | 2 FC | 3500 | Sydney, N.S.W. |  | 3LK | 2000 |  |
| 620 | 3AR | 4500 | Melbourne, Vic | 1100 | 4LA: | 500 | Longreach, Qsld. |
| 630 | 4QN | 7000 | Clevedon, Qsid. | 1.00 | 7 LA | 300 | Launceston. Tas. |
| 640 | 5 CK | 7500 | Crystal 13rook, S. A | 1110 | 2VW | 750 | Sydney, N.S.W. |
| 650 | 1 YA | 10000 | Auckland. N. Z . | 1120 | 2 ZB | 1000 | Wellington, $\mathrm{N} . \%$. |
| 660 | 2 DL | 100 | Dubbo. N.S.W |  | 2 ZB 4 BC | 1000 | Brisbane, Qsld. |
|  | 713 U | 100 | Burnle. Tas. | 1130 | 6 ML | 500 |  |
| ¢70 | 2 CO | 7500 | Corowa, N.s.W | 1130 | 6.115 |  |  |
| 680 | 2HIR | 300 | Slngleton, N.S.W. | 1140 | 4 YO | $\begin{aligned} & 500 \\ & 150 \end{aligned}$ |  |
|  | 47 P | 100 | Invercareil, N. Z. | 11.50 |  | 2000 | Dunedth. N. R. <br> Wagera, N.S.W. |
| 690) | 619 F | 35040 | Perth, W. A. |  | 2WG |  |  |
| 700 | 2NR | 7000 | Grafton N.S.W. | 1180 | 2 KM | 200 | Katoomba, N.S.W. |
| 710 | 7NT | 7000 | lielso, Tas. | 1190 | 4 TO | 200 | Townsville, Qsid |
| 720 | 3YA | 10000 | Christchuren, N. Z. | 1170 | 2 NZ | 200 |  |
|  | 6GF | 2000 | Kalgoorlie. W. A. | -1180 | 3に\% | 600 | Melbourne, vic |
| 730 | 5CL | 4000 | Adelaide, S. A | 1190 | 2 CH | 1000 | Sydney, N. S. W. |
| 740 | 2 BL . | 3000 | Sydney, N.S.W | 1290 | 3 Y , | 500 | Christchureli, N. Z. |
| 750 | KGU | 2500 | Honolulu, Hawati | 120 | 5 KA | 500 | Adeiaide, S. A. |
| 760 | 2YB | 100 | New Plymouth, N. Z . | 1210 | 2CiF | 100 | Grafton, N. S. W, |
| 770 | 3 LO | 3500 | Melbourne, Vic. | 1210 | 3 Y 3 | 100 | Warrnamhool. Vle. |
| 780 | KZEG | 1000 | Manila, Phillppines |  | 6 KC | 500 | Kalgoorlie, W. A |
| 790 | 4 ${ }^{\text {VA }}$ | 10000 | Dunedin, N. Z . | 1220 | 4 1 K | 2000 | Oakey, Qsid. |
| 800 | 4QG | 2500 | Brisbane, Qsld. | 1220 | 478 | 1000 | Munedin, N. z |
| 820 | 27H | 65 | Napier, N , Z. | 1230 | 2 NO | 2000 | Newcastle, N. S. W. |
| 830 | 3GI | 7000 | Long ford, Vic. | 1240 | 2 L | 20 | Hastings. N. Z . |
| 840 | 2 YC | 5000 | Wellington, N. Z . | 1240 | 3TR | 1040 | sale, Vic. |
| 850 | 5 IRM | 1000 | Renmark, S. A. |  | 6 IV | 500 | Perth. W. A. |
| 860 | 4AY | 500 | Ayr, Quld | 1250 | 12M | 175 |  |
|  | 7110 | 120 | llobart Tas. | 12 no | 3sR | 2000 | shepparton, Vic. |
| 870 | 2 Gl 3 | 1000 | Syduey, Nis.u. | 1270 | 2s. | 1000 | Sydney. N S. W. |
| 880 | 1 Y | 150 | Auchlalid, V. Z. | 1280 | $\begin{aligned} & 3 \mathrm{AW} \\ & 4 \mathrm{ZC} \end{aligned}$ | 600 | Welbourne, Vic <br> Cronwell, N. Z . |
|  | 2 Xl | 100 | Cooma, N.S.W. |  |  | 20 |  |
|  | ${ }_{6} \mathbf{P}$ R | 500 | Applecsoss. W, A. |  | 4 BK | 500 | JRriebane, Qsid. |
| 900 | KJIL3 | 1010 | Mantar I'. 1. | 1300 | 2TM | 2000 | Tamworth, N. S. W |
|  | 2L.11 | 500 | Liamore, V.S.V. |  |  |  |  |
|  | 27P | 250 | Whirot, N. Z. | 1310 | $\begin{aligned} & 1 Z J \\ & 5 \mathrm{AD} \end{aligned}$ | $\begin{array}{r} 65 \\ 500 \end{array}$ | Auchlund. N. Z. <br> Adelsikle, S. A. |
|  | 7 Cl | 100 | Queenstowns. Tus. | 1320 | KGMB | 1000 |  |
| 910 | 4RK | 2069 | Rockhmmion, Qsid. |  |  |  | Howolulu, Hawall |
| 920 | 7JV | 400 | Suva, Hili | 1330 | $\begin{aligned} & 3 \Omega H \\ & 4 R O \end{aligned}$ | 100 | Swan Hill, Vic. |
|  | 2ZH | 50 | Nelson N N Z |  |  |  |  |
| $1 / 30$ | 3UZ | 600 | Melbourie. Vic. | 1340 | 4Wに | 100 | Warwich. Qsid. |
| 940 | 3Zk | 400 | Greymouth. N. 2. |  |  | 100 | Mount (itubier, B. A. Geftong. Vic. |
| 36 | 215 | 1000 | sydnes Sisw | $\begin{aligned} & 1350 \\ & 1360 \end{aligned}$ | 3GL | 100 |  |
| 9190 | 2ZF | 250 | Pameratori North. N. $Z$ |  |  | 100 | Mildura, Vle. |
|  | 5 DN | 500 | Adeintite, S. A |  | 4 PM |  | lort Moresby, Papua |
| 970 | 3 BO | 200 | Bendigo, Vic | 1370 | $\begin{aligned} & 4 \mathrm{PM} \\ & 2.10 \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | Gummedah, N. S W. |
| 1180 | 2KM | 100 | Kenpsey, N.E.W | 1350 | 4 BH | 1000 | ibrisbane. gadd. <br> Gouburin, N. B. W. |
|  | 2 ZJ | 200 | Gkborre, $\mathrm{N} . \mathrm{Z}$. |  |  |  |  |
|  | 6AM | 2000 | Nortlem, IN. A. | 13:4) | $\begin{aligned} & 3 \mathrm{CN} \\ & 4 \mathrm{CA} \end{aligned}$ | $\begin{aligned} & 200 \\ & 200 \end{aligned}$ | Catrus, Qsid. |
| $\begin{array}{r} 900 \\ 1000 \end{array}$ | 2GZ | 2000 | Orambe VS.W. |  |  | $\begin{aligned} & 100 \\ & 250 \end{aligned}$ |  |
|  | 3UL | 200 | Warragul, Vic. | 1400 | KHBC |  | Fremantie, W. A. <br> Hilo. Hawail <br> Paimeraton North, N. Z |
|  | 4GR | 500 | Toownomba, (esld. |  |  | 200 |  |
| 1010 | 3 ILA | 750 | Hamilton, Vic. |  | $4 \mathrm{MB}$ | 100500 | Newcistle. N. S. W. |
|  | 42D | 85 | Dunediu, N. F . | 1410 |  |  |  |
|  | 4ZM | 60 | Dunedin, N. Z . | 1420 | $\begin{aligned} & 3 \mathrm{XY} \\ & 2 \mathrm{Wr} \end{aligned}$ | 600310 |  |
|  | '2KY | 1000 | Sydney. N.S.W. | $\begin{aligned} & 1420 \\ & 1430 \end{aligned}$ |  |  | Wollongong, X. B W. |
| 10:30 | 3DB | 600 | Melbourne. Vic. |  |  |  |  |

Tas., Tasmania
Vic., Victoria
W. A., West Australia

|  | $\begin{aligned} & 3 Z B \\ & 4 \mathrm{VL} \end{aligned}$ | $\begin{array}{r} 1000 \\ 50 \end{array}$ | Charleville. Qsid. |
| :---: | :---: | :---: | :---: |
| $14+0$ | $\begin{aligned} & 2 Q N \\ & 4 I P \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | Denilicuin. N. S. W. Ipswich, (estd. |
| 1450 | $\begin{aligned} & 4 Z R \\ & 5 \ I U \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | Romet, Qsid. <br> Murray Bridge, S. A |
| 1460 | 7 UV | 300 | Ulverstone. Tas. |
| $1+70$ | $\begin{aligned} & 2 M W \\ & 2 R G \\ & 3 Z M \end{aligned}$ | $\begin{array}{r} 100 \\ 50 \\ 60 \end{array}$ | Murwillunbah, N. S. W. Griffith, N. S. W. Christehureh, N. \% |
| 1480 | $\begin{aligned} & 2 A Y \\ & 4 B G \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | Albury, N. S. W. Bunitabery, Qsid. |
| 144) | $\begin{aligned} & 2 \mathrm{BE} \\ & 3 M \mathrm{MB} \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | Bega, N. S. W. Birchin. Vic. |
| 1.500 | $\begin{aligned} & 2 \mathrm{BS} \\ & 3 \mathrm{AK} \end{aligned}$ | $\begin{array}{r} 100 \\ 200 \end{array}$ | Bathurst, N. S. W. Melbourris. Vic. |
| 1511 | YDA | 500 | Tandjongpriok. Java, N. E. I |

## Arctic and Jungle Linked

A
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 memhers 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 thenugh station VP3THE, and the MacGregor Expedition through OX2QY. Roth these stations have been heart many times in the 20 moter 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 kes with 10,200 watts, signs off at midnight. LR5 on 830 kes with 29 kilowatts, signs off nightly at $11: 45 \mathrm{pm}$; 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, Euenos Aires.

Other Argentine stations which should be heard this winter are LR3 on 950, LF2 1 on 1070, LS2 on 1190 , and LS8 on 1230.

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

LR1, "Radio El Mundo," is per haps 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 $11: 30 \mathrm{pm}$, EST.

LS $2,1190 \mathrm{kcs}$ and 30,000 watts, closes down at midnight. The owner is Teodoro Pietro, Bolivar 1356, Bucnos Aires.
"Radio Stentor," LS8, works on 1230 kes with 15 kilowatts, signing off at $11: 30 \mathrm{pm}$ 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
KDH KDON KFRC KFXM KGH 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 Game statious as at Midnight．

E－7：30 a．m．，C－6：30，M－5：30，P－4：30 Michigan Radio Network，Daily． WX：Z
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 WIIP WIBX WJAS WJNO WKBW WLHZ WMAS WMBR WMMN゙ WNBF WOLO WORC WPAR WPG WPRO WQAM WREC WRVA WSBT IISJS

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 CES Press Radio，Sat．and Sunday CKAC FLRA KMOX WABC WA UC WAIMI WALA WCHS WCOC WDAL WDIHJ WDBO WEEI WESG WPBL WFBM WHEC WHIO WIBN WJNO WJR WJSY WLIBZ WMAS WMIBR WMAN WNBF WOKO WORC WPAR WQAM WREC WSVA WSFA WSIS 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 Radio，Sunday To statious available
NBC－Red－Press Radio，Sumday To stations avalable．
E－Noom，C－11：00 a．mı．，M－10：00，P－ 9：00
Michigan Radio Net work，Daily
W゙ANI WRCML WELL WFDMM WIBM WJIMWにZOWOODWXYZ

E－12：15 p．m．，C－11：15 a．m．，M－10：15， P－9：15
CBS Edwin C．Hill，Montay tinrough Friday
にF：B kFll K（ikO KLRA KMBC KわOS KNOW KOM：KRLD KRNT
 WARC WАCO WADC WALA WHBM W゙円IK；WHNS WBRC WBT WCAO WCAU WCOO WCHS WCOA WCOO WDAE WIDHJ WJOBG WIONC WTOD WHRE WIEI WEBL WGR WGST WHAN WIEEC WHIO WHP WIBS W上心 WJR W．SsV WhRB WKBN WKRC WLAC WIAZ WMAS WMAZ

WMBD WMBR WMMN WNAX INBF WNOX WOC WOKO WORC WIG WPRO WQAM WRISC WRVA 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 KTIJL KUKH WABC WADC WHBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEEI WFISL WFBM WGST WHAS WHEC WHIO WISN WJAS WJR WJSV WKBB WKBW WKRC WLAC WLBZ WMUSR WNRF WOKO WORC WPRO WQANI 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 Den 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
W ASH WBCA WELL WFDM WIMA W．JLM WKZO WOOD WSYZ
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 CES Monday，Wednesday，Friday KFBB KPPY KLZ KMBC KNX FOIN KOL KOY KSFO KSL KVI

E－6：25 p．mı，C－5：25，M－4：25，P－3：25
CES Press Radio，Thurs．and Sat A vailable to entire Network
E－6：30 p．m．，C－5：30，M－4：30，P－3：30
CBC－Sunday only
To National Networt
CBS Press Radio．Mon．，Tues．，Fri． kFll KlRA KNOW KOMA KSCJ KSL KTRH KWKII WABC WACO WADC WAIね WALA WHSC：HBRC WC（\％WCOC WDAE WDHJ WDFBG WDOU WHEC WISN WJAK W．SNO WJK WたBB WKRUW W゙はB\％WMAS WMIBR WOQ WORC W゙DAR WQARI WEEC WSFA WSJS WTAQ WTUC WWVA

NBC－Red，Press Radio，Wrehdays
To all stations available
Elue Saturday only
To all stations a vailable

## E－6：40 ；，m．，C－5：40，M－4：40，P－3：40 <br> CBS Wetrarsday only <br> To all stations ayatlable

E－6：45 p．m．，C－5：45，M－4：45，P－3：45 NBE－Btue Lowell Thomas，Mon． through Fri．
CRCT KDKA WBAL WHZ WHZA WEAN WLBAR WFLA WHAM WTOD WJAN WJZ WLH WMAL WOOD WRTD WSi D W゙\＆U N゙ W゙Vに WTAA WCYZ
Don Lee Sys．，Mon．through Fri． Same stations as at Midmight


#### Abstract

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 B oake Carter，Mon．，Wed．，Fri． KFAB KトH KIRA KMBC KMION KNOW KOMA KKLD KRNT KTRH KTSA KTUL WABC WADC WBISM WBNS WHRC WBT WCAO WCAU WCCO WDAE WDHO WDOD WDRC WEEL WFAM WFBL WGR WGST WHAS WHBC WHIO WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMED WABR WNOK WOKO WORC WPRO WQAM WREC WRVA WHL


E－8：00 p．m．，C－7：00，M－6：00．P－5：00
Blue Monday，Thursday
KDKA KOLL KSO KWK WBA！． WBZ WBZA WCKY WEAN WER：R WFIL WIIAM WHK WICC WJZ WLS WMAL WMT WREN WSYR WTCN WXYZ

E－8：30 p．m．，C－7：30，M－6：30，P－5：30 Eiue March of Time，Thursday KDK゙A KECA KFIRN KFBK KIPEL KFSD KGA KGO KJR KLO KMJ KOIL KSOKいGKWKKざYZ WA！る WBAL WIBZ WHZA WCKY WCOL WEBK WFIL WHAA！WJZ WMAL WAIPS WMT WOWO WREN WSPD WSIR WTCN WNYZ
E－9：45 p．m．，C－8：45，M－7：45，P－6：45
Don Lee System，Daity
Same stations as at Midnight
Michigan Network，daily
WASII WRCM WLEL WHDMIWIBA WIINI WKZO WOOD

E－10：00 p．m．，C－9：00，M－8：00，P－7：00 Blue Tuesday．Wednesday
KDKA KOIL K゙SO KWK WBAI， WBZ WHZA WCKX WEAN WEBR WFJL WHAN WHK WICC WJZ WLS WMAL WMIT WOWO WREN WSPD WEYR WTCN WNYZ
E－10：15 p．m．，C－9：15，M－8：15，P－7：15 Michigan Radio Network，Daity WJYZ

E－10：45 p．m．，C－9：45．M－8：45，P－7：45 CBC Daidy
To National and French Net works Red Friday onty
LDEL KFI KGW FiilQ KOOA KONO
 Wr＇SH WDAE WDEL，WEAF WJBR WGY WTRE WJAR WTW WMA！ WNaC WOW WRC WTAG WTAM WTICWWJ
E－11：00 p．m．，C－10：00，M－9：00，P－8：00 Blue，Sunday．Press Radio
Avaiatile to Eintire Network
E－11：15 p．m．，C－10：15，M－9：15，P－8：15 CBS Boake Carter，Mon．，Wed．，Fri． Kん户Y KLZ KNX KOIN KOL KsFO KSL KVI WEPM
E－11：30 p．nr．，C－10：30，M－9：30，P－8：30 Red－Sunday onty
Fo all stittorns atyathale

## 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 quickiy 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 WFIA WIOD WJAK 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 WEFI WFBL WGR WHEC WHK WJAS WJR WJSV WKRC WOKO WSPD WTOC WWVA

## R－Amos＇n＇Andy

KSD KSTP KYW WBEN WCAE WCSH WEAF WFBR WGY WIG WJAR WLW WNAC WRC W＇TAG 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 にPRC KSTP KTBS KTIIS KVOO KYW WBAP WBEN WCAF WCKY WCOL WCSH WDAF WDAY WEAF WEBC WFAA WFBR WGBF WGY WHO WIBA WIRE WJAR WKY WMAQ WNAC WOAI WOOD WOW WRC WTAG W＂TAM WTIC WTMJ

## E－7：30 p．m．，C－6：30，M－5：30，P－4：30 B－Lum and Abner <br> WBZ WBZA WENR WJZ WLW

 WMC WSA WSYRM－The Lone Ranger
WFIL WNHF WSYR WOR WKYY\％
E－7：45 p．m．，C－6：45，Ni－5：45，P－4：45
C－Boake Carter
K\BC KMOXKOMA KRID WABC WBBM WBT WCAV WCCO WORC WEAN WFBL WCR WHAS WHK WJAS WJR WJSV WKIRC IVNAC
E－8：00 p．m．，C－7：00，M－6：00，P－5：00 C－Horace Heidt and Orcinestra KDB KERN KFAR KFBK KIH KFPY にFRC KGHKHJ KLRA KLZ KMBC FMJ KMOS KOIN KOL KRI」D KRNT KSI，KTRI KTSA KTUL KVI KWG WABC WBBM ABRC WBT WCAO WCAU WCCO WDRC WIFIS WFRM WCR WGET WHAS WHK WJAQ WJK WJSV WKRC WLAC WMBR WNAC WNAX WOKO WREC WWL

## R－Burris and Allen

CRCT KYW WHEN WCAE WCAC

WCSH WEAF WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WJAX WIW WMAQ WNAC WPTE WRC WRVA WSOC WTAG WTAM WTAR WTIC WWJ

## B－Gen．Hugh Johnson

EDKA KOTL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WREN IVSYR WTCN WXYZ

## E－8：30 p．m．，C－7：30，M－6：30，P－5：30

C－－Pick and Pat
KFAB KMBC WABC WADC WBEM WBT WCAO WCAU WDRC WEAN WFBL WGR WGST WIIEC WIIK WHP WICC WJAS WJR WJSV WKRC WLBZ WMAS WNAC WOKO WORC WSPD

## R ．－．Voice of Firestone

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

## B Campana＇s Grand Hotel

KDKA KPVEI，KTI KFSD KGA KGO KGW KJR KLO KOIL．KSO KWK WIMAL WAZ WHZA WCKY WEAN WWBR WFIL WHAM WHK WICC WJZ WIS 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 KVOU KWK KNYZ WBAL WBZ WBZA WEAN WEIBR VENR WFIL，WHAM WJTN WJZ WIS WMAL WREN WRTD WSPI WBYR WTCN WXYZ

## C－Lux Radio Theater

rFFR CKAC KFAB KFM KFPY KLRA KLZ KMBC KMOX KNOW KNX KOH KOIN KOL KOMA KRLD KRNT KSFO KS1，KTRH KTSA KTUL KVI WABC WADC WBBM WHNS WHEC WBT WCAO WCCO WDAE WDBJ WDRC WEEI WFHL WHBM WGAR WGST WHAE WHEC WHIO WIBX WISN WJAS

WJR WJSV WKBW WKRC WLAC WMAS WMBD WNAX WOKO WORC WPRO WQAM WREC WRVA WWL．

## M－Elder Michauk

Available to entire network

## R－Fibber McGee and Molly

KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAF WCOI，WCSH WDAF WDAY WWAF WEIC WFAA WFHR WFLA WGY WHO WIBA WIOT WIRE WIS WJAR WJAX WJDX WILW WMAQ WMC WNAC WOAI WOOD WOW WPTF WRC WSIB WSM WSMB WSOC WSUN WTAG WTAM DTAAR 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 CHCT KDYL KFI KGiHI， KGIR KGO KGW KHU KOA KOMO KPRC KSD KSTl KVOO KYW WAVE WBEN WCAE WCSH WDAF WEAF WFAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAS WKI WLW WMAQ WAC WNAC WOA！WOW WPTF WRC WRVA WSB WSM WSMR WTAG WTAM WTAR WTIC WTMJ WHJ

E－10：00 p．m．，C－9：00，M－8：00．P－7：00 R－Contented Program
CFCF CRCT KDYI，KFI KGW KHQ KOA KOMO KPO KPIUC にふD KざW WBEN゙ WCAE WCSH WTAT WEAF WEEI WFBR W\＆LA WGY WHO WIOD WIS WJAR WJAS WK？ VMAG WMC WOAI WOW WPTF WRC WRVA WSB WSM WTAG WTAM WTAR WTIC WWJ WHNG
B－Warden Lewis E．Lawes
KTOKA KECA KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WBAL WBZ WBZA WCKY WEAN WEBR WENK WFIL WHAM WHK WICC WJZ WMAL WAT WOWO WREN WSPD WSYR WTCN WXYZ

## C－Wayne King and Orchestra

KDB KKRN KFAB KPBK KFPY KFRC KGB KHJ KL\％KMBC KMJ KMOX KOIN KOL KHNT KSL，KVI KWG WAAB WABC WATC WBBM WBNS WBT WCAO WCAU WCOO WDRC WEAN WFBL WFHM WHAS WHK WIBW WJAS WJR WJSV WKBW WKRC WOKO WNPD 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 K（INC KQO 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 KGDMI 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 KFAP KFBK KFPY KFIRC KGB KHJ KLRA KI．Z KMBC KMOX GOIN KOL KOMA KRLD KRNT KSL KTRII KTSA KVI WBBM WBRC WCCO WFBM WGST WLAC WREC WWL
R－Amos＇$n$＇Andy
KDYL KliRN KFiBK KFI KGW KHQ KMJ KOA KOMO KPO KPRC KSD KWG WDAF WFAA WHO WIRJ，WKY WMAQ WMC WOAI WOW USE WSM WSME

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

## 6－Lum and Abner

KECA KERN KEX KFBK KFSD KGA KGO KJR KMIJ KWG

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

## TUESDAY

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 KOII，KOMO KPO KSO KWK WBAL， WBZ WBZA WCKY WENR WFII， 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 KFII KLRA KMOX KNOW KDMA KRLD KRNT KTLRH KTSA KWKH wABC WADC WBBM WRNs WBT WCAO WCAU WCCO WCHS WDAE WDBO WDOT WIORC WEFII WFBL WGAR WGBI WGST WHAS WHEC WHIO WIBW WISN WJAS WJR WJSV WKRC WIAC WMIAS 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 KYPY KIRO KLZ KMBC
KMOX KNX KOIN KRNT ESUO

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 WJDK WKY WLW WMAQ WMC WNAC WOW WPTF WRC WRVA WSB WSM WSMB wSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC
## B－Husbands and Wives

KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WABY WBAL WBZ WBZA WCKY WEAN WHBR WFIL WGAR WHAM WICC WJZ WLS WMAL WMT WREN WSYR W゙XYZ
C－Edward Robinson；Claire Trevor CBM CFRB KFAB KFH KFPY KIlRO KLRA KLZ K゙MBC K゙MOX KNOW KNX KOIN KOMA KRLD KRNT KSきO KSL KTRH KTSA KTUL KVI WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDH3J WDRC WEEI WFBI．WFBM WGAR WGR WGST WIIAS WHEC WHIO WHBX WISN WJAS WJER WJSV WISRC WIAAC WMAS WMBD WNAE WOKO WORC WPRO WQAM WREC WIVVA WWL

## E－8：30 p．m．．C－7：30，M－6：30，P－5：30

 C－Al Jolson；ParkyakarkusCFRB CRCX KFAB KFH KLRA KMBC KMOX KNOW KOMA KRLD KRN＇T KTRH KTSA KTUL WABC WADC WBBM WHNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WIDRC WEEI WFBL WFBM TVGAR WGR WGST WIIAS WHEC WHIO WIBX WISN WJAS WJR WJSV WKRC WLAC WMAS WMIBD WNAX WOKO WORC WPRO WQA．I WREC WRVA WUL

## R－Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WERC WEEI WFBR WGY WHO WHIO WIBA WIRE WJAR WJDE WKY WMAQ WAC WOAI WOW WRC WSB WSA WSMB WTAG WTAM WTIC WTMJ WWJ

## B－Edgar Guest，It Can Be Done

 KDKA KOIL KSO KWK WBAI WBZ WBZA WFIL WGAR WHAM WJZ WIA WLW WAAL WMT WIREN WSYR WXYZE－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 KTUI， KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDI3J WDBO WI NC WDOD WDRC WEAN WFBL WFRM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBH WKBN WKBW WKRC WLAC W LBZ WMAS WMBD WMBG 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 WHEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WIRE WJAR WMAQ WOW WRC WTAC WTAM WTTC WWJ

E－9：30 p．m．，C－8：30，M－7：30，P－6：30 C－Jack Oakie＇s College
KFAB KF！KFPY KGKO KIIRO KLRA KLZ KMBC KMOX KNOW KNX KOIN KOMA KOY KRI．I KRNT KSCJ KSFO KSL KTR\＆ KTSA KTUHL KVI KVOR KWKII WABC WACO WADC WALA WBBA WBIG WBNS WBRC WBT WCAO WCAU WCCO WCHS WDAE WDE， WDBO WDNC WDOD WDRC WEEI WFBL WFBMI WGAR WGAT WHAS WHEC WHIO WRP WIBW WIBN WISN WJAS WJR WJSV WKlBr WKHN WKISW WKR（：WI．AC WIB7． WMAS WMRD WMER WNAX WNBI WNOX WOC WOKO WORC WPG WPRG WQAM WREC WRVA WSBT WNFA WATS WTOC WWI．

R－Mollywood Mardi Gras
CFCF CRCT KDY゙L KFI K（iHl． K（iW KHQ KUA KOMO KPO KPRC KSD KSTP KTAR KTES KVOO KYW WAVE WBAP WBEN WCAE WCOI，WCSC WCSH WDAF WDEI． WEAF WEBC WFBR WFLA WGY WHO WIIAA WIOD WIRE WIS WJAR WJAS WKY WMAQ WMBG； WMC WNAC WOAI WOOD WOW WRC WSB WSM WSMB WSOC＇ WTAG WTAM WTAR WTIC WTMJ WW＇J

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 KOLL KSO KWK WBAL WBZ WBZA WCKY WEAN WEBR WFIL WHAM WHK WICC WJZ WLS WMAL WMT WOWO WREN WSI＇I WSYR WTCN WXYZ

E－10：30 p．m．，C－9：30，M－8：30，P－7：30 M－Witch＇s Tale；Drama Avallable 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 WVJ

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 KBFO KSI，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 KSI， 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 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 - Hobby LobbyKMBC WABC WADC WRIG WIBNS WBT WCAO WCAU WCHS WDAE WLHBJ WDBO WDRC WEEI WFBL WGAR WGBI WGR WHEC WHIO WIBX WJAS WJR WJSV WKBN WKRC WLBZ WMAS WMBR WOKO WORC WI'RO WQAM WRVA WWVA
R - Uncle Ezra, See Monday
E-7:30 p.m., C-6:30, M-5:30, P-4:30 E-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 - Cavalcade of AmericaKDB KERN KFAH KFBK KFPY KFRC KGi3 KHJ KLZ KMBC KMJ KMOX KOIN KOL KRID KRNT KSL KVI KWG WABC WBBM WBNS WCAU WCCO WDRC WEAN WFBL WFIM WGR WHAS WHEC WHK WJAS WJR WJSV WKRC WLAC WMBG WNAC WOKO WTOC WWL

## 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 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 WHAM WHK WICC WJZ WLS WMAL WMPS WMT WOWO WREN WSGN WSPD WSYR WXYZ

## E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Eddle 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 WIIEC WHIO WHK WHP WIBW WIBX WJAS WJR WJSV WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAX WNOX WOKO WORC WOWO WPG WPRO WQAM WREC WWL

## R - Wayne King, See Tuesday <br> B - Skolsky from Hollywood

KDKA KECA KFEL KFSD KGA KGO KGW KJR KLO KOIL KSO KWK WBAL WBZ WBZA WCKY WEAN WEISR WFIL WHAM WHK WICC WJZ WIS 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 KDH KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KGMB KHJKLK゙A KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBAI WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBG WDBO WDNC WTOD WDRC WEAN WFBL WFBMI WFEA WGST WHAS WHEC WHK WHP WIBW WHBX WICC WISN W,JAS W.JR WJSV WKBH WFBW WKRC WLAC WLBZ WAIAS 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 KS'ГP KTBS KTHS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WVAF 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 KEIRN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KIZ K\IBC KMJ KMOX KOIN KOL KOMA KIRLD KINT KSL KTRH KTSA KTUL KVI KWG KWKH WABC WACO WBBM WBNS WBRC WB'T WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSV WKBW WKRC W LAC WLBZ WMBG WMIBR WNAC WOKO WORC WOWO WQAM WREC WTOC WWL
R-Your Hollywood Parade
KDYL KERN KFBK KFI KFYR KGBX KGHL KGIR KGNC KGU KGW KHQ KIDO KMJ KOA KOB KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KWG KYW WAPI WAVE WBINN WCAE WCSC WCSH WDAF WDEL WEAF WEBC WFAA WFBC WEBR WFEA WFLA WGL WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMBG WAC WNAC WOAT WOOI WORK WOW WPTF WRC WSB WSM WSAB 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 KDAI KFAB KFH KFPY KGKO KIRO KLZ KVOX 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 WIIAC WMIBD WNBF WNOX WOC WREC WSBT WSFA WWL[^0]E-11:15 p.m., C-10:15, M-9:15, P-8:15
C - Boake Carter, See Monday
B - Lum and Abrer, See Monday
E-11:30 p.m.. C-10:30, M-9:30, P-8:30 C Eddie Cantor; Deanna Durbin KFBB KFPY KGVO KIZ KNX KOH KOIN 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 K\BC KMOX KNOW,KOMA KRLD KRNT KSCJ KTRH KTSA KTUL, WABC WBBM WBNS WCAO WCAU WCCO WDAE WDBO WIHRC WEEI WFBL WGAR WGR WHAS WHEC WHEIO WHP WIBX WISN WJAS WJR WJSV WKRC WAIBD WMBR WOC WOKO WPRO WQAMI

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C- Kate Smith; Henny Youngman CFIRB CRCM KDAL KFAB KFH KGKO KIRA KMIRC 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 WIAC WLBZ WMBD WMBR WNAX WNOX WOC WOKO WORC WPRO WQAM WRVA WREC WSFA WTAQ WWL
R - Rudy Vallee's Variety Hour CFCF CRCT KDYI 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
KIJKA KERN KECA KFBK KFEL KFSD KGA KGO KJR KLO KMJ KOIL KSO KWGKWK KXYZ WABY WBAL WBZ WBZA WCKY WCOL WEBR WFIL WHAN WJZ WMAL WMPS WMT WOWO WREN WSPD WSYR WTCN WXYZ

## E-9:00 p.m., C-8ı00, M-7:00, P-6:00

 C - Major Bowes' AmateursCFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRID 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 WFBI, WFBAI WFEA WGST WHAS WHEE WHK WIIP WIBW WIBX

## THURSDAY（Continued）

wicc wisn wjas wir wisv WKBN WKbw whrc wlac wlbz WMAS WMBD WABG WMBR WMMN WNAC WNAX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSIS WSPD WTOC WWL

## R－MGM Program

CRCT KDYL KIEIRN KFibK KFI KFYR KGHL KGIR KGNC KGW KMJ KOA KOMO KPO KPRC KSD KSTI KTBS KWG KYW VAPI WAVE WBAI WBEN WCAE WCSH WDAF WDAY WEISC WRBR WFLA WGY＇WIIO WIBA WIOD WIS WJAR WJAX Whox WKY WLW Watag WMBG WAC WNAC WOAI WOOD WOW WPTF WRC WSB WSM wSMB WSOC WSUN $\begin{gathered}\text { WTAG WTAM }\end{gathered}$ WTAR WTIC WTMJ WWJ WWNC

E－10：00 p．m．，C－9：00，M－8：00，P－7：00 R－Bab Burns；Bing Crosby CFCF CRC＇I K゙DYI，KFI KFYR KGW KH（）KOA KOMO KPO KPlRC KSD KATI KTAR KTBS K＇THS KYOO KYW WAYE WBAP WREN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAK WJAS WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WhVA wSB WSM wsMis WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

## E－10：30 p．m．，C－9：30，M－8：30，P－7：30 C＂We，The People．＂ <br> KFI＇KIRO Kıl，KNX kOIN KOY

 KSFO KSI KVIE－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 KFBR KFPY KGVO KIRO KLZ KNX KOIN kOY KSFO KSL KVI KVOR

## 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 MondayE－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
KDI3 KERN KFAB KFBK KFPY KFRC KGB KIJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRNT KSL KVI KWG WABC WHBM WHNS WBRC WBT WCAO WCAU WCCO WDRC WEAN WIBL WFRM WFHIR WGST WHAS WHK WJAS WJR wJSV WKRC waAS WMBG WNAC WOKO WWL

## R－Cities Service Concert

CRCT CFYR KOA KPRC KSD KSTP KTIBS KTHS KVOO KYW

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

## E－8：30 p．m．，C－7：30，M－6：30，P－5：30 <br> C－Hal Kemp；Alice Faye

KFAR KFH KGKO KIIRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRII KTsA KTUI．KWK日 WARC WACO WADC W ALA WBRAI WHIG WInNS WBRC WBT HCAO WCAU WCCO WCOA WDALE WJBJ WDBO WDNC WIOD WDRC WEEI WFBI， WFIBM WFEA WGR WGiST WHIAS WIEEC WHIO WHK WII WIBW WInX WISN WJAS WJR WJSV WKISN WKRC WIAC WLBZ，WMAS WMIBD WMBG WMBR WMMN WNAX WNBF WNOX VOC WOKG WORC WOWO WPG WPRO WQAM WREC WSFA WSJS WSPD W WOC WVL
B－Death Valley Days
KDKA KIYYI，KPI KGW KHQ KOtL KOMO KPO KSO KWK WBAL WR\％， WBZA WFIL WGAR WHAN IV，J／ WLS WLW WMAL WMT WREN WSYR WXYZ

## E－9：00 p．m．，C－8：00，M－7：00，P－6：00

 C－Hollywood HotelCFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC ǨGB KHJ KLRAKLZ KMBC IXMJ KMIO KOIN KUL KOMA KIRLD KRNT KSCJ KSL KTRもIKTVA KTUL KVI KVOR KWC KWKH WABG WADC WBIM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WIDBO WIDIRC WEAN WFBL WFHM WFEA WGST WHAS WHEC WHE WHP WIBW WIBX WICC WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WABD WMBG WMBIR WNAC WNAN WNOX WOKO WORC WPG WQAM WREC WSPD WWL
R－＇Frank Munn；Abe Lyman KSD KYW WBEN WCAE WCSI WDAF WEAF WEEI WFBR WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

## B－Pontiac Varsity Show

KARK KDKA KECA KEIRN KFBK KFEL KFSD KFYR KGA KGH！ KGHI，KGIR KGNC KGO KGW KJR KLO KOB KOIL KPRC KSD KTAR KTBS KTHS KWG KW＇ WAPI WAVE WBAL WBZ WHZA WCSC WDAY WEAN WEBC WEBR WFAA WFBC WFIL WFLA WHAM WHK WICC WIOD WIS WJAX WJDX WJZ WKY WLS WLW WMAL WAC 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 WCSII WEAF WEEI WFRR WGY WHO WIIO WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

## B－Tommy Dorsey＇s Orchestra

 KARK KDKA KECA KFSI KGA KGO KJR KLO KOIL KPRC KSO KTBS KTHS KVOD KWK WABY WAVE WBAL WBZ WRZA WCKY WCOL WDSU WEAN WEIBR WENRWFAA WFIL WFLA WHAM WHK WIBA WICC WIOD WIS WJAX WJZ WKY WMAL WMPs WMT WOOD WOWO WPTE WREN WRTD WSGN WSA WSPD WEOC WSUN WSYR WTAR WTCN WTMJWWNC WXYZ
E－10：00 p．m．，C－9：00，M－8：00，P－7：00 C－Frank Crumit；Kitty Carlisle
KDAL KFAB Kl゙ßB KFH KIPY KGK゙O KGLO KGVO KiRLA KLZ KMOX kNOW kNX KOH kifiN KOI FONA kOY KRID KRNT hSCJ KSFO KSL KTRH N゙TSA ETUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WHIG WHNS WBRC WBT WCAO WCAU WCCO WCIIS WCOA WGOC WDAE WDJJ 以゙DßO WINNC WDOD WWねC WLEI WEOA WFBL WFBM WGAR WGBI WGST WHAS WHEC WHIO WHI WIBV WIBX WISN WJAS WJNO WJR WJSV WKRB WKBW WKRC WLAC WLBZ WMAS WABD WMRR WMMN WNIBF WNOX WUC WOKC）WORC WPAR WPG WPHO WQAM WREC WRVAVSBT WSFA wsJS WTUC WWI．

## R－First Nighter；Drama

KDYL KFI KFYV KGW KIHQ KOA KOMO にIア KPRC KSD KSTP KTBS KTHS KYW WAVE HIEN WCAE WCSI WDAF WDAY WEAF WERC WHEI WFAA WFBR WFIA WG：WHO WIBA WIOD WIS WJAR WJAX WJDS 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 IVBEN WCAE WCSH WDAF WDRI．WEAF WFBR WGY WIBA WIRE WJAR WI．W WMAQ WNAC WOW WRC WTAG WTAM WTIC WTAJ 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 KPOKSI KSTP KYW WBEN WCAE WCSH WDAF WDEL WEAF W＇FHK WGY WIRE WJAR WIW WMAG WNAC WOW WHC 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 KOll KOIN KOL，KSIO KSI． KVI KVOR

## SATURDAY

E－7：00 p．m．，C－6：00，M－5：00，P－4：00 C－Saturday Night Swing Club Avallable 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 WEZ WHZA WGY WHK WJZ WMAQ

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

 C - Your Unseen FriendWABC WADC WBBM WCAU WEEI WFBL WGAR WHEC WHP WJAS WJR
R - "Believe-lt-or-not." Ripley
KANS KDYL KFYR KCNC KOA KPRO KSD KSTP KYW WAPI WAVE WBAP WBEN WCAF WCSH WIAAF WDAY WDEL WEAF WEBC WFBC WFBR WGY WHO WIBA WIRE WJAR WKY WLW WMAQ WMBG WNAC WAC WOAI WOOD WOW WPTF WRC WSI WSMB WSOC WSPD WTAG WTAM WTAR WTIC WTMMJ WWJ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C-Johnny Presents Russ Morgan KFAB KFH KMRC KMOX KIRNT WARC WADC WBBM WBIG WRNS WHT WCAO WCAU WCCO WCOA WDRC WEEI WFBI. WFBM WGR WGST WHAS WHEC WHIO WHK WHP WISN W.JAS WJR WJSV WKRC WAHBD WMBG WNBF WOC WOKO WPRO WSBT WWVA
R - Jack Haley; Virginia Verrill KDYL KGNC KOA KPRC KSD KSTP KYW WAPI WAVE WBAP WBEN WCAE WCSII WDAF WIEL WEAF WEBC WFBC WFBR WGY WHO WIBA WIRE WJAR WKY WLW WAAQ WMBG WMC WNAC WOAI WOW WPTE WRC WSB WSMB WSOC WSPD wTAG WTAM WTAR W'IIC WTMJ WWJ

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

 C-Prof. QuizKDB KERN KFAB KFBK KFPY KFRC KGB KHJ KIARA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRID KRNT KSL KIUH KTSA KVI KWG WABC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDBO WDRC WEAN WFBL WFHM WJAS WJR WJSV WKRW 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 WJAK WJDX WJZ WKY WLS WMAL WMC WMT WOAI WOOD WPTF WREN WRVA WSB WSMB WSOC WSUN WSY゙R WTAR WWNC WXYZ

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

## C... Saturday Niaht Serenade

KFAB KFH KFPY KGKO KLRA KLZ KMBC KMOX KNOW KNX KOIN KOL KOMA KRLD KSFO KTRH KTSA KTUL KVI KWKII WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBO WDOD WEEI WFBL WFBM WGAR WGST WHAS WHEC WJAS WJR WJSV WKBW WLAC WMBI) 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
KERN KFAB KFHK KFH KFPY KFRC KGR KGKO KGMB KHJ KLRA KI.Z KMBC KMJ KMOX KOII KOIN KOL KOMA KRLD KRNT KSCJ KSL KTHH KTBA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDHO WDAC WIDOD WDRC WEAN WFBL. WFBM WFEA WGST WHAS WHIC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBW WKRC WIAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNON WOC WOKO WORC WPG WQAM WREC WSRT WSFA WSJS WSPD WTOC WWL WWVA

## R - NBC Symphony Orchestra

## Available to entire Red and Blue

 NetworkE-11:00 p.m., C-10:00, M-9:00, P-8:00 B - National Barn Dance
KDYL KFI KFSD KFYR KGil!. 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 K(iVO KIRO KLZ KNX KOIN KSFO KSL KVI KVOR

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C -- Professor Quiz
KFBB KFPY KIRO KNX KOH KOIN KOY KSFO KSI, KVI
R-"Believe-It-Or-Not" Ripley
KERN KFBK KFI KGW KHQ KidJ KOMO KPO KWG

## SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30 C - Major Bowes' "Family"
CFIRB KERN KFAB KFBH KFBK KFH KFPY KFRC KGB KGVO KMBC KOH KOL KIRLD KSL KTRII KTSA KVI KVOR KWG KWKH WABC WACO WADC WALA WANS WBRC WCAO WCCO WDAE WDRJ WDBO WDNC WESG WFBL WFEA WHAS WHK wIBX WJAS WJR WKRC WIBZ WMBD WMBR 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 KFII KFPY KFRO KGB KLZ KOH KOI. KRLD KSL KTRHKTSA KVI KVOR KWG WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCCO WDAE WDBJ WIDBO WESG WFBL WFEA WGR WIIAS WICC WJAS WJR WKRC WLAC WMBR WAMN WOC WOKO WORC WQAM WSBT WSJS WSPI WTOC
E-1:00 p.m., C-Noon, M-11:00 a.m., P-10:00
C - Church of the Alr
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 W DRC WESG WFRL WFAM 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 KMHC K.MOX KHNT 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 n.m.

B - Magic Key of RCA
CFCF CRCT KDKA KDYL KFI KFYR KCIU KGW KHQ KOA KOII. KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL, WHZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKI WMAL WMC WMT WOAI WPTF WIREN WRVA WSB WSM WSMB WSOC WSYIR WTAR WTMJ WW NC WSyZ

## C - The Fun Bug

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

E-2:30 p.m., C-1:30, M-12:30, P-11:30 C - Jean Hersholt, "Dr. Christian." CFRB KFAB KFII KMHC KMOX KNOIV KOMA KRLD KRNT KSCJ KTRH K'TSA KWKIF WABC: WAIC WHBM WBNS WRRC WRT WCAO WCAU WCCO WCILS WDAE WDBO WIDRC WEEI WFBI. WFBM WGAR WGST WHAS WHEC WHIO WHI WIBW WJAS WJR WJSy WKRW WKRC WLAC WIBZ WMAS WMIBR WOKO WORC WPRO WQAM WREC WRVA WWL
E-3:00 p.m., C-2:00, M-1:00, P-Noon C - N. Y. Philharmonic
CFRB CKAC KFAB KFBB KFII KGKO KGVO KI.RA KLZ KMBC KMOX KNOW KOL KRLD KSCJ KSL KTRH KTSA KWKH WABC WATC WALA WBNS WBT WCAO WCCO WCHS WDAE WDBJ WDBO WDRC WEEI WESG WFBL WFBM WHAS WHK WHP WIBW WIBX WJAS WJR WJSV WKBB WKBN WKAW WKRC WLAC WIBZ WMAS WMBD WMBG WMBR WMMN WNBF WOC WOKO WORC WPAR WIRO WQAM WSBT WSJS WTAQ 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 PartyKARK KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSTP KVOO KYW WAPI WAVE WBEN WCAE WDAF WEAF WFAA WFLA WGY WHO WIOD WIIE WJAX WLW WMAQ WMBG WMC WNAC WOAI WOW WRC WSB WSMI WSMB WTAML 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

## $\mathbf{R}$ - Marion Talley

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 K ${ }^{\text {Nr. }}$ KECA KEX KFEL KFI KFSD AFYR IGGA KGIR KGNC KGO KGU KJR KLO KOLL KPRC KSO KTBS KVOO KWE WABY WAPI WAVE WBAL WBAP WBZ WBZA WCKY WCSC UDAY WEAN WEBR WENR WFIT. WFIA WHAM WHK WICG WIOD WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WOWO WPTF WREN WRTD WSB WSM WSMR WSOC WSPD WSUN WSYR WTAR WTCN WWNC WXYZ
E-5:30 p.m., C-4:30, M-3:30, P-2:30 C - Guy Lombardo and Orchestra KFU KMBC KMOX KOMA KTUI, WAAB WABC WBNS WCAO WCAIT WDRC WEAN WFBI, 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 WFII, WHAM WHK WICC WJZ WMAI. WMT WREN WRTD WSM WSPD WSYR WTCN WXYZ

## R-Joo Rines; Sheila Barrett

CFCF CRCT KDYI, KFI KRW KHQ KOA KOMO KPO KPIC 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 WMAC? WMBG WMC WNAC WOAI WOW WPTF WRC WSB WSME WSOC WTAG WTAM WTAR WTIC
E-6:00 p.m., C-5:00. M-4:00, P-3:00 C - Joe Penner; Gene Austin КFAB KFPY KGLO KLZ KMiBC KMOX KNOW KNX KOIN KOL KOMA KRLD KRNT KSFO KSI, KTRH KTSA KVI WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDHO WDRC WEEI WFHL WFBMI WGAR WGST WHAS WHEC WJAS WJR WJSV WKBW WKIRC WOKO WORC WPRO WOAM WREC WRVA

M - George Jessel; Tommy Tucker 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 KOMPA KOY KRLI KRNT KSCJ KSFO KSL KTRHI KTSA KTUL KVI KVOR KWKH WABC Waco WadC waim Waid wbBM WBIG WBNs WBRC WBT WCAO WCAU WCCO WCHS WCOA WCOC WDAE WDBJ WDBO WDNC WDOD WDIRC WEEI WEOA WFBL WFBM WGAR WGBI WGST WHAS WHEC WHIO WHP WIBW WIBX WISN WJAS WJNO WJR WJSV WKBls 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 Irene
CKLIV KWK WHAL WCAE WGN WHK WIRE WOR
R-A Tale of Taday
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. KTRII KTSA KTUI, KVI KWKH WABC WADC WBRAT WBIG WBRC WHT WCAO WCAU WCCO WDRC WEEI WFBL WFBA WGAR WGBI WGR WGST WHAS WIIEC WHIO WJAS WJR WJSV WKRC WOKO WPRO WREC WRVA WTOC WWL,
R-Jack Benny; Mary Livingstone KSD KYA KYW WBES WCAE WCSII WDAF WEAF WFBIR WGY WHO W.JAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WWJ

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C - Phil Baker: Oscar Bradley
KLRA KIZ KRLD KTRH KTSA KTUL KWKH WAlsC WACO WADC WAIA WBIG WHNS WHRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WHA N WFBL WFBMI WFEA WGR WGST WHAS WHEC WHK WHP WIHX WICC WJAS WJR WJSV WKBN WKRC WTAC WI.BZ WMAS WMBR WNAC WNOK WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL, WWVA

## $\mathbf{R}$ - Flreside Recitals

KSD KYW WBEN WCAE WCSH WIDAF WEAF WFBR WGY WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC wWJ
B-Oxxie Nelson; Harriet HHlliard KARK KDKA KECA KFEL KEX KFSD KFYR KGA KGO KJR KLO KOIL KPRC KSO KSTP KTAR KTBS KTHA KVOO KWK WABY WAPI WAVE WBAL WHAP WBZ WBZA WCKY WCOI, WDAY WEAN WEBC WEBR WHIL WFLA WHAMI WHK WIRA WICC WIOD WIS WJAX WJUN WJZ WKY WlaEU

WLS WMAL WMC WMT WOAI WPTF WREN WRTD WSB WSM WSAB 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 KLARA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRN゙T KSCJ KSFD KSL KTRH KTSA KTUL KVI KWKH WABC WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WIDRJ WDBO WDRC WEEI WFBL WFBM WGR WGST WHAS DHEC WHIO WHK WHP WIBX WJAS WJR WJSV WKBN WKRC WLAC WLIBZ WMAS WMBG WMBR WNAX W NBF WNOX WOKO WORC WPRO WQAM WREC WSBT WWL WWVA

## Also on Canadlan Network

$\mathbf{R}$ - Don Ameche; Edgar Bergen
CFCF CRCT KDYI KFI KFYR KGW KHQ KOA KOMO KPO KPIRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WIAAF WIAY WEAF WEISC WrAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJIN WKY WLW WMAQ WMC WNAC WOAI WOW WPTF WRC WRVA WSB WSM WSMES WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WW:NC
B - General Motors Concert
KANS KIDKA KERN KECA KFBK KFEL KFSD KGA KGHI KGIR KGO KGU KJR KLO KMJ KOIL KSO KVOD KWG KWK KXYZ WABY WAGA WBAL WBCA WBOW WBZ WBZA WCKY WCOL WDSU WEAN WERR WFBR WFEA WFIL WGBF WGL WHAM WHK WICC WJBO WJIM WJTN WJZ WIEEU WLS WMAL WMPS WMT WORK WROL WRTD WSGN WSMK WSPD WSUN WSYK WXIZ

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

CFRB CKAC KDH KERN KFAB KFBK KFH KPPY KFIZC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMIOX KOII KOIN KOI. 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 WBFA WSJS WSPD WTOC WWL WWVA
B - 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 WMAR WMT WREN WSYR WXYZ
R - Manhattan Merry-Go-Round CFCF KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KsD KSTP KTBS KTHS KYW WAVE VBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFAA

## SUNDAY（Continued）

WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WTFY WMAQ WMC WOAI wOW WPTF wRC WRVA WSB WSM WSMH 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 CFCF CRCT KDYL KFI KFYR KGW KIQ EOA KOMO KPO KPRC KSD KSTP KTBS KYW WAPI WAVE WBEN WCAE WCSH WDAF WDAX WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WTBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WIRC WRVA WSAI WSB WSM WSME WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

## B－Walter Winchel！

KDKA KECA KLE KFSD KGA KGHEL KGII KGO KJR KIO KOIL KSO KTAR KWK WBAL WBZ W＇BZA WENR WFIL WGAR WHAMI WJZ WLW WMAL WMT WREN WSYR WKYZ

E－9：45 p．m．．C－8：45，M－7：45，P－6：45 B－Irene Rich，Drama
KDKA KOIL KSO KWK WBAI． WBZ WBZA WCKY WEAN WERIK 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 FoundationKFAB KFPY KLRA KLZ KMBC KAIOX KNOW KNX KOIN KOL， KOMA KRLD KRNT KSFO KSI，k＇TRH KTSA KTUL kiVI WABC WBBM WBNS WHRC WHT WCAU WCCO WDAE WDRO WDRC WEFI WFBI WFBM WGAR WCS＇C WHAS WHEC WJAS WJR WJNV WKBW WKLC WMBIR WNOY WOKO WORC WPRO WQAM WWI．
R－．Rising Musical Stars
KDYL KHI KGBX KGW KHQ KOA KIOKPRC K゙SD KSTPKTAR KTBS KTIIS KYW WAVE WBAP WBEN WCAE WCSA WDAF WEAT WFBR WFIAA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WNAC WOAI WOOD WOW WPTE WRC WRVA

WSB WSAI WSMB WBOC W＂IAC WTAM WTAR WTIC WTMIJ WWJ WWNC

E－11：00 p．m．，C－10：00，M－9：00，P－8：00 B－Irene Rich，Drama
KECA KERN KEX KFRK KrsD K（iA KGO K．JR KLO KMJ kVOD KWG WAPI WAVE W．JDX W＇MC WSB WSM WSMB

E－11：15 p．m．，C－10：15，M－9：15，P－8：15 B－Walter Winchell
KDYL KFI KFSD KGFL KGIR KGW KHQ KOA KOMO KPO KPIRC KTAF KTBS KTHS WAFI WAVE WBAJ WJDX WKY WMC WOAI WSB WSM WSMH

E－11：30 p．m1．，C－10：30，M－9：30，P－8：30 R－Jack Benny－Mary Livingstone KDJI KERN KFBK KFI KFSD kGHI kGIR kGU KGW KHQ にしDO KMJ KOA KCMO KPO KTAK KWG
B－Tyrone Power；Drama
KARK KPIRC KTBS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

# CLASSIFIED INDEX TO CHAIN PROGRAMS 

Time in Kastern Standard<br>C －Columbia； R －National（Red）； B －National（Blue）：M－Mutual

Fred Allen，9：00 p．m．Werl．．Red
Phfl Baker，7：30 p．m．Sun．，CBS
Jack Benny－Mary Livingstone． 7 and $11: 30$ p．m．Sun，． Red
Edgar Bergen－Cbarlie McCarthy． 8 p．m．Sun．，Red
Bob Burns，10：00 b．m．Thurs．，Red
Burns and Allen， 8 and $10: 30$ p．m．，Mon．．Red
Charles Butterworth， $0: 30 \mathrm{p} . \mathrm{m}$ ．Tues．，Red
Eddie Cantor，8：30 and 11：30 p．m．Wed．，CBS
Stuart Erwin， 9 ；30 p．m．Tues．，CBS
Billy Franz， $2: 00 \mathrm{p} . \mathrm{m}$ ．Sun．．Clis
Jack Haley，8：30 p．m．Sat．．Red
Arlene Harris， 9 and 12 p．m．Tues．．CBS
George Jessel，6：00 p．m．Sum ．，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．！：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．，CHS
Henny Youngman， 8 and $11: 15$ p．m．Thurs．，CHS

## CONCERTS

Frank Black．2：00 p．m．Sun．，Blue
Ford Sunday Evening Hour．9：00 p．m．Sun．，Cus
General Motors Concert．8：00 p．m．Sun．，Blue
Andre Kostelanetz． $0: 00 \mathrm{p} . \mathrm{m}$ ．Wed．，CBS
Metropolitan Opera．Sat afternoons，NBC
Met．Opera Auditions， $5: 00 \mathrm{p} . \mathrm{m}$ ．Sun．，Blue
NBC Symphony Orchestra，10：00 p．m．Sat．，Hed and Blue
N．Y．Philbarmonic，3：00 p．m．Sun．，CBS
Philadelphia Symphony， $9: 00 \mathrm{p} . \mathrm{m}$ ．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
Eddle Duchin，8：00 p．m．Wed．，Blue
T＇ed Flo Rito，8：30 p．m．Sat．，Red
A］Goodman，10：00 p．m．Sat．，CBS
Benny Goodman，10：00 p．m．Tues．，CBs

Jlmmy Grier，6：00 p．m．Sun．，CBS
Gustay Haenschen，9：30 p．in．Sun．，Red：10：00 p．m Fri．．CBS
Pbil Harris． 7 and $11: 30$ p．m．Sun．，Red
Carl Hoff， 9 and 12 p．m．Ties．．Clis
Hal Kemp．8：30 and 11：30 p．m．Fri．，CBS
Wayne King，8：30 p．m．Tues．．Wed．，lied； $10 \mathrm{n} . \mathrm{m}$ ． Mon．，CBS
Benny hreuger，s：30 p．m．Mon．，CBS
Guy Lombardo．5：30 j．m．Sun．，CBS
Abe Lyman，9：00 p．m．Fri．，Red
Higo Mariani， $3: 30$ p．m．Sun．，Red
Frankie Masters，8：30 d．m．Tues．．Blue
Jack Miller， 8 and 11：15 p．m．Thurs．，CPS
Russ Morgan，8：30 and 11：30 p．m．Sat．，CBS ；8：00 p．m． Tues．，Red
Ozzie Netson，7：30 p．m．Sun．，Blue
Ray Noble， 8 and 10：30 p．m．Mon．，Red
Raymond Paige，9：30 p．m．Tues．，Red： $9: 10$ p．m．Fri．． CBS
Jacques Renard，8：30 and 11：30 p．m．Wed．，CBS
Joe Rines， $5: 30 \mathrm{p} . \mathrm{m}$ ．Sun．，Red
B．A．Rolfe，8：00 and $12: 00$ p．m．Sat．，Red
Harry Salter，8：00 p．m．Sat．．CB．：10：00 p．m．Sat．， CBs；7：15 and 10：30 p．m．Wed．．CRS
Seyraour 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 n．m．sun．．MRS
Rudy Vallee，8：00 p．m．Thurs．，Red
Peter Van Steeden，9：00 p．m．Mon．，Red
Don Voorhees， $8: 00$ pm．Wed．，CBS
Mark Warnow，7：30 and 10：30 p．m．Thurs．，CBS
Ted Weems， $9: 00$ p．m．Non．，Red
Panl 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．．CRS
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 MeGee and Molly， $9: 00 \mathrm{p} . \mathrm{m}$ ．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

## DRAMA

Campana's First Nighter, 10:00 p.m. Fri., Red Cumpana's Grand hotel. $8: 30$ pam. Mon, Blae Columbia Workshos, 8:00 p.m. Sun.. CBS
Death Valley luys, $8: 30$ p.m. Fri., Hlute
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 Ilotel, $9: 00$ p.m. Fri.. CBS
Hollywood Playhouse, $9: 00$ and $11: 30$ p.m. Sun., Blue
Lone Ifanger, $7: 30$ and 10:30 p.m. Mon.. Wed., Fri.. MBS
Lux Radio Theater. 9:00 p.m. Mon., CBS
Helen Henken, 7:30 p.m. Tues., CBS
One Man's Family, 8:00 ping. Wed., Red
Tyrone Power. a 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 $10: 30 \mathrm{pm}$. Thurs., CBS
Witch's Tiale. 10:30 p.m. Tues.. Mibs
Your Unseen Friend, 8:00 p.m. Sat., CBS

## POPULAR PROGRAMS

Anerican Album of Familiar Music, $9: 30$ D.m. Sun. Red
Relieve It Or Not, 8:00 and 12:00 p ni. Sat., Red
Bicycle Party, $3 ; 30$ I. mm . Sun., Red
Major Bowes' Amateurs, 9:00 nom. Thurs., CBS
Major Bowes' Family, $11: 30$ a.m. Sun., CBS
lsrave New World, $10: 30 \mathrm{pm} . \mathrm{Mon.}$. CBS
Carborundum Band, 7:30 p.m. Sat.. CBs
Cavalcade of A nerica, 8:00 p.m. Wed. Cibs
Chase and Sanborn Hour, 8:00 p.m. Sun. Red
Cltes Service ('oncert, $8: 100 \mathrm{p} . \mathrm{mt}$. Fri, feed
Contented Progratim, $10: 00 \mathrm{p} . \mathrm{m}$. Mon.. $12 \in d$
Oeatlı Valley lays. 8:30 p.m. Fri., Jhue
biresicie Rectals, 7:30 p.m. Sun., Rec
Fun Buc. 2:00 p.m. sun., CBS
Gang Isusters, 10:00 p.m. Wed.. CBs
Jack Italey's Variety Show, 8:30 p.m. Sat., Red
Hammersten Musle Hall, 8:00 p.m. Fri., CBS
Hobby Lobby, $7: 15$ and $10: 30 \mathrm{p} . \mathrm{m}$. Wed., CBS
llollywood Mardi Gras, $9: 30 \mathrm{pm}$. Tues., Red
Hour of Charm, $1: 30$ p.m. Mon., Red
lusbands and Wives, $8: 00 \mathrm{pm}$. Tues., Blue
It, Can Be Done. 8:30 ; im. Tues.. Blue
Jello l'rogram, 7:00 and 11:30 p.m. Suli., Red
Johnny ${ }^{2}$ resents-. 8:100 p.m. Tues., Red: 8:30 and 11:30 p.m. Sat.. CBS
Kraft Music Hall. 10:00 n.m. Thurs., Red
Wardeı Lawes. 10:00 p.m. Mon., Blue
Log (abin Review, 8:30 p.m. Sat.. Red
Matic Key of reA. 2:00 p.m. Sun.. Hlue
Manhattan Merry-Go-Round, $9: 10$ p.m. Sun.. Red March of Time. s:30 p.m. Thurs. Mhe
Areil Program. 9:00 p.m. Thurs. Ked
Musie From Hallywood. 8:30 and $11: 30$ n m. Fri., CBE
Vational barn Tance, $9: 00$ and $11: 60 \mathrm{f} . \mathrm{m}$. Sat. Blıe
Northerri Messenter, 11 :00 p.m. Sat . © SBC


1. Pantages Covers Hollywood. $1: 45$ and $11: 00$ p.m.

जum. ('BS
foetie Melodies, $7: 00$ and $11: 00$ p.m. Mon. through Fri., CBS
Pontlac Varsity Show, $9: 00$ p.m. Fri. I3he
!rofessor Quix, $9: 00$ and $12: 00$ p.m. sat. CBs
Radio News Real, 3:0) p.m. Sun.. Red
Fall Lake City Tabernacle, Iz:30 p.un. Sun.. CBS
Saturday Nisht serenade, 9:30 p.m. Sat., CRs
Saturday Night Swing (lub, $7: 00$ pab. Sat.. CPS
kate Smith llour, $8: 00$ and $11: 15$ p.m. Thurs.. CBS songshop, $10: 00 \mathrm{p}$ m. l'ri., CBS
Htation E-Z-kt-A, 7:15 p.m. Mon., Werz. Fri.. Red
Swing School, 10:00 p.m. Tues., CBG
'lexneo Town, 8:30 and 11:30 p.m. 4 ed. CBS

Time of your bife. $5: 30$ p.m. Sun., Red
Town Hall Tonight, $9: 00 \mathrm{p} . \mathrm{m}$. Wed. Red
True sitory Court, $9: 30$ p.m. Fri., Red
Uncle Jim's Question Bee, 7;30 p.m. Sat., Blue
Vick's Open House, 7 :(0) p.m sun., CBS
Voice of Firestone, $8: 30$ p.m. Mon., Red
Vox Pop, !:00 p.m. Tues., Red
Waltz Time. $9: 00$ p.m. Fri.. Red
Wateh the l'un цo By, 9 on and $12: 00$ p.m. Tues., CBS
We, The I'eople, 7:30 and 10:30 p.m. Thurs.. CBs
Your Hit Parade, 10:00 pins. Sat., ('BS
Your Hollywood Parade, 10:00 p.in. 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 1, m. Sun., Red
Henry Burr, $9: 00$ and $11: 00 \mathrm{pm}$ Sat., Bume
Rachel Carlay, $9: 00 \mathrm{p}, \mathrm{m}$. Sun.. Red
Kitty Carlisle. 10:00 p.m. Fri., Cf3s
Jerry Cooper, $9: 00$ p.m. Fri.. CBs
Alice Cornett, $10: 00 \mathrm{pm}$ Fri., CBs
Richard Crooks, $8: 30 \mathrm{p} . \mathrm{m}$. Mon.. Red
Bing Crosby, $10: 00 \mathrm{p} . \mathrm{m}$. Thirs., Red
Frank Crumit, 10:00 p.m. Fri.. CRS
Jean: Dickenson, $9: 30$ p.m. Sun.. Red
Meanna Durbin, $8: 30$ and $11: 30 \mathrm{pm}$. Wed.. (lss
Mary Eastman, 9:30 p.m. Sat., CB.
Velson Eddy, 8:00 p.ni. Sun., Red
Wilbur Evans, 7:00 p.in, sun., Cbs
Alice Faye, 8:30 and $11: 30$ p.m. Fri.. CBS
Jack Fulton, $7: 00$ and $11:(\%)$ p.m. Moth throush liti. CBS
Freddie Gibson. 10:00 p.m. Sit. CBS
Harriet Hilliard. $7: 30$ p.m. Sun.. Blue
A| Jolson, $8: 30$ and $11: 30$ p.m. Tues. CBS
Reed Kenuedy, 10 :00 p.m. Fri.. Cibs
Dorothy Lamour, 8:00 [.m. Sun.. Red
Ronemary Idane, 10:00 p.m. Wed.. lied
Franees Langford. $9: 00$ p.m. Fm. CBS
Pitere Le Ereeun, !:00 p.m, sunt., Red
Nick Lucas, 9:00 and $12: 00$ pm. Tues. ClBs
Luhaby Lady. 10:00 p.m. Mon., Ked
Lulu Belle, $9: 00$ and $11: 00$ D.m. Sat.. J3tue
Jeantte MacDonaid. 7:00 p.m. Sull. CBS
Helen Marshall, 7:30 p.m. Sun. Med
Smiling Ed McConnell. $5: 30 \mathrm{p} . \mathrm{m}$. San., Btue
Lucille Manners, $8: 00 \mathrm{p}, \mathrm{m}$. Fi. Red
Tony Martin. 8:00 and 10:30 p.m. Mon., Red
Frank Mumi, $9: 30$ p.m. Sun.. Red ; $9: 00$ b.mı. Fri. Red
Dick Poweil, 10:00 bin. Wea.. Red
Martha Raye, 8:30 and 11:30 p.m. Tues. CRs
Jane Rhodes, 9:30 n:m. Tues., $R e 1$
Lanny Russ, $9: 30 \mathrm{p}$ m. Tues. Red
Kate smith, 8 :00 and $11: 15 \mathrm{p}, \mathrm{m}$. Thurs.. ( Pa
Murraret speaks, 又:30 p.m. Mori. Red
Darion Talley. is:00 p.m. Sun.. Rest
Virginta Verrill, $8: 30$ p.m Sat.. Reil
Bert Whatey, 3:30 p.m. Sin. Red

## TALKS

Boake Carter, 7:45 and 11:15 pm. Anon., Wom. Fri CBS
Jimmy Fider, 10:30 p.m. Tues.. Fri, Red
Gabriel Heatter, 7:30 and 10:30 pm. Thurs.. ('BS
Gen. Hugh Johason. x:00 jum. Mon., Thurs.. Minp 10:00 1.m. Tues.. Wed.. 13lue
John K. Kennedy, 8:00 ir.h. Sun.. Blue
Gलo McCail, 7:15 pim. Tues. Thurti, CBs
Elrier Ntichaux, 9:00 n.m. Mon.. Mhes
Robert 1. Riples, 8:00 and 12:00 p.m. Sat., Red
siduey skolsky, s:30 p.m. Wed.. Hhe
Deems Taylor. $0: 00$ n.m. Wed.. (LBS
Lowell Thomas, 6:15 1.m. Mon. through Fri.. Blue
Dorot!y Thompson, in:45 p.m. Fri., Red
Watter Winchell, $9: 30$ athr 11:15 p.m. Sun.. Wlue

## 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.

|  | NORTH | H AMERICAN RROADCAST NEW | $\begin{array}{r} 930 \\ 1200 \end{array}$ | CrAC <br> CKNX | Calgary, Alta., 1000 from 190 Wingham, Ont., 100 from 50 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 710 | CMIBL | Havana. Cuba. Radio Cadena Suaritos, Calle 25 No. 445, Vedado | 1450 | CFCT | Vetoria, B. C., 500 from 50 REINSTATED |
| 1030 | CJBR <br> CMCK | Rimouski, P. Q. J. A. Brillant | 1400 | WARD | Brooklyn, N. Y. |
|  |  | Havana. Cuba. San Miguel 86 |  | WLTH | Brooklyn, N. Y |
| 1200 | CFGP | Grande Prairie. Alta. Northern |  |  | NETWORK |
|  |  | 3rdestg. Corp., 906 MeLeod Bldg., | 580 | CKUA | Edmonton, Alta., new CBC |
|  |  | Edmonton, Alta. | 710 | KILO | Seattle, Wash., new Cus |
| 1210 |  | Greenfleld, Mass. John W. Haigis | 910 | CBF | Montreat, P. Q., new NisC and CBC |
| 1310 | KPßM | Poplar Blute, Mo. Fields McCarthy | 1030 | CFCN | Calgars, Alta., hew CBC |
|  |  | Co. |  | CJBR | Rimounki, P. (2., new CBC |
| 1370 | CHAR | Flin Flon, Man. Arctic ladio Corp., | 1050) | CHM | Montreal, P. Q.. new Red |
|  |  | 120 Main St. | 11.90 | WDGY | Minneapolis, Minn., new Ciss |
|  |  | (lwen Sommd, Ont. Owen Sound bun- | 1220 | KTMS | Santa Barbara, Calif, new Blue |
|  |  | Times | 1230 | KGBX | Springtield, Mo., new NBC |
| 1420 | CHLN | Three luvers. P, Q. Three Rivers | 1330 | WSAI | Cincinnati, Ohio, NBC from Red |
|  |  | Le Souvelliste | 1490 | WCKY | Covington. Ky., NBC fromi tlue DELETE |
| 930 | XEFO | Mexico City, D. F.. from 940 | 920 | WHAX | Philatelphta. Pa. |
| 1310 | XEBO | Irupuato, Guan., from 1280 |  |  | OWNER |
|  |  | POWER | 1240 | CJCB | Sydney, N. S. Eastern Broadcasters, Ltd. Radio Bide |
| 880 | CF.JC <br> CMic | Kambops, B. C., 1000 from 100 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. Scheibules are shown in Eastern Standard Time by the 24-hour clock. All schedules daily unless otherwise noted.

| 1.715 | to 2.000 | Amateur Stations. Monterrey, N, L. (.03). |
| :---: | :---: | :---: |
| 3.500 | to 4.000 | Amateur Stations. |
| 3.040 | YDA | Tandjong Priok, Java, N.E.I. (10.). |
| 4.273 | RV15 | Khabarousk, USSR (Siberia). (20.). 0100-1000. |
| 4.600 | HC2ET | Guayaquil, Ecuador. Wed., Sat., 2100-2230. |
| 4.780 | HJIARB | Barranquilla, Colombia (.3). Apartado 715. |
| 4.787 | HJ2ABC | Cucuta, Colombia. (.25). "La Voz de Cucuta." |
| 4.810 | YDE2 | Solo, Java, N.E.I. (1). |
| 4.840 | HJ3ABD | Bogota, Colombia. 1930-2400. Aptdo. 509. |
| 5.415 | $\mathbf{P M Y}$ | Bandoeng, Javá, N.E.I. (.45). 05301000. |
| 5.500 | TI5HH | San Ramon, Costa Rica. (.2). 20002330. |
| 5.710 | TGS | Guatemala City, Guat. (.2), Wed., Thurs., Sat., 1800-2100. |
| 5.735 | HCIPM | Quito, Ecuador. Sat., 2100-2300. |
| 5.763 | YNOP | Managua, Nicaragua. 2000-2130. |
| 5.765 | YV2RA | Sam Cristobal, Venez. 1800-2330. |
| 5.800 | YV5RC | Caracas, Vemez. (1.). Sun., 08302330. Weekdays 0700-2230. |


| 5.825 | TIGPH | (alse TIXGP3), San Jose, Costa Rica. 1100-1300; 1800-2200. |
| :---: | :---: | :---: |
| 5.850 | YV1RB | Maracaibo, Venez. Sun., 1145-1245. Weekdays 0845-0945; 1115-1215; 1645-2145. |
| 5.855 | HIIJ | San Pedro de Macoris, D. R. (.04). 1200-1400; 1830-2100. |
| 5.875 | HRN | Tegucigalpa, Henduras. (.4). Sun.. 2030-2130, Weekdays 2030-2200. |
| 5.885 | Hi9B | Santiago, D. R. 1800-2300. |
| 5.895 | YV3RA | Barquisimeto, Venez. 1800-2200 |
| 5.905 | TILS | San Jose, Costa Rica, 1800-2300. |
| 5.913 | YV4RH | Valncia, Venez, 1700-0100. |
| 5.925 | HH2S | Port-au-Prince, Haiti. 190 |
| 5.935 | YV1RL | Maracaibo. Venez. (.3). 1700-223 |
| -5.945 | TG2X | Guatemala City. Guat. (2). Sun. 1300-1400; Mon., Thurs., Sat., 1600 1800; 2200-2400. |
| 5.947 | PJC1 | Willemstad, Curacao, N.W.I. (.15) 1835-2035. |
| 5.975 | OAX4P | Huancayo, Peru. (.25). |
| 5.980 | HJAABD | Medellin, Colonbia. 2000-2230 |
| 5.990 | HJ2ABD | Bucaramanga, Colombia. (.67). 1900-2300. |
| 6.000 | CXA2 | Montevideo. Uruguay. (.5). |
|  | OAX5C XEBT | Ica, Peru. (1). <br> Mexico City, D. F. (1.). 1800-240 |


| 6.005 | CFCX <br> HP5K <br> VE9DN <br> XZ1GY | Montreal, $P, Q$. (.075). 0700-2400. <br> Colon. Panama. 1800-2300. <br> Montreal, P. Q. (6. <br> Rangoon, Burma. |
| :---: | :---: | :---: |
| 6.010 | $\operatorname{cJc} X$ $\operatorname{coco}$ OLR $2 A$ | Sydney, N. S. (1.). <br> Havana, Cuba, (2.5) Sun., 2000-2200. <br> Weekdays 1030-1300; 1600-2000. <br> Prague, Czechoslovakia. <br> (35.). <br> Mon., Wed., Fri., 1600-1630. <br> Saigon, French Inda-China. |
| 6.012 | HJ3ABH | Bogota, Colombia. (1.2). 1800-2300. |
| 6.015 | HI3U | Santiago de los Caballeros, D. R. (.025). Mon. 2000-2100. Daily 07300930; 1200-1430; 1700-1930. |
| 6.020 | DJC | Berlin, Germany. (50.). 1040-1630; 1650-2245 <br> Veracruz, Ver. (.02) 1800-2400. |
| 6.025 | HJIABJ | Santa Marta, Colombia. (.05). 1800-2230. |
| 6.030 | HP5B | Panama City, Panama. (.1). 17002200. |
|  | OLR2B <br> VE9BJ <br> XEBQ | Prague, Czecho. (35.). <br> St. John, N. B. (.05). <br> Mazatlan, Sin. (.05). |
| 6.033 | HJ4ABP | Medellin, Colombia. (2.5). 18002300. |
| 6.038 | HJ1ABC | Earranquilia, Colombia. (.15). 11002300. |
| 6.040 | PRA8 | ```Pernambuco, Brazil. (3.). 1500- 2000.``` |
|  | W1XAL | Boston, Mass. (10.). Daily exc. Sat. and Sun., 1900-2100. |
|  | W4XB <br> YDA | ```Miami, Fla. (5.). Tandjong Priok, Java, N.E.I. (10.).``` |
| 6.050 | $\begin{aligned} & \text { GSA } \\ & \text { HJGABA } \end{aligned}$ | Daventry, Gt. Britain. (20.). Pereira, Colombia (6054 assigned). 1800-2200. |
| 6.060 | $\begin{aligned} & \text { va7s } 0 \\ & \text { W3XAU } \\ & \text { W8XAL } \end{aligned}$ | Nairobi, Kenya. 11100-2430. <br> Philadelphia, Pa. (10.). 2000-2300. <br> Cincinnati, Ohio. (10.). Daily 23000200. Sun. 0800-2000. Weekdays 0600-2000. |
| $\begin{aligned} & 6.062 \\ & 6.064 \end{aligned}$ | SBG VP3MR | Motala. Sweden, (.5). 1330-1700. Georgetown, British Guiana. 1700- |
|  |  | $2100 .$ |
| 6.065 | HPSF | Colon, Panama. |
| 6.069 |  | Johannesburg, Union of S. Africa (5.). 2345-0030. |
| 6.070 | CFRX <br> HJ3ABF <br> YVIRD | Toronto, Ont. (1.) 1000-2300. Bogota, Colombia. (.05), 1500-2230. Maracaibo. Venez. 1900-2400. |
| 6.075 | XEBW <br> XECU | Guadalalara, Jal. (.045). <br> Guadalaiara, Jal. |
| 6.077 | OAX4Z | $\begin{aligned} & \text { Lima, Peru. (10.) (6082 asslgned). } \\ & 1900-2330 \text {. } \end{aligned}$ |
| 6.080 | $\begin{aligned} & \text { DJM } \\ & \text { VE9CS } \\ & \text { W9XAA } \end{aligned}$ | Berlin, Germany. (50.) <br> Vancouver, 8. C. (.01). 1400-2400. <br> Chicago, lli. (20.). Daily 1900-2200. <br> Weekdays 0600-0730. |
| 6.085 | HJ5ABD | Cali, Colombla. 1900-2200. |
| 6.090 | $\begin{aligned} & \text { CRCX } \\ & \text { HJAABC } \end{aligned}$ | Toronto, Ont. (1.). 1100-1900. Ibaque, Colombia. 2000-2200. |
| 6.095 | ZGE | Kuala Lampur, F,M.S. |
| 6.100 | $\begin{aligned} & \text { W3XAL } \\ & \text { W9XF } \end{aligned}$ | Round Brook, N. J. (35.). 2100-0100. Chicago, III. (10.). 1700-2005. Belgrade, Jugoslavia. (1.). 12001700. |
| 6.108 | HJAABB | Manizales, Colombia. 1800-2400. |
| $\begin{aligned} & 6.110 \\ & 6.115 \end{aligned}$ | $\begin{aligned} & \text { GSE } \\ & \text { OLR2C } \end{aligned}$ | London, Gt. Britain. (20.). Prague, Czecho. (35.). |
| 6.118 | XEUZ | Mexico City, D. F. (5.), 2300-0300, |
| 6.120 | W2XE XEFT YDA5 | New York, N. Y. (19.). <br> Veracruz, Ver. (.012). <br> Bandoent. Java. N.E.I. (1.5). |
| 6.122 | $\begin{aligned} & \text { HJ3ABX } \\ & \text { OAX } 6 A \end{aligned}$ | Bogota, Colombia. 1730-2230. Arequipa, Pera. (.1). |




| 9.730 |  | "Radio Martinique," Fort de France, Mart. 1845-1945. | $\begin{aligned} & 11.810 \\ & 11.820 \end{aligned}$ | $\begin{aligned} & \text { I2RO } \\ & \text { GSN } \end{aligned}$ | Rome, Italy. (25.). 0500-1220. Daventry, Gt. Britain. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9.750 | coca | Havana, Cuba. 0700-0100. | 11.830 | KZRM | Manila. P. I. |
| 9.830 | M | Havana, Cuba. (Assigned 9833). |  | W2XE | New York, N. Y. (10.). Daily 1830* |
| 860 | EAQ | Madrid, Spain. (20.). |  | W9XAA | 1900. Sun. 1900-2400. Chicago, III. (20.). |
| 9.925 9.940 | CSW | Darien, Manchukua 0715-0800. <br> Lisbon, Portugal. (5.). 1900-20 | 11.840 | CS | Chicago, 11. (20.). |
| 10.065 | CQN | Macau, Portuguese China. |  |  | Ma |
| 10.070 |  | Communistic Station. |  | OLR4A | Prague, Czecho. (35.). Mon., |
| 10.260 | PMN | Bandoeng, Java, N.E.I. (1.5). 0530 | 11.85 | DJP | n, 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 Is). 2000-2100. | 11.870 | $\text { YDB } \mathbf{Y \text { W8Xe }}$ | Soerabala. I, Java, N.E.I. (1.). Pittsburgh, Pa. (40.). 1900-2200. |
|  |  | dio Nacional ", Salamanca, | 11.875 | OLR4C | gue, Czecho |
| 10.430 |  | Spain. 1700-1825; 2000-2045. <br> Pirate station announcing "Radio Milan.' | 11.885 | TPA3 HPSI | Pontoise, France. 0200-0500; 12151800. |
| 10.530 | J1B | Taihoku, Taiwan. (6.). 0900-1030. | 11.900 | CD1190 | 10 |
| 10.500 | Z1K2 | Belize, British Honduras. |  |  | 2200. |
| 10.660 | JVN | Nazaki, Japan. (50.). |  | R4 | Prague, Czecho. (35.). |
| 10 | CEC | Santiago, Chile. |  | XEWI | Mexico City, D. F. (.25). 1930-2400. |
| 10.740 | M | Nazaki, Japan. (50.). | 11.955 | IUC | Addis Ababa, Ethiopi |
| 10.823 | "Radio | Nacional," Salamanca, Spain. 16301800. | 11.960 | HI2X | Trujillo, D. R. (.5). Tues., Fri., 2000-2200. Sun. 0740-1040. |
| 11.000 | PLP | Bandoeng, Java, N.E.I. (1.5). | 12.000 | RN | oscow, USSR. (20.). Sun. 1000- |
| 11.040 | csw | Lisbon, Portugal. (5.). 1500-1900. |  |  | 00. Sun., Wed., 0600-0700. Sun., |
| 11.402 | HBO | Geneva, Switr., Fri. 1400-1415; Sat. 1845-2030. | 12.120 |  | Algiers, Algeria. |
| 11.435 | $\operatorname{coc} x$ | Havana, Cuba. Sun. 1800-2100. Other days 0800-2400. | 235 | TFJ | $\begin{aligned} & \text { Reykjavik, Iceland. (7.5). Sun., } \\ & 1345-1430 \text {. } \end{aligned}$ |
| 11.500 | SPD | Warsaw, Poland. (2.). Daily 18001900. Sun. until 2000. | $\begin{aligned} & 12.290 \\ & 12.295 \end{aligned}$ | $\begin{aligned} & \text { GBU } \\ & \text { CB615 } \end{aligned}$ | Rugby, Gt. Britain. Santiago, Chile. |
| 11.698 | SBG | Motala. Sweden. (-5). 0100-0130. | 12.500 | HIN | TruJillo, D. R. (.75). |
| 11.700 | CB1170 | Santiago, Chile. 1000-1400; 15302300. | 13.635 | SPW | Warsaw, Poland. (10.). Mon., Wed., Fri., 1230-1330. Daily 1800- |
|  | HP5A | Panama City, Pan. (.5). 2000-2330. Saigon, Fr. Indo-China. 0500-1100. | 13.986 | DJS | 1900. <br> Berlin, Germany. (20.), |
| 11.710 | $\begin{aligned} & \text { XEWB } \\ & \text { YSM } \end{aligned}$ | Guadalafara, Jal. San Salvador, E. | 14.000 14.400 | to 14.400 UPOL | Amateur Stations. |
| 11.713 | TPA4 | Pontoise, France. 0615-1300. | $14.400$ | UPOL | orth Pole. 1400-1605 |
| 11.718 | CR7BH | Lourenco Marques, Port. Eas | $14.900$ | LZA | Geneva, Switz. Sat. 1845-2100 Sofia, Bulgaria. |
|  |  | Africa. (.2). Sun. 0530-0700. Other days 0430-0630. | $15.040$ | $\begin{aligned} & \text { LZA } \\ & \text { RKI } \end{aligned}$ | Sofia, Bulgaria. <br> Moscow, USSR. 1900-2115. |
| 11.720 | x | Winnipeg, Man. (2.). 1800-2400. | 15.110 | DJL | Berlin, Germany. (50.). 0000-0200; |
| 11.730 | $\begin{aligned} & \text { PH: } \\ & \text { XETM } \end{aligned}$ | Hilversum, Netherlands. (23.6). Villahermosa, Tab. |  |  | ```0800-0900; 1040-1630. Sun., 0600- 0800.``` |
| 11.740 | 5 | David, Panama. (.35). | 15.116 | LRS | Prague, Czecho. (35.). |
| 11750 | GSD | Daventry, Gt. Britain. (20.). 0315- | 15.120 | HVJ | Vatican City. (10.). 1000-1030 |
|  |  | 0530; 1045-1200; 1220-1545; 16002030: 2100-2300. | 15.140 | GsF | Daventry, Gt. Britain. (15.). 09151200. |
| 11.760 | OLR4B rGWA | Prague, Czecho. (35.). Guatemala City, Guat. | 15.150 | YDC | Bandoeng, Java, N.E.I. (3.). |
|  |  | Mon., Thurs., 2000-2200. | 15.160 | K EWW | Nazaki, Japan. (50.), Mexico City, D. F. (10 |
| 11.770 | DJo | $\begin{aligned} & \text { Berlin, Germany. (50.). 1040-1630; } \\ & \text { 1650-2245. } \end{aligned}$ | 15.170 | CXA14 | Montevideo, Uruguay. |
| 11.790 | w1XAL | s. (10.) Sat. 1345-1830. | 15.175 | TGWA <br> RV96 | Guatemala City, Guat. (10.). Moscow, USSR. |
| 11.795 | DJo | Sun. 1500-1800. Other days 1645 1830. | 15.180 | GS | Daventry, Gt. Britain. 0315-0530; 0545-0855; 1600-1800. |
| 11.796 | OAX5A | Ica, Peru. (1). 1200-1600: 1900-2330. | 15.200 | DJB | Berlin, Germany. (8.). Sun. 11101225. Daily 0005-1100; 1650-2245 |
| 11.800 | Cogr | $\begin{aligned} & \text { Matanzas, Cuba. (1.). 1300-1600; } \\ & \text { 1800-2200. } \end{aligned}$ | 15.210 | W8xK | Pittsburgh, Pa. (40.). 0900-1900. |
|  | JZJ | Nazaki, Japan. (50.). 1500-1600; 1630-1730; 0800-0900; 0030-0130. | 15.220 | PCJ | Huizen, Netherfands. (20.). Sun. 0330-0500. Wed. 0800-1030. |
|  | OER2 | Vienna, Austria. (1.5). Weekdays 0900-1800. | $\begin{aligned} & 15.230 \\ & 15.243 \end{aligned}$ | OLREA TPA2 | Prague, Czecho. (35.). 0930-1130. <br> Pontoise, France. 0600-1100, |
| 11.805 |  | Copenhagen, Denmark. 1830-2100. | 15.250 | W1XAL | Boston, Mass. (10.). Fri. 21 |

# SHORTWAVE BROADCASTING STATIONS OF THE WORLD 

| 15.260 | GSI | 2200; Sun, 1015-1200; Daily exc. Sat. and Sun. 1415-1600. <br> Daventry, Gt. Britain. 1220-1545; | 17.790 | $\begin{aligned} & \text { W8XK } \\ & \text { W9XAA } \\ & \text { W9XF } \\ & \text { GSG } \end{aligned}$ | Pittsburgh, Pa. (40.). Chicago, III. (5.). Chicago. III. (10.). |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2100-2300. |  |  | Daventry, Gt. Britain. (15.). 0315 0530; 0545-0855; 0915-1200; 1220- |
| 15.270 | H13X W2XE | Trujille, D. R. (.5). Sunt, |  |  | 1545. |
|  | $W_{2} \times E$ | 1430-1800; 2000-2400. Mon. through Fri. 1300-1800; 2030-2400. | 19.020 | HS8PJ | $\begin{aligned} & \text { Bangkok, Siam. (5.). Mon. 0800- } \\ & 1000 \text {. } \end{aligned}$ |
| 15.280 | DJQ | Berlin, Germany. (50.). Sun. 11101225. Daily 0005-0545; 0600-0800; 0815-1100; 1650-2245. | 21.450 | OLR6A | Prague, Czecho. (35.). |
|  |  |  | 21.460 | W1XAL | Boston, Mass. (10.). Tests irregularly. |
| 15.290 | LRU | Buenos Aires, Arg. (5.). 0800-1000. | 21.470 | GSH | Daventry, Gt. Britain. 0545-0855; |
| 15.300 | XEBM | Mazatlan, Sin. 1000-2300. |  |  | 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. 0800-1300; Other days 0730-1000. |
| 15.330 | W2XAD | Schenectady, N. Y. (25.). 1100-2100. |  | W3XAU | Philadelphia, Pa. |
|  |  | Belmont, Calif. (20.). 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. 0900-1000. | 21.550 25.950 | GST W4 WH | Daventry, Gt. Britain. Spartanburg, S. C. (.05) (WSPA). |
| 15.440 | XEBM | Maxatlan, Sin. (.05), 1000-2300. |  | W6XKG | Los Angeles. 24 hours daily. |
| 15.555 | $\cos w x$ | 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 | DJE | Berlin, Germany. (50.). Sun. 11101225. Daily 0005-1000. |  | W9XJL | Superior, Wis. (.08) (WEBC). <br> Milwaukee, Wis. <br> (.5) (WTMJ). |
|  | W2XE | New York, N, Y. (10.). 1830-2000. |  |  | $1300-2400 .$ |
| 17.770 | PHI | Hilversum, Netherlands. (23.6). | 26.550 | w2xa | Flushing, N. Y, (.1) (WMCA). |
|  |  | Sun., 0725-1025. Mon., Tues., | 27.100 | W10 | A Effle M. Morrissey (.1) |
|  |  | 0825-1040. | 28.00 | - 30.000 | Amateurs. |
|  | W3XAL | Bound Brook, N. J. (35.). 0855-1745; | 56.00 | 060.000 | Amateurs |
| 17.780 |  | 1800-2100. | 110.0 | 0 infi | y. Amateurs. |

## Time Conversion Table

The time given in our indices is Eastern Standard EST 24-hr.

| Clock | EST | CST | MST | PST | (iMT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0000.... | Midn't | 11 pm | 10 pm | 9 pm | 0500 |
| 0100 | 1 am | Midn ${ }^{\text { }}$ t | 11 pm | 10 pm | 0600 |
| 0200 | 2 am | 1 am | Midn't | 11 pm | 0700 |
| 0300 | 3 cm | 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 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 | 6 pm | 0200 |
| 2200 | 10 pm | 9 pm | 8 pm | 7 pm | 0300 |
| 2300 | 11 pm | 10 pm | 9 pm | 8 pm | 0400 |
| 2400 | Midn't | 11 pm | 10 pm | 9 pm | 0500 |
| For | s throug | the en | world | ult the | ADEX |

## 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 watts 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.

```
Second Column Symbols
    Verifies reception for return
        postage.
b Verifies only occasionally.
    Does not verify.
    Verification 10 c ; letter 25 c .
    Sends own station stamp
        for 10 c .
    Sends own station stamp
        for 5c.
    Sends own station stamp
        for postage.
\(k\) Has no stamps.
```

m Verifies for 5c. only. .... No information.

The signoon and sign-off time of stations is shown in Eastern Standard Time. "ss" means "sunset."
540 kcys. (555.2)
C.JRM ak 1000 F Regina, Sask.
$-9: 30$ am-1:30 am
550 kcys. (545.1) $\square$

| CFNB | mk | 500 | F (1) | Fredericton, N. B. | -7:00 am-11:00 pm |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KFUO | ak | 500 | 2 (1) | St. Louis, Mo. | -8:00 am Midnight |
| KFYR | ak | 1000 | N(5) | Bismarck, N. Dak. | 8:00 am 1:00 am |
| KOAC | ak | 1000 |  | Corvallis, Ore. | Noon-Midnight |
| KSD | ak | 1000 | 2R (5) | St. Louis, Mo. |  |
| KTSA | ak | 1000 | C (5) | San Antonio. Tex. |  |
| WDEV | ak | 500 | D | Waterbury, Vt. |  |
| WGR | ak | 1000 | C (5) | Buffalo, N. Y. | -7:00 am-midngeht |
| WKRC | ak | 1000 | C (5) | Cincinnati. Ohio |  |
| WSVA | ak | 500 | D | Harrisonburg Va. |  |
| XEFC | ak | 100 |  | Merida, Yuc. |  |

## 560 kcys. (535.4)

| FDM | ak | 500 | (1) N | Beaumont, T |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KLZ. | ak | 1000 | C (5) | Denver, Colo | 8:30 a m-2:00 |
| KSFO | ak | 1000 | C (5) | San Francisco, Cal. | 10:00 am-4:00 am |
| KWTO | ak | 5000 | D | Springfield, Mo |  |
| WFIL. | ak | 1000 | BM | Philadelphia, Pa. | -7:00 am-midnight |
| WIND | ak | 1000 | (5) | Gary, Ind. | 6:00 am-4:00 am |
| WIS | k | 1000 | N (5) | Columbia, S. C. | 7:00 am-midni¢ |
| WQAM | ak | 1000 | C | Miami, Fla. | 7:00 am-midnigh |

## 570 kcys. (526.0)



| CMCY | ak | 5000 |
| :---: | :---: | ---: |
| KGKO | ak | 250 |
| KMTR | ak | 1000 |
| KVI | ak | 1090 |
| WKBN | ak | 500 |
| WMCA | ak | 1000 |
| WNAX | ak | 1000 |
| WOSU | ak | 750 |
| WSYR | ak | 1000 |
| WWNC | ak | 1000 |


| CY (1) | Havana, Cuba | -9:00 am 3:00 am |
| :---: | :---: | :---: |
|  | Wichita Falls, Tex. |  |
|  | Los Angeles, Calif. |  |
| $\mathrm{C}^{\mathrm{C}}(5)$ | Tacoma, Wash. |  |
|  | Youngstown, Ohio |  |
| C (5) | Yankton, S. Dak |  |
| 1 (1) | Columbus. Ohio | -9:00 am-11:00 pm |
| 13 (WS | YU) Syracuse, N. Y' | -7:00 a m-1:00 am |
| N | Asheville, N. C. | -7:30 am - 1:00 am |

580 kcys. (516.9)

| CFPR | ak | 50 |
| :--- | :--- | ---: |
| CHRC | ak | 100 |
| CKCL | ak | 100 |
| CKUA | ak | 500 |
| KMJ | ak | 1000 |


| $\cdots$ | Prince Rupert, B. <br> Quebec, P. <br> F |
| :--- | :--- |
| N | Toronto, Ont. <br> Edmonton, Alta. <br> Fresno, Calif. |

-8:00 am-midnight
$-8: 00 \mathrm{am}-m i d n i g h t$
$-8: 00 \mathrm{am}-m i d n i g h t$
$-10: 00 \mathrm{am}-3: 00 \mathrm{am}$

| KSAC | ak | 500 | 2 (1) |  | -10:30 am 6:30 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WCHS | ak | 500 | C: (1) | Charles |  |
| WDIBO | ak | 1000 | C | Orlando | -7:00 am-midnigh |
| WIBW | ak | 1000 | ${ }^{2} \mathrm{C}$ (5) | Topeka, Kans. |  |
| WILL | ak | 1000 | 1) | Urbana. III. | 9:00 am |
| WTAG | ak | 1000 | R | Worcesrer, | 7:30 am-1:00 |
| XEMU | z |  |  | Piedras Negras, ${ }^{\text {co }}$ |  |

## 590 kcys. (508.2)

| KHO | ak | 1000 | $R(5)$ | Spokane. Wash. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| WEEI | ak | 1000 | C (5) | Bosion, Nass. |  |
| WKZO | ak | 1000 | BI) | Kalamazoo, Mich. |  |
| WOW | ak | 1000 | R (5) | Omaha. Nehr. | $-7: 00$ am $-3: 30 \mathrm{am}$ |

600 kcys. (499.7) $\square$

| CBW | ak | 500 | F (1) | Windsor, Ont. | $4: 30 \mathrm{pm}-11: 30 \mathrm{pm}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ( F CF | ak | 500 | BF | Montreal, P. ${ }^{\text {S }}$. |  |
| CJOR | ak | 500 |  | Vancouver. B. C. | -7:45 am-1:00 am |
| (MW | ak | 1400 |  | Havana. Cuta | -7:00 am midnight |
| KFSI) | ak | 1000 | B | San Jiego, Calif. |  |
| WCAO | ak | 500 | C (1) | Baltimore. Md. |  |
| WICC | ak | 500 | BM (1) | Bridgeport, Conn: | -7:00 am-1:00 am |
| WM' | ak | 1000 | BM1 (5) | Cedar Rapids, Iowa | -6:30 am 1:00 am |
| WREC | ck | 1000 | C (5) | Memphis, lenn. | $-7: 30$ ann 1:00 am |

## 610 kcys. (491.5)

| KFRC | c | 1000 |
| :--- | :--- | ---: |
| WYCLE | ak | 500 |
| WDAF | ak | 1000 |
| WIOD | ak | 1000 |
| WIP | ak | 1000 |


| M (5) | San Francisco, Cal. |  |
| :---: | :---: | :---: |
| I) M | Cleveland. Ohio. | -7:00 am -ss |
| $R(5)$ | Kansas City. Mo. | 7:30 am-1:00 ant |
| N(H) | 1) ${ }^{\text {c }}$ Miami, Fla. |  |
|  | Philadelphia, P': | 7:00anm-1:00 am |

## 620 kcys. (483.6)



650 kcys. (461.3) $\square$



|  |  |  |  |  | $-9: 00 \mathrm{pm}-1: 00 \mathrm{am}$$-8: 00 \mathrm{am}-\mathrm{s}$$-7: 30 \mathrm{am}-1: 00 \mathrm{am}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| 770 kcys. (389.4) |  |  |  |  |  |
| CMBS | ak | 150 |  | Havana, Cuba | $\begin{aligned} & -8: 00 \mathrm{am}-10: 30 \mathrm{pm} \\ & -7: 00 \mathrm{am}-1: 00 \mathrm{am} \end{aligned}$ |
| ${ }_{\text {KFAB }}$ |  | 10000 | CSy | Lincoln, Nebr. <br> Chicago, 111 |  |
| WBBM |  |  | CSy | Chicago, 11. |  |
| 780 kcys. (384.4) |  |  |  |  |  |
| CHWK | dk | 100 | F | Chilliwack, B. C. Sudbury, Ont. Camaguey, Cuba Los Angeles, Calif. Brookings, S. Dak. Anchorage, Alaska | --11:00 am-1:15 am |
| CKSO | ak | 1000 | F |  | $\begin{aligned} & \text { 9:00 am-midnlght } \\ & -11: 00 \mathrm{am}-10: 00 \mathrm{pm} \end{aligned}$ |
| CMJK | ak | 250 |  |  |  |
| KEHE | ak | 1000 | (5) |  | -1:30 pm-3 pm |
| KFDY | ak | 1000 | D |  |  |
| KFOD | ck | 250 |  |  | -10:00 am-1:00 am |
| KGHL | ak | 1000 | N (5) | Billings, Mont. |  |
| KWLK | z | 250 | DP | Longview, Wash. |  |
| WEAN | ak | 1000 | BM | Providence, R. I. | -7:45 am-1:00 am |
| WMC | ak | 1000 | R (5) | Memphis, Tenn. |  |
| WTAR | ak | 1000 | N | Norfolk, Va. |  |
| XEL | 2 | 1000 |  | Mexico City, D. F. |  |

790 kcys. (379.5) $\square$


| 800 | cys. | $374.8)$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WBAP | ak 50000 | Na |  | Worth, Texas | -7:00 am-midnight |
| WFAA | ak 50000 | Na |  | s, Texas | -9:00 am-12:30 am |
| WTBO | ak 250 | D |  | erland, Md. | -8:30 am-ss |

810 kcys. (370.2)

| CMCF | ak 600 | $\mathbf{X}$ | 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. - $11: 00 \mathrm{am}$-8:15 pm |
| XEXC | z 350 |  | Aguascalientes, Ags. |

## 820 kcys. (365.6)




## 830 kcys. (361.2) $\square$

| CMJX | $\text { ak } 500$ |  | Camaguey, Cuba | $\begin{aligned} & 9: 00 \mathrm{am}-11: 30 \mathrm{pm} \\ & -9: 00 \mathrm{am}-2: 00 \mathrm{am} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $-\mathrm{K}$ | ak 50000 <br> ak 1000 | $\begin{aligned} & \mathbf{R} \\ & \mathbf{D} \end{aligned}$ | Denver, Colo. <br> Reading, Pa. | $-9: 00 \mathrm{am}-2: 00 \mathrm{am}$ $-8: 00 \mathrm{am}-5: 00 \mathrm{pm}$ |
| WIIDH | ak 1000 | Dn | Boston, Ma |  |
| WR UF | ak 5000 | Dn | Gainsville, Fla. | 7:00 a m-6:30 |




| WKAR | ak 1000 | D | E. Lansing, Mich. | -7:00 am-5:00 pm |
| :---: | :---: | :---: | :---: | :---: |
| WWL | ak 10000 | C | New Orleans, La. | -7:30 am-1:00 am |


| 860 | cys. | 48.6) |  |  |
| :---: | :---: | :---: | :---: | :---: |
| -WABC | ak 50000 | C (WBOQ) New York, N. Y DM Kansas City, Mo. |  | -7:30 am-1:00 am |
| WHB | ak 1000 |  |  |  |
| WEMO | ak 5000 |  | ijuana, B. Cfa. | -9:45 am-3:00 am |
| XENC | z 50 |  | Mexica City, D. F. |  |

870 kcys. (344.6)

| -WENR | ak 50000 | Ba | Chicago, III. | -Noon—midnight- $\mathbf{8 : 0 0}$ am $3: 00 \mathrm{pm}$ |
| :---: | :---: | :---: | :---: | :---: |
| WLS | ak 50000 | Ba | Chicago, Ill. |  |
| XEFB | ak 200 |  | Monterrey, N. L. |  |
| XEJW | $z$ |  | Mexico City, D. F. |  |
| 880 kcys. (340.7) |  |  |  |  |
| ${ }^{-C B O}$ | ak 1000 | F | Ottawa, Ont. | -10:30 am-midnlght |
| CFJC | ak 100 | F | Kamloops, B. C. | -12:30 pm-1:15 am |
| CMO | ak 25000 |  | Havana, Cuba |  |
| KFKA | ak 500 | 2M (1) | Greeley, Colo. | -7:30 am-1:00 am |
| KLX | ak 1000 |  | Oakland, Calif. | -10:30 am-2:30 am |
| KPOF | ak 500 |  | Denver, Colo. |  |
| WCOC | ak 500 | CX (1) | Meridian, Miss. |  |
| WGBI | ak 500 | C 1 (1) | Scranton, Pa. | -12:30 pm-10:30 pm |
| WOAN | ak 500 | 1 (1) | Scranton, Pa. | -12:30 pm-10:00 pm |
| WRNL | ak 500 |  | Richmond, Va. | -7.30 am-ss 11.00 pm |
| WSUI | ak 500 | (1) | Iowa City, Iowa | -10:00 am-11:00 pm |

890 kcys. (336.9)

| KARK | ak | 500 | N (1) | Little Rock | -7:00 am-1:00 am |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KFNF | ak | 500 | 2 (1) | Shenandoah, Iowa | -7:00 am-1:00 am |
| KFPY | ak | 1000 | C (5) | Spokane, Wash. | -9:50 am-3:00 am |
| KUSD | ak | 500 | 2 | Vermillion, S. Dak. |  |
| WBAA | ak | 500 | (1) | W. Lafayette, Ind. | -Noon-6:00 pm |
| WGST | ak | 1000 | C (5) | Atlanta, Ga. |  |
| WJAR | ak | 1000 | R (5) | Providence, R.I. | -7:30 am-1:00 am |
| WMMN | ak | 500 | C (1) | Fairmont, W. Va. | -7:00 am-1:00 am |
| XEW | ak | 50000 |  | Mexico Sitv. D. F. |  |

## 900 kcys. (333.1)

| KGBU | ak | 500 | X | Ketchikan, Alaska |
| :--- | ---: | ---: | :--- | :--- |
| KHJ | ak | 1000 | M (5) | Los Angeles, Calif. |
| KSEI | ak | 250 | (1) | Pocatello, Idaho |
| KSBE | ak | 1000 | R (5) | Bufalo, N. Y. |
| WBEN | New Haven, Conn. |  |  |  |
| WELI | ak | 500 | D | New |
| WFMD | ak | 500 | D | Frederick, Md. |
| WJAX | ak | 1000 | N (5) | Jacksonville. Fla. |
| WKY | ak | 1000 | N(5) | OklahomaCity, Ok. |
| WWLBL | ak | 5000 | D | Stevens Point. Wis. |
| WTAD | ak | 1000 | D | Quincy, Ill. |

$-9: 30 \mathrm{am}-1: 00 \mathrm{am}$
$-7: 00 \mathrm{am}-1: 00 \mathrm{am}$
$-6: 00 \mathrm{am}-\mathrm{ss}$
$-6: 30 \mathrm{am}-\mathrm{ss}$
$-6: 45 \mathrm{am}-1: 00 \mathrm{am}$
$-7: 45 \mathrm{am}-1: 00 \mathrm{am}$
$-9: 00 \mathrm{am}-2: 00 \mathrm{pm}$
$-8: 00 \mathrm{am}-5: 45 \mathrm{pm}$

910 kcys. (329.6)

| CBF | 50000 | NP | Montreal, P. Q. |
| :---: | :---: | :---: | :---: |
| CJAT | ak 1000 | F | Trail, B. C. -10:00 am-2:00 am |
| XENT | ak 150000 |  | Nuevo Laredo, 'Tams. |

920 kcys. (325.9)

| CMX | ak | 1000 |  | Havana, Cuba | -8.00 am-1:00 am |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KFEL | ak | 500 | Ma | Denver, Colo. | -8:00 am-2:30 am |
| KOMO | ak | 1000 | R (5) | Seattle, Wash. |  |
| KPRC | ak | 1000 | R (5) | Houston, Texas |  |
| KVOD | ak | 500 | Ba | Denver, Colo. |  |
| WAAF | ak | 1000 | D | Chicago, Ill. | -6:00 a m -ss |
| WORL | ak | 500 | D | Boston, Mass |  |
| WPEN | ak | 1000 |  | Philadelphia, Pa. |  |


| $\begin{aligned} & \text { WSPA } \\ & \mathbf{W W J} \end{aligned}$ | $\begin{aligned} & \text { ak } \\ & \text { ak } \end{aligned}$ | $\begin{aligned} & 1000 \\ & 5000 \end{aligned}$ | $\begin{aligned} & \text { I) } \\ & \text { R } \end{aligned}$ | Spartanburg, S. C. Detroit, Mich. | -6:00 am-12:30 am |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 930 kcys. (322.4) |  |  |  |  |  |
| (:FAC | ak | 11000 | F | Calgary, Alta. | -9:00 am $-2: 00 \mathrm{am}$ |
| CFCH | ak | 100 | F | North Way, Ont. |  |
| CHLC | ak | 100 |  | Prescott. Ont. | -7:00 am-10:00 pm |
| CIMNS | ak | 1000 | F | Ilalifax, N. S. | -7:30 am-11:00 pm |
| CKPC | ak | 100 | F | Brantford, Ont. |  |
| KMA | ak | 1000 | (5) | Shenandoah fowa |  |
| KROW | ak | 1000 |  | Oakland, Calif. | -0:00 am-5:00 amm |
| WBRC | ak | 1000 | C | Birminsham, Ala. | -8:00 am-12:30 am |
| WDBJ | ak | 1000 | C. (5) | Roanoke, Va, | -7:00 am-ridnight |
| XEBH | ak | $500$ | (5) | Hermosillo. Son. | -1:00 pm-midnight |
| -XEFO | ak | 5000 |  | Mexico (ity, ${ }^{\text {D }}$. F. |  |


| KOIN | ak | 1000 | (5) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| voas | ak |  |  | St. John's. Nffd. |  |
| WAAT | ak | 500 | ! | Jersey City, N. J. | 6:30 am-6:00 pm |
| Wave | ak | 1090 | N | Louisville, $\mathrm{K} y$. | 8:00 1:00 am |
| WCSAY | ${ }_{\text {ak }}^{\text {ak }}$ | 1000 1000 |  | Portlandi. Maine Fargo. N. Dak. | -8:00 am-midnight |
| WHA | ak | 5000 | D | Madison, Wis. | -9:00 am - $5: 30 \mathrm{pm}$ |
| TICA | z | 250 | DP | Ashtabula. Ohio |  |
| Xeyo | $z$ | 500 |  | Mexico City, D. F |  |



960 kcys. (312.3)

| CFRN | ak | 100 | F | Edmonton, Alta. | -9:30 301 2:00 am |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CHNC | ak | 1000 | F | New Carlisic, P. Q. | -7:30 amm 11:00 pm |
| CRCI | ck | 100 | F | Toronto, Ont. |  |
| XEAW | c | 50000 |  | Reynosa, 'Tams. |  |

970 kcys. (309.1)


| WHO | ak 50000 | R | Des Moines, Iowa | -7:00 am-1:00 am |
| :---: | :---: | :---: | :---: | :---: |
| XEBI | ak 25 |  | Aguascalientes, Ags |  |
| XEBK | ak 60 |  | Nuevo Laredo, Tam | -10:00 am-8:30 pm |
| XEXS | $z \quad 100$ |  | Portable in Mexico |  |
| 1010 kcys. (296.9) |  |  |  |  |
| - ${ }^{\text {CHMCL }}$ | ak 100 | F | Hamilton. Ont. <br> Vancouver, B. C . | -8:00 am midnight |
| CKCD | ak 100 | 1 |  |  |
| CKCK | ak $\quad 1000$ | F | Regina, Sask. | -9:30 am-2:00 am |
| CKCO | ak 100 | F | Ottawa, Ont. | -Noon-11:30 pm |
| CKIC | ak 50 |  | Wolfville, N. S. |  |
| CKWX | $\begin{array}{ll}\text { ak } & 100 \\ \text { ak }\end{array}$ | F1 | Vancouver, B. C. | -Noon-4:00 am |
| KMGA | ak  <br> ak $\mathbf{3 0 0}$ <br> 100  | 2M | Camaguey. Cuba |  |
| KOW | ak 1000 | M | Coffeyville, Kans. <br> San Jose, Calif. | -9:30 am-3:00 am |
| WIIN | ak 1000 | (5) | New York, N. Y. |  |
| WNAD | ak 1000 | 2 | Norman, Okla. Knoxville. Tenn. | -3:00 pm-10:15 pm |
| WNOX | ak 1000 | C (5) |  | -6:30 am-2:00 am |
| XEU | ak 250 |  | Knoxville, Tenn. <br> Veracruz, Ver. | -8:00 am-1:00 am |
| 1020 | kcys. (293.9) |  |  |  |
| K YW | ak 10000 | $\underset{\mathbf{D}}{\mathbf{R}}$ | Philadelphia, Pa. 'Tuscola, 111 . Juarez, Chih. | -7:05 am-10:00 pm |
| WDZ | ak 250 |  |  | -7:00 am-6:00 pm |
| XEJ | ak 1000 |  |  |  |
| 1030 | kcys. | (291.1) |  |  |
| CFCN | ak 10000 |  | Calgary, Alta. <br> Rimouski, P. Q. | -6:45 am-1:30 am |
| CJBR | $\begin{array}{ll}\text { z } & 1000 \\ \mathbf{a k} & \mathbf{5 0 0 0}\end{array}$ |  | Rimouski, P. Q. Windsor, Ont. | -6:45am-1:30 am |
| CMCK |  | M |  | -6:45 a m-1:30 am |
| CMCX | \% 150 |  | Havana, Cuba | -9:00 am-11:00 pm |
| XEB | ak 10000 |  | Mexico City, 1). F | -11):00 am-12:1末 am |
| 1040 | kcys. | (288.3) |  |  |
| KRLD | ak 10000 | C | Dallas, Texas | -7:00 am-1:00 am |
| KWJJ | ak 500 |  | Portland, Ore. |  |
| KYOS | z 250 |  |  |  |
| WWTIC | ah 50000 | R | Hartford, Conn. |  |
| 1050 | kcys. | (285.5) |  |  |
| CBM | ak 5000 | F | Montreal, P. O. |  |
| CMKD | ak 250 |  | Santiaso, Cuba Abilene, Kans. |  |
| KFBI | ak 5000 | ${ }_{\text {D }}{ }^{\text {n }}$ |  | -7:00 am-7:45 pm |
| - KNX | ak 50000 |  | Los Angeles. Calif. | -9:30 am-3:15 am |
| WEAU | z 1000 | ${ }_{\text {C }}^{\text {D }}$ | Eau Claire. Wis. Indianapolis. Ind |  |
| WGVA | z 1000 | DP |  |  |
| 1060 | kcys. | (282.8) |  |  |
| KTHS | ak 10000 | N1065 | Hot Springs. Ark. St. John's, Ntd. | -9:00 am-ss |
| VOAC | $z \quad 40$ |  |  |  |
| +WBAL. | ak 10000 | ${ }_{\text {D }}^{\text {PM }}$ | Baltimore, Md.Norfolk. Nebr. | -7:00 am-9:00 pm |
| WJAG | ak 1000 |  |  | 7:30 am-ss |
| W3XJ | z 100 | P$\cdots$ | College Park. Md. | - Midnight to 6:00 am |
| XEAD | ak 125 |  | .... Atzeapotzalco. D. F. |  |  |
| XEMG | z 100 |  |  |  |  |
| 1070 | kcys. | (280.2) |  |  |
| $\rightarrow \mathrm{CMBX}$ | ak 500 |  |  |  |
| CMHA | z 50 | .... Sagua la Grande. Cuba |  |  |
| KJBS | ak 500 |  | San Francisco. Calif. - $1: 100 \mathrm{am}$ - $: 30 \mathrm{pm}$ |  |
| WCAZ WTAM | $\begin{array}{ll} \text { ak } & 100 \\ \text { ak } & 00000 \end{array}$ |  | Carthage. 111. <br> Cleveland, Ohio | dioll amt midnight |
| 1080 | kcys. | (277.6) |  |  |
| $\rightarrow$ WBT | ak 50000 | C | Charlotte N. C. | -bits am-milnight |
| WCBI) | ak 5000 | Dnl | Chicage. 111. |  |
| WMBI | ak 5000 | Dnl | Chicago. 111. |  |
| XEBA | $\begin{array}{lr}\mathrm{z} & \mathbf{2 0} \\ \mathbf{a k} & \mathbf{5 0 0}\end{array}$ | . . . |  |  |
| XEDP | ak 500 |  | Mexico City, D. F |  |




| WOLS | $z$ | 100 | DP | Florence, S. C. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| WRBL | ak | 100 | $(.25)$ | Columbus. Gai. | $-8: 00 \mathrm{am}-10: 30 \mathrm{pm}$ |
| WSAL | $\mathbf{z}$ | $\mathbf{2 5 0}$ | DP | Salisbury, Md. |  |
| WTHT | ak | 100 | M | Hartford. Conn. | $-7: 00 \mathrm{am}-4: 15 \mathrm{pm}$ |
| WTOL | $z$ | 100 | DP | Toledo, Ohio |  |

## 1210 kcys. (247.8)



| CHLT | $z$ | 100 |  | Sherbrooke, P. Q. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C.JCS | ak | 50 |  | Stratford, Ont. | -8:00 am-9:00 pm |
| CJCU | z | 50 |  | Aklavik, N.W.T. |  |
| CKBI | ak | 100 |  | Prince Albert, Sask. | -9:45 am-1:00 am |
| CKCH | ak | 100 | F | Hull, P. Q. | -8:00 am-11:00 pm |
| CKMC | ak | 50 |  | Cobalt, Ont. |  |
| CMHI | ak | 150 |  | Santa Clara, Cuba |  |
| KALB | ak | 100 |  | Alexandria, La. |  |
| KANS | ak | 100 | N | Wichita, Kans. | -7:30 am-midnight |
| KASA | c | 100 | M | Elk City, Okla. | -7:00 am - 8:00 pm |
| KDLR | ak | 100 |  | Devils Lake, N. D. | -7:30 am-9:30 pm |
| KDON | z | 100 | M | Monterrey, Calif. |  |
| KFJI | ak | 100 |  | Klamath Falls, Ore. |  |
| KFOR | ak | 100 | CM(.25) | ) Lincoln, Nebr. | -8:00 am-11:15 pm |
| KFPW | ak | 100 |  | Fort Smith, Ark. |  |
| KFVS | ak | 100 | 5 (.25) | Cape Girardeau, Mo. |  |
| KFXM | ak | 100 | M2 | San Bernardino, Cal. | 9:00 am-3:00 am |
| KGLO | z | 100 | C. $(.25)$ | Mason City, Iowa |  |
| KGY | ak | 100 | M | Olympia, Wash. |  |
| KHBG | z | 100 | D) | Okmulgee, Okla. |  |
| KIUL | ak | 100 |  | Garden City, Kans. | -8:00 am-10:00 pm |
| KLAH | ak | 100 |  | Carlsbad, N. Mex. |  |
| KOCA | 2 | 100 | (.25) | Kilgore, Texas |  |
| KPFA | $z$ | 100 | (.25) | Helena, Mont. |  |
| KPPC | ak | 100 | 2 | Pasadena, Calif. | -10:00 am-12:30 am |
| KROY | ak | 100 | D | Sacramento, Calif. |  |
| KVSO | ak | 100 | M | Ardmore, Okla. | -8:00 am-11:00 pm |
| KWTN | ak | 100 |  | Watertown, S. Dak. |  |
| WALR | ak | 100 |  | Zanesville, Ohio | -7:00 am-9:00 pm |
| WBAX | ak | 100 |  | Wilkes-Barre, Pa. |  |
| WBBL | ak | 100 | S | Richmond, Va. |  |
| WBLY | ak | 100 | D | Lima, Ohio | $-6: 00 \mathrm{am}-5: 15 \mathrm{pm}$ |
| WBRB | ak | 100 | 3 | Red Bank, N. J. |  |
| WCOL | ak | 100 | N | Columbus, Ohio | -7:00 am - $11: 00 \mathrm{pm}$ |
| WCRW | ak | 100 |  | Chicado. Ill. | -11:00 am 7:00 pm |
| WEBQ | ak | 100 | 5 (.25) | Harrisburg, Ill. |  |
| WEDC | ak | 100 | 4 | Chicago. 111. |  |
| WFAS | ak | 100 | 3 | White Plains, N. Y. |  |
| WFOY | ak | 100 | (.25) | St. Augustine, Fla. |  |
| WGBB | ak | 100 | 3 | Freeport, N. Y. |  |
| WGCM | ak | 100 | (.25) | Gulfport. Miss. |  |
| WGNY | ak | 100 | 3 | Newburdh, N. Y. | -7:30 am-midnight |
| WGRM | ak | 100 | P | Grenada, Miss. |  |
| WHISF | ak | 100 | (.25) | Rock Island, Ill. | -7:00 am-1:05 am |
| WHBU | ak | 100 | (.25) | Anderson. Ind. |  |
| WIBU | ak | 100 | (.25) | Poynette. Wis. |  |
| WJBY | ak | 100 | (.25) | Gadsden, Ala. | -8:00 am-10:30 pm |
| WJEJ | ak | 50 | In ${ }^{\text {(.1) }}$ | Hagerstown, Md. |  |
| W.JIM | z | 100 | (.25) | Lansing, Mich. | --7:15 am-12:30 am |
| WJ'TN | ak | 100 | B (.25) | Jamestown, N. Y. |  |
| WJW | ak | 100 | (.25) | Akron. Ohio | -8:00 am-10:30 pm |
| WKOK | ak | 100 |  | Sunbury, Pa. | -6:00 am-midnight |
| WLMU | $z$ | 100 | P (25) | Middlesboro. Ky. |  |
| WMFG | ak | 100 | (.25) | Hibling, Minn. | -7:30 am-10:00 pm |
| WOMT | ak | 100 |  | Manitowoc. Wis. |  |
| WPAX | ak | 100 | D | Thomasville, Ga. | -8:00 am-6:00 pm |
| WSAY | z | 100 | D | Rochester, $\mathbf{N}$. Y. |  |
| WSBC | ak | 100 | 4 (.25) | Chicaso, Ill. | 6:00 am midnipht |
| WS1X | ak | 100 |  | Nashville. Tenn. | -7:00 am-1:00 am |
| WSNJ | z | 100 | D | Bridgeton, N. J. |  |
| WSOC | ak | 100 | N (.25) | Charlotte, N. C. | -7:00 am-midnight |
| WTAX | ak | 100 |  | Springfield, Ill. |  |
| XEAT | ak | 250 |  | Parral, Chih. | -11:00 am-9:00 pm |
| XIE | ak | 50 |  | Durango, Dgo. |  |
| XEFV | ak | 100 |  | Juarez, Chih. |  |
| XETH | ak | 100 |  | Puebla, Pue. |  |
|  | z | 250 | DP | Greenfield, Mass. |  |



| WJDX | ak | 1000 | R (5) | Jackson, Miss. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WOOD | ak | 500 | Na | Gd. Rapids, Mich. | -7:00 am-midinght |
| XEXB | ak | 50 |  | Jalapa, Ver. |  |
| XEXE | z | 17 |  | Mexico City, D. F. |  |
| 1280 |  | S. | (234 | 2) |  |
| CMCU | ak | 500 |  | Havana, Cuba | -6:55am-1:00 am |
| CMKO | 2 |  |  | Holguin, Cuba |  |
| KFBB | ak | 1000 | C (5) | Great Falls, Mont. |  |
| KLS | ak | 250 |  | Oakland, Calif. |  |
| WCAM | ak | 500 | 1 | Camden, N.J. |  |
| WCAP | ak | 500 | 1 | Asbury Park, N. I. |  |
| WDOD | ak | 1000 | C (5) | Chattanoosa, 「enn. | -7:30 am-12:30 am |
| WIBA | ak | 1000 | N(5) | Madison. Wis. |  |
| WORC | ak | 500 | C | Worcester, Mass. | -8:00 am-midnight |
| WRR | ak | 500 | M | Dallas, Texas | -8:00 am-midnight |
| WTNJ | ak | 500 | 1 | 'Irenton, N. J. |  |
| XEMX | $z$ | 100 |  | Mexico (ity, 1). F. |  |
| 1290 |  | S. | (23) | 4) |  |
| KDYL | ak | 1000 | RX | Sait Lake City, Ut. | -8:00 am - $3: 00 \mathrm{am}$ |
| KLCN | ak | 100 | D | Blytheville, Ark. |  |
| KTRH | ak | 1000 | C (5) | Houston, Texas |  |
| WEBC | ak | 1000 | N(5) | Duluth, Minn. | -8:00 am 1:00 am |
| WJAS | ak | 1000 | C (5) | Pittsburgh, Pa. | -7:30 am-12:30 am |
| WNBZ | ak | 100 | D | Saranac Lake, N. Y' | -9:30 am-ss |
| WNEL | ak | 1000 | (2.5) | San Juan, P. R. | $-6: 30 \mathrm{am}-11: 30 \mathrm{pm}$ |
| 1300 |  | S. | (230 | 6) |  |
| KALE | ak | 500 | CiM | Portland, Ore. |  |
| KFAC | ak | 1000 |  | Los Angeles. Calif. |  |
| KFH | ak | 1000 | C. (5) | Wichita, Kans. |  |
| WBBR | ak | 1000 | 1 | Brooklyn, N. Y. |  |
| WEVD | ak | 1000 | 1 | New York, N. Y. |  |
| WFAB | ak | 1000 | 1 | New York, N. Y. |  |
| WFRBC | ak | 1000 | N(5) | Greenville, S. C. |  |
| WHAZ | ak | 1000 | 1 | Troy, N. Y. | $-6: 00 \mathrm{pm}-\mathrm{midnight}$ |
| WHBL | ak | 250 |  | Sheboygan. Wis. |  |
| 1310 |  | S. | (228 | 9) |  |
| CHCK | ak | 50 |  | Charlottetown, P.E.I |  |
| C.JKL | ak | 100 | F | North Bay, Ont. |  |
| CJLS | ak | 100 |  | Yarmouth, N. S. |  |
| CKCV | ak | 100 | F | Quebec, P. O. | -7:55 amm-11:30 pm |
| KAND | z | 100 | D | Corsicana, 'Tex. |  |
| KARM | Z | 100 | $\mathbf{P}$ | Fresno, Calif. |  |
| KCKN | ak | 100 |  | Kansas City, Kans. |  |
| KCRJ | ak | 100 | (.25) | Jerome, Ariz. |  |
| KFPL | dk | 100 | (.25) | Dublin, Texas | -7:00 am-10:45 pm |
| KFXR | ak | 100 | (.25) | Okla. City, Okla. | -8:00 am-midnight |
| KFYO | ak | 100 | (.25) | Lubbock. Texas | -8:00 am-10:15 pm |
| KGEZ | ak | 100 |  | Kalispe11, Mont. | -9:00 am-11:00 pm |
| KGFW | ak | 100 |  | Kearney, Nebr. | -7:00 am-10:00 pm |
| KHUB | ak | 250 | D | Watsonville, Calif. |  |
| KINY | ak | 100 | XZ | Juneau, Alaska |  |
| KIT | ak | 100 M | XZ $(.25$ | ) Yakima. Wash. |  |
| KPDN | ak | 100 | D | Panpa, Texas |  |
| KRBA | z | 100 | DP | Lufkin, '「exas |  |
| KRMD | ak | 100 | (.25) | Shreveport, La. |  |
| KROC | ak | 100 | (.25) | Rochester, Minn. | -7:00 am-12:15 am |
| KROA | ak | 100 |  | Santa Fe, N. Mex. |  |
| KRRV | $z$ | 250 | D | Sherman, Texas |  |
| KSRO | ak | 250 | D | Santa Rosa, Calif. | -11:00 am-9:00 pm |
| KSUB | al | 100 |  | Cedar City, Utalt |  |
| KTSM | ak | 100 | (.25) | El Paso, Texas | -8:30 am-1:10 am |
| KVOL | ak | 100 |  | Lafayette, La, | -8:00 a111-10:30 pm |
| KVOX | $\mathbf{z}$ | 100 | $\mathbf{P}$ | Moorhead, Minn. |  |
| KWOS | $\mathbf{Z}$ | 100 | D | Jefferson City, Mo. |  |
| KXRO | ak | 100 | M (.25) | Aberdeen, Wash. | 10:00 amn-2:00 am |
| WAML | ak | 100 | (.25) | Laurel, Miss. |  |
| WBEO | ak | 100 | D | Marquette, Mich. | $-10: 30 \mathrm{am}-5: 30 \mathrm{pm}$ |



| WAWZ | 500 | 1 (1) | Zarephath |
| :---: | :---: | :---: | :---: |
| WBNX | 1000 | 1 | New York, N, Y, |
| WMBG | 500 | R | Richmond, Va. |

## 1360 kcys.

| CMJH | dk | 50 |
| :--- | :--- | ---: |
| KGRC | ak | 250 |
| KGER | ak | 1000 |
| WCSC | ak | 500 |
| WFBL | ak | 1000 |
| WGES | ak | 500 |
| WOBC | ak | 1000 |
| WSBT | ak | 500 |

1370 kcys.

| CFAR |  | 100 |
| :---: | :---: | :---: |
| CKCW | ak | 100 |
| CMGE | ak | 150 |
| KAST | ak | 100 |
| KCMO | ak | 100 |
| KEEN | ak | 100 |
| KELD | 2 | 100 |
| KERN | ak | 100 |
| KFGQ | ak | 100 |
| KFJZ | ak | 100 |
| KFRO | ak | 250 |
| KGAR | ak | 100 |
| KGFL | ak | 100 |
| KGKL | ak | 100 |
| KICA | ak | 100 |
| KIUP | ak | 100 |
| KLUF | ak | 100 |
| KMAC | ak | 100 |
| KOBH | ak | 100 |
| KOKO | z | 100 |
| KONO | ak | 100 |
| KRE, | ak | 100 |
| KRKO | ak | 50 |
| KRMC | z | 100 |
| KSLM | ak | 100 |
| K'TEM | ak | 250 |
| KTOK | bk | 100 |
| KUJ | ak | 100 |
| KVGB | $z$ | 100 |
| KVRS | 2 | 100 |
| KWYO | ak | 100 |
| WABY | ak | 100 |
| WAGF | ak | 250 |
| WATL | ak | 100 |
| WBLK | ak | 100 |
| WBNY | ak | 100 |
| WBTM | ak | 100 |
| WCBM | ak | 100 |
| WDAS | ak | 100 |
| WDWS | ak | 100 |
| WEOA | 2 | 100 |
| WFOR | ak | 100 |
| WGL | ak | 100 |
| WGRC | ak | 250 |
| WIIBQ | ak | 100 |
| WHDF | ak | 100 |
| WHLB | ak | 100 |
| WIBM | ak | 100 |
| WLLH | ak | 100 |
| WMBR | ak | 100 |
| WMFD | ak | 100 |
| WMFO | ak | 100 |
| WMIN | ak | 100 |
| WOS | ak | 100 |
| WPAY | ak | 100 |
| WPRA | z | 100 |
| WRAK | ak | 100 |
| WRDO | ak | 100 |
| WR.JN | ak | 100 |
| WSAU | ak | 100 |
| wSVS | ak | 50 |
| XECZ | z | 100 |

(218.8)

| F | Flin Flon, Man. |  |
| :---: | :---: | :---: |
|  |  |  |
|  | Cardenas. Cuba | -10:00 am $-10: 30 \mathrm{pm}$ |
| D | Kansas City. Mo. | $-7: 00 \mathrm{am}-2: 00 \mathrm{am}$ |
| 3 | Seattle, Wash. | -3:00 pm-1:00 am |
|  | El Dorado |  |
| N | Bakersfield, Calif. | -11:00 am-3:00 am |
|  | Boone, Iowa | -7:00 am -2:00 pm |
| (.25) | Fort Worth, Texas | -7:30 am-midnight |
|  | Longview. Texas | -7:00 am-ss |

D Longview. Texas -7:00 am-ss
(.25) Tucson, Arizona
(.25) $\quad$ Rasweni, N. Mex.

4 Clovis, N. Mex. $\quad 9: 00 \mathrm{am}-11: 00 \mathrm{pm}$
$\begin{array}{ll}\text { Clovis, N. Mex. } & \text { - }: 00 \mathrm{am}-11: 00 \mathrm{pm} \\ \text { Durango, Colo. } & -10: 00 \mathrm{am}-11: 00 \mathrm{pm}\end{array}$
Galveston. Texas - $9: 00$ am-midnight
5 (.25) San Antonio, Tex. -8:00 am-9:00 pm
$\begin{array}{ccc}\cdots & \text { Rapid City S. Dak. } & -8: 00 \mathrm{am}-\text { midnight } \\ 5 & \text { Lan Anta, Co, Tex. } & -7: 00 \mathrm{am}-11: 00 \mathrm{pm}\end{array}$
(.25) Berkeley, Calif. - 24 hours dally
(.25) Jamestown, N. D.

M Salem, Ore. -10:00 am-1:00 am
D Temple, Texas
Oklahoma City, Ok.
Walla Walla, Wash. - $9: 30 \mathrm{am}-1: 00 \mathrm{am}$
Great Bend, Kans.
$\begin{array}{lll}\text { (.25) } & \text { Sheridan, Wyo. } & 9: 00 \mathrm{am}-m i d n i g h t ~ \\ \text { B } & -7: 00 \mathrm{am}-m i d n i g h t ~\end{array}$
${ }^{B}$
$\begin{array}{ll}\text { D. } 25) & \text { Dothan, Ala. } \\ \text { Alanta, Ga. }\end{array}$
$-9: 00 \mathrm{am}-\mathrm{ss}$
$-7: 00 \mathrm{am}-1: 00 \mathrm{am}$
(25) Clarksburg, W. Va.
(.25) Danville, Va.
(.25) Baltimore, Md.
(.25) Philadelphia, Pa. - 8:00 am midnight

C(.25) Evansville, Ind.
Hattiesburg, Miss. -8:00 am $-9: 00 \mathrm{pm}$
N Fort Wayne, Ind.
D New Alhany, Ind.
Memphis, Tenn. - $8: 00 \mathrm{am}-11: 30 \mathrm{pm}$
(.25) Calumet, Mich.
(.25) Virginia, Minn.
(25) Jackson, Mich. 6:30 am-12:30 am

MSy(.25) Lowell, Mass.
C. (.25) Jacksonville. Fla.

D Decatur, Ala.
(.25) St. Paul, Minn

C (.25) Davenport, lowa
Portsnaouth, Ohio
-7:30 am-midnight
-7:30 am-midnight
(25) Mortsnouth, Oh
(.25) Williamsport, Pa.
$\mathrm{M}^{\text {A }}$ Augta. Maine
(.25) Racine, Wis.

Wausau, Wis.
-8:00 am-6:30 pm
-7:00 am-1:00 am
-7:00 am-1:00 am
$-7: 00 \mathrm{am}-10: 15 \mathrm{pm}$
$-8: 00 \mathrm{am}-11: 15 \mathrm{pm}$
$-8: 25 \mathrm{am}-m i d n i g h t$
2D Buffalo. N. Y. $\quad$ San L. Pot., S.L.P.

| XEI | ak | 125 |  | Morelia, Mich |
| :---: | :---: | :---: | :---: | :---: |
| Xelz | $z$ | 100 |  | Mexico City, I). F. |
|  | 21 | 10-100 | SyP | Lawrence, Mass. |
|  | 2 | 100 |  | Owen Sound, Ont |

## 1380 kcys.

(217.3)

| KOH | ak | 500 | C. | Reno, Nevada | 11.00 am |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KOV | ak | 500 | C. 1 | Pittsburgh, Pa. | -7:00 am-10:00 pm |
| WALA | ak | 500 | C. 1 ) | Mobile, Ala. | -8:30 am-midnight |
| WKBII | ak | 1000 | C | La Crosse, Wis. |  |
| WNBC | ak | 250 | D | New Britain, Conn. | -7:00 am -ss |
| WSMK | ak | 200 | C 1 | Dayton, Ohio |  |


| 1390 | kcys. |  |
| :--- | :--- | ---: |
|  |  |  |
| CJGX | ak | 100 |
| CMJC | 2 | 150 |
| KLRA | ak | 1000 |
| KOY | ak | 1000 |
| KRLC | ak | 250 |
| WHK | ak | 1000 |
| WQDM | dk | 1000 |

## (215.7)



1400 kcys. (214.2)

| CMGC | ad | 150 |
| :--- | :--- | ---: |
| CKKR | z | 100 |
| KHBC | ak | 250 |
| KLO | ak | 500 |
| KTUL | ak | 500 |
| WARD | ak | 500 |
| WBBC | ak | 500 |
| WHDE | ak | 250 |
| WIRRE | ak | $\mathbf{1 0 0 0}$ |
| WLTH | ak | 500 |
| WVFW | ak | 500 |

1410 kcys. (212.6)

|  | Matanzas, Cuba | -8:00 am-11:00 pm |
| :---: | :---: | :---: |
|  | Santiago. Cuba |  |
| CM | Hilo, T. H. |  |
| 13 | Ogden, Utah | -10:00 a m-1:00 am |
| C (1) | Tulsa, Okla, |  |
|  | Brooklyn, N. Y. |  |
| 2 (1) | Brooklyn, $\mathrm{N}, \mathrm{Y}$. |  |
|  | Olean, N. Y. |  |
| MR (5) | Indianapolis, Ind, | $-7: 30 \mathrm{am}-1: 00 \mathrm{am}$ |
| $2$ | Brooklyn, N. Y. |  | CM Hilo, T. H. ${ }_{2}$ (1) Tulsa, Okia, $\quad$ Brooklyn, N. Y

2(1) Brooklyn, N, Y. D Olean, N. Y.
MR (5) Indianapolis, Ind, -7:30 am-1:00 am
2 Brooklyn, N. Y.

| CKFC | ak | 50 |
| :--- | :--- | ---: |
| CKMO | ak | $\mathbf{1 0 0}$ |
| CMCO | ak | $\mathbf{2 5 0}$ |
| KFJM | ak | 500 |
| KGNC | ak | $\mathbf{1 0 0 0}$ |
| KMED | ck | $\mathbf{2 5 0}$ |
| WAAB | ak | $\mathbf{5 0 0}$ |
| WBCM | ak | 500 |
| WHIS | ak | $\mathbf{5 0 0}$ |
| WROK | ak | $\mathbf{5 0 0}$ |
| WSFA | ak | $\mathbf{5 0 0}$ |

## 1420 kcys.

(211.1)

| CILN | z | 100 |  | Three Rivers, P. O. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CKGB | ak | 100 |  | North Bay, Ont. | -11:00 am-11:30 pm |
| KABC | ak | 100 | (.25) | San Antonio. Texas | $-7: 00 \mathrm{am}-12: 15 \mathrm{am}$ |
| KABR | ak | 100 | XZ | Aberdeen, S. D. |  |
| KATE | z | 250 | D | Albert Lea. Minn. |  |
| K BPS | ak | 100 | 4 | Fortland, Ore. | -2:00 pm-8:00 pm |
| KCMC | ak | 100 | (.25) | Texarkana, Tex. |  |
| KEUB | ak | 100 |  | Price Utah | -9:30 am-midnight |
| KFAM | $z$ | 100 | P | St. Cloud. Minn. |  |
| KFIZ | ak | 100 |  | Fond du Lac, Wis. |  |
| KGFF | ak | 100 | (.25) M | M Shawnee, Okla. | -8:00 am-10:00 pm |
| KGGC | ak | 100 |  | San Francisco. Cal. |  |
| KGIW | ak | 100 | 1 | Alamosa, Colo. | -9:30 am-10:30 pm |
| KIDW | ak | 100 | 1 | Lamar Colo. | -9:00 am-8:00 pm |
| KIUN | ak | 100 |  | Pecos, Texas | 8:00 am-10:00 pm |
| KLBM | z | 100 | (.25) $P$ | P La Grande. Ore. |  |
| KNET | ak | 100 | D | Palestine. Texas |  |
| KORE | ak | 100 | M | Eugene, Ore. |  |
| KRBC | ak | 100 | (.25) | Abilene, 'Texas | -8:00 am-10:00 pm |
| KRLH | z | 100 | D | Midland. Texas |  |
| KTRI | z | 100 | (.25) P | P Sioux City, lowa |  |
| KUMA | ak | 100 |  | Yuma, Ariz. |  |



| 1480 kcys. (202.6) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K | ak | 50 | C | Oklahoma City Ok. | am-1:00 am |
| WHIP | ${ }_{\text {z }}^{\text {z }}$ | 5000 | ${ }_{\text {C }}^{\text {D }}$ | ${ }_{\text {Hammond }} \mathrm{H}$, Y . |  |
|  |  |  |  |  |  |
| 1490 kcys. (201.2) |  |  |  |  |  |
| $\begin{aligned} & \text { KFBK } \\ & \text { WCKKY } \end{aligned}$ | $\underset{\mathbf{a k}}{\mathbf{a k}}$ | $\begin{array}{r} 5000 \\ 10000 \end{array}$ | $\mathbf{N}_{\mathbf{N}}^{\mathbf{x}}$ | Sacramento, Calif. Covington, Ky. | 7:00 am-midnight |
| 1500 kcys. (199.9) |  |  |  |  |  |
| CJIC | ${ }_{z}^{\text {ak }}$ | 100 |  | S. S. Marie. Ont. | -10:00 am-10:00 pm |
| KBIX | ${ }_{\text {ak }}$ | 100 | M | Muskogee, Okla. | - 8:00 am- $11: 00 \mathrm{pm}$ |
| KBST | z | 100 |  | Big Spring Texas |  |
| KDAL | ${ }_{\text {ak }}^{\text {ak }}$ | 100 | $\mathrm{M}_{(25)}$ | Santa Barbara. |  |
| KGFI | ak | 100 | (.25) | Brownsville, Tex |  |
| KGKB | ak | 100 | (.25) | Tyler, Texas |  |
| KGKY | ak | 100 | (.25) | Scottshluff, Neb. | ${ }_{-}^{8: 30 \mathrm{am}-11: 00 \mathrm{pm}}$ |
| KNEL | ${ }^{\text {ak }}$ | 250 | ${ }^{\text {D }}$ | Brady. Texas |  |
| KOTN | ${ }_{\text {ak }}$ | 100 | D | Pine Biuff, Ark | -8:00 am |
| KOVC | ${ }_{\text {ak }}^{\text {ak }}$ | 100 | (25) | Valley City, N. D. | -8:00 am-10:00 pm |
| KPLT | ${ }^{2}$ | 250 |  | Paris, Texas |  |
| ${ }^{\mathrm{K} P \mathrm{P}}$ | ${ }^{\text {ak }}$ | 100 M | 25) | Wenatchee, Wash. |  |
| KROD | ${ }_{\text {ak }}^{\text {ak }}$ | 100 | ${ }^{(25)}$ | El Paso. Texas. |  |
| KSAL | ak | 100 | (.25) | Salina, Kans. |  |
| KVOE | ${ }_{\text {ak }}^{\text {a }}$ | 100 | ${ }_{\mathbf{M}}$ | Salt Lake City Ut. | -Noon to 2:00 |
| KxO | ak | 100 |  | El Centro, Calif. | -11:00 am-midnight |
| WCNW | ak | 100 | 1 (.25) | Brooklyn, N. Y. | 9:00 am-midnght |
| WDNC: | ak | 110 |  | Durham, N . C . | -7:30 am-12:30 am |
| WGAL | ak | 100 | (.25) | Lancaster, Pa |  |
| WHEB | ${ }_{\text {ak }}^{\text {ak }}$ | 100 |  | Selma. Ala | ${ }_{-7: 30 \mathrm{am}-10: 00}{ }^{\text {7 }}$ |
| WJBK | ak | 100 | (25) | Detroit, Mich | - 24 hours daily |
| WKAT | z | 100 |  | Miami Beach, Fl |  |
| WKBB | ak | 100 | (.25) | E. Dubuque, III. |  |
| WKBV | ${ }_{\text {ak }}^{\text {ak }}$ | 100 | (25) | Richmond, Muskegon, Mich | -7:00 am-10:00 pm |
| WKEU | ak | 100 | - | Grifin, |  |
| WMBQ | ak | 100 | 1 | Brooklyn, N . |  |
| WMEX | ak | 100 |  | Boston, Ma |  |
| WNBF | ${ }^{\text {ak }}$ | 100 | $\mathrm{C}_{\mathrm{C}}(25)$ | Binghamton, $\mathrm{N} . \mathrm{Y}$. |  |
| WNLC | ${ }^{\text {ak }}$ | 100 |  | New London, Conn. |  |
| WOPMI | ${ }_{\text {ak }}^{\text {a }}$ | 100 |  | Owenshoro, K. | -7:00 am-10:30 |
| WRDW | ak | 100 | C(25) | Augusta, Ga. | -7:00 am-9:00 pm |
| WRGA | ak | 100 | (25) | Rome, Ga | 8:00 am-11:00 pm |
| WRTD | k | 100 | 1 | Richmond, ${ }^{\text {Rutiand }}$ Vt. | -10:00 am- $9: 00 \mathrm{pm}$ |
| WTMY | ${ }_{\text {ak }}$ | 100 | (25) | E. St. Louis, IIt. |  |
| WWRL | ak | 100 | $1(.25)$ | Woodside, N. Y. | -8:00 am-midnight |
| wwsw | ak | 100 | $(.25)$ | Pittsburgh, Pa. |  |

## 1510 kcys. (198.6)



## 1530 kcys. (196.0)



## 1550 kcys. (193.4)

$\begin{array}{llll}\text { KPMC: } & \text { ak } & \mathbf{1 0 0 0} & \mathrm{M} \\ \text { WQXR } & \text { ak } & \mathbf{1 0 0 0} & \end{array}$

Bakersfield, (alif. - 10:00 am-2:00 am New York, N. Y. - $10: 00 \mathrm{am}-0.15 \mathrm{pm}$


## NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Net wook affiliations in fourth column. C Columbia, $R$ National Red. $B$ National Blue, $N$ National Red and Mlue. F Canadian, M Mutual.

| ALABAMA |  |  |
| :---: | :---: | :---: |
| Sirminghiam |  |  |
| WAPI | 1140 | 5000 R |
| WISRC | 930 | 1000 |
| WSGN | 1310 | 100 |
| Decatur |  |  |
| WMFO | 1370 | 100 |
| Dothan |  |  |
| WAGF | 1370 | 250 |
| Gadsden |  |  |
| WJBY | 1210 | 100 |
| $\begin{aligned} & \text { Han } \\ & \text { WRHP } \end{aligned}$ | $\begin{aligned} & \text { sville } \\ & 1200 \end{aligned}$ | 100 |
| Mobile |  |  |
| WALA | 1380 | 500 C |
| Montgomery |  |  |
| WSFA | 1410 | 500 |
| Selma |  |  |
| WHIBB | 1500 | 100 |
| Shefield |  |  |
| WMS1) | 1420 | 100 |
| Tuscaloosa |  |  |
| W.JRI) | 1200 | 250 |
| ALASKA |  |  |
| Anchorage |  |  |
| KFQI) | 780 | 250 |
| Juneau |  |  |
| KINY' | 1310 | 100 |
| Ketchikan |  |  |
| KGBU | 900 | 500 |


| ARIZONA |  |  |
| :---: | :---: | :---: |
| Jerome |  |  |
| KCRJ | 1310 | 100 |
| Lowe |  |  |
| KSUN | 1200 | 100 |
| Phoenix |  |  |
| KOY | 1390 | 1000 |
| K'IAR | 620 | 1000 N |
| Tucson |  |  |
| KGAR | 1.370 | 100 |
| KVOA | 1260 | 1000 |
| Yuma |  |  |
| KUMA | 1420 | 100 |

ARKANSAS

| Blytheville |  |  |
| :---: | :---: | :---: |
| KLCN | 1290 | 100 |
| El Dorado |  |  |
| KELD | 1370 | 100 |
| Fort | Smith |  |
| KFPW | 1210 | 100 |
| Hot Springs |  |  |
| KTHS | 1060 | 10000 N |
| Jonesboro |  |  |
| KBTM | 1200 | 100 |
| little | Rock |  |
| KARK | 890 | 500 N |
| KGHI | 1200 | 100 |
| KLRA | 1390 | 1000 |
| Pine | Bluff |  |
| KO'TN | 1500 | 100 |
| Siloam Springs |  |  |
| KUOA | 1260 | 5000 |


| CALIFORNIA |  |  |
| :---: | :---: | :---: |
| Bakersfield |  |  |
| KERN | 1370 | 100 N |
| K PMC | 1550 | 1000 M |
| Berkeley |  |  |
| KRE | 1370 | 100 |
| Beverly Hills |  |  |
| KMPC | 710 | 500 |
| Chico |  |  |
|  | 1260 | 250 |
| El Centro |  |  |
| KXO | 1500 | 100 |
| Euteka |  |  |
| KIEM | 1450 | 500 M |
| Fresno |  |  |
| KARM | 1310 | 100 |
| K MJ | 580 | 1000 N |
| Glendale |  |  |
| KIEV | 850 | 250 |
| Hollywood |  |  |
| KFWB | 950 | 1000 |
| Long Beach |  |  |
| KFOX | 1250 | 1000 |
| KGER | 1360 | 1000 |
| Los Angeles |  |  |
| K LCA | 1430 | 1000 B |
| KEHE | 780 | 1000 |
| KFAC. | 1300 | 1000 |
| KFI | 6405 | 50000 R |
| KFSG | 1120 | 500 |
| KFVD | 1000 | 1000 |
| KGFJ | 1200 | 100 |
| KHJ | 900 | 1000 M |
| KMTR | 570 | 1000 |
| KNX | 10505 | 50000 C |
| KRKD | 1120 | 500 |
| Merced |  |  |
| K YOS | 1040 | 250 |
| Modes to |  |  |
| K'TRB | 740 | 250 |
| Monterey |  |  |
| KDON | 1210 | 100M |
| Oakrand |  |  |
| KLS | 1280 | 250 |
| KLX | 880 | 1000 |
| KROW | 930 | 1000 |
| Pasadena |  |  |
| KPPC. | 1210 | 100 |
| Redding |  |  |
| KVCV | 1200 | 100 |
| Sacramento |  |  |
| KFBK | 1490 | 5000 N |
| K12OY | 1210 | 100 |
| San Bernardino <br> $\begin{array}{lll}\mathrm{KFXM} & 1210 \quad 100 \mathrm{M}\end{array}$ |  |  |
|  |  |  |
| San Diego |  |  |
| KFSD | 600 | 1000 B |
| KG13 | 1330 | $10^{\circ} \mathrm{gM}$ |
| San Francisco |  |  |
| KFRC | 610 | 1000M |
| KGGC | 1420 | 100 |
| KGO | 790 | 7500 B |
| KJBS | 1070 | 500 |
| KPO | 6805 | 50000 R |
| KSFO | 560 | 1000 C |
| K Y $\boldsymbol{A}$ | 1230 | 1000 |
| $\begin{array}{ccc}\text { San Jose } \\ \text { KQW } & 1010 & \\ \mathbf{1 0 0 0 M}\end{array}$ |  |  |
|  |  |  |
| San Luis Obispo |  |  |
| KVEC | 1200 | 250 |
| $\underset{\text { KVOE }}{\text { Santa }}$ | a Ana | 100 M |


| Santa Barbara |  |  |
| :---: | :---: | :---: |
| KDB | 1500 | 100 M |
| K'TMS | 1220 | 500 B |
| Santa | Rosa |  |
| KSRO | 1316 | 250 |
| Stockion |  |  |
| KGIDM | 1100 | 1000 M |
| KWG | 1200 | 100 N |
| Visalia |  |  |
| KTKC | 1190 | 250 |
| Watso | nville |  |
| KHEB | 1310 | 250 |
| COLORADO |  |  |
| Alamosa |  |  |
| KGIW | 1420 | 100 |
| Colorado Springs |  |  |
| KVOR | 1270 | 1000 C |
| Denver |  |  |
| K FEL | 920 | 500 M |
| KLZ | 560 | 1000 C |
| KOA | 8305 | 50000 K |
| KPOF | 880 | 500 |
| KVOD) | 920 | 500 B |
| Durango |  |  |
| KIUP | 1370 | 100 |
| Grand Junction |  |  |
| KFXJ | 1200 | 100 |
| Greeley |  |  |
| KFKA | 880 | 500 M |
| 1a Ju | nta |  |
| KOKO | 1370 | 100 |
| Lamar |  |  |
| KIDW | 1420 | 100 |
| Puebis |  |  |
| KG1IF | 1320 | 500 B |
| Sterlin |  |  |
| KGEK | 1200 | 100 |
| CONNECTICUT |  |  |
| Bridgeport |  |  |
| WICC | 600 | 500M |
| Hartford |  |  |
| WIDRC | 1330 | 1000 C |
| WTIC | 10405 | 50000 R |
| W'THT | 1200 | 100M |
| New Britain |  |  |
| WNBC | 1380 | 250 |
| Wew | Haven |  |
|  | 900 | 500 |
| New London |  |  |
| WNLC | 1500 | 100M |
| Waterbury |  |  |
| WATR | 1190 | 100 |
| WBRY | 1530 | 1000 M |

## DELAWARE

| Wilmingto |  |  |
| :---: | :---: | :---: |
| WDEL | 1120 | 250 IR |
| WILM | 1420 | 100 |
| DIS'TRICT OF COLUMBIA |  |  |
| Washington |  |  |
| wJSV | 1460 | 10000 |
| WMAL | 630 | 250 B |
| WOL | 1310 | 100\% 1 |
| WRC. | 950 | 500 R |

## FLORIDA

Clearwater
WFLA 6201000 N
Daytona Beach
WMF.J $1420 \quad 100$
Gainesville
WRUF 8305000
Jacksonville
WJAX $900 \quad 1000 \mathrm{~N}$
WMBR 1370100 C.
Lakeland
WLAK 1310100
Miami
$\begin{array}{lll}\text { WIOD } & 610 & 1000 \\ \text { WMBF }\end{array}$
WOAM $560 \quad 1000 \mathrm{C}$.
Miami Beach
WKAT 1500100
Orlando
WDBO 5801000 C: Pensacola
WCOA $1340 \quad 500$ C
St. Augustine
WFOY 1210100
St. Petersburg
WSUN 6201000 N
$\begin{array}{lll}\text { Tallahassee } \\ 1310 & 100\end{array}$
Tampa
WDAE $1220 \quad 1000$ C West Palm Beach
WJNO 1200100 C

| GEORGIA |  |  |
| :---: | :---: | :---: |
| Albany |  |  |
| WGPC | 1420 | 100 |
| Atlanta |  |  |
| WAGA | 1450 | 500 |
| WATL | 1370 | 100 |
| WGS'I' | 890 | 1000 |
| WSB | 740 | 50000 R |
| Augasta |  |  |
| WRDW | 1500 | 100 C |
| Columbus |  |  |
| WR13L | 1200 | 100 |
| Griffin |  |  |
| WKEU | 1500 | 100 |
| Macon |  |  |
| WMAZ | 1180 | 1000 |
| Rome |  |  |
| WRGA | 1500 | 100 |
| Squannah |  |  |
| WTOC: | 1260 | 1000 |
| Thomasville |  |  |
| WPAX | 1210 | 100 |
| Waycross |  |  |
| WAYX | 1200 | 100 |
| HAWAIt |  |  |
| $\begin{array}{lll} \text { Milo } \\ \text { KHBC } & \\ \hline 1400 \end{array}$ |  |  |
|  |  |  |
| Honolula |  |  |
| KGM ${ }^{\text {S }}$ | 1320 | 1000 C |
| KGU | 750 | 2500 N |
| IDAHO |  |  |
| $\begin{aligned} & \text { Boise } \\ & \text { KII) } \end{aligned}$ | 1350 | 1000 |


| Coeur d'Alene <br> KGCI 1200100 |  |
| :---: | :---: |
|  |  |
| Idaho | Falls |
| K1I) | 1320500 |
| Lewist | ton |
| KRLC | $13 \% 0250$ |
| Namp |  |
| KFXI) | 1200100 |
| Pocate | ello |
| KSEI | 900250 |
| Twin | Falls: |
| KTFI | 12401000 |
| ILIINOIS |  |


| Bloomington |  |  |
| :---: | :---: | :---: |
| WJBC | 1200 | 100 |
| Carthage |  |  |
| WCAZ | 1070 | 100 |
| Champ | pign |  |
| WDWS | 1370 | 100 |
| Chicago |  |  |
| WAAF | 920 | 1000 |
| WBBM | 770 | 50000 |
| WCBD | 1080 | 5000 |
| WCFL | 970 | 5000 |
| WCRW | 1210 | 100 |
| WEDC | 1210 | 100 |
| WENR | 8705 | 50000 |
| WGES | 1360 | 500 |
| WGN | 720 | 50000 M |
| WJJI) | 1130 | 20000 |
| WLS | 870 | 50000 |
| WMAQ | 670 | 50000 |
| WMB1 | 1080 | 5000 |
| WSBC | 1210 | 100 |
| Cicero |  |  |
| WHFC | 1420 | 100 |
| Deca |  |  |

WJBL $1200 \quad 100$
East 1)ubuque
WKBB 1500100
East St. Louis
WTMV 1500100
Harrishurg
WEBQ $1210 \quad 100$
Joliet
WC.LS 1310100
Peoria
WMBD 14401000 C
Quincy
WTAD 9001000
Rockford
WROK $1410 \quad 500$
Rock Island
WHBF $1210 \quad 100$
Springfield
WCisS 1420100
WTAX 1210100
Tuscola
$\begin{array}{lll}W D Z & 1020 & 250\end{array}$
Urbana
WILL 5801000

## INDIANA

Anderson
WHBU 1210100
Elkhart
WTRC $1310 \quad 100$
Evansville
WEQA $1370 \quad 100 \mathrm{C}$
WGBF $630 \quad 500 \mathrm{~N}$

Fort Wayne
$\begin{array}{llr}\text { WGL } & 1370 & 100 \mathrm{~N} \\ \text { WOWO } & 1160 & 10000 \mathrm{~B}\end{array}$
Gary
WIND $\quad 5001000$
Hammond
WHIP $14 \times 05000$
WWAE 1200100
Indianapolis
WFEM $1230 \quad 1000 \mathrm{C}$
WGVA 10501000
WIRE $1400 \quad 1000 \mathrm{R}$
Mancie
WLEC 1310100
New Albany
WGRC $1370 \quad 250$
Richmond
WKBV 1500100

| South Bend |  |
| :--- | :--- | :--- |
| WFAM |  |
| WSET |  |
| 1200 | $\mathbf{1 0 0}$ |

WSET $1360 \quad 500$
Terre Haute
WBOW $1310 \quad 100 \mathrm{~N}$
West Lafayette
WBAA $890 \quad 500$
IOWA

| Arnes <br> WOl | 640 | 5000 |
| :---: | :---: | :---: |
| Boone |  |  |
| KFCO | 1370 | 100 |
| Cedar | r Rapids |  |
| WMT |  | 1000 B |
| Daven | nport | - |
| wor. | 1370 | 100 C |
| Decora | rah |  |
| KGCA | 1270 | 100 |
| KWLC. | 1270 | 100 |
| Des M | Moines |  |
| KRN1 | 1320 | 1000 C |
| KSO | 1430 | 500 is |
| WHO) | 1090 | $\mathbf{5 0 0 0 0} \mathrm{R}$ |
| Ditheq K1)TH | $\underset{1.340}{\text { que }}$ | 500 |
| lowa | City |  |
| WSUI | 880 | 500 |
| Marshalltown |  |  |
| KF.JB | 1200 | 100 |
| Mason | $n$ City |  |
| KGLO | 1210 | 100 C |
| Sherra | andoah |  |
| KFNF | 890 | 500 |
| KMA | 930 | 1000 |
| Sioux | City |  |
| KSC.J | 1330 | 1000 C |
| K'TEI | 1420 | 100 |

## KANSAS

## Abilene

KFBI $1050 \quad 5000$
Coffeyville
KGGF $1010 \quad 1000 \mathrm{M}$
Dodge City 250
KGNO 1340250
Garden City $_{1210} 100$
Great Bend
KVGB $1370 \quad 100$
Hentchinson
$\begin{array}{llll}\text { KW13G } & 1420 \quad 100\end{array}$

| $\underset{\text { Kanssas City }}{\text { Kin }}$ | 100 |
| :---: | :---: |
| Lawrence |  |
| KFKU 1220 | 1000 |
| WREN 1220 | 1000 B |
| Manhattan |  |
| KSAC 580 | 500 |
| Pittshurg |  |
| KOAM 790 | 1000 N |
| Salina |  |
| KSAL 1500 | 100 |
| Topeka |  |
| WIBW 580 | 1000 C |
| Wichita |  |
| KANS 1210 | 100 B |
| KFH 1300 | 1000 C |

## KENTUCKY



## LOUISIANA

| Alexandria |  |  |
| :---: | :---: | :---: |
| KALB | 1210 | 100 | Baton Rouge WJBO $1120 \quad 500$ B | Lafayette |  |  |
| :--- | :--- | :--- |
| KVOL | 1310 | $\mathbf{1 0 0}$ |

Lake Chartes KPLC 1500100
Monroe
$\begin{array}{lll}\text { KMLB } & 1200 \quad 100\end{array}$
New Orleans
$\begin{array}{lll}\text { WBNO } & 1200 & 100 \\ \text { WDSU } & 1250 & 1000 \text { IS }\end{array}$

| WJBW | 1250 | 100 |
| :--- | :--- | :--- | WSMB $1320 \quad 1000 \mathrm{R}$

WWL 85010000 C
Shreveport
KRMD 1310100 .
K'BS $1450 \quad 1000 \mathrm{~N}$
KWKII 110010000 C

| MAINE. |  |
| :---: | :---: |
| Augusta |  |
| WRIDO 1370 | 100 M |
| Bangor |  |
| WABI 1200 | 100 |
| WLbZ 620 | 500 C |
| Portland |  |
| WCSII 940 | 1000 R |
| WGAN 640 | 500 |
| Presque Isle |  |
| WAGM 1420 | 100 |

MAR YLAND
Baltimore
WBAL $\quad 760 \quad 2500$ B WBAL $1060 \quad 10000$ B WCAO $600 \quad 500$ (: $\begin{array}{lll}\text { WCBM } & 1370 & 100 \\ \text { WFBR } & 1270 & 500 \mathrm{R}\end{array}$
College Park
W3XJ $1060 \quad 100$
Cumberland
W'13O $800 \quad 250$
Frederick
WFMD $900 \quad 500$
Hagerstown
WJE.I 121050
Salisbury
WSAL 1200250
MASSAC.HUSETTS
Boston
WAAR $1410 \quad 500 \mathrm{M}$
$\begin{array}{lrr}\text { WBZ } & 990 & 50000 \\ \text { WCOP }\end{array}$
$\begin{array}{lll}\text { WCOP } & 1120 \quad 500\end{array}$
WEEI $590 \quad 1000$ C
$\begin{array}{lrr}\text { WHDH } & 830 & 1000\end{array}$
$\begin{array}{llc}\text { WMEX } & 1500 & 100 \\ \text { WNAC. } & 1230 & 1000\end{array}$
$\begin{array}{crc}\text { WORL. } & \mathbf{9 2 0} & \mathbf{1 0 0 0} \\ \text { W00 }\end{array}$
Fall River
WSAR $1450 \quad 1000 \mathrm{M}$
Greenfield 1210250
Lawrence
WLAW $680 \quad 1000$ 1370 10-100
Lowell
WLLH $1370 \quad 100 \mathrm{M}$ New Bedford
WNBH $1310 \quad 100 \mathrm{M}$
Pittsfield
WBRK $1310 \quad 100$
Springfield
WBZA $990 \quad 10008$
$\begin{array}{lrr}\text { WBMA } & 990 & 1000 \mathrm{~B} \\ \text { WMAS } & 1420 & 100 \mathrm{C}\end{array}$
WSPR $1140 \quad 500 \mathrm{M}$
Worcester
WORC: $1250 \quad 500$
WTAG $\quad 580 \quad 1000 \mathrm{R}$

## MICHIGAN

Battle Creek
WJLL $1420 \quad 100$
Bay City
WBCM 1410500
Calumet
WIDF $1370 \quad 100$
Detroit
WJISK $1500 \quad 100$
$\begin{array}{lll}\text { W.JR } & 750 & 50000 \text { ( }\end{array}$
$\begin{array}{lll}W M B C & 1420 \quad 100\end{array}$
WWJ $920 \quad 5000$ R
WXIZ $1240 \quad 1000$ 13
East Lansing
WKAR 8501000 Flint
WFDF $1310 \quad 100$
Grand Rapids
WASH $1270 \quad 500 \mathrm{~N}$
WOOD $1270 \quad 500 \mathrm{~N}$
Ironwood
W.JMS 1420100

Jackson
WIBM 1370100

NORTH AMERICAN B. C. STATIONS BY LOCATIONS


NORTH AMERICAN B. C. STATIONS BY LOCATIONS



NORTH AMERICAN B. C. STATIONS BY LOCATIONS


NORTH AMERICAN B. C. STATIONS BY CALLS


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NORTH AMERICAN B. C. STATIONS BY CALLS


## Special DX Calendar

THE 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 kes.
Wed., 0035-0045, KOY, 1390 kcs. 1345-1400, WTAR, 780 kcs .
Thur., 0230-0245, KGMB, 1320 kcs .
Sat., 0015-0030, W8XK, 6140 kes. $0230-0245, \mathrm{KLS}, 1280 \mathrm{kcs}$.

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

## 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 kes (UDXC).
Apr. 2, 0245-0400, CHWK, 780 kes (UDXC).
May 7, 0245-0400, CHWK, 780 kcs (UDXC).
June 4, 0245-0400, CHWK, 780 kcs (UDXC).

|  | e Month's Changes (Continued from Page 58) |
| :---: | :---: |
| 1260 | ${ }^{W}$ NBX Springtield. Yt. Twin States brdest, Corp., 39 Main st. |
|  | PERMIT TO CHANGE FREQUENCY |
| 50 | KLPM Minot, N. Dak.. to 13 |
| 1250 | WCAL Northitield Minim, to 760 |
| 1310 | KINY Juneau, Alaska, to taso |
|  | Krr Yakma, |
| 1420 | OL Masaington, D.C., to |
|  | PERMIT To CHANGE |
|  | WKZO Kalamazoo, Mieh. ${ }_{\text {2f: }}$ (1) |
| 880 | CMCF Havant. Cuba - 0000 |
| 880 | wCOC Meridian, Miss |
| 900 | KGBC Ketehiran, Alaska. |
| 190 | WATR Waterbury Coin. 250 |
| 1240 | Klpm minot, N , Dak. 500 (1) |
| 1250 | WCAL Northtield. |
|  | KIVY Mnneapois, |
|  | Yunau, Amban |
|  |  |
|  | wh |
|  | KA |


| 1430 | WH3NS | Columbus, Ohio. 1000 (5) |
| :---: | :---: | :---: |
| 1490 | KVHK | Sacramento, Calif. 10000 |
| PERMIT TO CHANGE LOCATION |  |  |
| 570 | KGKO |  |
| FOREIGN BROADCAST |  |  |
| (Exclu | ding Oc | cania, which is listed complete in this issue) |
|  |  | NEW |
| 1122 | Stugshaw, Gt. Britaln. fonot w |  |
| 1357 | Genor No. 2, Italy. 5000 |  |
| Rome No. 3. Italy 1000FREQUENCY |  |  |
|  |  |  |
| 720 | PRA8 | Pernambuco, Brazil, from 730 |
| 740 | Pl2, 4 | San Salvador, Braztl, from 1090 |
| 760 | PRA6 | Sao Paulo, Brazil, from 800 |
| 800 | PRA2 | 12io de Janeiro, Brazil, from 780 |
| 1060 | 1'RD2 | Rio de Janeiro, Brazil, from 1240 |
| 1080 |  | Joao Pessoa, Hrazil, from 640 |
| 1120 | PRH8 | Rio de Janeiro, Brazil, from 1080 |
| 1220 | PLA9 | Rlo de Janeiro, Brazil, irom 1120 |
| 1420 | PRB2 | Curityba, Brazil, from 1480 |
| 1470 | PRE6 | Nictheroy, Hrazil, from 1170 POWER |
| 850 |  | Softa, Bulgaria, 100,000 from 1000 |
| 1220 | PRA9 | 1 lio de Janeiro. Brazll, 25000 from 1000 DELETE |
| 580 | PRF8 | San Salvador, Brazil |
| 620 | PRE33 | Julz de Fora, Brazil |
| 630 | PRF6 | San Salvador, Brazil |
| 1122 |  | Newcastle, Gt. Britain |

## At DEADLINE

Merlin Almstead of Washington, D. C. reports ZNS, Nassau, Bahamas, on 540 kes, daily from 8:30 to $9: 30 \mathrm{pm}$, EST.

WICA, 940 Ashtabula, Ohio is now on the air.

CMQ, Havana, has moved to 600 kcs.

On December 29 the Irish Free State became the Irish Republic.

CMCX Havana has moved to 1380 kes.

## QUICK INDEX TO STATION DATA

North American Broadeast


## FOIR IBETTEIR RECEIPTION



The Perfect Plune Adaptor makes it coas? in attach headphones to any radio set. Anyone can install it, without trools, in mo time al all.

IDEAL FOR THE HARD-OF-HEARING;
Those who are very hard of hearing can enjoy radio reception by using our new hloll Model Adapter. The speaker can be silenced if desired.

In ordering be surs to gize make and model
of receiver and a list of the tubes wed. The Hofi Model Phone Sdapter.......\$3.95

We pay the postage on all orders
If you live in Ohio add $3 \%$ for sales T'us


TME RADEX PIBESS
14717 Dedroit Ave., Cleveland, Dhio,

## ACCESS(DIRIES FTDIR USE WVITII TIIE IPERNEAT IPIISNE ADAPTEIR

6-Foot extension cord with connector ................. 50c
Distant Volume Control, for regulation of volume of
set from a distance $\ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$ 20
Trimm Featherweight Headphones. $\begin{gathered}\text { Precision built, } \\ \text { combining ultra-sensitivity with rugged construc- } \\ \text { tion. Weigh } 4^{1 / 4} \text { ounces complete. } \\ 24,000 \text { ohms.... }\end{gathered} \$ 8.50$
Trimm Professional Headphones, the choice of countless users. Professional type. 4000 ohms

Trimm Dependahle Headphones, long a favorite with amateur operators. The best in the world for the money. 2000 ohms
Prices on single-unit or special 'phones on request.
We pay the postage on all orders
If you live in Ohio add 3\% for Sales Tax
THE RADEX PIRESS
14717 Detroit Ave., Cleveland, Dhio
J. E. SMITH, President National Radio Institute Established 1914


Earned $\mathbf{\$ 5 0}$ First Month in Spare Time
${ }^{-}$1 knew nothins about lkadio. After four lessons I began servjeing Ratios. tearthag s50 the first month. Last winter I made as high as s100 a month in spare time."-G. F WAITON. sus Vest Oltrey Road, Noriolk, Vil.

## Own Business <br> Pays $\$ 300$ a Month

"I now have my own Radio business which shows thiree hundred dolhundred dollars a month again to

 | Nationat luadio. |
| :--- |
| FRANK |

 Penna.


Gel My LESSON on Radie Servient Tips FREE
I'll prove that by Training is Just whte you need to master Tadio. My sample lesson text. "Ridio Receiver Trolibles - Their Cause and Remedy' cosers a lontr list of Rudio receiver troubles in A. ( ${ }^{\text {a }}$ D.C. battery, unversail, auto, T.R.F., super-heterodyle, bli-wave, and other types of sets, cross-indexed ior of sets, reference. Special section on receiver checkup. alignment. balaneing. neutralizing, testing. Get this lesson free Nail the Coupon.


Do you want to make more mones? The world wide use of Radio has made athas opportunties for you to have a spare time or full time Radio service business of your own. Three out of every four nomes in the United States have Radio sets which regularly require sebaire. servicing, new tubes. etc. I will train cou at home in your spare the to sell. install, service, all types of Radio setsto start your own Radio business and build it up on mones you make in your spare t me while learning. Mal coupou for m fit-page book. It's Free it shows what I haye Ione for otherswhat I dem ready to do for you.

## Many Make $\$ 5, \$ 10, \$ 15$ a Week Extra <br> In Spare Time while Learsing

Almost every neighborhood needs a rood spare tine serviceman. The day you enroll I start sending you lixtra Mtoney Job Sheets. Thes show you how $t 0$ do k adio repair jobs that you can cash in on quickly. Throughont your training I send you plans and ldeas that have made good spare time moneyfrom $\$ 200$ to $\$ 500$ a year-for handreds of fellows. I send you special equipment which pives you practical ladio experience-shows you how to conduct experiments and build eircuits which illustrate important radio principles.

## Get Ready Now tor Your Own

 Radio Business and for Jobs Like TheseRadio broadcasting stations employ engineers, operators, station managers and vay up to $\$ 5.060$ y year. Spare time

Kadio set servicing pays as much as $\$ 200$ to $\$ 500$ a year-rull the servicing jobs pay as much as $\$ 30, \$ 50, \$ 75$ a week. Many Radio Experts own their own full time or part time Radio businesses. Radio manufacturers and jobbers employ testers. inspeetors, foremen, engineers. service men, waying up to $\$ 6,0 n 0$ a year. Radio operaturs on shlp get good pay. see the world besides. A ritomobile, nolice, aviation, commercial Radio, loud speaker systems offer good opportunities. Television promises many good jobs soon. Sen I have trained at home hold good jobs in these branches of ladio.

## Find Out What Radio Offers You

Mail the coupon now for my Free Lesson and my look. tich Iiewards in Radio. Both are free to anyone over 16 years old. My book points out Radio's spare time and full time opportunitie's and thuse coming in 「elevision: tells about my Trisining in Radio and Television: shows you letters from men I have trained, telting what they are loing andl warning; tells about ny thoner back tureement. MAIL THi: COIPOD in an envelode. or laste fot a penny post a penmydost
d. E. SMITH, President National Radio Institute,
Dept. 8A0
Washington.
D.C.

## GOOD FOR BOTH SAMAAEE Book FREE

J. E. SMITH, President, Dept. 8AO
\| National Radio Institute, Washington, D. C.
Dear Mr. Simith: Without obigating me. send your sample resson and the Doak which tells about spare thme and full time Radio opportunities. and foow I can train for them at home in spare time. (Please write plainly.)




[^0]:    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

