THE NOVEMBER 1935

RADIO

The All-wave DX Log of the World



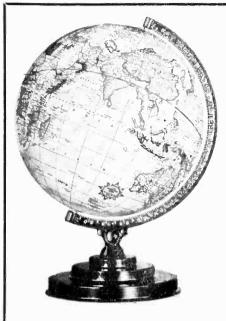
The Short Wave Stations of the World and the Broadcast Stations of North America Listed by Frequencies, Locations and Calls.



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November 1, 1935



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FRED CLAYTON BUTLER Editor and Publisher



B. FRANCIS DASHIELL Technical Editor

CARLETON LORD DX Editor

PAGE TAYLOR Short Wave Editor

TWELFTH YEAR

NUMBER 93

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The SHORT WAVE NEWS

of the Month

● ● By PAGE TAYLOR

WELCOME letter from Guatemala contains valuable information on shortwave stations in that country. Sr. Heberto Correa, Station Director of Radiodifusora Nacional, writes, "Please be advised that the following shortwave stations exist in the Republic of Guatemala: TGWA, 6000 kc/s., 300 watts, of the Radiodifusora Nacional. TG1X, 9450 kc/s., 200 watts, an experimental station of the Ministerio de Fomento, and TG2X, 5940 kc/s.. 200 watts, of the Policia Nacional. All these stations are subject to the control of the Ministerio de Fomento. I am pleased to state that we verify all reports except reports in which reception is not proven. TGW-TGWA (Radio Nacional) are on the air from noon to 1 p.m., EST., 6:30 to 7:30 p.m. and 9 to 11 p.m. daily except Sundays. On Sundays only the noon-day program is given. On Saturday nights the program continues until 6 a.m. with a special marimba concert. TG1X carries these same programs but as yet is not operating regularly. It will, however, eventually be in permanent service TG2X of with directional antennae. the National Police is on the air nightly from 9 to 11 p.m., EST.

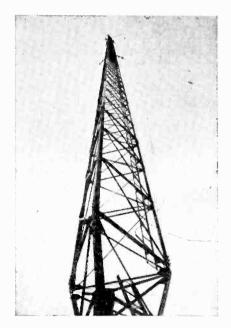
"Other stations not pertaining directly to this office are those of the Liberal Progresista, a daily newspaper, as follows: TGX, 1400 kc/s and TGXA, 6130 kc/s., both with 20 watts power."

A Request from Switzerland

"My homeland, Switzerland, has asked me to spread the news about their special shortwave offerings," preambles Rudolph Kure, 367 Amazon Ave (Clifton), Cincinnati. Ohio. "The letter I have from them follows:

'It may interest you to learn that our Society is going to radiate special broadcasts on the first Monday of every month, dedicated mainly to our countrymen abroad, which will go over several stations of the Swiss Shortwave Association (USKA) and also over the Society of Nations stations at Prangins, at the following times: From 3:10 to 4:15 p.m., EST: station HB9B, 14236 kcs.,

aerials directed to North America. station HB9H, 7005 kc/s., using an omnidirectional aerial station HB9J, 14400 kc/s., direct-



The new 490-foot vertical antenna tower of Station WMAQ, now the oldest of the Chicago stations. This tower is located 25 miles west of the Chicago loop at Bloomingdale, Ill.

ed to South and Central America

'In order to secure world-wide reception these same programs will be repeated on the same day between 6 and 7 p.m., EST, by the Prangins stations HBL, 9595 kc/s. and HBP, 7797 kc/s. The following USKA stations will transmit simultaneously with the Prangins stations:

HB9B, 14236 kc/s. to North America.

HB9AT, 14290 kc/s. to Netherland

'We will answer every report of reception. If reception reports are numerous enough to satisfy us we have a large international audience we will be encouraged to continue and extend these broadcasts.'

We understand reports on these broadcasts should be addressed to Swiss Shortwave Association (USKA), 30 Neuengasse, Berne. Switzerland. The programs will be transmitted on Nov. 4, Dec. 2, Jan. 6 and Feb. 3.

From the North West

"As I very seldom see reports from the State of Washington a few remarks might be of interest," contributes Anthony C. Tarr, Fort Lewis, Wash, "I reached out on 19-meters the other day and got HVJ with a test program at 1700 EST. transmitted music and announced as Radio Vaticano. They left the air withe the phrase Laudatur Jesus This station is heard well Christus. at this time and it seems they should In a former transmit more often. issue of RADEX it was stated that the German stations wondered if they were heard on the West Coast, Well, DJD is. DJD is not as good as Pontoise, but it is much better than the English stations. I would like to correspond with DX fans in the Northwestern States and with the secretaries of some DX Clubs." Mr. Tarr contributed a wealth of information on forestry and police stations in his state, all of which has been incorporated in our lists.

Below the Rio Grande

Official information on two stations follows. The Compania Radio-fonographica, Apartado 197, Guadalajara, Jal., Mexico, states they have a shortwave station XEDQ relaying the programs of XED. XEDQ works on 9520 kc/s, from 8 to 9 a.m. and from noon to midnight, CST daily.

Mr. Perry Girton, Apartado 225. San Jose, Costa Rica, gives the call letters of his station as TI2PG, but the station always announces simply as TIPG. "La Voz de la Victor." TIPG has a power of one kilowatt, according to its owner, and works daily from 5:30 to 10:30 p.m., CST.

The Alaskans

RADEX is indebted to Ashley V. R. Walcott, 76 San Rafael Way, San Francisco, Calif. for nearly all its information on the Alaskan stations. As these stations are seldom reported, even in Alaska, the paragraphs following should be highly interesting. "One of the more powerful Alaskan stations is Coastal Harbor KDK at Wrangell, owned by A. R. Brueker. This station, on 2538 kc/s, works with KIJB at Cape Pole on 2994 kc/s, at 10:30 p.m., PST every night; then with WLFP, the M. S. Alaskan on 2566 kc/s.; then with KLA at Waterfall on Dall Island, KFF at Union Bay and KLD at Hidden Inlet. On 4610 kc/s, there are a few stations in the forestry service, KMYA at Juneau and KMYB, location not known. These stations also work on 2304 with KBAI at Ketchikan The Two Brothers Mining Co. (Canada) operates several stations near 4500, among them VDC at Calgary, VDV at Two Brothers and VDW somewhere in British Columbia."

When to Tune

James Maguire, 312 Devenish Apartments, Calgary, Alta, reports WVD, Seattle on 8620 working with WXA at Juneau, Alaska on 8050 near 10 p.m. MST. Melvin M. Hill of 278 Collingwood St., San Francisco, re-

ports the same stations, giving the time as 6-7 p.m. PST. The stations state in verifications, however, that they have no regular schedules so we suggest listeners tune between 8 p.m. and midnight, EST (2000-2400).

Mr. Maguire's letter continues: "The correct address of VE9CA is the Toronto General Trust Bldg., Calgary. HJ4ABE uses three chimes like the NBC, and a regular feature of their broadcasts is a 30-minute talk from 10:30 to 11 p.m., EST, in English about the Republic of Colom-VE9GW is now CRCX, a Canadian Radio Commission station, with 500 watts. The frequency of VPD, according to my veri, is 13075. A new Panamanian was heard testing on 6070.It is HP5H at Colon."

Mr. Hill of San Francisco writes further, "I note that WXH is listed on 6662 kc/s. I have a recent verification giving the frequency as 2604 and their daily schedule as 1130, 1430, 1600, 1900 and 1930 EST. On this schedule they frequently contact ships in Alaskan waters which operate on 2738 kc/s. Two of these ships are WDDQ, the Zapora and KJCN, the Bandon. I would like to have information on the frequencies and schedules of WXE at Anchorage. WXP Fairbanks. WTQ Wrangel and WXY at Nome."

A Report from Britain

"I have all the USA stations except W9XAA verified, and some other veries include YV6RV, YV5RMO. PRA8, VQ7LO, HP5B. HJ3ABH. COH, COC, COCD, YV2RC and the Aussies," summarizes R. T. Coales, 54 Chelsea Road, Southsea, England. "Several of these were heard on my little bed-side set, home constructed, my motto being, 'Do your a.m. DXing in comfort!' I have been concentrating on the 20-meter phones as I find most of the hams are quite fascinating talkers, and at the same time it is a quick way to obtain a goodly crop of QSL's. I have 154 American hams verified in all Districts except the 6th and 7th."

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Mr. R. Abella of Cuba writes to assure us that he believes the shortwaves really are the Thrill Bands. "Here is the proof!" he says, "I am in the worst place in the world for radio reception due to the crazy stations of Cuba that move and modulate at their own will, causing all the trouble they can. I have to tune the shortwaves. The long ones are impossible with the terrible noise our 30 stations make day and night here in Havana. I have been able to listen to 85 s.w. stations in 4 months, from Europe, Asia and the three Americas. all of them well identified, using a 6-tube G-E set and tuning just a few hours a day."

Regarding W9XBS

A large number of readers report W9XBS on 6425 kc/s. According to Arthur Viner, 5554 Kenwood Ave. Chicago, Ill., this is an experimental station of the NBC in Chicago. W9XBS welcomes reports and will verify correct reports accompanied by postage. The address is the National Broadcasting Co., Merchandise Mart, Chicago. A few years ago this station was known as W9XQ and it is probable this call may be heard again, or the regular call sign W9XF.

New licenses issued by the Federal Communications Commission include one to the Atlantic Broadcasting Corp. (the CBS), operators of W2XE, for additional frequencies of 17,760 and 21,520 kc/s. The World Wide Broadcasting Corp. of New York, owners of W1XAL at Boston, have permission to increase the power of 1XAL to 10 kw. Construction of the new Honolulu broadcasters is progressing rapidly and they should be on the air soon relaying KGU.

Hearing the Russians

"There has been quite a Russian jamboree in the vicinity of 19 meters all summer, and at present," reports Geo. Acker of Wadsworth, Ohio. "There is RRR1 at Khabarovsk on 15970 kcs., RIM at Tashkent on 15250 and RKI at Moscow on 15040 and 15090. All three have been heard with R8-9 signals many mornings, particularly the latter two. A peculiarity of the Asiatic Russian phones is that they always have women operators, while RKI always has a male operator. The Siberian stations also have a three-beat signal peculiar to them. Java seems to have changed their Saturday morning broadcasts as I hear PMA on 19368 instead of the usual PLE. The programs consist, as usual, of all-Oriental music. PLP on 11 megs. is still used on Sunday mornings."

A List of Amateurs

The number of letters reporting 20-meter amateurs constantly increases and some readers even suggest we list these stations, but this we cannot do. To list all the foreign amateurs we would have to omit Mr. Dashiell's Technical Department and Mr. Lord's DX Section, as well as all the indices. All the amateur stations in the world are listed in the Radio Amateur Call Book Magazine.

"I listened to CEC at Santiago, Chile, for about 20 minutes one Sunday night and in due time was quite pleased to receive from them a nice verification. They state they have a power of 2 kw. COCD is a very good station now, the best of the Cubans." So reports Allan Ford, Portneuf Station, P. Q.

The Best Japanese

"The best Japanese station at this time is JVM," says Bill Bundlie, 614 N. 6th St., Grand Forks, N. Dak. "JVM signs off at 7:40 a.m., EST and have a pretty good signal for about an hour preceding the sign off. WNC at Hialeah, Fla. calls all the stations they work with near 6 p.m., and this is a good time to log some of those South and Central American phones as they all answer WNC in turn. My receiver is a Gloritone 5-tube and would like to hear from others using this make of set."

. R. N. Putnam, 920 Twelfth Ave., Fargo, N. Dak. has tuned in several new commercial stations, one of them being RIO, at Baku, USSR, on 10.180 megs. RIO is heard calling Moscow at 11:15 p.m., EST with an R6 signal but rapid fading. The station he reported last month has been identified as IRG at Massawa, Eritrea, on 14.710 megs.

New Frequency for YV2RC

Important news from Edgar J. Anzola of YV2RC! YV2RC will change its frequency to 5800 kc/s. immediately.

Another letter from R. Abella of Marianao, Cuba, states he hears HJ4ABD, Medellin, Colombia, on 6060 kc/s. He calls the 6 megacycle band a "radio revolution," liking it to the periodical revolutions in Cuba. We are glad to note that there seems to be a slight tendency on the part of some stations to move from the 48 meter band. It is hoped that all the stations do not move into the same spot, however.

Dick Wise, 515 Sixth Ave., Cedar Rapids, Iowa, suggests that more owners of Crosley sets report on their reception. "I am using a 10-tube 1935 model with a 20 foot aerial," he says. "I have had this set about two months and so far have heard 56 shortwave stations. I consider this as good reception for a beginner, especially because I am only four

(Continued on page 25)

When Good Sets Get in Trouble

• • • By the TECHNICAL EDITOR

ANY of our readers carefully study their receivers make comparisons with other sets. This is evidenced an inquiry from Mr. Llewellyn, of Durham, N. C., who writes: "The new Philco 116X uses the following tubes: 2-77s, 3-78s. 1-76, 1-37, 1-5Z3, 1-42, and 2-6A3s. Now my Philco 500X has the same chassis exactly, but uses two 42s in place of the two 6A3s. I presume this is the case because my set has three 42s instead of the one as in the 116X. Is it possible to substitute 2-6A3s for my 42s? If so, will I notice any improvement in the tone of my set? How shall I make the change?"

Mr. Llewellyn's inquiry is a natural one, for, when he looks over the 116 and 500 circuits he finds them similar except for the power output tubes. That is, he thinks the circuits are similar, until he begins to figure out values and try to match impedances.

The output tubes, the output transformer and the speaker are all designed for use with one another. When output tubes are changed to different types it is therefore necessary that we consider replacing the output transformer as well as the speaker. Of course, while it may be possible to find an output transformer that will match the tubes, the cost of the job would not justify the results.

Any change of design of this nature is not recommended unless all of the requirements are carried out. For example, if tubes are used which have a greater output than the original ones, additional power should be obtained from the power supply by making some changes. There are many factors effecting any such change. New sockets would be re-

quired, and several wiring changes to the sockets. The 42 type tubes in your set give as good results as you can get with 6A3s in your present set even if additional changes are made, and we do not recommend the effort.

National SW5 Is Noisy

Mr. J. G. Tate, who lives in Ardmore, Penna., has a National SW5 receiver. He writes: "This set works nicely on code but when I turn the volume control down for phone stations the set crackles and makes a terrific noise. A new volume control was put in but it is the same. There is no noise on c.w. code."

This action in a c.w. receiver is an indication of instability of the high frequency section. An r-f filter in the detector plate lead may be some benefit. Loss of emission of the tubes sometimes causes this same trouble. Be sure that the detector and especially the regenerative control is properly bypassed. Adjust the detector plate load for the smoothest possible regeneration by varying the plate voltage until you find the proper value, or by placing a resistor in the plate circuit and varying this until the correct results are obtained.

Evidently you have no trouble in obtaining oscillation from the circuit for reception of c.w. signals, so be careful that you do not destroy the regenerative qualities of the circuit by making the above suggested variations.

Hum and Distortion

One of the small, universal a.c.-d.c. sets—a De Wald 5-tube receiver—is giving Griffith Sechter, of Allentown, Pa., a bit of trouble. But his complaint is not new, most all set owners make it sooner or later. However,

we will publish his letter, in part, as follows: "Hum persists and at times it completely drowns out reception. Then amateur reception is distorted and never clear. The set receives no police calls."

We have discussed hum a number of times in these columns, but since no two sets have the same characteristics, your Editor feels that the subject of hum is of general interest and will confront radio users for years to come.

In this case we think that the two symptoms mentioned by Mr. Sechter both point to a common trouble especially alignment. While some hum is expected from such small receivers because of the limited filtering systems used, this amount should not be objectionable. One of the first indications of poor adjustments outside the loss of sensitivity and selectivity is the production of unusual hum. This is almost always accompanied by distortion of the type you have mentioned.

Poor adjustment is also accompanied usually by a distinct carrier "hiss" which may or may not be true in this case. There are of course numerous sources of hum in any receiver, such as low and faulty emission from tubes, incorrect bias voltages, incorrect plate voltage, failure to obtain proper ground for the filaments of the set, faulty filter condensers, resistors that have changed in value, etc.

The fact that the tubes and i.f. transformers are close together have little or no effect in this case However, failure of any of the shielding or of the condenser rotors to make good contact with the chassis will cause hum. We suggest that this is a case for a serviceman who can test out the parts along the lines suggested above and readily locate the defective part or parts.

Push-Pull Seems Defective

"I have a Crosley Showbox," writes one reader who appears to have had a bad fright as he signed his name. "and in the final stage is a pair of type 71 push-pull tubes. When the speaker is normally connected the music and sound is weak and mushy. But removing either of the 71s clears Replacing the 71s with new it up. tubes does no good, but the set works satisfactorily when I use Ols in this final stage, except for hum. A serviceman checked up the set and all The set uses an circuits seem o.k. impedance instead of a transformer output."

From your description the suggestion arises that the resistor used to bias the output tubes has changed in It has probably doubled or increased to much greater than normal. Now, when you remove one of the output tubes, the biasing current through this resistor naturally reduces to one-half normal and the bias voltage also reduces to half that impressed on the two tubes. The fact that, except for the hum, the 201-A tubes work all right in this circuit further substantiates this analysis. Resistors frequently change in value due to heat and breakdown and have to be replaced. In fact, if resistors and bypassing condensers in radio sets were absolutely fool-proof there would be little or no work for servicemen.

Receiver Is Noisy

Mr. Arthur Hutchinson, of Royal Oak, Mich., writes the kind of inquiry we enjoy reading. In brief, he states: "I have been enjoying quiet reception when suddenly my radio developed a loud crackling static-like All tubes have been checked and replaced. Set is sensitive and selective and tone is good. The statomit controls this noise; volume control does not reduce it: still noisy when stato-mit tube is removed from socket; makes less noise on distant, weak stations even when volume is turned on full: noise is not continuous, and is almost quiet between stations. The set is a 16-tube Midwest."

Your analysis clearly helped us in making a diagnosis. The trouble seems definitely to be limited to the audio system of this receiver and is nothing at all serious or expensive to repair. Because of the location this greatly simplifies the matter as it seems certain that the trouble is due to one of the audio coupling condensers. There are two of these, one being in connection with the tone control. The latter will probably not be found at fault.

Philco 86 Has Mushy Intervals

"I have a model 86 Philco," writes George H. Rains, from Mt. Ayr, Iowa. "It fades very badly and the voice goes mushy at intervals. I have just installed new tubes, power transformer, and condenser block, which a local serviceman suggested, but to no avail and the set is as bad as ever. The repairman is now at a loss as to what to do. Can you help us?"

The first place to look for this trouble is in the values of the series plate resistors of the r.f. tubes. There are three of these in series and if any one has become defective or changed in value this trouble will occur.

Have the serviceman see that the circuit is accurately neutralized. Changing tubes may make this necessary. To avoid the possibility of trouble due to the grid leak, which cannot be adequately tested by ordinary means, a change to power detection is recommended.

This may be done by removing the grid condenser and grid leak and placing a 35,000 ohm resistor in the cathode of the detector shunted by a .1 mfd. condenser. Inspect and clean the phone jack and test both of the audio transformers. We think that this general checkup will likely clear up your difficulty.

Edison C2 Acts Queerly

The Edison C2, which also plays phonograph records, was an elaborate

and expensive piece of apparatus when it first appeared. Mr. Idwin F. Dreher, of Novato, Calif., has one of these sets. He writes: "This set had excellent selectivity, but now this action is greatly impaired. It was shipped back to the factory and repaired, but they have been unable to restore the good, original selectivity. Now, when I switch to the phonograph I find it gives signals from local radio stations. There are other noises, like static, and code appears on the phonograph side."

Let us first consider selectivity. Make sure that wires leading to the coils are not corroded and that good soldered contacts are made. tighten all friction contacts. Make sure that the r.f. coils are in the center of the shields, and make sure that the shields are securely grounded. Tubes in the r.f. stages should be free from gas content. Moisture in the primary of the r.f. coils will cause trouble as it provides a leakage across the coils and reduces resonance. The coils may be heated by placing in an oven of about 130 degrees for 10 to 15 hours. ture of half beeswax and half rosin is melted and brushed over the coils Allow them to cool slowly. The grid suppressors in this set should have constant values of 600 ohms and should be checked and replaced if necessary.

If these directions are followed the coils should be restored to original selectivity. Make certain the shields are not dented or twisted in any way, as this will change the original dial selectivity and station setting and then little can be done to return to the original station readings.

It will be well to shield the wire leading from the antenna to the pick-up changeover switch. It is evident that some high resistance leakage across the various elements of this switch account for the radio signals being heard on the phonograph position. You might bake out this

switch and impregnate these switch dielectric units as you will for the coils.

Also, in spite of tests of various by-pass condensers, it might be well to replace them with a good make. As there are only a few of these the work will not be difficult or expensive. Sandpaper the resistance wire on the two filament potentiometers and apply a bit of vaseline and adjust under operating conditions. The static you seem to hear may be due to instability. A faulty adjustment of the tuned circuits or defective parts may account for this noise. In spite of all the work that has been done, we have no assurance that the set is perfectly aligned and adjusted.

Try 1.0 or 2.0 mfd. condensers from each side of the heater or filament of each r.f. and detector tube to ground, or center-tap to ground. This will, under most conditions, remove the hum you observe. Most of these adjustments must be made simply by trial and error.

S.W. On Philco 111

Mr. James W. Kirksey, of Chattanooga, Tenn., asks: "I have read with interest the article about converting old sets to short waves, and wonder whether my Philco model 111 broadcast receiver could be so converted so that I can get short waves. Also, the description of the Howard receiver interests me, but I do not know where to find one of the sets for inspection."

We would not recommend any attempt to convert a Philco 111 superheterodyne to receive short waves as it would call for a more or less complete redesign of the r.f., oscillator and i.f. circuits. Instead, we suggest that you use a good short-wave converter of some inexpensive make. A combination of a short-wave converter with the Philco 111 receiver should provide a very good short-wave outfit capable of European reception.

The Howard receiver, made by one of the oldest radio concerns in the country, is not widely displayed. We suggest that you write the manufacturers—The Howard Radio Company, Belmont Avenue, Chicago, Ill. They have a new metal tube receiver that covers the range from 540 to 18,000 kilocycles. The 1936 line embraces sets from 4 tubes to 19 tubes.

Auto-Radio Vibrators

Now that so many automobiles are fitted with receivers, it becomes natural that many people do not quite understand the different methods employed to provide operating voltages. Mr. Benjamin F. Larcombe, of Washington, D. C., asks: "Please tell me something about the automobile vibrator and why is it necessary?"

The automobile-radio vibrator is the answer to the obvious question: "How does an automobile radio get the high voltages needed to operate a radio when only a 6-volt battery is available?" In the days of battery radio we had to furnish B current either from B batteries or from a B eliminator. The vibrator takes 6 volts from the car generator and battery and breaks it up into impulses quite similar to ordinary house-lighting alternating current. alternating current through the primary of the set-powertransformer where it is stepped up to the usual high voltages.

Most of us are familiar with a spark coil. It has a vibrator which breaks up the primary current into rapid impulses. These pulsations, producing constantly breaking magnetic fields around its inner, iron core, induce higher voltages in the secondary coil. The voltage is so high that sparks jump across a gap from the secondary winding.

The primary of the automobile-radio transformer has a center tap which is generally connected to the positive post of the car battery. A spring vibrator is set to buzzing by an independent magnet and coil. This works just like a door bell or buzzer. But the tension of the vibrator is set so that it swings back and forth just 120 times a second, or makes 60 complete cycles per second. This corresponds to the 60-cycle alternating current used in our homes.

The two ends of the primary of the transformer connect to two contact points, one on either side of the vibrator. Now, when the vibrator pulls to the left it makes contact with the left-hand contact and sends the negative side of the battery into the half of the coil primary connected in the circuit. Then the vibrator swings to the right, it breaks this first contact and makes contact to the point on the right and sends the negative battery current into the opposite half of the transformer primary coil. Using the two halves of the primary coil, alternately, causes an alternating magnetic field to flow around the transformer magnet just as it does when attached to a 60-cycle house cur-This induces an alternating current of high voltage in the secondary as in any a.c. radio set. a.c. voltage is rectified and filtered in the usual manner. In other words, the auto radio is an ordinary a.c. radio, but operated from the low-voltage 6-volt d.c. battery current instead of the 60-cycle 110-volt house current, by means of the vibrator which changes the 6-volt d.c. into 6-volt a.c.

Noisy Power Supply

Out in Eureka, Nevada, many of the people have to use current that is generated by a Kohler electric plant together with an additional Fordson driven generator when the demand is great. Mr. Harold W. Gill writes: "When this power is running I get noise and vibration. The current is at 115 volts d.c., and the noise makes reception very unsatisfactory. What can be done?"

Direct current is generated by dynamos that use brushes to collect the current from the commutators. This current becomes noisy, and is known as commutator ripple caused by the make and break vibrations as the current is momentarily broken as the brush slides from one tiny section of the commutator to the next section. It is impossible to prevent this noise, but it can be reduced in intensity by having carefully fitted and sparkless brushes. The use of filter condensers on the generator will absorb the sparking and lessen the noise. Then, too, you can use a line filter at your radio. This will take out much of the noise. the Tobe Deutschmann Company at Canton, Mass., for information about their devices used to filter out noises in d.c. power lines.

Using Volt Meter

Joseph Stokes, of Swissvale, Pa., has a 0-60 to 0-300 volts voltmeter which he wishes to use. He asks: "What resistance shunt must I use with this meter when using 3,00 volts d.c. on it?"

A word about voltmeters will not be amiss. This voltmeter will have three contacts. One, perhaps, will be the negative side. The other two, both, positive, will be marked 60 volts and 300 volts. The negative and the 60 contacts will be used when measuring less than 60 volts, and the negative and the 300 will be used for volts over 60 and less than 300. Mr. Stokes is misinformed about the shunt. No shunt resistant is needed with a voltmeter. Shunts are used with ammeters, because these meters are set directly in series with the current flowing through the circuit. If the amperage is high the meter cannot carry it, so a shunt resistance is placed across the two contacts of the ammeter to carry the greater portion of the current. size of the shunt is proportional to the current being carried in the line.

Therefore, it is much easier to measure high voltages with a voltmeter connected directly across the line, than to measure amperages by inserting the ammeter in the line.

Using Dry Cells

Up in Moosamin, Sask., Can., dry cells must be plentiful. Douglas Fyke writes: "Is it possible to use two dry cells to get 2.5 volts to run my two-tube short-wave converter so as not to overload my broadcast receiver? This converter uses a 24 and 27 tube."

It is possible to use two dry cells for this purpose. They will soon run The two tubes, in parallel, will drain a total of 3.5 amperes at 2.5 volts from the battery. This is too severe a load to throw on two cells connected in series so as to give 3 volts. But, if you connect the two tube filaments in series, the converter then will require twice 2.5 volts, or 5 volts, but only the amperage of one tube, or 1.75 amperes. Four dry cells, connected in series, will give 6 volts. This is one volt too much for the tubes, so a small resistor, wire wound, of 0.6 ohms and I watt, in series will cut down the 6 volts to 5 volts. If the two cells register 30 amperes each, then the converter can be operated, theoretically at least, approximately 18 hours.

Loose Speaker

"I have a Philco model 14L set that has become noisy. There is a constant vibration as if the speaker is loose," says Mr. J. L. Cowles, of Columbus, Ind.

In the first place the speaker cone may be cracked or warped, and this would produce a characteristic singing rattle or buzzing. Another possibility is that the speaker mounting has become loose, that the edge of the cone has become loosened or that the voice coil supporting-spider is out of adjustment allowing the voice coil to make mechanical contact with the surgounding pole pieces.

Quite often a veneered cabinet will

cause trouble when the glued material becomes dried out and separated. Defective output tubes, too, cause similar trouble, as they may become gassy and overloaded. Bad tubes or a warped cone call for replacements.

Squealing Grebe

From Lehighton, Pa., Paul A. Hammel writes: "When I turn up the volume control of my Grebe, 1930, receiver to tune in a station, I get a squeal. All the tubes, 24, 27, 45 and 80, have been replaced, but that has not helped. What can be wrong?"

Oscillation squealing in one or more of the r. f. amplifier stages of the Grebe 1930 receiver may be traced to one of the following causes: Excessive plate voltage on the 24 tubes; excessive screen voltage on the same; faiture of the grid bias resistor bypass condensers; failure of either plate or screen bypass condensers because they are open; incomplete grounding of shielding; poor contact between condenser rotors and chassis; and improper placing of wires as regards control-grid and plate circuits being closely parallel.

Acrobatic RCA-Victor 128

Mr. Joseph Stempel, of Bridgeport. Conn., has one of those temperamental sets. He advises: "I have a new RCA-Victor model 128 all-wave set. It gets weak until I tilt it and then all the volume returns. One of the big condensers gives a popping sound when it is shaken. It sounds a bit like water splashing."

It hardly seems probable that any unit in the set other than the electrolytic condenser on top of the chassis could cause this trouble. There may be an internal shorting that is rectified when the position of the set is disturbed. We first advise replacing the 10 mfd. condenser and then testing all grid return circuits for conduction and proper values. Your serviceman can do this in quick time.

Tone Control

"How can I install a tone control in my Grunow 550 receiver?" asks D. A. Heisley, Jr., from Harrisburg, Pa.

A tone control may easily be added to the Grunow 550 5-B chassis. Place a 0.1 mfd, fixed condenser in series with a 100,000-ohm rheostat or variable resistor which in turn is placed in series between the second detector plate and the grounded chassis. There are, of course, other places where this tone control can be attached, such as from any of the audio-amplifier tube grids to the ground, but the greatest effectiveness is obtained from the connection between the second detector plate and the ground.

Interference

Aboard Ship

N the September issue, I read a wail from Mr. Pringle of the SS 'Tahchee,' 'observes David Carruthers of the SS 'Standard.' ''His complaint seems to be the noises picked up from the ship power-plant, etc. I shall try to disillusion Mr. Pringle in so far as is possible. I am the radio operator on this ship and have had about twelve years' experience on many vessels and have heard many sets used with more or less (mostly less) success.

"First of all, the trouble is that most ships use DC. I do not think this is as good as AC, especially for the s.w. bands, as the tubes do not get their full voltage. Then the generator supplying this current is comparatively small and the ripple is much greater than would be the case with a large city generator. The filter that would be sufficient for the city generator is inadequate on shipboard. If you filter any more, you cut down the tube voltages still further and impair their efficiency.

"The generator is not the only offender. There are usually three or four fans making a hell of a racket and these are picked up in the antenna (even a doublet). Then, too. there are lots of corroded socket connections which make a devil of a Mind you, all these noises racket. are picked up even if you use a DC-AC converter, as Mr. Pringle says he Seems all you have to do is to connect to a ship's socket and your troubles begin. The type of set used makes no difference. Some are better than others at picking up signals and broadcasts but they are all excellent at picking up line noises. Using the geegaws sold in fake radio stores and referred to as 'static controls', 'noise eliminators', 'no-stats' and the like, is a sheer waste of money.

"However, Mr. Pringle should not despair entirely. There is one way to get pretty good results-not a cureall, mind you—but a way to cut down the racket to a minimum. Let him retain his RCA doublet and use a battery-operated receiver. I use a National SW-3 and it's the 'nerts'. I hear everything on it that they write to your magazine about, with a minimum of noise. I know batteries are a bit of trouble and expense. However, sailors don't seem to mind paying through the nose for other entertainment; why kick about paying for radio?

"There are eleven DC sets on board of various makes. Most of them are expensive. They all work as Mr. Pringle says his does although their owners will claim that they are perfect. BUT, exclamation point, they come up to the radio shack to hear Lowell Thomas and the news dispatches. I wonder why? (N. B. The ship's receivers are always battery-operated.)

"I sincerely hope Mr. Pringle and a lot of others will follow my example and stick to batteries. Ship's juice just doesn't do."

Philco's Popular Masterpiece

• • By B. FRANCIS DASHIELL

N June of 1928, Philco began the manufacture of alternating current radio receiving sets. Those early receivers utilized the then popular "Neutrodyne" tuned-radio-frequency circuit. The novel feature of the first Philcos, however, was the builtin power supply unit. Within one year Philco jumped from 26th place to 2nd place in the radio industry, and by 1930 became the outstanding producer of radio sets. At that time they also began the independent manufacture of tubes. Philco tubes are now standard equipment of all Philco sets. It is useless to attempt to list even the important models made by Philco during the past eight years, for this company has turned out millions of receivers.

The new 1936 model 116 Philco all-wave receiver is presented by the Philco Radio and Television Corporation as its most popular and success-The model 116B is a Baby Grand cabinet of walnut and laurel. and is approximately 16 inches wide, 23 inches high and 12 inches deep. The large 116X cabinet is the famous "X" type with inclined sounding board, acoustic clarifiers, and wideangle sound diffusers. This cabinet is made of American walnut, and is about 27 inches wide, 42 inches high and 13 inches deep. Both of these attractive cabinets are fitted with the 116 chassis.

High Fidelity Reproduction

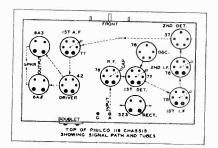
The inclined sounding baord was exclusively developed by Philco in 1932, being offered in the old model 90X. The slope of the sounding board directs the high notes up to the listener's ear, and the large area of the board faithfully reproduces the low notes. To this effective sound repro-

duction feature is added the acoustic clarifier that automatically eliminates the booming of bass notes. The wide-angle sound diffusion method spreads the delicate overtones and high notes uniformly throughout the room. Otherwise the high notes would travel out in a straight line and scarcely be heard off to either side of the speaker.

In this set the high fidelity audio system, with its full tonal range, provides an output of 15 watts of undistorted power. The audio reproduction covers the full audible range, and in volume from the faintest whisper to the thunderous roar of a great orchestra. The speaker is the new two-in-one high fidelity unit having a specially designed and treated cone. This cone is constructed in two parts, the stiff inner portion giving perfect reproduction of the high frequencies or treble notes, and the soft outer portion or flexible rim reproducing faithfully the low frequencies or bass notes. This new speaker takes the place of a pair of speakers-one large one for low notes, and one small one for high notes.

The Wave Bands

Every broadcast service on the air is covered by the 116. These embrace

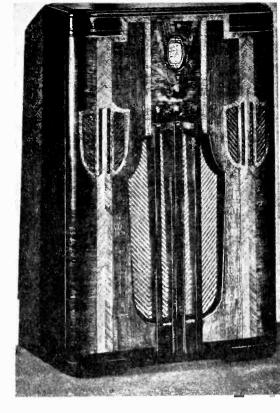


the daylight foreign and American short-wave stations; night-time stations of a similar nature; police, aircraft and ship calls; amateur bands; the standard broadcast band; and a longer wave aircraft, commercial and U. S. Weather Bureau forecast band. These bands have the following frequency ranges: Band 1—9.7 to 22.5 megacycles; Band 2—4.1 to 10.0 megacycles; Band 3—1.5 to 4.1 megacycles; Band 4—540 to 1,500 kilocycles; and Band 5—150 to 390 kilocycles.

The major tone features of Philco model 116 consist of a program control and automatic bass compensation, together with the usual automatic volume control and noise-excluding signal amplifier. The program control enables the operator to adjust the radio to receive each program at its best. These adjustments cover reception of mellow music, brilliant music, speech, normal sound for foreign stations, and noise-reducing reception from weak, distant stations. The automatic bass compensation offsets the lessened ability of the normal ear to hear low notes in true proportion at ordinary room volume. This compensation automatically emphasizes the bass notes when the volume is turned down. The noise-excluding or i.f. filter feature automatically amplifies the signal while rejecting interference, and greatly sharpens the tuning in the i.f. circuit. This gives hairline selectivity on all broadcasts, when needed, and tends to eliminate interference but at some sacrifice of high fidelity of tone. No crystal filter is used in the Philco 116 model.

The Circuit and Tubes

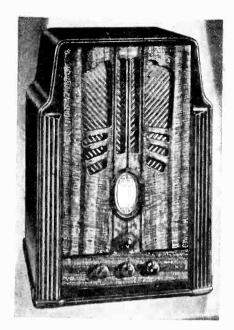
Through the scientific balancing of each unit of the circuit with all others, complete shielding of parts and tubes, and a non-radiating built-in filter that prevents interference going out to nearby sets, the Philco engineers have developed an excellent all-wave superheterodyne set.



The Philos 116-X Receiver

This receiver uses eleven glass tubes, for, so far, Philco has not offered metal tubes in their 1936 models.

The radio signal, as it enters the set through an automatic aerial selector, which will be discussed later, passes into a type 78 radio-frequency amplifier tube. Next comes a 77 first-detector tube. Connected to it in conventional manner is the 76 oscillator. Two type 78 tubes are next in line and serve as intermediatefrequency amplifiers. The i.f. circuit is peaked at 460 kilocycles. Following, is the second detector, a type 37 tube, and next is the type 77 first audio. A type 42 driver tube feeds the output of the 77 into two pushpull power or audio output tubestype 6A3s. A type 5Z3 is used as a rectifier, and a power-line noise re-



The Philco 116-B Baby Grand

jector keeps line noises out of the set. The receiver has a power consumption of 135 watts, and delivers 15 watts from the output into the speaker.

Tuning and Antenna

Philco shadow tuning shows the operator visually when each station is properly tuned in. The tuning dial is driven by a two-speed planetary selector that gives fast speed for turning and slow speed for precision tuning on short waves. The turn ratio is 80 to 1. A glowing arrow constantly indicates which one of the five wave bands is in use.

Besides the usual antenna and ground contacts, there is a special terminal plate on the rear of the chassis for an all-wave antenna. When the 116 receiver is used with the Philco all-wave antenna, a built-in aerial selector automatically switches into the circuit the proper electrical values needed to maintain

a maximum power input on each of the five wave bands. This aerial selector really provides five antennas in one. The all-wave antenna, then, becomes resonant to the impedence of any one of the five antenna coils connected to the particular wave band being used. It is the same as if five individual antennas, each designed for maximum efficiency with each of the five wave bands in the set, are used, one at a time, as the wave-band changing switch is turned.

The Editor's Column

N THIS issue the Long Wave and Foreign Broadcast stations are giving way to the Short Waves. In the December issue the former will be back with changes and addi-We hope that this artional data. rangement of alternating these lists will please everybody. "I was rather disappointed in the September issue," laments Roy Covert, 3940 24th Street, San Francisco; "it seemed as though you were becoming short-But the October issue wave crazy. has completely reassured me that you will remain All-Wave."

In a pair of parentheses Roy goes on to say: "I wish you arrived on the news-stands earlier than the third of each month. As a subscriber I receive RADEX on the 26th but a friend of mine is unable to purchase his until the third and so. about the 29th, he begins to borrow mine. If I don't let him take it, we have a quarrel and, if I do, it comes back sans cover or otherwise mussed up. Can you possibly do something about this?" The moral is so obvious we don't need to give it: Get your friend to subscribe too; he'll save 50c a year and get his copies early.

Their Time on the Air

In the Index by Frequencies this month, the hours on the air are given for Saturdays. A great many sta-

tions, however, use the same hours for all week-days. An asterisk after the hours indicates that the times given are the same for all six weekdays. Next month we will try to show the hours for Monday to Friday inclusive.

In this connection we want again to express our appreciation to the hundreds of stations which filled out our questionnaire and returned it promptly. A small minority of stations, however, were either lazy, indifferent or discourteous. We sent to each station a stamped and addressed envelope and a very short questionnaire and asked them please have a clerk take one minute of his time to give us the information necessary for us to advise listeners the correct data regarding their sta-This seems a small favor to tion. ask when so many thousand listeners look to this publication for their information regarding stations.

Fortunately the number of discourteous stations is very small. Thus on 550, KFYR, Bismarck, N. D., is the only offender. On 560, KFDM. Beaumont, Texas. On 570, KMTR, Hollywood, Calif. On 580 WCHS. Charlestown, W. Va. On 590 KHQ. Spokane, and WOW, Omaha. so on through the channels. were a radio advertiser, we would certainly not consider it to the credit of a station if it failed or refused to give to accredited sources, all possible information regarding its programs.

Some Cuban Specials

"In consideration of your kind wishes, we have made arrangements to broadcast two special DX programs during November," writes Senor F. Chavarry of Jose Garcia y Cia., owners of CMHX, Cienfuegos. These programs are scheduled for Saturday, November 2nd and 30th from 4:00 to 6:00 a. m. EST. "You might say that to the person who sends us the most nearly perfect report with all observations made during the broadcast, we will send a beautiful Cuban

scuvenir. Of course we will acknowledge all reports with a beautiful postcard but to just one will go the souvenir. We will arrange a typical program combined with talks regarding the city of Cienfuegos and other interesting subjects. Our identification call is 'CMHX, the Radio-Electric-House, P. O. Box 205, Cienfuegos, Cuba.' We thank CMHX for their cooperation and trust many of our readers will succeed in tuning this station in.

Bogus Inspectors

The sheriff of San Diego County. California, arrested one Jerry Stowell who had equipped himself with a card purporting to be credentials from the FCC. Stowell conducted solemn "inspections" and, in some cases, claimed to find irregularities which he promised not to report for, say, ten dollars. One gullible owner, caught in the "crime" of owning a short wave set, paid Stowell \$15 to prevent its destruction! "The public should beware of imposters," says the Commission. "The FCC inspectors carry a gold badge bearing the seal of the Commission. They are not authorized to destroy radio apparatus or to take any disciplinary action on their own motion."

Some readers complain that we show changes before they take place! We realize that being too early is as bad as being too late. But what to The Commission authorizes a do? station to change its frequency and it is quite impossible to prophesy just when the station will switch over. Sometimes, they never do and we have to jump back into line again. Thus, a number of months ago, the Commission authorized WIS and WNOX to exchange frequencies. made the changes accordingly but the stations didn't. Now we are advised by WIS "We doubt that the change will be effective before October 15th but it will certainly take piace during October." This time, we will wait until the shift is actually made before changing our indices.

Doin's of the Radexers

• • • By CARLETON LORD

HE prophet who has no honor in his own country is verily a national hero when compared with the prognosticator who has dared to forecast reception for a winter DX season. Right or wrong, his predictions are held up for scorn and ridicule, and never again may he show his face in public—at least until it is time for another forecast.

In our September issue, we ventured to quote a prominent scientist who had predicted poor reception on the broadcast band for the current season. Judging from the alphabetical display after his name, we figured that he must be the real McCoy. Certainly his arguments were convincing, and we proceeded to gobble them up, hook, line and sinker.

However, we did leave a loop-hole when we recalled that predictions for good reception in previous years had proved dismal failures, and we must confess that there was a tongue in our editorial cheek when the copy went off to the printer.

His First TA

"Please predict some more bad reception for the broadcast band," teases M. E. Smith, 259 Chester St., Painesville, Ohio. "On my first night at the dials this season, I pulled in my first T.A. and, if you will be so kind as to keep on with your predictions, I may be able to send in reports like some of the other fellows who write in.

"Yesterday, I worked sixteen hours and, when I got home at midnight, I thought I would sit down and see how much I could hear at this time of year. Well, I certainly was surprised when I came across a strong carrier on 858 kcys which turned out to be Radio Strasbourg. Further, I was able to hear strong carriers from Poste Parisien. Cologne and Monte

Ceneri. As I had tried all last year to get anything sounding like a T.A., that satisfied me plenty. If last night was an example of what we're going to hear this year, I will have plenty more to report. Strasbourg was R6-7 at times and, for about five minutes, it was a real R8, so loud and clear that every word could be heard. So, in the interest of DXers everywhere, please predict some more bad reception conditions."

Wrestling With 1YA

"After reading the first article in the September RADEX," bemoans Mrs. L. R. Ledbetter, 605 Mattingly St. Vicksburg, Miss., who seems to have taken us seriously, "I fear that my spirits are much lower than the ionosphere can ever get. Just when I was all enthused about reception of Australia and New Zealand in August, here comes news that poor reception is predicted for the coming winter.

"On August 26th, I heard 1YA, Auckland, New Zealand. the signal strength was very good. intelligibility was rather low and I could only distinguish the type of program most of the time. They were broadcasting a wrestling match and I could catch such phrases as 'headlock' 'pulls himself away' and 'tries to get up.' With this start, and considering what I thought was a bad season in 1934-35, I had counted on this winter to bring in Africa to round out the continents and entitle me to a World-Wide degree. But, if this year is to be worse than last, woe is me!"

Predictions Backfire

"Many of the so-called scientists have been predicting bad reception due to sun spots," comments President R. H. Weaver, in a National Radio Club bulletin, "but where have

we heard that line before? If they don't hit it any better than they have in the past, we can look forward to one of the greatest seasons in a long time. Every time they predicted good reception, our hopes for real DX were thwarted by a season filled with too much static for distant stations."

"Contrary to your expressed opinion that 1935 ushers in a period of poorer reception," concludes C. H. Skatzes, 45 Flax St., Delaware, Ohio, "I am accepting the statement of the A.R.R.L. in their Handbook to the effect that 1934-35 brings back a period similar to that of 1923-34, when DX was common on the lower frequencies."

Well, with that sample bombardment of brickbats, our official prognosticator is under fire. If reports on the full season next spring prove that he was again in error, he can consider himself quite fired.

"Would it be possible for listeners to report on stations which won't verify reports on frequency check transmissions?" queries Paul Sampson, 1820 College Ave., Regina, Sask. "I know that KGEK and KASA won't, and it would be useful to know what other stations fall in this class." According to the station, KASA won't verify any reports at all.

On Daytime Reception

"Today I got quite a kick out of turning on the Stewart-Warner at 11:30 A.M.," exclaims Barton A. Dowdy, 2903 Warsaw Ave., Cincinnati, Ohio, "and seeing what kind of daytime DX I could get. In half an hour, I tuned in nine stations in Ohio, four in Indiana, three in Illinois, four in Kentucky, and one each in West Virginia, Missouri, Wisconsin, Tennessee, Nebraska, New York, Pennsylvania, Michigan and Ontario. certainly 'hung one on me' in your Mid-Summer edition! After discoursing all over the place about reports which failed to give useful data on stations heard. I went ahead and did just that. This just brings out the fault that so many DXers have. We

like to rake the other chaps across the coals and then overlook our own shortcomings. Oh, well, DXers are partly human, so rest assured that your 'rebuke' was received in the same spirit in which it was sent."

"I certainly would be glad," promises Dick Campbell, 72 Griswold St., Delaware, Ohio, "if some veteran of the BCB would tell he how to pull in the Aussies, Japs, South Americans and Europeans. I would like to know how and when and where to tune for them, and I certainly would appreciate whatever help anyone can give me. I am using a 1935 Knight 5-tube superhet. My aerial is 150 feet long, runs NE by SW and is about 30 feet high."

"With a new season coming up," informs Bill Bundlie, 61 N. 6th St., Grand Forks, N. D., "I have decided to DX on the broadcast band as well as short waves. At present, I have logged 112 medium-wave stations and would appreciate having someone write and tell me how to pick up some of the Europeans, South Americans and Aussies such as Vienna. Fecamp, Berlin, Poste Parisien. Breslau, the LR's, CX6, 1YA and 2YA."

How about that article on Tuning the Foreigners in the last issue, Dick and Bill? Did it help any?

What He Likes

"To me, RADEX has been especially valuable with its articles on verifications, aerials and grounds, and the reports and records of the DXers," applauds William G. Rich, 2134 Acklen Ave., Nashville, Tenn. "Let's have lots more of them. In my four years of off-and-on DXing, I have compiled a log of 454 stations, of which 424 are distinct stations and only thirty were re-logged after a change in frequency or location, or All but seven of these were heard on a 1931 Philco 7-tube set. without much aerial and usually no ground."

Are More Clubs Needed?

At some time during a career of dial-twisting, a DXer will receive one or more invitations to join some new radio club. In the past few years, the formation of these small groups has been on an increase. While a few, such as the IDA, CDXR and NRC, have taken great strides and are contributing something tangible to DXing, the majority have little to offer and, sooner or later, plunge into oblivion.

DXers are inclined to take sides on the question of new clubs. Some listeners are charitable and maintain that the new organizations can do no harm. Perhaps, remembering the progress of the above clubs, they hope that the newcomers may even help DXing.

Others hold that the ever-increasing number of small clubs is a detriment to DXing and their formation should be discouraged at all times.

Apparently, the principal objection does not lie merely in the organization of a new club. Rather, it is pointed at the activities after the club has started out. If the officers were content to gather news, exchange tips and generally help members to better DX efficiency, there would be no objection from anyone. However, as soon as a club has been organized, it immediately starts after special DX programs. Stations are flooded with requests and demands that transmissions be scheduled for the particular benefit of a handful of listeners.

"Too Many Cooks . . ."

As one station manager wrote to a prominent CPC man, "I believe that you will find that radio stations are not co-operating as they might due to the fact that so many clubs are pestering them for special programs. We don't mind putting on a few DXes every winter, but we cannot dedicate a program to every club in the country. Operators can't be expected to work until 5:00 or 6:00 every Sunday morning and, as soon

as we refuse as politely as we can, the small fry get hot-headed and haul us on the carpet. Naturally, that doesn't raise our opinion of the average DXer. The best thing you chaps can do is get rid of all but the largest clubs and then you'll find the stations glad to co-operate."

Consequently, RADEX is inclined to discourage the formation of new clubs. We feel that there are more than enough clubs today and any more would only tend to increase the confusion.

The Other Side

"I just recently read the letter you wrote Mr. Gail B. Johnson, 1006 So. 2nd Street, Springfield, Illinois," writes Clifford Drain, 617 Camden St., Parkersburg, W. Va., "regarding the new proposed 'Around The World DX Club."

"Being a member of this club, I want to present our case to you, for I fear you don't understand.

"This club is to take the place of the now sadly disorganized Keystone DX Club of Pittsburgh, Pa., and members of the former club are joining this new club. So, you see, the 'Around The World DX Club' is not necessarily a new club.

"The dues are to be one dollar a year, and this entitles each and every member to the club bulletin. Please understand also that this club is to be of international character.

"It is the aim and desire of this club and its officials and members to co-operate with all other clubs so as to avoid confusion in regards to DX specials.

"Personally, I think there should not be so many DX clubs, but the only remedy I see is to merge all the clubs and thereby avoid all chaotic conditions. Why does not someone campaign along this line? I presume I will probably make someone terribly angry thinking this way, but I will have my opinion."

We may be wrong in our attitude on this score, but we've seen a great many clubs come and go without making any great contribution to DXing. As in the case of the abovementioned Keystone DX Club of Pittsburgh—a new one to us, by the way—many were sadly disorganized and died a natural death. Others merged and consolidated.

Objects to Space Saving

"In your DX Calendar," reminds Walter Snyder, 1401 Logan St., Grand Rapids, Mich., "you listed the names of the cities but not the states. It is very inconvenient to have to turn to another index to find which state a station is in. For example, very few people know that Nampa is in Idaho. If you had to look up every station in the back of the book, you'd never have time to do any listening and I hope you can correct this."

"Referring to your mention in the September issue about my results on a one-tuber," affirms Allan Ford. Portneuf Station, Que., "I know full well what tremendous interference can be made by one of these regenerative receivers. For instance, when using but 35 volts on the plate of a 230 tube, a listener five miles away could hear a whistle whenever I tuned in a particular station. Of course, the set was oscillating at the time.

"Naturally, proper care must be used when operating a 'blooper.' Last winter, I picked up WNRA on a frequency check at the same time another DXer, a quarter of a mile from here, was tuning and he only experienced slight interference."

Stealing Signals

Speaking of interference, we are reminded of an article which appeared in World Radio a few months ago. One contributor had been reporting on DX with a crystal set and had mentioned a number of instances of trans-Atlantic reception. In reply, another contributor insisted that such reception could be traced to rebroadcasts by local stations or to re-



In this issue we are presenting some views of the WEAF transmitter equipment. This is the building which houses the main and emergency transmitters.

radiations by a powerful receiver in the neighborhood.

"In the early days of broadcasting," he continued, "the writer's set was a detector with reaction directly coupled to the aerial. A lady living a few doors away had a standard type of crystal set. Normally, only Cardiff was audible on this set when the writer's set was not working. happily or unhappily, when I put my set in operation she could hear only the station to which I was tuned— Cardiff, Manchester, London, Brussels, Rome or Madrid-and at considerably more volume than could be expected from a crystal set. night, via wireless, I heard myself being discussed in connection with a foreign program and was much perplexed when I recognized the lady's voice. This was verified and it was found that if anyone spoke near the headphones attached to her set, the speech was audible in my phones. Further, by talking into my phones. she could hear whatever I said. Thereafter, if the lady did not like the program to which I was listening. in the first lull she would say. 'Can you please put me on to Rome?' and I would reply, 'Stand by . . . over!' "

And we cannot help but wish that there was some way of using this re-radiation idea when a noisy motor is creating no end of interference on a night we are trying to DX. Wouldn't it be swell if we could say to the motor, "Hold everything, old man. I'd like to hear Australia" and the motor could reply, "Stand by . . . off!"?

The Power of the Press!

Looking over the Index by Frequencies in the September issue, we found that eighteen North American stations had replied to one of our questionnaires to the effect that they would not verify reports of reception. Comparing this with the 686 broadcasters who stated that they would verify, this appeared to be a very small percentage and we were a bit curious to know why this policy had been adopted.

Consequently, we wrote to a few of the stations and asked what their reasons were. The replies received so far are rather interesting. Certainly they bring good news to many DXers.

"I wish to advise you that we have decided to verify correct reports on reception of both of our stations, KTBS and KWKH, provided a report encloses postage necessary for the verification." John C. McCormack, General Manager. The Shreveport Times Stations.

"You state that you received different replies from WEAF and WJZ. Will you please let us know who replied to your previous letters? I am advised by Mr. H. M. Beville, our Chief Statistician, that the Audience Mail Department does verify reception reports for WJZ as well as for WEAF and all short wave stations." William S. Hedges, Manager NBC Operated Stations.

"It has never been the policy of WTAM to issue DX stamps. However, we do try to answer all communications from remote points and verify through our Engineering Department all programs in question." Vernon H. Pribble, Manager, Cleveland Division, National Broadcasting Co.

"Please be advised that KRSC will

verify all correct reports of reception and that our questionnaire stating that we would not do so was in error." Manager, Radio Sales Corp., Seattle, Wash.

"This station does verify reports on receipt of self-addressed, stamped envelope." KSUN, Lowell, Arizona, by R. B. Thompson.

And so we may consider that six more stations are willing to co-operate with DXers in the matter of verifications, and we hope that the remaining twelve will fall in line eventually.

Reports In Brief

"Last season was a very successful one for me," confides J. Russell Graham, 1005 Allard Ave., Apt. 2, Verdun, Que. "Using an eight-tube Sparton Airmaster, I received 516 stations. While I have never heard any Europeans, my logs includes every state, seven provinces, Guatemala, and Haiti. I use a flat-top aerial, 60 feet long and about 50 feet high. Would be pleased to correspond with other DXers."

"The new logging in RADEX is very splendid," compliments Merton T. Meade, 819 Wyandotte St., Kansas City, Mo., "especially the new time system and the inclusion of the power of the S.W. stations. KADA says that they DX the 25th of each month. No time was given, but I believe they start at 0200 EST. KIUL, the new station at Garden City, Kans., DXes the 2nd, 3rd and 4th Wednesday of each month. Again, no time was given, but I have logged them at 0145 and 0255 EST."

"All Cuban stations having but three letters in their call will add one more," advises Alec Kinghorn, P. O. Box 2488, Havana. "COC is now COCO and COH is COCH. CMQ, CMW and CMK will be given their additional letter very soon. CMQ is on the air every morning on 840 kcys from 12:01 to 1:06 A.M., EST, with a midnight dance program. They are very anxious to receive reports. I am often at the mike and announce

the selections. They expect to install short wave equipment in the near future."

On Channel Hogs

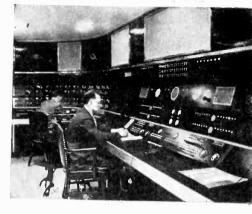
"Believe it or not," challenges Ashley V. R. Walcott, 76 San Rafael Way, San Francisco, Cal., "but the Bay District is furnishing two more stations with ideas about 24-hour broadcasting—namely, KRE in Berkeley and KGGC in San Francisco. While this may be good news to those Eastern DXers who have not heard these two stations, it is pretty awful for us here on the West Coast.

"San Francisco already has one all-nighter in KJBS on 1070 keys. KROW is on until 0200 PST now, while a dozen or so other stations clutter the air waves most of the night, with KGFJ, KFAC and KXL the most troublesome. KEHE is off between 0200 and 0400, while KGDM seems to have given up the all-night idea."

One very definite result of this allnight business is shown in a letter from Paul W. Norris, Program Director of WSOC, Charlotte, N. C., who writes: "Radio Station WSOC does not expect to run any special DX broadcasts during the winter. As you probably know, the 1210 channel is blocked in a good many parts of the country by all-night stations, and the few specials we have run have failed to elicite much response. except for monthly frequency check programs and occasional unannounced transmissions for the purpose of checking equipment, we don't have much to offer DX fans."

What To Do

Just how long this channel-blocking on a wholesale basis will continue is pretty much of a question. If the offending stations have their way, there just won't be an end to the nuisance. Apparently, as long as the broadcasters can find sponsors willing to take a chance on there being any listeners to the late programs, it looks as though the channels will be



Here we have the "nerve center" of the Red Network—the master control panel of WEAF in the NBC headquarters in Radio City. Through this exchange, the various studios are connected with the nationwide networks which carry the programs to stations all over the country.

untenantable for a self-respecting DX program.

At present, at least ten frequencies are effectively blocked insofar as DXing is concerned. As Mr. Walcott points out, the 780, 1070, 1200, 1300. 1370 and 1420 channels are monopby KEHE, KJBS. KGFJ. KFAC, KRE and KGGC respectively. A recent letter from KGIW advises that they will come on at 0200 EST every night for a late program. In addition. WEDC holds forth on 1210 six nights a week, WNEW's new 24hour schedule will make DXing tough on 1250, WEXL gums up the works on 1310, and now WJBK has decided to block 1500.

It will be noticed that the six "graveyard channels," happy hunting grounds of all DXers, are now barricaded most of the time. If a selfish few are permitted to grab all of the air time, DXing is certainly doomed to an early death.

More Reports

"I have just erected my Carl White-house aerial which is forty feet high," pridefully proclaims James Dickinson. 2622 Atkinson St., Regina, Sask. "It is suported by 2 x 2's and can be let down to about 26 feet in case of high winds—and we have plenty of them out here. Here is an aerial which I can recommend to any DXer wishing

to receive overseas stations on the BCB. With the ordinary inverted L type, I was not able to go very far. When I erected this aerial, Japan, Australia and New Zealand became comparatively easy to hear. A description of the aerial appeared in the February issue of the IDA Globe Circler."

"I certainly agree with you," exclaims Jack McLaren, 515 Rathgar Ave., Winnipeg, Man. "All DXers should remember to send reports or thank-you cards to stations whenever possible. It seems that the modern tendency is to grab all you can and never mind the other fellow. This applies to DXing, too, and I certainly think we should co-operate with any station which is decent enough to provide us with a DX program.

"Like many others, I am hoping that the cooler months will bring some good reception. I am one of those with a modest log and am looking forward to my first trans-oceanic catch on the medium waves. So far, I have had no luck with the BC stations across the drink, but still live in hopes."

Uses Four Aerials

"Not having seen Kansas City on the report lists for months, I thought It was time to do something about it," contributes M. F. Meade, 819 Wyandotte Street, Kansas City, Mo. "We at the Night Owl Listening Post have been carrying on to the best of our ability and our log now stands at 365 BC stations, of which 327 are in the United States, 17 in Canada, 17 in Mexico, five in Cuba and one We are still using the in Hawaii. Philco four-tuber on the broadcast band, although we have built an antenna tuner which improves recep-We have somewhat. aerials: the first is the "L" type, running 80 feet North-South and 100 feet East-West, approximately four feet above a flat roof; the second is a "V" type running NE-SW, of copper-washed iron wire (we thought it was solid copper and got stung); the third is an indoor cage which has eight 12½ foot lengths of flat braided copper wire, making 100 feet in all; and the fourth aerial, if you can call it such, is the old reliable bed springs—we use this when the noise gets bad and once pulled in CMQ through an electrical storm.

"We had a bit of diversion this summer by starting a new log the first of each month. In June, we logged 153 stations in 36 states; in July, it was 142 stations in 39 states; and in August, we heard 171 stations in 41 states. In all, we added approximately 25 new stations to our regular log during this three-month period."

Likes His Scott

'I have had one of the new Scott Imperial receivers since the first of August." informs Blake H. Page, 3045 Washington Blvd., Chicago, Illinois, "and I certainly can agree with all that Mr. Dashiell has to say about this model in the October issue. During the first seven days of September. I heard every station on the air for the frequency checks. Even though static is still high. I have heard KGU, KGMB, WKAQ, WNEL. TGW and LR5. I can separate WOR from the powerful WGN and WLW as well as pick up WABC, WEAF and WJZ without a trace of interference from the 50-KW locals on the next channels."

"Final reports on the Inter-Club Co-operation Plan show that the NNRC, CDXR, NRC, GCDXC, IDA, UDXC of Cal., and the Mid-Co DX Exchange have agreed to the provisions," reports Elwin H. Bullard, Drummondville, Que., sponsor of the plan. "I am certainly pleased with the results and feel that I am well repaid for all of the time and effort I have spent."

Aid for Sparton Owners

"I have been fishing for DX stations since 1922 and have logged well over one thousand," confesses Harry Fisk, R.F.D. 2, Jackson, Mich.

"In 1933, I built a 13-tube super and discarded my old log. During the fall and winter of 1934-35 and up to the present time, I have logged 635 stations on this receiver. I am foreman of the test department of the Sparton Radio Co. and would be glad to answer questions about Sparton receivers."

"After six years of DX," observes N. J. Hock, 20 Burnet St., Newark, N. J., "I find that my original antenna system is still the best for reception on the broadcast band. It is a single wire, 100 feet long, running East-West. I have a switching arrangement which permits the selection of this or my other 180 foot aerial at will. The switch also permits me to use my ground-50 feet from the set-in conjunction with either aerial, or both. This combination covers the broadcast band completely for the purpose of getting maximum sensitivity and selectivity from my "Pro." Have not tried the new diamond aerial, due to a lack of space, but would be interested to know how it has worked for other DXers."

DX Calendar Addenda

Attention is called to a few specials which are not included in the November DX Calendar. Although we were advised as to the dates of the transmissions, no mention was made of the times. CKCH, Hull, Que., 1210 keys, 100 watts, will be on the morning of November 30th, WOPI, Bristol, Tenn., 1500 kcys, 100 wafts, has scheduled transmissions for morning of November 20th and the third Wednesday of each month thereafter until February. Guadaljara, Jal., 1155 keys, 2500 watts announces specials on the 1st and 15th of each month.

Finally, KGDM, Stockton, Cal., will be testing its new 1-KW transmitter after 0300 EST, on or about November 1st.



The main transmitter room of WEAF. At the left are shown the low power units including modulating and frequency control devices. In the left center is the 50,000-watt power amplifier. In right center is the 20,000-wolt high power rectifier. At the right is the power control equipment and dummy antenna sustem.

Short Wave News

(Continued from page 6)

blocks from the loop with its interference."

Two New Police

"There are two police stations which I have not seen listed," complains Robert Levinsohn, 235 Westchester Ave., Crestwood, N. Y. "One of them is WPGF, Providence, on 1712 kc/s. The other is W3XCW, Trenton, N. J. on 1610 kc/s. with a kilowatt power."

From Victor Demerle, 103 Erb St., Buffalo, N. Y., comes this list of stations: WWEC, Delaware Breakwater; WWDI, Edgemoor Depot, Del.; WWDW, Fourteen Foot Bank, Delaware, all on 3410 kc/s. and heard between 7 and 10 p.m., EST. He also reports CT1AA, Lisbon, Portugal, on 5.995 in the evenings and HJV, Bogota, Colombia on 8790 from 7 to 9 p.m., EST.

Merton Thompson Meade. 819 Wyandotte St., Kansas City. Mo. wishes to exchange SWL cards. He says if DXers will send him their cards he not only will send his in return but will pass the names along to others, affording a chance to pick out "pen pals."

DX'ING IN NEW ZEALAND

● ● By H. C. MANN

HE story of DXing in New Zealand dates back practically to the advent of radio receiving sets, although it was not until 1928 that it achieved any degree of popularity. Early in that year, a few listeners logged and verified KFON in Long Beach. Cal. A few months later, KGER was also logged and verified.

The hobby had become so popular in 1930 that several of the more prominent DXers formed the New Zealand DX Club, and a page of the New Zealand Radio Record was devoted to the information gathered by this organization.

By July 1931, membership of this club had become so large that it was necessary to introduce a magazine devoted exclusively to DXers and DXing. This was The Radio Log, published for the club by the Radio Record. In March 1932, The Radio Log was incorporated in the new publication, The New Zealand Radio Times. This new magazine catered to radio dealers and home constructors as well as DXers.

In March 1931, a small band of Dunedin DXers organized the New Zealand DX Radio Association. For a time they published a fine little magazine, Tune In, but last winter this was absorbed by the New Zealand Radio News. The membership of this club has now passed the thousand mark, so it is evident that it has become quite popular. Tune In has recently resumed publication.

A few years ago, it was quite a feat to log a station from North America, but powerful superhets have now made reception from all over the world quite common. Stations in Europe, Africa, India, China, Japan and South America are regu-

lar visitors to our loudspeakers, while even some of the small 50- and 100-watters in the United States are heard under favorable conditions.

The Sets Used

While the most popular type of receiver used here is the garden-variety superhet, some wonderful results are claimed by owners of modest TRF and battery sets.

The cock-of-the-walk among N. Z. receivers just now is a Majestic, with a verified log of over 550 stations. Following closely are the Philcos, Atwater Kents, Radiolas, Stewart-Warners and a number of models made in Australia and New Zealand.

One outstanding performance is that of a 1925 Radiola Model 20, a battery-operated five-tube receiver. This set is operated by J. L. Sullivan, a very prominent N. Z. DXer, who resides five miles north of Cambridge, about eight miles from my own location. With this wonderful old receiver, Mr. Sullivan has verified over 300 stations in all parts of the world. He has more than 40 veries from Europe alone and has verified at least one station in nearly two-score countries.

When They are Heard

Just as one is accustomed to following a daily routine of existence, so there is a more or less definite schedule for the DXers. For North American reception, we have to consider the time belts. For example, from March to September, stations signing off at midnight, EST, may be heard between 4:00 and 4:30 PM, NZST, the next day. Those stations which sign off at midnight, CST, are naturally heard between 5:00 and 5:30 PM down here. The same applies to the Mountain and Pacific

Time stations. Those signing off at midnight may be heard here between 6:30 and 7:30 PM. Of course, there are exceptions, as in the case of WOAI, which is often heard as early as 3:00 PM.

During the rest of the year, the Eastern and Central stations fall off considerably in volume, while those on the Pacific Coast are occasionally heard just before they sign off at midnight, their time. During our summer months, the Eastern and Central stations can be heard when they sign on in the morning. approximately mid-night our time and the Mountain and Pacific sta-It is at this tions are heard later. time that the majority of the 100watters are heard, due to the fact that most of the Australian and N. Z. stations have signed off and clearchannel reception may be obtained. Of course, static is a major problem at this time of year and it is only on a relatively few nights that such reception is possible.

Other Foreign Stations

The South Americans are best heard from 2:30 to 3:30, and occasionally until 4:30 PM, from April until August. On special DX programs, they may be heard at other times of the year.

The best time to receive Japanese stations is from 10:00 PM until they sign off at 12:30 AM. These are all-year stations with us and may be logged as early as 9:00 PM in our winter. Chinese, Siamese and Indian stations are generally heard from 1:00 to 3:00 AM between March and September.

Though seldom logged down here, South African stations are best heard around 3:00 AM, while those in North Africa come in a little later.

The more powerful European stations are best heard during August, September and October. A few can be heard in July and some are audible right up to December. Instances of European reception in March and

April have been reported, but they are few and far between. Between 4:00 and 6:00 PM is the best time for these stations, when they can be heard with good loudspeaker strength. Unfortunately, fading is usually very bad.

The Aussies, of course, are heard all the year around, varying in strength according to the length of the days. In favorable locations, the more powerful stations are audible even during the daytime in winter.

Mr. Mann's Experience

My first experience in DXing dates back a little ofve five years. Early in 1930, I acquired an old three-tube battery receiver, and, in six months, I managed to log and identify some twenty-five stations, all being in Australia and New Zealand.

Then, in 1931, I purchased my present receiver, an eight-tube Atwater Kent. During my first week of listening, I experienced the thrill of logging my first trans-Pacific catches in the form of KFI, KGO. KPO, KOA, KGA, KECA, KFOX, KGER and KGEF.

It didn't take long to run up a log of over 20 "Yanks," although it wasn't until the end of June that I reported to my first station. This was KFI, which was testing out its new 50-kilowatt transmitter and asking for reports. Several Central U. S. stations were then heard at excellent volume and were duly reported. Among them were WTAM, KFJF, KTHS, WLS, KMOX, KSTP, KMBC and WLAC.

On July 20, 1931, WLAC was logged while broadcasting a special mission service for foreign listeners from the Church of Christ, in Nashville. Reports were solicited and the announcer said that a copy of the New Testament would be forwarded to all who sent in a correct report. My report was duly acknowledged by the minister, Reverend Brewer, who mentioned that, while no reports had

been received from Australia, twentyseven N. Z. listeners had written in. Later, a handsome autographed copy of The New Testament was delivered to me.

By the end of 1931, nearly 40 U.S. stations had been reported and quite a number of veries had been received.

Interference Comes

Early in 1932, two high-voltage power lines were erected in the vicinity. These carry 50,000 and 110,000 volts respectively. As these are about ten chains from my aerials, DXing during damp weather is well nigh impossible.

However, despite this interference, I managed to collect a few more scalps. To date, my log reads 82 U. S. stations, of which 62 are verified, as well as two from Hawaii, two Canadians, five Mexicans, one Philippine, one Chinese, seven Japs and two Europeans. My total log is well over 200 stations logged and 157 verified, with a number of reports out.

Conditions being favorable, I hope to increase my log of Europeans considerably this spring. Last October, more than twenty of these were heard, with Prague, Bisamberg, Moscow. Breslau, Heilsburg, Milan, Bari, Bratislavia and Toulouse being received with great volume. Due to a lack of time for DX. I was only able to spend a few minutes each morning and was able to send but four reports.

My best American veris are probably KFVD, KMBC, WMAQ, WLAC, WWVA. WABC and CJOR. I have yet to log my first 100-watter, but I am still living in hopes.

His Aerial and Ground

My aerial is of the inverted L type, about 120 feet in length and just under 40 feet high. Having read about various DXers getting good results with the Beverage type aerial, I erected one 700 feet long and 12 feet high. This ran SW-NE, with the

lead at the NE end. Results were below expectations and I was quite disappointed.

Believing that this type of antenna must be directional, I decided to concentrate on Yanks and point the aerial towards America. However, power and telephone lines interfered and I finally erected another which was pointed towards Australia. Results this time were rather encouraging, signal strength being slightly greater than with the regular aerial. It nothing else, this proved the directional theory.

My ground system consists of several four-foot pipes driven into the ground and spaced about six feet apart. I also have an old copper boiler which is buried to a depth of about four feet. This is kept filed with water and I must say that results have more than justified the trouble involved.

What Is DXing?

• • By R. H. Weaver

President. National Radio Club

M OST of us are familiar with the old adage—all work and no play makes Jack a dull boy. We know that the person who lacks some form of diversion evenutally reaches the point where he is known as a "crank" or an "old fogy."

DXing is one form of diversion which many people have adopted as their hobby. It provides that pleasure which breaks the regular day's routine and prevents us from getting out of sorts. It keeps life from becoming a monotony.

Perhaps there are readers who are not familiar with the term DXing. Possibly its best definition is the act of endeavoring to hear radio stations which cannot be heard on their daily broadcasts. Hence, when we "DX," we try to tune in the stations the reception of which is ordinarily made

impossible by stations transmitting on the same or adjoining frequencies.

Inasmuch as some channels support forty or fifty stations, it can readily be seen that the effort to hear as many of these broadcasters as possible may become a most interesting task.

During the regular schedule of broadcasting, it is usually impossible to hear more than two or three of the stations on the crowded frequencies. Even then, owing to their mutual interference, it is quite difficult to separate one from the other. Therefore, if we are to be successful in our attempt to hear all of these stations, we must choose a time other than the ordinary hours of transmission.

Fortunately, many stations in all parts of the world oblige the DXers by scheduling special transmissions at times when the possibility of encountering interference from other stations is at a minimum. Usually, these programs take place between 2:00 and 6:00 A.M., EST, which is a period set aside by most broadcasters for tests on their equipment.

During these hours, and under favorable reception conditions, it is quite possible to tune in virtually every station on a given frequency. course, the number of broadcasters "inhabiting" a channel may result in the reception of a few stations many times. but eventually a listener should be able to hear each and every station with little or no interference from others on the same frequency.

Contrary to popular opinion, DXing on the broadcast band is not necessarily limited to stations in the Western Hemisphere. Rather, it is truly a world-wide affair.

At present, many DXers in the United States and Canada have been successful in tuning stations in practically every country in the world. Experienced listeners will go so far as to say that the more powerful foreign stations are within the reach



Robert H. Weaver, President of the National Radio Club, York, Pa.

of virtually any listener, no matter how little tuning experience he may have.

Some people wonder why a station will put on a special program for the sole benefit of a more-or-less limited number of listeners. Other than expense, what does the station get out of the transmission?

Strange as it may seem, the broadcaster does derive some compensation. As the result of wide-spread publicity on the part of the various radio clubs, the station is assured of an audience in all parts of the country and the reports of these listeners are often of infinite value to the station officials.

An accurate survey of coverage and signal strength, observations on tone quality and modulation are but a few of the valuable items of information which are gleaned from a DXer's report. As the manager of one station puts it, "The suggestions offered by DXers have enabled us to make many improvements in our equipment. We feel that the cost of putting on the programs and verifying the reports was the cheapest engineering expense we have had in six years of operation."

This year, practically all of the

radio clubs have banded together in a plan which was devised to eliminate interference between stations on these programs. From the standpoint of station and listener alike, reception conditions should be greatly improved as a result.

It is believed that most listeners will find the DX game very fascinating and, to some, an acquaintance with this modern magic carpet will open the door to a keener interest in life as a whole. The hobby is packed with thrills from beginning to end and a complete investigation merely costs the loss of a few hours of sleep. Why not try it sometime?

The Northernmost Station

HO will be the first to tune in CJCU—that station away up in the vicinity of the North Pole? Dr. J. A. Urquahart, the owner of this unique station, writes Jim Watson, Regina, Sask., as follows:

"This station, with lower power and the call letters of UKZ, has been in operation for several years. With the assignment of all U letters to Soviet Russia, it has been granted more power and the new call of The station is situated at CJCU. Aklavik at the mouth of the McKenzie River, nearly 300 miles north of the Arctic Circle and is, so far as I know, the most northerly broadcasting station in the world. Under the Department of the Interior, I have charge of Eskimo welfare in the western Arctic. The primary function of the station is not general broadcasting but to keep me in communication with my home-base while out on patrol. It is necessary that this station use the broadcast band as I have to use the broadcast sets at whatever point I may be stopping for the night, to receive my messages which are hospital reports, etc., etc.

"While I am on patrol, the station comes on every evening at 8:30 p. m. PST, plays one or two records and then gives me my messages. The trappers in that isolated part of the world became quite interested in our station and we decided to give them local news once a week. We come on for one hour at 8:30 p. m. PST., every Tuesday for this purpose. This, however, is only for the winter months. During the summer I travel extensively by boat which carries radio equipment. CJCU will therefore be off the air until about the end of October when it will again go into service for the winter months. Radio reception and transmission in the Arctic Circle, during the time of continual daylight (that is spring and early summer) is highly unsatisfactory."

Mr. Watson is endeavoring to get CJCU to put on a series of early morning programs for the benefit of DXers.

The News on the Air

JUDGING from our correspondence, the most-sought-for programs are not jazz, nor bands, nor talks nor drama but merely "The News of the Day." Even listeners in the large cities with access to the daily newspapers, confess to a fendness for receiving their news while it is still sizzling hot. And out in the mountains, on the ranches and on the high seas, broadcasts of what has happened in the world offer the greatest enjoyment.

Writes Telesfor Znotin, radio operator aboard the M/S Yomachichi. "In one of your issues you listed stations sending out news reports. We found this to be about the best section of the whole magazine as we receive a very limited amount of news on board due to the necessity of subscribing to the news service. If it is possible to publish a section covering stations the world over that send

out news items, this would certainly be appreciated not only by us, I'm sure, but by every sea-going person. At present there are five radio owners aboard this ship and each owns a RADEX to find the best programs for the night."

Because of this universal interest in the news flashes, one of the questions that was asked in our recent questionnaire was regarding this feature. This data is now being arranged chronologically and, if it does not appear in this issue, it will certainly be published in the December number. It will require several pages to give the information that has been collected and we trust it will be widely appreciated and used.

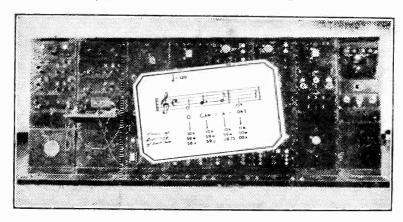
Time Signals by Music • • • By Jack McLaren

When radio listeners from coast to coast hear the first four notes of "O Canada" played at 11:00 p.m. EST, on Sunday, September 29th, they will hear the inauguration of a musical time service to be broadcast each evening thereafter at the same hour by the CRC. Such is the novel scheme which engineers, under the guidance of Lt. Col. W. Arthur Steel, of the Commission, have been work-

ing on for the past several weeks and which has now reached the stage of perfection.

Although musical time signals, by way of various chimes, have been used by other broadcasting systems for several years, the Commission's use of the first four notes of "O Canada" is an original idea. The music, which will be produced in the Commission's Standard Frequency Laboratory, comes from a specially constructed electrical oscillator which at the exact second, sends out the musical notes by means of a time switch actuated by a clock in the laboratory. From this laboratory, the signal will be carried to station CRCO, thence to the national net-The device is automatic and will not require the presence of an engineer.

So highly accurate has the signal been developed that it will be heard at precisely the same time each night and will not vary even the slightest fraction of a second. Upon the start of the first note, it will be two seconds to eleven o'clock. Upon the start of the second note it will be one second to eleven. Upon the start of the third note it will be one-quarter of a second to eleven and upon the start of the fourth note, it will be the eyact hour.



Control panels from which originate the musical signals

My DX Corner

● ● By Murray Buitekant*



IT SEEMS to me that most DXers are interested in seeing pictures of other listeners and their DX Corners, so I am starting the ball rolling by sending in this picture of my own corner.

The set shown is a 1932 Majestic 10-tube superheterodyne, on which I have logged 709 stations since the receiver was purchased three years ago. Also shown in the picture are some of my best verifications, which include Poste Parisien, Radio Normandie, LR5, CX26, HHK, HIX, CPX, and CP4. I have heard 87 2000-milers, of which 51 are verified.

You may believe it or not, but my aerial is a piece of wire 14 feet long running east and west, and I use no ground whatsoever. There just isn't room at my location for a longer aerial, so that may be the reason why I have yet to hear my first T.P. However, I am still trying.

For DN purposes, I use your Perfect Phone Adapter and can say that it certainly works swell.

*2961 Brighton 8th St., Brooklyn, N. Y.

The WQBC DX Broadcasts

• • By Mrs. L. R. Ledbetter*

N AUGUST 24th, Station WQBC, Vicksburg, Miss., inaugurated a series of DX Tip Broadcasts to be transmitted at 1400 CST every Saturday afternoon. WQBC has always been alert for new and different programs which might be of interest to readers, and it is the opinion of the station's owners that this new series will hold a particular appeal for a large audience.

The fifteen-minute period will be devoted to the presentation of notices on special DX programs gathered from reliable sources, an exchange of tips and news on DXing and other features of interest to DXers.

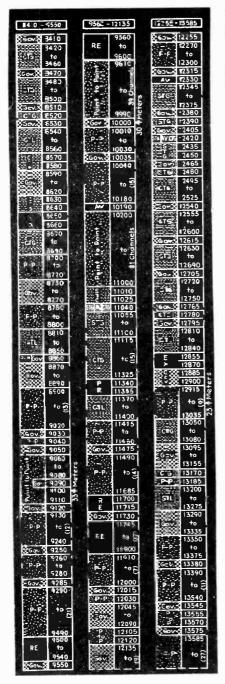
Although the time of the broadcast is hardly conducive to a wide-spread audience, listeners within range of the station are invited to send in their own reports on reception conditions.

The transmission of November 9th will be dedicated to RADEX and subsequent broadcasts wil honor leading radio clubs.

*605 Mattingly Street, Vicksburg, Miss.

The Frequency Charts

THE diagram which follows is one of a series which began in our May, 1935, issue and which will be concluded in a subsequent number. The complete set of these charts will give in diagrammatic form a picture of the allocation of frequencies to various radio services. These charts should be saved and mounted as they will be of great assistance in tuning, particularly in the short wave field.



Do You Know-

what happens in your set when you turn the dial?

It will double your enjoyment of Radio to have a clear understanding of its principles.

The Beginner's Story of Radio

gives you in clear and simple language, the story of just what "makes the wheels go'round."

Beautifully bound in leatherette, the 96 pages, printed in large, clear type, give you, in words you can understand, the fascinating story of radio.

In this book

B. Francis Dashiell

Technical Editor of RADEX

conducts you on a personal tour through your radio set, pointing out exactly what part each of the many devices plays in turning the mysterious waves into programs for your enjoyment.

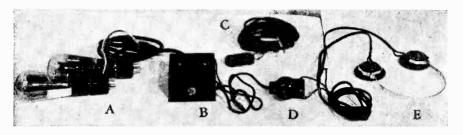
Every lover of radio should have this book in his library. It should be in the hands of every boy. Place your orders now for Christmas gifts.

Price
Only 50c postpaid

The Radex Press Inc.

Conneaut, Ohio

The "Perfect" Method of Using Head Phones



"A". The small socket adapter or adapters are placed under the power tubes where they remain,

"B". The Perfect Phone Adapter is placed on the underside of console or table. The tips of the phones may be inserted in the box and used directly at the set. No phone plug is required. The toggle-switch silences the speaker if desired. Price of Adapter, \$3.95 postpaid. (In Ohio, \$4.07)

"C". By inserting this extension cord and connector, the phones may be used at a distance of 15 feet from the set. Price 50c. (In Ohio, 52c)

"D". When this Distant Volume Control is inserted in the Adapter as shown, the volume may be regulated at a distance or the "blurbs" may be silenced altogether. The extension cord may also be used between the Volume Control and the set. Price, \$2.00. (In Ohio, \$2.06)

"E". The phones may be used directly with the Adapter or they may be used with the Volume Control as shown. This permits their use at a distance. We can furnish phones of the regular 2000-ohm type at \$2.75 or the Trimm "Feather weight" shown in the illustration for \$8.05. These we believe to be the best phones made. (In Ohio add 3% for sales tax.)

In ordering, be sure to give make and model of receiver and, if possible, a list of tubes used.

THE RADEX PRESS INC.

Conneaut, Ohio

WHAT'S ON THE AIR TONIGHT

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

| COLUMBIA(C) | | | | | |
|-------------|--|--|--|--|--|
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| | | | | | |
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| NATIONA | L, Red (R) |
|---------|------------|
| Call | Dial |
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| | |
| | |

| NATIONAL | , Blue (B) |
|----------|------------|
| Call | Dial |
| | |
| | |

TIME: E Eastern; C Central; M Mountain; P Pacific

RADEX is the only publication listing stations in alphabetical order for your convenience.

While these programs are correct at the time of going to press, changes are made from time to time.

MONDAY

E-6:00 p.m., C-5:00, M-4:09, P-3:00 C - Buck Rogers 25th Century CKLW WAAB WABC WCAU WFBL WHK WJAS WJSV WKBW WOKO

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C - Bobby Benson

WAAB WABC WCAU WDRC WEAN WFBL WGR WHEC WOKO

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

CRCT KDKA WBAL WBZ WBZA WFLA WGAR WHAM WIOD WJAX WJZ WLW WMAL WRVA WSYR

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

C — Myrt and Marge WARC WADC WET WCAO WCAU WDAE WDBO WEAN WFBL WGR WJAS WJSV WKRC WNAC WOKO WQAM WSPD WTOC WWVA

Amos 'n' Andy

CRCT KYW WBEN WCAE WCSH WEAF WEEL WFBR WGY WJAR WLW WRC WTAG WTIC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C - Vocals By Verrill
CFRB CKLW KFAB KFH KGKO

KLRA KLZ KMBC KRLD KRNT KSCJ KTSA KTUL KWKH WAAB WABC WBBM WBIG WBNS WBRC WBT WCAO WCCO WCOA WDAE WDBO WDNC WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WICC WISN WJSV WKRC WLAC WLBZ WMBD WMBG WOKO WORC WOWO WSJS WSMK WSPD WWVA

Uncle Ezra

KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WSAI WTAG WTAM

- Ivory Stamp Club

KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WMAL WMT WSYR WXYZ

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Singin' Sam

CKLW KFAB KMOX KRNT WABC

WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

R — Lum and Abner WBZ WBZA WENR WJZ WSYR

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

CKLW KMBC KMOX KOMA KRLD WABC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WGR WHAS WHK WJAS WJSV WKRC WNAC

B — Dangerous Paradise

KDKA KDKA KOIL KSO KTBS KWK WBAL WBAP WBZ WBZA WENR WFIL WHAM WJZ WLW WMAL WREN WSB WSM WSMB WSYR

E-8:00 p.m., C-7:00, M-6:00, P-5:00 - Guy Lombardo and Orchestra

KLRA KWKH WABC WBIG WBT WCAO WCAU WDBJ WDNC WDOD WDRC WDSU WEAN WESG WFBL WGR WHP WIBX WICC WJAS WJSV WLAC WMAS WNAC WNOX WOKO WORC WPG WREC WSJS

- Fibber McGee and Molly

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO WBAL WBZ WBZA WCKY WFIL WGAR WHAM WJZ WLS WMAL WMT WREN WSYR

R — Hammerstein's Music Hall KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC

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

C — One Night Stands
CKLW KFAB KMBC WABC WADC WBBM WBT WCAO WCAU WDRC WEAN WFBL WGR WHEC WIIK WKRC WLBZ WMAS WMBG WNAC WOKO WORC WSPD

R - Voice of Firestone

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

Evening in Paris

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WFIL WGAR WHAM WJZ WLS WMAL WMT KDKA WREN WSYR

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

C — Lux Radio Theatre CFRB CKAC CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KILJ KLRA KLZ KMBC KMJ KMOX KOIN KOMA KRLD KRNT KSI. KTRH KTSA KTUL KVI KWG WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDRC WDSU WEAN WFBL WIBM WGST WHAS WHEC WHK WICC WISN WJAS WJSV WKBW WKRC WLAC WNAC WNAX WOKO WORC WQAM WREC WSPD

R - A. & P. Gypsies YW WBEN WCAE WCSH WEAF WEEL WGY WHO KSD KYW WBEN WCAE WDAF WHIO WIRE WJAR WMAQ WOW WSAI WTAG WTAM WTIC WRC

B - Sinclair Minstrels

KDKA KDYL KFYR KOA KOIL KPRC KSO KSTP KTBS KVOO KWK WBAL WBZ WBZA WDAY WEBC WEAA WELA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WKY WIS WIW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC

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

KDYL KFI KFSD KFYR KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WEBR WELA WGY WHO WHIO WIBA WJAR WJAX WJDX WKY WLW

MONDAY (Continued)

WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

B — Princess Pat Players

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WMAL WMT WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C - Wayne King's Orchestra

CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHK WIBW WJAS WJSV WKBW WKRC WOKO WSPD

R — Contented Program KDYL KFI KGW KHQ KOA KOMO KPO KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFAA WFBR WGY WHO WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — March of Time

CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WEBL WEBM WGST WHAS WHE WJAS WJSV WKBW WKRC WNAC WOKO WSPD

E-10:45 p.m., C-9:45, M-8:45, P-7:45 Manhattan Choir

CFRB CKAC CKLW KDB KFBK KFH KGB KGKO KHJ KLRA KLZ KMBC KOH KOL KOMA KRLD KSL KTRH KTSA KVI KVOR KWG KWKII WAAB WABC WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WFBL WFBM WGR WGST WHAS WHK WHP WIBW WIRY WISN WIAS WISV WKBN WKBW WKRC WLAC WLBZ WMBR WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSMK WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — Myrt and Marge

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KVI KWG WALA WBBM WBRC WCCO WDSU WFBM WGST WHAS WLAC WREC WSFA

C — Dance Orchestra

CKAC CKLW KDB KFBK KFH KGB KGKO KHJ KLRA KLZ KMBC KOH KOL KRLD KSL KTRII KVI KVOR KWG KWKH WABC WADC WALA WBIG WBNS WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WFBM WGST WHAS WHK WHP WIBX WJAS WJSV WKBN WKBW WKRC WLAC WLBZ WMBR WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

R - Amos 'n' Andy

KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KTHS WDAF WFAA WHIO WKY WMAQ WMC WOAI WOW WSB WSM WSMB WTAM WWJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Singin' Sam

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSI KVI KWG

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

WABC WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDOD WDRC WEAN WFEA WICC WJSV WLAC WLBZ WMAS WMBG WMBR WNAC WNOX WORC WREC WSFA WSJS WTOC

C — One Night Stands

KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KMOX KOIN KOL KRNT KSCJ KSL KVI KWG WCCO WFBM WHAS

R - Voice of Firestone

KDYL KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO KTAR

E-12:00 p.m., C-11:00, M-19:00, P-9:00 - Helen Haves: Drama KDYL KFI KGW KHQ KOA KOMO KPO

TUESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C - Buck Rogers, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15

E-5:13 p.m., U-5:13, m-6:13, r-5:13
C — Benay Venuta, Songs.
KFH KGKO KLRA KLZ KMBC
KOMA KRLD KSCJ KTRH KTSA
KVOR KWKH WAAB WABC WACO WALA WBBM WBIG WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WESG WFBL WFBM WFEA WGR WGST WHEC WIBX WJR WKBN WLAC WLBZ WMAS WMBD WMBG WMBR WNOX WOC WOKO WORC WOAM WREC WSBT WSJS WSMK WSPD WTOC

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C - Russian Bear Orchestra

KLRA WABC WALA WBIG WBRC WBT WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WGST WLAC WLBZ WMAS WMBG WMBR WNOX WORC WQAM WREC WSFA WSJS

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 — Myrt and Marge, See Monday R - Amos 'n' Andy, See Monday

B — Easy Aces

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

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R - Popeye, The Sallor KFYR KSD KYW WBEN WCAE

WCSH WDAF WDAY WEAF WEBC WCSH WDAF WDAY WEAF WEBC WFBR WGY WHIO WIBA WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

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

CKLW KFAB KMBC KMOX KRLD KTRH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WDRC

WEAN WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WMBG WMBR WNAC WOKO

B - Lum and Abner, See Monday

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 - Frank Munn; Lucy Monroe CKLW KFAB KMBC KMOX KRNT WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

R — Lee Reisman's Orchestra

KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WMAQ WOW WPTF WRC WSOC WTAG WTAM WTAR WTIC WWJ WWNC

B — Ene Crime Clues KDKA KOIL KSO WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR

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

C — Lawrence Tibbett
CFRB CKAC CKLW KDB KERN
KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WIBW WISN WJAS WJSV WKBW WKRC WLAC WMBG WMBR WNAC WNAX WNOX WOC WOKO WQAM WREC WSFA WSJS WSPD WTOC

R — Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEEL WFAA WGY WHO WIBA WIRE WJAR WJDX WKY WMAQ WMC WOAI WOW WRC WSAI WSB WSMB WTAG WTAM WTIC WTMJ WWJ

B — Edgar Guest in Welcome Valley KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR.

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

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

B - N.T.G. and His Girls

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO WRAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR

C --- Walter O'Keefe; Glen Gray

KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WJAS WJR WJSV WKBN WKBW

TUESDAY (Continued)

WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Fred Waring and Orchestra

CFRB CKAC CKLW KDB KERN
KFAB KFBK KFH KFPY KFRC
KGB KGKO KHJ KLRA KLZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLD KSCJ KSL KKFA KVI KVOR
KWG KWKH WABC WACO WADC
WALA WBBM WBIG WBNS WBRC
WALA WBBM WBIG WBNS WBRC
WDT WCAO WCAU WCCO WCOA
WDAE WDBJ WDBO WDNC WDOD
WDRC WDSU WEAN WFBL WFBM
WGST WHAS WHEC WHK WHP
WIBW WISX WICC WISN WJAS
WJSV WKBN WKBW WKRC WLAC
WLBZ WMAS WMBD WMBR WNAC
WNAX WNOX WOC WOKO WORC
WOWO WPG WQAM WREC WSBT
WSFA WSJS WSMK WSPD WTOC

R—Eddie Duchin and Orchestra
KDYL KFI KFSD KFYR KGHL
KGIR KWG KHQ KOA KOMO KPO
KPRC KSD KSTP KTAR KTBS
KVOO KYW WAVE WBAP WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFLA WGY
WHO WHO WIBA WIDD WIRE
WIS WJAR WJAX WJDX WKY
WLW WAAQ WMC WOAI WOW
WPTF WRC WRVA WSB WSM
WSMB WSOC WTAG WTAM WTAR
WTIC WTNIJ WWJ WWNC

B — Helen Hayes; Drama

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WMAL WMT WREN WSYR WXYZ

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

R—Swift Studio Party
KDYL KFI KFYR KGW KIIQ KOA
KOMO KPO KPFC KSD KSTP
KTBS KTHS KYW WBAP WBEN
WCAE WCSH WDAF WBAY WEAF
WEBC WEEI WFBR WGY WHIO
WIBA WJAR WKY WLW WMAQ
WOAI WOW WRC WTAG WTAM
WTIC WTMJ WWJ

B --- Wendell Hall, Songs

CFCF KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WIRE WJZ WMAL WMT WREN WSYR WXYZ

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — March of Time, See Monday

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

CFRB CKLW KDB KFBK KFH
KFPY KFRC KGB KGKO KHI
KLRA KLZ KMBC KMOX KOH KOL
KOMA KRLD KSL KTRH KTSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBIG
WBNS WBRC WBT WCAO WDAE
WDBJ WDBO WDNC WDOD WDRC
WDSU WFBL WFBM WFEA WGST
WHAS WHEC WHK WHP WIBW
WIBX WICC WJAS WJSV WKBN
WKBW WKRC WLAC WLBZ WMAS
WMBG WMBR WNOX WOKO
WORC WOWO WPG WQAM WREC
WSBT WSFA WSJS WSMK WSPD

R --- Amos 'n' Andy, See Monday

C - Myrt and Marge, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 R — Leo Roisman's Orchestra KDYL KFI KFSD KFYR KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KTAR KTBS WAPI WAVE WBAP WDAY WEBC WIBA WIRE WJDX WKY WMC WOAI WSB WSM WSMR

C — Walter O'Keefe; Glen Gray KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KSL KVI KVOR KWG

WEDNESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Buck Regers, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Bobby Benson, See Monday

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 R — Amos 'n' Andy, See Monday

C — Myrt and Marge, See Monday

B - Easy Aces. See Tuesday

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Jerry Cooper, Baritone CKLW KDB KFBK KFH KFPY

CKLW KDB KFBK KFH KFPY KFRC KGB KGKO KIIJ KLRA KLZ KMBC KMOX KOH KOL KRLD KRNT KSCJ KTRH KTSA KTUL KVOR KWG KWG KWKH WABC WACO WADC WALA WBBM WBRC WBT WCAU WCOA WDAE WDBJ WDBO WDNC WDRC WEAN WESG WFBL WFBM WGR WGST WHAS WHK KIBX WISN WJAS WJSV WKBN WKRC WMBG WNAC WNOX WOKO WOWO WQAM WREC WSIS WSMK WSPD WTOCC WWA

R - Uncle Ezra, See Monday

B - Stamp Club, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Kate Smith, See Tuesday

B -- Lum and Abner, See Monday

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

E — Dangerous Paradise. See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — One Man's Family KDYL KFI KFYR KGW KHQ KOA KOMO KPRC KSD KSTP KTAR

ROMO KPRC KSD KSTP KTAR
ETBS KTHS KVOO KYW WAPI
WAVE WBEN WCAE WCSH WDAF
WDAY WEAF WEBC WEEI WFBR
WFLA WGY WHO WHIO WIBA
WIOD WIRE WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WOAI WOW WPTF WRC WRVA
WSB WSM WSMB WTAG WTAM
WTIC WTMJ WWJ WWNG

C -- Cavalcade of America

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGR WGST WIAS WHEC WHK WJAS WJR WJSV WKRC WMBG WNAC WOKO WSPD

B — Life Savers Rendezvous CRCT KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WFIL WGAR WHAM WJZ WLS WMAL WMT WREN WSYR WXYZ

E-8:30 p.m., C-7:30, M-6:30, P-5:30 B — House of Glass: Drama

KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WFLA WGAR WHAM WIOD WIS WJAX WJZ WLS WLW WMAL WMT WPTF WREN WSOC WSYR WTAR WWNC

R — Wayne King, See Tuesday

C - Burns and Allen

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 WDSU WEAN WFBL WFBM
WFEA WGR WGST WHAS WHEC
WJAS WJR WJSV WKRC WLAC
WJAS WJR WJSV WKRC WLAC
WLBZ WMAS WMBD WMBG
WMBR WNAC WNAX
WOKO WORC WPG WQAM WREC

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

CKAC CKLW KDB EERN KFBK
KFPY KFRC KGKO KHJ KLRA
KLZ KMBC KMJ KOIN KOL KSL
KTUL KVI KWG WAAB WABC
WADC WALA WBBM WBIG WBNS
WBRC WBT WCAO WCOA WDAE
WDBJ WDBO WDNC WDRC WDSU
WFBL WFBM WFEA WGST WHAS
WHEC WHP WICC WJAS WJSV
WKBW WKRC WLAC WLBZ WMBG
WMBR WNOX WOKO WORC WOWO
WFG WQAM WREC WSBT WSPD

R - Town Hall; Fred Allen

KFYR KPRC KSD KSTP 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 WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

B --- John Charles Thomas

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

E-9:30 p.m., C-8:30, M-7:30, P-6:30 B — Warden Lawes; Drama

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

C — Six Gun Justice

CFRB CKAC KFH KGKO KLRA
KMBC KMOX KOMA KRLD KSC
KTRH KTSA KVOR KWKH WABC
WACO WADC WALA WBIG WBNS
WBRC WBT WCAO WCAU WDAE
WDBJ WDBO WDNC WDOD WDRC
WEAN WFBL WFBM WFEA WGST
WHEC WIBW WIBX WICC WISN
WJAS WJR WJSV WKBW WKRC
WLAC WMAS WMBD WMBR
WNAC WNOX WOC WOKO
WQAM WREC WSBT WSJS WSPD

Wednesday (Continued) E-10:00 p.m., C-9:00, M-8:00, P-7:00 R -- Log Cabin Musical

KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KTBS KTHS KYW WBEN WCAE WCSH WDAF WEAF WEEI WFAA WGY WHIO WJAR WKY WMAQ WOAI WOW WRC WSAI WTAG WTAM WTIC WWJ

C - Lud Gluskin and Orchestra CFRB CKAC KFH KGKO KLRA KLZ KMBC KMOX KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WMBD WMBR WNAC WMAS WNAX WNOX WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSMK WSPD WTOC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 R - Ray Noble and Orchestra KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KTBS KTHS KVOO KYW WAVE WBEN WCAE WCSH WDAF WEAF WEEL WFAA WFBR WGY WHO WHIO WIRE WJAR WJDX WKY WLW WMAQ WMC WOAI WOW WRC WSB WSM WSMB WTAG WTAM WTIC WW.I C — March of Time, See Monday

E-11:00 p.m., C-10:00, M-9:00, P-8:00 - Myrt and Marge, See Monday R - Amos 'n' Andy, See Monday

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

CFRB CKAC KDB KFAB KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KOH KOL KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KVI KVOR KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJSV WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

E-11:30 p.m., C-10:30, M-9:30, P-8:30 B — House of Glass; Drama

KDYL KFI KFYR KGW KOA KOMO KPO KPRC KTBS WAPI WAVE WDAY WFAA WIBA WIRE WJDX WKY WMC WOAI WSB WSM WSMB WTMJ

- Burns and Allen

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KVOR KWG

E-12:00 p.m., C-11:00, M-10:00, P-9:00 R - Town Hall; Fred Allen KDYL KFI KGW KHQ KOA KOMO

THURSDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C - Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30 - Russian Bear Orchestra KLRA WAAB WABC WALA WBIG

WBRC WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WGST WLAC WLBZ WMAS.WMBG WMBR WORC WQAM WREC WSFA WSJS WTOC

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 — Myrt and Marge, 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 - Buddy Clark, Singer

CFRB CKLW KFAB KFH KGB KLRA KLZ KMBC KMOX KRLD KRNT KSCJ KSL KTSA KTUL KWG KWKH WAAB WABC WACO WBBM WBIG WBNS WBRC WBT WCOA WDAE WDBO WDNC WDOD WDRC WDSU WFBL WFBM WFEA WGR WGST WHAS WHEO WHP WIBX WJSV WKRC WLAC WLBZ WMBG WMBR WOKO WMRD WORC WOWO WQAM WREC WSJS WSMK WSPD WWVA

R - Popeye, See Tuesday

E-7:30 p.m., C-6:39, M-5:30, P-4:30 C — Kate Smith, See Tuesday

B -- Lum and Abner, See Monday

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 ' - Harv and Esther

CKLW KFAB KMBC KMOX KRNT WARC WADC WBBM WBNS WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSMK WSPD

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

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Atwater Kent Concert

CKAC CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTSA KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDAE WDBO WDRC WDSU WEAN WFBL WFBM WOR WGST WHAS WHK WJAS WJSV WKRC WLAC WLBZ WMBR WNAC WOKO WQAM WREC WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C - Walter O'Keefe, See Tuesday

- Maxwell House Show Boat KDYL KFI KFSD KFYR KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Death Valley Days KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM

WJZ WLS WLW WMAL WMT WREN WSYR

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

C — To Arms for Peace KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI KWG KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WHP WISN WJAS WJR WJSV WKBW WKRC WLAC WMBR WNAC WMBG WOKO WREC WSPD

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C - Horace Heidt's Orchestra

CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KTRH KTSA KTUL KVI KWG WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDBO WDRC WDSU WFBL WFBM WGST WHAS WHK WISN WJAS WJSV WKBW WKRC WMBG WLAC WNAC WNAX WOC WOKO WQAM WREC

R - Paul Whiteman's Music Hall CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA W8B WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C - March of Time, See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Dance Orchestra

CFRB CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD 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 WDOD WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBR WNAX WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C - Dance Orchestra

CFRB CKAC CKLW KDB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KOH KOIN KOMA KRLD KSL KTRH KTSA KTUL KVOR KWG KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WJAS WJSV WKBN WKBW WKRC WLAC WLBZ WMBG WMAS WMBR WNAC WNOX WOKO WORC WOWO WPG

THURSDAY (Continued)

WOAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

R - Amos 'n' Andy, See Monday

C — Myrt and Marge, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C - Walter O'Keefe, See Tuesday

FRIDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C - H. V. Kaltenborn

CKLW KDB KERN KFAB KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KOE KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBNS WBRC WCAO WCOA WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WESG WFBL WFBM WFEA WGST WHAS WHEC WHP WIBW WIBX WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C - Bobby Benson, See Monday

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

C --- Loretta Lee, Songs CFRB KGKO KLRA KLZ KMBC KMOX KOMA KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBRC WDAE WDBJ WDBO WDNC WDOD WFBL WFBM

WFEA WGST WHAS WHEC WICC WJSV WKBW WKRC WLAC WLBZ WMBG WMAS WMBR WOKO WORC WQAM WREC WSJS WSMK WSPD

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

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R — Uncle Ezra, See Monday C — Lazy Dan, Minstrel Man KFAB WABC WADC WBBM WCAO WCAU WDRC WEAN WGR WJAS

WJSV WKRC WOKO WSPD B — Stamp Club, See Monday

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

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C - Flying Red Horse Tavern

KFAB KFH KMBC KMOX KRNT WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHEC WHK WIBW WICC WJAS WJR WJSV WKBW WKRC WLBZ WMAS WMBD WNAC WOC WOKO WORC WSPD

R - Citles Service Concert

CRCT KDYL KOA KPRC KSD KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WHIO WIOD WJAR WKY WMAO WOAI WOW WRC WRVA WSAI WTAG WTAM WTIC WTMJ WWJ

B - Irene Rich; Dramatic Sketch KDKA KDYL KFI KGW KHQ KOIL KOMO KPO KSO KTAR WAVE WBAL WBZ WBZA WGAR WHAM WIRE WJZ WLS WMAL WMC WMT WREN WSB WSM

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

C — Broadway Varieties
CKLW KALE KDB KERN KFAB KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRNT KSL KWG WABC WADC WBNS WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHK WJAS WJSV WKRC WMAS WMBG WNAC WOKO WSPD

B - Ruth Etting; Red Nichols KDKA KDYL KFI KFSD KGW KHQ KOIL KOMO KPO KSO KTAR KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR

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

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

R --- Frank Munn; Vivlenne Segal KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WEBR WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

B — Palmolive Beauty Box Theatre CFCF CRCT KDKA KFYR KOIL KPRC KSO KSTP KTBS KWK KPRC KSO KSTP KTBS KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WLS WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC

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

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

E-10:00 p.m., C-9:00, M-8:00, P-7:00 - Richard Himber and Orchestra CKLW KFAB KFH KMBC KMOX WAAB WABC WADC WRBM WRNS WBT WCAO WCAU WCCO WDRC WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WOKO WSBT WSPD

- Compana's First Nighter

KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KSTP KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEL WFAA WFBR WGY WHO WJAR WKY WLW WMAQ WMC WOAI WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ E-10:30 p.m., C-9:30, M-8:30, P-7:30 C - March of Time, See Monday

- Mills Brothers: Art Kassel

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KVOO WAVE WCAE WDAF WDAY WEAF WEBC WEEL WFAA WFLA WHIO WIBA WIOD WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRVA WSAI WSB WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWI WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C - Myrt and Marge, See Monday R - Amos 'n' Andy, See Monday

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

CKLW KFAB KFBK KGKO KLZ KRLD KRNT KSCJ KTRH WABC WACO WBBM WDBJ WDBO WDOD WFBM WGST WHP WISN WJAS WLAC WMBD WNAC WNOX WOC WORC WOWO WSMK

- Palmolive Beauty Box Theatre KDYL KEI KESD KGHL KGIR KGW KHQ KOA KOMO KPO KTAR WLW.

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C - Richard Himber's Orchestra KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KVI KWG

SATURDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — Frederic William Wile CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KOH KOIN KOL KOMA KRLD KSCJ KSL KTSA KTUL KVI KVOR KWG KWKH WAAB WABC WACO WADC WBBM WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WESG WFBL WFBM WGST WHAS WHEC WHK WIIP WIBW WIBX WISN WJSV WKBW WLAC WLBZ WMBD WMBG WMBR WNOX WOC WOKO WORC WOWO WOAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWVA

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

CFRB KLRA WAAB WABC WADC WALA WBRC WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WFBL WFEA WGST WHK WICC WJSV WKBW WLAC WLBZ WMAS WMBR WOKO WORC WQAM WREC WSBT WSJS WSPD

E-7:00 p.m., C-6:00, M-5:00, P-4:00 R - Old Gold Sport Page

KDYL KFYR KOA KPRC KSD KSTP KTBS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WWJ WWNC

C — Atlantic Family; Frank Parker WARC WADC WBIG WBNS WBT WCAO WCAU WDAE WDBJ WDBO WDRC WEAN WFBL WHEC WHK WHP WICC WJAS WKBN WKBW WMAS WMBG WMBR WNAC

SATURDAY (Continued)

WOKO WORC WPG WOAM WSJS WTOC

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R - Popeye, See Tuesday

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 WEAN WFBL WGR WHAS WHK WJAS WJR WKRC WNAC

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Lennie Hayton and Orchestra KDYL KFI KFSD KFYR KGHL KGIR KGU 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 WBAY WEAF WEBC WEEL
WFAA WFBR WFLA WGY WHO
WHIO WIBA WIOD WIRE WIS
WJAR WJAX WJDX WKY WLW
WMAQ WMC WOAL WOW WFTF
WRC WRVA WSB WSM WSMB
WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

C-Club Columbia; Musical Comedy CFRB CKAC KFH KGKO KLRA KLZ KMBC KMOX KOMA KSCJ KSL KTRH KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WJSV WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WQAM WREC WSBT WSJS WSPD WTOC

E-8:45 p.m., C-7:45, M-6:45, P-5:45

C - Troopers; Martial Music CFRB CKAC KGKO KLRA KLZ KMBC KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WJSV WKRC WLAC WLBZ WMBG WMBD WMBR WNAC WNOX WOC WORC WPG WREC WSBT WSJS WSPD WTOC

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R - G-Men; Drama

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

C - Chesterfield, See Wednesday

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R - Wallace Beery; Victor Young KDYL KFI KFSD KFYR KGHL KGW KHQ KOA KOMO KGIR KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF E-11:30 p.m., C-10:30, M-9:30, P-8:30
WEBC WEEI WFLA WGY WHO C — Dance Orchestra
WHIO WIBA WIOD WIS WJAR CFRB CKAC CKLW KDB KERN

WJAX WLW WMAQ WOW WPTF WRC WRVA WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNO B - National Barn Dance

KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WIRE WJZ WLS WMAL WMT WREN WSYR

C — Marty May; Comedian

CFRB CKAC KFH KGKO KLRA KLZ KMBC KMOX KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WADO WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDRO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WIIK WIBW WIBX WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WPG WOAM WREC WSBT WSJS WSPD WTOC

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

C — California Melodies CFRB CKAC KFH KGKO KLRA KLZ KMBC KMOX KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDDD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WPG WOAM WREC WSBT WSJS WSMK WSPD WTOC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C - Dance Orchestra

CFRB CKAC CKLW KDB KFBK KFH KFPY KFRC KGB KGKO KHJ KLZ KMOX KOH KOIN KOL KFRC KRLD KSCJ KSL KTSA KTUL KVI KVOR KWG KWKH WAAB WABC WACO WADC WBBM WBIG WBNS WBRC WCAU WCCO WDBJ WDBO WDNC WFBL WFBM WGST WHAS WHEC WHE WHP WIBW WIBX WISN WJAS WJSV WKRC WLAC WLBZ WMAS WMBD WMBR WNOX WOC WORC WPG WREC WSFA WSJS WSMK WSPD WTOC WWVA

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C - Dance Orchestra

CKLW KDB KERN KFBK KFH
KFPY KFRC KGB KGKO KLRA
KLZ KMBC KMOX KOH KOIN
KOL KOMA KRLD KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDAE WDBJ WDBO WDNC WDDD WDRC WFBL WFBM WFEA WGST WHAS WHEC WHAS WJSV WKBW WIBX WICC WJAS WJSV WKBW WKRC WLAC WLBZ WMAS WMBR WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWVA

B — National Barn Dance

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSTP KTBS KTHS KVOO WAVE WBAP WDAY WEBC WIBA WJDX WKY WLW WMC WOAI WSB WSMB

KEAB KEBK KEH KEPY KERC KGKO KHJ KLRA KOH KOL KOMA KRLD KSCJ KSL KTSA KTUL KVOR KWKH WARC WACO WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJSV WKBW WKRC WLAC WLBZ WMAS WMBD WNAC WNAX WNOX WOKO WORC WPG WOAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWWA

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

CKAC CKLW KDB KERN KFBK KFH KFPY KGB KGKO KLRA KLZ KOH KOIN KOL KOMA KRLD KSL KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WBNS WBRC WBT WCAO WCAU WCOA WDBJ WDBO WDNC WDOD WEAN WFBL WFBM WHAS WHK WHP WIBX WICC WKBW WKRC WLAC WMBR WNAC WNOX WOC WOKO WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30 C — Salt Lake Tabernacle Choir CKLW KFAB KFBK KFH KGKO

CKLW KFAB AFBK KFH KGKO
KLRA KLZ KOMA KRLD KRNT
KSCJ KSL KTRH KTSA KTUL
KWKH WACO WADC WALA WBIL
WBNS WBRO WBT WCAO WCCO
WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WESG WFBL WFEA WGST WHP WIBW WIBX WISN WJAS WJSV WKBN WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSMK WSPD WTOC

R --- Major Bowes' Capitol Family KDYL KFYR KOA KPRC KSTP KTBS KVOO WAPI WCAE WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WHIO WJAR WJAX WKY WMAQ WMC WOAI WRC WRVA WSAI WSMB WTAG WTAM WWNC

E-12:00 a.m., C-11:00, M-10:00, P-9:00 B — Tastyeast Matinee

KDKA WBAL WBZ WBZA WCKY WJZ WMAL WSYR

E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Radie City Music Hall

CFCF CRCT KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KVOO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIS WJDX WKY WMAL WOAI WREN WSMB WSYR WWNC

E-12:45 p.m., C-11:45, M-10:45, P-9:45 C - Trans-Atlantic Broadcast

CFRB CKAC KFH KGKO KLRA KLZ KMBC KRLD KSCJ KTRH KTSA KVOR WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCAU WCCO WDAE WDBJ WDRC WEAN WESG WFBL WFBM WFEA WGR WHAS WIBX WJAS WJSV WKBN WLAC WLBZ WMBD WMBR WNAC WOC WOKO WORC WPG WQAM WREC WSJS WSMK WSPD WTOC

SUNDAY (Continued)

E-1:00 p.m., C-12:00, M-11:00, P-10:00 C - Church of the Air

CFRB KFH KGKO KLRA KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WALA WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDOD WESG WFBM WGR WHAS WHEC WIBW WIBX WJAS WJSV WKBN WKRC WLAC WLBZ WMBD WMBR WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSPD

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

KMOX KRNT WARC WRNS WCAU WHAS WJAS WKBW WKRC WREC

E-1:45 p.m., C-12:45, M-11:45, P-10:45 - Sisters of the Skillet

CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRII KTSA KVI KWG WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFBM WGST WHAS WHEC WIIK WIBX WICC WJAS WJSV WKBW WKRC WNAC WNOX WORO WORC WREC WTOC

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

CFRB CKAC KFH KGKO KLRA KLZ KMBC KRLD KSCJ KTRH KTSA KVOR KWKH WABC WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WESG WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNOX WOC WOKO WORC WPG WQAM WREC WSJS WSMK WSPD WTOC

B — Magic Key of RCA

CFCF KDKA KDYL KFI KFYR KGU KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WIBA WIOD WIS WJAX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC WXYZ

E-2:45 p.m., C-1:45, M-12:45, P-11:45 C — Blue Flames; Mixed Quartet

CFRB KFH KGKO KLRA KLZ KMBC KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WEAN WESG WFBL WFBM WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WKBN WKBW WKRC WLAC WLBZ WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WQAM WREC WSBT WSJS WSMK WSPD WTOC

E-3:00 p.m., C-2:00, M-1:00, P-12:00 C — New York Symphony

CERB CKAC KEH KOKO KLRA KLZ KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBIG

WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WESG WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJR WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNOX WOC WOKO WORC WQAM WREC WSBT WSJS WSMK WSPD WTOC

Your English

KOKA KOYL KFI KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTHS KVOO KWK WAPI WAVE WBAL WBZ WDAY WEBC WENR WFAA WFIL WELA WGAR WHAM WIOD WJAX WJZ WKY WLW WMAL WMC WMT WOAI WPTF WREN WSB WMAL WMC WSM WSMB WSYR WXYZ

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

KSTP KWK WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WHO WICC WIND WJAS WJJD WJR WLBZ WLW WMAS WNAC WNBH WOC WOKO WOL WOR WORC

E-5:00 p.m., C-4:00, M-3:00, P-2:00 C — Abe Lyman's Orchestra

CFRB CKLW KFAB KMBC KMOX KRNT WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WJAS WJSV WKRC WOKO WSPD

- Roses and Drums

KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR

R — Penthouse Serenade

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

E-5:39 p.m., C-4:30, M-3:30, P-2:30 C-Frank Crummit-Julia Sanderson CKLW KFII KMBC KMOX KOMA KTUL WAAB WABC WADC WBNS WCAO WCAU WDRC WDSU WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJSV WMAS WOKO WORC WSPD WWVA

R - Dream Drama

KYW WBEN WCAE WCSII WDAF WEAF WEEL WEBR WGY WJAR WMAQ WRC WSAI WTAG WTAM WTIC WWJ

B — Bob Becker's Dog Chats

KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WMAL WMT WREN WSA'R

E-5:45 p.m., C-4:45, M-3:45, P-2:45

B — Gabriel Heatter, Talks KDKA KOIL KSO WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WMAL WREN WSYR

- Al Goodman and Orchestra KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY

WHO WHIO WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

E-6:00 p.m., C-5:00, M-4:00, P-3:00 - National Amateur Night

CFRB CKLW KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WFBL WFBM WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WOKO WOWO WREC

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

C — Smiling Ed McConnell
KDB KERN KFAB KFBK KFH
KFPY KFRC KGB KHJ KLZ KMJ
KMOX KOIN KOL KRLD KRNT KSL KVI KWG WAAB WABC WBBM WBNS WBRC WRT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHEC WJAS WJR WJSV WKBW WKRC WLAC WWVA

B — Compana's Grand Hotel

KDKA KDYL KFI KGW KIIQ KQA KOIL KOMO KPO KSO KSTP KWK WBAL WBZ WBZA WCKY WEBC WENR WHAM WJZ WMAL WMT WREN WSYR

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

KMOX WAAB WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHEC WHK WJAS WJR WKBW WKRC WSPD

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

KDB KERN KEBK KEPY KERC KGB KHJ KLZ KMBC KMON KOIN KOL KSL KVI KWG WABC WBBM WCAO WCAU WCCO WDRC WFBL WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

B - Jack Benny; Johnny Green KDKA KEYR KOIL KPRC KSO

KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBAP WBZ WBZA WCKY WDAY WEBC WENR WEIL WELA WGAR WHAM WIBA WIOD WIRE WJAX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ

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

R — Fireside Recitals

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

C - Phil Baker; Hal Kemp

CKLW KLRA KRLD KTRH KTSA KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WESG WFBI. WFBM WFEA WGR WGST WHAS WHEC WHK WHP WICC WJAS WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WNAC WNOX WORO WORC WOWO WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWVA

B - Ozzie Nelson; Robt. L. Ripley KDKA KDYL KFI KFYR KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTAR KVOO KWK

SUNDAY (Continued)

WBAL WBZ WBZA WCKY WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WJAX WJDX WJZ WKY WLS WMAL WMC WMT WOAI WPTF WREN WRVA WSB W8M WSMB WSYR WTMJ WWNC WXYZ

E-7:45 p.m., C-6:45, M-5:45, P-4:45 — Sunset Dreams; Morin Sisters CFCF KSD KYW WBEN WCAE WCSH WEAF WFBR WGY WHO WHIO WIRE WJAR WLW WMAQ WRC WTAG WTAM WTIC WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Major Bowes' Amateur Hour CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTHS KVOO KYW WAPI WAVE WBEN WBZ WBZA WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

C — Eddie Cantor

KFAB KFH KLRA KLZ KMBC KMOX KOMA KRLD KRNT KTRH KTSA KTUL KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WICC WJAS WJR WJSV WKRC WLAC WNAC WOKO WOWO WREC WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Leslie Howard; Drama

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTUL KVI KWG WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGR WHAS WHEC WHK WJAS WJR WJSV WKRC WLAC WNAC WOKO WOWO WREC WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00 4 C - Ford Concert

CFRB CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN

KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBH WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WNOX WOC WOKO WORC WOWO WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC

Manhattan Merry-Go-Round CFCF KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFBR WGY WHO WHIO WIBA WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

- Charles Previn and Orchestra KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR

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 KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WHIO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ WWNC

- Walter Winchell

KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — Niela Goodelle, Songs KDKA KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WJZ WLW WMAL

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Wayne King's Orchestra CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC

WMT WREN WSYR WXYZ

KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WDSU WFBL WFBM WHAS WHK WIBW WJAS WJSV WKBW WKRC WSPD

R — General Motors Concert R — General Motors Concert CFCF CRCT KDYL KFI KFSD KFYR KGW KHQ KOA KOMO KPO KPRC KSTP KTAR KTBS KTHS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C --- Freedie Rich and Orchestra KLRA WABC WALA WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFEA WGST WICC WJSV WLBZ WMAS WMBG WMBR WNAC WORC WOAM WREC WSJS WTOC

WTIC WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 R — Sunset Dreams; Morin Sisters KDYL KFI KFSD KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WBAP WDAF WKY WOAI

C — Eddie Canter KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KSL KVI KWG

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Walter Winchell

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30 B — Jack Benny; Johnny Green KDYL KFI KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO

KTAR C - Voice of Experience

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

E-12:00 p.m., C-11:00, M-10:00, P-9:00 B - Charles Previn and Orchestra KDYL KFI KGW KHQ KOA KOMO KPO

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

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

These features are correct at the time of going to press, but changes are being made daily.

CONCERTS

Atwater Kent Concert, 8:30 p.m. Thursday, C Ford Concert, 9:00 p.m. Sunday, C General Motors Concert, 10:00 p.m. Sunday, R New York Symphony, 3:00 p.m. Sunday, C Radio City Music Hall, 12:30 p.m. Sunday, B

DANCE BANDS

Victor Arden, 8:00 p.m. Thurs.; 8:30 p.m. Fri., C

Ben Bernie, 9:00 p.m. Tuesday, R Eddie Duchin, 9:30 p.m. Tuesday, R Lud Giuskin, 10:00 p.m. Wednesday, C Al Goodman, 9:00 and 11:30 p.m. Friday, B; 5:45 p.m. Sunday, R

Glen Gray, 9:00 and 11:30 p.m. Tues, and Thurs., C Johnny Green, 7:00 and 11:30 p.m. Sunday, B Lennie Hayton, 8:00 p.m. Saturday, R Horace Heldt, 10:00 p.m. Thursday, C Richard Himber, 10:00 and 12:00 p.m. Friday, C

Johnny Johnson. 12:00 noon Sunday, B
Art Kassel, 10:30 p.m. Friday, R
Hal Kemp, 7:30 p.m. Sunday, C
Wayne King, 10:00 p.m. Sun, and Mon., C; 8:30 p.m.
Tues, and Wed., R
Guy Lombardo, 8:00 p.m. Sun, and Mon., C; 8:30 p.m.
Tues, and Wed., R
Guy Lombardo, 8:00 p.m. Monday, C
Abe Lyman, 5:00 p.m. Sunday, B
Red Nichols, 8:30 p.m. Friday, B
Red Nichols, 8:30 p.m. Friday, B
Ray Noble, 10:30 p.m. Wednesday, R
Charles Previn, 9:00 and 12:00 p.m. Sunday, B
Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R
Freddie Rich, 10:30 p.m. Sunday; 8:00 p.m. Friday, C
Harry Salter, 10:00 p.m. Wednesday, R
Rudy Vallee, 8:00 p.m. Thursday, R
Fred Waring, 9:30 p.m. Tuesday, C
Paul Whiteman, 10:00 p.m. Thursday, R
Victor Young, 9:30 p.m. Tuesday, R

DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R.

Amos 'n' Andy, 7:00 and 11:00 p.m. daily except Sat. and Sun., R
Phil Baker, 7:30 p.m. Sunday, C
Wallace Beery, 9:30 p.m. Saturday, R
Jack Benny, 7:00 and 11:30 p.m. Sunday, P
Burns and Allen, 8:30 and 11:30 p.m. Wednesday, C
Eddle Cantor, 8:00 and 11:00 p.m. Sunday, C
Easy Aces, 7:00 p.m. Tues., Wed. and Thurs., B
Fibber McGee and Molly, 8:00 p.m. Monday, B
Harv and Esther, 8:30 p.m. Thursday, C
Lum and Abner, 7:30 p.m. daily, except Sat. and Sun., B
Marty May, 9:30 p.m. Saturday, C
Walter O'Keefe, 9:00 and 11:30 p.m. Tues. and Thurs.,

Pick and Pat, S:30 and 11:30 p.m. Monday, C Popeye, The Sailor, 7:15 p.m. Tues., Thurs, and Sat., R Sisters of the Skillet, 1:45 p.m. Sunday, C Stooppagie and Budd, 9:30 p.m. Tuesday, C

DRAMA

Cavalcade of America, 8:00 p.m. Wednesday, C Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B Death Valley Days, 9:00 p.m. Thursday, B Dream Drama, 5:30 p.m. Sunday, B Bream Drama, 5:30 p.m. Sunday, B Emo Crime Clucs, 8:00 p.m. Tuesday, B First Nighter, 10:00 p.m. Friday, R G-Men, 9:00 p.m. Saturday, R Grand Hotel, 6:30 p.m. Sunday, B Helen Hayes, 12:00 mid. Monday; 9:30 p.m. Tuesday, B House of Glass, 8:30 and 11:30 p.m. Wednesday, B Lestle Howard, 8:30 p.m. Sunday, C Warden Lawes, 9:30 p.m. Wednesday, B Lux Theatre, 9:00 p.m. Wednesday, B Lux Theatre, 9:00 p.m. Monday, C Myrt and Marge, 7:00 and 11:00 p.m. dally, except Sat. and Sun., C One Man's Family, 8:00 p.m. Wednesday, R Princess Pat Players, 9:30 p.m. Wednesday, R Princess Pat Players, 9:30 p.m. Monday, B Irene Rich, 8:00 p.m. Friday, B Buck Rogers, 6:000 p.m. Mon., Tues., Wed., Thurs., C Roses and Drums, 5:00 p.m. Sunday, B Six-Gun Justice, 9:30 p.m. Wednesday, C True Story Court, 9:30 p.m. Priday, R

POPULAR PROGRAMS

Welcome Valley, 8:30 p.m. Tuesday, B

A. and P. Gypsies, 9:00 p.m. Monday, R Atlantic Family, 7:00 p.m. Saturday, C Album of Familiar Music, 9:30 p.m. Sunday, R Major Bowes, 11:30 a.m. and 8:00 p.m. Sunday, R Broadway Varieties, 8:30 p.m. Friday, C California Melodies, 10:00 p.m. Saturday, C Camel Caravan, 9:00 and 11:30 p.m. Tues, and Thurs, C

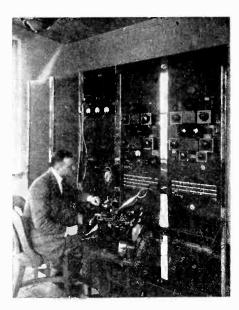
Carborundum Band, 7:36 p.m. Saturday, C Chesterfield Program, 9:00 p.m. Wed, and Sat., C Cities Service Concert, 8:00 p.m. Friday, R Contented Program, 10:00 p.m. Monday, R Evening in Paris, 8:30 p.m. Monday, B Fireside Recitals, 7:30 p.m. Sunday, R Fleischmann Variety, 8:00 p.m. Thursday, R. Flying Red Horse Tavern, 8:00 p.m. Friday, C Gulf Headliners, 7:30 p.m. Sunday, C Hammerstein's Music Hall, 8:00 p.m. Monday, R Hollywood Hotel, 9:00 p.m. Friday, C Honywood Hotel, 9300 p.m. Friday, C Life Savers Rendezvous, 8300 p.m. Wednesday, B Magic Key of RCA, 2500 p.m. Sunday, B Manhattan Merry-Go-Round, 9300 p.m. Sunday, R March of Time, 10:30 p.m. dally, except Sat. and Maxwell House Show Boat, 9:00 p.m. Thursday, R Musical Footnotes, 1:30 p.m. Sunday, C National Amateur Night, 6:00 p.m. Sunday, C National Barn Dance, 9:30 and 11:00 p.m. Saturday, B N.T.G. and His Giris, 9:00 p.m. Tuesday, B Palmolive Beauty Box, 9:00 and 11:30 p.m. Friday, B Penthouse Serenade, 5:00 p.m. Sunday, R. Sinclair Ministrels, 9:00 p.m. Monday, B Swift Studio Party, 10:00 p.m. Tuesday, R Town Hall Tonight, 9:00 and 12:00 p.m. Wednesday, R Uncle Ezra, 7:15 p.m. Mon., Wed., Fri., R Voice of Firestone, 8:30 and 11:30 p.m. Monday, R

SINGERS

Countess Olga Albani, 9:00 and 12:00 p.m. Sunday. B Michael Bartlett, 7:00 and 11:30 p.m. Sunday, B Bernice Clair, 5:00 p.m. Sunday, C Buddy Clark, 7:15 p.m. Thursday, C Crumit-Sanderson, 5:30 p.m. Sunday, C Vivian Della Chiesa, 1:30 p.m. Sunday, C Jessica Dragonette, 8:00 p.m. Friday, R Jessica Dragonette, 8:00 p.m. Friday, B Ruth Etting, 8:30 p.m. Friday, B Jack Fulton, 5:00 p.m. Sunday, R Niela Goodelle, 9:45 p.m. Sunday, B Wendell Hall, 10:00 p.m. Tuesday, B Helen Jepson, 10:00 p.m. Thursday, R Frances Langford, 9:00 p.m. Friday, C Lazy Dan, 7:15 p.m. Friday, C Elizabeth Lennox, 8:30 p.m. Friday, C Nino Martini, 9:00 p.m. Saturday, C Mills Brothers, 10:30 p.m. Friday, R Lucy Monroe, 8:00 p.m. Tuesday, C Grace Moore, 9:30 p.m. Monday, R. Morin Sisters, 7:45 and 11:00 p.m. Sunday, R. Frank Munn, 8:00 p.m. Tuesday, C; 9:30 p.m. Sunday, and 9:00 p.m. Friday, R Frank Parker, 7:00 p.m. Saturday, C Pickens Sisters, 8:30 p.m. Monday, B Lily Pons, 9:00 p.m. Wednesday, C Dick Powell, 9:00 p.m. Friday, C Lanny Ross, 9:00 p.m. Thursday, R Vivienne Segal, 9:30 p.m. Sun, and 9:00 p.m. Fri., R Oscar Shaw, 8:30 p.m. Friday, C Singin' Sam, 7:30 and 11:15 p.m. Monday, C Smiling Ed McConnell, 6:30 p.m. Sunday, C Kate Smith, 7:30 p.m. Tues., Wed. and Thurs., C Conrad Thibault, 10:00 p.m. Wed.; 9:00 p.m. Thursday, R John Charles Thomas, 9:00 p.m. Wednesday, B Lawrence Tibbett, 8:30 p.m. Tuesday, C Benay Venuta, 6:15 p.m. Tuesday, C Virginia Verrill, 7:15 p.m. Monday, C

TALKS

Bob Becker's Dog Chats, 5:30 p.m. Sunday, B Boake Carter, 7:45 p.m. dally, except Sat. and Sun., C Rev. Chas. E. Coughlin, 4:00 p.m. Sunday Thornton Fisher, 7:00 p.m. Saturday, R Gabriel Heatter, 5:45 p.m. Sunday, B Ivory Stamp Ciub, 7:15 p.m. Mon., Wed. and Frl., B H. V. Kaltenborn, 6:00 p.m. Friday, C Robt. L. Ripley, 7:30 p.m. Sunday, B Lowell Thomas, 6:45 p.m. dally, except Sat. and Sun., B To Arms for Peace, 9:30 p.m. Thursday, C Trans-Atlantic Broadcast, 12:45 p.m. Sunday, C Voice of Experience, 6:45 and 11:30 p.m. Sunday, C Frederic William Wile, 6:00 p.m. Saturday, C Walter Winchell, 9:30 and 11:15 p.m. Sunday, B Alexander Woolleott, 7:00 p.m. Sunday, C Your English, 3:00 p.m. Sunday, B



This is the control room apparatus of WEAF at Bellmore, N. Y. At the left is the oscillograph on which a continuous moving picture of the station output may be observed.

In one month, the new interference department of the French Post Office carried out 3888 investigations and discovered no less than 13,465 pieces of machinery which were creating interference with broadcast reception.

THE MONTH'S CHANGES IN STATION DATA

NEW

| 950 | YNVA | Managua, Nic. |
|------|------|-------------------|
| 1210 | | Rochester, N. Y. |
| 1230 | YNOP | Managua, Nic. |
| 1270 | HRN | Tegucigalpa, Hond |
| 1275 | YNLF | Managua, Nic. |
| 1370 | WBNY | Buffalo, N. Y. |
| 1420 | KNET | Palestine, Texas |
| 1420 | KRLH | Midland, Texas |
| 1500 | KRNR | Roseburg, Ore. |
| | WHBB | Selma, Ala. |
| | | |

POWER

| | | FOWER |
|------|------|-------------------------------|
| 710 | KIRO | Seattle, Wash. 250 to 500 |
| 800 | HIX | Santo Domingo, D. R., 1000 to |
| 950 | CMBC | Havana, Cuba, 200 to 500 |
| 970 | WCFL | Chicago, Ill., 1500 to 5000 |
| 1010 | CHML | Hamilton, Ont., 50 to 100 |
| 1010 | CMJA | Camaguey, Cuba, 50 to 300 |
| 1120 | CMKM | Manzanillo, Cuba, 50 to 200 |

FREQUENCY

| | | I MEQUENO: |
|------|-------|----------------------------------|
| 800 | HIX | Santo Domingo, D. R., from 1270 |
| 1100 | KWKH | Shreveport, La., from 850 |
| 1210 | TGW | Guatemala City, from 565 |
| 1500 | CJIC | Sault Ste. Marie, Ont., from 890 |
| | | CALLS |
| 710 | KIRO | Seattle, Wash, from KPCB |
| 900 | WELI | New Haven, Conn. from WMF1 |
| 1200 | WCPO | Cincinnati, Ohio, from WFBE |
| 1310 | WEMP | Milwaukee, Wis., from WISC |
| | | RE-INSTATED |
| 1310 | XETB | Torreon, Coah. |
| | | NETWORKS |
| 850 | WWL | New Orleans, La., new CBS |
| 1240 | WXYZ | Detroit, Mich., new NBC (Blue) |
| 1270 | WASH | Grand Rapids, Mich., new NBC |
| 1270 | A,OOD | Grand Rapids, Mich., new NBC |
| | | DELETED |
| 1310 | WAML | Laurel, Miss. |
| 1410 | WRBX | Roanoke, Va. |
| | | |

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November DX Calendar

For a list of the frequency checks referred to, see the October DX calendar.

Sunday Mornings November 3

2:00-4:00 CHAB 1200 100 Moose Jaw (Frequency check listing—KLCN to KUOA) November 10

| | | 40461 | INCI ZV | |
|-----------|------|-------|----------|-----------------|
| 4:00-6:00 | XEMO | 865 | 2500 | Tijuana |
| | i | Noven | iber 17 | |
| 1:00-2:00 | YLZ | 583 | 15000 | Riga, Latvia |
| | | 1104 | 50000 | Madona, Latvia |
| | | 1258 | 10000 | Kuldiga, Latvia |
| 3:00-5:00 | WHAZ | 1300 | 500 | Troy |
| 5:00-7:00 | WTRC | 1310 | 50 | Elkhart |
| | Nove | mber | 3, 10, 1 | 7, 24 |
| All Night | KXL | 1420 | 100 | Portland |
| 1:00-1:30 | KFI | 640 | 50000 | Los Angeles |
| 1:00-3:00 | CMJA | 1010 | 50 | Camaguey |
| 1:00-5:00 | KIUP | 1370 | 100 | Ourango |
| 2:00-4:00 | XEWZ | 1150 | 100 | Mexico City |
| 2:30-4:00 | CKWX | 1010 | 100 | Vancouver |
| 3:00-4:30 | CKOV | 630 | 100 | Kelowna |
| | | | | |

Monday Mornings

3:00-4:00 CHWK 780 100 Chilliwack (Frequency checks—WSYB to KINY) November 18 1:41-1:49 CFCY 630 1000 Charlottetown

700

| | | Novem | ber 25 | | 3:15 on | KGGM | 1230 | 250 | Albuquerque |
|------------|----------|--------------|-------------|----------------------------|-------------------|----------|---------|----------|------------------|
| 2:30-4:00 | KADA | 1200 | 100 | Ada | 4:00-5:00 | WIL | 1200 | 100 | St. Louis |
| 2:30-1:00 | | | , 11, 1 | | 2100 0100 | | | . 13, 2 | 0 27 |
| 12:01-1:00 | WGES | 1360 | 500 | Chicago | | | | | |
| 12.01-1.00 | | | | | 1:30-2:00 | WKBB | 1500 | 100 | East Dubuque |
| | Tu | - | Mornin | ig s | | Thu | ırsday | Morni | ngs |
| | | Novem | | | | | Novem | | |
| 1:00-1:15 | | 1310 | 100 | Wilkes-Barre | | | | | A- EMONIN |
| (Freque | | | WPAX | | (Fre | quency o | necks- | -wsoc | to KNOW) |
| 2:15-2:45 | WTBO | 800 | 250 | Cumberland | | | Novem | ber 14 | |
| | | | | Q to KLS) | 2:15-2:30 | WLLH | 1370 | 100 | Lowell |
| 5:00-5:15 | WBNS | 1430 | 500 | Columbus | | | Novem | ber 21 | |
| (Free | quency c | hecks- | -WDNC | to KFBK) | 1:31-1:39 | CJKL | | 1000 | Kirkland Lake |
| | | Novem | ber 19 | | 2:00-2:09 | CFNB | 580 | 500 | Fredericton |
| 1:01-1:09 | CRCS | 950 | 100 | Chicoutimi | 2.00-2.00 | | Novem | L 20 | |
| 1:11-1:19 | CJCB | 1240 | 1000 | Sydney | | | 1170 | | Philadelphia |
| 1:21-1:29 | CHNS | 930 | 1000 | Helifax | 2:30-3:30 | WCAU | | 1000 | Clearwater |
| 1:30-2:30 | | 749 | 100000 | Marseilles | 5:10-6:0 0 | WFLA | 620 | 1000 | Clearwater |
| 1:31-1:39 | CHRC | 580 | 100 | Quebec | | F | iday N | forning | 15 |
| 1:41-1:49 | CFCY | 630 | 1000 | Charlottetown | | | Novem | | |
| 1:51-1:59 | CJLS | 1310 | 100 | Yarmouth | | | | | to WMBH) |
| 2:11-2:19 | CHSJ | 1120 | 500 | St. John | (Fre | equency | | | (O WINISH) |
| 2:21-2:29 | CKCW | 1370 | 100 | Moneton | | | Noven | | _ |
| 3:01-3:09 | CHNC | 1410 | 50 0 | New Carlisle | 2:15-2:45 | KPOF | 880 | 500 | Denver |
| 3:00-4:00 | WDAY | | 1000 | Fargo | | | Novem | ber 15 | |
| | CPX | 1230 | 10000 | La Paz, Bolivia | 3:30-4:30 | KIDW | 1420 | 100 | Lamar |
| | | Novem | ber 26 | | 0.00 1.00 | | Novem | her 29 | |
| 1:00-3:00 | OKB | | 32000 | Brno, Czecho. | 1:00-1:15 | WLLH | | 100 | Lowell |
| 1:00-3:00 | | | | | 1:00-1:15 | KPRC | | 1000 | Houston |
| | | | , 12, 1 | | 1:15-1:45 | HIGE | | 10000 | Genoa, Italy |
| 12:01-2:00 | CMHW | 810 | 100 | Clenfuegos | 2:15-2:30 | WCSH | | 1000 | Portland |
| | Wad | Inosday | Morn | ing s | 2,10-2.00 | Novett | sher 1. | 8, 15, | 22, 29 |
| | **** | | | | 12:01-2:00 | CFCN | | 10000 | Calgary |
| | TIPD O | | nber 6 | Duluth | 12.01-2.00 | 01 0 | 2000 | | |
| 1:00-1:30 | WEBC | 1400 | 1000 500 | Indianapolis | | Saf | urday | Morni | ngs |
| 2:00-4:10 | WIRE | | | to WTMV) | | | Nover | nber 2 | |
| | KVSO | 1210 | 100 | Ardmore | (Time | anoneu e | | | B to KGGM) |
| 5:50-6:10 | N V BO | | | | 4:00-6:00 | CMHX | | 500 | Cienfuegos, Cuba |
| | | | sber 20 | | 4:00-0:00 | CMIIA | | | 0.00140900, 0.00 |
| 1:00-1:09 | CRCS | 950 | 100 | Chlcoutimi | | ****** | | nber 9 | Springfield |
| 1:11-1:19 | CJCB | 1240 | 1000 | Sydney | 5:00-6:00 | WNBX | | | |
| 1:21-1:29 | CHNS | 930 | 1000 | Halifax | | | | iber 30 | |
| 1:31-1:39 | CHRC | 580 | 500 | Quebec Yarmouth | 4:00-6:00 | CMHX | | 500 | Cienfuegos, Cuba |
| 1:51-1:59 | CJLS | 1310 | 100 | | 5:15-5:45 | WALA | 1380 | 500 | Mobile |
| 2:00-2:09 | CFNB | 550 | 500 5000 | Fredericton Springfield | | Nove | mber 2 | , 9, 16, | 23, 30 |
| 2:00-2:30 | KWTO | 560 | 5000 500 | St. John | 12:01-1:00 | CMCO | 1110 | 250 | Havana |
| 2:11-2:19 | CHSK | 1120 1370 | 100 | Moneton | 12:30-1:00 | KDKA | 980 | 50000 | Pittsburgh |
| 2:21-2:29 | CKCW | 1310 | 100 | Ashland | 2:00-4:00 | KIUN | 1420 | 100 | Pecos |
| 2:30-3:00 | WCMI | 1410 | 500 | New Carlisle | 3:00-5:00 | XEAA | 920 | 200 | Mexicali |
| 3:01-3:09 | CHNC | 1410 | 300 | 110W Callible | 0.00 0.00 | | | | |
| | | | | | | | | | |

Short Wave Stations By Frequencies

1.510 megs. 198.56 m.

CJD, Campbell River, B. C. 300 W. Minister of Lands for B. C.

CJK, Knight Inlet, B. C. 100 W. Anglo British Columbia Packing Co., Ltd.

VAC, Cape Lazo, B. C. 50 W. Dominion Gov. Sun., 0610-0640; 1010-1040; 1710-1740. Other days 0500-1945.

VAF, Alert Bay, B. C. 50 watts. Dominion Gov. YDA8, Tandjongpriok, N. E. I. 500 W. N. V. Nederlandsch Indische-Radio Omroep Moatschapij, Konigsplein W. 5, Batavia-Centrum, Java, N. E. I. Daily, 0530-1100; 1745-1845; 2230-0130.

.530 megs. 195.96 m.

YD87, Soerabaja, N. E. I. 75 watts. Address, see YD88 above. Daily, 0530-1100; 1745-1845; 2230-0130.

1.540 megs. 194.69 m.

CJD, Campbell River, B. C. 300 watts. Minister of Lands for B. C.

VBY, Lunenburg, N. S. 100 watts. Lunenburg Sea Products, Ltd. (Station operated by Canadian Marconi) 1.550 megs. 193.43 m.

YDA4, Soekaboemi, N. E. I. 25 watts. For address and schedule see YDA8, 1.510 megs.

1.566 megs. 191.46 m.

WIED, Broadcast pickup. 50 watts. National Broadcasting Co., 30 Rockefoller Plaza, N. Y. City WIEX, Broadcast pickup. 50 watts. Address, see WIED above.

1.570 megs. 190.96 m

WPEQ, Baton Rouge, La. Police. YDB6, Malang, N. E. I. 100 watts. For address and schedule see YDA8, 1.510 megs.

1.574 megs. 190.48 m.

KGPY, Shreveport, La. Police.

1.580 megs. 189.76 m.

CJM, Borden, P. E. I. 100 watts. Works ships. Canadian National Railway.

1.585 megs. 189.16 m.

YDD3, Batavia (C), Java, N. E. I. 50 watts. N. V. Nederlandsch Indische Radio Omroep Moatschapij, Koningsplein West 5, Batavia-Centrum, Java, N. E. I. 0530-1100; 1745-1845: 2230-0130.

1.595 megs. 187.98 m. YDBS, Solo, N. E. I. 25 watts. For address and schedule see YDD3, 1.585 megs.

1.596 megs. 187.84 m.
CFC, Cub Lake, Sask. 100 watts. Dept. of Natural Resources, Govt. of the Province of Sask. CGQ, Lac la Ronge, Sask. 100 watts. Address, see CFC above.

CGV, Emma Lake, Sask. 100 watts. Address CFC above.

CZJ, Isle-a-la-Crosse, Sask. 100 watts. Address CFC VYP, Prince Albert, Sask. Address, CFC above. WPGG, Findlay, Ohio. 500 W. State of Ohio, Highway police.

WPGQ, Columbus, Ohio. 400 W.

WPHC, Massillen, Ohio. 400 W. State of Ohio, Dept. of Highways.

WPHK, Wilmington, Ohio.

1.666 megs. 186.69 m.

KGXW, Port Alexander, Alaska. Karl Hansen. KIGA, Broadcast pickup. 7.5 watts. KSTP, St. Paul Hotel, St. Paul, Minn.

KNED, Broadcast pickup. 50 watts. WBAP, Carter Publications, Ft. Worth, Tex.

WHER, Broadcast pickup. (KDKA) Grant Bldg., Pittsburgh.

WIEO, Broadcast pickup. 50 watts. NBC, 30 Rockefeller Plaza, N. Y. City.

WIEW, Broadcast pickup. National Broadcasting Co. WIEX, Broadcast pickup. National Broadcasting Co. WJER, Broadcast pickup. WTMJ, The Milwaukee Journal, 333 W. State St., Milwaukee, Wisc.

WMEF, Breadcast pickup. 150 W. National Broadcasting Co.

..... , Funter Bay Camp, Alaska.

1.610 megs., Springfield, III. Police. 186.22 m.

> 1.615 meas. 185.65 m.

YDB4, Tjepoe, N.E.I. 25 W. N. V. Nederlandsche Indische Radio Omroep Moatschapij, Keningsplein W. S., Batavia-Centrum, Java, Moatschapii. N.E.I. 0530-1100; 1745-1845; 2230-0130.

> 1.620 meas. 185.67 m.

CFD, Kenora, Ont. 150 W. Ontario Dept. of Lands and Forests.

CFJ, Red Lake, Ont. Address CFD above.

CFL, Tabouret, P. Q. 100 W. Laurentian Forest Protective Association, Ltd., 126 St. Peter St., Quebec, P. Q.

CFM, Manicouagan River Estuary, P. Q. 100 W. Address CFL above.

CZB, Bellevue, P. Q. 100 W. Address CFL above. CZY, Riviere du Chef, P. Q. 100 W. Address CFL above.

CZZ, St. Felecien, P. Q. 100 W. Address CFL above.

1,622 mens. 184.85 m.

KGXU, Port Armstrong, Alaska. Buchan c/o Heinen. KHP, Deep Cove, Alaska. (KIJV) Atlas Packing Co. KIED, Broadcast pickup. (KFWB, Warner Bros., Hollywood, Calif.)

KIEF, Broadcast pickup. (WIL, Melbourne Hotel, St. Louis, Mo.)

KIEL, Broadcast pickup. (KJR, Fishers Blend Station, Seattle, Wash.)

KIFI, Broadcast pickup. (WDGY, Dr. Young, 909 W. Broadway, Minneapolis, Minn.) KIIQ, Broadcast pickup. (KMTR Radio Corp.,

Hollywood).

KIJI, Port Conclusion, Alaska. Northwestern Herring Co.

KIJK, Washington Bay, Alaska. Storfold & Grondahl.

KIJO, Port Herbert, Alaska. P. H. Packing Co. KIJS, Newport Walter, Alaska. Chatham Strait Fish Co.

KIJV, Deep Cove, Alaska. 50 watts. (KHP) Atlas Packing Co.

KILU, Broadcast pickup. (KARK, N.S.L. Bidg., Little Rock, Ark.)

KIOG, Red Bluff, Alaska. 50 watts. Richmond

Fisheries Co. WIEH, Broadcast pickup. (WMCA, 1697 Broadway, N. Y. City)

WJEP, Broadcast pickup. 100 watts. (WHAM, Stromberg-Carlson, 100 Carlson Road, Rochester,

N. Y.) WKEM, Broadcast pickup. (WINS 110 E. 58th St., N. Y. City) (WINS, Hearst Radio,

WNEI, Broadcast pickup. (WFBM, Indianapolis Power & Light Co., 48 Monument Circle.

> 1.630 megs. 183.94 m.

WEY, Boston, Mass. Marine Fire Station. WKDT, Detroit, Mich. Marine Fire Station.

YDD2, Bandoeng, Java, N.E.I. 25 watts. N. V. Nederlandsche Indische Radio Omroep Moats-chappij, Tegallegah O. 23, Bandoeng. 0530-1100; 1745-1845; 2230-0130.

> 1.634 megs. 183.48 m.

WPHE, Marion County, Ind. 1 kW. Indiana State Police.

WPHS, Cuiver, Ind. 1 kW. Municipal police. WPHU, Jasper, Ind. 1 kW. State of Ind., Dept. of Safety.

WQFE, Seymour, Ind. 1 kW. State of Ind., Dept. of Pub. Safety.

W9XBU, Portable in Indiana. 50 watts. (Expired ??)....., Columbia City, Ind. 1 kW. State police. , Indianapolis, Ind. 100 watts. State police.

> 1.640 megs. 182.82 m.

YDA3, Buitenszorg, N.E.I. 25 watts. N. V. Neder-landsche Indische Radio Omroep Moats-chappij, Koningsplein W. 5, Batavia-Centrum, Java, N.E.I. 0530-1100; 1745-1845; 2230-0130.

> 1.642 megs. 182.59 m.

WRDS, E. Lansing, Mich. 1 kW. night; 5 kW. day. State police.

> 1.646 megs. 182.15 m.

WIEK, Broadcast pickup. Columbia Broadcasting System, 485 Madison Ave. at 52nd St., N. Y. City.

WIEL, Broadcast pickup. Address WIEK above. WLEB, Broadcast pickup. WOKO Inc., Hotel Ten Eyck, Albany, N. Y.

1.650 megs.

181.71 m.

VBY, Lunenburg, N. S. Works ships. Lunenburg Sea Products Ltd. Operated by Canadian Marconi.

> 1.658 megs. 180.83 m.

KSW, Berkeley, Calif. Municipal police. WPGC, 5. Schenectady, N. Y. 1 kW night; 5 kW day.

State police., Redwood Falls, Minn. 500 watts.

> 1.660 megs. 180.62 m.

YDB3, Djokja, N.E.I. 100 watts. N. V. Nederlandsch Indische Radio Omroep Moatschappij, Koningsplein W. S, Batavia-Centrum, Java. N.E.I. 0530-1100; 1745-1845; 2230-0130.

1.666 mens. 179.96 m. WMP, Framingham, Mass. 1 kW. State police. WPEL, W. Bridgeport, Mass. 1 kW. State police. WPEV, Portable in Mass. 50 watts. State police. WPEW, Northampton, Mass. 1 kW. State police., Nashville, Tenn. Municipal police. 1.668 megs. 179.75 m. CFC, Cub Lake, Sask. Dept. of Natural Resources, Govt. of the Province of Saskatchewan. CGQ, Lac la Ronge, Sask. Address CFC above. CGV, Emma Lake, Sask. Address CFC above. CZJ, Isle-a-la-Crosse, Sask. Address CFC above. VYP, Prince Albert, Sask. Address CFC above. 1.674 megs. 179.10 m. KGHK, Palo Alto, Calif. 20 watts. Municipal police. KGZT, Santa Cruz, Calif. 100 watts. KIUK, Jefferson City, Mo. State police WPSP, Harrisburg, Pa. 1 kW. State police. 1.682 megs. 178.25 m. KGHO, Des Moines, la. State of Iowa, Bureau of Investigation. KNFN, Waterloo, Iowa, 400 watts. Municipal police. KNFO, Storm Lake, Iowa. 400 watts. City of S. L. W8XA, Portable in Ohio. 50 watts. Dept. of Highways, Div. of State Highway Patrol. 1.698 megs. KNGG, Phoenix, Ariz. 1 kW. Arizona State Highway Dent. 1.706 megs. KGPC, St. Louis, Mo. City of S. L. WKDU, Cincinnati, Ohio. City of C. WPET, Lexington, Ky. City of L. 1.712 meas. CZG, Prince Rupert, B. C., 150 watts, B. C. Provincial police. KGHY, Whittier, Calif. 30 watts. City of W. KGJX, Pasadena, Calif. 400 watts. City of P. KGPJ, Beaumont, Tex. City of B. KGPL, Los Angeles, Calif. City of L. A. KGPQ, Honolulu, T. H. 100 watts. City and County of H. KGPR, Fort Worth, Tex. City of F. W. KGZB, Houston, Tex. City of H. KGZL, Shreveport, La. City of S. KGZQ, Waco, Texas. City of W. KGZY, San Bernardino, Calif. 50 watts. City of S. B. KNFJ, Pomona, Calif. 50 watts. City of P. KNGE, Cleburne, Tex. 50 watts. City of C. KNGL, Galveston, Tex. 50 watts. City of G. KVP, Dallas, Tex. 500 watts. City of D. VYR, Montreal, P. Q. 400 watts. Police calls in French and English. City of M. Police Dept. WPDB, Chicago, III. City of C. WPDC, Chicago, III. City of C. WPDD, Chicago, III. City of C. WPDU, Pittsburgh, Pa. City of P. WPED, Arlington, Mass. Town of A. WPEH, Somerville, Mass. City of S.
WPEI, E. Providence, R. I. E. Prov. Police Dept. WPEJ, Brookline, Mass. City of B. WPFA, Newton, Mass. City of N WPFN, Fairhaven, Mass. Address: City of New Bedford Police. WPGV, Boston, Mass. 500 watts. City of B. WPHG, Medford, Mass. 50 watts. City of M.

1.715 megs to 2.000 megs. 174.82 m. to 149.91 meters Amateur Band. Phones in following countries work between 1.875 and 2.000 megs. (149.91 m to 159.90 meters). Australia, Argentina, Canada

WQFL, Oak Park, III. City of O. P.

, Denton, Texas.

Ecuador, Estonia, Union of South Africa, United States of America. 162.95 m. 1.840 meas. YDJ4, Cheribon, N.E.I. Batavia Radio Vereeniging. 1.850 meas. 162 06 00 YDU5, Bandjermasin, Borneo, N.E.I. Owner: "Eureka." 1.860 meas. 161 19 m YDK6, Semarang, N.E.I. Radio Vereeniging Midden lava. 1.880 meat. 159.47 m. YDO9, Soerabala, N.E.I. Owner: Holvast. 1.900 megs. 157.80 m. YDG6, Batavia, N.E.I. Batavia Radio Vereeniging. 1.920 meas. 156.16 m. YDH9, Buitenzorg, N.E.I. Batavia Radio Vereeniging. 1.940 megs. 154.55 m. YDN2, Kediri, N.E.I. Owner: Goldberg. 1.960 mens. YDH8, Bandoeng, N.E.J. Owner: v. d. Heyden. 1.988 meas. 151.42 m. YDQ8, Soerabaja, N.E.I. Owner: Gazellehuis. 148 43 m 2.020 meas. KNED, Broadcast pickup. 50 watts. (WBAP, Blackstone Hotel, Ft. Worth, Texas) WIEO, Broadcast pickup. 50 watts. Rockefeller Plaza, N. Y. City. WMEF, Broadcast pickup. 150 watts. Address WIEO above. 2.050 megs. 146.25 m. W9XAK, Manhattan, Kans, Television, Mon., 1945-2030. Wed. 2100-2290. 2.060 meas. 145.54 m. KIFO, Broadcast pickup. 200 watts. (KMTR Radio Corp., KIIQ, Broadcast pickup. Hollywood) WJEP, Broadcast pickup. 100 watts. (WHAM. Stromberg-Carlson, Rochester, N. Y.) WNER, Broadcast pickup, 100 watts. WAIU, Deshler-Wallick Hotel, Columbus, Ohio. 2.070 meas. 144.84 m. ¥907, Soerabaja, N.E.I. Owner: v. Wingen. 143.45 m 2.090 meas. YDG5, Batavia, Java, N.E.I. Batavia Radio Vereenigina. 2.102 megs. 142.64 m. KSTP, St. Paul Hotel, KIGA, Broadcast pickup. S. P. Minn. KIGW, Broadcast pickup. KNED, Broadcast pickup. 50 watts. (WBAP, Black-stone Hotel, Ft. Worth, Texas) WHER, Broadcast pickup. (KDKA, Grant Bldg., Pittsburgh). WIEO, Broadcast pickup. 50 watts. Address WIEO,

47

2.020 megs.

2.020 meas.

WIEW, Broadcast pickup. Address WIEO, 2.020 megs. WIEX, Broadcast pickup. Address WIEO, 2.020 megs.

WJER, Broadcast pickup. WTMJ, The Journal Co.,

WMEF, Broadcast pickup. 150 watts. Address WIEO,

333 W. State St., Milwaukee, Wisc.

2.110 megs.

142,09 m.

W1XH, Beston, Mass.

YD12, Soekaboemi, N.E.I., Batavia Radio Vereenig-Ing.

2.150 meas.

139.45 m.

KFWB, Warner Bros., KIED, Broadcast pickup.

Hollywood, Calif. KIEF, Broadcast pickup. WIL, Melbourne Hotel, St. Louis, Mo.

KIEL, Broadcast pickup, KJR, Fishers Blend Station, Skinner Bldg., Seattle, Wash.

KIEO, Broadcast pickup. KFSD, U. S. Grant Hotel, San Diego, Calif.

KIFI, Broadcast pickup. WDGY, Dr. Young, 909 W Broadway, Minneapolis, Minn. KIFT, Broadcast pickup. KJBS, 1380 Bush St., San

Francisco, Calif.

KIIQ, Broadcast pickup. KMTR Radio Corp., 915 N. Formosa Ave., Hollywood, Calif.

KILB, Broadcast pickup. 50 watts. KWKH, Spring and Fannin Sts., Shreveport, La. KILU, Broadcast pickup. 5 watts. KARK, N.S.L.

Bldg., Little Rock, Ark. WIEG. Broadcast pickup. WMCA, 1697 Broadway,

N. Y. City. WKEM, Broadcast pickup. Hearst Radio, 110 E. 58th St., N. Y. C.

WLEZ, Broadcast pickup. WJAG, Norfolk Daily News, Norfolk, Nebr.

WNEI, Broadcast pickup. WFBM, I. Power & Light Co., 48 Monument Circle, Indianapolis, Ind.

2.190 meas.

136 90 m.

KIIH, Broadcast pickup. KFAB, Cornhusker Hotel, Lincoin, Nebr.

WIEK, Breadcast pickup. Columbia Breadcasting System, 485 Madison Ave. at 52nd St., New York City.

WIEL, Broadcast pickup. Address WIEK above.

2.212 megs.

VYZ, High Fails, P. Q. 50 watts. James McLaren Co., Ltd.

2.284 megs.

131.22 m. CFT. Leamington, Ont. 14 watts. Dept. of Public Works.

CFX, Pelee Island, Ont. 22 watts. Dept. of Public Works. CKB, Pictou, N. S. 15 watts. Dept. of Public Works.

CKO, Crane Island, P. Q. 15 watts. Dept. of Public Works.

CKP, Montmagny, P. Q. 15 watts. Dept. of Public Works.

CKU, Pictou Island, N. S. 15 watts, Dept. of Public Works

> 130.93 m. 2,298 meas.

CFV, Namu, B. C. 100 watts. British Columbia Packers, Ltd.

CFW, Bones Bay, B. C. 100 watts. Canadian Fishing Co., Ltd.

CJE, Ceepeecee, B. C. 10 watts. Canadian Packing Corp.

CJX, Margaret Bay, B. C. Canadian Fishing Co., Ltd. CZL, Humpback Bay, B. C. 100 watts. Chatham Sound Fishing & Packing Co., Ltd. VFJ, Hemaiko, B. C. 100 watts. Hemaiko Logging

Co., Ltd.

2.304 megs.

KBAI, Ketchikan, Alaska. Forestry. KMYA, Juneau, Alaska. Forestry.

> 2.358 meas. 127.58 m.

VBQ, Halifax, N. S. 25 watts. Works ships in harbor. YDE5. Dloklakarta, N. E. I. 25 watts. N. V. Neder-

landsche Indische Radio Omroep Moats-chappij, Koningsplein W. 5, Batavia-Centrum, Java. 0530-1100; 1745-1845; 2230-0130.

2 382 megs.

125.87 m.

KGHT, Brownsville, Tex. 25 watts. City of B. KGHV, Corpus Christi, Texas. 50 watts. City of C. C.

KNFE, Duluth, Minn. City of D. Police.
WPDN, Auburn, N. Y. Police.
WPEA, Syracuse, N. Y. City of S. Police.
WPFM, Birmingham, Ala. 400 watts. City of B. Police

WPGW, Mobile, Ala. 400 watts. City of M. Police., Green Bay, Wisc. , Hibbing, Minn.

2.385 meas.

125.71 m.

YDA2, Batavia (C), Java, N. E. I. 150 watts. N. V. Nederlandsche Indische Radio Omroep Moatschappij, Keningsplein W. 5, Batavia-Centrum, Java, N. E. I. 0530-1100; 1745-1845; 2230-0130-

2.390 megs.

125 45 m

WIED, Broadcast pickup. 50 watts. N. B. C., 36 Rockefeller Plaza, N. Y. City. WIEX, Broadcast pickup. 50 watts. Address WIED above.

2.396 megs.

125.14 m.

VYM, Winnipeg, Man. 600 watts. Board of Pelice Commissioners. Tests 15, 35 and 55 minutes past each hour.

2.406 megs.

124 61 m

124.20 m.

KGHZ, Little Rock, Ark. City of L. R. Pelice. KGPW, Salt Lake City, Utah. City of S. L. C. Police., Fert Smith, Ark.

2.414 megs.

KGHW, Centralia, Wash. 15 watts. City of C. Police. KGPA, Seattle, Wash. Seattle Police Dept. KGPF, Santa Fe, N. Mex. 25 watts. Police. KGPS, Bakersfield, Calif. City of B. Police.

KGZA, Fresno, Calif. 500 watts. City of F. Police. KGZM, El Paso, Texas. City of E. P. Police.

KGZN, Tacema, Wash. City of T. Police. KGZO, Santa Barbara, Calif. City of S. B. Police.

KGZV, Aberdeen, Wash. 150 watts. City of A. Police. KGZX, Albuquerque, N. Mex. City of A. Police. KNFA, Clovis, N. Mex. 50 watts. City of C. Police. KNFI, Mt. Vernon, Wash. 50 watts. Skagit County

Police.

KNFP, Everett, Wash. 50 watts. City of E. Police. KNGU, Yakima, Wash. 100 watts.

WCK, Detroit, Mich. D. City Police. WMO, Highland Park, Mich. City of H. P. Police. WPDA, Tulare, Calif. 150 watts.

WPDJ, Passaic, N. J. WPDX, Detroit, MIch. City of D. Police.

WPDY, Atlanta, Ga. City of A. Police. WPFH, Baltimore, Md. City of B. Police.

WPFI, Columbus, Ga. City of C. Pelice.
WPGH, Albany, N. Y. 300 watts. City of A. Pelice.
WPGJ, Utica, N. Y. 100 watts. City of U. Pelice.

WPGM, La Grange, Ga. 50 watts.

WQFB, Macon, Ga. 50 watts. WRDR, Grosse Pointe, Mich. Township of G. P.

....., Augusta, Ga.

....., Lodi, Calif. 50 watts., Oneonta, N. Y. 50 watts.

124.15 m.

YDE4, Soerabaja, N. E. I. 75 watts. N. V. Neder-landsche Indische Radio Omroep Moats-chappij, Keningsplein West 5, Batavia-Centrum, Java, N. E. I. 0530-1100; 1745-1845; 2230-0130.

2.416 megs.

124.09 m.

CJW, Saint John, N. B. 15 watts. Dept. of Public Safety. CZG, Prince Rupert, B. C. 150 watts. B. C. Provincial

2.422 meas.

123.79 m.

KGPE, Kansas City, Mo. City of K. C. Police.

KGPG, Vallejo, Calif. City of V. Police. KGZC, Topeka, Kans. City of T. Police.

KNFF, Leavenworth, Kans. 100 watts. City of L. KNGF, Sacramento, Calif. 500 watts.

KSW, Berkeley, Calif.

Police.

WMJ, Buffalo, N. Y. City of B. Police, 757 E. Perry St. WNFP, Niagara Falls, N. Y. 135 watts. City of N. F. WPDR, Rochester, N. Y. City of R. Police.

WPDW, Washington, D. C. Municipal Police.

WPFU, Portland, Me. City of P. Police. WPHB, Nashua, N. H. 50 watts. City of N. Police., Salina, Kans. 50 watts.

2.430 megs.

123.38 m.

KGHX, Santa Ana, Calif. 400 watts. Orange county Police.

KGPB, Minneapolis, Minn. 508 watts. City of M. KGZJ, Phoenix, Ariz. Municipal Police.

KNGP, Shreveport, La. 100 watts. WPDI, Columbus, Ohio. Franklin County Police. WPDM, Dayton, Chio. City of D. Police. WPDS, St. Paul, Minn. City of S. P. Police.

WPEK, New Orleans, La. 250 watts. City of N. O. Police.

WPFD, Highland Park, III.

WPFK, Hackensack, N. J. Bergen County Police Dept. WPGI, Portsmouth, Ohio. 50 watts. City of P. Police.

WPHO, Zanesville, Ohlo. 50 watts. WQFO, Lancaster, Ohie. 50 watts. City of L. Police., Prescott, Ariz.

2.442 megs.

122,77 m.

KGHU, Austin, Texas. 100 watts. City of A. Police. KGPP, Portland, Ore. City of P. Police. KGPX, Denver, Colo. City and County of D. Police. KGZH, Klamath Falls, Ore. City of K. F. Police. KGZR, Salem, Ore. 50 watts. City of S. Police. WMDZ, Indianapolis, Ind. Municipal Police. WPDE, Louisville, Ky. City of L. Police. WPDF, Flint, Mich. City of F. Police. WPDH, Richmond, Ind. City of R. Police. WPDL, Lansing, Mich. City of L. Police. WPEB, Grand Rapids, Mich. 500 watts. City of G. R. WPES, Saginaw, Mich. City of S. Police. WPEY, Saginaw, Mich. City of M. Pelice.
WPFC, Muskegon, Mich. City of M. Pelice.
WPFE, Reading, Pa. City of R. Police.
WPFG, Jacksonville, Fla. City of J. Police.
WPFT, Lakeland, Fla. 50 watts. City of L. Pelice.
WPFX, Palm Beach, Fla. 50 watts. City of P. B.
WPFY, Yonkers, N. Y. 400 watts. City of Y. Police. WPFZ, Miami, Fla. 100 watts. City of M. Police. WPGL, Binghamton, N. Y. 400 watts. City of B. WPGP, Muncie, Ind. 100 watts. City of M. Police. WPHM, Orlando, Fla. 50 watts. City of O. Police. WQFQ, Lafayette, Ind. 50 watts. City of Lafayette

....., Winter Haven, Fla. 2.450 megs. 122.38 m. KGHN, Hutchinson, Kans. 50 watts. City of H.

, Fargo, N. Dak., Wilkes-Barre, Pa.

KGPH, Oklahoma City, Okla. KGPO, Tulsa, Okla. City of Tulsa Police. KGPZ, Wichita, Kans. 250 watts. City of W. Police. KGZF, Chanute, Kans. 25 watts. City of C. Police. KGZP, Coffeyville, Kans. City of C. Police.

KNGK, Duncan, Okla. 50 watts. KNGM, Rapid City, S. Dak. 50 watts. City of R. C.

KNGO, Mobile in Airplane, Oklahema State Police. 50 watts.

KNGT, Muskogee, Okla. 50 watts.

WPDK, Milwaukee, Wisc. City of M. Police.
WPEE, Brooklyn, N. Y. City of New York Police.
WPEF, Bronx, N. Y. City of New York Police.
WPEG, New York, N. Y. City of N. Y. Police.
WPEP, Kensha, Wisc. 100 watts. City and County

of K. Police.

WPHF, Richmond, Va. 150 watts. City of R. Police. WQFG, Roanoke, Va. 100 watts.

WQFH, Lynchburg, Va. 50 watts. City of L. YDB2, Semarang, N. E. I. 150 watts. N. V. Neder-

landsche Indische Radio Omroep Moats-chappil, Koningsplein West 5, Batavia-Centrum, Java, N. E. I. 0530-2100; 1745-1845; 2230-0130

....., Ada, Oklahoma., Milwaukee, Wisc.

....., Petersburg, Va. 50 watts. City of P. Police.

2.452 megs.

122.27 m.

CGZ, Vancouver, B. C. 400 watts. Corp. of the City of V CJZ, Verdun, P. Q. 20 watts. City of V. Police.

121.58 m.

KGHS, Spokane, Wash. 100 watts. City of S. Police. KGZI, Wichita Falls, Tex. City of W. F. Police. KGZW, Lubbock, Texas. 150 watts. City of L. Police. KNFB, Idaho Falls, Ida. 500 watts. WPDG, Youngstown, Ohio. 250 watts. City of Y. WPDG, Akron, Ohio. 250 watts. City of A. Police. WPDV, Charlotte, N. C. City of C. Police. WPFS, Asheville, N. C. 200 watts. Buncombe County

Police. WPGD, Rockford, III. City of R. Police.

WPHD, Steubenville, Ohio. 100 watts. WRBH, Cleveland, Ohio. City of C. Police.

..... , Brownwood, Texas, 50 watts,

2.466 megs.

KGHP, Lawton, Okla. 50 watts. City of L. Police. KGOZ, Cedar Rapids, Iowa. 50 watts. City of C. R. KGPD, San Francisco, Calif. City and County of

S. F. Police. KGPI, Omaha, Nebr. City of O. Police.

KGPK, Sloux City, Iowa. City of S. C. Police. KGPM, San Jose, Calif.

KGPN, Davenport, Iowa, City of D. Police.

KGZG, Des Moines, Iowa. City of D. M. Police.

WPEC, Memphis, Tenn. City of M. Police. WPEM, Woonsocket, R. I. City of W. Police.

WPFV, Pawtucket, R. I. City of P. Police. WPFW, Bridgeport, Conn. 50 watts. Police.

WPGA, Bay City, Mich. City of B. C. Police.

WPGB, Port Huron, Mich. City of P. H. Police.

WPGK, Cranston, R. I. 50 watts. City of C. Police. WPGX, Worcester, Mass. 100 watts. City of W. Police.

WPHA, Fitchburg, Mass. 50 watts. City of F. Police. WPHN, Tampa, Fla. 100 watts. City of T. Police.

WPHP, Jackson, Mich. 50 watts. City of J. Pelice.

WQFA, New Haven, Conn. 100 watts., Clearwater, Fla. 50 watts. City of C. Police., Gainsville, Fla. 50 watts.

2.474 megs.

Police.

121.19 m.

KGHG, Las Vegas, Nev. 50 watts. KGHM, Reno, Nev. 50 watts. City of R. Police. KNFH, Garden City, Kans. 50 watts. City of G. C. KNGH, Dodge City, Kans. 50 watts.

WPDP, Philadelphia, Pa. City of P. Pelice.

WPFO, Knoxville, Tenn. City of K. Police. WPFQ, Swarthmore, Pa. Berough of S. Police. WPFS, Asheville, N. C. 200 watts. Buncombe County

WPGZ, Johnson City, Tenn. 50 watts. City of J. C. WPHY, Elizabethton, Tenn. 100 watts. Carter County, Police. WRDQ, Toledo, Ohio. 400 watts. City of T. Police.

120.80 m. 2.482 megs. KGZE, San Antonio, Tex. City of S. A. and State of Texas Police. WPGT, New Castle, Pa. 59 watts. City of N. C. Police. WPHZ, Oil City, Pa. 50 watts. City of O. C. Police., Monessen, Pa. 50 watts. , Sharon, Pa. 2.430 meas. KGHA, Snowplow No. A232, 19 watts. State of Wash. KGHB, Snowplow No. A227. 10 watts. State of Wash. KGHC, Portable in Washington. 10 watts. State of W. KGHD, Seattle, Wash. 59 watts. State of Wash. KGHE, Snoqualmie Pass, Wash. State of W., Highway & Police Dept. KGHQ, Chinook Pass, Wash. 10 watts. State of W., Highway & Police. KGHR, Pertable in Wash. 18 watts. State of Wash. KGZD, San Diego, Calif. City of S. D. Police. Two transmitters, one 50 watts and another, 100 watts. KGZU, Lincoln, Nebr. City of L. Police. KNFG, Olympia, Wash. 50 watts. State of W. Police. KNFK, Bellingham, Wash. 50 watts. State of Wash. KNFL, Shuksan Camp, Wash. 10 watts. State of Wash, Highways. KNFM, Compton, Calif. 25 watts. KNFR, Rotary Snow Plow. 19 watts. State of Wash., Highway and Pelice Dept. KNFS, Rotary Snow Plow. 10 watts. State of Wash., Highway and Police Dept. KNFU, Skykomish, Wash. 10 watts. State of W. KNFX, Ellenburg, Wash. 10 watts. Address KNFS above. KNFY, Bear River Camp, Wash. KNFZ, Hells Crossing Camp, Wash. 10 watts. KNGA, Satus Pass Camp, Wash. 10 watts. KNGB, Yakima, Wash. 50 watts. KNGC, Vancouver, Wash. 50 watts. KNGD, Walla Walla, Wash. 10 watts. KNGJ, El Centro, Calif. 50 watts. KNGN, Norfolk, Nebr. 25 watts. KNGQ, Wenatchee, Wash. 50 watts. Address KNFS. KNGR, Spokane, Wash. 50 watts. Address KNFS. WPDT, Kokomo, Ind. City of K. Police. WPDZ, Fort Wayne, Ind. City of F. W. Police.
WPFP, Clarksburg, W. Va. City of C. Police.
WPGN, South Bend, Ind. 100 watts. City of S. B. Police. WPGO, Huntington, N. Y. 25 watts. Town of H. Police. WPGS, Mineola, N. Y. County of Nassau Police. WPHI, Charleston, W. Va. 50 watts. City of C. Police.

WPHJ, Fairmont, W. Va. 100 watts. WPHQ, Parkersburg, W. Va. 50 watts. City of P. Police.

....., Ephrata, Wash. 10 watts. State of Wash., Highway & Police.

> 2.506 megs. 119.64 m.

KLH, San Rafael, Calif. Pacific Telephone & Telegraph Co. WOU, Marshfleld, Mass. Phones fishing vessels.

2.512 meas. 119.36 m.

KGM, Ketchikan, Alaska. Alaska Pacific Salmon Co. KLB, Port Althorp, Alaska. Address KGM above. KLC, Kake, Alaska. Address KGM above. KLE, Rose Inlet, Alaska. Address KGM.

SHIPS owned by Alaska Pacific Salmon Co. as follows: KGJK, Jeannette E.; KGNM, Doris E.; KGNX, Yes Bay; WDEM, Wm. T. Muir; WFFR, Frances E.; WIDL, Leonine; WIDM, Sally S.; WIDN, Virginia E.; WNFM, Alco.

> 2.522 megs. 118.88 m.

KOW, Edmonds, Wash. Pacific Telephone & Telegraph Co.

2.538 megs. 118.13 m.

KDH, Port Alexander, Alaska. Karl Hansen. KDK, Wrangell, Alaska. Works KIJB, KLA, KFF. KLD daily at 0130. Owner: A. R. Brueger.

KDV, Cordova (Eyak River), Alaska. Pioneer Sea Foods Co.

WNFG, M. S. Arb No. 3. Owner: A. R. Brueger.

2,550 megs.

117.58 m.

WMES, Lorain, Ohio. 500 watts. Public Coastal Station. Lorain County Radio Corp.

> 116.84 m. 2.566 megs.

KFF, Union Bay, Alaska, Works KDK, Nakat Packing Corp.

KHV, Nakeen, Alaska. Nakat Packing Corp.

KLA, Waterfall, Alaska. Works KDK. Address above. KLD, Hidden Inlet, Alaska. Works KDK. Address above.

KOU, Wilmington, Calif. Southern Calif. Telephone Co.

WLFP, M. S. "Alaskan". Works KDK.

A number of Motorships owned by the Nakat Packing Corp. work on this frequency.

115.76 m.

2.590 megs.

WOX, St. George, Staten Island, N. Y. Harbor phone. New York Telephone Co.

> 2.604 megs. 115.14 m.

KNIA, Glacier National Park, Montana. KNKS, Yosemite National Park, Calif.

KNKU, Yosemite National Park, Calif.

KNKX, Deer Camp, Yosemite, Calif. KNKY, Devil's Post Pile Nat'l, Monument, Calif.

WVD, Seattle, Wash. 500 watts. Alaskan Telephone Co., 517 Federal Office Bldg., Seattle.

WXH, Ketchikan, Alaska. Works WVD.

WYBF, Napoleon, Mo. 500 watts. United States

2.616 megs. 114.61 m.

KION, Tin City, Alaska. 200 watts. American Tin Fields, Inc.

> 2.632 mens. 113.91 m.

KGI, Nellie Juan, Alaska. (KIOD) Copper River Packing Co.

KGX, Port Wakefield, Alaska. (KIOC) Apex Fish Co. KIJW, Shearwater Bay, Alaska. Kadiak Fisheries Co. KIJX, Kadiak Island, Alaska. Kadiak Fisheries.

KIMA, Port Hobron, Alaska. American Pacific Whaling Co.

KIOC, Port Wakefield, Alaska. (KGX) Apex Fish Co. KIOD, Nellie Juan, Alaska. 50 watts. Phones Anchor-

age and ships. Copper River Packing Co. KIOH, Iron Creek (Raspberry Straits), Alaska.

watts. Southwestern Herring Co. KIOI, Akutan, Alaska. 50 watts. American Pacific Whaling Co.

...... Funter Bay Camp, Alaska.

2,670 megs. 112.29 m.

NMC, Point Bonita, Calif. 200 watts. United States Coast Guard.

NMD, Cleveland, Ohio. 200 watts.

NMF, Winthrop, Mass. 200 watts. U.S. Coast Guard.

NMG, Mobile, Ala. U. S. Coast Guard.

NMN, Cape Henry, Va. 200 watts. U. S. Coast Guard. NMP, Wilmette, Ill. 200 watts.

NMV, Fort Lauderdale, Fla. 200 watts. U. S. Coast Guard.

NMW, Grays Harbor, Wash. 200 watts. NMY, Rockaway Point, N. Y. 200 watts. U. S. Coast

Guard. NOB, Buffalo, N. Y. 200 watts. U. S. Coast Guard.

NOF, St. Petersburg, Fla. 200 watts. U. S. Coast Guard.

NOG, Gloucester, Mass. 50 watts. U. S. Coast Guard Base 7.

NOJ, San Pedro, Calif. 200 watts. U. S. Coast Guard Base 17.

NOM, Miami, Fla.

NOP, Woods Hole, Mass. 50 watts. U. S. Coast Guard, Section Base 18.

NOR, Sault Ste. Marie, Mich. 200 watts.

NOU, New London, Conn. 200 watts. U. S. Coast Guard

NOV, Cape May, N. J. 200 watts. U. S. Coast Guard.

NOY, Galveston, Texas. 200 watts.

NOZ, Port Townsend, Wash. 200 watts. ..., Yaquina Bay, Ore. U. S. C. G.

> 2.698 mens. 111.13 m.

NMD, Cleveland, Ohio. 200 watts.

NMP, Wilmette, III. 200 watts. NOB, Buffalo, N. Y. 200 watts. U. S. Coast Guard. NOR, Sault Ste. Marie, Mich. 200 watts.

, Arena Cove, Calif. Works NMC. U. S. C. G.

2.710 meas.

YDK5, Semarang, N. E. I. Radio Vereniging Midden-Java.

> 109.98 m. 2.726 meas.

KIIW, San Gabriel Dam No. 2, Calif. 200 watts. Los Angeles County Flood Control District. KIIX, Tulunga Dam No. 1. Calif. Address KIIW

above. KITY, Los Angeles, Calif. 400 watts. Address KIIW above.

KINT, Portable, Los Angeles County, Calif. 50 watts. Address above.

2.728 megs.

109.90 m.

110.63 m.

KIJY, Hood River, Ore. 100 watts. Special emergency station owned by Crag Rats, Inc., a mountain-climbing organization.

KIJZ, Portable in Oregon. See above.

2.738 meas. 109.50 m.

KLGK, M. S. La Merced. Alaska Southern Packing Co.

VGBQ, Yacht Seyelyn II. Capt. Paul F. Johnson.

WDDQ, "Zapora" Wills Navigation Co.
WDFL, "El Ferrito". Ben S. McGlashan, KGFJ,
1417 S. Figueroa, Los Angeles.

WIFI, S. S. Cadrew, in Seattle Harbor, Wash. Works ships in harbor. Owner, A. E. Griswold.

WLFJ, "Onawa". C. M. Poncin. WLFS, "Uganik". San Juan Fishing & Packing Co. WOFM, "Principia". L. A. Macomber.

2.750 meas.

YDL6, Djoklakarta, N. E. I. Owner: v. Wingen.

2.760 meas.

108.63 m.

KNED, Broadcast pickup. 50 watts. (WBAP) Blackstone Hotel, Ft. Worth, Texas.

WIEO, Broadcast pickup. 50 watts. N. B. C., 30 Rockefeller Plaza, N. Y. City.

WMEF, Broadcast pickup. 150 watts. Address WIEO

2.770 megs.

108.24 m.

YDO6, Soerabaja, N. E. I. Owner: Eureka.

2.790 megs.

107.48 m.

YDN3, Madioen, N. E. I. Owner: v. Wingen.

2.810 mens.

106.70 m.

YDQ6, Malang, N. E. I. Owner: v. Wingen.

2.830 megs.

105.94 m.

YDU4, Medan, Sumatra, N E. I. Owner: Avrom.

105.20 m. 2.850 mens.

YDG4, Batavia, Java, N. E. I. Owner: Lindeteves Stokvis.

> 2.870 megs. 104.47 m.

YDA6, Cheribon, N. E. I. 15 watts.

YDJ3. Tegal. N. E. I. Owner: v. Wingen.

2.890 megs. 103.74 m. YDJ2, Pekalongan, N. E. I. Owner: v. Wingen.

2.910 megs.

YDE3. Semarang, N. E. I. 15 watts. YDK3, Semarang, N. E. I. Owner: v. Wingen.

2.912 megs. 102 96 m KHW, Akutan, Alaska. American Pacific Whaling Co. KHZ, Port Hobron, Alaska. Address KHW.

> 2.930 meas. 102.33 m.

WMEP, Suffield, Ohio. 200 watts. WMEU, St. Petersburg, Fla. 400 watts.

WMEV, Opa Locka, Fla. (Goodyear Zeppelin Base). 400 watts

WDO5, Soerabaja, N. E. I. Owner: Goldberg.

2.950 megs.

101.63 m.

YDQ5, Malang, N. E. I. Owner: Vis.

2.980 megs. 100.61 m.

CZA, Drummondville, P. Q. 4 kW. Phones ships. Canadian Marconi Co., Box 1690, Montreal, P. Q.

> 2.986 meas. 100 A1 m

KDX, M. S. LeMerced (vessel moored in vicinity of False Pass, Alaska). 50 watts. Alaska Southern Packing Co.

KGQ, Todd, Alaska. Peril Straits Packing Co.

KIJP, Uganik, Alaska. Works KIJR, KIJU. Juan Fishing & Packing Co. San KIJR, Port San Juan, Alaska. Works KIJP, KIJU.

Address KIJP. KIJU, Todd, Alaska, Works KIJR, KIJP.

Straits Packing Co. WNFJ, M. S. Sunset. Alaska Southern Packing Co.

> 2.994 meas. 100.14 m

KDY, Pillar Bay, Alaska. Fidalge Island Packing Co. KIEJ, Poorman, Alaska. 50 watts. Owner: W. N. Growden.

KIIJ, Tanana, Alaska. Northern Commercial Co. KIIK, Circle, Alaska. 50 watts. Phones Fairbanks,

Anchorage, etc. Northern Commercial Co. KIIL, Fort Yukon, Alaska. 50 watts. Phones WXP Fairbanks, and WXE Anchorage. Northern

Commercial Co. KIIM, Hot Springs, Alaska. 50 watts. See KIIL above

KIIN, Eagle, Alaska. 50 watts. See KIIL above. KIIO, McGrath, Alaska. 50 watts. See KIIL above. KIJB, Cape Pole, Alaska. 50 watts. A. R. Brueger. KILY, Excursion Inlet, Alaska. 50 watts. Astoria &

Puget Sound Canning Co.

KNBZ, Pillar Bay. Alaska, (KDY) Address KDY above.

3.046 megs.

CFQ, Edmonton, Alta. Edmonton Journal, Ltd. CGE, Calgary, Alta. 100 watts. Calgary Herald Ltd., Southam Bldg.

CKS, Portable. 100 watts. Calgary Herald; see above. YDA, Tandjongpriek, N. E. I. 18 kW. N. V. Nederlandsche Indische Radio Omroep Moatschappil, Koningsplein West 5, Batavia-Cent-rum, Java, N. E. I. 0530-1100; 1745-1845; 2230-0130.

> 3.070 megs. 97.66 m.

CJU, Winnipeg, Man. Canadian Airways, Ltd.

(Western Lines), 60 Brock St., Winnipeg. 3.290 megs. 91.13 m. WKDL, Miami, Fla. (airway). YDD3, Soerabala, N. E. I. Owner: Radio Electric. WMDU, San Juan, Puerto Rico, (airway). 3.300 meas. 90.85 m. 3.093 meas. 96 94 89 CZV. Waterloo Mine, B. C. Waterloo Gold Mines, Ltd. KIAP, Rose Inlet, Alaska. 100 watts. YDG7, Batavia, Java, N. E. I. Owner: Pianohandel Alaska Pacific Salmon Co. Kok. KIAW, Port Althorp, Alaska. Address KIAP above KIAY, Ketchikan, Alaska. Address KIAP above. 3.310 meas. 98 58 80 KIBA, Kake, Alaska. Address KIAP above. YDH4, Bandoeng, Java, N. E. I. Owner: Luyks. 50 watts. KICI, View Cove, Dall Island, Alaska. Superior Portland Cement Co. 3.320 megs. 90.31 m. KIIP, Willow Creek Mines, Luckyshot, Alaska. watts. Phones Anchorage. Owner: W. E. YDM2, Tjopoe, N. E. I. Radio Vereeniging. Dunkle. KIKN, Eyak River, Alaska. 50 watts. Pioneer Sea 3.330 meas. Foods Co. YDV2, Bandjermasin, Borneo, N. E. 1. Owner: Eureka. 95.94 m 3.125 meas. SHIPS work between 3.125 and 3.147 megs. (95.27 89 77 m 3.340 megs. to 95.94 meters) CGD, Drummondville, P. Q. Private station of Canadian Marconi Co., P. O. Box 1690, A number of SHIPS are listed on 4.413 megs. and 4.430 megs. We do not know definitely Montreal, P. Q. which of these ships work also on 3.125-3,147 CGM, Drummondville, P. Q. Private CMC station. megs. Reports of actual reception from Address CGD above. listeners are invited. 3.350 meas. 89.50 m. 3.130 meas. 95.79 m. YDQ3, Malang, N. E. I. Owner: Lammerce. YDH6, Bandoeng, N. E. I. Owner: Prot. Kerk. 88.97 m 3.370 meas. 3.150 meas. 95 18 mm YDG3, Batavia, Java, N. E. I. Owner: Luyks. YDU2, Medan, Sumatra, N. E. I. Owner: Avrom. 95.12 m. 3.152 megs. 3.385 meas. 88 57 m. CGM, Montreal, P. Q. Canadian Marconi Co., Box KBAA, Portland, Ore. Forestry. 1690, M. Phones CGY. KBCA, Santa Barbara, Calif. KBCB, Santa Barbara, Calif. KBCG, Yreka, Calif. CGY, Yamachiche, P. Q. Phones CGM, Address CGM above. KBCH, Oakland, Calif. 3.155 megs. 95.03 m. KBCJ, San Francisco, Calif. Weather Bureau, 3.387 megs. 88 50 mm KGYA, Longmire, Wash. Forestry station. Address 3.170 megs. 94.58 m. Mr. R. D. Waterhouse, Mount Rainier YDO4, Soerabaja, N. E. I. Owner: Jarico. National Park, Longmire. KGYB, Longmire, Wash. Address KGYA above. 3.190 megs. 93.99 m. KGYC, Paradise, Wash. Address KGYA above. KGYD, Sunrise, Wash. Address KGYA above. KIIJ, Tanana, Alaska. Northern Commercial Co. KIIK, Circle, Alaska. 50 watts. Phones Fairbanks KGYE, White River, Wash. Address KGYA above. and Anchorage. Northern Commercial Co. KGYF, Carbon, Wash. Address KGYA above. KIIL, Fort Yukon, Alaska. 50 watts. See KIIK above. KGYG, Portable station of the Forestry Dept. of the KIIM, Hot Springs, Alaska. 50 watts. See KIIK KIIN, Eagle, Alaska. 50 watts. See KIIK above. State of Washington. KGYH, same as KGYG above. KIIO. McGrath, Alaska. 50 watts. See Klik above. KGYI, same as KGYG above. YDK2, Semarang, N. E. I. Owner: Wels. KNLS, Gobblers Knob, Mt. Ranier Nat'l. Park, Wash. KNLX, Shriners Peak, Mt. Ranier Nat'l. Park, Wash. 3.210 megs. 93.40 m. YDL5, Djokjakarta, N. E. I. Owner: Helant Muller. 3,390 megs. 88.44 m. YDQ2, Djember, N. E. J. Owner: v. Wingen. 3.230 megs. 92.82 m. YDQ4, Malang, N. E. I. Owner: Radinova. 3.410 meas. 87.92 m. 3.250 megs. 92.25 m. KNKG, Ash Mt., Sequoia Nat'l. Park, Calif. YDH5, Garoet, Java, N. E. I. Bandoeng Radio KNLO, Death Valley National Monument, Calif. KNLP, Wild Rose Canyon, Death Valley, Calif. Vereeniging. KNLQ, Trona, Death Valley, Calif. KNLR, Lone Pine, Death Valley, Calif. 3.265 megs. 91.83 m. KIBZ, Waterfall, Alaska. Nakat Packing Cerp. WRJ, Poe Reef Lighthouse, Mich. Dept. of Com-KICE, Nakeen, Alaska. Nakat Packing Corp. merce, Bureau of Lighthouses. KICG, Union Bay, Alaska. Nakat Packing Corp. WST, Dry Tortugas Lighthouse, Fla. Address WRJ KIDE, Hidden Inlet, Alaska. Nakat Packing Corp. above. KIKY, Saldovia, Alaska. 40 watts. Adam W. Lipke. WWAJ, Manitou Island Lighthouse, Mich. Address WRJ above. WWAL, Passage Island Lighthouse, Mich. Address 3.268 megs. 91.74 m. CGP, Prince Rupert, B. C. North-West Telephone Co., Cor. 2nd Ave. and Wylie St., Vancouver, WRJ above. WWAM, Rock of Ages Lighthouse, Mich. Address WRJ above. B. C. WWAO, Huron Island Lighthouse, Mich. Address WRJ above. 3.270 megs. 91.69 m.

WWE, Fourteen Foot Shoals Lighthouse, Mich. Address WRJ.

YDA7, Pekalongan, N. E. I. 15 watts. YDK4, Magelang, N. E. I. Owner: v. Wingen.

WWG, Chebovgan Range Lighthouse, Mich. Address East Radio Station." Announcements in Russian, Chinese, English. Never verifies; mailing address unknown. Daily, 0300-0900. WRJ above. WWH, Stannard Rock Lighthouse, Mich. Address WRJ above. WWHJ, Delaware Breakwater Station, Philadelphia 4.276 megs. 70.11 m. Pa. Address WRJ. WIR, Rocky Point, N. Y. 40 kW. Works Port-au-WWM, Marquette Lighthouse, Mich. Address same Prince, Santo Domingo. Address R. C. A., as WRJ above. Central Frequency Bureau, 66 Broad St., WWN, Detroit River Lighthouse, Mich. Address WRJ above. WWR, Detroit, Michigan. Address WRJ. Lighthouse station. 4.280 megs. 70.05 m IBEJ, S. S. Conte Rosso. Works IAC, WOO. WWZ, Key West, Fla. Lighthouse. Address WRJ IBGI, S. S. Conte Verde. Works IAC, WOD. above. IBLI, S. S. Conte di Savoia. Works IAC, WOD. YDL4, Djokjakarta, N. E. I. Owner: Vadera. ICEJ, S. S. Rex. Works IAC, WOO. 3.423 megs. 87.59 m. 4.283 meas. 70.00 m. WOZ, New York, N. Y. American Telej Telegraph Co., 32 Sixth Ave., NYC. American Telephone & HC2JSB, Guayaquil, Ecuador, Interval sig.: one stroke on gong, Daily exc. Monday, 2015-2315. 3.430 megs. 87.41 m. 4.295 meas. 69.81 m. YDO2, Soerabaja, N. E. I. Owner: Soekaradio. WTDV, St. Thomas, Virgin Islands. 250 watts. Mr. H. M. McKenzie. 87.03 m. WYDW, St. Croix, Virgin Islands. 250 watts. KBAM, Grants Pass, Ore. Forestry. WTDX, St. John. Virgin Islands. 250 watts. KBCD, North Fork, Calif. KBCE, North Fork, Callf. 4.320 mers KBCF, North Fork, Calif. DAF, Norden, Germany. Phones ships. Hauptfunk-3.450 megs. 86.90 m. stelle Norddeich, Norden-Land, Germany. YDL3, Solo, N. E. I. 4.320 megs. 69.40 m. 3.452 megs. 86.85 m. GDB (GGRX), Rugby, England. 15 kW. Engineer-in-Chief, GPO (Radio Section), Armour House, St. Martins Le Grand, London EC1. CJU, Winnipeg, Man. Canadian Airways Ltd. (Western Lines), 60 Brock St., Winnipeg. England. 3.470 megs. 86.40 m YDG2, Batavia, Java, N. E. I. Owner: Batavia Radio 4.348 megs. 68.92 m.
CGA9, Drummondville, P. Q. Canadian Marconi
Co., Box 1690, Montreal, P. Q. Vereeniging. 3.490 megs. 85.91 m. YDH3, Bandoeng, Java, N. E. I. Owner: de Kort. 4.355 meas. 68.84 m. 1AC, Coltano, Italy. 56 kW. Phones ships. Radio-marittimo Coltano Radio IAC, Piza, Italy. 85.83 m. W7XK, Seattle, Wash. 80 watts. Northern Radio Co., Kulien Bidg. 4.390 megs. 68.30 m. FNSK, S. S. Normandie. Works Paris. French Lines, AMATEURS WORK BETWEEN 3.500 and 4.000 megs. Pier 88. North River, Foot of W. 48th St., (74.96 to 85.66 meters). Phones between N. Y. C. 3.900 and 4.000 megs. 4.410 megs. 67.99 m. 3.750 megs. 79.95 m. FNSK, S. S. Normandie. Works WOD. Address 4390 CT1CT, Lisbon, Pertugal. 500 watts. "Radio Eddymeas. stone". Sr. Oscar G. Lomelino, Rua Gomez Freire 79, 2-D, Lisbon. Daily, 0900-1100. 67.94 m. 4.413 meas. All these ships work with WOO. The German ships 3.800 megs. 78.90 m. also work DAF; British ships with GBC: ZP11, Asuncion, Paraguay. DDBR, S. S. Berlin. North German Lloyd, Pier 42, North River. Foot of Morton St., N. Y. City. 4.000 megs. 74.96 m. DDCP, S. S. Cap Polonio. CT2AJ, Ponta Delgada, Azores. 50 watts. Mr. H. E. J. DDFF, S. S. Reliance. DDFT, S. S. Oceana. Smith, St. Michael, Ponta Delgada. Wed., Sat., 1700-1900. S. S. Albert Ballin. Hamburg American Lines, Pier 86, North River, W. 46th St., DHAO, S. S. Albert Ballin. 4.098 megs. 73.16 m. WND, Hialeah, Fla. 400 watts. Phones ZFS Nassau. N. Y. C. DHDL, S. S. Cap Arcona. DHEY, S. S. Deutschland. 4.178 megs. 71.76 # ... DHJZ, S. S. Hamburg. Address DHAO above. DHRL, S. S. New York. Address DHAO above. WOO, Ocean Gate, N. J. 20 kW. Phones ships. DHTY, S. S. Resolute. DOAH, S. S. Bremen, North German Lloyd, Pier American Telephone & Telegraph Co., Long Lines Dept., 32 Sixth Ave., N. Y. C. WOY, Lawrenceville, N. J. 20 kW. Address WOO 4, Foot of 58th St., Brooklyn, N. Y. DOA1, S. S. Europa. Address DOAH above. 4.253 megs. 70.50 m. DOBX, S. S. Columbus. Address DOAH above. WKF, Lawrenceville, N. J. A. T. & T. Address WOO FNSM, S. S. Paris. French Lines, Pler 57, Hudson River, New York City. above WOG, Ocean Gate, N. J. FTNQ. S. S. He de France. Address FNSM above. GBZW, S. S. Berengaria. International Marine Radio Co., Ltd., Connaught House, 63 Ald-wych, London WC2, England.

70.16 m.

4.273 megs.

RV15, Khabarovsk, US\$R (Siberia). 20 kW. "Far

GFWV, S. S. Majestic. Address GBZW above. 4.820 megs. 62.20 m. GLSQ, S. S. Olympic. Address GBZW above. GMBJ, S. S. Empress of Britain. GDW, Rugby, England. Phones N. Y. Engineer-in-Chief, GPO, (Radio Section), Armour House, GMJQ, S. S. Belgenland. Address GBZW above. St. Martins Le Grand, London EC1. 4.415 megs. 67.91 111. 61.95 m. 4.840 megs. GLRZ, S. S. Aquitania. Address GBZW, 4.413 megs. CZV, Waterloo Mines, B. C. Waterloo Gold Mines, Inc. 4.430 megs. 67.68 m. GBC, Rugby, England. Works ships. Address GDB, 4.865 megs. 61.63 m. 4.320 megs. CGT, Campbell River, B. C. North-West Telephone GDLJ, S. S. Homeric. Address GBZW, 4.413 megs. Co., Corner 2nd and Wylie St., Vancouver, VQJM, S. S. Monarch of Bermuda. VQJP, S. S. Queen of Bermuda. 4.875 mags. RKF, Moscow, USSR. 20 kW. 61.50 m. 4.465 megs. 67.14 m. CFA2, Drummondville, P. Q. Canadian Marconi Co., Box 1690, Montreal, P. Q. 60.27 m. 4.975 megs. GBC, Rugby, England. 5 kW. Phones ships. Address 4.470 megs. 67.07 m. GDW, 4.820 megs. YDB, Soerabaja, N. E. I. 1 kW. YID, Bagdad, Iraq. 4.988 megs. 60.11 m. WWAD, S. S. Violet, Works Lighthouses on Great 4.505 megs. 66.55 m. Lakes. CGO, Ocean Falls, B. C. North-West Telephone Co., Corner 2nd Ave. and Wylie St., Vancouver, 5.015 megs. 59.78 m. B. C. IS3, Bolling Field, Va. United States Army airport. CZO, Prince George, B. C. Address CGO above. CZP, Claydon Bay, B. C. Address CGO above. 5.025 meas. 59.67 m. ZFA, St. George (Hamilton) Bermuda. 1.5 kW. 4.512 megs. 66.44 m. Phones WOB nights. ZFS, Nassau, Bahamas. Works WNC Hialeah. Office of Supt. of Telegraphs, Central Bay St., 59.49 m. 5.040 megs. Nassau N. P., Bahamas. RIR, Tiflis, USSR. 4 kW. 4.535 megs. 66.11 m. 5.140 meas. 58.33 m. WDG, Rocky Point, N. Y. 40 kW. R. C. A., Central PMY, Bandoeng, N. E. I. 600 watts. Bandoeng Radio Frequency Bureau, 66 Broad St., N. Y. C. Vereeniging, Nillmy Bldg., Bandoeng. 0040-0240: 0640-0940. 4.540 megs. 66.04 m. WIR, Rocky Point, N. Y. 40 kW. Works Port-au-5.260 megs. 57.00 m. YDU3, Medan, Sumatra, N. E. I. Owner: Meyer. Prince, Santo Domingo. Address WDG. 4.535 megs. 5.263 megs. 56.96 m. WQN, Rocky Point, N. Y. Address WDG, 4.535 megs. 4.550 megs. 65.89 m. WDN (W2XBJ), Rocky Point, N. Y. Address WDG, 57.57 m. 5.300 meas. 4.535 megs. 2FO, Cat Cay, Bahamas. 50 watts. Address ZFS, 4.512 meas. 4.580 meas. 65.48 m. DJG, Zeesen, Germany. Reichs-Rundfunk-Gesell-5.375 megs. 55.78 m. schaft, Haus des Rundfunks, Masurenallee, RSB, Stalinsk, USSR. 2 kW. Berlin-Charlottenburg 9, Germany. 5.400 megs. 55.52 m. 4.600 megs. HAT, Szekesfehervar, Hungary. 6 kW. "Justice for HC2ET, Guayaquil, Ecuador. Interval sig.: 12 chimes. Hungary!" Announcements French, English, P. O. Box 249. Fri., Sat., 2130-2300. Hungarian by lady. Address: Magyar Kiralyi Postakiserleti Allomas, IX Kerulet Gyali Ut 4.610 megs. 65.04 m 22, Budapest, Hungary. KMYA, Juneau, Alaska. Forestry. HJA7, Cucuta, Colombia. Colombian Petroleum Corporation. 4.753 megs. 63.08 m. WOO, Ocean Gate, N. J. Phones ships. A. T. & T., 5.405 megs. 55.47 m. Long Lines Dept., 32 Sixth Ave., N. Y. C. WOY, Lawrenceville, N. J. 20 kW. Address WOO CGP, Prince Rupert, B. C. Address CGT, 4.865 megs. above. CZQ, Anyox, B. C. Address CGT, 4.865 megs. VXX, Sage Creek, B. C. Address CGT, 4.865 megs, 4.755 megs. 63.05 m. CFU, Rossland, B. C. Consolidated Mining & Smelt-5.415 megs. 55.37 m. IAF, Fiumicino, Italy. 5 kW. ina Co. 4.785 megs. 62.66 m. 5.440 megs. 55.11 m. CZA, Drummondville, P. Q. Phones ships. Canadian RSN, Sverdlovsk, USSR. 10 kW.

5.490 megs.

5.505 megs.

WQN, Rocky Point, N. Y. Address WDG, 4,535 megs.

ROI, Sverdlovsk, USSR. 15 kW.

54.61 m.

54.46 m.

Marconi, Box 1690, Montreal.

YDL2, Solo, N. E. I. Owner: Solosche Radio Vereenig-

4.810 megs.

YDE2, Solo, N. E. I. 100 watts.

ing.

5.540 megs.

54.11 m.

VXU. Regina, Sask. Dept. of Natural Resources, Govt. of the Province of Sask. VXV, Hudson Bay Junction, Sask. Address VXU

VXW. Portable. Address VXU above.

5.550 meas.

54.02 m.

I2RO, Rome, Italy. Ente Italiano per le Audizioni Radiofoniche, Via Montello 5, Rome.

5.660 megs.

CFD, Kenora, Ont. 150 watts. Ont. Dept. of Land⁵ and Forests.

CFJ, Red Lake, Ont. Address CFD above. CFU, Rossland, B. C. Consolidated Mining & Smelting Co. of Canada, Ltd.

5.710 meas.

52.51 m.

JDZ, Darien. Works JVU nazaki.

5.720 megs.

52.42 m.

YV10RSC, San Cristobal, Venezuela. "La Voz de Tachira." Jesus M. Diaz Gonzalez.

5.725 meas.

52.37 m. 12RO, Rome, Italy. Address EIAR, 5.550 megs.

5.730 meas.

52.32 m.

JVV, Nazaki, Japan. Works JIA, JIB, JIC at Taiwan. Address: Kokusai-Denwa Kaisha, Ltd., Osaka Bldg., Kojimachiku, Tokyo.

52.00 m

KZGF, Manila, P. I. Inter-Island phone, Philippine Long Distance Telephone Co.

5.780 megs.

CMB, Havana, Cuba, Cuba Transat/antic Radio Corp-OAX40, Lima, Peru. "Radio DUSA." Interval sig.: 2 cuckoos. "The Voice of Peru." Sign off: "A Perfect Day." All America Cables, Box 858. Wed., Sat., 2100-2330.

5.790 megs.

JVU, Nazaki, Japan. 10 kW. Works JZA-B-C. Address JVV, 5730 megs.

5.795 megs.

51.74 m.

KZGH, Boilo, P. I. (floito Island). Inter-Island phone. Phillippine Long Distance Tele. Co.

5.810 meas.

5.820 meas.

51.60 m.

YV7RMO, Maracaibo, Venez. "Radiodifusora Maracaibo."

5.815 megs.

51.56 m.

HCK, Quito, Ecuador.

51.52 m.

CEC, La Granja (Santiago) Chile. Compania Internacional de Radio, Casilla 16-D, Santiago de Chile.

TIGPH, San Jose, Costa Rica. "Alma Tica." 1900-2200.

5.825 megs.

51.47 m.

HJA2, Bogota, Colombia.

KZGG, Cebu, Isl. of Cebu, P. I. Inter-Island phone. Philippine Long Distance Telephone Co. WQN, Rocky Point, N. Y. R. C. A., Central Frequency

Bureau, 66 Broad St., New York City.

5.830 megs.

51.43 m.

CWD, Montevideo, (Cerrito), Uruguay. 1.5 kW. JZC, Shinkio (Kanjoshi) Manchukuo. 20 kW. Works JVI, JVO, JVU. Address: Manchukuo Telephone & Telegraph Co., Ltd.

5.845 megs.

51.30 m.

KRO, Kahuku, Oahu, T. H. (Off the air?) , Kahuku, T. H. To work GMBJ.

5.850 mons

51 25 mg

WOB, Lawrenceville, N. J. A. T. & T., Long Lines Dept., 32 Sixth Ave., N. Y. C.

YV5RMO, Maracaibo, Venezuela. "Ecos del Caribe." (member Gadena Indo-Americana.) One gong precedes station announcement. grams close with Blue Danube March. Address: Sr. Santiago M. Vegas, Apartado 214. Daily exc. Sun., 1130-1300; 1730-2130.

5.865 megs.

51.12 m.

HIIJ, San Pedro de Macoris, D. R. Daily 1780-2030.

5.875 meas.

51.03 m.

YV8RB, Barquisimeto, Venezuela, "La Voz de Lara.

5.890 megs.

50.90 m.

HJ2ABC, Cucuta, Colombia. 250 watts. "La Voz de Cucuta." Interval sig: chimes C-D-E-F-C. Address, J. Alejandro Sanchez. Week days. 1100-1200: 1830-2100.

JIC, Taihoku (Chureki) Taiwan. Works JVG, JVL. JVV.

5.900 megs.

50.82 m.

HJ4ABE, Medellin, Colombia. 1 kW. (relays HJ4ABK) La voz de Antioquia." Daily, 19 00-2300. Owner: Jose M. Acevedo F.

50.47 m.

TG2X, Guatemala City, Guat.

5.970 mags.

5.940 meas.

50.22 m.

HVJ, Vatican City. 10 kW. Interval sig: clock ticking for 19 minutes preceding xmission; bells of St. Peters at 3 o'clock. Announce-ment "Laudatur Jesus Christus". Talks as follows: Mon., Italian; Tues., English; Wed., Spanish; Thurs.. French; Fri.. German; Sat., Dutch; Sun., Latin. Address: Stazione Radio-Vatican, Pontificia Accademia Della Scienze, Roma-Castina Pio IV, Citta del Vaticano. Schedule: Sundays and holidays, 0500-0530. Daily, 1400-1415.

5.980 megs.

50.14 m.

HIX, Santo Domingo, D. R. Mr. J. R. Saladin, Director HIX. Tues., Fri., 2000-2200.

HJ2ABD, Bucaramanga, Colombia. 100 watts. Sr.

Hector McCormick.

XECW, Mexico City. D. F. 10 watts. "del Caballero Santokan." add: Calle del Bajio 120. Daily 2300-2400.

5.995 megs.

50.01 m.

RPT, Tashkent, USSR. 1 kW. WVD, Seattle, Wash. 500 watts. Phones Alaska. Alaskan Telephone Co., 517 Federal Office Bldg., Seattle.

5.996 meas.

50.00 m.

, "Radio-Tananarive," Tananarive, Madagascar. Theme song: Ramona. 500 watts. Administration des Postes des Telegraphes et des Telephones. Sun., 0230-0400; daily exc. Sun. and Mon., 0309-0345.

RV59, Moscow, USSR, 28 kW. Kremlin chimes at 4 p.m. EST. sign off: l'Internationale. Add: Inna Marr, Central Radio Committee, Petrovka 12, Moscow. (temporarily discontinued).

6.000 meas.

XEBT, Mexico City, D. F. 1 kW. Interval sig.: cuckee, rooster, bugle, auto horn, fire bell. Relays XEB. Add: El Buen Tono S. A., Apartado 79-44. Daily 1000 to 0115.

XGOX, Nanking, China (proposed). Administration of Central Broadcasting Stations, Central Executive Committee of Kuomintang, Nankina.

6.005 megs.

49.93 m.

49.97 m.

VE9DN, Drummondville, P. Q. Canadian Marconi Co., P. O. Box 1690, Montreal. VE9DR, Montreal, P. Q. Address VE9DN above.

> 6.096 megs. 49.92 m.

HJ1ABJ, Santa Marta, Colombia. 50 watts. Voz de Santa Marta." Member Cadena Indo-Americana. Sr. Julio A. Sanchez T.

> 6.010 megs. 49.89 m

COCO, Havana, Cuba. Add: P. O. Box 98. Daily, 0930-1300; 1600-1900. Saturday, 2330-0030, special program for all s.w. clubs (programa dedicado a los clubs de ondas cortas).

> 6.012 megs. 49.87 m.

HJ3ABH, Bogota, Colembia. 1.2 kW. "La Voz de la Victor." Member, Cadena Indo-Americana. Add: Manuel J. Gaitan, Almacenes Victor, Apartado 565. Sun., 1200-1400; 1600-2100. Other days, 1130-1400; 1800-2300.

> 6.020 meas. 49.80 m.

DJC, Zeesen, Germany. 8 kW. Programs close with 2 Anthems, the Nazi Hymn and Watch on Rhine. Programs preceded by a music box tune, "Ever be True and Honest." Add: Reichs-Rundfunk-Gesellschaft, Haus des Pundfunke Masurenallee, Berlin-Chardes Masurenallee, lottenburg 9.

> 6.030 megs. 49.72 m.

HP5B, Panama City, Panama. 100 watts. "Estacion Miramar". Address: Estacion Radiodifusora Miramar de la Radio Panama S. A., Apartado 910. Daily, 1900-2200.

VE9CA, Calgary, Alta. 100 watts (input). "The Voice of the Prairie." Add: Voice of P., Ltd., Calgary. Thurs., 0900-0200; Sun., 1200-2400; other days, 0900-2400.

> 49.64 m. 6.040 megs.

W1XAL, Boston, Mass. Address: Educational Director, University Club, Boston. Tues., Thurs., 1930-2130; Sun., 1700-1900.

W4XB, Miami, Fla. (transmitter on Collins Island). 2500 watts. Relays WIOD. Isle of Dreams

Broadcasting Co. Sun., 1130-1500; 1708-2400. Weekdays, 1208-1400; 1730-2400. YDA, Tandjongpriek, N. E. I. 10 kW. Key Statien, NIROM Network. N. V. Nederlandsche Indische Radio Omroep Moatschappij, Koningsplein West 5, Batavia-Centrum, Java, N. E. I. 0530-1100; 1745-1845; 2230-0130.

6.042 megs.

HJ1ABG, Barranguilla, Colombia. 150 watts. "Emic." Member, Cadena Indo-Interval sig: 4-note chime. sora Atlanticc." Americana. Address: Sr. Andres Jimeno, Apartado 445.

6.050 megs. 49.56 m. GSA, Daventry, England. 20 kW. "A for Aerial."
Interval sigs: Bow Bells and Big Ben. Sign off: God Save the King. British Broadcasting Corp., Broadcasting House, London W. 1, 6.060 meas. 49.48 m.

OXY, Skamleback, Denmark (Copenhagen). watts. Chimes at 6 p.m. EST. Add: Harold J. Rud, Press Secretary, Statsradiofonien, Heibergsgade 7, Copenhagen. Daily 1300-1830.

VQ7LO, Nairobi, Kenya Colony. Cable & Wireless Ltd. Box 777. Tues., 0300-0400; Mon., Wed., Fri., 0545-0615; Thurs., 0800-0900; Sat., 1100-1530; daily exc. Sat., 1100-1400.

W3XAU, Philadelphia (Newton Square) Pa. Relays WCAU, CBS. WCAU Building, 1622 Chestnut St. 2100-2300.

W8XAL, Cincinnati (Mason) Ohio. 10 kW. Relays NBC-WLW. Crosley Radio Corp., 1329 Arlington St. Daily exc. Sun., 0630-2000; NBC-WLW. Sun., 0800-2000; daily exc. Sat., 2300-0200; Sat., 2300-0300.

ZHI, Singapore, Straits Settlements. Technical Director, Radio Service Co. of Malaya, Broadcast House 2 and 4, Orchard Road. Sat., 2300-0130; Mon., Wed., Thurs., 0600-0830.

> 6.070 megs. 49.39 m.

IRA, Rome, Italy. Address EIAR, 5.550 megs. VE9CS, Vancouver, B. C. 2-10 watts. Radio Service Engineers Ltd., 734 Davie St. Daily 2000-2200.

6.072 megs.

OER2, Vienna, Austria. 1.5 kW. Oesterr. Radio-verkehrs A. G., Wien 1, Johannesgasse 4b. Sat., 0900-1800; Sun., silent; other days, 0900-1700.

CQN, Macau. 500 watts. Ann: Portuguese and English. Mon., Fri., 0300-0500.

6.080 megs.

CP5, La Paz, Bolivia. "Radio Illimani." Compania Radio Boliviana, Casilla 637. Daily, 2000-2100. DJM, Zeesen, Germany. Address, DJC, 6.020 megs. HJN, Bogota, Colombia. Sr. Luis Ramirez Arana,

Jefe del Servicio de Inalambricos, Ministerio de Correos y Telegrafos.

VE9EH, Charlottetown, P. E. I. 250 watts. Relays CFCY. Island Radio Broadcasting Co., Ltd.. 143 Great George St.

W9XAA, Chicago, III. 500 watts. Relays NBC-WCFL. Daily exc. Sun., 0930-1800; Sun., 1130-2100. Mr. Maynard Marguardt, Chicago Federation of Labor, 666 Lake Shore Drive.

ZHJ, Penang, Straits Settlements. 49 watts. Hon. Secy., Penang Wireless Society, 40 Perak Road. Daily exc. Sun., 0640-0840.

6.085 megs. 49.27 m. 12RO, Reme, Italy. Address EIAR, 5.550 megs.

> 6.090 megs. 49.23 m.

VE9BJ, St. John, N. B. 50 watts. C. A. Munro, Ltd.. Canterbury Street.

CRCX, Bowmanville, Ont. 200 watts. Canadian Radio Commission-CRCT. dress: R. R. No. 4. Daily 1830-2330.

> 6.100 megs. 49.15 m.

HJ4ABL, Manizales, Colombia. 150 watts. "L for Lady." "Ecos del Occidente." Chimes at midnight. Apartado 50. Sat., 2300-0100.

W3XAL, Bound Brook, N. J. 20 kW. National Broadcasting Co., 30 Rockefeller Plaza, N. Y. C. Relays NBC-WJZ. Mon., Wed., Sat., 1700-1800; Sun., 0009-0100.

W9XF, Chicago (Downers Grove), IIL. 5 kW. Relays NBC-WENR, N. B. C., Merchandise Mart, Chicago.

6,110 megs. 49.07 m. GSL, Daventry, England. "L for Liberty." Int. sigs:

Bow Bells and Big Ben. Sign off: God Save the King. Address GSA, 6.050 megs. Daily, 2200-2300.

HJ4ABB, Manizales, Colombia. 300 watts. "Radio Manizales." Sr. Ernesto Villegas.

VE9CG, Calgary, Alta. Calgary Herald, Ltd. VE9HX, Halifax, N. S. The Maritime Broadcasting Co., Box 998.

6.112 megs. 4

49.05 m.

VUC, Calcutta, India. Indian State Broadcasting Service, 1 Garstin Place.

YV2RC, Caracas, Venezuela. 1 kW. "Broadcasting Caracas." "La Habla a la Nacion." Apartado 2009. Sun., 0930-2230; weekdays, 1030-1330; 1600-2200.

6.115 megs. 49.03 m.

HJ1ABE, Cartagena, Colombia. 180 watts, "La Voz de los Laboratorios Fuentes." Address: Laboratorios Fuentes L., Apartado 31.

6.120 megs. 48.99 m.

W2XE, New York, N. Y. (Wayne, N. J.) 10 kW. Relays CBS-WABC. Columbia Broadcasting System, 485 Madison Ave. at 52nd St., N. Y. C. Daily, 1800-2300.

YDA5, Bandeeng, Java, N. E. I. 1.5 kW. N. V. Nederlandsch Indische Radio Omroep Moatshappil, Tegallegah 0.23, Eandoeng. 0530-1100; 1745-1845; 2230-0130.

6.122 megs. 48.97 m.

ZTJ, Johannesburg, Union of South Africa. 5 kW. African Broadcasting Co., Joubert St. P. O. Box 4559.

6,125 megs. 48.95 m.

ZGE, Kuala Lampur, Federated Malay States. 180 watts. Hon. Secy., the Malayan Amateur Radio Society, Mercantile Eank Bldg., K. L. Sun., Tues., Fri., 0640-0840.

6.130 meas. 48.91 m.

COCD, Vedado, Havana, Cuba. 350 watts. "La Voz del Aire." Int. sig.: 4 chimes. Relays CMCD. Address: Hotel Palace, Calle 25 y G. Vedado, Havana. Sun.. 1700-2300. Weekdays, 1100-2400.

LCL, Jeloy, Norway. Director General, Administration des Telegraphes du Royaume de Norvege, Oslo, Norway.

6.132 meas.

48.89 m.

CT1GO, Parede, Portugal. Sun., 1130-1300; Sun., Tues., Wed., Thurs., Fri., 1920-2030.

6.135 megs. 48.87 m.

RKK, Moscow, USSR. 20 kW.

6.140 megs. 48.83 m.

W8XK, Pittsburgh (Saxonburg), Pa. 40 kW. Relays NBC-KDKA. Westinghouse Electric & Manufacturing Co., Grant Bldg., Pittsburgh. Daily, 2100-0100.

6.145 megs. 48.79 m., Villejust, France, 120 kW. (Under constr.)

6.150 megs. 48.75 m.

CJRO, Winnipeg, Man. (Middlechurch). Relays CRC programs. James Richardson & Sons, Ltd., Royal Alexandria Hotel, Winnipeg. Daily, 2000-2400.

CO9GC, Santiago de Cuba. Relays CMKB. "Ask for Bacardi." Laboratorio Radio-electrico, Sres. Grau y Caminero, Apartado 137. Daily, 0930-1000; 1245-1330; 1530-1615. CSL, Lisbon, Portugal.

YV3RC, Caracas, Venezuela. "Radiodifusora Venezuela YV3RC en Caracas." Bajos Pasaje Ramella. 1700-2200.

6.170 megs. 48.60 m.

HJ2ABA, Tunja, Colombia. 50 watts. "Ecos de Boyaca." Member: Cadena Indo-Americana. Sr. Pompelio Sanchez.

6.200 megs. 48.36 m.

HJ3ABF, Bogota, Colombia. 50 watts. "La Voz de Bogota." Interval sig.: 6 chimes. Daily 1900-2300.

6.230 megs. 48.13 m.

HJ4ABC, Pereira, Colombia. 50 watts. "La Voz de Pereira." 0930-1100; 1900-2000.

OAX4G, Lima, Peru. Relays OAX4C. R. Grellaud y Cie. Daily, 1900-2100.

6.240 megs. 48.05 r

HI1A, Santiago de los Caballeros, D. R. "La Voz del Yaque." Daily 1930-2130; Sun., 0100.

6.300 megs. 47.59 m.

HJ1ABH, Cienaga, Colombia. 48 watts. Sergio Martinez Aparicio, Jr. Tues., Fri., 1945-2200.

6.315 megs. 47.48 m.

HIZ, Santo Domingo, D. R. 100 watts. Operator. Frank Hatton, Calle Duarte No. 68. Sat., 2300-0100; daily exc. Sun., 1700-1800.

6.330 megs. 47.36 m.

JZG, Nazaki, Japan. 10 kW. Works ships. Kokusai-Denwa Kaisha, Ltd., Osaka Bldg., Kojimachiku, Tokyo.

6.375 megs. 47.03 m.

YV4RC, Caracas, Venezuela. "La Florida." "Estacion S.A.R." Member: Cadena Indo-Americana. Address: Estacion SAR, Este 10, Bis No. 71, Caracas. Dally. 1630-2230.

6.385 megs. 46.94 m.

BC1, Chanute Field, Rantoul, III. Army airport. IS3, Bolling Field, Va. (Washington, D. C.) Army airport.

WO9, Mitchell Field, Mineola, Long Island. Army airport.

WTR, Albrook Field, Canal Zone. Army airport.

6,400 megs. 46.85 m.

YV9RC, Caracas, Venez. "Ondas Populares."

6.410 megs. 46.77 m.

TIPG (TI2PG), San Jose, Costa Rica. 1 kW. "La Voz de la Victor." Perry Girton, Apartado 224. Sun., 0600-0700; 1100-2230. Weekdays, 1100-1300; 1730-2230.

6.425 megs. 46.66 m.

CZG, Prince Rupert, B. C. B. C. Provincial Police-VE9AS, Fredericton, N. B. Address, C/e Electrical Engineering Dept., University of New Brunswick.

VK1, Selfridge Field, Mt. Clemens, Mich. Army airport.

W3XL, Bound Brook, N. J. 18 kW. NBC Control station and cue station for nearly all special "stunt" broadcasts. Address NBC, 38 Rockefeller Plaza, N. Y. Gity.

W9XF, Chicago, (Downers Grove) III. Address W9XF 6.100 megs.

W9XQ, same as W9XF above. W9XBS, same as W9XF above.

6.440 megs. 46.56 m. RTA, Novosibirsk, USSR. 15 kW.

6.445 megs. 46.52 m.

PD1, Maxwell Field, Montgomery, Ala. Army airport. PE2, Wright Field, Dayton, Ohio. Army airport.

> 6.447 megs. 46.50 m.

HJ1ABB, Barranquilla, Colombia. 300 watts. Voz de Barranquilla." Relays HJ1ABA. Address: Elias J. Pellet B., Apartado 715. Daily, 1700-2200.

> 6.450 megs. 46.48 m.

YN1GG, Managua, Nicaragua. "La Voz de los Lagos." Raul Gutierrez U. & Cie., Ltd. Daily, 1245-1430; 1900-2145.

> 6.490 megs. 46.20 m.

HJ5ABD, Cali, Colombia. "La Voz del Valle." Apartado 270. Thurs., Sat., Sun., 1900-2100.

6.500 megs.

HIL, Santo Domingo, D. R. Mr. J. C. Pellicer, Box 623. H14D, Santo Domingo, D. R. "La Voz de Quisqueya." 1300-1340; 1640-1940; daily exc. Sun.

6.520 megs.

YV6RV, Valencia, Carabobo, Venezuela. "La Voz de Carabobo." Sres. Hermann y Williams Degwitz.

> 6.550 mens. 45.76 m.

TIRCC, San Jose, Costa Rica. 500 watts. "Radioemisora Catolica Costaricense". Box 1064.

> 6.590 meas. 45.50 m.

ZEA, Salisbury, Southern Rhodesia. 500 watts. Works ZEB.

ZEB. Bulawayo, Southern Rhodesia. 500 watts. Works ZEA.

45.36 m. 6.610 megs.

CWE, Cerrito (Montevideo) Uruguay, 1.5 kW.

6.615 megs. 45.32 m. KIKL, Los Angeles, Calif.

WMEP, Suffield, Ohio. 400 watts. Airways. WMEQ, Wheeling, III. Airways.

WMEU, St. Petersburg, Fla. 400 watts. Airways.

WMEV, Opa Locka, Fla. (Goodyear Zeppelin Base). 400 watts.

> 6.618 megs. 45,31 m.

WVD, Seattle, Wash. Phones Alaska. Alaskan Tele-phone Co., 517 Federal Office Bidg.

6.620 megs. 45.29 m.

PRADO, Riobamba, Ecuador. "Estacion El Prado." Member: Cadena Indo-Americana. Apartado 98. Thurs., 2100-2330 and other nights irregularly.

> 6.645 meas. 45.12 m.

BF4, Kelly Field, San Antonio, Tex. Army airport. FG7, Langley Field, Va. Army airport. IS3, Bolling Field, Va. (Washington, D. C.) Army airport.

> 6.650 megs. 45.09 m.

HC2RL, Guayaquil, Ecuador. "Quinta Piedad." Address: Dr. Roberto Levi, Apartado 759. Tues., 2114-2314; Sun. 1745-1945.

IAC, Coltago, Italy. 14 kW. Works ships. Address IAC, 4.355 megs.

This frequency has been assigned to certain SHIPS but it is not known whether or not

voice is used. Reports from readers of actual VOICE reception are requested.

6.662 megs. 45.00 ms. WXH, Ketchikan, Alaska. Phones Seattle.

6.666 megs. 44.98 m. ZP10, Asuncion, Paraguay.

> 6.672 meas. 44.94 m.

YVQ, Maracay, (Santa Rita), Venezuela. Address: Estados Unidos de Venez., Servicio Radiotelegrafico.

> 6.675 megs. 44.91 m.

DGK, Nauen, Germany. Address: Reichspostzentralamt, Telegraphentechnisches Reichsamt, Schoneberger Strasse 11-15, Berlin-Tempelhof.

> 6.690 mens. 44.82 m.

CGA6, Drummondville, P. Q. Address VE9DN, 6.005 meas.

> 6.710 megs. 44.68 m.

TIEP, San Jose, Costa Rica. "La Voz del Tropico." Sr. Eduardo Pinto Hernandez, Apartado 257. Member: Cadena Indo-Americana. Daily, 1900-2200.

> 6.718 megs. 44.62 m.

KBK, Manila, P. I. 50 kW. Radio Corp. of the Philip-

pines, Plaza Moraga, Manila. WDB, Rocky Point, N. Y. Works Havana. Radio Corp. of A., Central Frequency Bureau, 66 Broad St., N. Y. City.

44.62 ms. 6.720 meas.

CFU, Rossland, B. C. Consolidated Mining & Smelting Co.

> 6.725 megs. 44 57 871

WQO, Rocky Point, N. Y. Address WDB, 6.718 megs.

6.735 meas. 44.53 m.

KEQ, Kahuku, Oahu, Hawaii. Works California.

6.750 megs. 44.42 m.

JVT, Nazaki, Japan. 20 kW. Works Dixon and broadcasts. Address JZG, 6.330 megs. ZBW, Hong Kong. 250 watts. Address: Betty Billings,

Secy., Hong Kong Broadcasting Committee, P. O. Box 200.

6.755 megs. 44.38 m.

WOA, Lawrenceville, N. J. A. T. & T., Long Lines Dept., 32 Sixth Ave., N. Y. City.

6.760 megs. 44.35 m. CJA6, Drummondville, P. Q. Address VE9DN, 6.005 megs.

6.790 megs. 44.16 m. GDB, Rugby, England. Address GDW, 4.820 megs.

> 6.800 megs. 44.09 m.

HIH, San Pedro de Macoris, D. R. "La Voz del Higuamo." 75 watts. Sr. Domingo Dom-inguez. Daily 1600-2030. Sunday, 0300-0400.

43.71 m. 6.860 megs.

KEL, Bolinas, Calif. RCA Communications, Inc. Pacific Division, 28 Geary St., San Francisco, Calif.

6.870 megs. 43.64 m. RKF, Moscow, USSR. 20 kW.

2 2 2 more 43 58 m CGA7, Drummondville, P. Q. Address VE9DN. 6.005 megs. RKF, Moscow, USSR. 20 kW.

6.900 megs. 43.45 m. RKF, Moscow, USSR, 20 kW.

6.905 megs. 43.42 m. GDS, Rugby, England. 15 kW. Phones N. Y. nights

Address GDW, 4.820 megs.

6.928 megs. 43.27 m. WEZ, Rocky Point, N. Y. Address WDB, 6.718 megs.

6.935 megs. 43.23 m. WEB, Rocky Point, N. Y. Works Paris. Address WDB, 6.718 megs,

6.950 megs. 43.13 m. WKP, Rocky Point, N. Y. Address WDB, 6.718 megs.

6.990 megs. 42.89 m. JVS, Nazaki, Japan. Works Shanghai. Address JZG, 6.330 megs.

7.000 megs. 7.300 m. 41.07 meters to 42.83 meters. Amateur Band. Foreign amateurs use phone in this band. USA, code only,

7.005 megs. 42.80 m. HB9H, Berne, Switzerland. Swiss Shortwave Association, 30 Neuengasse, Berne. First Monday

> 7.080 megs. 42.35 m.

each month, 1500-1615.

VP3MR, Georgetown, Br. Guiana. "The Voice of Guiana." Sun., 0745-1015; Mon., 1545-1645; Thurs., 1700-1845; Mon., Wed., Sat., 1845-1945.

7.090 megs. 42.29 m. HKE, Bogota, Colombia. 138 watts. Observatorio

Nacional de San Bartolome. 7.175 meas. 41.78 m.

CR6AA, Lobito, Portuguese West Africa. "Radio Eddystone." The Manica Trading Co., Ltd., Caixa Postal 118, Lobito.

> 7.220 megs. 41.53 m.

HAT2, Szekesferhervar, Hungary. 6. kW. "Justice for Hungary!" Announcements Hungarian. French, English by lady. Address: Magyar Kiralyi Postakiserleti Allomas, IX Kerulet Gyali Ut 22, Budapest.

7.225 megs. 41.50 m. RPK, Moscow, USSR. 20 kW.

7.260 megs. 41.30 m. RFF, Kharkov, USSR. 1 kW.

7.275 megs. 41.23 m.

RTZ, Irkutsk, USSR. 15 kW.

7.280 megs. 41.18 m. HJIABD, Cartagena, Colombia. 50 watts. "Ondas de la Heroica." Jzd. Villarreal, Director, Apartado 252. Daily, 1945-2115.

7.370 megs. 40.68 m.
WJN, Rocky Point, N. Y. Address WDB, 6.718 megs.

7.380 megs. 40.63 m. XECR, Mexico City, D. F. Announcements: Spanish, English. Address: Departamento Publicidad de la Secretario de Relaciones Exteriores. Sunday, 1800-1900.

7.390 meas. 49.57 m.

HJ3ABD, Bogota, Colombia. 50 watts. "Colombia Broadcasting." Apartado 509. Daily, 1930-2300.

JVR, Nazaki, Japan. Works Hongkong. Address JZG, 6.330 megs.

ZLR, Wellington, N. Z. 1 kW. Works VLJ. Address: Supt. of Post and Telegraphs, G. P. O.

7.400 megs.

WEM, Rocky Point, N. Y. Works London, Honolulu. Address WDB, 6.718 megs.

7.465 megs. 40.16 m.

HJP, Bogota, Colombia. Works Hialeah nights.

7.470 megs. 40 14 m.

JVQ, Nazaki, Japan. 10 kW. Works PLE, PLV. Address JZG. 6.330 meg.

39.92 m. 7.510 meas.

JVP, Nazaki, Japan. 20 kW. Works Europe. Address JZG, 6.330 meas.

> 7.520 meas. 39.87 m.

KDK, Kahuku, Oahu, Hawaii. Works Doxon. (?) KKH, Kahuku, Oahu, Hawaii. Works Dixon. RKI, Moscow, USSR. 20 kW. , Kahuku, Oahu, Hawaii. Works GMBJ.

> 7.550 megs. 39 71 m

CFQ, Edmonton, Alta. The E. Journal, Ltd. CGE, Calgary, Alta. The Calgary Herald, Southam Bldg.

CKS, Portable. Address CGE above.

39.63 m. 7.565 meas.

KWY (W6XN), Dixon, Calif. Address: Transpacific Communication Co., Ltd., 140 New Montgomery St., San Francisco.

> 39.58 m. 7.575 meas.

XGO, Shanghai, China. Chinese Govt. Radio Administration, Sassoon House, Jinkee Road.

> 7.610 megs. 39.40 m.

KWX (W6XN), Dixon, Calif. Address KWY, 7.565 meas.

7.626 megs. 39,32 m.

RIM. Tashkent, USSR, Works RKI, 20 kW.

7.680 megs. YBZ, Menado, Celebes, N. E. I. Works PNI, Macassar. Address: Mr. H. Van der Veen, Engineer-in-Post-Telegraaten Telefoondienst Bedrilf der Radiostations op Java, Bandoeng,

39.04 m.

7.685 meas. 39.01 en.

HJA3, Barranquilla, Colombia.

TIR, Cartago, Costa Rica. Address: Compania Radiografica Internacional de C. R., San Jose.

7.715 megs. KEE, Bolinas, Calif. Address KEL, 6.860 megs.

> 7.740 megs. 38.74 m.

CEC, La Granja (Santiago) Chile. Address CEC, 5.820 megs.

38.47 m. 7.797 megs. HBP, Prangins (Geneva) Switzerland. 20 kW. "Radio

Nations." Works USA and broadcasts. Programs consist of talks in English, French, Spanish. Address: M. G. Gallarati, Information Section, League of Nations. Geneva. Sat., 1730-1815.

8 464 mens 35.42 m. 7.820 megs. 38.34 m. DAF. Norden, Germany. Works ships. Address OCO, Lima (Valverde) Peru. Hauptfunkstelle Norddeich, Norden-Land. 38:29 m. 7.830 meas. 8.500 megs. 35.27 m. HC2JSB, Guayaquil, Ecuador. Interval sig.: one JZF, Nazaki, Japan. 10 kW. Works ships. Address conc. JZG, 6.330 megs. 38.05 m. 8.560 megs. 35.03 m. JYR, Kemikawa-Cho, Chiba-Ken, Japan. 5 kW. WOO, Ocean Gate, N. J. 20 kW. Works ships. Ameri-Experimental. can Telephone & Telegraph Co., Long Lines Dept., 32 Sixth Ave., N. Y. C. WOY. Lawrenceville, N. J. 20 kW. Address WOO 7.920 meas. 37.86 m. GCP, Rugby, England. Address GDW, 4.820 megs. above. 7 960 mens. 37 67 m 8.565 megs. 35.00 m. VLZ (VK2ME), Pennant Hills (Sydney), N. S. W., HAT3, Szekesfehervar, Hungary. 20 kW. "Justice for Australia. 3.5 kW. Address: Amalgamated Wireless (A/sia) Ltd., 47 York St., Sydney. Hungary!" Announce in Hungarian, French. English by lady. Address HAT2, 7,220 megs. XGL, Shanghia, China. Address: XGO, 7.575 megs. 8.575 megs. 7.968 megs. 37.63 m. YCP, Balikpapan, N. E. I. 3 kW, Address YBZ. 7.680 megs. HSP, Bangkok, Siam. 20 kW. Address Post and Telegraph Dept. 8.620 megs. 34.78 m. WVD, Seattle, Wash. Works Alaska at 2400. Alaskan Telephone Co., 517 Federal Office Bldg.. 7.980 meas. 37.57 m. VLZ (VK2ME), Pennant Hills (Sydney) Australia. Address VLZ, 7.960 megs. Seattle. 8.625 megs. 34.76 m. 37.38 m. 8 020 mens HC2CW, Guayaquil, Ecuador. "Ondas del Pacifico." HSJ, Bangkok, Siam. 20 kW. Address HSP. 7.968 megs. CO9JQ, Camaguey, Cuba. 150 watts. Rafael Grimany. 8.035 megs. 37.31 m1. Calle General Gomez No. 4. CNR, Rabat, Morocco. 12 kW. Phones Paris. Di-rection de l'Office des Postes, des Tele-8.680 megs. 34.54 m. GBC, Rugby, England. Works ships. Address GDW. graphes et des Telephones du Maroc, Rabat. 4.820 megs. 8.050 megs. 37.24 m. WXA. Juneau, Alaska. Works WVD at 2400. 8.690 megs. 34.50 m. VWZ, Kirkee, Poona, India. 10 kW. Works also on 37 15 m freqs. 8.691, 8.693, 8.700 megs. 8.070 megs. Phones IRF, Rome, Italy. Works N. Y. Societe Italo Radio, Servizi Radioelectrici, Via Calabria No. London. 8.708 megs. 34.43 m. 46-48, Roma 125, Italy. VWZ, Kirkee, Poona, India. 10 kW. Phones London. 37.04 m. 8.095 megs. 8.710 meos. 34 42 m VLK, Pennant Hills (Sydney) Australia. Address CEC. La Granja, (Santiago) Chile. 800 watts. Ad-VLZ. 7.960 megs. dress CEC. 5.820 megs. 36.92 m. 8.120 megs. KTP, Manila, P. I. Phones Dixon near 1000. Address KBK, 6.718 megs. 8.770 megs. 34.19 m. RSZ, Irkutsk, USSR. 15 kW. Tests with RNE. 8.775 megs. 8.180 megs. 36.65 m. PNI. Macassar, Celebes, N. E. I. 3 kW. Phones PSK, Rio de Janeiro (Marapicu) Brazil. Phones N. Y. and Buenos Aires. Companhia Radio Internacional do Brasil, Caixa Postal 709, Bandceng, Address YBZ, 7,680 megs. 34.11 m. 8.790 mens Rio de Janeiro. HJA3, Barranquilla, Colombia. 8.214 megs. 36.50 m. HCJB, Quito, Ecuador. 150 watts. "La Voz de los 8.810 megs. 34 03 m Andes." Interval sig.: 4 strokes on gong. Address Clarence W. Jones, Casilla 691, Quito. Sun., 1615-2245; Mon., silent; other FNSK, S. S. Normandie. Works Paris nights. French Lines, Pier 88, North River, Foot of W. 48th St., N. Y. C. days, 1915-2315. 8.830 megs. 33.95 m. 8.220 megs. SHIPS. For address of these ships refer to 4.413 megs., 4.415 megs. and 4.430 megs. All these ships work with WOO. The German ships ZSV, Walvis Bay, Union of South Africa. 1 kW. 8.225 megs. 36.45 m. work also DAF; British ships with GBC and RRD, Moscow, USSR. 20 kW. CZA; Furness-Bermuda ships with ZFA-B. DDBR, S. S. Berlin. 8.396 megs. 35.71 m. HSP, Bangkok, Siam. 20 kW. Address HSP, 7.968 DDCP, S. S. Cap Polonio. DDFF, S. S. Reliance. meas. DDFT, S. S. Oceana. DHAO, S. S. Albert Ballin.

DHDL, S. S. Cap Arcona. DHEY, S. S. Deutschland.

25.46 m.

8.455 mags. CWF, Montevideo (Cerrito) Uruguay. 1.5 kW.

DHJZ, S. S. Hamburg. DHRL, S. S. New York. DHTY, S. S. Resolute. DOAH, S. S. Bremen.

DOAI, S. S. Europa. DOBX, S. S. Columbus.

FNSK, S. S. Normandie. Works WOO nights. Address 8.810 megs.

FNSM, S. S. Paris. FTNQ, S. S. Ile de France. GBZW, S. S. Berengaria.

GDLJ, S. S. Homeric. GFWV, S. S. Majestic.

GLRZ, S. S. Aquitania.

GLSQ, S. S. Olympic. GMBJ, S. S. Empress of Britain.

GMJQ, S. S. Belgenland.

VQJM, S. S. Monarch of Bermuda.

VQJP, S. S. Queen of Bermuda.

8.900 megs. 33.69 m. ZLS, Wellington, N. Z. Address Supt. of Post and Telegraphs, GPO.

> 8.930 megs. 33.57 m.

WAD, Rocky Point, N. Y. R. C. A., Central Frequency Bureau, 66 Broad St., N. Y. City. WEC, Rocky Point, N. Y. Address WAD above.

33,54 m. 8.940 meas. KZGG, Cebu, Island of Cebu, P. I. Inter-Island phone. Philippine Long Distance Telephone

Co. WKL, Rocky Point, N. Y. Address WAD, 8.930 megs.

8.950 megs. 33.50 m. WEL, Rocky Point, N. Y. Address WAD. 8.930 megs.

33.41 m. 8.975 megs.

VWY, Kirkee, Poona, India. Phones London.

9.010 megs. KEJ, Bolinas, Calif. 20-40 kW. Address KEL, 6.860 meas.

33.24 m. 9.020 megs. 33.24 m. GCS, Rugby, England. 15 kW. Phones N. Y. night.

33.13 m. 9.050 megs.

TFK, Reykjavik, Iceland. 8.5 kW.

9.120 megs. 32.88 m. CP6, La Paz, Bolivia. "Illimani Radio." Compania Radio Boliviana, Casilla 637.

> 32.86 m. 9.125 megs.

HAT4, Szekesfehervar, Hungary. 20 kW. "Justice for Hungary!" Announce in Hungarian, French, England by lady. Address HAT2, 7.220 megs.

32,70 m. 9.168 megs. Address YVR, Santa Rita, Maracay, Venezuela.

YVQ, 6.672 megs. 9,170 megs. 32.70 m.

KZGF, Manila, P. I. Inter-Island phone. WNA, Lawrenceville, N. J. Works London. A. T. & T., Long Lines Dept., 32 Sixth Ave., N. Y. City.

> 32.31 m. 9.280 megs.

GCB, Rugby, England. 15 kW. Phones Canada. Address Engineer-in-Chief, G.P.O. (Radio Section), Armour House, St. Martins le Grand, London EC1.

9.332 megs. 32.13 m. CGA4, Drummondville, P. Q. Phones London. Address VE9DN, 6.005 megs. 9,415 megs. 31.84 m.

PLV, Bandoeng, Java, N. E. I. 80 kW. Works Dixon and JVB, JVE, JVQ. Address Mr. H. Van der Veen, Post-Telegraafen Telefoondienst, Bedrilf der Radiostations op Java, Bandoeng.

> 31.80 m. 9,428 megs.

COCH, Vedado, Havana, Cuba. Slogan: "Cuba, the Evergreen Land." Address: No. 2, B. Street. Daily 1000-1200; 1600-1800; 2100-2200; Relays CMCY Sunday, 1000-1100.

> 9.448 megs. 31.74 m.

WES, Rocky Point, N. Y. Address WAD, 8.930 megs.

9.450 megs. 31.73 m.

TG1X, Guatemala City, Guat. 200 watts. Ministerio de Fomento.

> 9.460 megs. 31.69 m.

WKJ, New Brunswick, N. J. Address WNA, 9.170 megs. 31.66 m.

9,470 megs. 31.66 m. WET, Rocky Point, N. Y. Works Buenos Aires, Caracas. Address WAD, 8.930 megs.

> 9.490 meas. 31.59 m.

KZGH, Iloilo, P. I. Inter-Island phone. Philippine Long Distance Telephone Co.

OXY, Copenhagen, Denmark. Not used at present. SR1, Poznan, Poland. 1 kW. Tues., 1300-1500; Wed., 0800-0900. Radio Pozanski, Plac Wolnosce 11, Rozglosnia, Poznan. (This station is probably off the air).

9.500 megs. 31.56 m. XGOX, Nanking, China. See 6.000 megs.

> 31.55 m. 9.503 megs.

VK3ME, Melbourne, Victoria, Australia (Braybank). 5 kW. Amalgamated Wireless (A/sia) Ltd., Box No. 1272L, Elizabeth St. P. O., Mel-bourne. Wed., Thurs., Fri., Sat., 0500-0700.

> 31.54 m. 9.505 megs.

PRF5, Rio de Janeiro, Brazil. "Radio Journal." Program consists of talks in Portuguese, Spanish, English and sometimes French, German. Address: Director of the Imprensa Nacional. Daily, 1730-1815.

> 31.53 m. 9.510 megs.

GSB, Daventry, England. 20 kW. "B for Broadcasting." Interval sig.: Bow Bells and Big Ben. Sign off: God Save the King. Address GSA, 6.050 megs. Daily, 0115-0315; 1215-1500: 1515-1645.

> 31.49 m. 9.520 megs.

XEDQ, Guadalajara, Jal. Relays XED. Guadalajara, Jal. Relays XED. Address Cia. Radiofonografica, Apartado 197. Daily, 0800-0900: 1200-2400.

> 9.530 megs. 31.46 m.

W2XAF, Schenectady, N. Y. 40 kW. Relays NBC-WGY. The General Electric Co., Schenectady. "The Voice of Electricity". Programs commence with electrical discharge of Programs 10,000,000 Volts (man-made lightning). Sun., 1615-2400; Thurs., 1700-2300; other days. 1730-230B.

> 31.43 m. 9.540 megs.

DJN, Zeesen, Germany. 8 kW. Programs close with Nazi Hymn and Watch on the Rhine. Pro-grams preceded by a music box tune, "Ever be True and Honest," Address DJC, 8,020 meos.

LKJ1, Jeloy, Norway. 500 watts. Address LCL, 6.130 megs. Daily, 0500-0800.

9.555 megs. 31.38 m. VE9DN, Drummondville, P. Q. Canadian Marconi Co., Box 1690, Montreal, P. Q.

9.560 megs. 31.36 m. DJA, Zeesen, Germany. For details see DJN,

9.540 megs.

9.565 megs. 31.35 m.
VUB, Bombay, India. Indian State Broadcasting Service, Irwin House, Sprotts Road, Ballard Estate, Bombay. Sun., 0700-0900 approxi-

> 9.570 mens. 31.33 m.

W1XK, Millis (Boston), Mass. 10 kW. Relays WBZ-WBZA, NBC programs. "These are the New England Westinghouse stations WBZ, WBZA, Address: Westinghouse Radio WIXK." Stations of New England, Hotel Bradford. Sunday, 0800-0100; other days, 0700-0100.

W&XK, Pittsburgh (Saxonburg), Pa. This frequency loaned to W1XK.

9.575 megs. 31.31 m.
VUC, Calcutta, India, Refer to VUC, 6.112 megs.

9.580 megs. 31.30 m.

GSC, Daventry, England. 20 kW. "C for Corperation." For other details see GSB, 9.510 megs. Daily, 1860-2000; 2200-2300.

VE9DR, Montreal, P. Q. Address VE9DN, 9.555 megs. VK3LR, Melbourne, Australia. Research Section. P. M. G. Dept., 61 Little Collins St., C1, Melbourne. Daily, 0400-0890. XGBD, Shanghal, China. 18.5 kW. (Existence

doubtful).

31.28 m. 9.585 meas.

VK2ME, Sydney (Pennant Hills), Australia. 12 kW.
"The Voice of Australia." Laughing notes of the kookaburra, the Laughing Jackass, various times during program. Sign off: God Save the King. Address: Amalgamated Wireless (A/sla) Ltd., 47 York St., Sydney. Sundays, 0100-0300; 0500-1100. , Villejust, France. 120 kW. (Under con-

struction).

9.590 megs. 31.26 m.

HP5J, Panama City, Panama. 1 kW. "La Voz de Panama." Manuel Diaz Doce, Apartado 867. Daily, 1145-1300; 1930-2200.

W3XAU, Philadelphia (Newton Square), Pa. Relays CBS-WCAU. 750 watts. Address W3XAU, 6.660 megs. Daily, 1200-2009.

> 31.25 m. 9.595 megs.

HBL, Prangins (Geneva), Switzerland. 18 kW. "Radie Nations." Werks USA and broadcasts. Programs consist of talks in English, French, Spanish. Address HBP, 7.797 megs. Sat., 1730-1815.

> 9.600 meas. 31.23 m.

CT1AA, Lisbon, Portugal. 2 kW. "Radio Colonial." Interval sig.: 3 cuckoos. Address: Senhor Abilio Nunes dos Santes, Jr., Av. Antonio d'Aguiar 144. Tues., Thurs., Sat., 1630-1900. LQA, Buenos Aires, Argentina. Compania Inter-nacional de Radio, Defensa 143, B. A.

31.20 m. 9,609 megs. DGU, Nauen, Germany. Phones Egypt irreg. Address DGK, 6.675 megs.

9.630 meas. 31.13 m.

I2RO, Rome, Italy. Address Ente Italiano Audizioni Radiofoniche, Via Montello 5, Rome. American Hour broadcast Mon., Wed., Fri., 1800-

> 9.710 megs. 30.88 m.

GCA, Rugby, England. 15 kW. Phones N. Y. and Buenos Aires. Address GCB, 9.280 megs.

9.750 megs.

RKF, Moscow, USSR. 20 kW.

VLJ. Sydney (Pennant Hills), Australia. 3.5 kW. Phones Bandoeng, Address VK2ME, 9.585 meas.

WOF, Lawrenceville, N. J. Address WNA, 9,170 megs.

9.790 megs.

GCW, Rugby, England. 15 kW. Phones N. Y. evenings. Address GCB, 9.280 megs.

9.840 meas.

JYS, Kemikawa-Cho, Chiba-Ken, Japan. Experimental. 10 kW.

> 9.862 meas. 30.40 m.

EAQ, Madrid (AranJuez), Spain. 20 kW. "La Voz de Espana." Transradio Espanola, S. A., Departamento de Radiodifusion Ibero-Americana, Apartado 951. Programs close with National Hymn, "Himno de Riego." Daily, 1730-1900: Sat., 1200-1400.

> 9.870 megs. 30.38 m.

WON, Lawrenceville, N. J. 20 kW. Works London. Add.: WNA, 9.170.

9.890 megs. 30.32 m.

LSN2, Buenos Aires (Hurlingham), Argentina. Address LQA, 9.600 megs.

> 9.895 meas. 30.30 m.

LSN, Buenos Aires (Hurlingham), Argentina. Works N. Y. Address LQA, 9.600 megs.

> 9.920 meas. 30.22 m.

JDY, Darien. Works JVU, Nazaki.

9.930 megs. 30.19 m.

HJY, Bogota, Colombia. Phones CEC, OCI evenings.

9,950 meas. 30.13 m.

GCU, Rugby, England. 15 kW. Werks N. Y. nights. Address GCB, 9.280 megs.

> 9.990 megs. 30.01 m.

KAZ, Manifa, P. I. 40 kW. Works Dixon. Radio Corp. of the Philippines, Plaza Moraga. LSL, Buenos Aires, Argentina. Address LQA, 9.600

megs.

10.000 megs. 29.98 m.

WWV, Beltsville, Md. 28 kW. Standard Frequency Station. Dept. of Commerce, National Bureau of Standards, Washington, D. C. Tues., Fri., 1315-1415.

10.040 meas. 29.86 m. HII, Santo Domingo, D. R.

> 10.055 meas. 29.82 m.

SUV, Cairo (Abu Zabal), Egypt. 19 kW. Marconi Radio Telegraph Co., of Egypt, S. A., Box 795, Cairo.

ZFB. Hamilton (St. George) Bermuda. 1.5 kW. Phones N. Y. days.

10.070 megs. 29.77 m.
EHY, Madrid (Pozuelo del Rey), Spain. Phones YVR afternoons, Compania Telefonica Nacional de Espana, S. A., Margall 2, Madrid.

10.080 megs. 29.74 m.
RIR, Tiflis, USSR. Works RIO, RNE mornings.

10.135 megs. 29.58 m. OPM, Leopoldville, Belgian Congo. 12 kW. Works ORK. Address Leopoldville Radio Station.

ORK. Address Leopoldville Radio Station
10.160 megs. 29.51 m.

RIO, Baku, USSR. Works RIR, RNE mornings.

10.200 megs. 29.34 m.
PSH, Rio de Janeiro (Marapicu), Brazil. 12 kW.
Works Buenos Aires. Cia. Radiotelegraphica
Brasileira. Caixa Postal 500.

10.250 megs. 29.25 m. LSK3, Buenos Aires (Hurlingham), Argentina. 5 kW.

10.260 megs. 29.22 m.
PMN, Bandoeng, N. E. I. 3 kW. Works Sydney.
Address PLV, 9.415.

10.285 megs. 29.15 m.
DIQ, Koenigswusterhausen, Germany. Address
DGK, 6.675 megs.

10.290 megs. 29.14 m. HPC, Panama City, Panama.

10.330 megs. 29.02 m.
ORK, Brussels (Ruysselade), Belgium. 11 kW. Works
OPM irregularly; broadcasts daily. Ann.:
Radio I.N.R. Sign off: La Brabaconne.
Address: Regie des Telegraphes et des Telephones, Direction des Radiccommunications,
Bruxelles.

10.335 megs. 29.91 m.
ZFD, St. George, Bermuda. 1.5 kW. Address reports on special transmissions to Town Clerk, St. George.

10.350 megs. 28.97 m.
LSX, Buenos Aires (Monte Grande), Argentina.
20 kW. Transradio Internacional, Compania
Radiotelegrafica Argentina S. A. San Martin

10.370 megs. 28.91 m. WCG (W2XBJ), Tuckerton, N. J.

10.375 megs. 28.89 m.
JVO, Nazaki, Japan. 10 kW. Works JZA, JZB, JZC,
Harbin. Address JZG, 6.330 megs.

10.400 megs. 28.83 m.
KEZ, Bolinas, Calif. 40 kW. RCA Communications,
Inc., Pacific Division, 28 Geary St., San
Francisco, Calif.

10.410 megs. 28.80 m.
KES, Bolinas, Calif. 40 kW. Address KEZ, 10.400 megs.

PDK, Kootwijk, Netherlands. 60 kW. Address Radiolaboratory, Neth. State Telegraphs, Parkstraat 29, S'Gravenhage.

10.420 megs. 28.77 m. XGW, Shanghai, China. 20 kW. Address XGO, 7.575 megs.

10.430 megs. 28.75 m.
YBG, Medan, Sumatra, N. E. I. 3 kW. Works Bandoeng. Director of Govt. Radio Service. Telegraaf en Telefoondienst, Serdangweg 2, Medan. Daily, 0430-0530; 2030-2330 10.465 megs. 28.64 m. WKC, Rocky Point, N. Y. 100 kw. Address WAD. 8.930 megs.

10.520 megs. 28.50 m.
VLK, Pennant Hills (Sydney), Australia. 16 kW.
Address VK2ME, 9.585 megs.

10.530 megs. 28.47 m. GBX, Rugby, England. 8 kW. Address GCB, 9.280

JIB, Taihoku (Chureki) Taiwan. Works JVG, JVL.

10.550 megs. 28.42 m.
WOK, Lawrenceville, N. J. 20 kW. Address WNA.
9.170 megs.

10.600 megs. 28.28 m. WQW, Rocky Point, N. Y. Works Berlin. Address WAD, 8.930 megs.

10.610 megs. 28.25 m. WEA, Rocky Point, N. Y. 40 kW. Address WAD. 8.930 megs.

10.660 megs. 28.13 m.

JVN. Nazaki, Ibaraki-Ken, Japan. 20 kW. Works Europe and broadcasts to America. Sign off: Japanese National Anthem. Address, see JZG, 6.330 megs. Mon., Thurs., 1600-1700; daily, 0000-0100.

10.670 megs. 28.10 m.

CEC, La Granja, (Santiago) Chile. 4 kW. Compania Internacional de Radio S. A. (Chile). Casilla 16-D, Santiago. Broadcasting irregularly.

10.675 megs. 28.09 m. WNB, Lawrenceville, N. J. \$00 watts. Phones Bermuda. Address, WNA, 9.170 megs.

10.740 megs. 27.92 m. JVM, Nazaki, Ibaraki-Ken, Japan. 20 kW. Other details identical JVN, 10.660.

10.770 megs. 27.84 m.
GBP, Rugby, England. 15 kW. Address GCB, 9.280 megs.

10.840 megs. 27.66 m.
KWV (W6XN), Dixon, Calif. 20 kW. Address: Transpacific Communication Co., Ltd., 140 New

10.960 megs. 27.36 m.

Montgomery St., San Francisco, Calif.

JZB, Shinkio (Kanjoshi) Manchukuo. 20 kW. Works JVI, JVO, JVU. Add: Manchukuo Telephone & Telegraph Co., Ltd., Shinkio.

10.990 megs. 27.28 m.

ZLT, Wellington, N. Z. Works VLZ. Supt. Posts
and Telegraphs.

11.000 megs. 27.26 m. PLP, Bandoeng, Java, N. E. I. 3 kW.

11.140 megs. 26.91 m. XGB, Shanghai China. 15 kW. (Existence doubtful)

11.370 megs. 26.38 m. CWG, Cerrito (Montevideo), Uruguay. 1.5 kW.

11.495 megs. 26.08 m.
VtZ3, Rockbank (Melbourne), Australia. Tests with
Canada. Address VK3ME, 9.503 megs.

11.660 megs. 25.71 m.
JVL, Nazaki, Japan. 10 kW. Works JIA, JIB, JIC
Taiwan. Address JZG, 6.330 megs.

11.670 megs. 25.69 m.
PPQ, Rio de Janeiro (Sepetiba), Brazil. 5 kW. Address, see PSH, 10.220 megs.

11.680 megs. 25.67 m. KIO, Kahuku, Oahu, Hawaii. Works Bolinas., Kahuku, Oahu, T. H. Works GMBJ.

11.720 megs. 25.58

CJRX, Winnipeg, Man. (Middlechurch). James Richardson & Sons, Royal Alexandra Hotel. Daily, 2000-2400.

HJ4ABA, Medellin, Colombia. "Ecos de la Montana."
, "Radio Coloniale." Pontoise, France. 15
kW. Address: Ministere des Postos, Telegraphes et Telephones, Direction de la
Radiodiffusion, 98 bis, Blvd. Haussmann.
Paris. Daily, 1900-2200; 2300-0100.

11.725 megs. 25.57 m.

PHI, Hilversum, Netherlands. 23.6 kW. (Winter frequency). Philips' Omroep Holland-Indie, Emmasingel 29, Eindhoven. Announces in Dutch, Malay, German, French, English, Spanish, Portuguese. Close: Dutch National Anthem.

11.750 megs. 25.52 m.

GSD. Daventry, England. 20 kW. "D for Daventry."
Interval sig.: Bow Bells and Big Ben. Sign
off: God Save the King. Address, see GSA.
6.050 megs. Daily, 0115-0315; 1215-1600;
1800-2000; 2200-2300.

11.770 megs. 25.47 m.

DJD Zeesen, Germany. 8 kW. Programs close with
Nazi Hymn and Watch on the Rhine. Programs preceded by a music box tune, "Ever
be True and Honest." Address DJC, 6.020
megs.

11.790 megs. 25.43 m.
DJO, Zeesen, Germany. Address DJC, 6.020 megs.
W1XAL, Boston, Mass. 5 kW.

11.800 megs. 25.37 m.

CO9WR, Sancti-Spiritus, Cuba. 150 watts. V. E.
Weiss y O. Ramirez, Apartado 85.

11.810 megs. 25.39 m. VE9GW, Toronto (Bowmanville), Ont.

11.811 megs. 25.38 m.
IRE, Rome, Italy. Address I2RO, 9.630 megs. Daily, 0815-0900; 0915-1015; 1200-1300; 1345-1430.

11.830 megs. 25.34 m. W2XE, New York, N. Y. (Wayne, N. J.). Relays CBS, WABC. 10 kW. Address W2XE, 6.120 megs. Daily, 1500-1700.

W9XAA, Chicago, III.

11.845 megs. 25.31 m.
, Villejust, France. 120 kW. Under construction.

11.860 megs. 25.28 m.
GSE, Daventry, England. 20 kW. "E for Empire."
Interval sig.: Westminster Chimes and Big
Ben. Sign off: God Save the King. Address:
see GSA, 6.050 megs. Daily, 1100-1200.

11.870 megs. 25.25 m.
W8XK, Pittsburgh (Saxonburg), Pa. 40 kW. Relays
NBC-KDKA. Westinghouse Electric &
Manufacturing Co., Grant Bldg., Pittsburgh,
Pa. Dally, 1700-2100

11.880 megs. 25.24 m., "Radio Coloniale," Pontoise, France. 15

kW. Address, see 11.720 megs. Daily, 1115-1415; 1500-1800.

11.940 megs. 25.11 m.
FTA, Ste. Assise, France. Works Saigon. Societe
Française Radio-Electrique, 79 Blvd. Haussmann, Paris VIII.

11.950 megs. 25.08 m. KKO, Bolinas, Calif, Address KEZ, 10.400 megs.

11.990 megs. 25.00 m.

FZS2, Saigon, French Indo-China. 15 kW. Phones Paris. Cie. Generale de Telegraphie Sans Fil, Boite Postale 238.

12.000 megs. 24.99 m.
RNE, Moscow, U. S. S. R. 20 kW. Kremlin Chimes
at 1600 EST. Programs in English, Russian,
German, French, Czech, Hungarian, Dutch.
Spanish, Swedish. Address: Mme. Inna
Marr, Central Radio Committee, Petrovka
12, Moscow.

12.020 megs. 24.94 m. JVK, Nazaki, Japan. Works Shanghai. Address JZG, 6.330 megs.

12.030 megs. 24.92 m. HBO, Prangins, (Geneva) Switzerland. 20 kW. "Radio Nations." Address: see HBP, 7.797 megs.

12.035 megs. 24.91 m.

DJK, Nauen, Germany. 7.2 kW. Address DGK, 6.675 megs.

12.050 megs. 24.88 m.
PDV. Kootwijk, Netherlands. 60 kW. Address:
PDK, 10.410 megs.

12.150 megs. 24.68 m, GBS, Rugby, England. 15 kW. Phones N. Y. Afternoons. Address: GCB, 9.280 megs.

12.215 megs. 24.55 m.
TYA, Paris, France. Phones Algeria. Address: FTA,
11.940 megs.

12.225 megs. 24.53 m. TFK, Reykjavik, Iceland. 8.5 kW.

12.240 megs. 24.49 m.
GBU, Rugby, England. Phones N. Y. Address:
GCB, 9.280 megs.

12.250 megs. 24.48 m.
TYB, Pontoise, France. Works JVH and Ships.

TYB, Pentoise, France. Works JVH and Ships.

12.260 megs. 24.46 m. FTN, Ste. Assise, France. Address: FTA, 11.940 megs.

12.270 megs. 24.52 m. JVJ, Nazaki, Japan. Works Hongkong. Address JZG, 6.330 megs.

RKK, Moscow, USSR. 20 kW.

12.325 megs. 24.33 m.
DAF, Norden, Germany. 5 kW. Phones ships, mornings. For address see DAF, 8.464 megs.

12.500 megs. 23.99 m.

RKF, Moscow, USSR. 20 kW. ZSV, Walvis Bay, Union of South Africa. 1 kW.

12.745 megs. 23.60 m.
DAF, Norden, Germany. 5 kW. Works ships. Address DAF, 8.464 megs.

12,780 megs. 23,46 m.
GBC, Rugby, England. 5 kW. Works ships. Address
GCB, 9.280 megs.

12.795 megs. 13.337 megs. 22.48 m. 23.45 m. YVQ, Maracay (Santa Rita), Venezuela. Hialeah days. Phones IAC, Coltano, Italy. 14 kW. Works ships. Address IAC, 4.355 megs. 13.390 megs. 22.39 m. 12.830 megs. 23,36 191. WMA, Lawrenceville, N. J. Works London. Address CNR, Rabat, Morocco. Works Paris. Address, CNR, WNA. 9.170 megs. 8.035 megs. HJA3. Barranguilla, Colombia. 13.395 meas. 22 39 m FNSM, S. S. Paris. 12.848 megs. 23 35 mg. FTNO. S. S. Ile de France. WOO, Ocean Gate, N. J. 20 kW. Works ships. Ad-13.415 megs. 22.35 m. dress WNA, 9.170 megs. WOY, Lawrenceville, N. J. 20 kW. Address WNA, GCJ, Rugby, England. Works JVH, Nazaki. Address GCB 9.280 megs., 0300-0800. 9.170 megs. TIEP, San Jose, Costa Rica. "La Voz del Tropico". 23.18 m. Sr. Eduardo Pinto Hernandez, Apartado 257. 12.930 megs. WAW, Hialeah, Fla. Sunday at 1300. 12,955 megs. 23.14 m. 13.435 megs. 22.31 m. GMBJ, S. S. Empress of Britain. Works WOO. IAC. WEL, Rocky Point, N. Y. Phones London. Address DAF, GBC, CZA, etc. WAD 8.930 megs. 13.500 megs. 22.21 m. GBB, Rugby, England. Phones Canada and Egypt 13.020 megs. 23.03 m. JZE, Nazaki, Japan. 10 kW. Works ships. Address, JZG, 6.330 megs. days. Address: GCB, 9.280 megs. 13.040 meas. 22.99 m. 13.560 megs. JVI, Nazaki. Japan. 10 kW. Works JZA, JZB, JZC Harbin. Address: Kokusai-Denwa Kaisha. Ltd., Osaka Bldg., Kojimachiku, Tokyo. SHIPS. For address of these ships refer to 4413, 4415 and 4430 megs. All these ships work with WOO, and DAF. DDBR, S. S. Berlin. DDCP, S. S. Cap Polonio. 13.600 megs. DDFF, S. S. Relianca. DDFT, S. S. Oceana. JYK. Kemikawa-Cho, Chiba-Ken, Japan. Experimental. DHAO, Albert Ballin. DHDL, S. S. Cap Arcona 21.90 m. 13.690 meas. KKZ, Bolinas, Calif. Works Honolulu, Hsinking, DHEY, S. S. Deutschland. New York. Address: KEZ, 10.400 megs. DHJZ, S. S. Hamburg. DHRL, S. S. New York. DHTY, S. S. Resolute. DOAH, S. S. Bremen. 21.81 m. 13.745 megs. CGA2, Drummondville, P. Q. Canadian Marconi Co., DOAI, S. S. Europa. DOBX, S. S. Columbus. Box 1690, Montreal, P. Q. 13.780 megs. 21 75 m. KKW, Bolinas, Calif. Address: KEZ, 10.400 megs. 13.045 megs. 22.98 m. VPD, Suva, Fiji Islands. "Radio Suva." Amalgamated Wireless, (A/sia) Ltd., Suva, Fiji. 13.810 megs. Daily exc. Sun., 0030-0130. HRM, Tela. Honduras. Tela Raitroad Co. SUZ, Cario (Abu Zabal), Egypt. 10 kW. Uses any freq, between 13.810 and 13.830 megs. Ad-13.050 megs. dress SUV. 10.055 megs. These ships work with IAC and WOO. All owned by the Italian Line, 1 State St., N. Y. C. 13.840 megs. 21.66 m. WPE, Rocky Point, N. Y. Radio Corp. of America. Central Freq. Bureau, 66 Broad St., New 21.66 m. S. S. Conte Rosso. IRFI S. S. Conte Verde. IBGI, IBLI, S. S. Conte di Savoia. York City. S. S. Rex. ICEJ, 13.855 megs. 21.63 m. WOU. Rocky Point, N. Y. Address: WPE, 13.840 megs. 13.140 megs. 22.82 81. CWH, Montevideo (Cerrito), Uruguay. 1.5 kW. 13.870 megs. 21.61 m. WIY, Rocky Point, N. Y. Address: WPE, 13.840 megs. 13.190 megs. 22.73 m. FNSK, S. S. Normandie. Works Paris afternoons. Address FNSK, 8.810 megs. 13.900 megs. 21.57 m. WQP (W2XBJ), Rocky Point, N. Y. Address: WPE. 13.200 megs. 22.71 m. CFU, Rossland, B. C. Consolidated Mining & Smelt-13.840 megs. 97 011 ing Co. 13.915 megs. 21.54 m. WQS, Rocky Point, N. Y. Address: WPE, 13.840 megs. 22.70 m. 13.210 megs. FNSK, S. S. Normandie. Works WCO, afternoons. 13.980 megs. 21.45 m. Address FNSK, 8.810 megs. LCO, Jeloy, Norway. 1 kW. Address LCL, 6.130 megs. 22.51 m. 13.320 megs. 13.984 megs. 21.44 m. GBA, Rugby, England. Address GCB, 9.280 megs. GBZW, S. S. Berengaria. GDLJ, S. S. Homeric. GFWV, S. S. Majestic. 14.000 to 14.400 megs. GLRZ, S. S. Aquitania. GLSQ, S. S. Olympic. 20.82 to 21.42 meters. AMATEURS. Phones work between 14.150 and 14.250 megs.

GMJQ, S. S. Belgenland.

14.000 megs. 21 42 m

HJ5ABE, Cali, Colombia. Apartado 50. Daily 1900-2200

14.236 megs.

21.06 m.

HB9B, Berne, Switzerland. Swiss Shortwave Association, 30 Neuengasse, Berne. First Monday every month 1510-1615; 1800-1900.

14.290 megs.

20.99 m.

HB9AT, Berne, Switzerland. Address HB9B above. First Monday each month, 1800-1900.

> 14.400 mens 20 82 m

HB9J, Berne, Switzerland. Address HB9B above. First Monday each month, 1510-1615.

14.440 megs. 20.76 m. GBW, Rugby, England. 15 kW. Address GCB, 9.280 meas.

> 14.470 megs. 20.72 m.

WMF, Lawrenceville, N. J. A. T. & T., Long Lines Dept., 32 Sixth Ave., N. Y. City.

14.480 meas. 20.79 mg.

LSN, Buenos Aires (Hurlingham), Argentina. Phones N. Y. Address: Compania Internacional de Radio, Defensa 143.

YNA, Managua, Nicaragua. Phones Hialeah days.

14.500 megs. 20.68 *** HRM, Tela, Honduras. Works Hialeah days,

14.535 megs. 20.63 m

HBJ. Prangins (Geneva), Switzerland. 20 kW. 'Radio Nations." Address: M. Gallarati. Information Section, League of Nations, Geneva

14.545 megs.

20.69 m.

HPF, Panama City, Panama. Phones Hialeah days. TGF, Guatemala City, Guat. Phones Hialeah days. TIN, Cartago, Costa Rica. Phones Hialeah days. Compania Radiografica Internacional de C. R., San Jose.

TIU, Cartago, Costa Rica, See TIN above.

14.590 megs. 20.55 m. WMN, Lawrenceville, N. J. 20 kW. Address WMF. 14.470 megs.

14.640 megs. 20,42 m. 14.640 megs. 20.42 m.
JVH. Nazaki, Japan. 20 kW. Address JVI, 13.560
megs. Works GCJ, 0200-0600.

> 14.690 megs. 20.41 m

PSF. Rio de Janeiro, Brazil. Phones Madrid and Buenos Aires. Companhia Radio Internacional do Brasil, Caixa Postal 709.

14.800 megs. 20.26 m.

WQV, Rocky Point, N. Y. 40 kW. Address WPE. 13.840 megs.

14.815 meas. 20.23 m WQL. Rocky Point, N. Y. 40 kW. Address WPE,

13.840 megs.

14.830 megs. 20.21 m. WKU. Rocky Point, N. Y. 40 kW. Address WPE, 13.840 megs.

14.910 megs. 20.11 m. JVG, Nazaki, Japan. 10 kW. Works JJA, JJB, JJC Taiwan. Address: JVI, 13.560 megs.

14.930 meas. 20.08 m. HJB. Bogota, Colombia. Phones Hialeah, days. 14.935 megs. 20.07 m.

PSA, Rio de Janeiro, Brazil. Phones Buenos Aires and Madrid. Address: PSF. 14.690 megs.

14.980 megs. 20.01 m. KAY, Manila, P. I. 40 kW. Radio Corp. of the Philippines, Plaza Moraga, Manila.

15.040 meas.

RKI, Moscow, USSR. 20 kW. Works RIM Tashkent. WQG, Rocky Point, N. Y. 40 kW. Address WPE, 13.840 meas.

15.055 megs. 19.91 m.

WNC, Hialeah, Fla. 400 watts. Works HJB, HJP, HPF, HRM, TGF, TIN, TIU, YNA, YVQ and ZFS daily; other S. Americans irregular-Iv.

> 15.070 megs. 19.89 m.

PSD, Rio de Janeiro (Marapicu), Brazil. 12 kW. Works Madrid and Buenos Aires mornings. Address: PSF, 14.690 megs.

> 15.090 megs. 19.87 m.

RKI, Moscow, USSR. 20 kW. Works Rocky Point.

15,104 megs. 19.85 m. RAU, Tashkent, USSR. Phones Moscow mornings.

15 120 megs. 19 83 m.

HVJ, Vatican City. 10 kW. Interval sig.: clock ticking for 10 minutes preceeding transmission; bells of St. Peter's at 3 o'clock. Announcement: Laudatur Jesus Christus. Talks as ment: Laudatur Jesus Christias. Lauda de follows: Mon., Italian; Tues., English; Wed., Spanish; Thurs., French; Frl., German; Sat., Dutch; Sun., Latin. Address: Stazione Radio-Vatican, Pontificia Accademia Della Scienze, Roma-Castina Pio IV, Citta del Vaticano. Schedule: 1000-1045.

> 15.140 megs. 19.80 m.

GSF, Daventry, England. 15 kW. "F for Fortune." Interval sig.: Westminster chimes and Big Ben. Sign off: God Save the King. Address, British Broadcasting Corp., Broadcasting House, London W.1. Daily, 0900-1200; daily exc. Sun., 0600-0845; Sun., 0630-0845.

> 15.200 megs. 19.73 m.

DJB, Zeesen, Germany. 8 kW. Programs close with Nazi Hymn and Watch on the Rhine. Pro-grams proceded by a music box tune, "Ever be True and Honest." Address DJC 6.020 megs.

15.210 megs. 19.71 m. W8XK, Pittsburgh (Saxonburg), Pa. 40 kW. Relays NBC-KDKA. Westinghouse Electric & Manufacturing Co., Grant Bldg, Daily 0900-1900.

> 15.220 megs. 19.70 m.

PCJ, Hilversum, Netherlands. Philips' Omroep Holland-Indie, Emmasingel 29, Eindhoven. Announcements in Dutch, English, French. German, Malay, Portuguese, Spanish. Sign off: Dutch National Anthem. Irregular in operation.

> 15,250 megs. 19.65 m. "Radio Coloniale," Pontoise, France. 12 kW.

Address, see 11.720 megs. Daily, 0700-1100. W1XAL, Boston, Mass. 5 kW.

15.260 megs. 19.65 m. GSI, Daventry, England. "I for Island." For other details see GSF, 15.140 megs.

15.270 meas. 19 64 m W2XE, New York, N. Y. (Wayne, N. J.). 10 kW. Relays WABC-CBS. For address see 6.120 megs. Daily 1100-1300.

15.280 megs. DJQ, Zeesen, Germany.

19.62 m.

15.295 megs. 19.60 m. , Villejust, France. 120 kW. Under con-

15.300 megs. 19 60 m CP7, La Paz, Bolivia. Compania Radio Boliviana.

struction.

Casilla 637. OXY, Copenhagen, Denmark,

> 15.330 megs. 19.56 m

W2XAD, Schenectady, N. Y. 20 kW. The General Electric Co. Relays NBC-WGY. "The Voice of Electricity." Program commences with electrical discharge of 10,000,000 volts of man-made lightning. Sunday, 1030-1600: other days, 1400-1500.

15.340 mens. DJR, Zeesen, Germany.

10.840 megs.

19.55 m.

15.350 megs. 19.53 m. CT1AA, Lisbon, Portugal. 2 kW. Int. Sig.: 3 cuckoos. Address CT1AA, 9.600 megs.

19.52 m. KWU (W6XN), Dixon, Calif. 20 kW. Address KWV,

> 15.370 megs. 19.51 m.

HAS3, Szekesferhervar, Hungary. 20 kW. "Justice for Hungary!" Announce in Hungarlan, French, English by lady. Address, see HAT2, 7.220 megs.

15.415 mens.

19.45 m.

KWO (W6XN), Dixon, Calif. 20 kW. Address KWV 10.840 megs.

15,440 mens.

PRADO, Riobamba, Ecuador. "Estacion El Prado." Apartado 98. This freq. used in summer only. Sundays. 1700-1809.

15.445 megs. 19 41 mg WKW, Rocky Point, N. Y. Address WPE, 13.840.

> 15.454 meas. 19.40 m.

, Pontoise, France. (Proposed).

15.475 megs. 19.37 m. KKL, Bolinas, Calif. Address KEZ, 10.400 megs.

> 15.510 megs. 19.33 m.

JDX, Darien. Works JVU Nazaki.

15.620 megs. 19.19 m. JVF. Nazaki, Japan. 20 kW. Works Dixon, nights. Address JVI, 13.560 megs.

15,660 meas. 19.15 m JVE, Nazaki, Japan. 10 kW. Works Bandoeng nights. Address JVI, 13.560 megs.

> 15.680 megs. 19.12 m.

JZA, Shinkio (Kanjoshi) Manchukuo. 20 kW. Works JVI, JVO, JVU. Add.: Manchukuo Tele-phone & Telegraph Co., Shinkio.

15.750 megs. 19.04 m, JIA, Taihoku (Chureki) Taiwan, Works JVG, JVL, JVV.

15.760 megs. 19.02 m. JYT, Kemikawa-Cho, Chiba-Ken, Japan. 5 kW.

> 15.860 megs. 18-90 m.

CEC, La Granja (Santiago), Chile. 800 watts. Phones Peru, afternoons. Address CEC, 10.670 megs. JVD, Nazaki, Japan. Works Shanghai. Address JVI. 13.560 meas.

15.863 megs. 18.90 m. FTK, Ste. Assise, France. Pirones Saigon. Address FTA, 11.940 megs.

15.950 megs. 18 80 m

PLG, Bandoeng, Java, N. E. I.

15.970 megs. 18.77 m. WKO, Rocky Point, N. Y. Address WPE, 13.840 megs.

16.015 meas. 18.72 m.

WQR. Rocky Point, N. Y. Address WPE, 13.840 megs.

16.030 meas. 18.71 m. KKP, Kahuku, Oahu, Hawali. Kahuku, Oahu, T. H. Phones GMBJ.

18.68 m. 16.050 megs.

JVC, Nazaki, Japan. Works Hongkong. Address JVI, 13.560 megs.

16.150 meas. 18 56 000

GBX, Rugby, England. Phones Sydney. Address Engineer-in-chlef, G.P.O. (Radio Section), Armour House, St. Martins le Grand, London EC1.

16.200 meos. 18.51 m. FZR, Saigon, French Indo-China. Phones Paris. Address FZS2, 11.990 megs.

16,240 meas. 18.49 m. KTO, Manila, P. I. Phones Dixon, Radio Corp. of the Philippines, Plaza Moraga, Manila.

16.270 megs. 18.48 m. WLK, Lawrenceville, N. J. Works London. Address WMF, 14.470 megs.

16.380 megs. 18.30 m. XGN, Shanghai, China. Address XGO, 7.575 megs.

16.460 megs. 18.22 m.

DHEY, S. S. Deutschland, Works WOO, DAF, Address, North German Lloyd, Pier 4, Foot of 58th St., Brooklyn, N. Y.

16.600 megs. 18.06 m DOAI, S. S. Europa. Phones WOO, DAF. Address DHEY above.

16.765 megs. DHTY, S. S. Resolute, Works WOO, DAF.

16.910 megs. 17.73 m. JZD, Nazaki, Japan. 20 kW. Works ships. Address JVI, 13.560 megs.

> 17.080 megs. 17.55 m.

GBC, Rugby, England. 5 kW. Works ships. Address GBX, 16.150 megs.

> 17.120 megs. 17.51 m.

WOO, Ocean Gate, N. J. 20 kW. Works ships, Address WMF, 14.479 megs.

WOY, Lawrenceville. N. J. 20 kW. Address WMF. 14.470 megs.

> 17.260 megs. 17.37 m.

DAF, Norden, Germany, 5 kW. Works ships. Address DAF, 8.464 megs.

18.020 megs. 16.64 m. 17.32 m. 17.310 meas. KQJ, Bolinas, Calif. 40 kW. Address KEZ, 10.400 CZA, Drummondville, P. Q. Works ships. Address meas. CGA2, 13.745 megs. W3XL, Bound Brook, N. J. 20 kW. National Broad-casting Co., 30 Rockefeller Plaza, N. Y. C. 18.115 mens. 16 55 m. LSY3, Buenos Aires (Monte Grande), Argentina. Transradio Internacional, San Martin 329. 17.15 m. 17.480 meas. VWY, Kirkee, Poona, India. Phones London. 16 53 m. 18.135 megs. 17.520 megs. 17.11 m. PMC, Bandoeng, Java, N. E. I. 40 kW. Works Neth., 0330-0900. Address: Mr. H. Van der Veen, DFB, Nauen, Germany. Works S. America mornings. Address DGK, 6.675 megs. Engineer in Charge, Post-Telegraaf-en Tele-foondienst, Bedrijf der Radiostations op 16.93 m. 17.710 megs. Java, Bandoeng. CJA3, Drummondville, P. Q. Works London. Address CGA2, 13.745 megs. 18,180 megs. CGA, Brummondville, P. Q. Canadian Marconi Co., 17.740 megs. 16.90 m. Box 1690, Montreal, P. Q. HSP, Bangkok, Siam. 20 kW. Post & Telegraph Dept. 16.48 m. 18.190 megs. 17.760 megs. 16.88 m. JVB, Nazaki, Japan. 10 kW. Works PLE, PLV. DJE, Zeesen, Germany. 5 kW. Address: Kokusai-Denwa Kaisha, Ltd., Osaka Bidg., Kojimachiku, Tokyo. 17.765 meas. 16.88 m., Villejust, France. 120 kW. Under con-16.47 m. 18,200 megs. GAW, Rugby, England. 15 kW. Works N. Y. Address: GBX, 16.150 megs. struction. 16.87 m. 17.770 megs. IAC, Coltano, Italy. Works ships. Radiomarittimo Coltano Radio IAC, Piza, Italy. 16.39 m. 18.296 meas. YVR, Maracay (Santa Rita), Venezuela. Works Estados Unidos de Venezuela, Berlin. 17.775 megs. 16.87 m. Servicio Radiotelegrafico. PHI, Hilversum, Netherlands. 23.6 kW. For details see PCJ, 15.220 megs. Mon., Thurs., Frl., 18.304 meas. 16.38 m. 0730-0930; Sat., Sun., 0730-1030. GAS, Rugby, England. Works N. Y. mornings. Address: GBX, 16.150 megs. 17.780 megs. W3XAL, Bound Brook, N. J. 14 kW. Relays WJZ-NBC programs. Address W3XL, 17.310 megs. 18,330 megs. FTE, Ste. Assise, France. Societe Francaise Radio-Electrique, 79 Blvd. Haussmann, Paris VIII. Daily exc. Sun., 0900-1000; Tues., Thurs., Fri., 1500-1600. Pittsburgh (Saxonburg), Pa. 40 kW. Not 16.35 m. used at present. FZS, Saigon, French Indo-China. Works Paris. W9XAA, Chicago, III. Not used at pres. Address: FZS2, 11.990 megs. 16.85 m. 17.790 megs. 16,34 m. GSG, Daventry, England. 15 kW. "G for Greeting." 18,350 megs. For other details see GSF, 15.140. Daily, 0900-1045; daily exc. Sun., 0600-0845; Sun., WLA, Lawrenceville, N. J. A. T. & T. Long Lines Dept., 32 Sixth Ave., N. Y. City. 0630-0845 16.29 m. 18,400 megs. PCK, Kootwijk, Netherlands. Works Java. Address: 16.82 m. 17.830 megs. PCV. Kootwijk Netherlands. Works Java, mornings. PCV, 17.830 megs. Radiolaboratory Neth. State Telegraphs, Parkstraat 29, S'Gravenhage. 16.25 m. 18,444 megs. HJY, Bogota, Colombia. Works CEC, LSR, OCI days. 16.80 m. 17.850 megs. 18.450 megs. 16.25 ma. PLF. Bandoeng, Java, N. E. I. HBH, Prangins, Switzerland. 20 kW. Address: HBJ, 16.78 m. 14.535 meas. 17.860 megs. WQC, Rocky Point, N. Y. 40 kW. Address WPE, 13.840 megs. 18.600 megs. 16.12 m. PCM, Kootwijk, Netherlands. Address: PCV, 17.830 megs. 17.880 megs. 16.76 m. WQI. Rocky Point, N. Y. 1 kW. Address WPE, 13.840 16.76 m. 16.10 m. 18.620 megs. megs. GAU, Rugby, England. 15 kW. Address: GBX, 16.150 megs. 16.75 m. 17.900 megs. WLL, Rocky Point, N. Y. 20 kW. Address WPE, 16.06 m. 18.670 megs. 13.840 megs. OCI, Lima (Valverde), Peru. Works HJY, CEC. LSR, WNC days. Compania Peruana de 16.73 m. 17,920 megs. Telefonos, Apartado 986, Lima. WQF, Recky Point, N. Y. 40 kW. Address WPE, 13.840 megs. 18,830 megs. PLE, Bandoeng, Java, N. E. I. 40 kW. Works Dixon nights, Tokyo mornings. Address: PMC. 16.71 m. 17.940 megs.

18.135 megs.

WQB (W2XBJ), Rocky Point, N. Y. 40 kW. Address

WPE, 13.840 megs.

19.980 megs. 18.860 megs. 15.89 m. WKM, Rocky Point, N. Y. 40 kW. Address: R.C.A.. 15.01 m. KAX, Manila, P. I. Radio Corp. of the Philippines. 66 Broad St., N. Y. City. Plaza Moraga, Manila. 15.88 m. 20.020 megs. 14.98 m.
DHO, Nauen, Germany. 7.2 kW. Works S. America. 18.880 megs. WQH, Rocky Point, N. Y. Address WKM, 18.860 megs. Reichspost-zentralamt, Telegraphentechnisches Reichsamt, Schoneberger Strasse 18.890 mens. 15.87 m. ZSS, Capetown (Klipheuvel), Union of South Africa. 11-15, Berlin-Tempelhof. 5 kW. Works London. Overseas Communica-14.97 m. tion Co., Kodak House, Shortmarket St., 20-040 megs. OPL, Leopoldville, Belgian Congo. 9 kW. Works ORG. Capetown. 18.900 megs. 15.86 m. WDS, Rocky Point, N. Y. Address WKM, 18.860 megs. 20.100 megs. 14.91 m. WQY, Rocky Point, N. Y. 40 kW. Address: WKM. 18.860 megs. 18.910 meas. 15.86 m JVA, Nazaki, Japan. 20 kW. Works Europe. Address 20.368 megs. 14.72 m. GAA, Rugby. England. 15 kW. Address: GBX, 16.150 megs. JVB, 18.190. 18.920 megs. 15.84 m. WQE, Rocky Point, N. Y. Address WKM, 18.860 megs. 20.606 megs. 14.55 m. PMB, Bandoeng, Java, N. E. I. Works PCK. Address: PMC, 18.135 megs. 18,940 meas. 15.83 m. WTT, Rocky Point, N. Y. Address WKM, 18.860 megs. 21.020 meas 14.27 m. LSN, Buenos Aires (Hurlingham), Argentina. Works 18.950 meas. 15.82 m. N. Y. Address: LSN, 14,480 megs. HBF, Prangins (Geneva), Switzerland. 20 kW Address HBJ, 14.535 megs. 21.060 megs. 14.24 m. KWN (W6XN), Dixon, Calif. 20 kW. Address: KWV, 18.958 megs. LSR, Buenos Aires, Argentina. Works CEC, HJY, 10.840 megs. WKA, Lawrenceville, N. J. 20 kW. Address: WLA, 18.350 megs. 18.970 megs. 15.80 m. GAQ. Rughy, England. Works Address GBX, 16.150 megs. Works Capetown 0800. 21.070 megs. 14.23 m. PSA, Rio de Janeiro (Marapicu), Brazil. 10 kW. Works N. Y. Address: PSF, 14.690 megs. 19.120 meas. 15 68 m LSM, Buenos Aires, Argentina. Works Europe. 14.19 m. 21.128 megs. LSM, Buenes Aires (Monte Grande), Argentina, Address: LSY3, 18.115 megs. 19.200 megs. 15.62 m. ORG, Brussels (Ruysselede), Belgium. 8 kW. Works Leopoldville. Address ORK, 10.330 megs. 21.410 megs. 14.00 m. WKK, Lawrenceville, N. J. Address: WLA, 18.250 19.220 megs. 15.60 m meas. WKF, Lawrenceville, N. J. 20 kW. Address WLA. 18,350 megs. 21.460 megs. 13.97 m. W1XAL, Boston, Mass. 5 kW. 15.57 m. 19 270 meas. PPU, Rio de Janeiro, Brazil. Works Paris. 13.5 kW. 13.96 m. 21.470 meas. GSH, Daventry, England. "H for Home." Interval Address: Cia Radiotelegraphica Brasileira, sig: Westminster Chimes and Big Ben. Caixa Postal 500, Rio de Janeiro. Sign off: God Save the King. Address: British Broadcasting Corp., Brdcsting. 19.345 megs. PMA, Bandoeng, Java, N. E. I. 40 kW. Address: House, London W.1. PMC, 18.135 megs. 21.490 megs. 13.95 m. ..., Villejust, France. 120 kW. Under con-19.355 meas. 15.46 m. FTM. Ste. Assise. France, Address: FTE, 18,330 megs. struction. 21.530 megs. 13.93 m. 19.520 megs. 15.36 m. GSJ, Daventry, England. "J for Justice." See GSH. IRW, Rome, Italy. Works Argentina. 20 kW. Address: Societe Italo Radio, Servizi Radioclectrici. 21.470 meas. Via Calabria No. 46-48, Roma 125. 13.92 m. 21.540 meas. W8XK, Pittsburgh (Saxonburg), Pa. 40 kW. Relays 19.600 megs. 15.30 m. LSF, Buenos Aires (Monte Grande), Argentina. NBC-KDKA. Grant Building. 0700-0900. 7 kW. Address: LSY3, 18.115 megs. 22,290 megs. 13,45 m. GBU, Rugby, England. Works N. Y. Address: GBX, 19.680 megs. CEC, La Granja (Santiago), Chile. 4 kW. Compania 16.150 megs. Internacional de Radio S. A. (Chile), Casilla 26.100 megs. 11.49 m. 16-D Santiage. GSK, Daventry, England. "K for King." See GSH. 21.470 mags. 19,820 megs. 15.13 m. WKN, Lawrenceville, N. J. Address: WLA, 18.350. 29.820 megs. 10.05 m. IAF, Fiumicino, Italy. 5 kW. 15.06 m. 19.980 megs. 30.604 megs. 9.80 m. LSG, Buenos Aires (Monte Grande), Argentina. 7 kW. Address: LSY3, 18.115 megs.

IAG, Golfo Aranci, Sardinia. & kW.

| ALASKA (K) | P. Wakefield | AZORES | VE9CA 6.030 | VE9HX 6.110 | Tabouret |
|--|--|---|---|---|--|
| | KGX 2.632 | (CT2-) | VE9CA 11.860 | Lunenburg | CFL 1.620 |
| Akutan | KIOC 2.632 | Banta Dalanda | Edmonton CFQ 3.040 | VBY 1.540 | Verdun |
| KHW 2.912 KIOI 2.632 | Red Bluff KIOG 1.622 | Ponta Delgada CT2AJ 4.000 | CFQ 7.550 | VBY 1.650 | CJZ . 2.452 |
| Cape Pole | Rose Inlet | C12AJ 4.000 | CFQ 7.550 | Pictou | Yamachiche |
| KIJB 2.994 | KIAP 3.093 | BAHAMAS | BRITISH | CKB 2.284 | CGY 3.152 |
| Circle | KLE 2.512 | (ZF-) | COLUMBIA | Pictou Island | |
| KIIK 2.994 | Saldovia | (27-) | - COLOMBIA | CKU 2.284 | SASKATCHE- |
| KIKK 3.190 | KIKY 3.265 | Cat Cav | Alert Bay | | WAN |
| Cordova | Shearwater Bay | ZFO 5.300 | VAF 1.510 | ONTARIO | |
| KDV 2.538 | KIJW 2.632 | | Anyox | | Cub Lake |
| Deep Cove | Tanana | Nassau ZFS 4.512 | CZQ 5.405 | Bowmanville | CFC 1.596 |
| KHP 1.622 | KIIJ 2.994 | ZFS 4.312 | Bones Bay | CRCX 6.090 | CFC 1.668 |
| KIJV 1.622 | KIIJ 3.190 | BELGIAN | CFW 2.290 | VE9GW 11.810 | Emma Lake |
| Eagle | Tin City | CONGO | Campbell River | VE9GW 24.380 | CGV 1.596 |
| KIIN 2.994 | KION 2.616 | (OP-) | CGT 4.865 | Kenora | CGV 1.668 |
| KIIN 3.190 | Todd | | CJD 1.510 | CFD 1.620 | Hudson Bay |
| Excursion Inlet | KGQ 2.986 | Leopoldville | CJD 1.540 | CFD 5.660 | Junct. |
| KILY 2.994 | KIJU 2.986 | OPL 20.040 | Cape Lazo | Leamington | VXV 5.540 |
| Eyak River | Uganik | OPM 10.135 | VAC 1.510 | CFT 2.284 | Isle-a-la-Crosse |
| KIKN 3.093 | KIJP 2.986 | | Ceepeecee | | CZJ 1.596 |
| Fort Yukon | | BELGIUM | CJE 2.290 | Pelee Island | CZJ 1.668 |
| KIIL 2.994 | Union Bay KFF 2.566 | (ONA-OTZ) | Claydon Bay | CFX 2.284 | |
| KIIL 3.190 | KICG 3.265 | | CZP 4.505 | Red Lake | Lac la Ronge |
| Hidden Inlet | | Brussels | Homalko | CFJ 1.620 | CGQ 1.596 |
| KIDE 3.265 | View Cove | ORG 19.200 | VFJ 2.290 | CFJ 5.660 | CGQ 1.668 |
| KLD 2.566 | KICI 3.093 | ORK 10.330 | Humpback Bay | | Prince Albert VYP 1.596 |
| Hot Springs | Washington Bay | | CZL 2.290 | PRINCE | VYP 1.596 VYP 1.668 |
| KIIM 2.994 | KIJK 1.622 | BERMUDA | Knight Inlet | EDWARD | Regina 1.668 |
| KIIM 3.190 | Waterfall | (ZF-) | CJK 1.510 | ISLAND | VXU 5.540 |
| Iron Creek KIOH 2.632 | KIBZ 3.265 | | Margaret Bay CJX 2.290 | | Portable |
| Juneau | KLA 2.566 | Hamilton | Namu | Borden | VXW 5.540 |
| KMYA 2.304 | Willow Creek | ZFA 5.025 | CFV 2.290 | CJM 1.580 | 3,040 |
| KMYA 4.610 | Mines | ZFB 10.055 | Ocean Falls | Charlottetown | CANAL ZONE |
| WXA 8.050 | KIIP 3.093 | St. George | CGO 4.505 | VE9EH 6.080 | (W) |
| Kadiak Island | | ZFD 10.335 | Prince George | | |
| KIJX 2.632 | Wrangell KDK 2.538 | | CZO 4.505 | QUEBEC | Albrook Field |
| Kake | NDN 2.538 | BOLIVIA | Prince Rupert | | WTR 6.385 |
| KIBA 3.093 | ARGENTINA | (CPA-CPZ) | CGP 3.268 | Bellevue | |
| KLC 2.512 | (LOA-LVZ) | | CGP 5.405 | CZB 1.629 | CHILE |
| Ketchikan | (COM-LVZ) | La Paz | CZG 1.712 | Crane Island | (CAA-CEZ) |
| KBAI 2.304 | Buenos Aires | CP5 6.080 | CZG 2.416 | CKO 2.284 | |
| KGM 2.512 | LQA 9.600 | CP6 9.120 CP7 15.300 | CZG 6.425 | Drummondville | Santiago |
| KIAY 3.893 | LSF 19,600 | CP7 15.300 | Ressland | CFA2 4.465 | CEC 5.820 |
| WXH 2.604 | LSG 19.900 | BRAZIL | CFU 4.755 | CFA4 10.520 | CEC 7.740 |
| WXH 6.662 | LSK3 10.250 | (PPA-PYZ) | CFU 5.660 | CGA 18.180 | CEC 8.710 |
| McGrath | LSL 9.990 | (FFA-FIZ) | CFU 6.720 | CGA2 13.745 | CEC 10.670 |
| KIIO 2.994 | LSM 19.120 | Rio de Janeiro | CFU 13.200 | CGA4 9.332 | CEC 15.860 CEC 19.680 |
| KIIO 3.190 | LSM 21.128 | PPQ 11.670 | Sage Creek VXX 5.405 | CGA6 6.690 | CEC 19.080 |
| Nakeen | LSN 9.895 | PPU 19,270 | | CGA7 6.880 | CHINA |
| KHV 2.566 | LSN 14.480 | PRF5 9.505 | Vancouver CGZ 2.452 | CGA9 4.348 | (XGA-XUZ) |
| KICE 3.265 Nellie Juan | LSN 21.020 | PSA 14,935 | CGZ 2.452 VE9CS 6.070 | CGD 3.340 | (AGA-AUZ) |
| KGI 2.632 | LSN2 9.890 | PSA 21.070 | Waterloo Mine | CJA3 17.718 | Nanking |
| KIOD 2.632 | LSR 18.958 | PSD 15,070 | CZV 3.300 | CJA6 6.760 | XGOX 6.000 |
| Newport Waiter | LSX 10.350 | PSF 14.690 | CZV 4.840 | CZA 2.980 | XGOX 9.500 |
| KIJS 1.622 | LSY3 18.115 | PSH 10.220 | | CZA 4.785 | XGOX 11.900 |
| Pillar Bay | AUSTRALIA | PSK 8.180 | MANITOBA | CZA 6.285 CZA 8.515 | XGOX 17.800 |
| KDY 2,994 | (VHA-VMZ) | | | CZA 12.660 | Shanghai |
| KNBZ 2.994 | (VHA-VNIZ) | BRITISH | Winnipeg | VE9DN 6.095 | XGB 11.140 |
| | | GUIANA | CJRO 6.150 | VE9DN 9.555 | XGBD 9.580 |
| Poorman | Flakadila | | | | XGK 18.690 |
| Poorman KIEJ 2.994 | Fiskville | (VP3) | CJRX 11.720 | | |
| | VIZ3 11.495 | | CJRX 11.720 CJU 3.070 | 1 | XGL 7.960 |
| KIEJ 2.994 | VIZ3 11.495 Melbourne | Georgetown | | High Falls | XGL 7.960 XGN 16.380 |
| KIEJ 2.994 Port Alexander | VIZ3 11.495 Melbourne VK3LR 9.588 | | CJU 3.070 | 1 | XGL 7.960 XGN 16.380 XGO 7.575 |
| KiEJ 2.994 Port Alexander KDH 2.538 | VIZ3 11.495 Melbourne | Georgetown VP3MR 7.080 | CJU 3.070 CJU 3.452 VYW 2.396 | High Falls VYZ 2,212 | XGL 7.960 XGN 16.380 XGO 7.575 |
| K1EJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp K1AW 3.093 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney | Georgetown VP3MR 7.080 | CJU 3.070 CJU 3.452 VYW 2.396 | High Falls | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; | CJU 3.070 CJU 3.452 VYW 2.396 | High Falls VYZ 2.212 Manicouagan CFM 1.620 | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 |
| RIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton | High Falls VYZ 2.212 Manicouagan CFM 1.628 Montmagny CKP 2.284 | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) |
| KBEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Conclusion | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 18.520 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VESAS 6.425 | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny CKP 2.284 Montreal | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) |
| KIEJ 2.994 Port Alexander L KDH 2.538 KGXW 1.606 Port Althorp KLB Value 2.512 Port Armstrong KGXU 1.622 Port Conclusion KIJI 1.622 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.583 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 10.520 VLZ 7.960 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; VXA-VYZ) | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VE9AS 6.425 St. John | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny CKP 2.284 Montreal CGM 3.152 | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 7.685 |
| KBEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Conclusion KIJI 1.622 Port Herbert | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 18.520 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VE9AS 6.425 St. John CJW 2.416 | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 7.685 HJA3 8.780 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Conclusion KIJI 1.622 Port Herbert KIJO 1.622 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.583 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 10.520 VLZ 7.960 VLZ 7.980 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; VXA-VYZ) ALBERTA | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VE9AS 6.425 St. John | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 VE9DR 9.5840 | XGL 7.960 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 7.685 HJA3 8.790 HJA3 12.830 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.696 Port Althorp KIAW 3.093 KLB 2.512 Port Aremstrong KGXU 1.622 Port Conclusion KIJI 1.622 Port Herbert KIJO 1.622 Port Hobron | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 VLK 10.520 VLK 10.520 VLZ 7.960 VLZ 7.980 AUSTRIA | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; VXA-VYZ) ALBERTA Calgary | CJU 3.076 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VESAS 6.425 St. John CJW 2.416 VESBJ 6.090 | High Falls VYZ 2.212 Manicouagan CFM 1.620 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 VE9DR 9.530 VYR 1.712 | XGL 7,956 XGN 16,380 XGO 7,575 XGW 10,420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 8,790 HJA3 8,790 HJA3 12,830 HJABB 6,447 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.696 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Herbert KIJO 1.622 Port Hobron KHZ 2.512 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.583 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 10.520 VLZ 7.960 VLZ 7.980 | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VAA-VGZ; VXA-VYZ) ALBERTA Calgary CGE 3.040 | CJU 3.070 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VE9AS 6.425 St. John CJW 2.416 | High Falls VYZ 2.212 Manicouagan CFM 1.626 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 VE9DR 9.580 VYR 1.712 Riviere du Chef | XGL 7,956 XGN 16.380 XGO 7.575 XGW 10.420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 7.685 HJA3 12.830 HJIABB 6.447 HJIABB 6.447 |
| KIEJ 2.994 Port Alexander KDH 2.538 KGXW 1.606 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Conclusion KIJI 1.622 Port Herbert KIJO 1.622 Port Hobron KHZ 2.912 KIMA 2.632 | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.583 Sydney VK2ME 9.585 VLJ 9.750 VLK 8.095 VLK 10.520 VLZ 7.960 VLZ 7.980 AUSTRIA (OAE-OEZ) | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VXA-VZ) ALBERTA Caigary CGE 7.550 | CJU 3.076 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VESAS 6.425 St. John CJW 2.416 VESBJ 6.090 NOVA SCOTIA | High Falls VYZ 2.212 Manicouagan CFM 1.626 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 VE9DR 9.586 VYR 1.712 Riviere du Chef CZY 1.620 | XGL 7,966 XGN 16,380 XGO 7,575 XGW 10,420 COLOMBIA (HJA-HKZ) Barranquilla HJA3 7,685 HJA3 8,790 HJA3 12,830 HJA3 6,447 HJIABB 6,447 HJIABG 6,042 Bogota |
| KIEJ 2.994 Port Alexandor KDH 2.538 KGXW 1.696 Port Althorp KIAW 3.093 KLB 2.512 Port Armstrong KGXU 1.622 Port Conclusion KIJI 1.622 Port Hobron KIJO 1.622 Port Hobron KHZ 2.512 KIMA 2.632 Fort San Juan | VIZ3 11.495 Melbourne VK3LR 9.588 VK3ME 9.503 Sydney VK2ME 9.585 VLJ 9.750 VLK 10.520 VLK 10.520 VLZ 7.960 VLZ 7.980 AUSTRIA | Georgetown VP3MR 7.080 CANADA (CFA-CKZ; CYA-CZZ; VXA-VZ) ALBERTA Calgary CGE 3.040 CGE 7.550 CKS 3.040 | CJU 3.076 CJU 3.452 VYW 2.396 NEW BRUNSWICK Fredericton VESAS 6.425 St. John CJW 2.416 VESBJ 6.090 | High Falls VYZ 2.212 Manicouagan CFM 1.626 Montmagny CKP 2.284 Montreal CGM 3.152 VE9DR 6.005 VE9DR 9.580 VYR 1.712 Riviere du Chef | XGL 7.96(XGN 16.38) XGO 7.57' XGW 10.42' COLOMBIA (HJA-HKZ) Barranquilla HJA3 7.68' HJA3 8.79(HJA3 12.83) HJABB 6.44' HJ1ABG 6.04' Bogota HJA2 5.82' |

| HJN 6.080 | | | | | | | | | |
|--|--|--|--|---|---|--|--|--|---|
| | | FZS | 18.342 | HAT3 | 8.565 | KENYA | (VQ7-) | PLV PMA | 9.415 19.345 |
| HJP 7.465 | REPUBLIC | FZS2 | 11.990 | HAT4 | 9.125 | | | PMA PMB | 20.606 |
| HJY 9.930 | | | ···· | | | Nair | | | |
| HJY 18.444 | | GERMA | NY (D) | IND | | VQ7L0 | 6.060 | PMC | 18.135 |
| HJ3ABD 7.390 | San Pedro de | - | | (VTA- | VWZ) | | | PMN | 10.260 |
| HJ3ABF 6.200 | Macorist | | uen | | | MAC | AU | PMY | 5.140 |
| HJ3ABH 6.012 | HIH 6.800 | DFA | 19.240 | Bom | bay | | | YDA5 | 6.120 |
| HKE 7.096 | Santiago de los | DFB | 17.520 | VUB | 9.565 | Mad | | YDD2 | 1.630 |
| Bucaramanga | Caballeros | DFC | 12.980 | | | CQN | 6.073 | YDH3 | 3.490 |
| HJ2ABD 5.980 | HI-1-A 6.240 | DFD | 14.665 | Calc | 6.112 | | | YDH4 | 3.310 |
| | Santo Domingo | DFE | 9.810 | | | MADAG | | YDH6 | 3.130 |
| Cali | HII 10.040 | DFL | 10.850 | VUC | 9.575 | (F |) | YDH8 | 1.960 |
| HJ5ABD 6.490 | MIF 0.210 | DGK | 6.675 | Kir | kee 🍴 | | | Bata | |
| HJ5ABE 14.000 | HIX 5.980 | DGU | 9.609 | VWY | 8.975 | Tanar | | YDA2 | 2.385 |
| Cartagena | H1Z 6.340 | DHO | 20.020 | VWY | 17.480 | | 5.996 | YDD3 | 1.585 |
| HJ1ABD 7.28 | | DJK | 12.035 | vwz | 8.690 | | | YDG2 | 3.470 |
| HJ1ABE 6.11 | | No | rden | vwz | 8.693 | MANCH | IUKUO | YDG3 | 3.150 |
| Cienaga | ECUADOR | DAF | 4.320 | vwz | 8.700 | (J |) | YDG4 | 2.850 |
| HJ1ABH 6.300 | (HCA-HCZ) | DAF | 8.464 | vwz | 8.708 | | | YDG5 | 2.090 |
| | ' | DAF | 12.325 | **** | 000 | Shir | | YDG6 | 1.900 |
| Cucuta | Guayaquil | DAF | 17.260 | ITAL | Y (I) | JZA | 15.680 | YDG7 | 3.300 |
| HJA7 5.400 | HC2CW 8.625 | | | | • (•) | JZB | 10.960 | Buite | |
| HJ2ABC 5.97 | HC2ET 4.600 | | esen | Colt | ann | JZÇ | 5.830 | YDA3 | 1.640 |
| Manizales | HC2JSB 4.283 | DIQ | 10.285 | 1 | | | | YDH9 | 1.920 |
| HJ4ABB 7.20 | | DJA | 9.560 | IAC | 4.355 | MEX | | Cher | |
| HJ4ABL 6.10 | Quito | DIB | 15.200 | IAC | 6.650 | (XAA | -XFZ) | YDA6 | 2.870 |
| | HCJB 8.214 | DJC | 6.020 | IAC | 12.795 | | | YDJ4 | 1.840 |
| Medellin | | DID | 11.770 | Fium | icino | Guada | | Djen | nber |
| HJ4ABA 11.720 HJ4ABE 5.900 | Riobamba | DIE | 17.760 | IAF | 5.415 | XEDQ | 9.520 | YDQ2 | 3.390 |
| | PRADO 6.620 PRADO 15.440 | DIG | 4.580 | IAF | 29.820 | Wexic | City | | |
| Pereira | | DIL | 15.110 | | | XDA | 14.525 | Djocja | |
| HJ4ABC 6.23 | | DJM | 6.080 | Golfo / | Aranci | XEBT | 6.000 | YDB3 | 1.660 |
| Santa Marta | EGYPT | DJN | 9.540 | IAG | 30.604 | XECR | 7.380 | YDE5 | 2.350 |
| HJ1ABJ 6.00 | (STA-SUZ) | D10 | 11.790 | Ro | **** | XECW | 5.980 | YDL4 | 3.410 |
| Tunja | | BJP | 11.850 | IRA KU | 6.070 | | | YDL5 | 3.210 |
| HJ2ABA 6.17 | Caire SUV 10.055 | DIG | 15.280 | IRE | 11.810 | MOR | | YDL6 | 2.750 |
| | SUV 10.055 | | 15.340 | IRF | 8.070 | (CNA- | ·CNZ) | Gar | |
| COSTA RICA | 13.830 | | | IRM | 9.823 | | | YDH5 | 3.250 |
| (TIA-TIZ) | 13.630 | | EMALA | IRO | 9.780 | Ra | | Ked | diri |
| | FEDERATED | (TGA | -TGZ) | IRW | 19.520 | CNR | 8.035 | YDN2 | 1.940 |
| Cartago | | | | 12RO | 5.550 | CNR | 12.820 | | |
| TIN 14.54 | MALAY STATES | Guaten | nala City | | | | | Mad | 2.790 |
| | | | | | | | | | |
| TIU 14.54 | . SIMIES | TGF | 14.545 | 12R0 | 5.725 6.085 | NETHE | | YDN3 | |
| TIU 14.54 TIR 7.68 | (7G-) | TG1X | 9.450 | 12R0 | 6.085 | NETHEI (PAA | | Mage | lang |
| TIU 14.54 TIR 7.68 San Jose | (ZG-) | | | 12R0 12R0 | 6.085 6.980 | (PAA | -PIZ) | | |
| TIR 7.68 | (ZG-) Kuala Lampur | YG1X TG2X | 9.450 5.940 | 12R0 | 6.085 | (PAA Hilve | -P1Z) rsum | Mage | alang 3.270 |
| TIR 7.68 San Jose | (ZG-) Kuala Lampur 7GF 6.125 | YG1X TG2X | 9.450 | 12RO 12RO 12RO | 6.085 6.980 9.630 | (PAA Hilve PCJ | -P1Z) rsum 15.220 | Mage YDK4 | alang 3.270 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 | Kuala Lampur ZGE 6.125 | TG1X TG2X HAW | 9.450 5.940 All (K) | 12RO 12RO 12RO | 6.085 6.980 | (PAA Hilve PCJ PHI | rsum 15.220 11.725 | Mage YDK4 Mai YDB6 YDQ3 | 3.270 3.270 ang 1.570 3.350 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 | Kuala Lampur ZGE 6.125 | TG1X TG2X HAW/ | 9.450 5.940 Att (K) | 12RO 12RO 12RO JAPA | 6.085 6.980 9.630 | (PAA Hilve PCJ PHI PHI | rsum 15.220 11.725 17.775 | Mage YDK4 Mai YDB6 | 3.270 3.270 ang 1.570 3.350 3.230 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) | TG1X TG2X HAW | 9.450 5.940 All (K) | 12RO 12RO 12RO JAPA Kemika | 6.085 6.980 9.630 N (J) | Hilve PCJ PHI PHI Koot | rsum 15.220 11.725 17.775 wijk | Mage YDK4 Mai YDB6 YDQ3 | 3.270 3.270 ang 1.570 3.350 |
| TIR 7.68 | Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) | TG1X TG2X HAW/ Hon KGPQ Kal | 9.450 5.940 AII (K) rolulu 1.712 | JAPA Kemika | 6.085 6.980 9.630 N (J) wa-Cho 13.600 | Hilve PCJ PHI PHI Koot | rsum 15.220 11.725 17.775 wijk 18.400 | Mage YDK4 Mai YDB6 YDQ3 YDQ4 | 3.270 3.270 ang 1.570 3.350 3.230 |
| TIR 7.68 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) | TG1X TG2X HAW/ Hon KGPQ Kal | 9.450 5.940 AII (K) Holulu 1.712 huku 6.733 | JAPA Kemika JYK JYR | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 | Hilve PCJ PHI PHI Koot PCK PCM | rsum 15.220 11.725 17.775 wijk 18.400 18.600 | Mage YDK4 Mai YDB6 YDQ3 YDQ4 YDQ5 YDQ6 | 3.270 3.270 ang 1.570 3.350 3.236 2.950 2.810 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; | Kuala Lampur ZGE 6,125 FIJI (VPA-VSZ) Suva VPD 13,045 | TG1X TG2X HAW/ Hon KGPQ Kal KEQ | 9.450 5.940 All (K) lolulu 1.712 huku 6.733 11.680 | JAPA Kemika JYK JYR JYS | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 | (PAA Hilve PCJ PHI Koot PCK PCM PCV | -P1Z) rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 | Mage YDK4 Mai YDB6 YDQ3 YDQ4 YDQ5 YDQ6 | 3.270 ang 1.570 3.350 3.230 2.950 2.810 |
| TIR 7.68 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE | HAW/ Hon KGPQ Kal KEQ KIO KKH | 9.450 5.940 Att (K) 1.712 huku 6.733 11.680 7.520 | JAPA Kemika JYK JYR JYS JYT | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 | Hilve PCJ PHI Koot PCK PCM PCV PDK | -P1Z) rsum 15.220 11.725 17.775 :wijk 18.400 18.600 17.830 10.410 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekale YDA7 | slang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ongan 3.270 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) | Kuala Lampur ZGE 6,125 FIJI (VPA-VSZ) Suva VPD 13,045 | HAWA Hon KGPQ Kal KEQ KIO KKH | 9.450 5.940 All (K) Tolulu 1.712 huku 6.733 11.680 7.520 16.030 | JAPA Kemika JYK JYR JYS JYT | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 | (PAA Hilve PCJ PHI Koot PCK PCM PCV | -P1Z) rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDA7 YDJ2 | slang 3.270 ang 1.570 3.350 2.950 2.810 ongan 3.270 2.890 |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey | Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise | HAWA Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 | JAPA Kemika JYK JYR JYS JYT Naz | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 | PCM PCV PDV | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDA7 YDJ2 Sema | slang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ongan 3.270 2.890 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ' Camaguey C091Q 8.66 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 | HAW/ Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 18.190 | PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PDV | P1Z) rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDA7 YDJ2 Sema YDB2 | slang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ongan 3.270 2.890 arang 2.450 |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.255 | HAWA Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 AII (K) 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 | JAPA Kemika JYK JYR JYS JYT Naz JVA JVB | 6.085 6.980 9.630 N (J) iwa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 18.199 16.050 | Hilve PCJ PHI Koon PCK PCM PCV PDK PDV NETHE | P1Z) rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekale YDA7 YDJ2 Sema YDB2 YDB2 YDE3 | slang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ongan 3.270 2.890 |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontolse TYA 12.215 TYB 12.250 | HAWA Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 Aff (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 5.845 7.520 11.680 | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD | 6.085 6.980 9.630 N (J) Iwa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 18.190 16.050 15.860 | Hilve PCJ PHI FHI Koot PCK PCM PCV PDK PDV NETHE | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES -POZ; | Mage YDK4 Mai YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekale YDA7 YDJ2 Serna YDB2 YDB2 YDE3 YDK2 | 1.570 3.270 ang 1.570 3.350 3.230 2.950 2.810 ongan 3.270 2.890 hrang 2.450 2.910 3.190 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 | CZG-) Kuala Lampur G.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.885; 11.720; 11.880: 15.250 | HAW/ Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 AII (K) 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVE | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.860 15.860 | Hilve PCJ PHI FHI Koot PCK PCM PCV PDK PDV NETHE | P1Z) rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekale YDA7 YDJ2 Sema YDB2 YDB3 YDK2 YDK3 | alang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ongan 3.270 2.890 arang 2.450 2.910 3.190 |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 | (ZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720, 8 | HAWA Hon KGPQ Kal KEQ KIO KKH KKP | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 5.845 7.520 11.680 16.030 | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVE JVF | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 | PCJ PHI Koot PCK PCW PCV PDK PDV NETHE EAST (PKA YBA- | -PIZ) rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES -POZ; | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekale YDA7 YDJ2 Sema YDB2 YDB3 YDK3 YDK3 YDK3 | 3.270 ang 1.570 3.350 3.230 2.950 2.810 ong an 3.270 2.890 arang 2.450 2.910 3.190 2.710 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720; 11.880; 15.256; 8 | TG1X TG2X HAW/ Hon KGPQ Kal KEQ KIO KKH KKP KRO | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 11.680 16.030 | IZRO IZRO IZRO JAPA Kemika JYK JYS JYT IVA JVB JVC JVD JVE JVC JVC | 6,085 6,980 9,630 N (J) wa-Cho 13,600 7,880 9,840 15,760 zaki 18,910 18,199 16,050 15,660 15,660 15,662 14,910 | (PAA Hilve PCJ PHI Koot PCK PCW PCW PDK PDV NETHE EAST (PKA YBA- Boi | 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ7 YDD2 Sema YDB2 YDB3 YDK2 YDK3 YDK5 YDK6 | 3.270 3.370 3.350 3.236 2.950 2.810 bongan 3.270 2.890 arang 2.450 2.910 2.710 1.860 |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.03 Sancti Spiritus | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.15.85; 11.720; 11.880; 15.250; 515.454 Ste. Assise | HAW/ Hon KGPQ Kal KEQ KIO KKH KKP KRO | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 5.845 7.520 11.680 16.030 | JAPA JAPA Kemika JYK JYS JYT Na: JVA JVB JVC JVD JVC JVF JVG JVG JVG | 6.085 6.980 9.630 N (J) Nwa-Cho 13.600 7.880 9.840 15.760 zaki 18.110 18.190 16.050 15.660 15.620 14.410 | (PAA Hilve PCJ PHI Koot PCK PCM PCV PDV NETHE EAST (PKA Boot Bandje | rsum 15,200 11,725 17,775 18,400 18,600 17,830 10,410 12,050 RLAND INDIES POZ; YHZ) | Mage YDK4 All YDB6 YDQ3 YDQ5 YDQ6 Pekali YDA7 YDJ2 Sema YDK2 YDE3 YDK3 YDK3 YDK5 YDK6 Soeka | 3.270 ang 1.570 3.236 2.950 2.810 bongan 3.270 2.890 arang 2.450 2.910 3.190 2.710 1.860 boemi |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritue CO9WR 11.80 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720; 11.880; 15.250; 8 5te, Assise FQO 12.166 | TG1X TG2X HAW/ Hom KGPQ Kala KEQ KIO KKH KKP KRO | 9.450 5.940 AII (K) loiulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 11.680 16.030 | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVE JVG JVH JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 14.910 14.640 13.565 | (PAA Hilve PCJ PHI PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Bondle Bandle YDUS | rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) mee 1.850 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 Pekal YDA7 YDJ2 Serma YDB2 YDE3 YDK2 YDK3 YDK6 Soeka | 3.270 ang 1.570 3.350 3.236 2.950 2.810 ongan 3.270 2.890 arang 2.450 2.910 3.190 2.710 1.860 beeni |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.03 Sancti Spiritus CO9WR 11.80 Santiago | CZG-) Kuala Lampur G.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720; 08 11.880; 15.250; 08 15.454 Ste. Assise FQO 12.166 FTA 11.944 | TG1X TG2X HAW/ Hon KGPQ KIO KKH KKP KRO | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 16,030 1,5845 5,845 7,520 11,680 16,030 DURAS | JAPA JAPA Kemika JYK JYR JYS JYS JYS JVA JVB JVC JVD JVE JVF JVG JVH JVI | 6.085 6.980 9.630 N (J) 13.600 7.880 9.840 15.760 18.190 16.050 15.860 15.660 15.620 14.910 14.640 13.560 | (PAA Hilve PCJ PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBAA Boot Bandje YDU5 | rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo rmasin 1.850 3.330 | Mage YDK4 Mal YDB6 YDQ3 YDQ5 YDQ5 Pekale YDA7 YDJ2 Sema YDB2 YDE3 YDK3 YDK3 YDK3 YDK6 Soeka YDK6 | 3.270 ang 1.570 3.350 3.230 2.950 2.950 2.810 bongan 3.270 2.890 1819 2.450 2.910 2.710 1.860 boemi 1.550 2.110 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritue CO9WR 11.80 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 0 9.585; 11.720; 0 11.880; 15.250; 0 15.454 Ste. Assise FQ0 12.166 FTA 11.946 FTA 18.343 | TG1X TG2X HAW/ Hom KGPQ Kalo KKH KKP KRO HON (HRA | 9.450 5.940 AII (K) loiulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 11.680 11.680 10.030 DURAS A-HRZ) | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 15.650 14.640 13.550 12.270 | (PAA Hilve PCJ PHI PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS Cel | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo 18.850 3.330 ebes | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ5 YDQ7 YDD2 Sema YDB2 YDE3 YDK3 YDK3 YDK3 YDK5 YDK6 YDK6 YDK6 YDK6 YDK6 YDK6 YDK6 YDK6 | slang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.890 2.910 3.190 2.910 2.710 1.860 beemi 1.550 2.110 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 Sancti Spiritus CO9WR 11.88 Santiago CO9GC 6.15 | CZG-) Kuala Lampur G.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720; 08 11.880; 15.250; 11.880; 15.454 Ste. Assise FQO 12.166 FTA 11.940 FTE 18.336 FTE 18.336 FTE 19.844 | TG1X TG2X HAW/ Hon KGPQ KIO KKH KKP KRO | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 16,030 1,5845 5,845 7,520 11,680 16,030 DURAS | JZRO IZRO IZRO IZRO JAPA Kemika JYK JYR JYT Na: JVB JVC JVD JVE JVC JVB JVG JVH JVJ JVH JVI JVI JVI JVI JVI JVI JVI JVI JVK | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 15.660 15.660 15.620 14.910 14.640 13.560 12.270 12.020 | (PAA Hilve PCJ PHI HIIVE PHI KOOI PCK PCW PDK PCV PDK PDV NETHE EAST (PKA YBA- Boon Bandje YDUS Cel Mac | rsum 15.220 11.725 17.775 wilk 18.400 18.600 10.410 12.050 RLAND INDIES POZ; YHZ) neo irmasin 1.850 3.330 ebes assar | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDA7 YDB2 YDE3 YDK2 YDK2 YDK3 YDK6 Soeka YDK6 Soeka YDK6 | 81ang 3.270 ang 1.570 3.230 2.950 2.950 2.950 2.890 117ang 2.450 2.910 2.710 1.860 boemi 1.550 2.110 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.03 Sancti Spiritus CO9WR 11.80 Santiago | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720 11.880; 15.250; 15.454 Ste. Assise FTA 11.944 FTE 18.336 FTI 9.844 FTI 9.844 FTI 15.865 | TG1X TG2X HAW/ Hon KGPQ KIO KKH KKP KRO HON! (HRA | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 16,030 5,845 7,520 11,680 16,030 DURAS A-HRZ) | JAPA Kemika JYK JYR JYR JYS JYT Na: JVA JVB JVC JVD JVF JVG JVH JVI JVK | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 15.660 12.270 14.640 13.560 12.270 14.660 10.740 | (PAA Hilve PCJ PHI PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandig YDU5 YDV2 Cel Mac | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo 18.850 3.330 ebes assar 8.775 | Mage YDK4 Mall YDB6 YDQ3 YDQ5 YDQ5 Pekali YDA7 YDB2 YDB3 YDK3 YDK3 YDK5 YDK5 YDK4 YDK4 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 | 81ang 3.270 ang 1.570 3.350 2.950 2.810 ongan 3.270 2.890 2.910 3.190 2.910 2.710 1.550 2.110 olo |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) | CZG- Kuala Lampur ZGE 6.125 CZG- | HONG HONG HONG HAM | 9,450 5,940 AII (K) lolulu 1,712 huku 6,733 11,680 7,520 16,030 5,845 7,520 11,680 10,030 DURAS A-HRZ) Tela 13,810 14,500 GKONG | JAPA Kemika JYK JYK JYR JYS JYT Na: JVB JVC JVD JVE JVF JVG JVH JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2aki 18.910 16.050 15.660 15.660 15.660 12.270 14.640 13.566 12.270 12.020 16.050 16.050 | (PAA Hilve PCJ PHI PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandig YDU5 YDV2 Cel Mac | rsum 15.220 11.725 17.775 wilk 18.400 18.600 10.410 12.050 RLAND INDIES POZ; YHZ) neo irmasin 1.850 3.330 ebes assar | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDB2 YDB3 YDK2 YDE3 YDK5 YDK5 YDK6 Soeka YDK4 YDB2 YDK6 Soeka YDB2 YDB3 YDK6 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 | 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.890 arang 2.450 2.910 2.710 1.860 boemi 1.550 2.110 olo |
| TIR 7.58 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey COSJQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720, 0 11.880; 15.250; 11.880; 15.250; 11.880; 15.250; 11.780 FTA 11.946 FTA 11.946 FTA 11.946 FTFA 11.946 FTFA 11.946 FTFA 11.946 FTFA 11.945 FTFK 15.863 FTK 19.864 FTK 19.865 | HONG HONG HONG HAM | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 16,030 5,845 7,520 11,680 16,030 DURAS A-HRZ) | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVF JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 15.660 15.660 15.660 14.410 12.270 12.020 11.660 10.375 | (PAA Hilve PCJ PHI FHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBAA Boot Bandje YDU5 YDV2 Mac PNI Met YBZ | rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES -POZ; YHZ) neo irmasin 1.850 3.330 abssar 8.775 | Mage YDK4 Mall YDB6 YDQ3 YDQ5 YDQ5 Pekali YDA7 YDB2 YDB3 YDK3 YDK3 YDK5 YDK5 YDK4 YDK4 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 | 81ang 3.270 ang 1.570 3.350 2.950 2.810 ongan 3.270 2.890 2.910 3.190 2.910 2.710 1.550 2.110 olo |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGCH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 178 12.250 11.880; 15.250 11.880; 15.250 11.880; 15.250 11.880; 15.250 11.891 FTA 11.940 FTA 11.940 FTA 11.940 FTA 11.940 FTH 18.355 FTM 19.355 FTM 19.355 FTM 19.355 FTM 12.266 Villejust | HONG | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 11.680 16.030 DURAS A-HRZ) Tela 13.810 14.500 GKONG | JAPA Kemika JYK JYR JYS JYT Na: JVB JVC JVB JVC JVB JVC JVB JVC JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 15.660 15.660 14.640 13.566 12.270 14.650 10.740 10.668 10.375 | (PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS C Col Mac PNI Met YBZ Jz | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo sassar 8.775 3.330 bbs assar 8.775 7.688 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDB2 YDE2 YDE3 YDK2 YDK3 YDK5 YDK6 Soeka YDK4 YDB4 YDB5 YDK6 SOEka YDB5 YDB5 YDE2 YDE2 YDE2 YDE2 YDE2 | slang 3.270 ang 1.570 3.236 2.950 2.950 2.950 2.950 2.950 2.910 3.190 2.910 1.860 boemi 1.550 2.110 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 COCO 6.00 Sancti Spiritus CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.92 | Car | HONG HONG | 9,450 5,940 AII (K) Intervention (K) 6,733 11,680 7,520 16,030 16,030 DURAS A-HRZ) Fela 13,810 14,500 GKONG (Z) | JAPA Kemika JYR JYR JYS JYT Na: JVB JVC JVD JVF JVF JVI JVH JVI JVK JVL JVM JVN | 6.085 6.980 9.630 N (J) Iwa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.620 14.910 12.270 12.020 11.650 10.375 7.510 7.470 | (PAA Hilve PCJ PHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS YDV2 Cel Mac PNI Met YBZ Jz Balik | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) rmasin 1.850 3.330 bbes assar 8.775 ado 7.688 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ6 Pekal YDB2 YDE2 YDE3 YDK2 YDK3 YDK5 YDK6 Soeka YDK4 YDB4 YDB5 YDK6 SOEka YDB5 YDB5 YDE2 YDE2 YDE2 YDE2 YDE2 | 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.890 arang 2.450 2.910 2.710 1.860 boemi 1.550 2.110 olo |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGCH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 0 9.585; 11.720, 0 11.880; 15.250; 0 15.454 Ste. Assise FQO 12.166 FTA 11.944 FTK 15.865 FTM 19.355 | HONG HONG TEN HONG TE | 9.450 5.940 AII (K) Iolulu 1.712 huku 6.733 11.680 7.520 16.030 5.845 7.520 11.680 16.030 DURAS A-HRZ) Tela 13.810 14.500 GKONG | IZRO IZRO IZRO IZRO JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVF JVG JVH JVI JVI JVN | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 13.560 12.270 12.020 11.660 10.740 10.660 10.755 7.370 | (PAA Hilve PCJ PHI FHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Bot Bandig YDU5 YDV2 Cel Mac PNI Met YBZ Jz Balik YCP | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo rimasin 1.850 3.330 ebes assar 8.775 nado 7.688 va papan 8.575 | Mage YDK4 Mall YDB6 YDQ3 YDQ5 YDQ5 Pekali YDM2 YDB2 YDB2 YDK2 YDK3 YDK5 YDK5 YDK4 YDK4 YDM4 YDM5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK | slang 3.270 ang 1.570 3.350 3.236 2.950 2.810 origan 3.270 2.8910 3.190 2.710 2.710 1.650 boemi 1.550 2.110 olo |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 COCO 6.13 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.37 JDZ 5.77 | Car | HONG HONG TEN HONG HONG HONG HONG HONG HONG HONG HON | 9,450 5,940 AII (K) III (III (III (III (III (III (III (III | JAPA Kemika JYK JYR JYS JYT Na: JVA JVB JVC JVD JVE JVG JVH JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2aki 18.910 15.660 15.660 15.660 12.270 14.640 13.560 12.270 14.640 13.560 12.270 14.640 13.560 12.270 14.640 13.560 12.270 12.020 10.660 10.740 10.660 10.375 7.510 | (PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PCV PDK PDV NETHE EAST (PKA Boot Bandje YDUS Cel Mac PNI Meie YBZ Ji Balikk YCP Ban | rsum 15.220 11.725 17.775 18.400 18.400 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) 18.500 3.330 essar 7.688 vapapan 8.575 toeng | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ5 YDQ7 YDB2 YDB3 YDK2 YDB3 YDK2 YDK5 YDK6 Soeka YDR4 YDB2 YDB5 YDB5 YDB5 YDB2 YDB2 YDB2 YDB2 YDB2 YDB3 YDB5 YDB5 YDB5 YDB2 YDB3 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 | 8lang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.890 arang 2.450 2.910 2.710 1.860 boemi 1.550 2.110 slo |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.93 JDZ 5.71 DENMARK | CGG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 TYB 12.250 9.585; 11.720, 08 15.454 Ste, Assise FQO 12.166 FTA 11.944 FTE 18.33 FTI 9.844 FTK 15.863 FTIM 19.355 FTIM 19.355 FTIM 12.266 0 Villejust 6.145; 9.885; 0 11.845; 15.295; 11.845; 15.295; 11.845; 15.295; 11.845; 15.295; 11.845; 15.295; 11.765; 21.499 | TG1X TG2X HAW/ Hon KGPQ Kal KEQ KIO KKH KKP HON (HR/ HRM HON HON JBW HUN | 9,450 5,940 AII (K) Inuku 6,733 11,680 7,520 16,030 5,845 7,520 11,680 16,030 DURAS A-HRZ) Fela 13,810 14,500 GKONG GKONG GGRY | JAPA Kemika JYK JYR JYR JYS JYT Na: JVB JVC JVD JVF JVG JVH JVI JVI JVI JVN | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2aki 18.910 16.050 15.660 15.660 14.640 13.560 12.270 11.660 10.375 7.510 7.470 7.390 6.990 | (PAA Hilve PCJ PHI FHI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Bandje YDU5 YDV2 Mac PNI Met YBZ Jz Balik YCP Bant | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLADIS POZ; YHZ) nee 18.50 3.330 obes assar 7.588 wa papan 8.575 doeng 18.638 | Mage YDK4 Mall YDB6 YDQ3 YDQ4 YDQ5 Pekal YDB2 YDE3 YDK3 YDK3 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 YDK5 | 8lang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ong an 3.270 2.810 ong an 3.270 2.890 one and 3.270 2.890 one and 3.270 2.890 one and 3.270 2.910 3.190 2.710 1.850 boemi 1.550 2.110 old 1.595 4.810 4.810 3.450 abaya 4.480 3.453 abaya 4.480 3.453 3.430 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 COCO 6.13 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.37 JDZ 5.77 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 0 9.585; 11.720; 0 11.880; 15.250; 0 11.880; 15.250; 0 15.454 Ste. Assise FQO 12.166 FTA 11.944 FTK 15.863 FTI 9.844 FTK 15.865 FTM 19.355 FTM 19.355 FTM 19.355 FTM 12.266 Villejust 0.6145; 9.585; 0 11.845; 15.295 11.845; 15.295 11.845; 15.295 17.765; 21.496 FRENCH | TG1X TG2X HAW/ Hon KGPQ Kal KEQ KIO KKH KKP HON (HR/ HRM HON HON JBW HUN | 9,450 5,940 AII (K) III (III (III (III (III (III (III (III | IZRO IZRO IZRO IZRO IZRO IZRO IZRO IZRO | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 zaki 18.910 16.050 15.660 15.660 12.270 14.640 13.560 12.270 14.640 13.560 12.270 14.640 17.40 10.660 10.375 7.470 7.390 6.990 6.750 | PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS Cel Mac PNI Met YBZ JI Balik YCP Bann PLE | rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES -POZ; YHZ) neo irmasin 1.850 3.330 ebssar 8.775 addo 7.688 va papan 8.575 loeng 18.639 17.839 | Mage YDK4 Mal YDB6 YDQ3 YDQ5 YDQ5 Pekal YDB2 YDB2 YDB2 YDB3 YDK5 YDK6 Soeka YDK6 Soeka YDB5 YDB5 YDB2 YDB2 YDB3 YDB5 YDB5 YDB5 YDB2 YDB3 YDB7 YDB7 YDB7 YDB7 YDB7 | 8lang 3.270 ang 1.570 3.350 3.230 2.950 2.810 ong an 3.270 2.810 ong an 3.270 2.890 one and 3.270 2.890 one and 3.270 2.890 one and 3.270 2.910 3.190 2.710 1.850 boemi 1.550 2.110 old 1.595 4.810 4.810 3.450 abaya 4.480 3.453 abaya 4.480 3.453 3.430 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 COCO 6.01 CO9WR 11.80 Sancti Spiritus CO9WR 10.80 Spirit | Cag | HONG HONG HONG HONG HONG HONG HONG HONG | 9,450 5,940 AII (K) Ioluliu 1.712 huku 6.733 11.680 7.520 16.030 5.845 5.845 7.520 11.680 16.030 DURAS A-HRZ) Fela 13.810 14.500 GKONG (Z) Igkong 6.750 | JAPA Kemika JYR JYR JYS JYT Na: JVB JVC JVD JVF JVI | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2saki 18.910 15.660 15.660 15.660 14.640 13.560 12.270 12.020 11.660 10.375 7.510 7.390 6.990 6.750 5.730 | (PAA Hilve PCP PDI Koot PCK PCM PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS YDV2 Cel Mac PNI Met YBZ Jz Balik YCP Bant PLE PLF PLF | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) nee rmasin 1.850 3.330 bes assar 8.775 nado 7.688 iva papan 8.575 iceng 18.839 17.850 15.950 | Mage YDK4 Mall YDB6 YDQ3 YDQ4 YDQ5 YDQ5 YDQ7 YDB2 YDB3 YDK2 YDB3 YDK3 YDK4 YDK4 YDB4 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 YDB5 | slang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ongan 3.270 2.890 2.910 3.190 2.910 3.190 2.910 3.190 2.910 3.190 2.910 3.190 2.910 3.450 2.910 3.450 2.910 3.450 3.450 3.450 4.810 4.810 4. |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.92 JDZ 5.73 DENMARK (OUA-OZZ) Copenhagen | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) VPD 13.045 FRANCE (F; TYA-TZZ) FONTOISE TYB 12.255 0.585; 11.720, 0.11.880; 15.250; 0.11.880; 15.250; 0.15.454 Ste. Assise FTA 11.940 FTA 11.940 FTA 11.940 FTI 9.844 FTK 15.862 FTM 19.355 FTM 19.355 FTM 19.355 FTM 17.765; 21.490 FRENCH INDO-CHINA (F) | HONG HONG HONG HONG HONG HONG HONG HONG | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 11,680 16,030 DURAS A-HRZ) GKONG (Z) Igkong 6,750 IGARY A-HAZ) Japest | IZRO IZRO IZRO IZRO JAPA Kemika JYK JYR JYR JYS JYT Na: JVB JVC JVD JVE JVF JVG JVH JVI JVL JVL JVN | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2aki 18.910 16.050 15.660 15.660 13.560 14.640 10.660 10.740 10.660 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.750 10.740 10.750 10. | PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS Cel Mac PNI Met YBZ JI Balik YCP Bant PLE | rsum 15.220 11.725 17.775 wijk 18.400 17.830 10.410 12.050 RLAND INDIES -POZ; YHZ) neo irmasin 1.850 3.330 ebssar 8.775 addo 7.688 va papan 8.575 loeng 18.639 17.839 | Mage YDK4 Mall YDB6 YDQ3 YDQ4 YDQ5 YDQ5 YDB2 YDB3 YDK2 YDB3 YDK2 YDK2 YDK3 YDK4 YDK4 YDB4 YDB5 YDK2 YDB5 YDK2 YDB5 YDK2 YDB5 YDK2 YDB5 YDK2 YDB5 YDK2 YDB5 YDB5 YDE2 YDE3 YDE2 YDE3 YDE4 YDB7 YDB7 YDB7 YDB7 YDB7 YDB7 YDB7 YDB7 | slang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.810 3.190 2.910 3.190 2.710 1.550 2.910 3.190 4.810 3.450 beemi 1.550 4.810 4.810 3.450 4.810 3.450 4.810 3.450 4.810 3.450 3.450 3.290 3.290 3.340 3.3 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCH 9.42 COCO 6.13 COCH 9.42 COCO 6.13 Sancti Spiritus CO9WR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.93 JDZ 5.73 DENMARK (OUA-OZZ) Copenhagem COY 6.06 | Cag | HONG HONG HONG HONG HONG HONG HONG HONG | 9,450 5,940 AII (K) Ioluliu 1.712 huku 6.733 11.680 7.520 16.030 5.845 5.845 7.520 11.680 16.030 DURAS A-HRZ) Cela 13.810 14.500 GKONG (Z) Igkong 6.750 IGARY A-HAZ Iapest 15.370 | JAPA Kemika JYR JYR JYS JYT Na: JVB JVC JVD JVF JVI | 6.085 6.980 9.630 N (J) Iwa-Cho 13.600 7.880 9.840 18.760 2aki 18.910 16.050 15.660 15.620 14.910 12.270 12.020 11.660 10.375 7.510 7.470 7.390 6.990 6.750 5.730 13.020 | (PAA Hilve PCJ PJH HI HI KOO PCK PCW PDV NETHE EAST (PKA YBA Boo Bandje YDUS Cel Mac PNI Mei YBZ Ja Balikk YCP Banik YCP PLF PLF PLF PLF PLM | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RLAND INDIES POZ; YHZ) neo irmasin 1.850 3.330 ebes assar 8.775 nado 7.688 va papan 18.838 17.850 14.480 12.290 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 YDQ5 YDQ5 YDB3 YDB2 YDB3 YDK2 YDB3 YDK2 YDK3 YDK4 YDB5 YDB5 YDB5 YDB5 YDB5 YDB2 YDB3 YDB5 YDB5 YDB7 YDB7 YDB7 YDB7 YDB7 YDB7 YDB7 YDB02 YDD3 | stang 3.270 ang 1.570 3.350 3.236 2.950 2.810 ong an 3.270 2.890 arang 2.450 2.910 3.190 2.910 1.860 boemi 1.550 2.110 olo abaya 4.480 4.480 4.480 3.430 3.290 3.170 |
| TIR 7.68 San Jose TIEP 6.71 TIEP 13.41 TIGPH 5.82 TIPG 6.41 TIRCC 6.55 CUBA (CLA-CMZ; COA-COZ) Camaguey CO9JQ 8.66 Havana CMB 5.78 COCD 6.13 COCH 9.42 COCO 6.01 COGWR 11.80 Santiago CO9GC 6.15 DARIEN (J) Darien JDX 15.53 JDY 9.93 JDZ 5.71 DENMARK (OUA-OZZ) Copenhagen OXY 6.60 OXY 9.45 | CZG-) Kuala Lampur ZGE 6.125 FIJI (VPA-VSZ) Suva VPD 13.045 FRANCE (F; TYA-TZZ) Pontoise TYA 12.215 0.9 15.454 0.5 15.250 0.1 1880; 15.250 0.1 1880; 15.250 0.1 15.454 0.5 FTA 11.944 0.5 FTA 11.944 0.5 FTA 11.945 0.7 FTM 19.355 | HONG HONG HONG HONG HONG HONG HONG HONG | 9,450 5,940 AII (K) Iolulu 1,712 huku 6,733 11,680 7,520 11,680 16,030 DURAS A-HRZ) GKONG (Z) Igkong 6,750 IGARY A-HAZ) Japest | IZRO IZRO IZRO IZRO JAPA Kemika JYK JYR JYR JYS JYT IVA JVB JVC JVD JVF JVG JVH JVI JVN | 6.085 6.980 9.630 N (J) wa-Cho 13.600 7.880 9.840 15.760 2aki 18.910 16.050 15.660 15.660 13.560 14.640 10.660 10.740 10.660 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.740 10.750 10.740 10.750 10. | PAA Hilve PCJ PHI PHI Koot PCK PCW PCV PDK PCV PDK PDV NETHE EAST (PKA YBA- Boot Bandje YDUS Cel Mac PNI Met YBZ JI Balik YCP Bant PLE | rsum 15.220 11.725 17.775 wijk 18.400 18.600 17.830 10.410 12.050 RIADIES POZ; YHZ) rmasin 1.850 3.330 obes 3.330 obes 17.850 18.858 17.850 18.838 17.850 14.480 12.290 | Mage YDK4 Mal YDB6 YDQ3 YDQ4 YDQ5 Pekal YDD7 YDJ2 Semz YDB2 YDB3 YDK5 YDK5 YDK6 YDA4 YDB2 YDB2 YDB2 YDB2 YDB2 YDB2 YDB2 YDB2 | slang 3.270 3.350 2.950 2.810 congan 3.270 2.810 congan 3.270 2.810 congan 3.270 2.910 3.190 2.710 1.550 2.110 congan 4.810 4.810 3.450 doi:1.550 4.810 4.810 3.450 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.810 3.450 doi:1.595 4.810 4.820 3.450 doi:1.595 4.810 3.450 doi:1.595 4.810 3.450 doi:1.595 do |

| YDO8 | 1.980 | Man | | JIB | 10.530 | Rug | by | KNLP | 3.410 | New Hay | |
|---------------------|----------------|------------|--------|------------|------------------|------------|----------------|----------------|---------|------------|--------|
| YDO9 | 1.880 | KAX | 19.980 | JIC | 5.890 | GAA | 20.368 | KNLQ | 3.410 | | 2.466 |
| Tandjong | | KAY | 14.980 | | | GAQ | 18.970 | KNLR | 3.410 | New Lon | |
| YDA | 3.040 | KAZ | 9.990 | UNION | | GAS | 18.304 | Devils Por | | NOU | 2.670 |
| YDA | 6.040 | KBK | 6.718 | SOCIA | | GAU | 18.620 | KNKY. | 2.604 | | |
| YDA8 | 1.510 | KTO | 16.240 | SOVI | | GAW | 18.200 | Dixo | | DISTRICT | |
| Tega | al i | KTP | 8.120 | REPUB | | GBA | 13.984 | | 21.060 | COLUME | SIA |
| YDJ3 | 2.870 | KZGF | 5.765 | (R; U | U) | GBB | 13.500 | KWO | 15.415 | | |
| Tjep | oe | KZGF | 9.170 | | | GBC | 4.430 | KWU | 15.355 | Washing | |
| YDB4 | 1.615 | | | Bak | | GBC | 4.975 | KWV | 10.840 | WPDW | 2.422 |
| YDM2 | 3.320 | POL | | RIO | 10.160 | GBC | 8.680 | KWX | 7.610 | | |
| Suma | tra | (SOA- | SRZ) | Irku | | GBC | 12.780 | KWY | 7.565 | FLORIC |)A |
| Meda | | | | RSZ | 8.770 | GBC | 17.080 | El Cen | | | |
| YBG | 10.430 | Pozi | | RTZ | 7.275 | GBP | 10.770 | KNGJ | 2.490 | Clearwa | |
| YDU2 | 3.370 | SR1 | 9.490 | Khaba | | GBS | 12.150 | Fresi | | | 2.466 |
| YDU3 | 5.269 | | | RV15 | 4.273 | GBU | 12.240 | KGZA | 2.414 | Dry Torti | |
| YDU4 | 2.830 | PORT | | Khar | kov | GBU | 22.296 | Lod | | | 3.410 |
| | | (CSA- | CUZ) | RFF | 7.260 | GBW | 14.440 | | 2.414 | Ft. Laude | |
| NEW ZE | | | | Mose | | GBX | 10.530 | Los An | geles | NMV | 2.670 |
| (ZKA-Z | ZMZ) | Lisi | bon | RKE | 4.875 | GBX | 16.150 | KGPL | 1.712 | Gainsvi | |
| | | CSL | 6.150 | RKF | 6.870 | GCA | 9.710 | KIIY | 2.726 | | 2.466 |
| Wellin | gton | CT1AA | 9.600 | RKF | 6.880 | GCB | 9.280 | KIKL | 6.615 | Hialea | |
| ZLR | 7.390 | CT1AA | 15.350 | | 6.900 | CC1 | 13,415 | Oakla | | WND | 4.098 |
| ZLS | 8.900 | CT1CT | 3.750 | RKF RKF | 9.750 | GCP | 7.920 | KBCH | 3.385 | | 12.930 |
| ZLT | 10.990 | CT1CT | 12.223 | RKF | 12.500 | GCS | 9.020 | Palo A | | ****** | 15.055 |
| | | Par | | | | GCU | 9.950 | KGHK | 1.674 | Jackson | |
| NICARA | | CT1G0 | 6.132 | RKI | 7.520 | GCW | 9.790 | Pasad | ena | WPFG | 2.442 |
| (YNA- | YNZ) | | | RKI | 15.040 | GDB | 6.790 | KGJX _ | 1.712 | Key We | est |
| | | | A MI | RKI | 15.090 6.135 | GDS | 6.995 | Point B | | wwz | 3.410 |
| Mana | agua | (HSA- | -HSZ) | RKK | | GDW | 4.820 | NMC | 2,670 | Lakelai | |
| YNA | 14.480 | | | RKK | 12.270 | G6RX | 4.320 | Pomo | | WPFT | 2.442 |
| YN1GG | 6.450 | Ban | gkok | RNE | 12.000 | | | KNFJ | 1.712 | Miam | |
| | | HSJ | 8.020 | RPK | 7.225 | UNI | | Sacram | | NOM | 2.678 |
| NORV | VAY | HSP | 7.968 | RRD | 8.225 | STA | | KNGF | 2.422 | WPFZ | 2.442 |
| (LAA- | LNZ) | HSP | 8.396 | RV59 | 5.996 | (K; N | I; W) | San Berr | iardino | W4XB | 6.040 |
| | | HSP | 17.740 | Novos | | | | KGZY | 1.712 | Opa Lo | |
| Jele | рy | | | RTA | 6.440 | ALAB | AMA | San D | iego | WMEV | 2.930 |
| LCL | 6.130 | | HERN | Stali | insk | | | KGZD | 2,490 | WMEV | 6.615 |
| LCO | 13.980 | RHO | DESIA | RSB | 5.375 | Birmir | | San Frai | | Orland | io |
| LKJ1 | 9.540 | (Z | E-) | | | WPFM | 2.382 | KGPD | 2.466 | WPHM | 2.442 |
| | | | | Sverd | | Maxwe | II Field | San Ga | | Palm Be | nob. |
| PANA | MA | Bula | wayo | ROI | 5.490 5.440 | PD1 | 6.445 | Dar | | WPFX | 2.442 |
| (HPA- | HPZ) | ZEB | 6.590 | 1 | _ | | bile | KHW | 2,726 | | |
| | | Salis | sbury | Tash | | NMG | 2.670 | San J | ese | St. Peters | |
| Panama | | ZEA | 6.590 | RAU | 15.104 | WPGW | 2.382 | KGPM | 2.466 | NOF | 2.670 |
| HPC | 10.290 | | | RIM | 7.626 | WPGW | 2.382 | San P | edro | WMEU | 2.930 |
| HPF | 14.545 | SP | AIN | RPT | 5,995 | 4517 | ONA | NGJ | 2.670 | WMEU | 6.615 |
| HP5B | 6.030 | (EAA | -EHZ) | i Tit | flis | ARIZ | LONA | San R | | Tamp | a |
| HP5J | 9.590 | | | RIR | 5.040 | DI- | enix | KLH | 2.506 | WPHN | 2.466 |
| - | | | drid | RIR | 10,080 | KNGG | 1.698 | Santa | | | |
| PARAC | | EAQ | 9.862 | | | | | KGHX | 2.430 | GEORG | AIG |
| (ZPA- | ZPZ) | | | UNIO | N OF | KNZJ | 2.430 | Santa B | | | |
| | | | AITS | SOUTH | | . 51/ / | | KGZO | 2,414 | Atlan | ta |
| Asun | cion | SETTLE | EMENTS | | -ZUZ) | ARKA | INSAS | Santa | Cruz | WPDY | 2.414 |
| ZP10 | 6.666 | | H-) | (237 | | | | KGZT | 1.673 | Columi | |
| ZP11 | 3.800 | ļ | | Cane | town | | Rock | Tujunga | Dam | | |
| | | | nang | zss | 18.890 | KGHZ | 2.406 | KHX | 2,726 | WPFI | 2.414 |
| PEI | RU | | 6.080 | | | | OBNICA | Tula | | La Gra | |
| (OAA- | OCZ) | Sing | ароге | | nesburg C 122 | CALIF | ORNIA | WPDA | 2.414 | WPGM | 2.414 |
| | | ZHI | 6.060 | ZTJ | 6.123 | | | Vall | ejo | Maco | n |
| Lin | na | | | Walvi | s Bay | | rsfield | KGPG | 2,422 | WQFB | 2.414 |
| OAX4B | 6,238 | | ERLAND | ZSV | 8.220 | KGPS | 2.414 | Whit | | | |
| OAX4D | 5.789 | (HBA | -HBZ) | ZSV | 12.500 | Berl | keley | KGHY | 1.712 | IDAH | 0 |
| OCI | 10.962 | | | | | KSW | 1.658 | Wilmir | | | |
| OCI | 18.670 | | rne | | TED | KSW | 2,422 | KOU | 2,566 | Idaho F | alls |
| OCI | 15.625 | HB9AT | 14.290 | | DOM | Ral | inas | Yoset | | KNFB | 2.458 |
| oco | 7.820 | HB9B | 14.236 | (G; | M) | KEE | 7.715 | KNKS | 2.604 | | |
| | | HB9H | 7.005 | | | KEJ | 9.010 | KNKU | 2.604 | | DIS |
| PHILI | PPINE | HB9J | 14.400 | | entry | KEL | 6.860 | KNKX | 2.604 | | |
| ISLA | NDS | Ge | neva | GSA | 6.050 | KES | 10.410 | Yre | | Chica | go |
| (F | () | HBF | 18.950 | GSB | 9.510 | KEZ | 10.400 | KBCG | 2.385 | WPDB | 1.712 |
| | | нвн | 18.450 | GSC | 9.580 | KKL | 15,475 | 1 | | WPDC | 1.712 |
| Cebu | Island | HBJ | 14.535 | GSD | 11.750 | KKQ | 11.950 | COLO | RADO | WPDD | 1.712 |
| Ce | bu | HBL | 9.595 | GSE | 11.860 | KKW | 13.780 | | | WSXAA | 6.080 |
| KZGG | 5.825 | | 12.030 | GSF | 13.140 | KKZ | 13.690 | Den | ver | WAXAA | 11.830 |
| KZGG | 8.940 | | 7.797 | GSG | 17.790 | KOJ | 18.020 | KGPX | 2.442 | W9XAA | 17.780 |
| | Island | 1 | | GSH | 21.470 | 1 | | | | 1 | |
| Houto | | TAIW | AN (J) | GSI | 15.260 | | 1pton 2.490 | CONNEC | TICUT | Highland | 2.430 |
| licilo Ile | ile | | | | | KNFM | 7.490 | | | | Z.4.5U |
| | 11e 5,795 | | | GSJ | 21.530 | 1 | | | | ***** | |
| Ilo KZGH KZGH | 5.795 9.498 | Tai | hoku | GSK | 26.100 | Death | Valley | Bridge | epert | Reckfe | ord |
| Ilo KZGH KZGH | 5,795 | | | GSK | | Death | | Bridge WPFW | 2,466 | ***** | |

| Wilmette | LOUISIANA | E. Lansing | NEVADA | Bronx | S. Schenectady |
|--|---|--|--|---|---|
| NMP 2.670 | | WRDS 1.642 | | WPEF 2,450 | WPGC 1.658 |
| NMP 2.698 | Baton Rouge | Flint | Reno | Brooklyn | St. George |
| Wheeling | WPEQ 1.570 | WPDF 2.442 | KGHM 2.474 | WPEE 2.450 | WOX 2.590 |
| WMEQ 6.615 | | | NGHW 2.4/4 | | |
| AMEG 6.612 | New Orleans | Fourteen Foot | | Buffalo | Syracuse |
| | WPEK 2.430 | Shoals | NEW | NOB 2.670 | WPEA 2.382 |
| INDIANA | £ 10 | WWE 3.410 | HAMPSHIRE | NOB 2.698 | Utica |
| | Shreveport | Grand Rapids | | WMJ 2.422 | WPGJ 2.414 |
| Columbia City | KGPY 1.574 | WPEB 2.442 | Nashua | Huntington | Yonkers |
| 1.634 | KGZL 1.712 | Grosse Pointe | WPHB 2.422 | WPGO 2.490 | WPFY 2.442 |
| Culver | KNGP 2.430 | WRDR 2.414 | | | |
| WPHS 1.634 | | Highland Park | NEW JERSEY | Mineola | NORTH |
| Fort Wayne | MAINE | WMO 2,414 | NEW JERSE! | WPGS 2.490 | CAROLINA |
| | | | Round Brook | Mitchell Field | CAROLINA |
| | Portland | Huron Island | Douna Dioon | WO9 6.385 | |
| Indianapolis | WPFU 2.422 | WWAO 3.410 | W3XAL 6.100 | | Asheville |
| WMDZ 2.442 | 11770 2.422 | Jackson | W3XAL 17.780 | New York | WPFS 2.458 |
| 1.634 | DA A DAVI A NO | WPHP 2.466 | W3XL 6.425 | WOZ 3.423 | WPFS 2.474 |
| Jasper | MARYLAND | Lansing | W3XL 17.310 | WPEG 2.450 | Charlotte |
| WPHU 1.634 | | WPDL 2.442 | Cape May | Niagara Falls | WPDV 2.458 |
| Kokomo | Baltimore | Manitou Islan d | NOV 2.670 | WNFP 2.422 | |
| WPDT 2.490 | WPFH 2.414 | WWAJ 3,410 | Hackensack | | OHIO |
| Marion County | | Marquette | WPFK 2.430 | Oneonta | |
| WPHE 1.634 | MASSA- | WWM 3.410 | Lawrenceville | 2.414 | Akron |
| | CHUSETTS | | | Destautes | WPDO 2.458 |
| Muncie | | Muskegon WPFC 2.442 | WKA 21.060 WKF 4.253 | Rochester WPDR 2.422 | |
| WPGP 2.442 | Arlington | | ****** | WPDR 2.422 | Cincinnati |
| Richmond | WPED 1.712 | Passage Island | WKF 19.220 | Rockaway Point | WKDU 1.706 |
| | | WWAL 3.410 | WKK 21.410 | NMY 2.670 | W8XAL 6.060 |
| WPDH 2.442 | Boston | Poe Reef | WKN 19.820 | | Cleveland |
| Seymour | WEY 1.630 | WRJ 3.410 | WLA 18.350 | Rocky Point | NMD 2.670 |
| WQFE 1.634 | WPGV 1.712 | Port Huron | WLK 16.270 | WAD 8.930 | NMD 2.698 |
| | W1XAL 6.040 | WPGB 2.466 | WMA 13.390 | WAJ 13.480 | WRBH 2.458 |
| South Bend | W1XAL 11.790 | | WMF 14.470 | WBU 21.260 | Columbus |
| WPGN 2.490 | W1XAL 15.250 | Rock of Ages | WMN 14.590 | WDB 6.718 | WPDI 2.430 |
| | | WWAM 3.410 | | WDG 4.535 | |
| 10WA | W1XAL 21.460 | Saginaw | WNA 9.170 | WDN 4.550 | WPGQ 1.596 |
| | W1XH 2.110 | WPES 2.442 | WNB 10.675 | WDS 18.900 | Dayton |
| Cedar Rapids | Brookline | | WOA 6.755 | WEA 10.610 | WPDM 2.430 |
| KGOZ 2.466 | WPEJ 1,712 | Sault Ste. Marie | WOB 5.850 | WEB 6.935 | Findlay |
| | | NOR 2.670 | WOF 9.750 | | WPGG 1.596 |
| Davenport | Fairhaven | NOR 2.698 | WOK 10.550 | WEC 8.930 | Lancaster |
| KGPN 2.466 | WPFN 1.712 | Selfridge Field | WON 9.870 | WEL 8.950 | WQFO 2.430 |
| Des Moines | Fitchburg | | WOY 4.178 | WEL 13.435 | Lorain |
| KGHO 1.682 | WPHA 2.466 | VK1 6,425 | WOY 4.753 | WEM 7.400 | WMES 2,550 |
| KGZG 2.466 | | Stannard Rock | WOY 8.560 | WES 9.448 | Massillon |
| | Framingham | WWH 3,410 | WOY 12.840 | WET 9.470 | WPHC 1.596 |
| Sioux City | WMP 1.666 | | | WEZ 6.928 | |
| KGPK 2.466 | Gloucester | MINNESOTA | WOY 17.120 | WIR 4.276 | Portsmouth |
| Storm Lake | NOG 2.670 | | New Brunswick | WIR 4.540 | WPGI 2.430 |
| KNFO 1.682 | | Duluth | WKJ 9.460 | WIY 13.870 | Steubenville |
| | Marshfield | KNFE 2.382 | Ocean Gate | WJN 7.370 | WPHD 2.458 |
| Waterloo | WOU 2.506 | | WOG 4.253 | | Suffield |
| KNFN 1.682 | Medford | Minneapolis | WOO 4.178 | | WMEP 2.930 |
| | WPHG 1.712 | KGPB 2.430 | WOO 4.753 | WKL 8.940 | WMEP 6.615 |
| KANSAS | Millis | St. Paul | WOO 8.560 | WKM 18.860 | Toledo |
| | W1XK 9.570 | | WOO 12.840 | WKO 15.970 | WRDQ 2.474 |
| Chanute | Newton | WPDS 2.430 | WOO 17,120 | WKP 6.950 | Wilmington |
| KGZF 2.450 | WPFA 1.712 | | Passaic | WKU 14.830 | WPHK 1.596 |
| | Northampton | MISSOURI | WPDJ 2.414 | WKW 15.445 | Wright Field |
| Coffeyville | WPEW 1.666 | | | WLL 17.900 | PE2 6.445 |
| KGZP 2.450 | Somerville | Jefferson City | Tuckerton WCG 10.370 | WPE 13,840 | |
| Dodge City | WPEH 1.712 | KIUK 1.674 | | WOB 17.940 | Youngstown |
| KNGH 2.474 | | Kansas City | Wayne | WQC 17.860 | WPDG 2.458 |
| | W. Bridgewater | KGPE 2.422 | W2XE 6.120 | WQE 18.920 | Zanesville |
| Garden City | WPEL 1.666 | | W2XE 11.830 | WQF 17.920 | WPHO 2.430 |
| KNFH 2.474 | Winthrop | Napoleon | W2XE 15.270 | | WPHO 2.430 |
| Hutchinson | NMF 2.670 | WYBF 2.604 | | WQG 15.040 | |
| KGHN 2.450 | Woods Hole | St. Louis | NEW MEXICO | WQH 18.880 | OKLAHOMA |
| | NOP 2.670 | KGPC 1.706 | | WQI 17.880 | |
| Leavenworth | Worcester | Kare 1.700 | Albuquerque | WQL 14.815 | Duncan |
| KNFF 2.422 | WPGX 2.466 | MONTANA | KGZX 2.414 | WQN 5.263 | KNGK 2.450 |
| Manhattan | | MONTANA | Clovis | WQN 5.505 | Lawton |
| W9XAK 2.050 | MICHIGAN | | KNFA 2.414 | WQN 5.825 | KGHP 2.466 |
| | | Glacier Nat'l | • | WQO 6.725 | |
| | Bay City | Park | Santa Fe | WQP 13.900 | Muskogee |
| Topeka | | KNIA 2,604 | KGPF 2.414 | WQR 16.015 | KNGT 2.450 |
| KGZC 2.422 | WECK 2400 | | | | |
| KGZC 2.422 | WPGA 2.466 | | | WAS 12 01= | |
| KGZC 2.422 Wichita | WPGA 2.466 Chebeygan | NEBRASKA | NEW YORK | WQS 13.915 | Oklahoma City |
| KGZC 2.422 | WPGA 2.466 Chebeygan Range | NEBRASKA | NEW YORK | WQU 13.855 | KGPH 2.450 |
| KGZC 2.422 Wichita KGPZ 2.450 | WPGA 2.466 Cheboygan Range WWG 3.410 | | | WQU 13.855 WQV 14.800 | KGPH 2.450 Tulsa |
| KGZC 2.422 Wichita | WPGA 2.466 Cheboygan Range WWG 3.410 Detroit | Lincoln | Albany | WQU 13.855 WQV 14.800 WQW 10.600 | KGPH 2.450 |
| Wichita KGPZ 2.450 KENTUCKY | WPGA 2.466 Cheboygan Range WWG 3.410 Detroit WCK 2.414 | Lincoln KGZU 2.490 | Albany WPGH 2.414 | WQU 13.855 WQV 14.800 WQW 10.600 WQY 20.100 | KGPH 2.450 Tulsa KGPO 2.450 |
| Wichita KGPZ 2.450 KENTUCKY Lexington | WPGA 2.466 Cheboygan Range WWG 3.410 Detroit | Lincoln KGZU 2.490 Norfolk | Albany WPGH 2.414 Auburn | WQU 13.855 WQV 14.800 WQW 10.600 | KGPH 2.450 Tulsa |
| Wichita KGPZ 2.450 KENTUCKY | WPGA 2.466 Chebeygan Range WWG 3.410 Detroit WCK 2.414 WKDT 1.630 WPDX 2.414 | Lincoln KGZU 2.490 | Albany WPGH 2.414 | WQU 13.855 WQV 14.800 WQW 10.600 WQY 20.100 WTT 18.940 | KGPH 2.450 Tulsa KGPO 2.450 |
| Wichita KGPZ 2.450 KENTUCKY Lexington | WPGA 2.466 Chebeygan Range WWG 3.410 Detroit WCK 2.414 WKDT 1.630 WPDX 2.414 | Lincoln KGZU 2.490 Norfolk KNGN 2.490 | Albany WPGH 2.414 Auburn WPDN 2.382 | WQU 13.855 WQV 14.800 WQW 10.600 WQY 20.100 WTT 18.940 Schenectady | KGPH 2.450 Tuisa KGPO 2.450 OREGON |
| KGZC 2.422 Wichita KGPZ 2.450 KENTUCKY Lexington WPET 1.706 Louisville | WPGA 2.466 Chebeygan Range WWG 3.410 Detroit WCK 2.414 WKDT 1.639 WPDX 2.414 | Lincoln KGZU 2.490 Norfolk | Albany WPGH 2.414 Auburn | WQU 13.855 WQV 14.800 WQW 10.600 WQY 20.100 WTT 18.940 | Tulsa KGPO 2.450 OREGON Hood River |

| Klamath Falls KGZH 2.442 | TENNESSEE | VIRGINIA | Satus Pass Camp | Milwaukee WPDK 2.456 |
|-----------------------------|----------------|----------------|--------------------|---|
| Portland | Johnson City | Bolling Field | KNGA 2.490 | - |
| | WPGZ 2.474 | IS3 5.015 | Seattle | URUGUAY |
| KGPP 2.442 | Knoxville | Cape Henry | KGHD 2.490 | (CVA-CXA) |
| Salem | WPFO 2.474 | NMN 2,670 | KGPA 2.414 | |
| KGZR 2.442 | | Langley Field | WVD 2.604 | Montevideo |
| | Memphis | FG7 6.645 | WVD 5.995 | CWD 5.83 |
| PENN- | WPEC 2.466 | FG/ 6.645 | WVD 6.618 | CWE 6.61 |
| SYLVANIA | | | Shuksan Camp | CWF 8.45 |
| STEVANIA | TEXAS | WASHINGTON | | CWG 11.37 |
| | | | KNFL 2,490 | |
| Harrisburg | Austin | Aberdeen | Skykomish | CWH 13.14 |
| WPSP 1.674 | KGHU 2.442 | KGZV 2.414 | KNFU 2.490 | |
| New Castle | | Bear River | Snoqualmie | VATICAN |
| WPGT 2.482 | Beaumont | Camp | Pass | STATE |
| Oil City | KGPJ 1.712 | KNFY 2,490 | KGHE 2.490 | (HVA-HVZ) |
| WPHZ 2.482 | Brownsville | Bellingham | Spokane | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Philadelphia | KGHT 2.382 | KNFK 2,490 | KGHS 2.414 | Vatican City |
| WPDP 2.474 | | | KGHS 2.458 | HVJ 5.97 |
| WWHJ 3.410 | Brownwood | S. S. Cadrew | | HVJ 15.12 |
| | 2.458 | WIFI 2.738 | Sunrise | 15.12 |
| W3XAU 6.060 | | Carbon | KGYD 3.387 | |
| W3XAU 9.590 | Cleburne | KGYF 3.387 | Tacoma | VENEZUELA |
| Pittsburgh | KNGE 1.712 | Centralia | KGZN 2.414 | (YVA-YWZ) |
| WPDU 1.712 | Corpus Christi | KGHW 2,414 | Vancouver | |
| W8XK 6.140 | KGHV 2.382 | Chinook Pass | KNGC 2.490 | Barquisimeto |
| W8XK 9.570 | | KGHQ 2.490 | Walla Walla | YV8RB 5.87 |
| W8XK 11.870 | Dallas | Edmonds | KNGD 2.490 | Caracas |
| W8XK 15.210 | KVP 1.712 | | Wenatchee | YV2RC 6.11 |
| W8XK 17.780 | El Paso | | | YV3RC 6.15 |
| | KGZM 2.414 | Elienburg | 2.490 | |
| W8XK 21.540 | NGZWI 2.414 | KNFX 2.490 | White River | YV4RC 6.37 |
| Reading | Fort Werth | Ephrata | WGYE 3.387 | YV9RC 6.40 |
| WPFE 2.442 | KGPR 1.712 | 2.490 | Yakima | Maracaibo |
| Swarthmore | 0-1 | Everett | KNGB 2.490 | YV5RMO 5.85 |
| WPFQ 2.474 | Galveston | KNFP 2,414 | KNGU 2.414 | Maracay |
| | KNGL 1.712 | Grays Harbor | | YVQ 6.67 |
| RHODE | NOY 2.670 | NMW 2,670 | WEST | YVQ 13.33 |
| ISLAND | Houston | | VIRGINIA | YVR 9.16 |
| | KGBZ 1.712 | Hells Crossing | VIRGINIA | YVR 18.29 |
| Cranston | | Camp | | |
| WPGK 2.466 | Lubbeck | KNFZ 2.490 | Charleston | Valencia |
| | KGZW 2.458 | Longmire | WPHI 2.490 | YV6RV 6.52 |
| E. Providence | San Antonio | | Clarksburg | |
| WPEI 1.712 | KGZE 2.482 | KGYA 3.387 | WPFP 2.490 | VIRGIN |
| Pawtucket | | KGYB 3.387 | 1 | ISLANDS |
| WPFV 2.466 | Waco | Mt. Vernon | Fairmont | (W) |
| Woonsocket | KGZQ 1.712 | KNFI 2,414 | WPHJ 2.490 | (**) |
| WPEM 2.466 | Wichita Falls | 1 | Parkersburg | St. Themas |
| 44 PE 141 2.400 | KGZI 2.458 | Olympia | WPHQ 2,490 | |
| | NGZ1 2.430 | KNFG 2.490 | WF11Q 2.430 | WTDV 4.29 |
| SOUTH | | Paradise | MICCONICINI | St. Croix |
| DAKOTA | UTAH | KGYC 3.387 | WISCONSIN | WTDW 4.29 |
| | | | | 1 |
| Rapid City | Salt Lake City | Port Townsend | Kenosha | St. John WTDX 4.29 |
| KNGM 2,450 | KGPW 2,406 | NOZ 2,670 | WPEP 2.450 | WTDX 4.29 |

SHORT WAVE STATIONS BY CALLS

| CEC | 5.820 | CFT | 2.284 | CGP | 3.268 | CJW | 2.416 | CP7 | 15.300 | CZG | 2.416 | DDCP | 4.413 |
|------|--------|-------|--------|------|--------|-------|--------|-------|--------|------|--------|------|--------|
| CEC | 7.748 | CFU | 4.755 | CGP | 5.405 | CIX | 2.290 | CQN | 6.073 | CZG | 6.425 | DDCP | 8.830 |
| | • | CFU | 5.660 | CGQ | 1.596 | CJZ | 2.452 | CRCX | 6.090 | CZJ | 1.596 | DDCP | 13.040 |
| CEC | 8.716 | CFU | 6.720 | CGQ | 1.668 | CKB | 2.284 | CREAA | 7.175 | CZJ | 1.668 | DDFF | 4.413 |
| CEC | 10.670 | CFU | 13.200 | CGT | 4.865 | СКО | 2.284 | CSL | 6.150 | CZL | 2.290 | DDFF | 8,830 |
| CEC | 15.860 | CFV | 2.290 | CGV | 1.596 | CKP | 2.284 | CT1AA | 9.600 | CZO | 4.505 | DDFF | 13.040 |
| | | CFW | 2.290 | CGV | 1.668 | CKS | 3.848 | CT1AA | 15.350 | CZP | 4.505 | DDFT | 4,413 |
| CEC | 19.680 | CFX | 2.284 | CGY | 3.152 | CKS | 7.550 | CT1CT | 3,756 | CZQ | 4.505 | DDFT | 8.830 |
| CFA2 | 4.465 | CGA | 18.180 | CGZ | 2.452 | CKU | 2.284 | CT1G0 | 6.132 | CZV | 3.300 | DDFT | 13.040 |
| CFC | 1.596 | 10000 | 13.745 | CJA3 | 17.710 | CMB | 5.780 | CT2AJ | 4.000 | CZV | 4.840 | DFB | 17,520 |
| | | CGA4 | 9.332 | CJA6 | 6.760 | CNR | 8.035 | CWD | 5.830 | CZY | 1.620 | DGK | 6.675 |
| CFC | 1.668 | CGA6 | 6.690 | CJD | 1.510 | CNR | 12.820 | CWE | 6,610 | CZZ | 1.620 | DGU | 9.609 |
| CFD | 1.620 | CGA7 | 6.880 | CJD | 1.540 | COCD | 6.130 | CWF | 8.455 | DAF | 4.320 | DHAO | 4.413 |
| CFD | 5.660 | CGA9 | 4.348 | CJE | 2.290 | COCH | 9,428 | CWG | 11.370 | DAF | 8.464 | DHAO | 8.830 |
| CFJ | 1.620 | CGD | 3.340 | CJK | 1.510 | COCO | 6.010 | CWH | 13,140 | DAF | 12.325 | DHAO | 13.040 |
| CFJ | 5.660 | CGE | 3.040 | CJM | 1.580 | COSGC | 6.150 | CZA | 2.980 | DAF | 12.745 | DHDL | 4.413 |
| CFL | 1.620 | CGE | 7.550 | CJRO | 6.150 | COSIG | 8.665 | CZA | 4.785 | DAF | 17,260 | DHDL | 8.830 |
| CFM | 1.620 | CGM | 3.152 | CJRX | 11.720 | COSWR | 11.800 | CZA | 17.310 | DDBR | 4.413 | DHDL | 13.040 |
| CFQ | 3.040 | | 3.340 | | 3.070 | CP5 | 6.080 | CZB | 1.620 | DDBR | 8.830 | DHEY | 4.413 |
| CFQ | 7.550 | CGO | 4.506 | CJU | 3.452 | CP6 | 9.120 | CZG | 1.712 | DDBR | 13.040 | DHEY | 8.830 |

| DHEY | 13.048 | GCB | 9 280 | HJ4ABI | 6 100 | KBCA | 3.385 | KGYI | 3.387 | KIJZ | 2.728 | KNLP | 3.410 |
|------------|-------------------------|---------------|------------------|------------|------------------|--------------|-----------------|--------------|----------------|------------|-----------------|------------|----------------|
| DHEY | 16.460 | GC1 | 13.415 | HJ5AB | | KBCB | 3.385 | KGZA | 2.414 | KIKL | 6.615 | KNLQ | 3.410 |
| DHJZ | 4.413 | GCS | 9.020 | HJ5AB | | KBCD | 3.445 | KGZB | 1.712 | KIKN | 3.093 | KNLR | 3,410 |
| DHJZ | 8.830 | GCU | 9.958 | HKE | 7.090 | KBCE | 3.445 | KGZC | 2.422 | KIKY | 3.265 | KNLS | 3.387 |
| DHJZ | 13.040 | GCW | 9.790 | HPC | 10.290 | KBCF | 3.445 | KGZD | 2.490 | KILB | 2.150 | KNLX | 3.387 |
| DHO | 20.020 | GDB | 4.320 | HPF | 14.545 | KBCG | 3.385 | KGZE | 2.482 | KILU | 1.622 | KOU | 2.566 |
| DHRL | 4.413 | GDB | 6.790 | HP5B | 6.030 | KBCH | 3.385 | KGZF | 2,450 | KILU | 2.150 | KOW | 2.522 |
| DHRL | 8.838 | GDLJ | 4.430 | HP5J | 9.590 | KBCJ | 3.155 | KGZG | 2.466 | KILY | 2,994 | KQJ | 18.020 |
| DHRL | 13.040 | GDLJ | 13.320 | HRM | 13.810 | KBK | 6.718 | KGZH | 2,442 | KIMA | 2.632 | KRO | 5.845 |
| DHTY | 4.413 | GDS | 6.095 | HRM | 14.500 | KDH | 2.538 | KGZI | 2.458 | KINT | 2.726 | KSW | 1,658 |
| DHTY | 8.839 | GDW | 4.820 | HSJ | 8.020 | KDK | 2.538 | KGZJ | 2.430 | KIO | 11.680 | KSW | 2.422 |
| DHTY | 13.040 | GLRZ | 4.415 | HSP | 7.968 | KDV | 2.538 | KGZL | 1.712 | KIOC | 2.632 | KTO | 16.240 |
| DHTY | 16.765 | GMBJ | 4.413 | HSP | 8.396 | KDX | 2,986 | KGZM | 2.414 | KIOD | 2.632 | KTP | 8.120 |
| DIQ | 10.285 | | 12,955 | HSP | 17.740 | KDY | 2,994 | KGZN | 2.414 | KIOG | 1.622 | KVP | 1.712 |
| DJA | 9.560 | GSA | 6.050 | HVJ | 5.970 | KEE | 7,715 | KGZO | 2.414 | KIOH | 2.632 | KWN | 21.060 |
| DIB | 15.200 | GSB | 9.510 | HVJ | 15.120 | KEJ | 9.010 | KGZP | 2.450 | KIOL | 2.632 | KWO | 15.415 |
| DID | 6.02 0 11.778 | GSC GSD | 9.580 | IAC | 4.355 | KEL | 6.860 | KGZQ | 1.712 | KION | 2.616 | KWU | 15.355 |
| DIE | 17.760 | GSE | 11.750 | IAC | 6.650 | KEQ | 6.733 | KGZR | 2.442 | KIUK | 1.674 | KWV KWX | 10.840 |
| DJG | 4.580 | GSE | 11.860 15.140 | IAC | 12.795 | KES | 10.410 | KGZT KGZU | 1.674 2.490 | KKH KKL | 7.520 15.475 | KWY | 7.610 7.565 |
| DJK | 12.035 | GSG | 17.790 | IAC | 17.770 5.415 | KEZ | 10.400 2.566 | KGZV | 2,414 | KKP | 16.030 | KZGF | 5.765 |
| DIM | 6.080 | GSH | 21.470 | IAF | 29.820 | KGHA | 2.490 | KGZW | 2.458 | KKQ | 11.950 | KZGF | 9.170 |
| DJN | 9.540 | | 15.260 | IAG | 30.604 | KGHB | 2.490 | KGZX | 2.414 | KKW | 13.780 | KZGG | 5.825 |
| DIO | 11.790 | GSJ | 21.530 | ICEJ | 13.050 | KGHC | 2.490 | KGZY | 1,712 | KKZ | 13.690 | KZGG | 8.940 |
| DIO | 15.280 | GSK | 26.100 | IRA | 6.070 | KGHD | 2.490 | KHP | 1.622 | KLA | 2.566 | KZGH | 5.795 |
| DJR | 15.340 | GSL | 6.110 | IRE | 11.610 | KGHE | 2.499 | KHV | 2.566 | KLB | 2.512 | KZGH | 9.490 |
| DOAH | 4.413 | GGRX | 4.320 | IRF | 8.070 | KGHG | 2,474 | KHW | 2.912 | KLC | 2.512 | LCL | 6.130 |
| DOAH | 8.838 | HAS3 | 15.370 | IRM | 9.823 | KGHK | 1.674 | KHZ | 2,912 | KLD | 2.566 | LCO | 13.980 |
| DOAH | 13.040 | HAT | 5.400 | IRO | 9.789 | KGHM | 2.474 | KIAP | 3.093 | KLE | 2.512 | KLJ1 | 9.540 |
| DOAL | 4.413 | HAT2 | 7.220 | IRW | 19.520 | KGHN | 2.450 | KIAW | 3.093 | KLGK | 2.738 | LQA | 9.600 |
| DOAL | 8.830 | HAT3 | 8.565 | 153 | 5.015 | KGHO | 1.682 | KIAY | 3.893 | KLH | 2.506 | LSF | 19,600 |
| DOAL | 13.040 | HAT4 | 9.125 | I2RO | 5.550 | KGHP | 2.466 | KIBA | 3.093 | KMYA | 2.304 | LSG | 19.900 |
| DOAL | 16.600 | | 18.950 | 12R0 | 5.725 | KGHQ | 2.490 | KIBZ | 3.265 | KMYA | 4.610 | LSK3 | 10.250 |
| DOBX | 4.413 | | 18.450 | 12RO | 6,085 | KGHR | 2.490 | KICE | 3.265 | KNBZ | 2.994 | LSL | 9.990 |
| DOBX | 8.830 | HBJ | 14.535 | 12RO | 6.980 | KGHS | 2.458 | KICG | 3.265 | KNED | 1.606 | LSM | 19.120 |
| DOBX | 13.040 | HBL | 9.595 | 12R0 | 9.630 | KGHT | 2.382 | KICI | 3.093 | KNFA | 2.414 | LSM | 21.128 |
| EAQ | 9.862 | HBP | 7.797 | JDX | 15.510 | KGHU | 2.442 | KIDE | 3.265 | KNFB | 2.458 | LSN | 9.895 |
| FG7 | 6.645 | | 12.030 | JDY | 9.920 | KGHV | 2,382 | KIED | 1,622 | KNFE | 2.382 | LSN | 14.480 |
| FNSK | 4.390 | | 14.290 | JDZ | 5.710 | KGHW | 2.414 | KIED | 2.150 | KNFF | 2.422 | LSN | 21.020 |
| FNSK | 4.410 | | 14.236 | JIA | 15.750 | KGHX | 2.438 | KIEF | 1.622 | KNFG | 2.490 | LSN2 | 9.890 |
| FNSK | 8.810 | HB9H | 7.005 | JIB | 10.530 | KGHY | 1.712 | KIEF | 2.150 | KNFH | 2.474 | LSR | 18.958 |
| FNSK | 8.830 | | 14.400 | TIC | 5.890 | KGHZ | 2.406 | KIEJ | 2.994 | KNF | 2.414 | LSX | 10.350 |
| FNSK | 13.190 | HCJB | 8.214 | JVA | 18.910 | KGI | 2,632 | KIEL | 1.622 | KNFJ | 1.712 | LSY3 | 18.115 |
| FNSK | 13.210 | HCK | 5.815 | JAB | 18.190 | KGJX | 1.712 | KIEL | 2.150 | KNFK | 2.490 | NMC | 2.670 |
| FNSM | 4.413 | HC2CW | 8.625 | JAC | 16.050 | KGM | 2.512 | KIEO | 2.150 | KNFL | 2.490 | NMD | 2.670 |
| FNSM | 8.839 | HC2ET | 4.690 | JAD | 15.860 | KGOZ | 2.466 | KIFI | 1.622 | KNFM | 2.490 | NMD | 2,698 |
| FNSM | 13.395 | HC2JSB | | JVE | 15.660 | KGPA | 2.414 | KIFI | 2.150 | KNFN | 1.682 | NMF | 2.670 |
| FTA | 11.846 | HC2JSB | | JVF | 15.620 | KGPB | 2.430 | KIFT | 2.150 | KNFO | 1.682 | NMG | 2.670 |
| FTE FTK | 18.330 15.863 | HC2RL | €.659 | JVG | 14.910 | KGPC | 1.706 | KIGA | 1.606 | KNFP | 2.414 | NMN | 2.670 |
| FTM | | HIH | 6.800 | JVH | 14.640 | KGPD | 2.466 | KIGA | 2.102 | KNFR | 2.490 | NMP | 2.670 |
| FTN | 19.355 12.260 | | 10.040 | IVI | 13.560 | KGPE | 2.422 | KIGW | 2.102 | KNFS | 2.490 | NMP NMV | 2.698 |
| FTNQ | 4.413 | HIL | 6.518 5.980 | 16K 161 | 12.270 | KGPF | 2.414 | KIIH | 2.190 | KNFU | 2.490 | NMW | 2.670 2.670 |
| FTNQ | 8.830 | HIZ | 6.340 | | 12.020 | KGPG | 2.422 | | | KNFY | 2.490 | NMY | 2.670 |
| FTNQ | 13.395 | HI1A | 6.240 | JVM | 11.660 10.740 | KGPH KGPI | 2.450 | KIIJ | 3.190 2.994 | KNFZ | 2.490 | NOB | 2.670 |
| FZR | 16.200 | H14D | 6.580 | JVM | | KGPJ | 1.712 | KIIK | 3.190 | KNGA | 2.490 | NOB | 2.698 |
| FZS | 18.342 | HJA2 | 5.825 | JVO | 10.660 10.375 | KGPK | 2.466 | KIIL | 2.994 | KNGB | 2.490 | NOF | 2.670 |
| FZS2 | 11.998 | HJA3 | 7.685 | JVP | 7.510 | KGPL | 1.712 | KIIL | 3.190 | KNGC | 2.490 | NOG | 2.670 |
| GAA | 20.368 | HJA3 | 8.790 | JVQ | 7.470 | KGPM | 2.466 | KUM | 2.994 | KNGD | 2.498 | NOJ | 2.678 |
| GAQ | 18.970 | | 12.830 | JVR | 7.390 | KGPN | 2.466 | KIIM | 3.190 | KNGE | 1.712 | NOM | 2.670 |
| GAS | 18.304 | HJA7 | 5.400 | JVS | 6.990 | KGPO | 2.450 | KIIN | 2.994 | KNGF | 2.422 | NOP | 2.670 |
| GAU | 18.629 | | 14.938 | JVT | 6.750 | KGPP | 2,442 | KIIN | 3.190 | KNGG | 1.698 | NOR | 2.670 |
| GAW | 18,200 | HJN | 6.080 | JVU | 5.790 | KGPQ | 1.712 | KIIO | 2.994 | KNGH | 2,474 | NOR | 2.698 |
| GBA | 13,984 | HJP | 7.465 | JVV | 5.730 | KGPR | 1.712 | KIIO | 3.190 | KNGJ | 2.490 | NOU | 2.670 |
| GBB | 13.500 | HJY | 9.930 | JYK | 13,600 | KGPS | 2.414 | KHP | 3.093 | KNGK | 2,450 | NOV | 2.670 |
| GBC | 4.439 | HJY | 18.444 | JYR | 7.880 | KGPW | 2.406 | KILQ | 2.150 | KNGL | 1.712 | NOY | 2.670 |
| GBC | 4.975 | HJ1ABB | 6.447 | JYS | 9.840 | KGPX | 2.442 | KIIW | 2.726 | KNGM | 2,450 | NOZ | 2.670 |
| GBC | 8.680 | HJ1ABD | | JYT | 15.760 | KGPY | 1.574 | KIIX | 2.726 | KNGN | 2.498 | OAX4D | |
| GBC | 12.780 | HJ1ABE | 6.115 | JZA | 15.680 | KGPZ | 2.450 | KIIY | 2.726 | KNGO | 2.450 | OAX4G | |
| GBC | 17.080 | HJ1ABG | | JZB | 10.960 | KGQ | 2.986 | KIJB | 2.994 | KNGP | 2.430 | OCI | 18.670 |
| GBP | 10.770 | HJ1ABH | | JZC | 5.830 | KGX | 2.632 | KIJI | 1.622 | KNGT | 2.450 | OER2 | 6.072 |
| GBS | 12.150 | HJ1ABJ | | JZD | 16.910 | KGXU | 1,622 | KIJK | 1,622 | KNGU | 2.414 | OPL | 20.040 |
| GBU | 12.240 | HJ2ABA | | JZE | 13.020 | KGXW | 1.696 | KIJO | 1.622 | KNGQ | 2.490 | OPM | 10.135 |
| GBU | 22.290 | HJ2ABC | | JZF | 8.500 | KGYA | 3.387 | KIJP | 2.986 | KNGR | 2.490 | ORG | 19.200 |
| GBW | 14.440 | HJ2ABD | | JZG | 6.330 | KGYB | 3,387 | KIJR | 2.986 | KNIA | 2.604 | ORK | 10.330 |
| GBX | 10.530 | HJ3ABD | | KAX | 19.980 | KGYC | 3.387 | KIJS | 1.622 | KNKG | 3.410 | OXY | 6.060 |
| GBX | 16.150 | HJ3ABF | 6.200 | KAY | 14.980 | KGYD | 3.387 | KIJU | 2.986 | KNKS | 2.604 | OXY | 9.490 |
| GBZW | 4.413 | HJ3ABH | | KAZ | 9.990 | KGYE | 3.387 | KIJV | 1.622 | KNKU | 2.604 | OXY | 15.300 |
| GBZW | 8.830 | HJ4ABA | | KBAA | 3.385 | KGYF | 3.387 | KIJW | 2.632 | KNKX | 2.604 | PCJ | 15,220 |
| GBZW | 13.320 | HJ4ABC | 6.230 | KBAI | 2.304 | KGYG | 3.387 | KIJX | 2.632 | KNKY | 2.604 | PCK | 18.400 |
| GCA | 9.710 | HJ4ABE | 5.900 | KBAM | 3.445 | KGYH | 3.387 | KUY | 2.728 | KNLO | 3.410 | PCM | 18.600 |
| | | | | | | _ | | | | | | | |

| PCV | | VE9CS | | WIEX | 2.102 | WPDD | 1,712 | | 2.382 | W1XAL | | YDG4 | 2.850 |
|--------|--------|-------|--------|------|--------|------|-------|------|--------|-------|--------|--------|--------|
| PDK | 10.410 | VE9DN | 6.005 | WIEX | 2.390 | WPDE | 2.442 | WPGX | 2.466 | W1XAL | | YDG5 | 2.090 |
| PDK | 12.050 | VE9DN | 9.555 | WIFE | 2.738 | WPDF | 2,442 | WPGZ | 2.474 | W1XAL | | YDG6 | 1,900 |
| PD1 | 6.445 | VE9DR | 6,005 | WIR | 4.276 | WPDG | 2.458 | WPHA | 2.466 | W1XAL | 21.460 | YDG7 | 3.300 |
| PE2 | 6.445 | VE9DR | 9.580 | WIR | 4.540 | WPDH | 2,442 | WPHB | 2.422 | W1XH | 2.110 | YDH3 | 3.490 |
| PHI | 11.725 | VE9EH | 6.080 | WIY | 13.870 | WPDI | 2.430 | WPHC | 1.596 | W1XK | 9.570 | YDH4 | 3.310 |
| PHI | 17,775 | VE9GW | | WJER | 1.606 | WPDJ | 2.414 | WPHD | 2.458 | W2XAD | 15.330 | YDH5 | 3,250 |
| PLE | 18.830 | VE9HX | 6.110 | WJER | 2.102 | WPDK | 2,450 | WPHE | 1.634 | W2XAF | 9.530 | YDH6 | 3.130 |
| PLF | 17.850 | VFJ | 2.290 | MIN | 7.370 | WPDL | 2.442 | WPHF | 2.450 | W2XBJ | 4.550 | YDH7 | 1.960 |
| | | | | WKA | 21.060 | WPDM | 2.430 | WPHG | 1.712 | W2XBJ | | YDH9 | 1.920 |
| PLG | 15.950 | VIZ3 | 11.495 | | | | | | | | | YD12 | 2.110 |
| PLP | 11.000 | VK1 | 6.425 | WKC | 10.465 | WPDN | 2.382 | WPHI | 2.490 | W2XBJ | | | |
| PLV | 9.415 | VK2ME | 9.585 | WKDT | 1.630 | WPDO | 2.458 | WPHJ | 2.490 | W2XBJ | | YDJ2 | 2.890 |
| PMA | 19.345 | VK3LR | 5.678 | WKDU | 1.706 | WPDP | 2.474 | WPHK | 1.596 | W2XE | 6,120 | AD13 | 2.870 |
| PMB | 20.606 | VK3LR | 9.580 | WKEM | 1.622 | WPDR | 2.422 | WPHM | 2.442 | W2XE | 11.830 | YDJ4 | 1.840 |
| PMC | 18.135 | VK3ME | 9.503 | WKEM | 2.150 | WPDS | 2,430 | WPHN | 2.466 | W2XE | 15.270 | YDK2 | 3.190 |
| PMN | 10.260 | VLJ | 9.750 | WKF | 4.253 | WPDT | 2.490 | WPHO | 2.430 | W3XAL | 6.100 | YDK3 | 2,910 |
| PMY | 5.140 | VLK | 8,095 | WKF | 19.220 | WPDU | 1.712 | WPHP | 2.466 | W3XAL | 17.780 | YDK4 | 3.270 |
| PNI | 8.775 | VLK | 10.520 | WKJ | 9.460 | WPDV | 2.458 | WPHQ | 2.490 | W3XAU | 6.060 | YDK5 | 2.710 |
| PPQ | 11.670 | VLZ | 7.960 | WKK | 21,410 | WPDW | 2,422 | WPHS | 1.634 | W3XAU | | YDK6 | 1.860 |
| PPU | 19.270 | VLZ | 7.980 | WKL | 8.940 | WPDX | 2.414 | WPHU | 1.634 | W3XL | 6.425 | YDL2 | 4.810 |
| | | VPD | | WKM | 18.860 | WPDY | 2.414 | WPHY | 2.474 | W3XL | 17.318 | YDL3 | 3.450 |
| PRADO | | | 13.045 | | | WPDZ | 2.490 | WPHZ | 2.482 | W4XB | 6.040 | YDL4 | 3.410 |
| PRF5 | 9.505 | VP3MR | 7.080 | WKN | 19.820 | | | WPSP | | | | YDL5 | 3.210 |
| PSA | 21,069 | MLDA | 4.430 | WKO | 15.970 | WPEA | 2.382 | | 1.674 | W7XK | 3.493 | YDL5 | |
| PSA | 14,935 | MLDA | 8.830 | WKP | 6.950 | WPEB | 2.442 | WQB | 17.940 | W8XA | 1.682 | | 2.750 |
| PSD | 15.070 | VQJP | 4.430 | WKU | 14.830 | WPEC | 2.466 | WQC | 17.860 | W8XAL | | YDM2 | 3.320 |
| PSF | 14,690 | VQJP | 8.830 | WKW | 15.445 | WPED | 1.712 | WQE | 18.92@ | W8XK | 6.140 | YDN2 | 1.940 |
| PSH | 10.220 | VQ7LO | 6.060 | WLA | 18.350 | WPEE | 2.450 | WQF | 17.920 | W8XK | 9.570 | YDN3 | 2.790 |
| PSK | 8.180 | VUB | 9.565 | WLEB | 1.646 | WPEF | 2.450 | WQFA | 2,466 | W8XK | 11.870 | YDO2 | 3.430 |
| RAU | 15.104 | VUC | 6.112 | WLEZ | 2.150 | WPEG | 2,450 | WQFB | 2.414 | W8XK | 15.210 | YD03 | 3.290 |
| RFF | 7.260 | VUC | 9.575 | WLK | 16.270 | WPEH | 1.712 | WQFE | 1.634 | W8XK | 17.789 | YD04 | 3.180 |
| RIM | 7.626 | VWY | 8.975 | WLL | 17.900 | WPEI | 1.712 | WQFG | 2.450 | W8XK | 21.540 | YD05 | 2.930 |
| | | VWY | | WMA | 13 390 | WPEJ | 1.712 | WQFH | 2.450 | W9XAA | | YDO6 | 2.770 |
| RIO | 10.160 | | 17.480 | | | | | WQFL | 1.712 | WOYAA | 11 020 | YD07 | 2.070 |
| RIR | 5.040 | vwz | 8.690 | WMDZ | 2,442 | WPEK | 2.430 | | | W9XAA | 11.830 | | |
| RIR | 10.080 | VWZ | 8.693 | WMEF | 1.606 | WPEL | 1.666 | WQFO | 2,430 | W9XAA | | YD08 | 1.988 |
| RKF | 4.875 | vwz | 8.700 | WMEF | 2.020 | WPEM | 2.466 | WQFQ | 2.442 | W9XAH | | YD09 | 1.880 |
| RKF | 6.870 | vwz | 8.708 | WMEF | 2.102 | WPEP | 2.450 | WQG | 15.040 | W9XBS | | YDQ2 | 3.390 |
| RKF | 6.880 | VXU | 5.540 | WMEF | 2.760 | WPEQ | 1.570 | WQH | 18.880 | W9XBU | | YDQ3 | 3.350 |
| RKF | 6.900 | VXV | 5.540 | WMEP | 2.930 | WPES | 2.442 | WQI | 17.880 | W9XF | 6.100 | YDQ4 | 3.230 |
| RKF | 9.750 | VXW | 5.540 | WMEP | 6.615 | WPET | 1.706 | WQL | 14.815 | W9XF | 6.425 | YDQ5 | 2.950 |
| RKF | 12,500 | | 5,405 | WMEQ | 6.615 | WPEV | 1.666 | WQN | 5.263 | W9XQ | 6.425 | YDQ6 | 2.810 |
| RKI | 7.520 | VYP | 1.596 | WMES | 2.550 | WPEW | 1.666 | WQN | 5.505 | XEBT | 6.000 | YDU2 | 3.370 |
| RKI | 15.040 | | 1.668 | WMEU | 2.930 | WPFA | 1.712 | WQN | 5.825 | XECR | 7.380 | YDU3 | 5.260 |
| | | | | | | WPFC | 2.442 | woo | 6.725 | XECW | 5.980 | YDU4 | 2.830 |
| RKI | 15.090 | | 1.712 | WMEU | 6.615 | | | | 13.900 | | | YDU5 | 1.850 |
| RKK | 6.135 | | 2.416 | WMEV | 2.930 | WPFD | 2,430 | WQP | | XGB | 11.140 | YDV2 | 3.330 |
| RKK | 12.270 | VYZ | 2.212 | WMEV | 6.615 | WPFE | 2.442 | WQR | 16.015 | XGBD | 9.580 | | |
| RNE | 12.000 | | 8.930 | WMF | 14.470 | WPFG | 2.442 | wos | 13.915 | XGK | 18.690 | YID | 4.470 |
| ROI | 5.490 | | 12.930 | WMJ | 2.422 | | 2.414 | WQU | 13.855 | XGL | 7.960 | YID | 6.135 |
| RPK | 7,225 | WCG | 10.370 | WMN | 14.590 | WPFI | 2.414 | WQV | 14.800 | XGN | 16.380 | YNA | 14.480 |
| RPT | 5.995 | WCK | 2.414 | WMO | 2.414 | WPFK | 2.430 | WQW | 10.600 | XGO | 7.575 | YNLF | 6.714 |
| RRD | 8.225 | | 6.718 | WMP | 1.666 | WPFM | 2.382 | WQY | 20.100 | XGOX | 6.000 | YN1GG | 6.450 |
| RSB | 5.375 | | 4.535 | WNA | 9.170 | WPFN | 1.712 | WRBH | 2.458 | XGOX | 9.500 | YVQ | 6.672 |
| RSN | 5.440 | | 4.550 | WNB | 10,675 | WPFO | 2.474 | WRDQ | 2.474 | XGOX | 11,900 | YVQ | 13.337 |
| RSZ | 8.770 | | 18,900 | WNC | 15.055 | WPFP | 2.490 | WRDR | 2.414 | XGOX | 17.800 | YVR | 9.168 |
| RTA | 6.440 | | 10,610 | WND | 4.098 | | 2.474 | WRDS | 1.642 | XGW | 10.420 | YVR | 18.296 |
| | 7.275 | | 6.935 | WNEI | 1.622 | | 2,458 | WRJ | 3.410 | YBG | 10.430 | YV2RC | 6.112 |
| RTZ | | | | | | WPFS | 2.474 | WST | 3.410 | YBZ | 7.680 | YV3RC | 6.150 |
| RV15 | 4.273 | | 8.930 | WNEI | 2.150 | | 2.442 | WTDV | 4.295 | YCP | 8.575 | YV3RC | 9.510 |
| RV59 | 5.996 | | 8.950 | | 2.060 | | | | | | | YV4RC | 6.375 |
| SR1 | 9.490 | | 13.435 | WNFP | 2.422 | | 2.422 | WTDW | 4.295 | YDA | 3.040 | YV5RM | 0.3/3 |
| SUV | 10.055 | | 7.400 | WOA | 6.755 | | 2.466 | WTDX | 4.295 | YDA | 6.040 | | |
| SUZ | 13.810 | | 9.448 | WOB | 5.850 | | 2.466 | WTR | 6.385 | YDA2 | 2.385 | YV6RV | 6.520 |
| TFK | 9.050 | | 9.470 | WOF | 9.750 | WPFX | 2.442 | WTT | 18.940 | YDA3 | 1.640 | YV10R9 | |
| TGF | 14.545 | WEY | 1.630 | WOG | 4.253 | WPFY | 2.442 | WVD | 2.604 | YDA4 | 1.550 | ZBW | 6.750 |
| TG1X | 9.450 | | 6.928 | WOK | 10.550 | | 2.442 | WVD | 5.995 | YDA5 | 6.120 | ZEA | 6.590 |
| TG2X | 5.940 | WHER | 2.102 | WON | 9.870 | WPGA | 2.466 | WVD | 6.618 | YDA6 | 2.870 | ZEB | 6.590 |
| TIEP | 6,710 | | 1.606 | WOO | 4.178 | WPGB | 2.466 | WWAD | 4.988 | YDA7 | 3.270 | ZFA | 5.025 |
| TIEP | 13.415 | | 1.566 | | 4.753 | | 1.658 | WWAJ | 3.410 | YDA8 | 1.510 | ZFB | 10.055 |
| TIGPH | | | 2.390 | | 8.560 | | 2.458 | WWAL | 3,410 | YDB | 4.470 | ZFD | 10.335 |
| TIN | 14,545 | | 2.350 | woo | 12.840 | | 1.596 | WWAM | | YDB2 | 2.450 | ZFO | 5.300 |
| | | | | woo | 17.120 | | 2.414 | WWAO | 3.410 | YDB3 | 1,660 | ZFS | 4.512 |
| TIU | 14.545 | WIEH | 1.622 | WOU | | | 2.430 | WWE | 3.410 | YDB4 | 1.615 | ZGE | 6.125 |
| TIPG | 6.550 | | 1.646 | | 2.506 | | | WWG | | YDB5 | 1.595 | ZHI | 6.060 |
| TIR | 7.685 | | 2.190 | | 2.590 | | 2.414 | | 3.410 | | | | |
| TIRCC | | | 1.646 | | 4.178 | | 2.466 | WWH | 3.410 | YDB6 | 1.570 | ZHJ | 6.080 |
| TYA | 12.215 | | 2.190 | | 4.753 | | 2.442 | WWHJ | 3.410 | YDB7 | 1.530 | ZLR | 7.390 |
| VAC | 1.510 | | 1.606 | WOY | 8,560 | | 2.414 | WWM | 3.410 | YDD2 | 1.630 | ZLS | 8.900 |
| VAF | 1,510 | | 2.020 | | 12.840 | | 2.490 | WWN | 3.410 | YDD3 | 1.585 | ZLT | 10.996 |
| VBQ | 2.350 | WIEO | 2.102 | | 17.120 | | 2.490 | WWR | 3.410 | YDE2 | 4.810 | ZSS | 19.890 |
| VBY | 1.540 | | 2.760 | | 3.423 | WPGP | 2.442 | WWZ | 3.410 | YDE3 | 2.910 | ZSV | 8.220 |
| VBY | 1.650 | | 1.606 | | 6.385 | | 1.596 | WXA | 8.050 | YDE4 | 2.415 | ZSV | 12.500 |
| VESAS | 6.425 | | 2.102 | WPDA | 2.414 | | 2.490 | WXH | 2.604 | YDE5 | 2.750 | ZTJ | 6.123 |
| VE9BJ | 6.090 | | 1.566 | | 1.712 | | 2.482 | WXH | 6.662 | YDG2 | 3.470 | ZP10 | 6.666 |
| VE9CA | 6.030 | | | WPDC | 1.712 | WPGV | 1.712 | | 2.604 | YDG3 | 3.150 | ZP11 | 3,800 |
| V EJUA | 0.030 | 171EA | 000 | | | | | | | | | , | |

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530 kilocycles (565.7)
CJKL ak
               1000
                                 Kirkland Lake, Ont. E-....
540 kilocycles (555.2)
              1000
CJRM ak
                                 Moose Jaw, Sask.
                                                           M-7:30-23:00*
550 kilocycles (545.1)
                       F (1)
2 (1)
N (5)
CFNB
                 500
                                 Fredericton, N. B.
                                                              -8:10-10:30*
KFUO
KFYR
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          ae
                                 St. Louis, Mo.
                                                             -7-8; 9:30-9:45; 12:15-12:45; 3-3:45*
                1000
                                 Bismarck, N. D.
                                                             -7:00-24:00
          ae
KOÁC
KSD
          ak
                1000
                                 Corvallis, Ore.
St. Louis, Mo.
                                                           P-9:00-21:00*
                        2R
          ak
                1000
                                                              -8-9:15; 9:30-12:15; 12:45-15; 15:45-21; 22-1*
                                 San Antonio, Texas
Waterbury, Vt.
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KTSA
          ak
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                        C (5)
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WKRC
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                                 Cincinnati, Ohio
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WSVA
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560 kilocycles (535.4)
KFDM ak
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                                 Beaumont, Texas
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KLZ
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               1000
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                                 Denver, Colo.
                                                          М-
                                                              -6:30-24:00*
         ae
                1000
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         ak
                                 San Francisco, Calif.
KWTO ak
                                 Springfield, Mo.
Philadelphia, Pa.
               5000
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                                                              6:00-17:45*
WFIL
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                                 Gary, Ind.
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Miami, Fla.
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WIND
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XEAO
                 250
                                 Mexicali, L. C.
Merida, Yuc.
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570 kilocycles (526.0)
KGKO ak
                250
                       C(1)
                                 Wichita Falls, Tex.
                                                          C-7:30-23:30*
KMTR ak
               1000
                                 Hollywood, Calif.
                                                          P-6:45-23:30
                                Holywood, Calif.
Tacoma, Wash.
Youngstown, Ohio
New York, N. Y.
Yankton, S. D.
Columbus, Ohio
Syracuse, N. Y.
Asheville, N. C.
=KVI
               1000
                                                          P-6:00-24:00*
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WNAX ak
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580 kilocycles (516.9)
CFPR
                                 Prince Rupert, B. C.
                                 Quebec, Que.
Toronto, Ont.
CHRC
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                                 Edmonton, Alta.
KMJ
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               1000
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                                 Fresno, Calif.
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C
KSAC
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                500
                                Manhattan, Kans.
Charleston, W. Va.
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                                                              -7:00-23:00- 4:15pm - 11-29-35
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WDBO
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                                 Orlando, Fla.
Topeka, Kans
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-7:45-1:00*
WTAG
                500
                                 Worcester, Mass.
590 kilocycles (508.2)
KHO
WEEI
                                Spokane, Wash.
Boston, Mass.
               1000
                       N (2.5)
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                                Kalamazoo, Mich.
WOW
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                                Omaha, Neb.
Piedras Negras, Coah.
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600 kilocycles (499.7)
CFCF
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                                Montreal, Que.
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CJOR
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                                Vancouver, B. C.
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         ak
CMW
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Windsor, Ont.
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San Diego, Calif.
Storrs, Conn.
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                 500
                                  Baltimore, Md.
                                  Bridgeport, Conn.
Cedar Rapids, Iowa
          ae
                 500
                                                               -6:00-24:00*
          ak
                1000
 WREC
                1000
                                  Memphis, Tenn.
                                                               -7:00-24:00*
 610 kilocycles (491.5)
                                  San Francisco, Calif.
Kansas City, Mo.
                                                            P-6:00-24:00*
                1000
                        C (5)
R (5)
 KFRC
          ck
                                                            C--6:30-24:00*
                1000
 WDAF
          ak
                                  Philadelphia, Pa.
Cleveland, Ohio
 WIP
                1000
                                                            E-7:00-1:00*
          ae
                                                               -6:00-17:15*
 WJAY
XFX
                 500
                         D
          ae
                                  Mexico City, D. F.
                1000
 620 kilocycles (483.6)
                        N (5)
 KGW
KTAR
WFLA
                                                             P--7:00-24:00
                1000
                                  Portland, Ore.
          ak
                 1000
                                  Phoenix, Ariz.
                                                             M-7:00-23:15*
          ae
                                  Clearwater, Fla.
                 1000
                                                             E-7:00-17:00* /2 30 pm
                         Na (5)
          ae
 -WHJB
                  250
                                   Greensburg, Pa.
          ak
                         D
                         Ĉ (1)
                                  Bangor, Maine
St. Petersburg, Fla.
Milwaukee, Wis.
                                                                -8:00-24:00*
 WLBZ
                  500
          ak
 WSUN
                 1000
                         Na (5)
N (5.)
                                                                -7 \cdot 30 - 1 : 00
                                                                -6:45-00:30
-WTMJ ae
                 1000
 630 kilocycles (475.9)
 CFCO
CFCY
CJGX
                                                             E-7:30-9:90; 11:00-13:30; 17:00-23:00
                  100
                         F
                                  Chatham, Ont.
          ak
                                  Char't'w'n, P.E.I.
Yorkton, Sask.
Kelowna, B. C.
                                                                -11:45-13:30; 17:30-23:30*
-8:00-14:00; 18:00-22:00
-8:00-22:30*
                         Ē
          ae
                 1000
                         F
                  500
          ae
  CKOV
          ak
                  100
                                   Columbia, Mo.
Pierre, S. D.
                                                                -6:00-9:00; 14:00-ss; 19:00-22:00
-9:30-11:00; 12:00-17:15*
  KFRU
          ak
                  500
                         1(1)
  KGFX
                  200
                         D
          ak
                                                                -7:00-19:00; 22:00-24:00
                                   Evansville, Ind.
  WGBF
          ak
                  500
                                   Washington, D. C.
Jefferson City, Mo.
                                                               -7:00-1:00*
  WMAL ak
                  250
                         B(.5)
                                                             C-9:00-14:00
  WOS
           ak
                  500
                         10
                                                                -7:30-24:00*
  WPRO ak
                  250
                                   Providence, R. I.
                  500
                                   Merida, Yuc.
  XEZ
  640 kilocycles (468.5)
                         ....
N
                  150
                                   Havana, Cuba
  CMBY
           z
  KFI
WAIU
                50000
                                   Los Angeles, Calif.
Columbus, Ohio
                                                             P---6:45-24:00*
           ah
                                                                -6:15-17:30
                         Ď....
           ae
                  500
                                                                 -6:45-16:00
  WOI
                 5000
                                   Ames, Iowa
                  250
                                   Saltillo, Coah
 650 kilocycles (461.3)
-wsm
           ae 50000
                                   Nashville, Tenn.
                                                             C--6:30-24:00*
  660 kilocycles (454.3)
                                   Havana, Cuba
Omaha, Neb.
New York, N. Y.
  CMCX z
WAAW ak
                  150
                         Ď
                                                             C--6:00-17:45*
                  500
               50000
                                                                 -6:45-1:00*
                         R
  670 kilocycles (447.5)
  WMAO ak 50000
                                                             C-7:00-1:00*
                                   Chicago, III.
  680 kilocycles (440.9)
                                   Havana, Cuba
                                                             C-6:00-17:00*
  KFEO
           ak
                 2500
                          D
                                   St. Joseph, Mo
                                   San Francisco, Calif.
Glace Bay, N. S.
St. John's, Nfld.
Raleigh, N. C.
                                                             P-7:00-24:00*
  KPO
           ak 50000
                          N
                                                                 -23:00-23:10; 00:00-00:10*
  VĀŠ
                 2000
                          685
                                                              A۱
           akn
  vowa
                                                               -11:00-18:30
          ck
                  500
                          DnN
                                                             E-7:00-23:00*
                 5000
  690 kilocycles (434.5) [
                                   Toronto, Ont.
Calgary, Alta.
                                                                --8:00-24:00*
  CFRB
           ak
                10000
                                                             M-7:30-16:30; 20:00-23:00*
E-10:10-10:15; 11:55-12:00; 15:45-15:50; 21:55-
  CJCJ
           ai
                   100
                                   Arlington, Va.
  NAA
           akn
                 1000
                                                                  22:05
                                                              C-12:00-21:00*
                                   Monterrey, N. L.
  XET
                   500
```

```
700 kilocycles (428.3)
  RDN
WLW
           z 500
ak 500000
                                   San Salvador, E. S.
                                                             L—
E—6:30-2:00*
                                   Cincinnati, Ohio
  710 kilocycles (422.3)
KIRO
-KMPC
- WOR
                   500
                                   Scattle, Wash.
Beverly Hills, Calif.
Newark, N. J.
                                                             P-5:30-ss; 22:00-4:00
                  500
                                                             P-6:00-18:00; 21:00-1:00*
E-6:45-00:30*
          ak
                          . . . .
                50000
           ak
                          . . . .
                                                               -9:00-12:00; 13:00-16:00; 17:00-24:00 10-76
  XEN
                 1000
                                   Mexico City, D. F.
  720 kilocycles (416.4)
           ak 50000
                                   Chicago, III.
                                                             C-7:00-2:30
                                                                                                         0 26
                                                                                         35pm
  730 kilocycles (410.7)
                                   London, Ont.
                                                             E-8:15-10:30; 12:00-13:30; 17:00-23:30
M-7:30-13:30; 16:30-1:00
                 1000
                                   Edmonton, Alta.
Montreal, Que.
                                                             E-7:30-1:00*
 740 kilocycles (405.2)
                 1000
  KMMJ ae
                                   Clay Center, Neb.
                                                            C-5:00-18:00*
P-6:00-17:30*
                  250
250
                                   Modesto, Calif.
  KTRB ak
                         D
  WHEB ak
                                   Portsmouth, N. H.
                                                                -9:00-17:30*
  WSB
                50000
                                   Atlanta, Ga.
                                                                -6:55-24:00*
 750 kilocycles (399.8)
  CMCW dk
                  150
                                   Havana, Cuba
                         NC
  KGU
WJR
                 2500
           aj
ak
                                   Honolulu, T. H. Detroit, Mich.
                                                             L-6:30-22:30*
                50000
                                                                ·6:00-24:00*
                                   Matamoros, Tams,
 760 kilocycles (394.5)
  CMHX ak
                  500
                                   Cienfuegos, Cuba
Seattle, Wash.
                         (.15)
                                                             E-8:00-22:00*
  KXA
WBAL
                  250
           36
                                                             P-6:30-ss; 22:00-1:00*
                         BSy
                                  Baltimore, Md.
St. Louis, Mo.
New York, N. Y.
Tijuana, L. C.
           ae
                10000
                                                             E
  WEW
                 1000
           ae
                                                                -6:00-ss*
                         BSy
                50000
           яk
                                                             E-8:00-1:00*
 770 kilocycles (389.4)
 CMBS ak
                  150
                                  Havana, Cuba
                                                             E-10:00-12:00: 15:30-18:00
               10000
 KFAB ae
WBBM ae
                                  Lincoln, Neb.
                                                             C-6:00-24:00
               50000
                         CSy
                                  Chicago, III.
                                                             C-6:50-2:15*
 780 kilocycles (384.4)
                                                                2110 Pm
 CHWK dk
                  100
                                  Chilliwack, B. C.
                                                            P-11:45-22:30*
 CKSO
CMJK
KEHE
           ak
                 1000
                         F
                                                               --12:00-14:00; 17:00-23:00*
                                  Sudbury, Ont.
          ak
                  250
                                  Camaguey, Cuba
                                                            E-11:30-14:30; 17:00-22:45
P-6:00-10:00; 13:00-17:00; 20:00-4:00
                         2(1)
                  500
                                  Los Angeles, Calif.
Burbank, Calif.
Brookings, S. D.
           ak
  KELW
                  500
          ak
                                                            P--10:00-13:00; 17:00-20:00; 4:00-6:00
C--12:30-14:00*
 KFDY
                 1000
                         Đ
          ae
                                  Anchorage, Alaska
Billings, Mont.
Providence, R. I.
Memphis, Tenn.
Norfolk, Va.
Mexico City, D. F.
 KFOD
KGHL
                  250
                                                            L-18:00-24:00
M-8:00-23:00*
          ck
                         N (2.5)
          ak
                 1000
 WEAN
WMC
                         C
N (2.5)
N (1)
          ae
                  500
                                                             E-7:45-1:00*
           ak
                 1000
                                                             C-6:45-1:00
 WTAR ae
XEYZ z
                                                              -7:00-24:00*
                  500
               10000
                                                                -10:00-23:00*
 790 kilocycles (379.5)
                                  Havana, Cuba
 KGO
WGY
          ak
                7500
                                  San Francisco, Calif.
Schenectady, N. Y.
                                                            E-7:30-24:00*
          ak 50000
                         Ŕ
                                                            E-6:45-1:00*
 800 kilocycles (374.8)
                 700
 HIX ak 700
WBAP ak 50000
                                  Santo Domingo, D.R. Fort Worth, Tex.
                                                            L—11:30-13:00; 17:00-18:00*
C—6-7; 8:30-10:30; 12:30-15; 17:30-18:30; 19-22
                         Na
```

| | orth Am | erican B. | C. Stations by Freque | ncies with Saturday's Time on the Air |
|---|--|---|--|--|
| WFAA WTBO | | Na D | Dallas, Tex. Cumberland, Md. | $C\!-\!7\!-\!8\!:\!30;10:\!30\!-\!12:\!30;15\!-\!17:\!30;18:\!30\!-\!19;22\!-\!24$ $E\!-\!8:\!45\!-\!ss*$ |
| 810 k | ilocyc | les (3 <mark>7</mark> | 0.2) | |
| CMCF CMHW -WCCO WNYC | ak 250 ak 100 | 815 C D | Havana, Cuba Cienfuegos, Cuba Minneapolis, Minn. New York, N. Y. Aguascalientes, Ags. | E-10:30-24* E-13:00-14:00; 17:00-21:00 C-6:45-1:00 E-9:00-1 hour after ss |
| 820 k | ilocyc | les (36 | 5.6) | 7 |
| -WHAS XETW | ai 50000 | C | Louisville, Ky. Mexico City, D. F. | C-7:00-24:00* C-12:00-24:00* |
| 830 k | ilocyc | les (36 | 1.2) | |
| KOA WEEU WHDH WRUF | ae 1000 |) D } Dn | Denver, Colo. Reading, Pa. Boston, Mass. Gainesville, Fla. | M-7:00-24:00* E-8:00-ss* E-7:00-ss in Denver E-8:00-18:45* |
| 840 k | ilocyc | eles (35 | 66.9) | |
| CFQC -CMQ -CRCT VOGY XEP | ak 1000 ak 500 ak 5000 ak 400 z 500 |) F)) FN | Saskatoon, Sask. Havana, Cuba Toronto, Ont. St. John's, Nfld. Mexico City, D. F. | M—8:00-13:30; 17:30-23:00 E—6:55-1:00* E—6:45-24:00* L—10:00-11:30; 13:00-14:30; 18:00-21:00 C— |
| 850 k | cilocy | cles (35 | (2.7) | - 4/30/11 |
| KIEV THEP WESG WWL XEFE | ak 10 z 50 ak 100 ae 1000 z 25 | 0 C · | Glendale, Calif. San Jose, C. R. Elmira, N. Y. New Orleans, La. Nuevo Laredo, T. | P—6:00-18:00* C———————————————————————————————————— |
| 860 k | cilocy | cles (34 | 18.6) | |
| WABC WHB XEMO | ak 5000 ak 100 | 0 C 0 D | New York, N. Y. Kansas City, Mo. Tijuana, L. C. | E—7:30-2:00* C—6:00-17:00* P—7:00-1:00* |
| ×870 k | cilocy | cles (34 | 14.6) | |
| WENR WLS | _ | 0 Na | Chicago, III. Chicago, III. | C15:00-19:00; 00:00-1:00 C8:00-15:00; 19:00-24:00 |
| 880 1 | kilocy | cles (34 | 10.7) | |
| CFJC CMBN CRCO KFKA KLX KPOF WCOC WGBI WPHR WOAN WSUI | ak 10 z 15 ak 100 ak 50 ae 100 ae 50 ae 50 ae 50 ae 25 ae 25 ae 50 | 0 0 F 0 2 (1) 0 00 2 00 2 00 1 00 D 00 1 | Kamloops, B. C. Havana, Cuba Ottawa, Ont. Greeley, Colo. Oakland, Calif. Denver, Colo. Meridian, Miss. Scranton, Pa. Petersburg, Va. Scranton, Pa. Iowa City, Iowa | P7:30-10:30; 12:00-14:00; 18:00-21:00 E-8:00-9:00; 11:50-14:00; 17:00-24:00* M-5-7; 9-14; 16:30-19; 20:30-24* M-7:30-9:00; 14:30-16:00; 19:00-20:30* C-7:30-14:00; 17:00-22:30* E-9:30-12:30; 13:30-16:30; 17:30-23:00 E-7:30-38* E-12:30-13:30; 16:30-17:30 C-9:00-22:00* |
| 8901 | kilocy | cles (3 | 36.9) 2 | |
| KARK KFNF KFPY KUSD WBAA WGST WILL WJAR WMMI XEW | ak 25 ak 50 ak 100 ae 50 ak 100 ak 50 ak 25 ae 50 | 60 (.5) 10 2 (1) 10 C 10 2 10 D 10 C (1) 10 C (1) | Little Rock, Ark. Shenandoah, Iowa Spokane, Wash. Vermillion, S. D. W. Lafayette, Ind. Atlanta, Ga. Urbana, III. Providence, R. I. Fairmont, W. Va. Mexico City, D. F. | C-6:00-22:00* C-5:30-8:00; 11:00-16:00; 18:00-21:00* P-6:50-24:00* C-Irregular C-11:00-17:00* C-6:00-24:00* C-8:00-11:00; 16-18; 22-24 E-8:00-1:00* E-7:30-22:00* C |

| | 9001 | cile | nevel | es (33 | 3 1) 74 | N, |
|---|---|---|--|--|---|---|
| | KGBU-KHJ KSEI WBEN WELI WFMD WJAX WKY WLBL WTAD | ak ae ck ak z | 500 1000 250 1000 500 500 | C (5) (.5) R DP DP DP N (5) N | Ketchikan, Alaska Los Angeles, Calif. Pocatello, Idaho Buffalo, N. Y. New Haven, Conn. Frederick, Md. Jacksonville, Fla. Oklahoma City, Ok. Stevens Point, Wis. Quincy, Ill. | L— |
| | 9101 | cilo | ocycle | es (32 | 9.6) 2772 | |
| _ | CJAT CRCM XENT | ak ak ak | 250 5000 65000 | F F | Trail, B. C. Montreal, Que. Nuevo Laredo, Tams | P-7:00-24:00 E-5:00-24:00 C-19:30-1:30* |
| | 9201 | cilo | ocycle | es (32 | 5.9) | Les Vi |
| | CMX HHK KFEL KOMO KPRC KVOD WAAF WBSO WPEN WRAX WSPA WWJ XEAA | ae ae ak | 650 1000 500 1000 1000 500 500 500 250 250 1000 100 | a N (5) N (5) a D D (.5) 1 1 (.5) D R | Havana, Cuba Port-au-Prince, Haiti Denver, Colo. Seattle, Wash. Houston, Texas Denver, Colo. Chicago, Ill. Babson Park, Mass. Philadelphia, Pa. Spartanburg, S. C. Detroit, Mich. Mexicali, L. C. | P—7:00-24:00 E—5:00-24:00 C—19:30-1:30* E—8:00-1:00 * P—7:00-24:00* C—6:30-24:00* M—6:00-24:00* C—6:00-16:30* E—8:30-17:00* E—7:30-22:00* E—7:30-22:00* E—7:30-22:00* E—7:00-24:00* |
| | 930 k | ilo | ocycle | es (32 | 2.4) | |
| _ | CFAC CFCH CFLC CHNS CKPC CKPR KGBZ KMA *KROW TIRH WBRC WDBJ | ak ak ae ae ak ak ak | 100 100 100 100 100 100 1000 1000 500 50 | F F F F F 2 (2.5) | Calgary, Alta. North Bay, Ont. Prescott, Ont. Halifax, N. S. Brantford, Ont. Fort William, Ont. York, Neb. Shenandoah, Iowa Oakland, Calif. San Jose, C. R. Birmingham, Ala. Roanoke, Va. | $\begin{array}{llllllllllllllllllllllllllllllllllll$ |
| | 940 k | ilo | ocycle | es (31° | 9.0) | |
| - | CMBC KOIN VOAS WAAT WAVE WCSH WDAY WHA XEFO | dj ak ak ae bk ae ak ak | 500 1000 100 500 1000 1000 1000 1000 5000 | C (5) D N R (2.5) N (5) D (5) (XFO) | Havana, Cuba Portland, Ore. St. John's, Nfld. Jersey City, N. J. Louisville, Ky. Portland, Maine Fargo, N. D. Madison, Wis. Mexico City, D. F. | E=9:00-00:30* P=6:30-24:00* L=-11-12:30; 16-17:30; 19:45-21:30 E=6:30-18:00* C=7:00-24:00* E=7:45-24:00* C=7:00-24:00* C=7:00-24:00* C=7:00-24:00* C=7:00-24:00* |
| | 950 k | ilo | ocycle | es (31 | 5.6) | |
| - | CRCS KFWB KHSL KMBC WRC YNVA | ak ak ak ae ak z | 100 1000 250 1000 500 30 | F (2.5) D C (5) R (1) | Chicoutimi, Que. Hollywood, Calif. Chico, Calif. Kansas City, Mo. Washington, D. C. Managua, Nic. | E—17:00-23:00* P—7:00-23:30* P—7:00-ss* C—5:55-24:00* E—7:00-1:00* |
| | 960 k | ilc | cycle | es (31 | 2.3) | |
| | CK Y CMCD | ak | 15000 250 50000 | F | Winnipeg, Man. Havana, Cuba Reynosa, Tams, | C-8:00-14; 16-24* E11:00-24:00* C19:00-10:00* |

| | 970 k | ilo | cycle | es (30° | 9.1) | |
|---|---|--|---|---------------------------|--|---|
| _ | KJR WCFL WIBG | ak ae ak | 5000 5000 100 | N B D | Seattle, Wash. Chicago, Ill. Glenside, Pa. | P-7:30-24:00* C-7:00-24:00* E-6:00-sa* |
| | 980 k | tilo | cycle | es (30 | 3.9) | |
| - | KDKA | ae | 50000 | В | Pittsburgh, Pa. | E7:00-1:00* |
| | 990 k | tilo | cycle | es (30 | 2.8) | |
| | WBZ WBZA XEAF XEK XES | ak ak ak ak dk | 50000 1000 500 100 250 | BSy BSy | Boston, Mass. Springfield, Mass. Nogales, Sonora Mexico City, D. F. Tampico, Tams. | E7:00-1:00* E7:00-1:00* M9:00-13; 18-22* C11:00-16; 18:00-2:00* C9:30-14:30; 17-22; 1:00-2:30* |
| | 1000 | kil | ocve | les (2 | 99.8) | |
| | CMBZ KFVD TIGH WHO XEY | ak ak z ak z | 250 250 500 50000 10 | Dn R | Havana, Cuba Los Angeles, Calif. San Jose, C. R. Des Moines, Iowa Merida, Yuc. | E-7:00-24:00* P-6:30-8s; 22-24* C-6:30-7:15; 12:45-17; 18:30-22:30 C |
| | 1010 | kil | ocyc | les (2 | 96.9) | |
| - | CHML CHWC CKCD CKCK CKCO CKIC CKWX CMJA KGGF KOW TIGA | ak ak ak ak ak ak ak ac | 100 500 100 500 100 50 100 300 1000 1000 | F 3F F 2 (5) | Hamilton, Ont. Regina, Sask. Vancouver, B. C. Regina, Sask. Ottawa, Ont. Wolfville, N. S. Vancouver, B. C. Camaguey, Cuba Coffeyville, Kans. San Jose, Calif. Cartago, C. R. New York, N. Y. | E-8:00-23:00* M7:00-9:00; 10-11; 12-13; 15:30-24 P-7:30-23:30* M-9-10; 11-12; 13:30-15:30 E-12-14; 18-23* A-18:00-19:00 P-7:00-19:30; 23:30-1:00 E-12:00-22:00* C-7:00-14; 16:30-21:30 P-6:30-24:00* C E-8:00-1:00* |
| | WIS WNAD XEU | ae ae ak | 500 1000 250 | (5) N (1) 2 (1) | Norman, Okla. Veracruz, Ver. | E—7:30-24:00* C—Silent C—7:00-8:00; 22:00-23:00 |
| | | | _ | les (2 | | C—8:00-1:00* |
| | KYW XEJ | ak ak | 10000 1000 | | Philadelphia, Pa. Juarez, Chih. | G-10:00-14:00; 17-23:30* |
| | 1030 | kil | locyc | les (2 | 91.1) | |
| 7 | CFCN CKLW CMCY XEB | ak ag ak ak | 10000 5000 1000 10000 | | Calgary, Alta. Windsor, Ont. Ilavana, Cuba Mexico City, D. F. | M—7:00-23:00 E—7:00-1:00* E— G—9:00-24:00* |
| | 1040 | kil | ocyc | les (2 | 88.3) | |
| | KRLD KWJJ WKAR WTIC | ae ak ae ah | 10000 500 1000 50000 | C D R | Dallas, Texas Portland, Ore. East Lansing, Mich. Hartford, Conn. | C-6:30-24:00 P-7:00-ss; 21-3:00* E-12-12:30; 14-17* E-7:00-24:00* |
| | 1050 | kil | осус | les (2 | 85.5) / ? / 2 | |
| - | CMKD CRCK KFBI KNX TIFA | ak ak ak ak z | 250 1000 5000 50000 75 | F Dn | Santiago, Cuba Quebec, Que. Abilene, Kans. Hollywood, Calif. San Jose, C. R. | E-7:30-22:30* E-16:30-24* C-6:45-19:30* P-7:00-24:00* C |
| | 1060 | kil | осус | les (2 | 82.8) | |
| | CMK KTHS | ae ae | 250 10000 | Ń | Havana, Cuba Hot Springs, Ark. | E-11-13; 19-24* C-8-13; 15-17; 20-23* |

```
VOAC
                         1065
                                  St. John's, Nfld.
           Z
  WBAL
          ak
                10000
                         В
                                  Baltimore, Md.
Norfolk, Neb.
                                                            E-7:00-24:00*
  WJAG
          ak
                                                               7:00-ss*
                 1000
  XEA
                                  Guadalajara, Jal.
                                                               -8:30-9: 18-23*
  1070 kilocycles (280.2)
                   50
                                  Sagua la Grande, C
  KJBS ak
WCAZ ak
WDZ ak
                  500
                         Dn
                                  San Francisco, Calif.
                                                               -22:00-21:00*
                                                           P-
                                  Carthage, III.
Tuscola, III.
                  100
                                                               -9:30-15:30*
                         D
                                                               8:00-16:00*
                  100
 -WTAM ak
                50000
                                  Cleveland, Ohio
                                                               6:30-1:00*
  1080 kilocycles (277.6)[
-WBT
           ak
                50000
                                  Charlotte, N. C.
                                                            E-6:45-24:00*
                         1Dny
                                  Waukegan, 111.
  WCBD ak
                 5000
                                                               -7:30-10:30: 13-15
  WMBI ak
                 5000
                         1Dn
                                  Chicago, 111.
                                                               -7:00-7:30; 10:30-13; 15-16:30*
  XEMA
                                   Tampico, Tams.
  1090 kilocycles (275.1)
 . KMOX ak 50000
                         \mathbf{C}
                                  St. Louis, Mo.
                                                           C--5:30-24:00*
  1100 kilocycles (272.6)
                                  Vancouver, B. C.
  CRCV
          ak
                 500
                                                               -5:30-23:00*
  KGDM ak
                 1000
                         Ď
                                  Stockton, Calif.
                                                               6:00-ss*
                                  Shreveport, La.
New York, N. Y.
Atlantic City, N. J
Mexico City, D. F.
  KWKH ae
                10000
                         \mathbf{C}
                                                               6:00-20:00
                 5000
  WPG
           ak
                 5000
                         ĩC
                                                               8:30-18: 20-00:30
                  250
  XEI.
           7
  1110 kilocycles (270.1)
                  250
                                  Havana, Cuba
                                                           E-9:00-24:00*
  CMCO
  KSOO
WRVA
                 2500
                                  Sioux Falls, S. D. Richmond, Va.
                                                              -6:30-18:30*
           ak
                         Dn
           ae
                 5000
                         N
                                                               -7:00-24:00*
                10000
                                  Piedras Negras, Co.
  1120 kilocycles (267.7)
                                  Montreal, Que.
St. John, N. B.
  CHLP
           ak
                  100
                                                           E-8:00-23:09*
                        F (1)
F (1)
                                                              -6:00-7:45; 17-24
-8:00-24:00*
                  500
  CHSJ
           20
                                  Hamilton, Ont.
Brandon, Man.
 CKOC
CKX
                  500
           ae
                                                               -11:30-12:30; 19-22:30
                  100
           ak
  CMGF
                                                               -15-17; 20-22:30*
          dk
                  100
                                  Matanzas, Cuba
                                                              -8:00-11:55; 19-22*
-6:00-17:00*
                                 Manzanillo, Cuba
Spokane, Wash.
Los Angeles, Calif
  CMKM ak
                  200
                        Ď
  KFIO
           ae
                  100
  KFSG
                  500
                        a (1)
a (1)
                                                               6:30-7:15; 19:30-24
           ag
  KRKD
KRSC
          aj
                  500
                                  Los Angeles, Calif.
                                                               7:45-19:30
                                  Seattle, Wash.
Boston, Mass.
                  100
                                                               6:00-ss*
  WCOP
          ak
                  500
                        Đ
                                                               7:00-ss*
                                  Wilmington, Del.
                  250
                         (.5)
                                                               -9:00-24:00*
  WDEL
          ak
                                  Mississippi City
Milwaukee, Wis.
College Station, Tex.
  WGCM ae
                  500
                                                              -8-14; 16-22:30*
-7:00-24:00*
  WISN
                  250
                         (1)
          ak
  WTAW ae
                                                              -12:20-12:50
                  500
 1130 kilocycles (265.3)
  CMJI
                                  Clego de Avila, Cuba
  KSL
WJJD
               50000
                                  Salt Lake City, Utah
                                                           M-6:30-24:00*
          ae
                                 Chicago, Ill.
New York, N. Y.
          ak
               20000
                        Ďη
                                                               6:00-18:45*
                1000
                                                              -8:00-18:00*
 1140 kilocycles (263.0)
                                  Havana, Cuba
Tulsa, Okla.
 CMBG z
                  200
                         1N
               25000
                                                              -6:00-ss; 21-1:00
  KVOO
         ak
                                  Birmingham, Ala.
                5000
  1150 kilocycles (260.7)
                                  Camaguey, Cuba
Rochester, N. Y.
                        В...
 WHAM ae 50000
                                                           E-7:30-00:30*
```

```
-8:00-9:00; 12:00-24:00*
-9:00-21:00*
                                     Guadalajara, Jal.
Monterrey, N. L.
Mexico City, D. F.
                 2500
                          1155
 KEH
                  250
                  100
                                                                   C-12:00-1:00*
1160 kilocycles (258.5)
                                     Clenfuegos, Cuba
Fort Wayne, Ind.
Wheeling, W. Va.
Tijuana, L. C.
CMHJ z
WOWO ae
WWVA ak
                  100
                                                                      -11:00-13:00; 17:00-21:00*
                          ic '
               10000
                                                                       7.00-18.30
                                                                       6:00-2:00
                 5000
XEC
                   30
1170 kilocycles (256.3)
CMBD
                                     Havana, Cuba
                                                                   E-8:00-1:00*
-WCAU ae 50000
                                     Philadelphia, Pa.
1180 kilocycles (254.1)
                                                                   E-9:00-13; 18-22*
                                     Ciego de Avila, Cuba
                           2N
                                     Portland, Ore.
                                                                   P-6:30-17:30; 20-24*
                 5000
KEX
                                     Albuquerque, N. M.
Montmagny, Que.
Minneapolis, Minn.
New York, N. Y.
                                                                   M-11:00-21:00*
KOB
                10000
 VE9EK ak
                           \bar{1}185
                                                                      -6:30-18:30*
 WDGY ak
                  1000
                           Dn (5)
WINS
          ak
                  1000
                                                                   \mathbf{E}_{-}
                                                                       -6:00-19:30*
WMAZ ak
                                     Macon, Ga.
Mexico City, D. F.
                                                                       7:00-19:30*
                 1000
XEFA
                   500
1190 kilocycles (252.0)
                                     Santiago, Cuba
Santo Domingo, D.R.
St. John's, Nfid.
CMKV
                    50
                           1195
 HIJ
                    15
                                                                   L-12:00-14:00; 18-20; 21:30-23
 VONF
          ak
                   500
                           1195
                                      Waterbury, Conn.
San Antonio, Texas
Huntington, W. Va.
                                                                   E-9:00-17:15*
C-6:55-23:30*
 WATR ak
                   100
                           n
                                                                                                              10-26 3
WOAI
           ak
                50000
                           N
 WSAZ
                  1000
                                                                   E--7:00-19:15
1200 kilocycles (249.9)[
                                      Moose Jaw, Sask.
Wingham, Ont.
St. Catherines, Ont.
                                                                   M--7:00-22:00*
E--11-13; 17-21*
E--10-24:00*
 CHAB
           ak
                   100
 CKNX
                    50
           ak
 CKTB
           ae
                   100
                                                                    E
 CMCJ
                   350
                                      Havana, Cuba
Ada, Okla.
                           Ď...
                                                                        7:00-17:45
 KADA
                   100
                                                                       -8:30-18:30*
                                      Jonesboro, Ark.
 KBTM
           ak
                   100
                           D
                           (.25)
(.25)
(.25)
 KFJB
KFXD
KFXJ
                                                                   C-6:00-21:00*
           ak
                   100
                                      Marshalltown, Iowa
                   100
                                      Nampa, Idaho
                                                                    M--7:00-21:00*
           26
                                                                   M-9:00-21:00*
                                     Grand Junction, Col.
           яk
                   100
                                      Fergus Falls, Minn.
 KGDE
                   100
                            (.25)
                                                                       -7:00-21:00*
           ak
                   100
                                      Sterling, Colo.
Los Angeles, Calif.
Little Rock, Ark.
                                                                        -11:30-13:30
           ak
 KGEK
                                                                       100
 KGFJ
KGHI
           ae
                           (.25)
           ak
                    100
                                      Monroe, La.
Lowell, Ariz.
Bellingham, Wash.
 KMLB
           ak
                   100
                           D ...
                                                                    M--9:00-17:45*
 KSUN
KVOS
                    100
                                                                    P-6:00-24:00*
P-7:00-24:00*
           dk
                    100
                           \mathbf{c}
                                      Stockton, Calif.
 KWG
           ak
                    100
                                       Bangor, Maine
                    100
                                                                        -9:00-14; 18-22*
 WABI
                                       Anderson, S. C.
Ponca City, Okla.
                                                                       -7:30-21:30*
 WAIM
                    100
           ak
 WBBZ
WBNO
           ak
                   100
                                                                        -6:30-21:45
                                      New Orleans, La.
Rapid City, S. D.
                                                                      -12-17; 20-23*
                    100
           ak
           ak
                    100
                           Ď
                                                                       -12:30-13:30
 WCAT
                                      Buflington, Vt.
Janesville, Wis.
Cincinnati, Ohio
South Bend, Ind.
                                                                      -12:00-1:00*
                    100
 WCAX
           ak
                                                                       -7:00-20:00*
           ak
 WCLO
                    100
                                                                        -7:30-23:00*
-6:30-24:00*
                            (.25)
 WCPO
           ak
                    100
 WFAM
                    100
                           (.25)
                                                                        7:00-9:00; 12-15; 18-21*
                                      Canton, Ohio
Green Bay, Wis.
Utica, N. Y.
 WHBC
           ak
                    100
                                                                       -7:00-22;00*
 WHBY
                    100
                            (.25)
           ak
                    100
                            (.3) C
                                                                        -7:00-1:00*
 WIBX
           aej
                                       St. Louis, Mo.
                                                                        7:00-24:00*
 WII.
            ak
                    100
                            (.25)
                                       Bloomington, Ill.
Decatur, Ill.
                                                                        -9:00-12:30; 15-19:30*
 WJBC
                    100
           ak
                                                                        79:00-12:30; 13-17:30
-6:30-9; 12:30-15; 19:30-24*
-8:00-12:00; 17-20*
-7:30-11; 15-18; 20-23*
-11:00-15; 18-20*
                    100
 WJBL
           ak
 WJBW
                                       New Orleans, La.
                    100
           ak
                                      Harrisburg, Pa.
Lancaster, Pa.
Lynchburg, Va.
High Point, N. C.
                           3 (.25)
3 (.25)
(.25)
                    100
 WKBO
           ak
 WKJC
WLVA
            ae
                    100
                                                                        7:00-14; 17-22*
            ak
                    100
                            ΡĎ
  WMFR ae
                    100
                                                                        7:00-ss
                            (.25)
                                                                        Silent
  WMPC ak
                    100
                                       Lapeer, Mich.
                                      Newport, R. I.
Columbus, Ga.
Hammond, Ind.
                            (.25) P
  WNRI
          ak
                    100
                                                                        7:00-21:00*
  WRBL
           ak
                    100
                                                                    C-7:00-8:30; 11-13; 16-24
  WWAE ae
                    100
```

```
1210 kilocycles (247.8)
                                       Stratford, Ont.
Aklavik, N. W. T.
Prince Albert, Sask.
                                                                          -9:00-13:30: 16:30-22*
                           ....
F
CJCU
                     50
           7.
                                                                          -20:30-21:30*
CKBI
CKCH
                                                                         -8:00-13:30; 17-23*
           ak
                   100
                                       Hull, Que.
Cobalt, Ont.
Santa Clara, Cuba
                            ĥ
          ak
                   100
                                                                         -8-9; 10:30-13:15; 17-23:15
CKMC
          ak
                     50
                            . . . .
CMHI
          ak
                   150
                                                                         -11-12; 20-21*
-6-8; 9-13:30; 14:30-20*
                            . . . .
                                       Santa Clara, Cuba
Elk City, Okla.
Devils Lake, N, D.
Del Monte, Calif.
Klamath Falls, Ore.
Lincoln, Neb.
Fort Smith, Ark.
KASA
           ck
                   100
                            . . . .
                           P
KDLR
                                                                         -6:30-16; 18-20:30*
           ak
                   100
KDON
           Z.
                   100
KFJI
           ak
                   100
                                                                      P-8:30-21:00*
KFOR
                   100
                            (.25)C
           ae
                                                                          -7:00-23:00*
                                                                         -7:00-23:00*
-6:30-14; 17-21:30*
-9:00-12; 16-19:30; 21-24
-9:00-12; 15; 18-22*
-7:00-23:60*
KFPW
                   100
           ak
                                       Cape Girardeau, Mo.
                            6 (.25)
KFVS
           ak
                   100
KFXM
KGY
KIEM
                   100
                                       San Bernardino, Cal.
          ak
                                       Olympia, Wash.
Eureka, Calif.
Garden City, K.
Pasadena, Calif.
           ak
                   100
                   100
          ak
                            5 km - -
                                                                          -7:30-22:00*
KIUL
                   100
                           ġ...
           ak
                                                           Kans.
                                                                      M-6:00-20:45
KPPC
                                                                      P-Silent
           ak
                    50
KVSO
KWEA
                   100
                                       Ardmore, Okla.
           ak
                            1)
                                                                         --7:00-18:00*
           z
                   100
                                       Shreveport, La.
                             . . .
KWTN ak
                   100
                                       Watertown, S. D. Guatemala City
                                                                          -7:00-21:00*
TGW
                10000
                                                                         -11-13; 18:30-5
           ak
                                       Zanesville, Ohio
WALR
          ak
                   100
WBAX
WBBL
                   100
                                       Wilkes Barre, Pa.
          ae
                                                                          -7:30-12; 18-24
                                       Richmond, Va.
Red Bank, N. J
          ak
                   100
                           3
                                                                          -Silent
                   100
WBRB
          ak
                                                                         --17:00-19:00
WCOL
                   100
          ak
                                       Columbus, Ohio
                                                                          -7:00-23:00*
                                       Columbus, Onto
Chicago, Ill.
Harrisburg, Ill.
Chicago, Ill.
White Plains, N. Y.
Freeport, N. Y.
Chester, N. Y.
Rock Island, Ill.
WCRW ae
                   100
                            4
                                                                          -11-14; 17-19*
WEBO
                                                                          -6-9; 12-16; 19:30-21
-8:30-10; 15:30-17; 0-2
-9-11:30; 15-17; 19-22
          ae
                   100
                            6(.25)
                   100
WFAS ak
WGBB ae
          ak
                   100
                            3
                   100
                            3
                                                                         Silent
WGNY ak
                   100
                                                                          -6:45-9; 11:30-15
-7:30-23:00*
                            (.25)
WHBF
                   100
          ak
                                       Anderson, Ind.
Poynette, Wis.
Gadsden, Ala.
WHBU ak
                   100
                                                                          6:30-24:00*
                            (.25)
WIBU
                   100
          ak
                                                                          7:00-19:00*
WJBY
          ak
                   100
                                                                          9:00-21:00*
                            D
ŴĴEJ
                   100
                                       Hagerstown, Md.
          ae
                                                                        6:30-23:00
                            (.25)
WJIM
WJW
                   100
                                       Lansing, Mich.
Akron, Ohio
          z
           ae
                   100
                            (.25)
                                                                        --9:00-23:00*
WKOK ak
WMBG ak
                   100
                                       Sunbury, Pa
                                                                          12:00-18:00
                                      Richmond, Va.
Hibbing, Minn.
Clarksdale, Miss.
                   100
                            C (.25)
                                                                         -7:00-24:00°
WMFG z
                   100
WMFN ak
                   100
                                                                         -7:00-21:00*
                            . . . .
WOCL ak
WOMT ak
WPAX ak
WSBC ae
                                       Jamestown, N. Y.
Manitowoc, Wis.
                                                                         -10:30-22:30*
                   100
                                                                         -7:00-21:00*
                   250
                           D
                                       Thomasville, Ga.
                                                                      E-7:00-ss*
                   100
                                      Chicago, Ill.
Springfield, Tenn.
Charlotte, N. C.
Springfield, Ill.
                            4
                                                                         -6-8:30; 10-11; 14-15:30; 20-22; 23-24*
WSIX
                   100
          ak
                                                                          -6:00-14:30; 17-20:30*
-7:00-24:00*
                           N (.25)
                   100
WSOC
          ak
WTAX
                   100
          ak
                                                                          -7:00-22:30*
XEE
XEFV
                    50
                                       Durango, Dgo.
Juarez, Chih.
          ak
                   100
                                                                      M-8:00-15: 17-22*
                            . . . .
XEMZ
                   250
                                       Tijuana, L. C.
Puebla, Pue.
XETH
          ak
                   100
                                                                          8:30-11: 13-15: 19-24
                           DP
                                       Rochester, N. Y.
1220 kilocycles (245.8)[
CMJE
                    50
                                       Camaguey, Cuba
Lawrence, Kas.
Seattle, Wash.
                           a (5)
S2
KFKU
KTW
                  1000
          20
                                                                         -14:30-15: 18-18:15
          ak
                  1000
                                                                          -Silent
KWSC
                  1000
                            \widetilde{2} (5)
                                       Pullman, Wash.
Canton, N. Y.
          ae
                                                                          6:45-8; 10:30-21:30
WCAD
                            D
          ak
                   500
                                                                        -12:30-13:30: 15-16<sup>3</sup>
                           R (5)
C (2.5)
WCAE
          ak
                  1000
                                       Pittsburgh, Pa.
Tampa, Fla.
                                                                          6:45-1:00*
WDAE
                  1000
                                                                         -8:00-24:00*
          ae
WREN
          ak
                  1000
                            Ba(5)
                                       Lawrence, Kas.
Veracruz, Ver.
                                                                          -7:00-24:00*
XETF
          ak
                    12
                                                                         -10:00-15:00; 18:30-23:00*
1230 kilocycles (243.8)
                   100
                            F
CJOC
                                       Lethbridge, Alta.
Havana, Cuba
                                                                      M-7:30-22:30
CMCB ak
                   150
                                                                      E-10:00-23:00*
KGBX
                   500
                                       Springfield, Mo.
                                                                         -7:00-13; 16-23*
          ak
                           (.5)
N
C
                                                                     M-7:00-14; 16-21*
P-8:00-23:00*
KGGM ak
                   250
                                       Albuquerque, N. M.
KYA
                                       San Francisco, Calif.
Indianapolis, Ind.
          ak
                 1000
WFBM ae
                 1000
                                                                     C-6:30-24:00*
```

```
-6:30-1:00*
               1000
                                 Boston, Mass.
                        C (2.5)
WNAC ak
                                 Monterrey, N. L.
Managua, Nic.
                                                              -11:00-14; 18-21:30*
XEFJ
YNOP
                100
                 100
1240 kilocycles (241.8)
               1000
                                                             -10-14: 17:30-24*
CJCB
                                 Sydney, N. S
         ak
                                 Sancti Spiritus, Cuba
                50
250
CMHB
                                 Sancti Spiritus, Cub
Mandan, N. D.
Minot, N. D.
Fort Worth, Texas
Twin Falls, Idaho
San Juan, P. R.
Detroit, Mich.
Mexico City, D. F.
                                                           M-12:00-17; 18:45-21*
C-7:00-13; 18-19:45; 22-23:30*
KGCU
         ak
                 250
KLPM
         ak
                        1
KTAT
KTFI
WKAO
                                                               7:00-24:00*
         ak
               1000
                                                           M-5:45-00:15*
                                                                            1: Kpm-11-25-35 (3/4)
               1000
         ae
                                                               -11-14; 18-24
               1000
         ae
                                                           Ê
                                                             -7:00-24:00*
               1000
                        В
         ak
XEAI
XEKL
                 100
         7.
                                 Leon, Guan.
                                                               -10:30-16; 17-23*
                 500
         7.
                                 Saltillo, Coah.
XELA
                  50
1250 kilocycles (239.9)
                                                               -8:00-24:00*
                 250
                        1255
                                 Havana, Cuba
CMCG ak
                                 Santiago, Cuba
                                                            E
                                                               8:00-14; 16-23*
         ak
                 150
                                 Long Beach, Calif.
Northfield, Minn.
                                                               5:30-24:00
KFOX
               1000
         ae
                                                               9:45-10:16
                                                            ċ
WCAL
               1000
                        2 (2.5)
         ah
                                                               -7:00-24:00*
WDSU ak
               1000
                                  New Orleans, La.
                        a (2.5)
                                                               Silent
WHBI
         ak
               1000
                                  Newark, N. J.
                                                               -19:00-20:00
                                  Minneapolis, Minn.
WLB
         ak
               1000
                                                               24 hours daily
                        a (2.5)
2 (5)
                                 Newark, N. J.
WNEW ae
               1000
                                                               6:00-9:43; 10:16-19; 20-24
               1000
                                 Minneapolis, Minn.
WTCN ak
1260 kilocycles (238.0)
                                 Edmonton, Alta.
Missoula, Mont,
Council Bluffs, Iowa
Port Arthur, Texas
                                                            M-7:30-24:00
CFRN
         ak
                 100
                                                            M-7:30-22:00*
KGVO
               1000
         ak
                                                               -6:00-1:00*
KOIL
KPAC
               1000
                        B (2.5)
         ak
                                                               -6:00-ss
         ak
                 500
                        D
                                 Weslaco, Texas
Fayetteville, Ark
                                                               -7:00-21:00*
KRGV
         ak
                 500
                                                              -6:00-10; 12-18*
                        Ď
               1000
KUOA
         ak
KVOA
                                                            M=6-9; 12-15; 18-21
         ak
                 500
                                 Tucson, Ariz.
Dayton, Ohio
                        Ŕ
               1000
WHIO
         ae
                                 Springfield, Vt.
Savannah, Ga.
                                                              -7:15-17:45
               1000
WNBX
         ak
                        Ċ...
                                                            E-7:00-1:00*
WTOC
        ae
               1000
1270 kilocycles (236.1)[
                                 Caibarien, Cuba
                                                               -20:00-21:00
                 250
CMHD dk
                                 Tegucigalpa, Hond.
Decorah, Iowa
Seattle, Wash.
HRN
KGCA
                 100
         Z.
                        žĎ.
                                                              -8:30-9:45: 10:45-11:30: 12:30-14:30*
         ak
                 100
                        C (2.5)
                                                           P-6:45-24:00*
M-7:00-22:00*
KOL
KVOR
               1000
         ae
               1000
                                 Colorado Spgs., Colo.
         ae
                                                               -7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-
KWLC
                 100
                        2D
                                  Decorali, Iowa
         ak
                                                                 15:30*
                                  Grand Rapids, Mich.
                                                               *00: 24:00
                 500
                        aN
WASII
                                 Baltimore, Md.
Jackson, Miss.
                                                            E-7:00-24:00*
WFBR
                 500
                        R
         ak
                        N (2.5)
aN
                                                              -7:00-23:00*
WJDX
               1000
         ae
                                 Grand Rapids Mich.
Ensenada, L. C.
                                                              -7:00-24:00*
WOOD
         ak
                 500
XEG
         7
                 200
                                                              -8:00-9:00: 13-14:30: 20-23:30
                 250
                                  Jalapa, Ver.
XFB
         ak
                                  Managua, Nic.
 YNLF
                  20
                        1275
1280 kilocycles (234.2)
                                 Havana, Cuba
                                                            E-12:00-18:00*
CMCU z
                 150
                        (2.5)
                                 Great Falls, Mont.
Camden, N. J.
                                                            M-8:00-22:00*
               1000
        ae
KFBB
                                                            E-
                                                               -Silent
WCAM ae
WCAP ae
                 500
                                 Asbury Park, N. J.
Chattanooga, Tenn.
Madison, Wis.
Worcester, Mass.
                                                               -10:30-16; 20-21
                                                            F.
                 500
                        C (5)
N (5)
C
WDOD ak
                                                               7:00-23:30*
                1000
                                                               -7:00-24:00*
-8:00-24:00*
WIBA
         ae
                1000
WORC
         ak
                 500
                                  Dallas, Texas
                                                               7:00-23:00*
WRR
         ak
                 500
                                  Trenton, N. J
                                                               8:00-8:30; 13-14; 17-20
                 500
                        1
WTNJ
         ak
                                  Mexico City, D. F.
XEMX z
1290 kilocycles (232.4)
                                  Salt Lake City, Utah
                                                           M--6:20-1:00*
KDYL ak
KLCN ak
               1000
                                                            C-8:00-18:00*
                                  Blytheville, Ark.
                 100
```

```
Houston, Texas
Superior, Wis.
Pittsburgh, Pa.
                         C (5)
N (5)
C (2.5)
                                                                   -6:30-24:00*
KTRH
                1000
         ak
                                                               C-7:00-24:00*
WEBC
         ae
                1000
                                                               E-7:30-24:00
WJAS
         ak
                1000
                                   Saranac Lake, N. Y.
WNBZ
                 100
                         D
                                                               E.
        7.
         ak
                 500
                                   San Juan, P. R.
                                                               E-7:00-9; 11-14:30; 16-24
WNEL
1300 kilocycles (230.6)[
                                   Santo Domingo.D.R.
                  10
                         3C
                                                                   -7:00-10:30; 14:30-17; 18-19; 20-23
                 500
KALE
         ak
                                   Portland, Ore.
                                   Los Angeles, Calif.
                                                                  -24 hours daily
KFAC
         ak
                1000
                                   Los Angeles, Gas.
Wichita, Kans.
Portland, Ore.
Brooklyn, N. Y.
New York, N. Y.
New York, N. Y.
Greenville, S. C.
Troy, N. Y.
                         Ċ
                                                               Č.
                                                                  -7:00-24:00*
KFH
          ak
                1000
                                                                   -10:30-14:30; 17-18; 19-20
                 500
                         3
KFJR
         аø
                1000
                                                                   -Silent
WBBR
         ae
                                                                  -7:00-12; 15-21; 22-23; 24-1:00
WEVD
          яk
                 1000
                                                                E-9:00-10; 12-15; 21-22; 23-24*
                 1000
         ae
                                                                  -7:30-22:30*
                1000
                         (5)
WFBC
         ak
                                                                   -Silent
WHAZ
         ae
                 500
                                   Miami, Fla.
                                                                   -7:30-24:00*
WIOD
          ak
                1000
1310 kilocycles (228.9)[
                                                               A-12:00-13:30; 17:00-21:00
A-10-13; 17:30-19:30*
E-8:00-14; 17-23*
                                   Charlottetown, P.E.I.
CHCK
                   50
         ak
                  100
                                    Yarmouth, N. S.
CJLS
          ak
                                   Quebec, Que.
Jerome, Ariz.
Dublin, Texas
CKCV
          ak
                  100
KCRJ
                  100
                         Ď
                                                                M-7:30-9:30; 12-13; 16:30-18
          яk
                         (.25)
(.25)
(.25)
                                                                   -6:00-21:30*
KFPL
          dk
                  100
                                   Oklahoma City, Ok.
Lubbock, Texas
                                                                   -6:00-24:00*
KFXR
          ak
                  100
KFYO
                                                                   -7:00-21:15*
          dk
                  100
                                                                   -7:30-9:30: 12-15: 18-19*
                                    Wolf Point, Mont.
                                                                M-
KGCX
          ak
                  100
                         (.25)
                                                                   -7:00-21:00*
                                   Kalispell, Mont.
KGEZ
         aj
ak
                  100
                                                                M-
                         . . . .
KGFW
                                    Kearney, Neb
                                                                   -7:00-13:30; 15:30-21*
                  100
                                   Juneau, Alaska
Yakima, Wash.
KINY
          ak
                  100
                                                                   8:00-14; 16-22:00*
                         (.25)
                                                                  -7:00-24:00
          ak
                  100
                  100
                                    Santa Fe, N. Mex.
                                                                P-7:00-13:30; 16:30-22*
KIŪJ
                         (.25)
                                   Medford, Ore.
                                                                P---8:00-20:00*
KMED
                  100
         ck
                                   Shreveport, La.
Rochester, Minn.
El Paso, Texas
         ak
                  100
                                                                   -7:00-21:00*
KRMD
                         P ...
                  100
KROC
          Z
KTSM
                                                                    6:30-22:30*
          ak
                  100
                                   Lafayette, La.
Aberdeen, Wash.
                                                                   -7:00-14; 17-22*
-7:30-22:00*
KVOL
          яk
                  100
                         . . . .
KXRO
         ak
                  100
                         . . . .
                                   Marquette, Mich.
                                                               C
                                                                    9:30-16:30*
WBEO
          ae
                  100
                                                                  --6:45-14:16-23*
--8:00-22:30
WBOW
                         (.25)
                                    Terre Haute, Ind.
                                                                C
         ak
                  100
                                   Wilkes Barre, Pa.
Joliet, Ill.
WBRE
          ak
                  100
                                                                E-
                         . . . .
                         D
                                                                   -7:00-20:30
WCLS
                  100
                                   Ashland, Ky.
El Paso, Texas
Buffalo, N. Y.
                                                                   -6:30-24:00*
WCMI
                  100
                                                                E.
                                                               M-
WDAH
         ak
                  100
                                                                   -Silent
                         (.25)
                                                               E-7:00-24:00*
WEBR
         aeh
                  100
WEMP
WEXL
WFBG
                 100
                         PD
                                   Milwaukee, Wis.
Royal Oak, Mich.
         Z
                                                               E-8:00-4:00*
         ak
                   50
                         3
                                   Altoona, Pa.
                                                                   -10:30-16:30; 18:15-21:15
                  100
                                                               E
         ae
                                   Flint, Mich.
                                                                   -7:00-24:00*
WEDE
         mk
                  100
                                   Newport News, Va.
                                                                   7:00-24:00
                         (.25)
          aj
                  100
WGII
                                                                   9:00-11:30; 13-16; 21-24
WHAT ak
                                   Philadelphia, Pa.
                  100
                                   Johnstown, Pa.
                                                                   -8:00-10:30; 16:30-18:15; 21:15-24

-7:00-18:00; 19:30-23:00

-8:00-23:00*
WJAC
          ae
                  100
                         6(.1)
                                   Muncie, Ind.
WLBC
          ak
                   50
                                   Muncie, Ind.
Laconia, N. H.
Auburn, N. Y.
Plattsburg, N. Y.
New Bedford, Mass.
Washington, D. C.
                                                               Ē
WLNH
         ak
                  100
                                                                   -8:00-20:00*
                                                               F
WMBO ak
                  100
                                                                   -8:00-16:00*
WMFF
                  100
                         D (.25)
                                                                   -7:45-23:30*
WNBH
                  100
                         (.25) \acute{C}
                                                               E
                                                                   -7:00-24:00*
                  100
                                                                E
WOL
          ak
                                                                   -7:00-13; 16-22*
WRAW ak
                                   Reading, Pa.
                                                               E
                  100
WROL
                  100
                         (.25)
                                    Knoxville, Tenn.
                                                                    7:00-24:00*
         ak
                                   Grove City, Pa.
                                                                  -Football Game
WSAJ
          ae
                  100
WSGN
WSJS
                         (.25)
C
                                                                    7:00-21:00*
                  100
                                   Birmingham, Ala
          яk
                  100
                                    Winston-Salem, N.C.
                                                                   -8:00-24:00*
          яk
                         P
                                    Tallahassee, Fla.
                                                                    7:00-23:00*
                  100
WTAL.
          яk
                                   Philadelphia, Pa.
                                                                  -7:00-9; 11:30-13; 16-21
-7:00-13:45; 16-22
WTEL.
                  100
          ce
                                   Philadeiphia, Pa.
Jackson, Tenn.
Elkhart, Ind.
Oaxaca, Oax.
Mexico City, D. F.
Tampico, Tams.
Torreon, Coah.
                         (.25)
                  100
WTJS
          аk
                                                                   8:00-14; 17:30-19:30*
                   50
WTRC
          ak
                         6 (.1)
XEAJ
                   15
XECW
                   10
                                                                  -9:00-11; 12-14:30; 17-21
XEFW
          ak
                  250
                                                                M-11:00-16: 18:30-21*
                  125
XETB
          ak
XEX
                  125
                                    Monterrey, N. L
          ak
XFA
                                   Aguascalientes, Ags.
1320 kilocycles (227.1)
CMOX ak
                                    Havana, Cuba
                                                               E-12:00-24:00*
M-7:00-22:00*
                                   Pueblo, Colo.
KGHF
                  500
```

```
L-6:00-24:00
   KGMB ak
                    1000
                            \mathbf{C}
                                      Honolulu, T. H.
                            (.5)
C (1)
C (2.5)
                                      Idaho Falls, Idaho
Des Moines, Iowa
   KID
             ae
                     250
                                                                   M-9:00-21:00*
   KRNT
            ak
                     500
                                                                      -6:00-24:00*
                                      Akron, Ohio
York, Pa.
New Orleans, La.
   WADC ae
                    1000
                                                                      -8:00-24:00*
    WORK ak
                                                                      -8:00-17:30*
                    1000
                            'n
   WSMB ak
                     500
                                                                     -7:00-1:00
1330 kilocycles (225.4)
                                      Cruces, Cuba
   CMHK z
                     250
                                                                  E-10:00-11:30
                                                                  P-7:00-1:00*
                            C (2.5)
                                      San Diego, Calif.
Tacoma, Wash.
   KGB
             ag
ak
                    1000
   KMO
                     250
                                                                   P-6:45-23:00*
                            1C (2.5) Sioux City, Iowa C (2.5) Hartford, Conn.
   KSCJ
                    1000
                                                                       ·7:30-23:00*
             aj
   WDRC ae
                    1000
                            C (2.5)
R (2.5)
                                                                      -8:00-24:00*
                    1000
                                      Cincinnati, Ohio
    WSAI
             ak
                                                                      -7:00-24:00*
   WTAO ae
                                       Eau Claire, Wis.
                                                                      -7:00-20:00
                    1000
   1340 kilocycles (223.7)
                                      Camaguey, Cuba
Huron, S. D.
Butte, Mont.
Dodge City, Kans.
Pensacola, Fla.
                     100
   CMJI
   KGĎŶ
                                                                     -7:00-18:00*
            ak
                     250
                            N (2.5)
                                                                   M--8:00-23:00*
   KGIR
             ak
                    1000
                                                                      -7:00-20:00*
   KGNO
                     250
                            C
C (1)
C (2.5)
   WCOA
                     500
                                                                       7:30-23:00*
             ak
   WFEA
WSPD
                     500
                                       Manchester, N. II.
                                                                      9:00-23:00*
             ae
                                      Toledo, Ohio
Jalapa, Ver.
             ae
                    1000
                                                                       7:00-1:00*
                     350
   1350 kilocycles (222.1)
                                                                  E-12:00-14:00; 17:00-23:00*
M-7:30-22:00*
   CMCA
                     250
                                       Havana, Cuba
                            (2,5)
B (5)
                                      Boise, Idaho
                    1000
   KIDO
             ak
                                                                   C-6:30-1:30*
   KWK
                                      St. Louis, Mo.
             ak
                    1000
   WAWZ ae
                     500
                            1(1)
                                      Zarephath, N. J.
New York, N. Y.
                                                                     -7:45-8:45; 17-18:30
                                                                   E-6:00-7:30; 9-13
   WBNX ae
                     250
   1360 kilocycles (220.4)
   CMJH
             dk
                     100
                                       Ciego de Avila, Cuba
                                                                      -8:00-9:30; 10-14; 17-22*
                                      Enid, Okla.
Long Beach, Calif.
                                                                      -7:00-14; 16:30-23*
   KCRC
             ak
                     250
   KGER
                    1000
                                                                       7:00-23:00*
             ak
                                      Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
                            (1)
C (5)
             ak
                                                                       8:00-15:30; 17-22*
                     500
   WFBL
WGES
                                                                       -7:00-1:00*
             ak
                    1000
                                                                     -7:00-12; 15:30-20*
-8:00-10; 12-17:30*
-6:30-24:00*
             ae
                     500
   WOBC
WSBT
                                       Vicksburg, Miss.
             ak
                    1000
                            D
                                      South Bend, Ind.
                     500
   1370 kilocycles (218.8)
                     100
                                       Moncton, N. B.
                                                                      -8:00-9:30: 12-14: 17-24*
   CMGE
                                       Cardenas, Cuba
                                                                      -11:00-14; 18-22:30*
             ak
   KAST
KELD
                                       Astoria, Ore.
                     100
                            D
                                                                      -7:00-18:30*
                                       El Dorado, Ark.
Bakersfield, Calif.
                     100
             7.
   KERN
KFGQ
KFJM
KFJZ
                                                                      -7:00-24:00*
             ak
                     100
                                      Boone, Iowa
Grand Forks, N. D.
Fort Worth, Texas
Longview, Texas
Tucson, Ariz.
                     100
             ak
                     100
                             (.25)
                                                                      -8:00-20:00*
             ak
                                                                       7:00-23:00*
                     100
             ae
                                                                      -6:00-ss
   KFRO
             ak
                     100
                             (.25)
                                                                       7:00-13; 16-22*
   KGAR
             ae
                     100
                                                                      -9:00-11; 14-19; 19:45-22*
-7:00-9:30; 12-13; 16-19:30*
                                      Oklahoma City, Ok.
Roswell, N. M.
   KGFG
             bk
                     100
   KGFL
KGKL
             ak
                     100
                             (.25)
                                                                       8:00-21:30*
             ak
                     100
                                       San Angelo, Texas
                                       Clovis, N. M.
                                                                      -7:00-16:30; 19:30-21:30*
-7:00-23:00*
   KICA
                     100
             ak
                                       Durango, Colo.
   KIUP
             яk
                     100
                            (.25)
   KLUF
                     100
                                      Galveston, Texas
             7.
                                                                       ·7-8:30; 10-11; 12-13:30; 16-18; 19-20; 22-00:30*
   KMAC ak
                     100
                            5
                                      San Antonio, Texas
   KONO
                                       San Antonio, Texas
                                                                       6-7; 8:30-10; 11-12; 13:30-16; 18-19; 20-22*
                     100
             ak
                                      Berkeley, Calif.
Everett, Wash.
Salem, Ore.
Walla Walla, Wash.
                            (.25)
                                                                       24 hours daily
   KRE
             ak
                     100
   KRKO
                                                                       7:30-12; 16:30-20*
            ak
                      50
                                                                      -9:00-23:00
-6:30-22:00*
   KSLM
             ak
                     100
                            1
   KŬJ
             ak
                     100
                                      Seattle, Wash.
Kansas City, Mo.
Sheridan, Wyo.
Albany, N. Y.
                                                                   P-12:00-16:30; 19-22
   KVL
             ak
                     100
   KWKC ak
KWYO ak
                                                                      -6-9; 12-15; 18-21*
                     100
                            . . . .
                                                                   M-7:00-24:00*
                     100
                                                                   E-7:00-24:00*
   WABY aj
WAGF ak
                     100
                             Dothan, Ala.
2P (.25) Buffalo, N. Y.
                     100
                                                                      -8:00-17:15*
   WBNY
                     100
```

```
Danville, Va
WBTM ak
WCBM ae
                 100
                         (.25)
                                                                 -7:00-14: 17-22*
                                   Baltimore, Md
                 100
                                                                  -7:30-24:00*
                                   Philadelphia, Pa.
WDAS ae
                 100
                         (.25)
                                                                   6:30-9:30; 11:45-13:30; 17-24*
WGL
         96
                  100
                                   Fort Wayne, Ind.
                                                                   0.30-7.30, 11:95-15:50; 17-24*
-7:55-14; 16-22:30*
-7:00-9; 11:30-13:30; 17:30-20:30*
-7:00-00:45*
                                   Memphis, Tenn.
Calumet, Mich.
Jackson, Mich.
Atlanta, Ga.
Lowell, Mass.
WHBO ak
                 100
WHDF
                         (.25)(.25)
                 100
         ak
WIBM ak
                 100
WJTL ak
WLLH ak
                 100
                                                                   6:30-24:00*
                        (,25)
C (,25)
D
                 100
                                                                   7:30-24:00*
                                   Jacksonville, Fla.
Wilmington, N. C.
                                                                   7:00-24:00*
WMBR ak
                 100
                                                                   7:30-17:45*
WMFD ak
                 100
                                                                   -7:00-17:15*
WMFO ak
                 100
                        n
                                   Decatur, Ala.
                                                               E.--
                                                                   7:00-24:00*
WOC ak
WPAY ak
                         C (.25)
                 100
                                   Davenport, Iowa
                                                                   -8:00-11:30; 12-21*
-7:00-21:00*
                 100
                                   Portsmouth, Ohio
                                                               E.
WPFB
                 100
                                   Hattiesburg, Miss.
         ak
WODM ae
                                   St. Albans, Vt.
                 100
                         (.25)
WRAK ak
                                   Williamsport, Pa.
                                                                   7:30-20:00*
                 100
                                   Withamsport, Pa.
Augusta, Maine
Racine, Wis.
Buffalo, N. Y.
Mexico City, D. F.
Morelia, Mch.
San Luis Potosi, SLP
                                                                   -8:00-23:30*
-7:45-22:45*
WRDO ae
                 100
                         (,25)
                 100
WRIN
         ak
                         \tilde{\mathbf{D}}
                                                                   8:30-10:00
WSVS
         ak
                  50
                                                                  -18:00-1:00*
                 100
XEFZ
         ak
                                                               C-14:00-15:30; 21:00-22:00
C-9:30-15; 17-22*
XEI
         ak
                 125
XEZZ
                 100
1380 kilocycles (217.3)
CMBX ak
                 150
                                   Havana, Cuba
                                   Reno, Nev.
Pittsburgh, Pa.
KOH
KOV
WALA
                         Ċ
                                                                   -8:00-24:00*
         ak
                 500
                 500
                                                                   7:00-24:00*
          310
                        \ddot{\mathbf{C}}(\mathbf{i})
                                                                  -8:00-23:00*
         af
                 500
                                   Mobile, Ala
                                   LaCrosse, Wis
                                                                  -7:30-23:00*
WKBII ac
                1000
                                                                 --7:00-17:15*
                        \dot{\mathbf{D}}
WNBC mk
WSMK ak
                 250
                                   New Britain, Conn.
                 200
                                                                   -7:00-19:30: 22-1:00*
                        \bar{\mathbf{C}}
                                   Dayton, Ohio
1390 kilocycles (215.7)
                                                               C-7:30-23:00*
                                    Winnipeg, Man.
CJRC
          ak
                  100
CMJC
                  150
                                   Camaguey, Cuba
          7
HIH
KLRA
          ak
                   15
                         1395 San Ped. de Macoris, DR
                 1000
                         C (2.5) Little Rock, Ark.
Marshfield, Ore.
                                                                    6:30-23:30*
          ae
                                                                P 8:00-20:00*
KOOS
                  250
          ae
                                    Phoenix, Ariz.
                                                                M--7:00-22:15*
                  500
KOY
          36
                         (1) Phoenix, Ariz.
C (2,5) Cleveland, Ohio
WHK
                                                                E-7:30-24:00*
                 1000
          316
1400 kilocycles (214.2)
                                    Matanzas, Cuba
Santiago, Cuba
Ogden, Utah
Tulsa, Okla.
CMGC
                  100
                                                                E
CMKR z
                  100
                                                                M-8:30-21:30*
 KLO
                  500
                                                                   -6:30-24:00*
-7:00-10:30; 13-15; 19-23*
 KTUL
          ak
                  500
                          C (1)
 TĠX
                  250
                                    Guatemala City, Gt.
          ak
 WARD
                  500
                          ż
                                    Brooklyn, N. Y.
Brooklyn, N. Y
                                                                  -15:45-18; 22:30-1:00
          ak
                          2 (1)
R (1)
 WBBC
          ae
                  500
WIRE
                                    Indianapolis, Ind.
Brooklyn, N. Y.
Brooklyn, N. Y.
          ak
                  500
                                                                    -7:00-24:00*
                                                                   -11:00-13:30; 18:00-19:30
WLTH
                  500
                                                                   -13:30-15:45: 21-22:30
                  500
1410 kilocycles (212.6)[
                                                                  -9:00-10: 12-13: 17:30-23:30*
                  500
                                                                Л—9:00-10; л
Р—15-16:30*
 CHNC
                          F (1)
                                    New Carlisle, Que.
 CKFC
          ak
                   50
                                    Vancouver, B. C
 CKMO
                  100
                          5F
                                    Vancouver, B. C.
          ag
                                                                   -12:00-13; 16-18; 20-21
                                    Havana, Cuba
Amarillo, Texas
Boston, Mass.
 CMCR
                  150
                                                                E
          7.
 KGNC
          ae
                 1000
                          (2.5)
                                                                  -7:30-24:00*
 WAAB
          ak
                  500
                          Ċ
                                                                    8:45-00:45*
 WBCM ae
                  500
                                    Bay City, Mich.
                                    Sheboygan, Wis.
Bluefield, W. Va.
Rockford, Ill.
                                                                    6:00-10:00; 13-16:30; 18-19:30*
 WHBL
                  500
          36
                                                                E-7:00-9; 12-15; 18-20*
C-10:00-13:00; 16-18; 20-22:30*
 WHIS
                  250
                          (.5)
          ak
 WROK ak
                  500
                                                                C-6:30-22:30*
                          C (1)
                                    Montgomery, Ala.
 WSFA
                  500
          ak
1420 kilocycles (211.1)[
                         ř ...
                                                                E-12-13:30: 17-22:30*
CKGB
CKNC
                  100
                                    Timmins, Ont.
                                                                E-8:00-23:15*
          ak
                  100
                                    Toronto, Ont.
 CMGI
                   50
                                    Matanzas, Cuba
          z
 KABC
                  100
                          (.25)
                                    San Antonio, Texas
                                                                C-7:00-23:00*
```

```
KABR
                   100
           яk
                          Ď...
                                    Aberdeen, S. Dak.
 KALB
                   100
                                    Alexandria, La.
 KBPS
          aj
ak
                   100
                          4
                                    Portland, Ore.
                                                                   Silent
 KCMC
                   100
                                    Texarkana, Arl
                                                               Ċ
                                                                  -7:00-14; 16-21*
-9-13; 16-21*
 KFIZ
           ak
                   100
                                    Fond du Lac, Wis.
 KGFF
           ak
                  100
                                    Shawnee, Okla.
                                                               C-7:30-15; 17-21*
 KGGC
KGIW
           ak
                  100
                                    San Francisco, Cal.
                                                               P-9:00-13:16-23*
                                    Alamosa, Colo.
Hilo, T. H.
Lamar, Colo.
Pecos, Texas
                          1
           ak
                  100
                                                                M-7:00-14; 18-21*
 KHBC
                          i ...
                   100
           z
           ak
                   100
                                                                M-7:00-12; 15-18*
 KIUN
           ak
                   100
                                                                  --7:00-14:16-22*
                         DP
 KNET
           z
                  100
                                    Palestine, Texas
 KORE
           ae
                  100
                                    Eugene, Ore.
                                                                   -7:45-21:00*
                                    Lewiston, Idaho
Midland, Tex.
Yuma, Ariz.
Hutchinson, Kans.
 KRLC
           ak
                   100
                                                                   -6:30-22:00*
                          DP
 KRLH
                   100
 KUMA
                  100
                                                                  -4:00-9; 11-13:30; 18-22*
-7:00-19:00*
 KWBG
                  100
          ak
 KXL
                  100
                         4 (.25)
C
                                    Portland, Ore.
                                                                   7:00-1:00
          ak
 WACO
          ak
                  100
                                    Waco, Texas
                                                                   7:00-23:00*
                         ····
 WAGM ae
                  100
                                    Presque Isle, Maine
                                                                   11:00-13; 16-19*
 WAZL
WCBS
                  100
          ak
                                    Hazleton, Pa
                                                                   -10:30-14:30; 16-22*
          ak
                  100
                                    Springfield, III
                                                                   -7:00-22:00*
 WEED
                  100
                                    Rocky Mount, N. C.
          ak
                                                                  -7:00-16; 20-22*
-7:00-13; 16-20*
 WEHC
          ak
                  100
                          \bar{3} (.25)
                                    Charlottesville, Va.
                  100
 WEHS
                                    Cicero, III.
Battle Creek, Mich.
          ak
                          a
                                                                   -16-18*
 WELL
          ak
                  100
                                                                   -7:30-24:00*
                                    Albany, Ga.
Olean, N. Y
Cicero, III.
          ak
                  100
                                                                   ·7:00-21:00*
                         D
 WHDL
          ak
                  100
                                                                   -7:00-ss*
 WHFC
          ae
                  100
                         2
                                                                   7:00-13:30: 18-1:00*
                                   Wilmington, Del.
Baton Rouge, La.
Ironwood, Mich.
Cicero, Ill.
 WILM
                  100
                                                                  -7:00-11; 14-17; 21-24*
-6:45-22:00*
          aj
ak
 WJBO
                  100
                                                                   -7:30-19:30*
 WJMS
          ak
                  100
 WKBI
          ak
                  100
                                                                   -13:30-16:00*
                          (.25)
 WLAP
          ak
                  100
                                    Lexington, Ky
                                                                   -7:00-22:00*
 WLBF
                                    Kansas City, Kans.
          ak
                  100
                                                                   -7:00-22:00
                         (,25)
C (,25)
(,25)
                  100
 WLEU
          ak
                                    Erie, Pa
                                                                  -8:00-23:00*
 WMAS
                  100
                                   Springfield, Mass.
Detroit, Mich.
Joplin, Mo.
          ak
                                                                   7:30-24:00*
 WMBC
          ae
                  100
                                                                 --7:30-24:00*
 WMBH ak
                                                                   -7:00-21:30*
-8:00-24:00*
                  100
                         (.25)
 WMFJ
          ak
                  100
                                   Daytona Beach, Fla.
 WNRA
          ak
                  100
                                    Muscle Shoals, Ala.
                                                                   -7:00-13:00; 16-22*
-7:00-9:30; 11:00-14:00; 16-22:30*
                                    Paducah, Ky.
 WPAD
                  100
                         (.25)
 WPAR
          ak
                  100
                                   Parkersburg, W. Va.
Ponce, P. R.
                                                                  -8:00-1:00
 WPRP
                  100
                         P (.25)
          z
WWC
                 1000
                                   Spartanburg, S. C. Guanjuato, Gto. Monterrey, N. L.
          7.
XEAZ
XEFB
          7.
          ak
                  100
                                                                  -10:00-14:00: 17:00-22:30
1430 kilocycles (209.7)
CMJP
          яk
                  100
                                   Camaguey, Cuba
                                                                  -10:00-12:00: 20:00-22:00*
                                   Los Angeles, Calif.
North Platte, Neb.
Des Moines, Iowa
Columbus, Ohio
Rochester, N. Y.
                         (5) N
KECA
          ah
                 1000
                                                               P---7:00-23:00*
KGNF
KSO
                1000
                                                              Ċ
          ak
                                                                  -7:00-ss*
                        B (1)
C (1)
C (1)
C (1)
          ak
                 500
                                                              Č
                                                                  -6:30-1:00*
WBNS
                  500
                                                                  -6:30-24:00*
          ae
                                                              E—8:00-24:00*

E—8:00-24:00*

C—7:30-22:15*
                  500
WHEC
          ae
                                   Harrisburg, Pa.
Memphis, Tenn.
Albany, N. Y.
WHP
                 500
          ak
WNBR ae
                         (1)
C (1)
                  500
WOKO aj
                 500
                                                                  -8:00-1:00*
1440 kilocycles (208.2)
KDFN
         ak
                 500
                                   Casper, Wyo
                                                                   7:30-13:30; 15:00-21:00*
                                  Oakland, Calif.
Houston, Texas
Cartago, C. R.
KLS
KXYZ
                 250
                         D
                                                              P-7:00-18:00*
         ag
ak
                1000
                                                                 -6:00-22:30*
TIFS
                        (1441)
         Z
                                  Greensboro, N. C.
Allentown, Pa.
WBIG
                 500
                         C (1)
                                                              E-7:00-23:00*
         26
WCBA
                 500
                                                              E--7:00-1:00*
WCBA aj
WMBD ak
                 500
                        C (1)
                                  Peoria, Ill.
                                                                 -6:00-24:00*
                 500
                                  Allentown, Pa
                                                                -13:00-23:00
WSAN
         aj
                        a
                 250
                                  Chihuahua, Chih.
XEEL
         36
                                                              C-13:00-16:00; 20-22:30*
1450 kilocycles (206.8)[
                  75
CFCT
                                  Victoria, B. C.
                                                                 -8:00-12:30; 17:30-20:15; 00-2:00
                        F
N
                                  Summerside, P.E.I.
CHGS
                  50
                                                              A-7:30-8:45; 10:30-14; 16-23*
         ae
                                                              C-6:30-24:00*
KTBS
         ak
                1000
                                  Shreveport, La.
                 500
250
WGAR ak
                        B (1)
                                  Cleveland, Ohio
                                                                 -7:00-1:00
WHOM ae
                                  Jersey City, N. J.
                                                                 -7:00-24:00*
```

E-8:00-15:30; 17-22:15* E-8:00-20:00* 250 Fall River, Mass. WSAR ae Athens, Ga. 500 WTFI ak 1460 kilocycles (205.4) Holguin, Cuba St. Paul, Minn. CMKF 6:45-00:15* N 25000 ak KSTP E-6:30-1:00* Washington, D. C. ak 10000 1470 kilocycles (204.0) Havana, Cuba Spokane, Wash. CMOK z P-6:00-24:00* 5000 KGA ak WLAC ak -6:30-24:00* Nashville, Tenn. 5000 1480 kilocycles (202.6) Oklahoma City, Ok. Buffalo, N. Y. C--7:00-24:00* KOMA ak WKBW ck E-7:00-1:00* 5000 1490 kilocycles (201.2) P-7:00-24:00* Sacramento. Calif. CB KFBK ak WCKY ae 5000 Covington, Ky. E-7:00-1:00 5000 1500 kilocycles (199.9) Sault Ste. Marie, Ont. E-11:00-14; 17-20* CJIC a CMCN z Havana, Cuba 150 Santa Barbara, Calif. 7:00-24:00* 100 KDB ak -7:00-15; 18-22* -8:00-21:00* Corpus Christi, Tex. (.25) Y 100 ak KGFI Moorhead, Minn. 100 KGFK ak C-8:00-14:00; 17-23* M-7:00-15; 17-21* Tyler, Texas KGKB ak 100 Scottsbluff, Neb. (.25)100 KGKY ak Brady, Tex. Austin, Texas ĎΡ KNEL KNOW 100 --7:00-14; 16-22* --7:00-ss* ak 100 Ď... Pine Bluff, Ark. KOTN KPJM 100 ak M-8:00-13:30; 17:30-20:00* Prescott, Ariz. ak ak 100 C-7:00-14; 17-21* P-7:00-23:00* Lake Charles, La KPLC 100 Wenatchee, Wash. Santa Ana, Calif. (.25)KPO ak 100 P-9:00-23:00* KRĚG 100 ak KRNR z KXO ae WCNW ak WDNC ae WGAL ae Roseburg, Ore. El Centro, Calif. Brooklyn, N. Y. Durham, N. C. ĎΡ 100 P-7:00-14:00; 16:00-21:00* 100 1 (.25) C E-15:00-21:00 100 -7:30-00:30* 100 (.25)Lancaster, Pa. E-9:00-22:00* 100 100 ĎΡ Selma, Ala. Kosciusko, Miss. WHBB (.25) (.25) (.25) -6:30-21:00* 100 ak WHEF -7:00-24:00* Detroit, Mich. WJBK 100 E. Dubuque, 111. Richmond, Ind. Muskegon, Mich. -7:00-21:00* WKBB ak 100 10:00-12:00; 18:00-22:00* WKBV 100 (.25)7:30-22:00 WKBZ ak 100 7:00-17:00* Griffin, Ga. Brooklyn, N. Y. WKEU ak 100 --9:00-11:00 WMBO ae WMEX ak 100 Boston, Mass. (.25) C 100 Binghamton, N. Y. 7:00-22:00* 100 WNBF Lae 7:00-23:00 100 Bristol, Tenn. WOPI 36 WRDW ak Augusta, Ga. 8:00-21:00* 100 7:00-10:00; 12-15; 18-21* Rome, Ga. 100 (.25)WRGA -10:00-13; 17-21* Rutland, Vt. 100 WSYB Tak -6:00-23:00 WTMV ak WWRL ak WWSV ae East St. Louis, III. Woodside, N. Y. 100 1 (.25) E-8-9; 11-15; 21-1:00 E-8:00-24:00* 100 Pittsburgh, Pa. (.25) 100 Valley City, N. Dak. 100 1510 kilocycles (198.6) Irregular Kingston, Ont. Waterloo, Ont. 100 CFRC ak 8:00-14:00; 17:00-24:00* CKCR ak 100

| 1530 kil | locycles (196.0) Waterbury, Conn. | | | |
|---------------------|-----------------------------------|--|------------------|--|
| W1XBS z W9XBV ak | 1000 | | Waterbury, Conn. | |

1550 kilocycles (193.4)

W2XR z W6XAL ak 1000 1000 Long Isl, City, N. Y. Bakersfield, Calif.

E-Silent P-12:00-23:00*

KEY TO SYMBOLS

As Shown in the index by Frequencies and Dial Numbers

Frequency is given in kilocycles: wavelengths in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis 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
- Verifies only occasionally. h
- Does not verify. а Verification 10c: letter 25c
- Sends Ekko stamp for 10c. Sends Ekko stamp for 5c.
- Sends Ekko stamp for postage. Sends own station stamp for
- 10c Sends own station stamp for 5c.
- Sends own station stamp for postuce

- L Has no stamps.
- ın Verifies for 5c. Weather or time only
- No information available.
- Fourth Column Symbols National "Blue" network.
- Columbia network \mathbf{C}
- Day time only Dn Day time with occasional evening hours.
- Canadian Radio Brdestg. Commission.
- National "Red" and "Blue"

- Has construction permit only
- R National "Red" network
- Sunday only Sv. Synchronized
- Has permit to increase power
- Has permit to change location. Z Has permit to change fre-
- quency. a-b-c. Small letters show stations using same transmitter
- 1-2-3. Figures denote stations sharing time ... No information

Time on the Air

*Asterisk indicates that the hours are the same for the other week days.

The time is given in accordance with the "24-hour clock." Noon is always 12:00, but midnight may be either 0:00 or 24:00. To change to time of your own clock, subtract twelve. Thus, 18:00-24:00 is 6:00 p. m. to midnight. 23:00-0:30 is 11:00 p. m. to 12:30 a. m. A signifies Atlantic Standard Time (AST). E is Eastern Standard Time (EST). C is Central Standard Time (CST). P is Pacific Standard Time (PST). L is Local Standard Time (LST).

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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

| ALABAMA | | | ALASKA | | | Yuma KUMA | 1420 | 100 | Texark KCMC | ana 1420 | 100 |
|---------|--------|--------|-----------|------|--------|--------------|--------|---------|----------------|-------------|-------|
| Birmin | gham | | Anchorage | • | | | | | KOMO | 1420 | 100 |
| WAPI | 1140 | 5000 N | | 780 | 250 | AR | KANS | AS | CAL | LIFOR | 41.0 |
| WBRC | 930 | 1000 C | Juneau | | | Blythe | ville | | VA. | | |
| WSGN | 1310 | 100 | KINY 13 | 310 | 100 | KLCN | | 100 | Bakers | field | |
| Decatu | r | | Ketchikan | n | 1 | El Dor | ado | | KERN | 1370 | 100 C |
| WMFO | 1370 | 100 | KGBU 9 | 900 | 500 | KELD | 1370 | 100 | W6XAI | 1550 | 1000 |
| Dothar | 1 | | ARIZ | ZONA | | Fayette | eville | | Berkele | ev | |
| WAGF | 1370 | 100 | | | ` | KUOA | 1260 | 1000 | KRE | 1370 | 100 |
| Gadsde | _ | | Jerome | | 1 | Fort S | mith | | Beverly | Hills | |
| WJBY | | 100 | | 310 | 100 | KFPW | 1210 | 100 | KMPC | 710 | 500 |
| | | 100 | Lowell | | | Hot Sp | | | Burbar | 1k | |
| Mobile | | | | 200 | 100 | KTHS | 1060 | 10000 N | KELW | 780 | 500 |
| WALA | 1380 | 500 C | Phoenix | | 1 | Jonesb | 010 | | Chico | | |
| Montgo | merv | | | 390 | 500 | KBTM | 1200 | 100 | KHSL | 950 | 250 |
| WSFA | 1410 | 500 C | | 520 | 1000 N | Little I | Rock | | Del Mo | onte | |
| Muscle | Chanle | | Prescott | | i | KARK | 890 | 250 | KDON | 1210 | 100 |
| WNRA | 1420 | 100 | | 500 | 100 | KGHI | 1200 | 100 | El Cen | tro | |
| | 1420 | 100 | Tucson | | | KLRA | 1390 | 1000 C | KXO | 1500 | 100 |
| Selma | | | | 370 | 100 | Pine B | luff | | Eureka | | |
| WHBB | 1500 | 100 | KVOA 12 | 260 | 500 | KOTN | 1500 | 100 | KIEM | 1210 | 100 |
| | | | | | | | | | | | |

| Fresno | CONNECTICUT | WTOC 1260 1000 C | INDIANA |
|--|--------------------------------|-------------------------------------|--------------------------------|
| MJ 580 1000 C | Bridgeport | Thomasville WPAX 1210 250 | Anderson |
| CIEV 850 100 | WICC 600 500 C | W17EX 1210 200 | WHBU 1210 100 |
| Hollywood | Hartferd | HAWAII | Elkhart |
| FWB 950 1000 | WDRC 1330 1000 C | | WTRC 1310 50 |
| KMTR 570 1000 | WTIC 1040 50000 R | Hilo | Evansville WGBF 630 500 |
| KNX _1050 50000 | New Britain WNBC 1380 250 | KHBC 1420 100 | Fort Wayne |
| Long Beach CFOX 1250 1000 | WNBC 1380 250 New Haven | Honelulu KGMB 1320 1000 C | WGL 1370 100 |
| KFOX 1250 1000 KGER 1360 1000 | WELI 900 500 | KGU 750 2500 N | WOWO 1160 10000 |
| Los Angeles | Sterrs | | Gary |
| ECA 1430 1000 N | WCAC 600 500 | IDAHO | WIND 560 1000 |
| EHE 780 500 I | Waterbury | | Hammond WWAE 1200 100 |
| FAC 1300 1000 | WATR 1190 100 | Beise | WWAE 1200 100 Indianapolis |
| FI 640 50000 N FSG 1120 500 | W1XBS 1530 1000 | KIDO 1350 1000 Idaho Falls | WFBM 1230 1000 |
| FVD 1000 250 | | KID 1320 250 | WIRE 1400 500 |
| GFJ 1200 100 | DELAWARE | Lewiston | Muncie |
| HJ 900 1000 C | Wilmington | KRLC 1420 100 | WLBC 1310 50 |
| RKD 1120 500 | WDEL 1120 250 | Nampa | Richmond |
| Modesto | WILM 1420 100 | KFXD 1200 100 | WKBV 1500 100 |
| TRB 740 250 | | Pocatello | South Bend |
| Oakland | DISTRICT OF | KSEI 900 250 | WFAM 1200 100 WSBT 1360 500 |
| LS 1440 250 | COLUMBIA | Twin Falls | WSBT 1360 500 Terre Haute |
| LX 880 1000 | | KTFI 1240 1000 | WBOW 1310 100 |
| ROW 930 1000 | Washington | ILLINOIS | West Lafayette |
| Pasadena CPPC 1210 50 | WJSV 1460 10000 C | ILLINO13 | WBAA 890 1000 |
| Sacramento | WMAL 630 250 B WOL 1310 100 | Bloomington | |
| FBK 1490 5000 C | WRC 950 500 R | WJBC 1200 100 | AWOI |
| San Bernardino | WKC 750 500 K | Carthage | |
| FXM 1210 100 | FLORIDA | WCAZ 1070 100 | Ames WOI 640 5000 |
| San Diego | | Chicago | Boone 040 3000 |
| KFSD 600 1000 N | Clearwater | WAAF 920 500 | KFGO 1370 100 |
| GB 1330 1000 C | WFLA 620 1000 N | WBBM 770 50000 C | Cedar Rapids |
| San Francisco | Daytona Beach WMFJ 1420 100 | WCFL 970 5000 B WCRW 1210 100 | WMT 600 1000 |
| KFRC 610 1000 C | | WEDC 1210 100 | Council Bluffs |
| KGGC 1420 100 | Gainesville WRUF 830 5000 | WENR 870 50000 N | KOIL 1260 1000 |
| KGO 790 7500 N KJBS 1070 500 | WRUF 830 5000 Jacksonville | WGES 1360 500 | Davenport |
| ΚΡΟ 680 50000 N | WJAX 900 1000 N | WGN 720 50000 | WOC 1370 100 |
| KSFO 560 1000 | WMBR 1370 100 C | WJJD 1130 20000 | Decorah KGCA 1270 100 |
| CYA 1230 1000 N | Miami | WLS 870 50000 N WMAO 670 50000 N | KWLC 1270 100 |
| San Jose | WIOD 1300 1000 N | WMBI 1080 5000 N | Des Moines |
| QW 1010 1000 | WQAM 560 1000 C | WSBC 1210 100 | KRNT 1329 500 |
| Santa Ana CREG 1500 100 | Orlando | Cicero | KSO 1430 500 |
| Santa Barbara | WDBO 580 1000 C | WEHS 1420 100 | WHO 1000 50000 |
| CDB 1500 100 C | Pensacola WCOA 1340 500 C | WHFC 1420 100 | Lowa City |
| Stockton | St. Petersburg | WKBI 1420 100 | WSUI 880 500 |
| KGDM 1100 1000 | WSUN 620 1000 N | Decatur | Marshalltown |
| KWG 1200 100 C | Tallahassee | WJBL 1200 100 | KFJB 1200 100 |
| | WTAL 1310 100 | East Dubuque WKBB 1500 100 | Shenandoah KFNF 890 500 |
| COLORADO | Tampa | East St. Louis | KMA 930 1000 |
| Alamosa | WDAE 1220 1000 C | WTMV 1500 100 | Sioux City |
| GIW 1420 100 | GEORGIA | Harrisburg | KSCJ 1330 1000 |
| Colorado Springs | | WEBO 1210 100 | |
| KVOR 1270 1000 C | Albany | Joliet | KANSAS |
| Denver | WGPC 1420 100 | WGLS 1310 100 | |
| KFEL 920 500 KLZ 560 1000 C | Athens | Peoria | Abilene |
| KOA 830 50000 N | WTFI 1450 500 | WMBD 1440 500 C | KFBI 1050 500 |
| KPOF 880 500 | Atlanta WGST 890 500 C | Quincy WTAD 900 500 | Coffeyville KGGF 1010 100 |
| KVOD 920 500 | W.ITL 1370 100 | Reckford | Dedge City |
| Durango | WSB 740 50000 N | WROK 1410 500 | KGNO 1340 25 |
| KIUP 1370 100 | Augusta | Reck Island | Garden City |
| Grand Junct on | WRDW 1500 100 | WHBF 1210 100 | KIUL 1210 10 |
| KFXJ 1200 100 | Celumbus | Springfield | Hutchinson |
| Greeley | WRBL 1200 100 | WCBS 1420 100 | KWBG 1420 10 |
| | Griffin | WTAX 1210 100 | Kansas City |
| KFKA 880 500 | | Tuscola | WLBF 1420 10 |
| KFKA 880 500 Lamar | WKEU 1500 100 | WINT 1070 400 | 1 |
| KFKA 880 500 Lamar KIDW 1420 100 | Macon | WDZ 1070 100 | Lawrence |
| KFKA 880 500 Lamar KIDW 1420 100 Pueblo | | WDZ 1070 100 Urbana | KFKU 1220 100 |
| KFKA 880 500 Lamar KIDW 1420 100 Pueblo | Macon WMAZ 1180 1000 | WDZ 1070 100 | KFKU 1220 100 |

| | | 1 | |
|-------------------------------------|---------------------------------|-----------------------------------|------------------------------------|
| Topeka WIBW 580 1000 C | WNAC 1230 1000 C Fall River | Jackson WJDX 1270 1000 N | NEVADA |
| Wichita KFH 1300 1000 C | WSAR 1450 250 | Kosciusko WHEF 1500 100 | Reno KOH 1380 500 C |
| KENTUCKY | WLLH 1370 100 New Bedford | WAML 1310 100 | NEW HAMPSHIRE |
| | WNBH 1310 100 C | Meridian | |
| Ashland WCMI 1310 100 | Springfield WBZA 990 1000 B | WCOC 880 500 | WLNH 1310 100 |
| Covington WCKY 1490 5000 B | WMAS 1420 100 C | Mississippi City WGCM 1120 500 | Manchester WFEA 1340 500 C |
| Lexington | Worcester WORC 1280 500 C | WQBC 1360 1000 | Portsmouth |
| WLAP 1420 100 Louisville | WTAG 580 500 R | | WHEB 740 250 |
| WAVE 940 1000 N WHAS 820 50000 C | MICHIGAN | MISSOURI | NEW JERSEY |
| Paducah | Battle Creek | Cape Girardeau KFVS 1210 100 | Asbury Park |
| WPAD 1420 100 | WELL 1420 100 Bay City | Columbia KFRU 630 500 | WCAP 1280 500 Atlantic City |
| LOUISIANA | WBCM 1410 500 | Jefferson City | WPG 1100 5000 C |
| Alexandria | WHDF 1370 100 | WOS 630 500 | WCAM 1280 500 |
| KALB 1420 100 Baton Rouge | Detroit | WMBH 1420 100 | Jersey City WAAT 940 500 |
| WJBO 1420 100 | WJR 750 50000 C | Kansas City KMBC 950 1000 C | WHOM 1450 250 |
| Lafayette KVOL 1310 100 | WMBC 1420 100 WWJ 920 1000 R | KWKC 1370 100 | Newark WHBI 1250 1000 |
| Lake Charles KPLC 1500 100 | WXYZ 1240 1000 B | WDAF 610 1000 R WHB 860 1000 | WNEW 1250 1000 WOR 710 50000 |
| Monroe | East Lansing WKAR 1040 1000 | W9XBY 1530 1000 | Red Bank |
| KMLB 1200 100 New Orleans | Flint | St. Joseph KFEQ 680 2500 | WBRB 1210 100 Trenton |
| WBNO 1200 100 WDSU 1250 1000 | WFDF 1310 100 Grand Rapids | St. Louis KFUO 550 500 | WTNJ 1280 500 |
| WJBW 1200 100 | WASH 1270 500 N | KMOX 1090 50000 C | WAWZ 1350 500 |
| WSMB 1320 500 N WWL 850 10000 C | WOOD 1270 500 N | KSD 550 1000 R KWK 1350 1000 B | NEW MEXICO |
| Shreveport | WJMS 1420 100 | WEW 760 1000 | |
| KRMD 1310 100 KTBS 1450 1000 N | Jackson WIBM 1370 100 | WIL 1200 100 1500 100 | Albuquerque KGGM 1230 250 |
| KWEA 1210 100 KWKH 1100 10000 C | Kalamazoo WKZO 590 1000 | Springfield KGBX 1230 500 | KOB 1180 10000 |
| | Lansing | KWTO 560 5000 | KICA 1370 100 |
| MAINE | WJIM 1210 100 Lapeer | MONTANA | Roswell KGFL 1370 100 |
| Augusta WRDO 1370 100 | WMPC 1200 100 | Billings | Santa Fe KIUJ 1310 100 |
| Bangor | Marquette WBEO 1310 100 | KGHL 780 1000 N | |
| WABI 1200 100 WLBZ 620 500 C | Muskegon WKBZ 1500 100 | Butte KGIR 1340 1000 N | NEW YORK |
| Portland WCSH 940 1000 R | Royal Oak | Great Falls KFBB 1280 1000 | Albany WABY 1370 100 |
| Presque Isle | WEXL 1310 50 | Kalispeli | WOKO 1430 500 C |
| WAGM 1420 100 | MINNESOTA | KGEZ 1310 100 Missoula | Auburn WMBO 1310 100 |
| MARYLAND | Fergus Falls | KGVO 1260 1000 | Binghamton WNBF 1500 100 |
| Baltimore | KGDE 1200 100 Hibbing | Wolf Point KGCX 1310 100 | Brooklyn |
| WBAL 1060 10000 B WCAO 600 500 C | WMFG 1210 100 | | WARD 1400 500 WBBC 1400 500 |
| WCBM 1370 100 WFBR 1270 500 R | Minneapolis WCCO 810 50000 C | NEBRASKA | WBBR 1300 1000 |
| Cumberland | WDGY 1180 1000 WLB 1250 1000 | Clay Center KMMJ 740 1000 | WCNW 1500 100 WLTH 1400 500 |
| WTBO 800 250 Frederick | WTCN 1250 1000 | Kearney | WMBQ 1500 100 WVFW 1400 500 |
| WFMD 900 500 | Moorhead KGFK 1500 100 | KGFW 1310 100 Lincoln | Buffalo |
| Hagerstown WJEJ 1210 100 | Northfield | KFAB 770 10000 C | WBEN 900 1000 R WEBR 1310 100 |
| MASSACHUSETTS | WCAL 1250 1000 Rochester | KFOR 1210 100 C Norfolk | WGR 550 1000 C WKBW 1480 5000 C |
| Babson Park | KROC 1310 100 | WJAG 1060 1000 North Platte | WSVS 1370 50 |
| WBSO 920 500 | St. Paul KSTP 1460 25000 N | KGNF 1430 1000 | WBNY 1370 100 Canton |
| Boston WAAB 1410 500 C | MISSISSIPPI | Omaha WAAW 660 500 | WCAD 1220 500 Chester |
| WBZ 990 50000 B | | WOW 590 1000 R | WGNY 1210 100 |
| WCOP 1120 500 WEEI 590 1000 R | Clarksdale WMFN 1210 100 | Scottsbluff KGKY 1500 100 | Elmira WESG 850 1000 C |
| WHDH 830 1000 WMEX 1500 100 | Hattlesburg | York | Freeport |
| TT ITTLE A LOUD 1000 | WPFB 1370 100 | KGBZ 930 1000 | WGBB 1210 100 |

| Jamestown WOCL 1210 50 | оніо ' | KOIN 940 1000 C KWJJ 1040 500 | WJAR 890 500 R WPRO 630 250 |
|----------------------------------|------------------------------------|---------------------------------------|------------------------------------|
| Long Island City | Akron | KXL 1420 100 | |
| W2XŘ 1550 1000 | WADC 1320 1000 C WJW 1210 100 | Roseburg KRNR 1500 100 | SOUTH CAROLINA |
| New York WABC 860 50000 C | WJW 1210 100 Canton | Salem | Anderson |
| WBNX 1350 250 | WHBC 1200 100 | KSLM 1370 100 | WAIM 1200 100 |
| WBOO 860 50000 | Cincinnati | | Charleston |
| WEAF 660 50000 R | WCPO 1200 100 | PENNSYLVANIA | WCSC 1360 500 Columbia |
| WEVD 1300 1000 WFAB 1300 1000 | WKRC 550 1000 C WLW 700 500000N | Allentown | WIS 1010 500 N |
| WFAB 1300 1000 WHN 1010 1000 | WSAI 1330 1000 R | WCBA 1440 500 | Greenville |
| WINS 1180 1000 | Cleveland | WSAN 1440 500 | WFBC 1300 1000 |
| WJZ 760 50000 B | WGAR 1450 500 B | Altoona | Spartanburg WSPA 920 1000 |
| WLWL 1100 5000 | WHK 1390 1000 C | WFBG 1310 100 | WSPA 920 1000 WWC 1420 1000 |
| WMCA 570 500 WNYC 810 1000 | WJAY 610 500 WTAM 1070 50000 R | WLEU 1420 100 | WWG 1220 1000 |
| WOV 1130 1000 | Columbus | Glenside | SOUTH DAKOTA |
| Olean | WAIU 640 500 | WIBG 970 100 | |
| WHDL 1420 100 | WBNS 1430 500 C | Greensburg WHJB 620 250 | Aberdeen KABR 1420 100 |
| Plattsburg | WCOL 1210 100 WOSU 570 750 | WHJB 620 250 Grove City | Brookings |
| WMFF 1310 190 Rochester | WOSU 570 750 | WSAJ 1310 100 | KFDY 780 1000 |
| WHAM 1150 50900 B | WHIO 1260 1000 R | Harrisburg | Huron |
| WHEC 1430 500 C | WSMK 1380 200 C | WHP 1430 500 C | KGDY 1340 250 |
| 1210 100 | Portsmouth | WKBO 1200 100 | Plerre KGFX 630 200 |
| Saranac Lake | WPAY 1370 100 | Hazleton | |
| WNBZ 1290 100 | Toleda WSPD 1340 1000 C | WAZL 1420 100 | Rapid City WCAT 1200 100 |
| Schenectady WGY 790 50000 R | Youngstown | Johnstown WJAC 1310 100 | Sioux Falls |
| Syracuse | WKBN 570 500 C | Lancaster | KSOO 1110 2500 |
| WFBL 1360 1000 C | Zanesville | WGAL 1500 100 | Vermillion |
| WSYR 570 250 B | WALR 1210 100 | WKJC 1200 100 | KUSD 890 500 |
| Troy WHAZ 1300 500 | OKLAHOMA | Philadelphia | Watertown |
| Utica 1300 300 | - CILLANIONIA | KYW 1020 10000 R WCAU 1170 50000 C | KWTN 1210 100 Yankton |
| WIBX 1200 100 C | Ada | WCAU 1170 50000 C WDAS 1370 100 | WNAX 570 1000 (|
| White Plains | KADA 1210 160 | WFIL 560 1000 B | |
| WFAS 1210 100 Woodside | Ardmore KVSO 1200 100 | WHAT 1310 100 | TENNESSEE |
| WWRL 1500 100 | Elk City | WIP 610 1000 | |
| | KASA 1210 100 | WPEN 920 250 WRAX 920 250 | Bristoi |
| NORTH CAROLINA | Enid | WTEL 1310 100 | WOPI 1500 100 Chattanooga |
| | KCRC 1360 250 | Pittsburgh | WDOD 1280 1000 (|
| Asheville WWNG 570 1000 N | WNAD 1010 1000 | KDKA 980 50000 B | Jackson |
| Charlotte | Oklahoma City | KOV 1380 500 WCAE 1220 1000 R | WTJS 1310 100 |
| WBT 1080 50000 C | KFXR 1310 100 | WJAS 1290 1000 C | Knoxville WNOX 560 1000 (|
| WSOC 1210 100 N | KGFG 1370 100 KOMA 1480 5000 C | WWSW 1500 100 | WNOX 560 1000 (WROL 1310 100 |
| Durham WDNC 1500 100 C | KOMA 1480 5000 C WKY 900 1000 N | Reading | Memphis |
| Greensboro | Ponca City | WEEU 830 1000 | WHBO 1370 100 |
| WBIG 1440 500 C | WBBZ 1200 100 | WRAW 1310 100 Scranton | WMC 780 1000 N |
| High Point | Shawnee | WGBI 880 500 | WNBR 1430 500 |
| WMFR 1200 100 | KGFF 1420 100 | WQAN 880 250 | WREC 600 1000 (|
| WPTF 680 5000 N | Tulsa KTUL 1400 500 C | Sunbury | WLAC 1470 5000 0 |
| Rocky Mount | KVOO 1140 25000 N | WKOK 1210 100 Wilkes-Barre | WSM 650 50000 P |
| WEED 1420 100 | 1110 200011 | WBAX 1210 100 | Springfield |
| Wilmington WMFD 1370 100 | OREGON | WBRE 1310 100 | WSIX 1210 100 |
| WMFD 1370 100 Winston-Salem | | Williamsport | TEXAS |
| WSJS 1310 100 C | Astoria KAST 1370 100 | WRAK 1370 100 | |
| | Corvaliis | York WORK 1320 1000 | Amarillo |
| NORTH DAKOTA | KOAC 550 1000 | WORL 1020 1000 | KGNC 1410 1000 |
| Bismarck | Eugene | PUERTO RICO | KNOW 1500 100 |
| KFYR 550 1000 N | KORE 1420 100 | | Beaumont |
| Devils Lake | Klamath Falls KFJI 1210 100 | Ponce WPRP 1420 100 | KFDM 560 500 |
| KDLR 1210 100 | Marshfield | San Juan | Brady |
| Fargo WDAY 940 1000 N | KOOS 1390 250 | WKAQ 1240 1000 | KNEL 1500 100 |
| Grand Forks | Medford | WNEL 1290 500 | College Station |
| KFJM 1370 100 | KMED 1310 100 | RHODE ISLAND | WTAW 1120 500 Corpus Christi |
| Mandan | Portland KALE 1300 500 C | KHODE ISLAND | KGFI 1500 100 |
| KGCU 1240 250 Minot | KALE 1300 500 C KBPS 1420 100 | Newport | Dallas |
| KLPM 1240 250 | KEX 1180 5000 N | WNRI 1200 100 | KRLD 1040 10000 |
| | KFJR 1300 500 | Providence | WFAA 800 50000 |
| Valley City 1500 100 | KFJR 1300 500 KGW 620 1000 N | WEAN 780 500 C | WRR 1280 500 |

| NORTH | AMERICAN B. C. | STATIONS BY LOC | LATIONS |
|--------------------------------------|----------------------------------|---------------------------------------|------------------------------------|
| Dublin | Norfelk | Milwaukee | N. W. TERRITORY |
| KFPL 1310 100 | WTAR 780 500 N | WEMP 1310 100 | N. W. IERRITORY |
| El Paso | Petersburg | WISN 1120 250 C | Aklavik |
| KTSM 1310 100 WDAH 1310 100 | WPHR 880 500 | WTMJ 620 1000 N | CJCU 1210 50 |
| WDAH 1310 100 Fort Worth | Richmond WBBL 1210 100 | Peynette | NOVA SCOTIA |
| KFJZ 1370 100 | WMBG 1210 100 C | WIBU 1210 100 | NOVA SCOTIA |
| KTAT 1240 1000 | WRVA 1110 5000 N | Racine WRJN 1370 100 | Glace Bay |
| WBAP 800 50000 N Galveston | WDBJ 930 1000 C | Shebeygan | VAS 685 2000 |
| KLUF 1370 100 | WDBJ 930 1000 C | WHBL 1410 500 | Hallfax CHNS 930 1000 F |
| Houston | WASHINGTON | Stevens Point | Sydney |
| KPRC 920 1000 N | | WLBL 900 2500 | CJCB 1240 1000 F |
| KTRH 1290 1000 C KXYZ 1440 1000 | Aberdeen KXRO 1310 100 | Superior | Welfville |
| Langview | KXRO 1310 100 Bellingham | WEBC 1290 1000 N | CKIC 1010 50 Yarmouth |
| KFRÖ 1370 100 | KVOS 1200 100 | WYOMING | CJLS 1310 100 |
| Lubbock VEVO 1318 100 | Everett | | |
| KFYO 1310 100 Midland | KRKO 1370 50 Olympia | Casper KDFN 1440 500 | ONTARIO |
| KRLH 1420 100 | KGY 1210 100 | Sheridan 300 | Brantford |
| Palestine | Pullman | KWYO 1370 100 | CKPC 930 100 F |
| KNET 1420 100 Peces | KWSC 1220 1000 | | Chatham |
| KIUN 1420 100 | Seattle KIRO 710 500 | CANADA | CFCO 630 100 F |
| Port Arthur | KJR 970 5000 N | · · · · · · · · · · · · · · · · · · · | Cobalt CKMC 1210 50 |
| KPAC 1260 500 | KOL 1270 1000 C | ALBERTA | Fort William |
| San Angelo KGKL 1370 100 | KOMO 920 1000 N KRSC 1120 100 | 6-1 | CKPR 930 100 F |
| San Antonio | KTW 1220 1000 | Calgary CFAC 930 100 F | Hamilton |
| KABC 1420 100 | KVL 1370 100 | CFCN 1030 10000 | CHML 1010 100 F |
| KMAC 1370 100 KONO 1370 100 | KXA 760 250 | CJCJ 690 100 F | CKOC 1120 500 F |
| KTSA 550 1000 C | Spokane KFIO 1120 100 | Edmonton | Kingston |
| WOAI 1190 50000 N | KFPY 890 1000 C | CFRN 1260 100 F CJCA 730 1000 F | CFRC 1510 100 |
| Tyler | KGA 1470 5000 N | CKUA 580 500 | Kirkland Lake CJKL 530 1000 |
| KGKB 1500 100 Waco | KHQ 590 1000 N | Lethridge | London |
| WACO 1420 100 C | KMO 1330 250 | CJOC 1230 100 F | CFPL 730 100 F |
| Weslaco | KVI 570 1000 C | | North Bay |
| KRGV 1260 500 | Walla Walla | BRITISH COLUMBIA | CFCH 930 100 F |
| Wichita Falls KGKO 570 250 C | KUJ 1370 100 Wenatchee | Chilliwack | Ottawa |
| | KPQ 1500 100 | CHWK 780 100 F | CKCO 1010 100 F CRCO 880 1000 F |
| UTAH | Yakima | Kamleops CFJC 880 100 F | |
| Ogden | KIT 1310 100 | | Prescott CFLC 930 100 |
| KLO 1400 500 | WEST VIRGINIA | Kelewna CKOV 630 100 F | St. Catherines |
| Salt Lake City | | Prince Rupert | CKTB 1200 100 F |
| KDYL 1290 1000 N KSL 1130 50000 C | Bluefield WHIS 1410 250 | CFPR 580 50 | Sault Ste. Marie |
| K3E 1130 3000 G | WHIS 1410 250 Charleston | Trail | CJIC 1500 100 |
| VERMONT | WCHS 580 500 | CJAT 910 250 F | Stratford CJCS 1210 50 |
| Prodice de la | Fairmont | Vancouver CJOR 600 500 | Sudbury |
| Burlington WCAX 1200 100 | WMMN 890 500 Huntington | CKCD 1010 100 | CKSO 780 1000 F |
| Rutland | WSAZ 1190 1000 | CKFC 1410 50 | Timmins |
| WSYB 1500 100 | Parkersburg | CKMO 1410 100 F | CKGB 1420 100 |
| St. Albans WQDM 1370 100 | WPAR 1420 100 Wheeling | CKWX 1010 100 F CRCV 1100 500 F | Torento |
| Springfield | WWVA 1160 5000 C | Victoria | CFRB 690 10000 C CKCL 580 100 F |
| WNBX 1260 1000 | | CFCT 1450 75 | CKNC 1420 100 F |
| Waterbury WDEV 550 500 | WISCONSIN | | CRCT 840 5000 N |
| WDEV 330 300 | Eau Claire | MANITOBA | Waterloo CKCR 1510 100 |
| VIRGINIA | WTAQ 1330 1000 | Brandon | |
| Auliusa | Fond du Lac | CKX 1120 100 F | Windsor CKLW 1030 5000 |
| Arlington NAA 690 1000 | KFIZ 1420 100 Green Bay | Winnipeg | CRCW 600 500 F |
| Charlottesville | WHBY 1200 100 | CJRC 1390 100 F | Wingham |
| WEHC 1420 100 | Janesville | CKY 960 15000 F | CKNX 1200 50 |
| Danville WBTM 1370 100 | WCLO 1200 100 | NEW BRUNSWICK | PRINCE EDWARD |
| Harrisonburg | LaCrosse | | ISLAND |
| WSVA 550 500 | WKBH 1380 1000 Madison | Fredericton CFNB 550 500 F | Charlettetewn |
| Lynchburg | WHA 940 1000 | Moncton 550 500 F | Charlottetown CFCY 630 1000 F |
| WLVA 1200 100 | WIBA 1280 1000 N | CKCW 1370 100 F | CHCK 1310 50 |
| Newport News WGH 1310 100 | Manitowec WOMT 1210 100 | St. Jehn CHSJ •1120 500 F | Summerside CHGS 1450 50 F |
| | ., OMI 1210 100 | CHSJ #1120 500 F | CHGS 1450 50 F |
| | | | |

| QUEBEC | YNOP 1230 100 | XEAO 560 250 | CMJK 780 250 |
|---------------------------------|--|--|--------------------------------|
| | YNVA 950 30 | Tijuana | CMJL 1340 100 |
| Chicoutimi | | XEC 1160 30 | CMJP 1430 100 |
| CRCS 950 100 F | EL SALVADOR | XEMO 860 5000 | Cardenas |
| Hull CKCH 1210 100 F | 6 | XEMZ 1210 250 | CMGE 1370 50 |
| Montmagny | San Salvador RDN 706 500 | XEOK 760 250 | Ciego de Avila |
| VE9EK 1185 10 | KDN 700 500 | MICHOACAN | CMJH 1360 100 CMJI 1130 50 |
| Montreal | MEXICO | | CMJI 1130 50 CMJO 1180 50 |
| CFCF 600 400 N | MEXICO | Morelia XEI 1370 125 | Cienfuegos |
| CHLP 1120 100 F | | AE1 1370 123 | CMHJ 1160 100 |
| CKAC 730 5000 C | AGUASCALIENTES | NUEVO LEON | CMHW 810 100 |
| CRCM 910 5000 F | | | CMHX 760 500 |
| New Carlisle CHNC 1410 500 F | XFA 1310 5 | Monterrey XEFB 1420 100 | Cruces |
| Quebec 1410 500 F | XFA 1310 5 XFC 810 350 | XEFJ 1230 100 | CMHK 1330 250 |
| CHRC 580 100 F | AFG 810 350 | XEH 1150 250 | Havana CMBC 940 500 |
| CKCV 1310 100 F | CHIHUAHUA | XET 690 500 | CMBD 1170 150 |
| CKCK 1010 1000 F | | XEX 1310 125 | CMBG 1140 200 |
| | Chihuahua | | CMBN 880 150 |
| SASKATCHEWAN | XEFI 1440 250 | OAXACA | CMBS 770 150 |
| | Juarez | Oaxaca | CMBX 1380 150 |
| Moose Jaw | XEFV 1210 100 | XEAJ 1310 15 | CMBY 640 150 |
| CHAB 1200 100 F | XEJ 1020 1000 | | CMBZ 1000 250 |
| CJRM 540 1000 F | | PUEBLA | CMCA 1350 250 |
| Prince Albert | COAHUILA | Bushle. | CMCB 1230 150 |
| CKBI 1210 100 F | Piedras Negras | Puebla XETH 1210 100 | CMCD 960 250 |
| Regina | XELO 1110 10000 | ABIH 1210 100 | CMCF 815 250 CMCG 1255 250 |
| CHWC 1010 500 F | XEPN 590 50000 | SAN LUIS POTOSI | CMCJ 1200 350 |
| CKCK 1010 500 F | Saltillo | 2013 701031 | CMCN 1500 150 |
| Saskatoon | XELA 1240 50 | San Luis Potosi | CMCO 1110 250 |
| CFQC 840 1000 F | XEOX 640 250 | XEZZ 1370 100 | CMCQ 680 250 |
| Yorkton | Torreon | | CMCR 1410 150 |
| CJGX 630 500 F | XETB 1310 125 | SONORA | CMCU 1280 150 |
| | D. F. | NI. I | CMCW 750 150 |
| NEWFOUNDLAND | | Nogales XEAF 990 500 | CMCX 660 150 CMCY 1030 1000 |
| St. John's | Mexico City | XIIII 770 300 | CMCY 1030 1000 CMK 1060 250 |
| OAC 1065 40 | XEAI 1240 100 | TAMAULIPAS | CMOA 790 150 |
| OAS 940 100 | XEB 1030 10000 | | CMOK 1470 150 |
| OGY 840 400 | XECW 1310 10 | Matamoros | CMOX 1320 250 |
| ONF 1195 500 | XEFA 1180 500 | XEAM 750 7.5 | CMQ 840 500 |
| OWR 681 500 | XEFO 940 5000 | Nuevo Laredo | CMW 600 1000 |
| MICHELON | XEFZ 1370 100 | XEFE 850 250 XENT 910 65000 | CMX 920 650 |
| MIQUELON | XEK 990 100 XEL 1100 250 | Reynosa | Holguin |
| St. Pierre | XEL 1100 250 XEMX 1280 12 | XEAW 960 50000 | CMKF 1460 50 |
| ON 609 250 | XEN 710 1000 | Tampico | Manzanillo CMKM 1120 200 |
| | XEP 840 500 | XEFW 1310 250 | 1 |
| CENTRAL | XETW 820 500 | XEMA 1080 50 | Matanzas CMGC 1400 100 |
| AMERICA | XEW 890 50000 | XES 990 250 | CMGC 1400 100 CMGF 1120 100 |
| | XEWZ 1150 100 | | CMGI 1420 50 |
| COSTA RICA | XEYZ 780 10000 | VERACRUZ | Sagua la Grande |
| COSIA RICA | XFX 610 1000 | Jalapa | CMHA 1070 50 |
| Cartago | DURANGO | XFB 1270 250 | Sancti Spiritus |
| IFS 1441 7.5 | | XFD 1340 350 | CMHB 1240 50 |
| IGA 1014 30 | Durango | Veracruz XETF 1220 12 | Santa Clara |
| San Jose | XEE 1210 50 | XEU 1010 250 | CMHI 1210 150 |
| TEP 850 500 | | 1010 230 | Santiago |
| TFA 1050 75 | GUANJUATO | YUCATAN | CMKC 1250 150 |
| 'IGH 1000 500 'IRH 930 50 | Cuanturals | | CMKD 1050 250 |
| 730 30 | Guanjuato XEAZ 1420 7 | Merida XEFC 560 100 | CMKR 1400 100 |
| GUATEMALA | Leon | XEY 1000 10 | CMKV 1190 50 |
| | XEKL 1240 500 | XEZ 630 500 | DOMINICAN |
| Guatemala City | | 000 | REPUBLIC |
| GW 1210 10000 | JALISCO | WEST INDIES | |
| GX 1400 250 | | | San Pedro de Macoris |
| HONDUSAS | Guadalajara | | HIH 1395 15 |
| HONDURAS | XEA 1060 125 XED 1155 2500 | CUBA | Santo Domingo |
| | XED 1155 2500 | Calharian | HIJ 1195 15 |
| Tegucigalna | | Calbarien | HIX 800 700 |
| Tegucigalpa RN 1270 100 | LOWER CALIFORNIA | | |
| Tegucigalpa IRN 1270 100 | LOWER CALIFORNIA | CMIID 1270 250 Camaguey | HIZ 1300 10 |
| | Ensenada | CMIII) 1270 250 Camaguey CMJA 1010 300 | |
| NICARAGUA | Ensenada XEG 1270 200 | Camaguey CMJA 1010 300 CMJC 1390 150 | HAITI |
| IRN 1270 100 | Ensenada | Camaguey CMJA 1010 300 | |

| | CFAC 930 100 Calgary, Alta. | CJLS 1310 100 Yarmouth, N. S. Laurie L. Smith, Grand Hotel |
|---|--|--|
| | T. P. & C. Brdestg. Co., Southam Bidg. CFCF 600 400 Montreal, Que. | CJOC 1230 100 Lethbridge, Alta. |
| | Mt. Royal Hotel | Marquis Hotel |
| | CFCH 930 100 North Bay, Ont. | CJOR 600 500 Vancouver, B. C. G. C. Chandler, Hotel Grosvenor |
| | Capitol Theatre Bldg. Roy H. Thomson CFCN 1030 19000 Caigary, Alta. | CJRC 1390 100 Winnipeg, Man. |
| | Toronto Gen. Trust Bldg. | Royal Alexandra Hotel |
| | CFCO 630 100 Chatham, Ont. | CJRM 540 1000 Moose Jaw, Sask. 311 Main St. No. |
| | Wm. Pitt Hotel CFCT 1450 75 Victoria, B. C. | CKAC 730 5000 Montreal, Que. |
| | 620 View St. | 980 St. Catherine St. W. |
| | CFCY 630 1000 Charlottetown, P.E.I. 143 Great George St. | CKBI 1210 100 Prince Albert, Sask. Canada Bidg. |
| | CFJC 880 100 Kamloops, B. C. Wilcox-Hall Bidg. | CKCD 1019 109 Vancouver, B. C. 142 Hastings St. W. |
| | CFLC 938 108 Prescott, Ont. | CKCH 1210 100 Hull, Que. |
| - | Hoy Bldg., 307 George St. CFNB 550 500 Fredericton, N. B. | Standish Hall Hotel CKCK 1010 500 Regina, Sask. |
| | York St. | 1853 Hamilton St. CKCL 580 100 Toronto, Ont. |
| | CFPL 730 100 London, Ont. Richmond St. | CKCL 580 100 Toronto, Ont. |
| | CFPR 580 50 Prince Rupert, B. C. Felix E. Batt | CKCO 1010 100 Ottawa, Ont. 272 Somerset St. W. |
| | CFQC 840 1000 Saskatoon, Sask. | CKCR 1510 100 Waterloo, Ont. |
| | 216 First Ave., No. CFRB 690 10000 Toronto, Ont. | 24 King St., So. CKCV 1310 100 Quebec, Que. |
| | 37 Bloor St. W. | 142 St. John St. |
| | CFRC 1510 100 Kingston, Ont. Queens University, Fleming Hall | Moncton Brdestg. Co., Ltd., K. of P. Hall |
| - | CFRN 1260 190 Edmonton, Alta. | CKFC 1410 50 Vancouver, B. C. |
| | 109 C. P. R. Bullding | Hemlock & 12th Ave. CKGB 1420 100 Timmins, Ont. |
| 1 | CHAB 1200 100 Moose Jaw, Sask. P. O. Box 26 | R. H. Thompson, Press Bldg. |
| | CHCK 1310 50 Charlottetown, P.E.I. 36 Upper Hillsboro St. | CKIC 1010 50 Wolfville, N. S. Acadia University |
| | CHGS 1450 50 Summerside, P.E.I. | CKLW 1030 5000 Windsor, Ont. |
| | 190 Water St. CHLP 1120 100 Montreal, Que. | Guaranty Trust Bidg. |
| | Sun Life Bidg. | R. L. MacAdam |
| | CHML 1010 100 Hamilton, Ont. Pigott Bidg. | CKMO 1410 100 Vancouver, B. C. 1604 Bekins Bldg. |
| | CHNC 1410 500 New Carlisle, Que. Gaspesian Radio Brdestg, Co. | CKNC 1420 100 Terente, Ont. 805 Davenport Road |
| - | CHNS 930 1000 Halifax, N. S. | CKNX 1200 50 Wingham, Ont. |
| | Lord Nelson Hotel | Wingham Radio Ciub |
| | CHRC 580 190 Quebec, Que. CHRC, Ltd., Victoria Hotel | CKOC 1120 500 Hamilton, Ont. Wentworth Bldg. |
| - | CHSJ 1120 500 St. John, N. B. | CKOV 630 100 Kelowna, B. C. |
| | Admiral Beatty Hotel | Okanagan Broadcasters, Ltd., Box 243 CKPC 930 100 Brantford, Ont. |
| | CHWC 1010 500 Regina, Sask. R. H. Williams & Sons, Kitchener Hotel | Arcade Bldg. |
| | CHWK 780 109 Chilliwack, B. C. | CKPR 930 100 Fort William, Ont. |
| | Box 452 CJAT 910 250 Trail, B. C. | CKSO 780 1000 Sudbury, Ont. |
| | Kootenay Brdcstg. Co., P. O. Box 1959 | W. E. Mason, Grand Theatre Bldg. |
| | CJCA 730 1000 Edmonton, Alta. 10122—100A St. | CKTB 1200 160 St. Catherines, Ont. E. T. Sandell, Welland House |
| | CJCB 1240 1000 Sydney, N. S. 318 Charlotte St. | CKUA 580 500 Edmonton, Alta. University of Alberta |
| - | CJCJ 690 100 Calgery, Alta. | CKWX 1010 100 Vancouver, B. C. |
| - | New Albertan Bidg. CJCS 1210 50 Stratford, Ont. | Hotel Georgia CKX 1120 100 Brandon, Man. |
| | M. I. Higgins, 151 Ontario St. | City Hall Square CKY 960 15000 Winnipeg, Man. |
| | CJCU 1210 50 Aklavik, N. W. T. Dr. J. A. Urquabart, Dept. of Interior | Sherbrooke St. |
| | CJGX 630 500 Yorkton, Sask. | CMBC 940 500 Havana, Cuba |
| | 188 Grain Exchange Bidg. (Winnipeg) CJIC 1500 100 S. Ste. Marie, Ont. | Domingo Fernandez, Monte No. 139 CMBD 1170 150 Havana, Cuba |
| | Windsor Hotel, P. O. Box 504 | Luis Perez Garcia, Calle 17 No. 3, Vedado |
| | CJKL 530 1606 Kirkland Lake, Ont. Northern Brdestg Co., Ltd. | John L. Stowers, Hospital No. 100 |
| |] | |

| | CMBN 880 150 Havana, Cuba Pozos Duices No. 3 | | CMJI 1130 50 Clego de Avila, Cuba |
|-----------|--|-----|---|
| | CMBS 770 150 Havana, Cuba | | Gilberto Gessa Lopez, Independencia 95 CMJK 780 250 Camaguey, Cuba |
| | Calzada y H. St., Vedado CMBX 1380 150 Havana, Cuba | | Cia. Nacional de Radio, Finlay No. 3 |
| | Alberto Alvarez, San Miguel 194 | | CMJL 1340 100 Camaguey, Cuba M. Caymares, Republica 181 |
| | CMBY 640 150 Havana, Cuba | | CMJO 1180 50 Ciego de Avila, Cuba |
| | Infanta 132 Callejas Estefani CMBZ 1000 250 Havana, Cuba | | C. Central & Maceo |
| | Manuel y G. Salas, San Rafael No. 14 | 1 | CMJP 1430 100 Camaguey, Cuba Cesar Canall, Callejas No. 28 |
| | CMCA 1350 250 Havana, Cuba Galiano No. 102 | / | CMK 1060 250 Havana, Cuba |
| | CMCB 1230 150 Havana, Cuba Metropolitan Bldg, 828/30. | - | CMKC 1250 150 Santiago, Cuba J. A. Saco, P. O. Box 466 |
| | CMCD 960 250 Havana, Cuba Calle G y 25, Vedado | | CMKD 1050 250 Santiago, Cuba |
| | CMCF 815 250 Havana, Cuba | | Box 23 CMKF 1460 50 Holguin, Cuba |
| - | Cuban Brdcstg. Co., Paseo de Marti No. 9 CMCG 1255 259 Havana, Cuba | | Libertad esq. Arias |
| | Malecon No. 340 Altos | | CMKM 1120 200 Manzanilio, Cuba Merchan P. Figeredo, P. O. Box 4 |
| | CMCJ 1200 350 Havana, Cuba Rafael Rodriquez, Estevez No. 4 | | CMKR 1400 100 Santiago, Cuba |
| | CMCN 1500 150 Havana, Cuba | | B. Maso alta 71 CMKV 1190 50 Santiago Cuba |
| 1 . | Reina y Ave. Buen Retiro, Marianao | E : | CMKV 1190 50 Santiago, Cuba Oscar Vidal, Palma Soriano |
| | CMCO 1110 250 Havana, Cuba Oficios 116, Enrique Lasanta | | CMOA 798 150 Havana, Cuba |
| | CMCQ 680 250 Havana, Cuba | | Juan Fernandez, Aguiar 126 Aites CMOK 1470 150 Havana, Cuba |
| | Vista Alegre No. 80, Vibora | | CMOK 1470 150 Havana, Cuba Rafael Valdez, Estrella 121 |
| | CMCR 1410 150 Havana, Cuba Milagros No. 35 vibora | | CMOX 1320 250 Havana, Cuba |
| - | CMCU 1280 150 Havana, Cuba | | 10 entre 17 y 19, Vedado CMQ 840 500 Havana, Cuba |
| | San Francisco No. 13, Vibora | | 25 Numero 445, Vedado |
| | CMCW 50 150 Havana, Cuba San Lazaro No. 113 | | CMW 600 1000 Havana, Cuba |
| | CMCX 660 150 Havana, Cuba | | Troncoso y Gil, Prado 105 (altos) CMX 920 650 Havana, Cuba |
| | Maceo No. 7, Guanbacoa | | Edif. J. Calle, Oficios y Obrapea |
| | CMCY 1030 1000 Havana, Cuba Manuel D. Autran, Calle G 215, Vedado | | CRCK 1050 1000 Quebec, Que. Chateau Frontenac Hotel |
| | CMGC 1400 100 Matanzas, Cuba Independencia No. 56 | | CRCM 910 5000 Montreal, Que. 1231 St. Catherine St. W. |
| | CMGE 1370 50 Cardenas, Cuba | - | CRCO 880 1000 Ottawa, Ont. |
| | Genaro Sebater, Cespedes No. 180 CMGF 1120 100 Matanzas Cuba | | Chateau Laurier Hotel |
| | CMGF 1120 100 Matanzas, Cuba G. Betancourt No. 51 | | CRCS 950 100 Chicoutimi, Que. |
| | CMGI 1420 50 Matanzas, Cuba | | CRCT 840 5000 Toronto, Ont. |
| | Armando Lizama Mart No. 35 CMHA 1070 50 Sagua la Grande, Cu. | | 805 Davenport Road |
| | Abelardo Menocal, Carrillo No. 31 | | 1150 Main Street |
| | CMHB 1240 50 Sancti Spiritus, Cuba Independencia No. 33 | | CRCW 600 500 Windsor, Ont. |
| | CMHD 1270 250 Calbarien, Cuba | - | Guaranty Trust Bldg. FQN 609 250 St. Pierre, Miq. |
| | Manuel Alvarez, M. Escobar 17 | | |
| | CMHI 1210 150 Santa Clara, Cuba Lavis y Paz, Independencia No. 34 | | HHK 920 1000 Port-au-Prince, Haiti Haitian Government |
| | CMHJ 1160 100 Cienfuegos, Cuba | | HIH 1395 15 San Pedro de M.,D.R. |
| | Romualdo Ugalde, Sta. Elena 184 CMHK 1330 250 Cruces, Cuba | | Domingo Dominguez |
| | Heredia No. 61 | | HIJ 1195 15 Santo Domingo, D.R. Tuto Baez, Hostos 34 |
| | CMHW 810 100 Clenfueges, Cuba P. O. Box 226, Ramon Gonzales | | HIX 800 700 Santo Domingo, D.R. |
| | CMHX 760 500 Cienfuegos, Cuba | | J. R. Saladin, Director General HIZ 1300 10 Santo Domingo, D.R. |
| | F. Chavarry, P. O. Box 205 | | Abbes and Garcia |
| | CMJA 1010 300 Camaguey, Cuba Rafael Valdes, P. O. Box 64 | | HRN 1270 100 Tegucigalpa, Hend. |
| | CMJC 1390 150 Camaguey, Cuba Cisneros y G. Gomez | | KABC 1420 100 San Antonio, Texas Texas Theatre Bldg. |
| | CMJE 1220 50 Camaguey, Cuba | | KABR 1420 100 Aberdeen, S. Dak. |
| - | Manuel Fernandez, Hnos. Aguere No. 2 CMJF 1150 200 Camaguey, Cuba | | Aberdeen Broadcast Co. |
| | John L. Stowers, Republica No. 88 | | KADA 1200 100 Ada, Okia. C. C. Morris |
| | CMJH 1360 100 Ciego de Avila, Cuba Luis Marauri, H. Castilia 37 | | KALB 1420 100 Alexandria, La. |
| | | | Alexandria Brdestg. Co. |

| KALE 1300 500 Portland, Ore. Kale, Inc., New Heathman Hotel KARK 890 250 Little Rock, Ark. N. S. L. Bldg. KASA 1210 100 Elk City, Okla. E. M. Woody, Casa Grande Hotel | KFJI 1210 100 Klamath Falls, Ore. KFJI Broadcasters, Inc., Willard Hotel KFJM 1370 100 Grand Forks, N. D. University of North Dakota |
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| N. S. L. Bldg. KASA 1210 100 Elk City, Okla. E. M. Woody, Casa Grande Hotel | |
| KASA 1210 100 Elk City, Okla. E. M. Woody, Casa Grande Hotel | University of North Dakota |
| E. M. Woody, Casa Grande Hotel | KFJR 1300 500 Portland, Ore. |
| KACT 1270 100 4-4-1- 0 | 622 Lumberman's Bldg. |
| KAST 1370 100 Astoria, Ore. | KFJZ 1370 100 Fort Worth, Texas |
| Abraham Shapiro, 611 Commercial St. KBPS 1420 100 Portland, Ore. | 502 Trinity Life Bldg. KFKA 880 500 Greeley, Colo. |
| 546 N. E. 12th Ave. | Box 735 |
| KBTM 1200 100 Jonesboro, Ark. Jay P. Beard | KFKU 1220 1000 Lawrence, Kans. University of Kansas |
| KCMC 1420 100 Texarkana, Ark. Box 865 | KFNF 890 500 Shenandoah, Iowa 407 Sycamore St. |
| KCRC 1360 250 Enid, Okla. Enid Radiophone Co., Oxford Hotel | KFOR 1210 100 Lincoln, Neb. Howard Shuman, Hotel Lincoln |
| KCRJ 1310 100 Jerome, Ariz. | KFOX 1250 1000 Long Beach, Calif. |
| Chas. C. Robinson, Drawer D KDB 1500 100 Santa Barbara, Calif. | 220 E. Anaheim St. KFPL 1310 100 Dublin, Texas |
| 15-17 E. Haley St. | C. C. Baxter, Box 176 |
| KDFN 1440 500 Casper, Wyo. Donald Lewis Hathaway, Box 930 | KFPW 1210 100 Fort Smith, Ark. Goldman Hotel |
| KDKA 980 50000 Pittsburgh, Pa. | KFPY 890 1000 Spokane, Wash. |
| Grant Buildin g KDLR 1210 100 Devils Lake, N. D. | Symons Bidg. KFQD 780 250 Anchorage, Alaska |
| KDLR, Inc., 1025 3rd Street | 411—4th Ave. KFRC 610 1000 San Francisco, Catif. |
| KDON 1210 100 Del Monte, Calif. Richard F. Lewis | 1000 Van Ness Ave. |
| KDYL 1290 1000 Salt Lake City, Utah Ezra Thompson Bldg. | KFRO 1370 100 Longview, Texas Voice of Longview, Box 86 |
| KECA 1430 1000 Los Angeles, Calif. | KFRU 630 500 Columbia, Mo. KFRU, Inc., 9th and Elm Sts. |
| 1000 S. Hope St. KEHE 780 500 Los Angeles, Calif. | KFSD 600 1000 San Diego, Calif. |
| 214 S. Vermont St. KELD 1370 100 Ei Dorado, Ark. | U. S. Grant Hotel KFSG 1120 500 Los Angeles, Calif. |
| T. H. Barton | 1100 Glendale Blvd. |
| KELW 780 500 Burbank, Calif. 3702 Magnolla Park Blvd. | KFUO 550 500 St. Louis, Mo. 801 De Mun St. |
| KERN 1370 100 Bakersfield, Calif. Elk's Club | KFVD 1000 250 Los Angeles, Calif. E. L. Cord, 645 S. Mariposa |
| KEX 1180 5000 Portland, Ore. Oregonian Bldg. | KFVS 1210 100 Cape Girardeau, Mo Oscar C. Hirsch, Box 275 |
| KFAB 770 10000 Lincoln, Neb. Cornbusker Hotel | Warner Bros. Motion Pictures, Inc. |
| KFAC 1300 1000 Los Angeles, Calif. | KFXD 1200 100 Nampa, Idaho |
| E. L. Cord, 645 So. Mariposa KERR 1280 1000 Great Fails Mont | Frank E. Hurt, 1024 12th Ave., S. KFXJ 1200 100 Grand Jct., Colo. |
| KFBB 1280 1000 Great Falls, Mont. Buttrey Broadcast., Inc., P. O. Box 1817 | Hillerest Manor |
| KFB1 1950 5000 Abilene, Kans. Box 345 | KFXM 1210 100 San Bernardino, Calif. California Ifotel |
| KFBK 1499 5960 Sacramento, Calif. Sacramento Bee, 7th & I Sts. | KFXR 1316 100 Oklahoma City, Okla. 541 Hightower Bldg. |
| KFDM 568 508 Beaumont, Texas | KFYO 1310 100 Lubbock, Texas Kirksey Bros., Hotel Lubbock |
| Beaumont Hotel, P. O. Box 2950 KFDY 788 1008 Breekings, S. D. | KFYR 550 1000 Bismarck, N. D. |
| Box L. State College Station | 320 Broadway KGA 1470 5000 Spokane, Wash. |
| KFEL 928 508 Denver, Colo. Albany Hotel | 1023 W. Riverside Ave. |
| KFEQ 680 2508 St. Joseph, Mo. Schneider Bldg., KFEQ, Inc. | KGAR 1370 100 Tucson, Ariz. 142 S. 6th Ave. |
| KFGQ 1370 100 Beene, lowa 924 W. 2nd St. | KGB 1330 1000 San Diego, Calif. 1012—1st Ave. |
| KFH 1308 1000 Wichita, Kans. 124 1/2 S. Market St. | KGBU 900 500 Ketchikan, Alaska Mile 5, Wards Cove Rd. |
| KF1 648 50800 Los Angeles, Calif. | KGBX 1230 500 Springfield, Mo. KGBX, Inc., St. Louis at Kimbrough |
| 1000 S. Hope St. KFIO 1128 188 Spekane, Wash. | KGBZ 930 1000 York, Neb. |
| Zieglar Building KFIZ 1420 190 Fend du Lac, Wis. | KGBZ Broadcasting Co., 719 Grant Ave. KGCA 1278 100 Decorah, towa |
| 18 W. 1st St. | Charles W. Greenley, 201 Water St. |
| KFJB 1299 180 Marshalltown, Iowa 1603 W. Main St. | KGCU 1246 250 Mandan, N. D. 404 W. Main St. |

| KGCX 1310 100 Wolf Point, Mont. E. E. Krebsbach. | KHBC 1420 100 Hilo, T, H. |
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| KGDE 1280 100 Fergus Falls, Minn, | KHJ 900 1000 Los Angeles, Calif. |
| C. L. Jaren KGDM 1100 1000 Stockton, Calif. | 7th & Bixel Sts. KHQ 590 1000 Spokane, Wash. |
| E. F. Peffer, 42 S. Calif, St. KGDY 1340 250 Huron, S. D. | Sprague Ave. & Post St. |
| Voice of S. D., Inc., 347 Dakota Ave. | Golden Empire Brdestg. Co. |
| KGEK 1200 100 Sterling, Colo. Elmer G. Beehler, 109 W. 2nd St. | KICA 1370 100 Clovis, N. M. Southwest Broadcasting Co. |
| KGER 1360 1000 Long Beach, Calif. 435 Pine Ave. | KID 1320 250 Idaho Falis, Idaho Box 487 |
| KGEZ 1310 100 Kalispell, Mont. Donald C. Treloar, Box 1 | KIDO 1350 1000 Boise, Idaho Rotel Boise |
| KGFF 1420 100 Shawnee, Okla. 9th & Bell Sts. | KIDW 1420 100 Lamar, Colo. Lamar Broadcasting Co., Box 688 |
| KGFG 1370 100 Oklahoma City, Okla. | KIEM 1210 100 Eureka, Calif. |
| Okla. Broadcasting Co., 1113 N. Broadway KGFI 1500 100 Corpus Christi, Texas | Redwood Brdcstg. Co., Vance Hotel KIEV 850 100 Glendale, Calif. |
| Eagle Broadcasting Co., Inc., P. O. Box 1508 KGFJ 1200 100 Los Angeles, Calif. | Cannon System, Ltd., Glendale Hotel KINY 1310 100 Juneau, Alaska |
| Ben S. McGlashan, 1417 S. Figueroa | Edwin A. Kraft |
| KGFK 1500 100 Moorhead, Minn. Comstock Hotel | KIRO 710 500 Seattle, Wash. Tower Bldg. |
| KGFL 1370 100 Roswell, N. M. KGFL, Inc., 507 N. Main St. | KIT 1310 100 Yakima, Wash. 109 1/2 E. Yakima Ave. |
| KGFW 1310 100 Kearney, Neb. 919 West 27th St. | KIUJ 1310 100 Santa Fe, N. Mex. W. C. Irvin |
| KGFX 630 200 Pierre, S. D. | KIUL 1210 100 Garden City, Kans. |
| Dana McNell, Box 573 KGGC 1420 100 San Francisco, Calif. | Garden City Brdestg, Co. KIUN 1420 100 Pecos, Texas |
| 230 Eddy St. KGGF 1010 1000 Coffeyville, Kans. | J. H. Hawkins & B. H. Hubbs |
| Coffeyville Journal Bldg. | C. Guy Shepard, 2800 Main Street |
| Kimo Building | KJBS 1070 500 San Francisco, Calif. |
| KGHF 1320 500 Pueblo, Colo. C. P. Ritchie, 113 Broadway | KJR 970 5000 Seattle, Wash. Skinner Bidg. |
| KGHI 1200 100 Little Rock, Ark. Arkansas Brdcstg. Co., Marion Hotel | KLCN 1290 100 Blytheville, Ark. |
| KGHL 780 1000 Billings, Mont. 5th & N. Broadway | C. L. Lintzenich, Main and Division St. KLO 1400 500 Ogden, Utah 405-25th St. |
| KGIR 1340 1000 Butte, Mont. | KLPM 1240 250 Minot, N. D. |
| KGIR, Inc., 121 W. Broadway KGIW 1420 100 Alamosa, Colo, | John B. Cooley, Box 707 KLRA 1390 1000 Little Rock, Ark. |
| Leonard E. Wilson, 326 N. Commercial KGKB 1500 100 Tyler, Texas | Arkansas Broadcasting Co., Box 550 |
| 115 S. College | KLS 1440 250 Oakland, Calif. Warner Bros., 2201 Telegraph Ave. |
| KGKL 1370 100 San Angelo, Texas KGKL, Inc., St. Angelus Hotel | KLUF 1370 100 Galveston, Texas Geo. R. Clough, Buccaneer Hotel |
| KGKO 570 250 Wichita Falls, Texas 9th St. & Indiana Ave. | KLX 880 1000 Oakland, Calif. Tribune Tower |
| KGKY 1500 100 Scottsbluff, Neb. | KLZ 560 1090 Denver, Colo. |
| Hilliard Co., Inc., 1517 1/2 Broadway KGMB 1320 1000 Honelulu, T. H. | Shirley-Savoy Hotel KMA 930 1000 Shenandoah, Iowa |
| Honolulu Broadcasting Co., Box 2663 KGNC 1410 1000 Amarille, Texas | Earl E. May Seed & Nursery Co. |
| Plains Radio Brdestg. Co. | KMAC 1370 100 San Antonio, Texas W. W. McAllister, Smith-Young Tower |
| KGNF 1430 1000 North Platte, Neb. Great Plains Broadcasting Co., W. 12th St. | KMBC 950 1000 Kansas City, Mo. Pickwick Hotel |
| KGNO 1340 250 Dodge City, Kans. First Natl. Bank Bldg. | KMED 1310 100 Medford, Ore. Mrs. W. J. Virgin, Sparta Bldg. |
| KGO 790 7500 San Francisco, Calif. 111 Sutter St. | KMJ 580 1000 Fresno, Calif. |
| KGU 750 2500 Henelulu, T. H. | Van Ness & Calaveras Sts. KMLB 1200 160 Monroe, La. |
| Kapiolani at South St. KGVO 1260 1000 Missoula, Mont. | Francis Hotel KMMJ 740 1000 Clay Center, Neb. |
| Mosbys, Inc., 240 N. Higgins | The M. M. Johnson Co. |
| KGW 628 1000 Pertland, Ore, 325 Adler St. | KMO 1330 250 Tacoma, Wash. KMO, Inc., Hotel Winthrop |
| KGY 1210 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way | KMOX 1090 50000 St. Leuis, Mo. 401 S. 12th St. |

| | KMPC 710 508 Beverly Hills, Calif. | - | KRLD 1040 10000 Dallas, Texas |
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| | 9631 Wiltshire Blvd. KMTR 570 1000 Hollywood, Calif. | | KRLD Radio Corp., Adolphus Hotel KRLH 1420 100 Midland, Texas |
| | KMTR Radio Corp., 915 N. Formosa Ave. | | Clarence Scharbauer |
| | KNEL 1500 100 Brady, Texas G. L. Burns | | KRMD 1310 100 Shreveport, La. Jefferson Hotel |
| | KNET 1420 100 Palestine, Texas | | KRNR 1500 100 Roseburg, Ore. |
| | Palestine Brdestg. Assn. KNOW 1500 100 Austin, Texas | | Oregon Pub. Co. KRNT 1320 500 Des Moines, Iowa |
| | Norwood Building | | 715 Locust Street |
| | KNX 1050 50000 Hollywood, Calif. West. Broadcast Co., Inc., 1558 N. Vine St. | | KROC 1310 100 Rochester, Minn. |
| | KOA 830 50000 Denver, Colo. | | Southern Minnesota Broadcasting Co. KROW 930 1900 Oakland, Calif. |
| | General Electric Co., 1370 Krameria St. | | 1803 Franklin St. |
| | KOAC 550 1000 Corvallis, Ore. Oregon State Agricultural College | | KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Ciu |
| 1 | KOB 1180 10000 Albuquerque, N. M. | | KSAC 580 500 Manhattan, Kans. |
| | Albuquerque Journal, Box 1319 KOH 1380 500 Reno, Nev. | | State College of Agriculture KSCJ 1330 1000 Sioux City, Iowa |
| | 440 N. Virginia St. | | Perkins Bros. Co., 415 Douglas St. |
| 7 ! | KOIL 1260 1000 Council Bluffs, Iowa Mona Motor Oil Co. | | KSD 550 1000 St. Louis, Mo. St. Louis Post-Dispatch |
| 1 | KOIN 940 1000 Portland, Ore. | | KSEI 900 250 Pocatello, Idaho |
| | KOIN, Inc., New Heathman Hotel | | Radio Service Corp , 141 S. 6th Ave. |
| | KOL 1270 1000 Seattle, Wash. Northern Life Tower | | KSFO 566 1000 San Francisco, Calif Russ Building |
| | KOMA 1480 5800 Oklahoma City, Okla | | KSL 1130 50000 Salt Lake City, Utal |
| | Biltmore Hotel KOMO 920 1000 Seattle, Wash. | - | Vermont Bidg. KSLM 1370 100 Salem. Ore. |
| 8 | Skinner Bldg. | | Oregon Radio, Inc. |
| | KONO 1370 100 San Antonio, Texas Mission Broadeast Co., Milam Bldg. | | KSO 1430 500 Des Moines, Iowa 715 Locust Street |
| 1 | KOOS 1390 250 Marshfield, Ore. | | KSOO 1110 2500 Sioux Falls, S. D. |
| | H. H. Hanseth, Hall Bidg. KORE 1420 100 Eugene, Ore. | | Sioux Falls Brdest. Assn., Carpenter Hote KSTP 1469 25000 St. Paul, Minn. |
| 7 | 733 Willamette St. | | St. Paul Hotel |
| | KOTN 1500 100 Pine Bluff, Ark. Universal Brdcstg. Corp., Hotel Pines | | KSUN 1200 100 Lowell, Ariz. Copper Electrical Co., Drawer C |
| 1 | KOY 1390 500 Phoenix, Ariz. | | KTAR 620 1000 Phoenix, Ariz. |
| | P. O Box 1323 | | Heard Building |
| | KPAC 1260 500 Port Arthur, Texas Port Arthur College | | KTAT 1240 1000 Fort Worth, Texas Ft. Worth Natl. Bank Bldg. |
| 1 | KPJM 1500 100 Prescott, Ariz. | | KTBS 1450 1000 Shreveport, La. |
| | Scott & Sturm, P. O. Box 782 KPLC 1500 100 Lake Charles, La. | - | Box 17 KTFI 1240 1000 Twin Falls, Idaho |
| | Calcasieu Brdcstg. Co., Majestic Hotel | | Radio Broadcasting Corp., Box 521 |
| | KPO 680 50000 San Francisco, Calif. | | KTHS 1060 10000 Hot Springs, Ark. Chamber of Commerce, Box 886 |
| 1 | KPOF 880 500 Denver, Colo. | | KTRB 740 250 Modesto, Calif. |
| | Pillar of Fire, 1845 Champa St. KPPC 1210 50 Pasadena, Calif. | | McTammany & Bates, P. O. Box 405 KTRH 1290 1000 Houston, Texas |
| | 585 E. Colorado St. | | KTRH Broadcasting Co., Rice Hotel |
| | KPQ 1500 100 Wenatchee, Wash. KPQ Bldg., 20 2nd St. | | KTSA 550 1000 San Antonio, Texas |
| | KPQ Bidg., 20 2nd St. KPRC 920 1000 Houston, Texas | | Southwest Broadcasting Co., Plaza Hotel KTSM 1310 100 El Paso, Texas |
| 1 | Lamar Hotel | | P. O. Box 1976 |
| | KQV 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., 1406 C. of C. Bidg. | | KTUL 1400 500 Tulsa, Okla. National Bank of Tulsa Bidg. |
| 1 | KQW 1010 1000 San Jose, Calif. | | KTW 1220 1000 Seattle, Wash. |
| | 37 E. San Antonio St. KRE 1370 108 Berkeley, Calif. | | 7th & Spring St. KUJ 1370 100 Walla Walla, Wash. |
| 2 | 2337 Shattuck Ave. | | KUJ, Inc., Marcus Whitman Hotel |
| | KREG 1500 100 Santa Ana, Calif. Brd & Sycamore Sts. | | KUMA 1420 106 Yuma, Ariz. Dr. A. H. Schermann, Box 267 |
| 1 | KRGV 1260 500 Weslaco, Texas | | KUOA 1260 1000 Favetteville, Ark. |
| | KRGV Inc. | | KUOA, Inc., Washington Hotel |
| | KRKD 1120 500 Los Angeles, Calif. B15 Spring Arcade Bldg. | | KUSD 890 500 Vermillion, S. D. University of South Dakota |
| 1 | KRKO 1370 50 Everett, Wash. | | KVI 570 1000 Tacoma, Wash. |
| | Lee Mudgett, 2814 Rucker Ave. KRLC 1420 100 Lewiston, Idaho | - | W. R. Rust Bidg. KVL 1370 100 Seattle, Wash. |
| | H. E. Studebaker, Lewis-Clarke Hotel | | KVL, Inc., 2101 Smith Tower |

| KVOA 1260 500 Tueson, Ariz. Cons. Natl. Bank Bldg. | VAS 685 2000 Glace Bay, N. S. Canadian Marconi Co., Ltd. |
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| KVOD 920 500 Denver, Colo. Continental Oil Bidg. | VESEK 1185 10 Montmagny, Que. J. A. Marquis, P. O. Box 52 |
| KVOL 1310 100 Lafayette, La. | VOAC 1085 40 St. John's, Nfid. |
| Evangeline Hotel KVOO 1140 25000 Tulsa, Okla. | VOAS 940 100 St. John's, Nfld |
| Wright Bldg. KVOR 1270 1000 Colorado Spg., Colo. | Ayre & Sons, Ltd., Water St. |
| Antlers Hotel | Newfoundland Hotel |
| KVOS 1200 100 Beilingham, Wash. 115 W. Magnolia St. | VONF 1195 500 St. John's, Nfid. Dominion Broadcasting Co., Ltd., Box 135 |
| KVSO 1210 100 Ardmere, Okia. Ardmorelte Pub. Co., Inc. | VOWR 681 500 St. John's, Nfld. Wesley United Church, Box 157 |
| KWBG 1420 100 Hutchinson, Kans. | WAAB 1410 500 Boston, Mass. |
| W. B. Greenwald KWEA 1210 100 Shreveport, La. | 21 Brookline Ave. WAAF 920 500 Chicago, III. |
| Spring & Fannin Sts., Times Pub. Co. KWG 1200 100 Stockton, Calif. | Palmer House WAAT 940 500 Jersey City, N. J. |
| Medico-Dental Bidg. | Bremer Broadcasting Corp., 50 Journal Sq. |
| KWJJ 1040 500 Portland, Ore. 622 Salmon St. | WAAW 660 500 Omaha, Neb. Omaha Grain Exchange |
| KWK 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase | WABC 860 50000 New York, N. Y. 485 Madison Ave. |
| KWKC 1370 100 Kansas City, Mo. | WABI 1200 100 Bangor, Maine |
| 3915 Main St. KWKH 1100 10000 Shreveport, La. | Community Brdestg. Service WABY 1370 100 Albany, N. Y. |
| Spring & Fannin Sts., Times Pub. Co. KWLC 1276 100 Decorah, lowa | Hotel Ten Eyck WACO 1420 100 Waco, Texas |
| Luther College | Amicable Bldg. |
| State College of Washington | WADC 1320 1000 Akron, Ohio Allen T. Simmons, P. O. Box 29 |
| KWTN 1210 100 Watertown, S. D. Citizens Bank Bldg. | WAGF 1370 100 Dothan, Ala. P. O. Box 25 |
| KWTO 560 5000 Springfield, Mo. KGBX Inc., St. Louis at Kimbrough | WAGM 1420 100 Presque Isle, Me. |
| KWYO 1370 100 Sheridan, Wyo. | Aroostook Broadcasting Corp., Main St. WAIM 1200 100 Anderson, S. C. |
| Big Horn Brdestg. Co. KXA 760 250 Seattle, Wash. | Anderson College WAIU 640 500 Columbus, Ohio |
| American Radio Tel. Co., 312 Bigelow Bldg. KXL 1420 100 Portland, Ore. | Deshler-Wallick Hotel WALA 1380 500 Mobile, Ala. |
| KXL Broadcasters, Multnomah Hotel | Pape Brdestg. Corp., P. O. Box 288 WALR 1210 100 Zanesville, Ohio |
| F. M. Bowles, Box 140 | First Trust & Savings Bank Bldg. |
| KXRO 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morck | WAML 1310 100 Laurel, Miss. Southland Radio Corp., Box 26 |
| KXYZ 1440 1000 Houston, Texas Gulf Building | WAPI 1140 5000 Birmingham, Ala. Protective Life Bldg. |
| KYA 1230 1000 San Francisco, Calif. | WARD 1400 500 Brooklyn, N. Y. |
| 988 Market St. KYW 1020 10000 Philadelphia, Pa. | 427 Fulton St. WASH 1270 500 Grand Rapids, Mich. |
| 1622 Chestnut Street NAA 690 1000 Arlington, Va. | Grand Rapids Natl. Bank Bldg. WATR 1190 100 Waterbury, Conn. |
| United States Navy | WATR Co. Inc., 47 Grand St. |
| Republic of El Salvador | WAVE 940 1000 Louisville, Ky. WAVE, Inc., 1525 Brown Hotel |
| TGW 1210 10000 Guatemala, Gua. 2227 Maquinaria 3389 | WAWZ 1350 500 Zarephath, N. J. Pillar of Fire |
| TGX 1400 250 Guatemala City | WAZL 1420 100 Hazleton, Pa. Hazleton Broadcasting Service, Inc. |
| TIEP 850 500 San Jose, C. R. | WBAA 890 1000 West Lafayette, Ind. |
| TIFA 1050 75 San Jose, C. R. | Purdue University WBAL 1060 10000 Baltimore, Md. |
| TIFS 1441 7.5 Cartago, C. R. | Lexington Bidg., Amer. Radio News Corp. WBAP 800 50000 Fort Worth, Texas |
| | Ft. Worth Star-Telegram |
| TIGA 1014 30 Cartago, C. R. | WBAX 1210 100 Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St. |
| TIGH 1000 500 San Jose, C, R. | WBBC 1400 500 Brooklyn, N. Y. 552-54 Atlantic Ave. |
| TIRH 930 50 San Jose, C. R. | WBBL 1210 100 Richmond, Va. |
| L | 1627 Monument Ave. |

| - | WBBM 770 50000 Chicago, III. | WCCO 810 50000 Minneapelis, Minn. |
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| - | 410 N. Michigan Ave. WBBR 1300 1600 Brooklyn, N. Y. | Nicoliet Hotel WCFL 970 5000 Chicago, III. |
| 1 | 124 Columbia Heights | 666 Lake Shore Drive |
| | WBBZ 1200 160 Ponca City, Okla. C. L. Carrell, 407 W. South Ave. | WCHS 580 500 Charleston, W. Va. WOBU, Inc., Ruffner Hotel |
| | WBCM 1410 500 Bay City, Mich. James E. Davibson, Hotel Wenonah | WCKY 1490 5080 Covington, Ky. 6th & Madison Sts. |
| | WBEN 900 1000 Buffalo, N. Y. | WCLO 1200 100 Janesville, Wis. |
| | WBEN, Inc., Hotel Statler | 200 E. Milwaukee St. |
| | WBEO 1310 100 Marquette, Mich. 146 W. Washington St. | WCLS 1310 100 Joliet, III. WCLS, Inc., 301 E. Jefferson St. |
| | WBIG 1440 500 Greensboro, N. C. O. Henry Hotel | WCMI 1310 100 Ashland, Ky. Ashland Broadcasting Co., Box 106 |
| | WBNO 1200 100 New Orleans, La. | WCNW 1500 100 Brooklyn, N. Y. Arthur Faske, 864-868 Flatbush Ave. |
| | Hotel New Orleans WBNS 1430 500 Columbus, O. | WCOA 1340 500 Pensacola, Fla. |
| | 33 N. High St. WBNX 1350 250 New York, N. Y. | San Carlos Hotel WCOC 880 500 Meridian, Miss. |
| | 260 E. 161st St. | Box 603 WCOL 1210 100 Columbus, Ohio |
| | WBNY 1370 100 Buffalo, N. Y. Roy L. Albertson | WCOL Inc., 33 N. High St. |
| | WBOQ 860 50000 New York, N. Y. Atlantic Broadcasting Corp. | WCOP 1129 500 Boston, Mass. Joseph M. Kirby, Hotel Copley-Plaza |
| | WBOW 1310 100 Terre Haute, Ind. | WCPO 1200 100 Cincinnati, Ohio Continental Radio Co., Hotel Sinton |
| | Banks of Wabash, Inc., 19 Beach Block WBRB 1210 100 Red Bank, N. J. | WCRW 1210 100 Chicago, III. |
| | 63 Broad St. WBRC 930 1000 Birmingham, Ala. | Clinton R. White, 2756 Pine Grove Ave. WCSC 1368 500 Charleston, S. C. |
| | Bankhead Hotel | Francis Marion Hotel WCSH 940 1000 Portland, Me. |
| | WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main | Congress Square Hotel |
| ļ | WBSO 920 500 Babson Park, Mass. Drawer B | WDAE 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace |
| | WBT 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg. | WDAF 610 1000 Kansas City, Mo. 1729 Grand Ave. |
| | WBTM 1370 100 Danville, Va. | WDAH 1310 100 El Paso, Texas |
| | Miller Bldg. WBZ 990 50000 Boston, Mass. | Box 1976 WDAS 1370 100 Philadelphia, Pa. |
| | Hotel Bradford WBZA 990 1000 Springfield, Mass. | WDAS Brdcstg. Co., Inc., 1211 Chestnut St. |
| | Hotel Kimbail WCAC 600 500 Storrs, Conn. | WDAY, Inc., Black Bidg., 118 Broadway WDBJ 930 1000 Roanoke, Va. |
| | Connecticut State College | Times World Corp., P. O. Box 150 |
| | WCAD 1220 500 Canton, N. Y. St. Lawrence University | WDBO 589 1000 Orlando, Fla. P. O. Box 1097 |
| | WCAE 1220 1000 Pittsburgh, Pa. P. O. Box 1705 | WDEL 1120 250 Wilmington, Del. WDEL, Inc., 10th and King Sts. |
| | WCAL 1250 1000 Northfield, Minn. | WDEV 550 500 Waterbury, Vt. |
| | St. Olaf College WCAM 1280 500 Camden, N. J. | Harry C. Whitehill, Stowe St. WDGY 1180 1000 Minneapolis, Minn. |
| | City of Camden, City Hall WCAO 600 500 Baltimore, Md. | Dr. Geo. W. Young, 909 W. Broadway |
| | 811 W. Lanvale St. | WDNC 1500 100 Durham, N. C. Washington Duke Hotel |
| | WCAP 1280 500 Asbury Park, N. J. Convention Hall | WDOD 1280 1000 Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten |
| | WCAT 1200 100 Rapid City, S. D. South Dakota State School of Mines | WDRC 1330 1000 Hartford, Conn. WDRC, Inc., Corning Bldg., 11 Asylum St. |
| | WCAU 1170 50000 Philadelphia, Pa. | WDSU 1250 1000 New Orleans, La. |
| | WCAU Broadcasting Co., 1622 Chestnut WCAX 1200 100 Burlington, Vt. | WDSU Inc., Hotel Monteleone WDZ 1070 100 Tuscola, III. |
| | 203 College St. WCAZ 1070 100 Carthage, III. | James L. Bush, Star Store Bldg. WEAF 660 50000 New York, N. Y. |
| | 97 1/2 Adams St. | 30 Rockefeller Plaza |
| | WCBA 1440 500 Allentown, Pa. B. Bryan Musselman, 39-41 10th St. | New Crown Hotel |
| | WCBD 1080 5000 Waukegan, III. Karcher Hotel | WEBC 1290 1000 Superior, Wis. Spaulding Hotel, Duluth, Minn. |
| | WCBM 1370 100 Baltimore, Md. Keith Theatre Bidg. | WEBQ 1210 100 Harrisburg, H. 100 E. Popular St. |
| /- | WCBS 1420 100 Springfield, III. | WEBR 1310 100 Buffalo, N. Y. |
| | WCBS, Inc., 208 1/2 S. 5th. | Howel Broadcasting Co., Inc., 23 North |

| | WEDC 1210 100 Chicago, III. Emil Denemark, 3860 Ogden Ave. | WGL 1370 100 Fort Wayne, Ind. F. C. Zieg, 213 W. Main St. |
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| | WEED 1420 100 Rocky Mount, N. C. | WGN 720 50000 Chicago, III. |
| | Wm. Avera Wynne, Box 221 | WGN, Inc., 435 N. Michigan Ave. |
| | WEEl 590 1900 Beston, Mass. 182 Tremont St. | WGNY 1210 100 Chester, N. Y. Peter Goelet (Orange County) |
| | WEEU 830 1000 Reading, Pa. | WGPC 1420 100 Albany, Ga. |
| | Berks Broadcasting Co., 533 Penn. | Rylander Theatre Bldg. |
| | WEHC 1420 100 Charlettesville, Va. P. O. Box 221 | WGR 550 1000 Buffale, N. Y. Rand Bldg. |
| | WEHS 1420 100 Cicers, III. WEHS, Inc., 6138 W. Cermak Rd. | WGST 890 500 Atlanta, Ga. Ansley Hotel |
| | WELI 900 500 New Haven, Conn. | WGY 790 50000 Schenectady, N. Y. |
| | Patrick J. Goode WELL 1420 180 Battle Creek, Mich. | 1 River Road WHA 940 1000 Madison, Wis. |
| | Enquirer News, 38 W. State St. | University of Wisconsin, Radio Hail |
| | WEMP 1310 100 Milwaukee, Wis. Milwaukee Brdcstg. Co. | WHAM 1150 58000 Rochester, N. Y. 100 Carlson Road |
| —— | WENR 878 50000 Chicago, III. | WHAS 820 50000 Louisville, Ky. |
| | Merchandise Mart | 300 W. Liberty St. |
| | WESG 850 1000 Elmira, N. Y. Mark Twain Hotel | WHAT 1310 100 Philadelphia, Pa. Public Ledger Bldg. |
| | WEVD 1300 1000 New York, N. Y. Jewish Daily Forward, Hotel Claridge | WHAZ 1300 500 Troy, N. Y. 8th St. |
| | WEW 760 1000 St. Louis, Mo. | WHB 860 1000 Kansas City, Mo. |
| | St. Louis University, 221 N. Grand Blvd. | WHB Broadcasting Co., Scarritt Bldg. |
| | WEXL 1310 50 Reyall Oak, Mich. 212 W. 6th St. | YMCA Bldg. |
| | WFAA 809 50000 Dallas, Texas | WHBC 1200 100 Canton, Ohio |
| | Baker Hotel WFAB 1300 1000 New York, N. Y. | Edw. P. Graham, 319 Tusc. St., W. WHBF 1210 100 Rock Island, III. |
| | 154 W. 57th St. | Hotel Harms |
| | WFAM 1209 100 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave. | WHB! 1250 1000 Newark, N. J. 100 Shipman St. |
| | WFAS 1210 100 White Plains, N. Y. | WHBL 1410 500 Sheboygan, Wis. Press Publishing Co., Press Bidg. |
| <u> </u> | Hotel Roger Smith | Press Publishing Co., Press Bidg. WHBQ 1370 100 Memphis, Tenn. |
| | WFBC 1300 1800 Greenville, S. C. Imperial Hotel | Brdestg. Sta. WNBQ, Inc., Hotel Clarid |
| | WFBG 1310 100 Altoona, Pa. | WHBU 1218 100 Anderson, Ind. Anderson Broadcasting Corp., Box 816 |
| | Gable Broadcasting Co., 12th Ave. & 13th St WFBL 1360 1000 Syracuse, N. Y. | WHBY 1200 100 Green Bay, Wis. |
| | Onondaga Hotel | WHBY, Inc., Bellin Bidg. |
| | WFBM 1230 1000 Indianapolis, Ind. 307 N. Pennsylvania St. | WHDF 1370 100 Calumet, Mich. Box 643 |
| | WFBR 1270 500 Baltimore, Md. 7 St. Paul St. | WHDH 830 1000 Boston, Mass. Matheson Radio Co., 62 Boyiston |
| | WFDF 1319 100 Flint, Mich. | WHDL 1420 100 Olean, N. Y. |
| | Union Industrial Bidg. WFEA 1340 500 Manchester, N. H. | Exchange Natl. Bank Bldg, WHEB 740 250 Portsmouth, N. H |
| | Carpenter Hotel | Box 522, 39 Congress St. |
| | WFIL 560 1000 Philadelphia, Pa. WFIL Broadcasting Co., 801 Market | WHEC 1430 500 Rochester, N. Y. WHEC, Inc., 40 Franklin St. |
| | WFLA 620 1000 Clearwater, Fla. | WHEF 1500 100 Kosciusko, Miss. Box 631 |
| | Box 119 WFMD 900 500 Frederick, Md. | WHFC 1420 100 Cicero, III. |
| | Francis Scott Key Hotel | WHFC, Inc., 6138 W. Cermak Road |
| | WGAL 1500 100 Lancaster, Pa. WGAL, Inc., 8 W. King St. | WHIO 1260 1000 Dayton, Ohio 39 S. Ludlow St. |
| | WGAR 1450 500 Cleveland, Ohio | WHIS 1410 250 Bluefield, W. Va. |
| | WGAR Broadcasting Co., Hotel Statler WGBB 1210 100 Freeport, N. Y. | WHJB 620 250 Greensburg, Pa. |
| | H. H. Carman, 64 S. Grove St. | Penn-Albert Hotel, 128 Pa. Ave. |
| | WGBF 630 500 Evansville, Ind. 519 Vine St. | WHK 1390 1000 Cleveland, Ohio |
| | WGBI 880 500 Scramton, Pa. | WHN 1010 1000 New York, N. Y. 1540 Broadway |
| | WGCM 1120 500 Mississippi City | WHO 1000 50000 Des Moines, Iowa |
| | Great Southern Golf Club, Box 207 WGES 1360 500 Chicago, III. | Central Brdcstg. Co., 914 Walnut St. WHOM 1450 250 Jersey City. N. J. |
| | 4000 Washington Blvd. | 2870 Hudson Boulevard |
| | WGH 1310 100 Newport News, Va. 2813 Washington Ave. | WHP 1430 500 Harrisburg, Pa. WHP, Inc., 216 Locust St. |
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| WIBA 1280 1000 Madison, Wis. 111 King St. | WJTL 1370 100 Atlanta, Ga. Volunteer Life Bidg. |
| WIBG 970 100 Glenside, Pa. | WJW 1210 100 Akron, Ohio |
| Seaboard Radio Brdestg. Corp. | WJW, Inc., 41 S. High St. |
| WIBM 1370 100 Jackson, Mich. WIBM, Inc., 306 W. Michigan Ave. | WJZ 766 50000 New York, N. Y. 30 Rockefeller Plaza |
| WIBU 1210 100 Poynette, Wis. | WKAQ 1248 1808 San Juan, P. R. |
| Win. C. Forrest, R. F. D. No. 3 | Radio Corp. of Puerto Rico, Box 1414 |
| WIBW 580 1000 Topeka, Kans. | WKAR 1640 1000 East Lansing, Mich. Michigan State College |
| WIBX 1200 100 Utica, N. Y. | WKBB 1500 100 East Dubuque, III. |
| WIBX, Inc., 1st Natl. Bank Bldg. WICC 600 500 Bridgeport, Conn. | Hotel Julien WKBH 1389 1900 LaCrosse, Wis. |
| Stratfield Hotel | WKBH, Inc., 409 Main St. |
| WIL 1208 180 St. Louis, Mo. Melbourne Hotel | WK81 1420 100 Cicero, III. |
| WILL 890 250 Urbana, III. | WKBI, Inc., 6138 W. Cermak Road WKBN 570 500 Youngstown, Ohio |
| University of Illinois | 17 N. Champion St. |
| WILM 1420 180 Wilmington, Del. 920 King St. | WKBO 1208 189 Harrisburg, Pa. |
| WIND 560 1000 Gary, Ind. | Penn Harris Hotel WKBV 1500 100 Richmond, Ind. |
| 504 Broadway | Knox Radio Corp., Box 308 |
| WINS 1180 1000 New York, N. Y. 114 E. 58th St., Hearst Radio, Inc. | WKBW 1489 5000 Buffalo, N. Y. Rand Bldg. |
| WIOD 1300 1000 Miami, Fia. | WKBZ 1500 100 Muskegon, Mich. |
| News Tower, Boscayne Blvd. WIP 610 1000 Philadelphia, Pa. | Occidental Hotel Bldg. |
| Gimbel Bldg., 9th & Chestnut Sts. | WKEU 1500 100 Griffin, Ga. Radio Station WKEU, 906 Hill St. |
| WIRE 1400 500 Indianapolis, Ind. 540 N. Meridian St. | WKJC 1200 100 Lancaster, Pa. |
| WIS 1010 500 Columbia, S. C. | 16 W. King St. WKOK 1210 100 Sumbury, Pa. |
| Station W18, Inc., Box 635 | 1150 N. Front St. |
| WISN 1120 250 Milwaukee, Wis. 123 W. Michigan St., Hearst Radio, Inc. | WKRC 550 1000 Cincinnati, Ohio |
| WJAC 1310 100 Johnstown, Pa. | WKRC, Inc., Hotel Alms WKY 980 1000 Oklahoma City, Okla. |
| WJAC, Inc., Locust St. | Plaza Court Bldg. |
| WJAG 1960 1000 Norfolk, Neb. Norfolk Daily News | WKZO 590 1000 Kalamazoo, Mich. John E. Fetzer, Burdick Hotel |
| WJAR 890 500 Providence, R. I. Outlet Co., Weybossett St. | WLAC 1470 5000 Nashville, Tenn. WLAC, Inc., 159-4th Ave., No. |
| WJAS 1290 1000 Pittsburgh, Pa. | WLAP 1420 100 Lexington, Ky. |
| Chamber of Commerce Bldg. WJAX 990 1000 Jacksonville, Fla. | Main & Esplanade WLB 1250 1000 Minneapolis, Minn. |
| City of Jacksonville | University of Minnesota |
| WJAY 610 580 Cleveland, Ohio 1224 Huron Road | WLBC 1310 59 Muncle, Ind. D. A. Burton, Anthony Bldg. |
| WJBC 1200 100 Bloomington, III. Kaskaskia Broadcasting Co. | WLBF 1420 100 Kansas City, Kans. 901 N. 8th Street |
| WJBK 1580 190 Detroit, Mich. | WLBL 900 2500 Stevens Point, Wis. |
| 6559 Hamilton Ave. | Fox Theater Bidg. |
| WJBL 1200 100 Decatur, III. Gushard Bldg. | WLBZ 629 500 Bangor, Me. Maine Broadcasting Co., Inc., 100 Ma'n |
| WJBO 1420 100 Baton Rouge, La. | WLEU 1420 109 Erie, Pa. |
| 334 Florida Street WJBW 1200 100 New Orleans, La. | Commerce Building |
| C. C. Carlson, Godchaux Bldg. | WLLH 1370 100 Lowell, Mass. Merrimac Brdcstg. Co., Box D |
| WJBY 1210 100 Gadsden, Ala. | WLNH 1310 100 Laconia, N. H. |
| Gadsden Broadcasting Co., 112 N. 8th St. WJDX 1270 1080 Jackson, Miss. | 523 Main St. WLS 870 58880 Chicago, III. |
| Lamar Life Bldg. | 1230 W. Washington Blvd. |
| WJEJ 1210 100 Hagerstown, Md. Lovely Dame Bldg. | WLTH 1400 500 Brooklyn, N. Y. 105 2nd Ave., (N. Y. City) |
| WJIM 1218 100 Lansing, Mich. | WLVA 1280 100 Lynchburg, Va. |
| Capital City Brdestg. Co. WJJD 1130 20000 Chicago, III. | 915 Main St. |
| WJJD, Inc., 201 N. Wells St. | WLW 700 500000 Cincinnati, Ohio |
| WJMS 1420 100 Ironwood, Mich. WJMS, Inc., St. James Hotel | WLWL 1180 5000 New York, N. Y. |
| WJR 750 50080 Detroit, Mich. | 415 W. 59th St. WMAL 630 250 Washington, D. C. |
| WJR, Inc., Fisher Bldg. | 712—11th St., N. W. |
| WJSV 1460 10000 Washington, D. C. Earle Building | WMAQ 670 50000 Chicago, III. Merchandlee Mart |
| | |

| 1 | WMAS 1420 100 Springfield, Mass. WMAS, Inc., 70 Chestnut St. | WNRI 1200 100 Newport, R. I. S. George Webb, 21 Bull St. |
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| , | WMAZ 1180 1080 Macon, Ga. | WNYC 810 1000 New York, N. Y. |
| | WMBC 1420 188 Detroit, Mich. | Centre & Duane Sts. WOAI 1196 58008 San Antonio, Texas |
| | 310 Woodward Ave. | Bouthland Industries, Inc., 1038 Navarro |
| | VMBD 1449 500 Peoria, III. 14 N. Madison St. | WOC 1379 198 Davenport, Iowa 1002 Brady Street |
| | VMBG 1210 109 Richmond, Va. | WOCL 1210 50 Jamestown, N. Y. |
| | VMBH 1420 108 Jeplin, Mo. | A. E. Newton, 840 N. Main St. WOI 640 5080 Ames, Iowa |
| | 334 Roosevelt St. WMBI 1089 5080 Chicago, III. | Iowa State College |
| [] | 53 Institute Place | WOKO 1438 500 Albany, N. Y. WOKO, Inc., Hotel Ten Eyck |
| | WMBO 1319 100 Auburn, N. Y. WMBO, Inc., Metcalf Bldg. | WOL 1310 108 Washington, D. C. |
| | WMBQ 1508 100 Breoklyn, N. Y. | American Broadcasting Co., Annapolis Hotel |
| | Metropolitan Brdestg. Corp., 95 Leonard St. NMBR 1370 199 Jacksenville, Fla. | Francis M. Kadow, Box 326 |
| 1 | J. Reynolds, Carling Hotel | WOOD 1270 500 Grand Rapids, Mich Grand Rapids Natl. Bank Bldg. |
| | NMC 780 1806 Memphis, Tenn. | WOPI 1500 100 Bristol, Tenn. |
| ١, | WMC, Inc., Hotel Gayoso WMCA 570 500 New York, N. Y. | 22nd & State Sts. WOR 710 50000 Newark, N. J. |
| | 697 Broadway | 147 Market St. |
| | WMEX 1500 100 Boston, Mass. The Northern Corp., Hotel Manger | WORC 1289 500 Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St. |
| 1 | VMFD 1379 100 Wilmington, N. C. | WORK 1320 1000 York, Pa. |
| | Hotel Wilmington WMFF 1310 190 Plattsburg, N. Y. | York Broadcasting Co., 15 S. Beaver St. |
| E | Hotel Cumberland | State Highway Control, Capitol Bidg. |
| | NMFG 1216 100 Hibbing, Minn. Yead of the Lakes Brdestg. Co. | WOSU 570 750 Columbus, Ohio Ohio State University |
| | VMFJ 1420 100 Daytona Beach, Fla. | WOV 1130 1800 New York, N. Y. |
| | V. Wright Each VMFN 1210 100 Clarksdale, Miss. | 132 West 43rd St. |
| A | ttala Brdestg. Corp., Box 180 | WOW 590 1000 Omaha, Neb. Woodmen of the World, 4th and Farnam |
| | NMFO 1379 100 Decatur, Ala. (ames R. Doss, Jr. | WOWO 1160 10000 Fort Wayne, Ind. |
| · · | NMFR 1200 100 High Point, N. C. | Main Auto Supply Co., 213 W. Main WPAD 1420 100 Paducah, Ky. |
| | fart & Nelson NMMN 890 500 Fairmount, W. Va. | 2201 Broadway WPAR 1420 100 Parkersburg, W. Va |
| 7 | West Va. Brdcstg. Corp., 208 Main St. | WPAR 1420 199 Parkersburg, W. Va Chancellor Hotel |
| | VMPC 1200 100 Lapeer, Mich. | WPAX 1210 250 Themasville, Ga. H. Wimpy, 135 E. Jackson St. |
| | VMT 680 1900 Cedar Rapids, Iowa | WPAY 1370 100 Portsmouth, Ohio |
| | Iotel Montrose VNAC 1230 1909 Bosten, Mass. | Veebee Corp. WPEN 920 250 Philadelphia, Pa. |
| 2 | l Brookline Ave. | 22nd & Wainut Sts. |
| 1.0 | WNAD 1919 1008 Norman, Okla. University of Oklahoma | WPFB 1370 100 Hattlesburg, Miss. Forest Brdcstg. Co., 512 Main St. |
| | VNAX 570 1080 Yankton, S. D. | WPG 1100 5000 Atlantic City, N. J. |
| | House of Gurney, Inc., 2nd and Capital St. VNBC 1380 250 New Britain, Conn. | City of Atlantic City, Convention Hall |
| ١. | Vm. J. Sanders, 147 Main St. | WPHR 880 500 Petersburg, Va. WLBG, Inc., Medical Arts Bldg. |
| | VNBF 1500 100 Binghamton, N. Y. Arlington Hotel | WPRO 630 250 Previdence, R. I. Cherry & Webb Brdcstg. Co., 15 Chestnu |
| v | VNBH 1319 100 New Bedford, Mass. | WPRP 1428 180 Pence, P. R. |
| | 51 Union St VNBR 1430 500 Memphis, Tenn. | Julio M. Conesa WPTF 680 5000 Raleigh, N. C. |
| | Memphis Broadcasting Co., Hotel DeVoy | WPTF 680 5000 Raleigh, N. C. 324 Fayetteville St. |
| | WNBX 1260 1000 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St. | WQAM 560 1000 Miami, Fia. |
| | VNBZ 1290 100 Saranac Lake, N. Y. | Miami Brdestg. Co., Inc., 327 N. E. 1st Ave |
| s | mith & Mace, 70 Broadway | Scranton Times, 149 Penn Ave. |
| F | 30x 1252 | WQBC 1360 1000 Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg |
| | VNEW 1250 1000 Newark, N. J. | WQDM 1370 100 St. Albans, Vt. |
| | Vodsam Corp., 100 Shipman St. | 42 N. Main St. WRAK 1370 100 Williamspert, Pa. |
| v | VNOX, Inc., Hotel Andrew Johnson | WRAK, Inc., 244 W. 4th St. |
| | VNRA 1420 190 Muscle Shoals, Ala. P. O. Box 486, Sheffield, Ala. | WRAW 1310 100 Reading, Pa. Reading Broadcasting Co., 533 Penn St. |

| | WRAX 920 250 Philadelphia, Pa. | WSYV 1509 100 Rutland, Vt. |
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| - | WRAX Broadcasting Co., 217 S. Broad St. | Philip Weiss Music Co., Box 328 |
| | WRBL 1200 100 Columbus, Ga. Royal Theatre Bidg. | WSYR 570 250 Syracuse, N. Y. 315 Starret-Syracuse Bldg. |
| | WRC 950 500 Washington, D. C. | WTAD 900 509 Quincy, 111. |
| | National Press Bldg. WRDO 1378 100 Augusta, Me. | Illinois Brdcstg. Corp., State and 6th |
| | WRDO, Inc., Augusta House | WTAG 580 500 Worcester, Mass. 18 Franklin St. |
| | WRDW 1500 100 Augusta, Ga. | WTAL 1310 100 Tallahassee, Fla. |
| | Augusta Brdcstg. Co., 309 8th St. | Florida Capitol Broadcasters, Inc. |
| | WREC 600 1000 Memphis, Tenn. WREC, Inc., Hotel Peabody | WTAM 1070 50000 Cleveland, Ohio 1367 E. 6th St. |
| | WREN 1220 1000 Lawrence, Kans. | WTAQ 1330 1000 Eau Claire, Wis. |
| | WREN Brdcstg. Co., 7th and Vermont St. WRGA 1500 100 Rome. Ga. | WHBY Inc., Hotel Eau Claire |
| | WRGA 1500 100 Rome, Ga. 10 Third Ave. | WTAR 780 500 Norfelk, Va. WTAR Radio Corp., Bank of Com. Bldg |
| | WRJN 1378 100 Racine, Wis. | WTAW 1120 500 College Station, Tex. |
| | Racine Broadcasting Corp., Hotel Racine WROK 1410 500 Rockford, III. | Agricultural and Mechanical College |
| 1 | 109 So. Water St. | WTAX 1210 100 Springfield, III. WTAX, Inc., 416 E. Capitol Ave. |
| | WROL 1310 100 Knoxville, Tenn. | WTBO 800 250 Cumberland, Md. |
| | Stuart Broadcasting Corp., 524 S. Gay WRR 1280 500 Dallas, Texas | Associated Brdcstg. Corp., Box 794 WTCN 1250 1000 Minneapolis, Minn. |
| | City of Dallas, Southland Life Bldg. | WTCN 1250 1000 Minneapolis, Minn. Wesley Temple Bldg. |
| | WRUF 830 5000 Gainesville, Fla. | WTEL 1310 100 Philadelphia, Pa. |
| | State University WRVA 1110 5000 Richmond, Va. | 3701 N. Broad Street |
| | Larus & Bros Co., Inc., 22nd and Gary St | WTFI 1450 500 Athens, Ga. Liberty Brdcstg. Co., 133 E. Washington St. |
| | WSAI 1330 1000 Cincinnati, Ohio | WTIC 1040 50000 Hartford, Conn. |
| | Crosley Radio Corp., 1329 Arlington WSAJ 1310 100 Grove City, Pa. | 26 Grove St. WTJS 1310 100 Jackson, Tenn |
| | Grove City College, 418 Poplar St. | WTJS 1310 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg. |
| | WSAN 1440 500 Allentown, Pa. | WTMJ 620 1000 Milwaukee, Wis. |
| - | WSAN, Inc., 39 10th St. WSAR 1450 250 Fall River, Mass. | The Journal Co., 333 W. State St. |
| | Academy of Music Bldg. | WTMV 1500 100 East St. Louis, III. Mississippi Valley Brdcstg. Co. |
| | WSAZ 1190 1000 Huntington, W. Va. | WTNJ 1280 500 Trenton, N. J. |
| - | WSAZ, Inc., P. O. Box 729 WSB 740 50000 Atlanta, Ga. | Trenton Brdestg. Co., Stacy Trent Hotel |
| | Atlanta Journal, 7 N. Forsyth St. | WTOC 1269 1000 Savannah, Ga. Savannah Brdestg. Co., De Soto Hotel |
| | WSBC 1210 100 Chicago, III. | WTRC 1310 50 Elkhart, Ind. |
| | Gene T. Dyer, 1258 S. Michigan Ave. WSBT 1360 500 South Bend, Ind. | Truth Pub. Co., Inc., Hotel Elkhart |
| | South Bend Tribune, 225 W. Colfax Ave. | WVFW 1400 500 Brooklyn, N. Y. Paramount Brdestg. Co., 4 & 5 Court Sq. |
| | WSFA 1410 500 Montgomery, Ala. | WWAE 1200 100 Hammond, Ind. |
| | Jefferson Davis Hotel WSGN 1310 100 Birmingham, Ala. | 402 Hammond Bidg. WWC 1420 1000 Spartanburg, S. C. |
| | Tutwiler Hotel | Virgil V. Evans, Ravenal & Avant St. |
| | WSIX 1210 100 Springfield, Tenn. | WWJ 920 1000 Detroit, Mich. |
| | 638 Tire & Vulvanizing Co. WSJS 1310 100 Winston-Salem, N. C. | Evening News Assn., 616 Lafayette Blvd. |
| | Winston-Salem Journal Co., 416 N. Marshall | WWL 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel |
| | WSM 650 50000 Nashville, Tenn. | WWNC 570 1000 Asheville, N. C. |
| | 301—7th Ave. No. WSMB 1320 500 New Orleans, La. | Citizen Brdestg. Co., Inc., Flatiron Bldg. |
| | WSMB, Inc., Maison Blanche Bldg. | WWRL 1500 100 Woodside, N. Y. 41-30-58th St. |
| | WSMK 1380 200 Dayton, Ohio | WWSW 1500 100 Pittsburgh, Pa. |
| | WSMK, Inc., 121 N. Main St. WSOC 1210 100 Charlotte, N. C. | Hotel Keystone |
| | WSOC, Inc., 516 W. Trade St. | WWVA 1160 5000 Wheeling, W. Va. Hawley Bldg. |
| | WSPA 920 1000 Spartanburg, S. C. | WXYZ 1240 1000 Detroit, Mich. |
| | Virgil V. Evans, Ravenel and Avant St. WSPD 1340 1000 Toledo, Ohio | Macabees Bldg. |
| | Toledo Broadcasting Co., 505 Jefferson | W1XBS 1530 1000 Waterbury, Conn. 61 Leavenworth St., Amer. Republican, Inc. |
| | WSUI 880 500 lowa City, lowa | W2XR 1550 1000 Long Island City, N.Y. |
| - | State University of Iowa | Scientic Brdcstg. Serv., 41 Park Row, N. Y. |
| | WSUN 620 1000 St. Petersburg, Fla. Recreation Pier | W6XAI 1550 1000 Bakersfield, Calif. Pioneer Mercantile Co. |
| | WSVA 550 500 Harrisonburg, Va. | W9XBY 1530 1000 Kan sas City, Mo. |
| - | Main & Market Sts. WSVS 1370 50 Buffalo, N. Y. | 106 West 14th St. |
| | 666 E. Delavan Ave. | XEA 1060 125 Guadalajara, Jat. Alberto Palos Souza, Apdo. 197 |
| | | Thousand Talos Souza, Apdo. 197 |

| XEAA 920 200 Mexicali, B. C. P. O. Box 714 (Calexico, Calif.) | XEMO 860 5000 Tijuana, B. C. P. O. Box 202, San Diego, Calif. |
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| XEAF 990 500 Nogales, Son. Francisco G. Elias, Hotel Central | XEMX 1280 12 Mexico City, D. F. Alfonzo T. Avales, Salamanca 87 |
| XEAI 1240 100 Mexico City, D. F. | XEMZ 1210 250 Tijuana, L. C. |
| Carlos Gonzales Caballero, Insurgentes 366 | Ave. "D" No. 542 |
| XEAJ 1310 15 Oaxaca, Oax. Enrique M. Crihuela, 3a, Gurroro 18 | XEN 710 1000 Mexico City, D. F. Cerveceria Modelo Ave. Juarez 77 |
| XEAM 750 7.5 Matamores, Tams. | XENT 910 65000 Nuevo Laredo, Tams. |
| Edificio Banco Longoria | Box 410, Laredo, Texas |
| XEAO 560 250 Mexicali, B. C. | XEOK 760 250 Tijuana, L. C. |
| Luis L. Castro, C. Altamirano 156 | Carlos de la Sierra, Calle 5a 312 XEOX 640 250 Saltillo, Coah. |
| XEAW 960 50000 Reynosa, Tams. Apartado No. 6 | Victoria No. 4, Altos |
| XEAZ 1420 7 Guanjuato, Gto. | XEP 840 500 Mexico City, D. F. |
| Antonio Zavala, Pasco de la Presa 85 | Cia Difusora de Mexico S. A., Rembrandt 11 |
| XEB 1030 10000 Mexico City, D. F. | XEPN 590 50000 Piedras Negras, Coah. |
| El Buen Tono, S. A., Apdo. 79-44 | Piedras Negras Brdcstg. Co., Box 360 XES 990 250 Tampico, Tams. |
| XEC 1160 30 Tijuana, B. C. Luis F. Enciso, Teatro Zaragoza | Fernando Sada, Box 309 |
| XECW 1310 10 Mexico City, D. F. | XET 690 500 Monterrey, N. L. |
| MariaElenaBravodeCorderoAve.Juarez104 | P. O. Box 203, Hidalgo |
| XED 1155 2500 Guadalajara, Jal. | XETB 1310 125 Terreon, Coah. |
| Cia. Radiofonografica, Apdo. 197 | P. O. Box 225 XETF 1220 12 Veracruz, Ver. |
| XEE 1210 50 Durange, Dge. | Jose M. Lopez, Independencia 28 |
| 20 de Nov. 112 (Afido. 148) XEFA 1180 500 Mexico City, D. F. | XETH 1210 100 Puebla, Pue. |
| Eduardo Limon Segui, Meditarraneo 236 | Ramon Huerta G., Calle 17, Oriente II |
| XEFB 1420 100 Monterrey, N. L. | XETW 820 500 Mexico City, D. F. |
| Jesus Quintaniila, P. O. Box 317 | Rafael M. Pena, Ave. 16 de Sep. 83 XEU 1010 250 Veracruz, Ver. |
| XEFC 560 100 Merida, Yuc. | XEU 1010 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98 |
| J. Molina Font. Calle 59, 517 XEFE 850 250 Laredo, Tams. | XEW 890 50000 Mexico City, D. F. |
| R. T. Carranza, Km. 4 Carretera Laredo Mt. | P. O. Box 2516 |
| XEFI 1440 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157 | XEWZ 1150 100 Mexico City, D. F. P. O. Box 291 |
| XEFJ 1230 109 Monterrey, N. L. R. Junco de la Vega, P. O. Box 186 | XEX 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10 |
| XEFO 940 5000 Mexico City, D. F. | XEY 1000 10 Merida, Yuc. |
| Reforma No. 137 | Calle 64, Numero 568 XEYZ 780 10000 Mexico City, D. F. |
| XEFV 1210 100 Jaurez, Chih. Cordova & Prieto. Ave. Ferrocaril 104 | Angel M. Diez, Ave. Juarez 48 |
| XEFW 1310 250 Tampico, Tams. | XEZ 630 500 Merida, Yuc. |
| J. E. Martinez, Salvador Diaz Miron 6 | Jorge L. Falomeque, Estamores Ctd 214 |
| XEFZ 1370 100 Mexico City, D. F. | XEZZ 1370 100 San Luis Potosi, SLP Emilio Delgado R. Ave. Chicosein 32 |
| Manuel Zetina, Cedro & Nonoaleo No. 344 | XFA 1310 5 Aguascalientes, Ags. |
| XEG 1270 200 Ensenada, B. C. Juan C. Chavez | A. Postal 92 |
| XEH 1150 250 Monterrey, N. L. | XFB 1270 250 Jalapa, Ver. |
| Tarnava y Cia, P. O. Box 147 | Gobierno del Estado de Veracruz |
| XEI 1370 125 Morelia, Mich. | XFC 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes |
| Carlos Gutierrez M., F. I. Madero 545 XEJ 1020 1000 Juarez, Chih. | (XFD 1340 350 Jalapa, Ver. |
| Juan G. Buttner, P. O. Box 111 | Gobierno Estado de Veracruz |
| XEK 998 100 Mexico City, D. F. | XFO 940 5000 Mexico City, D. F. |
| Arturo Martinez, Jalapa No. 51 | Nat. Rev. Party, Ave. Morelos 110 |
| XEKL 1240 500 Leon, Guan. 5 de Mayo 26 | XFX 610 1000 Mexico City, D. F. |
| XEL 1100 250 Mexico City, D. F. | Secretaria de Educacion Publica YNLF 1275 20 Managua, Nicaragua |
| Calzada del Rosel No. 1 | YNLF 1275 20 Managua, Nicaragua |
| XELA 1240 50 Saltillo, Coah. Enrique Gomez, Chauhtemos 28 Sur | YNOP 1230 100 Managua, Nicaragua |
| XELO 1110 10000 Piedras Negras, Coah. Piedras Negras Brdestg Co. | YNVA 950 30 Managua, Nicaragua |
| XEMA 1080 50 Tampico, Tams. Manuel M. Pier, Aretsanos 10 | |

In the December issue, the foreign broadcasting stations will be listed. The Short Wave stations will appear again in January.

AROUND the CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

| GMT | 5:00 | 6:00 | 7:00 | 0.00 | 0.00 | | 1 | 1 | | l | Ī | 1 |
|-----|------------|-------|-------------|---|--|---|---|---|---|--|--|---|
| | | | | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 |
| AST | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 |
| EST | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 |
| СВТ | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 |
| MST | 10:00 | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 |
| PST | 9:00 | 10:00 | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 |
| | JVH JVH | VK2ME | OSD W9XF | DJB DJN G8B PCJ VK3LR RV15 | DJB DJN JVM PCJ RV15 VK2ME VK3LR | DJB DJN HVJ JVM LKJ1 PCJ RV15 VK2ME VK3LR VK3ME | DJB DJN GSF GSG JVM LKJI RNE RVI5 VK2ME VK3ME VK3ME W8XAL | GSF GSG JVM LKJI PCJ PHI RNE Pont. RV15 VK2ME VK3LR W1XK W8XAL W8XAL | DJA DJB DJE GSF GSG PCJ PHI Pont, RNE VK2ME WIXK W8XK | DJA DJB DJB DJQ GSF GSG HAS3 PCJ PHI Pont. RNE VE9CA WIXK W8XK | DJA DJB DJE DJQ OSF OSG HVJ PCJ PHI Pont. RNE WIXK WSXAL WSXAL | DJA DJE DJQ GSE GSF Pont. W1XK W2XE W3XL W8XK W9XAA |

NOON TO MIDNIGHT (EST)

| GMT | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | 24:00 | 1:00 | 2:00 | 3:00 | 4:00 |
|-----|--|---|---|--|--|----------------|--|--|--|--|--|---|
| AST | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 |
| EST | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 |
| CST | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 |
| MST | 10:00 | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 |
| PST | 9:00 | 10:00 | 11:00 | 12:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 |
| | DJC DJD DJD GBB GGD ORK Pont. W1XK W2XE W8XAL W8XAL W8XAL | DJC DJD EAQ GSB GSD ORK PONK WESCA WIXK W3XAU W8XK W9XAA | DJC DJD GSB GSD VE9CA W1XK W2XAD W3XAU W3XAU W3XAU | W1XK W2XE W3XAL W3XAU W8XK | CJRO CJRX CTIAA DJC DJD G6B G6F H1H Pont. VE9CA W3XAU W8XAL W8XAL W9XAA XEBT YV3RC | W3XAL W3XAU | CJRO CJRX COCO CJRX COCO CRCX CTIAA DJD DJN EAQ GSC GSC GSD HAT4 HC2RL HJIABB IRA WIXAL WI | CJRO CJRX COCD CJRX COCD CJRX COCD CJRX COCD CJRX COCD CJRX CJRX CJRX CJRX CJRX CJRX CJRX CJRX | HP5B TIEP WIXAL WIXK W2XAF W2XE W3XAU W8XAU W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO | CJRO CJRX COCD CJRX COCD CJRX COCD COCH CRCX DJC DJD DJN HCJB HCJB HC2RL HLX HC2RL HLX HC2RL HLX HC2RL HLX HC2RL HLX HC3RL HC3 | CJRO CJRX COCID CJRX COCID CRCX DJC DJD GSC GSL HC2RL HC2RL HC2RL W2XAF W2XAF W2XAF W2XAF W3XAU W8XK W9XAA W9XF XEBT | CJRO CJRX COCD CRCX HJ4ABI W1XK W3XAU W9XAA W9XAA |

BEST SHORTWAVE BROADCASTING STATIONS BY CALL LETTERS

Frequencies are given in megacycles and the time is Eastern Standard.

- CEC, Santiago, Chile, 10.670. Sun., 2030-2100.
- CJRO, Winnipeg, Man., 6.150. Sun., 1500-2200; other days, 2000-2400.
- CJRX, Winnipeg, Man., 11.720. Sun., 1500-2200; other days, 2000-2400.
- COCD, Havana, Cuba, 6.130. Sun., 1700-2300; weckdays, 1100-2400.
- COCH, Havana, Cuba, 9.428. Daily 1000-1200; 1600-1800; 2100-2200.
- COCO, Havana, Cuba, 6.010. Daily 1600-1900.
- CO9GC, Santiago, Cuba, 6.150. Sun., 0000-0200.
- CO9JQ, Camaguey, Cuba, 8.665. CO9WR, Sancti-Spiritus, Cuba,
- 11.800. CRCX, Bowmanville, Ont., 6.090. Daily 1830-2330.
- CT1AA, Lisbon, Portugal, 9.600. Tues., Thurs., Sat., 1630-1900.
- DJA, Berlin, Germany, 9.560. 0030-0215; 0800-1130; 1705-2115.
- DJB, Berlin, Germany, 15.200. 0345-0715; 0800-1030; 2230-2330.
- DJC, Berlin, Germany, 6.020. 1200-1630; 2130-2245.
- DJD, Berlin, Germany, 11.770. 1200-1630; 1705-2245.
- 1200-1630; 1705-2245.

- DJN, Berlin, Germany, 9.540, 0030-0215; 0345-0715; 1705-2245.
- DJQ, Berlin, Germany, 15.280. 0800-1130. EAO Madrid Spain 9.862 1730-
- EAQ, Madrid, Spain, 9.862. 1730-1900 Sat., 1200-1400.
- GSB, Daventry, England, 9.510. 0115-0315; 1215-1500; 1515-1645. GSC, Daventry, England, 9.580.
- 1800-2000; 2200-2300. GSD, Daventry, England, 11.750, 0115-0315; 1215-1600; 1800-2000
- 2200-2300. GSE, Daventry, England, 11.860.
- 1100-1200.
- GSF, Daventry, England, 15.140. 0900-1200; 1615-1745; 0600-0845. GSG, Daventry, England, 17.740. 0900-1045; 0600-0845.
- GS1, Daventry, England, 6.110. 2200-2300.
- HAS3, Budapest, Hungary, 15.370. Sun., 0900-1000.
- HAT4, Budapest, Hungary, 9.125.
 Sun., 1800-1900.
 HBL, Geneva, Switz., 9.595.
 Sat.,
- 1730-1815.
- HBP, Geneva, Switz., 7.797. Sat., 1730-1815.
- HCJB, Quito, Ecuador, 8.214.
 Dally exc. Mon., 1915-2315.
- HC2ET, Guayaquil, Ecuador, 4.600. _Wed Sat. 2130-2300

- Tues., 2115-2315; Sun., 1745-1945.
- HIH, San Pedro de Macoris, D. R., 6.800. 1600-2030.
- HIX, Santo Domingo, D. R., 5.980.
 Tues., Fri., 2000-2200.
 HIZ, Santo Domingo, D. R., 6.315.
- Sat., 2300-0100; daily exc. Sun., 1700-1800.
- HJ1ABB, Barranquilla, Colombia, 6.447, 1700-2200.
- HJ1ABD, Cartagena, Colombia, 7.280. 1945-2115.
- HJ1ABE, Cartagena, Colombia, 6.115. Sun. at 0400; Mon., 2200-2400; Wed., 2: 0-2200.
- HJ1ABG, Barranquilla, Colombia, J.042, 1900-2200.
- HJ1ABH, Cienaga, Colombia, 6.300. Tues., Fri., 1945-2200.
- HJ2ABC, Cucuta, Colombia, 5.975.
 Daily exc. Sun., 1800-2100.
 HJ3ABD, Bogota, Colombia, 7.390.
- 1930-2300. HJ3ABF, Bogota, Colombia, 6.200.
- 1900-2300. HJ3ABH, Bogota, Colombia, 6.012.
- Sun., 1600-2100; other days, 1800-2300.
- HJ4ABA, Medellin, Colombia, 11.720. 1130-1300; 1830-2230. HJ4ABC, Pereira, Colombia, 6.230.
- 1900-2000. KILLARE Madellin Colombia (2000)

- HJ4ABL, Manizales, Oolombia, 6,100. Sat., 2300-2430.
- HJ5ABD, Call. Colombia, 6.490. Thurs., Sat., Sun., 1900-2100. HP5B, Panama City, Panama.
- 6.030. 1900-2200. HP5J, Panama City, Panama, 9.590.
- 1930-2200. HVJ, Vatican City, 5.970. Sun.,
- 0500-0530. 15.120. Tests late afternoons.
- I2RO, Rome, Italy, 9.630. Mon.,
 Wed., Fri., 1800-1930.
 JVH, Nazaki, Japan, 14.640, 0000-
- 0100. Mon., Thurs., 1600-1700. JVM, Nazaki, Japan, 10.740. Daily, 0400-0745.
- LKJ1, Jeloy, Norway, 9.540. 0500-0800.
- OANAD, Lima, Peru, 5.780. Wed., Sat., 2100-2330.
- ORK, Brussels, Belgium, 10.330. 1200-1400.
- PCJ, Hilversum, Netherlands, 15.220. Sun., 0730-1000; Tues., 0300-0600; Wed., 0700-1100.
- PHI Hilversum, Netherlands, 11.730 0830-1100, daily exc. Tues, and Wed.
- PRADO, Riobamba, Ecuador, 6.620. Thurs., 2100-2330.
- PRF5, Rio de Janeiro, Brazil, 9.505, 1700-1745.
- RNE, Moscow, USSR, 12,000. Daily, 1400-1800; Sun., 0700-1100; Wed., 0600-0700.
- RV15, Khabarovsk, USSR., 4.273. Daily, 0300-0900.

- TIEP, San Jose, Costa Rica., 6.710. 1900-2200.
- TIGPH, San Jose, Costa Rica, 5.820, 1900-2200.
- TIPG, San Jose, Costa Rica, 6.385. TIRCC, San Jose, Costa Rica, 6.550. Dally, 1800-1900. Sun., Thurs., 2000-2100; Sun., 1100-1300.
- VK2ME, Sydney, Australia, 9.585. Sun., 0000-0200; 0430-0830; 0900-1100.
- VK3LR, Melbourne, Australia, 9.580. Mon., Tues., Wed., Thurs., 0315-0730; Fri., 2230-0200; Sat., 0500-0730.
- VK3ME, Melbourne, Australia, 9.503. Wed., Thurs., Fri., Sat., 0500-0700.
- VPD, Suva, Fiji, 13.045. 0030-0130. VUB, Bombay, India, 9.565. Sun.,
- near 7 a.m. WINAL, Boston, Mass., 11.790. Tues., Thurs., Sun., 1830-2030. WINK, Millis, Mass., 9.570. 0700-
- 0100. W2XAD, Schenectady, N. Y.
- W2XAF, Schenectady, N. Y., 9.530. 1840-2300, W2XE, Wayne, N. J., 6.120, 2000-
- 2300. 11.830: 1700-1900. 15.270: 1000-1700. W3XAL, Bound Brook, N. J.,
- W3XAL, Bound Brook, N. J., 6.100: Mon., Wed., Sat., 1700-0100. 17.780: Tues., Thurs., Fri., 1500-1600.
- W3XAU, Philadelphia, Pa., 9.590; 1200-2000.

- W3XL, Bound Brook, N. J., 17.310: 1100-1700.
- W4XB, Miami, Fla., 6.040. Sun., 1130-1500; 1700-2400. Other days, 1200-1400; 1730-2400.
- W8XK, Pittsburgh, Pa., 6.140: 2100-0100, 11.870: 1700-2100, 15.210: 0900-1900, 21.540: 0700-0900.
- W8XAL, Cincinnati, Ohio, 6.060. Sun., 0700-1900; 2200-0130. Other days, 0630-1900; 2200-0200.
- W9XF, Chicago, Ill., 6.100: Monday to Friday, 0100-0200; 2100-2200; Sat., 0100-0200; Sun., 0100-0230; 2100-2200.
- XECR, Mexico City, D. F., 7.380: Sun., 1800-1900.
- XECW, Mexico City, D. F., 5.980: daily 2300-2400.
- YV2RC, Caracas, Venezueia, 6.112 1700-2145.
- YV3RC, Caracas, Venezuela, 6.150. 1700-2200.
- YV4RC, Caracas, Venezuela, 6.375. 1630-2230.
- YV5RMO, Maracaibo, Venezuela, 5.850. Dally exc. Sun., 1700-2130.
- YV6RV, Valencia, Venezuela, 6.520: 1700-2200,
- YVQ, Maracay, Venez., 6.672. Sat., 2000-2100.
 - Pontoise, France, 11.720. 1800-2100; 2200-2400.
 - 11.880: 1015-1315; 1400-1700. 15.250:



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

THOUGHT RADIO WAS A PLAYTHING

But Now My Eyes Are Opened, and I'm Making Over \$40.00 a Week!

\$40 a week! Man alive, a year ago I thought anyone making so much was just plain lucky.

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

If you had told me that twelve months later I would be making \$40 a week in my own Radio business-I'd thought you were crazy.

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

One day I picked up a magazine and an ad attracted me because it seemed to fit my case. It said. "I will show you how to start a spare time or full time Radio service business of your own WITHOUT CAPITAL."

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

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

What has happened since seems almost like a dream. I started to take their course and soon I was ready to start making money in my neighbor-hood—as much as \$5 and \$15 a week. It wasn't ong until I had saved enough money to start a little business of my own.

That business has since grown to the point where I am clearing an average of \$40 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. of my friends at the National Radio Institute. They also offered to train me for other lines. Broadcasting Stations, Radio Manufacturers, Operating on Board Ship, Servicing Sets, Aviation Radio, Television, Short Wave, Automobile and Police Radio, Loud Speaker Systems are other fields their training covers. And to think, until the day I wrote for that book, I'd been wailing, "I never had a chance and will never have one because I have no pull or a good education!"

Friend-you may not be as bad off as I was-

but think it over-are you satisfied? making as much money as you need? Are you would you sign a contract to stay where you are for the next ten years at the same salary? Those are the things you have to think about-because no one is going to make it his business to push you aheadyou must make it your own business.

Take my tip-write for their book, "Rich Rewards in Radio." It won't cost you anything It won't cost you anything except a postage stamp. It shows you a lot of things which I don't believe you know now about Radio—a lot of facts and figures on the opportunities in this new, fast-growing field. Where tunities in this new, fast-growing field. Where the jobs are, what they pay, how to get ready for them. Beginners as well as experienced men are making as much as \$500 to \$1,500 a year more as a result of N.R.I. training. And at the same time they send the book "Rich Rewards in Radio" they'll send you, without any cost or obligation, a Free Lesson to prove that their training is easy, practical, fascinating. The lesson they send "Radio Receiving Troubles—the Cause and Remedy" is valuable. And when you see how simple this lesson is to understand teal." and Remedy' is valuable. And when you see how simple this lesson is to understand you'll know why many fellows with less than a grammar school education have mastered N.R.I. training and are now making good money as Radio Experts.

You are not placing yourself under any obliga-tion by writing for this material as they will gladly send it to anyone who is ambitious and wants to get alhead. Mail the coupon in an envelope or paste it on a Ic postcard. Just address Mr. J. E. Smith, President, National Radio Institute, Dept. 5.MO. Washington, D. C.

| 1 | J. E. SMITH, President, National Radio Institutes Dept. 5MO, Washington, D. C. |
|---|---|
| 1 | Dear Mr. Smith: Without obligation, send me the sample lessor and your free book about spare time and full time Radio opportunities, and how I can train for them at home in spare time. (Please print plainly) |
| 1 | Name Age |
| i | Address |
| ı | City State |

14X1





PUSH-BUTTON TUNING

(Noises Suppressed) Push Button Silent Tuning is

offered for first time! Simply pushing Silencer Button husbes set between stations suppresses noises. Pressing Station Finder Button automatically indicates proper dial position for bringing in extremely weak stations.

Acousti-Tone V-Spread Design
("atent Preding)
Establishes new radio six-le overnight The
V-Front Disprising Values were developed by
Milwest engineers as a result of a study of
directional effect of the Midwest Full Scope
Tiple Pidelity Speaker. These Vanes spread
the beautiful Jacework of the "highs" throughout the critic toom in a scientific manner. out the cutter from in a scientific manner, out the cutter from in a scientific manner, directing the High Fidelity waves uniformly to the car. Send for new FREE 40-page catalog. It pictures the complete line of beautiful 1936 Acousti-Tone V-Spread consoles ... and chassis ... in four colors.

FULL SCOPE HIGH FIDELITY



Brilliant Concert Tone

E VERYWHERE, radio enthusiasts are praising

ment has been verified by a Conductat who conducted at a most result of the same of the conductat when the same of the conductat of the conduc among representative Ohio. Kentucky and Indiana raido retailers.) Before you buy any radio, write for FREE 40-page 1936 catalog. Newer before so much radio for so little money. Why pay more? You are triple proceed with. One Year Gutantee. Reception Gutantee and Money-Back Gutantees. This super Midwest will out-perform \$200 to \$300 sets on a point-for-point comparison. That is why nationally known orchestra leaders like Fred Waring, George Olien, Jack Denny, Ted Fio Rito, and others use Midwest sets to study types of harmony and rhythmic beats followed by leading American and Foreign orchestras. among representative Ohio. Kentucky and Indiana

80 ADVANCED 1936 FEATURES

Sorces of marvedous features, many exclusive, explain Midwest super performance and thailling world-wide all-wave reception emble Midwest ro bring in weak distant foreign nations, with full loud speaker volume, on channels adjacent to locals. Only Midwest offers on many features only Midwest tunes as low as 45% meters only Midwest give the senational new Push-Button Tuning feature, etc. See pages 12 to 21 in FREE catalog for description of the 80 features, Pedid about advantages of 6 Tuning ranges — offered from the Sorte of the Sor

Concert Took

Now, get complete range of aided and be concert read by the concert read

MIDWEST RADIO

DEPT. 81E CINCINNATI, OHIO Established 1920 Gable Address, MIRACO All Codes

with New GIANT THEATRE SONIC (LESS TURES) SPEAKER

TERMS AS LOW AS \$ 500 Thrill to new explorations in sections of radio

spectrum that are strangers to you. Every type of broadcast from North and South America, Europe, Asia, Africa and Australia is now yours. Send today for money-saving facts.

GEORGE OLSEN PRAISES LIFE-LIKE TONE REALISM

Long Island, N. Y.—After compasting many different makes. I finally decided upon Midwest. It out-performs other radios costing almost twice as much. The crivial-clear tone is so life-like that it sounds as though I am in the studios, actually hearing artists performing.



TODAY'S FINEST RADIO SAYS TED FIO RITO



METAL TUBES

This Midwest is engineered from the ground up to see either the new METAL tubes or glass fixed counterpart tubes. Occal sockets and newscent experimit use of either type just as very are.

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