RADIO

The All-Wave Radio Log Authority



No. 135

JANUARY - FEBRUARY, 1940

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Hear Distant Stations on Your Regular Broadcast Band Receiver. The Articles and Lists in this Magazine will tell you how.





RADEX READERS SHOPPING SERVICE

OFFERS YOU

THE NEW

HALLICRAFTERS



SKYRIDER DEFIANT SX-24

SX-24 - 1939

Skyrider Defiant

\$69.50

Matched Speaker

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Combination

Cash \$81.50

> Term Payments \$12.60 Down

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12 Months \$6.10 ea.

 BAND RANGE. Tunes from 540 kcs. to 43500 kcs. in four bands. Band 1, 540 to 1730 kcs. Band 2, 1700 to 15100 kcs. Band 3, 5000 to 15700 kcs. Band 4, 15200 to 15700 kcs. 43500 kcs.

43500 kcs.

BAND SPREAD. The band spread dial is calibrated stands the operator may determine the frequency of the signals to which he listens in any of the amateur band-the outer edge of the dial is marked off in 100 division-for additional ease in logging and locating stations.

TUBES. There are nine tubes. 6SK7 R.F. Amplifies 6K8 1st Detector-Mixer II.F. Oscillator. 6SK7 1st I. F. Amplifier. 6SK7 2nd I. F. Amplifier. 6SQ7 2nd Detector-Mixer II.F. Oscillator. 6SK7 2nd Detector-Mixer II.F. Oscillator. 8SK7 2nd Detector-Mixer II.F. Oscillator. 8SQ7 2nd Detector-Mixer II

lator. 80 Rectifier.

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8 Months 12 Month-Payments Paymen's Cash Down Price Payment SX-23, complete with tubes, crystal and

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\$14.08 \$9.58 \$13.47 \$9.16

\$16 53 \$11.25

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Please refer to Order Form on Page 95

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AT

A LITTLE PRICE!

This is a full 12 inch globe, beautifully made, and as up-to-date as the Worlds Fair! The new streamlined semi-meridian is made of hammered-metal, and the base is a Duncan Phyfe of walnut finished wood.

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RADEX

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Do you listen in late at night while others are sleeping? Does your town require you to turn your radio down at a certain hour? If you are an apartment dweller, or a DXer, or if there is more than one radio in your home, equip your set with headphones and win the gratitude of your family and your neighbors.

We offer two phone adapters which will permit the use of headphones with your radio. They can be used with any radio set, regardless of make, and are fully guaranteed. They are easily installed. When ordering, be sure to give a list of the tubes used in your receiver.

TRIMM

Quiet Radio Attachment

This kit, including adapter and headphones, is made by the makers of the famous "Trimm" headphones. Headset and loudspeaker may be used separately or together.

Adapter with Trimm Featherweight Headphones—

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Adapter with Trimm Dependable Headphones—

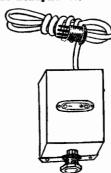
\$5.95

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\$4.40

THE PERFECT PHONE ADAPTER

Makes it easy to attach headphones to any radio set. Easily installed, without tools, in just a minute. The loudspeaker can be silenced while 'phones are being used. Ideal for the hard-of-hearing. The price is only \$3.95, without headphones.



As these adapters are made to order, about two weeks should be allowed for delivery.

We pay the postage.

THE RADEX PUBLISHING CO., 362 Cedar Lane, Teaneck N. J.



SIXTEENTH YEAR

JANUARY 1, 1940

No. 135

Page Taylor, Editor
B. Francis Dashiell, Technical Editor

Ray LaRocque, Eastern Editor-Anthony C. Tarr, Western Editor

Owen P. Callin, Amateur Editor

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PRINTED IN THE U.S.A.

FOR SALE AT YOUR NEWSSTAND

Important Announcement

Commencing with this issue, RA-DEX will be published six times a year instead of the usual ten times per year. The schedule of issues and the approximate on-sale dates will be as follows:

January-February Issue Dec. 22
March-April Issue February 25
May-June Issue April 25
July-August Issue June 25
September-October Issue ... August 25
November-December Issue ... Oct. 25

The publishers regret to make this announcement, but they are reluctantly compelled to take this action because the expense of waste copies returned for some time past has resulted in losses which have greatly interfered with proper service to you.

The publishers have been glad to

make good these losses, but now with mounting prices for even the cheapest grades of paper and other rising costs, such a plan is no longer possible to follow. In the interest of DXing, the finest of hobbies, and your RADEX, the publishers have decided upon this new plan which it is hoped will meet with your approval under the circumstances.

In an effort to effect economies we have recently made several changes in RADEX, notably in the paper used. In making these changes the publishers felt that you would much prefer them to a reduction in the number of pages and editorial material. As a matter of fact, we have actually increased the quality and the amount of editorial material. These, consisting as they do of the real service any

publication offers, we sincerely believed the changes were made in your best interests.

Some of these changes, however, have been misunderstood by some as being something that would greatly add to the profits of the publishers at the expense of the readers. We are not blaming anyone for this attitude. It is a perfectly natural conclusion. But now that we are giving you the facts concerning the problems of your magazine, we believe you will understand the circumstances.

The new plan will result favorably in a number of ways, the most important of which is the fact that we will be able to realize a better proportion of copies sold to the number of copies printed, and the savings thus effected will permit us to publish a better magazine for you.

The reduced subscription price of \$1.25, too, will make subscriptions available to a large number of DXers who were not able to subscribe at the higher price.

Nothing will be editorially lost. The several indices of North American broadcasting stations will be continued, just as they have for the past sixteen years. The shortwave broadcasting station lists, the world's radio stations on all waves and in all services will continue to be listed, and the articles by Anthony C. Tarr, Ray LaRocque, Owen P. Callin, B. Francis Dashiell's "Turner Dial" stories, and edited by Page Taylor—all will continue as in the past.

Present subscribers will, of course, receive their full quota of copies subscribed for.

Please be assured the publishers have and will continue to do everything possible to supply you with a good magazine. Your continued faithful support of our earnest efforts in your behalf will be a great incentive to continue to serve you to the best of our ability.

Page Taylor, Editor

FCC OFFICES

Following the suggestion of Rud Anderson of Ambrose, North Dakota, who believes many of our readers will also be interested, we are listing the addresses of the Field Offices of the FCC.

Central Frequency Monitoring Station, Grand Island, Nebr.

Naval Training Station Monitoring Station, Great Lakes, Ill.

- Dist. No. 1, U. S. Customhouse, Boston, Mass.
- Dist. No. 2, 641 Washington St., New York City.
- Dist. No. 3, Customhouse, Philadelphia, Pa.
- Dist. No. 4, Fort McHenry, Baltimore, Md.
- Dist. No. 5, New Post Office Bldg., Norfolk, Va.
- Dist. No. 3, Fort McHenry, Baltimore, Md.
- Dist. No. 6, 411 Federal Annex, Atlanta, Ga.
 Sub-Office: 208 Post
 Office Bldg., Savannah,
 Ga.
- Dist. No. 7, P. O. Box 150, Miami, Fla.
 Sub-Office: 203 P. O.
 Bldg., Tampa, Fla.
- Dist. No. 8, Customhouse, New Orleans, La.
- Dist. No. 9, 404 Federal Bldg., Galveston, Texas
- Dist. No. 10, 302 U. S. Terminal Annex Bldg., Dallas, Tex.
- Dist. No. 11, Rives-Strong Bldg., Los Angeles, Calif. Sub-Office: New California Bldg., San Diego, Calif.
- Dist. No. 12, Customhouse, San Franciso, Calif.
- Dist. No. 13, New Courthouse Bldg., Portland, Oreg.

(Please turn to page 88)

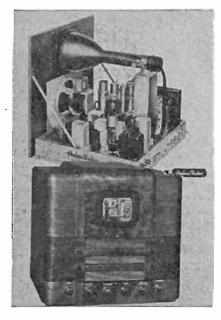
BEGINNING THE NEW YEAR WITH THE TECHNICAL EDITOR

Wherein some perplexing problems are solved for new radio listeners, and some questions from our old-timers are answered.

This is the time of year when another Christmas and a New Year are at hand. RADEX and the Technical Editor both hope that every one of our large family of readers derives the largest possible measure of happines the season affords. We in America enjoy this holiday in peace, while at the same time through the medium of radio we learn of the welfare of our friends across the seas, to whom we wish the happiest New Year that troublesome times in those war-torn lands will permit.

We are reminded that this is the season for new radios. As Christmas gifts the new radios rank high in importance. They come from the factory in perfect condition, and are guaranteed generally for 90 days or more. Some of them, of course, will be abused through ignorance and carelessness. A few others are certain to give some trouble. The law of averages provides for that. But radios now days are good, and seldom give trouble because of sloppy assembly or cheap and inferior parts. As it is, any reliable manufacturer is more than willing to try to please when his new product fails to satisfy.

The new sets for 1940 are less replete with strange gadgets, internal devices and circuits, than any previous year. Electric tuning, cathoderay eyes, push buttons, and metal tubes are old stories. Even the current television adaptability has failed to excite amazement. New radio refinements consist principally of improvements in cabinets, speakers and controls, not to mention, of course, the essentials of increased sensitivity and range on the short waves. Of course, we are hearing, too, of the built-in aerials, but, after all, the good old-fashioned outdoor antenna still is the radio listeners' best friend.



Andrea Televisors. At the top is the easily-built kit, and the table model cabinet is shown below.

It is to this army of newcomers in the radio game, as well as old-timers who will be perhaps a bit confused by the intricacies of their new models, that we open the New Year by anticipating their future troubles. RADEX, as always, will continue to assist its readers with their service problems as far as it is practicable to do so at long range. Write briefly and list your troubles clearly. In those obvious cases where expert service work is clearly indicated, an experienced serviceman is needed, and it is the policy the Technical Staff to so advise. Only in exceptional cases can the Editors of this publication conscientiously advise the average set-owner to plunge into the mysteries of his radio for the purpose of making repairs of alterations. Any advice that is given is intended as a guide for possible dicussion with the serviceman, or to provide something tangible for the set-owner to seize upon when deciding whether to do the work himself or call in a repairman.

The large number of letters that have crossed the Technical Editor's desk since we last discussed our readers' troubles have been of unusual interest, but many in the following group should appeal to the newcomers in the 1940 radio field.

What causes radio stations to fade? Natural fading is a phenomenon quite beyond the control of the broadcasting radio station and the listener. Due to the complexity of radio broadcasting this subject is one that could be made to fill a book. Briefly, however, a radio wave, once it is emitted from the transmitting station antenna, must pass through space. It does not follow a direct line, but travels much as a beam of light would if it were flashed on an angle up to some surface high overhead, then reflected back to earth, back overhead, again back to earth, until the waves are made to pass entirely around the earth in a "saw-toothed" surge. This upper surface is variously called the ceiling", "ionosphere", "Heaviside Layer." Variations in the height, evenness, reflecting powers, absorbing qualities, etc., of the ceiling tend to determine whether the radio wave can at that time travel far or be quickly absorbed. Irregulaities in reflection cause fading, for this lofty surface seldom remains smooth or at ease. Its height varies between day and night. Magnetic storms and the effects of sun spots or solar radiation affect the composition and ionization of the radio ceiling. If such does not cause severe fading, it absorbs signals so badly that we can hear few distant stations at that time. Inference at certain distances from the broadcasting station between the ground and space waves causes severe fading, and this usually occurs when a station is relatively near by, although other stations come in steadily and are seldom known to fade. When a station is far away and the wave is reflected back and forth several times between the ceiling and the earth some fading is certain to occur.

What can the radio receiver do to prevent fading? Modern sets are designed to overcome fading to a certain extent. Beyond that radio engineers are powerless to overcome natural fading All radios now have built-in automatic - volume - controls. When a signal begins to fade it weakens, and this action affects the a. v. c. so that it begins to boost up the fading signal just as if you were turning up the manual volume-control. knob. As long as the fading brings some energy to the antenna the a. v. c. will keep the signal at an audible level. However, the noise level of the set and other interference may become so prominent that the fading signal is rendered unintelligible. But as soon as the signal fades entirely there no longer is any energy in the aerial for the radio and the a. v. c. system to amplify, and the set becomes momentarily dead. There is nothing that can be done except to wait for the signal to reappear. As the signal comes back, the a. v. c. cuts down its maximum amplifying power in proportion to the signal, and when the received energy is back to its original intensity the a. v. c. goes out of action entirely.

Is fading caused by the broadcasting station? Fading can be caused by the transmitter failing to emit a steady flow of energy. If the output of a broadcasting station varies due to fluctuations in the power sent into the aerial, the signal will fade at the receiver. Also, fading will appear at the receiver when the transmitted signal "swings" or changes frequency slightly due to faulty capacity units or inductances. In either of the above

cases the operators of the station in question are in for a lot of explaining when the Federal Radio Commission montior stations check up on their failure to maintain constant frequencies and output of power. A swinging signal from a broadcast station can be easily discovered if, when the signal is fading, the tuning knob be turned ever so slightly in either direction so as to increase the signal. A steady manipulation of the knob, by turning it slowly back and forth, will keep the receiver in tune to the swinging signal. This trouble, then, is clearly the fault of the broadcaster, and should be corrected as soon as discovered.

Can two stations on the air cause fading of either? This form of fading is the result of signal interference. When two signals on the same or nearly identical wave lengths or frequencies are both within receiving range of the set, neither one nor the other will be cearly intelligible. This is due to the "heterodyning" effect, which is the result of a wavering "beat" note set up by the interference between the two different frequencies of the signals. The signals, therefore, appear to die down and become loud at rapid intervals. Such trouble is created in the set, perhaps because it is not sufficiently selective or is too small. Repeating of a station at different points on the dial is due to similar trouble, and these repeat points or "images" can cause interference with a signal properly received at the same point on the dial but which is found to fade rapidly. Frequently the use of a good wave trap, a pre-selector, or some attention to the tubes and adjustments of the receiver, will eliminate much of this sort of fading interference.

Is it possible for the receiver to cause fading? Other than the effects noted in the paragraph above, fading also can be caused in a receiver when one or more parts have become defective. The first suspicions should be

turned to the tubes, particularly those using indirect-heating of the cathode. Often this form of defect is not indicated on the ordinary tube tester, and substitution tests provide the most satisfactory method for discovering the trouble. Radios develop fading inclinations when radio-frequency coils leak because of dampness or corrosion; capacities vary slightly through defects or poor contacts; inductances change because of dampness or loose supports; or mechanical weakness in some of the tuning units causes them to slip slightly and throw the station out of tune. These de-tuning effects make the signal fade until the set is retuned. We often speak of this de-tuning as "signal shifting."

Why do some stations fade more than others? If a radio station is a consistent fader, there always is present the possibility that something is wrong with the transmitter. However, persistent fading, night after night, indicates a natural condition over which man has no control. This was mentioned in a preceding paragraph, when the ground and space waves interfere at intervals to cause severe fading from a station that is not far distant. In this case a station would appear to fade more than others situated beyond the range of the ground wave. Certain local conditions sometimes combine to make one station a bad fader. This was the case with radio's pioneer station KDKA at Pittsburgh, Pa., for listeners situated along the Atlantic coast.

A sales-man tells me that the number of tubes in a radio is not always an important consideration when buying a new set. Is this true It is a fact that the number of tubes in a set does not always give an indication of its ability to perform in proportion to the number of tubes. Sometimes there are additional tubes, such as a ballast tube, tuning, eye, beat oscillator for detecting CW signals, and more frequently, a series of

audio tubes in parallel to improve the current-carrying capacity without overloading. Such sets may have four audio output tubes when two will do the work. The extra tubes provide additional tone values so as to produce high-fidelity of reproduction. But a set with all these extra tubes may not be any better than one having less tubes when it comes to actual distance and sensitivity. It all depends upon the circuit whether a multi-tube set is any better or equal to a set with fewer tubes. After all, the essential tube complement in a radio is all that is absolutely necessary for reception, and the additional tubes are mere refinements for better operation and improved tone greater volume.

Why it is not possible to get foreign stations whenever I want them? I bought a good short-wave set so that I could do this, but the set fails me once in a while. You could get good short-wave reception at all times if nature did not have moods.. When certain conditions exist, such as poor conductivity through space due to magnetic storms or absorption along the radio ceiling, the finest set on earth cannot pick up signals that The sun is do not come through. blamed for much of this effect when sun-spots are rampant. weather is known, too, to prevent reception over those areas where certain meterological conditions exist. Sometimes a wave band, particularly about 10 to 20 meters, will close up entirely without warning and then suddenly open for a time.

I bought a new radio and already have had it serviced 3 times. My old radio was 7 years old and had never given trouble by failing. Is it a fact that new radios do not hold up like the older ones? The new radios are good radios and carefully made and inspected. However, it might be well for all radio owners to get this fact well rooted in their minds: New radios are more powerful and utilize

much higher voltages than the older sets. This fact throws more stress and strain, electrically speaking, on the parts of the circuit. Resistors and condensers, as well as transformer windings, are heavily loaded. If any part weakens (for a chain is no stronger than its weakest link) the strain becomes severe and before long something gives way. A new set, if of reputable manufacture, should contain only the best materials capable of insulating against high voltges, and, therefore, is not subject to undue servicing. Radio engineers now take into consideration the strains under which a modern radio operates, and make allowances accordingly. However, it is possible for a weak part to appear perfect at inspection time although it breaks down under constant use. The 90day guarantee on a new radio takes care of this possibility and protects the purchaser.

I recently purchased a Philco 17-T with a built-in aerial. But it has terminals for aerial and ground also. For DXing should this set be used with an outside antenna? Built-in aerials are good for local reception and distance with the volume turned high and noisy. A good outdoor aerial still is your best bet for DXing. A T type with ground will be good unless static noise demands the use of a noise-reducing type or doublet. From 40 to 60 feet in length will be ampe.

My new portable A. C.-D. C. radio some times brings in a station fine, but when it is moved to another location the station is weak. On the other hand just the opposite action frequently is noted. Why is this? The new portables nearly all have built-in aerials, known as Wave Magnets, Beamascopes, etc. They are really small loop antennas having definite directional qualities. The set should always be placed so that one end points toward the place from which the signal is coming. When

(Please turn to page 60)

DXer's Picture Gallery



Walter E. Bishop, a DXer for four years, with 1008 ham stations in 41 countries and in 46 states to his credit.



Mervyn Branks, "The Southlander," is a well-known New Zealand DXer. Besides being a member of the Radex Club (R276 N. Z. 1), he is also a

member .of four Australiasian DX Clubs, and editor of the N. Z. DX-tra, the monthly bulletin of the N. Z. DX Club: Merv. has been DXing 12 years and has verified over 500 stations on the broadcast band, and is the holder of the six RADEX Plaques for verifying all continents.



DXer John Gawell of Buffalo, N. Y.



Some of the receiving equipment, a few of the SW verifications, and a large hand-made map are shown in this corner of the listening post of Graham D. Hutchins of Maribyrnong, Australia.



HIGH FREQUENCY BROADCAST STATIONS

Call Kcs.	Watts Location		
~	E. Anthony and Sons, Inc., Fairhaven, Mass.		
W1XER 42340 500	Yankee Network, Inc., Sargents Purchase,		
, TITATITA 40000 FO	N. H.		
W1XKA 42220 50	Westinghouse Elec. and Mfg. Co., Boston,		
	Mass.		
W1XKB 42220 50	Westinghouse Elec. and Mfg. Co., E. Spring-		
	field, Mass.		
W1XKB 42380 1000	Westinghouse Elec. and Mfg. Co., E. Spring-		
	field, Mass. (Under construction).		
W1XOJ 43000 50000	Yankee Network, Inc., Paxton, Mass. (Under		
	construction).		
W1XPW 43400 1000	WDRC, Inc., Meridan, Conn.		
W2XDA 43200 50	General Elec. Co., Schenectady, N. Y.		
W2XDG 42420 150	National Breaster Co. Inc. Nov. Vorl. City		
W2XDV 42300 50	National Brdcstg. Co., Inc., New York City.		
	Columbia Brdcstg. Sys., New York City.		
W2XHG 42060 150	National Brdcstg. Co., Inc., New York City.		
W2XJI 25300 100	Bamberger Brdcstg. Serv. Inc., New York City.		
W2XMN 42800 40000	Edwin H. Armstrong, Alpine, N. J.		
W2XMN 117430 40000	Edwin H. Armstrong, Alpine, N. J.		
W2XOY 43200 150	General Elec. Co., Albany, N. Y.		
W2XQO 25500 100	Knickerbocker Brdcstg. Co., Flushing, N. Y.		
W2XQR 41200 1000	John V. L. Hogan, New York City.		
W2XQR 43200 1000	John V. L. Hogan, New York City (Modifica-		
	tion of construction permit pending).		
W2XSN 432000 1000	Paul F. Godley, Alpine, N. J. City of N. Y. Municipal Brdcstg. Sys., New		
W2XVP 26100 1000	City of N. Y. Municipal Brdcstg. Sys., New		
W2XWF 42180 1000	York City.		
W2XWF 42180 1000 W3XES 42100 300	Wm. G. H. Finch, New York City. Monumental Radio Co., Baltimore, Md.		
W3XIR 42140 100	WCAU Brdcstg. Co., Philadelphia, Pa.		
W3XO 43200 1000	Jansky and Bailey, Georgetown, D. C. (Under		
VV 521 C 40200 1000	construction).		
W4XA 26150 1000	National Life and Accident Ins. Co., Nashville		
77 11111 20100 1000	Tenn.		
W4XBW 26000 100	WDOD Brdcstg. Corp., Chattanooga, Tenn.		
W4XCA 26150 250	Memphis Commercial Appeal Co., Memphis,		
VV 421 C/1 20130 230	Tenn.		
W5XAU 26125 100	WKY Radiophone Co., Oklahoma City, Okla.		
W5XAC 25125 100 W5XD 25300 100	A. H. Belo Corp., Dallas, Texas.		
W6XDA 42300 100	Columbia Brdcstg. Sys., Los Angeles, Calif.		
	Ben S. McGlashan, Los Angeles, Calif.		
	Den S. McClashan, Los Angeles, Calif.		
	Ben S. McGlashan, Los Angeles, Calif.		
W6XRE 116950 500	Ben S. McGlashan, Los Angeles, Calif.		
W6XRE 250000 500	Ben S. McGlashan, Los Angeles, Calif.		
W8XKA 42220 50	Westinghouse Elec. and Mfg. Co., Saxonburg,		
33703777 A 42600 1000	Pa.		
W8XKA 42600 1000	Westinghouse Elec. and Mfg. Co., Saxonburg,		
337037317T 42240 FO	Pa.		
W8XNT 42340 50	United Brdcstg. Co., Cleveland, Ohio.		
W8XNU 25950 1000	Crosley Corp., Cincinnati, Ohio.		
W8XWJ 42060 500	Evening News Ass'n., Detroit, Mich.		
W9XA 26000 1000	Commercial Radio Equipment Co., Kansas		
	City, Mo.		

W9XAZ W9XBA W9XBS W9XER	42260 26100 42180 42460	500 100 100 500	The Milwaukee Journal, Milwaukee, Wis. WHB Brdcstg. Co., Kansas City, Mo. National Brdcstg. Co., Chicago, Ill. Midland Brdcstg. Co., Inc., Kansas City, Mo.
W9XH	26050	100	South Bend Tribune, South Bend, Ind.
W9XHW	42300	50	Columbia Brdcstg. Sys., Minneapolis, Minn.
W9XJL	2 6100	250	Head of the Lakes Brdcstg. Co., Superior.
			Wis.
W9XLA	25400	100	KLZ Brdcstg. Co., Denver, Colo.
W9XOK	25300	100	Star-Times Pub. Co., St. Louis, Mo.
W9XPD	25900	100	Pulitzer Pub. Co., St. Louis, Mo.
W9XTA	26000	500	Schonert Radio Serv., Harrisburg, Ill.
W9XYH	26300	1000	Head of the Lakes Brdcstg. Co., Superior,
			Wis.

BELOW 10 METERS

◆ You are losing out if you don't hear the UHF's which your radio is capable of bringing you. The simple addition of a 50c converter brings you your share of over 1,000 experimental television, police, facsimile, and broadcast stations besides additional thousands of amateurs on Ultra High Frequencies. Buy this complete, postpaid, guaranteed, and tested UHF converter for any superheterodyne which tunes to 15mc., for 50c from Princeton Radio, Dept. D, 15889 Princeton, Detroit, Mich. Not a diagram! We have never received a complaint! Order today!



The New Zealand DX Club, the oldest organization of the kind in the southern hemisphere, has been completely reorganized and the Auckland Branch has taken over the duties of headquarters with Mr. Frank Hutchins, 6 Levonia Street, Auckland, S. W. 1 as president and Mr. Bill Lewis, 17 Ethel Street, Auckland, S. W. 1, as national secretary. The club publishes a monthly bulletin, which contains full news of the stations "down under," the editor being Merv. Branks, 5 Dublin Street, Invercargill.

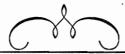
Membership is open to all DXers, the dues being 1 dollar 25 cents for the first year and 75 cents thereafter. Applications for membership may be sent to the secretary or editor, payment being accepted in 3c stamps.

The Cincinnati Chapter of The Newark News Radio Club is a new and growing organization in the city of Cincinnati, Ohio. This chapter was started by George H. Jacobs, vicepresident of the parent order and now president of the chapter. The Cincinnati Chapter meets at the home of George H. Jacobs at 311 Seitz St., in that city on the first and third Saturday evenings of every month. In the local chapter's membership are such members as WKRC's program director: WCKY's best announcer; Cincinnati's leading newspaper radio editor, business men and all round swell fellows and gals in all fields.

The Cincinnati Chapter of the Newark News Radio club has a standing invitation to all DXers to visit with them at any of these meetings. Some of the activity of this club is furnishing intertainment for the blind people, finding lost relatives via radio, teaching radio, answering questions of prospective buyers of receivers, showing visitors to the city, the various stations, introducing them to the station staffs, arranging for them to watch broadcasts, and serving the people of Cincinnati in many other ways. In Cincinnati will be found the official Ohio outlet for The News Radio Club in Radio Station WKRC-

HIGH FREQUENCY GLOBE TROTTING

By Ray La Rocque



Report-o-Meter
G. R. Jewell, Jr100%
Robert Skyten 46%
M. F. Williams 25%
Carl Horton 13%
Alton Caldwell, Jr 10%
Bertram Podall 10%



Our select five becomes a group of six month, the unusual situation being created by a tie for fifth place. Judging from the meter, New England must have been a good place for DX signals during the past month, for four of the six boys who reached Report-o-Meter honors this month hail from New England. Skyten. Horton, Caldwell, and Podall are reporting from this group of states, while Williams does his DXing not too far from New England in the state of New Jersey. It remained for the South to come out on top of the meter as Montgomery Alabama's G. R. Jewell did a jewell of a job in outdistancing his nearest rival by more than 50%.

We must not forget to award a few honorable mentions. The following came very close to registering in the meter: Ralph Simpson, Jack Welsh, Eddie Hirsch, Oscar Sandoz, and John D. Long.

ASK US ANOTHER

Please read these next few paragraphs carefully. In it you may find the answer to one of your DX puzzles or mystery stations. Or you may find that you possess the solution to

some other DXer's problem. If such is the case, please forward the answer directly to that person as it wil reach its destination much sooner than it can by replying through RADEX.

At 1:15 a.m. a station speaking German was heard until 2 a.m. on 13800 kcs. It was not Warsaw. Another German station is on 14400 kcs. at 6 p.m. If you have any identification please send to Bertram Podall, Gilman, Vermont. . . . oJseph Schwartz of Bronx, New York would like to know more about the Cuban station on 4390 kcs. announcing as COXF. Address Radexer Schwartz at 1355 Morris Ave. . . . "What is HVJ's veri policy?" is the query of Art Hankins, 1006 Ligonier St., Latrobe, Pa. He continues, "I sent a fine report last December and never heard from them. The same goes for PCJ."

G. R. Jewell, Jr., 222 S. Court St., Montgomery, Alabama asks: "On October 29th at 12:30 a.m. I was running the dial when I stumbled upon a mystery station on or about 14600 kcs. with a signal of R5. The station seemed to be either a Chinese or some other Asiatic station. There was a drama and music that sounded very oriental. Can anyone give me a helping hand in determining the origin of these signals. . . . A Chinese station also bothers Al Kempton, Harding, Mass. He'd like infor-

Readers living in the Eastern and Central Standard Time Zones may send their reports direct to

> Ray LaRocque 4 Wachusett St., Worcester, Mass.

mation regarding the one heard on 11790 kcs, with R9 signal just below JZJ on 11800 kcs. It was not JZJ as they came on at 7 a.m. Can anyone solve these mysteries?

Alvin W. Oliver, Houston, Texas heard a station on approximately 11680 kcs. with recordings and annoucements in Spanish. Call sounded the CXA-9 but he's not positive about the "9". However it was definitely a OX or Uruguayan station. (Aside to Radexer Oliver: Your other station was ZIK-2 at Belize, British Honduras—RL)

C. C. Lance of 1331 South 34th street, Birmingham, Alabama writes as follows, "Tonight for an hour and a half from 7-8:30 p.m. I heard a station on approximately 7960 kcs. broadcasting oriental music. Later there was piano music and choral singing with announcements in Chinese. At the end of the program announcements came in Spanish which identified the station of OAX1A, Chiclayo, Peru. They then signed with 'Good Night Waltz'. OAX1A is supposed to be on 6335 kcs., how come." . . . Edward H. Draper, RFD #2, c/o Mrs. Ezra John, West Burke, Vt., would appreciote it very much if any member can identify a station that he heard on 17700 kcs. signing off at 5 p.m. with two marches. Announcements at sign-off indicated that the station would return at 12:30 p.m.

Carl Horton of Athol, Mass., sends along the news that ZEA is heard giving news on Sundays on an announced frequency of 5990 kcs. . . . Alton Caldwell, 69 Britt St., Brockton, Mass has been hearing a Spanish speaking station daily near noon on about 31000 kcs. The call has never been identified. Has anyone else heard this station?

QUOTE AND UNIQUE

Charles A. Mills, Strathroy, Ontario: "I have been a reader of your magazine for about six months and would like to be enrolled as a member of the RADE Club. I have been

DXing for about a year on the broadcast band and the farthest stations verified are KNX, KPO, and FKI. I am just a beginner on the short-, waves."

G. R. Jewell, Jr., 222 So. Court Street, Montgomery, Alabama: I would like to correspond with DXers living in any foreign country. I will exchange stamps and picture post cards in the first letter."

ULTRA HIGH

A practical use of the ultra high frequencies not widely known is that of the Detroit Edison Company and its station WQJL on 39660 kcs. with 150 watts. The station is located in the company warehouse. The antenna, atop a 200 ft. tower is equipped with aircraft warning lights. No longer experimental, the station has a definite purpose. If flashes emergency. Results thus far have been highly successful and progress is still being made with plans for a two-way communications ready to materialize. (George H. Boorstein, W8TLI, Detroit, Mich.)

WALJ on 31460 kcs. Anntena is being erected on the Barlum Tower in Detroit. The transmitter, operated by the Department of Street Railways is used to direct traffic control cars, to re-route bus, street in co-operation with the police department. (Boorstein, Mich.)

WCK-WPWX on 33780 kcs., the Detroit Police Department has ten mobile transmitters for each call. Boorstein, Mich.)

WMO on 33220 kcs. the Highland Park, Mich, police has seven mobile transmitters. (Boorstein, Mich.)

WQYQ is a new Mass. state Dept. of Conservation station located in Middleboro, Mass. this month. (Caldwell—R1319, Mass.)

W1XEH is a new frequency station in Hartford, Conn. They operate on 42460 kcs. with 150 watts output. (Benson—R1374, Mass.)

W1XKA on 42220 kcs. has not been on the air lately. (Simpson—R1253, Mass.)

W1XOV of the Yankee network testing with airplane besides daily weather contacts with W1XOY at Mt. Washington on 27500 kcs. (Caldwell—R1319, Mass.)

W1XSO under construction in Hartford, Conn. will be another Frequency modulated station and will operate on 43200 kcs. with 1000 watts. W1XSO will be on the air by Jan. 1, 1940. (Benson—R1374, Mass.)

W1XW on 31000 kcs. approx.) heard testing. This station is the weather observatory of Harvard College on Mt. Blue. (Caldwell—R1319, Mass.)

Atlantic Communications Corp. of Philadelphia opeartes the following "W3XAY, stations on 38600 kcs: W3XAZ - S. S. Van Dyke W3XDE—S. S. W3XDF—S. S. Dyke Van #1, Van Dyke #2, W3XDG—S. S. Van Dyke #3. W3XHD - S. S. Atlantic, W3XDKportable mobile, W3XDL-also portable mobile. The Pennsylvania Dept. of Forests and Waters, Bureau of Forest Protection has the following stations: W3XDW, W3XDZ, all W3XDX, W3XDY, portable and W3XEA at Lykens, Pa., W3XEB at Harrisburg, Pa., and at Stony Mount, Pa. W3XEC (Schwartz-R1109, N. Y.)

W8XWJ on 42060 kcs. is now making field intensity and noise level tests. (Boorstein, Mich.)

W9XA on 26450 kcs. is heard with R8 signals on Sunday afternoon. (Podall—R946, Vt.)

W9XOK on 25,300 kcs. at St. Louis, Mo. has been heard well since October 23 relaying KXOK. Signals very steady and R 6-8. (Caldwell—R1319, Mass.)

W9XPD on 25950 kcs. at St. Louis, Mo. has a good signal daily. It relays KSD, owned by St. Louis oPst Dispatch. (Caldwell—R1319, Mass.)

NOT SO SHORT WAVES

WCOF "Betty Gardner" on 2739 kcs., KFQA and WPLQ on same frequency., NMN at Norfolk, Va. on 2670 kcs. R9, NMD on 2690 kcs. R8;

NMC on 2560 kcs. R 4-5; WWN on 2680 kcs. R9; WWZ on 2662 kcs. R7; WWOC on 2585 kcs. WOU on 2515 kcs. R6; WAE on 2555 kcs. R9, NMY on 2670 kcs. R9; WAY on 2530 kcs. R9; WWOJ on 2582 kcs. R9; WWOJ on 2670 kcs. R9; and WWGX at Milwaukee on 2672 kcs. R7. The above stations were all heard in less than an hour. The time was near 11 p.m. (Welsh—R790, Ill.)

KBCT is now on 3195 kcs. . . KBDP on 3213, KBAK and KBGG on 3265 kcs. KBCH, KBDB, KBDD, and KBDE on 3345 kcs. KBDY on 3398 kcs. KBAN, KBCD, KBCE, and KBCF, and KBDC on 3438 kcs. Stations not listed and probably deleted are KBDJ, KBFK, WWKK. Lighthouse stations: KBGF "Tender Columbine"; KCBG at Point Arguel-California; KCBW and KCK "Columbia R. L. S. Oregon"; KCEM at Blunt Reef L. S., Calif.; KCO at Relief L. S. #76, Calif.; WRS at Chesapeake . S., Va.; WSD at Frying Pan Sheal, N. C.; WWAJ at Monitou Island, Mich., WWBO at Sandy Point L. S., Md.; WWR at Detroit L. S. Depot; WWXT at Brandywine Shoal, Del. (Roman—Ill.)

Weather reports are heard on WAY—2182 kcs. at Lake Bluff, Ill., W M I on 2550 kcs., W W M C, WWMO, WWME on 2770 kcs., CZ71 and CZ7J on 2318 kcs., WAS on 2550 kcs., WOX on 2530 kcs., and KJQF on 2740 kcs. (Podall—R946, Vt.)

WHSH, KJDY, WHYZ all locations unknown heard near 2700 kcs. WWHF, WWHJ, WWDW, WWHT also unknown on 3380 kcs. (Caldwell—1319, Mass.)

SHORTWAVES IN REVIEW

Argentina

LRA-5 on 17830 kcs., of Buenos Aires broadcasts on Fridays between 2 and 2:30 p.m. (Williams—N. J.)

LRU on 15290 kcs. is being heard now for the first time in several months with good signals until 10 a.m. (Jewell—R834, Ala.)



A green and black card from HC2HP. (Courtesy of Carl Horton).

LRXon 9660 kcs. at Buenos Aires is showing up with R8 signals from 8-10:30 p.m. They often feature an American orchestra playing in one of the leading hotels. They verify by white card with light blue-grey call leters. (Jewell—R834, Ala.)

Australia

VLR on 9580 kcs. at Melbourne is being heard lately with very good signals up to R8 from 5-6 a.m. (Jewell —834, Ala., and Scholz—R9, Mo. 1)

Bahama Islands

ZNS verified recently. They stated that they have a shortwave station on 6090 kcs. using 200 watt power. (Chamberlain, R32, N. Y.)

Belgium

ORK on 10330 kcs. located at Ruysselede heard daily with good signals from 1:30-3 p.m. with program directed to Belgian Congo. (Skyten—R786, Mass.)

PSH on 10220 kcs. at Rio de Jan-Brazil

eiro is putting an R 8-9 signal. English program is still being broadcast every Monday from 8-8:30 p.m. (Jewell—R834, Ala.)

British Guiana

VP3BG on 6130 kcs. at Georgetown is heard from 4-8 p.m., but VP3BG has been badly QRM'd lately. COCD is probably the cause. The QRA is British Guiana United Broadcasting Co., Ltd., P. O. Box 11, Georgetown . (Jewell—R834, Ala.)

British Honduras

ZIK-2 of Belize is now broadcasting on Tuesdays, Thursdays and Saturdays from 8:30-9 p.m. (Williams-N. J.)

Canada

CFRX on 6070 at Toronto heard relaying broadcast station CFRB with a program of dance music. Address: Rogers Radio Broadcasting Co., 622 Fleet St., Toronto. (Jewell—R843, Ala.)

CJCX on 6010 kcs. broadcasts daily from 7 a.m. to 12:30 p.m. and Sundays from 10 a.m. to 11:30 a.m. (Grant—N. S.)

Chile

CB1174 on 11745 kcs. heard relaying CB93 during the evening. Slogan is "Radio Hucke", and address P. O. Box 6009, Santiago. (Williams—N. J.)

China

XGOX on 15200 kcs. is now at Szechwan and heard daily coming on the air at 9 p.m. with the Chinese National Anthem with program for North America and Japan. News in English from 9:50-10 p.m. XGOX now signs off at 10:45 p.m. with the Sun Sen Memorial Song. (Skyten—R786, Mass.)

XGOY on 11900 kcs. also at Szechwan broadcasts news in English at 6:15 a.m., 9 a.m., and 5 p.m. They are best heard here at 6:15 a.m. (Skyten — R786, Mass., and Kempton, Mass.)

XGOK on 11650 kcs. at Canton heard from 6:40 to around 8:50 a.m. Program in English from 7:50-8:30 a.m. with news at 8:10 a.m. A lady announces. Signal at times is very strong and clear. Relays XGOK on 780 kcs. (Skyten—R786, Mass.)

XMHA on 11910 kcs. heard October 7 from 5-5:30 a.m. with Chinese music, also with weak signal. (Jewell—R834. Ala.)

XOJD on 6880 kcs. heard from 5:45-8:45 a.m. with R3 signal. (Horton-R1305, Mass.)

XBW13 on 9526 kcs. at Hong Kong is very badly QRM'd by KBEI at San Francisco. (Welsh—R790, Ill.)

Colombia

HKF on 9710 kcs. at Bogota was

heard with R8 signal on Sept. 30 from 10-11:30 p.m. Program consisted of South American popular recordings.

HJ3CAX on 6012 kc. at Bogota signs on nightly at 5:30 p.m. and continues until 11:30. Sunday from 6-11 p.m. Song "Indian Love Call" is used at sign off. (Jewell—R834, Ala.)

Costa Rica

TIEM on 10050 kcs. is being heard nightly with both popular and Spanish music from 7-11 p.m. Address: Aptdo. 1040, San oJse. Clock chimes the hour of nine at 10 p.m. (Jewell—R834, Ala.)

TI2RH on 6152 kcs. at San Jose heard relaying TIRH during the early

evening. (Williams-N. J.)

TI4NRH on 9682 kcs. at Heredia is heard Tuesday, Thursday, and Saturday from 9-10 p.m. with program in English for the United States. Ten cents in United States stamps are requested instead of IRC's when writing for verification. (Jewell—R834, Ala.)

Cuba

COKG has shifted from 8965 to 8950 kcs., COCX from 11740 to 9155 kcs., COCA from 9100 to 9090 kcs., and COBC from 9990 to 9360 kcs. (Williams—N. J.)

Denmark

OZF on 9520 kcs. at Copenhagen is being heard nightly with English announcements at 10:55 p.m. and signing off with R9 signal. Clock striking 5 a.m. and National Anthem are heard at sign off. (Jewell—R834, Ala.)

OZH on 15320 kcs. is now broadcasting between 1 and 1:30 p.m. daily with the additional 8 a.m. to 1:30 p.m. on Sundays. (Williams—N. J.)

Dominican Republic

HI-2M on 6993 kcs. at San Pedro de Macoris broadcasts irregularly. (Williams—N. J.)

El Salvador

YSM on 11710 kcs, at San Salvador is heard in the afternoons from 1-2:30 p.m. (Jewell—R834, Ala.)

YSP on 10400 kcs. at aSn Salvador is heard with R8-9 signal from 8-11

p.m. playing popular dance music and featuring marimba music. (Jewell—R834, Ala.)

Finland

OIE on 15190 kcs. and OFD on 9500 kcs. at Lahti broadcast news in French at 4:20 p.m., news in English at 4:30 p.m., followed by news in German. (Skyten, Mass.)

France

"Paris Mondial" on 9680 kcs. is QRM'd badly by WCBX on 9670 kcs., and TGWA on 9685 kcs. News in English is given daily at midnight. Same program broadcast over 11885 kcs., and 11718 kcs. All signals R8 plus. (Scholz—R9, Mo. 1)

"Paris Mondial" on 11843 kcs. transmits to North America from 12:30-1:30 p.m. replacing TPA-2. Signal is very strong and clear. A few minutes later it returns to the air to join other transmitters of "Paris Mondial" on regular afternoon program. Reports requested. (Skyten—R786, Mass.; and Hirsch—N. Y.)

"Paris Mondial" on 11885 kcs. heard with R9 signal. New mailing address is Paris Mondial, 102 Rue Grenelle, Paris 7, France. (Caldwell—R1319, Mass. and Graham—R76, Texas)

"Paris Mondial" on 15243 kcs. is being heard daily with an English program for North America from 12:30-1:30 p.m. with music and talks. (Jewell—R834, Ala.)

French Indio China

"Radio Saigon" on 11780 kcs. transmits from 10:30 a.m. to around 11:45 a.m. with programs in English directed to North America. News in English at 10:30 a.m. At 11 a.m. the BBC news from London is relayed at the conclusion of which they sign off with "La Marseillaise", the French National Anthem. Lady announcer. Requests reports be sent to "Radio Saigon" P. O. Box 412, Saigon, French Indo China. (Skyten—R786, Mass.)

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Germany

Official schedule of the German shortwave stations is as follows: 6:30 a.m. to 9:00 a.m. on DJB (also 11:10

a.m. 12:25 p.m. on Sun.) 4:'0 p.m. to 1 a.m. on DJD and DXB. Germany has cut-down on its monthly printed program booklet and now issues just a single sheet. Listeners are requseted to tune in DJD or DXB at 4:55 daily for latest program and schedule changes. Stations other than those listed above are merely experimental. (RX)

DJBB on 15200 kcs, heard on the extended morning program from 6:30-9 a.m. with news in English at 6:45 and 8:30 a.m. (Skyten—R786, Mass.)

DJX on 9675 kcs. is used in place of DXB occasionally on week-ends carrying English programs on same transmision as DXB. (Jewell—R834, Mass.)

DXB on 9610 kcs. is heard with a very strong signal which drowns out everything within 10 kcs. of its channel. News in English is heard at midnight. (Simpson—R1253, Mas.; Jewell—R834, Ala.; Gilgen—R820, Iowa,; Caldwell—R1319, Mass.)

DZC on 10290 kcs. heard daily from 4:50-10:50 p.m. with program in Portuguese. (Skyten—R786, Mass.)

DZG on 15360 kcs. heard with DXB coming on the air at 11:30 a.m. with program in Arabic. (Skyten—R786, Mass.)

DJL on 15110 kcs. along with DJD on 11770 kcs. heard at 4:15 p.m. with news in English. (Skyten-R786, Mass.)

New and unidentified station in Germany heard on 11990 kcs. heard coming on the air at 1 a.m. and at various times during the day. (Jewell—R834, Ala., and Skyten—R786, Mass.) Unidentified station reported by Simpson—R1253, Mass. on 10280 kcs. should be DZC, actually 10290 kcs. (RL—Mass.)

Great Britain

Changes in the BBC official schedule since last month's listings: Transmision I closes at 5 a.m. instead of 5:15 now., Transmission II and III closes at 11:45 a.m. instead of noon, and Transmission IV begins at 11:52 a.m. instead of 12:22 p.m. Station

changes: GSC added to Transmission I; GSE and GSD added to Transmission II and III while GST is dropped from that some transmission; GSV added to Transmission IV while GSG and GSO drop off that schedule; GSE replaces GSF on transmission V. (RX)

GRX on 9690 kcs. is being heard with strong signals. "X" for Extra.

(Jewell-R834, Ala.)

GSA on 6050 kc. is being used to cover Europe during the fifth transmision along with GRX 9690 kcs. (Scholz, R9, Mo. 1)

Greece

Following is a list of stations soon to be heard from Sparta, Greece. Power for all transmitters is 10 kw. and both phone and c.w. will be used. SVD—6885 kcs., SVL 7228 kcs., SVG 7805 kcs., SVH 9030 kcs., SVI 9695 kcs., SVJ 9825 kcs., SVM 9935 kcs., SVN 10725 kcs., SVP 12195 kcs., SVQ 13640 kcs., SVT 15015 kcs. Some of these stations should be in operation by the time this is read so let's see who will be the first to hear Greece. (Jewell—R834, Ala., and Williams—N. J.)

Guatemala

TGWA with 10 kw. sends a neat verification card with a picture of a Quetzal bird in natural color. The card is white with blue print. No return postage necessary for verification. (Bates—R1231, Pa.)

TG5JG on 11750 kcs. was heard on October 8 with a Spatari program. Location is Guatemala City. (Grossman—R1330, N. Y.)

Honduras

HRN on 5875 kcs. at Tegucigalpa is always a safe bet for the DXer as they are on the air with good signals from 8 p.m. to midnight. (Sign-off theme is "Goodnight". (Jewell—R834, Ala.)

Hungary

HAT-4 on 9125 kcs. is on the air daily from 7-8 p.m. Saturday program is from 5:57 p.m. when a music box identification signal is heard. Program lasts until 7 a.m. with news in

English at 6:30 p.m. Address is Radiolabor, Kiserleti Allomasa, Gyali-ut 22, Budapest IX. (Jewell—R834, Ala., Takacs — Ohio, Sandoz — R1403, N. S. 5)

HAD on 21680 kcs. broadcasts between 11 a.m. and 2 p.m. and on 11850 kcs. from 2-6 p.m. and lastly on 9625 kcs. from 6-9 p.m. (Williams—N. J.)

VUB-2 on 9550 kcs. at Bombay heard on several mornings broadcasting cricket matches until 7 a.m. when they sign off .VUB returned a few minutes later on 4880 kcs. All India Radio transmiters on the 61 meter band broadcast news in English at 7:30 a.m. They are VUD-2 on 4960 kcs., VUM-2 on 4920 kcs., VUC-2 on 4840 kcs., along with VUB-2. VUM-2 is the best signal. (Skyten—R786, Mass.)

VUD-2 on 9590 kcs. at Delhi heard with very good signal from 7 a.m. until about 8:20 a.m. when they begin to fade. News in English is heard at 7:30 (Long—Ga., Jewell—R834, Ala., and Welsh—R790, Ill.)

VUD-4 on 15290 kcs. heard from 8:30-10:30 p.m. with weak signals. Clock strikes the hour on the half hour. (Jewell—R834, Ala., Hirsch—R1387, N. Y.). VUD-4 heard here at seven in the morning like a house-afire. Even rides over the neighbor's electric shaver! (Gilgen — R820, Iowa.)

Ireland

"Irish S. W. Station" official schedule according to verifications received: 7:30-9 a.m., 11:30 a.m. to 3:30 p.m. and 4:30 p.m. to 5 p.m. The station uses one of these two frequencies on alternate days: 17840 and 9595 kcs. (Horton—R1305, Mass., Grant—N.S.) "Irish shortwave station" reported on 17840 kcs. at 8:0 a.m. and on 9595 kcs. from 6:30-7 a.m. with good signals. Which must signify that they do not always adhere to the official schedule. (Skyten—R786, Mass., and Jewell—R834, Ala.)

Italy
I2RO-3 on 9536 kcs. is heard with

I2RO-4, and 6 and IRF nightly with North American program in English from 7:30-8:30 p.m., and continuing till 9 p.m. in Italian. Identifying signals at sign on and off are the songs of canary birds. (Hirsch—N. Y., and Jewell—R834, Ala.)

I2RO-6 on 15300 kcs. heard with an English program in the afternoons at 1:30 p.m. Along with I2RO-4 they are on till 6 p.m. (Jewell—R834, Ala., and Long-Ga.)

I2RO-15 on 11760 kcs. at Rome heard mornings coming in with a strong signal (Skyten—R786, Mass.)

JZI on 9535 kcs, at Tokyo is being heard from 12:20 a.m. with English program consisting of news, music talks. This program is heard on Thursdays and Saturdays.

JZJ on 11800 kcs. at Tokyo is being heard at 8:30 a.m. with English news, music and talks. (Jewell—R834, Ala.)

JZK on 15160 kcs. is heard from 8-9 p.m. with news in English at the beginning of the program. Signal is good at beginning but fades rapidly toward the end of the hour. (Takacs—R1383, Ohio, Simpson—R1253, Mass., and Sandoz—R1403, N. S. 5)

Java

PLP on 11000 kcs. at Bandoeng is again heard with R7-8 signals from 7-8 a.m. In parallel with PLP are PMN on 10260 kcs., YDB on 9550 kcs., and YDC on 15150 kcs. Popular and classical music is heard along with talks. (Jewell—R834, Ala.)

Manchukuo

JDY on 9925 kcs. at Dairen is putting in a good signal at last from 7-8 a.m. News in English is sometimes given shortly after 8 a.m. (Jewell—R834, Ala.)

MTCY on 11775 kcs. heard with fair signal from 1:30-2:30 a.m. Address is Shortwave System, Central Broadcasting Station, Hsingking, Manchukuo. (Oliver-Texas, Scholz—R9, Mo. 1, and Jewell—R834, Ala.) MTCY also heard with good signal from 9:50-10:55 a.m. with English announcements. News in English at 10:35 a.m. In addition, MTCY is also

heard from 4-4:50 p.m. with an English program. (Skyten—R876, Mass.)

Mexico

XEQQ on approximately on 9700 kcs. heard at 12:40 a.m. relaying XEQ. (Chamberlain—R52, N. Y.)

XEWW on 9500 kcs. has an R8 signal here on Sunday evenings at 8:30 p.m. when they have news broadcasts until 8:39 p.m. Four decending chimes for identification. (Hirsch-N. Y.)

Netherlands

PCJ on 9590 kcs. heard with R9 signal. Eddie Etartz, genial announcer spoke out to those who were seeking war from JCJ. Listeners might just as well tune to some other station for JCJ has not, and will not broadcast any war news. (Jewell—R834, Ala.)

Newfoundland

VONK on 9510 kcs. broadcasts from 8:30 a.m. to 1:15 p.m. and on 5890 kcs from 4:30-8:30 p.m. Interval signal is three chimes, similar to NBC, They relay VONF. Kempton—Mass., Caldwell, Mass., Grant, N.S., Skyten — R786, Mass., Simpson—R1253, Mass.)

New Zealand

ZMEF on 9200 kcs. heard about once or white weekly with no definite schedule. Listen between 1:30 and 2:30 a.m. Location is an island near New Zealand. (Horton—, Mass.)

Nicaragua

YNDG on approximately 7550 kcs. heard with a weak signal. Reports are welcomed. (Chamberlain—R32, N. Y.)

YN3DG on 13900 kcs. verifies 100% for 10c in coin. They are on daily from 10:30 p.m. and often broadcast special DX programs. (Hiatt-Wash., and Podall—R946, Vt.)

Peru

OAX4T on 9562 kcs. at Lima is heard with R7 signal in the mornings from 7-8 a.m. Address is "Radio National" Preuvian Gov't. Ave. Petit Thouars 447, Lima. (Jewell—R834, Ala.)

Philippine Islands

KZIB on 9490 kc. at Manilla is heard from 5:30-8 a.m. with news and dance music relayed from one of Manila's leading hotels. Address: I. Beck, Inc., Box 440, Manila. (Jewell—R834, Ala.)

KZRF on 6140 kcs. are the call letters of the Manila station on that frequency. Announces a KZRF "Radio Filipinas". Announcements are made in English and Spanish. KZRF is very good until around 7 a.m. when CHNX comes on the air.

KZRH on 9630 kcs. "The Voice of the Philippines at Manila" is heard daily at 6 a.m. to 11 a.m. with very good signal. Uses three musical chimes for interval signal. Sign off at 11 a.m. with Star Spangled Banner. (Skyten—R786, Mass.)

Ships

Following are the call letters of stations aboard the Trans-Oceanic liners: U. S. Lines: KDWS-President. Roosevelt, WIEA-Manhattan. French Line: FNSM-Isle de France, KNOW-La France, and FNUN -Champlain. .Cunard White Star Lines: GBTT-Queen Mary, GBXF -Britainnic, GLRZ - Aquitania. North German Llyod: DOAH -Breman, DOAI — Europe, DJNB — Deutschland, DJNY - New York. Italian Line: ICEJ—Rex, ISEV— Roma, IBLI-Conte Savoia, ICOF-Vulcania. American Republic Line: WMCM-Uruguay, WMDS-Argentine, WSBW-Brazil. (Szabo-R1302, N. J.)

Spain

EAQ on 9860 no longer ues the call but simply identifies itself as "Radio Nacional", Madrid. Daily except Sunday from 7:30-8:50 p.m. is the schedule. (Jewell—R834, Ala., and Caldwell—R1319, Mass.)

Strait Settlements

ZHP on 9690 kcs. at Singapore is heard from 5:30 until 7 a.m. at which time they give news in English and stock quotations. (Skyten — R786, Mass., and Jewell—834, Ala.)

Sweden

Schedule of Motala stations: SBP on 11705 kcs. and SBT on 15155 kcs. are on daily from 1-4:15 p.m., Sundays from 3 a.m. to 4:15 p.m. and on Wednesdays and Saturdays from 8-9 p.m. with special program to North America.

SBU and SBO on 9535 kcs. and 6065 kcs. are on daily from 4:15-5 p.m. and some time on Sunday. (Skyten—R786, Mass., Welsh—R790, Ill., and Jewell—R834, Ala.)

Switzerland

HBBO on 11402 kcs. at Geneva is heard on Mondays from 8:45 p.m. to 10:30 p.m. and on Tuesday and Saturday from 1-2 p.m. Skyten—R786, Mass., and Jewell—R834, Ala.)

Turkey

TAQ is discontinued. TAP on 9465 kcs., and TAR (long wave 182 kcs.) broadcast daily from 5:30-7 a.m. to 4:30 p.m. Saturdays from 6:30 a.m. to 8:30 a.m., and 11 a.m. to 4:30 p.m. Sundays the schedule is 5:30-7:30 a.m. and 11 a.m. to 4:30 p.m. (Horton—Mass., Skyten—Mass., Chamberlain—R32, N. Y., and Sandoz—R1403, N. S. 5)

Union of South Africa

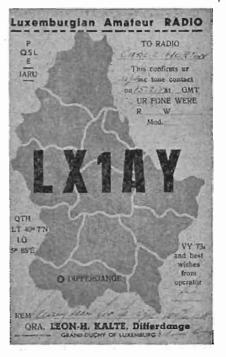
ZRL ocmes in every evening with a good signal at 11:45 p.m. Physical exercises are conducted in English with piano accompaniment. (Long—Ga.)

U. S. A.

New FCC regulations gover the issuing the several licenses to one station for different facilities and frequencies. Under the recent change in regulation one license will cover all frequencies and facilities at one given location of transmission. This will save much resubmitting of applications each time a frequency change is necessitated by changing climatic conditions. *(RX)

KGEI on 9530 kcs. broadcasts from 7 a.m. to noon and from midnight to 3 a.m. On 15330 kcs. KGEI broadcasts from 6:30 p.m. to 11:15 p.m. (Varga—R960, Ill.)

WGEA on 21500 kcs. from 8 a.m.



Carl Horton sends this card from the Luxembourg amateur station LX1AY.

to 11 a.m. On 15330 kcs. from 11:15 a.m. to 6 p.m. and on 9500 kcs. from 6:15 p.m. (Varga—R960, Ill.)

WGEO on 9530 kcs. is heard from 3-11:45 p.m. daily. Starting in December WGEO will broadcast a mailbag service to Admiral Byrd and his men every weeks. First program on December 8, 1939. The time will be from 11-11:45 p.m. when it will be 4 p.m. in Little America. (Varga—R960, Ill.)

WPIT on 21540 kcs. from 7-9 a.m., on 15210 kcs. from 9 a.m. to 3 p.m., on 11870 kcs. from 3-11 p.m. and on 6140 kcs. from 11 p.m. to 1 a.m., (Takacs—Ohio)

WRAC sends a good veri card in red on white with call letters and picture of RCA Manufacturing Co., and RCA building. (Bates—R1231, Pa.)

WWB on 5000 kcs. heard announc-

ing as a standard musical pitch station. (Jewell-R834, Ala.)

Uruguay

ing on 6075 kcs. between 10:30 a.m. CXA-3 of Montevideo is broadcastand 12:30 p.m. daily Address is CXA-3, Servicio Official de Difusion Radio Electrica, Mercedes 823, Montevideo. (Williams—N. J.)

Verification from Uruguay states the following stations belong to SO-DRE (Servicio Official de Difusion Radio Electrica): CXA-4 on 6125 kcs., CXA-6 on 9620 kcs., CXA-10 on 11895 kcs., and CXA-18 on 15300 kcs. RC was returned so it is not evidently necessary to send one. (Callin—Ohio)

U. S. S. R.

RAN on 9600 kcs. at Moscow is on the air with English programs daily from 6-8 p.m. but is being badly QRM'd. (Jewell—R834, Ala.)

RKI on 15080 kcs. is heard from 8 p.m. with news in English. Sundays they are heard at 1:30 p.m. with bad commercial CW. (Welsh—R790, Ill., and Jewell—R834, Ala.)

Mystery stations in the U.S.S.R. on 11640 kcs. or 25.77 meters (as announced) at Radio Center with program in English from 6-6:30 a.m. daily. Another is heard on 6030 kcs. in the evening with English program. (Skyten—R786, Mass., and Podall—R946, Vt.)

Yugoslavia

Complete list of calls and frequencies: YUA 6100 kcs., YUB 6100 kcs., YUC 9505 kcs., YUD 9505 kcs., YUE 11735 kcs., YUF 15240 kcs., YUG 15240 kcs.

Now in use are YUA and YUC from 4:5:30 p.m. and YUG from 7:30-9 p.m. and YUE commencing at 9 p.m. (Podall—R946, Vt., Jewell—R834, Ala.; and Horton—Mass.)

Additional

HCJD shifted from 4845 to 9400 kcs., OAX4A shifted from 5335 to 6180 kcs., TKWB from 6486 to 6415 kcs. and XEQQ from 6980 to 6029 kcs. (Williams—N. J.)

Notice

All time used in High Frequency

Globe Trotting is Eastern Standard unless otherwise specified. This is in answer to several queries on the subject.

RADEX REPORTERS

R7, Pa. 1: Art Hankin,s, Latrobe, Pa. R9, Mo. 1: Walter V. Scholz, Webster Groves, Mo. R32: oJhn D. Chamberlain, Rochester, N.Y. R76: Sam Graham, Panhandle, Texas R220: Albert Pickering, West Medway, Mass. Chester Roman, Chicago, Ill. M. F. Williams, Newark, N. J. Vt. 5: Edward H. Draper, R451: R552: R638: 638: Vt. 5: Edward II.

Burke, Vt.
786: Robert Skyten, S. Brookfield, Mass.
790: Jack Welsh, Kingston, Ill.
820: Harold Gilgen, Marshalltown, Iowa
834: G. R. Jewell, Jr., Montgomery, Ala.
946: John Varga, Chicago, Ill.
11109: Joseph Schwartz, Bronx, N. Y.
1231: Phipippe aBtes, Philadelphia, Pa.
11273: Ralph Simpson, Wollaston, Mass.
11273: Ga. 5: John D. Long, Dalton, Ga.
11302: William Szabo, New Brunswick, R786: R790: R820: R834: R946: R1109: R/1231: R1253: R1273: R1302: N. J. R1305: Carl Horton, Athol, Mass. Alton L. Caldwell, Brockton, Mass. Lee Grossman, Rochester N. Y. Milton Benson, South Hadley Falls, R1319: R1330: R1374: Mass. R1383: Steve Takacs, Akron, Ohio Eddie Hirsch, Jamaica, N. Y. N. S. 5: Oscar Sandoz, Halifax, R1387: R1403: N. S. George H. Boorshtein, W8TLI, Detroit, Mich Owen Callin, Columbus, Ohio Jose Carrizo, Jr., DX Editor Radiomania, Haavna, Cuba Haavna, Cuba
Warren Dame, Saxonville, Mass.
Carl Forestieri, Bronx, N. Y.
Eddie Grant, North Sydney, N. S.
Merton Hiatt, Dryden, Wash.
George H. Jacobs, Cincinnati, Ohio
Al Kempton, Harding, Mass.
C. C. Lance, Birmingham, Ala.
Charles A. Mills, Strathroy, Ontario
Alvin W. Oliver, Houston, Texas
Merlin N. Sten, Decorah, Iowa
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ON THE WEST COAST

By ANTHONY C. TARR

All time shown in this column is Pacific Standard

Reporters in the Mountain Standard and Pacific Standard Time Zones may send their reports direct to

Anthony C. Tarr 909 W. Lee Street, Seattle, Washington

A number of readers have written us indicating their unfamiliarity with the proper procedure to follow when attempting to verify the TP stations and, while we have replied personally to such inquiries, there are no doubt others who are not approaching the matter correctly, or hestitate to report at all. To them we direct these few paragraphs in the hopes that it will aid them to enjoy this DX hobby to the utmost.

Roughly, the trans-Pacific broadcasters may be divided into two classes for our purpose: Oriental and Occidental. The latter stations, including Australia, New Zealand and Fiji Islands, are usually very good about verifying reports from listeners and their letters indicate that our reports are warmly received. The writer has had trouble with only one out of some fifty odd reports, that being 2NC on 1230 kcs., who have failed to answer four reports in three years. (We'd appreciate learning if any American listener has verified 2NC).

Little need be said about the form of report to be used when writing to a VK or ZL station, other than that it should conform to the standards of any good report sent to the ordinary American station, with perhaps a little more emphasis placed on the degree and time of fading. Naturally, the program data will include musical selections heard or, what is best, the name of a product advertised at a specific time. (Use Greenwich Mean Time-8 hours ahead of PST- to avoid any possible misunderstanding). It might be well to briefly describe your receiver, as some of our trade names will not be familiar to them. The British refer to a tube as a



Printed in blue, on white cherry blossoms on a pink back ground, this card from J5CW is very pretty. The operator, Takeo Onishi, says he is the only phone station in the Japanese J5-District. (Courtesy of Jack Wells).

"valve" and the ground connection is termed the "earth". Include with your report a notation of weather conditions, temperature and, if possible, barometer reading. (Numerous tests the writer has made with Australian stations have served to indicate that barometric pressures affect reception to a marked degree, and we may discuss this subject in another issue).

Finally, include with your report either an IRC (International Reply Coupon, available for 9c at your postoffice), or an unused Australian three penny or New Zealand one penny stamp. About two months will elapse until your verification arrives, if they respond promptly. After about four months, if no reply is received, a polite letter of reminder may be sent, enclosing a copy of your original report. Never, under any circumstances, write an insulting or sarcastic letter to any station for failure to verfy! Remember that THEY are doing YOU a favor!

When reporting to a Japanese station (and here is the real problem for many DXers!) best results may be obtained by using a little patience. At times you may listen for hours

- m

and hear nothing but a discourse in Japanese, which admittedly affords little data from which to compile a report, unless your knowledge of Japanese is better than the average American's! However, at other times there will be musical programs, descriptions of sporting events, or dramas with sound effects. Any of these lend themselves to sufficient description in your report to warrant a verification if described in detail. That is the best anyone can do and, from our own experience, will produce quite satisfactory results. To sum it up, then, we will advise "describe what you hear."

Some have asked us, "How can we tell the identity of the station?" The code of a DXer is that he must be "reasonably sure" that he is correct before reporting. Since we cannot understand their language, then, we must perforce consult an up-to-date station list and base our identification upon that. Here is perhaps the only legitimate excuse for reporting to station without hearing the call letters announced.

In your report, bear in mind that the Nipponese engineer who will read it not only has difficulty understanding our language but in many cases does not know the meaning of "QSA4, R5" and such technical ab-breviations. Therefore, it is much better to say, "Your signal was very good at this time, became weaker at such-and-such a time, and faded out nearly completely at so-and-so. The time of best reception was . . . " etc. Your report should be couched in simple, short English words, avoiding involved sentence construction, and type your letter if possible, or write or print neatly. Enclose the usual IRC with your report and be prepared to wait up to two years for a reply! Some stations will be prompt, others for some unknown reason are extremely slow, but your patience will nearly always be rewarded, either be a very pretty verification card, several of which have been illustrated in

RADEX from time to time, or by a courteous letter from the engineer, frequently accompanied by postal views if they have no regular veri card.

BROADCAST BAND

KVAN, Vancouver, Wash., 880 kcs, began regular schedules Oct. 22 from 7 am to local sunset daily and from 9 am to LS Sundays. Their studios are in the Evergreen Hotel, 5th and Main; transmitter is at 2915 Fruit Valley Road. Mailing address: P. O. Box 610, Vancouver, Wash. (E. M. Ringle—Vancouver). Verifies by letter. (West, R-673, Crow, R-1213, Morrison, R-1203).

TGW, 1520 kcs, reported with good signals about 6 pm daily. West, Macedo).

KFYR, Bismarck, 550 kcs, presented a special DX program December 14, (no time stated) and will verify reports outside a 500-mile radius. (West).

H. H. Crow, Jr., 1306 38th St., Sacramento, is anxious to get in touch with other DXers in his city. He reports KVOD, Denver, now on 640 kcs, and KTKC, Visalia, now on 890 kcs, each with a kilowatt. The frequency checking schedules of the following stations will be appreciated by Mr. Crow: KRBM, KTSW, KOME, KTBC, WSKB, WCOV. Our reporter also supplies the following list of veri signers:

KCRJ, D. E. Towne, Ch. Eng. KVAN, Leon W. Crager, Prog. Mgr.

KIT, Harry B. Murphy, Ch. Eng. KUJ, Ed. T. Carter, Anner. KWLK, Dorothy Hamilton.

Frank Macedo, Victoria, B. C., has found conditions fairly good for TP's and supplies the following list of some of those heard by him lately: 2HD, 3BA, 2FC, 4QN, 3GL, and a new one on 760 kcs. Also LR-6 and LS-2 in the Argentine, both R7. And, by way of variety, 540 kcs. produced RW-54, Khabarovsk, U. S. S. R. There's a good one to try for, and

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not so hard, but just try and get a veril

During the November frequency checks, Frank picked up this very nice list: WBNY, WEOA, KNEL, WPRA, WPAX, WPAR, WFTC, WFDF, KWOS, WAML, WFOY, WGRC, WHDF, KHBG, KQV, WBLK, WSAY, WCPO. KGH. WRAW. WDAS, WBTM, WRAK, KBEO, WJIM. WHLB. KIDW. KVSF. KEUB. WGNY. KMLB. KOVC, WING, KIUN, KVWC, WSIX.

The new Australian on 760 kcs. heard fairly well on the coast when KXA is off, is listed by the IDA as 4QS, Dalby, Australia, with 10 kw.

KFAR, Fairbanks, Alaska, on 610 kcs, is now being heard from midnight until 2 am or later with a recorded dance program. (Morrison, R-1203).

Melvin Fisher, Berkeley, Calif., reports the following stations added to his log lately: KGU, WGN, CFNC, KXA, WCCO, CFRC, KOVA, WIBW, WSB, KSTP, KMOX, WJBW, and WWVA. Veries he has received include KOY, KOOS, WKY, WJR, WBT, WBT, WSM, KOB, KELA, CBR, and WWL.

Victor West San Rafael, Calif., has been pulling in the Japanese stations regularly, the following having been heard this season: JOAK-1, JOAK-2, JOIK, JOKB-1**,** JOBK-2, JBCK, JOFK, JOHK, JOCK-1. JOGK, JOCK-2. He reports that CKMO. Vancouver, 1410 kcs., verifies by letter but reports on their Saturday midnight DX prowl also receive a membership card in the Midnight Prowlers Club which shows tomcats "singing" on the roof, CKMO inscribed on the chimney, and the moon joining the chorus.

The question as to what town in the United States or its territories possesses the smallest population seems to have created considerable interest. R. Anderson, Ambrose, ND., nominates Rice Lake or Poynette, Wisc. H. H. Crow suggests that Lihue, Hawaii, will be the smallest when KTOH begins operations. Ores Wilson, announcer at WRAW, took the trouble to diligently search through various maps and finally emerged with the information that Hobbs, N. M. had a population of 598 people in the 1930 censús. If any other reader wishes to enter a nominee in this race let's hear from you!

SHORTWAVE BROADCAST

Australia

VLR, Lyndhurst, will soon be broadcasting on 7250 and 7280 kcs. Also keep an ear open for VLW, Wanneroo, on 6130, 9560 and 11830 kcs.

Brazil

A national shortwave 20 kw station is under construction at Rio de Janeiro, assigned the following frequencies: 6200, 9505, 9585, 9600, 11710, 11825, 11890, 15145, 15370 and 17835 kcs. (IRM)

Canada

CKFX, (ex-VE9CS), the two-watt station in Vancouver, B. C. is reported heard on 6080 kc beteen 10 pm and midnight with an R5 signal in Hawaii. (Fern, R-211 TH-2)

England

A review of the Daventry frequencies might be of some help at this time, inasmuch as they now broadcast in some fourteen different languages and are apt to mislead DXers into thinking they have a new station. Refer to the following list if in doubt:

6050 GSA, 6110 GSL, 7230 GSW, 7260 GSU, 9510 GSB, 9580 GSC, 9600 GRY, 9690 GRX, 11750 GSD, 11820 GSN, 11860 GSE, 15140 GSF, 15180 GSO, 15260 GSI, 15310 GSP, 17790 GSG, 17810 GSV, 21470 GSH, 21530 GSJ, 21550 GST, 21560 GSJ2, 21640 GST2, 25750 GSQ, 26100 GSK, 26550 GSS.

France

TPB, Paris Mondial, is now broadcasting from 9:30 am on 11845 kcs., also being relayed on 11885, concluding at 3 pm. (Park, Honda).

Guatemala

TG5JG, Guatemala City, testing on 11440 kc from 9:30 to 10:30 pm. Also heard on 11750 kcs. (IDA). Address: P. O. Box 12.

Manchukuo

Verifications received from MTCY, 11775 kcs, are in the form of a folder bearing a symbolic Oriental design in rich red color on the outside, while inside is the veri message and a musical bar, which is their identification signal. Their schedules were listed here last month. (Satterthwaite, West, Sawada.)

Paraguay

ZP-14, 11720 kc, was heard with a strong signal at 4 pm. (Park).

Philippines

Accurate information as to the correct call letters of the 49-meter stations would be appreciated. We have many conflicting reports on hand and therefore hestitate to give what might be erroneous information.

Spain

EAQ, 9860, still going strong. (Park). This will be interesting to several to have inquired as to this station.

Turkey

TAP, 9465 kc, is reported to be the only active station at this writing. They are being heard signing off at 1:30 pm with a good signal, and announcements by a lady at close. The 15190 kc. transmitter is off the air. (Park, Honda).

THE REPORTERS

R211, T. H. 2—C. J. Fern, Jr., Lihue, Hawaii.
R592—Bob Sawada, Isleton, Cal.
R673, Victor West, San Rafael, Cal.
R1203, Don Morrison, Berkeley, Cal.
R1213, H. H. Crow, Jr., Sacramento, Cal.
R1213, Robert C. Morris, Arcadia, Cal.
R1362, Robert C. Morris, Arcadia, Cal.
Harold Saterthwaite, Los Angeles, Cal.
Harold B. Clein, Los Angeles, Cal.
Frank Macedo, Victoria, B. C.
E. M. Ringle, Vancourver, Wash.
Bob Park, Vancouver, B. C.
Bill Cuuningham, Pasadena, Cal.
R. Anderson, Ambrose, N. D.
Ores Wilson, Reading, Pa.
James Dagg, Aldergrove, B. C.
Harry Honda, Los Angeles, Cal.

Radex Radio Riddles

Test your knowledge of radio. If you answer all but three, it means you make 80 percent, and are well-informed about every-day radio. The correct answers are given on page 95 in this issue of RADEX.

- 1. Radio waves travel through space with the speed of (a) the earth's shadow (b) a comet (c) light (d) sound.
- 2. The antenna takes its name from (a) an ancient Greek flag pole (b) an insect's whiskers (c), Franklin's lightning rod (d) an African flying ant.
- 3. Radio fading is produced by (a) cheap paint (b) an aging announcer (c) cracked tubes (d) vanishing signals.
- 4. Wave traps are needed to (a) trap the watts in the meter (b) drown out certain stations (c) tone down the speaker (d) prevent waves in the detector tube.
- 5. By DX we mean (a) armored electric conduit cable (b) a physician's radio prescription (c) interfering signals (d) distant reception.
- 6. An All-wave radio (a) does not tune to all wave (b) creates internal interference (c) covers the long waves exclusively (d) has an adjustable rubber magnet.
- 7. Radio bands (a) are heard from all stations (b) embrace groups of wave lengths (c) are small belts used to turn the tuning dial.
- 8. When a condenser is used in a radio it (a) condenses the lighting current to a lower voltage (b) stores electric charges (c) prevents burning out (d) demagnetizes the speaker.
- 9. Radio tubes are (a) filled with "juice" (b) small light bulbs (c) electric valves (d) heating elements.
- 10. A radio receiver is tuned by (a) twisting a flexible tuning fork (b) winding a tiny piano wire (c) adjusting a condenser (d) whirling an electron spinwheel.
- 11. It is now a known fact that radio waves travel entirely around the earth (a) from east to west (b) in

one-seventh of a second (c) best when the moon is full (d) when sun spots are visible.

12. During recent years short waves have become popular because they (a) take up little air space and reduce interferenc (b) are quiet (c) are less affected by the sun (d) can dodge easily around obstructions,

13. If you needed a microphone you would describe it as a (a) small telephone set (b) hearing device for deaf persons (c) high-grade telephone transmitter (d) scientific instrument for examining electrons.

14. Static is the result of (a) friction between radio waves (b) the rotation of the earth (c) movement of the planets (d) electricity in the air (e) too many radios.

15. A loud speaker (a) sets air in motion (b) requires no magnet (c) is clamped down rigidly (d) should be operated loudly to renew its vigor.



Membership in the Radex Club approaches the 1500 mark; at the time of writing we have 1474 members enrolled, in every state in the Union except Nevada. The map at the head of this column shows the states, in solid black, in which there are at least five members.

We believe our club is getting big enough now to permit us to organize more permonently, to give it officers, to work more energetically for our hobby. The first step in our new program is the formation of a Board of Directors, a group of persons who will originate, discuss, and approve or reject ideas for the conduct of club business. The Board at the present time consists of three editors of



Lithuanian amateur LY1] verifies correct reports with this card. The colors are red, yellow, green and blue. (Courtesy of Wallace Howe).

RADEX, Ray LaRocque, Anthony C. Tarr, and Owen P. Callin. In addition to the editors, the presidents of the Radex Club Chapters are also included in the Board. At present there are three chapters, the Irvington Chapter with Warren Carpenter as president, the Brooklyn Chapter with George Nahas at the helm, and the Virginia Chapter, presided over by Harold Tear.

Through the Board of Directors, every member of The Radex Club may offer suggestions or criticisms, knowing that every idea presented will be duly considered by this group of DXers. At chapter meetings, suggestions will be voted upon by members, and when our aim is realized to have at least one chapter in every state, every member of The Radex Club will have a direct vote in matters concerning his club-

Under the direction of Harold Tear, the Virginia Chapter is embarking on an ambitious program of DX activities that should appeal to every DXer in Virginia. Of first importance is the fine little bulletin, issued every month, full of DX news from all the members, and written up in a style that we know you'll like. Very important, too, is the Virginia DX Contest, running from January 15 until February 28, in which two prizes are offered, a twelve-foot vertical antenna with complete lead-in kit, and a one year subscription to RADEX. This

contest is only for members of the chapter, who will receive complete details through the mail. Any Virginia DXer who is interested in joining may communicate with Harold Tear, 1317 Thomas Ave., Roanoke, Va.

A special program will be dedicated to The Virginia Chapter on January 12, from station WNBZ, Saranac Lake, N. Y., during their frequency check, at 3:55 to 4:10 am, EST. All Radexers are requested to tune in and send their reports to Mr. Fred C. Ambrose, the engineer of the station.

The Irvington (N. J.) Chapter has recently been honored by two special programs, the first of which was sent from WAIR, Winston-Salem, and the second, on December 12, from KRGV in Weslaco Texas.



Harold Wintheiser, Le Center, Minn. (SWL cards).

Glenn S. Pidge, 431 Azusa Ave., Azusa, Calif. (SWL cards).

Carl Horton, 16 Auburn Place, Athol, Mass. (SWL cards).

John Johnson, 1004 Washington St., Hoboken, N. J. (Correspondence).

John Varga, 4758 West End Ave., Chicago, Ill. (SWL cards, and correspondence with owners of Hallicrafters SX-23).

Lewis R. Hill 2138 S. 16th Ave., Maywood, Ill. (SWL cards).

Merlin Steen, Route 6, Decorah, Iowa. (SWL cards and swap photos).

Jack Welsh, Kingston, Ill. (SWL cards).

J. I. Vaught, Box 1424, New Orleans, La. (SWL Cards).

Baron Franz Gall von Atlass, c/o "Radio Morse," Guatemala City, Guatemala (Exchange photos and souvenirs).

Norman E. Lank, 932 Wilder Ave., Montreal, P. Q. (SWL cards).

L. F. Dolbow, 4466 Rainbow Blvd., Kansas City, Kans. (Correspond with owners of 20-tube Midwest).

Geo. H. Jacobs, Box 141, Station V, Cincinnati, Ohio (SWL cards).

Alan Bolles, 21 Los Arboles, Albuquerque, N. Mex. (SWL cards).

Art. Parfitt, 1874 E. 87th St., Cleveland, Ohio (SWL cards).



From Portland, Oregon, "The City of Roses," .comes this three-color SWL card.



Sam Graham's SWL



Red and silver are the colors of this this SWL card from Victor Samardza of New York City.

HAM HOUNDING

● ● By HUGH HUNTEM

According to the many reports we have received during the past month, the ham band listeners are still with us, despite the silencing of many of the foreign DX "stations. We admit that even we have strayed a little ourselves, and consequently have logged many new broadcast band stations, commercials, ship stations, and others.

However, those periods were during the times when the ham frequencies were just spots of silence on the dial because of atmospheric condition. The 20-meter band was nothing to boast about as far as evening listening was concerned last month, yet Chinese and Japanese stations were logged early in

the morning.

Listeners' reports show that the most consistent band was 10-meters. What DX stations left on the air by the war were coming in nicely, including the Belgian Congo rigs in South Africa, a district every listener should have logged by now.

In answer to the request for reports on Far East stations, we have Cliff Tavener, R716, to thank of the most complete log. His antenna has grabbed plenty of FB catches from out of the air

down in Rosenberg, Texas.

We are rather proud to point out that we called the turn on the South African stations going off the air in our last issue. Subsequent reports proved that the ZS rigs were ordered to shut down. It would be easier now to list the countries still on the air rather than those affected

by bans.

With listeners concentrating on Asia for their DX there should be many more applicants soon for the VAC plaques, since that continent is the hardest to log. In answer to a question from R716, of course a notarized statement will do instead of taking veris off the wall. In fact, this method is preferred, since it does away with shipping the QSL's for proof of reception.

Before we parade some radio personalities, we should mention the ARRL Sweepstakes, which brought out many usually silent rigs. It has been on during

the latter half of November.

Bee Catalano, 1412 Hyde Park Blvd., Chicago, a newcomer to our column, reports: "That sweepstake Nov. 12 was something. I heard 29 hams from 8 to



Wilfred Chock, of the Honolulu Police Department, choses an attractive lass in a grass skirt and with a guitar, to decorate his QSL card.



DXing with a good receiver is like fishing in Minnesota, according to Harold Wintheiser, who sends this red and blue SWL card. 9 p.m., and were they having a time! Got a Mexico ham, XE2JK calling someone. How many responses to your CQ did you get, W61TH? And what does "CQSS" mean—will someone please tell me?"

Welcome to Ham Hounding, Bee, and we wish that more of our YL and XYL listeners would report. And that "CQSS" of course, means "Calling CQ Sweepstakes"—get it?

Four hams now off the air are nominated for our personality parade this month. Since they cannot operate we'll help them out some. They are G8JM, ZL4GS, VE1KV, and VP4TJ.

G8JM—This station is located on a hillside on the edge of historical Epping Forest, in Chingford, a suburb of London, "where the metropolis meets the country," as the pop, W. G. Hall, puts it.

The rig is located about 100 feet above sea level, surrounded on all sides by low hills with the exception of the west, in which direction an excellent view of Alexandra Palace, the television station, six miles away, may be had.

Hall is a "British working man," 27 years old, recently married. Before the war broke out he was an assistant departmental manager in a cabinet factory. He is not allowed to tell at present what he is doing.

The war interfered with plans to "work all states" on phone. Hall has worked 53 countries on all continents and on 160 meters has worked F, El, OZ, HB, and D. He had also determined to get across the ocean on this band. His good record he says resulted from the erection of an antenna invented by W3EDP—the all-band antenna.

..ZL4GS—F. J. W. Graham, the op, took his amateur radio seriously and built all of his own equipment, even to the crinkle paint on the panels, which he baked in his own oven. Band switching on all stages with the exception of the final which has plug-in coils, operation on 80, 40, and 20 meters, and matched impedance antenna are some of the features.

In 1935 Jim didn't know what radio was all about, but a year later he had his ticket. Two months later he built a small rig and went on the air with a lusty "CO."

Did he get a bite? "I'll say I did," he chuckles, "ZL4GS was all over the band!"

But fellow-hams helped out and now he is an old hand at the transmitting game. He is a shunter on a New Zealand radio, is married but has no junior operators—and will QSL 100 percent. He lives in Invercargill, just 18 miles north of the two most southermost hams in the world—ZL4CP and ZL4DR at Bluff, New Zealand.

VEIKV—John Shreve, of St. Johns, New Brunswick, became interested in radio in 1936 when he was sailing on a Canadian government ship back and forth from Halifax to Australia and New Zealand. He used to communicate with passing ships by flashlight, which taught him the dots and dashes of Morse.

He mixes radio and flying, and by this time is in the Canadian Air Force. Before the war he was ready to take the examination for his commercial radio license.

Before VE hams were banned he was running only 35 watts, his former transmitter having been destroyed in a fire.

"I lived in a hotel beside the concern where I was working as a salesman," he writes." Early one morning last winter while I was DXing I saw a tongue of flame shoot past the window. I reckon my hair stood right on end—anyway, I cleared the chair in one leap, hurried to the door and hollered 'fire' and then grabbed plugs and cutting pliers. I got the precious transmitter loose, took it in my arms—and proceeded to fall down a flight of stairs. What a mess!"

So before the war John was on a vacation, going to a radio school, and transmitting with his smaller rig. Now we'll have to wait until hostilities have ceased before we hear from him again.

VP4TJ—Although running only three watts to a single 802 tube, Anthony "Andy" Jasmins gets Q5R9 reports on 40 meters constantly, and has worked some fine DX on 20 meters, phone and CW. He says that VP2XY, airport in British Guiana, and VP3XY on two planes operating to Kaiteur Falls and gold mines in the interior use his rig for checking.

And the whole thing, with the exception of modulator and crystal mike cost him only \$30!

An electrical engineer, Andy has lived in all parts of the West Indies, Canada, and the United States. He saw the SOS sent out from the emergency spark transmitter of the ship Caraquet when it sank off Bermuda 15 years ago.

He owned the first radio set in British Guiana (two-tube Grebe) back in 1922. He also made application for transmitting license but since they were not granted he pirated, using the calls VP3LX and VP3PH. In the rig a Ford coil was used on a wavelength of 500 meters, mostly in contacting ships arriving into port.

Now he is in Trinidad and his QRA: Radio Distribution, 11B Maraval Road,

Port of Spain, Trinidad.

Now for the list of who's on the air: ALASKA—Bill Wells, Hamilton, Ont., is turning to 75 meters for his DX, and has heard K7AWH, Ketchikan, formerly W7AWH, on 3970 kcs. using 150 watts, and K7FJ on 3945 kcs. K7GZH and K7KSC reported on 20 meters. Also on 20 K7GTP, located in Unalaska, in the Aleutian Islands, heard by Jack Welsh, Kingston, Ill.

ALBANIĀ—All cards for ZA stations should be sent via Radio G. U. F., Trento,

Italy.

ÅLGERIA—FA3JY, 14090, is Rene Roujas, 17 rue Lafontaine, Belcourt-Algers.

ANTIGUA-Off the air.

ARGENTINA—Quite a few of the LU hams are coming through, including LU4CZ, 8AB, 4BH, 1QA, 2DJA, and 2DJB to name a few. LU1QA informs us through the WDXA that he is the only station in the San Luis province of Argentina and that he is only allowed to transmit four hours a day and cannot speak to an amateur in a country at war. AUSTRALIA—Off the air.

AZORES—CT2BP is still the only ham heard. His frequency is 14.134 QRA: Florencio Jose Terra, Jr., Travessa de S. Francisco, Horta-Faial, Azores.

BAHAMAS—Off the air. BARBADOS—Off the air.

BELGIAN CONGO—Although ON stations are off the air, there are several OQ stations still broadacsting. Here is the list: OQ5AA, 14080; OQ5AB, 14295 and 28300; OQ5AE, 14400; OQ5RC, 14080; and OQ5ZZ, 14090. 5AE's transmitter was built by hams in Tennessee, this missionary's home state. 5AB is best DX available on 10 meters, and reports should be sent to Mr. A. Schroovens, Chef de Service Principal a 1'U.M.H.K., Elisabethville, Belgian Congo. 5ZZ, the Gatti Expedition, operates on Wednesday and Fridays between 5:30 and 8 p.m.—QRA: Poste Restante, Stanleyville.

BELGIUM—Off the eir.
BERMUDA—Off the air.

BOLIVIA—CP1BA will positiviley not QSL, many of our listeners report.

BRITISH GUIANA—Off the air. BRITISH HONDURAS—Off the air.

BRITISH HUNDURAS—Off the air.
RURMA—Try shooting for XZ2DX
and XZ2BHB, on 14100. These two
stations are heard in the United States
when conditions are right.

CANADA-Off the air.

CANARY ISLANDS—Readers report that two active 40-meter stations, EA8AE and EA8AS, will not QSL. 8AE, 7.18 and 7.31 megs, and 8AS, 7.25 megs, both broadcasted as propoganda stations during the Spanish war, according to Jack Wells, of Phenix, Alabama. He has also heard EA8AK, 7.25 megs, Santa Cruz de las Palmas.

CANTON ISLAND—KF6DHW will QSL with his black and white card if reports are sent to Charles Calley, Department of Interior, Honolulu, Hawaii.

CURACAO—PJ5MS issues a very attractive QSL with mountains and a cockatoo bird in brilliant colors. Don't forget that PJ stations are working undercover.

CEYLON—VS7RA, 14625 kcs, verified for Cliff Tavener with a new card, dark green call letters over a light green map of the island. He also sent photos of a lioness and crocodile that he had shot on his estate. The QRA: R. P. Walker-Alexander, Hynford Estate, Nawalapitiva.

CHILE—CE2BX, CE3CZ, CE3AH, and CE3AZ have all been heard on 10

meters.

CHINA—It is with satisfaction that we report XU stations practically rolling in on 20 meters. XU6KL, XU8RB, XU5CX, XU7HV, and XU1B were the strongest. QRA of XU8RB was given as



Merton Hiatt sends this Alaskan

Reginald J. Broadley, Lane 159, House 6, Seymour Road, Shanghai, by Cliff Tavener, who also reports that 8RB runs 300 watts into the final and uses a variable crystal, 14084 to 14106 kcs. XU5CX may be heard on 14020 kcs.

COSTA RICA—Many of the TI stations are turning to 10 meters and we also find more of them QSLing. TI3AV and TI2RC are the best. Two new ones heard on 20 meters are TI2TG and

TI6HP.

CUBA—Cuban stations are ack on the air after a two-month ban imposed y the Director of Radio. They help fill in the blank spaces on the 20-meter foreign band.

DANZIG—Off the air.

DENMARK-QSL cards from OZ5BW and OZ7KG have reached this country, but it is believed that OZ rigs are off the air, too, since Denmark is near the scene of the war and none of our listeners are reporting hearing them.

ECUADOR—HC2CC is the new Ecuador station on ten meters. It is jointly operated by Carlos Casal and Wally Grosskreuz, and the RA: Box 348, Guayaquil.

EGYPT-Off the air.

ESTONIA—Believed off the air. FINLAND—Off the air.

FRANCE Off the air.

GERMANY—Off the air.
GIBRALTAR ZB2B, Royal Engineers Club, may be off the air, too, since Gibraltar is British.

GUAM-KB60CL, 14170, is being heard. He is William Harrison, U.S.M.C. Unit, M. C. Building 131, Sumay. GUATEMALA—TG9BA and TG9JG

will verify but TG8AA will not. 9BA and 9JG have been heard on 10 meters.

HAWAII-Bill Wells reports hearing K60QE (3947 kcs.) on 75 meters. K60XY and K6RDB have been heard on 10 meters.

HONG KONG-The Call Book reports a ban on VS6 stations. The QRA of VS6BE, requested by R716, is Capt. Whatman, Box 651, Hongkong. He was heard on 14360 kcs., mentioning that he was running 50 watts.

HUNGARY-HAIK, 14143 and 14250 kcs., operated by the Researche Station of the Royal Hungarian Post, Budapest, is still on the air and probably will remain on during the war, reports lack Wells. The station is operated by SWBC station HAT4 and is used to seek reports on that station's transmissions.

Time of operation of HA1K is from 7



This card has to be seen to be fully appreciated. It is hand drawn, in black, yellow, green and red. An amateur who sends out as nice a card as this certainly cannot be "America's *Orneriest Ham," as he calls himself. More appropriate would be "A-One Ham." (Courtesy of R. Fieberg).

p.m. to midnight.

ICELAND-TF3C, about the only Icelander heard, will not verify reports, we are sorry to say.

IRAQ-Phil Craig, Waterville, Me., reports reception of YIIC with a QSA 5 R 6-7 signal.

IAMAICA—Off the air because of the war.

JAPAN—Jack Wells heard J2NQ, 14070; J3CX, 14150; J5CW, 14080; and J7CB, 14090, all in one hour one morning last month. J5CW, heard before, QSL's in seven weeks, and said on his card that he was the only active J5 phone on 20 meters. However, J5CC has been reported. Weston Richards, Zion, III., also reports J5CW. It is a safe bet that these J stations will QSL: J2MI, J2KG, J5CC, J7CR, J2QN, J2JJ, and I3CX.

LUXEMBOURG—LX1SI and LX1AI both have QSL's for listeners but LX rigs may be off the air. Condition uncertain.

MALAYA-VS2AL, 14080, who has his WAC on 15 watts, will QSL.

MALTA-ZBIL may or may not verify, depending upon how he is feeling. The concensus is that he's very hard to QSL.

MAURITIUS-VQ8JM, the new station on the island, is probably off the air now with the rest of the British Empire, since this little country is a British passession.

NETHERLAND INDIES—PKIVX, rarely heard in the states, has been captured by Phil Craig. Reports of the PK stations are meagre this month.

NORWAY—Rigs believed off the air. LA1F, Oliver Bingen, Sandefjord, sent his

QSL.

PANAMA—HP1A, the only operator in Panama, used to QSL but evidently has grown tired of it and will only send his card when the report is of actual value to him.

PERU—OA4C is the newcomer. Many report him. The QRA: Ernest De Rossi,

Box 1079, Lima.

PHILIPPINES—KAILZ is the best KA phone, on 14260 kcs. Others to listen for with their frequencies are: KAIME, 14140 and 14260 (does not QSL, says Jack Wells, who has sent him 10 different reports with return postage in each); KA4LH, 14110 (the op only goes into Manila twice a year after his mail—he's located in an outlying district); KA7EF, 14110 and 14250; KA1FH, 14140 and 14270; KA1CW, 14140; and KA1LB, 14130 and 14260—all of them heard best about 7:30 a.m.

SPAIN—The QRA of EA7BA, 14010 kcs, is Jose Maria Gil Guerra, Sagastas

Num. 33, Cadiz, Spain.

SPANISH MOROCCO—EA9AI, 7190 kcs, operated by Dr. Angel Mora, broadcasts 9-10 p.m. on Saturdays; EA9AH, 7000, Tetuan, key propaganda station for Franco during the Spanish war, broadcasts in the afternoon—sometimes is on 13990 kcs.; EA9BJ, 7100, Alcazarquivir, usually heard near midnight.

TAHITI—FO8AA has often been heard calling W6's, but will not verify.

TANGIER—EK1AF, the only phone station in the International Zone, is Jose M. Sierra, British P. O. Box 50, Tangier. EK1AA, the other ham station, is on CW.

URUGUAY—CX2BK, who QSL's 100 percent, according to Jack Welsh, has a new QRA: Jaime Borba, Box 896, Mon-

tevideo, Uruguay.

The Spatari Langauge Foundation, 27-20 25th Ave., Astoria, New York, is sponsoring a world-wide DX contast, with a silver loving cup as first prize. Details may be obtained by writing to the above address. Any amateur wishing to cooperate in promoting the Spatari may communicate with Lee Mason, W8SPK, 800 Conner Ave., Detroit Mich.

CHATTER: Alton L. Caldwell, Jr., Brockton, Mass., sends in his second report and lauds an open 10-meter band with fine signals from Africa. He reports that WILVS is portable mobile on the Continental Clipper and W5FPA is portable marine aboard the steamship Gulf Dawn, headed for Philadelphia from Port Arthur, Texas. . . . Phil Craig sent in a fine report-said he had benefited so much by reading Radex that he felt obligated to pass along what he knew about DX. Thanks, Phil. . . Ralph Kastner sent along his month's dope sheet. . . . Bill Wells logged a Frenchman sounding like F8GO in the American phone band on Oct. 25. . .

How is 75 meters, Bill? Robert W. May, R689, is studying for his ham ticket, so is stealing a march on the rest of the boys by logging some CW stations on 40 and 80 meter CW. Bertram Podall, of Gilman, Vt., asks if VP8JP is a licensed ham. He was heard low in the 20-meter band. Well, we can't find that call in the "Bible," Bert. Was NX2L in Greenland last summer, he also asks? Can anyone help him?. . . . Walter E. Welch, of Lynn, Mass., sends in a fine list. . . . and Oscar Sandoz, of Halifax, Nova Scotia, has data on dozens of ham stations with frequencies he is willing to furnish. He also wants to send in a monthly report, since he is one of only a few reporters in the Maritime Provinces. Pass it right along, Oscar, and we'll appreciate it. If anyone wants to communicate with him about his fine offer, the full QRA is Dutch Village, Fairview P. O., Halifax, Nova Scotia. Oscar is No. 1403 in The Radex Club.

Carl F. Horton, 16 Auburn Place, Athol, Mass., some time ago volunteered to furnish QRA's to any Radexer who wrote to him. Over 100 did write, but failed to send return postage, which Carl stipulated. Only one writer did send stamps to cover the reply. Since Carl has so kindly volunteered this service, it is only fair that return postage be sent along with your request.

A. M. Hawkins, of Latrobe, Pa., sends

in a list of hams who do not OSL: K6FAB, YV5AE, PY2FF, HH2S, H15X, HP51, E16G, K4FAY, VP9G, VP7NS, CX2AK, VP3AA, HC1JW, CE3DW, K4ENT, ZS1AX, VK7AB, and SV1KE

And with that we close this month's dope sheet. We're right in the middle of the best DX season, so don't forget to

drop your reports in the mail to ol' Hugh Huntem.

Ham Band Revisions

American Amateur Bands were revised to conform to the following schedule:

Frequencies for exclusive use of Amateur

Stations

1715	to	2000	kcs.	(a)
3500	to	4000	kcs.	1
7000	to	7 300	kcs.	
14000		14400		
		300:00		
56000				
		116000		
		230000		
400000	to	401000	kcs.	,

Frequency Bands for Telephony

1800	to	2000	kcs.
28500	to	30000	kcs.
56000	to	60000	kcs.
112000	to	116000	kcs.
224000	to	230000	kcs.
400000	to	401000	kcs.

Frequencies for Amateur transmissions of Television and Frequency-Modulated Transmissions

112000 to 116000 kcs. 224000 to 230000 kcs. 400000 to 401000 kcs.

Frequencies for use by Amateur Stations for Facsimile

1715 to 2.000 kcs. (a)

56000 to 60000 kcs.
112000 to 116000 kcs.
224000 to 230000 kcs.
400000 to 401000 kcs.

Frequencies in hich Type A2 Transmission May be Employed

56000 to 60000 kcs. 112000 to 116000 kcs. 224000 to 230000 kcs. 400000 to 401000 kcs.

Effective December 1, 1939, the Radiotelegraphy (CW, or code transmissions) may be employed on all the amateur bands.

(ar) The bands indicated by the letter (a) are subject to change to "1750 to 2050" kcs. in accordance with the Inter-American Arrangement Covering Radio communciation, drawn up at Havana in 1937.

Amateur Calls Heard

The calls are listed under the time zones in which they are heard. The names and addresses of persons reporting the stations are indicated by small letters following the call signs. Key to the small letters is given at the end of the column.

CE2BX (a); CF3CZ (a); H12B (a); HI7G (af); K4EZR (a); K4FAB K4FSP K4FRN (a); K6MVV (af); K6NZC (e); K6OQE K6OQM (e); K6PCF (e); (e); K6PIT (e): K6OXY (e): K6REF K6ROB (e); K6RVG (e); (e); (a); LU7BU K7GZH (e); LU2DT LU8AB (e): OO5AB TG9AB (a); TI2RC OQ5AE (e); (ae); TI3AV (aef); XE1CQ (af); XE1FF (f); XE1GL (af); XE2FC XE2HY YN3DG (f); (a); (a); YV1AG (a); YV5AE (a); ZS5T (g).

75 Meters

K6OQE (j); K7AWH (j); K7FJ (j).

20 Meters-EST

CE1AS CE1AM (b); (bgj); CE2AM (b); CE3BE (j); CE3CG (bj); CE3ĆK (j); CE3DW (b); CE4AC (i): CT2BP (d): CX2BK (bij); CX2CO (bdj); EA7BA (bij); EA9AH (d); EK1AF (bij); HB9DE (j); HC1FG (g); HC2HP H13N (j); H15X (ij); H16Q (ij); HI7I (ij); HK1AB (aj); HK1AG (j); HK3BS (a); HK3CI (j); HK3CK (j); HK3CO (i): HK3CY (j); HK4EA (j); KA1CS (b); KA1CW (b); KA1FH (bi); KAIHS KA1LZ (b); KA1ME (b); KA7EF(b); K4EMG (di); K4EZR (a); K4FKC (gi); K5AM (ij); K6ILW (b); K6LVU (b); K6MVA (i); K6NYD (i); K6OJI (i); K6PTW (i); LA1F (d); LU1QA (bj); LU2DJA (j); LU2EG (j); LU4CJ (j); LU4DJ (i); LU4DJD (i); LU5CK (bi); LU7BU (i): LU8AB (ij); LY1J (bdj); LY1S (b); OA4C (b); OZ5BW (bd); PAoEH (b); PAoMZ (d); PKIVX (b); PYICK (b); PY5AO (j); TG5JG (j); TG9AA (b); TG9BA (j); TG9BA (g); TI2BC (j); TI2LR (j); T12RC (ij); T14AC (j); T14JG (j); TI6HP (ab); EX1CS XE1CQ (i); XE1CX (j); XE1FU

XE1JH (j); (ij); XE1HR (ij); XE1LK (ij); XE1LV (i); XE1LX (ij); XE1ZK (g); XE2HB (j); XE2HY (i); XE2JK (ij); XE2KU (i); XE3AR (ij); XU6KL (b); YI1C (b); YN1FF (bj); YN1IP YN3DG (bj); YV1AN (ij); YV1AP (j); YV1AQ (gij); YV4AA (a); YV4AC (a); YV4AE (ij); YV4AF (j); YV4AL (j); YV4AO (a); YV4AX (j); YV5ABE (j); YV5ABF (i); YV5ABY (i); YV5ACE (ij); YV5ACJ (j); YV5AE (j).

20 Meters—CST

CE1AC (e); CE1AH (e); CE1AR (e); CE1BC (e); CE3BE (e); CE3CG (e); CE3CZ (e); CE3EY (e); CE3EW (e); CX2BK (eh); CX2CO (e): EA7BA (f); EK1AF HC2HC (e); HH2B (h); HI5X (eh); HI6Q (fh); HK1AB (e); HK4DF HK3CI HK3CK (f); HK3CO (e); HK4AC (e); HK4DK (e); HK4DX (e); HK5EA (e): J5CW (h); KA1AF (e); KA1AF (e); KA1AP (e); KA1CS (e); KA1CW (eh); KA1CX (h); KA1FH (eh); KA1HS (h); KA1ME (ehk); KA1OZ (e); KA1XL (e); KA7EF (h); K4FDC (f); K4FKC (c); K6OJI (k); K6PMC (e); K6RVU (ek); K7KTP (k); LU1QA LU4BD (e); (k); LU4CZ (k); LU4DJD (e); LU8AB (ek); OA4C (k); OA4L (e); OA4R (f); PK10G (k); PK1TM (k·); PK2AY (h); PK2ER (h); PK3WI (e); PK4KS (hk); PK4MM (k); PY5AQ (e); PY7AE (k); TG9BA (e); TG9RV (e); TI2AC (e); TI2PG (e); TI2TG (e); TI4AC (ef); TI4JG (f); XE1BL (f); XE1CD (c); XE1CQ (c); YE2HY (cf); XE2IM XE3AR (f); XE3AX (h); X14 (f); XU8ZA (k); YN1IF (e); YV1AD (e): YV1AN (e); YV1AP YVIAQ (efk); YVIAS (e); YV3AQ (h); YV4AE)ce); YV5ABE (c); YV5ACE YV5ABF (ce); (k); YV5ACH (e); YV5ACJ (f); YV5AE (k); YV5AG (e); YV5AO (ek).

The Reporters

(a) Alton Caldwell, Jr., Brockton, Mass.

- (b) Philip Craig, Waterville, Maine.
- (c) Harold Gilgen, Marshalltown, Iowa
- (d) A. M. Hankins, Latrobe, Pa.
- (e) Ralph Kastner, New Braunfels, Texas
- Robert W. May, Rome, Ga. (f)
- Bertram Podall, Gilman, Vt. (g)
- (h) Weston Richards, Zion, Ill. (i) Walter Welch, Lynn, Mass.
- (j) Wm. Wells, Hamilton, Ont.
- (k) Jack Welsh, Kingston Ill.

"SSSS" AND "SOS"

News dispatches from the war zone report that "SSSS" is rivalling "SOS" as the marine radio operators call of distress. If this is fact, the former is not internationally recognized as is the "SOS" signal in the International Morse Code.

In any event, the "SSSS" does not officially mean "Submarine Sighted" or any other particular words beginning with "S". The explanation is that the dot-dot-dot four times repeated (...), representing these letters, has a characteristic swing and through common understanding and usage identifies the nature of the distress case.

"SOS" does not mean literally "Save Our Souls" or "Save Our Ship" as is sometimes claimed, any more than the previous international distress call "CQD" meant "Come Quick Danger." All such calls are based on the speed and clarity with which they can be transmitted.

It was at the 1906 International Radio Conference at Berlin that "SOS" was formally adopted. This combination was the outgrowth of "SOE" which had been used by German ships but which was somewhat unsatisfactory because that final dot was easily obliterated by interference.

Even so, "CQD" was so firmly established with some operators that its use was continued for some years thereafter. A notable example was its employment in summoning aid for the steamship "Republic" in 1909.

DXer's Appointment Calendar

The time shown in this Calendar is EST. For CST, subtract 1 hour; for MST, subtract 2 hours; for PST, subtract 3 hours; for GMT, add 5 hours.

Clubs: Newark News Radio Club (NNRC); Universal Radio DX Club (URDXC); Na-tional Radio Club (NRC); International DX-ers Alliance (IDA); DXers International Exchanges Club (DXIEC); World DX Alliance (WDXA).

Jan. 2, 4-5 am, KFAB, Lincoln, Nebr. 770 kcs. (WDXA).

Jan. 3, 4-5 am, CJCS, Stratford, Ont., 1210 kcs. (NRC).

Jan. 7, 4-5 am, WWNC, Asheville, N. C., 570 kcs. (WDXA).

Jan. 8, 3 am, CMHK, Cruces, Cuba, 1210 kcs. (NRC).

Jan. 11, 3:15-3:45 am, Bismarck, N. Dak., 550 kcs. (WDXA).

Jan. 12, 3:10-3:25 am, N. Y., 1210 (WDXA). WJTN, Jamestown,

Jan. 12, 3:55-4:10 am, WNBZ, Saranac Lake, N. Y., 1290 kcs. (For Virginia Chapter, The Radex Club. Send reports to Fred. C. Ambrose, Engineer).

n. 13, 3-4 am, CHLT, Sherbrooke, P. Q., 1210 kcs. (NRC).

n. 13, 4-5 am, C 1370 kcs. (NRC). CFAR, Flin Flon, Man.,

Jan. 15, 12:30-1 am, KOI Mex., 1180 kcs. (IDA). KOB, Albuquerque, N.

Jan. 14, 1-2:30 am, WTAM, Cleveland, Ohio, 1070 kcs. (IDA).

Jan. 18, 4-5 am, CKOV, Kelowna, B. C., 630 kcs. (NRC).

Jan. 19, starting at 5:45 am, KFAB, Lincoln, Nebr., 770 kcs. (IDA).

Jan. 21, 5-6 pm, 12AA, Addis Ababa, Ethiopia, 9650 kcs. (IDA).

Jan. 28, 4-5, am, XENT, Nuevo Laredo, Tams., 910 kcs. (IDA).

Jan. 28, 4-5 am, HOK, Colon, Panama, 640 kcs. (URDXC).

Jan. 28, 4-5 am, HP5K, Colon, Panama, 6005 kcs. (URDXC) (Send IRC or unused

Panamanian stamps for veri).
Feb. 4, 4:30-5:30 am, XEDE, Torreon, Coah., 1400 kcs. (URDXC).

Feb. 11, 4-5 am, XEQK, Mexico City, 1500 kcs. (URDXC).

25, 4:30-5:30 am, XETB, Torreon, Coah., 1310 kcs. (URDXC)

XEDE and XETB are both owned by Aurelio G. Zaragoza. Reports are urgently requested, but it is advisable to send an IRC or unused Mexican stamps for veries.

Apr. 13, 4:30-5:30 am, XEXT, Tepic, Nayarit, Mexico, 1420 kcs. (Send IRC or un-

used 10 cvos. Mexican stamps) (URDXC).

NOTE—The National Radio Club is arranging a series of special programs from Canadian stations, and some programs may be scheduled after this list appears in print. DXers who are interested can get the latest dates by sending a postal card to the NRC at 317 E. 10th St., Erie, Pa.

Regular DX Programs

First day of month, 4-4:30 am, WPAY, 1370 kcs., Portsmouth, Ohio.

Last day of month, 3-5 am, KWSC, 1220 kcs., Pullman, Wash.

Every Saturday, 2-3 am, WMBI, Chicago, Ill., 1080 kcs.

Every Saturday, 2:30-2:45 am, KLS, 1280 kcs., Oakland, Calif.

Every Saturday, 10:15-10:30 am, WEEU, 830 kcs., Reading, Pa.

Every Saturday at 10 pm, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari-10c for veries).

Every Saturday, 4:15-4:45 pm, W2XJI, 26300 kcs., Newark, N. J. (NNRC tips).

Every Saturday, 10 pm, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari program).

Every Sunday, 2-2:30 am, TG1 on 1310 and TG2 on 6190 kcs., Guatemala City, Guat.

Every Sunday, 3-5 am, CKLN, Nelson, B. C., 1420 kcs.

Every Sunday, 10:15-10:45 am, CFCO, 630 kcs., Chatham, Ont.

Every Sunday, 3-Tijuana, B. Cfa. 3-5 am, XEAC, 980 kcs.,

Every Sunday, 12:30-1 am, TGQA on 6400 and TGQ on 1450 kcs., Quezaltenango, Guatemala. (Spatari program, all reports verified free).

First Sunday, at 1 am, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari program).

First and Third Sunday, 2-4 am, WJBO, 1120 kcs., Baton Rouge, La.

Every Tuesday, 11:45 am-noon, W9XA, 26450 kcs., Kansas City, Mo.

Every Wednesday, 12:30 am, KOY, 1390 kcs., Phoenix, Ariz.

First and Third Wednesday, 1:45-2 pm, WTAR, 780 kcs., Norfolk, Va.

Every Thursday, 2:45-3 am, KSL, 1130 kcs., Salt Lake City, Utah. (Spatari announcements).

1st to 7th, midnight to 6 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexican souvenirs sent to reporters).

8th to 14th, midnight to 2 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexican souvenirs sent to reporters).

15th to 31st, midnight to 6 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexico souvenirs sent to reporters).

Second Friday, 12:30-1 am, WJAG, 1060 kcs., Norfolk, Nebr.

Radexing With The Radexers

By Ray La Roque

As "Old Man 1939" draws to a close we must make a few remarks regarding the unusual "comeback" that DX reception has staged during the last few months. Let us hope that the New Year will continue to show an increase in signals from distant points. With the added incentive of the probable good reception ahead, there should be a marked return to the hobby by fans who, in recent years, have turned to shortwaves due to poor conditions on the broadcast band. From appearances thus far we feel it is fairly safe to predict that this season will measure closely with the good old days of '32, '33, and '34.

Competition always creates added interest in any game. DX is a competitive game in a mild sort of way. We're all out to compile a log and a stack of verifications greater than our co-hobbyists. Without a comparative list, there can be no real competition as there is no basis on which to establish the supremacy of one DXer over another. Your Radexer in Chief has worked out a few supremacy listings which ought to cover the field pretty well and give the DXer whose catches are purely domestic a chance as well as the fellow who chases the foreigners. Beginners are also given a show in our listings. In each issue we shall choose two of the foregoing supremacy listings and show the names of perhaps the top ten in each list. This will require five issues, after which time we can repeat the first listings in revised form showing the changes in the logs of each member, providing no new members have surpassed the records of those formerly listed. Only members of the RADEX Club may participate, so if you're not a member send your name today and ask for your membership card and club indicia. Reports sent immediately may reach us in time for inclusion in our next issue. The listings:

Readers living in the Eastern and Central Standard Time Zones may send their reports direct to

> Ray LaRocque 4 Wachusett St., Worcester, Mass.



This card is the same kind that is used by all the National Commercial Broadcasting Service stations in New Zealand. Other stations, in addition, 1ZB, are 2ZB, 3ZB, 4ZB, and 2ZA. The background is in dark and light blue, and the call letters in red. (Courtesy of A. Mervyn Branks).

SUPREMACY FOR ALL CON-TINENTS. List the number of continents you have verified. If all are verified list how many times you have completed the entire set of continents.

SUPREMACY FOR TP's: List the number of trans-Atlantic stations verified.

SUPREMACY FOR TP's: List the number of trans-Pacific stations verified.

SUPREMACY FOR SA's: List the number of South America stations verified.

SUPREMACY FOR UNITED STATES: List the names of the states in which you have verified every station presently operating.

SUPREMACY FOR NORTH AMERICA: List the states of the United States, provinces of Canada, the states of Mexico, and the remaining North American countries in which you have verified at least one station. Countries other than U.S.A., Canada, or Mexico, count as one state.

SUPREMACY FOR BEGIN-NERS: For those who have been DXing two years or less up to Jan. 1, 1940. List total number of stations verified.

SUPREMACY FOR OLD TIM-ERS: List your five oldest verifications with dates of each.

SUPREME SUPREMACY: List total number of verifications and the number of countries you have verified along with the amount of time you have been verifying stations.

There are to be no awards, no special certificates, nor any tangible compensation for the leaders. Just the mere satisfaction of seeing your own name listed in RADEX among the leaders in each particular group will provide sufficient interest to create a little competition without breeding bitter, rivalry or jealously among members which is always the case when there are prizes to be won. The honor system is to be used. We accept your lists as they are written by you. No verifications or other proof will be required of you unless there be sufficient reason to doubt any claim, in which case the member will be expected to back up his claims with proof or forever be branded as a cheater. However, we doubt if there will be need for any branding. So let us have your complete listings in each department immediately on a penny post card or letter.

THIS 'N' DATA

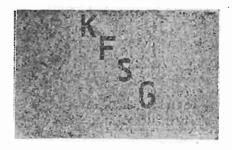
Co-operation among the radio stations fighting for the supremacy of one channel is a rare occurence. However, KTUL, WIRE, and KLO worked out a plan for increase in power without creating inter-station interference as they all operate on the same channel. The engineers from the three stations got together and submitted their finished plans to the FCC. It was aproved immediately by the commission. . . . In October RADEX, Desmond Callan

on its frequency checking schedule. Peter C. Landry (R1208) of Montreal heard WAGM on their November broadcast.

A check for identification is desired concerning the Spanish speaking station on 1104 kcs. most evenings. There is none listed there in RADEX. HJ3ABD used to be on 1104, but is not listed there at present under a new or old call. The veri from that station showed them as 1110 kcs. The above is for the benefit of Joe Lippincott, East Vassalboro, Me.

A very cleverly edited and interesting little bulletin is the "Vertical Radiator" put out by the Virginia Chapter of the RADEX Club under the editorship of Harold Tear. A few items from the bulletin: XET on 639 kcs. signs on the air at 5:30 a.m. daily. . . . LR3 May be heard after 3 a.m. on Sundays. CJCA broadcasts messages to the far North Sundays until 4 a.m. If any RADEXER wants to know what a particular station is using, drop a line to the Virginia Chapter and information will be sent you. The chapter keeps a complete record of equipment used by radio stations.

NBC stations will reach a new high when WALR changes call letters to WHIZ and becomes a supplementary affiliate of the Blue and Red Networks. Desmond Callan discovered that there was a great deal



From KFSG in Los Angeles comes this QSL card picturing Aimee Semple McPherson of the nationally-known Angelus Temple. (Courtesy of Jim Walker).

to be logged by the early riser who gets 'em when they sign on the air. He gives the following sign on times for stations: WSAZ at 6 a.m.; WCHS at 6.m.; WRNL at 6; KWTO at 6; WMMN at 6; WLS at 6:30, WJAX at 6:45, KMA at 5:30; CKOC at 6; WSAL at 6:30; WH1O at 5:45; WNEL at 5:45; WDOD at 6:30; WFBC at 6; WSAL at 6; WSJD at 6; WBTH and WCNC at 6; WING at 6; WQDM at 6; WHIS at 5; WBNS at 6; WBIG at 6; WCKY at 5:55; WOMI at 6; and KITE at 5.

POST OFFICE BOX R9

Fayette City, Pennsylvania—Alfred Razzando: "I have heard a station on 1150 kcs. at 1:45 a.m to 2:00 a.m. This station was talking about the war and the announcer had a British accent. They closed their war talk of Holland Belgium invasion by a musical selection. This station was badly heterodyned. Can you give any inforation?" Your station was the synchronized BBC transmitters on 1149 kcs. broadcasting news from London.—RL)

Cleveland, Ohio—Arthur J. Parfitt: "So far I have been using only a piece of wire laying on the floor about 15 feet long. My eight foot vertical antenna was stolen and I have not as yet purchased a new one. On the present arrangement, I've heard CBK, WING, WNOE, WGKV, WENY, CMHI, LR3, 1YA and 2YA, CMCU, and HJ3CAZ. Total verifiactions now stand at 908 on the broadcast band only."

Kingston, Illinois — Jack Welsh, R790: "Please identify the Spanish speaking station on 830 kcs. under KOA in the evenings? Also the weak Spanish stations on 620 kcs. and the one heard under KHBC on October 29 at 4 a.m"

Chicago, Illinois—Mrs. Bee Catalano: "I read in the October issue that Allen Verrill of Mass., has been DXing a little better than a month and listed his stations. Well, Allen old chap, how in the world did you get your veries back so quickly? I'm

still waiting for a slew of mine. I've been at it since September 14 and have gotten stations from California to New York, Cuba and Canada. So far the only verie I've received came from CKLW, which came two days after mailing. To date I have pulled in 93 stations on the broadcast band and 23 on the shortwaves. Whenever I get to making a log that I can understand and learn to read the shortwave band maybe my report might be different. Let's hope."

Yonkers, New York—Harry Bracken, 480 Hawthorne Avenue: "I have sent for verifications and received replies from the following: WJAX, WBAL, WGY, WTAM, WNAC, WKBW, WFIL, WDAE, WCKY, WBT, WBBRY, and CMCK."

Readville, Massachusetts-Desmond Callan (R987), Green Street: "In the evening the following catches have been heard recently: CBK (sometimes R9 at 10 p.m.), CMCY (one can hear Spanish spoken through local WEEI, 20 miles away). WHKC, WPTF, XEPN (sometimes on top of CKAC), CMCF, CMHI, (blocking out 830 kcs. nightly with 10 kw.), CMX, and CBO both on 880 kcs. CMBQ on 900 kcs. WEI on 930 kcs WHO (no nights when selectivity is good and WBZ doesn't cover them), CJBR, KTHS, CJCB (once when WNAC wasn't too strong), and WORK."

Hoboken New Jersey—John Johnson, 1004 Washington Street: "Starting at 7:30 p.m. I got close to a hundred channels ranging down to 1700 kcs.; I would like very much to correspond with other DXers and members of the RADEX Club."

London, Great Britain—Eric Butcher on duty on the American Freighter S.S. Nemaha: "We arrived in London yesterday after an unevenful trip. We have large U.S. flags painted on each side, also on the hatch. The flag is flown 24 hours a day with a spotlight on it at night. European broadcast band DX is a new experience to me, having never heard them



The operator and rig of PY2LN in Sao Paulo, Brazil. (Couresty of Jack Wells).

before. Such stations as Lille, Toulouse, Rabat, Leipzig, Stuttgart, Munich, Turin, Frankfort, Radio Paris, Tripoli, come in full volume. Radio International 241 meters—new frequency wishes reports urgently and signs off at 8p.m. G.M.T. and comes on the air at 9 a.m. GMT. I would like to hear from my friends. Write to Eric Butcher, c/o National Maritime Union, New Orleans, La."

(Shortly after receiving Eric's letter we learned that his ship had been transferred to a South African registry, and was scheduled to leave New York on December 3 for African ports. We wonder where Eric's next report will come from).

Montreal, Quebec—Peter C. Landry (R1208), 493 Mt. Pleasant Avenue: "This is the first time that I have reported and I thus have quite a lot to say. I have been DXing now for one year. From November '38 till April '39 I DXed at school in Port Hope, Ontario and I heard 405 stations on the broadcast band. I did not send away for verifications. Since July 1, I have been DXing at home here in Montreal and started my log all over again. I have now heard 369 stations, verified 83, and have some

fifty more in the mails. Have heard every state in the U.S.A. with the exception of Arizona, Montana, and Nevada."

Goshen, Indiana—James O. Weaver: "When we got our first Phileo in Januray 1936, I began DXing in earnest and since then I have heard 597 stations on the broadcast band in the following countries: U.S.A., Canada, Mexico, Cuba, Miquelon, Porto Hawaii, Bahamas, and New Zealand."

Princeton, New Jersey-Forrest H. Blanding, 173 Nasau Street: "I think that a discussion of the most desirable locations for DX activities would be very interesting. I haven't decided which is the better of the two I have tried, as I haven't really had time. I would also like to see some comments as to actually how much better one of those multi-tube commercial or factory receivers is than an ordinary good 6 or 7 tube superhet than can bring down the noise level at any time. I mean by that, how often would it mean the difference between hearing or not hearing a distant station. I have been using a seven tube table model."

COVERING THE CONTINENTS Domestic Dialings

FORECAST: January is the second "peak" month in the domestic DX season. In the months of December and January DX conditions should be at their best as these months mark the midway period in the DX season. That this rule does not always hold true and fast can be blamed only on adverse weather conditions which are ever changing.

Komments from the "K" District: KIDO on 1350 kcs. with 1 kw. heard weekdays from 1:30-2 a.m. with R9 signal. . . . KJR at Seattle knives in between XEAW and XEAC from 1-3 a.m. with varying signal from R 5-9. . . . KERN on 1370 kcs. with 100 watts heard R8 when 1370 kcs. is clear at 3 a.m. . . . West coasters good any morning from 1-3 a.m. are KGO, KEPY, KTMS, KLS, KIDO, KFVD, KOIN, KGA, KJR,

XECL, XEMO, and XEAC. (Harold Tear, R924, Roanoke, Va.)

KFEL at Denver, Colorado on 920 kcs. has a request program each Tuesday and Friday morning from 2:30-3. a.m. are very anxious for reports and will verify with an attractive card. (Peter A. Clarius, R6, N. Y. 2, Port Richmond, N. Y.)

KOWH has become affiliated with NBC and becomes the 179th NBC af-

filiate . (RX)

KWSC on 1220 kcs .announced they were broadcasting their regular monthly DX prgoram on October 29 from 2-5 a.m. (Arthur Parfitt, Cleveland. Ohio)

KTBC on 1120 kcs. at Austin, Texas has been on the air for some time now. (Alvin W. Oliver, Hous-

ton, Texas.)

KTKC at Visalia, Calif. on 890 kcs. with 1000 watts having already moved to that channel. . . . KVOD in Denver is now on 630 kcs. with 1000 watts. (Merlin Steen, R6, De-

corah, Iowa.)

"W's" in the East: WADC at Akron on 1320 kcs., signs on the air at a.m. an off at a.m. . . . WJW on at 6:30 a.m. and off at 11 p.m., WCLE on 610 kcs. on the air at 6:45 a.m. and off at 6:30 p.m., WHK on 1390 kcs. on at 7 a.m., WCKY on 1490 kcs. on the air at 6 a.m. and off the air at 2 a.m., WROL on 1310 kcs. off the air at 1 a.m. (Steve J. Takacs, Akron, Ohio)

WNBZ at Saranac Lake, N. Y., on 1290 kcs. will dedicate their January 12 FCC check fro 3:55-4:10 a.m. to the Virginia Chapter of the RADEX Club. (Vertical Radiator, bulletin of the Va. Chapter)

WCHS heard testing new 5000 watt transmitter at 2:30 a.m. (Alvin W.

Oliver, Houston, Texas)

WHBF stands for "Where Historic Blackhawks Fought, and WOC for "Wonder of Chiropractic." (J. Montgomery, Rock Island, Ill.)

WMFO (as listed in RADEX) at Decatur, Alabama was heard to use the following words to identify their call: "William, Mary, Sugar, Lincoln," making the call letters WSML! (Jack Welsh, R790, Kingston, Ill) Call letter has been (Gorrect.

changed).

WWNC at Asheville, N. C. will present a DX program on Sunday morning January 7 from 4-5 a.m. The program will be the World DX Alliance of Perth Amboy, N. J. Verifications will be issued in letter form and return postage is required. All reports should be addressed to the Chief Engineer, c/o Radio Station WWNC, Asheville, N. C. (Peter A. Clarius, Port Richmond, N. Y.)

WJW will very shortly become affiliated with Elliott Roosevelt's new Transcontinental Broadcasting System. Tentative plans call for a network of about 100 stations. (RX)

WJAC and WFBG will become affiliated with NBC soon as will WSPD, Mutual will add WEBC and WDSM in Duluth, Minnesota, and WENY in Elmira to their network. (RX)

WSAY is now using 250 watts all the time. All correct reports sent to Thurlow Greene will be promptly veried. WBRU are the new call letters of WMOG in Brunswick, Ga., on 1500 kcs. (Lee Grossman, R1330, Rochester, N. Y.)

WMEX in Boston changed to 250 watts full time. . . . WFBL to 1310 kcs. with 250 watts, with new call of WSOY. They are in Decatur,



From Montevideo, Uruguay, comes card, printed in red, black and blue. The QRA is Luis A. Primavesi, Casilla 37. (Couresty of W. G. Howe).

Desmond Callan, Readville, Mass.)

WJAG DX program of November 10 heard with good signal and enjoyable music. (RL-Mass.)

WENY on 1200 kcs, heard testing from 1-4:30 a.m. on November 3. . .

. . WMRO heard every Wednesday after 2 a.m. . . . WHBC's new station is the second tallest tower in Ohio. It measures 502 feet. (Arthur Parfitt, Cleveland, Ohio)

Canada: CJCA on 730 kcs. with 1 kw. heard nicely after 3 a.m. Sunday mornings. CBR on 1100 kcs. with 5 kw. heard with R 8-9 from 2-2:15 a.m. weekdays. (Harold Tear,

Roanoke, Va.)

CFAC on 930 kcs. at Calgary has a request program each Monday, Wednesday, and Friday from 1:30-2 a.m. an dare also anxious to hear from thei rdistant listeners and promise to verify. (Peter A. Clarius, Port Richmond, N. Y.)

CICA on 730 kcs. heard with messages for North woods inhabitants on Sunday mornings till 4 a.m. (Arthur

J. Parfitt, Cleveland, Ohio)

CKX at Brandon, Manitoba on 1120 kcs. is R9 plus with plenty of QRM by WISN, WJBO, and CKOC. CBM at Montreal, P. Q., on 960 kcs. completely wipes out XEAW. . . . CJCA at Edmonton, Alberta is heard Sunday mornings at 3:30 reading letters to people in isolated territories. (Jack Welsh, R790, Kingston, Ill.)

CBA has a marvelous signal all day here. Almost equal to WTIC at night. New catches include CKCK and CBR heard on November 3. . . . VE9EK with 10 watts is my verie contribution to the superpeewee stations listed by Jack Varner (Alton L. Caldwell, Jr.,

R1319. Brockton, Mass.)

Latin America

Newfoundland: KONF on 640 kcs. is well heard here any evening after-8:30 pm. with clear channel until sign o at 9:30 p.m. It's an easy catch for most East coast DXers. (Alton Caldwell, Jr., R1319, Brockton, Mass.)



Mario de la Torre, of Havana, Cuba, sends this card with letters and flag in red, white and blue. He is section communications manager for the American Radio Relay League.

Argentina: LE-11 on 1310 kcs. with 32000 watts at La Plata heard on program of October 31, from 3-5 a.m. Interference was encountered from several U.S.A. stations varying according to the location of the receiver (John Chamberlain "R32" N. Y., Harold Tear, Va.; Joe A. Piechuta "R1269", Conn.; Richard Wright, "R23, Ill. 4" Penna.)

It might be well to let DXers know that several of the big Argentina stations have been coming on regularly in the early morning hours with test programs. LS2, LR3,, and LR6 are some of the stations heard on consecutive days all at the same time. LR6 announced a number of Uruguayan stations which were on in conjunction with them, but I was unable to hear any of the CX's.

LR3 on 950 kcs. heard advertising Chevrolet cars each Sunday morning from 3 a.m. (Arthur Parfitt, Cleve-

land, Ohio)

LR66 on 8770 kcs. heard with R8 signaal on October 29 at 3 a.m., LR3 on 960 kcs. was also R8 at the same time. LS2 on 1190 kcs., was heard on the same date at the same time with R5-6 signal. (Jack Welsh, R790, Kingston, Ill.)

HJ3CAZ on 1040 kcs. at Bogota heard one morning after WTIC signed off. (Joseph Piechuta, R1269, Meriden, Conn.) Verification from HJ3CAZ states address as, "La Voz de Colomubia", Apartado no. 26-65 with schedule from 10:30 a.m. to 2:00 p.m. and 5:30 p.m. to 11:30 p.m. (Colombia Local Time). Arthur J. Parfitt Cleveland Ohio)

Cuba: Has CMOX shifted to 1510 kcs? They were logged one night with my dial set on 1510 kcs. and there were no other stations in the background. . . . Many Cubans pile in on the locals here in the early evening. CMKS over WOR, and CMCK over WCFL, to state an outstanding example. (Harold L. Gilgen, R820, Marshalltown, Iowa)

CMBX on 1080 kcs. was pulled through with an R7 signal while WTAM (1070 kcs). and WBT (1080 kcs.) were both on the air. Hubert Martz, Langley Field, Va.)

CMBC on 690 kcs. is having a tough with XET. CMCF on 810 kcs. completely wipes out WCCO. (Jack Welsh, R790, Kingston, Ill.)

CM9RT (as listed) on 1580 kcs. announces merely as CMRT. They are heard with a very weak signal until 11 p.m. evenings. . . . CMZ is believed to be the call of a new station heard on 920 kcs. operating in Havana. It has been heard every and judging from the signal, my guess is the power is from 500-1000 watts. (John D. Chamberlain, R32, Rochester, N. Y.)

Guatemala: TGQ on 1450 kcs. with 200 watts heard Sunday mornings from 12:30-1 a.m. Arthur Parfitt, Cleveland, Ohio; Harold Tear, R924, Roanoke, Va.)

TGW heard so reguarly on 1520 kcs. that it can hardly be called DX here. (Joe A. Piechuta, R1269, Meriden, Conn.)

Mexico: XEDH at Villa Acuna, Coah. heard from 3-4 a.m. on October 31. They sign off at 4 a.m. with an organ selection. (Jack Welsh, R790, Kingston, Ill.; and Harold Tear, Roanoke, Va.)

XEAW is on all night now. They verify with a letter signed by B. Mantalu. Return Postage is not re-



An interesting OSL card from KA1LB in San Juan, Rizal, Philippines. (Courtesy of Jack Well).

quired. XENT is back with a new transmitter after an explosion in August. (Desmond Callan, R987, Readville, Mass., and Phillippe Bates, R1231, Philadelphia Penna.)

XECL in Mexicali has been positively identified on 1110 kcs. using 1000 watts and they are on regulary until 3 a.m. . . . XESM has been heard regularly in the early morning hours on 1400 kcs. They seem to be an all nighter now. . . . XERC on 830 kcs. heard with R5-6 signal. Probably a test program. (John D. Chamberlain R32, Rochester, N. Y.)

XEP on 1160 kcs. heard with fair signal at 1:30 a.m. (Joe A. Piechuta, R1269, Meriden, Conn.)

XESM on 1410 kcs. is heard almost every a.m. They are apparently an all-nighter in Mexico. (RL—Worcester, Mass.)

XERA in Villa Acuna sends a good veri to all correct reporters. It is easy to pick up this station. Card is red and black on cream. (Philippe Bates, R1231, Philadelphia, Pa.)

XEMO and XET are new ones heard here. Log is now 462 stations on the broadcast bands. Alton L. Caldwell, Jr., R1319, Brockton, Mass.)

Peru: OAX4A on 854 kcs. heard on November 12 from 8-9 p.m. with signal from R5-6. (Art Parfitt, Cleveland, Ohio). OAX4A heard here on October 30 from 3-3:30 a.m. broadcasting a special program. Location is Lima. John D. Chamberlain, R32, Rochester, N. Y.)

Uruguay: According to a veri rec'd from SODRE (Servicio Official de Difusion Radio Electrica) the following broadcast band stations are owned and operated by them: CX-6 on 650 kcs., with 25000 watts; and CX-38 on 1290 kcs. with 5000 watts. (Owen Callin, Columbus, Ohio)

CX-18 on 890 kcs. For Romney of W. Va.) Re-submit your report with return postage to the following address: Lorenzo F. Balerio Sicco, Administrador, Difusoras Radio Sporte, Calle Olimar 1364, Esquina Avenida 18 de Julio, Montexideo, Uuruguay. (Arthur Parfitt Cleveland, Ohio)

Tuning the TA's

FORECAST: Instead of a forecast we suggest that you tune all month for TA's and use the following table of stations heard by Joseph T. Lippincott for your guide as to the best bets from Europe:

638 kcs. Prague from 12:401:00 a.m., R5

658 kcs. Cologne 1:18-3:12 a.m. R8 668 kcs. Enganl 2:10-2:40 a.m. R7 722 kcs. Holland 3:08- R4

740 kcs. Munich 1:25-2:17 a.m. R5 749 kcs. marseilles 2:30-3:17 a.m. R4

767 kcs. England 2:12-3:05 a.m. R8

776 kcs. Toulouse 1:21-2:25 a.m. R7 785 kcs. Leipzig 1:17-3:30 a.m. R6

841 kcs. Berlin 1:49-2:35 a.m. R66

850 kcs. Stavenger 2:01-2:08 a.m. R8 868 kcs. Pozan 2:10-2:31 a.m. R6

904 kcs. Hamburg 1:05-3:30 a.m. R7

941 kcs. ? ? ? ? 3:07-3:12 a.m. R6

995 kcs. Holland 3:50-3:55 a.m. R4 1031 kcs. Konigs 3:18- a.m. R6

1040 kcs. Rennes 12:36-3:00 a.m. R9

1068 kcs. France 4:50-5:00 a.m. R6 1077 kcs. Bordeau 1:25-2:50 a.m. R7

1131 kcs. Horby 3:36-3:46 a.m. R6

1140 kcs. Italy 2:05-2:25 a.m. R5 1149 kcs. England 1:03-2:10 a.m. R9

plus 1185 kcs. Nice 1:19-1:40 a.m. R7 1195 kcs. Frankfort 1:10-2:00 a.m. R7

1213 kcs. Lille 1:42-2:00 a.m. R6

1222 kcs. France 1:40-:01 a.m. R7 1222 kcs. Rome 5:45-5:35 a.m. R8

Signal strength shown is maximum for that particular station. Times are when heard and not actual sign-on or sign-off. Information is desired on France—1222 kcs., mystery on 941 kcs., and Pozan on 868 kcs., which is a German speaking station, but definite identication is not certain. (Joe Lippincott East Vassalboro, Maine)

France: "Radio International" broadcasting on 1410 kcs. for the British Expeditionary Forces in France heard with very good signal R7-8. They began fading at 2:30 a.m. Boreadux on 1077 kcs. heard R5 signal at 2 a.m. Rennes heard on 1040 kcs. with R 7-9 signal with German program at 1:20 a.m. (Joe A. Piechuta, R1269, Meriden, Conn.)

Toulouse on 776 kcs. heard with church services near 2:45 a.m. with R 4-5 signals.... Rennes on 1040 kcs. heard on November 11 from 1:20-1:58 a.m. Announcements at 1:45 very clear. Signal peaked as high as R7 with thirty-five minutes of program copied easily from loud speaker. Also heard on November 22. Alton L. Caldwell, Jr., R1319, Brockton, Mass.)

Germany: Leipzig heard here at 3:00 a.m. November 12 with man giving talk in German with R4 signal. (Alton Caldwell Jr., R1319, Brockton, Mass.)

Stuttgart on 574 kcs. heard with R7 signal this morning after 2 a.m. (Carl Horton, Athol, Mass.)

Great Britain: London (and others synchronized) on 1149 kcs. heard almost every morning coming on the air with a news broadcast in English starting at 1:45 a.m. Their carrier goes on the air at 1:30 a.m. and continues fifteen minutes with an interval signal which sounds like the slow constant beating of a hammer on wood. Signal has reached an R9 on peaks. (RL-Worchester, Mass., Joe Piechuta, R1269, Meriden Conn.; and

(Please turn to page 53)

The SHORTWAVE STATIONS

♦ The shortwave list, arranged by frequencies in kilocycles, gives the schedules of the shortwave broadcasting stations. When requesting verifications from radio stations, return postage should always be sent. Return postage to foreign countries can be sent in the form of an International Reply Coupon, available at any post office at 9c each. Unused postage stamps from many foreign countries, which can be sent instead of Reply Coupons, are available from the Return Postage Bureau, 85 Francisco Ave., Rutherford, N. J.

Time is Eastern Standard. Subtract 1 hour for Central, 2 hours for Mountain and 3 hours for Pacific.

2320	TGWC	Guatemala City, Guat. 1 kw. See TGWA. Sun, 10:30 am- 5:15 pm; 7 pm-midnight. Other days, 7:45-9 am; 12-45- 3:45 pm; 7:30 pm-12:15 am. Panama City, Panama. "Ron Dalley." Salvador Graziani, Box 1:21. (6-10 pm). Tegucigalpa, Honduras. 500 w. Noon-1:30 pm; 7-10:30 pm. "La Voz de Honduras."	4810 YV1RU	Maracaibo, Venez. "Radio- difusora Maracaibo," Luis
		5:15 pm; 7 pm-midnight. Other days, 7:45-9 am; 12-45- 3:45 pm; 7:30 pm-12:15 am.		Mantellini H. 3 Cucuta, Colombia. 600 w. Relays HJ2BAC, "La Voz de Cucuta."
2340	HOA	Panama City, Panama. "Ron Dalley." Salvador Graziani,	4820 YV3RN	Cucuta." Barquisimeto, Venez. "Radio Barquisimeto," Amilcar Se-
2437	HRN	Tegucigalpa, Honduras. 500 w. Noon-1:30 pm; 7-10:30		gura.
	*****	pm. "La Voz de Honduras."	4020 TITTED TT	Cali, Colombia. 720 w. "La Voz del Valle."
3400	YV5RW	pm. 'La Voz de Honduras.' Caracas, Venez. 'Radio Tur- merito,' Cesar Banuls.	4830 YV5RH	
3450	YV6RC	Barcelona, Venez. Gobierno		
3480	YV3RF	Edo Anzoategui. Acarigua. Venez. "La Voz	4835 HT1ABE	Aptdo. 1931. Cartagena. Colombia. 525 w.
	2ZB	Acarigua, Venez. "La Voz del Llano," Pausides Sigala. Wellington, New Zealand. 200		Gonzalo Veloz Mancera, Aptdo. 1931. Cartagena, Colombia. 525 w. Relays HJ1ABF, "La Voz de los Labs. Fuentes," Apartado 31.
		w. At 7 am.		
34 88	XZZ	w. At 7 am. Rangoon, Burma. 50 w. W. J. Byrnes, Burma Independent Wireless Sub-Division, Strand	4840 VUC2	Calcutta, India. 10 kw. 7:30 am-1 pm. All-India Radio.
		Wireless Sub-Division, Strand	YV4RX	Maracay, Venez. "Radio
		Road. (Sun, 8:30-10:30 pm; Daily 5:30-9 am; 8:20-10:30	4845 HT3CAT	Maracay," Luis Croquer.
	CD TAB	pm).	1010 11100111	"Nueva Granada."
3490	CR7AB	Lourenco Marques, Mozam- bique. Sun, 5-7 am; 10 am-2	4850 YV1RZ	Valera." L. Febres Ielambi.
		pm: Weekdays, midnight to 1	4860 YV1RL	Maracaibo, Venez. 300 w.
		am; 4:30-6ffi30 am; 9:30-11 am; noon-4 pm. Radio Club de Mocambique, Box 594.		"Nueva Granada." Trujillo, Venez. "Radio Valera," L. Febres Jelambi. Maracaibo, Venez. 300 w. Relays YV1RK "Radio Popular," sign off "National Emblem March." Jose A. Higuera, Apartado 247. (6-11
2500	YV5RV	de Mocambique, Box 594.		blem March." Jose A.
3300	IASKA	Vargas," Gonzalo Veloz		pmy.
4002	CT2AJ	Mancera. Ponta Delgada, Azores. Wed,	4865 HJ2BAJ	Santa Marta, Colombia. 751
		Sat. 5-7 pm.		Santa Marta, Colombia. 751 w. 10:30 am-2 pm; 5-11 pm. "La Voz de Santa Marta." San Cristobal, Venez. "La
4107	нсјв2	Quito, Ecuador. 1 kw. 7-8:15 am; 11:30 am-2:30 pm;	4870 YV2RN	San Cristobal, Venez. "La Voz del Tachira," Jesus Diaz
		8:15 am; 11:30 am-2:30 pm; 2:45-10:15 pm. "Broadcasting Provincial," Clarence W. Jones, Casilla 691.		Gonzaalez.
		Jones, Casilla 691.	4875 HJ6FAE	I Armenia, Colombia. 600 w. 9 am-2 pm; 6-11:30 pm. "La
4273	RVI5	Khabarovsk, U.S.S.R. 20 kw. 4-10 am. Miss Rowens	1050 FMD	Vor de Armenia"
		Meyer, Radio Committee.	4878 ZTD	Durban, Union of S. Africa. See "Johannesburg." (11:45
4300	4 Z B	Dunedin, New Zealand. 30 w. At 6 am.	1000 TTTTD0	pm-12:50 am).
4770	YV1RT	Maracaibo, Venez. "La Voz de la Fe," Pedro A. Ber-	4880 VUB2	Bombay, India. 10 kw. 8 am-1 pm. All-India Radio.
1		de la Fe," Pedro A. Ber- mudez V.	YV6RU	Ciudad Bolivar, Venez. "Ecos del Orinoco," E. Torres Val-
4775	HJGAB	Bucaramanga, Colombia. 750		encia.
		w. 6-10:45 pm. "Radio Santandar."	4885 HJ4DAF	Medellin, Colombia. 501 w. Relays HJ4DAQ. 9 am-2 pm; 7 pm-midnight. "Em-
4780	YV1RO	Santandar." Trujillo, Venez. "Radio Trujillo," Pedro J. Torres.		pm; 7 pm-midnight. "Em-
4785	HT1ABB	Barranquilla, Colombia, 600		isora Claridad."
	,	Barranquilla, Colombia. 600 w. Relays HJ1ABA, "La Voz	4030 1 7 12021	del Lago," Nicolas Vale
		de Barranquilla," Apartado 715. Interval signal, 3 chimes.	4895 HT3CAH	Quintero. Bogota, Colombia. 720 w.
4790	YV5RY	Caracas, Venez. "La Voz de	.575 IIJUUIII	"La Voz de la Victor." Re-
4795	HJ3CAF	Caracas, Venez. "La Voz de la Esfera," Edmundo Suegart. Bogota, Colombia. 750 w.		lays HJ3CAI. Almacenes Victor, Aptdo 565.
		La VOZ de Dogota.	4900 YV6RT	Ciudad Bolivar. Venez.
	-	ibague, Colombia. 501 w. "Ecos del Combeima."		"Radio Bolivar," Miranda & Behrens.
4800	YV1RV	Maracaibo, Venez. "Ecos del del Zulia." Luis Garcia. Manizales, Colombia. 501	4910 YV1RY	Coro, Venez. "Radio Coro," Roger Leyba.
4805	HJ6FAB	Manizales, Colombia. 501	4920 VUM2	Madras, India. 10 kw. 7:30
		"Radio Manizales."		am-1 pm, All-India Radio,

	YV5RU	Caracas, Venez. "Estudios	6000	CXA2	Montevideo, Uruguay. 5 kw.
4000		Caracas, Venez. "Estudios Universo," Mario Garcia Arocha.			Montevideo, Uruguay. 5 kw. Cia. de Radio Publicidad Continental, J. C. Gomez 1431. 10 am-10 pm.
	YV4RP	Valencia, Venez. "R a d i o Valencia," Luis Croquer. Caracas, Venez. "La Voz de Venez." Marquis y Linares. Valencia, Venez. "La Voz de		HH2S	Port-au-Prince, Haiti. Societe
	YV5RQ YV4RO	Venez." Marquis y Linares.		DATEO	Port-au-Prince, Haiti. Societe Haitienne de Radiodiffusion, Box 103. (7-10 pm). Moscow, U.S.S.R. 7-9:15 pm. Mexico City, D. F. 500 w. Interval signal, cuckoo calls, and sign off with "Liebes- traume." El Buen Tono, S. A. Apartado 79-44. 11 am-1
		Carabobo, Herman Degwitz.		RV59 XEBT	Mexico City, D. F. 500 w.
4960	VUD2	Delhi, India. 10 kw. 7:30 am-1 pm. All-India Radio.			and sign off with "Liebes-
	YV5RS	Caracas, Venez. "Radio Libertador," Victor M. Soto.			9m
4975	YV1RJ	Coro, Venez. "Radio Falcon," J. A. Mendoza.	6005	CFCX	Montreal, P. Q. 75 w. Re- lays CFCF. Canadian Mar-
4980	YV5RT	Caracas, Venez. "Gobierno Nacional."			Montreal, P. Q. 75 w. Relays CFCF. Canadian Marconi Co., Ltd., Box 1690. Sun, 10 am-11:15 pm. Weekdays 7:45 am-1 am.
	YV3RX	Barquisimeto, Venez. "La Voz de Lara." Arturo Ramos		HP5K	days 7:45 am-l am. Colon, Panama. 200 w. Re- lays HOK, 'La Voz de La Victor, Apartado 33. Noon-2 pm; 6 am-midnight.
50 00	YV5RK	Caracas, Venez. Gobierno Nacional.	500		Victor, Apartado 33. Noon-2 pm; 6 am-midnight.
5010	YV5RM	Caracas, Venez. "Radio- difusora Venez." Degwitz y	6007	XYZ	pm; 6 am-midnight. Rangoon, Burma. 1500 w. Burma Independent Wireless Sub-Division, W. J. Byrnes, Strand Road. Sun, 8:30-10:30 pm; Daily 5:30-9 am; 8:20- 10:30 pm). Pretoria, Union of So. Africa. 5 kw. See "Johannesburg." Sat, 9:30 am-4:45 pm; Sun, 8:40 am-noon; 12:15-3:15 pm; Other days, 9:30 am-3:30 pm; 11:45 pm-12:50 am. Sydney, N. S. 1 kw. Relays CJCB. Eastern Broadcasters, Ltd., Radio Bildg. Sun, noon- 1:30 pm; Weekdays 9 am- 2:30 pm; Weekdays 9 am- 2:30 pm; Recife, Brazil. 5 kw.
	YV4RQ	Sibletz. Puerto Cabello, Venez. Radio Pto. Cabello, Rafael A.			Strand Road. Sun, 8:30-10:30 pm: Daily 5:30-9 am: 8:20
E040	Witne	Pto. Cabello," Rafael A. Segura.		ZRH	10:30 pm). Pretoria, Union of So. Africa.
5146	PMY	Caracas, Venez. Radio Caracas," Almacen Americano.			5 kw. See "Johannesburg." Sat, 9:30 am-4:45 pm: Sun.
3140	PMY	Bandoeng, Java, N. E. I. 1 kw. Sat, 8 pm-3:30 am. Sun, 5:30 am-noon. Other days, 5:30 am-noon; 7 pm-3 am. Belize, Brit. Honduras. (8:30-			8:40 am-noon; 12:15-3:15 pm; Other days, 9:30 am-3:30 pm:
5300	ZIK3	5:30 am-noon; 7 pm-3 am.	6 010	CJCX	11:45 pm-12:50 am. Sydney, N. S. 1 kw. Relays
	TGS				CJCB. Eastern Broadcasters, Ltd., Radio Bldg. Sun, noon-
		Guatemala City, Guat. 200 w. Wed, Thur, Sat, 6-9 pm. Radiotransmisora de la Casa			1:30 pm; Weekdays 9 am- 2:30 pm.
5824	TIGPH	Presidencial."		PRA8	Recife, Brazil. 5 kw. "A Vox do Norte," Radio Club do Brasil, Avenida Cruz Cabuga 394. Time signals at Noon and 7 pm Brazil Time. Sign off with national an- them. 9 am-noon; 1-3 pm; 4- 9 pm.
		San Jose, Costa Rica. 1 kw. 'Alma Tica," Gonzalo Pinto H., Aptdo. 800. (7 pm-			Cabuga 394. Time signals at
5875	HRN	midn't). Tegucigalpa, Honduras. 500 w. "La Voz de Honduras,"			Sign off with national anthem 9 am-noon: 1-3 am. 4
		Mr. Paul John. Interval, notes from national anthem,	6015	HI3U	9 pm. Santiago de los Caballeros
		and signs off with "Goodnight			D. R. 100 w. "La Voz del Comercio," Fernando Bertran.
58 80	ZEA	and signs off with "Goodnight Waltz." 8 pm-midnight. Salisbury, Southern Rhodesia. 325 w. Gen'l. P. O., Station Sec'y., Box 792. Sun, 3-5 am.			Apartado 23. Sign off. "Mario la O" on organ and
50 40	PJC1	Sec'y., Box 792. Sun, 3-5 am.		*******	national anthem. 7:15-9 am; noon-2 pm; 4:45-8 pm.
3370	1,01	Willemstad, Curacao. 150 w. "Radio Curom," Curacaosche Radio Vereeniging, Emmastad, Curacao. 7:45-9:35 pm.		XEWI	9 pm. Santiago de los Caballeros, D. R. 100 w. "La Voz del Comercio," Fernando Bertran, Apartado 23. Sign off. "Mario la O" on organ ano national anthem. 7:15-9 am; noon-2 pm; 4:45-8 pm. Mexico City, D. F. 400 w. Institucion Muncial de la V. L. Mina 56.
5045	TG2X	Curacao. 7:45-9:35 pm.	6020	DJC	I., Mina 56. Berlin, Germany. 50 kw. See
3943	I GZA	Guatemala City, Guat. 200 w. "Policia Nacional." Tue,		XEUW	Berlin, Germany. 50 kw. See "Berlin." 11:30 am-4:25 pm. Veracruz, Ver. C. 20 w. "El Eco de Sotavento desde Veracruz," Av. Independencia 98. Veries for 3c USA stamp. 8 am-midgight.
5075	CCÁTUD	Wed, Fri, 11 am-1 pm. Sat, 11 am-3 pm.			Veracruz," Av. Independencia
5975	CS2WD	Lisbon, Portugal. 250 w. Radio Renascenca, Rua do	602E	HI1T	o am miament
		Capero 3-2 esq.	0023	пп	San Pedro de Macoris, D. R. 100 w. Fausto M. Donastorg,
		Huancayo, Peru. 250 w. "Radio-Andina Junin," J. Alberto Maduana, Cuzco 25.	6030	CFVP	Aptdo 204. (8-11 pm). Calgary, Alta. 100 w. Voice
59 80	VONG	St. John's, Newfoundland. Newfoundland Brdcstg. Corp.			Calgary, Alta. 100 w. Voice of the Prairies, Ltd., Toronto General Trusts Bldg. (Thur, 2 and 1 a
		St. John's, Newfoundland. Newfoundland Brdcstg. Corp. Relays VONF. 8:30 am- 12:30 pm; 4:30-9:30 pm.		HP5B	Panama City, Panama. 100
5984	HJ4DAG	Quibdo, Colombia. 150 w. "La Voz del Choco.			w. Estacion Radiodifusora Miramar de la Radio Panama,
5995	VUD2	Delhi, India. 10 kw. All- India Radio. 7:30 am-12:30	6035	TI7RVM	Miramar de la Radio Panama, Apartado 910. 5-10 pm. Las Juntas, C. Rica. 500 w. "La Voz del Guanacasto," Ruben Venegas M.
		pm.			Auben venegas M.

6040	KZIB	Manila Philippines I Reck			0 am 11.45 am 2.00
00.10		Manila, Philippines. 1. Beck Inc., Box 440. (4-10 am; 6 pm-12:30 am).			9 am-11:45 am; noon-3:20 pm; Weekdays, 3:20-7:20
6 040	WSLA	Boston, Mass, 20 kw. See WSLA. Miami, Fla. 5 kw. 10 pm-1 am. Relays WIOD. Ruth Richardson, Isle of Dreams Broadcasting Corp. Tandjong Priok, N.E.I. 10 kw. NIROM. Sign off, "End of a Perfect Day." Barranquilla, Colombia. 600 w. Relays HJ1ABH. "Emi- sora Atlantico," Aptdo. 445. Villarrica, Paraguay. 1 kw.	6100	KZRH	pm; Weekdays, 3:20-7:20 am; 9-11:45 am; noon-4 pm; 11:45 pm-12:50 am.
ı	WDJM	Miami, Fla. 5 kw. 10 pm-1			Heacock," Escolta, (5-11 pm).
		am. Relays WIOD. Ruth	6100	W9XF	Manila, Philippines. "Radio Heacock," Escolta. (5-11 pm). Chicago. III. 10 kw. Relays NBC-WENR. Audience Mail Dept., NBC, Inc., Merchandise Mart. Sat, 1:05-2 am; 45:30 pm; Sun, 1-5:45 pm; Other days, 1:05-2 am; 4-5:45
		Broadcasting Corp.			Dept., NBC, Inc., Merchan-
	YDA	Tandjong Priok, N.E.I. 10			dise Mart. Sat, 1:05-2 am;
		"End of a Perfect Day."			Other days, 1:05-2 am: 4-5:45
6042	HJIABG	Barranquilla, Colombia. 600 w. Relays HTIARH. "Emi-		SZTTA	pm.
		sora Atlantico," Aptdo. 445.		YUA	12:45° am-5:30 pm. "Radio
6044	ZP14	"Radio Cultura."			Beograd," Bureau Central de
6 045	XETW	Tampico, Tams. 100 w. Re-			pm. Belgrade, Yugoslavia. 1 kw. 12:45; am-5:30 pm. "Radio Beograd," Bureau Central de Presse, Poste Emetteur a Ondes Courtes. Announce in Serbian Italian English Car
		tinez. Francisco I. Madero			Serbian, Italian, English, Ger-
		204 Ote. Sun, 10 am-4 pm.			Presse, Poste Emetteur a Ondes Courtes. Announce in Serbian, Italian, English, German, Turkish, Hungarian, Albanian, and Greek. (12:45
6053	VK9MI	Willarrica, Paraguay. 1 kw. "Radio Cultura." Tampico, Tams. 100 w. Relays XEFW, Flores y Martinez, Francisco I, Madero 204 Ote. Sun, 10 am-4 pm. Weekdays, 10 am-10 pm. M. V. "Kanimbla." 50 w. Sign of "God Save the King."	6105	HI3C	La Pamana D. D. 20 A
					Herrero Hernandez. London, Gt. Britain. "L for Liberty." See "London." Mexico City, D. F. 250 w. Jose G. Garza Fox, San Juan
		Ltd., Melbourne, Australia.	6110	GSL	London, Gt. Britain. "L for
€0E4	HIGEAD	(7:15 am).		XEGW	Mexico City, D. F. 250 w.
0034	пјогив	"La Voz de Pereira."			Jose G. Garza Fox, San Juan
6055	••••	Bern, Switzerland. 25 kw.	6116	••••	Saigon, Fr. Indo-China.
6 060	VQ7LO	McIlwraith & McEacharn, Ltd., Melbourne, Australia. (7:15 am). Pereira, Colombia. 501 w. "La Voz de Pereira." Bern, Switzerland. 25 kw. See eBrn." Nairobi, Kenya. Cable & Wireless, Ltd., Box 777. 11	6120	WCBX	de Letran 81. Saigon, Fr. Indo-China. "Radio Saigon." (6 am). New York, N. Y. 10 kw. See "WCBX." (Midnight-2
		Nairobi, Kenya. Cable & Wireless, Ltd., Box 777. 11 am-2:30 pm.			See "WCBX." (Midnight-2
6060	WCAB	Philadelphia, Pa. 10 kw.		HI8T	San Cristobal, D. R. 30 w.
		pm; Tu, F, 6:30-11 pm;	6122	FK8AA	Noumea, New Caledonia, Re-
	wLwo	Wed, 6:30-8:30 pm).			lays FJP. Announces, "Ici
-0		Wireless, Ltd., Box 777. 11 am-2:30 pm. Philadelphia, Pa. 10 kw. See "WCAB." (Sun, 6:30-11 pm; Tu, F, 6:30-11 pm; Wed, 6:30-8:30 pm). Cincinnati, Ohio. 10 kw. See "WLWO." Stockholm, Sweden. 500 w.			Raul Henriquez. Noumea, New Caledonia. Relays FJP. Announces, "Ici Noumea," and signs off with Marseillaise. 44 rue de l'Alma. Tues, Sat, 2:30-3:30 am. Bogota, Colombia. 750 w. Relays HJ3CAZ, La Voz de Colombia, Aptdo 772. (Heard on 6012 kcs). (Sun, Noon-1:30 pm; 6-11 pm; Other days 10:30 am-2 pm; 5:30-11:30 pm.)
6065	SBO	Stockholm, Sweden. 500 w. 5:15-5 pm. Telegrafverket		нисах	Tues, Sat, 2:30-3:30 am.
		Tianstehrey 5		J	Relays HJ3CAZ, La Voz de
6070	CFRX	Toronto, Ont. 1 kw. Sun, 10:30 am-midnight. Week- days 7:30 am-midnight. Re- lays CFRB. Rogers Radio Broadcasting Co., 622 Fleet			on 6012 kcs). (Sun. Noon-1:30
		days 7:30 am-midnight. Re-			pm; 6-11 pm; Other days
		Broadcasting Co., 622 Fleet			pm.)
£070	DJM			TGWB	pm.) Guatemala City, Guat. 1 kw. Sun, 10:30 am-5:15 pm; 7 pm-midnight. Weekdays, 7:45-9 am; 12:45-3:45 pm; 7:30 pm-12:15 pm. See TGWA. Halifax. N. S. 500 w. Sat.
•0/9	D) M	Berlin, Germany. 50 kw. See Berlin."			7 pm-midnight. Weekdays,
608 0	CKFX	Vancouver, B. C. 10 w. Relays CKFC Standard Brdcstg.			7:45-9 am; 12:45-3:45 pm;
		Sys., 1504 Sun Bldg. 2 pm-			TGWA.
	*****	midnight.	6130	CHNX	Halifax, N. S. 500 w. Sat, 8 am-11:30 pm; Sun, noon- 11:15 pm; other days, 7 am- 11:15 pm. Maritime Broad- casting Co., Lord Nelson
	HP5F WCBI	Colon, Panama. Chicago, Ill. 500 w. See "WCBI".			11:15 pm; other days, 7 am-
c000		"WCBI".			casting Co., Lord Nelson
€082	XEQQ OAX4Z	Mexico City, D. F. Lima, Peru. 10 kw. Radio Nacional." Relays OAX4A,		COCD	
		Nacional." Relays OAX4A,		COCD	lays CMCD. "La Voz del
€090	ZNS	Av. Petit Thouars 447. Nassau, Bahamas. Superintendent of Telegraphs, Box 48			Havana, Cuba. 250 w. Relays CMCD. "La Voz del Aire," S. A., Sr. J. Benitez, Aptdo. 2294. Oslo, Norway, 5 kw. See "Oslo."
		tendent of Telegraphs, Box 48 (No postage required for		LKJ	Oslo, Norway, 5 kw. See
		veries).	6132	VP3BG	"Oslo." Georgetown, British Guiana.
ø097	⅓ ZRJ	Johannesburg, Union of So.	0101	11000	Brit. Guiana United Brdcstg.
		nesburg." Sat, midnight to			am: 4-8 pm).
		12:50 am; 3:15-7 am; 8:30-		XEXA	Mexico City, D, F. 100 w.
		(or 4-5 am); 5:30-7 am; 8:40-			Propaganda, Sr. Tose Rivera.
		Johannesburg, Union of So. Africa. 200 w. See "Johannesburg." Sat, midnight to 12:50 am; 3:15-7 am; 8:30-11:30 am; Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 8:40-11:30 am; Other days, 3:15-7 am; 9 am-1:30 pm; 11:45 pm:12:50 am	6137	OR7AA	Georgetown, British Guiana. Brit. Guiana United Brdcatg. Co., Box 11. (10:30 am-11:30 am; 4-8 pm). Mexico City, D, F. 100 w. Depto. de Publicidad y Propaganda, Sr. Jose Rivera. Lourenco Marques, Port. East Africa. Radio Club de Mocambique, Caixo Postal
	ØDT.	pm-12:50 am.			Mocambique, Caixo Postal
	ZRK	Africa. 5 kw. See "Tohan-			Mocambique, Caixo Postal 594. Sun, 5-7 am; 10 am-2 pm; Weekdays, midnight-1
		am; 9 am: 100 pm; 11:45 pm-12:50 am. Capetown, Union of So. Africa. 5 kw. See "Johan- nesburg." Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am;			am; 4:30-6:30 am; 9:30-11 am; noon-4 pm.
•		am (or 4-3 am); 5:30-7 am;			am; noon-4 pm.

6140 KZRF	Manila, Philippines. "Radio Filipinas," Insular Life Bldg. (5:30-11 pm).		HI1G	Trujillo, D. R. 200 w. Relays HIG. Andres Cordero
WPIT	"WPIT." (11 am-noon).	6282	сонв	Puello. Sancti-Spiritus, Cuba 150 w. Relays CMHB, V. E. Wiess
6145 HJ4DAI	E Medellin, Colombia. 700 w. "La Voz de la Antioquia."			y O. Ramirez, Calle Inde-
6147½ ZRD	Durban, Union of So. Africa. 200 w. See "Johannesburg."	6295	OAX4G	Puello. Sancti-Spiritus, Cuba 150 w. Relays CMHB, V. E. Wiess y O. Ramirez, Calle Inde- pendencia 33. 9-11 pm. Lima, Peru. 400 w. Relays OAX4B, "Radio Grellaud." Roberto Grellaud y Cia., Sen Abencay 915-23 (7-9:30 pm). Villarica. Paraguay. 1 w.
	Sat, 3:30-7:30 am; 9-11:15 am; Sun, 5:30-7 am; 9-11:16 am; Weekdays, 11:45 pm- 12:50 am.			"Radio Cultura."
6150 CJRO	Winnipeg, Man. 2 kw. James Richardson & Sons, Ltd., 157		HI1Z COCW	Trujillo, D. R. 100 w. Relays HIZ. Frank Hatton.
6150 TIEMC	Royal Alexandra Hotel. San Jose, C. Rica. 250 w. "Radio El Mundo," Rafael		OAX1A	Havana, Cuba. 7 am-midnight. Relays CMW. "La Voz de las Antillas," Apartado 130.
6165 TILS	Hine Ch. San Jose, Costa Rica. 2 kw. "Para Ti," Luis Saenz Mata,	0333	UAAIA	Chiclayo, Peru. 200 w. "La Voz de Chiclayo." Eliaa Aguirre 171, Casilla 9. Sign off, "Good Night Waltz."
6165	Aptuo. 3.			off "Cood Night Walt-"
6170 HI4V	See "Bern." San Francisco de Macoris, D.	6340	HI1X	(Sat, 10 pm-midnight; Other days, 8-11 pm). Trujillo, D. R. 900 w. Relays HIX. J. R. Saladin. (Tues, Fri, 8-10 pm).
	R. 100 w. Luis R. Betances R.	6351	HRP1	San Pedro Sula, Honduras.
6174 XEXA	Mexico City, D. F. Relays XEXM, Departamento Auto- nomo de Prensa Publicidad (DAPP). Sign off, "March of the Toys." 8:30 am-mid-			"El Eco de Honduras."
	nomo de Prensa Publicidad (DAPP), Sign off, "March	6355	IAC	Rome, Italy. See "Rome." (3-3:35 pm).
	ment.	6380	ZIZ	Basseterre, St. Kitts. (Reported on 6384). Daily 4-5
6185 HI1A	Santiago de los Gaballeros, D. R. 75 w. "La Voz del Yaque," Rafael Western. (Weekdays, 8-10 pm). Vatican City. 15 kw. Mon, Thur, Sat, 2-3:30 pm; Tues, Fri, 2-3 pm; Wed, 2-2:30 pm; 3-3:30 pm. See HVJ.	6383	HI9B	Basseterre, St. Kitts. (Reported on 6384). Daily 4-5 pm; Wed, 7-7:30 pm; Santiago, D. R. 200 w. Jacinto L. Sanchez, Aptdo. 95. Santiago de los Caballeros, D. R. 200 w. "La Voz de La Hispaniola." Generoso Sarnelli. (6-11 pm)
6190 HVJ	(Weekdays, 8-10 pm). Vatican City. 15 kw. Mon.	6420	HI1S	Santiago de los Caballeros, D. R. 200 w. "La Voz de
	Thur, Sat, 2-3:30 pm; Tues, Fri, 2-3 pm; Wed, 2-2:30 pm;		TGQA	La Hispaniola." Generoso Sarnelli. (6-11 pm).
6190 KGEI	San Francisco, Calif. 20 kw.			Relays TGO, "La Voz de
6190 TG2	San Francisco, Calif. 20 kw. See "KGEI." Guatemala City, Guat. 200 w. "Radio Morse," Director General of Electrical Com- munications. (Sat, 7:30-9			La Hispaniola." Generoso Sarnelli. (6-11 pm). Quezaltenango, Guat. 200 w. Relays TGQ, "La Voz de Quezaltenango," Director General of Electrical Communications. (Sat, 10 pm-1 am; Sun, 1-3 pm; Other days, 9-11 pm).
	General of Electrical Com- munications. (Sat. 7:30-9			am; Sun, 1-3 pm; Other days, 9-11 pm).
	munications. (Sat, 7:30-9 am; 6 pm-1 am; Sun, 7:30-11 am; 3-8 pm; Other days, 7:30-	6425	W2XGB	Press Wireless, Inc.
WGEO	y am, o-ii pm).	6480	HI1L	Santiago, D. R. 100 w. "Emisora Nacional." Maria I
WGEO	Schenectady, N. Y. 40 kw. See "WGEA." Athlone, Ireland.			Tavarez, Calle Pres. Trujillo 97. (6:30-8 am; 5:30-7 pm;
6200 COKG	Antione, reland. Santiago de Cuba1200 w. Relays CMKG. "Ask For Bacardi." Sres. Grau y Caminero, Aptdo. 137. Daily exc. Sat, 9 am-11 pm. Mexico City, D. F. 100 w. Departamento de Salubridad	6480	TGWB	Santiago, D. R. 100 w. "Emisora Nacional," Maria J. Tavarez, Calle Pres. Trujillo 97. (6:30-8 am; 5:30-7 pm; 8-9:45 pm). Guatemala City, Guat. 1 kw. (Reported on 6495). See
	Caminero, Aptdo. 137. Daily	6500	$_{ m HIL}$	TGWA. Trujillo, D. R. 60 w. J. C.
XEXS	Mexico City, D. F. 100 w. Departamento de Salubridad	6550	TIRCC	Trujillo, D. R. 60 w. J. C. Teixido, Aptdo. 623. San Jose, C. Rica. 500 w. Accion Catolica, Prbo. Carlos Borge, Aptdo. 1064. Puerto Plata, D. R. 30 w. J. M. Modesto.
ZGE		6565	HI5P	Borge, Aptdo. 1064. Puerto Plata, D. R. 30 w.
	Kuala Lampur, F.M.S. Insti- tute of Medical Research. Sun, Tue, Fri, 6:40-8:40 am. Saigon, Fr Indo-China.	6590	cocu	J. M. Modesto.
••••	Saigon, Fr Indo-China. "Radio Boy-Landry," Etablis- sements Boy-Landry. 5:30-9	0000	0000	Havana, Cuba. Jorge Garcia Serra, Estrada aPlma 25, Vibora. (Sun, 6:55 am-mid- night; Weekdays, 6:55 am-1 Trujillo, D. R. 100 w.
6235 HRD2	am.		HI6P	night; Weekdays, 6:55 am-1 Trujillo, D. R. 100 w. Emilio Garden, Jr.
	am. Ceiba, Honduras. 250 w. La Ceiba, Honduras. 250 w. 8-11 pm. "La Voz de Atlan- tida."	6622	PRADO	Emilio Garden, Jr. Rio Bamba, Ecuador. Fabrica de Tejidos de "El Prado," Aptdo. 98. (Thur, 9-11 pm). Trujillo, D. R. 100 w. "La Voz de La RCA-Victor," F. A. Sanabia, Aptdo. 1105. Interval bella: expr. of
6243 HI1N	Trujillo, D. R. 700 w. Week-dys, noon-2:30 pm; 5:45-10 pm. Sign off national anthem. Relays HIN. J. M. Bonetti Burgos.	6630	HIT	Aptdo. 98. (Thur, 9-11 pm). Trujillo, D. R. 100 w. "La
į	pm. Sign off national anthem. Relays HIN. J. M.			Voz de La RCA-Victor," F. A. Sanabia, Aptdo, 1105
	Bonetti Burgos.			A. Sanabia, Aptdo. 1105. Interval, bells; sign off, na-

	tional anthem. (Sun, 10:45 pm-12:45 am; Weekdays,	8650 HJ4DAU	Medellin, Colombia. 250 w. Universidad Antioquia.
6638 HC2RL	5:45-8:45 pm).	8664 COJK	Camaguey, Cuba. 1 kw. 11:30 am-12:30 pm; 8-10 pm. (Reported on 8660 and 8680). Relays CMJK, "Radio Zenith" Tones Castillon r
6660 HI6Y	7:30 pm; Tues, 9-11 pm). Trujillo, D. R. 30 w. Al-	8700 COCO	Cie., Finlay #3. Havana, Cuba. 1 kw. Re-
6675 HBQ	forms Cuerro		lavs CMCK, Luis Casas
0075 1122	Geneva, Switzerland. "Radio Nations." (Sun, 1:45-2:45 pm).	8820 HCJB	Romero, Aptdo 98. Quito, Ecuador. 1 kw. "La Voz de los Andes," Clarence
6690 VK8SK	Broken Hill, Australia. At 2:30 am. Australian Aerial Medical Service.	8830 COCQ	Havana, Cuba. 1 kw. Relays CMO, "De La RCA-Victor," Calle 25 No. 225.
6700 TIEP	San Jose, C. Rica. 1 kw. "La Voz del Tropico." Eduardo Pinto H., Aptdo. 257. (4-11 pm). Bandeng Jaya, N.E.I. 1500 w.	9030 COBZ	(Reported on 8850). Havana, Cuba. 250 w. Re lays CMBZ, "Radio Salas," Aptdo. 866. Opens, nighting-ales and canaries; interval, 4
6780 HIH	257. (4-11 pm). Bandoeng, Java, N.E.I. 1500 w. San Pedro de Macoris, D. R. 250 w. "La Voz de Hig- uamo," Domingo Dominguez.		chimes; closes, national anthem. (6:45 am-1 am). Havana, Cuba. Relays CMBX. Alberto Alvarez, San
6800 PZH 6960 2ZB	Wellington, New Zealand.	9100 COBX	Havana, Cuba. Relays CMBX. Alberto Alvarez, San Miguel 194.
7000 to 7300 7006 FETI	200 w. Amateurs.	9125 HAT4	Budapest, Hungary. 20 kw. Sun. Wed. 7-8 pm; Sat. 6-7
7006 FET1 7010 XPSA	5:30 pm.		Budapest, Hungary. 20 kw. Sun, Wed, 7-8 pm; Sat, 6-7 pm. Radiolabor, Kiserleti Allomasa, Gyali-ut 22, Buda-
	(Reported on 6970 and 7140). (5:30-10:55 am).	9125 HC2CW	Guayaquil, Ecuador. "Ondas
7088 PI1J	Dortrecht, Netherlands. 50 w. Technical College. (Sat, 10	9163 HC1GQ	Quito, Ecuador. "Radiodi- fusora Nariz del Diablo."
	am-12:50 pm). Papeete, Tahiti. Radio Club Oceanien. (Tues, Fri, 11 pm- midnight).	/	Ouito, Ecuador. "Radiodi- fusora Nariz del Diablo." Sign off, "Blue Danube Waltz." Guayaquil & Ouito R. R. Co., Aptdo. 159. (8:30- 11 pm).
7100 EA9BJ 7177 CR6AA	Spanish Morocco. Lobito, Angola. (Wed, Sat,	9234	Bucuresti, Romania. 2 kw. "Radio Experimental." Socie-
7200 EA8AE	2:45-4:30 pm). Las Palmas, Canaries. (Re-		tatea Romana de Radiodifu- ziune, Str. Gral. Berthelot 60.
7220 12RO11	Lobito, Angola. (Wed, Sat, 2:45-4:30 pm). Las Palmas, Canaries. (Reported on 7150). Rome. Italy. 100 kw. See "2RO."	9290 HI2G	Trujillo, D. R. 200 w. Relays HIG. Andres Cordero Puello.
7222 YV9AB	In Venezuela on Guiana- Brazil Border. Expedicion Tecnico de Mineria y Geo-	9295 XTC 9350 HS8PJ	Shanghai, China. (8-9 am). Bangkok, Thailand (formerly "Siam"). Post and Telegraph Dept. Fort de France Martinique
7260 FET8 7270 EA8AS	Spanish Morocco. (5-7 pm). Teneriff, Canaries. Relays	9363 COBC	Fort de France, Martinique. "Radio Fort de France." Havana, Cuba. Relays
7300 VIG	Caracas. Spanish Morocco. (5-7 pm). Teneriff, Canaries. Relays EAJ43. (Wed, 4-5 pm). Port Moresby Papula. Relays 4 pm. A call sign, not time.	,,,,	CMBC, "E! Progreso Cubano," Aptdo 132. (6:55 am-midnight). (Reported on
7310	Madrid, Spain. "Radio Na-	9400	10000). Saigon, Fr. Indo-China. 10
7380 XECR	Mexico City, D. F. 20 kw. Secretaria de Relaciones Ex- teriores. (Sun, 6-8 pm). Pointe-a-Pitre, Guadeloupe.	0415 DTC0	Saigon, Fr. Indo-China. 10 w. "Radio Michel-Robert," (Weekdays, 7-8:30 am).
7435 FG8AH	reriores. (Sun, 6-8 pm). Pointe-a-Pitre, Guadeloupe. "Radio Guadeloupe," Box 125.	9415 PJC2 9415 PLV	Willemstad, Curacao. "Radio Curom," Emmastad. Bandoeng, Java, N.E.I. 80
7500 EAJ43	(6-7:30 pm).		kw. Governments Radio-
7510 JVP	Tokyo, Japan. 50 kw. See		Azul de Radio, Prado 63. (Sun, 8 am-10 pm; other
7797 HBP	Santa Cruz de Teneriffe, Canaries. Relays "Radio Na- tional of Burgos. (8-9 am). Tokyo, Japan. 50 kw. See "Tokyo" at end of list. Geneva, Switzerland. "Radio Nations." (Sat, 5:30-6:30	9465 TAP	days, 8 am-midnight). Ankara, Turkey. 20 kw. 11:30 am-5 pm. See "Ankara."
7894 YSD	Con Columban Dalams VCC	9500 KZIB	Manila, P. I. I Beck, Inc., (4-10 am; 6 pm-12:30 am).
	"Alma Cuscatleca." Director General de Telegrafos, Tele- fonos, y Radio Nacionales.	9500 OFD	Dienst. Havana, Cuba. 5 kw. Cadena Azul de Radio, Prado 63. (Sun, 8 am-10 pm; other days, 8 am-midnight). Ankara, Turkey. 20 kw. 11:30 am-5 pm. See "Ankara." Manila, P. I. I Beck, Inc., (4-10 am; 6 pm-12:30 am). Lahti, Finland. 1 kw. See "Lahti" (Weekdays, 5-6:30 am; 10 am-5 pm.)

	PRF5	Rio de Janeiro, D. F., Brazil. 12 kw. "A Vox do Brasil." Cia. Radio Inter-		TPB11	Paris, France. 25 kw 11:15 pm-6 pm. See "Paris" at end of list.
	35 73117117	nacional do Brasil, Marapicu, D. F. (4:45-5:45 pm). Mexico City, D. F. 10 kw. 8:55 am-midnight. "La Voz		VUB2	or itst. Bombay, India. 10 kw. 12:30- 4 am; 5-7:30 am; 10-11 pm. All India Radio. Schenectady, N. Y. 25 kw. See "WGEA."
	AEW W	8:55 am-midnight. "La Voz de la America Latina desde		WGEA	Schenectady, N. Y. 25 kw. See "WGEA."
		de la America Latina desde Mexico." Aptdo. 2516. Re- lays XEW. Cadena Radio- difusora Mexicana.	9 560	DJA	Berlin, Germany. 50 kw. See "Berlin." (6:30-10:30
9503	XGOY XEXA	difusora Mexicana. Lungtso, China. Mexico City, D. F. 100 w. (until 1 am).	9 562	OAX4T	pm). Lima, Peru. 10 kw. "Radio Nacional." Relays OAX4A.
9510	CXA8	Colonia, Uruguay. 2500 w. Relays LR3. "Real de San			(Reported on 9560). Peruvian Gov't., Av. Petit Thouars 447. (7-8 am; 11:30 am-1:30
9510	GSB	Colonia, Uruguay. 2500 w. Relays LR3. "Real de San Carlos." (6 am-10 pm). London, Gt. Britain. 20 kw. "B for Broadcasting." See "London." (1:30-3:50 am; 6:20.0:15 pm; 9:40.11:30	957 0	KZRM	
		"London." (1:30-3:50 am; 6:20-9:15 pm; 9:40-11:30 pm).			Brdcstg. Co., Insular Life Bldg. (4-10:30 am; 4:30-7
	НЅ8РЈ	"Siam"). Opening and interval signals, 3 ascending chimes. Post and Telegraph	9570	wbos	Manila, Philippines. 5 kw. "Radio Manila," Far Eastern Brdcstg. Co., Insular Life Bldg. (4-10:30 am; 4:30-7 pm; 11 pm-12:30 am). Springfield, Mass. 10 kw. Relays NBC-WBZ-WBZA. Westinghouse Electric & Mfg.
		Dept., Col. Phra Aram.		WPIT	Pittsburgh, Pa. 40 kw. See
	VKJME	Melbourne, Australia. 5 kw. Weekdays, 4-7 am. Amalgam- ated Wireless, (A/sia), Ltd.,	9580	GSC	"C for Corporation." See "London." (1:30-4 pm.; 4:20-6 pm; 6:25-9:20 pm; 9:40-
9520	OZF	167 King St. Copenhagen, Denmark. 6 kw. 2-6 pm; 10-11 pm. Stats- radiofonicn, Heibergsgade 7.		•	
	XEDQ	radiofonica, Heibergsgade 7. Guadalajara, Jal. 100 w.		VLR	Melbourne, Vic., Australia. 2000 w. 3:15-9:45 am. See
	V	Guadalajara, Jal. 100 w. "Hablando a los Continentes desde Guadalajara." Relays XED, Aptdo, 197. Interval, 4 chimes; sign off, "Jarabe Tapatio."	9585 9590	KZEH HP5J	Manila, Philippines. Box 119. Panama City, Panama. 1 kw. (Reported on 9610). 6:30-11
9523	ZRG	Pretoria, Union of So. Africa, 5 kw. See "Johannesburg." (Sat, 5-7 am; 9:30 am-4:45 pm; 11:45 pm-12:50 am; Sun, 5:30-7 am; 8:30 am-noon; 12:15-3:15 pm; Other days, 5-7 am; 9:30 am-3:30 pm; 11:45 pm-12:50 am).		РСЈ	Apartado 807. Huizen, Netherlands. 60 kw. See "Hilversum." (Sun, 1:40- 3 pm; 7:15-9:50 pm; Tu,
		12:15-3:15 pm; Other days, 5-7 am; 9:30 am-3:30 pm; 11:45 pm-12:50 am).		VK2ME	7:15-8:40 pm; F, 8-9 pm). Sydney, Australia. 20 kw. Sun, 1-3 am; 5-11 am. Signature, laughing notes of kookaburra. Amalgamated Wireless, (A/sia), Ltd., 47
9 524	••••	bourg." (11 am-1 pm).			nature, laughing notes of kookaburra. Amalgamated
9525	ZBW3	Hong Kong. 2500 w. Hong Kong Broadcasting Commit- tee, Box 200.			kookaburra. Amalgamated Wireless, (A/sia), Ltd., 47 York St. (Sun, midn't-2 am; 4:30-8:30 am; 11:30 am-1:30
9530	KGEI	San Francisco, Calif. 20 kw. See 'KGEI." (3-9 am).		VK6ME	pm).
953 0	LKC	Oslo, Norway. 5 kw. See "Oslo."			Perth, Australia. 5 kw. Weekdays, 6-8 am. Amalgamated Wireless, (A/sia), Ltd.
	VUC2 WGEO	Calcutta, India. 10 kw. 2:30- 4:30 am. All-India Radio. Schenectady, N. Y. 40 kw See WGEA."		VUD2	Delhi, India. 10 kw. 2-4:15 am; 8 am-1 pm; 10 pm-mid- night. All-India Radio.
9535	JZI	See WGEA." Tokyo, Japan. 20 kw. See		VUD3	Delhi, India. 5 kw. 8 am-1
		Tokyo, Japan. 20 kw. See "Tokyo." (4:40-5:30 pm). Bern. Switzerland. 25 kw. See "Bern."	9590	WCAB	Philadelphia, Pa. 10 kw. See "WCAB." (M. Th. Sat. 6:30
9536	VPD2	Suva, Fiji. 2 kw. Amalgamated Wireless, (A/sia),		w r wo	"WLWO."
9540	DJN	Ltd. (5:30-7 am). Berlin, Germany. 50 kw. (12:05-2:30 2m: 4:50.10:50		HBL	Geneva, Switzerianu. 20 kw.
 .	****	Ltd. (5:30-7 am). Berlin, Germany. 50 kw. (12:05-2:30 am; 4:50-10:50 pm). See "Berlin" at end of list.	9600 9606	CB960 XEYU ZRL	Mexico City, D. F. (9-11 pm). Capetown, Union of So. Africa.
9544	HH2S	Port-au-Prince, Haiti. So- ciete Haitienne de Radio- diffusion, Boite Postal 103.			(Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 9-11:45 am;
9550	HVJ	Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am, See HVJ.			"Radio Nations." Santiago de Chile. (6 pm). Mexico City, D. F. (9-11 pm). Capetown, Union of So. Africa. 5 kw. See"Johannesburg." (Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 9-11:45 am; noon-3 pm; Weekdays, 3:20-7:20 am; 9-11:45 am; noon-4 pm; 11:45 pm-12:50 pm).

9615 TIPG	San Jose, C. Rica, 2 kw. "La Voz de la Victor," Claudia Martinez. (Reported on 9610). (7 am-11:30 pm; English hour Wed, Sat, 9-10	9985 COCM 10220 PSH	Havana, Cuba. 1 kw. Relays CMCM, "Trans Radio Colum- bia," 23 No. 1113, Vedado. Rio de Janeiro, Brazil. 12 kw. Relays PRF4; signs off
9616 HJ1AB1	pm). P Cartagena, Colombia. 608 w. 4:30-16:30 pm. "Radio Car- tagena," Aptado 37.		with Brazilian National Hymn. Cia. Radio Internacional do Brasil, Caixa Postal 709. (Weekdays, 6-7 pm; M, 8-8:30 pm; F, 7-7:30 pm).
9620 HAD	Budapest, Hungary. (6-9 pm). D Bucaramanga, Colombia. 650 w. Relays HJ/GAE. "Radio Bucaramanga."	10330 ORK	Brussels, Belgium. 11 kw. 1:30-3 pm.
9630 I2RO3	Rome, Italy. 100 kw. See "Rome." (12:07-12:56 pm; 1:01-2:55 pm; 5:30-9 pm).	10660 JVN 10740 JVM 11402 HBO	Tokyo, Japan. Tokyo, Japan. Geneva Switzerland, "Radio
9645 HH3W	1:01-2:55 pm; 5:30-9 pm). Port-au-Prince, Haiti. 30 w. 1-2 and 7-8 pm. C. Ricardo Widmaier, Box A-117.	11660 JVL	Geneva, Switzerland. "Radio Nations." Sun, 7-7:45 pm. Tokyo, Japan.
9645 JLT2	Tokyo, Japan. See "Tokyo." (8-8:30 pm).	11673 IQY	Rome, Italy. See "Rome." (5:20-5:40 am; 12:07-12:56 pm; 1:50-2:30 pm).
9650 IABA	Addis Ababa, Ethiopia. 1 kw. E. I. A. R. (Sun, 3:30-3:55 am).	11700 HP5A	Panama City. 300 w. Sun, 9 am-1 pm; 6-10 pm. Week- days, 11:45 am-1 pm; 6-10 pm. "Radio Teatro Estrella de Panama." Sign off with "Anvil Chorus." Radio Tea-
9650 WCBX	New York, N. Y. 10 kw. See "WCBX." (10:30-11:30 pm).		tro, Aptao. 954.
9660 CR6AA HVJ	Lobito, Angola. Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am. See HVJ.	11705 JLG3 11705 SBP	Tokyo, Japan. See "Tokyo." (8-8:30 pm). Stockholm. Sweden. 500 w.
9670 I2RO9	Rome, Italy. 100 kw. See "Rome." (12:40-5:30 pm; 6-		Stockholm, Sweden. 500 w. Sun, 1:15-4:15 pm; Wed, Sat, 8-9 pm; Daily 1-4:15 pm. Telegrafverket Tjanstebrev 5.
9675 DJX	6:30 pm). Berlin, Germany. 10:35 am- 4:25 pm. See "Berlin" at end of list.	11718 CR7BH	Lourenco Marques, Port. E. Agrica. 200 w. Radio Club de Mocambique, Caixa 594. (Sun, 5-7 am; 10 am-12 pm; Weekdays, midn't-1 am; 4:30-6:30 am; 9:30-11 am; noon-4
9685 TGWA	Guatemala City, Guat. 10 kw. See "TGWA." (Sun, 7 pm-midnight; Weekdays, 7:30		Weekdays, midn't-1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm).
9690 HMF	pm-12:15 am). Baghdad, Iraq. Qasr-El- Lahoor Brdestg. Station. (3	11718 TPB6 TPA4	Paris, France. 7-9:15 pm. See "Paris.' Paris, France. 7-9:15 pm;
9692 TI4NRE	pm). I Heredia, Costa Rica. 750 w. Sun, 7-8 am; Tu, Th, Sat, 9-10 pm. Amando Cespedes	11720 CJRX	Paris, France. 7-9:15 pm; 9:30 pm-midnight. See "Paris." Winnipeg, Man. 2 kw. James Richardson & Sons, 157 Royal
9 700	Marin, Apartado 40.	11721 ZP14	Alexandra Hotel. Villarrica, Paraguay. "Radio Cultura." (7:07-9:07 pm).
	"Radio Martinique," Fort de France, Martinique 1500 w. 1:15-2:45 pm; 6-10 pm. Sign off with Marseillaise. Poste Seri. Boite 136.	11730 PHI	Huizen Netherlands. 23.6 kw. See Hilversum.
9730 CB970	Seri. Boite 136. Valparaiso, Chile. (Reported	WSLA	Boston, Mass. 20 kw. See "WSLA."
9735 CSW7	Valparaiso, Chile. (Reported on 9710). 6:30-11 pm. Lisbon, Portugual. (8 pm).	11730 WSLR	Boston, Mass. 20 kw. See "WSLA."
9755 ZRO	Durban, Union of So. Africa.	11735 LKQ	Oslo, Norway. 5 kw. See "Oslo." (11 am-2 pm).
	Durban, Union of So. Africa. 200 w. See "Johannesburg." (Sat, 3:30-7:30 am; 9-11:15 am; 11:20 am-4 pm; Sun, 5:30-7 am; 9-11:15 am; 11:20 Chart depression of the second se	11740 HVJ	8:30-9 am. See HVJ.
	5:30-7 am; 9:11:15 am; 11:20 am-3:20 pm; Other days, 3:30-7:30 am; 9-11:15 am; 11:20 am-3:45 pm).	11750 GSD	Vatican City. 15 kw. Tues, 8:30-9 am. See HVJ. London, Gt. Britain. 20 kw. "D For Daventry." See "London." (1:30-3:50 am; 12:35-4 pm; 4:20-6 pm; 6:20-9:15 pm; 9:40-11:30 pm)
9835 IRF	Rome, Italy. 20 kw. See "Rome." (5:20-5:40 am; noon-12:25 pm; 12:40-1 pm; 1:50-2:30 pm; 6-9 pm).	11753 COCX	Havana, Cuba. Relays CMX, "Casa Lavin," Box 32. Sun 6-9 pm; weekdays 8 am-mid-
9860 EAQ	Madrid, Spain.	11760 TGWA	night).
9925 JDY	Dairen, Kwantung. 10 kw. 7-8 am. Manchuria Telephone and Telegraph Co.		Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; Week- days, 12:45-1:45 pm. See TGWA.

11770 DJD	Berlin, Germany. 50 kw. 11:30 am-4:30 pm; 4:50-10:50 pm. See "Berlin."	12230 COCE	Havana, Cuba. "La Vos del Transporte," Prado 18. (8 am-midn't.)
11770 MTCY	Hsingking, Manchukuo. Strasbourg." (10-11:30 pm).	1 2 235 TFJ	Reykjavik, Iceland. 7500 w. Sun, 1:45-2:30 pm Icelandic State Broadcasting Service, Box 547.
11780 HP5G	Luxembourgoise de Radiodif- fusion, (1 hour daily, same hour for three days then ad- vanced an hour for next 3-day period).	12460 HCJB	Quito, Ecuador. (Reported on 12450). Clarence W. Jones, Casilla 691. (Daily exc. Mon, 10-11 pm).
11780 11134	Panama City, Pan. 750 w. "Ron Dalley." Opens, closes, with Prelude from "Traviata." Salvador Graziani, Box 1121. (6-10 pm).	['] 13900 YN3DG 14125 YV9AB	Leon, Nicaragua. (Verifies for 10c). (Sat, Sun, 10 pm).
11780	Saigon, Fr. Indo-China. "Radio Saigon." (6 am).		la Gran Sabana, Ministerio de Fomento, Caracas.
11790 WSLA	"WSLA."	14795 IQA	Rome, Italy. See "Rome." (4:30-4:55 am).
11800 JZJ	Tokyo, Japan. 50 kw. See "Tokyo." (7-9:30 am; 2:30-4 pm).	14935 PSE	Rio de Janeiro, Brazil. W, 4-4:10 pm; Th, Sat, 3-3:30
11801 DJZ 11810 I2RO4	Vienna, Germany. 50 kw. See "Berlin." (4:50-10:50 pm). Rome, Italy. 100 kw. See	15110 DJL	pm). Berlin, Germany. 50 kw. 12:05-2 am; 8-9 am; 10:35 am-4:25 pm. See "Berlin."
11820 GSN	Rome, Italy. 100 kw. See "Rome." (4:30-10:30 pm). Rome, Italy. 100 kw. See "Rome." (4:30-4:55 am; 5-7:25 am; 7:30-8:45 am; 10 am-3 pm; 6-9 pm).	15120 HVJ	Vatican City. 15 kw. Tues, 10:30-11 am; Sun, 1-1:30 pm.
11830 WCBI	London, Gt. Britain. Chicago, Ill. 500 w. See "WCBI."	15130 TPB11	See HVJ. Paris, France. 25 kw. 2-5
11830 WCBX	New York, N. Y. 10 kw.	WSLA	Paris, France. 25 kw. 2-5 am. See "Paris." Boston, Mass. 20 kw. See "WSLA."
	pm; Daily exc. Sun, 4-6 pm; Daily 6:30-10 pm).	15130 WSLR	Boston, Mass. 20 kw. See "WSLA."
11840 KZRM 11840 OLR4A	& Gallinger, Inc., David St.	15140 GSF	London, Gt. Britain. 15 kw. "F For Fortune." See "London." (5:45-8:50 am; 9 am-
	Prague, Bohemia. 35 kw. "Radio Podebrady." (M, Tu, W, Th, F, 8-10:30 am; Sun, 7:15-9:55 pm).	45440 7077	noon; 4:20-6 pm; 6:20-9:15 pm).
11850 HAD 11870 VUM2	Budapest, Hungary. (2-6 pm). Madras, India 10 kw. 4-4:30 am. All-India Radio.	15160 JZK	Tokyo, Japan. 50 kw. See "Tokyo." (Midnight-1:30 am: 7-9:30 am; 2:30-4 pm).
11870 WPIT	Pittsburgh, Pa. 40 kw. See "WPIT." (2-11 pm). Strasbourg, France. "Radio Melbourne, Australia. 1-3 am.	VUD3	Delhi, India. 5 kw. 2-4:15 am; 10 pm-midnight. All- India Radio.
11880 VLR3	See VLR.	XEWW	
11885 TPA3	Paris, France. 25 kw. 2-5 am; 11:15 am-6 pm. See "Paris."	15170 LKV	Oslo, Norway. 5 kw. See Oslo.
TPB 7	Paris, France. 25 kw. 9:30 pm-midnight. See "Paris."	15170 TGWA	
11900 I2RO13	2RO.	•	Guatemala City, Guat. 10 kw. See "TGWA." (Sun, 12:01- 1 am; 10:30 am-5:15 pm; Weekdays, 7:45-9 am; 12:45-
11900 XGOY	Chungking, China. Central Brdcstg. Station. (5:30-10:30 am; 11-11:30 am; 4-6:30 pm).	15180 GSO	London, Gt. Britain. "O For Ocean." See "London."
11900 XMHA	Shanghai, China. 445 Race- course Road. (Reported on 11840 and 11857). (6 am).	15195 TAQ	(4:20-6 pm; 6:25-9:20 pm). Ankara, Turkey. 20 kw.
11900	Hanoi, Fr. Indo-China. "Radio Hanoi II." 20 rue de la Pepiniere. (Sat, 8:30-10:30 pm; Sun, 12:01-9:30 am; Other days, 12:01-2:30 am;	15200 DJB	Daily 5:30-7 am. Berlin, Germany. 8 kw. See "Berlin." (5-11 am; 4:50- 10:50 pm; Sun, 11:10 am- 12:25 pm).
11930 PPH	Rio de Janeiro, Brazil. (5:30	15210 WPIT 15220 PCJ2	Pittsburgh, Pa. 40 kw. See "WPIT." (9 am-2 pm). Hilversum, Netherlands. 60
11960 HI2X	am). Trujillo, D. R. 900 w. Relays HIX. J. R. Saladin, Gobierno Dominicano. (Sun, 7:40-10:40 am).	·	Wiffi. (9 am.) pm). Hilversum, Netherlands. 60 kw. See "Hilversum." (Sun, 7:40-9:05 am; M, Th, 7:40-9 am; Tu, 1-2:30 am; W, 9:30- 11:30 am; Tu, W, F, Sat, 7:40-8:45 am).

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15240 CR7BD	Lourenco Marques, Mozambique. Radio Club de Mocambique. Box 594. (Sun, 5-7 am; 10 am-2 pm; Other days, midn't-1 am; 4:30-6:30 am;	2
	am; 10 am-2 pm; Other days, midn't-1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm).	2
15243 TPA2	Paris, France. 25 kw. 6-11	2
15260 GSI	Island." See "London."	
15270 WCBX	pm). New York N V 10 km	
15280 DJQ	pm). New York, N. Y. 10 kw. See "WCBX." (Sun, 1-2:30 pm; Other days, 1-3:30 pm). Berlin, Germany. 50 kw. Daily. 12:05-11 am: 4:50-	1
15280 HI3X	Trujillo, D. R. 900 w. (Reported on 17400). Relays HIX. Secretaria de Comunicaciones y Obras Publicas. (Tu, F, 8:10-10:10 pm; Sun, 7:40-9:40 pm).	1
LRU	Buenos Aires, Argentina. 5 kw. 8 am-1 am. "Radio El Mundo," Calle Maipu 555.	
15300 I2RO6	Rome, Italy. 100 kw. See "Rome." (4:10-4:55 am; 10 am-12:06 pm; 1:40-2:30 pm; 3-5:30 pm; 7:30-9 pm).	j
15300 LYZ4	on 15130). (Sun. 1 pm).	
15310 GSP	London, Gt. Britain. "P For Progress." See "London." (12:17-1:15 pm; 1:15-4 pm; 4:20-6 pm).	
15330 KGEI	San Francisco, Calif. 20 kw. See "KGEI." (1-4 am; 5-8 am; 12:30-8 pm).	
15340 DJR	Berlin, Germany. 50 kw. See "Berlin." (4:55-10:50 pm).	
15410	Bucuresti, Romania. 50 kw. "Radio Bucuresti." (9-10:15 pm).	
17760 DJE	Berlin, Germany. 50 kw. See "Berlin." (12:05-5:50 am; 6-7:45 am; 8-11 am;	
17770 PHI2	Huisen, Netherlands. 23.6 kw. See "Hilversum." (Sun, 6:40-10:05 am; M, Th, 7:40- 9 am; Tu, W, F, Sat, 7:40-	
17785 JZL	Tokyo, Japan. See "Tokyo." (4:30-:530 pm; 8-8:30 pm). London, Gt. Britain. 5:45-	
17790 GSG	7 Japan. See "Tokyo." (4:30-:530 pm; 8-8:30 pm). London, Gt. Britain. 5:45- 8:50 am; 9 am-noon; 12:20-4 pm. See "London." Guatemala City, Guat. 10 kw. See "TGWA."	
17800 TGWA	Guatemala City, Guat. 10 kw.	
17810 GSV	London, Gt. Britain. 5:45-8:50 am; 12:20-4 pm. See "London."	
17840 HVJ	Vatican City. 15 kw. See HVJ.	
21470 GSH	London, Gt. Britain. 5:45- 8:50 am: 9 am-moon. See	
21520 WCAB	"London." Philadelphia, Pa. 10 kw. See "WCAB." (Noon-6 pm). London, Gt. Britain. 5:45-	
21530 GSJ	London, Gt. Britain. 5:45- 8:50 am. See "London."	
21540 WPIT	8:50 am. See "London." Pittsburgh, Pa. 40 kw. See "WPIT." (5:30-9 am).	

21565 DJJ Berlin, Germany. 6-7:50 am. See "Berlin."

21570 WCBX New York, N. Y. 10 kw. See "WCBX." (8 am-12:30 pm).

21680 HAD Budapest, Hungary. (11 am-2 pm).

Addresses

Ankara—Radio Ankara." Ann: Turkish, Eng, Fr, Ger. Sign off, National anthem. Turkish Brdcstg. System, Correspondence Dept.

Berlin—These transmitters are located at Zeesen, near Berlin. Interval signal is the tune, repeated several times, "Ever Be True and Honest," and sign off theme, two national anthems, "Horst Wessel Lied" and "Deutschlandlied". Address is Reichsrundfunk G. m. b. H., Haus des Rundfunk, Masurenallee, Berlin-Charlottenberg 9.

Hilversum—Transmitters at Huizen. PCJ is "The Happy Station." Announcements in Dutch, German, French, English, Spanish, Portuguese. Sign off with National Anthem. N. V. Philips' Radio, Eindhoven.

Johannesburg—All programs originate in J/B. Announce "Johannesburg Calling." English and Afrikaans. Open with bugle call. South African Broadcasting Corp., Box 4559, Johannesburg.

London—Transmitters are at Daventry. Interval signals are Bow Bells; Greenwich time signal on even hours; and, irregularly, Big Ben, preceded by Westminster Chimes, strikes the hours. Sign off with "God Save The King." British Broadcasting Corp., London W1.

Oslo-Norsk Rikskringkasting, Shortingsgaten 28, Oslo, Norway.

Paris—Transmitters at Essarts-le-Roi. Announce as "ParisMondial," (Paris Embracing The World), and sign off with "La Marseillaise." Minister of Posts, Telegraphs and Telephones, 98 bis Blvd. Haussmann.

Rome—"Radio Roma-Napoli." Transmitter at Prato-Smeraldo. Interval signal, chirping of bird. Announcements usually by a lady. Sign off with 2 anthems, "Giovinezza" and "Marcia Reale." Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.

Tokyo-Transmitters are at Nazaki. Sign off with national anthem, "Kimagayo." Nippon Hoso Kyokai, 2-Chome, Uchisaiwaicho, Kojimachi ku.

HVJ—Announcements in Dutch, Italian, Polish, English, German, French, Spanish, Russian. A clock or metronome ticks seconds during 5 minutes preceding broadcasts. Bells of St. Peters strike hour. Open and close with Laudetur Jesus Christus." Pontifica Accademia Della Scienze, Roma-Castina Pio IV.

KGEI—Transmitter at Treasure Island. General Elec. Co., 235 Montgomery St., San Francisco, Calif.
TGWA—Radiodifusora National, "La Vox de Guatemala." Relay TGW. Return postage is not necessary for verifications.
VLR—Transmitter at Lyndhurst. Australian Broadcasting Commission (Victorian Division), P. O. Box 1686, GPO, Melbourne, Vic., Australia.
WCAI—Trans. at Newtown Square. Relays CBS-WCAU. WCAU Brdestg. Co., 1622 Chestnut St., Philadelphia, Pa.
WCBI—"The Voice of Labor." Transmitter, York Township. Relays NBC-WCFL.
Sign off in English, French, German, Nor-

WCBI—"The Voice of Labor."
York Township.
Sign off in English, French, German, Norwegian, Polish, Russian and Spanish. Chicago Federation of Labor, 666 Lake Shore Drive, Chicago, Ill.
WCBX—Transmitter at Wayne Twp., N. J. Relays CBS-WABC. Sign off, "Star Spangled Banner." Columbia Broadcasting Sys., 485 Madison Ave., New York City.
WGEA—Transmitter at South Schenectady.

WGEA-Transmitter at South Schenectady. Relays NBC-WGY. Programs commence with discharge of man-made lightening. General Elec. Co., 1 River Road.

WLWO-Transmitter Mason. Relays at

WLWO—Transmitter at Mason. Accays
St., Cincinnati, Ohio.
NBC-WLW. Crosley Corp., 1320 Arlington
WNBI—Transmitter at Bound Brook, N. J.
Relays NBC-WJZ. Sign off with "Star
Spangled Banner." NBC, Inc., 30 Rockefeller Plaza, New York, N. Y.
WPIT—Transmitter at Saxonburg. Relays
NBC-KDKA. Westinghouse Electric &
WSTA—"Dedicated to Englightment." World

WSLA—"Dedicated to Englightment." World Mfg. Co., Grant Bldg., Pittsburgh, Pa. Wide Broadcasting Corp., Educational Di-rector, University Club, Boston, Mass.

(Continued from page 43) Alton Caldwell, Jr. R1319, Brockton, Mass.)

Italy: Rome No. 1 on 713 kcs. heard for seven minutes on November 12 from 4:42-4:49 p.m. (Art. Par-

fitt, Cleveland, Ohio)

Norway: Stavenger on 850 kcs. heard in morning from 2-2:07 a.m. with short program in Norwegian which seems to be a news broadcast. They can be identified by music box at sign off. Signal reached R 5. (RL -Worcester, Mass.) Stavenger heard at 2:30 a.m. on November 12 with setting up exercises with R 3-4 signal. (Alton Caldwell, Jr., R1319, Brockton. Mass.)

Hawaii: KGMB on 1320 kcs. at Honolulu can just barely be heard with deep fading. KGU is about an R6 on Sundays at 3 a.m. KHBC at Hilo on 1400 kcs. is the loudest of all, with an R 7-8 signal. (Jack Welsh, R790, Kingston, III.)

KGU in Honolulu on 750 kcs. is being heard very well now. (Art Parfitt, Cleveland, Ohio)

Newe Znldaa

New Zealand: 2YC on 840 kcs. at Wellington heard with peak at R4. 4YA at Dunedin on 790 kcs. heard with a signal of R4 at peaks. . . . 1YA at Auckland on 650 kcs. with a R 7-8 on peaks. This for me, is the loudest of the New Zealand stations. (Jack Welsh, Kingston, Ill.)

'Australia: New stations: 4QS at Dalby on 760 kcs. with 10000 watts, 2LT at Litgow on 1080 kcs, with 200 watts, 6TZ on 1340 kcs. at Dardanup with 500 watts, and 7DY on 1390 kcs. in Tasmania wih 200 watts. Other changes: 7ZL from 630-600 kcs., 3AR from 10000-4500 watts, 2DU from 100-200 watts 7QT from 300-500 watts, 5CL from 4000-6500 watts, 2BL from 3000-10000 watts, 5RM from 850-810 kcs., 2GB from 10001-2000 watts, 2XL from 880-950 kcs., 3ZR from 1000-2000 watts, 3BO from 300-500 watts, 1ZB from 1070-1090 kcs., 4ZB from 1220-1280 kcs., and 7UV from 1460-1250 kcs. These are changes which have taken place since the latest world list in September RADEX. (From New Zealand Radiogram)

A subscription to RADEX will not only save you money, but will insure regular delivery of your magazine direct to your home each month. Use the subscription blank on page 96.



A cleverly executed QSL card from WIAKY in E. Braintree, (Courtesy of Weston Richards).

The WORLD'S Radio Stations

(Continued From December Issue)

A complete listing of the radio stations of the world, from 500 kcs to 500,000 kcs.

The addresses and broadcasting schedules of the shortwave broadcasting stations are not shown in this list. Readers are referred to The Shortwave Broadcasting Station List for this information.

4320	GOB	T		Rugby, Gt. Britain. GPO, Armour House, St. Martin's Le Grand, London EC1. Aklavik, N.W.T. Dept. of Nat'l. Defense, Domi-
4340	VEF	G	• • • •	Aklavik, N.W.T. Dept. of Nat'l. Defense, Dominion Gov't.
4348	CGA9	CHT		Drummondville, P. Q. Canadian Marconi Co.
4355	CIA	T	••••	Barriefield, Ont. Dept. of Nat'l. Defense, Dominion Gov't.
	CZ9X IAC	$\mathbf{F}_{\mathbf{E}}$		nion Gov't. Carcross, Y. T. Northern Airways, Ltd. Pisa, Italy. Radio di Coltano Centro Aklavik, N. W. T. Same as CIA. Montreal, P. Q. Dominion Skyways, Ltd. Cambridge Bay, N.W.T. Hudson's Bay Co. Cape Dorset, Baffin Land, N.W.T. Same as CYSD.
	\mathbf{VEF}	G		Aklavik, N. W. T. Same as CIA.
	VFN CY5D	FA	• • • •	Montreal, P. Q. Dominion Skyways, Ltd.
4356	CZ4T	FÃ C T		Cape Dorset, Baffin Land, N.W.T. Same as
				CY5D.
	CZ4Y CZ5H	$^{ m T}_{ m C}$	••••	Cape Smith, N.W.T. Same as CY5D. Arctic Bay, Admiralty Inlet, N.W.T. Same as
		_	••••	CYSD.
4390	NAA	G	• • • •	Arlington, Va. Navy Time Signals Arlington, Va. Navy Time Signals
4400	NSS CPP9	č	••••	Viacha. Bolivia
4415	ZMBJ	ცცი ა	300	T.S.S. "Awatea." Union Steam Ship Co. of New
4422 1/2	W10XKG	E2	75	Viacha, Bolivia T.S.S. "Awatea." Union Steam Ship Co. of New Zealand, Ltd. Tow Boat "Alex Mackensie," Radiomarine Corp. of America.
4436	VDO	T	400	vancouver, B. C. North-West Telephone Co.,
4465	CFA2	С	••••	Jos Seymour St., Drummondville, P. Q. Can. Marconi Co., Box 1690, Montreal, P. Q. Consolidated Chibougamau Goldfields, Ltd.
4490	CZ2T	T	• • • •	Cedar Bay, P. Q. Consolidated Chibougamau
4495	CZ2B	Т		Bridge River, B. C. North-West Telephone Co
4500	CZ2B CIA	Ť	••••	Bridge River, B. C. North-West Telephone Co Barriefield, Ont. Dept. of Nat'l Defense, Domi- nion Gov't.
	CIP8	С		
	CZ5K	Fa	• • • •	Shaboygama, P. Q. Dominion Skyways, Ltd.
	VEW	င္အ	• • • •	Calgary, Alta. Same as CIA.
4505	ČFW CZP	Fa CTTTTT TT		Claydon Bay, B. C. Vanadian Fishing Co., Ltd.
4510	CY2L	ተ	• • • •	Baie Comeau, P. O. Ont. Paper Co., Ltd.
4310	CY20	Ť	••••	Chutes oux Outardes, P. Q. Ont. Paper Co.
	CY3E	T	• • • •	Clarke City, P. Q. Gulf Pulp & Paper Co.
4512	ZFS	T	••••	Salboygama, P. Q. Dominion Skyways, Ltd. Calgary, Alta. Same as CIA. Bones Bay, B. C. Canadian Fishing Co., Ltd. Claydon Bay, B. C. North-West Telephone Co. Baie Comeau, P. Q. Ont. Paper Co., Ltd. Chutes oux Outardes, P. Q. Ont. Paper Co. Clarke City, P. Q. Gulf Pulp & Paper Co. Nassau, Bahamas. Sup't. of Telegraphs, Central Bay St.
4550	WDN	С		Rocky Point, N. V. RCA Frequency Bureau
		C.		30 Rockfeller Plaza, NYC. LaPaz, Bolivia
4560 4600	CPQ4 HC2ET	B	••••	Guavaguil. Ecuador.
4610	KBAI	ř		Guayaquil, Ecuador. Ketchikan, T. A. U.S. Department of Agricul-
1010		_		ture, Forest Service.
	KBEO	FFFFFFF G	• • • •	Juneau, T. A. Same as KBAL.
	KBEP KBFM	- 1		Juneau, T. A. Same as KBAL
	KBFN	F		Petersburg, T. A. Same as KBAI.
	KBFO	· F	• • • •	Juneau, T. A. Same as KBAI.
	$\mathbf{K}\mathbf{M}\mathbf{Y}\mathbf{A}$	\mathbf{F}	• • • •	Patrol Boat "Forester." Same as KBAI.
	KMYB	F	• • • •	Patrol Boat "Ranger 10." Same as KBAI.
461 7	KYZA	G	• • • •	ture, Forest Service. Juneau, T. A. Same as KBAI. Juneau, T. A. Same as KBAI. Juneau, T. A. Same as KBAI. Petersburg, T. A. Same as KBAI. Juneau, T. A. Same as KBAI. Juneau, T. A. Same as KBAI. Patrol Boat "Forester." Same as KBAI. Patrol Boat "Ranger 10." Same as KBAI. El Paso, Texas, U. S. Immigration Border Patrol.
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	KYZD KYZE KYZF KYZG	ტეტიტიტიტიტიტიტიტიტიტიტიტიტიტიტიტიტიტიტ	• • • •	Del Rio, Texas. Same as KYZA. El Centro, Calif. Same as KYZA. Alpine, Texas. Same as KYZA. Tucson, Ariz. Same as KYZA. McAllen, Texas. Same as KYZA. Laredo, Texas. Same as KYZA. Laredo, Texas. Same as KYZA.
	KVZE	Ğ		Alpine, Texas, Same as KYZA.
	KYZG	Ğ		Tucson, Ariz. Same as KYZA.
	KYZK	G		McAllen, Texas. Same as KYZA.
	KYZL	G	• • • • •	Laredo, Texas. Same as KYZA.
	\mathbf{KYZM} \mathbf{WWMA}	č		Detroit, Wich. Same as KYZA.
	WWMB	Ğ	••••	Lynden, Wash. Same as KYZA. Detroit, Mich. Same as KYZA. Buffalo, N. Y. Same as KYZA.
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Derby Liue, Vt. Same as KYZA.
Ogdensburg, N. Y. Same as KYZA.
Rousses Point, N Y. Same as KYZA.
Rhambra, Calif. Southern Calif. Edison Co.
Anaheim, Calif. Southern Calif. Edison Co.
Anaheim, Calif. Same as KAMB.
Fairbanks, T. A. Harold Gillam
Rainy Pass District, T. A. Star Air Lines, Inc.,
Rhon River Emergency Field.
Flat, T. A. Star Air Lines.
Candle, T A. Same as KFRA.
Amapala, Honduras. Gobierno de Honduras
Fort Worth, Tex. Aeronautical Radio, Inc.
El Paso, Tex. Same as KGTF.
Phoenix, Ariz. Same as KGTF.
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Roberston, Mo. Same as KGTF.
Oklahoma City, Okla. Same as KGTF.
Tulsa, Okla. Same as KGTF.
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So. Washington, Va. Same KGTF.
Newark, N. J. Same as KGTF.
Louisville, Ky. Same as KGTF.
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Cincinnati, Ohio. Same as KGTF.
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Cincinnati, Ohio. Same as KGTF.
Berea, Ohio. Same as KBRN.
Charlotte, N. C. Same as KBRN.
Tampa, Fla. Same as KBRN.
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Corpus Christi, Tex. Aeronautical Radio, Inc.
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Muscle Shoals, Ala. Same as KBLC.
Muscle Shoals, Ala. Same as KBLC.
Greensboro, N. C. Same as KBLC.
Jacksonville, Fla. Same as KBLC.
Washington, D. C. Same as KBLC.
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                                     YVIRT
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                                                                                                                                                                      Maracaibo, Venezuela.
Campbell River, B. C. Minister of Lands for
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4775
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                                                                                                                                                                     Atlin, B. C. B. C. Provincial Police
Bralorne, B. C. Same as CY2Q
Armstrong, Ont. Ont. Dept. of
                                   CY2Q
CZC
CZ4B
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Basswood, Ont. Same as CZ4B.
Alert Bay, B. C. Same as CY2Q.
Bucaramanga, Colombia.
Triujillo, Venezuela.
Bralorne, B. C. B. C. Provincial
Atlin, B. C. Same as CZC.
Alert Bay, B. C. Same as CZC.
Barranquilla, Colombia
Caracas Venezuela
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CZC
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4785
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                                    HJ1ABB
YV5RY
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Caracas, Venezuela
Bogota, Colombia
Ibague, Colombia
Ibague, Colombia
NC-19904. Howard R. Hughes, NYC.
New York City. NBC, Inc. 30 Rockfeller Plaza
Kaena Point, Oahu, T. H. Globe Wireless, Ltd.
New York City. NBC, Inc.
W. Palm Beach, Fla. Gray Radio Co.
San Francisco, Calif. Garlynn Eng. Co.
Portable. Press Wireless, Ltd.
Palo Alto, Calif. Stanford University
4790
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4795 -
                                   H<sub>1</sub>3CAF
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4797 1/2
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WNBM
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E1
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W6XCS
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	W7XBA W7EFZ	E E1	15 60	Portable. Northern Radio Co. Seattle, Wash. Radio Labs. Inc. Portable. W. Va. Univ. Dept. of Physics. Portable. Same as W8XUK. Elgin, Ill. Time signals. Portable. Harvey Radio Labs., Inc. New York City. CBS, Inc., 485 Madison Ave Maracibo, Venezuela Manizales, Colombia. Amos, P. Q. Canadian Nat'l. Railwy Solo, Java, N.E.I. NIROM. Maracaibo, Venezuela Cucuta, Colombia Rugby, Gt. Britain G.P.O Armour House, St Martin's Le Grand, London EC1. Barquisimeto, Venezuela. Channing, Man. Wings, Ltd. Berens River, Man. Wings, Ltd. Cali. Colombia Caracas, Venezuela Caracas, Venezuela
	WEXIII.	GE GE	10 10	Portable, W. Va. Univ. Dept. of Physics.
	W9XAM	Time	25	Elgin, Ill. Time signals.
4800	W9XAM W10XJJ WCBN	GE RB		New York City. CBS, Inc., 485 Madison Ave.
4805	VVIDV	B B	501	Maracibo, Venezuela Manizales Colombia
4810	HJ6FAB CYC YDE2	B T		Amos, P. Q. Canadian Nat'l. Railwy
	YVIRU	B R	100	Maracaibo, Venezuela
4815 4820	HJ2BAB GDW	B T	600	Cucuta, Colombia Rugby, Gt. Britain G.P.O., Armour House, St.
	YV3RN	В		Martin's Le Grand, London EC1. Barquisimeto, Venezuela.
4825	YV3RN CY6P CZ3B	FA FA B	••••	Channing, Man. Wings, Ltd. Berens River Man. Wings Ltd
	HJ5EAD YV5RH	B	720	Cali. Colombia
4830 4835	HIIABE	B B T	525	
4840	CÝ2L	T T	• • • •	Baie Comeau, P. Q. Ont. Paper Co., Ltd.
	HJIABE CY2L CY2O CY2T	ŕ	••••	Baie Comeau, P. Q. Ont. Paper Co., Ltd. Chutes aux Outardes, P. Q. Same as CY2L. Berens River, Man. Man. Dept. of Mines & Resources.
	CY3E	T R	10000	Resources. Clarne City, P. Q. Gulf Pulp & Paper Co. Calcutta, India. All-India Radio Maracay, Venezuela Bogota, Colombia. Trujillo, Venezuela Calgary, Atla. Chiboygama, P. Q. Dominion Skyways, Ltd. Mud Lake, Ont. Same as CZ5K. Rouyn, P. Q. Same as CZ5K. Rouyn, P. Q. Same as CZ5K. St. Felicien, P. Q. Same as CZ5K. Guatemala City, Guat. Northwest River, Labrador. Newfoundland Skyways, Ltd.
	VUC2 YV4RX HJ3CAD YV1RZ	B	720	Maracay, Venezuela
4845 4850	HJ3CAD VV1RZ	B	720	Bogota, Colombia. Truiillo. Venezuela
4855	VBV6 CZ5K	С	• • • •	Calgary, Atla.
4860	CZ5L	FA FA FA	• • • •	Mud Lake, Ont. Same as CZ5K.
	CZ5L CZ5M CZ9U TGY	FA FA	• • • •	Rouyn, P. Q. Same as CZ5K.
	TGY	C	• • • •	Guatemala City, Guat.
	vowm	FĀ	••••	ways, Ltd.
40.05	YV1RL HJ2BAJ	B	300 751	Maracaibo, Venezuela
4865	VDO	B T	400	Santa Marta, Colombia Vncouver, B. C. North-West Telephone Co., 768 Seymour St.
487 0	CIA	T	••••	Vncouver, B. C. North-West Telephone Co., 768 Seymour St., Barriefield, Ont. Dept. of Nat'l. Defense, Domi- nion Gov't
	VEW YV2RN	C B B	••••	Calgary, Atla.
4875	HJ6FAH ZTD		600	Armenia, Colombia
4878 4880	VDQ	B T	••••	San Cristobal, Venezuela Armenia, Colombia Durban, Union of S. Africa. Cedar Bay, P. Q. Telephone Centre du Lac St. Jean.
	YUB2	В	10000	Bombay, India. Ciudad Bolivar, Venezuela
4885	YV6RU HJ4DAP	B	501	
4890	HRK	B C B	200	Tegucigalpa, Honduras. Gobierno de Hond. Maracaibo, Venezuela Bogota Colombia
4895	YV1RX HI3CAH	B	720	Bogota Colombia
4900	HJ3CAH YV6RT YV1RY	B B	• • • •	Ciudad Bolivar, Venezuela
4910 4917 ½	WAZM	FA B	40	Madison, Wis. Aeronautical Radio, Inc.
4920	VUM2	В	100 00	Coro, Venezuela Madison, Wis. Aeronautical Radio, Inc. Madras, India Caracas, Venezuela Valencia, Venezuela Phoenix, Ariz. Aeronautical Radio, Inc. Albany, N. Y. Same as KGUP. Caracas, Venezuela
4930	YV4RP	B FA	• • • •	Valencia, Venezuela Phoenix Ariz Aeronautical Radio Inc
4837 ½	YV4RP KGUP WSDM YV5RO	FA	••••	Albany, N. Y. Same as KGUP.
4940 4 947 <u>%</u>		FA	• • • •	Albany, N. Y. Same as KGUP. Caracas, Venezuela Phoenix, Ariz. Aeronautical Radio, Inc. Albany, N. Y. Same as KGUP. Valencia, Venezuela Phoenix, Ariz. Aeronautical Radio, Inc. Albany, N. Y. Same KGUP. Delhi, Indi. Caracas, Venezuela
4950	WSDM YV4RO KGUP WSDM	FA B		Valencia, Venezuela
4952 1/ 2	KGUP WSDM	FA FA	• • • •	Phoenix, Ariz. Aeronautical Radio, Inc. Albany, N. Y. Same KGUP.
4960	VIIII	B	10000	Delhi, Indi.
4967 1/2	ÝV5RS KGUP	FA	50	Caracas, Venezuela Phoenix, Ariz. Aeronautical Radio, Inc. NC-14947. Lt. Col. G. H. Hutchinson, Balti-
	KHAGH	A	50	more, Md.
4975	WSDM GBC_	FA T B	5000	Albany, N. Y. Same as KGUP. Rugby, Gt. Britain.
4980	GBC YV1RJ YV5RT YV3RX	B	• • • •	Coro, Venezuela.
4990	ŶŶ3ŔX	а	• • • •	Caracas, Venezuela Barquisimeto, Venezuela
50 00	TFL	С	••••	Reykjavik, Iceland

	wwv	G		Beltsville, Md. Standard frequency transmis- sions. National Bureau of Standards, Washing-
5010 5020 5025 5032 1/2	YV5RK YV5RM YV4RO ZFA KAIK KAIL	B B T FA	1500 50 50	ton, D. C. Caracas, Venezuela, Caracas, Venezuela Puerto Cabello, Venezuela Hamilton, Bermuda Sitka, Alaska. Marine Airways
5033 5040 5042 1/2	KANH WDI YV5RN KAZV KBOF	FA FA B FA FA	20000 100 50	Sitka, Alaska. Marine Airways Chichagoi, T. A. Same as KAIK. Juneau, T.A. Same as KAIB. Ocean Gate, N. J. Am. Telephone & Teleg. Co. Caracas, Venezuela Fairbanks, T. A. Harold Gillam Rainy Pass District, T. A. Star Air Lines, Inc., Rhon River Emergency Field
5077 5110	KFRA KFRD WCN VJI	FA FA T	100 100 80000	Rhon River Emergency Field Flat, T. A. Star Air Lines, Inc. Candle, T. A. Same as KFRA. Lawrenceville, N. J. Cloncurry, Osld., Australia. Australian Airways Medical Service Red Bluff, Calif. Aeronautical Radio, Inc.
5122 1/2 5130	KRBD HRE	FA C	400 400 Bakarar	regucigalpa, rionduras. Propici Radio Tele-
5135	KGHX" HGHZ HGPJ KHPF KNFE KOHM	ZP ZP ZP ZP ZP ZP	100 500 500 500	Santa Ana, Calif. Orange County Little Rock, Ark. City of L. R. Beaumont, Tex. (Days only). City of B. Jefferson City, Mo. State of Mo.
5137 1/2	WPGQ WPHN KADY KAJX KAKR KATP KBNM	ZP ZP TT TT TT C	500 40 18 25	Columbus, Ohio. State of Ohio Tampa, Fla. (Days only). City of T. Petersville, Alaska. (Days only). W. N. Cuddy. Holy Cross, T. A. Catholic Society of Alaska Candle, T. A. Candle Community Radio Assn. Kako Landing, T. A. olel S. Ramstad
5138	KBNM KALY		25 25	Platinum, T. A. (Days only). Alaska Traders. Egavik, Alaska. (Only between 6 pm and 6 am, PST). R. B. Julian.
5140	KAMX KANR KASI KGHP KGHX KGHZ KHPF KHPG	T ZP ZP ZP ZP ZP	40 20 20 100 500 200	Portable, days only. State of Ore., Police & Hikhway Depts. Columbus, Ohio. State of Ohio Tampa, Fla. (Days only). City of T. Petersville, Alaska. (Days only). W. N. Cuddy. Holy Cross, T. A. Catholic Society of Alaska Candle, T. A. Candle Community Radio Assn. Kako Landing, T. A. olel S. Ramstad Platinum, T. A. (Days only). Alaska Traders. Egavik, Alaska. (Only between 6 pm and 6 am, PST). R. B. Julian. Utopia Creek, T. A. (Days only). L. McGee Kalskag, T. A. (Days only). Fred H. Whitcher Allakaket, T. A. (Days only). Sam Dubin Lawton, Okla. City of L. Santa Ana, Calif. Orange County Little Rock, Ark. City of L. R. Jefferson City, Mo. State of Mo. Kirkwood, Mo. (Days only). State of Mo. Highway Patrol Beaumont, Tex. (Days only). City of B.
	KGPJ KNFE KOHM	· ZP ZP ZP	500 500	Duluth, Minn. (Day only). City of D.
	KQBX WPGG WPGQ WPHC WPHN WPHN WPHT WQPJ WQPZ	ZP ZP ZP ZP ZP ZP ZP ZP	300 300 300 300 500 300 250	Highway Depts. Portable, Gays only. State of Ore. Police & Highway Depts. Portable. State of Wash. Findlay, Ohio. Same as WPGG. Massillon, Ohio. Same as WPGG. Wilmington, Ohio. Same as WPGG. Tampa, Fla. (Only only). City of T. Cambridge, Ohio. Same as WPGG. French Village, Ill State of Ill. Portable. State of Ill. Dept of Public Works and Bldg., Div. of Highway, Bureau of State Highway Maintenance Police.
5145 5146 5167 ½	HRU HRX PMY KIBZ KIOJ	C B T T	400 400 1000 	Highway Maintenance Police. Puerto Castilla, Honduras. Tela Railroad Co. La Lima, Honduras. Same as HRU. Bandoeng, Java, N.E.I. Waterfall, Alaska. Nakat Packing Corp. Stuyahok Landing, T.A. W. R. E. Moore. Waterfall, T.A. Same as KIBZ. Denver, Colo. Aeronautical Radio Inc. Garden City, Kans. Same as KFCA. Wichita. Kans. Same as KFCA.
5172 1/2	KLA KFCA KRGG	T FA FA	1000	Watertall, T.A. Same as KIBZ. Denver, Colo. Aeronautical Radio Inc. Garden City, Kans. Same as KFCA.
5195	KTCW KGHP KGHX KGHZ KGPJ KHPF KHPG	FA ZP ZP ZP ZP ZP ZP	1000 100 500 500	Garden City, Kans. Same as KFCA. Wichita, Kans. Same as KFCA. Lawton, Okla. City of L. Santa Ana, Calif. Orange County Little Rock, Ark. (Days only). City of L. R. Beaumont, Tex. (Days only). City of B. Jefferson City, Mo. (Days only). State of Mo. Kirkwood, Mo. (Days only). State of Mo. Highway Patrol Duluth. Minn. City of D.
	KNFE	ZP	200 500	Highway Patrol Duluth, Minn. City of D.

	конм	ZP		Portable, days only. State of Ore., Police &
			50	Highway Depts. Portable. State of Wash. Findlay, Ohio. State of Ohio.
	KQBX WPGG	ZP ZP	300	Findlay, Ohio. State of Ohio.
	WPĞŎ WPHC	7P	300	Columbus, Ohio. Same as WPGG. Massillon, Ohio. Same as WPGG.
	WPHK	ZP	300	Wilmington, Ohio. Same as WPGG.
	WPHN	ZP ZP ZP ZP	500	Tampa, Fla. (Days only). City of T.
	WPHT WOPJ YAH	ZP	300 ; 250	Wilmington, Ohio. Same as WPGG. Tampa, Fla. (Days only). City of T. Cambridge, Ohio. Same as WPGG. French Village, Ill. State of Ill.
5200 5207 1/2	YAH KAEW	Ç	••••	Kabui, Aighanistan
3207 72	KAGN	ŽP C T	50	Umnak, Alaska. Territory of Alaska Portable. Alaska Aeronautics and Communica- tions Commission
	KAGO	T T T T	10	Portable Same as KAGN
	KAJJ KAJU KAOF KAXP	$\mathbf{\dot{T}}$	• • • •	Atka, T. A. Same as KAEW. Atku, T. A. Same as KAEW. Unalaska, T. A. Same as KAEW. St. Michael, T. A. (Days only). Northern Com-
	KAOF	$_{\mathrm{T}}^{\mathrm{T}}$	10	Unalaska, T. A. Same as KAEW.
	KAAP	1	10	
	KBML	T	84	Ophir, Esperanto, T. A. Three Miners, Inc. Platinum, T. A. (Days only). Alaska Traders. Portable. Same as KAGN. Portable. Same as KAGN. Shennandoah Nat'l. Park, Va. Nat'l Park Service, U.S. Dept. of Interior. Wundham, Australia, Australian Airways Medi-
	KBNM KEXO	T T T G	25 50	Platinum, I. A. (Days only). Alaska I raders. Portable. Same as KAGN.
F0071/	KEXP	Ť	50	Portable. Same as KAGN.
5287 1/2	WSEK	G	• • • •	ice, U.S. Dept. of Interior.
5300	VK8SI	•••	• • • •	Transfer and trans
5310	ZIK3 KAFF	$\mathbf{F}\mathbf{A}$	50	Belize, British Honduras Sioux Falls, S. Dak, Aeronautical Radio Fairbanks, Alaska, Harold Gillam NC-552-N. Peck & Rice Airways, Bethel, T. A. NC-10795, Star Air Lines. NC-18445 Raymond I. Peterson, Bethel, T. A. Sheridan, Wyo. Same as KAFF. Augusta, Ga. Same as KAFF. Tels Honduras Tale R. R. Co.
3310	KAZV	FA	100	Fairbanks, Alaska. Harold Gillam
	KHCFI KHCIS	Ā	30 30	NC-552-N. Peck & Rice Airways, Bethel, T. A.
	KHCRW KNCN	А	30	NC-18445 Raymond I. Peterson, Bethel, T. A.
	KNCN WARG	FA FA	300 45	Sheridan, Wyo. Same as KAFF.
5330	H R C2	Ĉ	400	Tela, Honduras. Tela R. R. Co.
5342 5350	HRZ HRJ	FA C C C	500 100	Guanaja, Honduras. Gobierno de Honduras
5360	VK8UB			Tela, Honduras. Tela R. R. Co. Guanaja, Honduras. Gobierno de Honduras Utila, Honduras, Gobierno de Hond. Kalgoorlie, W.A., Aust. Australian Airways Medical Service. Madison, Wis. Aeronautical Radio, Inc. Charlie Lake, B. C. United Air Transport Ltd. Alice Springs, S.A., Aust. Australian Airways Medical Service.
537 7 1/2 5390	WAZM CY3O	$\mathbf{F}\mathbf{A}$	40	Madison, Wis. Aeronautical Radio, Inc.
5390 5410	CY3O VK8US	$\mathbf{F}\mathbf{A}$	• • • •	Charlie Lake, B. C. United Air Transport Ltd.
		•••	••••	Medical Service.
5420 5440	HRI2 HRV	CCCG	500 100	Tegucigalpa, Honduras. Rosario Mining Co. La Ceiba, Honduras. Gobierno de Hond. San Pedro Sula, Honduras. Gobierno de Hond. Aklavik, N.W.T. Dept. of Nat'l Defense, Domi-
5440 5450	HRP	Č	500	San Pedro Sula, Honduras. Gobierno de Hond.
54521/2	VEF	G	••••	Aklavik, N.W.T. Dept. of Nat'l Defense, Domi- nion Gov't.
6470	VO 4 2			nion Gov't. Aklavik, N.W.T. Same as above. Jesselton, Brit. North Borneo Hankow, China Toncontin Honduras, Pan American Airways
5480	VQA3 XTL	• • •	••••	Hankow, China
5485 5510	HDR PWH	FA	14	Toncontin, Itoniquius, I da Ilmerican Ilmays
5520	KHCIV	Ä	100	NC-18997. American Export Airlines.
5565	WBF WBF KAZV KHCKB KHCRW	A CT MR FA	• • • •	Hingham, Mass. Tropical Radio Teleg. Co.
5572 ½	KAZV	FA	100	Fairbanks, Alaska, Harold Gillam
	KHCKB	A A	30 30	NC-16159. James M. Dodson, Fairbanks, T. A.
	KKHII	$\mathbf{F}\mathbf{A}$	400	Red Bluff, Calif. Aeronautical Radio, Inc.
5582 1/2	KNCN KRBD KRCG	FA FA	300 400	Sheridan, Wyo. Aeronautical Radio, Inc.
	KRCG	$\mathbf{F}\mathbf{A}$	400	Garden City, Kans. Same as KNCN.
5590	KRCW PWH	$\mathbf{F}\mathbf{A}$	1000	Abrolhos, Brazil NC 18997. American Export Airlines. Hingham, Mass. Tropical Radio Teleg. Co. Hingham, Mass. Tropical Radio Teleg. Co. Fairbanks, Alaska. Harold Gillam NC 16159. James M. Dodson, Fairbanks, T. A. NC 18445. Raymond Peterson, Bethel, T. A. Red Bluff, Calif. Aeronautical Radio, Inc. Sheridan, Wyo. Aeronautical Radio, Inc. Red Bluff, Calif. Same as KNCN. Garden City, Kans. Same as KNCN. Wichita, Kanss. Same as KNCN. Abrolhos, Brazil
5592 1/2 5602 1/2	KRBD	FA	400	Abrolhos, Brazil Red Bluff, Calif. Aeronautical Radio
5602 1/2	KHCNY	A	20	Red Bluff, Calif. Aeronautical Radio NC-21107. All American Aviation, Inc., Wil- mington, Del.
	KHCOR KHCOS WSJI	A A	50 50	mington, Del. NC-21750. Canadian-Colonial Airways, Inc. NC-21750. Same as KHCQR. Elkins, W. Va. Aeronautical Radio, Inc.
	WSJI	$\mathbf{F}\mathbf{A}$	50	Elkins, W. Va. Aeronautical Radio, Inc.
56121/2	KHCNY	A	20	NC-21107. All American Aviation, Inc., Wilming-
E 6 1 E	WSDJ HR1KC	FA	50	Elkins, W. Va. Aeronautical Radio, Inc.
5615	HR2KC	FA FA	100 100	San Pedro Sula, Honduras, T.A.C.A.
5620	HR3KC HR13	FA	100 5 00	Toncontin, Honduras, T.A.C.A.
,5020	111713	C	300	ton, Del. Elkins, W. Va. Aeronautical Radio, Inc. LaCeiba, Honduras. T.A.C.A. San Pedro Sula, Honduras. T.A.C.A. Toncontin, Honduras, T.A.C.A. Rey del Oro, Juticapla, Honduras. Yoy. Mc Cartney.
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·	HRI4	c	5 00 •	Agua Fria, Honduras. Cia. Mineral de Agua Fria.
5622 1/2	KANG KANU	$\mathbf{F}\mathbf{A}$	50 50	Juneau, Alaska. Alaska Air Transport, Inc.
	KANU KAXT	FA FA	30	Kimshan Cove, T.A. Same as KANG.
	KAYP	FA	50	Ketchikan, T. A. Same as KANG.
	KAZV KBOF	FA FA	100 · 50 ·	Fria. Juneau, Alaska. Alaska Air Transport, Inc. Kimshan Cove, T.A. Same as KANG. Sitka, T.A. Same as KANG. Ketchikan, T. A. Same as KANG. Fairabnks, T.A. Harold Gillam Rainy Pass District, T.A. Star Air Lines, Inc., Rhon River Emergency Field. Flat, T.A. Star Air Lines, Inc. Candle, T. A. Same as KFRA. Lizienski Inlet, T.A. Same as KANG. Petersburg, T. A. Same as KANG. Bousquet, P. Q. General Airways, Ltd. NC-21107. All American Aviation, Inc., Wilmington (Del.
	KFRA	$\mathbf{F}\mathbf{A}$	100	Flat, T.A. Star Air Lines, Inc.
	\mathbf{KFRD} \mathbf{KFWC}	FA FA	100 30	Candle, T. A. Same as K.F.R. Lizienski Inlet T.A. Same as KANG.
	KBJW CY4A	$\mathbf{F}\mathbf{A}$	30 '	Petersburg, T. A. Same as KANG.
5630 5632 1/ 2	CY4A KHCNY	FA A	20	Bousquet, P. Q. General Airways, Ltd NC-21107. All American Aviation, Inc., Wilming-
J002 /2		- ' i - 3/1/1	111/1/19	ton(Del.
	KHCOR	A A	50 50	NC-21750. Canadian-Colonial Airways, Inc. NC-21750. Same as KHCQR.
	WSDJ	FA	5 0 ,	Elkins, W. Va. Aeronautical Radio
5642 1/2	KHCOR KHCOS WSDJ CYG VFBJ	FA FA	• • • •	Coleman B C Dept of Transport
5660	HRR	Ĉ	200	NC-21750. Same as KHCQR. Elkins, W. Va. Aeronautical Radio Cranbrook. B. C. Trans Canada Air Lines. Coleman, B. C. Dept. of Transport. Santa Rosa de Copan, Honduras. Gobierno de
5652 ½	KAXO	FA	30 -	Tolar Lodge Aleska Aleska Assessmentical and
	KAZV	FA	100 ·	Fairbanks, T.A. Harold Gillam
	KBJW KBLC	FA	30	Petersburg, T.A. Alaska Air Transport, Inc.
	KBLC KBOF	FA FA	50 50	Rainy Pas District, T.A. Star Air Lines, Rhon
	KBUF	FA	30	River Emergency Field.
	KBRN	FA	3000 · 30 ·	Valdez, T.A. Lyle Airways
	KFRG KHCFI	FA A	30 '	NC-552-N. Peck & Rice Airways, Bethel, T.A.
	KHCFI KHCIS KHCNY	Ą	30 2 0 ,	NC-10795. Star Air Lines, Inc. NC-21107. All American Aviation. Wilmington.
		Α	_	Communications Commission Fairbanks, T.A. Harold Gillam Petersburg, T.A. Alaska Air Transport, Inc. Corpus Christi, Tex. Aeronautical Radio. Rainy Pas District, T.A. Star Air Lines, Rhon River Emergency Field. Brownsville, Tex. Same as KBLC. Valdez, T.A. Lyle Airways NC-552-N. Peck & Rice Airways, Bethel, T.A. NC-10795. Star Air Lines, Inc. NC-21107. All American Aviation, Wilmington, Del. NC-21750 Canadian-Colonial Airways, Inc.
	KHCOR KHCOS KHCRW WAHY WAHZ	A	50 · 50	NC-21750 Canadian-Colonial Airways, Inc.
	KHCOS	A A	30	NC-18445. Raymond Peterson, Bethel, T. A.
	WAHY	A FA FA FA	1000 50	Birmingham, Ala. Same as KBLC.
	WARS	FA	50	Muscle Shoals, Ala. Same as KBLC.
	WARS WATE WATE	FA FA FA	200 200	Tallahassee, Fla. Same as KBLC.
	WELL	FA	50	Beaumont, Tex. Same as KBLC.
	WGSA WPAE	FA FA	50 50	Philadelphia, Pa. Same as KBLC.
	WSJM	FA C	400 100	Tampa, Fla. Same as KBLC.
5660 5662 1/ 2	HRI KAZV	FĂ	100	Fairbanks, Alaska. Harold Gillam
3002 /2	KBOF	$\mathbf{F}\mathbf{A}$	50·	NC-18445. Raymond Peterson, Bethel, T. A. Memphis, Tenn. Same as KBLC. Birmingham, Ala. Same as KBLC. Muscle Shoals, Ala. Same as KBLC. Pensacola, Fla. Same as KBLC. Tallahassee, Fla. Same as KBLC. Beaumont, Tex. Same as KBLC. Greenville. S. S. Same as KBLC. Greenville. S. S. Same as KBLC. Greenville, Pa. Same as KBLC. Tallahassee, Fla. Same as KBLC. Tampa, Fla. Same as KBLC. San Juancito, Honduras. Rosario Mining Co. Fairbanks, Alaska. Harold Gillam Rainy Pass District, T.A. Star Air Lines, Rhon River Emergency Field. Flat, T.A. Star Air Lines, Inc. Candle, T.A. Same as KFRA. Red Bluff, Calif. Aeronautical Radio, Inc. Sandakan, Briti. North Borneo Grand Falls, Newfoundland. Nfld. Airport, Squadron Leader H. A. L. Pattison.
	KFRA	FA FA	100 100	Candle, T.A. Star Air Lines, Inc.
	KFRD KRBD VQB2	FA	400	Red Bluff, Calif. Aeronautical Radio, Inc.
5670 5672.4	VOB2 VOAC	FΑ	• • • •	Grand Falls, Newfoundland, Nfld, Airport,
30/2.4				Grand Falls, Newfoundland, Nild. Airport, Squadron Leader H. A. L. Pattison. Syracuse, N. Y. Aeronautical Radio, Inc. Knoxville, Tenn. Same as WAES. Dayton, Ohio. Same as WAES. Newark, N. J. Same as WAES. Boston, Mass. Same as WAES. Nashville, Tenn. Same as WAES.
5672 1/2	$egin{array}{c} \mathbf{WAES} \\ \mathbf{WAEV} \end{array}$	FA FA	• • • •	Knoxville. Tenn. Same as WAES.
	337 A TO CO	$\mathbf{F}\mathbf{A}$	1000	Dayton, Ohio. Same as WAES.
	WSDC	FA FA		Boston, Mass. Same as WAES.
	WSDH	$\mathbf{F}\mathbf{A}$	• • • •	Nashville, Tenn. Same as WAES.
	WSDC WSDD WSDH WSDI WSDM	FA FA		Albany, N. Y. Same as WAES.
	WSDO WSDP WSDQ	$\mathbf{F}\mathbf{A}$		Buffalo, N. Y. Same as WAES.
	WSDP	FA FA	••••	Berea, Ohio, Same as WAES.
5692	HRD	$\mathbf{F}\mathbf{A}$	14	Toncontin, Honduras. Pan American Airways
5692 1/2	KANP KBKD	FA FA	100 100	Portable. Aeronautical Radio. Inc.
	KHAGH	Ä	. 50	NC-14947. Lt. Col. G. R. Hutchinson, Balti-
	77.10.4	TEΑ	20	Nashville, Tenn. Same as WAES. Cincinnati, Ohio. Same as WAES. Albany, N. Y. Same as WAES. Buffalo, N. Y. Same as WAES. Buffalo, N. Y. Same as WAES. Port Columbus, Ohio. Same as WAES. Berea, Ohio. Same as WAES. Toncontin, Honduras. Pan American Airways Seattle, Wash. Pan American Airways, Inc. Portable. Aeronautical Radio, Inc. NC-14947. Lt. Col. G. R. Hutchinson, Baltimore, Md. Tanana, Alaska, Pacific Alaska, Airways, Inc.
	KIQA VEP Z	FA FA		Tanana, Alaska. Pacific Alaska Airways, Inc. Burwash Landing, Y.T. Dominion Gov't. Baltimore, Md. Same as KANP.
E700	WPAF CPP2	FA	• • • •	Baltimore, Md. Same as KANP.
5700 57 05	CFU	\tilde{r}	٠٠٠٠	Viacha, Bolivia Annable, B. C. Consolidated Mining & Smelting Co. of Canada, Ltd.
	4	•		Co. of Canada, Ltd.

5707 1/2	CZ5Y CZ7H WAJE	T T FA	300	Anyox, B. C. Same as CFU. Cedar Creek, B. C. Same as CFU. Birmingham, Ala. (300 to 600 atts; days only). Aeronautical Radio, Inc.
	WARG	FA	45	Augusta, Ga. Same as WAJE.
	WEEA	FA		Atlanta, Ga. Same as WAJE.
	WEEC	FA		Charleston, S. S. Same as WAJE.
5713	TGS	${f B}$	200	Guatemala City, Guat.
5730	JVV	T	10000	Nazaki, Japan. Kokusai Denwa Kaisha, Osaka
	-			Bldg., Tokyo.
5735	HC1PM	${f B}$		Quito, Ecuador
5737 1/2	CPQ3	С		LaPaz, Bolivia
5750	CP2ANB	С		Quechisla, Bolivia.
	HRU2	В С С	400	Puerto Castilla, Honduras Tela R. R. Co.
		(To	he conti	nued in the next issue)

(To be continued in the next issue)

Explanation of the Third Column Symbols:

```
SEM—Special emergency.
MF—Marine fire.
MR—Marine Relay.
   -Aircraft.
   -Broadcast.
                                                                            -Marine Relay.
     Commercial Telegraph.
                                                                     PR-Press relay.
    _Forestry.
   -Government.
                                                                     RB-Relay broadcast.
                                                                     FAC—Facsimile.
TV—Television video.
TA—Television audio.
P—Poince.
S—Ship.
T-Radio Telephone.
                                                                     CC—Coastal Telegraph.
                                                                     NCE-Non-commercial educational.
FA-Aeronautical (ground). GEO-Geophysical.
                                                                    CH—Coastal harbor,
CHC—Coastal harbor telegraph,
CHT—Coastal harbor telephome.
RC—Circular radiobeacon.
RD—Directional radiobeacon.
RG—Direction finding station.
LH—Lighthouse
                                                                     E1
                                                                              Experimental.
      -Radio range station.
                                                                     \mathbf{E}_{2}
MP-Municipal police.
SP—State police.
ZP—Zone police.
                                                                     E3
                                                                     GE—General Experimental.
SE—Special Experimental.
EM-Emergency.
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All the Mobile and Portable-Mobile police stations installed in police automobiles bear the same call letters as the Fixed police broadcast station to which they report, and in many cases they work on the same frequency. We list herewith the Fixed station, and in parentheses we show the number, and the power of the Portable and Portable-Mobile units attached to that station, as for example:

WRHD

250

Louisville, Ky. (2 units-12 w).

NEW YEAR

MP

(Continued From Page 8)

you move the set to a new location, rotate it around its base until it is in a position that gives the loudest signal.

Why are people using A. C.-D. C. sets when D. C. is not available in most places These are universal sets that work on either alternating or direct current. They were developed to fill a need where direct current is used, or when a set was carried about from place to place and apt to meet up with either kind of current. Many people are buying such sets when there is no need, since they may never encounter direct current. How-

ever, the universal set costs less to build than the A. C. set, and it works very well. The lower cost of these receivers has made them popular with listeners, especially as auxillary sets.

DX SPECIAL

A special program will be dedicated to the Virginia Chapter of The Radex Club on January 9, from station WOPI, 1500 kcs., Bristol, Tenn. Broadcast during their regular frequency check, the program will be from 4:15 to 4:30 am, EST. All members of The Radex Club are requested to listen in and send their reports to Bob Smith, Chief Engineer of WOPI.

Applications to the FCC

CP-Construction permit. mod .- modification. lic.—license. ltd.—limited time. Itd.—Imited time.
unitd.—unlimited time.
S. H.—specified hours.
KDON, Monterey, CP 500(1), 1440 kcs.
KEEN, Seattle, CP 1370 kcs. to 1420 kcs.
KERN, Bakersfield, CP 1380 kcs., 1000 w.
KEX, Portland, CP 1160 kcs. unitd.
KFBB, Great Falls, mod. of lic. for 900 kcs., KFIO, Spokane, CP 950 kcs., 1 kw. unitd. KFNF, Shenandoah, mod. of CP to move to Council Bluffs. to Council Bluis.
KFPW, Ft. Smith, CP 1370 kcs.
KFRU, Columbia, to 1370 kcs., 250 w. unltd.
KFYO, Lubbock, to 1380 kcs., 500(1).
KGDM, Stockton, 1530 kcs., 1 kw. unltd.
KMAC, San Antonio, CP 930 kcs., 1000 w. KOH, Reno, CP 630 kcs., 1 kw. unltd.
KOVC, Valley City, CP 1340 kcs., 500(1).
KOY, Phoenix, mod. of lic. for 550 kcs.
KRBC, Abilene, CP 940 from 1420; 1 kw.
KRMC, Jamestown, CP 900 kcs., 1 kw.
KROC, Rochester, CP 920 kcs., 500(1) unltd.
KRRV, Sherman, CP 880 kcs., 1 kw. unltd.
KSD, St. Louis, CP 630 kcs.
KSEI, Pocatello, CP 600 kcs., 1 kw. unltd. KTBS. Shreveport, CP 620 kcs., 1000(5) unltd. KUTA, Salt Lake City, CP 570 kcs., 1 kw. KWK, St. Louis, CP 630 kcs.
KXL, Portland, CP 730 kcs., 10 kw. unltd.
KXOK, St. Louis, CP 630 kcs., 1000(5).
KXYZ, Houston, CP 710 kcs; 10 kw. KYOS, Merced, CP 1390 from 1040; 500(1) unltd. WAPI, Birmingham, CP 1050 kcs., WCAD, Canton, CP Watertown, N. Y. WCOL, Columbus, to 1200 kcs., 250 w. unltd. WGBF, Evansville, CP 1250 kcs., 1000(5) WGRC, New Albany, CP 880 kcs., 250 w. unltd. HA, Madison, CP 670 kcs. 50 kw. unltd. (facilities of WMAQ). WHA. WIBC, Indianapolis, mod. lic. 1130 from 1050; 1 kw. WJJD, Chicago, 10000(25) unitd. CP 1040 from 1130: WKAQ, San Juan, CP 620 kcs. 5 kw. WLAP, Lexington, CP 1270 kcs. 1 kw. unltd. WMAZ, Macon, CP 1240 kcs. 1 kw. unitd. WMBC, Detroit, CP 600 kcs. WPG, Atlantic City, CP New York (facilities WBIL and WOV). WPRP, Ponce, mod. lic. 250 unitd; CP 1480 from 1420; 1000(5) unitd. WREN, Lawrence, CP Kansas City. WROL, Knoxville, CP 620 kcs. 500(1) WROL, Knoxville, CP 620 kcs. 500 WSBT, South Bend, CP 930 kcs. 500 WSFA, Montgomery, CP 1410 kcs. 1 kw. WSPR, Springfield, CP 1240 from 1140; 500 w unltd. WTCN, Minneapolis, CP 710 kcs. 10 kw. unltd. WTJS, Jackson, CP 1380 from 1310; 1 kw.; mod. liefl 250 unltd.

WWVA, Wheeling, CP 1140 from 1160; 50 Applications for New Stations Albemarle, lbemarle, N. C., Albemarle Brdcstg. Station, 1370 kcs. 100 w. days. Arlington, Va., Arlington Brdcstg. Corp., 1420 kes 250 unltd. Ashland, Wis., WJMS, Inc., 1370 kcs. 100 w. unltd. unitd.
Asheville, N. C., Publix-Bamford Theaters, Inc., 1430 kcs. 1 kw. unitd.
Atlantic City, N. J., Atl. City Brdcstg. Co., 1100 kcs. 5 kw. sharing with WBIL.
Atlantic City, N. J., Neptune Brdcstg. Corp., 1420 kcs. 100(.25).
Bainbridge, Ga., Post Search Light Co., 1500 kcs., 100(.25).
Bellingham, Wash., Bell Brdcstg. Co., Inc., 1200 kcs. 100(.25).
Birmingham, Ala., B. News Co., 590 kcs. 1 kw. unitd. kw. unltd. Boston, Mass., Mayflower Brdcstg. Corp., 1410 kcs. 500(1). Bridgeport, Conn., Chas. Greenblatt, 1190 kcs. 250 w. ltd. Bridgeport, Conn., Harold Thomas, 1420 kcs. 250 unltd. Briggeport, Conin., riaroid inomas, 1420 kcs. 250 unlid.

Brownwood, Tex., Brown County Brdcstg. Co., 990 kcs. 1 kw. days.

Burlington, Iowa, Burlington Brdcstg. Co., 1420 kcs., 100 D.

Burlington, N. C., Burlington Brdcstg. Co., 1420 kcs., 250 unlid.

Co., 1420 kcs., 250 unlid.

Cedar Rapids, Iowa, The Gazette Co., 1420 kcs. 100 w. unlid.

Cedar Rapids, Iowa, The Gazette Co., 1210 kcs. 100(25).

Cleveland, Ohio, Cuyahoga Valley Brdcstg. Co., 1500 kcs. 100 w. days.

Clinton, Iowa, Clinton Brdcstg. Corp. Columbus, Miss., Birney Imes, 1370 kcs. 100(25) unlid.

Ely, Nev. Eastern Nev. Brdcstg. Co., 1500 kcs. 100 days. Ely, Nev. Eastern Nev. Brdcstg. Co., 1500 kcs. 100 days.

Erie, Pa., Presque Isle Brdcstg. Co., 1500 kcs. 100(.25) unltd.

Everett, Wash., Cascade Brdcstg. Co., 1420 kcs. 100(.25) unltd.

Ft. Myers, Fla., Palm Radio Co., 1210 kcs., 250 unltd.

Greenville, Tex., Hunt Brdcstg. Assn., 940 kcs., 1 kw D.

Hannibal, Mo., Courier Post Pub. Co. kcs., 1 kw D.

Hannibal, Mo., Courier Post Pub. Co.

High Point, N. C., High Point Brdestg. Co.,

1120 kcs., 250 unltd.

Jacksonville, Ill., Stephenson, Edge & Korsmeyer, 1370 kcs., 250 unltd.

Kosciusko, Miss., P. K. Ewing, 1500 kcs.,

100(.25). unltd.

Las Vegas, Nev., Las Vegas Brdestg. Co.,

1420 kcs. 100(.25).

Las Vegas, Nev., Nev. Brdestg. Co., 1370

Las 100(.25) unltd. 1420 kcs. 100(.25).

Las Vegas, Nev., Nev. Brdcstg. Co., 1370 kcs. 100(.25) unltd.

Logan, W. Va., Frey and Greever, 1200 kcs. 100 days.

Lookout Mt., Ga., Lookout Mt. Corp., of Ga., 1370 kcs., 100(.25).

Louisville. Ky., Gateway Brdcstg. Co., 880 kcs. 500 unltd.

Martinsville, W. Va., M. Brdcstg. Co., 1420 kcs. 250 days.

Martinsville, W. Va., Patrick Henry Brdcstg. Co., 1420 kcs. 100(.25).

Marysville, Calif., Yuba-Sutter Broadcasters, 1320 kcs. 250 unltd.

Miles City, Mont., E. E. Krebsbach 1310 kcs., 100(.25). Miles City, Mont., Star Printing Co., 1310 kcs., 250 unltd.
Minneapolis, Minn., Independent Merchants Brdcstg. Co., 1300 kcs., 1 kw. unltd.
Norfolk, Va., Colonial Brdcstg. Corp., 1370 kcs. 100(.26).
North Sacramento, Calif., Grant Union High School District, 1530 kcs., 1 kw.
Olney, Ill., Olney Brdcstg. Co., 1210 kcs. 100(.25) unltd.
Opelika, Ala., Opelika-Auburn Brdcstg. Co., 1370 kcs. 100(.25).
Orlando, Fla., Hazlewood Co., 1390 kcs. 1 kw. unltd.
Pawtucket, R. I., Pawtucket Brdcstg. Co., 1390 kcs. 1 kw. unltd.
Phoenix, Ariz., M. C. Reese, 1200 kcs. 100(.25) unltd.
Phoneo, P. R., Portorican American Brdcstg. Co., 1340 kcs. 1 kw. unltd.
Riverside, Calif., Brdcstg. Corp., 1440 kcs. 250 unltd.
Riverside, Calif., Richard T. Sampson, 1390 kcs. 1 kw.
Riverside, Calif., Richard T. Sampson, 1390 kcs. 1 kw.
Riverside, Calif., Mollin Investment Co., 1390 kcs., 500 w. D.
Rochester, N. Y., Edward J. Doyle, 1270 kcs. 500 days.
Salina, N. Y., Sentinel Brdcstg. Corp., 620 kcs. 1 kw. unltd.
Sandusky, Mich., Thumb Brdcstg. Co., 880 kcs. 1 kw. unltd.
San Diego, Calif., Jack Hazard, 1430 kcs., 500 w. unltd.
San Juan, P. R., Enrique Abarca Sanfeliz, 580 kcs. 1 kw. unltd.
San Juan, P. R., United Theaters, Inc., 580 kcs. 1 kw. unltd.
San Juan, P. R., United Theaters, Inc., 580 kcs. 1 kw. unltd.

eranton, Pa., Lackawanna Brdestg. Co., 1370 kcs. 100(.25). Scranton, Scranton, Pa., Union Brdcstg. Co., 1370 kcs. 100(.25) unltd.
Shelby, N. C., Jos. A. Lattimore, 1370 kcs. 100(.25) unltd.
Springfield, Ohio, Radio Voice of Springfield, 1210 kcs. 100 unltd. 1310 kcs. 100 unltd. Springfield, Ohio, S. Radio Corp., 1310 kcs. 100 unltd. Springfield, Ohio, S. Radio Service, 780 kcs. Steubenville, Ohio, Valley Brdcstg. Co., 930 kcs., 1 kw D.
Tacoma, Wash., Tacoma Brdcstg. Co., 1420 kcs. 100(.25). Tacoma, Wash., Michael J. Mingo, 1400 kcs. 250 unltd. Traverse City, Mich., Northern Brdcstg. Co., 570 kcs. 500 days. Valdosta, Ga., John F. Arrington, Jr., 1230 kcs. 250 unltd. Vincennes, Ind., kcs. 100 unltd. Samuel M. Emison, 1420 Vincennes, Vin. Newspapers, Inc.. Ind., 1420 kcs. 100 unltd. Watertown, N. Y., Black River Valley Brdcstg. Co. V., Watertown Brdcstg. Corp. Watertown, S. Dak., Midland Brdcstg. Co., watertown, S. Dak., Midland Brdestg. Co., 1210 kes., 100(.25). kes. 250 days. Willmar, Minn., Lakeland Brdestg. Co., 680 Wisconsin Rapids, Wis., Wm. F. Huffman, 1310 kes., 100(.25). Worcester, Mass., Winfield A. Schuster, 1200 kcs. 100 unltd. Worcester, Mass., C. T. Sherer Co., Inc., 1200 kcs. 100(.25). Yuma, Ariz., Silver Crest Theaters, 1420 kcs. 100 S. H.

The Month's Changes in Station Data

		MeM
570		Santa Clara, Cuba
670		Jovelanos, Ćuba
710		Camaguey, Cuba
730		Victoria Tunas, Cuba
740		Guantanamo, Cuba
870		Ciego de Avila, Cuba
920	CMZ	Havana, Cuba
960	CMKY	Santiago de Cuba
990		Pinar del Rio, Cuba
1030		Santiago de Cuba
1040		Matanzas, Cuba
1100		New York, N. Y.
1150		Holguin, Ćuba
1200	WHOP	Hopkinsville, Ky.
1200	WMLG	Saginaw Mich.
1210	WFTM	Ft. Myers, Fla.
1240	XEKS	Saltillo, Coah.
1370	KORN	Fremont, Nebr.
1370	WHTR	Spartanburg, S. C.
1370	WSLR	Ogdensburg, N. Y.
1400	CMAR	Pinar del Rio, Cuba
1420	\mathbf{WKIP}	Poughkeepsie, N. Y.
1500	WMJM	Cordele, Ga.
1500	WOLF	Syracuse, N. Y.
		Frequency

CMJX CMGH

660 710 1000

Poughkeepsie, N. Y.
Cordele, Ga.
Syracuse, N. Y.
Frequency
Camaguey, Cuba, from 740
Matanzas, Cuba, from 790
Santiago de Cuba, from 1150
Sagua la Grande, Cuba, from
870

1020	CMJK	Camaguey, Cuba, from 1290
1030	CMKW	Santiago, Cuba, from 770
1200	KHBC	Hilo, Hawaii, from 1400
1200	IIIID0	Power
590	KHO .	Spokane, Wash, 5000 from
0,0		1000(5)
690	CMBC	Havana, Cuba, 5000 from 200
750	CMBL	Havana, Cuba, 5000 from
	CILLDIA	200
1000	CMKG	Santiago, 10000 from 200
1030	CMKW	Santiago, 1000 from 200
1200	KELO	Sioux Falls, 250 from 100
1200	KFJB	Marshalltown, 250 from
1200	KL') D	100(.25)
1200	KFXJ	Grand Junction, 250 from
1200	111 111	100(.25)
1200	KHAS	Hastings, 250 from 100(.25)
		T 11 250 from 100(.23)
1200	KSUN	Lowell, 250 from 100(.25)
1200	WENY	Elmira, 250 from 100(.25)
1200	\mathbf{WHBY}	Green Bay, 250 from
	****	100(.25)
1210	wcou	Lewiston, 250 from 100(.25) St. Augustine, 250 from
1210	WFOY	St. Augustine, 250 from
		100(.25)
1210	WGRM	Grenada, 250 from 100(.25)
1210	WOCB	Hyannis, 250 from 100(.25)
1210	WPID	Petersburg 250 from
	*****	100(.25)
1250	WKST	New Castle, 1000 from 250
1310	KARM	Fresno, 250 from 100
1310	KCRI	Jerome, 250 from 100(.25)
1310	KHUB	Watsonville, 250 from
1010	111101	100(.25)
		100(.23)

(Please turn to page 82)

KEY TO SYMBOLS

As Shown in the Index by Frequencies

Frequencies are given in kilocycles per second, and wavelengths in meters. Night power is shown in watts in third column and daytime power is shown in parentheses in kilowatts. Thus: (.25) indicates 250 watts. Exact frequencies, when not multiples of ten are shown in the second column.

Second Column Symbols A—Status in doubt. B—National "Blue" Network. C—Columbia Network. D—Daytime only. E—Minor Network. F—Canadian Network. G—Specified Hours. H—Assigned another frequency —using this one under Special Authorization. J—Assigned lower power but using this power under Special Authorization. K—Licensed for facsimile. L—Limited time. M—Mutual Network.	Networks. P—Has Construction Permit only. Q—Station not in use. R—National "Red" Network. S—Sundays only.	a-b-c—Small letters show stations using same transmitter. 1-2-3—Figures denote stations sharing time. ?—Reported but not officially confirmed. —No information. a-verifies for return postage. b-Verifies for government postal card. e-Verifies free. f-Verifies for 10 cents. g-Card for postage; veri stamp for 10c, z-No information available.
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NORTH AMERICAN BROADCASTING STATIONS BY FREQUENCIES WITH WEEKDAY TIME ON THE AIR

Time is Eastern Standard. Subtract 1 hour for Central, 2 hours for Mountain and 3 hours for Pacific. Add 5 hours for GMT.

SS is "Sunset" and LS is "Local Sunset."

540 kcs. (552.2 m.) CBK F 50000	a Watrous, Sask.	Noon to midnight
550 kcs. (545.1 m.) CFNB F 1000 CMW 2500 KFUO 2 500(1) KFYR N 1000(5) KOAC 1000 KSD 2R 1000(5) KTSA C 1000(5) WDEV D 1000 WGR C 1000(5) WKRC 1000(5) WSVA D 500	a Fredericton, N. B. a Havana, Cuba a St. Louis, Mo. a Bismarck, N. Dak. a Corvaills, Ore. a St. Louis, Mo. a San Antonio, Texas a Waterbury, Vt. a Buffalo, N. Y. a Cincinnati, Ohio a Harrisonburg, Va.	7 am-11 pm 7:55 am-midnight 8-9 am; 10:30-10:45 am; 1:15- 1:45 pm; 4-4:45 pm; 11 pm- midnight Noon to midnight 6 am-LS 7 am-midnight
560 kcs. (535.4 m.) KFDM N 500(1) KLZ C 1000(5) KSFO C 1000(5) KWTO D 5000 WFIL BM 1000 WIND C 1000(5) WIS N 1000(5) WQAM C 1000	a Beaumont, Texas a Denver, Colo. a San Francisco, Calif. a Springfield, Mo. a Philadelphia, Pa. a Gary, Ind. a Columbia, S. C. a Miami, Fla.	8:30 am-2 am 10 am-4 am 6 am-LS 6 am-4 am 7 am-midnight 6:45 am-midnight
570 kcs. (526 m.) KGKO N 1000 (5) KMTR 1000 KVI C 1000 (5) T15CV 575 100 WKBN C1 500 (1) WMAM D 250 WMCA 1000 WNAX C 1000 (5) WOSU G1 1000	a Fort Worth, Tex. a Los Angeles, Calif. a Tacoma, Wash. z Alajeula, Costa Rica a Youngstown, Ohio z Marinette, Wis. a New York, N. Y. a Yankton, S. Dak. a Columbus, Ohio	7 am-? 9 am-3 am 7 am-1:15 am 7 am-? Daily 9-11 am; 1-4 pm; Mon, 8- 10 pm; Wed, 8-11 pm; Fr1, 7- 10 pm
WSYR Ba 1000 WSYU Qa 1000	a Syracuse, N. Y. a Syracuse, N. Y.	6:15 am-1 am

wwnc (1000 1000	a Asheville, N. C. z Santa Clara, Cuba	7:30 am-1 am
580 kcs.	(516.9 m.)		
CFPR CHRC CKCL CKCL CKUA CKUA KMJ KMJ KSAC WCHS WDBO WIBW CWIBW WTAG XEMU	50 100 100 F 1000 F 500 N 1000 2 500(1) 500(5) 2 1000(5) 2 1000(5) 2 1000	a Prince Rupert, B. C. a Quebec, P. Q. a Toronto, Ont. a Fort William, Ont. b Edmonton, Alta. a Fresno, Calif. a Manhattan, Kans. a Charleston, W. Va. a Orlando, Fla. a Topeka, Kans. urbana, III. a Worcester, Mass. z Piedras Negras, Coah.	8 am-midnight 8 am-midnight 8 am-midnight 9 am-11 pm 9 am-3 am 10:30 am-6:30 pm From 6 am 7 am-midnight From 5:30 am 9 am-LS 7:30 am-1 am
	(508.2 m.)		•
CMCY KHQ EF WEEI (WKZO BD) WOW F	15000 5000 1000(5) 1000 1000(5)	a Havana, Cuba a Spokane, Wash. a Boston, Mass. a Kalamazoo, Mich. a Omaha, Nebr.	8 am-10 pm From 6:30 am 7 am-3:30 am
600 kcs.	(499.7 m.)		
CFCF B CFQC CJOR FQN 60' KFSD E TIGPH 60' WCAO C WICC BA WMT BA WREC C	F 500 F 1000 500 9 250 8 1000 5 1000 5 500(1) 4 1000(5)	a Montreal, P. Q. a Saskatoon, Sask. a Vancouver, B. C. a St. Pierre, Miquelon a San Diego, Calif. a San Jose, Costa Rica a Baltimore, Md. f Bridgeport, Conn. a Cedar Rapids, Iowa a Memphis, Tenn.	7:45 am-1 am 6 am-1 am 6:30 am-1 am
	(491.5 m.)		
CHNC I KFAR KFRC MX WCLE DA WDAF I	F 1000 1000 K 1000 (5) A 500 R 1000 (5) a 1000 1000	a New Carlisle, P. Q. z Fairbanks, Alaska b San Francisco, Calif. a Cleveland, Ohio a Kansas City, Mo. a Miami, Fla. a Philadelphia, Pa. a Miami, Fla.	7:30 am-11 pm 6:45 am-5:30 pm 7:30 am-1 am 7 am-midnight 7 am-1 am
	(483.6 m.)		•
	R 1000 (5) 1000 C 250 (1) 5 5000 a 1000 (5) D 250 N 1000 (5) N 1000 (5)	a Portland, Ore. a Phoenix, Ariz. z Wichita Falls, Tex. b San Jose Costa Rica a Tampa, Fla. a Greensburg, Pa. a Bangor, Maine a St. Petersburg, Fla. a Milwaukee, Wis.	9 am-2 am 9 am-1:15 am 8 am-5 pm From 8 am 7 am-1 am 7 am-1:30 am
630 kcs.	(475 0 m)		
CFCO CFCY CJRC CKOV CMCD KFRU KGFX I KVOD WGBF N WMAL WPRO CI	F 1000 F 1000 F 1000 I 15000 I 5000(1) D 200 B 1000 I 500(1) B 250(.5) X 500(1) . 2000	a Chatham, Ont. a Charlottetown, P. E. I. a Winnipeg, Man. a Kelona, B. C. a Havana, Cuba a Columbia, Mo. a Pierre, S. Dak. a Denver, Colo. a Evansville, Ind. a Washington, D. C. a Providence, R. I. a Merida, Yuc.	8 am-10:30 pm 9 am-11 pm 8:30 am-2 am 7 am-11 pm 9 am-10:30 pm 6 am-midnight 6 am-1 am

640 kcs. (468.5 m.)		
HOK KFI Ř 50000 VONF 12500	z Colon, Panama f Los Angeles, Calif. a St. John's, Nfld.	Noon-2 pm; 6 pm-midnight 9:45 am-3 am 8:30 am-12:30 pm; 4:30-9:30
WGAN CL 500 WHKC LM 500 WOI D 5000 XEBX 250 YSS 500	a Portland, Maine a Columbus Ohio a Ames, Iowa z Sabinas, Cosh. a San Salvador, E. S.	pm 6:30 am-SS on Pacific Coast 6:30 am-7:45 pm
650 kcs. (461.3 m.)		
TIGPH P WSM KN 50000	z San Jose, C. R. a Nashville, Tenn.	
660 kcs. (454.3 m.)		
CMJX 200 CMOA 200 KOWH BD 500 WEAF R 50000 XEAO 250	z Camaguey, Cuba z Havana, Cuba a Omaha, Nebr. a New York, N. Y. a Mexicali, B. Cfa.	7:55 am-11 pm 7 am-LS 6:30 am-1 am
670 kcs. (447.5 m.)		•
WMAQ R 50000 XELO 50000 P 1000	b Chicago, III. a Tijuana, B. Cfa. z Jovellanos, Cuba	6:30 am-1 am 7 am-2:15 am
680 kcs. (440.9 m.)		
CMHW 200 KFEQ 500 (2.5) KPO R 50000 VAS 685 2000 WLAW D 1000 WPTF JN 5000	f Santa Clara, Cuba a St. Joseph, Mo. a San Francisco, Calif. f Glace Bay, N. S. a Lawrence, Mass. a Raleigh, N. C.	7 am-? 11 am-3 am 7 am-LS
690 kcs. (434.5 m.)	1	
CFRB C 10000 CJCJ F 100 CMBC 5000 TIGH 1000 XET 5000	a Toronto, Ont. a Calgary, Alta. z Havana, Cuba b San Jose, Costa Rica a Monterrey, N. L.	9:30 am-1 am 6:55 am-midnight 5:30 am-9 pm
700 kcs. (428.3 m.)		
VOWR 500 WLW KMN 50000 W8XO Exp 500000	b St. John's, Nfld.a Cincinnati, Ohioa Cincinnati, Ohio	From 5;45 am
710 kcs. (422.3 m.)		
CMGH 200 CMKS 200 KIRO C 1000 KMPC LX 500 WOR KM 50000 P 1000	a Matanzas, Cuba a Guantanamo, Cuba a Seattle, Wash, a Beverly Hills, Calif, a Newark, N. J. z Camaguey, Cuba	Until 8 am 9 am-8 am 6:25 am-2:05 am
720 kcs. (416.4 m.)		
CMK 200 TI4NRH 725 750 WGN KM 50000 XEWE 20	a Havana, Cuba f Heredia, Costa Rica b Chicago, III. z Silao, Gto.	••••
730 kçs. (410.7 m.)		
CFPL F 100 CJCA F 1000 CKAC C 5000 XEPN AQ 100000 XEQ 50000	a London, Ont. a Edmontton, Alta. a Montreal, P Q. a Piedras Negras, Coah. a Mexico City, D. F. z Victoria Tunas, Cuba	9 am-3 am 9 am-2 am 7:30 am-1 am

740 kcs. (405.2 m.) KMMJ L 1000 KTRB D 250 WHEB D 250 WSB R 50000 XEH 250 P 1000	a Grand Island, Nebr. a Modesto, Calif. a Portsmouth, N. H. a Atlanta, Ga. a Monterrey, N. L. z Guantanamo, Cuba	9 am-8:30 pm 7 am-LS 6:55 am-1 am
750 kcs. (399.8 m.) CMBL	a Havana, Cuba a Honolulu, Hawaii z San Jose, Costa Rica a Detroit, Mich. a Mexicali, B. Cfa. z Matamoros, Tam.	11:30 am-4:30 am 5:30 am-2 am
760 kcs. (394.5 m.) KXA WBAL BHMSy 2500 WCAL D2 5000 WEW D 1000 WJZ BSy 50000 WLB D2 5000	a Seattle, Wash. a Baltimore, Md. a Northfield, Minn. a St. Louis, Mo. a New York, N. Y. a Minneapolis, Minn.	Until 6 am 9 pm-1 am 8 am-LS 6:30 am-1 am
770 kcs. (389.4 m.) KFAB CSyXZ 10000 TILJ 775 450 WBBM CSy 50000	a Lincoln, Nebr. z San Jose, C. Rica a Chicago, III.	5:45 am-1 am
780 kcs. (384.4 m.) CHWK F 1000 CKSO F 1000 CMO N 25000 KECA 1000(5) KFDY D 1000 KFOD 250 KGHL N 1000(5) KWLK D 250 WEAN BM 1000(5) WMC JR 5000 WPIC D 250 WTAR JN 5000 XEN 1000	f Chilliwack, B. C. a Sudbury, Ont. a Havana, Cuba a Los Angeles, Calif. a Brookings, S. Dak. b Anchorage, Alaska a Billings, Mont. a Longview, Wash. a Providence, R. I. a Memphis, Tenn. a Sharon, Pa. y Norfolk, Va. a Mexico City, D. F.	11 am-1:15 am 9 am-midnight 9 am-? 1:30-3 pm 11 pm-5 am 9 am-1 am From 6 am 7:45-1 am
790 kcs. (379.5 m.) KGO B 7500 KOAM DN 1000 WGY R 50000 ZNS 1000	a San Francisco, Calif. a Pittsburg, Kans. a Schenectady, N. Y. d Nassau, Bahamas	7 am-1 am 6:30 am-1 am
800 kcs. (374.8 m.) HIX 800 TIXD 1000 WBAP ENa 50000 WFAA ENa 50000 WTBO D 250	a Trujillo, D. R. z San Jose, Costa R. a Fort Worth, Texas a Dallas, Texas a Cumberland, Md.	 7 am-midnight 9 am-12:30 am 8:30 am-LS
810 kcs. (370.2 m.) CMCF 5000 WCCO C 50000 WNYC D 1000 XEBZ 100 XEDF 100	a Havana, Cuba g Minneapolis, Minn. a New York, N. Y. a Mexico City, D. F. a Nuevo Laredo, Tam.	7:30 am-1 am 7 am-6:30 pm 11 am-3:15 pm; 7-8:15 pm
820 kcs. (365.6 m.) WHAS C 50000 XEBG 1000	a Louisville, Ky. z Tijuana, B. Cfa.	:::: ·

CMHI KOA TIEP WEEU	Es. (361.2 m.) E 1000 R 50000 DR 1000 L 1000 L 5000	a a a a a a z	Santa Clara, Cuba Denver, Colo. San Jose, C. Rica Reading, Pa. Boston, Mass. Gainesville, Fla. Mexico City, D. F.	9 am-2 am 8 am-5 pm From 6:30 am 7 am-6:30 pm
840 ko CBL VOGY XERA	F 50000 400 250000	a a	Toronto, Ont. St. John's, Nfld. Villa Acuna, Coah.	8:30 am-12:30 pm; 4:30-9:30 pm From 5:30 am
	cs. (352.7 m.) 200 CD 1000 DX 1000 C 50000	a a a a a	Havana, Cuba Glendale, Calif. Elmira, N. Y. E. Lansing, Mich. New Orleans, La.	8 am-11:30 pm 6 am-SS at New Orleans 7 am-5 pm From 6 am
CMJA TIEMC WABC WBOQ WHB	cs. (348.6 m.) 200 250 Ca 50000 OA 50000 DM 1000 5000	a z a a a a	Camayuey, Cuba San Jose, C. Rica New York, N. Y. New York, N. Y. Kansas City, Mo. Tijuana, B. Cfa.	6:27 am-2 am 9:45 am-3 am
WENR WLS XEFB	Ba 50000 Ba 50000 P 1000	а	Chicago, III. Chicago, III. Monterrey, N. L. Ciego de Avila, Cuba	Noon-midnight 8 am-Noon
CBO CFJC CMX KFKA KLX KPOF KVAN	F 1000 F 1000 15000 M2 500(1) 1000 D 250 500 C 1000 C 1000 C 500(1) 1 500(1) D 500 X 500	aaaaaxbafaaa	Ottawa, Ont. Kamloops, B. C. Havana, Cuba Greeley, Colo. Oakland, Calif. Denver, Colo. Vancouver, Wash. San Jose, C. Rica Meridan, Miss. Scranton, Pa. Scranton, Pa. Richmond, Va. Iowa City, Iowa	7:45 am-midnight 8 am-midnight 7:30 am-1 am 10:30 am-2:30 am 4 am-LS 12:30-10:30 pm 12:30-10 pm 6 am-LS 10 am-11 pm
KARK KFNF KFPY KTKC KUSD	cs. (336.9 m.) N 1000 2 500(1) C 1000(5) M 1000 2 500 500(1) C 1000(5) R 1000(5) C 1000(5) 100000	a a a f a a a a a a	Little Rock, Ark. Shenandoah, Iowa Spokane, Wash. Visalia, Calif. Vermillion, S. Dak. W. Lafayette, Ind. Atlanta, Ga. Providence, R. I. Fairmont, W. Va. Mexico City, D. F.	7 am-1 am 7 am-1 am 9:50 am-2 am Noon-6 pm 7:30 am-1 am From 5:30 am
HIG KGBU KHJ KSEI	cs. (333.1 m.) 250 X 500 M 1000(5) N 250(1) 600 R 1000(5) D 500	2 a a a 2 a a	Trujillo, D. R. Ketchikan, Alaska Los Angeles, Calif. Pocatello, Idaho San Jose, C. Rica Buffalo, N. Y. Frederick, Md.	Until 4 am 9:30 am-1 am 7 am-1 am 6:30 am-LS

WJAX N 1000(5) WKY N 1000(5) WBBL D 5000 WTAD D 1000	a Jacksonville, Fla. a Oklahoma City, Okla. a Stevens Point, Wis. a Quincy, III.	6 am-1 am 7:45 am-1 am 9 am-5 pm 8 am-5:45 pm					
910 kcs. (329.6 m.) CBF FN 50000 CJAT F 1000 CKY F 15000 CMBO 5000 CMKD 1000 XENT Q 50000	a Montreal, P. Q. a Trail, B. C. a Winnipeg, Man. a Havana, Cuba a Santiago de Cuba a Nuevo Laredo, Tam.	8 am-midnight 10 am-2 am 8:30 am-1 am 8 am-midnight					
920 kcs. (325.9 m.) CMHT 200 CMZ 5000 KFEL M 1000 (5) KPRC ER 1000 (5) TIRS 925 200 WAAF D 1000 WORL D 500 WPEN 1000 WSPA D 1000 WSPA D 1000 WSPA D 1000 WSPA D 1000 WWJ R 1000 (5)	z Trinidad, Cuba z Havana, Cuba a Denver, Colo. Seattle, Wash. a Houston, Texas z San Jose, C. Rica chicago, III. a Boston, Mass. a Philadelphia, Pa. a Spartanburg, S. C. a Detroit, Mich.	8 am-2:30 am 6 am-LS 7 am-LS 6 am-LS					
930 kcs. (322.4 m.)							
CFAC F 1000 CFCH F 100 CFLC 100 CHNS F 1000 CKPC 200 CMJF 200 KMA B 1000(5) KROW 1000 WBRC R 1000(5) WBRC R 1000(5) WBDJ C 1000(5) WELI 250(.5) XEBH 500	a Calgary, Alta. a North Bay, Ont. a Prescott, Ont. a Halifax. N. S. a Brantford, Ont. Camaguey, Cuba a Shenandoah, Iowa a Oakland, Calif. a Birmingham, Ala. a Roanoke, Va. New Haven, Conn. a Hermosillo, Son.	9 am-2 am 7 am-10 pm 7:30 am-11 pm 7:30 am-11 pm 7:30 am 9 am-5 am 8 am-12:30 am 7 am-midnight From 6 am 1-3 pm; 9 pm-midnight					
940 kcs. (319 m.)							
CMBZ 200 KOIN C 1000(5) TIOS 500 WAAT D 500 WAYE N 1000 WCSH R 1000(2.5) WDAY N 1000(5) WHA D 5000 WICA DX 250 XEFO 5000	a Havana, Cuba a Portland, Ore. 2 San Jose, C. Rica a Jersey City, N. J. a Louisville, Ky. a Portland, Maine a Fargo, N. Dak. a Madison, Wis. a Ashtabula, Ohio a Mexico City, D. F.	7:45 am-1 am 9:30 am-3 am 6:30 am-6 pm 8 am-1 am 7:30 am-midnight 7 am-1 am 9 am-5:30 pm 7 am-LS					
950 kcs. (315.6 m.)							
CBV F 1000 CJRM F 1000 CMKL 200 KFWB E 1000(5) KMBC C 1000(5) VOAR 25 WHAL DP 500 WRC R 1000(5) WTRY DP 1000	a Quebec, P. Q. a Regina, Sask. Bayamo, Cuba Los Angeles, Calif. a Kansas City, Mo. z St. John's, Nfld. Saginaw, Mich. Washington, D. C. z Troy, N. Y.	Noon-midnight 9:30 am-4 am 6:55 am-1 am 6 am-1 am					
960 kcs. (312.3 m.)							
CBM FR 5000 CFRN F 100 CMKY 5000 KEAW 100000	a Montreal, P. Q. a Edmonton, Alta. z Santiago de Cuba a Reynosa, Tam.	9:30 am-3 am From 5:30 am					
970 kcs. (309.1 m.)							
CMCK 5000 KJR B 5000	z Havana, Cuba a Seattle, Wash.	7:50 am-12:30 am 10 am-3 am					

WCFL N 5000 WIBG D 100	a Chicago, III. a Glenside, Pa.	7:30 am-LS
980 kcs. (306 m.) KDKA B 50000 XEAC 5000 XEFE 250	b Pittsburgh, P a Tijuana, B. C z Nuevo Lared	a. .fa. 8 am-1 am o, Tam.
990 kcs. (302.8 m.) WBZ BSY 50000 WBZA BSY 1000 XEAF 750 XEK X 100 XES 250 P 1000	a Boston, Mass a Springfield, I a Nogales, Son a Mexico City, a Tampico, Tan z Pinar del Ric	Asec 6 am 1 am
1000 kcs. (299.8 m.) CMKG 10000 KFVD L 1000 TIFA 250 WHO KR 50000 XBI 250	z Santiago de a Los Angeles, z San Jose, C. a Des Moines, a Aguascaliente	Calif Rica 9 am-8:15 pm Iowa 7 am-1 am
1010 kcs. (296.9 m.)	a Hamilton, Or a Vancouver, I	nt. 8 am-midnight B. C. MT, 10:30 am-2:30 am; WF, 11 am-midnight; Th, 10:30 am-
CKCK F 1000 CKCO F 100 CKIC 50 CKWX F1 100 CMCU 200 KGGF M2 1000	a Regina, Sask a Ottawa, Ont a Wolfville, N. a Vancouver, I. a Havana, Cub a Coffeyville,	12:30 am 9:30 am-2 am Noon-11:30 pm
KOW M 1000(5) WHN 1000(5) WNAD 2 1000 WNOX C 1000(5) XEFQ 500	a San Jose, Ca a New York, N a Norman, Ok a Knoxville, T a Cananea, Sor a Veracruz, V	1. Y. 7 am-1 am a. 3-10:15 pm enn. 6 am-2 am
1020 kcs. (293.9 m.) CMHO 200 KYW R 10000 WDZ D 1000 XEJ 1000	z Sagua la Gra a Camaguey, C b Philadelphia, a Tuscola, Ill. a Juarez, Chih	uba Pa. 6 am-10 pm
1030 kcs. (291.1 m.) CFCN F 10000 CJBR F 1000 CKLW FM 5000 CMKW 1000 TIHO 500 XEB 20000 P 1000	a Calgary, Aita a Rimouski, P. a Windsor, On z Santiago da z San Jose, C. a Mexico City, z Santiago de	9 am-1:30 am Cuba Rica D. F. 10 am-12:15 am Cuba
1040 kcs. (288.3 m.) KRLD C 50000 KWJJ HC 500 KYOS DM 250 VOCM 1500 WTIC HR 50000 P 1000	a Dallas, Texas a Portland, Ora Merced, Cal z St. John's, a Hartford, Cc z Matanzas, C	e. 9 am-5:45 am f. 9 am-L\$ Nfld nn. 6 am-1 am
1050 kcs. (285.5 m.)	a Sackville, N. z Havana, Cub	B. 7 am-midnight a 7:55 am-midnight

HIT KFBI KNX WEAU WIBC	ĽÝŻ C L2 D	50 5000 50000 1000(5)	z a b a a	Trujillo, D. R. Abilene. Kans. Los Angeles, Calif. Eau Claire, Wis. Indianapolis, Ind.	7:am-7:45 pm 9:30 am-3:15 am 7 am-LS
1060 KTHS VOAC WBAL WJAG	KCS. HN 1065 BM L	(282.8 m.) 10000 40 10000 1000	a z a	Hot Springs, Ark. St. John's, Nfld. Baltimore, Md. Norfolk, Nebr.	7 am-LS; 9 pm-1 am 6:30 am-9 pm 7:30 am-LS
1070 CMJW KJBS TINBC WCAZ WTAM	kcs.	(280.2 m.) 200 500 5000 100 50000	z a z a a	Camaguey, Cuba San Francisco, Calif. San Jose, C. Rica Carthage, III. Cleveland, Ohio	1 am-9:45 pm 7 am-4 pm 6 am-midnight
1080 CMBX CMKM WBT WCBD WMBI XEBA XEBK XEDP	kcs.	(277.6 m.) 200 200 50000 50000 5000 100 1500	aaaag zza	Hayana, Cuba Manzanillo, Cuba Charlotte, N. C. Chicago, III. Chicago, III. Guzman, Jal. Nuevo Laredo, Tam. Mexico City, D. F.	5:30 am-midnight 8-8:30 am; 11:30 am-2 pm; 4-5:30 pm
1090 CMHA HIN KMOX XERB	kcs. 	(275.1 m.) 200 100 50000 50000	z z a a	Sagua la Grande, Cuba Trujillo, D. R. St. Louis, Mo. Tijuana, B. Cfa.	 7 am-1 am
CBR CMHP KGDM KWKH WBIL WCAR WPG	F DM CH DP CI P	(272.6 m.) 5000 200 1000 5000 1000 5000 5000 5000	azfaazaz	Vancouver, B. C. Placetas, Cuba Stockton, Calif. Shreveport, La. New York, N. Y. Pontiac, Mich. Atlantic City, N. J. New York, N. Y.	Until 3 am 9 am-LS 8 am-6 pm; 8 pm-midnight
CMCJ KSOO WRVA XECL	kcs. LN CM	(270.1 m.) 200 5000 50000 1000	a a a z	Havana, Cuba Sioux Falls, S. Dak. Richmond, Va. Mexicali, B. Cfa.	8 am-9 pm 7 am-LS 55 am-1 am
CBJ CHLP CHSJ CKOC CKX CMGF KFIO KFSG KRKD	KCS. FFFFF Da a a XX DG DR CB	(267.7 m.) 100 100 100 100 200 100 500(2.5) 500(2.5) 500 250(1) 250(1) 250(1) 500		Chicoutimi, P. Q. Montreal, P. Q. St. John, N. B. Hamilton, Ont. Brandon, Man. Matanzas, Cuba Spokane, Wash. Los Angeles, Calif. Los Angeles, Calif. Seattle, Wash. Austin, Texas Boston, Mass. Wilmington, Del. Milwaukee, Wis. Baton Rouge, La. College Station, Texas	3:15-11:15 pm 9 am-11 pm 4:55 am-midnight 6 am-? 9 am-12:30 am 9 am-3 am 9 am-4:30 am 7 am-4 pm 9 am-11 pm 8 am-1 am 7:45 am-1 am

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CMII		(265.3 m.) 200 50000	a	Ciego de Avila, Cuba Salt Lake City, Utah	Noon-10 pm 8:30 am-3 am 6 am-6:45 pm
WJJD WOV	c L	20000	8	Chicago, III. New York, N. Y. Mexico City, D. F.	6 am-6:45 pm
XEJP		100	z	Mexico City, D. F.	••••
1140	kcs.	(263 m.)			*
KVOO	··;	200 25000	z a	Havana, Cuba Tulsa, Okla.	7:57 am-midnight From 7 am
WAPI WSPR	ĽM.	5000 500	a	Birmingham, Ala. Springfield, Mass.	7:57 am-midnight From 7 am 7 am-1 am 7 am-5:45 pm
		(260.7			
1150 I WHAM	KCS. N	(260.7 m.)	a	Rochester, N. Y.	7 am-midnight
XEBP XEC	:::	250 100 300	z a	Rochester, N. Y. Durango, Dgo. Tijuana, B. Cfa. Minatitlan, Ver. C.	••••
XEDW	:::	300 250	a	Minatitlan, Ver. C. Mexico City, D. F.	
XEXH	 P	400 1000	z	Oaxaca, Oax. Holguin, Cuba	••••
			_	riolgani, Caba	
1160 I		(258.5 m.)	_	Ciantuana, Cuba	
MOMO	Βį	10000	a	Cienfuegos, Cuba Fort Wayne, Ind. Wheeling, W. Va.	····
WWVA XEAS XED	CI	5000 100	а а	Saltillo, Coah. Guadalajara, Jal.	From 6 am
XEFM	•••	2500	a Z	Leon, Gto.	Noon-midnight
KEP	•••	500	a	Juarez, Chih.	9 am-2 am
1170	kcs.	(256.3 m.)			7.27 11
CMBS WCAU XEXX	ç	200 50000	a a	Havana, Cuba Philadelphia, Pa. Mexico City, D. F.	7:27 am-11 pm 6 am-1 am
	• • • •	1000	z	Mexico City, D. F.	••••
1180		(254.1 m.)			0.20 2
KEX KOB WDGY	, B	5000 10000	a	Portland, Ore. Albuquerque, N. Mex.	9:30 am-3 am 9 am-1 am 7 am-7:3 0 pm
WINS	ĽΜ	1000 (5)	a	Albuquerque, N. Mex. Minneapolis, Minn. New York, N. Y.	• • • •
WMAZ	CL.	1000(5)	a	Macon, Ga.	6 am-7 pm
1190 CMKX	KCS.	(252 m.)	z	Banes, Cuba	
WOAI WSAZ	ĖŅ	50000 1000	ā	Banes, Cuba San Antonio, Texas Huntington, W. Va.	7:30 am-12:30 am 6 am-7 pm
			-		
1200 CFGP	KCS.	(249.9 m.)	a	Grande Prairie Alta	9:45 am-5 pm: 7 pm-midnight
CHAB CHGB	¨Ė F	100 (.25) 100	a	Grande Prairie, Alta. Moose Jaw, Sask. St. Anne de la Pocatierre,	9:45 am-5 pm; 7 pm-midnight 9 am-12:30 am
CKNX CKTB CMCO	···j	100 100 200	a	Wingham, Ont.	8:30 am-10 pm
CWCO		200	a	mavana, Cuba	8:30 am-10 pm 9:30 am-11:30 pm 7:55 am-midnight
KADA KAST	EW.	100 250 100	a	Astoria, Ore.	****
KBTM KELO	Z	250 250	a	Jonesboro, Ark. Sioux Falls, S. Dak. Marshalltown, Iowa	8:30 am-6:30 pm 1 pm-1 am
KFXD KFXD KFXJ	•••	100 (.25)	a	Nampa, Idano	1 pm-1 am 7 am-10 pm 8 am-11 pm
KGDE	•••	250 100 (.25)	a b	reigus rans, Minn.	· 8 am-10 pm 1:30-3:30 pm; Tu, Fri, 9:15-
KGEK	•••	100	f	Sterling, Colo.	10:45 pm
KGFJ KGHI	• • • •	100 250 250	a	Little Rock, Ark.	24 hours daily 8:30 am-11 pm
KHAS	···è	250	2	Hastings, Nebr.	••••

KHBCB KMOSS KKOUCU KWOS	C MEMAXXPZE OO PA OPAX P4Y	250 250 100 250 100 100 100 100 250 250 100 250 100 250 250 250 250 250 250 250 250 250 2	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	Hilo, Hawaii Monroe. La. Marshrield Ore. Lowell, Ariz. Redding, Calif. San Luis Obispo, Calif. Logan. Utah Bellingham, Wash. Plainview, Texas Stockton, Calif. Winona, Minn. San Jose, C. Rica Bangor, Maine Anderson, S. C. Waycross, Ga. Atlantic City, N. J. Ponca City, Okla. Huntsville, Ala. Rapid City, S. Dak. Burlington, Vt. Janesville, Wis, Cincinnati, Ohio Panama City, Fla. Superior, Wis, Easton, Pa. Salem, Mass. South Bend. Ind. Kinston, N. C. Canton Ohio Green Bay, Wis. Hopkinsville, Ky. Utica N. Y. St. Louis, Mo.	Noon-4 am 10 am-7:45 pm 11 am-midnight 9:30 am-3 am From 9:30 am 10 am-3 am 6 am-10 pm 7 am-9 pm 8 am-10 pm 7:30 am-9 pm 8 am-10 pm 7 am-11:30 pm 7 am-11:30 pm 7 am-10:45 pm From 6 am M, Tu, F, 9 am-10:30 pm; Th, 9 am-10:45 pm
WHOP WIBX WIL WJBC WJBL	- 5	250	ā	Bloomington, III.	4-8:30 pm
WJBW WJHL WJNO WKBO WLVA WMFR WMLG WMOBC WOLS WRSKB WSOO WTHT WTOL WWAE	L :CDZ :XPPGXC :PX :4	100 250 250 250 100 (.25) 250 100 100 (.25) 100 250 100 250 100 100 (.25) 100	aaaaaaxxa aaxxaaa	New Orleans, La. Johnson City, Tenn. W Palm Beach, Fla. Tuscaloosa Ala. Harrisburg Pa. Lynchburg, Va. High Point N. C. Sadinaw, Mich. Mobile, Ala. Lapeer, Mich. Florence, S. C. Columbus, Ga. McComb, Miss. Saul Ste. Marie, Mich. Hartford, Conn. Toledo, Ohio Hammond, Ind.	2 pm-3 am 7 am-midnight 8 am-11 pm 7 am-11 pm From 6 am 7 am-? 8 am-midnight 7 am-4:15 pm From 6 am
1210	kcs.	(247.8 m.)			
CHLT CJCSC I CKCHC CKKHCHC CKCHC CKALBS KASSA KLDOJI KFPPS M KFPPS M KFSL KFSL KFSL KFSL KFSL KFSL KFSL KFSL	FFF :::XM :M :MXG2CM	100 50 100 100 100 200 250 100 100 250 100 100 250 100 250 100 250	2 a a a a a a a a a a a a a a a a a a	Sherbrooke, P. Q. Stratford, Ont. Lethbridge, Alta. Prince Albert, Sask. Hull, P. Q. Cobalt, Ont. Cruces, Cuba Alexandria, La. Wichita, Kans. Elk City, Okla, Devils Lake, N. Dak. Monterey, Calif. Klamath Falls, Ore. Lincoln, Nebr. Fort Smith, Ark. Cape Girardeau, Mo. San Bernardino, Calif. Mason City, Iowa Olympia, Wash.	8 am-9 pm 9 am-1 am 9 :45 am-1 am 8 am-11 pm 10 am-1 pm; 4-10 pm 7:30 am-midnight 7 am-8 pm 7:30 am-9:30 pm From 9:30 am From 9 am 8 am-11:15 pm 7:30 am-11 pm 3 am-3 am 7 am-1 am M, Tu, W, F, 10 am-2 am; Th, 10 am-10:30 pm
KHBG KIUL		100	a	Okmulgee, Okla. Garden City, Kans.	8 am-10 pm

KLAH KOCA KOVO KPFA EN KPPC KROY KVSO M KWJB KWTN A KXOX DP KYUM WBAX WBBL S WBRB 3	100(.25) 250 100(.25) 250 100 100 100 100 100 250 100 250 100 250 100 (.25) 250 100 (.25) 250 100 250	Kilgore, Texas Provo, Utah Helena, Mont. Sacramento, Calif. Ardmore, Okla. Globe, Ariz. Watertown, S. Dak. Sweetwater, Tex. Yuma, Ariz. Wilkes-Barre, Pa. Richmond, Va.	8:30 am-11 pm 10:15 am-midnight 8:30 am-11 pm 10:15 am-midnight 8 am-11 pm 10 am-midnight
WCOL NXZ WCOU M WCOV WCRW 4 WEBQ G6	100 a 250 a 100 2 100 a 250 a	Lewiston, Maine Montgomery, Ala. Chicago, III.	5-7 pm; F, 1 pm-midnight 7 am-midnight 6 am-midnight 11 am-7 pm 7-10 am; 1-5 pm; M, W, F, 9:30 pm-1 am; Tu, Th, 8:30-10 pm
WEDC WFAS WFOY WFTM WFOY WFTM WFOY WFTM WFOY WFAS WGCM WGRM WHAI WHAI WHAI WHAI WHAI WHAI WHAI WHAI	250 100 (.25) 100 (.25) 100 (.25) 250 250 250 100 (.25) 250 250 250 250 250 250 250 250 250 250	white Plains, N. Y. St. Augustine, Fla. Ft. Myers, Fla. Freeport, N. Y. Gulfport, Miss. Grenada, Miss. Greenfield, Mass. Anderson, Ind. Zanesville, Ohio Poynette, Wis. Louisville, Ky. Gadsden, Ala. Hagerstown, Md. Lansing, Mich. Beckley, W. Va. Rice Lake, Wis. Jamestown, N. Y. Akron, Ohio Sunbury, Pa. Lima, Ohio Hilbbing, Minn. Hyannis, Mass. Manitowoc, Wis. Thomasville, Ga. Petersburg, Va. Raleigh, N. C. Rochester, N. Y. Chicago, Ill. Nashville, Tenn. Bridgeton, N. J. Charoltte, N. C. Springfield, Ill. Charleston, S. C. Parral, Chih. Durango, Dgo. Juarez, Chih.	1-7 am 7:30 am-10 pm 6 am-7 7 am-9 pm 8 am-10:30 pm M, W, F, 7 am-9:30 pm; Tu, Th 7 am-11 pm 7:15 am-12:30 am 6:30 am-11 pm 6:30 am-11 pm 6:30 am-10 pm 6:30 am-10 pm 6:30 am-10 pm 7:30 am-idnight
1220 kcs	(245.8 m.)		
KFKU ARTHUR STAND	1000 (5) a 500 z 1000 (5) a 1000	Santa Barbara, Calif. Seattle, Wash. Pullman, Wash. San Jose, C. Rica Canton, N. Y. Pittsburgh, Pa. Tampa, Fla. Newburgh, N. Y. Lawrence, Kans. Mazatlan, Sin. Mexico City, D. F.	3:30-7:30 pm Thursday, 10:30 pm-1 am Daily exc. Thurs, 9:45 am-12:30 am; Thurs, 9:45 am-10:30 pm 12:30-4 pm 7 am-2:30 am 7:30 am-midnight 8 am-7 pm

				process and the second	
1230	kce.	(243.8 m.)			
	KCJ.	200 200 500 1000 1000(5) 1000(5) 1000(5) 1000 250 250 125			
CWCB	• • •	200	а	Havana, Cuba Camaguey, Cuba Springfield, Mo. Albuquerque, N. Mex. San Francisco, Calif. Indianapolis, Ind. Boston, Mass. Washington, D. C. Tampico, Tam. Monterrey, N. L. Guadalajara, Jal.	8 am-11 pm
CMJE KGBX	NOECRA	200	z	Camaguey, Cuba	• • • •
KGBX	Ň	1000	а	Springfield, Mo.	6:36 11:30
KGGM	۲	1000	а	Albuquerque, N. Mex.	9:30 am-11:30 pm
KYA WFBM WNAC WOL	-	1000(5)	а	San Francisco, Calif.	9:30 am-3 am
WEBW	۲	1000(5)	а	Indianapolis, Ind.	7:30 am-1 am
WINAC	K	1000(5)	a	Washington D C	6.20 am 2 am
YEC'V	141	250	-	Tampico Tam	0.50 ani-2 ani
WOL XECA XEG	• • •	250	-	Monterrey N I	••••
XEHK	:::	125	ž	Guadalajara, Jal.	••••
			_	Cadda ajara, san	
1240	kes	(241.8 m.)			
1270	MC3.	(ATTIO III.)			
CJCB	F	1000	а	Sydney, N. S.	7 am-1 am
CWAB	• • •	200	z	Pinar del Rio, Cuba	• • • •
CWHR	• • • •	200	z	Sancti Spiritus, Cuba	• • • •
CJCB CMAB CMHB KFJZ KGCU KTFI WHBF WKAQ WXYZ XEAC	M	1000	a	Adams N. Dak	;; ··:
PTEI	· Ni	1000	a	Twin Falls Idaho	l am-midnight
WHEE	13	1000	2	Rock Island III	6 am-midnight
WKAO	~~	1000	a	San Juan Puerto Rico	6.30 am-9.30 pm
WXYZ	B	1000	ā	Detroit, Mich.	0.50 am-7.50 pm
XEAD	,	500	z	Aguascalientes, Ags.	
XEBC	• • •	100	z	Morelia, Micho.	••••
XEBU	• • •	50	z	Chihuahua, Chih.	••••
WKAQ WXYZ XEAD XEBC XEBU XECW	• • •	250	z	Cordoba, Ver. C.	• • • •
XEDL.	···	250	ŗ	Navojoa, Son.	• • • •
XEDL XEKL XEKS		500	Þ	Leon, Gto.	• • • •
YEK?	• • •	100	z	Saitillo, Coan.	• • • •
XEME	• • •	50	_	Sydney, N. S. Pinar del Rio, Cuba Sancti Spiritus, Cuba Fort Worth, Texas Mandan, N. Dak. Twin Falls, Idaho Rock Island, Ill. San Juan, Puerto Rico Detroit, Mich. Aguascalientes, Ags. Morelia, Micho. Chihuahua, Chih. Cordoba, Ver. C. Navojoa, Son. Leon, Gto. Saltillo, Coah. Merida, Yuc.	••••
		/aaa a			
1250	kcs.	(239.9 m.)		, i	
CMKC	• • •	200	а	Santiago, Cuba	
CMKC KFOX	• • • •	1000	ā	Long Beach, Calif.	
KIT	FM	1000	ā	Yakima, Wash.	9:30 am-3 am
KXOK/		1000	z	St. Louis, Mo.	• • • •
KIT KXOK/ WAIR WDSU	DM	250	а	Winston-Salem, N. C.	6 am-LS
WDSU	B	1000	а	New Orleans, La.	7 am-midnight
WHRI	2	1000 (2.5)	а	Newark, N. J.	IC
WKSI	K	1000	a	New Castle, Pa.	/ am-LS
WINE	5	1000(5)	2	New York N Y	On all night
WTCN	Ŕ	1000 (5)	2	Minneapolis Minn	am-midnight
XFAI		500	ž	Mexico City, D. F.	/ am-mangm
	•••				
KIT KXOK/ WAIR WDSU WHBI WKST WMRO WNEW WTCN XEAI					9:30 am-3 am 6 am-LS 7 am-midnight 7 am-LS Wed, 1 am-LS On all night 7 am-midnight
1200	L.	/220 \			••••
	kcs.	/220 \			••••
CMBD	kcs.	/220 \			
CWBD	kcs.	/220 \			::::
CMBD CMJO KGVO	kcs.	/220 \			8:50 am-1 am
CMBD CMJO KGVO KHSL	kcs.	/220 \			::::
CMBD CMJO KGVO KHSL KOIL	kcs.	/220 \			8:50 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC	Kcs.	/220 \			8:50 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC KRGV	kcs.	/220 \			8:50 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA	CEM DN DN	/220 \			8:50 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA KVOA	kcs.	/220 \			8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA KVOA WFVA	kcs. : CAMUZDEDC	/220 \			8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA KVOA WFVA WHIO WHIO	kcs.	/220 \			8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA KVOA WFVA WHIO WHID WHBX	kcs. :: CAMANND DO CPY	/220 \			8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am
CMBD CMJO KGVO KHSL KOIL KPAC KRGV KUOA KVOA WFVA WHID WHLD WHLD WHLD WHDS	KCS. :: CAMANZ DE DOPYO	/220 \			8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am
	CED X DE DO DAYO	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 1000 1000 1	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm
	CED X DE DO DAYO	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270 CMHD KGCA KOL KVOR KWLC WASH WFBR WJDX WOOD	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270 CMHD KGCA KOL KVOR KWLC WASH WFBR WJDX WOOD	CEDM EDD DOPYC kcs.	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa	Havana, Cuba Ciego de Avila, Cuba Missoula, Mont. Chico, Calif. Omaha, Nebr. Port Arthur, Texas Weslaco, Texas Síloam Springs, Ark. Tucson, Ariz. Fredericksburg, Va. Dayton; Ohio Niagara Falls, N. Y. Springfield, Vt. Savannah, Ga.	8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight
1270	CMMUND END CAYC	(238 m.) 200 200 1000 (5) 250 1000 (5) 500 1000 5000 1000 250 1000 (5) 1000 1000 1000	zaaaaaaazazaa		8:50 am-1 am 6 am-5:45 pm 8 am-11 pm 7 am-LS 8 am-11:30 pm 6 am-1 am 7 am-midnight 7 am-midnight

	kcs.	(234.2 m.)			
CMKO KFBB KLS WCAM	··ċ	200 1000(5)	z a	Holguin, Cuba Great Falls, Mont. Oakland, Calif. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Worcester, Mass. Dallas, Texas Trenton, N. J. Mexico City, D. F. Mexico City, D. F.	10 am-1 am
KLS WCAM	 2 2 C	250 500	a	Oakland, Calif. Camden, N. J.	Silent
WCAP WDOD WIRA	Ć	1000 (5)	b	Chattanooga, Tenn.	Silent 10:30 am-4 pm; 8 pm-midnight 7:30 am-12:30 am 8 am-1 am 8 am-midnight 8 am-midnight
WIBA WORC WRR	X O Z	500 500	a	Worcester, Mass. Dallas, Texas	8 am-midnight 8 am-midnight
WTNJ XEKR	 A	500 100	a	Trenton, N. J. Mexico City, D. F.	••••
XEMX	Α	100	z	Mexico City, D. F.	••••
	kcs.	(232.4 m.)			
CMCG KDYL	···Ř	1000 (5)	a	Havana, Cuba Salt Lake City, Utah	7 am-midnight 8 am-3 am
KLCN KTRH WATR	č	1000 (5)	a	Houston, Texas	7:30 am-3:30 am
WEBC WJAS	NO P	1000 (5)	a	Duluth, Minn. Pittsburgh, Pa.	8 am-1 am 7:30 am-12:30 am
WJHP WNBZ	P	250 100	z	Jacksonville, Fla. Saranac Lake, N. Y.	9:30 am-LS
WNEL	•••	1000 (2.5)	а	Havana, Cuba Salt Lake City, Utah Blytheville, Ark. Houston, Texas Waterbury, Conn. Duluth, Minn. Pittsburgh, Pa. Jacksonville, Fla. Saranac Lake, N. Y. San Juan, Puerto Rico	6:30 am-1,1:30 pm
		(230 6 m)		1 1	
KALE KFAC KFH	<u>.</u>	1000	a	Portland, Ore. Los Angeles, Calif. Wichita, Kans. Brooklyn, N. Y. New York, N. Y. Greenville, S. C. Troy, N. Y. Sheboygan, Wis.	9:15 am-3 am 24 hours daily 7 am-1 am From 6:30 am 7 am-4 am 6:45 am-midnight 6 pm-midnight 8 am-midnight
WBBR WEVD WFBC	 2 2	1000	a	Brooklyn, N. Y. New York N. Y	From 6:30 am
WHAZ	Ñ 2	1000 1000 1000 (5)	a	Greenville, S. C. Troy, N. Y.	6:45 am-midnight
WHBL	•••			Sheboygan, Wis.	8 am-midnight
		(228.9 m.)			
CHCK				Charlottetown, P. E. I. Kirkland Lake, Ont.	
CHCK CJKL CJLS CKCV CMKE	 F F F			Charlottetown, P. E. I. Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo. Cuba	7:55 am-11:30 pm
CHCK CJKL CJLS CKCV CMKE KAND	:FFF?MC			Charlottetown, P. E. I. Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif.	7:55 am-11:30 pm From 7 am 9 am-3 am
CHCK CJKL CJLS CKCV CMKE KAND KARM KBND	:FFF?MC			Charlottetown, P. E. I. Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans.	7:55 am-11:30 pm From 7 am 9 am-3 am 7 am-1 am
CHCK CJKL CJLS CKCV CMKE KAND KARM KBND KCRJ	FFF SKC :EE			Charlottetown, P. E. I. Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas	7:55 am-11:30 pm From 7 am 9 am-3 am 7 am-1 am 7 am-10:45 am
CHKL CJKS CKAND KARM KERD KCRJ KFPL KFPL KFPL KGEZ	FFF?MO :HE :A :	50 100 100 100 250 250 250 250 250 100(.25)		Charlottetown, P. E. I. Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearnev, Nebr.	7:55 am-11:30 pm From 7 am 9 am-3 am 7 am-1 am 7 am-10:45 am 8 am-10:15 pm 9 am-10 pm 7 am-10 pm
CHKL CJKLSV CKKED KARND KARND KERJ KEFYO K KEFYO K KEFYO K KEFYO K KEFYO K KEFYO K KEFYO K K K K K K K K K K K K K K K K K K K	FFF?MC :EE :M : : :	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaaxaaxaaf aaaa	Kirkland Lake, Ort. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif.	7:55 am-11:30 pm From 7 am 9 am-3 am 7 am-1 am 7 am-10:45 am 8 am-10:15 pm 9 am-11 pm 7 am-10 pm From 9 am From 7:45 am
CHKLSVE CKKED KKERLSVE KARM KKERLSVE KARM KKERLSVE KKERLS	FFFPAC :EE :A : : :MD	50 100 100 100 250 250 250 250 100 (.25) 100 (.25) 100 (.25)	aaaaxaaxaaf aaaa	Kirkland Lake, Ort. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif.	
CHCKLS VEED KARMAN KARMAN KARMAN KEPLO KKARMAN KARMAN KEPLO KKARMAN KEPLO KKARMAN KEPLO KKARMAN KARMAN KEPLO KKARMAN KARMAN KARMAN KEPLO KKARMAN KARMAN KARM	FFFF MC :EE :M : : :MDD	50 100 100 100 250 250 250 250 100 (.25) 100 (.25) 100 (.25)	aaaaxaaxaaf aaaa	Kirkland Lake, Ort. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif.	
CHILLS VERY OF THE STATE OF THE	FFF7AC :EE :A : : : MDD :NX	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am
CHILLS VERY OF THE STATE OF THE	:FFF?MC:EE:A:::MDD:EXX::X	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am
CCICKMAND NEW COLOR CONTROL OF THE COLOR CANADA	FFFPAC : EE : M : : : : : : : : : : : : : : :	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am
CULCOKKIDA CULCOKKIDA KARNON KEFYOZ WENON KERRON	:FFF?MC:EE:M:::MDD:EX::XPP:E	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am
CULICO ENDA DO CONTROL O C	FFF?AC : EE :A :	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am 7 am-2 pm; 5-11 pm 7 am-10 pm 9 am-4 pm; 6:30-11:30 pm
CULICKENDA DO CONTROL	:FFF?MC :EE :M :: :MDD :EX :: ZPP :ECPD	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Tulsa, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am 7 am-2 pm; 5-11 pm 7 am-10 pm 9 am-4 pm; 6:30-11:30 pm
CCUCKKAMADA HKLSVEDAMADA CCUCKKAMADA KKFYESYBY BY	FFFF MC : EE : M : : : MDD : NX : : ZPP : ECPD : M :	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaaxaaxaafaaaaaaaaaaaaxxaaaxaada	Kirkland Lake, Onn. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn. Sherman, Texas Santa Rosa, Calif. Cedar City, Utah El Paso, Texas Grants Pass, Ore. Victoria, Texas Lafayette, La. Moorhead, Minn. Santa Fe, N. Mex. Hot Springs, Ark. Poplar Bluff, Mo. Jefferson City, Mo. Aberdeen, Wash. Guatemala City, Guat. Laurel Mise	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am
CULICKENDA DO CONTROL	FFFF MC : EE : M : : : MDD : NX : : ZPP : ECPD : M :	50 100 100 100 250 250 250 250 250 250 250 250 250 2	aaaazaazaafaaaaazaaaa	Kirkland Lake, Ont. Yarmouth, N. S. Quebec, P. Q. Manzanillo, Cuba Corsicana, Texas Fresno, Calif. Bend, Ore. Kansas City, Kans. Jerome, Ariz. Dublin, Texas Lubbock, Texas Kalispell, Mont. Kearney, Nebr. Watsonville, Calif. Oklahoma City, Okla. Tulsa, Okla. Pampa, Texas Lufkin, Texas Shreveport, La. Rochester, Minn. Sherman, Texas Santa Rosa, Calif. Cedar City, Utah El Paso, Texas Grants Pass, Ore. Victoria, Texas Lafayette, La. Moorhead, Minn. Santa Fe, N. Mex. Hot Springs, Ark. Poplar Bluff, Mo. Jefferson City, Mo. Aberdeen, Wash Guatemala City, Guat.	7 am-6:15 pm 7:30 am-1 am 7 am-12:15 am 10 am-2 am 8:30 am-1 am 7 am-2 pm; 5-11 pm 7 am-10 pm 9 am-4 pm; 6:30-11:30 pm 7:30 am-LS 7 am-11 pm 10 am-2 am

WBCLSI WCDAH B B WESHAP WEBMP WEBMP WESHAP WFFIGU W	250 100 (.25) 250 100 (.25) 250 50 100 100 (.25) 250 250 250 250 250 250 250 250 250 250	***************************************	Pittsfield, Mass. Joliet, III. Ashland, Ky. El Paso, Texas Buffalo, N. Y. Milwaukee, Wis. Royal Oak, Mich. Altoona, Pa. Flint, Mich. Sumter, S. C. Athens, Ga. Newport News, Va. Wilson, N. C. Philadelphia, Pa. Greenville, Miss. Lakeland, Fla. Muncie, Ind. Bowling Green, Ky. Laconia, N. H. Auburn, N. Y. New Bedford, Mass. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Savannah, Ga. Birmingham, Ala. Winston-Salem, N. C. Tallahassee, Fla. Philadelphia, Pa. Jackson, Tenn. Elkhart, Ind. Cordoba, Ver. C. Tijuana, B. Cfa. Irapuato, Gto. Tampico, Tam. Torreon, Coah. Monterrey, N. L.	-	7 am-1 am 8 am-9:30 pm 8 am-9:30 pm Silent 7 am-midnight From 7:30 am 8 am-4 am 7 am-10:30 pm 7 am-midnight 7 am-midnight 7 am-midnight 7 am-midnight 7 am-midnight 7 am-midnight 11 am 11 pm 12 am-11 pm 13 am-midnight 14 am-midnight 15 am-midnight 16 am-10 pm 17 am-11 pm 18 am-midnight 18 am-midnight 19 am-11 pm 10 am-11 pm 11 am 11 pm 12 am-11 pm 13 am-11 pm 14 am-11 pm 15 am-11 pm 16 am-10 pm 17 am-11 pm 18 am-midnight 18 am-midnight 19 am-11 pm 10 am-8:30 pm
1320 kcs.	(227.1 m.)				
CMCR KGHF B KGMB CMZ KID KRNT C WADC C WORK N WSMB R	200 500 1000 500(1) 1000(5) 1000(5) 1000	z a a a a a a a a	Havanna, Cuba Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho Des Moines, Iowa Akron, Ohio York, Pa. New Orleans, La.		9 am-1 am 1:30 am-6 pm From 6 am 6:30 am-1 am 7 am-1 am 8 am-10 pm
	(225.4 m.)				
KGB M KMO M KRIS MN KSCJ N WDRC C WSAI MN WTAQ C	1000 1000 500 1000(5) 1000(5) 1000(5)	a a a g a a	San Diego, Calif. Tacoma, Wash. Corpus Christi, Tex. Sioux City, Iowa Hartford, Conn. Cincinnati, Ohio Green Bay, Wis.	\	10 am-4 am 9 am-3 am 7:30 am-midnight 7 am-2 am 7 am-midnight 6 am-1 am 8 am-1 am
	(223.7 m.)				
KDTH DP KGINO EN WCOA N WFEA N WFEA DP WSPD R XEAP XEBJ SEBS XEBW SEBW SEBW SEBW SEBW SEBW SEBW SEBW S	500 1000(5) 250(1) 500(1) 500(1) 250 1000(5) 50 100 200 250 200 250 100 250	zabaaza za za za z	Dubuque, Iowa Butte, Mont. Dodge City, Kans. Pensacola, Fla. Manchester, N. H. Fayetteville, N. C. Toledo, Ohio Obregon, Soon. Victoria, Tam. Mexico City, D. F. Chihuahua, Chih. Villa Acuna, Coah. Merida, Yuc. Guadalajara, Jal.		8:30 am-midnight 8 am-1 am 6 am-1 am Until 4 am
1350 kcs. CMCA KIDO N	(222.1 m.) 200 1000(2.5)	a a	Havana, Cuba Boise, Idaho		9 am-2 am

KWK_	BM	1000 (5)	а	St. Louis, Mo. Zarephath, N. J. New York, N. Y. Richmond, Va.	6:30 am-1 am 6 am-8:45 am; 6-7:30 pm.
WAWZ	2	1000	а	Zarephath, N. J.	6 am-8:45 am; 6-7:30 pm.
WMBG	RX	500	a	New York, N. Y.	7 am-midnight
		500	•	recumond, va.	, am-mangin
1360	kcs.	(220.4 m.)		1	
CMIH		200	а	Ciego de Avila, Cuba Enid, Okla. Long Beach, Calif. Minot, N. Dak. Salem, Ore. Charleston, S. C. Syracuse, N. Y. Chicago, III. Vicksburg, Miss. South Bend, Ind.	
CMJH KCRC	ĒΜ	250	a	Enid. Okla.	8 am-11 pm
KGER KLPM	•••	1000	a	Long Beach, Calif.	9 am-3 am
KLPM	• 11	500(1)	а	Minot, N. Dak.	iò: 1
KSLM WCSC	M	500(1)	2	Charleston S C	7 am-midnight
WFBL	Ċ	1000 (5)	a	Syracuse, N. Y.	6 am-1 am
WFBL WGES WQBC WSBT	2	500(1)	а	Chicago, III.	8 am-9 pm
WCBC	D	1000	а	Vicksburg, Miss.	••••
***301	CZ	300	a	Journ Bena, ma.	••••
1570	vc2.	(210.0 III.)			
CFAR	• • •	100	a	Flin Flon, Man.	8 am-2:15 pm; 6-10 pm
CKCW	F	100	2	Moncton N B	••••
CKRN		250	z	Rouyn, P. Q.	
CMGE	• • •	200	а	Cardenas, Cuba	10 am-10:30 pm
KEEN	₹	100	z	Spattle Wash	3 pm-1 am
KELD	x	100	z	El Dorado, Ark.	5 pin-1 am
KERN	ΕŅ	100	а	Bakersfield, Calif.	11 am-3 am
KEDO I	MY7	100	а	Boone, Iowa	7 am-2 pm 7:45 am-1 \$
KGFL	4	100	a	Roswell, N. Mex.	11 am-3 am 7 am-2 pm 7:45 am-LS From 9 am
KGKL	M	250	ā	San Angelo, Texas	
KICA	4	100	а	Clovis, N. Mex.	9 am-11 pm , .
KIUP	• • •	100	a	Durango, Colo.	10 am-11 pm
KLUF	M	250	a	Galveston, Tex.	8 am-1 am
KMAC	, 5	250	а	San Antonio, Tex.	8 am-9 pm
KORU	• • •	250	a	Rapid City, S. Dak.	8 am-midnight
KONO	•••	250	a	San Antonio, Tex.	9 am-11 pm 8 am-10 pm 10 am-11 pm 8 am-11 am 8 am-9 pm 8 am-midnight 8 am-11:30 pm 7 am-11 pm
KORN	P	100 (.25)	ž	Fremont, Nebr.	11.1
KRE	•••	250	a	Berkeley, Calif.	24 hours daily 10 am-3 pm; 7-10 pm
KRMG		250	a,	Jamestown, N. Dak.	pm; 7-10 pm
KTEM	M	250	ā	Temple, Texas	••••
KTOK	EMN	250	a	Oklahoma City, Okla.	7 am-1 am
KTUC	ç	100 (.25)	a	Tucson Ariz.	9 am-1 am 9:30 am-1 am
ŔÙĴ		100	a	Walla Walla, Wash.	9:30 am-1 am
KVFD	LP.	100 (.25)	z	Fort Dodge, Iowa	• • • •
KVBS	• • •	250	z	Rock Springs Wyo.	• • • •
ŔŴŶŎ		25 ŏ	ä	Sheridan, Wyo.	9 am-midnight
WABY	BM	100(.25)	а	Albany, N. Y.	7 am-midnight
WAGE	D	250	a	Atlanta Ga	9 am-L3 7 am-l am
WBLK	Ň	250	a	Clarksburg, W. Va.	6 am-11:30 pm
WBNY	2	250	а	Flin Flon, Man. Owen Sound, Ont. Moncton, N. B. Rouyn, P. Q. Cardenas, Cuba Trujillo, D. R. Seattle, Wash. El Dorado, Ark. Bakersfield, Calif. Boone, Iowa Longview, Texas Roswell, N. Mex. San Angelo, Texas Clovis, N. Mex. Pecos, Texas Durango, Colo. Galveston, Tex. San Antonio, Tex. Rapid City, S. Dak. La Junta, Colo. San Antonio, Tex. Rapid City, S. Dak. La Junta, Colo. San Antonio, Tex. Fremont, Nebr. Berkeley, Calif. Everett, Wash. Jamestown, N. Dak. Temple, Texas Oklahoma City, Okla. Emporia, Kans. Tucson, Ariz. Walla Walla, Wash. Fort Dodge, Iowa Great Bend, Kans. Rock Springs, Wyo. Sheridan, Wyo. Albany, N. Y. Dothan, Ala. Atlanta, Ga. Clarksburg, W. Va. Buffalo, N. Y. Williamson, W. Va. Battimore, Md. Elizabeth City, N. C. Columbia, S. C.	9 am-midnight 7 am-midnight 9 am-LS 7 am-1 am 6 am-11:30 pm 7:30 am-midnight
WBTH	• • •	250	z	Williamson, W. Va.	From 6 am 7 am-10 pm
WCBM	• • •	250	a	Raltimore, Md.	/ am-10 pm
WCNC	•••	250 250	ž	Elizabeth City, N. C.	7 am-11 pm
wcos	• • •	100 (.25)	z	Columbia, S. C.	A
WDAS WDWS	• • •	250	a	Champaign III	8 am-midnight
MECA	_	250	a	Evansville, Ind.	8 am-1 am
WFOR WFTL WGBR WGL WGRC WHBO		100	а	Williamson, W. Va. Danville, Va. Baltimore, Md. Elizabeth City, N. C. Columbia, S. C. Philadelphia, Pa. Champaign, Ill. Evansville, Ind. Hattlesburg, Miss. Ft. Lauderdale, Fla.	8 am-midnight
WFTL	P	100 (.25)	z	FT. Lauderdale, Fla.	••••
WGBK	X	250	a	Fort Wayne, Ind.	
WGRC	Ä	25ŏ	ā	New Albany, Ind.	From 7 am
WHBQ	• • •	100	a	Memphis, Tenn.	8 am-11:30 pm
WHDF		100(25)	a 7	Hickory, N. C.	10:50 am-0:50 pm
WHLB	င်	250	ã	Evansville, Ind. Hattlesburg, Miss. Ft. Lauderdale, Fla. Goldsboro, N. C. Fort Wayne, Ind. New Albany, Ind. Memphis, Tenn. Calumet, Mich. Hickory, N. C. Virginia, Minn. Port Huron, Mich.	••••
WHDF WHKY WHLS WHTR WHUB WIBM WISE		250	а	Memphis, Tenn. Calumet, Mich. Hickory, N. C. Virginia, Minn. Port Huron, Mich. Spartanburg, S. C. Cookeville, Tenn. Jackson, Mich. Asheville, N. C.	•
WHTR	 P	100(.25)	z	Spartanburg, S. C.	••••
WHUB	R	250	8	Jackson, Mich.	6:30 am-12:30 am
WISE	Ň	100	Z	Asheville, N. C.	

WJAC SY WLLH MSY WMAN DP WMGA P WMGA DE WMGAY WRAK WRDO WRAK WRDO WRJN WSLB P WSLB WSLB WSLB WSLB WSLB WSLB WSLB WSLB	250 10-100 250 250 250 100 (.25) 250 100 250 100 100 (2.5) 250 250 250 250 250 250 100 (.25) 100 (.25)	z Mansfield, Ohio a Jacksonville, Fla. a Wilmington, N. C. z Moultrie, Ga. a St. Paul, Minn. a Decatur, Ala. a Davenport, Iowa a Portsmouth, Ohio a Mayaguez, P. R. a Williamsport, Pa. a Augusta, Maine a Racine, Wis. a Wausau, Wis.	7:30 am-midnight 7:30 am-midnight 7:30 am-midnight 7:30 am-7 pm. 7 am-1 am 8 am-6:30 pm 6 am-midnight 7 am-10:15 pm 7:30 am-9 pm 8 am-11:15 pm 8:45 am-midnight 7 am-11:15 pm 8:30 am-10 pm
1380 kcs.	/a== a \		
CMCW KOH C KQV WALA CX WING N WKBH C WNBC B	200 500 500(1) 500(1)	d Havana, Cuba a Reno, Nev. b Pittsburgh, Pa. a Mobile, Ala. a Dayton, Ohio a La Crosse, Wis. a New Britain, Conn.	6:55 am-midnight 11 am-3 am 7 am-10 pm 8:30 am-midnight 6 am-7:30 pm; 10 pm-1 am 7 am-midnight 7 am-midnight
1390 kcs.	(215.7 m.)		
CMJC KABR KLRA C KOY C KRLC WHK KBM WQDM AD XEM	200 500 (1) 1000 (5) 1000 250 1000 (5) 1000 500	z Camaguey, Cuba a Aberdeen, S. Dak. a Little Rock, Ark. phoeniz, Ariz. a Lewiston, Idaho a Cleveland, Ohio f St. Albans, Vt. z Chihuahua, Chih.	8 am-11 pm 9 am-12:15 am 9:30 am-12:30 am 7 am-midnight 6 am-LS
1400 kcs.	(214.2 m.)		4
	200 200 5000 5000 500 500 250 500 250 100 250	a Indianapolis, Ind.	9:30 am-1:30 am 7:30 am-1:30 am 3:45-6 pm 7-11 am; 7:30-9 pm 7:30 am-1 am Silent 1:30-3:45 pm; 9-10:30 pm
1410 KCS.			
CKFC 2 CKMO 2 CMCQ KFJM KGNC N KMED N WAAB EM WBCM WHIS WROK M WSFA CE	50 100 200 500(1) 1000(2.5) 250 1000 500(1) 500(1) 500(1)		From 11 am 7 am-11 pm 8 am-10 pm From 7 am From 7 am 9 am-12:30 am 5 am-10 pm 7:30 am-midnight 7:30 am-midnight
1420 kcs. CBY F CHLN	(211.1 m.)	a Toronto, Ont. z Three Rivers, P. Q.	:::: 1

ANPC CKMJPC CKMJ	FF : ZH4XD : ZHXX : M : DXXH : : DPX4	100 (.25) 100 200 250 100 250 100 250 100 250 100 250 100 250 100 250 100 250 100(.25) 100 100(.25) 100 100(.25)	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	Kenora, Ont. Nelson, B. C. Moron, Cuba San Antonio, Texas Albert Lea, Minn. Portland, Ore. Texarkana, Texas Denton, Texas Price, Utah St. Cloud, Minn. Fond du Lac, Wis. Shawnee, Okla. Alamosa, Colo. Safford, Ariz. Lamar, Colo. La Grande, Ore. Palestine, Texas Eugene, Ore. Abilene, Texas Eugene, Ore. Abilene, Texas Bozeman, Mont. Beaumont, Texas Midland, Texas San Francisco, Calif. Sioux City, Iowa Atchison, Kans. Wallace, Idaho Hutchinson, Kans. Portland, Ore.	10 am-3 am 7 am-12:15 am From 7:30 am 2-3:30 pm; 7-8 pm 8 am-midnight 8 am-LS 9:30 am-midnight 8 am-10 pm 9:30 am-10:30 pm 9 am-8 pm 10 am-8 From 10 am 8 am-10 pm From 8 am 24 hours daily 7 am-midnight 8 am-10 pm 9 am-2 pm; 3:30-7 pm; 8 pm-
WACO WAGM WAPL WCBS WCHD WELLJ WGNC WHAC WHAC WILLS WILLS WILLS WILLS WILLS WALEU WAMS WAMS WAS WAS WAS WAS WAS WAS WAS WAS WAS WA	N	250 100 250 250 250	b a a a a	Waco, Texas Presque Isle, Maine Chattanooga, Tenn. Hazleton, Pa. Springfield, Ill. Charlottesville, Va. Rocky Mount, N. C. Battle Creek, Mich. Youngstown, Ohio Gastonia, N. C. Albany, Ga. Cicero, Ill. Anniston, Ala. Wilmington, Del. Ironwood, Mich. Poughkeepsie, N. Y. Lexington, Ky. Erie, Pa. Suffolk, Va. Springfield, Mass. Detroit, Mich. Joplin, Mo. Uniontown, Pa. Daytona Beach, Fla. Muscle Shoals City, Ala. New Orleans, La. Paducah, Ky. Parkersburg, W. Va. Ponce, Puerto Rico Jackson, Miss. Sarasota, Fla.	24 hours daily 7 am-midnight 8 am-10 pm 9 am-2 pm; 3:30-7 pm; 8 pm- 3:15 am. 9 am-1 am 11 am -7 pm 7 am-7 pm 9 am-10 pm 8 am-11 pm 7 am-midnight 7 am-8 pm 7:30 am-midnight 6:30 am-11 pm 6 am-11 pm 8 am-8:30 pm 8 am-8:30 pm 9 am-midnight 7:30 am-midnight 8:30 am-11 pm 8:30 am-11 pm 9:30 am-midnight 9:30 am-mi
1430 CJGX CMKZ KGNF	kcs.	(7007)		1 1	8:30 am-12:30 am
KINY KSO WBNS WHEC	SECONDEXT:	250 1000(5) 1000(5) 500(1) 1000(5) 500(1)	a a a a a	Yorkton, Sask. Palma Soriano, Cuba North Platte, Nebr. Juneau, Alaska Des Moines, Iowa Columbus, Ohio Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y. Mexico City, D. F.	8 am-6:15 pm Starts at Noon 7:30 am-2 am 6 am-1 am 7 am-midnight 6:30 am-midnight 8 am-12:30 am 8 am-1 am
XERH				Albany, N. Y. Mexico City, D. F.	8 am-1 am ····
	kcs.	(208.2 m.)	a	Timmins, Ont-	11 am-11:30 pm
CKGB CMBY KDFN KELA	 M	100 200 500 1 000	a	Timmins, Ont. Havana, Cuba Casper, Wyo. Centralia, Wash.	7:55 am-11:30 pm 9:45 am-3 am

KXYZ WBIG WCBA WMBD WSAN XEFI	BM C a C N	1000 1000(5) 500 1000(5) 500 1000	8 8 8 8	Houston, Texas Greensboro, N. C. Allentown, Pa. Peoria, III. Allentown, Pa. Chihuahua, Chih.	On all night 6 am-11:30 pm 7:30 am-11:30 pm 6:30 am -midnight 1-11:30 pm
1450	kcs.	(206.8 m.)			
CFCT CHGS CMHM HRN		500 50 200 500	a f z b	Victoria, B. C. Summerside, P. E. I. Cienfuegos, Cuba Tegucigalpa, Hond.	10:45 am-12:15 am 6:30 am-10 pm Noon-1 pm; 2-3 pm; 7-10:30
KCMO KGCX KIEM KTBS TGQ WAGA WGAR WHOM WSAR XEF	M NZ B C	1000 1000 500(1) 1000 200 500(1) 1000(5) 250 1000	a a a a a a a a f a	Kansas City, Mo. Wolf Point, Mont. Eureka, Calif. Shreveport, La. Quezaltenango, Guat. Atlanta, Ga. Cleveland, Ohlo Jersey City, N. J. Fall River, Mass. Juarez, Chih.	pm 7 am-2 am 10 am-1 am 7:30 am-1 am 7:15 am-2 am 6:30 am-midnight 7 am-midnight 7:30 am-midnight
1460	kcs.	(205.4 m.)			
CMKF KSTP WJSV	ŘX CX	250 10000 (25) 10000	z z a	Holguin, Cuba St. Paul, Minn. Washington, D. C.	7 am-2 am 6 am-1 am
1470	kcs.	(204 m.)			
CMCX HI8Q KGA WLAC	1475 BM	200 100 5000 5000	z z a a	Havana, Cuba Trujillo, D. R. Spokane, Wash. Nashville, Tenn.	9 am-11 pm
1490	kes	(202.6 m.)		1	
CMHX KOMA WHIP WKBW	 G	200 5000 5000 5000	a a z a	Cienfuegos, Cuba Oklahoma City, Okla. Hammond, Ind. Buffalo, N. Y.	7:30 am-1 am 7:30 am-5:30 pm 8 am-1 am
1490 CMKQ KFBK WCKY XECH XEDR	kcs.	(201.2 m.) 10000 100000 50000 250 100	z a a z z	Santiago de Cuba Sacramento, Calif. Cincinnati, Ohio Toluca, Mex. Guaymas, Son.	10 am-3 am 6 am-2 am
1500	1	(199.9 m.)			
CJIC CMOXX KAWM KBKR KBKR KDB KDB KDB KDB KDB KDB KGFI KGKY KNOTN KNOTN KOYAR	F EP M CM . M . D M D	100 200 100 100 100 100(.25) 100 100(.25) 100(.25) 250 250 250 250 250 250 250 250 250 250	********************************	Sault Ste. Marie, Ont. Havana, Cuba Gallup, N. Mex. Muskogee, Okla. Baker, Ore. Big Spring, Texas Duluth, Minn. Santa Barbara, Calif. Sedalia, Mo. Amarillo, Texas Brownsville, Texas Tyler, Texas Scottsbluff, Nebr. Brady, Texas Austin, Texas Pine Bluff, Ark. Valley City, N. Dak. Laredo, Texas Lake Charles, La. Paris, Texas Wenatchee, Wash. Roseburg, Ore. El Paso, Texas Salina, Kans.	10 am-10 pm 8 am-midnight 10 am-10 pm 8 am-11 pm 7:30 am-midnight 10 am-3 am 8 am-midnight 3 am-1 am 8:30 am-11 pm 8 am-6 pm 8 am-LS 8 am-10 pm On all night
KPLC KPLT KPQ KRNR	M M M P		8	Wenatchee, Wash.	••••
KRNR KROD	M	100 (.25) 100 100 (.25)	a z	Koseburg, Ore. El Paso, Texas	••••
KSAL	χź	100 (.25)	z	Salina, Kans.	••••

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                                                         Augusta, Ga.
Rome, Ga.
                                                    a
              ...
                                                   a Rome Ga.
a Richmond, Va.
a Richmond, Va.
a Salisbury, N. C.
a Rutland, Vt.
Cocala. Fla.
a E St Louis, III.
a Woodside, N. Y.
a Pittsburgh, Pa.
z Mexico City, D. F.
                                                    а
                                100
 WSTP
                 M
                                                                                                       8:30 am-9 pm
 WSYB
               XX
 WTMC
               • • •
                                                                                                       From 6 am
 WTMV
               ···ż
                                                                                                       8 am-midnight
24 hours daily
 WWRL
                                 100 (.25)
 NWSW
                                250
400
XEQK
1510 kcs. (198.6 m.)
                                                         Kingston, Ont.
Waterloo, Ont.
                                                                                                        Noon-11 pm
CFRC
                                                                                                       8 am-11 pm
1520 kcs. (197.3 m.)
TGW
                              5000
                                                       Guatemala City, Guat.
                                                                                                       7:45 am-9 am; 12:45-3:45 pm;
7:30 pm-12:15 am
1530 kcs. (196 m.)
                                                         Havana, Cuba
Kansas City, Mo.
Waterbury, Conn.
CMC
KITE
WBRY
                                                   z
                                                                                                        6 am-3 am
8:30 am-midnight
               ĊM
1550 kcs. (193.4 m.)
                                                         Bakersfield, Calif.
New York, N. Y.
KPMC
WQXR
                                                                                                       10 am-2 am
                                                                                                       7:30 am-midnight
1560 kcs. (112.2 m.)
                              5000
                                                                                                       7:55 am-midnight
CMBF
                                                   z Havana, Cuba
1580 kcs. (189.8 m.)
                                200
CMRT
                                                      z Guines, Cuba
1600 kcs. (187.4 m.)
 CMBH
                               5000
                                                     z Havana, Cuba
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	C	HANGES	610	WCLE	United Brdcstg. Co., Cleve- land, Ohio
		ued From Page 62)	640	WHKC	United Brdcstg. Co., Columbus, Ohio
1310 1310	KROC WGAU	Rochester, 250 from 100(.25) Athens, 250 from 100(.25)	900	WLBL	State of Wis., Dept. of Agriculture, Stevens Point, Wis.
1310	WLBJ	Bowling Green, 250 from 100(.25)	1200	кнвс	Hawaiian Brdcstg. Sys., Hilo, Hawaii
1310 1310	WLNH	Laconia, 250 from 100 Knoxville, 250 from 100(.25)	1320	KGMB	Hawaiian Brdcstg. Sys., Honolulu, T. H.
1310 1370	WTJS KMAC	Jackson, 250 from 100(.25) San Antonio, 250 from 100(.25)	1330	KMO	Carl E. Haymond, Tacoma, Wash.
1370	KONO	San Antonio, 250 from 100	1370	WISE	Harold, H. Thoms, Asheville, N. C.
1370 1370	KTSW KVRS	Emporia, 250 from 100 Rock Springs, 250 from	1390	WHK	United Brdcstg. Co., Cleve- land, Ohio
1370	WBNY	100(.25) Buffalo, 250 from 100(.25)	1500	WTMC	Ocala Brdcstg. Co., Inc., Ocala, Fla.
1370	WCNC	Elizabeth City, 250 from		Perm	it to Change Power
1370	WLLH	100(.25) Lowell, 250 from 100(.25)	590	WKZO	Kalamazoo, Mich., to 250(1).
1370	WMBR	Jackson ville, 250 from	610	KFRC	San Francisco, to 5 kw. Providence, to 1000(5). Beverly Hills, to 1000(5). Seattle, to 1000.
1370	WMGA	100(.25)	630	WPRO	Providence, to 1000(5).
1370	WOC	Moultrie, 250 from 100(.25) Davenport, 250 from	710	KMPC	Beverly Hills, to 1000(5).
10,0		100(.25)	760 770	KXA KFAB	Lincoln, to 50000.
1400	KLO	Ogden, 5000 from 1000(5) Tulsa, 5000 from 1000(5)	850	WKAR	E. Lansing, to 50000.
1400	KTUL	Tuisa, 5000 from 1000(5)	880	\mathbf{WRNL}	Richmond, to 1000.
1400	WIRE	Indianapolis, 5000 from 1000(5)	880	WSUI	Iowa City, to 1000(5)
1420	KABC	San Antonio, 250 from	890 890	KFNE WGBU	Ketchikan to 1000(5).
1420	KATE	100(.25) Albert Lea, 250 from 100(.25)	940 990	WICA XEK	E. Lansing, to 50000. Richmond, to 1000. Iowa City, to 1000(5) Shenandoah, to 1000(5). Ketchikan, to 1000. Ashtabula, to 500. Mexico City, to 500 w. Seattle, to 1 kw.
1420	KGLU	Safford, 250 from 100(.25)	1120	KRSC	Seattle, to 1 kw.
1420	KLBM	La Grande, 250 from 100(.25)	1200 1200 1200	KVNU KVOS WMFR	Logan, to 250 Bellingham, to 250 High Point, to 250
1420	KSAN	San Francisco, 250 from 100	1200 1200	WMFR	
1420	WAPO	San Francisco, 250 from 100 Chattanooga, 250 from 100(.25)	1210	WOLS KANS	Florence, to 250 Wichita, to 250 Fort Smith, to 250 Columbus, to 250 Zanesville, to 250 Sherman, to 1 kw.
1420	WAZL		1210	KFPW	Fort Smith, to 250
1420	WCBS	Springfield, 250 from 100 (.25)	1210 1210	WCOL WHIZ KRRV	Columbus, to 250
1.20	11 042	100(.25)	1310	KRRV	Sherman, to 1 kw.
1420	WILM	Wilmington, 250 from 100	1310	WBOM	Terre Haute, to 250
1420 1500	WLEU KGKB	Tyler 250 from 100(.25)	1310	WBOM WGTM WNBH	Wilson, to 250
1500	ROVC	Wilmington, 250 from 100 Erie, 250 from 100(.25) Tyler, 250 from 100(.25) Valley City, 250 from	1310 1350	KWK	Terre Haute, to 250 Wilson, to 250 New Bedford, to 250 St. Louis to 5000
		100(,25) Paris, 250 from 100(.25) Mankato, 250 from 100(.25) Bristol, 250 from 100	1350	WMBG	
`1500	KPLT	Paris, 250 from 100(.25)	1370	KELD	El Dorado, to 250 Longview, to 1 kw. Goldsboro, to 250
1500 1500	KYSM WOPI	Rrietol 250 from 100 (.23)	1370 1370	KFRO WGBR	Coldabore to 250
1300	WOLL	Location	1370	WPRA	Mayaguez, to 1000(2.5)
1490	WCKY	Cincinnati, Ohio, from Co-	1380	WPRA WALA	Mayaguez, to 1000(2.5) Mobile, to 1 kw.
	*****	Cincinnati, Ohio, from Covington, Ky. Ulster Twp., N. Y., from	1420	KORE	Eugene, to 250
1 50 0	WKNY	Kingston	1420 1420	KORE KWBG WMSD	Hutchinson, to 250 Muscle Shoals City, to 250
		Call Letters	1430	KINY	Juneau, to 1 kw.
1210	WHIZ	Zanesville, from WALR Petersburg, from WPIV	1550	WQXR	Juneau, to 1 kw. New York, to 5 kw.
1210	WPID	Petersburg, from WPIV		Permit	to Change Frequency
1370	WMSL	Decatur, from WMFO Reinstated	770		
950	WHAL	Saginaw, Mich.	770 1200	KFAB WIBL	Lincoln, Nebr., to 1080. Decatur, to 1310. Fort Smith, to 1370
	TOWIT	Network	1210	WJBL KFPW	Fort Smith, to 1370
660 12 00	KOWH WENY	Floring new MRS	1210	WCOL	
1210	WHIZ	Zanesville, new NBC	1260 1310	KPAC KRRV	Sherman, to 880
1310	KVSF WFBG	Santa Fe, new CBS	1310	WBOW	Terre Haute, to 1200
1310	WFBG	Network Omaha, to NBC Blue Elmira, new MBS Zanesville, new NBC Santa Fe, new CBS Altoona, new NBC Red Toledo, Red, from Blue Johnstown, NBC Red Packford new MBS	1320	WBOW KGMB	Port Arthur, to 1220 Sherman, to 880 Terre Haute, to 1200 Honolulu, to 590 Longview, to 1340
1340	WSPD WJAC	Tohnstown NRC Red	1370	KFRO	Longview, to 1340
1370 1410	WROK	Rockford, new MBS	1370 1450	WPRA KTBS	mayaguez, to 700
1420	CKLN	Rockford, new MBS Nelson, new CBC	1500	KSAL	Shreveport, to 620 Salina, to 1120
1310	WJPF	Deleted Herrin, Ill. Akron, Ohio	a !		Jsing Special Frequencies
1530	WAKR		Call KTH	S Hot	Assigned Using Springs 1040 1060 eport 850 1100
560	WIS	Liberty Life Ins. Co, Co- lumbia, S. C.	KTH KWK WTI	H Shrev	eport 850 1100 ord 1060 1040

Prequency is given in kilocycles in second column. For power and network affiliations, refer to the list of North American stations by Frequencies.

WHIMA 1450 WHIM 1210 WHIM 1250 WART 1250	ALABAMA	El Dorado	San Bernardino	New Haven	Athens
Aunistan					
WASK 1200	Anniston				
Birmingham					
WRICK September Septembe					
WYSGN 1370					WMBI 1080 WGST 890
Decature				1000	
Decease			0.0	DELAWARE	Augusta
WAGE 1370 KARK 880			- ,,,,		
WASP 1370 WILM 1450					
California Cal		KGHI 1200			
WHEY 1210		KLRA 1890		WILM 1420	
WINDED 1300 WALA 1380			*** KYA 1230		
Washington Was					
WAILA 1380 WMMAD 1290 WMAD 1290 WMMAD 1290 WMMAD 1290 WMMAD 1290 WMMAD 1290 WMA	WBHP 1200			COLUMBIA	
WMOD 1260 Montgomery WWOV 1210 WWAL 630 W		-KUOA 1260	San Luis Obispo		
Montgomery	,,		***KVEC 1200		
WOOV 1210	.,	CALIFORNIA			
WOOV 1210					
WHISE 1500 Berkeley Santa Rosa City Cit	,,,,,,				Rome
WHBE 1500 Muslos Shoals City Wilder Wild		KERN, 1870			
Wilsole Shoals City Hillis Stockton Stockton Stockton City Hillis Stockton City City Hillis Stockton City Hillis Hi				FLORIDA	
City					
WMSD				Daytona Reach	
Tuscalcosa					- WPAX 1210
ALASKA	Tuscaloosa				
ALASKA					WAYX 1200
Alaska		El Centro		Ft. Myers	
Anchorage KFQD 780	\				HAWAII
Anchorage KFQD 780 Freene	ALASKA		KHUB 1810		
Anchorage				Jacksonville	
Red	Anchorage		COLORADO		
Colorado Springs			\ \ \		
Kiry 1430					
Long Beach KFOX 1250 Denver Los Angeles KFOX 1250 Denver Los Angeles KFOX 1250 Convert Convert Los Angeles KFOX 1250 Convert Los Angeles Los Angeles Los Angeles Los Angeles Los Angeles Los Angeles Los Angel					
Recomplex Reco				Miami	KTOH 1500
RGBU 900					
Color Angeles Color Co					I IDAHO
REPAC 1800	MGDO 000		KLZ 560		
RFIZUNA					
RFSG 1120	ARIZONA				
Contains					
Second S	Globe				
Second S	KWJB 1210	∞∞ KFWB 950			
Composition		*** KGFJ 1200			
Name					
Note				- WCOA 1840	KSEI 900
Note				- St. Augustine	
Note				- WFOY 1210	
Prescritt RYCA 1500 Safford RTRB 746 Monterey Sterling Sarasata 1420 Sterling WSPB 1420 Tallahasse WWTAL 1810 Sarasata 1420 Tallahasse WWTAL 1810 Tallahas					
RYCA 1500 Safford KTRB 746 Sterling Safasota WSPB 1420 Safasota WSPB 1420 Safasota WSPB 1420 WSP					- KWAL 1420
Safford RGLU 1420 Monterey KDON 1210 Oakland KLS 1280 CONNECTICUT More			-KGHF 1820		
RGLU				WSPR 1420	ILLINOIS
Tucson	KGLU 1420		-KGEK 1200	Tallahassee	
- KTUC 1870 - KLS 1280 - KLS 880 - KLX 880 - KROW 930 - KROW 930 - Pasadena KYUM 1210 - Redding KYCV 1200 - WTIC 1040 - WTIC 1					
WILA 1200 WILA 620 WILA 620 WILA 620 WILA 620 WILA 620 WILA 620 WestPalmBeach WILA 620 WILA			CONNECTICUT	Tampa	
New Prince New	- KVOA 1260				
ARKANSAS Redding KPPC 1210 Hartford WJNO 1200 Champaign WDRC 1350 KVCV 1200 Sacramento WTHT 1200 Champaign WDWS 18 Chicage WTHT 1200 Champaign WDWS 18 Chicage WAAF WTHT WDWS WTHT WDWS WTHT WDWS WTHT WDWS WDWS WTHT WDWS W	Yuma		Bridgeport		
RPPC 1210	KYUM 1210				
ARKANSAS KYCV 1200 - WTIC 1040 GEORGIA Chicago WTHT 1200 - WAAF 9 KFBK 1490 New Britain Albany - WBBM 7					
Blytheville Sacramento WTHT 1200 — WAAF 9 Skeramento WTHT 1200 — WAAF 9 WTHT 1200 — WABF 7	ARKANSAS			CECRCIA	
Blytheville KFBK 1490 New Britain Albany - WBBM 7	AIIIAIIOAU			GEORGIA	
	Blythaulila			Albert	
	-KLCN 1290	**KROY 1210	WNBC 1880	WGPC 1420	- WBBM 770
I write and I make I make I may to the total		1 44401 1440	1 11-12-0 2000	1 11010 1120	1 4000 5000

		- WCKY 1490		
∞WCFL 970	IOWA	Hopkinsville	WEEI 590	MINNESOTA
WCRW 1210 WEDC 1210	-WKBB 1500	WHOP 1200 Lexington	WHDH 880 WMEX 1500	
WENR 870	Ames	WLAP 1420	WNAC 1280	Albert Lea
WGES 1360	WOI 640	Louisville	WORL 920	~~ KATE 1420
₩GN #20	₩KFGQ 1370	WAVE 940	Fall River	Duluth
∞WJJD 1130	Cedar Rapids	WHAS 820	WSAR 1450	
™WLS 870 ™WMAQ 670	WMT 600	WINN 1210	Greenfield	Fergus Falls
SEEWMBI 1080	Davenport WOC 1870	Owenshore 1500	WHAI 1210 Hyannis	- KGDE 1200
WSBC 1210	WOC 1870	Paduoah	WOCB 1210	Hibbing .
Cicero WHFC 1420	KGCA 1270		Lawrenss	WMFG 1210
WHFC 1420 Danville	KWLC 1270		WLAW 680	Mankate KYSM 1500
- WDAN 1500	Des Moines KRNT 1320	LOUISIANA	WLLH 1870	Minneapolis
Decatur	K80 1430		Lowell WLLH 1370	WCCO \$10
™ WJBL 1200	₩HO 1000	Alexandria	New Bedford	-WDGY 1180
East Dubuque WKBB 1500	Dubu que	KALB 1210	WNLH 1310 Pittsfleld	WLB 760 WTCN 1250
East St. Louis	KDTH 1840	Baton Rouge	∞WBRK 1810	WTCN 1250 Moorhead
**** WTMV 1500	Fort Dodge KVFD 1370	WJBO 1120	Salem	-KVOX 1810
Galesburg	lowa City	Lafayette	WESX 1200 Springfield	Northfield
- WGIL 1500 Harrisburg	₩SUI 880	Lake Charles	WBZA 990	
WEBQ 1210	Marshalltown 	-KPLC 1500	WMAS 1420	Rochester KROC 1310
Jollet	Mason City	Monroe	WSPR 1140	St. Cloud
WCLS 1310	KGLO 1210	New Orleans	Worcester WORC 1280	KFAM 1620
Peorla	Shenandoah	_ WDSU 1250	WTAG 580	St. Paul
Quinoy	₩KFNF 890	- WJBW 1200		-KSTP 1460 -WMIN 1870
WTAD 900	Sloux City	WNOE 1420	MICHIGAN	Virginia
Rockford		WSMB 1820 WWL 850		-WHLB 1870
WROK 1410 Rock Island	-KSCJ 1330 -KTRI 1420	Shreveport	Battle Creek	Winena
- WHBF 1240		KRMD \ 1810	WELL 1420.	- KWNO 1200
Springfield	KAN8A8	KTBS 1450	Bay City	***************************************
WCBS 1420 WTAX 1210	Abllana	KWKH 1100	Calumet	MISSISSIPPI
Tuscola	Abilene KFBI 1050		WHDF 1870	
WDZ 1020	Atchison	MAINE	Detroit WJBK 1500	Greenville WJPR 1319
Urbana WILL 580	KVAK 1420	Augusta	WJBK 1500 WJB 750	Grenada
WILL	Coffeyville	WRDO 1870	WMBC 1420	WGRM 1210
INDIANA	Dodge City	Bangor	WWJ 920	Gulfport
	KGNO 1340	WABI 1200 WLBZ 620	WXYZ 1240 East Lansing	Hattlesburg
Anderson	Emporia	WLBZ 620 Lewiston	→WKAB 850	WFOR 1370
WHBU 1210 Elkhart	-KTSW 1870	WCOU 1210	Flint	Jackson 1270
WTRC 1310 \	Garden City KIUL 1210	Portland		WJDX 1278 WSLI 1420
Evansville	Great Bend	WCSH 940 WGAN 640	Grand Rapids WASH 1270	Laurel
WEOA 1370	KVGB 1370	WGAN 640 Presque Isle	WOOD 1270	WAML 1810
WGBF 330,	Hutchinson	WAGM 1420	tronwood	McComb
WGL 1370	KWBG 1420 Kansas City	***************************************	WJM8 1420	WSKB 1200 Meridian
WOWO 1160	KCKN 1310	MARYLAND	Jackson WIBM 1870	WCOC 880
Gary	Lawrence		Kalamazee	Vicksburg
WIND 560	- KFKU 1220	Baltimore	WKZO 590	WQBC 1360
#ammonu	WREN 1220	WBAL 760	Lansing	
WWAE 1200	Manhattan			MISSOURI
Indianapolis	Pittsburg	WCBM 1870	Lapeer WMPC 1200	l ———
₩FBM 1230	KOAM 790	WFBB 1270	Marquette	Cape Girardeau
WIBC 1050 WIRE 1400	Salina	Cumberland	WBEO 1210	KFV8 1210 Columbia
Muncle	KSAL 1500 Topeka	WTBO 800	Muskegon WKBZ 1560	KFRU 680
- WLBC 1310	WIBW 580	Frederick WFMD 900	WKBZ 1590 Pontlac	Jefferson City
New Albany	Wichita	Hagerstown	WCAR 1100	- KWOS 1810
-WGRC 1370	KANS 1210	WJEJ 1210	Port Huron	Joplin 1460
Richmond - WKBV 1500	- KFH 1300		WHLS 1870	WMBH 1420 Kansas City
- WKBV 1500 South Bend	KENTUCKY	MASSACHU-	Royal Oak	KCMO 1456
→WFAM 1200	KENTUCKT	SETT8	WEXL 1310	₩ KITE 1539
-WSBT 1360		I	Saginaw	KMBC 959
Terre Haute	Ashland —WCMI 1810	Boston WAAB 1410	WHAL 950 WMLG 1200	WDAF 616 WHB 868
WBOW 1310 West Lafayette	Bowling Green	WAAB 1410 WBZ 990	Sault Ste. Marie	Poplar Blaff
WBAA 890	WBLJ 1810	WCOP 1120	WS00 1200	KWOC 1810
That to	United to the second		- con countries	- AND - COLUMN

R. Color	St. Joseph	NEW JERSEY	New York	Kinston	-WKBN 570
	- KFEQ 680		WABC 860		Zanesville
Attants			WBIL 1100		
Wildle					
RX 150	-KSD 550		WEAF 660	Rocky Mount	
## WIND 1500 Canden 1210 Canden 1220 Canden Canden	201124				
Sedalia Seda					
Sedella					Elk City
Series City WAAT 940 WAAT 940 WAYEN 1350 WATS 1350	Sedalla		WLTH 1400	-WMFD 1370	
WATCH 1500 Nowark 1500					
New New					
Norman		₩HOM 1450			
MONTANA Red Bank WRBB 110 Molthons City Molthons C	. 11/120 000				
Billings KORI	MONTANA			NORTH	
WRID 1300	MUNIANA				
ROBIL Fabra Fabr	Billings	₩BRB 1210			KOMA 1489
NEBM	KGHL 780				
Butts 1240 WAWZ 1380 Walff 1210 Farge Walff Walff 1210 Farge Walff Walff Walff Walff					
Pounkeepsie Farge Ponce City Ponce C			WWW WMFF 1810		
Refrest Falls RFB 1280 Helena RFB 1280 Helena RFB 1280 RFB 12					Ponca City
Helena KIPBA 1250 Holena KIPBA 1250 KIRBA 1210 K	Great Falls	NEW MEXICO			
A Disquerque Willing Willing					
Kallapell KGEZ 1816 KGEM 1830 Carlebad KGV 1840 KGV	MOIONA 1910	Albuquerque		Jamestown	
Milesoula KGYO 1260 KIAH 1210 Shenectady Minot KGYO 1240 Minot KGYO Minot Minot KGYO Minot Minot KGYO Minot Minot KGYO Minot Minot Minot KGYO Minot	Kalispeli	KGGM 1230	-WSAY 1210		- KOME 1810
Clovic					
Clovic C					KV00 1140
NEBRASKA				-KLPM 1860	OREGON
NEBRASKA			Syracuse		
Hobbs		Gallup		-KOVC 1500	
Fremont RORN 1370 Grand sland Roswell 1370 Grand sland Roswell 1370 Grand sland Roswell 1370 Grand sland Roswell 1370 Roswell Roger 1310 White 1310 Whi	NEBRASKA			OHIO	
Frement ROBN 1370 Grand Island RAMD T40 RAVSF 1310 RAVSF 1310 WHRZ 1300 WTRY 950 WWW 1210 Ashtabula ROBE ROSSE ROSSE					
Corveiling		Roswell			
NEW YORK Solution New York Solution New York Solution New York New York					
Mastings	KMMJ 740			Ashtabula	
New York Albany 1870					
Company Comp	Kearney	NEW YORK			KORE 1420
Weight 1310 Weight 1370 Weight 1370 Weight 1310 Weight 131		Albany	White Plains	Cincinnati	
WORD 1210	-KFAR 770	WABY 1870	WFAS 1210	WCKY 1490	
Nortog N					
North Platte			***************************************		
Wight 1450 Wight 1806 Brocklyn Ward 1400 Wight 1800 Wigh 1800 Wight 1800 Wight 1800 Wight 1800 Wight 18				WSAI 1880	
March Marc		→ WNBF 1506			
Ward		Brooklyn	WISE 1870		
WBB 1800 WBT 1080 WWTM 1300 WWTM 1070 KALE 1300 KBPS 1420 WWTM 1500 WWTM 1600 WW			WWNC 570	-WGAB 1450	
WCNW 1500 WFW 1400 WF					
NEVADA	Scottsbluff	WCNW 1500			
NEVADA	∞ KGKY 1500				-KEX 1180
NEVADA					
WEBR 1210 WCNC 1270 Dayton Content WEBR WEBR 1210 WWRW 1480 WWRV 1870 WWRV 1480 WW	NEVADA				
WGR	- ILLIADA	-WEBR 1810			
WARW 1870 Gastenia WING 1880 KRNR 1800 Salem WING 1810 KRNR 1800 Salem WING 1810 KRNR 1800 Salem KRNR 1810 Mansfield WMAN 1310 WENG 1800 WING 1810 WING WING	Rene				Roseburg
Canton VWCAD 1220 Goldsbore Greensbore WENG 1240 WENG	—кон 1880				
WCAD 1220 WGBB 1370 WMAN 1370 Pennsylvania Pennsyl	 \				
Company Comp		WCAD 1220			
VENT 1310 WESG 850 Freeport WCPC 1500 Freeport WCPC WSAN 1440 WSAN 1440 Freeport Freeport WSAN 1440 Freeport Freepo	HAMPSHIRE				Pennsylvania
Laconia Fresport Greenville WYAX 1570 WCBA 1449 WSAN 1			WBIG 1440	Portsmouth	
WINH 1310		Freeport			
Portamenth Newburgh 1210 WHKY 1370 WTOL 1200 WFBG 1319 Easton	WLNH 1810	WGBB 1210			
Portsmeuth Newburgh High Point Youngstown Easton					
WHEB 740 WGNY 1220 WMFR 1200 WFMJ 1420 WEST 1200	Portsmouth	Newburgh	High Point	· Youngstown	Easton
	WHEB 740	WGNY 1220		WFMJ 1420	WEST 1200

Erie	Charleston	Beaumont	Texarkana	. WASHINGTON
-WLEU 1420	-WCSC 1860	-KFDM 560	KCMC 1420	
Gienside WIBG 970	-WTMA 1210	- KRIC 1420	Tyler	43
Greensburg	Columbia	Big Spring	-KGKB 1500	Aberdeen KXRO 1810
WHJB 620	- WCOS 1870	- KBST 1500	Vernon	Bellingham
Grove City	WIS 560	Brady KNEL 1500	KVWC 1500	KVOS 1200
∞-WSAJ 1810	WOLS 1200	Brownsville		Centralia
Harrisburg	Greenville	KGFI 1500	Victoria KVIC 1310	KELA 1440
WHP 1430	-WFBC 1800	College Station	Wang	Everett
WKBO 1200	Spartanburg	WTAW 1120	-WACO 1420	KRKO 1870
Hazelton	WHTR 1370	Corpus Christi	Weslaco	Longview
₩AZL 1420	WSPA 920	- KRIS 1330	-KRGV 1260	KWLK 780
Johnstown	Sumter	Corsioana	Wichita Falls	Olympia
WJAC 1370	→ WFIG 1310	- KAND 1310	KWFT 620	KGY 1210
Lancaster WGAL 1500		Dallas	INTI 020	Puliman
WGAL 1500 New Castle	SOUTH	₩ KRLD 1040 ₩ WFAA 800	UTAH	-KWSC 1220
-WKST 1250	DAKOTA	WBR 1280	0148	Seattle KEEN 1870
Philadelphia		Denton	0:4:- 0!4:	-KIRO 710
KYW 1020	Aberdeen	KDNT 1420	Cedar City KSUB 1810	-KJR 970
-WCAU 1170	→ KABR 1890	Dublin		- KOL 1270
*** WDAS 1370	Brookings	- KFPL 1310	Logan	- KOMO 920
WFIL 560	KFDY 780	El Paso	KVNU 1200	-KRSC 1120
	Pierre	KROD 1500	Ogden	KTW 1220 •
WIP 610	KGFX 630	KTSM 1810	KLO 1400	KXA 760
WPEN 920	Rapid City	WDAH 1310	Price	Spokane
WTEL 1310	-KOBH 1370	Fort Worth	KEUB 1420	KF10 1120
Pittsburgh	WCAT 1200	- KFJZ 1240 - KGKO 870	Provo 1210	-KFPY 890
	Sioux Falls	- KGKO 870	Salt Lake City	KGA 1470
	*** KELO , 1200	WBAP 800	™KDYL 1290	-KHQ 590
WJAS 1290	-KSOO 1110 Vermillion	Galveston ≪KLUF 1870	-KSL 1130	Tacoma
W.WSW 1500	KUSD 890	Houston	KUTA 1500	KMO 1330
Reading	Yankton	KPRC 920		Vaneouver
WEEU 830	-WNAX 370	- KTRH 1290	VERMONT.	KVAN 880
WRAW 1810	William	KXYZ 1440		Walla Walla
Scranton	TENNESSEE	Huntsville	Burlington	KUJ 1870
WGBI 880	IEMMESSEE	KSAM 1500	TOTAL WCAX 1200	Wenatohee
WQAN 880	Bristol	Kilgore	Rutland	KPQ 1500 Yakima
Sharon	WOPI 1500	KOCA 1210	-WSYB 1500	
WPIC 780		Laredo	St. Albans	- KIT 1250
Sunbury WKOK 1210	Chattanooga WAPO 1420	KPAB 1500	WQDM 1890	
₩KOK 1210 Uniontown	WAPO 1420 WDOD 1280	Longview	Springfield WNBX 1260	WEST
∞ WMBS 1420		Lubbock	Waterbury	VIRGINIA
Wilkes-Barre	Cookeville WHUB 137:0	-KFYO 1810	WDEV 550	
WBAX 1210	Jackson	Lufkin	11221	Beckley
>= WBRE 1310		-KRBA 1810	VIRGINIA	WJLS 1216
Williamsport	Johnson City	Midland	Vindinia	B) uefteld
WRAK 1370	WJHL 1200	KRLH 1420	011-11111-	WHIS 1410
York		Palestine	Charlottesville	Charleston
WORK 1820	Knoxville	∞ KNEI 1420	WCHV 1420	WCHS 580
	WNOX 1010	Pampa	WBTM 1870	WGKV 1500
PUERTO RICO	WROL 1810	KPDN 1810	Fredericksburg	Clarksburg
Mayaguez	Memphis —WHBQ 1370	Paris KPLT 1500	WFVA 1260	-WBLK 1870
WPRA 1870	-WHBQ 1370 -WMC 780	Fecos	Harrisonburg	Fairmont
Ponce	-WMPS 1430	***KIUN 1870	WSVA 550	Huntington
WPRP 1420	WREC 600	Plainview	Lynchburg	- WSAZ 1190
San Juan	Nashville	KWBD 1200	WLVA 1200	Parkersburg
-WKAQ 1240	- WLAC 1470	Port Arthur	Newport . News	WPAR 1420
WNEL 1290	- WSIX 1210	∞ KPAC 1260	WGH 1810	Wheeling
	WSM 650	San Angelo	Norfolk	WWVA 1160
RHODE ISLAND		KGKL 1370	WTAR 780	Williamson
	TEVAS	San Antonio	Petersburg	WBTH 1370
Providence :	TEXAS	= KMAC 1370	WPID 1210 Richmond	
WEAN 780		-KONO 1370	WBBL 1210	WISCONSIN
WJAR 890	Abilene	-KTSA 550	WMBG 1350	
₩PBO 630	-KRB(' 1420	-WOAJ 1190	-WRNL 880	Eau Claire
	Amarillo	Sherman	WRTD 1500	WEAU 1050
BOUTH	KFDA 1500	KRRV 1310	WRVA 1110	Fond du Lac
CAROLINA	KGNC 1410	Sweetwater	Roanoke	- KFIZ 1420
	Austin	KXOX 1210	WDBJ 980	Green Bay
Anderson	**KNOW 1500	Temple	Suffolk	-WHBY 1200
-WAIM 1200	-KTBC 1120	-KTEM 1870	₩LPM 1420	-WTAQ 1880

Janesville.	ı Trail ı	Owen Sound	saskatoon	CMCD 630
WCLO 1200	CJAT 910	CFOS 1870	CFQC 600	CMCF 810
LaCrosse	Vancouver	Prescott	Watrous	CMCG 1290
	CBR 1100	CFLC 930	CBK 540	CMCH 1050
			Yorkton	CMCJ 1110
Madison WHA 940				
******	CKCD 1010	CKTB 1200	CJGX 1430	-CMCK 970
WIBA 1280	CKFC 1410	Sault Ste. Marie		CMCL 780
Manitowoc	- CKMO 1410	CJIC 1500	COSTA RICA	CMCM 850
WOMT 1210	CKWX 1010	Stratford		CMCO 1200
Marinette	Victoria	CJCS 1210	Alajuela	CMCQ 1410
WMAM 570	- CFCT 1450	Sudbury	TISCV 575	CMCU 1010
Milwaukee	01 01	CKSO 780		CMCR 1820
-WEMP 1810		Timmins	San Jose	CMCW 1380
-WISN 1120	MANIŢOBA		TIAFB 900	CMCX 1470
			TIEMC 860	CMCY 570
		Toronto .	TIEP 880	
Poynette	Brandon	→ CBL 840	TIFA 1000	CMK 720
-WIBU 1210	CKX 1120	CBY 1420	TIGH 690	CMOA 660
Racine	Film Flon	CFRB 690	TIGPH 600	CMOX 1500
WRJN 1870	CFAR 1870	CKCL 580	TIGPH2 1225	•••• CMQ 780
Rice Lake	Winnipeg	Waterlee	TIHO 1030	CMW 550
- WJMC 1210	—CJRC 680 —CKY 910	CKCR 1510	CILJ 775	5000 CMX 880
Sheboygan	-CKY 910	Windsor	TILS 880	CMZ 920
-WHBL 1300			TINBC 1070	Holguin
		-CKLW 1030	TING 750 TIOS 940	CMKF 1460
	NEW	Wingham	TIOS 940	
WLBL 900	BRUNSWICK	CKNX 1200	TIPG 625	
Superior			TIRCC 1200	Manzaniilo
WDSM 1200	Fredericton	PRINCE ED-	TIRS 920	CMKE 1310
Wausag		WARD ISLAND	TIXD 800	CMKM 1080
-WSAU 1370				Matanzas
11 222	Monoton	Charlottetown	CUBA	CMGF 1120
	CKCW 1870	CFCY 630	1 0000	CMGH 710
WYOMING	Sackville			Moron
	CBA 1050	CHCK 1810	Banes	
Casper	St. John	Summerside	CMKX 1190	CMJP 1420
KDFN 1440	CHSJ 1120	CHGS 1450	Bayamo	Palma Scriano
	CHS		CMKL 950	CMKZ 1430
Rock Springs		QUEBEC	Calbarien	Pinar del Rie
KVRS 1370	NOVA SCOTIA	QUEBEC	CMHD 1270	CMAB 1240
Sheridan				CMAB 1400
-KWYO 1370		Chicoutimi	Camaguey	CILITIES 2100
777 TO 10 10 10 10 10 10 10 10 10 10 10 10 10		CHICOULIER		Discretes
ZZ 110 2010	Glace Bay		CMJA 860	Placetas
	Glace Bay	CBJ 1120	CMJA 860 CMJC 1390	CMHP 1100
BAHAMAS	VAS 685	CBJ 1120 Hull	CMJA 860 CMJC 1390 CMJE 1230	CMHP 1100 Sagua la Grande
	VAS 685 Hallfax	CBJ 1120 Hull CKCH 1210	CMJA 860 CMJC 1390 CMJE 1230 CMJF 980	CMHP 1100 Sagua la Grande CMHA 1090
BAHAMAS	VAS 685 Hallfax CHNS 930	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230	CMHP 1100 Sagua la Grande
BAHAMAS	VAS 685 Halifax CHNS 930 Sydney	CBJ 1120 Hull CKCH 1210 Montreal CBF 910	CMJA 860 CMJC 1390 CMJE 1230 CMJF 980	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020
BAHAMAS	VAS 685 Hallfax CHNS 930 Sydney CJCB 1240	CBJ 1120 Hull CKCH 1210 Montreal CBF 910 CBM 960	CMJA 860 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus
BAHAMAS	VAS 685 Halifax CHNS 930 Sydney CJCB 1240 Wolfville	CBJ 1120 Hull CKCH 1210 Montreal MOCBF 910 CCBM 960 CFCF 600	CMJA 860 CMJC 1390 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJW 660	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249
BAHAMAS Nassau ZNS 790	VAS 685 Halifax CHNS 980 Sydney CICB 1240 Wolfville CKIC 1010	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJX 660 Cardenas	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA	VAS 685 Halifax CHNS B30 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1330 CMJF 980 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790	VAS 685 Halifax CHNS 980 Sydney CICB 1240 Wolfville CKIC 1010	CBJ 1120 Hull CKCH 1210 Montreal —CBM 980 CFCF 600 CHLP 1120 —CKAC 730 New Carlisle	CMJA 860 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritua CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA	VAS 685 Halifax CHNS B30 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1330 CMJF 930 CMJK 1020 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1880	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1240 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA	VAS 685 Halifax CHNS 930 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1310	CBJ 1120 Hull CKCH 1210 Montreal —CBF 910 —CBM 980 CFCF 600 CHLP 1120 —CKAC 130 New Carliste CHNC 610 Quebeo	CMJA 880 CMJC 1390 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avlia CMJH 1880 CMJI 1180	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara CMHW 680 Santiago CMKC 1250
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary	VAS 685 Halifax CHNS B30 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1370 Cleyo de Avila CMJH 1360 CMJI 1180 CMJO 1260	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1246 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980	VAS 685 Halifax CHNS 930 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1310	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1880 CMJI 1180 CMJO 1260 Clenfuegos	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1246 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 930 CFECN 1080	VAS 685 Halifax CHNS 930 Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1310	CBJ 1120 Huil CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230 CMJF 920 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Cleps de Avila CMJH 1860 CMJ 1180 CMJO 1260 Clonfuegos CMHJ 1160	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara ———————————————————————————————————
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980	VAS	CBJ 1120 Hull CKCH 1210 Montreal —CBF 910 —CBM 960 CFCF 600 CHLP 1120 —CRAC 730 New Carlisle CHNC 610 Quebeo CHBC 580 CKCV 1310 CBV 950	CMJA 880 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1880 CMJI 1180 CMJO 1260 Clenfuegos	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFECN 1080 CJCJCJ 690	VAS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJW 660 Cardenas CMGE 1870 Clego de Avila CMJH 1380 CMJH 1380 CMJO 1260 CMJU 1260 CMJU 1260 CMHJ 1160 CMHJ 1160 CMHJ 1460	CMHP 1100
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton	VAS	CBJ 1120 Huil CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1330 CMJF 930 CMJK 1020 CMJW 1070 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1880 CMJI 1130 CMJO 1260 Clenfuegos CMHJ 1160 CMHM 1450 CMHM 1450 CMHM 1450	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960	VAS Halifax CHINS Sydney CJCB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC Chatham CFCO 680	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230 CMJE 1230 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1860 CMJI 1180 CMJO 1260 Clentuegos CMHJ 1160 CMHJ 1450 CMHM 1450 CMHM 1450 CMHM 1450 CCMHM 1450	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clera
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CCFAC 980 CCFCN 1080 CCICJ 690 Edmonton CCFAN 960 CJCA 780	VAS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJF 930 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avlia CMJH 1860 CMJ 1260 CMJ 1260 CMJ 1160 CMJ 1160 CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHJ 1450 CMHJ 1450 CMHJ 1450 CMHX 1450 CMHX 1450 CMHX 1450 CMHX 1450 CMHK 1210	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clera
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 CJCA 780	VAS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1330 CMJF 930 CMJF 1020 CMJW 1070 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1880 CMJI 1180 CMJO 1260 Clenfuegos CMHJ 1160 CMHM 1450 CMHM 1450 CMHK 1490 Cruces CMHK 1210 Guantaname	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clera
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 930 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 730 CKUA 550 Grande Prairie	VAS Halifax Halifax CHNS Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1210 ONTARIO Brantford CKPC 930 Chatham CFCO 680 Cobalt CKMC 1210 Fort William	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 860 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJ 1180 CMJ 1180 CMJ 1180 CMJ 1450 CMHX 1450 CMHX 1450 CMHK 1210 Guantanamo CMKS 710	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFEN 960 CJCA 780 CKUA 780 Grande Prairie CFGP 1200	VAS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJW 1070 CMJW 1070 CMJW 1070 CMJK 1020 Cardenas CMGE 1870 Clego de Avlia CMJH 1860 CMJI 1180 CMJO 1260 CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHX 1480 Cruces CMHK 1210 Guantanamo CMKS 710 Gulnes	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 CKUA 580 Grande Prairie CFGP 1200 Letthbridge	VAS Halifax Halifax CHNS Sydney CJCB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1210 ONTARIO Brantford CKPC 930 Chatham CFCO 680 Cobalt CKMC 1210 Fort William	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 860 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJ 1180 CMJ 1180 CMJ 1180 CMJ 1450 CMHX 1450 CMHX 1450 CMHK 1210 Guantanamo CMKS 710	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFEN 960 CJCA 780 CKUA 780 Grande Prairie CFGP 1200	VAS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJW 1070 CMJW 1070 CMJW 1070 CMJK 1020 Cardenas CMGE 1870 Clego de Avlia CMJH 1860 CMJI 1180 CMJO 1260 CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHX 1480 Cruces CMHK 1210 Guantanamo CMKS 710 Gulnes	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 CKUA 580 Grande Prairie CFGP 1200 Letthbridge	VAS Halifax Halifax CHNS Sydney CICB 1240 Wolfville CKIC 1010 Yarmouth CJLS 1310 ONTAR10 Brantford CKPC 980 Chatham CFCO 680 Cobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJK 1020 CMJX 660 Cardenas CMGE 1870 CHJX 660 CARDE 1870 CHJX 1360 CMJI 1180 CMHX 1480 CMHX 1480 CRUES CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Lethbridge CJOC 1210	VAS Halifax CHNS Sydney CICB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC Chatham CFCO Chatham CKPC Chatham CKPC Chatham CKPC Hamilton CKMC Hamilton CHML 1010 CKMC 1120 CCMC CHML 1010 CKCC 1120	CBJ 1120 Hull CKCH 1210 Montreal CBM 980 CFCF 600 CHLP 1120 CRAC 730 New Carlisle CHNC 610 Quebeo CHBC 580 CKCV 1310 CBV 980 Rimouski CUBB 1030 Rouyn CKRN 1370 St. Anne de la Pocatiere CHGB 1200 Sherbrooke CHLT 1210 Three Rivers	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJW 1070 CMJW 1070 CMJW 660 Cardenas CMGE 1370 Clego de Avlia CMJH 1380 CMJI 1180 CMJI 1200 Clenfuegos CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHJ 1450 CMHX 1480 Cruces CMHK 1210 Guantanamo CMKS 710 Guines CMST 1580 Havana	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 CKUA 580 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH	VAS Halifax Halifax CHNS Sydney CICB Wolfville CKIC 1010 Yarmouth CJLS 1210 ONTARIO Brantford CKPC Chatham CFCO Cobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC Kenora	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 930 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 860 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJ 1180 CMJ 1180 CMJ 1160 CMHM 1450 CMHM 1450 CMHM 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMBC 1580 Havana	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanot! Spiritus CMHB 1249 Santa Clara
Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Lethbridge CJOC 1210	VAS Halifax Halifax CHNS Sydney CICB L240 Wolfville CKIC Yarmouth CJLS L310 ONTARIO Brantford CKPC Ghatham CFCO Cobalt CKMC L210 Fort William CKPR Hamilton CHML 1010 —CKOC Kenora CKOA L120 Kenora CKCA L420	CBJ 1120 Hull CKCH 1210 Montreal CBM 980 CFCF 600 CHLP 1120 CRAC 730 New Carlisle CHNC 610 Quebeo CHBC 580 CKCV 1310 CBV 980 Rimouski CUBB 1030 Rouyn CKRN 1370 St. Anne de la Pocatiere CHGB 1200 Sherbrooke CHLT 1210 Three Rivers	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1380 CMJO 1260 CMHJ 1180 CMJO 1260 CMHJ 1450 CMHJ 1450 CMHX 1480 CTuces CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana —CMBC 690 CMBD 1280 CMBF 1550	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA CEGAC 980 CEGN 1080 CUCJ 690 Edmonton CFRN 960 CUCA 780 Grande Prairie CEGP 1200 Lethbridge CUOC 1210 BRITISH COLUMBIA	VAS Halifax CHNS Sydney CICB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC Chatham CFCO Chatham CKPC Cobalt CKMC 1210 Fort William CKPC Hamilton CHML 1010 CKMC 1120 Kenora CKCA Kingstoa	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 860 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1380 CMJ 1130 CMJ 1150 CMJ 1160 CMHJ 1450 CMHX 1480 CMHX 1480 CMHX 1480 CMHX 1480 CMHX 150 GUANTANA CURES CMHK 1210 GUANTANA CMHX 120 GUANTANA CMBT 1580 HAVANA CMBC 660 CMBC 1560 CMBC 1560 CMBC 1560 CMBG 1140	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFEN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Letthbridge CJOC 1210 BRITISH COLUMBIA	VAS Halifax Halifax CHNS Sydney CJCB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC Ghatham CFCO Cobalt CKMC 1210 Fort William CKPB S80 Hamilton CHML CKNC CHML 1010 CKOC CHML 1010 CKOC Kenora CKCA 1420 Kingston CFRC 1510	CBJ 1120 Huil CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJX 660 CMJX 1070 CMJX 660 Cardenas CMGE 1370 Clego de Avila CMJH 1360 CMJI 1180 CMJO 1260 Clenfuegos CMHJ 1150 CMHM 1450 CMHM 1450 CMHK 1210 Guantanamo CMKS 710 Guines CM9ET 1580 Havana	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA CEGAC 980 CEGN 1080 CUCJ 690 Edmonton CFRN 960 CUCA 780 Grande Prairie CEGP 1200 Lethbridge CUOC 1210 BRITISH COLUMBIA	VAS Halifax Halifax CHNS Sydney CICB Sydney CICB 1240 Wolfville CKIC Yarmouth CJLS 1310 ONTARIO Brantford CKPC 980 Chatham CFCO Cobalt CKMC 1210 Fort William CKPR Hamilton CHML 1010 —CKOC 1120 Kenora CKCA 1420 Kingston CFEC Kirkiand Lake	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avlia CMJH 1280 CMJ 1280 CMJ 1280 CMJ 1180 CMJ 1280 CMHJ 1480 CMHX 1480 CMHX 1480 Cruces CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana —CMBC 690 CMBD 1280 CMBC 1140 CMBG 1140 CMBG 1140 CMBG 1140 CMBG 1140 CMBH 1800 —CMBL 750	CMEP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanotl Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFEN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Letthbridge CJOC 1210 BRITISH COLUMBIA	VAS Halifax Halifax CHNS Sydney CJCB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC Ghatham CFCO 680 Cobalt CKMC 1210 Fort William CKFR 580 Hamilton CHML OKOC L120 Kenora CKCA L120 Kingston CFRC Kirkiand Lake CJKL 1810	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 920 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 8600 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJH 1360 CMJH 1360 CMJH 1450 CMHM 1450 CMHM 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMBC 1500 CMBT 1580 Havana —CMBC 690 CMBD 1280 CMBH 1500 CMBH 1500 CMBH 1600 CMBQ 910	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH GOLUMBIA Chilliwack CHWK 780 Kamloops	VAS Halifax CHNS Sydney CICB LIVE Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC 980 Chatham CFCO Cobalt CKMC Hamilton CKPR 580 Hamilton CKPR 1010 —CKOC L120 Kenora CKCA Kingston CFEC L1810 Kirkland Lake CJKL L1810 Lendon	CBJ 1120 Hull CKCH 1210 Montreal CBM 980 CFCF 600 CHLP 1120 CRAC 730 New Carlisle CHNC 610 Quebeo CHBC 580 CKCV 1310 CBV 950 Rimouski CUBR 1030 Rouyn CKRN 1370 St. Anne de la Pocatiere CHGB 1200 Sherbrooke CHLT 1210 Three Rivers CHLN 1420 SASKATCH-EWAN	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJI 1190 CMJO 1260 CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana — CMBC 690 CMBF 1580 CMBF 1560 CMBH 1600 — CMBL 750 CMBQ 910 CMBQ 910 CMBQ 910 CMBQ 1170	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 930 CFCN 1030 CJCJ 690 Edmonton CFRN 960 CJCA 730 CKUA 580 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH COLUMBIA Chilliwack CHWK 780 KAMIOOPS EMCEJIC 880	VAS Halifax Halifax CHNS Sydney CJCB Wolfville CKIC Yarmouth CJLS 1210 ONTARIO Brantford CKPC Ghatham CFCO Gobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC Kenora CKCA Kingston CFEC 1810 Kingston CFEC 1810 London CFFL 1810 London CFFL 730	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 920 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 8600 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJH 1360 CMJH 1360 CMJH 1450 CMHM 1450 CMHM 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMBC 1500 CMBT 1580 Havana —CMBC 690 CMBD 1280 CMBH 1500 CMBH 1500 CMBH 1600 CMBQ 910	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1244 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH COLUMBIA Chilliwaok CHWK 780 Kamloops ECFYC 880 Kelowna	VAS Halifax Halifax CHNS Sydney CICB Wolfville CKIC Yarmouth CJLS ONTARIO Brantford CKPC 980 Chatham CFCO Cobait CKMC Fort William CKPB 580 Hamilton CHML 1010 —CKOC 1120 Kenora CKCA Kingstoa CFCC Kirkland Lake CJKL London CFPL 730 North Bay	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJI 1190 CMJO 1260 CMHJ 1160 CMHJ 1450 CMHJ 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana — CMBC 690 CMBF 1580 CMBF 1560 CMBH 1600 — CMBL 750 CMBQ 910 CMBQ 910 CMBQ 910 CMBQ 1170	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 780 CKUA 580 Grande Prairie CFGP 1200 Letthbridge CJOC 1210 BRITISH COLUMBIA Chilliwack CHWK 780 Kamioops ESCEJC 880 Kelowna CKOV 680	VAS Halifax Halifax CHNS Sydney CJCB Wolfville CKIC Yarmouth CJLS 1210 ONTARIO Brantford CKPC Ghatham CFCO Gobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC Kenora CKCA Kingston CFEC 1810 Kingston CFEC 1810 London CFFL 1810 London CFFL 730	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJK 1020 CMJX 660 Cardenas CMGE 1870 CMJZ 1870 CMHX 1450 CMHX 1450 CMHX 1450 CMHX 1450 CMHX 1210 Guantanamo CMKS 710 Guines CMST 1580 Havana	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 CJCJ 690 CJCA 780 CJCA 780 CJCA 780 CJCA 780 CJCA 780 CKUA 580 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH COLUMBIA Chilliwack CHWK 780 Kamloops ECFJC 880 Kelowna CKOY 630 Nelson	VAS Halifax Halifax CHNS Sydney CICB Sydney CICB 1240 Wolfville CKIC Yarmouth CJLS 1310 ONTARIO Brantford CKPC 980 Chatham CFCO Cobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC 1120 Kenora CKCA 1420 Kingston CFRC 1510 Kirkiand Lake CJKL London CFPL 730 North Bay CFCH 930	CBJ 1120 Hull CKCH 1210 Montreal CBM 980 CFCF 600 CHLP 1120 CRAC 730 New Carlisle CHNC 610 Quebeo CHBC 580 CKCV 1310 CBV 950 Rimouski CUBB 1030 Rouyn CKRN 1370 St. Anne de la Pocatiere CHGB 1200 Sherbrooke CHLT 1210 Three Rivers CHLN 1420 SASKATCH-EWAN Moose Jew CHAB 1200 Prince Albert CKBI 1210	CMJA 880 CMJC 1390 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1380 CMJ 1280 CMJ 1180 CMJ 1180 CMJ 1180 CMJ 1180 CMH 1480 CMHX 1480 Cruces CMHK 1210 Guantanamo CMKS 710 Guines CMBT 1580 Havana —CMBC 690 CMBD 1280 CMBD 1280 CMBF 1550 CMBG 1140 CMBH 1800 —CMBL 750 CMBS 1170 CMBS 1170 CMBX 1080 CMBY 1440 CMBY 1440 CMBY 1440 CMBY 1440	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanotl Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CICA 780 CKUA 580 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH COLUMBIA Chilliwack CHWK 780 Kamioops CEJC 880 Kelowna CKOY 630 Nelson CKLN 1420	VAS Halifax Halifax CHNS Sydney CICB Wolfville CKIC 1010 Yarmouth CJLS 1210 ONTARIO Brantford CKPC 930 Chatham CKCO 680 Cobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC L120 Kenora CKCA 1420 Kingston CFRC 1510 Kirkland Lake CJKL 1810 London CFPL 730 North Bay CFCH 930 Ottawa	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJE 1230 CMJF 920 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJH 1360 CMJH 1360 CMJH 1450 CMJH 1450 CMHM 1450 CMHM 1450 CMHM 1450 CMHM 1450 CMHM 150 CMHM 150 CMHM 150 CMHM 1210 Guines CMHK 1210 Guines CMHK 1210 GUINES CMBT 1580 Havana —CMBC 690 CMBF 1500 CMBH 1800 —CMBL 750 CMBQ 910 CMBS 1080 CMBY 1440 CMBZ 1550	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Calgary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CFRN 960 CJCA 750 CKUA 580 CKUM 780 CKUM 780 Kamloops CCHOY 680 Kelowna CKOY 680 Noison CKLN 1420 Prince Rupert	VAS Halifax CHNS Sydney CICB LIE Wolfville CKIC Yarmouth CJLS Brantford CKPC Sobalt CKMC Cobalt CKMC Hamilton CKPR S80 Hamilton CKPR Hamilton CKPR LIE Konora CKCA Kingston CFEC LIE London CFPL T30 North Bay CFCH Ottawa CRO SSS	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJE 1230 CMJF 980 CMJK 1020 CMJK 1020 CMJK 1020 CMJX 660 Cardenas CMGE 1870 CMJZ 1870 CMJZ 1870 CMJZ 1870 CMJI 1180 CMJI 1180 CMJI 1180 CMJI 1180 CMJI 1180 CMHM 1450 CMHM 1450 CMHK 1210 Guantanamo CMKS 710 Guines CMHK 1210 Guines CMST 1580 Havana — CMBC 690 CMBG 1140 CMBG 1140 CMBG 1140 CMBG 1140 CMBG 1140 CMBG 1140 CMBG 1170 CMBS 1170 CMBS 1170 CMBZ 940 CMBZ 1680 CMBZ 1640	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanoti Spiritus CMHB 1249 Santa Clara
BAHAMAS Nassau ZNS 790 CANADA ALBERTA Caigary CFAC 980 CFCN 1080 CJCJ 690 Edmonton CICA 780 CKUA 580 Grande Prairie CFGP 1200 Lethbridge CJOC 1210 BRITISH COLUMBIA Chilliwack CHWK 780 Kamioops CEJC 880 Kelowna CKOY 630 Nelson CKLN 1420	VAS Halifax Halifax CHNS Sydney CICB Wolfville CKIC 1010 Yarmouth CJLS 1210 ONTARIO Brantford CKPC 930 Chatham CKCO 680 Cobalt CKMC 1210 Fort William CKPR 580 Hamilton CHML 1010 —CKOC L120 Kenora CKCA 1420 Kingston CFRC 1510 Kirkland Lake CJKL 1810 London CFPL 730 North Bay CFCH 930 Ottawa	CBJ 1120 Hull CKCH 1210 Montreal	CMJA 886 CMJC 1390 CMJE 1230 CMJE 1230 CMJE 1230 CMJF 920 CMJK 1020 CMJK 1020 CMJW 1070 CMJX 660 Cardenas CMGE 1870 Clego de Avila CMJH 1360 CMJH 1360 CMJH 1360 CMJH 1450 CMJH 1450 CMHM 1450 CMHM 1450 CMHM 1450 CMHM 1450 CMHM 150 CMHM 150 CMHM 150 CMHM 1210 Guines CMHK 1210 Guines CMHK 1210 GUINES CMBT 1580 Havana —CMBC 690 CMBF 1500 CMBH 1800 —CMBL 750 CMBQ 910 CMBS 1080 CMBY 1440 CMBZ 1550	CMHP 1100 Sagua la Grande CMHA 1090 CMHO 1020 Sanott Spiritus CMHB 1249 Santa Clara

NORTH	AMERICAN	В.	C.	STATIONS	BY	LOCATIONS

GUATEM	ALA	XEBW	1340	I XERH	1480	I DAYACA	. 74	esle m
			1440			UNANUA		
			1390			Davana		
	a City							
			1450			ABAH		
				DURAN	GO	PUEBLA		ic toria 3J 1340
		-XEJ	1020			Dueble		
Quezalte		- XEP	1160					ERACRUZ
TGQ	1450	Parrai		XEE	1210	XETH .		
		XEAT	1210					rdoba
HONDU	RAS			GUANAJ	UATO			
		COAHL	ILA	Irapuato		P01081		
Teguolga	pa	Piedras	Negras	XEBO	1310	Com Lude De	Ja	
	1450	XEMU	580	Leon				
		XEPN	730		1160			natitian
MEXIC	20				1240			
			640	Silao		Mazatlan		raoruz
Aguascan	olites			XEWE	720			
A	ontes .		1160	•		XEDS	400 XEU	1010
	1940		1240	JALIS	CO		_	
				Cuadala	lare	SONORA	Į Y	UCATAN
Y FDI	1000					0	-	
PAIA			1400					erida
			ouns				عديم ا	
CALIFOR	MIM				1340	Guaymas		
Ti and and					1000		1490 XEZ	680
	PKO.			XEBA	1080	Hermosillo	090	
				MEXI	0.0		- M	IQUELON
		FEDE	RAL				400	
	1110	Maylon	City				1040 81	. Plerre "
	000				1270		FQN	209
							900	
				XECH	1490		NE NE	WFOUND-
				MICHOA	CAN		1940	LAND
					-	ABAF		
				Morella		TAMAIII IP	AS St	. John's
				XEBC		I AMAGEM	VOA	C 1065
				XEI	1370		- VOA	R 950
CAMPE	HE				·			
Campach	A .			NUEVO	LEON		100	
				Monterre	v			
	1100						1000	
CHIHUA	HUA							
								PANAMA
Chihuahi		XEQK	1500	-XET	690	* Reynosa		
	1240						l Co	lon
XEBU	1240	XERC	830	XEX	13 10	XEAW	960 HOE	
	Guatema TGW TGW TGW TGW TGU HONDUI Teguolga HRN MEXIC Aguascali XEAD XEBI BAIA CALIFOR Mexicali XEAA XEAA XEAA XEAA XEAA XEAC XEAC XEAC	TGX 1406 TGI 1810 Quezaltenango TGQ 1450 HONDURAS Tegucigalpa HRN 1450 MEXICO Aguascalientes XEAD 1240 XEBI 1000 BAJA CALIFORNIA MEXICALIFORNIA MEXICALI	Guatemaia City TGW	Gustemaia City TGW	Color	XEPI 1440 XEM 1390 XEM 1270 XEW 880 XEX 1170 XEW 810 XEW 1170 XEW 1170	Composite Comp	Columbia

(Continued from page 4) WA Federal Office Dist. No. 14, Seattle, Wash.

Sub-Office: P. O. Box 2719, Juneau, Alaska. Dist. No. 15, Customhouse, Denver,

Colo. Dist. No. 16, Main P. O. Bldg., St. Paul, Minn.

Dist. No. 17, Pickwick Bldg., Kansas City, Mo.

Dist. No. 18, 246 U.S. Court House Bldg., Chicago, Ill.

New Federal Bldg. Dist. No. 19, Detroit, Mich.

Dist. No. 20, Federal Bldg., Buffalo, N_∞ Y.

Dist. No. 21, Aloha Tower, Honolulu, Hawaii

Dist. No. 22, Ochoa Bldg., San Juan, Puerto Rico. 10 Meters

OP CALLON 24 Jun 1969 0850 L

The QRA of CN8BB, often heard on 20 meters, is Davize Roger, Villa la Flarazee, Bd. des Regiments Colonioux, Casablanca, Morocco, but he advises on his card to QSL via AAEM, Boite Postale 50, Casablanca. In the center is a globe surrounded by Moroccan products, and the caption beside it says "Like the waves, the products of Morocco go 'round the world."

NORTH AMERICAN B. C. STATIONS BY CALL LETTERS

For power and network affiliations, see the list of stations by frequencies.

The space under the call letters may be used for logging or checking.

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CBA	1050	CHGB	1200	CKCL	580	CMBL	759	СМНЛ	1160	CMKW	1030
CBF	910	CHGS	1450	СКСО	1010	CMBQ	910	СМНК	1210	CMKX	1190
CBJ	1120	CHLN	1420	CKCR	1510	CMBS	1170	СМНМ	1450	CMKY	960
CBK	540	CHLP	1120	CKCY	1310	CMBX	1080	СМНО	1020	CMKZ	1430
CBL	840	CHLT	1210	CKCW	1370	CMBY	1440	СМНР	1100	CMOA	660
CBM	960	CHML	1010	CKFC	1410	CMBZ	940	CMHT	920	смох	1500
СВО	880	CHNC	610	CKGB	1440	CMC	1530	CMHW	680	CMQ	780
CBR	1100	CHNS	930	CKIC	1010	CMCA	1350	СМНХ	1480	CMW	550
CBY	950	CHRC	580	CKLN	1420	CMCB	1230	CMJA	860	CMX	880
CBY	1420	CHSJ	1120	CKLW	1030	CMCD	630	CMJC	1390	CMZ	920
CFAC	930	CHWK	780	CKWC	1210	CMCF	810	CMJE	1230	CM9RT	1580
CFAR	1370	CJAT	910	CKMO	1410	CMCG	1290	CMJF	930	FQN	609
CFCF	600	CJBR	1030	CKNX	1200	CWCJ	1110	СМЈН	1360	HIG	900
CFCH	930	CJCA	730	СКОС	1120	CMCH	1050	CWJI	1130	HIN	1090
CFCN	1030	CJCB	1240	СКОЛ	630	CMCK	970	CMJK	1020	HIT	1050
CFCO	630	CICI	699	CKPG	930	CMCL	730	CWJO	1260	HIX	800
CFCT	1450	CJCS	1210	CKPR	580	CMCM	850	CMJP	1420	HIZ	1370
CFCY	630	CJGX	1430	CKRN	1370	CMCO	1200	CWJW	1070	HI8Q	1470
CFGP	1200	CJIC	1500	CKSO	780	CMCQ	1410	CMJX	660	нок	640
CFJC	880	CJKL	1310	CKTB	1200	CMCR	1320	CMK	720	HRN	1450
CFLC	930	CJLS	1310	CKUA	580	CMCU	1010	CMKC	1250	KABC	1420
CFNB	550	CJOC	1210	CKWX	1010	CMCW	1380	CMKD	910	KABR	1390
CFOS	1370	CJOR	600	СКХ	1120	CMCX	1470	CMKE	1310	KADA	1200
CFPL	730	CJRC	630	CKY	910	CMCY	590	CMKF	1460	KALB	1210
CFPR	580	CJRM	950	CMAB	1240	CMGE	1370	CMKG	1000	KALE	1300
CFQC	600	CKAC	730	CMAR	1400	CMGF	1120	CMKL	950	KAND	1310
CFRB	690	CKBI	1210	CWBC	690	CMGH	710	CMKM	1080	KANS	1210
CFRC	1510	CKCA	1420	CMBD	1260	CMHA	1090	CMKO	1280	KARK	890
CFRN	960	CKCD	1010	CMBF	1560	СМНВ	1240	CWKÓ	1490	KARM	1310
CHAB	1200	СКСН	1210	CMBG	1140	CMHD	1270	CMKR	1400	KASA	1210
CHCK	1310	CKCK	1010	СМВН	1600	СМНІ	830	CMKS	710	KAST	1200

KATE	1420	KFAR	610	KFV\$	1210	кско	570	KJR	970	KOIL	1260
KAWM	1500	KFBB	1280	KFWB	950	KGKY	1500	KLAH	1210	KOIN	940
КВІХ	1500	KFBI	1050	KFXD	1200	KGLO	1210	KLBM	1420	коко	1370
KBKR	1500	KFBK	1490	KFXJ	1200	KGLU	1420	KLCN	1290	KOL	1270
KBND	1310	KFDA	1500	KFXM	1210	KGMB	1320	KLO	1400	KOMA	1480
KBPS	1420	KFDM	560	KFYO	1310	KGNC	1410	KLPM	1360	KOME	1310
KBST	1500	KFDY	780	KFYR	550	KGNF	1430	KLRA	1390	комо	920
KBTM	1200	KFEL	920	KGA	1470	KGNO	1340	KLS	1280	коно	1370
KCKN	1310	KFEQ	680	KGB	1330	KGO	790	KLUF	1370	KOOS	1209
KCMC	1420	KFGQ	1370	KGBU	900	KGU	750	KLX	880	KORE	1420
КСМО	1450	KFH	1300	KGBX	1230	KGVO	1260	KLZ	560	KORN	1370
KCRC	1360	KFI	640	KGCA	1270	KGW	620	KMA	930	KOTN	1500
KCRJ	1310	KFIO	1120	KGCU	1240	KGY	1210	KMAC	1370	KOVC	1500
KDAL	1500	KFIZ	1420	KGCX	1450	KHAS	1200	KMBC	950	кочо	1210
KDB	1500	KFJB	1200	KGDE	1200	кнвс	1200	KMED .	1410	KOWH	660
KDFN	1440	KFJI	1210	KGDM	1100	кнвс	1210	KMJ	580	KOY	1390
KDKA	980	KFJM	1410	KGEK	1200	KHJ	900	KMLB	1200	KPAB	1500
KDLR	1210	KFJZ	1240	KGER	1360	кно	590	KWWJ	740	KPAC	1260
KDNT	1420	KFKA	880	KGEZ	1310	KHSL	1260	кмо	1330	KPDN	1310
KDON	1210	KFKU	1220	KGFF	1420	KHUB	1310	кмох	1090	KPFA	1210
KDRO	1500	KFNF	890	KGFI	1500	KICA	1370	KMPC	710	KPFT	1219
KDTH	1340	KFOR	1210	KGFJ	1200	KID	1320	KMTR	570	KPLC	1500
KDYL	1290	KFOX	1250	KGFL	1370	KIDO	1350	KNEL	1500	KPLT	1500
KECA	780	KFPL	1310	KGFW	1310	KIDW	1420	KNET	1420	KPMC	1550
KEEN	1370	KFPW	1210	KGFX	630	KIEM	1450	KNOW	1500	КРО	680
KELA	1440	KFPY	890	KGGF	1010	KIEV	850	KNX	1050	KPOF	880
KELD	1370	KFQD	780	KGGM	1230	KINY	1430	KOA	830	KPPC	1210
KELO	1.200	KFRC	610	KGHF	1320	KIRO	710	KOAC	550	KPQ	1500
KERN	1370	KFRO	1370	KGHI	1200	KIT	1250	KOAM	790	KPRC	920
KEUB	1420	KFRU	630	KGHL	780	KITE	1530	КОВ	1180	KQV	1380
KEX	1180	KFSD	600	KGIR	1340	KIUL	1210	КОВН	1370	KQW	1010
KFAB	770	KFSG	1120	KGIW	1420	KIUN	1370	KOCA	1210	KRBA	1310
KFAC	1300	KFUO	550	KGKB	1500	KIUP	1370	KOCY	1310	KRBC	1420
KFAM	1420	KFVD	1000	KGKL	1370	KJBS	1070	КОН	1380	KRBM	1420
				l]					

KRE	1370	KSUN	1200	KVOA	1260	кхок	1250	VOCM	1040	WBAL	769
KRGV	1260	KTAR	620	KVOD	630	кхох	1210	VONF	640	WBAL	1060
KRIC	1420	KTBC	1120	KVOE	1500	KXRO	1310	VOGY	840	WBAP	800
KRIS	1330	KTBS	1450	KVOL	1310	KXYZ	1440	VOAC	1065	WBAX	1210
KRKD	1120	KTEM	1370	KVOO	1140	KYA	1230	VOAR	950	WBBC	1400
KRKO	1370	KTFI	1240	KVOR	1270	KYCA	1500	VOWR	700	WBBL	1210
KRLC	1390	KTHS	1060	KYOS	1200	KYOS	1040	WAAB	1410	WBBM	770
KRLD	1040	KTKC	890	KYOX	1310	KYSM	1500	WAAF	920	WBBR	1300
KRLH	1420	KTMS	1220	KVRS	1370	KYUM	1210	WAAT	940	WBBZ	1200
KRMC	1370	ктон	1500	KVSF	1310	KYW	1020	WABC	860	WBCM	1410
KRMD	1310	кток	1370	KVSO	1210	TGQ	1450	WABI	1200	WBEN	900
KRNR	1500	KTRB	740	KVWC	1500	TGW	1520	WABY	1370	WBEO	1310
KRNT	1320	KTRH	1290	KWAL	1420	TGX	1400	WACO	1420	WBHP	1200
KROC	1310	KTRI	1420	KWBD	1200	TG1	1310	WADC	1320	WBIG	1440
KROD	1500	KTSA	550	KWBG	1420	TIAFB	900	WAGA	1450	WBIL	1100
KROW	930	KTSM	1310	KWEW	1500	TIEMC	860	WAGF	1370	WBLK	1370
KROY	1210	KTSW	1370	KWFC	1310	TIEP	830	WAGM	1420	WBNS	1430
KRRY	1310	KTUC	1370	KWFT	620	TIFA	1000	WAIM	1200	WBNX	1350
KRSC	1120	KTUL	1400	KWG	1200	TIGH	690	WAIR	1250	WBNY	1370
KSAC	580	KTW	1220	KWJB	1210	TIGPH	605	WALA	1380	WBOQ	860
KSAL	1500	KUIN	1310	KMJJ	1040	TIGPH2	1225	WALR	1210	WBOW	1310
KSAM	1500	KUJ	1370	KWK	1350	TIHO	1030	WAML	1310	WBRB	1210
KSAN	1420	KUOA	1260	KWKH	1100	TILJ	775	WAPI	1149	WBRC	930
KSCJ	1330	KUSD	890	KWLC	1270	TILS	880	WAPO	1420	WBRE	1310
KSD	550	KUTA	1500	KWLK	780	TINBC	1070	WARD	1400	WBRK	1310
KSEI	900	KVAK	1420	KWNO	1200	TING	750	WASH	1270	WBRY	1530
KSFO	560	KVAN	880	KWOC	1310	TIOS	940	WATL	1370	WBT	1080
KSL	1130	KVCV	1200	KWOS	1310	TIPG	625	WATR	1290	WBTH	1370
KSLM	1360	KVEC	1200	KWSC	1220	TIRCC	1200	WAVE	940	WBTM	1370
Kso	1430	KVFD	1370	KWTO	560	TIRS	920	WAWZ	1350	WBZ	990
KSOO	1110	KVGB	1370	KWYO	1370	TIXD	800	WAYX	1200	WBZA	990
KSRO	1310	KVI	570	KXA	760	TI4NRH	725	WAZL	1420	WCAD	1220
KSTP	1460	KVIC	1310	KXL	1420	TISCV	575	WBAA	890	WCAE	1220
KSUB	1310	KYNU	1200	кхо	1500	VAS	685	WBAB	1209	WCAL	760
		(

WCAM	1280	WDAE	1220	WEOA	1370	WGBF	630	WHBU	1210	wicc	600
WCAO	600	WDAF	610	WESG	850	WGBI	880	WHBY	1200	WIL	1200
WCAP	1280	WDAH	1310	WEST	1200	WGBR	1370	WHDF	1370	WILL	580
WCAR	1100	WDAN	1500	WESX	1500	WGCM	1219	WHDH	830	WILM	1420
WCAT	1200	WDAS	1370	WEYD	1310	WGES	1360	WHDL	1400	WIND	560
WCAU	1170	WDAY	940	WEW	760	WGH	1310	WHEB	740	WING	1380
WCAX.	1200	WDBJ	930	WEXL	1310	WGIL	1500	WHEC	1430	WINN	1210
WCAZ	1070	WDBO	580	WFAA	800	WGKV	1500	WHFC	1420	WINS	1180
WCBA	1440	WDEL	1120	WFAM	1200	WGL	1370	WHIO	1260	WIOD	610
WCBD	1080	WDEV	550	WFAS	1210	WGN	729	WHIP	1480	WIP	610
WCBM	1370	WDGY	1180	WFBC	1300	WGNC	1420	WHIS	1410	WIRE	1400
WCBS	1420	WDLP	1200	WFBG	1310	WGNY	1220	WHJB	620	WIS	560
wcco	810	WDNC	1500	WFBL	1360	WGPC	1420	WHK	1390	WISE	1370
WCFL	970	WDOD	1280	WFBM	1230	WGR	550	WHKC	640	WISN	1120
WCHS	580	WDRC	1330	WFBR	1270	WGRC	1370	WHKY	1370	WJAC	1370
WCHY	1420	WDSM.	1200	WFDF	1310	WGRM	1210	WHLB	1370	WJAG	1060
WCKY	1490	WDSU	1250	WFEA	1340	WGST	890	WHLD	1260	WJAR	890
WCLE	610	WDWS	1370	WFIG	1310	WGTC	1500	WHLS	1370	WJAS	1290
WCLO	1200	WDZ	1020	WFIL	560	WGTM	1310	WHMA	1420	WJAX	900
WCLS	1310	WEAF	660	WFLA	620	WGY	790	WHN	1010	WJBC	1200
WCMI	1310	WEAN	780	WFMD	900	WHA	940	WHO .	1000	WJBK	1500
WCNC	1370	WEAU	1050	WFMJ	1420	WHAL	950	WHOM	1450	WJBL	1200
WCNW	1500	WEBC	1290	WFNC	1340	WHAI	1210	WHOP	1200	MIBO	1120
WCOA	1340	WEBQ	1210	WFOR	1370	WHAM	1150	WHTR	1370	WJBY	1210
wcoc	880	WEBR	1310	WFOY	1210	WHAS	829	WHP	1430	WJBW	1200
WCOL	1210	WEDC	1210	WFTC	1200	WHAT	1310	WHUB	1370	MIDX	1270
WCOP	1120	WEED	1420	WFTL	1370	WHAZ	1300	WIBA	1280	MIEI	1210
wcos	1370	WEEI	590	WFTM	1210	WHB	860	WIBC	1050	WJHL	1200
WCOU	1210	WEEU	830	WFVA	1260	WHBB	1500	WIBG	970	WJHP	1290
wcov	1210	WELI	930	WGAL	1500	WHBC	1200	WIBM	1370	WILM	1210
WCPO	1200	WELL	1420	WGAN	640	WHBF	1240	WIBU	1210	MIID	1130
WCRW	1210	WEMP	1310	WGAR	1450	WHBI	1250	WIBW	580	WJLS	1210
WCSC	1360	WENR	870	WGAU	1310	WHBL	1300	WIBX	1200	MJWC	1210
WCSH	940	WENY	1200	WGBB	1210	WHBQ	1370	WICA	940	WJMS	1420

RADEX

ONLW	1200	WLBZ	620	WMGA	1370	WOLS	1200	WRC	950	WSNJ	1219
WJPR	1310	WLEU .	1420	MWIN	1370	WOMI	1500	WRDO	1370	WSOC	1210
WJR	7 50	WLLH	1370	WMJM	1500	WOMT	1210	WRDW	1500	WSOO	1200
WJRD	1200	WLLH	1370	WMLG	1200	WOCB	1210	WREC	600	WSPA	920
VZCW	1460	WLNH	1310	WMMN	890	WOPI	1500	WREN	1220	WSPB	1420
MTLW	1210	WLOK	1210	WMOB	1200	WOR	710	WRGA	1500	WSPD	1340
MIM	1210	WLPM	1420	WMOG	1500	WORC	1280	WRJN	1370	WSPR	1146
WJZ	760	WLS	870	WMPC	1200	WORK	1320	WRNL	880	WSTP	1500
WKAQ	1240	WLTH	1400	WMPS	1430	WORL	920	WROK	1410	WSUI	880
WKAR	850	WLVA	1200	WMRO	1250	wosu	570	WORL	920	WSUN	620
WKAT	1500	WLW	700	WMSD	1420	wov	1130	WRR	1280	WSVA	550
WKBB	1500	WMAL	630	WMSL	1370	wow	590	WRTD	1500	wsvs	1370
WKBH	1380	WMAM	570	WMT	600	wowo	1160	WRUF	, <u>830</u>	WSYB	1500
WKBN	570	WMAN	1370	WNAC	1230	WPAD	1420	WRYA	1110	WSYR	570
WKBO	1200	WMAQ	670	WNAD	1010	WPAR	1420	WSAI	1330	WSYU	570
WKBY	1500	WMAS	1420	WNAX	570	WPAX	1210	WSAJ	1310	WTAD	900
WKBW	1480	WMAZ	1180	WNBC	1380	WPAY	1370	WSAN	1440	WTAG	580
WKBZ	1500	WMBC	1420	WNBF	1500	WPEN	920	WSAR	1450	WTAL	1310
WKEU	1500	WMBD	1449	WNBH	1310	WPG	1100	WSAU	1370	WTAM	1070
WKIP	1420	WMBF	610	WNBX	1260	WPIC	780	WSAV	1310	WTAQ	1330
WKNÝ	1500	WMBG	1350	WNBZ	1290	WPID	1210	WSAY	1210	WTAR	780
WKOK	1210	WMBH	1420	WNEL	1290	WPRA	1370	WSAZ	1190	WTAW	1120
WKRC_	550	WMBI	1080	WNEW	1250	WPRO	630	WSB	740	WTAX	1210
WKST	1250	WMBO	1310	WNLC	1500	WPRP	1420	WSBC	1210	WTBO	800
WKY	900	WMBR	1370	WNOE	1420	WPTF	680	WSBT	1360	WTCN	1250
WKZO	590	WMBS	1420	WNOX	1010	WQAM	560	WSFA	1410	WTEL	1310
WLAC	1470	WMC	780	WNYC	810	WQAN	880	WSGN	1310	WTHT	1200
WLAK	1310	WMCA	570	WOAI	1190	WQBC	1360	WSIX	1210	WTIC	1040
WLAP	1420	WMEX	1500	woc	1370	WQDM	1390	WSJS	1310	WTJS	1310
WLAW	680	WMFD	1370	WOCB	1210	WQXR	1550	WSKB	1200	WTMA	1210
WLB	760	WMFF	1310	₩0I	640	WRAK	1370	WSLB	1370	WTMC	1500
WLBC	1310	WMFG	1210	WOKO	1430	WRAL	1210	WSEI	1420	WTW.	620
WLBJ	1310	WMFJ	1420	WOL	1230	WRAW	1310	WSM	650	WTMY	1500
WLBL	900	WMFR	1200	WOLF	1500	WRBL	1200	WSMB	1320	WTNJ	1280
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WTOC	1260	XEAG	1310	XEBP	1150	XEDS.	1400	XEKL	1240	XERC	830
WTOL	1200	XEAI	1250	XEBS	1340	XEDW	1150	XEKR	1280	XERH	1430
WTRC	1310	XEAJ	1400	XEBU	1240	XEE	1210	KEKS	1240	XES	990
WTRY	950	XEAM	750	XEBW	1340	XEF	1450	XEL	1150	XESM	1270
WTSP	1370	XEAO	660	XEBX	640	XEFB	870	XELO	670	XET	690
WVFW	1400	XEAP	1340	XEBZ	810	XEFC	1340	XELW	1340	XETB	1310
WWAE	1200	XEAS	1160	XEC	1150	XEFE	989	XELZ	1370	XETH	1210
WWJ	920	XEAT	1210	XECA	1230	XEFI	1440	XEM	1390	XEU	1010
WWL	850	XEAU	1310	XECH	1490	XEFM	1160	XEME	1240	XEW	890
WWNC	570	XEAW	960	XECL	1110	XEFO	940	XEMO	860	XEWE	720
WWRL	1500	XEB	1030	XECW	1240	XEFQ	1010	XEMU	580	XEX	1310
WWSW	1.500	XEBA	1080	XECZ	1370	XEFV	1210	XEMX	1280	XEXB	1270
WWVA	1160	XEBC	1240	XED	1160	XEFW	1319	KEN	780	XEXE	1270
WXYZ	1240	XEBG	820	XEDA	1220	XEG	1230	XENT	910	XEXH	1150
W8X0	700	XEBH	930	XEDF	810	XEH	740	XEP	1160	XEXX	1170
XEA	1400	XEBI	1000	XEDH	1340	XEHK	1230	XEPN	730	XEZ	630
XEAA	750	XEBJ	1340	XEDL	1240	XEI	1370	XEQ	730	YSS	640
XEAC	980	XEBK	1080	KEDM	1400	XEJ	1020	XEQK	1500	ZNS	790
XEAD	1240	XEBL	1220	XEDP	1089	XEJP	1180	XERA	840		
XEAF	990	XEBO	1310	XEDR	1490	KEK	990	XERB	1090		
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"This Hobby Called DXing"

An outline of the Art of Tuning and an explanation of all the things that perplex the new DXer, was given in an article called "This Hobby Called DXing," which appeared in the January, 1939, issue of RADEX. All radio fans who wish to know how and what to write to radio stations, how to get verifications, how to hear distance, and who wish to understand the

codes, prefixes and abbreviations used in DXing, should obtain this isue of RADEX. It is still available at the regular price of 25c per copy.

If you like RADEX why not tell your friends? When an article in this magazine strikes you as being unusually good, please tell your friends to get a copy at the newsstands, and read it.

Answers to the Radex Radio Riddle

The letters given below give the correct answers to the questions. By allowing yourself 20 points for every three that were right you will find that a score of 60 is only fair, 80 is very good, and higher is excellent.

1.	c			8.	b	
2.	b			9.	,c	
3.	đ			10.	c	
4.	b			11.	b	
5.	đ			12.	c	
6.	a			13.	С	
7.	b			14.	đ	
		15.	a			

NEW CANADIAN

The Manager of station CKNB, Mr. C. S. Chapman, advises us that his station was ready to commence operating on or about December 22nd. This new Canadian broadcaster is located in Campbellton, New Brunswick, and transmits on 1210 kcs. with 250 watt power. The address of this private commercial station is P. O. Drawer 840, Campbellton. It is affiliated with the Canadian Broadcasting Corporation.

Mr. Chapman has asked us to assure DXers that, while verification cards may not be immedately available, CKNB will gladly issue letters of verification to all who send correct reports, accompanied by return post-

age.

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est route. Where	be sent express collect to part payment is made in payments apply to U.S.	t is understood that		
Name	••••••••••••••••••••••••••••••••••••••	Street Addre	ess	:
R.F.D	Box No Post	Office		••••••
State		Please give	shipping point if dif	ferent from

Selected Back Numbers

The Oceania Broadcasting Stations, Sept. '38.

Tuning South Pacific Stations, Tuning South Americans, and a list of South American Broadcasting Stations, Oct. '38.

Dialing the Europeans, Nov. '38. Dialing the Asiatics, Dec. '38.

This Hobby Called DXing, the International Prefixes, the QSA and R Codes, Jan. '39.

Stations of France and Norway, March '39.

Stations of New Zealand, April '39. Television is Here, list of Television Stations, the stations of Colombia, China and Venezuela, Midsummer '39.

Stations of Costa Rica and Venezuela, Sept. '39.

The World's Broadcasting Stations, Sept. '39.

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THE RME 69

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Radio broadcasting stations employ engineers, operators, technicians and pay well for trained men. Radio manufacturers employ testers, inspectors, foremen, servicemen in goodpay jobs with opportunities for advancement. Radio jobbers and dealers employ installation and servicemen. Many Radio Technicians open their own Radio sales and repair businesses and make \$30. \$40, \$50 week. Others hold their regular job and make \$5 to \$10 a week fixing Radios in spare time. Automobile, police, aviation, commercial Radio; loudspeaker systems, electronic devices, are newer fields offering good opportunities to qualified men. Television promises to open many good jobs soon.

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