

APRIL 1939

RADIO IN INDEX

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No. 128

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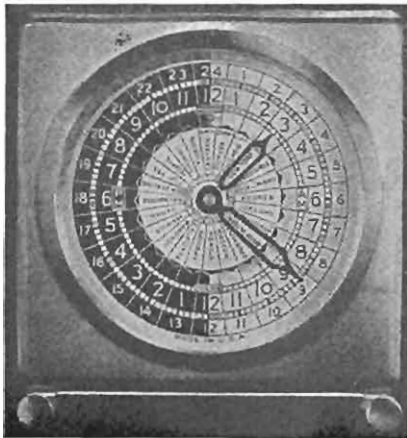
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APRIL 1, 1939



RAD IN DEX

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NUMBER 128

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HAM HOUNDING . . .

●●● By HUGH HUNTEM

● Again we greet you, fellow ham hounders, and we hope that during the past month, all of you were successful in hearing more new countries than were we. It appears as though we were a bit "damp" in some of our predictions; for example, the South Africans have held up a bit better than we had anticipated and the Europeans are not coming through nearly as well as they did in 1938. However, in making predictions, we can refer, only, to past seasons, and if conditions "cross us up", it just can't be helped.

We are more than grateful to the many of you who have submitted reports in an effort to help this column along and we do hope that our readers will benefit by your experiences. It is interesting to note that numerous listeners are now hearing more DX than they had, heretofore, believed possible.

FORECAST

April should be another good DX month for 20 meters and, unless we are mistaken, DX should roll through as it did in March of 1938. To date, our observations have convinced us that anticipated stations are coming in about a month later than they did last season. Look for the European and North African signals in the afternoons and shortly after midnight; the VK's should be best around 2:00 am and 7:30 am; and the Asians might be heard from dawn until 9:00 am. Our hemisphere should be received throughout the 24 hours of the day.

QTH (QRA) BUREAU

Another reader has kindly offered to procure QTH's for listeners, the public spirited citizen being, Carl Horton, c/o George H. Webster Sole Co., Athol, Mass. Members of our QTH bureau have requested us to inform our readers that no Spanish stations are listed in the call book. Elmer Wokaty informs us that one listener requested addresses for around a hundred "W" stations. The purpose of this bureau is to provide the listener with foreign QTH's and not the addresses of local stations. If some listener outside the country desires the QTH of a "W" amateur, this, of course, is a different matter, and we are sure

that our bureau members will comply with his request.

Many of our readers have requested information concerning the other amateur bands and this will be taken care of, in part, in this issue. Others have asked us to describe QSL cards, in detail. From our point of view, the appearance of a veri card is of little or no importance but, what is important, is whether or not a station QSL's. As far as we're concerned, a verification from Tibet would be most acceptable, even if it were scribbled on the bottom of a milk bottle cap.

Following we shall summarize the various ham bands in an effort to let you know what is being heard or what can be heard.

160 METERS

On 160 meters, we've never been able to get out of our own back yard. This band is a bit too crowded to suit our tastes and when we are able to hear a W6 or 7, we feel pretty good about it. Were it not for the QRM, TA reception would be quite possible. During the International Tests in February, we attempted to log British stations, but not a one was heard. We are wondering if any of our East coast listeners were successful in landing a "G".

80 METERS

The 80 meter band will surprise quite a few of you. Several listeners in the East have reported hearing a number of European stations. One listener claims to have heard North African stations, etc. The Hawaiians are amazingly good at around 5:00 am, even on the East coast. K6ACC, 3975 kcs., and K6KDV, 3910 kcs. are the best of the K6's and the former is often a good R8 on peaks. K4's are also occasionally heard, with K4ENT having the best signal on 3905 kcs.

One morning while listening in the Canadian section of the band we were surprised to hear two New Zealand stations. However, due to QRN, we were unable to definitely identify their calls. One sounded like ZL2BZ and the other like ZL3BM. Undoubtedly, Pacific coast listeners could have identified these stations with ease.



A Canal Zone amateur station, K5AF, verifies reports with this card, printed in red, yellow, blue and black. (Courtesy of Nicholas Woytan).

40 METERS

Believe it or not, but there is plenty of DX on 40 meters; in fact, it is very easily possible to log five continents on this band, Asia, of course, being the "sticker". To begin with, we will quote a bit of what Jack Wells of Phenix, Ala. has to say. "40 meter phone has been rather FB at times. I've logged EA8AS, 7.27, EA8AE, 7.31, EA9BJ, 7.01, together with TC5GJ, 7.08, and lots of Latin Americans. All of the above stations were heard 5:30 to 6:30 pm EST, and from 11:30 to Midnight EST. It appears that all of the ops are exclusively Spanish-speaking on the 40 meter band. Of the lot, EA8AS has been heard most frequently, broadcasting news for the Spanish National Government, during the evenings."

Elmer Wokaty of Fairview Village, Ohio writes, "In my wildest dreams I couldn't have conceived the true possibilities of DX on 40 meters. At around 5:00 am, the band is virtually infested with VK stations, the best being VK3BM, VK3MI, VK3WH, VK5BM and VK5BF. These stations are received with good sig strength, but it is difficult to copy their calls because they speak so rapidly, in much the same manner as do our 75 meter hams. FO8AA, on its Friday broadcasts, have often reached R7-8 on the R meter. EA's are also received well, the best being, EA7BA, EA8AE, EA8AS, EA9BJ, EA9AH and EA9AI. Several mornings, I have also heard European stations at around 2:00 am."

Messrs. Wells and Wokaty are cer-

tainly doing OK on 40 meters and we are sure that many Radex fans could do likewise if they were to give this band a try. Various listeners along the Atlantic seaboard inform us that they are experiencing almost daily reception of TA stations. PK6XX has been heard by several listeners, and other Oceanic signals include VK4HN (Papua), and VK9's in British New Guinea. CT3AN in the Maderia Islands is another TA to keep in mind. One listener reports his signal as R9!

10 METERS

Unfortunately we tune ten meters but rarely, figuring that 20 keeps us well enough occupied. Walter Welch of Lynn, Mass., however, sends in a very complete reception chart which covers a period of 30 days. It is interesting to note that Walter has heard hundreds of European stations and numerous South Africans during this period. Some of the better TA's include LA1G, SM5SI and SU1CH. To illustrate the strength of signals on this band, GM6RG was heard 29 days and at all times possessed an R9 plus signal.

20 METERS

Many of our readers have furnished valuable information concerning 20 meter hams and we will start off by listing the calls of amateurs who QSL 100 percent, according to Jack Wells and A. M. Hankins.

NORTH AMERICA—K4EMC, K5AF, TC9BA, VO1B, VP6FO, VP7NA, YN3DG.

SOUTH AMERICA—CE3CO, CX2CO, HC1JB, HC2HP, LU1QA, LU8AB, OA4R, PY2GC.

EUROPE—EI3J, EI6G, G2TR, G6WU, GM8MN, I1MY (Send all "I" reports under cover to the A.R.I., Viale Bianca Maria 24, Milano, Italy), ON4AU, ON4VK, LA8C, PAOGN.

AFRICA—CN8AV, CN8BA, CN8MU, EA9AH, FA3HC, FA3QV, ZS1AX, ZS2N, ZS2X, ZS4H.

OCEANIA—VK2UC, VK3KR, VK4JP, VK4KO, VK5AW, VK6MW, ZL2BE.

ASIA—J2MI, J7CR.

Sanford Morris of Metuchen, N. J. states, "ON page 23, of February Radex, you state that SM7YA does not QSL. His card is one of two Europeans that I

have in my collection, postmarked two months after I heard him". We are always glad to have corrections of this type and we are pleased to know that SM7YA does, occasionally, QSL.

Following are listed what we believe to be the outstanding stations in various countries which we have given little or no attention, prior to now. Carl Horton furnished us with many of the frequencies.

BRITISH SOMALILAND—A new station reported is VQ6XT which has been heard on the extreme low frequency of the band. Unfortunately we have no other data on this station, but we trust that it is not a "phoney."

BULGARIA—LZ1AA is being heard on 14.43. This is, indeed, a rarely heard country, but again we do not possess the QTH; in fact, no LZ stations are listed in the call book. We advise that anyone hearing this station hold their reports until it is definitely determined where reports should be sent.

CHINA—The most frequently heard XU phones are XU6TL, 14.1 and XU8RK, 14.12. The former QSL's 100 percent and reports should be addressed, T. L. Shen, P. O. Box 132, Canton, China. All unlisted XU6 stations may be reported to Mr. Shen, as he is the QSL manager in this district.

COCOS ISLAND—This particular island is located in the Indian Ocean and is represented by ZC2MA who operates on 14.3. We do not have the QTH but as Cocos is but a small island, the postal service should be able to locate him.

FRENCH INDIA—The South African hams have been heard working FN1C whose frequency they stated was around 14.08. The QTH for this station is D. W. H. Patterson, Gondalpara, Chandernagore. The operator also operates as VU2GN when in British India.

GOLD COAST—ZD4AB, owned and operated by F. T. Hall, Engineering Dept., Post Office, Accra, is now making phone tests on various frequencies. From what we understand, his modulation is very poor and it will be some time before he gets his rig to operate efficiently. This is not a new call, as Mr. Hall has been operating on CW for quite some time.

INDIA—As VU2CQ is a bit slow about

JARL IARU

J7CR



TO RADIO *Jack Wells*
 MANY THANKS FOR QSL
 ON 20 METER BAND AT 14.27 MCT
 UR SIGS QSA 1J ON 14.43
 XMITR: CO FD PD BUF PA 20W. !
 RCVR: SUPERHET 7 TUBES.
 A.N.T.: 2 SECTION FLAT TOP (RON ZEP)

AKIRA SAGA
 2 OF 8 HIRAFUNCHO KUSHIRO
 HOKKAIDO

PSE QSL

NIPPON

A very good catch on the 20 meter band is J7CR, in Hokkaido, Japan. The card is printed in brown and orange. (Courtesy of Jack Wells).

answering QSL's, we suggest you be on the lookout for VU2FO, 14.38 and VU2KK, 14.28. Both of these stations are supposed to verify promptly.

JAPANESE EMPIRE—The "J" phones are rarely heard in the eastern section of the U. S. but are frequently heard on the Pacific coast. J1 through J7 includes all of Japan, proper. The outstanding stations are, J2CS, LF, J2K1, 14.25, J2KN, HF, J2M1, 14.1, J2NG, 14.11, J5CC, 14.4, J7CB, 14.11, and J7CR, 14.27. J8 is assigned to Korea (Chosen). The following J8's are supposed to be on 20 meter phone, J8CA, J8CD and J8CG. 9's are located in Taiwan (Formosa) and in the Marshall Islands, but none have ever been reported. It is interesting to note that we have never heard of a Japanese station refusing to QSL.

MADERIA—CT3AB, to our knowledge, is the only CT3 operating on 20 meters. He has been heard on the low end of the band and one listener claims to have received his QSL. For confirmation write, J. A. Ferraz, Rua de Santa Maria 261, Funchal.

MOZAMBIQUE—One of the most frequently reported stations is CR7AG who has been heard on 14.295; as this station verifies, send your reports to, Jose Filomeno, Correlos e Telegrafos, Chibuto, Lourenco Marques.

N. E. I.—The Netherland Indies are divided, according to prefix, as follows: PK 1, 2 and 3, west, central and east Java, respectively; PK4 includes Sumatra, Billiton, Banka and surrounding islands; PK5 includes Dutch Borneo and surrounding islands; and PK6 takes in Celebes, Moluccas, Dutch New Guinea

and other neighboring islands. How to classify which islands of the Indies should be considered countries and which should not has been a much discussed subject. We are in favor of considering all of the larger islands as countries and dividing the smaller islands into groups. Some of the best heard PK's are PK1GL, 14.3 (rarely QSL's), PK1MJ, 14.11, PK1PK, LF, PK1RI, 14.33, PK1VM, 14.11 and 14.27, PK1VY, 14.27, PK2AY, LF, PK2WL, 14.12, PK3LC, HF, PK4DG, 14.35, PK4JD, 14.09, PK4KS, 14.03, PK4WS, 14.1, PK6CI, LF, and PK6XX, usually on 14.02.

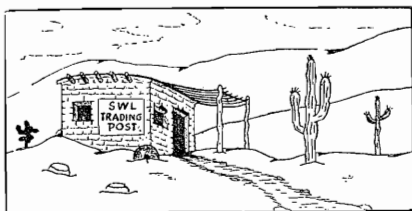
NIGERIA—A station well worth logging is ZD2H, 14.03 and 14.12, which is operated by Art Tomlinson, c/o Posts and Telegraphs, Lagos. Walter Th. Kammann of Caracas, Venezuela, reports a QSL from ZD2H.

ORKNEY ISLANDS—GM3TR is the only station in the islands and we understand that he will soon be on 20 meter phone. Many listeners consider this a separate country. The QTH is J. Critchley Graham, Air Ministry Control Station, Wideford Aerodrome, Kirkwall, Orkney, Great Britain.

PACIFIC ISLANDS—In addition to KF6DHW, Canton Island, mentioned last month, are KF6ODC, Enderbury Island, and KG6HCO, Jarvis Island. All three of these stations are owned by Pan-American Airways and are used to relay weather reports. KF6DHW has been heard on several occasions and we are fairly certain that the other two stations will soon be heard on 20 meters.

PHILIPPINES—Many have requested the calls and frequencies of the most widely heard KA stations, so here's a group that would look good in anyone's log. KA1AP, 14.26, KA1BH, 14.14, KA1CS, 14.15, KA1ER, 14.12, KA1FC, 14.1, KA1FH, 14.12, KA1JM, 14.27, KA1ME, 14.14 and 14.26, KA1MH, 14.2, KA1YL, 14.26, KA1ZL, 14.25, KA2OV, 14.26, KA3BW, 14.18, KA3KK, 14.27, KA4IH, 14.1, KA7BS, 14.21, KA7EF, 14.12 and 14.25. We are pleased to say that none of these stations have been reported as definitely

(Please turn to page 75)



Leonard Sprain, 58 Stanley St., Little Falls, N. J. (Correspondence with owners of G-E radios).

Alfred Razzando, Fayette City, Pa. (Correspond with listeners in Newfoundland and Alaska, and with DXers who hear BCB stations there).

Paul E. George, 2303 Melrose St., Rockford, Ill. (Correspond with users of Zenith 9S-367).

George Burnett, 161 Grey St., Buffalo, N. Y. (DXers who tune foreign BCB).

W. C. Post, 996 E. Third St., St. Paul, Minn. (SWL cards and photos).

Maurice P. Wynne, 210 Hectar Ave., New Orleans, La. (SWL cards).

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

Homer Davidson, 322 E. 10th St., So., Newton, Iowa (SWL cards).

George F. King, 66 Hamilton St., Leominster, Mass. (A shut-in; wishes correspondence).

Murray Shainis, 99 Featherbed Lane, Bronx, New York, N. Y. (SWL cards).

Ernest R. Cooper, 438 E. 21st St., Brooklyn, N. Y. (Correspond with users of Scott 23).

H. V. Gribble, Traffic Box 42, Minneapolis, Minn. (SWL cards).

Edgar W. Keller, 2161 N. Fairfield Ave., Chicago, Ill. (Correspond with BCB DXers on west coast and in New England).

Elmer Wall, Box 393, Mountain Lake, Minn. (Correspondence).

Raymond Skidmore, 27 W. 89th St., Apt. 6, New York, N. Y. (Correspondence).

Dan Mowen, 187 N. Chicago Ave., Kankakee, Ill. (Correspondence).

George Cryder, Route 3, Delaware, Ohio (Foreign SWL cards).

Laverne D. Mitchell, Marquette, Iowa (SWL cards).

Stan Brus, 1441 Bell Ave., No. Brad-dock, Pa. (SWL cards).

FOURTEEN YEARS AGO

The old "Red Apple" Station, WCX of Detroit, verified with this card, which strangely puts one in mind of Mae West. It was sent to Carl Horton of Athol, Massachusetts, in 1925, long before the "come up and see us sometime" phrase became famous. Although several changes in ownership have taken place, WCX has finally become WJR. In olden times, a program known as "The Red Apple Club" made this station famous throughout the country.



The Lament of the Sleepless Knight

By CAPT. E. N. MASSEY

The foreign foemen will not stand; they flee my trusty lance.

The cowards lurk 'neath QRM, as witness Fort de France.

I had a go at SPD—we only had one fall,
But lo! When back to him I turned, he wasn't there at all!

The Cuban dastards are the worst; change places every week;

I hunt the old familiar spots and do not hear a squeak,

But when I think that I've discovered something that is new,

I strain my ears to listen, and I hear "COCQ."

The knights of Daventry go by, contemptuous of my skill.

They sneer at all my challenges and swear they always will.

I bid them stand and fight with me but still they pass me by

With heads erect they calmly say, "We do not verify."

On JZJ in Tokyo I've squandered quite a heap

Of dimes and patience, to say nothing of my morning sleep.

I've penned them hopeful cartels, just itching for a fight,

How can my honor be increased when they won't even write?

HH3W as well, is a thorn within my side;
Challenging all listeners, they later run and hide.

I hammer on their portals, but silence then ensues.

What wonder that I am beset by symptoms of the Blues?

I'm told that Delhi and Bombay are worthy of my steel.

Invading both their frequencies, I've asked them how they feel.

I'd stake my DX honor on just one fight with them.

Alas! The only answer is a lot of QRM!

ZIK2 is lost to view, or rather, to the ear.
He signalled loudly, but of late, has hushed through starkest fear.

Some messenger told him of me and made him change his mind.

It's enough to make a valiant knight lose faith in all mankind.

I'm not like Alexander, with no more worlds to whip.

The world is full of foemen but they all give me the slip.

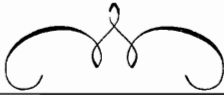
There are many foreign warriors who should doughty champions be

But if they just ignore reports, how can I VAC?

HIGH FREQUENCY

GLOBE TROTTING

●●● By RAY LA ROCQUE



Report-O-Meter

Jack Wells	100%
John J. Oskay	86%
G. R. Jewell, Jr.	72%
A. I. Breen	68%
Robert Skyten	61%



Jack Wells, down there in the city that sounds like it's in Arizona, but actually is in Alabama (Phenix, Ala.) finally hit top spot in our meter. Jack has been a very consistent "Report-o-Meter" visitor, but has never before reached the coveted position. The meter, this month, has three newcomers plus Robert Skyten, who rocketed back into the top five after a drop last month. Many came close to registering this month so we list a few who deserve honorable mention: J. E. Gardner, D. H. Dussek, T. D. Smith, Robert Trubee, Elvyn Barker, and Gilbert Harris. Thanks to every reporter for their kind letters. Here's hoping YOU register in the meter next month!

ASK US ANOTHER

We substitute this month a new department—replacing our Megacycle Brevities. This new department will contain nothing but questions concerning unidentified stations and the corresponding answers as they come to us from helpfully inclined readers. When it comes to answering questions. RADEX readers have proved

that they are second to none in this universe! . . .

Gilbert Harris of North Adams, Mass. is hearing an unknown station near 9998 kcs. from 7:30 p.m. to 9 p.m. The station is very weak at times. Gil believes it to be the new Tirana, Albania station. Another mystery to friend Harris is a station on 7000 kcs. from 4-5 p.m. with Chinese music. . . . Anthony B. Sanchez of Phoenix, Arizona wants the call letters of the station on 11850 kcs. announcing as Radio Nacional Yugoslavia, Beograd. (DJP on 11850 kcs. is the station you are hearing. The German transmitter often relays the programs of the Yugoslavian medium wave stations.—RL)

"What Army station is operating on 5730 kcs. between 9 and 10 p.m.?" is asked by Chester Roman of Chicago. . . . A. M. Hankins of Latrobe, Penna. wants to know which German shortwave station signs off at 4:25 p.m. on a frequency of approximately 9678 kcs. "They are midway between TGWA and W3XAL," says friend Hankins. (The station is DJX, located in Vienna,—formerly Austria—Germany.—RL). . . . Help in determining the locations of HI8H on 7150 kcs., and YV1CB on 7650 kcs. is desired by E. Schlubach of Providence, R. I. . . . "Where is WQKW, a police station, on 33000 kcs? Also heard on that frequency were WRBH, the Cleveland Police station," comes from Tony Tarr, Seattle, Wash.

The call letters of the new Italian station on about 9665 kcs. are requested by S. Schmuch, East Cambridge, Mass. (I2RO-9 on 9670 kcs. seems to be the call which will fill

the bill for our fellow Bay Stater—RL). . . . Someone should be able to help A. D. Jordan of Philadelphia, Penna. to identify the station he heard on 7080 kcs. at 11:36 p.m. using English and asking for reports. . . . John J. Oskay of New Brunswick, N. J. has a lot of mystery stations. Who can help? A (HJ) station heard at 9 p.m. on 4905 kcs., and a station on 15100 kcs. heard at 7:15 a.m. Speaking on this last one is like that of Italy. Oriental music is heard on 15310 kcs. at 12:30 p. m. and followed by news and sign off at 1:15 p.m. (This station is I2RO-6 on 15300, evidently broadcasting a program directed to Japan—RL). Other mysteries of friend Oskay are: A French station on 7570 kcs. broadcasting Spanish music at 5 p.m.; a Spanish speaking station at 9 p.m. playing English recordings on 9565 kcs.; a Spanish speaking station on 5225 kcs. seemingly in Caracas, Venezuela, heard at 6:45 p.m. . . . For W. C. Post of St. Paul, Minn., comes the news that KIPQ, WAGQ and the other stations he mentioned in his query last month do verify. This from H. P. Faulkner of Cincinnati, Ohio who has verifications from the stations—which are owned by the Natural Gas Pipeline Co. of America with principal offices at 20 N. Wacker Drive, Chicago.

QUOTE AND UNQUOTE

Gerald Cote, Sherbrooke, P. Q.: "If this may interest you, I was made a Caballero de la NRH by Amando Cespedes Marin, owner and operator of station TI4NRH and I also received a bronze medal in recognition of the good will demonstrated during the celebration of the 10th anniversary of TI4NRH by sending him 31



One of America's fine shortwave stations is W4XB, of Miami, Florida. This verification was received by A. D. Jordan.

full reports from May 1, to May 31. The station was heard on a Rogers 4 tube receiver."

S. Schmuck, East Cambridge, Mass.: "Hats off to PSH, Rio de Janeiro, on 10220 kcs., heard well and announce frequently in ENGLISH! If the rest of 'em would only co-operate, we'd be able to understand 'em. English announcements mean more reports. I can't get VK2ME, and I wonder if they're still there on Sundays. SPW and SPD also seem to have disappeared completely."

Mrs. G. M. Crosland, Washington, D. C.: "Have been hearing a Cuban shortwave station broadcasting a few notes of music and then ceasing. Then they jabber and jabber in Spanish for a while and then do the same thing over and over again day and night. In dialing, I always get them loud and clear. They ring a bell twice, and sirens and whistles shriek. What in the world is the reason for just a bar of music and then so much talking?" (The answer, Mrs. Crosland, is just a Cuban imitation of American radio advertising—only they seem to overdo it—a LITTLE!—RL)

William W. Flynn, Dummer, Saskatchewan: "I had a letter from Radio Center, Moscow refusing to

verify because I could not understand their speech. Have heard RV96 on 15160 kcs. since with news in English at 3 a.m."

Anthony B. Sanchez, Phoenix, Arizona: "I'd like to be in the RADEX Club. After I picked up your fine magazine by mistake last December, I became interested in DXing."

C. E. McCarty, Zanesville, Ohio: "I have been DXing since 1928 and among my collection is a souvenir calendar of the first coast to coast broadcast by the Canadian National Railways which took place Dec. 27, 1928. I have purchased RADEX since 1929 when I found it was the best there was."

Gene Kosolapoff, Dayton, Ohio: "I would like to hear from any DXer who has heard any of the USSR stations on 9600 kcs., 12000 kcs., and 15080 kcs. on their usual afternoon or evening hours. As far as I can tell they've simply quit broadcasting recently as the only USSR station I have heard these last weeks was on about 6030 kcs. Address 461 Allwin Dr., Dayton, Ohio."

H. P. Faulkner, Cincinnati, Ohio: "I would like to say that I have been a reader of RADEX since 1927 and have retained all my old copies. It is quite interesting to review them and I do not hesitate in saying that as far as I'm concerned, whether it be short-wave or broadcast band reception, I consider RADEX my Radio Bible!"

ULTRA HIGH

GS? on 30100 kcs. heard occasionally between 12 (noon) and 1 p.m. carrying the same programs as the Daventry transmitters. (RL and Horton, Mass.)

WAR on 26280 kcs. at Washington, D. C. is heard at 12:15 p.m. and

on 26600 kcs. at 1:05 p.m. (Olthoff, Kansas)

W1XKA on 31600 kcs. in Boston, Mass. heard at noon with an R8 signal. (R333—Texas)

W2XJR on 26300 kcs. in Detroit is now relaying WJR from noon to 3 p.m. (R333—Texas)

W2XQO on 26550 kcs. at Flushing, N. Y. logged on Jan. 13 at this location. Schedule is 11:45 a.m. to 5 p.m. (R333—Texas) W2XQO heard here for the first time. It was the first east coast station on the ultra high bands heard along with W2XJI—which was heard just a little later. (R274—Wash.)

W3XEY on 31600 kcs. in Baltimore, Md. is heard at 11 a.m. relaying WFBR. (R333—Texas)

W4XA on 26150 kcs. is the frequency that this Nashville, Tenn. station will use when operation commences. They decided that this frequency would be better than the higher bands and promptly requested the change from the FCC. They got it! (RX)

W5XGB on 31600 kcs. at Houston, Texas heard testing around 2:45 p.m. as the announcer read technical articles from magazines. Announcer said the station was attempting to determine its ground wave coverage and that they wanted to suppress their sky wave. Efforts were not too successful as the signal was R4 here. The station owned by the Houston Lighting and Power Co., and located at their Deepwater Plant in Pasadena, Texas. (RL—Mass.)

W6XKG on 25950 kcs. in Los Angeles, Calif. relays KGFJ and is heard here from about 11:45 a.m. to 5:30 p.m. (R333—Texas)

W8XWJ on 41000 kcs. in Detroit

is now operating on a new schedule: Monday to and including Saturday 10 a.m. to 5 p.m. and silent on Sunday. (Ritzenheim—Mich.)

W9XH on 26070 kcs. heard from 4-4:20 p.m. relaying WSBT in South Bend, Indiana. (R333—Texas)

W9XJL on 26100 kcs. in Superior, Wis. relays WEBC from 11:45 a.m. to 3 p.m. (R333—Texas)

W9XTA on 26500 kcs. at Harrisburg, Illinois heard signing off the air at 4:20 p.m. asking that radio clubs send them material of interest that could be utilized for a Saturday morning program. They also asked for opinions on whether a series of code lessons would be desired on the program. (R274—Wash.)

W9XTC on 26050 kcs. in Minneapolis, Minn. from 3:30-5 p.m. (R333—Texas)

W9XUJ on 26000 kcs. around 4 p.m., then switching to 25950 kcs. (R221—T.H.2)

W9XUP on 26150 kcs. at St. Paul, Minnesota (or is it Minneapolis) is heard from 11:45 a.m. to 3 p.m. relaying KSTP. (R333—Texas)

VERI NEWS AND NEW VERIES

PLP in Java verifies with a cream and gold card and black ink. Reception is marked verified. . . TIEM at Apartado Postal 1049 in San Jose, Costa Rica issues a nice veri in black and gold. . . HH3W's card is yellow with silver letters and an outline map of Haiti and the Dominican Republic. . . YSM verifies promptly with a red, green, blue, and yellow card. Along with the card came about eight varieties of Salvadorian stamps. . . VUD-3 verifies with a form letter and states that QSL cards will soon be available. . . PRE-8 verifies by letter. . . COKG sends a two color veri.

The station is owned by Bacardi and sends two souvenir cards and a wine booklet under separate cover. . . CT2AJ verified (This catch by R. Skyten) in two months with an attractive card bearing a map of the Isle of San Miguel, in the Azores, in six colors. . . SP-19 sends a beautiful brown, red, and white QSL card as promised. . . COCA's card is white printed in red, with call and antenna towers in blue. . . TI2XD's card is peach color with call in black and red. . . ZIK-2 on 10600 kcs. verifies with a grey card, white outline of Central America showing British Honduras in red. Call is in white trimmed with black! . . . Finland verifies with picture of transmitter. . . SM5SX's card is light blue with black print. Call in large letters.

For help in compiling the above veri notes we'd like to thank G. R. Jewell, Jr., Jack Kenneally, J. E. Gardner, Jack Wells, A. V. Deterly, Murray Shainis, R. Skyten, and Robert Trubee.

NOT SO SHORT WAVES

WAAU an airplane owned by Columbia Broadcasting System flying over Newark and testing with studio. They were on 2830 kcs. from 5:45-6:07 p.m. on Jan. 20. (Welch—Mass.) CBS verified reception of their portable transmitter WAAU on 2830 kcs. aboard the tug M. Moran used during landing of ESSO BAY-TOWN. NBC refused to verify WNBM on Tug Elizabeth Moran used on the same occasion. (R671—N. Y.)

Can anyone give any information on W8XYR on 4797 kcs. in Binghamton, N. Y. heard on Feb. 4, broadcasting ice skating races between 11 a.m. and noon from Lake Placid.

They stated they would be on again the following day. They were relaying some UHF station. (R671—N. Y.)

VBC on 1630 kcs. at Sault Ste. Marie, Ontario broadcasts weather reports at 11:30 p.m. They talk to Great Lake Ships on same frequency as do the other VB stations. (Hodnett—Ont.)

VBF on 1630 kcs. (location unknown) broadcasts weather reports at 10:55 p.m. WNYF carrier causes heterodyne, making readability poor. (Hodnett—Ont.)

VBG on 1630 kcs. at Toronto, Ont. broadcasts weather reports at 10:40 p.m. (Hodnett—Ont.)

VBH on 1630 kcs. at Kingston, Ont. broadcasts weather reports at 11:00 p.m. Great Lakes ships which work VB stations above are "City of Montreal", "Calgarian", "City of Toronto", and "Weyvern". (Hodnett—Ont.)

KWBL "Moana" in Pacific Ocean lat. 31° 35 min. Long. 21°, bound for San Diego. Heard at 10 p.m. phoning KOU at San Pedro. KWBL on 2198 kcs. (R451—Ill.)

NREH Port Adams, Oreg. on 2698 kcs. at 10:30 p.m. On 2738 kcs. WOTQ "St. Joseph" at Sacramento, Cal. heard 10:30 p.m., KFZE "Virginia" heard at 11 p.m.—15 watts; KIZD "Steamer Helen" at 11 p.m.; WNZT "Pasado Manana" at Sacramento at 11:30 p.m. and WPZN "J. A. Martinolich" near coast of Wash. at 11:45 p.m. (R451—Ill.)

SHORTWAVES IN REVIEW

Albania

ZAA the call for "Radio Tirana" at Tirana, Albania—the station which caused a flood of reports this month by its sudden appearance on the air

waves bringing to shortwave fans a new country heretofore unheard on the broadcast channels. Channels on which the station is reported are 6085 kcs., 7500 and 7900 kcs., 9987 kcs., and 15765 kcs. Latter frequency is supposed to be for North American transmissions. They announce as "Experimental Radio Station Tirana Calling." Announcements are in several languages including English. Address is Directorate General of Postes and Telegraphs, Tirana, Albania. No station schedule is known, but here are a few of the hours at which the various frequencies were reported: 7900 kcs. around 8 p.m.; 7500 kcs. around noon; 9987 kcs. heard around 1:30 a.m. (R118—Eng. 1, Barker—Me., and Bonifield—N. J.)

Antigua

VP2AE on 7120 kcs. in St. Johns in this West Indies Island heard at 3:30 p.m. broadcasting music and horse race results. (R591—P. R.)

Argentina

LRX on 9660 kcs. comes on the air each morning at 6 o'clock. Announcements are in English at this time. Later in the morning they switch to LRU on 15290 kcs. (R786—Mass.)

LR3 on 9640 kcs. heard at 10:15 p.m. off schedule. No CXA—mentioned at announcements. (R591—P.R.)

Australia

VK2MA on 6720 kcs. (Location unknown) heard Sundays from 4:30-8:30 a.m. when they relay VK2ME. (Oskay—N. J.)

VK2ME on 9590 kcs. is QRM'ing VUD-2 on its Sunday transmission starting at 6:30 a.m. VUD-2 overrides VK2ME by a wide margin. The squeal you hear on VUD-2 is VK2ME. (Wells—Ala.)

VK3ME on 9500 kcs. at Melbourne heard here on Jan. 29th at 6 a.m. (R591—P.R.)

VK6ME on 9590 kcs. is received with an R4 signal although it is QRM'd by VUD-2 in the latter part of the broadcast. Peak reception is at 7 a.m. A recent card from them gives the power as 200 w. (R620—N.S.2)

VK8SK on 6690 kcs. of the Australian Aerial Medical Service has been testing and asking for reports after 2:30 a.m. The station is located at Broken Hill, Australia. (RA—N. Z.)

VK9MI on 6010 kcs. aboard the M/V Kanimbla operates irregularly transmitting programs to stations in Australia for rebroadcast purposes. Programs are not daily but are usually broadcast between 10 and 10:30 p.m. or sometimes till midnight. (R517—Ohio)

Brazil

PRA-8 on 6020 kcs. at Pernambuco broadcasts time signals at 10 a.m. and 5 p.m. (Oskay—N. J.)

PSH on 10220 kcs. broadcasts daily from 6-7:30 p.m. and on Mondays the Brazilian hour is broadcast in English from 8-8:30 p.m. Program consists of typical Brazilian music and news in English. Listeners are invited to write and comment on the program. Other stations used for broadcasts for other lands are PSE on 14935 kcs., and PSA on 21080 kcs. (R834—Ala., R786—Mass., R837—Ariz.3, and Redden—N. J.)

Canada

CFRX on 6070 kcs. at Toronto, Ontario are on the air irregularly. When they broadcast, they follow a schedule that starts at 10 a.m. and finishes at 1 a.m. Power is 300 w.

(R702—Penna.)

CJRO on 6175 kcs. have changed from 6147 kcs. Their location is Winnipeg, Manitoba. (R552—N. J.)

CJRX on 11790 kcs. heard on Saturday from 11 p.m. to midnight playing old time music. (R333—Texas)

Denmark

OZH-2 on 15320 kcs. is the unknown Danish station you reported. They are heard Sundays from 8 a.m. to 1:30 p.m. (Gilbert Harris—Mass.)

Canary Islands

EAJ-43 on 7500 kcs. announces in English at 9 p.m. giving call, schedule, and time with clock striking 1 a.m. (Oskay—N. J.)

EA8AE on 7310 kcs. at Las Palmas, and EA8AS on 7270 kcs., Tenerife operate as Spanish Nationalist Broadcasters in the early evening hours and later contact Latin-American amateurs. EA8AS gives war news nearly every evening between 6 and 7 p.m. (Wells—Ala., and Schlubach—R. I.)

Chile

CB960 on 9600 kcs. in Santiago is being heard daily from 8 p.m. to 11:30 p.m. They are known as "Radio El Americana", Compania de Seguros de Vida, P. O. Box 1-B, Santiago, Chile. There are occasional English announcements. (R620—N.S.2, and R552—N. J.)

CB970 on 9730 kcs. and CB960 on 9600 kcs. were heard during the recent earthquake doing emergency work. CB960 often contacted Concepcion at 11:30 p.m. and obtained the names of the victims. (Wells—Ala.)

China

XGOA on 15190 kcs., location unknown, is heard with good signals in mornings. They are heard broadcasting news at 9:05 a.m. with a lady announcer (in English). This station

can be easily mistaken for TAQ on 15195 kcs. (R786—Mass.)

XGOI on 9505 kcs. (approx.) seems to be the call of the new Chinese station heard in the mornings. The signal is very good, and QRM's VK3ME so heavily before sign off that only a whistle is heard. (R786—Mass.)

XGRV on 11400 kcs. at Chungking is heard on its 8-8:35 a.m. schedule fairly well. XGRV was logged R4 on Feb. 5 at 8:15 a.m. (Wells—Ala.)

XPSA on 7140 kcs. is the call of the new station at Chungking, Kweichow, China. Power is 10 kilowatts and schedule is from 6-7 p.m. and 6-8 a.m. Reports are requested and address is: The Central Broadcasting Administration, Central Executive Committee of Kuomintang, Chungking, China. (R592—Calif., Wells—Ala.)

ZBW-3 on 9525 kcs. at Hong Kong is very well heard at 6:55 a.m. Chinese native songs are the usual fare. Occasionally an American folk song will be sung in Chinese. I heard ZBW-3 broadcasting "Oh Susanna" sung by a Chinese girl with accompaniment of a typical Chinese orchestra one winter morning! (Wells—Ala.)

Colombia

HJ3CAH on 4895 kcs. is wandering in frequency. They were last heard close to 4903 kcs. (Oskay—N. J.)

HKF on 4855 kcs. with same program, under same slogan as "La Voz de Bogota" is a new station on the air. QRA is: Aprdo 312, Bogota. On 9710 kcs. the signal is R9 at 8:58 p.m. and on 4855 kcs. is R7 at 9:25 p.m. (Olthoff—Kans.)

Costa Rica

TI4NRH on 9692 kcs. as their new announced frequency (R591—P.R.)

Cuba

CMA5 on 15450 kcs. can be heard with the Metropolitan Opera broadcasts on Saturday afternoons. (R9—Mo.1)

COCD on 6130 kcs. at Havana "La Voz del Aire" P. O. Box 2294, is broadcasting an American Hour from 11:30 p.m. to midnight daily with a very good signal. (R834—Ala.)

COCM on 9810 kcs. at Havana appears to have left CMCM and is now relaying the programs of CMBL on 750 kcs. (R620—N.S.2)

COCQ on 8825 kcs. now carries a program in English daily from 8:50 to 8:55 p.m. containing English News furnished by Havana Post. (R671—N. Y. and R21—Pa.3)

Czechoslovakia

OLR2A on 6010 kcs. in Praha is heard from 10:30-11 a.m. The lady announcer used many languages. (R815—Ohio and Park—B.C.)

OLR4A on 11840 kcs. and OLR3B on 9670 kcs. broadcast simultaneously week days from 9:30 p.m. in English. (R834—Ala.)

Dominican Republic

HIG at Trujillo City has changed calls to HI-1G on 6290 kcs., and HI-2G on 9290 kcs. (Oskay—N. J. and R591—P.R.)

HI-1J on 5880 kcs. at 7 p.m. and are not heard any longer on 5855 kcs. (Oskay—N. J.)

HI-3X on 15268 kcs. with power of 300 watts. Schedule: Tues. and Fri. 8:10-10:10 p.m. and Sun. 7:40-9:40 a.m. Reports for verifications should be addressed to Secretaria de E. de Comunicaciones y Obras Publicas, Estacion Radiofusora HI3X, Ciudad Trujillo, Republica Dominicana.

(Coyle—Penna., and Harris—Mass.)

HI-9B on 6650 kcs. (listed on 5885 kcs.) heard after 6 p.m. with volume up to R9! (Schmuck—Mass.)

H-1N on 6240 kcs. is the new call for the station formerly known as HIN. The letter "I" is replaced in the call by the figure "1". (R591—P.R.)

Ethiopia

IABA on 9650 kcs. at Addis Ababa is on daily from 11 a.m. to 1 p.m. (R671—N. Y.)

Formosa

JFO at Taihoku on 9630 kcs. with 1000 watts relaying JFAK from 4-9 a.m. daily. Reports are requested by the director of the station. (RA—N.Z.)

France

Many new frequencies are apparently being used experimentally by "Paris Mondial" this month. We've not been able to check every frequency reported, so we'll list the frequency as reported by the reader. Sort 'em yourself?

TPB-3 on 17850 kcs. apparently has moved here from 17810 kcs. since GSV is now using that channel. TPB-3 heard from 10:45-11 a.m. (Oskay—N. J.)

TPB-11 on 9550 kcs. transmits an English news period from 3-3:15 p.m. daily. (R671—N. Y.)

TPB? on 7220 kcs. comes in R9 from 6:15 p.m. with recordings and frequent station announcements. News is broadcast at 11 p.m. by another TPB transmitter at 11 p.m. followed by recordings. This station is also R9. (Schlubach—R.I.)

TPB? on 7280 (also reported 7279) kcs. comes on at 9:30 p.m. with North American program. News at 11 p.m. and tone chime heard on the hour. Sign off is at midnight and

11885 kcs., and 11720 kcs. heard in parallel with this station. (R790—Ill., Harris—Mass., and Oskay—N. J.)

TPB? on 9620 kcs. (also reported 9615) is also reported to be operating from 9:30 p.m. to midnight with program in French and English directed to North America with R9 signal. (R806—N. Y., Badden—P. Q., R786—Mass., R816—Colo., and Jones—Texas.)

French Indo China

"Radio Boy-Landry", Saigon on 12000 kcs. welcomes reports from listeners. The schedule is: 11:45 p.m. to 1 a.m., and 7 a.m. to 9 a.m. Also used are the frequencies 9800 kcs., and 6180 kcs., but no mention is made concerning when each frequency is used. (R517—Ohio)

Germany

DJP on 11850 kcs. can be heard from 7-8:15 p.m. on the 14th and last days of each month with a relay of Yugoslav shortwave station for countrymen abroad. This broadcast is very confusing, being an absolute relay of Yugoslavia, the only German identification being the music box interval signal of the German shortwave stations sounded once or twice at the finish of the broadcast. (Park—B. C., and Oskay—N. J.)

DJY on 6070 kcs. at Vienna, Germany has a good program from 5-6 p.m. playing American and Spanish records for one hour with few announcements. (R591—P.R.)

Great Britain

GSV on 17810 kcs. at Daventry is a new BBC wavelength and is heard with an R7-9 signal after 1 p.m. (R9—Mo.1)

Greenland

OX7OU on the 14 megacycle band, the transmitter of Oxford University

Expedition is heard near 9:30 p.m. Address is A. Croft, Leckhampton House, Cambridge, England. (R671—N. Y.)

Guadeloupe

FG8AH on 7435 kcs. now and 'be-ing heard daily from 6:10-7:10 p.m. Program consists of American and French recordings. English announcements are given occasionally. Call is very seldom used, but its slogan "Radio Guadeloupe" is used occasionally during the program. Address is P. O. Box 125, Pointe-a-Pitre, Guadeloupe, Fr. W. Indies. FG8AH is the first signal heard below EAJ43 on 7490 kcs. (R834—Ala., R671—N. Y., Barker—Me., and Wells—Ala.)

Haiti

HH3W on 9750 kcs. now instead of 9645 kcs., but they are still announcing their old frequency. They are heard daily from 7-9:05 p.m. (Harris—Mass., and Massey—Tenn.)

Honduras

HRK on 5890 kcs. heard testing and requesting reports. They are a government owned station operating irregularly in the evenings. (Massey—Tenn.)

Hungary

HAT-4 on 9125 kcs. is broadcast-ing almost daily from 7-8 p.m., with program on Saturday from 6-7 p.m. Sundays the transmission begins at 5 p.m. and lasts till shortly after 7 when English news items are heard. (R924—Va., R834—Ala., and Oskay—N. J.)

Iceland

TFJ on 12235 kcs. at Reykjavik is heard every Sunday with a weak signal from 1:40-2:30 p.m. QRA: Iceland State Broadcasting Service, Reykjavik. (R834—Ala.)

India

Complete All India Radio Schedule:

VUD-2 on 9590 kcs. at Delhi from 10 p.m. to midnight and 2-4:15 a.m. and on 4960 kcs. from 8 a.m. to 1 p.m.

VUD-3 on 15160 kcs. at Delhi from 10 p.m. to midnight and 2-4:15 a.m. and on 9590 kcs. from 8 a.m. to 1 p.m.

VUD-2 on 9550 kcs. at Bombay from 10-11 p.m., 12:30-4 a.m., and 5-7:30 a.m., and on 4880 kcs. from 8 a.m. to 1 p.m.

VUM-2 on 11870 kcs. at Madras from 4-4:30 a.m., and on 4920 kcs. from 7 a.m. to 12:30 p.m.

VUC-2 on 9530 kcs. at Calcutta from 2:30-4:30 a.m. and on 4840 kcs. from 7 a.m. to 10:30 p.m. (RX)

The above schedules are not always followed as some reports from listeners will show.

VUC-2 on 4830 kcs. at Calcutta is the best heard 62 meter India station. VUC-2 was logged on a Sunday transmission at 8 a.m. At that time a church program is presented. At 8 a.m. the announcer speaks English. Then the time signal is heard, followed by an organ selection which opens the program of church services. The signal of VUC-2 is good R6 at this time, but by 8:30 it has almost completely faded. Most of the 62 meter India stations are easily readable on the loudspeaker. (Wells—Ala.)

VUD-3 on 15160 kcs. heard but not very clearly. A clock is heard striking 9 a.m. at 10:30 p.m. EST. (R937—Saskatchewan)

VUD-4 on 15290 kcs. heard daily from 8:30-10:30 p.m. This is evidently a new Delhi transmitter. (Wells—Ala.)

Ireland

The new Irish Shortwave station being constructed at Moydrum (Athlone) will use a power of 3000 watts on a wavelength of 49.75 meters. (R118—Eng.1)

Italy

IQH on 14736 kcs. in Rome broadcasts very irregularly on this frequency. (R702—Penna.)

I2RO-3 on 9635 kcs. heard broadcasting one of the masses for Pope Pius XI announced that the program originated from St. Peters Cathedral. Signal strong and clear. (R816—Colo.)

I2RO-4 on 11810 kcs. again being heard in the afternoons and evenings. They are heard on the American Hour with IRF on 9830 kcs., and I2RO-3 on 9635 kcs. (R786—Mass.)

I2RO-5 on 15300 kcs., along with IQY on 11675 kcs., and I2RO-4 on 11810 kcs. can be heard with Japanese music from 12:10-1 p.m. daily. A gong is sounded at exactly 1 p.m. These transmissions can easily fool a person into believing he has an oriental! Take it from one who has been fooled! (RL and Harris—Mass.)

I2RO-6 on 15300 kcs. comes on the air at 9 a.m. with the Eastern Hour and announcements in English and Italian. They begin to fade about 10:30, but can be heard weakly until their sign off at 1:30 p.m. (Webb—Texas)

Japan

JLG-3 on 11705 kcs. is the new call being used by Tokio on this channel. (Horton—Mass.)

JLG on 7280 kcs. at Tokio is a new station operating in parallel with JZJ on the European program from 9:30 a.m. to 11 a.m. daily. (H118—Eng.1)

JVD on 15860 kcs. heard calling

KKR and KWE and was heard on Feb. 1 with a special program for NBC at 8:15-8:30 p.m. (R333—Texas)

JZI on 9535 kcs. is now carrying the North American program from 7:30 a.m. in place of JZJ on the 25 meter band. (R786—Mass.)

JZK on 15160 kcs. has been heard regularly from 8-8:30 p.m. for several months now. (Kosolapoff—Ohio)

Java

Complete schedule of all NIROM S. W. stations: Daily 4:30 a.m. to 10:30 a.m., 6 p.m. to 7:30 p.m., and 10:30 p.m. to 2 a.m. Saturdays from 4:30 a.m. to 11:30 instead of 10:30 a.m. (rest of sked. same). Sundays from 7:30 p.m. to 2 a.m. and 4:30 a.m. to 10:30 a.m. The stations used all have the same (above) schedule.

They are:

PLP	on 11000 kcs.	1500 watts
PMN	on 10260 kcs.	1500 watts
YDC	on 15150 kcs.	1500 watts
YDB	on 9610 kcs.	1000 watts
YDA	on 3040 kcs.	10000 watts

(R453—N. Y.)

PLP on 11000 kcs. at Bandoeng really has a good R8 signal here on its morning transmission. PLP has been audible until 9:30 a.m. PMN on 10260 kcs. is much weaker than PLP and is QRM'd at around 8 a.m. by some South American station (Wells—Ala.)

PMH on 6720 kcs. is very strong at 7:30 a.m. and is readily logged. All NIROM stations except PMY on 5140 kcs. verify from this QRA: NIROM, Koningsplein West 5, Batavia, Java, Netherlands East Indies. PMY verifies from: PMY, Nillmy Bldg., Bandoeng, Java, N.E.I. A fine Orientally-designed veri is earned by anyone correctly reporting one of the

NIROM network stations. (Wells—Ala.)

Lithuania

LYR on 9315 kcs. the new station at Kaunas is now on the air from 1:30-2:15 a.m. and 12:30 p.m. to 2:25 p.m. (Reichardt—Mass.)

Manchoukuo

JDY on 9925 kcs. at Dairen, Kwantsung Province using 10000 watts broadcasts from 7-7:45 a.m. with music and news in Japanese and occasional English news at 8 a.m. Address: Shotokugai 3, Dairen, Kwantung Leased Territory. R517—Ohio, Wells—Ala., and RA—N. Z.)

Mexico

XEBR on 11820 kcs. at Hermosillo in the province of Sonora starts at 1 p.m. and broadcasts till 4 p.m. and then from 8-11 p.m. They relay the programs of XEBH and the broadcasts start and end with "Over the Waves." (R837—Ariz.3)

EXXA on 6132 kcs. "Cadena Radiofusora DAPP" Mexico City, D.F. has an English hour on Friday at 11 p.m. (R834—Ala.)

XETA on 11760 kcs. at Monterrey is heard daily until 4 p.m. on this frequency (R485—N. Y.)

XEUZ on 6117 kcs. in Mexico City broadcasts an American hour from 11:30-midnight. The program is both interesting and educational, as a vivid picture of New and Old Mexico is painted by XEU's capable English announcer. (R834—Ala.)

Netherlands

PI-1J on 7088 kcs. and 14164 kcs. at Dordrecht is being heard fairly consistently each weekend at present near 10 a.m. to 1 p.m. Signals are R7-8! (RA—N. Z.)

New Zealand

2ZB on either 6960 kcs. or 3480 kcs. is on irregularly up to 7 a.m. with 200 watts power. (RA—N. Z.)



This black and light blue card comes from HP5G in Panama City, a short-wave station working on 11780 kcs. (Courtesy of A. D. Jordan).

ZL4ZB on 4300 kcs. is also on the shortwaves now. They broadcast almost every weekend up to 6 or 7 a.m. Sundays. They are using only 30 watts power and really use the ZL call. (RA—N. Z.)

Norway

Complete schedule of the Oslo transmitters:

LLG on 9610 kcs. from 3-6, 8-9 p.m. and 11 p.m. to midnight.

LKQ on 11735 kcs. from 2-6:40 a.m. and 10 a.m. to 3 p.m.

LKV on 15170 kcs. from 6:40-10 a.m. Power used is 5 kw. QRA: Norsk Rikskringkasting, Stortingsgaten 28, Oslo, Norway. (Quisgard—Md., and R517—Ohio)

LK? on 8025 kcs. is also heard on the 8-9 p.m. and 11 p.m. to midnight schedule along with LLG. They give no call letters and seem to refer to this station as a relay station for Oslo! This station is heard much better than LLG! (Schlubach—R. I., Oskay—N. J., and Barker—Me.)

Panama

HP5F on 6140 kcs. in Panama City is heard irregularly on this channel. (R591—P. R.)

HP5J on 9590 kcs. again with an excellent signal after having wandered

as far as 9605 or 9610 kcs. (R806—N. Y.)

Papua

VHPM on 8080 kcs. at Port Moresby on this Oceanic Island heard only irregularly from 4-6:30 a.m. (Oskay—N. J.)

Paraguay

ZP-14 on 11720 kcs. at Villarica is heard on this new frequency from 7-9 p.m. with a good signal. QRA: Friedmann Hnos., Villarica. (R620—N. S.2, R834—Ala., and Wells—Ala.)

Peru

OAX4T on 9562 kcs. "Radio Nacional del Peru" of Lima is heard coming on the air at 7:00 a.m. with excellent signal. (R786—Mass.)

Philippine Islands

KZRM on 9570 kcs. with 1000 watts at Manila broadcasts week days from 11:15 p.m. to 12:15 p.m., 4-10 a.m., and 4 p.m. to 7 p.m. Sundays from 3-10 a.m. (RA—N. Z.)

Portugal

CSW-2 on 11040 kcs. heard daily commencing at noon. Signal excellent during first half hour, though they fade fast after 12:30 p.m. Programs commence with chimes, clock striking 5 p.m. and National Anthem followed by music, usually recordings. This station is replaced in the afternoon by CSW on 9737 kcs. till 9 p.m. (Park—B. C.)

CSW on 15120 kcs. is heard mornings on this frequency with good signals. They used 15100 kcs. for a while, but switched over to 15120 kcs. They use one chime or gong for interval signal. (R786—Mass.)

CS2WD on 5977 is badly QRM'd by YV5RC now on 5973 kcs. during its daily schedule from 2:30-5:30 p.m. (R671—N. Y.)

Portuguese China

CRY-7 on 6115 kcs. at Macao is reported to be closing at 3:15 a.m. NZTime. I have not yet heard it or learned of its reception. (RA—N.Z.)

Roumania

"Radio Bucuresti" on 8572 kcs. at Bucharest heard recently on a salute to the New York World's Fair. The station is supposed to operate from 8:15-10:30 a.m. and 4-7 p.m. (Barker—Me.)

St. Kitts

ZIZ on 6380 kcs. operate daily from 4-4:30 p.m. and on Wednesdays they are also heard from 7-7:30 p.m. (R591—P. R. and R671—N. Y.)

Straits Settlements

ZHP on 9690 kcs. in Singapore now carry all the British Malaya broadcasting Corp. programs. ZHO is no longer being used according to official word from J. S. Dumeresque, Gen. Manager. ZHP's schedule: 7:20 a.m. to 12:20 p.m. Mon. thru Sat., 3:20-4:20 a.m. Weds., 3:05-4:05 a.m. on Sat., and 1:20-3:50 a.m. and 8:20 a.m. to 12:30 p.m. on Sunday. They are usually heard here in the mornings up to 8 o'clock. Address the British Malaya Broadcasting Corp., Broadcasting House, Thomas Rd., Singapore. (R834—Ala.)

Sweden

Complete schedule for Swedish stations:

SBO on 6065 kcs. 4:15-5 p.m. daily including Sun.

SBP on 11705 kcs. Daily 1 p.m. to 4:15 p.m., Sun. 3 a.m. to 4:15 p.m. and Mon., Tues. and Fri., 8-9 p.m.

SM5SX on 15155 kcs. at Stockholm daily from 11 a.m. to 5 p.m. and Sun. 9 a.m. to 5 p.m. (Reichardt—Mass.)

SM5SX on 15155 kcs. in Stockholm is being heard best on Sundays from 9 a.m. to 5 p.m. SM5SX uses 400

watts and can be addressed at the Royal Technical University. (R834—Ala.)

SBO on 6065 kcs. at Motala heard daily from 4:15-5 p.m. SBO suffers badly from QRM from W8XAL and CFRX. (R671—N. Y.)

SBP on 11705 kcs. at Motala relays the Swedish National program until about 4:15 p.m. when they switch over to SBO. The latter frequency is the better of the two although there is QRM from W8XAL. (R620—N. S.2)

Turkey

TAQ on 15180 kcs. "Radio Ankara" is on the air daily from 5:30 a.m. to 7 a.m.

TAP on 9460 kcs. is on from 11 a.m. to 5 p.m. (R118—Eng. 1 and R256—Alta4)

U.S.A.

W2XAA on 12862.5 kcs., portable at Chicago testing from 4:30-5 p.m. and are owned by Bell Telephone Laboratories. (Welch—Mass.)

W2XE in New York City—complete operating schedule:

21570 kcs. 7:30-10 a.m. Mon. thru Fri.; 8 a.m. to noon on Sat. and 8-11:30 a.m. on Sun. (To Europe)

15270 kcs. 1-3 p.m. Mon. thru Fri.; 12:30-2:30 p.m. on Sat.; and noon to 2:30 p.m. on Sun. (To Europe)

11830 kcs. 3:30-6 and 6:30-10 p.m. Mon. thru Fri.; 3-6 and 6:30-11 p.m. on Sat. and Sun. (First xmission to Europe, 2nd to So. America)

9650 kcs. 10:30-11:30 p.m. daily except Sat. & Sun. (To Europe)

6120 kcs. Midnight to 1 a.m. Mon. thru Fri.; 11:30 p.m. to 1

a.m. on Sat. and Sun. (To So. America)

W3XAU in Philadelphia, Penna. since January 9 has been operating on the following schedule and new frequencies: Noon to 1 p.m. on 21520 kcs., and from 2-6 p.m. on 15270 kcs. At 6:30 p.m. they come on the air on their old channel of 9590 kcs. Many of their daytime programs are in Spanish and the rest are from WCAU and Columbia. (Webb—Texas)

U.S.S.R.

RKI on 15080 kcs. at Moscow is being heard from 7:30 to about 8:55 p.m. daily with an English program. (R834—Ala., R816—Colo.)

RV-59 on 6030 kcs. reported heard with English program at various times in the late afternoon and early evening. Reported at 4, 5, and 7:40 p.m. (R786—Mass., R790—Ill., and Long—Ga.)

RV-96 on 15180 kcs. at Moscow heard with English program between 7:30 and 8 p.m. and also with English news items at 3 a.m. (R834—Ala., R786—Mass., and R937—Saskatchewan)

Vatican City

HVJ on 15120 kcs. is heard with terrific volume on Sundays at 2 p.m. The following frequencies are also available for HVJ: 6190, 9550, 9660, 11740, and 17840 kcs. All but the latter frequency are in use as reference to complete schedule in Twenty Stentors will show. (R834—Ala., R591—P. R., and Schneckenburger—N. J.)

Venezuela

YV1RL on 4860 kcs. near 6 a.m. They have not been heard lately on 5935 kcs. (Oskay—N. J.)

YV2RN on 4870 kcs. heard at 10 p.m. on this frequency playing marches. (Oskay—N. J.)

YV5RA on 11750 kcs. heard coming on the air at 7:45 a.m. on this frequency. (R591—P. R.)

YV5RR on 5835 kcs. in Caracas is on the air daily from 4:30 p.m. to 10 p.m. (R702—Penna.)

Yugoslavia

YUA on 6100 kcs. heard coming on the air at 12:45 a.m., with a very weak signal. (R7—Pa.1)

NOTE: Schedules and changes in this department are written at a later date than those in Twenty Stentors and should be used in preference to any contradicting schedule in the latter dept.

Radex Reporters

RA: A. I. Breen, Dunedin, New Zealand.
 RL: Ray LaRocque, Worcester, Mass.
 RX: Official.
 R7, Pa. 1: A. M. Hankins, Latrobe, Pa.
 R9, Mo. 1: Walter V. Scholz, St. Louis, Mo.
 R21, Pa. 3: Ed Lang, Philadelphia, Pa.
 R23, Ill. 4: Richard Wright, Chicago, Ill.
 R49, D. C. 2: David Hill, Washington, D. C.
 R118, England 1: D. H. Dussek, Alton, England.
 R221, T. H. 2: C. J. Fern, Jr., Lihue, Hawaii.
 R274: A. C. Tarr, Seattle, Wash.
 R256, Alta. 4: Dick Anderson, Calgary, Alta.
 R333: T. D. Smith, Burnet, Texas.
 R451: C. Roman, Chicago, Ill.
 R485: Robert Blanchard, Brooklyn, N. Y.
 R517: J. E. Gardner, Cleveland, Ohio.
 R552: Matson Williams, Newark, N. J.
 R591: Caribbean Listening Post, Catano, P. R.
 R592: Bob Sawada, Isleton, Calif.
 R620, N. S. 2: Wm. Snook, Middle Musquodoboit, N. S.
 R622, La. 3: A. V. Deterly, Baton Rouge, La.
 R626, Tenn. 3: Wm. Scott, Johnson City, Tenn.
 R671: Robert Trubee, Brentwood, N. Y.
 R702: A. D. Jordan, Philadelphia, Pa.
 R784: Allie Rokey, Blakesburg, Iowa.
 R786: Robert Skyten, E. Brookfield, Mass.
 R790: Jack Welsh, Kingston, Ill.
 R806: Mel R. Botto, Buffalo, N. Y.
 R815: C. E. McCarty, Zanesville, Ohio.
 R816: W. F. Cornwall, Englewood, Colo.
 R831: Gerald Cote, Sherbrooke, P. Q.
 R834: G. R. Jewell, Jr., Montgomery, Ala.
 R837, Ariz. 3: Anthony B. Sanchez, Phoenix, Ariz.
 R850: Murray Shainis, Bronx, New York City.
 R924: Harold Tear, Roanoke, Va.
 R937: Wm. Flynn, Dummer, Sask.
 R. H. Badden, Montreal, P. Q.
 Lewis F. Ball, Richmond, Va.
 Elyn Barker, Portland, Maine.
 Arthur E. Blick, Toronto, Ont.
 Kyle C. Bonifield, Asbury Park, N. J.
 J. Coyle, Philadelphia, Pa.
 Philip Craig, Waterville, Maine.
 Mrs. G. M. Crosland, Washington, D. C.
 Warren Dame, Saxonville, Mass.
 Forest W. Fisher, Battle Creek, Mich.

Gilbert Harris, North Adams, Mass.
 Lisle Hodnett, Ottawa, Ont.
 Cari Horton, Athol, Mass.
 Billy Jones, Dallas, Texas.
 Gene Kosolapoff, Dayton, Ohio.
 John D. Long, Dalton, Ga.
 Capt. E. N. Massey, Sweetwater, Tenn.
 Martin J. Olthoff, Independence, Kans.
 John J. Oskay, New Brunswick, N. J.
 Robert Park, Vancouver, B. C.
 R. A. Quisgard, Baltimore, Md.
 Thomas Redden, Buffalo, N. Y.
 Warren C. Reichadt, Reading, Mass.
 Richard Ritzenheim, Grosse Pointe Farms, Mich.
 E. Schlubach, Providence, R. I.
 S. Schmuck, E. Cambridge, Mass.
 Robert Schneckenburger, Nutley, N. J.
 Pat Webb, San Antonio, Texas.
 Walter E. Welch, Lynn, Mass.
 Jack Wells, Phenix City, Ala.
 C. R. Wilson, Portland, Maine.

Note: This is a complete listing of everyone who has been kind enough to drop us a line or two during the past month. Due to the tremendous amount of mail now received we cannot attempt to acknowledge personally every letter, so we do the next best thing, and announce them publicly in this column. Please use your Radex Club indicia with every report you write.

W. H. D., Spokane, Wash. I am considering a 5-tube set, either straight a.c., or a combination a.c.—d.c. In your opinion, which is best? Would the a.c. set, but with an added ballast tube, be better than the 5-tube a.c. set?

Answer. We are inclined to favor a straight a.c. set when the current available is suitable. There is no need for an universal set of the a.c.—d.c. type unless it is to be used on both sources. Of course, small sets can be made much cheaper for either current. But, because of the internal circuit arrangement and higher voltages available for the tubes, we like the a.c. sets better for all around use. The set having a ballast tube will do no more than one without it. But the ballast tube tends to hold the volume to an even level if there are fluctuations in line voltage.

**THE IMPROVED RADEX
 WILL HELP YOUR FRIENDS TOO!
 WILL YOU PLEASE HELP BY
 TELLING THEM ABOUT IT?—The Editor**

The RADEXER'S Report

●●● By CARLETON LORD

A minor mystery of the month involves several of the Mexican stations. It all started when XEPN was destroyed by an explosion on December 17th. Immediately its 730 kcs. channel was appropriated by another Mexican station—and that's where the mystery comes in. Merlin Steen, Decorah, Iowa; Ray B. Edge, Buffalo, N. Y.; and Jack Welsh, Kingston, Ill., avow that it was XERB, formerly on 1090. Several other readers—including Bill Cunningham, Pasadena, Calif., who puts XERB on 1090—claim that XELO has jumped to 730. The XERB-on-1090 theory is supported by Samuel Meyer, our authority on doin's of the Mexicans. Pat Webb, San Antonio, Texas, claims that both XELO and XEQ are on 730, the latter having moved from 710. XEQ has advised us direct that they have moved to 730. Finally, Don Sellenberger, Inglewood, Calif., comes forward to advise that both XERB and XELO are on 730. Apparently you pays your money and you takes your choice.

The dope on the other Mexican stations is a bit more definite. According to Bill Cunningham, XECL has settled on 1100, XEH and XES have reduced power to 100 watts, while power boosts have taken XEAC up to 5 KW, XEBI to 250 watts, XEDW to 300 watts and XEX to 500 watts. From the same source comes news of several new stations below the Rio Grande—XEBW, 1340 kcys, 250 watts, Chihuahua, Chih.; XELW, same power and frequency, Guadalajara, Jal.; XERH, 1430 kcys, 500 watts, Mexico City; and XECH, 1490 kcys, 250 watts, Toluca.

Jorge E. Riveru of Station XEAC, Agua Caliente, advises that his station is now using 5000 watts on 980 kcys. "We have just completed a new transmitter," he writes, "one of the most modern on the North American continent. It uses the new high efficiency Dogherty Circuit, coupled to an elaborate radial ground system, which is really producing DX reception. A Midnight Madness program is broadcast every Sunday morning from 3 to 5 a.m., EST, for the benefit of DXers everywhere. All correct reports addressed to Box 55, San Diego, Calif., will be verified."

In a verification to Bill Scott, Johnson City, Tenn., XERA states that it is using 500 KW power, as compared to the 250 KW credited in our indices. XERA seems to have foregone its former non-verifying policy, and Mr. Scott's verie was signed by Julia Andalon.

Besides reporting on the XELO-XERB situation, Don Sollenberger, Inglewood, Calif., advises that XEBG on 820 has been quite strong of late, as is XEMO on 860.

Merlin N. Steen, Decorah, Iowa, forwards several assorted notes and tips: "WHBF, Rock Island, Ill., is now using 1000 watts on 1240. WHBL, Sheboygan, Wis., was scheduled to use 1000 watts days and 250 watts night after February 20th. CKPR has moved from 730 to 580 and has boosted power to 1000 watts. WMT signs on at 6:30 a.m., EST, while WTMJ opens a half hour later."

"The new WMRO at Aurora, Ill., broadcasts from 7:30 a.m., EST, to local sunset on weekdays and from 9

a.m. to sunset on Sundays," informs Jack Welsh, Kingston, Ill. CMX at Havana was heard testing on 880 kcys recently with a signal comparable to CMQ, which is now on 780. LRA, Buenos Aires, 750 kcys, tested some time ago and showed an R8 signal. CJCA, Edmonton, Alta., is often heard near 3:30 a.m., reading letters to people in the Yukon."

"The Cuban stations put in very good signals all day long," reports George Burnham, Tampa, Fla., "so I would like to report a few changes which I have noticed. CMQ changed from 1010 to 780, with CMCU moving from 780 to 1010. CMW has switched from 880 to 550, CMBD from 550 to 1260, and CMX from 1260 to 880. The station on 1050 is CMCH, not the CMCP which you list."

According to Pat Webb, San Antonio, Texas, the powerful signal from CMX on 880 is being put out by a new transmitter of 20 KW power.

"Our local CJGX recently got permission to change from 1390 to 1430 kcys," states Stuart Houston, Yorkton, Sask. "They now transmit from 8:30 to 12:30 a.m., EST, daily except Sundays, when they are on from noon to 12:30 a.m."

Stations Verifying

When the RADEX questionnaires go out to the stations, one of the questions is a request for a statement regarding the station's policy regarding verifications. When the station responds, this information is included in the second column of the index by frequencies. If the station advises that it will verify under certain conditions (for return postage, for a certain amount in coin, etc.), that data

is indicated by given symbols in the second column. If the station says that it will not verify reports under any circumstances, that policy is shown by the letter "c" in the same column. If we do not receive a reply and have no official information available, the letter "z" is used. As a result, the indices show the extent of the official information on hand.

Occasionally, a broadcaster who has signified a non-verifying policy will confirm a report from some reader. Also, a station which stated that it would verify reports, fails to do so. Such variations from the stations' own statements are frequently reported by Radexers.

And in the same vein, DXers often advise of verifications from broadcasters who never bothered to reply to our questionnaires and from whom no official information was available.

According to F. T. Coradetti, Narberth, Pa., stations in the latter class which have verified reports for him include CJBR, WJHL, WKST, WBRK, CMBQ, KTSW, WHMA, WPRP, CMBY, KYSM and WSTP. Dale Snider, Pataskala, Ohio, also reports a verification from WPRP, while Clarence Mustae, Brady, Mont., advises that KVRS should be included among the verifying stations.

Overseas Reception

The recent pick-up in trans-Atlantic reception found many North American DXers dialing patiently for European stations. For some listeners, the current season is bringing the first taste of real success in overseas reception, while for others, it brings back memories of the international tests of a decade and more ago.

"The mention in the February RADEX of early trans-Atlantic recep-

tion recalls the International Test Weeks of the early days," writes Raymond M. Bell (W8RFG), Washington, Pa. "There were three such periods. During the week of November 25, 1923, the British stations called the United States from 10 to 10:30 p.m., EST, on Sunday, Tuesday, Thursday and Saturday, while the U. S. stations remained silent. I drew a blank this week, hearing nothing that could be verified.

"During the week of November 23, 1924, the Continental stations called the United States between 11 p.m. and midnight, EST, on Sunday, Tuesday, Thursday and Saturday, the British stations broadcast during the same hour on Monday, Wednesday and Friday, and the American stations were supposed to remain silent during that hour for the entire week. I was able to report excellent reception from EAJ6, Radio Iberica, at Madrid on Tuesday, Thursday and Saturday evenings. The best night was Thursday, when the station could be heard for a full hour on the speaker. My report was verified by a letter from EAJ6 on February 27, 1925, and it marked the first real medium-wave TA reception in my experience. Incidentally, many people were fooled that week, because KGW, WOAI, KNX, KOB, CYX and XICE were on the air during the silent hour.

"During the week of January 24, 1926, there was a more complicated set-up. The British stations broadcast to the United States from 11 p.m. to midnight, EST, on Sunday and Tuesday. The Continental stations broadcast during the same hour on Monday and Wednesday, while all of the European stations—British and Continental—used that hour on Thursday



A card from a seldom-heard broadcast band station. It comes from FQN, of St. Pierre and Miquelon, French owned island to the south of Newfoundland.

and Friday. On Friday, North America was divided into four zones, East to West, with each zone broadcasting 15 minute periods between 11 p.m. and midnight, while on Saturday the same procedure was followed, only with the zones were divided off from North to South. The net result of this elaborate arrangement was no good DX reception for me.

"My first good TA reception during regular hours was a program heard from 2LO, London. They were using 2000 watts on 830 kcys, and I listened to them from 5:15 to 6:15 p.m., EST, on November 26, 1927. My first TP station was 2BL, Sydney, Australia, heard from 5:50 to 6:20 a.m., EST, on March 17, 1927. At that time, they were using 2700 watts on 850 kcys."

"While I generally confine my DXing to the short waves," admits William Snook, Middle Musquodoboit, N. S., "I have lately been tuning the medium-wave Europeans between 5 and 6:30 p.m., EST, with excellent results. Stations with R8 signals included Lyons PTT, Poste Parisien and North Ireland Regional, while Paris PTT and Marseilles were about R5.

Others heard are West Regional, Toulouse PTT, Wales Regional, Leipzig and a station on 850 kcys, announcing 'Radio Nacional del Espagne.'"

"I have been having very nice reception of South American stations during the evening hours," reports Don Reynolds, Peekskill, N. Y. "Among those heard frequently are LS4 on 670, PRA8 on 720, LR10 on 790, LR5 on 830, OAX4A on 850, LR6 on 870, YV5RQ on 880, PRE8 on 980, CP4 on 1040, LR1 on 1070, YV1RF on 1120, LR8 on 1150, LS2 on 1190, PRA9 on 1220, LS11 on 1310 and LS7 on 1440. And of course TGW is a regular on 1520."

Radexers Report

"The frequency checks of the past month brought me 26 new catches," totals Ken Smith, Portland, Ore. "Best among these were KADA, KGHI, WHMA, WMBR, WTJS, WTAL, KOMA and several others. The Aussies and Zedders have surely been booming in here during the past couple of weeks, with really excellent signals being heard from 1YA, 2YA, 3YA, 4YA, 4BC and 4QN. After an absence of nearly a month, the Japs are beginning to come back. WNEL at San Juan continues to put a good signal out here early in the morning."

"Just this past Christmas I was very fortunate in getting a new 10-tube Silvertone," writes Mel R. Botto, Buffalo, N. Y., "and since then my DX efforts have been renewed on all bands. In a little over a month, 273 stations have been logged on the broadcast band alone, and that was with very little early-morning listening. So far, my best DX with the new receiver is HJ1ABN, TGW,

WNEL, XEL, XEAC, CFCT, CBR, KRSC, KFSG, KFPY, KOMO, KGB, KPMC, KFVD and KFSD. I don't know if you've identified that mystery Mexican on 1150, but my interpretation of the call, heard several times, is XEL. HJ1ABN has been well heard on 1190, announcing as 'La Voz de la Victor' in Barranquilla. They were practically R9 here New Year's Eve."

"DXing the past month has been fair as far as the U. S. stations are concerned," notes Paul E. George, Rockford, Ill., "but I haven't been able to raise a thing in the way of TA's or TP's. Even KGU is very weak at 3 a.m. My inside aerial is largely responsible for this, although I think my nine-tube Zenith should bring some of them in. Since December 15th, I have verified 80 stations in 37 states, and there are 50 more reports still out in the mail. Among the best veries at present are KXA, WCOU, KWJJ, KOH, KLS, WNEL and WEEL."

While it has never been a policy to comment on the receiving equipment used a reader, yet one cannot help but feel that the erection of a good outside aerial could easily bring in the TA's and the TP's which Radexer George has been missing. Signals from overseas stations are unbelievably weak at all times, and if they are to be heard at all, some form of an outdoor aerial is a necessity. No receiver in the world is going to be worth its salt unless it is attached to an efficient antenna—and that means going outdoors with the far end of the sky wire.

Of course, it is appreciated that many listeners have been able to hear foreign stations without an elaborate

antenna installation, and they may consider themselves lucky to be in a location where signals are received with such volume. But when an inside installation doesn't produce the results expected, there's only one suggested solution—an outside aerial, as long and as high as possible.

Oddly enough, the only other report of the month in which aeriels are mentioned also comes from Rockford, from Kenneth R. Leu.

"In the February 1938 RADEX," he recalls, "there was an article describing a vertical doublet aerial. I followed the instructions carefully, built and installed one at a total cost of \$1.79 (including lumber for the tower). I then rigged up a knife switch arrangement so I could switch at will from the vertical to my old aerial (a standard all-wave doublet—price \$7.50). I was delighted to find that the new vertical really opened up the tough ten meter band, was about the same on the standard short wave band, but jumped the signal strength amazingly on the broadcast band. In fact, weak BCB signals were boosted about two R's, and that's something!

"And by the way, last year I realized one of my fondest ambitions by the purchase of McMurdo Silver's latest Masterpiece VI, a 21-tube custom-built receiver with power to burn and selectivity that is almost unbelievable. I would like to advise all real DXers to save their pennies, as I had to do, and get some kind of a custom-built job, for they will do things which the ordinary receiver just can't accomplish."

Reports and Resumes

"I have been DXing since August, 1934," recalls John K. Higbee, Powhatan Point, Ohio, "and to date I

have logged 209 stations in the United States, 15 in Canada, ten in Mexico and in Cuba, as well as KGU, ZNS (when it was on 540) and PRF3. My receiver is a Hallicrafters Sky Champion. I have two aeriels—one, a T-type, 45 feet along the flat top, with a 55 foot lead-in; the other, an inverted-L type, with a 60-foot flat top and a 40-foot lead-in. I can use either one by means of a knife switch. I have rather a bad location for long distance reception, being located on the West bank of the Ohio River and almost surrounded by high hills, except to the North and South."

"I now find myself in my third year of DXing," adds up Florien Lapointe, Livermore Falls, Me., "although I am able to be active only at times during the fall and winter months. The log now stands at 285 heard and 43 verified, with ten more reports still out. I've reported to XEAC, KXYZ, XEW, WOC, WSUI and CHLN as the best of my recent catches. Some other good catches of this winter include KFPY, KFBK, WJHL, WSUN, CMCF, KPO, KSL, WDEL, WAPI, KTHS and WIRE, all of which are verified."

One Radexer who has been particularly busy the past winter is Leon Grossman, Rochester, N. Y. Reporting in the November issue, his log stood at 259 stations heard. During January of this year, he heard 98 new stations to boost the total to 485. Among the better catches reported for that month are KGU, KFPY, KALB, KDLR, KLAH, KRGV, KAND, KOCY, KWOC, KGMB, KELD, KGKL, KICA, KIUP, KMAC, KRMC, KTOK, KCMC, KFAM, KGFF, KXYZ, KHBG, KIUL, KGCU, CKCV, KWOS, KCRJ,

KGHF, KONO, KFRO, KFJM, KOTN, KGFI, KGKB, KNOW, KARK, KFJB, KGDE, KFXJ, KGGM, KGBX, KRQA, KGFL, KWYO, KOKO, KATE, KIUN, KEUB, KIDW, KOMA, KTAR, KEX, KIRO, KFVD, KGER, KGO and KHJ.

"I heard the new WCOV testing after 2 a.m. on February 2nd," writes Clarence Wakefield, Wiarton, Ont. "When they verified, it was with the same kind of a card which WMBO used about four years ago. I've been hearing CJRM pretty regularly on 540 in the early evening. Had no luck on the PRF3 special due to overlapping of KDKA. While I think of it, the Mex on 1150 was heard to announce as XEL in English last November. Said they wanted reports, but I haven't received any trace of a verification from them yet. CFCO is another hard one to verify. I guess they are only interested in distant reports. Late catches which were quick to verify include KPAB, KRKD, KYSM and KUTA."

"This is the first winter I have had much time to devote to DXing," greets G. B. Leech, Salmon Arm, B.C. "Strange as it may seem, the best programs from the Antipodes have come from 4BH. It has shown less volume than 1YA, 2YC, 4YA and 3LO, naturally, but doesn't seem to fade nearly as much as the others. I've never tried logging programs from the Jap stations, as the language gets me down! The Jap which comes in best, however, is the one on 850 kcys.

"We are rather up in one corner as far as North American DXing is concerned, with few stations to the West and only enough to the North to count on the fingers of one hand. It

makes me envy those DXers in the middle states, with stations all around them."

It is likely that the grass always looks greener in the other fellow's pasture. There are lots of listeners in the East who would trade their chances at the domestic stations for a far Western location which would bring in a mess of Aussies, Japs and Zedders.

Special Programs

"In the early morning hours of April 8th we will be on the air for a special programs," advises J. R. Heck, Chief Engineer of WMMN, Fairmont, W. Va. "The program will start at 2:30 a.m., EST, and will probably run until our regular sign-on at 5:30. Since the first of December, we have been using our new power of 5000 watts day, 1000 watts night. Our regular sign-on at 5:30 each morning has brought us letters from a widely scattered area. If they can catch us while the other stations on 890 kcys are sleeping, a lot of DXers might be able to get a new West Virginian and we might get reports from new places, too! Correct reports, of course, will be verified."

WMMN also broadcast a special program on March 8th, but notice of this special was received too late for inclusion in the March issue. If that lack of publicity slowed up the reports for the first program, let's hope that Radexers will rally around and give WMMN a real flood of mail after the April 8th broadcast.

Speaking of late notices, many of our readers still seem to be unaware of the absolute press deadline on each issue. Every month we receive announcements of special broadcasts with urgent requests that the news be

included in a certain issue—and too many times that news comes to us days and even weeks after the issue in question has gone to press.

Generally, ordinary news should reach us by the 27th of the second month preceding the date of issue. Last-minute announcements can be handled up to the 3rd of the next month, which is the date each issue goes to press. Thus, for example, material intended for the May issue should reach us by March 27th for proper handling, although news of special programs may be added to the DX Calendar if received no later than April 3rd.

If readers will keep this schedule in mind, there won't be cases when notice of a March 4th DX program is mailed on February 18th, to reach us February 20th, 17 days after the March issue went to press.

George H. Jacobs, Cincinnati, Ohio, advises that WLAP, 1420 kcys, Lexington, Ky., will broadcast for the NNRC from 3 to 3:30 a.m., EST, on May 7th.



● Stephen A. Mann of Lakewood, Ohio, announces the formation of a new club, known as the All-Wave DX Club. The first of the monthly bulletins was issued on March 15th, containing columns on high frequen-

cy, broadcast band, shortwave and amateur reception, in addition to a crossword puzzle and other interesting features. The officers of the club are Stephen Mann, president, and Francis J. Gmeiner, secretary. Headquarters are at 1281 Ramona Ave., Lakewood, Ohio.

● Members of the National Radio Club living in the Buffalo area, lead by John Klambach and Ray Edge, are forming a Buffalo Chapter of the Club. They also announce the formation of the Niagara Frontier Radio Club. The officers are John Kalmbach, president, T. Carberry, Jr., vice-president, Ray Edge, secretary, and H. Jacobson, treasurer. The address of the club is 1195 Wehrle Drive, Williamsville, N. Y.

TELEVISION NEWS

● The Milwaukee Journal Company has applied for permission to inaugurate an experimental television service. This is the first application that the FCC has received, looking to establishment of a program service for reception in the home, as distinguished from fundamental research or technical experimentation in the art of developing television apparatus.

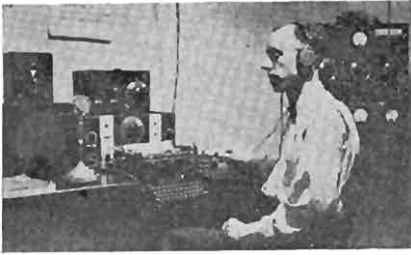
● Drawing an opening day audience of over 12,000, television's public debut created a "housing problem" in the RCA exhibit at San Francisco's Golden Gate Exposition. Though more than 10,000 were televised during the two day celebration which marked the Fair's opening, waiting crowds filled all entrances of the large building.

Public interest has exceeded all expectations. Though the building has 5000 square feet of floor space, it now seems that attendance will tax all facilities to the limit.

NEWSSTAND BUYERS

If your newsdealer is unable to supply you with your copy of RADEX you may obtain the issue you want by using the order form on page 96 of your last copy.

Dxers' Picture Gallery



WILBURT C. GROSS



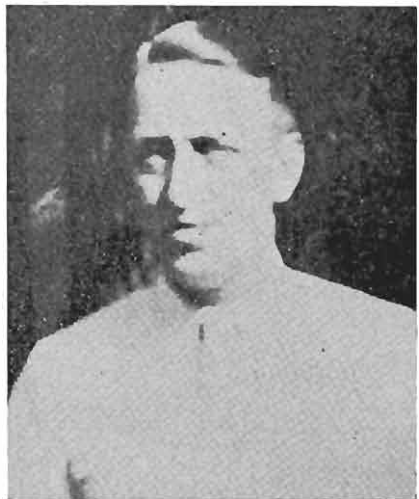
LEON GROSSMAN



E. A. KNOFF



GRAHAM HUTCHINS



HARRY GORDON

WILBURT C. GROSS

An amateur operator and radio listener since the old spark days, Wilburt Gross is now one of the leading code operators of the country. His National receivers, and monitor are on the desk, and to the right is 75 watt station W8BKM, which works on 5, 10, 20, 40 and 80 meters.

LEON GROSSMAN

A DXer for about two years, Leon Grossman has a log of over 300 stations on the broadcast band, and has heard 35 countries on the amateur bands. He is a member of the GCDXC.

E. A. KNOFF

Mr. Knoff describes his receiver as a Browning 35 that has had its face lifted. All his equipment is home made, or revised to his specifications. On top his receiver is his antenna tuner, with a Lumalite desk lamp above. At the left of the Browning is the ten meter receiver, and to his right is his Zenith 755. The clock is a Sangamo, an electric clock that will run for 24 hours after the current is turned off. A reader of RADEX for ten years, Mr. Knoff is a member of The Radex Club (R41, Ohio 3), and the IDA.

GRAHAM HUTCHINS

This Melbourne, Australia, DXer was told, some time ago, that DX was not possible in Australia, but he has proved the contrary to be true. He now has 23 countries verified on the broadcast band, on all the continents except South America. Graham was honorary announcer of experimental station VK3HF, and the photo on the opposite page shows him at the 3HF mike. This station works on regular schedules on 1400 kcs, and between times, on 20 meters. He is an official of the Australian DX Radio Club, and a member of The Radex Club.

HARRY M. GORDON

The president of the National Radio Club, Harry Gordon, is one of the coun-

try's most successful broadcast band DXers. He started his tuning in 1924 on a home made "oatmeal box" set. This set featured a stick about two feet long, along which he pushed his condensers. Stations were logged by cutting notches in the stick. He first heard KFI in 1925, when he lived on a farm in Illinois. When the station came in, he put the earphones to the telephone mouthpiece, and rang everyone's telephone for miles around, so his neighbors, too, could enjoy the reception. Since 1932, he has received 14 veries from KGU. Has veries from Europe, Oceania, South America. Best veries are 10AB in Canada, 6BY, 2BB, 2OL in Cuba, and KGFX. Harry is an Honorary Member of The Radex Club.

Amateur Calls Heard

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

Ten Meters

CE2BX (n); CO7VP (h); CT1SI (h); EI9J (q); F3HM (q); F8AI (q); F8KI (q); F8NX (q); F8QD (q); F8RR (gq); F8UE (q); GM6RG (hnq); GW5KJ (q); GW5PH (q); G2AO (q); G2CG (g); G2DV (nq); G2IS (hq); G2MY (g); G2PU (q); G2VG (hq); G2WD (q); G2ZP (q); G3BM (q); G3BM (q); G5BY (q); G5GI (g); G5KH (hq); G5LJ (q); G5LU (q); G5QI (q); G5SA (hq); G5TP (q); G5ZG (hq); G6BL (g); G6BW (q); G6DH (gq); G6GS (q); G6ML (h); G6PY (q); G6TL (q); G2VK (q); G6WT (hq); G6WX (q); G8BM (q); G8JQ (q); G8MA (q); G8MX (hq); G8OO (q); G8QX (q); G8SA (q); G8TD (q); G8UJ (q); HI7G (nq); I1KN (q); K4DDH (q); K4ENT (q); K4EZR (hq); K4FAB (q); K4FAY (q); K4FDC (q); K5AC (n); K5AN (nq); K5AT (nq); K6BAZ (n); K6MUVV (klq); K6MVX (q); K6OQE (q); K6PCF (n); K6POR (k); LA1T (g); LU1CA (n); LU1DA (q); ON4FE (q); ON4PA (hq); ON4ZA (q); PAOAD (q); PAOBE (q); PAOFB (h); PAOMQ (q); PAOWT (q); SM5SI (q); SU1CH (q); SU1MW (hq); TG9AA (hkq); TG9BA (nq); TI2FG (nq); VP3AA (hq); VP6YB (q); XE2AE (q); XE2DU (h); XE2IY (q); ZS4H (hq); ZS5T (q); ZS6BW (h); ZS6DY (h); ZS6L (q); ZS6W (q).

Twenty Meters

CE1BC (n); CE2BX (bnp); CE3DW (n); CE4AC (p); CE4AI (p); CN1AF (g); CN8AM

(f); CN8BA (p); CN8MB (b); CN8MU (f); CO2AM (m); CO2BG (h); CO2CR (m); CO2LA (m); CO2LY (hm); CO2MT (d); CO2OK (n); CO2RH (h); CO2RR (a); CO2SD (h); CO2SP (m); CO2WA (m); CO2WW (n); CO6OM (m); CO7VP (em); CO8AK (e); CO8MA (e); CO8YB (m); CR6AI (g); CR7AG (g); CT1AX (g); CT1AY (abfpq); CT1BY (j); CT1QG (pq); CT1SI (b); CT1ZA (bq); CX1VD (n); CX2CO (gnop); CX3AL (p).

EA7AV (g); EA8AE (r); EA8AS (r); EA9AH (br); EA9BJ (r); EI2L (g); EI2J (p); EI4L (q); ES5D (c); FA3HC (c); FA3QV (c); FB8AF (c); FB8AH (g); F3CN (g); F300 (gp); F3QT (m); F8AH (b); F8GM (b); F8KI (p); F8LX (pq); F8MX (q); F8NT (bqp); F8PU (q); F8QD (pq); F8QW (p); F8RV (q); F8TU (b); F8VC (p); F8XO (p); F8ZO (q).

GI5ZY (pq); GI8UW (pq); GM5NW (p); GM6RG (g); GM6WD (bmq); GM8MN (bgmpq); GM8MQ (q); GW5PH (pq); G2AK (p); G2AV (abpq); G2DV (ampq); G2IWF (m); G2KG (q); G2LR (h); G2PU (p); G2UT (a); G2VG (abpq); G2XN (pq); G2ZP (p); G3BM (abpq); G3QK (pq); G4AS (q); G5BJ (bqp); G5DR (p); G5DT (q); G5FA (r); G5HK (q); G5JO (bp); G5LJ (p); G5LU (pq); G5ML (abfpq); G5NI (f); G5PW (q); G5QI (p); G5SH (q); G5TP (d); G5VT (b); G5WP (b); G5YV (q); G5ZG (bq); G6AG (q); G6BM (g); G6DL (p); G6GO (q); G6IA (p); G6IG (d); G6JF (p); G6ML (bdpq); G6RH (p); G6TD (a); G6TX (a); G6UX (q); G6VK (p); G6VX (dq); G6XR (bp); G8CL (p); G8FK (p); G8GX (q); G8IG (q); G8KD (p); G8MF (g); G8OG (q); G8SA (g); G8SD (a); G8TD (pq); G8WS (pq).

HA8N (cg); HB9BG (c); HB9BL (c); HC2AP (f); HC2HP (p); HH2B (hmpnpq); HH2G (e); HH4AS (bhpq); HH5PA (ampq); HI1C (e); HI3N (afmnpq); HI5X (afpq); HI6G (p); HI7BG (f); HI7G (fnp); HI7I (p); HK1AG (bqp); HK1AP (f); HK3CG (nq); HK3CK (b); HK3CL (np); HK3CO (m); HK3CW (bnpq); HK4DA (b); HK4DF (eq); HK4EL (b); HK5EB (m); HK5EE (p); HP1A (q); HR5C (p); I1IR (g); I1NQ (g); KA1E (g); K4DDH (q); K4EJF (d); K4EMG (q); K4ENT (pq); K4FAM (f); K4FAY (dnopq); K4FJT (f); K4FKC (p); K5AF (bmnopq); K5AH (fno); K5AN (p); K6AGR (g); K6BNR (gnpq); K6CMC (no); K6DDT (d); K6GAS (no); K6ILT (o); K6ILW (gnp); K6KGA (p); K6KGT (n); K6KMB (p); K6LEJ (dn); K6LKN (no); K6MTH (d); K6NZQ (n); K6OBH (i); K6OJI (n); K6QJW (g); K6OKN (g); K6QOE (g); K6PLZ (p); K6QAF (d); K7AOC (c).

KA1F (cd); LA1G (pq); LA8C (c); LA1DA (epq); LU1QA (p); LU2EC (n); LU4AG (n); LU4BH (p); LU4CZ (ep); LU5CK (p); LU5CZ (p); LU7BK (o); LZ1AA (g); NY2AE (j); OA4R (h); OK4EA (c); ON4CSL (c); ON4DI (p); ON4DJ (p); OQ5AA (c); OZ2EA (g); OZ9Q (c); PAOFB (g); PAOMZ (pq); PAOWT (p); PK1RI (g); PK4AA (c); PK6XX (f); PY2AK (p); PY4EJ (no);

PY6AI (b); PY7AI (hq); SM5WZ (g); SP1DC (c); SP2HH (c); SU1AM (bc); SU1CH (e); SU1KG (c); SU1RD (c); SU1SG (c); SV1KE (cg); TG5JG (r); TG9AA (go); IG9BA (demnopq); TI2AV (b); TI2FG (p); TI2LR (d); TI2RC (p).

VE5KN (a); VK2BQ (n); VK2GU (g); VK2WC (f); VK3KX (j); VK3SB (g); VK3WX (o); VK4KC (g); VK4KO (f); VK4UL (f); VK5BF (f); VK5CS (o); VK7LZ (g); VK9BW (g); VO1B (p); VO1Y (p); VO2M (d); VO2N (bhpq); VO2Z (p); VO6J (p); VP1BA (df); VP3AA (abmpq); VP4TK (pq); VP5BR (bp); VP5IS (opq); VP6LN (bmq); VP6LW (q); VP6TR (ff); VP6YB (ap); VP7ADA (f); VP7NH (f); VP7NS (amp); VP7NW (be); VP9G (np); VP9L (aghnp); VP9R (afmp); VQ5ELD (g); VR6AY (c); VS7GJ (g); VS7RP (g); VU2FO (g); VU2KK (e); XE1AJ (e); XE1BL (m); XE1BT (e); XE1BX (m); XE1CJ (pq); XE1FF (n); XE1FU (b); XE1G (e); XE1GE (a); XE1HR (p); XE2FC (p); XE2IK (p); XE2IY (p); XE2KY (e); XE3AR (pq); XE3AX (p); XE3BA (f); XE3BK (p).

YI2BA (c); YN1OP (p); YR5AA (c); YR5CF (c); YV1AD (m); YV4ABG (mpq); YV4AE (hnpq); YV4AN (mq); YV5ABF (am); YV5ABY (efgp); YV5AK (pq); ZC1JX (j); ZC2MA (g); ZE1JR (no); ZL2BE (q); ZP1AC (g); ZS1AX (g); ZS1CN (g); ZS2AF (q); ZS2AZ (pq); ZS2N (f); ZS2X (d); ZS4H (dfhpq); ZS5AW (o); ZS5CL (f); ZS5T (o); ZS6AJ (j); ZS6BR (op); ZS6CX (j); ZS6DW (bdfgpr); ZS6DY (dmp); ZS6AJ (d); ZS6EF (g); ZS6EJ (p); ZS6S (bdop).

The Reporters

- (a) Robert L. Blanchard, Brooklyn, N. Y.
- (b) Mel R. Botto, Buffalo, N. Y.
- (c) George J. Eder, Philadelphia, Pa.
- (d) A. M. Hankins, Latrobe, Pa.
- (e) Lewis R. Hill, Maywood, Ill.
- (f) Walter Hoobs, St. Albans, N. Y.
- (g) Carl Horton, Athol, Mass.
- (h) Vincent Longo, Detroit, Mich.
- (i) Martin Olthoff, Independence, Kans.
- (j) Alfred Razzando, Fayette City, Pa.
- (k) Richard Ritzenheim, Grosse Pointe Farms, Mich.
- (l) Bill Scott, Johnson City, Tenn.
- (m) Murray Shainis, New York, N. Y.
- (n) T. D. Smith, Burnet, Texas.
- (o) Cliff Tavener, Rosenberg, Texas.
- (p) Winship Taylor, Baltimore, Md.
- (q) Walter E. Welch, Lynn, Mass.
- (r) Jack Wells, Phenix City, Ala.

**THE IMPROVED RADEX
WILL HELP YOUR FRIENDS TOO!
WILL YOU PLEASE HELP BY
TELLING THEM ABOUT IT?—The Editor**

TURNER DIAL SELLS SOME NEW GADGETS

B. Francis Dashiell

● There are times when the most genial person works up a grouch. Turner Dial was suffering from this very form of ailment. People had been worrying him about their radio troubles. And they acted very unreasonable, so he thought, about the prices of radio sets. In no uncertain tones he was telling all this to a customer.

"Here we are struggling through an age of low-priced sets and parts," Turner said. "All down the line," he added, "the radio industry has been making slim profits. This certainly is a good time to get a radio bargain, especially in the late 1939 models that are coming out. But retailers, like ourselves, have to provide the service and maintain the public confidence. That keeps us on the spot!"

The customer was asking about a noise silencer. "I have a good radio and a noise-reducing antenna, as you know," he complained. "You have checked everything a couple of times, but I still get too much noise and static. How about these noise silencing devices? I have been told that one might help me, but I've spent so much now that I hate to put out more money, unless the silencer is inexpensive." Turner knew all about the situation, and it was natural for the man to object to additional expenses. But, after all, it wasn't Higrade's fault that he lived in a noisy section of the city.

Turner Dial leaned back against the shelf. "A well-known radio engineer devised this noise silencing circuit some time ago. It's not so new. But professionals and amateurs have used

it for some time. Now it's available for everyone at reasonable cost. On DX reception, and particularly amateur and short-wave work, this silencer is valuable." Turner placed the small unit on the counter before the customer, and added: "It'll work on any superheterodyne set and is designed to reduce static and man-made interference so as to improve short-wave reception."



"Looks compact," commented the customer. "Guess I'll give it a trial."

Turner held the silencer in his hand. It looked like a tiny radio set with four tubes and shielded coil. "It gets its own power by plugging into an electric socket. And the adapter plugs into any superheterodyne receiver, provided it has an intermediate frequency range of 450 to 470 kilocycles. Only a small amount of current is taken from the receiver."

The customer paid without further protest, and departed. Turner glared across the store at Bill Wood, his active young assistant, who was brush-

ing off some shelves amid a cloud of dust. Dial was about to release some of his pent-up feelings on the luckless Bill, but someone entered the door. Dial glanced up and saw an attractive young woman approaching him. Suddenly he gave a start, and then a smile spread over his slowly flushing face. "Why, Miss White!" he exclaimed. "This is indeed a pleasure!"

Mary White, whose father had purchased a large radio from Turner some months previously, smiled in return. "Oh, Mr. Dial," she said, "I've been trying to see you for some time. We have a problem that I feel you can solve." Heeding Turner's somewhat confused gesture she seated herself in a comfortable chair beside a demonstrator radio.

"I'll be very happy to do what I can to help you," answered Turner.

Bill Wood glanced slyly at Miss White and Turner. "Looks like Miss White," he muttered to himself. "The Boss gets all flustered when he talks to her. Maybe he won't be so grouchy now."

"What lovely radios!" exclaimed Miss White, as she glanced approvingly up and down the display line. "I want to see one that plays records. You know, our's doesn't. We should have bought that kind at first. Now I guess we'll have to trade it in on a new kind." Miss White frowned slightly and then smiled appealingly at Turner. "Wouldn't that be awfully expensive?" she asked.

"Why, there's no need to get another radio," replied Turner. "You can play records with it if you wish."

"I can! How?" Mary White's eyes were round with amazement.

"It's easier than you think," Dial commented. "But there are several

methods of doing that. For instance, you can have a 'pick-up' unit wired into your radio and use your old phonograph. That's the oldest and least satisfactory way. Then you can get a 'phonograph oscillator' and hook it to the aerial terminal of your radio. That's a little more modern."

"But," protested Mary, "we don't have an old phonograph at home any more. We got rid of it when we bought our first radio."

"Yes, lots of people did that," said Turner. "And now that records are coming back into popularity, they wish they still had the old phonographs."

Turner Dial stepped toward the rear of the store, and quickly returned with a small box-like instrument in his hand. "In any event you will have to get a turntable unit for playing the records, and a pickup for transforming sound to electrical energy. This is the very thing for you, and it is the latest." Turner placed the box on a small table before Miss White. "It's a 'wireless record player'," he explained. "All you need, of course, are the records."

"How does it work?" asked Mary White, as she turned a puzzled expression toward Turner.

"Simply plug it in an electric socket. Like this!" And Turner connected the instrument. "The current runs the motor and turntable." Dial snapped the switch, and the table began to spin. "There are two radio tubes inside," continued Turner. "They operate a tiny radio transmitter which broadcasts a signal to your radio from any position in the house. Watch!" He snapped on the radio beside Miss White's chair. "Now you adjust the volume and tone of

the radio to suit yourself."

Turner placed a record on the turntable and adjusted the needle and pickup. Immediately the radio began to play, and Mary turned the controls until the music suited her taste. Calling Bill Wood, Turner instructed him to carry the record player to the rear of the shop. There was no change in the music that came from the radio.

"Oh! How wonderful!" exclaimed Mary White in her excitement. "It's so simple. I know I could run it! There are so many times we'd like to have our own music, especially for dances. Do you dance, Mr. Dial?" she asked with a smile.

"Very poorly," replied Turner.

Miss White smiled, her eyes sparkling roguishly. "You better brush up, then," she declared. "Can't you come to see me tomorrow night and bring this record player? I'll have a couple of friends in, and we'll try it out. Dad will be glad to have you, too." Mary White rose and walked toward the door. "I'm off to buy some good lively records."

Excuse after excuse died on Turner's lips. He couldn't think of a good one! For a moment he regretted there was such a thing as a wireless record player. But, while he was murmuring something about being glad to come, Miss White had gone and a new customer had entered the store.

"What about automatic tuning and distant control of radio sets?" the newcomer asked. "What can you show me? I've been reading a lot recently in the advertisements."

Turner Dial was gazing through the door. "Eh? Oh, yes! Distant control. Sure." The customer

glanced curiously at Turner, but followed him toward a group of new radios.

"Automatic tuning is so easy a baby can operate it, and anyone can control the set from any location within the house," Turner stated. He was getting into the spirit of the thing, and even smiled happily at Bill Wood, who had approached the two men. Bill grinned back.

The customer looked at the receiver before him. "Can I use these gadgets wehn DXing on the short-waves? I think they would be a help."

"No, only on the broadcast band," replied Turner. "Personally, to me, there isn't any fun DXing unless you work hard to tune in a station, and then fight like the dickens to hold it until you get the call letters. DXing is an art, and it takes the human touch to get all you can out of a radio."

"That means, then," said the listener, "that control units for remote operation can't be used either?"

"No, they can't," answered Turner. "The instability of radio and the need for razor-sharp tuning prevents any application of automatic tuning to the short waves. The broadcast band is divided into a number of sections.



This post card view of Bismarck, North Dakota, verifies reception of KFYY. In the upper right hand corner is an Ekko Stamp, and in the left hand corner is a station stamp. (Courtesy of B. Duffy).

Each section is tuned by a tiny padding condenser. These are tuned to nearby stations that fall within the limits of the different sections of the band. Pushing a button merely switches the set to that particular section of the band and its permanently tuned condenser. Of course, you also can use the conventional hand tuning when you wish."

"I guess that's best, after all," commented the customer. "If I'm going to listen to a favorite program, I tune to the broadcast band. So I would use the push-button tuning most of the time for that kind of reception. Then I could use the remote control. How does that work?"

Turner glanced at his questioner and grinned. "These remote controls seem to be a mystery to people," he remarked. "However, only a simple principle is involved. That receiver over there and this little box are all you need. This is called a 'wireless-control box,'" Turner added. He spun the dial and the distant radio started to play.

Turner picked up the box and handed it to the customer. "Inside is a tiny radio transmitter. A special pickup circuit in the receiver operates a sensitive relay which sets an automatic tuner in operation."

"What happens in an apartment house if a couple of these things are running at one time?" asked Bill Wood. "Oh, boy! What a mess!"

"That couldn't happen. About 75 feet is the extreme range of the oscillator," replied Turner. "That goes, too, for the record player over there. This control box has an inductance inside that couples its magnetic field to a second tuned inductance built into the receiver. The control box, as you see, has a telephone dial. No

signal is created until the dial is turned. Moving the dial operates a series of contacts, such as one, two, three, and so on, just like calling a number on your telephone. Each time a contact is passed, a signal is broadcast across the room. It consists of electromagnetic impulses, one for each contact. In the receiver, these impulses, move a relay, one step for each contact made by the dial. These movements work a ratchet that turns the tuning mechanism just like the push buttons."

"It's supposed to be wireless," insisted the customer, "but what makes it run?"

"This type of control contains a flashlight cell and tiny 45-volt battery, and a single 2-volt tube." Turner switched off the set by spinning the dial of the box. "There are others," he added, "that plug into the lighting system and send their impulses through the wiring to the radio. One also uses a small antenna. Then there are older types that connect directly to any radio set by means of a cable filled with wires."

The customer glanced at Turner. "Guess I'm sold," he said. "Let's talk business."

Later that day Turner seemed deep in thought. He walked over toward Bill Wood who was working on an ancient receiver. "Bill," he said, "get up in the store room and break out a brand new wireless record player and polish it up the best you know how. I want to give it a good test, for I've got to demonstrate it tomorrow night."

"O.K. Boss!" said Bill as he glanced at Turner and grinned. "I suppose you'll want your tool kit and overalls. Want me to drive you up in the truck?"

Station NEWS of the Month

● The Secretary of the Department of Posts and Telegraphs, Dublin, Ireland, has furnished us with particulars of the three broadcasting stations in his country. They are:

Athlone (Radio Eireann), 565 kcs., 100 kilowatts.

Cork, 6CK, 1240 kcs., 1 kilowatt.

Dublin, 2RN, 1348 kcs., 1 kilowatt.

Athlone and Dublin broadcast daily from 8:30 to 10 am, and from 12:30 to 6 pm, EST. The Cork station transmits on Saturdays from 2:30 to 6 pm; on Sundays at 8:30 to 10 am, and 12:30 to 6 pm; on the other days of the week, the schedule is 9:30 to 10 am, and 2:30 to 6 pm, EST.

The new shortwave station, under construction, was not mentioned in the Secretary's letter.

Guatemala

From the director of Radiodifusora Nacional de Guatemala, Sr. L. Schlesinger, we learn the following details concerning the TGW stations.

TGW, with 5 kilowatts power, is the very latest RCA high fidelity transmitter, working on 1520 kcs. TGWA, with 10 kilowatts, transmits, usually, on 15170 kcs. in the daytime, and on 9685 kcs. at night. TGWA employs a directional aerial pointed towards the United States. TGWB, with one kilowatt, transmits provisionally on 6490 kcs., with directional aeriels directed towards North and South America.

These Guatemalan stations, known by the slogan "La Voz de Guatemala," welcome reports from all listeners. International reply coupons are not necessary.

Romania

There are four broadcasting stations in Romania, and three others are contemplated, according to information received from the General Manager of the Societatea Romana de Radiodifuziune. The stations are as follows:

"Radio-Romania," at Bod-Brasov, on 160 kcs., with 150 kilowatts power.

"Radio-Bucuresti," at Bucuresti, 823 kcs, 12 kw.

"Radio-Basarabia," at Chisinau, 1411 kcs, 20 kw.

"Radio-Experimental," at Bucuresti, 9234 kcs., 2 kw.

The national network is to be enlarged by the erection of a new broadcasting station at Timisoara (Banate).



A card that has to be seen to be appreciated is this beauty from the NIROM stations in the Netherland East Indies. The border is blue, brown and black, and the printing is on a light yellow mosaic background. (Courtesy of D. H. Dussek).

The frequency has not yet been determined, but the power will be 20 kilowatts. Two more stations which will be constructed this year will be at Cluj (Transylvania) and at Iasi (Moldavia).

Denmark

There are two broadcasting stations, and one shortwave station, in Denmark. The Chief of the Press Department, Statsradiofonien, tells us these stations are at Kalundborg, 240 kcs., and at Copenhagen, 1176 kcs. Kalundborg is a 60 kilowatt station, and the other employs 10 kilowatts. Danish shortwave stations operate on several frequencies, we understand, but we are officially advised of only one, that being OZF on 9520 kcs., with 6 kilowatts of power.

Lithuania

"Radio-Kaunas" and "Radio-Klaipeda" are the two Lithuanian radio stations. Kaunas transmits on 155 kcs. with 7 kilowatts, and Klaipeda uses 565 kcs., and 10 kilowatts of power. This information has been forwarded to us by Mr. E. Zabaruskas, Director, Valstybes Radiofonas, at Kaunas.

Switzerland

A complete list of the radio stations in Switzerland has been furnished us by the Direction General des Postes, Telegraphes et des Telephones, at Bern.

Kcs	Station	Power
401	Geneva	*
556	Beromunster	100000
677	Sottens	100000
1167	Monte Ceneri	15000
1375	Basle	500
1375	Bern	500

* Geneva uses 1300 watts daytime, and 500 watts nights. All the above stations are owned by the Administration des telegraphes et des telephones suisses, and operated by the Societe Suisse de Radiodiffusion.

The shortwave stations at Geneva are owned by the League of Nations, and those at Bern by the same bureau which operates the broadcasting stations. The shortwave stations are:

The League of Nations stations, "Radio-Nations," at Geneva, with 20 kw. power.

7797	HBP	11402	HBO
9595	HBL	18450	HBF
	18480	HBH	

Using 25 kilowatts, without call letters, the Bern stations transmit on 6055, 6165, 9535, 11865, 15305, 17784, 21520, and 25640 kcs.

New Zealand

A complete list of the broadcasting stations of New Zealand (the first official list we have ever seen) was thankfully received from Mr. James Shelley, Director, National Broadcasting Service, Wellington. The list follows:

National Stations		kcs	watts
1YA	Auckland	650	10000
1YX	Auckland	880	100
1ZM	Auckland	1250	1000
2ZJ	Gisborne	980	250
2ZM	Gisborne	1180	15
2YH	Napier	760	5000
2YB	New Plymouth	810	100
2YA	Wellington	570	60000
2YC	Wellington	840	5000
2YD	Wellington	990	200
2YN	Nelson	920	30
3ZR	Greymouth	940	100
3YA	Christchurch	720	10000
3YL	Christchurch	1200	250
4YA	Dunedin	790	10000
4YO	Dunedin	1140	200
4ZD	Dunedin	1010	20
4ZM	Dunedin	1010	30
4ZC	Cromwell	1280	5
4YZ	Invercargill	680	5000
Commercial Stations		kcs	watts
1ZB	Auckland	1090	1000
2ZA	Palmerston North	1400	100
2ZB	Wellington	1120	1000
3ZB	Christchurch	1430	1000
4ZB	Dunedin	1220	1000

Italy

The official list of Italian stations which we are pleased to present herewith, is also the first official list we have ever seen from this country. It comes from the E. I. A. R., the Administration Department at Torino. We have retained, with the exception of Rome, the Italian spelling of all the cities.

kcs	location	power
536	Bolzano	10000
565	Palermo	3000
565	Catania	3000
610	Firenze I	20000
713	Rome I	100000
814	Milano I	50000
986	Bologna	50000
1059	Bari I	20000
1104	Tripoli	50000
1140	Genova I	10000
1140	Torino I	30000
1140	Trieste	10000
1222	Rome II	60000
1258	Firenze II	1000
1303	Napoli I	10000
1357	Ancona	1000
1357	Bari II	1000
1357	Genova II	5000
1357	Milano II	4000
1357	Rome III	1000
1357	Torino II	5000
1429	Milano III	1000
1429	Torino III	5000
1429	Napoli II	1000

A 100 kilowatt station is under construction for Firenze I, and a 20 kilowatt station for Firenze II. One kilowatt stations are being built at Cagliari, San Remo and Venezia. Two hundred watt stations will be built at Aquila, Ascoli, Benevento, Bologna II, Campobasso, Catanzaro, Cosenza, Foggia, La Spezia, Macerata, Padova, Pescara, Potenza, Taranto, Teramo and Verona.

The shortwave stations, all located at Rome (Prato-Smeraldo), have the prefix 12RO. The initial letter "I" is never, or at least, seldom, used.

2RO3	9630	2RO9	9670
2RO4	11810	2RO11	7220
2RO6	15300	2RO12	15100
2RO8	17820	2RO13	11900

In Ethiopia, station IABA at Addis Ababa broadcasts with one kilowatt, at present, on 9650 kcs. A new 10 kw. station is under construction there.

Canada

Some of the Canadian stations have changed frequencies. These changes have been sent to us by Mr. Gladstone Murray, the General Manager of the Canadian Broadcasting Corporation.

Mr. Murray advises that CBK will be located in Watrous, instead of Saskatoon, in the Province of Saskatchewan. Operating on 540 kcs., CBK will be on the air on about the first of June.

CBO, in Ottawa, 880 kcs., transmits daily from 7:45 am until midnight, EST.

CBF in Montreal, on 910 kcs., transmits from 8 am until midnight, EST.

CBY, Toronto, has moved to 1420 kcs., with only 100 watts. It formerly broadcast on 960 kcs.

CBM, Montreal, formerly on 1050 kcs., has moved to 960 kcs., broadcasting daily from 8 am until midnight.

The new Maritimes station, CBA at Sackville, N. B., is expected on the air on about April 1. The schedule will be 7 am until midnight daily.

NBC Minnesota Network

Three 100-watt Minnesota stations, known as the Minnesota Network, became affiliated with the NBC on March 6. They are KYSM Mankato, KROC Rochester and KFAM St. Cloud. These stations will be available to either the Red or Blue Networks.

With the addition of WKBO Harrisburg, Pa., the NBC now totals 173 stations.

Two stations have announced termination of their NBC affiliations, which will bring the total of stations on this chain down to 171. The stations are WWNC Asheville, N. C., and KOIL Omaha, Nebr.

VERI SIGNERS

● When requesting verifications, it is often helpful to know the name of the official to whom the request should be addressed. A list of the names of "verification signers" was started in the March issue, and is continued here.

From Bob Taglauer, Covington, Ky.:

WGAR—R. M. Pierce, Chief Engineer.
 WJBO—Wilbur Golson, Engineer.
 WKBN—C. L. Lindberg.
 WEEL—Margaret Grady.
 WLAP—Winston L. Clark, Manager.
 CBO—Lillian E. de Olloqui.
 WCKY—C. H. Topmiller, Chief Engineer.
 WHKC—J. E. Anderson, Chief Engineer.
 KOA—T. E. Stepp.
 WFBC—Frank Blair, Program Director.
 WTMV—F. S. Liggett, Chief Engineer.
 KFI—Dorothy Roe.
 KECA—Dorothy Roe.
 WMT—C. F. Quentin, Chief Engineer.
 CFRB—H. Sedgwick, Managing Director.
 WFIL—Donald Withycomb, General Manager.
 WROL—L. Strunk.
 WCAU—J. G. Leitch.
 KTAT—H. Sutton, Chief Engineer.

From George Craddock, Jr., Allen, Mich.:
 WKAR—Ronald Coleman, Program Director.
 WHLS—Wayne F. McDonald, Chief Engineer.
 KRIC—Don Mitchell, Chief Engineer.

KBIX—Lester Harlow, Chief Engineer.

KFDY—Jack Larvexs.

KYSM—Helen Nekon, Secretary.

WTJS—M. Stone.

WKBZ—Grant F. Ashbacher, Manager.

KFDM—Bernice Anderson, Secretary.

WJBL—Melvin Stuckwich, Chief Engineer.

KOBH—Casey Jones, Eng. Department.

WMBC—E. H. Clark, Chief Engineer.

KALB—T. L. Stanley, Chief Engineer.

WJRD—James R. Doss.

WKAQ—J. Dizney, Vice President.

WRTD—David Bain, Chief Engineer.

From Mrs. Grace L. Simpson, and Frank E. Simpson, the Mother-and-Son DXing team:

WSTP—James R. Yost, Ch. Eng.
 KPAB—Fred Hammond, Ch. Eng.
 KWOC—John Lee Milster, Ch. Eng.
 WDAN—Perry W. Esten, Ch. Eng.
 KWNO—Maurice Reutter, Ch. Eng.
 KOAM—W. L. Brown, Ch. Eng.
 WKAT—Russell Bennett, Ch. Eng.
 WLAU—George R. Lackey, Ch. Eng.
 WBRK—N. H. Blake, Ch. Eng.
 KUTA—Lyle Wahlquist, Ch. Eng.
 WGIL—Paul Kalbfleisch, Ch. Eng.
 WSLI—G. G. Benson, Ch. Eng.
 WCOU—Al Thompson, Ch. Eng.
 WHLS—W. F. McDonnell, Ch. Eng.
 KALB—James F. Manship, Ch. Eng.
 WBLK—W. P. Heitzman, Ch. Eng.

**THE IMPROVED RADEX
 WILL HELP YOUR FRIENDS TOO!**
 WILL YOU PLEASE HELP BY
 TELLING THEM ABOUT IT?—*The Editor*

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 newsstand, and read it.

ACROSS THE SERVICE BENCH

By THE TECHNICAL EDITOR

● Our readers continue to write interesting letters telling of their radio problems and asking for aid in solving them. The appeals reaching the Technical Editor during the past month have indicated the strong desire of our readers to keep their receivers at the peak of operating perfection. Certainly a radio set requires some attention from time to time, and most radio enthusiasts seem to realize this. Perhaps it is only a new tube here or there, or a bit of cleaning and realignment, and the old receiver is off again to new DX records.

But, as usual, the loudest cry has been raised against noise. Just what to do is our greatest problem. Noise in every walk of life is something we can do without; it's the despair of every radio engineer. Of course, in many cases, noise can be eliminated or prevented. It may be caused by a defect within the receiver or some unnecessary and preventable source without, but there are many occasions when we have to answer some unhappy reader in a frank and seemingly brutal manner. He's just one of those unlucky fellows, doomed to DX in some hotbed of electric frenzy located in the densest static region of a great city. We can't help him much, except to tell him how to spend more money in an almost hopeless attempt to overcome the electrical jitters that assail him from a million nearby sources.

And now for the radio hint of the month. Have you ever given much consideration to the oscillator tube in your set? It's the most important one in the circuit, and your set cannot pick up signals on all parts of every

wave band, the longest to the shortest, unless this tube is able to oscillate strongly and instantly over a wide range of frequencies. An oscillator tube may light; it may test satisfactorily, it may bring in signals to your delight; yet it may not work as well as a new one. Try a new oscillator sometime, and see if your receiver does not increase its pep and get action on some of those notoriously weak wave bands.

Looking through the more interesting of the month's accumulation of service inquiries, we find a letter from G. M. H., of New York, N. Y. He bemoans the fact that he hears interference on his new Majestic radio, but it sounds like Morse code to him. It interferes with many of the stations to which he is listening. And he adds: "I'm very near the Brooklyn Navy Yard."

Well, wireless code signals are apt to be heard at many points on all-wave dials. This is proper, for code transmissions are assigned definite positions in the wave bands. But, if code comes in when a broadcast or voice station is being received, it indicates interference, and when the same code signal comes in at several places on the dial along with voice signals the trouble may be due to harmonics or image reception. Harmonic trouble at the transmitter, when it is nearby, is beyond your control. Double-spot or image reception may be corrected by a good serviceman. A wave trap also is a good preventive. Since G. M. H. lives close to a Navy Yard, it is likely that strong code signals enter his set as harmonics and image frequencies.

From F. L., in Brooklyn, N. Y., comes a desire to change the type of tubes in his Philco 91 so as to improve sensitivity and selectivity for DX reception. He wants to know how the tubes function, and also the intermediate frequency. Our advice to F. L. is not to change the tubes but to put in new ones if necessary, and have the set adjusted and aligned by a good service man. The present tubes are economical, and the circuit is built around their individual characteristics. The I-F is 260 kilocycles. There are two 42's in push-pull power output; two 37's as first and second audio amplifiers; a 37 second detector; two type 44's as I-F and detector-mixer tubes; one 36 R-F amplifier; and a type 80 rectifier. The new type 39/44 should be used in place of the older type 44. This is a good set, but may need a complete overhauling.

Occasionally a reader sees some problem which also has been his own. So, from Seaside Park, N. J., comes a welcome note. The Rev. L. L. has had oil-burner trouble. He tried filters and whatnot. Then they discovered a tiny vial which had a mercury contact within. It had a weak spring so couldn't stay in order, but a new spring did the trick, and now the writer enjoys his radio in peace and quiet except for the first 30 seconds after the burner turns on. We are happy to pass the Father's comments along to our readers and also add one of our own. That noise which so many oil burners emit for a short time after starting up is due to a spark coil and plug which provides the ignition spark to light the oil spray. It can't be eliminated, so we'll have to endure it.

H. D. L., of Baltimore, Md., is

worried about his 1939 R.C.A., 14-tube receiver. It's hard to tune because of some back lash in the peculiar tuning device. He thinks it might be best to junk the present system and install a 2-speed vernier control dial. We can't agree with this idea. The R.C.A. communications sets which cover the short waves so completely have rather complicated tuning systems. To replace it with a simple dial would only make tuning more difficult. This is a fine set, so we would see the R.C.A. local distributor and his expert serviceman, and have the lost motion taken care of in short order. There's nothing like going to headquarters about fine and costly radio sets.

Headphones seem to give a lot of trouble. We don't know why. A good adapter is almost fool proof. But H.G.R., of Walhalla, N. D., like many others, is suffering. He bought a Cannon Ball headset, and when the speaker is silenced, so are the phones. Well, the Cannon Ball makers also have a phone kit. If H. G. R. used that and connected the three wires properly, everything should work fine. It's a case of check and double check. But a single headset, if not used with an adapter, may be attached in several ways. The easiest is to connect to an end pair of contacts of a double-pole double-throw switch. Cut the voice coil leads—one is white and the other maroon. Connect the speaker ends to the other pair of switch contacts, and the remaining two ends to the central pair of contacts. By throwing the switch one way, the phones are connected to the audio output transformer, and when the other way, the speaker voice-coil is connected. The impedance of the phones should be

low so as nearly to match that of the transformer secondary coil.

Since we published an article that mentioned the improvement provided by new I-F transformers of the band-expanding type, the expected inquiries began to arrive. For instance, L. R. W., of Ballston Spa, N. Y., wonders whether his General Electric M-81 all-wave set can be improved upon, and can he do the work himself. But where can he procure the transformer?

For the benefit of all we repeat that band-expanding I-F transformers can be installed in superheterodyne receivers that have one stage of I-F amplification (two transformers) and use about 450 kilocycles intermediate frequency. These transformers can be a great help in many receivers, unless the tuning is sharp and sufficient R-F amplification and preselection is used. A trained serviceman should be consulted about doing the work, for careful realignment is needed afterward. We are advised that the Meissner Mfg. Co., of Mt. Carmel, Ill., can supply the transformers at a nominal cost, and will advise fully as to their use. Mention RADEX.

"Should I use a ground with my R.C.A. 86-X receiver so as to reduce static noises?" asks H. L. S., of Washington, D. C. He mentions also that a steam-heating pipe is nearby. A ground wire will not prevent static noises; in fact, it may cause a few more. But a ground often has it advantages. In this case, use one with a small bypass condenser connected in series with the steam pipe and the chassis of your set. How about a noise-reducing antenna?

A young lady in Minot, N. D. complained to the local radio station officials. Her Radiola 60 brings in

the locals at several places on the dial. She now feels that if she had a decent set the trouble would not exist. Her set used to be good. We feel that she still has a decent set; it was, once upon a time. But the old Radiola 60 has a low intermediate frequency—180 kilocycles. That doesn't help the situation, and may tend to increase the number of points where images and double spots appear. The R-F coils and leads ought to be well shielded. Perhaps there is some defect in this arrangement. A good adjustment and alignment, of course, is in order. New tubes, too, may be necessary. A simple wave trap, tuned to the offending station, often does the trick. Try one sometime; you can get them from J. W. Miller Co., of Los Angeles, or the Meissner Co., mentioned above, as well as many other radio places.

From J. T., of Phoenix, Ariz., comes a request for a description of a vertical antenna. A good many other readers write similar requests, too, but all we can tell them is that a vertical antenna is just what it calls itself. Either a wire or rod or tower may be used. It must be erected in a vertical position but well insulated. It has little directional effect. But vertical antennas are principally useful as radiators at transmitting stations; they often tower many hundreds of feet into the air. The rather high cost of erection, since it should be 30 feet or more above the roof or ground surface, fails to give the vertical aerial any increased value for reception. The fact that it receives equally well from all directions is about all there is in its favor for ordinary use.

Metal tubes have been the cause of debate ever since they appeared to add to the confusion that already existed.

A number of our readers inquire about these tubes, and here is W. D. W., of Milwaukee, Wis., who asks: "Can I replace the metal tubes in my R.C.A. 9K3 receiver with glass ones for better reception?"

Naturally, the R.C.A. receivers are furnished with metal tubes in most cases. R.C.A. manufactures metal tubes to a large extent, but we feel that the engineers at that factory would not use metal tubes if they felt that glass tubes would do better work in the same circuits. So, it is not for us to say that replacing metal tubes with glass tubes will improve reception unless the metal tubes are weakening and actually are in need of replacement. However, glass and metal-glass tubes may be substituted for all-metal tubes. There are counterparts that may be obtained. Glass counterparts have the letter "G" added to the tube number, and metal-glass tubes have the letters "MG" added. Glass tubes operate cooler and have been proven as entirely satisfactory. But metallic shields may be needed. The metal tube acts as its own shield. When interchanging "G" types with metal tubes it frequently is necessary to realign the tuned circuits. Ordinary tube shielding will be sufficient for the 6K7G, 6J7G, etc., all with Octal bases, used as replacements in the R.C.A. 9K3.

Each month we have several complaints against him. We all know how objectionable hum is when it persists. If this hum appears all over the dial that is a sign the trouble is in the receiver; it may be external when the hum is tuneable. In the case of L. A. H., of Oakland, Calif., the hum sounds like a motor and is



This veri card from JDY is the prettiest card we have seen for a long time. The lettering is in black, and the stalks of rice by the call letters are gold. The "MTT" monogram is red, and the silver temple is on a yellow background. (Courtesy of J. E. Gardner).

everywhere. Tubes have been replaced, but no improvement was noted. Our suggestion is that the filter system be examined, particularly the field-magnet coil of the speaker, for signs of an unsteady current that is poorly filtered. All tubes, of course, must be checked carefully. Look for poor shielding in the R-F circuit; open condensers in the R-F and I-F circuits or stages; or defective condensers and resistors in the audio stages, especially between the 2nd detector and the following audio system; or a defective hum-bucking coil on the cone of the speaker. We always feel that a good serviceman, who has the necessary equipment, can locate the point where hum commences and quickly remedy the defects.

There are many old receivers still operating. J. P. J., of Astoria, N. Y., has one—Philco 87—but when he removes his ground wire there is very little decrease in volume, al-

(Please turn to page 96)

The SHORTWAVE STATIONS and TWENTY STENTORS

● The shortwave list, arranged by frequencies in kilocycles, gives the schedules of the shortwave broadcasting stations. The Twenty Stentors are the shortwave stations which were reported the most frequently in each of the time zones last month. Arranged according to the number of reports received, this chart can be used by new listeners as a guide to the stations which they are most apt to receive in their own localities.

Best in EST	Best in CST	Best in MST	Best in PST	Best in World*
Paris	Rome	TGWA	Berlin	OAK4Z
Berlin	Paris	Rome	London	4ZB
Rome	Berlin	Paris	Rome	2ZB
ZRK	London	CB970	Tokyo	XGSA
Tokyo	FG8AA	PSH	Paris	XGOY
TAP	Tokyo	OZF	OZF	XGOX
HAT4	CB970	HAT4	OIE	VK8SK
Praha	COCA	ZRK	TAP	VK6ME
London	COCM	RV96	DJG	PI1J
HJ1ABP	HH3W	XEBR	OFE	KZIB
TIEP	LRX	Huizen	TIEP	SBO
VLR	PSH	XEWW	VLR	OAX5C
Martinique	VUD2	London	VK3ME	SBP
OZF	CXA8	Martinique	VK6ME	CSW2
TGWA	EAJ43	COCQ	VK2ME	ZP14
HH2S	RK1	VUD3	PLP	COCM
FG8AA	TGWB	HVJ	JDY	CB960
EAQ	VUC2	VUC2	TGWA	COCQ
COCQ	TGWA	Praha	VUD2	OIE
VK3ME	Praha	RK1	ZRK	W2XE

*Exclusive of the USA and Canada.

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

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.

1734	Liepaja, Latvia.. 1 kw.. Latvijas Radiofons.	HJ6FAI	Ibague, Colombia, 501 w. "Ecos de Combeima."
2437 HRN	Tegucigalpa, Honduras. 500 w. Noon-1:30 pm; 7-10:30 pm. "La Voz de Honduras."	4805 HJ6FAB	Manizales, Colombia. 501 w. "Radio Manizales."
3480 2ZB	Wellington, New Zealand. 200 w. At 7 am.	4815 HJ2BAB	Cucuta, Colombia, 600 w. Relays HJ2BAC, "La Voz de Cucuta."
4107 HCJB	Quito, Ecuador. 7-8:15 am; 11:30 am-2:30 pm; 2:45-10:15 pm. "Broadcasting Provincial," Clarence W. Jones, Casilla 691.	4825 HJ5EAD	Cali, Colombia. 720 w. "La Voz del Valle."
4300 4ZB	Dunedin, New Zealand. 30 w. At 6 am.	4835 HJ1ABE	Cartagena, Colombia, 525 w. Relays HJ1ABF. "La Voz de los Labs. Fuentes." Apto. 31.
4775 HJ7GAB	Bucaramanga, Colombia. 750 w. 6-10:45 pm. "Radio Santandar."	4840 VUC2	Calcutta, India. 10 kw. 7 am-12:30 pm. All-India Radio.
4785 HJ1ABB	Barranquilla, Colombia. 600 w. Relays HJ1ABA, "La Voz de Barranquilla," Apartado 715. Interval signal, 3 chimes.	485 HJ3CAD	Bogota, Colombia, 720 w. "Nueva Granada."
4845 HJ3CAD	Bogota, Colombia, 720 w. Voz de Bogota."	4865 HJ2BAJ	Santa Marta, Colombia. 751 w. 10:30 am-2 pm; 5-11 pm. "La Voz de Santa Marta."
		4875 HJ6FAH	Armenia, Colombia. 600 w. "La Voz de Armenia."

- 4880 VUB2 Bombay, India. 10 kw. 8 am-1 6079 DJM pm. All-India Radio.
- 4885 HJ4DAP Medellin, Colombia. 501 w. Relays HJ4DAQ, "Emisora Claridad."
- 4895 HJ3CAH Bogota, Colombia. 720 w. "La Voz de la Victor." Relays HJ3CAL. Almacenes Victor, Apto 565.
- 4920 VUM2 Madras, India. 10 kw. 7 am-12:30 pm. All-India Radio.
- 4960 VUD2 Delhi, India. 10 kw. 8am-1 pm. All-India Radio.
- 5835 YV5RR Caracas, Venezuela. 4:30-10 pm.
- 5850 YV1RB Maracaibo, Venezuela. 300 w. 5:45-9:45 am; 3:30-10:45 pm. "Ecos del Zulia," Apartado 37. Relays YV1RA; interval, gong and xylophone, and signs off with "Strike Up The Band."
- 5970 YV5RC Caracas, Venezuela. 1 kw. (Reported on 5910, 5900 and 5973). W weekdays, 7 am-10 pm; Sun, 8:30 am-9:30 pm. "Radio Caracas," Apartado 2009. Relays YV5RA, and signs off with "March 1BC."
- 5984 HJ4DAG Quibdo, Colombia. 150 w. "La Voz del Choco."
- 6005 CFCX Montreal, P. Q. 75 w. Relays CFCF. Canadian Marconi Co., Ltd., Box 1690.
- 6010 CJCX Sydney, N. S. 1 kw. Relays CJCB. Eastern Broadcasters, Ltd., Radio Bldg.
- VK9MI M. V. "Kanimbla," 50 w. McIlwraith & McEacharn, Ltd., Melbourne, Vic., Australia.
- 6020 DJC Berlin, Germany. 50 kw. 1-4:25 pm. See "Berlin" at end of list.
- 6030 CFVP Calgary, Alta. 100 w. Voice of the Prairies, Ltd., Toronto General Trusts Bldg.
- 6040 W1XAL Boston, Mass. 20 kw. See "W1XAL".
- W4XB Miami, Fla. 5 kw. 10 pm-1 am. Relays WIOD. Ruth Richardson, Isle of Dreams Broadcasting Corp.
- 6042 HJ1ABG Barranquilla, Colombia. 600 w. Relays HJ1ABH. "Emisora Atlantico," Apto. 445.
- 6054 HJ6FAB Pereira, Colombia, 501 w. "La Voz de Pereira."
- 6050 GSA London, Gt. Britain. 20 kw. 10:45 am-noon; 4:15-6 pm. See "London" at end of list.
- 6060 W3XAU Philadelphia, Pa. 10 kw. Su, Tu, W, F, 7:30-11 pm; Su, W, F, 11:30 pm-1 am; M, Tu, Th, midnight-1 am; Sat, 11 pm-2 am. See "W3XAU" at end of list.
- W8XAL Cincinnati, Ohio. 10 kw. See W8XAL.
- 6065 SBO Stockholm, Sweden. 500 w. 4:15-5 pm. Telegrafverket Tjansstebrev 5.
- 6070 CFRX Toronto, Ont. 1 kw. Sun, 10:30 am-midnight. Weekdays 7:30 am-midnight. Relays CFRB, Rogers Radio Broadcasting Co., 37 Bloor St. W.
- Berlin, Germany. 50 kw. 4:50 10:50 pm. See "Berlin" at end of list.
- 6080 CKFX Vancouver, B. C. 10 w. 2 pm-midnight. Relays CKFC. Standark Broadcasting System, 1504 Sun Bldg.
- W9XAA Chicago, Ill. 500 w. See W9XAA.
- XEWVW Mexico City, D. F. 10 kw.
- 6100 W3XL New York, N. Y. 35 kw. See W3XL.
- YUA Belgrade, Yugoslavia. 1 kw. 12:45 am-5:30 pm. "Radio Beograd," Bureau Central de Presse, Poste Emetteur a Ondes Courtes. Announcement in Serbian, Italian, English, German, Turkish, Hungarian, Albanian, and Greek.
- 6110 GSL London, Gt. Britain.
- 6120 W2XE New York, N. Y. 10 kw. See W2XE.
- 6122 HJ3CAX Bogota, Colombia. 750 w. Relays HJ3CAZ, La Voz de Colombia, Apto 772.
- TGWB 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.
- 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 Broadcasting Co., Lord Nelson Hotel.
- COCD Havana, Cuba. 250 w. Relays CMCD. "La Voz del Aire," S. A., Sr. J. Benitez, Apto. 2294.
- LKJ Oslo, Norway, 5 kw. See "Oslo."
- 6152 VP3BG Georgetown, British Guiana.
- XEXA Mexico City, D. F. 100 w. Depto. de Publicidad y Propaganda, Sr. Jose Rivera.
- 6140 W8XX Pittsburgh, Pa. 40 kw. See W8XX.
- 6145 HJ4DAE Medellin, Colombia. 700 w. "La Voz de la Antioquia."
- 6150 CJRO Winnipeg, Man. 2 kw. James Richardson & Sons, Ltd., 157 Royal Alexandra Hotel.
- 6170 W2XE New York, N. Y. Sat, Sun, 11:30 pm-1 am; other days, midnight-1 am. See "W2XE" at end of list.
- 6190 HVJ 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 NVJ.
- 6235 HRD2 La Ceiba, Honduras. 250 w. 10-11 pm. "La Voz de Atlantida."
- 6243 HIN Trujillo, D. R. 740 w. Weekdays, noon-2:30 pm; 5:45-10 pm. Sign off National Anthem. Frank Hatton, Dominican Government, Carle Arzobispo Merino 79.
- 6330 COCW Havana, Cuba. 7 am-midnight. Relays CMW. "La Voz de las Antillas," Apartado 130.
- 6351 HRP1 San Pedro Sula, Honduras. 100 w. 12:30 pm-12:30 am. "[I

- 6380 ZIZ Eco de Honduras." Basseterre, St. Kitts. (Reported on 6384). Daily 4-5 pm; Wed, 7-7:30 pm.
- 6425 W4XD Gainesville, Fla.
- 6490 TGWB Guatemala City, Guat. 1 kw. (Reported on 6495).. See TGWA.
- 6690 TIEP San Jose, Costa Rica. 4-11 pm. (Reported on 6695). "La Voz de Isthmo," Eduardo Pinto H., Aptdo. 257.
- VK8SK Broken Hill, Australia. At 2:30 am. Australian Aerial Medical Service.
- 6960 2ZB Wellington, New Zealand. 200 w.
- 7006 FETI Valladolid, Spain. 7:30 am-5:30 pm.
- 7020 X6SA Kweiyang, China. 8-11:15 am; 8-9 pm.
- 7088 PI1J Dortrecht, Netherlands. 50 w. Sat, 10 am-12:50 pm. Technical College.
- 7220 I2ROII Rome, Italy. 100 kw. See 2RO.
- 7300 VIG Port Moresby Papua. Relays 4 pm.
- 7450 FG8AA Pointe a Pitre, Guadeloupe. (Reported on 7050, 7435). 6-7 pm. "Radio Guadeloupe," Box 125.
- 7510 JVP Tokyo, Japan. 50 kw. 6-9:30 am. See "Tokyo" at end of list.
- 8650 HJ4DAU Medellin, Colombia. 250 w. Universidad Antioquia.
- 8664 COJK Camaguey, Cuba. 1 kw. 11:30 am-12:30 pm; 8-10 pm. (Reported on 8660 and 8680). Relays CMJK, "Radio Zenith." Jones Castillon y Cie., Finlay #3.
- 8820 HCJB Quito, Ecuador. 1 kw.
- 9100 COCA Havana, Cuba. Relays CMCA. Testar y Gonzales, Box 3488.
- 9125 HAT4 Budapest, Hungary. 20 kw. Sun, Wed, 7-8 pm; Sat, 6-7 pm. Radiolabor, Kiserleti Allomas, Gyali-ut 22, Budapest IX.
- 9234 Bucuresti, Romania. 2 kw. "Radio Experimental." Societatea Romana de Radiodifuziune, Str. Yral. Berthelot 60.
- 9460 TAP Ankara, Turkey. 20 kw. 11:30 am-5 pm.
- 9480 EAR Madrid, Spain. 20 kw. 7:20-8 pm; 8:30-9 pm. "La Voz de Espana," Medinaceli 6.
- 9500 XEWW Mexico City, D. F. 10 kw. 8:55 am-midnight. "La Voz de la America Latina desde Mexico." Aptdo. 2516. Relays XEW, Cadena Radiodifusora Mexicana.
- 9510 GSB London, Gt. Britain. 20 kw. 10:30 am-noon; 1:30-4 pm; 4:15-8:30 pm; 9:20-11:25 pm. See "London" at end of list.
- VK3ME, Melbourne, Australia. 5 kw. Weekdays, 4-7 am. Amalgamated Wireless, (A/sia), Ltd., 167 King St.
- 9520 OZF Copenhagen, Denmark. 6 kw. 2-6 pm; 10-11 pm. Statsradiofonieu, Heibergsgade 7.
- 9525 ZBW3 Hong Kong. 2500 w. Hong Kong Broadcasting Committee, Box 200.
- 9530 LKC Oslo, Norway. 5 kw. See "Oslo."
- VUC2 Calcutta, India. 10 kw. 2:30-4:30 am. All-India Radio.
- W2XAF Schenectady, N. Y. 40 kw. See W2XAD.
- W6XBE San Francisco, Calif. 20 kw.
- 9535 JZI Tokyo, Japan. 20 kw. 4:30-5:30 pm. See "Tokyo" at end of list.
- 9540 DJN Berlin, Germany. 50 kw. 12:05-11 am; 4:50-10:50 pm. See "Berlin" at end of list.
- 9550 HVJ Vatican City. 15 kw. Wed, See W6XBE. 2-30-3 pm; Sun, 5-530 am. See HVJ.
- 9550 TPB11 Paris, France. 25 kw. 11:15 pm-6 pm. See "Paris" at end of list.
- 9550 VUB2 Bombay, India. 10 kw. 12:30-4 am; 5-7:30 am; 10-11 pm. All India Radio.
- W2XAD Schenectady, N. Y. 25 kw. See W2XAD.
- 9560 DJA Berlin, Germany. 50 kw. 12:05-11 am; 4:50-10:50 pm. See "Berlin" at end of list.
- 9570 W1XK Springfield, Mass. 10 kw. Relays NBC-WBZ-WMZA. Westinghouse Electric & Mfg. Co.
- W8XK Pittsburgh, Pa. 40 kw. See W8XK.
- 9580 GSC London, Gt. Britain. 20 kw. 4:15-6 pm; 6-8:30 pm; 9:20-11:25 pm. See "London" at end of list.
- VLR Melbourne, Vic., Australia. 500 w. 3:15-9:45 am. See VLR.
- 9590 HP5J Panama City, Panama. 1 kw. (Reported on 9610). 6:30-11 pm. "La Voz de Panama." Apartado 867.
- PCJ Huizen, Netherlands. 60 kw. Sun, 2-3 pm; Mon, 7:15-8:15 pm; 8:25-9:25 pm; Tu, 1:45-3:30 pm; W, Th, 7-9:30 pm; F, 8-9 pm. See Hilversum.
- VK2ME Sydney, Australia. 20 kw. Sun, 1-3 am; 5-11 am. Signature, laughing notes of kookaburra. Amalgamated Wireless, (A/sia), Ltd., 47 York St.
- VK6ME Perth, Australia. 5 kw. Weekdays, 6-8 am. Amalgamated Wireless, (A/sia), Ltd.
- VUD2 Delhi, India. 10 kw. 2-4:15 am; 8 am-1 pm; 10 pm-midnight. All-India Radio.
- VUD3 Delhi, India. 5 kw. 8 am-1 pm. All India Radio.
- W3XAU Philadelphia, Pa. 10 kw. M, Th, 7:30-11:30 pm; Sat, 7:30-10:45 pm. See "W3XAU" at end of list.
- W8XAL Cincinnati, Ohio. 10 kw. See W8XAL.
- 9606 ZRK Cape Town, U. of South Africa. 5 kw. Weekdays,

- 11:45 pm-12:45 am. Programs open with bugle call, and announcement is "Johannesburg Calling." South African Broadcasting Corp., Box 4559, Johannesburg.
- 9616 HJ1ABP Cartagena, Colombia. 608 w. 4:30-10:30 pm. "Radio Cartagena." Aptado 37.
- 9630 H7GAD Bucaramanga, Colombia. 650 w. Relays HJ7GAE. "Radio Bucaramanga."
- 9630 2RO3 Rome, Italy. 25 kw. 12:10-10 pm. See 2RO.
- 9645 HH3W Port-au-Prince, Haiti. 30 w. 1-2 and 7-8 pm. C. Ricardo Widmaier, Box A-117.
- 9650 1ABA Addis Ababa, Ethiopia. 1 kw. E. I. A. R.
- W2XE New York, N. Y. Mon thru Fri, 10:30-11:30 pm. See "W2XE" at end of list.
- 9660 HVJ Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am. See HVJ.
- 9670 I2RO9 Rome, Italy. 100 kw. See 2RO.
- W3XAL New York, N. Y. 35 kw. See W3XL.
- 9675 DJX Berlin, Germany. 10:35 am-4:25 pm. See "Berlin" at end of list.
- 9685 TGWA Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; 7 pm-midnight; weekday, 12:45-1:45 pm; 10-11:30 pm. See TGWA.
- 9692 TI4NRH Heredia, Costa Rica. 500 w. Sun, 7-8 am; Tu, Th, Sat, 9-10 pm. Amando Cespedes Marin, Apartado 40.
- 9700 "Radio Martinique," Fort de France, Martinique. 1500 w. 1:15-2:45 pm; 6-10 pm. Sign off with Marseillaise. Poste Seri, Boite 136.
- 9715 COCQ Havana, Cuba. 1 kw. "de la RCA Victor," Calle 25 No. 225.
- 9730 CB970 Valparaiso, Chile. (Reported on 9710). 6:30-11 pm.
- 9830 IRF Rome, Italy. 20 kw. 12:40-1 pm; 1:37-3:30 pm; 6-9 pm. See "Rome" at end of list.
- 9833 COCM Havana, Cuba. 1 kw. (Reported on 9805 and 9840). 8 am-10:30 pm. "Trans Radio Columbia," 23 No. 1113, Vedado.
- 9860 EAQ Madrid, Spain. "The Voice of Republican Spain," Apartado 951.
- 9925 JDY Dairen, Kwantung. 10 kw. 7-8 am. Manchuria Telephone and Telegraph Co.
- 9940 CSW Lisbon, Portugal. 5 kw. (Reported on 9735).
- 9960 COBC Havana, Cuba. (Reported on 9980). 6:55 am-midnight. "El Progreso Cubano." Aptdo 132.
- 10042 DZB Berlin, Germany.
- 10050 TIEMC San Jose, Costa Rica. Relays TIEH. Apartado 1049.
- 10220 PSH Rio de Janeiro, Brazil. 12 kw. Mon, 6-9 pm. Relays PRF4; signs off with Brazilian National Hymn. Cia. Radio Internacional do Brasil, Caixa Postal 709.
- 10330 ORK Brussels, Belgium. 11 kw. 1:30-3 pm.
- 10660 JVN Tokyo, Japan.
- 10740 JVM Tokyo, Japan.
- 11040 CSW Lisbon, Portugal. 5 kw. 2-5:30 pm. "Emisora Nacional".
- 11280 HIN Trujillo, D. R. 750 w. Aptdo 604.
- 11402 HBO Geneva, Switzerland. "Radio Nations." Sun, 7-7:45 pm.
- 11650 COCX Havana, Cuba. 1 kw. (Reported on 11740). Sun, 6-9 pm; Weekdays, 8 am-midnight. Relays CMX, "Casa Lavin," Box 32.
- 11660 JVL Tokyo, Japan.
- 11700 HP5A Panama City. 300 w. Sun, 9 am-1 pm; 6-10 pm. Weekdays, 11:45 am-1 pm; 6-10 pm. "Radio Teatro Estrella de Panama." Sign off with "Anvil Chorus." Radio Teatro, Aptdo. 954.
- 11705 SBP Stockholm, Sweden. 500 w. Sun, 1:15-4:15 pm; Wed, Sat, 8-9 pm; Daily 1-4:15 pm. Telegrafuerket Tjanstebrev 5.
- 11718 TPB6 Paris, France. 7-9:15 pm. See "Paris."
- TPA4 Paris, France. 7-9:15 pm; 9:30 pm-midnight. See "Paris."
- 11720 CJRX Winneipeg, Man. 2 kw. James Richardson & Sons, 157 Royal Alexandra Hotel.
- 11730 PHI Huizen Netherlands. 23.6 kw. See Hilversum.
- W1XAL Boston, Mass. 20 kw. See W1XAL.
- 11735 LKQ Oslo, Norway. 5 kw. See "Oslo."
- 11740 HVJ Vatican City. 15 kw. Tues, 8:30-9 am. See HVJ.
- 11750 GSD London, Gt. Britain. 20 kw. 3-5:25 am; 9-10:15 am; 12:20-4 pm; 4:15-8:30 pm; 9:20-11:25 pm. See "London."
- 11760 TGWA Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; Weekdays, 12:45-1:45 pm. See TGWA.
- 11770 DJD Berlin, Germany. 50 kw. 11:30 am-4:25 pm; 4:50-10:50 pm. See "Berlin."
- 11790 W1XAL Boston, Mass. 20 kw. See W1XAL.
- 11800 JZJ Tokyo, Japan. 50 kw. 12:30-1:30 am; 7-9:30 am; 2:30-4 pm; 4:30-5:30 pm; 8-8:30 pm. See "Tokyo."
- 11810 2RO4 Rome, Italy. 25 kw. 4:40-8:45 am; 11 am-1:09 pm. See 2RO.
- 11820 GSN London, Gt. Britain.
- 11830 W2XE New York, N. Y. 10 kw. Sat, Sun, 6:30-11 pm; Other days, 6:30-10 pm. See "W2XE."
- W9XAA Chicago, Ill. 500 w. See W9XAA.
- 11860 GSE London, Gt. Britain. 20 kw 3-5:25 am; 5:45-8:50 am; 9-10:30 am. See "London."
- 11870 VUM2 Madras, India. 10 kw. 4-430 am. All-India Radio.
- W8XAL Cincinnati, Ohio. 10 kw. See

	W8XK	W8XAL. Pittsburgh, Pa. 40 kw. See W8XK.	15310 GSP	London, Gt. Britain. 1:45-4 pm. See "London."
11880	VLR3	Melbourne, Australia. 1-3 am. See VLR.	15340 DJR	Berlin, Germany. 50 kw. 12:05- 11 am. See "Berlin."
11885	TPA3	Paris, France. 25 kw. 2-5 am; 11:15 am-6 pm. See "Paris."	17760 DJE	Berlin, Germany. 50 kw. 12:05- 5:30 am; 6-7:50 am. See "Berlin."
	TPB7	Paris, France. 25 kw. 9:30 pm-midnight. See "Paris."	17770 PHI2	Huizen, Netherlands. 23.6 kw. Sun, 6:25-9:40 am; M, Th, 7:40-8:40 am. See Hilversum.
11900	I2RO13	Rome Italy. 100 kw. See 2RO.	17790 GSG	London, Gt. Britain. 5:45-8:50 am; 9 am-noon; 12:20-4 pm. See "London."
12235	TFJ	Reykjavik, Iceland. 7500 w. Sun, 1:45-2:30 pm. Icelandic State Broadcasting Service, Box 547.	17810 GSV	London, Gt. Britain. 5:45- 8:50 am; 12:20-4 pm. See "London."
12450	HCJB	Quito, Ecuador. Daily exc. Mon, 7:15-10:30 pm.	17830 W2XE	New York, N. Y.
15100	I2RO12	Rome, Italy. 100 kw. See 2RO.	21470 GSH	London, Gt. Britain. 5:45-8:50 am; 9 am-noon. See "London."
15110	DJL	Berlin, Germany. 50 kw. 12:05- 2 am; 8-9 am; 10:35 am-4:25 pm. See "Berlin."	21520 W3XAU	Philadelphia, Pa. 10 kw. 1- 2:30 pm. See "W3XAU."
15120	HVJ	Vatican City. 15 kw. Tues, 10:30-11 am; Sun, 1-1:30 pm. See HVJ.	21530 GSJ	London, Gt. Britain. 5:45-8:50 am. See "London."
15130	TPB11	Paris, France. 25 kw. 2-5 am. See "Paris."	21550 GST	London, Gt. Britain.
	W1XAL	Boston, Mass. 20 kw. See W1XAL.	21565 DJJ	Berlin, Germany. 6-7:50 am. See "Berlin."
15140	GSF	London, Gt. Britain. 15 kw. 3-5:25 am; 5:45-8:50 am; 9 am-noon. See "London."	25725 W3XAU	Philadelphia, Pa. 10 kw. See W3XAU.
15160	JZK	Tokyo, Japan. 50 kw.	25950 W4XH	Spartanburg, S. C. WSPA.
	VUD3	Delhi, India. 5 kw. 2-4:15 am; 10 pm-midnight. All-India Radio.	W6XKG	Los Angeles, Calif. KGFI.
	XEWW	Mexico City, D. F. 10 kw. "La Voz de la America Latina desde Mexico," Aptdo. 2516.	26050 W5XEX	Norfolk, Va. WTAR.
15170	LKV	Oslo, Norway. 5 kw. See Oslo.	W9XH	South Bend, Ind.
15170	TGWA	Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm. Weekdays 12:45-1:45 pm. See TGWA.	W9XTC	Minneapolis, Minn. WTCN.
15180	GSO	London, Gt. Britain. 3:5:25 am; 4:15-8:30 pm. See "Lon- don."	26100 GSK	London, Great Britain. See Lon- don.
	TAQ	Ankara, Turkey. 20 kw. 9:30- 11 am.	W9XJL	Superior, Wis. WEBC.
15200	DJB	Berlin, Germany. 8 kw. 8-9 am; 4:50-10:50 pm; Sun only, 11:10 am-12:25 pm. See "Ber- lin."	26150 W9XUP	St. Paul, Minn. KSTP.
15210	W8XK	Pittsburgh, Pa. 40 kw. See W8XK.	26400 W9XAZ	Milwaukee, Wis. WTMJ.
15220	PCJ2	Huizen, Netherlands. 60 kw. Tues, 3-4:30 am; Wed, 9:30- 11:30 am. See Hilversum.	26450 W9XA	Kansas City, Mo. 1 kw. Everett L. Dillard, Commercial Radio Equipment Co.
15243	TPA2	Paris, France. 25 kw. 6-11 am. See "Paris."	26500 W9XTA	Harrisburg, Ill. Schenert Radio Service.
15250	W1XAL	Boston, Mass. 20 kw. See W1XAL.	26550 W2XQO	Flushing, N. Y. WMCA.
15260	GSI	London, Gt. Britain. 3-5:25 am; 12:20-1:30 pm.	31100 W3XIW	Reading, Pa.
15270	W2XE	New York, N. Y.	31600 W1XEQ	Fairhaven, Mass. WNBH.
	W3XAU	Philadelphia, Pa. 10 kw. 3-7 pm. See "W3XAU."	W1XER	Boston, Mass. The Yankee Net- work.
15280	DJQ	Berlin, Germany. 50 kw. Sun, 11:10 am-12:25 pm; Daily, 12:05-11 am; 4:50-10:50 pm. See "Berlin."	W1XKA	Boston, Mass. WBZ.
	LRU	Buenos Aires, Argentina. 5 kw. 8 am-1 am. "Radio El Mundo," Calle Maipu 555.	W1XKB	Springfield, Mass. WBZA.
15330	W2XAD	Schenectady, N. Y. 25 kw. See W2XAD.	W1XOE	Boston, Mass. CBS.
			W2XDG	New York, N. Y. WEA-F/WJG.
			W2XDV	New York, N. Y. WABC.
			W2XHG	Bound Brook, N. J. WJZ.
			W3XES	Baltimore, Md. WCAO.
			W3XEX	Norfolk, Va. WTAR.
			W3XEY	Baltimore, Md. WFBR.
			W3XIR	Philadelphia, Pa. WCAU.
			W3XKA	Philadelphia, Pa. KYW.
			W4XBW	Chattanooga, Tenn. WDOJ.
			W4XCA	Memphis, Tenn. WMCA.
			W5XAU	Oklahoma City, Okla. WKY.
			W5XD	Dallas, Texas.
			W5XGB	Pasadena, Texas. Houston Light- & Power Co.
			W5XGC	Humble, Texas. Houston Light- & Power Co.
			W6XAS	San Francisco, Calif. KJBS.
			W6XXT	Portable. Press Wireless, Ltd.
			W8XAI	Rochester, N. Y. WHAM.
			W8XH	Buffalo, N. Y. WBen.
			W8XKA	Pittsburgh, Pa. KDKA.
			W8XNT	Cleveland, Ohio. WGAR.
			W8XOY	Akron, Ohio. WADC.

- W8XWJ Detroit, Mich. WWJ.
 W9XBS Chicago, Ill. WENR.
 W9XER Kansas City, Mo. KMBC.
 W9XHW Minneapolis, Minn. WCCO.
 W9XLA Denver, Colo. KLZ.
 W9XOK St. Louis, Mo.
 W9XPD St. Louis, Mo. KSD.
 W9XUY Omaha, Neb.
- 42000 to 56000 Television
 W1XG Boston, Mass. General Television Corp.
 W2XAX New York, N. Y. Columbia Brdctg. System.
 W2XBS New York, N. Y. NBC, nlc.
 W2XDR Long Island City, N. Y. Radio Pictures, Inc.
 W2XVT Passaic, N. J. Allen B. DuMont Labs, Inc.
 W3XE Philadelphia, Pa. Philco Radio & Television Corp.
 W3XEP Camden, N. J. RCA Mfg. Co.
 W3XPF Springfield, Pa. Farnsworth Television, Inc.
 W6XAO Los Angeles, Calif. Don Lee Brdctg. System.
 W8XAN Jackson, Mich. Sparks-Withington Co.
 W9XAL Kansas City, Mo. First National Television, Inc.
 W9XAT Minneapolis, Minn. Dr. George W. Young.
 W9XD Milwaukee, Wis. The Journal Co.
 W9XUI Iowa City, Iowa. University of Iowa.
- 42800 W2XMN Alpine, N. J. Major Armstrong.
 50000 to 55000 Television
 W2XAX New York, N. Y. CBS.
 60000 to 86000 Television
 W6XAO Los Angeles, Calif. Don Lee Brdctg. System.

Addresses

- 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 Reichs-Rundfunk G. m. b. H., Haus des Rundfunk, Masurenallee, Berlin-Charlottenberg 9.
- Hilversum—Transmitters a Huizen. PCJ is "The Happy Station." Announcements in Dutch, German, French, English, Spanish, Portuguese. Sign off with National Anthem. N. V. Philips' Radio, Eindhoven.
- 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.
- Tokyo—Transmitters are at Nazaki. Sign off with national anthem, "Kimagayo." Broadcasting Corp. of Japan, Overseas Section, Atago-Yama, Tokyo
- Paris—Transmitters at Essarts-le-Roi. Announce as "Paris Mondial," (Paris Embracing The World), and sign off with "La Marseillaise." Minister of Posts, Telegraphs and Telephones, 98 bis Blvd. Haussmann.
- Rome—Stations sign off with "Giovinezza" and "Marcha Reale." E. I. A. R., 5 Via Montello.
- 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.
- 2RO—"Radio Roma-Napoli." Transmitter at Prato-Smeraldo. Interval signal, chirping of bird. Announcements usually by a lady. Sign off with 2 anthems, "Giovinezza" and "Marcha Reale." Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.
- TGWA—Radiodifusora National, "La Voz de Kuantemala." 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.
- W1XAL—"Dedicated to Enlightenment." World Wide Broadcasting Corp., Educational Director, University Club, Boston, Mass.
- W2XAD—Transmitter at South Schenectady. Relays NBC-WGY. Programs commence with discharge of man-made lightning. General Elec. Co., 1 River Road.
- W2XE—Transmitters at Wayne Township, N. J. Relay programs of CBS-WABC, and sign off with "Star Spangled Banner." Columbia Broadcasting System, 485 Madison Ave., New York, N. Y.
- W3XAU—Transmitters at Newton Square. Relay CBS-WCAU. WCAU Broadcasting Co., 1622 Chestnut St.
- W3XL—Transmitter at Bound Brook, N. J. Relays NBC-WJZ. Sign off with "Star Spangled Banner." NBC, Inc., 30 Rockefeller Plaza, New York, N. Y.
- W6XBE—Transmitter at Belmont. General Electric Co.
- W8XAL—Transmitter a Mason. Relays NBC-WLW. Crosley Corp., 1329 Arlington St., Cincinnati, Ohio.
- W8XK—Transmitter at Saxonburg. Relays NBC-KDKA. Westinghouse Electric & Mfg. Co., Grant Bldg., Pittsburgh, Pa.
- W9XAA—"The Voice of Labor." Transmitter, York Township. Relays NBC-WCFL. Sign off in English, French, German, Norwegian, Polish, Russian and Spanish. Chicago Federation of Labor, 666 Lake Shore Drive, Chicago, Ill.

Newfoundland Broadcasting

The Broadcasting Corporation of Newfoundland was officially established on Feb. 3, 1939, and almost immediately following, the Marconi station at Mount Pearl was acquired, new equipment installed, and adequate studios constructed in the Newfoundland Hotel in St. John's. This new station, with 12500 watts, was dedicated on March 13.

Applications to the FCC

(Only applications which are set for hearing are shown in this list)

- KAND, Corsicana, CP 100 (.25) unlt'd. (Com).
 KECA, Los Angeles, CP move to San Diego (E).
 KEEN, Seattle, CP 1420 kcs, 100 (.25) unlt'd (E).
 KERN, Bakersfield, CP 1380 kcs, 1 kw. (C).
 KEX, Portland, CP 1160 kcs, unlt'd. (E).
 KFAB, Lincoln, CP DA night, 1080 kcs, 50 kw unlt'd.
 KFEO, St. Joseph, CP 500 w. nights, 2500 w. to ss at San Francisco (C).
 KFJZ, Fort Worth, CP 930 kcs, 500 w. unlt'd, DA night (E).
 KFSD, San Diego, CP 5 kw. (C).
 KGKL, San Angelo, mod. lic. 250 w. unlt'd. (C).
 KGNO, Dodge City, CP 500 w. unlt'd. (C).
 KMJ, Fresno, CP 1000 (5). (C).
 KOH, Reno, CP changes freq. to 630, pwr. to 1 kw.
 KOVC, Valley City, CP 1340 kcs, 500 (1) (E). DA night (C).
 KOY, Phoenix, mod. of lic. for 550 kcs. (C).
 KPAC, Ft. Arthur, CP 1220 kcs, 500 w. unlt'd DA night (E).
 KRBA, Lufkin, CP 250 w. (E).
 KRKO, Everett, CP 100 (.25) unlt'd. (E).
 KRRV, Sherman, CP 880 kcs, 1 kw unlt'd, DA. (E).
 KRSC, Seattle, CP 1 kw. (E).
 KSAL, Salina, CP 1120 kcs, 500 (1). (C).
 KSAM, Huntsville, CP 250 w. (E).
 KSCJ, Sioux City, CP 5 kw. unlt'd. (E).
 KSEI, Pocatello, CP 600 kcs, 1 kw. unlt'd. (C).
 KTAT, Ft. Worth, CP 1000 (5), and move to Wichita Falls. (E).
 KTBS, Shreveport, CP 620 kcs, 1000 (5) unlt'd. (C).
 KTEM, Temple, mod. of lic. 100 (.25) unlt'd. (E).
 KTKC, Visalia, CP 890 kcs, 1 kw unlt'd, DA nite (C).
 WALA, Mobile, CP 1 kw unlt'd. (C).
 WAZL, Hazelton, mod. lic. 1320 kcs, 100 w. unlt'd. (E).
 WBAX, Wilkes Barre, renewal of lic. set for hearing (C).
 WBNX, New York, CP 5 kw, move trans. to Carlstadt, N. J. (C).
 WBOW, Terre Haute, CP 1200 kcs. (C).
 WCBS, Springfield, CP 1290, 500 (1). (C).
 WCSC, Charleston, CP 100 w. (C).
 WDAE, Tampa, mod. lic. 780 kcs, (E. rec. denial). (C).
 WDAN, Danville, mod. lic. for 100 (.25) unlt'd. (E).
 WDEL, Wilmington, mod. of CP for 1 kw. (E).
 WDGY, Minneapolis, mod. of lic. for unlt'd. (C).
 WDRC, Hartford, CP 5 kw. (C).
 WEAU, Eau Claire, CP 5 kw. (E).
 WEBQ, Harrisburg, mod. lic. 1310 kcs. 100 (.25) unlt'd. (C).
 WEDC, Chicago, CP 100 (.25) specified hrs. (C).
 WFMD, Frederick, CP 500 w. unlt'd, DA nite (C).
 WGRG, New Albany, CP 880 kcs, 250 w. unlt'd, DA nite (E).
 WGTM, Wilson, CP 1240 kcs, 500 w. (E).
 WHA, Madison, CP 670 kcs, 50 kw. (facilities of WMAQ) (E).
 WHAI, Greenfield, mod. of lic. 100 (.25) unlt'd. (E).
 WHDH, Boston, CP 5 kw. unlt'd. (E).
 WHLS, Port Huron, mod. of lic. 100 (.25) unlt'd. (C).
 WIP, Philadelphia, CP 5 kw, move trans. to Brookland, N. J., DA (E).
 WIRB, Indianapolis, mod. of CP for 5 kw. (F).
 WIS, Columbia, spec. exp. authority for new satellite station at Sumter, S. C., 560 kcs, 10 to 100 w. from LS to sunrise (E).
 WJAC, Johnstown, mod. of lic. 1370 kcs, 100 (.25) unlt'd (E).
 WJBL, Decatur, CP 1310 kcs, 100 (.25) unlt'd. (C).
 WJWB, New Orleans, mod. of lic. unlt'd. (C).
 WJMS, Ashland, CP 1370 kcs, 100 w. unlt'd. (E).
 WJNO, W. Palm Beach, mod. lic. 250 w. unlt'd. (E).
 WJRD, Tuscaloosa, mod. of lic. for 100 (.25) unlt'd. (C).
 WKOK, Sunbury, mod. of lic. unlt'd. (C).
 WLAC, Nashville, CP 50kw. (E).
 WLAW, CP DA nite, 1 kw to ss at San Francisco (C).
 WMBC, Detroit, CP 600 kcs, 250 w. unlt'd. (E).
 WMBR, Jacksonville, CP 1120 kcs, 500 (1). (E).
 WMFF, Plattsburg, CP 1240 kcs, DA, 1 kw. (E).
 WMIN, St. Paul, mod. lic. 250 w. unlt'd. (C).
 WNAC, Boston, CP 5 kw. (C).
 WOC, Davenport, CP 1390 kcs. 1 kw. unlt'd. (E).
 WOMI, Owensboro, mod. lic. 1200 kcs. (C).
 WPG, Atlantic City, CP unlt'd, move studio to New York, trans. to Kearney, N. J., requesting facilities of WBIL and w/OV. CP change owner to Greater N. Y. Brcdstg. Corp. (E).
 WPRa, Mayaguez, CP 780 kcs, 1000 (2.5) unlt'd. (C).
 WRAW, Reading, CP 250 w. (C).
 WREN, Lawrence, CP move to Kansas City. (E).
 WRR, Dallas, CP 1 kw (E).
 WSEA, Montgomery, CP 1410 kcs, 1 kw unlt'd. (E).
 WSJS, Winston Salem, CP 100 (.25) (E).
 WSNJ, Bridgeton, CP 100 (.25) unlt'd (C).
 WSUI, Iowa City, CP 1000 (5). (E).
 WTAQ, Green Bay, Wis. CP 1000 (5). (C).
 WTAR, Norfolk, CP 5 kw. (E).
 WTEL, Philadelphia, mod. of lic. to share with WHAT (E).
 WTHT, Hartford, CP 100 (.5). (C).

WTMV, E. St. Louis, mod. of lic. 250 w. (E).
 WTOLO, Toledo, mod. of lic. unltld. (E).

Applications For New Stations

- Akron, Ohio, Summit Radio Corp., 1530 kcs, 1 kw unltld. (E).
 Ashland, Wis., WJMS, Inc., 1370 kcs, 100 w. unltld. (C).
 Asheville, N. C., Asheville Daily News, 1370 kcs, 100 w. unltld. (C).
 Asheville, N. C., Publix Bamford Theaters, 1430 kcs, 500 (1). (E).
 Bellingham, Wash., Bell Brdcastg. Co., 1200 kcs, 100 (.25). (E).
 Birmingham, Ala., Birm. News Co., 590 kcs, 1 kw. (C).
 Bowling Green, Ky., B. G. Brdcastg. Co., 1310 kcs, 100 (.25). (C).
 Brown City, Mich., Thumb Brdcastg. Co., 880 kcs, 1 kw. days (E).
 Brunswick, Ga., Coastal Brdcastg. Co., 1500 kcs, 100 (.25) unltld. (E).
 Cleveland, Ohio, Cuyahoga Valley Brdcastg. Co., 1500 kcs, 100 w. days. (E).
 Columbus, Miss., Birney Imes, 1370 kcs, 100 (.25) unltld. (E).
 Concord, N. C., Cabarrus Brdcastg. Co., 1370 kcs, 100 (.25) unltld. (E).
 Elizabeth City, N. C., 1370 kcs, 100 (.25) (E).
 Ely, Wyo., Eastern Nev. Brdcastg. Co., 1500 kcs, 100 w. days (E).
 Erie, Pa., Presque Isle Brdcastg. Co., 1500 kcs, 100 (.25) (E).
 Everett, Wash., Cascade Brdcastg. Co., 1420 kcs, 100 (.25) (E).
 Florence, S. C., Pee Dee Brdcastg. Co., 1200 kcs, 100 (.25) (requests facilities of WOLS) (E).
 Fremont, Nebr., Nebr. Brdcastg. Corp., 1370 kcs, 100 (.25) (E).
 Grants Pass, Ore., Southern Ore. Brdcastg. Co., 1310 kcs, 100 w. unltld. (C).
 Hancock, Mich., Copper Country Brdcastg. Co., 1370 kcs., 100 (.25) S.H. (E).
 Hastings, Nebr., South Nebr. Brdcastg. Co., 920 kcs, 1000 (5) (E).
 Herrin, Ill., Orville W. Lyerla, 1310 kcs., 100 (.25) unltld. (C).
 Kingston, N. Y., Kingston Brdcastg. Corp., 1500 kcs, 100 w. days.
 Louisville, Ky., Gateway Brdcastg. Co., 880 kcs, 500 w. (C).
 Marinette, Wis., M & M Brdcastg. Co., 570 kcs, 250 w. days (C).
 Martinsville, Va., Mart'le Brdcastg. Co., 1420 kcs, 100 (.25) (C).
 Marysville, Calif., Yuba-Sutter Broadcasters, 1320 kcs, 250 w. (C).
 Marysville, Calif., Calaway and Hooper, 1420 kcs, 100 (.15) unltld. (E).
 McComb, Miss., McComb Brdcastg. Corp., 1200 kcs, 100 w. days (E).
 Montebello, Calif., Bureau of Education, 1420 kcs, 100 w. days (contingent upon KECA's move to San Diego). (C).
 Niagara Falls, N. Y., 1260 kcs, 1 kw. (C).
 Norfolk, Va., Colonial Brdcastg. Corp., 1370 kcs, 100 (.25) (C).
 North Sacramento, Calif., Grant Union High School, 1370 kcs, 100 w. days S. (C).
 Ogdensburg, N. Y., St. Lawrence Brc. Corp., 1310 kcs, 100 (.25) (C).
 Olney, Ill., Olney Brc. Co., 1210 kcs, 100 (.25) (E).
 Panama City, Fla., Panama City Brdcastg. Co., 1200 kcs., 100 (.25) unltld. (E).
 Phoenix, Ariz., M. C. Reese, 1200 kcs, 100 (.25) (E).
 Pontiac, Mich., King-Trendle Brdc. Corp., 1440 kcs, 250 w. (C).
 Pontiac, Mich., Pontiac Brc. Co., 1100 kcs, 1 kw days. (C).
 Pontiac, Mich., Geo. B. Storer, 600 kcs, 500 (1). (C).
 Providence, R. J., Peter J. Calderone, 1270 kcs, 250 w. days. (E. rec. denial). (C).
 Provo, Utah, Citizens Voice and Air Show, 1210 kcs. 100 (.25). unltld. (C).
 Provo, Utah, Provo Brdcastg. Co., 1210 kcs. 100 (.25) unltld. (C).
 Rochester, N. Y., Edward J. Doyle, 1270 kcs, 500 w. days. (E).
 Rockville, Md., Monocacy Brc. Co., 1140 kcs, 250 w. days (C).
 Saginaw, Mich., Saginaw Brc. Co. Co., 950 kcs. (C).
 Sandusky, Mich., Thumb Brc. Co., 880 kcs, 1 kw days. (E).
 San Juan, P. R., United Theaters, Inc., 580 kcs, 1000 w. (C).
 San Juan, P. R., E. R. Sanfeliz, 580 kcs., 1 kw. (C).
 Santa Monica, Calif., A. E. Austin, 1160 kcs, 100 (.25). (C).
 Sedalia, Mo., Drohlich Bros., 1500 kcs, 100 (.25) (E).
 Spartanburg, S. C., Spartanburg Advertising Co., 1370 kcs. 100 (.25) unltld. (E).
 Springfield, Ohio, S. Brc. Corp., 1310 kcs, 100 w. (E).
 Suffolk, Va., S. Brc. Corp., 1420 kcs, 100 (.25). (C).
 Sumter, S. C., J. Samuel Brody, 1310 kcs, 100 (.25) (E).
 Sweetwater, Tex., 1210 kcs, 250 w. days (E).
 Tacoma, Tacoma Brc. Co., 1420 kcs, 100 (.25) (C).
 Tacoma, Michael J. Mingo, 1400 kcs, 250 w. (C).
 Topeka, Kans., W. B. Greenwald, 1370 kcs, 100 (.25) unltld. (E).
 Vincennes, Ind., Vin. Newspapers, Inc., 1420 kcs., 100 w. (C).
 Washington, D. C., Lawrence J. Heller, 1310 kcs, 100 (.25) (Facilities of WOL) (C).
 Washington, D. C., Lawrence J. Heller, synchronous station on 1310 kcs, 10 to 100 w. unltld, to be used with above station if application is granted (C).
 Worcester, Mass., Central Brc. Corp., 1500 kcs, 100 (.25) (C).
 Worcester, Mass., C. T. Sherer Co., 1200 kcs., 100 (.25). (E).

Applications, listed here last month, which have been withdrawn or denied.

- KCMC, Texarkana, CP 1340 kcs, 500 (1) unltld. (C).
 KFEL, Denver, CP 1 kw. (C).
 KGCI, Coeur d'Alene, mod. of CP for 1200 kcs, 100 w. days (C).
 KGEK, Sterling, CP move to Denver. (C).
 KLS, Oakland, CP 1280 kcs, 500 w. unltld (C).
 KMED, Medford, CP 1 kw unltld. (C).
 KVOD, Denver, CP 630 kcs, 1 kw. (C).
 WEXL, Royal Oak, SP 1300 kcs, 250 w. (E).
 WFIL, Philadelphia, CP 1000 (5) unltld. (E).
 WRBL, Columbus, CP 1330 kcs, 1 kw. (C).
 Dalhart, Texas, Dalhart Brdcastg. Co., 1500 kcs,

- 10w (.25) (C).
 Elgin, Ill., Elgin Brdctsg. Ass'n., 1170 kcs, 100 w. days (E).
 Evanston, Ill., Northwestern Brdctsg. Assn., 1310 kcs, 100w. (E).
 Modesto, Calif., Thomas McTammany, 1340 kcs, 500 w. (C).
 Modesto, Calif., Wm. H. Bates, 740 kcs, 250 w. days (facilities of KTRB) (E).
 Proctorville, Ohio, David F. Thomas, CP spec. em. station, 2726 kcs, 5 w, in addition to anyone of 3 freqs. 31420, 39660, 39860 kcs, 15 w.



Shortwave station PPO in Rio de Janeiro sends this brown and red verification. Rio's famous harbor is shown in the view, with PPO's aerial imposed upon it. (Courtesy of Dick Anderson).

Stations Using Special Frequencies

Call	City	Assigned	Using
KIRO	Seattle	650	710
KTHS	Hot Springs	1040	1060
KWKH	Shreveport	850	1100
WESG	Elmira	1040	850
WTIC	Hartford	1060	1040

The Month's Changes in Station Data

New

790	6WN	Perth, Australia
1200	WMOB	Mobile, Ala.
1210	WINN	Louisville, Ky.
1310	CMKE	Manzanillo, Cuba
1370	WGBR	Goldsboro, N. C.
1500	.....	Ocala, Fla.

Frequency

550	CMW	Havana, Cuba, from 880
730	XEQ	Mexico City, D. F., from 710
785	ZNS	Nassau, Bahamas, from 540
880	CMX	Havana, Cuba, from 1260
960	CBM	Montreal, P. Q., from 1050
1220	WGNV	Newburgh, N. Y., from 1210
1240	WHBF	Rock Island, Ill., from 1210
1260	CMBD	Havana, Cuba, from 550
1420	CBY	Toronto, Ont., from 960

Power

580	WILL	Urbana, Ill., 5000 from 1000
700	WLW	Cincinnati, Ohio, 50,000 from 500,000 (Termination of Special Experimental Authority)
1520	TGW	Guatemala City, 5000 from 1000

Location

540	CBK	Watrous, Sask., from Saskatoon
740	KMMJ	Grand Island, Nebr., from Clay Center
1510	CKCR	Kitchener, Ont., from Waterloo

Call Letters

1210	WLOK	Lima, Ohio, from WBLY
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Owner

600	WREC	Broadcasting Service, Memphis, Tenn.
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1420 KRBM KRBM Broadcasters, Bozeman, Mont.

1420 WGPC Albany Broadcasting Co., Albany, Ga.

Network

1200 WKBO Harrisburg, Pa., new NBC

Delete

1420 KUMA Yuma, Ariz.

Permit to Change Power

590	WKZO	Kalamazoo, Mich., to 250 (1).
770	KFAB	Lincoln, Nebr., to 50000.
850	WKAR	E. Lansing, Mich., to 5000.
850	WWVL	New Orleans, La., to 50000.
880	WRNL	Richmond, Va., to 1000.
890	KFNF	Shenandoah, Iowa, to 1000 (5).
900	WELI	New Haven, to 250 (.5)
900	KGBU	Ketchikan, T. A., to 1000.
1020	WDZ	Tuscola, Ill., to 1000.
1040	KRLD	Dallas, Texas, to 50000.
1110	WRVA	Richmond, Va., to 50000.
1190	WATR	Waterbury, Conn., to 250.
1250	BIT	Yakima, Wash., to 500 (1).
1350	KWK	St. Louis, Mo., to 5000.
1370	KAST	Astoria, Ore., to 100 (.25).
1370	KSLM	Salem, Ore., to 500.
1400	KLO	Ogden, Utah, to 1000 (5).
1430	WHP	Harrisburg, Pa., to 1000 (5).
1460	KSTP	St. Paul, Minn., to 50000.
1460	WJSV	Washington, D. C., to 50000.
1490	WCXY	Covington, Ky., to 50000.

Permit to Change Frequency

770	KFAB	Hincoln, Nebr., to 1080.
1190	WATR	Waterbury, Conn., to 1290.
1370	KAST	Astoria, Ore., to 1200.
1370	KSLM	Salem, Ore., to 1360.

Permit to Change Location

1200 WHBY Green Bay, Wis., to Appleton.

**NORTH AMERICAN B. C. STATIONS BY FREQUENCIES
WITH WEEKDAY TIME ON THE AIR**

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. Daytime power is shown in parentheses in fourth column, in kilowatts. Thus: (.25) indicates 250 watts. Exact frequencies, when not multiples of ten are shown in the fourth column.

Second Column Symbols

- a Verifies for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verifies—no postage required.
- e Verifies for International Reply Coupon
- f Verifies for 10 cents.
- g Card for postage; veri stamp for 10c.
- z No information available.

Fourth Column Symbols

- A Status in doubt.
- B National "Blue" Network.
- C Columbia Network.
- D Daytime only.
- F Canadian Network.

- G Assigned this frequency but using another under Special Authorization.
- 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.
- N National "Red" and "Blue" Networks.
- P Has Construction Permit only.

- Q Station not in use.
 - R National "Red" Network.
 - S Sundays only.
 - Sy Synchronized.
 - X Has Permit to change power.
 - Y Has Permit to change location.
 - Z Has Permit to change frequency.
- 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.

LS means Local Sunset, and always refers to sunset at the transmitter.

540 kcs. (555.2 m.)



EASTERN STANDARD TIME

- CBK z 50000 P
- CJRM a 1000 F
- ZNS d 400

- Watrous, Sask.
- Regina, Sask. 9:30 am-1:30 am.
- Nassau, Bahamas

550 kcs. (545.1 m.)



- CFNB a 500 F(1)
- CMW c 1400
- KFUE a 500 2(1)
- KFYR a 1000 N(5)
- KOAC a 1000
- KSD a 1000 2R(5)
- KTSA a 1000 C(5)
- WDEV a 500 D
- WGR a 1000 C(5)
- WKRC a 1000 C(5)
- WSVA a 500 D

- Fredericton, N. B.
- Havana, Cuba
- St. Louis, Mo. 8-9 am; 10:30-10:45 am; 1:15-1:45 pm; 4-4:45 pm.
- Bismarck, N. Dak. 8 am-1 am.
- Corvallis, Ore. noon-midnight.
- St. Louis, Mo.
- San Antonio, Tex.
- Waterbury, Vt. 7 am-LS.
- Buffalo, N. Y.
- Cincinnati, Ohio 6:30 am-2 am.
- Harrisonburg, Va. 6:30 am-5 pm.

560 kcs. (535.4 m.)



- KFDM a 500 N(1)
- KLZ a 1000 C(5)
- KSFO a 1000 C(5)
- KWTO a 5000 D
- WFIL a 1000 BM
- WIND a 1000 (5)
- WIS a 1000 N(5)
- WQAM a 1000 C

- Beaumont, Texas
- Denver, Colo. 8 am-2 am.
- San Francisco, Calif. 9:10 am-3 am.
- Springfield, Mo.
- Philadelphia, Pa. 7 am-12:30 am.
- Gary, Ind. 7 am-5 am.
- Columbia, S. C. 6:45 am-midnight.
- Miami, Fla. 6:30 am-midnight.

570 kcs. (526 m.)



- KGKO a 1000 B(5)
- KMTR a 1000
- KVJ a 1000 C(5)
- TTSCV z 100 575
- WKBN a 500 1C
- WMCA a 1000
- WNAX a 1000 C(5)
- WOSU a 750 1(1)
- WSYR a 1000 Ba
- WSYU a 1000 Qa
- WWNC a 1000 N

- Ft. Worth, Texas
 - Los Angeles, Calif. 8 am-2 am.
 - Tacoma, Wash. 9 am-3 am.
 - Alajuela, Costa Rica
 - Youngstown, Ohio
 - New York, N. Y.
 - Yankton, S. Dak.
 - Columbus, Ohio
 - Syracuse, N. Y.
 - Syracuse, N. Y.
 - Asheville, N. C.
- MTWTF, 9-11 am; MTWT, 1-3 pm; M, 8-10 pm; W, 8-11 pm.
6 am-1 am.

Monday Thru Friday

Eastern Standard

580 kcs. (516.9 m.)



CKPR	a	100	....	Prince Rupert, B. C.
CHRC	a	100	....	Quebec, P. Q.
CKCL	a	100	F	Toronto, Ont.
CKPR	a	1000	....	Fort William, Ont.
CKUA	c	500	F	Edmonton, Alta.

7:30 am-midnight.
7:30 am-12:30 am.
8 am-11:30 pm.
MTWTF, 1:30-3 pm; Th, 4-5 pm; M, 4-5:15 pm; TWF, 4-5:30 pm; MTF, 7-10:15 pm; Th, 7-10:30 pm; W, 7 pm-midnight.

KMJ	a	1000	KN	Fresno, Calif.
KSAC	a	500	2(1)	Manhattan, Kans.
WCHS	a	500	C(1)	Charleston, W. Va.
WDBO	a	1000	C(5)	Orlando, Fla.
WIBW	a	1000	C2(5)	Topeka, Kans.

10:30-11:30 am; 1:30-3 pm; 5:30-6:30 pm.
6 am-1 am.
7 am-12:05 am.
5:30-10:30 am; 11:30 am-1:30 pm; 3:30 pm-1 am.
8:30 am-LS.
7:30 am-midnight.

WILL	a	5000	D	Urbana, Ill.
WTAG	a	1000	R	Worcester, Mass.
XEMU	z	250	....	Piedras Negras, Coah.

590 kcs. (508.2 m.)



CMCY	a	15000	....	Havana, Cuba
KHQ	a	1000	R(5)	Spokane, Wash.
WEEI	a	1000	C(5)	Boston, Mass.
WKZO	a	1000	BDX	Kalamazoo, Mich.
WOW	a	1000	R(5)	Omaha, Nebr.

9:45 am-3 am.
6:30 am-1 am.
7 am-5:15 pm.
6:45 am-2 am.

600 kcs. (499.7 m.)



CFCF	a	500	BF	Montreal, P. Q.
CJOR	a	500	....	Vancouver, B. C.
FON	a	250	609	St. Pierre, Miquelon
KFSD	a	1000	B	San Diego, Calif.
WCAO	g	500	C(1)	Baltimore, Md.
WICC	f	500	BM(1)	Bridgeport, Conn.
WMT	a	1000	BM(5)	Cedar Rapids, Iowa
WREC	a	1000	C(5)	Memphis, Tenn.

7:45 am-1 am.
10 am-3 am.
10 am-3 am.
7 am-midnight.
6 am-1:30 am.

610 kcs. (491.5 m.)



CHNC	a	1000	F	New Carlisle, P. Q.
KFAR	z	1000	P	Fairbanks, Alaska
KFRC	b	1000	M(5)	San Francisco, Calif.
WCLE	a	500	DM	Cleveland, Ohio
WDAF	a	1000	R(5)	Kansas City, Mo.
WIOD	a	1000	Na	Miami, Fla.

7 am-11:15 pm.
6:45 am-LS.
7 am-1 am.
MTTF, 6:45 am-midnight; W, 6:45 am-1 am.

WIP	a	1000	....	Philadelphia, Pa.
WMBF	a	1000	Qa	Miami, Fla.

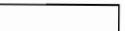
620 kcs. (483.6 m.)



KGW	a	1000	R(5)	Portland, Ore.
KTAR	a	1000	N	Phoenix, Ariz.
KWFT	z	250	(1)P	Wichita Falls, Tex.
TIPG	b	5000	625	San Jose, Costa Rica
WFLA	a	1000	Na(5)	Tampa, Fla.
WHJB	a	250	CD	Greensburg, Pa.
WLBZ	a	500	MN(1)	Bangor, Maine
WSUN	a	1000	Na(5)	St. Petersburg, Fla.
WTMJ	a	1000	N(5)	Milwaukee, Wis.

MWF, 7 am-1 am.
TThSat, 7:55 am-1 am.

630 kcs. (475.9 m.)



CFCO	a	100	F	Chatham, Ont.
CFCY	a	1000	F	Charlottetown, P.E.I.
CJRC	a	1000	F	Winnipeg, Man.
CKOV	a	100	F	Kelowna, B. C.
CMCD	a	15000	....	Havana, Cuba
KFRU	a	500	1(1)	Columbia, Mo.
KGFX	a	200	D	Pierre, S. Dak.

7:30 am-1:30 pm;
4:30-10:30 pm.
8:30 am-2 am.
10 am-2 am.
M, 7 am-9:30 pm; TWT, 7 am-1 am; F, 7 am-6:30 pm.

Monday Thru Friday

Eastern Standard

WGBF	a	500	N(1)	Evansville, Ind.	M, 7:30 am-8:30 pm; 9:30-1 am; T Th, 7 am-8 pm; W, 7:30 am-8 pm; F, 7:30 am-1 am.
WMAL	a	250	B(.5)	Washington, D. C.	
WPRO	a	500	C(1)	Providence, R. I.	6 am-1 am.
XEZ	a	500	....	Merida, Yuc.	11 am-2:30 pm; 7:15 -11 pm.

640 kcs. (468.5 m.)

KFI	f	50000	R	Los Angeles, Calif.	10 am-3 am.
WGAN	a	500	L	Portland, Me.	7 am-3 hrs after LS.
WHKC	a	500	ML	Columbus, Ohio	6:30 am-8:30 pm.
WOI	a	5000	D	Ames, Iowa	7:30 am-LS.
XEBX	z	250	....	Sabinas, Coah.	
YSS	a	500	....	San Salvador, E. S.	

650 kcs. (461.3 m.)

TIX	b	1000	....	San Jose, Costa Rica	
WSM	a	50000	KMN	Nashville, Tenn.	

660 kcs. (454.3 m.)

CMCR	z	200	....	Havana, Cuba	
WAAW	a	500	D	Omaha, Nebr.	7 am-6 pm.
WEAF	a	50000	R	New York, N. Y.	6:30 am-1 am.
XEAL	z	1000	A	Mexico City, D. F.	
XEAO	a	250	Mexicali, B. Cfa.	

670 kcs. (447.5 m.)

WMAQ	c	50000	R	Chicago, Ill.	8 am-2 am.
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680 kcs. (440.9 m.)

CMHW	f	200	Santa Clara, Cuba	8 am-noon; 3-11 pm.
KFEQ	a	2500	D	St. Joseph, Mo.	
KPO	a	50000	R	San Francisco, Calif.	
VAS	f	2000	685	Glace Bay, N. S.	noon and 11 pm.
VOWR	c	500	681	St. John's, Nfld.	
WLAW	a	1000	D	Lawrence, Mass.	7 am-LS.
WPTF	a	5000	JN	Raleigh, N. C.	6:30 am-11 pm.

690 kcs. (434.5 m.)

CMBG	a	200	....	Havana, Cuba	
CFRB	a	10000	C	Toronto, Ont.	7:30 am-midnight.
CJ CJ	a	100	F	Calgary, Alta.	9 am-1 am.
XET	a	5000	....	Monterrey, N. L.	

700kcs. (428.3 m.)

WLW	a	50000	KMN	Cincinnati, Ohio	5:45 am-2 am.
W8XO	a	50000	....	Cincinnati, Ohio	

710 kcs. (422.3 m.)

CMKS	a	200	....	Guantanamo, Cuba.	9 am-11 pm.
KIRO	a	1000	CHJ	Seattle, Wash.	
KMPC	a	500	L	Beverly Hills, Calif.	
WOR	a	50000	KM	Newark, N. J.	6:25 am-1:30 am.

720 kcs. (416.4 m.)

CMK	a	200	....	Havana, Cuba	
TIGH	z	600	725	San Jose, Costa Rica	
WGN	c	50000	KM	Chicago, Ill.	
XEH	a	250	....	Monterrey, N. L.	

730 kcs. (410.7 m.)

CFPL	a	100	F	London, Ont.	
CJCA	a	1000	F	Edmonton, Alta.	8:30 am-2 am.

Monday Thru Friday

Eastern Standard

CKAC	a	5000	C	Montreal, P. Q.
XELO	a	50000	....	Tijuana, B. Cfa.
YFPN	a	100000	QA	Piedras Negras, Coah.
XEQ	a	50000	....	Mexico City, D. F.

740 kcs. (405.2 m.)

CMJX	z	200	....	Camaguey, Cuba	
KMMJ	a	1000	D	Grand Island, Nebr.	
KTRB	a	250	D	Modesto, Calif.	
WHEB	a	250	D	Portsmouth, N. H.	7 am-LS at Atlanta
WSB	a	50000	R	Atlanta, Ga.	

750 kcs. (399.8 m.)

CMBL	a	200	....	Havana, Cuba	
KGU	a	2500	LN	Honolulu, Hawaii	11:30 am-4:30 am.
TIRM	z	500	....	San Jose, Costa Rica	
WJR	a	50000	C	Detroit, Mich.	
XEAA	a	200	....	Mexicali, B. Cfa.	
XEAM	z	25	....	Matamoros, Tams.	

760 kcs. (394.5 m.)

KXA	a	250	(.5) X	Seattle, Wash.	
WBAL	a	2500	BHMSy	Baltimore, Md.	
WCAL	a	5000	2D	Northfield, Minn.	7:30-11:30 am; 1:30-2:30 pm.
WEW	a	1000	D	St. Louis, Mo.	7 am-LS.
WIZ	a	50000	BSy	New York, N. Y.	6:30 am-1 am.
WLB	a	5000	2D	Minneapolis, Minn.	

770 kcs. (389.4 m.)

CMKW	z	200	....	Santiago, Cuba	
KFAB	a	10000	CSyXZ	Lincoln, Nebr.	
TILJ	z	450	775	San Jose, Costa Rica	
WBBM	a	50000	CSy	Chicago, Ill.	

780 kcs. (384.4 m.)

CHWK	f	100	F	Chilliwack, B. C.	11 am-midnight.
CKSO	a	1000	F	Sudbury, Ont.	7:45 am-midnight.
CMCU	a	200	....	Havana, Cuba	
KEHE	a	1000	(5)	Los Angeles, Calif.	
KFDY	a	1000	D	Brookings, S. Dak.	
KFQD	c	250	....	Anchorage, Alaska	
KGHL	a	1000	N(5)	Billings, Mont.	
KWLK	a	250	D	Longview, Wash.	10 am-LS.
WEAN	a	1000	BM(5)	Providence, R. I.	
WMC	a	1000	R(5)	Memphis, Tenn.	7 am-1 am.
WPIC	a	250	D	Sharon, Pa.	6:30 am-LS.
WTAR	g	1000	N	Norfolk, Va.	6:30 am-1 am.
XEN	a	1000	...	Mexico City, D. F.	
ZNS	d	400	785?	Nassau, Bahamas	

790 kcs. (379.5 m.)

CMGH	a	200	....	Matanzas, Cuba	
KGO	a	7500	B	San Francisco, Calif.	
KOAM	a	1000	DN	Pittsburg, Kans.	7 am-LS.
WGY	a	50000	R	Schenectady, N. Y.	6:45 am-1 am.

800 kcs. (374.8 m.)

HIX	a	800	....	Ciudad Trujillo, D. R.	
TIXD	z	1000	....	San Jose, Costa Rica	
WBAP	a	50000	Na	Fort Worth, Tex.	6:45-8 am; 9:30-11:30 am; 1:30-4 pm; 6:30-7:30 pm; 8-11 pm.

Monday Thru Friday

Eastern Standard

WFAA	a	50000	Na	Dallas, Texas	8-9:30 am; 11:30 am-1:30 pm; 4-6:30 pm;
WTBO	a	250	D	Cumberland, Md.	7:30-8 pm. 7:30 am-6:30 pm.

810 kcs. (370.2 m.)

CMCF	a	5000		Havana, Cuba	8 am-midnight.
WCCO	g	50000	C	Minneapolis, Minn.	7 am-1 am.
WNYC	a	1000	D	New York, N. Y.	
XEBZ	a	100	....	Mexico City, D. F.	
XEDF	a	100	....	Nuevo Laredo, Tams.	

820 kcs. (365.6 m.)

WHAS	a	50000	C	Louisville, Ky.	
XEBG	z	1000	....	Tijuana, B. Cfa.	

830 kcs. (361.2 m.)

KOA	a	50000	R	Denver, Colo	
TIEP	e	3000	....	San Jose, Costa Rica	
WEEU	a	1000	DR	Reading, Pa.	
WHDH	a	1000	L	Boston, Mass.	
WRUF	a	5000	L	Gainesville, Fla.	

860 kcs. (348.6 m.)

CBL	a	50000	F	Toronto, Ont.	7:45 am-12:30 am.
CFQC	a	1000	F	Saskatoon, Sask.	
VOGY	a	400	....	St. Johns, Nfld.	
XERA	a	250000	....	Villa Acuna, Coah.	

850 kcs. (352.7 m.)

CMCM	a	200	....	Havana, Cuba	
KIEV	a	250	D	Glendale, Calif.	
WESG	a	1000	CDH	Elmira, N. Y.	7:30 am-LS at New Orleans.
WKAR	a	1000	DX	E. Lansing, Mich.	7 am-5 pm.
WWL	a	50000	CJX	New Orleans, La.	

860 kcs. (348.6 m.)

CMJA	a	200	....	Camaguay, Cuba.	
WABC	a	50000	Ca	New York, N. Y.	
WBOQ	a	50000	Qa	New York, N. Y.	
WHB	a	1000	DM	Kansas City, Mo.	
XEMO	a	5000	....	Tijuana, B. Cfa.	

870 kcs. (344.6 m.)

WENR	c	50000	Ba	Chicago, Ill.	4-7:30 pm; 9 pm-2 am.
WLS	a	50000	Ba	Chicago, Ill.	
XEFB	a	200	....	Monterrey, N. L.	
XERC	z	500	A	Mexico City, D. F.	

880 kcs. (340.7 m.)

CBO	a	1000	F	Ottawa, Ont.	
CFJC	a	1000	F	Kamloops, B. C.	
CMX	e	20000	....	Havana, Cuba	
KFKA	a	500	2M(1)	Greeley, Colo.	7:30-9:15 am; 11 am-4:30 pm; 6:30-8:30 pm; 10:30 pm-2 am.
KLX	a	1000	....	Oakland, Calif.	
KPOF	a	1000	2	Denver, Colo.	9:15-10:45 am; 4:30-6:30 pm; 8:30-10:30 pm.
KVAN	z	250	DP	Vancouver, Wash.	
TILS	b	500	....	San Jose, Costa Rica	

Monday Thru Friday

Eastern Standard

WCOC	a	1000	C	Meridian, Miss.	
WGBI	f	500	C1(1)	Scranton, Pa.	7 am-1 am.
WQAN	a	500	1(1)	Scranton, Pa.	
WRNL	a	500	DX	Richmond, Va.	6 am-LS.
WSUI	a	500	(1)	Iowa City, Iowa	9 am-1:30 pm; 2-10 pm.

890 kcs. (336.9 m.)

KARK	a	500	N(1)	Little Rock, Ark.	
KFNF	a	500	2X(1)	Shenandoah, Iowa	6:30-10:30 am; 11:30 am-5 pm; 6-10:30 pm.
KFPY	a	1000	C(5)	Spokane, Wash.	
KUSD	a	500	2	Vermillion, S. Dak.	
WBAA	a	500	(1)	W. Lafayette, Ind.	noon-6 pm.
WGST	a	1000	C(5)	Atlanta, Ga.	
WJAR	a	1000	R(5)	Providence, R. I.	
WMMN	a	1000	C(5)	Fairmont, W. Va.	6:30 am-1:00 am.
XEW	a	100000	....	Mexico City, D. F.	

900 kcs. (333.1 m.)

KGBU	a	500	X	Ketchikan, Alaska	
KHJ	a	1000	M(5)	Los Angeles, Calif.	9 am-4 am.
KSEI	a	250	N(1)	Pocatello, Idaho	
WBEN	a	1000	KR(5)	Buffalo, N. Y.	
WELI	a	500	DX	New Haven, Conn.	
WFMD	a	500	D	Frederick, Md.	(6:30 am-LS.
WJAX	a	1000	N(5)	Jacksonville, Fla.	6:45 am-1 am.
WKY	a	1000	N(5)	Oklahoma City, Okla.	
WLBL	a	5000	D	Stevens Point, Wis.	9 am-5:15 pm.
WTAD	a	1000	D	Quincy, Ill.	

910 kcs. (329.6 m.)

CBF	a	50000	FN	Montreal, P. Q.	
CJAT	a	1000	F	Trail, B. C.	
CKY	a	15000	F	Winnipeg, Man.	8:30 am-1:30 am.
CMKD	a	1000	....	Havana, Cuba	
CMOA	z	200	....	Havana, Cuba	
TIRS	z	250	915	San Jose, Costa Rica	
XENT	a	150000	A	Nuevo Laredo, Tams.	7 pm-8:15 am.

920 kcs. (325.9.)

CMHT	z	200	....	Trinidad, Cuba.	
KFEL	a	500	Ma	Denver, Colo.	
KOMO	a	1000	R(5)	Seattle, Wash.	10 am-3 am.
KPRC	a	1000	R(5)	Houston, Texas	7 am-1 am.
KVOD	a	500	Ba	Denver, Colo.	10:30 am-12:30 pm; 2:30-5 pm; 6:30-8 pm; 9:30 pm-2:30 am.
WAAF	a	1000	D	Chicago, Ill.	
WORL	a	500	D	Boston, Mass.	7 am-LS.
WPEN	a	1000	....	Philadelphia, Pa.	
WSPA	a	1000	D	Spartanburg, S. C.	6 am-LS.
WWJ	a	1000	R(5)	Detroit, Mich.	

930 kcs. (322.4 m.)

CFAC	a	1000	F	Calgary, Alta.	
CFCH	a	100	F	North Bay, Ont.	
CFCL	a	100	....	Prescott, Ont.	
CHNS	a	1000	F	Halifax, N. S.	7 am-11:15 pm.
CKPC	a	100	....	Brantford, Ont.	
CMJF	z	200	....	Camaguey, Cuba	
KMA	a	1000	B(5)	Shenandoah, Iowa	
KROW	a	1000	....	Oakland, Calif.	10 am-4 am.
WBRC	a	1000	R(5)	Birmingham, Ala.	7:15 am-1 am.
WDBJ	a	1000	C(5)	Roanoke, Va.	7 am-midnight.
KEBH	a	500	....	Hermosillo, Son.	

Monday Thru Friday

Eastern Standard

940 kcs. (319 m.)

CMBZ	a	200	....	Havana, Cuba
KOIN	a	1000	C(5)	Portland, Ore.
WAAT	a	500	D	Jersey City, N. J.
WAVE	a	1000	N	Louisville, Ky.
WCBS	a	1000	R(2.5)	Portland, Me.
WDAY	a	1000	N(5)	Fargo, N. Dak.
WHA	a	5000	D	Madison, Wis.
WICA	a	250	D	Ashtabula, Ohio
XEFO	a	5000	....	Mexico City, D. F.

7 am-2 am.
7:15 am-midnight.
9 am-LS.
7 am-LS.

950 kcs. (315.6 m.)

CBV	a	1000	F	Quebec, P. Q.
CJOC	a	100	F	Lethbridge, Alta.
CKML	z	200	....	Bayamo, Cuba
KFWB	a	1000	(5)	Los Angeles, Calif.
KMBC	a	1000	C(5)	Kansas City, Mo.
TIRH	b	2000	....	San Jose, Costa Rica
WRC	a	1000	R(5)	Washington, D. C.
WTRY	z	1000	DP	Troy, N. Y.

Noon-midnight.
8 am-1 am.
9 am-3 am.

960 kcs. (312.3 m.)

CBM	a	5000	FR	Montreal, P. Q.
CFRN	a	100	F	Edmonton, Alta.
CRCY	a	100	F	Toronto, Ont.
XEAW	a	100000	....	Reynosa, Tams.
XECL	z	1000	....	Mexicali, B. Cfa.

MWThF, 6:30 am-11 pm; Tu, 6:30 am-10 pm.
5-7:15 am; 7 pm-12:30 am.

970 kcs. (309.1 m.)

CMCK	a	5000	....	Havana, Cuba
KJR	a	5000	B	Seattle, Wash.
WCFL	a	5000	N	Chicago, Ill.
WIBG	a	100	D	Glenside, Pa.

10 am-3 am.
7:30 am-LS.

980 kcs. (306 m.)

KDKA	b	50000	B	Pittsburgh, Pa.
XEAC	a	5000	....	Tijuana, B. Cfa.
XEFE	z	250	....	Nuevo Laredo, Tams.

8 am-1 am.

990 kcs. (302.8 m.)

WBZ	a	50000	BSy	Boston, Mass.
WBZA	a	1000	BSy	Springfield, Mass.
XEFE	z	250	....	Nogales, Son.
XEK	a	100	....	Mexico City, D. F.
XES	a	250	....	Tampico, Tams.

6 am-1 am.
6 am-1 am.

1000 kcs. (299.8 m.)

KFVD	a	1000	L	Les Angeles, Calif.
VOCM	z	200	1006	St. John's Nfld.
WHO	a	50000	KR	Des Moines, Iowa
XEBI	a	250	....	Aguascalientes, Ags.

7 am-1 am.

1010 kcs. (296.9 m.)

CHML	a	100	F	Hamilton, Ont.
CKCD	a	100	1	Vancouver, B. C.
CKCK	a	1000	F	Regina, Sask.
CKCO	a	100	F	Ottawa, Ont.
CKIC	a	50	....	Wolfville, N. S.
CKWX	a	100	1F	Vancouver, B. C.

7 am-11:30 pm.
MT, 10:30 am-2:30 am; WF, 11 am-midnight; Th, 10:30 am-12:30 am.
9 am-2 am.

CMQ	a	25000	N	Havana, Cuba
KGGF	a	1000	2M	Coffeyville, Kans.
KQW	a	1000	M	San Jose, Calif.

MT, 9:30 am-10:30 pm; WF, 9:30 am-11:30 pm; W midnight-2 am; Th, 9:30 am-10:30 pm; F midnight-1:30 am.
MTWTF, 8 am-11:30 pm; TWT, 12:30-3 pm; TuTh, 5-8 pm; W, 5-11:30 pm.
9:15 am-3 am.

Monday Thru Friday

Eastern Standard

WHN	a	1000	(5)	New York, N. Y.	7 am-1 am.
WNAD	a	1000	2	Norman, Okla.	TWT, 11:30 am-12:30 pm; 3-5 pm; TT, 8-9 pm; W-9-10 pm.
WNOX	a	1000	C(5)	Knoxville, Tenn.	6:30 am-2 am.
XEFQ	a	50	....	Cananea, Son.	
XEU	a	250	....	Veracruz, Ver.	

1020 kcs. (293.9 m.)

KYW	c	10000	R	Philadelphia, Pa.	6 am-1:15 am.
WDZ	a	250	DX	Tuscola, Ill.	
XEJ	a	1000	....	Juarez, Chih.	

1030 kcs. (291.1 m.)

CFCN	a	10000	....	Calgary, Alta.	
CJBR	a	1000	F	Rimouski, P. Q.	
CKLW	a	5000	FM	Windsor, Ont.	
XEB	a	10000	....	Mexico City, D. F.	

1040 kcs. (288.3 m.)

KRLD	a	10000	CX	Dallas, Texas	
KWJJ	a	500	H	Portland, Ore.	9 am-LS; midnight-6 am.
KYOS	a	250	D	Merced, Calif.	9 am-LS.
WTIC	a	50000	HR	Hartford, Conn.	6 am-1 am.

1050 kcs. (285.5 m.)

CBA	a	50000	....	Sackville, N. B.	
CMCP	z	200	....	Havana, Cuba	
HIT	z	50	....	Ciudad Trujillo, D. R.	
KFBI	a	5000	L	Abilene, Kans.	7 am-LS.
KNX	c	50000	C	Los Angeles, Calif.	9 am-4 am.
WEAU	a	1000	L	Eau Claire, Wis.	
WIBC	a	1000	D	Indianapolis, Ind.	7 am-LS.

1060 kcs. (282.8 m.)

CMHI	a	200	....	Santa Clara, Cuba	
KTHS	a	10000	HN	Hot Springs, Ark.	7 am-LS; 9 pm-1 am.
VOAC	z	40	1065	St. John's, Nfld.	
WBAL	a	10000	BM	Baltimore, Md.	
WJAG	a	1000	L	Norfolk, Nebr.	7:15 am-LS.

1070 kcs. (280.2 m.)

CMJW	z	200	....	Camaguey, Cuba	
KJBS	a	500	L	San Francisco, Calif.	1 pm-LS.
WCAZ	a	100	D	Carthage, Ill.	8 am-5 pm.
WTAM	a	50000	R	Cleveland, Ohio	

1080 kcs. (277.6 m.)

CMBX	a	200	....	Havana, Cuba	
CMKM	a	200	....	Manzanillo, Cuba	
WBT	a	50000	C	Charlotte, N. C.	
WCBD	a	5000	1L	Chicago, Ill.	
WMBI	g	5000	1L	Chicago, Ill.	8-8:30 am; 11:30 am-2 pm; 4-5:30 pm.
XEBA	z	20	....	Guzman, Jal.	
XEBK	a	100	....	Nuevo Laredo, Tams.	
XEDP	a	500	....	Mexico City, D. F.	

1090 kcs. (275.1 m.)

CMHA	z	200	....	Sagua la Grande, Cuba	
HIN	a	740	....	Ciudad Trujillo, D. R.	
KMOX	a	50000	C	St. Louis, Mo.	
XERB	a	150000	....	Rosarito Beach, B. Cfa.	

Monday Thru Friday

Eastern Standard

1100 kcs. (272.6 m.)

CBR	a	5000	F	Vancouver, B. C.	
CMHP	z	200	....	Placetas, Cuba	
KGDM	f	1000	DM	Stockton, Calif.	9 am-LS.
KWKH	a	10000	CH	Shreveport, La.	
WBIL	a	5000	1	New York, N. Y.	
WPG	a	5000	C1	Atlantic City, N. J.	8 am-6 pm; 8 pm-midnight.
XECL	z	1000	?	Mexicali, B. Cfa.	

1110 kcs. (270.1 m.)

CMCJ	a	200	....	Havana, Cuba	
KSOO	a	5000	LN	Sioux Falls, S. Dak.	7 am-LS.
WRVA	a	50000	CM	Richmond, Va.	7 am-midnight.

1120 kcs. (267.7 m.)

CBJ	a	100	F	Chicoutimi, P. Q.	3:15-11:15 pm.
CHLP	a	100	F	Montreal, P. Q.	8 am-11 pm.
CHSJ	a	100	F	St. John, N. B.	7 am, and 8:30 am-1:15 am.
CKOC	a	500	F(1)	Hamilton, Ont.	
CKX	a	1000	F	Brandon, Man.	9 am-12:30 am.
CMGF	a	200	....	Matanzas, Cuba	
KFIO	a	100	D	Spokane, Wash.	
KFSG	a	500	a(2.5)	Los Angeles, Calif.	
KRKD	a	500	a(2.5)	Los Angeles, Calif.	
KRSC	a	250	....	Seattle, Wash.	9 am-4:30 am.
KTBC	z	1000	DP	Austin, Texas	
WCOP	a	500	D	Boston, Mass.	7 am-LS.
WDEL	a	250	R(.5)	Wilmington, Del.	
WISN	a	250	C(1)	Milwaukee, Wis.	7 am-1 am.
WJBO	a	500	B	Baton Rouge, La.	
WTAW	a	500	L	College Station, Tex.	

1130 kcs. (265.3 m.)

CMJI	a	200	....	Ciego de Avila, Cuba	
KSL	a	50000	C	Salt Lake City, Utah	
WJJD	a	20000	L	Chicago, Ill.	7 am-LS at Salt Lake.
WOV	a	1000	D	New York, N. Y.	
XEJP	z	100	....	Mexico City, D. F.	

1140 kcs. (263 m.)

CMBC	a	200	....	Havana, Cuba	
KVOO	a	25000	N	Tulsa, Okla.	
WAPI	a	5000	C	Birmingham, Ala.	7 am-1 am.
WSPR	a	500	DM	Springfield, Mass.	7 am-6:30 pm.

1150 kcs. (260.7 m.)

CMKG	z	200	....	Santiago, Cuba	
WHAM	a	50000	B	Rochester, N. Y.	6:30 am-1 am.
XEBP	z	250	....	Durango, Dgo.	
XEC	a	100	....	Tijuana, B. Cfa.	
XEDW	z	300	....	Minatitlan, Ver.	
XEL	z	250	....	Mexico City, D. F.	

1160 kcs. (258.5 m.)

CMHJ	a	200	....	Cienfuegos, Cuba	
WOWO	a	10000	1B	Fort Wayne, Ind.	
WVVA	a	5000	1C	Wheeling, W. Va.	
XEAS	a	100	....	Saltillo Coah.	
XED	e	2500	....	Guadalajara, Jal.	noon-midnight.
XEP	a	500	....	Juarez, Chih.	

1170 kcs. (256.3 m.)

CMBS	a	200	....	Havana, Cuba	
WCAU	a	50000	C	Philadelphia, Pa.	6:30 am-1 am.
XEXX	z	1000	....	Mexico City, D. F.	

Monday Thru Friday

Eastern Standard

1180 kcs. (254.1 m.)

KEX	a	5000	2B	Portland, Ore.	9:30 am-3 am.
KOB	a	10000	N	Albuquerque, N. Mex.	9 am-1 am.
WDGY	a	1000	CM(5)	Minneapolis, Minn.	7:00 am-7:30 pm.
WINS	a	1000	....	New York, N. Y.	
WMAZ	a	1000	C(5)	Macon, Ga.	

1190 kcs. (252 m.)

CMKX	z	200	....	Santiago, Cuba	
KTKC	f	250	DM	Visalia, Calif.	9 am-1S.
VONF	a	500	1195	St. John's Nfld.	
WATR	a	100	DXZ	Waterbury, Conn.	
WOAI	a	50000	N	San Antonio, Tex.	7:30 am-12:30 am.
WSAZ	a	1000	L	Huntington, W. Va.	6 am-7:30 pm.

1200 kcs. (249.9 m.)

CFGP	a	100	....	Grande Prairie, Alta.	9:45 am-5 pm; 7 pm-midnight.
CHAB	a	100	F(.25)	Moose Jaw, Sask.	9 am-1 am.
CHGB	z	100	FP	St. Anne de Pocatiere, P.Q.	
CKNX	b	100	....	Wingham, Ont.	MTWTF, 10:30 am-1:30 pm; Tu, 10:30 am-2 pm; MTWTF, 5:30-10:30 pm.
CKTB	a	100	F	St. Catharines, Ont.	
CMCO	a	200	....	Havana, Cuba	
KADA	a	100	M	Ada, Okla.	
KBTM	a	100	D	Jonesboro, Ark.	8:30 am-6:30 pm.
KELO	a	100	N	Sioux Falls, S. Dak.	1 pm-1 am.
KFJB	a	100	(.25)	Marshalltown, Iowa	7 am-10 pm.
KFXD	a	100	(.25)	Nampa, Idaho	8 am-11 pm.
KFXJ	a	100	(.25)	Grand Junction, Colo.	
KGCI	z	100	DP	Coeur d'Alene, Idaho	
KGDE	b	100	(.25)	Fergus Falls, Minn.	
KGEK	f	100	L	Sterling, Colo.	MTWTF, 1:30-3:30 pm; TuF, 9:15-10:45 pm.
KGfJ	a	100	....	Los Angeles, Calif.	
KGHI	a	100	(.25)	Little Rock, Ark.	
KGVL	z	100	DP	Greenville, Tex.	
KMLB	a	100	(.25)	Monroe, La.	
KOOS	a	100	(.25)M	Marshfield, Ore.	
KSUN	a	100	(.25)	Lowell, Ariz.	9:30 am-midnight.
KVCV	a	100	....	Redding, Calif.	
KVEC	a	100	(.25)	San Luis Obispo, Calif.	9:30 am-3 am.
KVNU	z	100	....	Logan, Utah	
KVOS	b	100	M	Bellingham, Wash.	
KWG	a	100	N	Stockton, Calif.	
KWNO	a	250	D	Winona, Minn.	
WABI	a	100	(.25)	Bangor, Maine	
WAIM	a	100	C	Anderson, S. C.	
WAYX	a	100	(.25)	Waycross, Ga.	7 am-9 pm.
WBBZ	a	100	M(.25)	Ponca City, Okla	
WBHP	a	100	....	Huntsville, Alta.	
WCAT	a	100	D	Rapid City, S. Dak.	1-3 pm.
WCAX	a	100	(.25)	Burlington, Vt.	7:30 am-9 pm.
WCLO	a	100	(.25)	Janesville, Wis.	8 am-10 pm.
WCPO	a	100	(.25)	Cincinnati, Ohio	6:30 am-12:10 am.
WDSM	z	100	P	Superior, Wis.	
WENY	z	250	DP	Elmira, N. Y.	
WEST	a	100	(.25)	Easton, Pa.	
WFAM	a	100	4	South Bend, Ind.	
WFTC	a	100	(.25)	Kinston, N. C.	
WHBC	a	100	(.25)	Canton, Ohio	
WHBY	a	100	Y(.25)	Green Bay, Wis.	MTuF, 9 am-10:30 pm; Th, 9 am-10:45 pm.
WIBX	a	100	C(.25)	Utica, N. Y.	
WIL	a	100	(.25)	St. Louis, Mo.	
WJBC	a	100	5(.25)	Bloomington, Ill.	
WJBL	a	100	5	Decatur, Ill.	7-10 am; 1:30-4 pm; 8:30 pm-1 am.
WJBW	a	100	....	New Orleans, La.	2 am-1 pm; 6-9 pm; midnight-1 am.
WJHL	a	100	(.25)	Johnson City, Tenn.	

Monday Thru Friday

Eastern Standard

WJNO	a	100	C(.25)	W. Palm Beach, Fla.	7 am-midnight.
WJRD	a	250	D	Tuscaloosa, Ala.	
WKBO	a	100	(.25)	Harrisburg, Pa.	7 am-noon; 3-6 pm; 8-11 pm.
WLVA	a	100	(.25)	Lynchburg, Va.	
WMFR	a	100	....	High Point, N. C.	6:30 am-10 pm.
WMOB	z	100	DP	Mobile, Ala.	
WMPG	a	100	(.25)	Lapeer, Mich.	
WOLS	a	100	D	Florence, S. C.	7 am-LS.
WRBL	a	100	(.25)	Columbus, Ga.	8 am-midnight.
WSAL	z	250	D	Salisbury, Md.	
WTHT	a	100	M	Hartford, Conn.	
WTOL	a	100	D	Toledo, Ohio	
WWAB	a	100	4	Hammond, Ind.	

1210 kcs. (247.8 m.)

CHLT	z	100	....	Sherbrooke, P. Q.	
CJCS	a	50	....	Stratford, Ont.	
CJCU	z	50	....	Aklavik, N. W. T.	
CKBI	a	100	F	Prince Albert, Sask.	
CKCH	a	100	F	Hull, P. Q.	
CKMC	a	50	....	Cobalt, Ont.	
CMHK	z	200	....	Cruces, Cuba	
KALB	a	100	(.25)	Alexandria, La.	
KANS	a	100	N	Wichita, Kans.	
KASA	b	100	M	Elk City, Okla.	7:30 am-7:45 pm.
KDLR	a	100	(.25)	Devils Lake, N. Dak.	
KDON	a	100	M	Monterey, Calif.	
KFJI	a	100	....	Klamath Falls, Ore.	
KFOR	a	100	CM(.25)	Lincoln, Nebr.	
KFPW	a	100	....	Fort Smith, Ark.	7:30 am-11 pm.
KFVS	a	100	5(.25)	Cape Girardeau, Mo.	
KFXM	a	100	2M	San Bernardino, Calif.	MTTF, 9 am-3 am; W, 9 am-10 pm; 12:30 am-3 am.
KGLO	a	100	C(.25)	Mason City, Iowa	7 am-1 am.
KGY	a	100	M	Olympia, Wash.	MTWF, 10 am-2 am; Th, 10 am-10:30 pm.
KHBG	a	100	D	Okmulgee, Okla.	
KIUL	a	100	....	Garden City, Kans.	8 am-9 pm.
KLAH	a	100	(.25)	Carlsbad, N. Mex.	8:30 am-11 pm.
KOCA	a	100	(.25)	Kilgore, Texas	
KPFA	a	100	N(.25)	Helena, Mont.	10:15 am-midnight.
KPPC	a	100	2	Pasadena, Calif.	
KROY	a	100	CD	Sacramento, Calif.	9:30 am-8 pm.
KVSO	a	100	M(.25)	Ardmore, Okla.	8 am-midnight.
KWJB	a	100	(.25)	Globe, Ariz.	10 am-midnight.
KWTN	z	100	A	Watertown, S. Dak.	
WALR	a	100	....	Zanesville, Ohio	7 am-midnight.
WBAX	a	100	M	Wilkes-Barre, Pa.	
WBBL	a	100	S	Richmond, Va.	
WBRB	a	100	3	Red Bank, N. J.	MThF, 9-11 am; M, 7-9 pm; Tu, 4-7 pm; W, 5-8 pm; Th, 5-7 pm; F, 1 pm-midnight.
WCOL	a	100	N	Columbus, Ohio	7 am-1 am.
WCOU	a	100	M	Lewiston, Maine	6 am-midnight.
WCOV	z	100	DP	Montgomery, Ala.	
WCRW	a	100	4	Chicago, Ill.	noon-3 pm; 6-8 pm.
WEBQ	a	100	5(.25)	Harrisburg, Ill.	MTWTF, 7-10 am; 1-5 pm; MWF, 9:30 pm-1 am; TuTh, 8:30-10 pm.
WEDC	a	100	4	Chicago, Ill.	10-11 am; 5-6 pm; 10 pm-midnight.
WFAS	a	100	3	White Plains, N. Y.	
WFOY	a	100	(.25)	St. Augustine, Fla.	7:30 am-10 pm.
WGBB	a	100	3	Freeport, N. Y.	
WGCM	a	100	(.25)	Gulfport, Miss.	
WGRM	a	100	(.25)	Grenada Miss.	
WHAI	a	250	DM	Greenfield, Mass.	7 am-LS.
WHBU	a	100	(.25)	Anderson, Ind.	
WIBU	a	100	(.25)	Poynette, Wis.	
WINN	z	100	P(.25)	Louisville, Ky.	
WJBY	a	100	(.25)	Gadsden, Ala.	8 am-11 pm.
WJEJ	a	100	....	Hagerstown, Md.	MWF, 7 am-9:30 pm; TuTh, 7 am-11 pm.
WJIM	z	100	B(.25)	Lansing, Mich.	

Monday Thru Friday

Eastern Standard

WJLS	z	100	(.25)P	Beckley, W. Va.	
WJMC	z	250	DP	Rice Lake, Wis.	
WJTN	a	100	B(.25)	Jamestown, N. Y.	
WJW	a	100	(.25)	Akron, Ohio	8 am-10:30 pm.
WKOK	a	100	L	Sunbury, Pa.	MWF, non-midnight; TuTh, noon-6 pm.
WMPG	a	100	(.25)	Hibbing, Minn.	
WOCB	z	100	(.25)P	Barnstable, Mass.	
WOMT	a	100	....	Manitowoc, Wis.	
WPAX	a	100	(.25)	Thomasville, Ga.	6:30 am-7:30 pm.
WPIV	z	100	(.25)P	Petersburg, Va.	
WRAI	z	100	(.25)P	Raleigh, N. C.	
WSAY	a	100	(.25)	Rochester, N. Y.	
WSBC	a	100	4(.25)	Chicago, Ill.	
WSIX	a	100	(.25)	Nashville, Tenn.	
WSNJ	a	100	D	Bridgeton, N. J.	7 am-LS.
WSOC	a	100	N(.25)	Charlotte, N. C.	6:30 am-midnight.
WTAX	a	100	....	Springfield, Ill.	
WTMA	z	100	(.25)P	Charleston, S. C.	
XEAT	a	250	....	Parral, Chih.	
XEE	a	50	....	Durango, Dgo.	
XEFV	a	50	....	Juarez, Chih.	
XETH	a	100	....	Puebla, Pue.	

1220 kcs. (245.8 m.)

KFKU	a	1000	a(5)	Lawrence, Kans.	
KTMS	z	500	B	Santa Barbara, Calif.	
KTW	a	1000	2S	Seattle, Wash.	
KWSC	a	1000	2(5)	Pullman, Wash.	MTWTF, 9:45-11 am; MTWF, 2 pm-1 am; Th, 2-10:30 pm.
WCAD	a	500	D	Canton, N. Y.	12:30-1:30 pm; 3-4 pm.
WCAE	a	1000	MR(5)	Pittsburgh, Pa.	7 am-1:30 am.
WDAF	a	1000	C(5)	Tampa, Fla.	7 am-midnight.
WGNV	a	250	D	Newburgh, N. Y.	
WHDN	a	1000	sa(5)	Lawrence, Kans.	
XEBL	a	50	....	Mazatlan, Sin.	
XEDA	z	200	....	Gral. Anaya, D. F.	
XETF	a	12	....	Veracruz, Ver.	

1230 kcs. (243.8 m.)

CMCB	a	200	....	Havana, Cuba	
KGBX	a	500	N	Springfield, Mo.	
KGGM	a	100	....	Albuquerque, N. Mex.	9 am-1 am.
KYA	a	1000	(5)	San Francisco, Calif.	9:30 am-3 am.
WPBM	a	1000	C(5)	Indianapolis, Ind.	
WNAC	a	1000	R(5)	Boston, Mass.	
WOL	a	1000	M	Washington, D.C.	6 am-2 am.
XECA	z	250	....	Tampico, Tamps	
XEG	z	250	....	Monterrey, N. L.	

1240 kcs. (241.8 m.)

CICB	a	1000	F	Sydney, N. S.	7 am-1 am.
CMAB	z	200	....	Pinar del Rio, Cuba	
CMHB	z	200	....	Sancti Spiritus, Cuba	
KGCU	a	250	....	Mandan, N. Dak.	11 am-midnight.
KTAT	a	1000	M	Fort Worth, Tex.	7:30 am-midnight.
KTFI	a	1000	N	Twin Falls, Idaho	8 am-1 am.
WHBF	a	1000	(.25)	Rock Island, Ill.	
WKAQ	a	1000	..	San Juan, P. R.	
WXYZ	a	1000	B	Detroit, Mich.	
XEBU	z	50	..	Chihuahua, Chih.	
XEKL	b	500	A	Leon, Gto.	
XEME	z	50	Merida, Yuc.	

1250 kcs. (239.9 m.)

CMKC	a	200	Santiago, Cuba	
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Monday Thru Friday

Eastern Standard

KFOX	a	1000	Long Branch, Calif.	
KIT	a	250	MX(5)	Yakima, Wash.	9:30 am-3 am.
KXOK	z	1000	....	St. Louis, Mo.	
WAIR	a	250	D	Winston-Salem, N. C.	6 am-LS.
WDSU	a	1000	B	New Orleans, La.	
WHRI	a	1000	(2.5)	Newark, N. J.	
WKST	a	250	D	New Castle, Pa.	7 am-LS.
WMRO	z	250	D	Aurora, Ill.	
WNEW	a	1000	(5)	New York, N. Y.	
WTCN	a	1000	B(5)	Minneapolis, Minn.	7 am-1 am.
XEAI	z	500	....	Mexico City, D. F.	

1260 kcs. (238 m.)



CMBD	z	200	....	Havana, Cuba	
CMJO	a	200	....	Ciego de Avila, Cuba	
KGVO	a	1000	C(5)	Missoula, Mont.	9 am-1 am.
KHSL	a	250	....	Chico, Calif.	
KOIL	a	1000	BM(5)	Omaha, Nebr.	
KPAC	a	500	D	Port Arthur, Tex.	7 am-LS.
KRGV	a	1000	MN	Weslaco, Texas	7:30 am-midnight.
KUOA	a	5000	D	Siloam Springs, Ark.	7 am-LS.
KVOA	a	1000	....	Tucson, Ariz.	8 am-11:30 pm.
WHIO	a	1000	C(5)	Dayton, Ohio	
WNBX	a	1000	CM	Springfield, Vt.	7 am-midnight.
WTOC	a	1000	C	Savannah, Ga.	6 am-midnight.

1270 kcs. (236.1 m.)



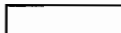
CMHD	b	200	....	Caibarien, Cuba	
KGCA	a	100	2D	Decorah, Iowa	
KOL	a	1000	M(5)	Seattle, Wash.	
KVOR	a	1000	C	Colorado Springs, C.	8:45 am-1:45 am.
KWLC	a	100	2D	Decorah, Iowa	7:30-9:30 am; 10:45-11:45 am! 12:30- 1:30 pm.
WASH	a	500	DNA	Grand Rapids, Mich.	
WFBR	a	500	R(1)	Baltimore, Md.	6:30 am-1:30 am.
WJDX	a	1000	R(5)	Jackson, Miss.	
WOOD	a	500	Na	Grand Rapids, Mich.	
XEXB	a	250	A	Jalapa, Ver.	
XEXE	z	17	....	Texcoco, Mex.	

1280 kcs. (234.2 m.)



CMKO	z	200	....	Holguin, Cuba	
KFBB	a	1000	C(5)	Great Falls, Mont.	10 am-1 am.
KLS	a	250	....	Oakland, Calif.	
WCAM	a	500	1	Camden, N. J.	Silent.
WCAP	a	500	1	Asbury Park, N. J.	10:30 am-4 pm; 8 pm-midnight.
WDOD	c	1000	C(5)	Chattanooga, Tenn.	7 am-midnight.
WIBA	a	1000	N(5)	Madison, Wis.	8 am-1 am.
WORC	a	500	C	Worcester, Mass.	8 am-midnight.
WRR	a	500	M	Dallas, Texas	8 am-1 am.
WTNJ	a	500	1	Trenton, N. J.	
XEMX	z	100	....	Mexico City, D. F.	

1290 kcs. (232.4 m.)



CMCG	a	200	....	Havana, Cuba	
CMJK	a	200	....	Camaguey, Cuba	
KDYL	a	1000	R(5)	Salt Lake City, Utah	
KECN	a	100	D	Blytheville, Ark.	
KTRH	a	1000	C(5)	Houston, Texas	7:30 am-3:30 am.
WEBC	a	1000	N(5)	Duluth, Minn.	7:30 am-1 am.
WJAS	a	1000	C(5)	Pittsburgh, Pa.	
WJHP	z	250	P	Jacksonville, Fla.	

Monday Thru Friday

Eastern Standard

WNBZ	a	100	D	Saranac Lake, N. Y.	8 am-LS.
WNEL	a	1000	(2.5)	San Juan, P. R.	5:30 am-11 pm.

1300 kcs. (230.6 m.)

KALE	a	1000	M	Portland, Ore.	9:30 am-3 am.	(6:30 am-midnight)
KFAC	a	1000	....	Los Angeles, Calif.	24 hours daily.	(24 hours daily)
KFH	a	1000	C(5)	Wichita, Kans.	7 am-1 am.	(4 am-10 pm)
WBRR	a	1000	1	Brooklyn, N. Y.	Silent.	(Silent)
WEVD	a	1000	1	New York, N. Y.		
WFBC	a	1000	N(5)	Greenville, S. C.	6:45 am-midnight.	
WHAZ	a	1000	1	Troy, N. Y.		
WHBL	a	250	(1)	Sheboygan, Wis.	8 am-midnight.	

1310 kcs. 228.9 m.)

CHCK	a	50	....	Charlottetown, P.E.I.		
CJKL	a	100	F	North Bay, Ont.		
CJLS	a	100	F	Yarmouth, N. S.		
CKCV	a	100	F	Quebec, P. Q.	7:45 am-11:45 pm.	
CMKE	a	....	?	Manzanillo, Cuba		
KAND	z	100	DM	Corsicana, Tex.		
KARM	a	100	C	Fresno, Calif.	9 am-3 am.	
KBND	z	100	(.25)	Bend, Ore.		
KCKN	a	100		Kansas City, Kans.	7 am-1 am.	
KCRJ	a	100	(.25)	Jerome, Ariz.		
KFPL	f	100	(.25)	Dublin, Texas		
KPYO	a	100	M(.25)	Lubbock, Texas	7 am-midnight.	
KGEZ	a	100	....	Kalispell, Mont.		
KGFW	a	100	(.25)	Kearney, Nebr.	7 am-11:30 pm.	
KHUB	a	250	D	Watsonville, Calif.	9 am-LS.	
KOCY	a	100	D	Tulsa, Okla.		
KOME	z	250	D	Tulsa, Okla.		
KPDN	a	100	D	Pampa, Texas	7 am-6:15 pm.	
KRBA	a	100	D	Lufkin, Texas	7:30 am-1 am.	
KRMD	a	100	(.25)	Shreveport, La.	7 am-1 am.	
KROC	a	100	(.25)	Rochester, Minn.	9 am-4 pm; 6:30-11:30 pm.	
KROA	a	100	....	Santa Fe, N. Mex.		
KRRV	a	250	DM	Sherman, Texas		
KSRO	a	100	(.25)	Santa Rosa, Calif.	10 am-2 am.	
KSUB	a	100	....	Cedar City, Utah		
KTSM	a	100	N(.25)	El Paso, Texas	8:30 am-2 am.	
KVOL	a	100	(.25)	Lafayette, La.	8 am-2 pm; 5-11 pm.	
KVOX	a	100	(.25)	Moorhead, Minn.	7 am-10 pm.	
KWOC	a	100	D	Poplar Bluff, Mo.	7:30 am-LS.	
KWOS	a	100	(.25)	Jefferson City, Mo.	7 am-11 pm.	
KXRO	a	100	M(.25)	Aberdeen, Wash.		
TG1	d	....	....	Guatemala C., Guat.		
WAML	a	100	(.25)	Laurel, Miss.		
WBEO	a	100	(.25)	Marquette, Mich.		
WBOW	a	100	N(.25)	Terre Haute, Ind.		
WBRE	a	100	N(.25)	Wilkes-Barre, Pa.		
WBRK	a	100	C(.25)	Pittsfield, Mass.		
WCLS	a	100	I	Joliet, Ill.		
WCM1	a	100	(.25)	Ashland, Ky.		
WDAH	a	100	S(.25)	El Paso, Tex.		
WEBR	a	100	B(.25)	Buffalo, N. Y.	7 am-midnight.	
WEMP	a	100	....	Milwaukee, Wis.		
WEXL	a	50	....	Royal Oak, Mich.	8 am-4 am.	
WFBG	a	100	3	Altoona, Pa.		
WEDF	a	100	B	Flint, Mich.	6 am-midnight.	
WGAU	a	100	(.25)	Athens, Ga.	7 am-midnight.	
WGH	a	100	(.25)	Newport News, Va.		
WGTM	a	100	D	Wilson, N. C.		
WHAT	a	100	4	Philadelphia, Pa.		
WJAC	a	100	3(.25)	Johnstown, Pa.	8:30-10:30 am; 4:30-6:30 pm; 9:30 pm-midnight.	
WLAK	z	100	N	Lakeland, Fla.		
WLBC	a	100	(.25)	Muncie, Ind.	6:30 am-12:30 am.	
WLNH	a	100	M	Laconia, N. H.	7 am-midnight.	
WMBO	a	100	(.25)	Auburn, N. Y.		

Monday Thru Friday

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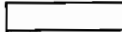
WMFF	a	100	B(.25)	Plattsburgh, N. Y.	7:45 am-midnight.
WNBH	a	100	M(.25)	New Bedford, Mass.	
WRAW	a	100	....	Reading, Pa.	
WROL	a	100	N(.25)	Knoxville, Tenn.	
WSAJ	a	100	....	Grove City, Pa.	Silent.
WSAV	z	100	P	Savannah, Ga.	
WSGN	a	100	B(.25)	Birmingham, Ala.	7 am-midnight.
WSJS	a	100	C	Winston-Salem, N. C.	6:30 am-midnight.
WTAL	a	100	(.25)	Tallahassee, Fla.	
WTEL	a	100	4	Philadelphia, Pa.	
WTJS	a	100	(.25)	Jackson, Tenn.	7 am-11 pm.
WTRC	a	100	(.25)	Elkhart, Ind.	7:30 am-10:30 pm.
XEAG	z	10	....	Cordoba, Ver.	
XEBO	z	25	....	Irapuato, Gto.	
XEFW	a	300	....	Tampico, Tams	
XETB	a	500	....	Torreón, Coah.	
XEX	a	500	....	Monterrey, N. L.	

1320 kcs. (227.1 m.)



CMBQ	a	5000		Havana, Cuba	
KGHF	a	500	B	Pueblo, Colo.	9 am-1 am.
KGMB	a	1000	CM	Honolulu, Hawaii	11:25 am-5:30 am.
KID	a	500	(1)	Idaho Falls, Idaho	
KRNT	a	1000	C(5)	Des Moines, Iowa	6:30 am-1 am.
WADC	a	1000	C(5)	Akron, Ohio	
WORK	a	1000	N	York, Pa.	8 am-midnight.
WSMB	a	1000	R(5)	New Orleans, La.	

1330 kcs. (225.4 m.)



KGB	a	1000	M	San Diego, Calif.	
KMO	a	1000	M	Tacoma, Wash.	9 am-3 am.
KRIS	a	500	NM	Corpus Christi, Tex.	7:30 am-midnight.
KSCJ	a	1000	C(5)	Sioux City, Iowa	7 am-2 am.
WDRG	g	1000	C(5)	Hartford, Conn.	7 am-1 am.
WSAI	a	1000	MN(5)	Cincinnati, Ohio	
WTAQ	a	1000	C	Green Bay, Wis.	8 am-1 am.

1340 kcs. (223.7 m.)



KDTH	z	500	ADP	Dubuque, Iowa	
KGIR	a	1000	N(5)	Butte, Mont.	
KGNO	c	250	....	Dodge City, Kans.	7:30 am-10 pm.
WCOA	a	500	C(1)	Pensacola, Fla.	
WFEA	a	500	MN(1)	Manchester, N. H.	
WFNC	z	250	DP	Fayetteville, N. C.	
WSPD	a	1000	B(5)	Toledo, Ohio	6:30 am-1 am.
XEAP	z	50	....	Obregon, Son.	
XEBS	z	200	....	Mexico City, D. F.	
XEBW	a	250	....	Chihuahua, Chih.	
XEDH	z	200	....	Villa Acuna, Coah.	
XEFC	a	100	....	Merida, Yuc.	
XEXD	z	350	A	Orizaba, Ver.	

1350 kcs. (222.1 m.)



CMCA	a	200	....	Havana, Cuba	
CMKW	z	....	....	Santiago, Cuba	
KIDO	a	1000	N(2.5)	Boise, Idaho	9 am-2 am.
KWK	a	1000	XBM(5)	St. Louis, Mo.	
WAWZ	a	500	1(1)	Zarephath, N. I.	7:45-8:45 am; 6-7:30 pm.
WBNX	a	1000	1	New York, N. Y.	
WMBG	a	500	R	Richmond, Va.	7 am-midnight.

1360 kcs. (220.4 m.)



CMJH	b	200	Ciego de Avila, Cuba	
KCRC	a	250	M	Enid, Okla.	

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KGER	a	1000	Long Beach, Calif.	9 am-3 am.
KLPM	a	500	(1)	Minot, N. Dak.	
WCSC	a	500	N(1)	Charleston, S. C.	7 am-midnight.
WFBL	a	1000	C(5)	Syracuse, N. Y.	
WGES	a	500	1(1)	Chicago, Ill.	
WQBC	a	1000	D	Vicksburg, Miss.	
WSBT	a	500	1	South Bend, Ind.	

1370 kcs. (218.8 m.)



CFAR	a	100	....	Flin Flon, Man.	8am-2:15 pm; 6-10 pm.
CFOS	z	100	....	Owen Sound, Ont.	
CKCW	a	100	F	Moncton, N. B.	
CKRN	z	100	P	Rouyn, P. Q.	
CMGE	a	200	....	Cardenas, Cuba	
KAST	a	100	DXZ	Astoria, Ore.	10 am-LS.
KCMO	a	100	....	Kansas City, Mo.	
KEEN	a	100	3	Seattle, Wash.	
KELD	z	100	....	El Dorado, Ark.	
KERN	a	100	N	Bakersfield, Calif.	10 am-3 am.
KFGQ	a	100	D	Boone, Iowa	7-8:30 am; 10:30-11 am; 1-2 pm.
KFJZ	a	100	M(.25)	Fort Worth, Texas	8 am-midnight.
KFRO	a	250	DM	Longview, Texas	
KGAR	a	100	C(.25)	Tucson, Ariz.	9 am-1 am.
KGFL	a	100	4	Roswell, N. Mex.	
KGKL	a	100	(.25)	San Angelo, Texas	
KICA	a	100	4	Clovis, N. Mex.	
KIUN	a	100	....	Pecos, Texas	8 am-10 pm.
KIUP	a	100	....	Durango, Colo.	
KLUP	a	100	M(.25)	Galveston, Tex.	8 am-1 am.
KMAC	a	100	5(.25)	San Antonio, Tex.	
KOBH	a	100	(.25)	Rapid City, S. Dak.	
KOKO	a	100	....	La Junta, Colo.	8:30 am-11:30 pm.
KONO	a	100	5	San Antonio, Tex.	7-8 am; 9:30-11 am; noon-1 pm; 2:30-5 pm; 7-8 pm; 9-11 pm.
KRE	a	100	(.25)	Berkeley, Calif.	
KRKO	a	50	3M	Everett, Wash.	10 am-3 pm; 7-10 pm.
KRMC	a	100	(.25)	Jamestown, N. Dak.	
KSLM	a	100	MXZ	Salem, Ore.	10:30 am-2:30 am.
KTEM	a	250	DM	Temple, Texas	
KTOK	a	100	MN	Oklahoma City, Okla.	7 am-1 am.
KTSW	a	100	D	Emporia, Kans.	
KUJ	a	100	....	Walla Walla, Wash.	9:30 am-1 am.
KVGB	z	100	....	Great Bend, Kans.	
KVRS	z	100	(.25)	Rock Springs, Wyo.	
KWYO	a	100	(.25)	Sheridan, Wyo.	
WABY	a	100	N(.25)	Albany, N. Y.	7 am-1 am.
WAGF	a	250	D	Dothan, Ala.	9 am-LS.
WATL	a	100	(.25)	Atlanta, Ga.	7 am-2 am.
WBK	a	100	....	Clarksburg, W. Va.	6 am-11:30 pm.
WBNY	a	100	2(.25)	Buffalo, N. Y.	7-8:30 am; 10 am-2 am.
WBTM	a	100	(.25)	Danville, Va.	
WBTH	z	100	DP	Williamson, W. Va.	
WCBM	a	100	(.25)	Baltimore, Md.	
WCOS	z	100	P	Columbia, S. C.	
WDAS	a	100	(.25)	Philadelphia, Pa.	7:30 am-midnight.
WDWS	a	100	(.25)	Champaign, Ill.	7 am-midnight.
WBOA	a	100	C(.25)	Evansville, Ind.	8 am-1 am.
WFOR	a	100	....	Hattiesburg, Miss.	8 am-9:30 pm.
WGBR	z	100	P	Goldsboro, N. C.	
WGL	a	100	N(.25)	Fort Wayne, Ind.	
WGRC	a	250	D	New Albany, Ind.	7 am-LS.
WHBQ	a	100	....	Memphis, Tenn.	
WHDF	a	100	(.25)	Calumet, Mich.	
WHLB	a	100	C(.25)	Virginia, Minn.	
WHLS	a	250	D	Port Huron, Mich.	6 am-7:30 pm.
WIBM	a	100	(.25)B	Jackson, Mich.	
WLLH	a	100	Sy	Lawrence, Mass.	
WLLH	a	100	MSy(.25)	Lowell, Mass.	7:30 am-midnight.
WMBR	a	100	C(.25)	Jacksonville, Fla.	7 am-midnight.
WMFD	a	100	(.25)	Wilmington, N. C.	7:30 am-7 pm.

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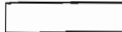
WMFO	a	100	D	Decatur, Ala.	7 am-LS.
WMIN	a	100	(.25)	St. Paul, Minn.	7 am-3 am.
WOC	a	100	C(.25)	Davenport, Iowa	
WPAY	a	100	....	Portsmouth, Ohio	7 am-8 pm.
WPRA	a	100	(.25)	Mayaguez, P. R.	
WRAK	a	100	(.25)	Williamsport, Pa.	7:30 am-9 pm.
WRDO	a	100	MN	Augusta, Maine	8 am-midnight.
WRJN	a	100	(.25)	Racine, Wis.	
WSAU	a	100	(.25)	Wausau, Wis.	7:30 am-1 am.
WSVS	a	50	2D	Buffalo, N. Y.	8:30 am-10 pm.
XECZ	z	100	....	San Luis Potosi, S.L.P.	
XEI	a	125	....	Morelia, Mich.	
XELZ	z	100	....	Mexico City, D. F.	

1380 kcs. (217.3 m.)



CMCW	b	200	....	Havana, Cuba	
KOH	a	500	C	Reno, Nev.	
KQV	c	500	C(1)	Pittsburgh, Pa.	7 am-12:30 am.
WALA	a	500	C(1)	Mobile, Ala.	8 am-midnight
WKBH	a	1000	C	La Crosse, Wis.	7 am-midnight.
WNBC	a	250	R(1)	New Britain, Conn.	7 am-midnight.
WSMK	a	250	C(.5)	Dayton, Ohio	6 am-7:30 pm; 10 pm-1 am.
XEM	z	500	....	Chihuahua, Chih.	

1390 kcs. (215.7 m.)



CJGX	a	100	F	Yorkton, Sask.	8:30 am-1:45 am.
CMJC	z	150	....	Camaguey, Cuba	
KABR	a	500	(1)	Aberdeen, S. Dak.	8 am-11 pm.
KLRA	a	1000	C(5)	Little Rock, Ark.	
KOY	g	1000	C	Phoenix, Ariz.	8:30 am-2 am.
KRLC	a	250	....	Lewiston, Idaho	9:30 am-12:30 am.
WHK	a	1000	BM(.25)	Cleveland, Ohio	7 am-2 am.
WQDM	f	1000	D	St. Albans, Vt.	6 am-LS.

1400 kcs. (214.2 m.)



CMKR	z	200	....	Santiago, Cuba	
KHBC	a	250	CM	Hilo, Hawaii	Noon-4 am.
KLO	a	500	BX	Ogden, Utah	9:30 am-1:30 am.
KTUL	a	1000	C(5)	Tulsa, Okla.	7:30 am-1:30 am.
TGX	d	....	....	Guatemala City, Guat.	
WARD	a	500	2	Brooklyn, N. Y.	
WBBC	a	500	2	Brooklyn, N. Y.	7-11 am; 7:30-9 pm.
WEGL	z	500	2(1)	Brooklyn, N. Y.	
WHDL	a	250	....	Olean, N. Y.	
WIRE	a	1000	MR(5)	Indianapolis, Ind.	
WLTH	a	500	2	New York, N. Y.	11 am-1:30 pm; 6-7:30 pm.
WVFW	a	500	2	Brooklyn, N. Y.	1:30-3:45 pm; 9-10:30 pm.

1410 kcs. (212.6 m.)



CKFC	a	50	5	Vancouver, B. C.	
CKMO	a	100	5	Vancouver, B. C.	
CMCQ	a	200	....	Havana, Cuba	
KFJM	a	500	(1)	Grand Forks, N. Dak.	8 am-10 pm. (5 am-7 pm)
KGNC	a	1000	MN(2.5)	Amarillo, Texas	
KMED	b	250	N	Medford, Ore.	
WAAB	a	500	M(1)	Boston, Mass.	
WBCM	a	500	(1)	Bay City, Mich.	
WHIS	a	500	(1)	Bluefield, W. Va.	5 am-10 pm. (3 am-7 pm)
WROK	a	500	(1)	Rockford, Ill.	7:30 am-11 pm. (4:30 am-8 pm)
WSFA	a	500	C(1)	Montgomery, Ala.	

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1420 kcs. (211.1 m.)



CBY	a	100	F	Toronto, Ont.		
CHLN	z	100	Three Rivers, P. Q.		
CKCA	a	100	Kenora, Ont.		
CKGB	a	100	F	North Bay, Ont.	7:45 am-midnight.	
CMJP	a	200	....	Moron, Cuba		
KABC	a	100	M(.25)	San Antonio, Tex.	7:30 am-12:30 am.	
KATF	a	100	(.25)	Albert Lea, Minn.		
KBPS	a	100	4	Portland, Ore.	2-3:30 pm; 6-8 pm.	
KCMC	a	100	M(.25)	Texarkana, Tex.	8 am-midnight.	
KDNT	a	100	D	Denton, Texas	8 am-1S.	
KEUB	a	100	....	Price, Utah	10 am-10 pm.	
KFAM	a	100	(.25)	St. Cloud, Minn.	8 am-10 pm.	
KFIZ	a	100	....	Fond du Lac, Wis.		
KGFF	a	100	M(.25)	Shawnee, Okla.	8 am-1 am.	
KGIW	a	100	1	Alamosa, Colo.	9:30 am-9:30 pm.	
KGLU	z	100	(.25)	Safford, Ariz.		
KIDW	a	100	1	Lamar, Colo.		
KLBM	z	100	(.25)	La Grande, Ore.		
KNET	a	100	D	Palestine, Texas		
KORE	a	100	M	Eugene, Ore.		
KRBC	a	100	M(.25)	Abilene, Tex.		
KRBM	z	100	P(.25)	Bozeman, Mont.		
KRIC	z	100	M(.25)	Beaumont, Texas		
KRLH	a	100	D	Midland, Texas		
KSAN	a	100	....	San Francisco, Calif.	24 hrs. daily.	
KTRI	f	100	(.25)	Sioux City, Iowa	7 am-midnight.	
KVAK	z	100	DP	Atchison, Kans.		
KWAL	z	100	(.25)P	Wallace, Idaho		
KWBG	a	100	....	Hutchinson, Kans.	8 am-10 pm.	
KXL	c	100	(.25)	Portland, Ore.	9 am-3 am.	
WACO	c	100	CM(.25)	Waco, Texas	9 am-1 am.	
WAGM	a	100	....	Presque Isle, Me.		
WAPQ	a	100	(.25)N	Chattanooga, Tenn.	7 am-midnight.	
WAZL	a	100	2	Hazleton, Pa.		
WBNO	a	100	(.25)	New Orleans, La.		
WCBS	a	100	(.25)	Springfield, Ill.	7 am-1 am.	
WCHV	a	100	(.25)	Charlottesville, Va.	7 am-10:05 pm.	
WEED	a	100	(.25)	Rocky Mount, N. C.	7 am-8 pm.	
WELL	a	100	B	Battle Creek, Mich.	7 am-midnight.	
WFMJ	z	100	DP	Youngstown, Ohio		
WGNC	z	100	(.25)P	Gastonia, N. C.		
WGPC	a	100	....	Albany, Ga.		
WHFC	a	100	(.25)	Cicero, Ill.	8 am-2 am.	
WHMA	a	100	D	Anniston, Ala.		
WILM	a	100	2	Wilmington, Del.		
WJMS	a	100	....	Ironwood, Mich.	8 am-8:30 pm.	(5 am-5:30 pm)
WLAP	a	100	(.25)	Lexington, Ky.	8 am-11 pm.	(5 am-8 pm)
WLEU	a	100	B(.25)	Erie, Pa.		
WMAS	a	100	C(.25)	Springfield, Mass.		
WMBG	a	100	(.25)	Detroit, Mich.	7 am-midnight.	(4 am-9 pm)
WMBH	a	100	(.25)	Joplin, Mo.	7 am-midnight.	(4 am-9 pm)
WMBS	a	100	(.25)	Uniontown, Pa.	7 am-8 pm.	(4 am-5 pm)
WMFJ	a	100	....	Daytona Beach, Fla.	8 am-11 pm.	5 am-8 pm)
WMSD	a	100	....	Muscle Shoals City, Ala.		
WPAD	a	100	(.25)	Paducah, Ky.		
WPAR	a	100	C	Parkersburg, W. Va.		
WPRP	a	100	(.25)	Ponce, P. R.		
WSLI	a	100	(.25)	Jackson, Miss.	8 am-11 pm.	

1430 kcs. (209.7 m.)



CMKZ	z	200	....	Palma Soriano, Cuba		
KECA	a	1000	B(5)	Los Angeles, Calif.	8 am-1S.	
KGNF	a	1000	D	North Platte, Nebr.		
KINY	a	250	Juneau, Alaska		
KSO	a	1000	BM(5)	Des Moines, Iowa	7:30 am-2 am.	
WBNS	a	1000	C(5)	Columbus, Ohio		

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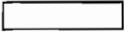
WHEC	a	500	C(1)	Rochester, N. Y.	
WHP	a	500	C(1)	Harrisburg, Pa.	7:30 am-1 am.
WMPS	a	500	B(1)	Memphis, Tenn.	8 am-12:30 am.
WOKO	a	500	C(1)	Albany, N. Y.	7 am-1 am.
XERH	z	500	?	Mexico City, D. F.	

1440 kcs. (208.2 m.)



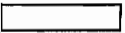
CMBY	a	200	....	Havana, Cuba	
HP50	z	....	....	Colon, Panama	
KDFN	a	500	....	Casper, Wyo.	
KELA	a	500	M	Centralia, Wash.	9:45 am-3 am.
KXYZ	a	1000	BM	Houston, Texas	
WBIG	a	1000	C	Greensboro, N. C.	6:30 am-midnight.
WCBA	a	500	a	Allentown, Pa.	
WMBD	a	1000	C(5)	Peoria, Ill.	7 am-2 am.
WSAN	a	500	Na	Allentown, Pa.	
XEFI	a	250	....	Chihuahua, Chih.	

1450 kcs. (206.8 m.)



CFCT	a	500	....	Victoria, B. C.	11 am-4:30 pm; 7:30 pm-5 am.
CHGS	f	50	F	Summerside, P. E. I.	6:30-8:30 am; 9:30 am-1:30 pm; 3-8 pm.
CMHM	z	200	....	Cienfuegos, Cuba	
KGCX	a	1000	....	Wolf Point, Mont	
HRN	b	500	....	Tegucigalpa, Honduras	
KIEM	a	500	M(1)	Eureka, Calif.	
KTBS	a	1000	N	Shreveport, La.	
TGQ	d	200	....	Quezaltenango, Guat.	
WAGA	a	500	B(1)	Atlanta, Ga.	7:15 am-2 am.
WGAR	a	1000	C(5)	Cleveland, Ohio	
WHOM	a	250	....	Jersey City, N. J.	
WSAR	f	1000	M	Fall River, Mass.	7:30 am-midnight.
XEF	a	100	....	Juarez, Chih.	

1460 kcs. (205.4 m.)



CMKF	z	250	....	Holguin, Cuba	
KSTP	a	10000	R(25) X	St. Paul, Minn.	7 am-2 am.
WJSV	a	10000	CX	Washington, D. C.	7 am-1 am.

1470 kcs. (204 m.)



CMCX	z	200	....	Havana, Cuba	
KGA	a	5000	BM	Spokane, Wash.	
WLAC	a	5000	C	Nashville, Tenn.	

1480 kcs. (202.6 m.)



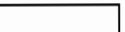
CMHX	a	200	....	Cienfuegos, Cuba	
KOMA	a	5000	C	Oklahoma City, Okla.	7:30 am-1 am.
WHIP	z	5000	D	Hammond, Ind.	6 am-1S.
WKBW	a	5000	C	Buffalo, N. Y.	7 am-1 am.

1490 kcs. (201.2 m.)



CMKQ	z	200	....	Santiago, Cuba	
KFBK	a	10000	N	Sacramento, Calif.	10 am-3 am.
WCKY	a	10000	NX	Covington, Ky.	6:30 am-1 am.
XECH	z	250	?	Toluca, Mex.	
XEDR	z	100	....	Guaymas, Son.	

1500 kcs. (199.9 m.)



CJIC	a	100	F	Sault Ste. Marie, Ont.	10 am-midnight
CMOX	a	200	....	Havana, Cuba	
KAWM	a	100	....	Gallup, N. Mex.	10 am-10 pm.

Monday Thru Friday			Eastern Standard		
KBIX	a	100	M	Muskogee, Okla.	8 am-1 am. (5 am-10 pm)
KBKR	z	100	(.25)P	Baker, Ore.	
KBST	a	100	M	Big Spring, Tex.	
KDAL	a	100	C	Duluth, Minn.	7:30 am-midnight.
KDB	a	100	M(.25)	Santa Barbara, Calif.	10 am-3 am.
KFDA	z	100	P	Amarillo, Texas	
KGFI	a	100	(.25)	Brownsville, Tex.	8 am-midnight.
KGKB	a	100	M(.25)	Tyler, Texas	8 am-1 am.
KGKY	a	100	(.25)	Scottsbluff, Nebr.	
KNEL	a	250	D	Brady, Texas	
KNOW	a	100	CM	Austin, Texas	
KOTN	a	100	D	Pine Bluff, Ark.	
KOVC	a	100	(.25)	Valley City, N. Dak.	
KPAB	a	100	(.25)	Laredo, Tex.	7:30 am-11 am.
KPLC	a	100	(.25)	Lake Charles, La.	
KPLT	a	250	DM	Paris, Texas	
KPQ	a	100	M(.25)	Wenatchee, Wash.	
KRNR	a	100	M(.25)	Roseburg, Ore.	
KROD	z	100	AP	El Paso, Texas	
KSAL	a	100	(.25)	Salina, Kans.	
KSAM	z	100	D	Huntsville, Texas	
KTOH	z	100	(.25)P	Lihue, Hawaii	
KUTA	a	100	N	Salt Lake City, Utah	9 am-2 am.
KVOE	a	100	M	Santa Ana, Calif.	10 am-3 am.
KVWC	z	100	P	Vernon, Texas	
KWWE	z	100	D	Hobbs, N. Mex.	
KXO	a	100	M	El Centro, Calif.	
KYCA	z	100	A(.25)P	Prescott, Ariz.	
KYSM	a	100	(.25)	Mankato, Minn.	7 am-3 am.
WCNWX	a	100	1(.25)	Brooklyn, N. Y.	3-9 pm.
WDAN	a	250	D	Danville, Ill.	7:30 am-LS.
WDNC	a	100	C	Durham, N. C.	7 am-11 pm.
WGAI	a	100	(.25)	Lancaster, Pa.	
WGIL	z	250	D	Galesburg, Ill.	
WGKV	z	100	P	Charleston, W. Pa.	
WHBB	a	100	....	Selma, Ala.	8 am-10 pm.
WJBK	a	100	(.25)	Detroit, Mich.	
WKAT	a	100	(.25)	Miami Beach, Fla.	
WKBB	a	100	YC(.25)	E. Dubuque, Ill.	7:30 am-noon.
WKBV	a	100	(.25)	Richmond, Ind.	9:30 am-9:30 pm.
WKRZ	a	100	(.25)	Muskegon, Mich.	7 am-10 pm.
WKEU	a	100	D	Griffin, Ga.	
WMEX	a	100	(.25)	Bot'on, Mass.	
WBNF	a	100	C(.25)	Binghamton, N. Y.	
WNLC	a	100	DM	New London, Conn.	7:30 am-LS.
WOMI	a	100	(.25)	Owensboro, Ky.	8 am-midnight.
WOPI	a	100	....	Bristol, Tenn.	6 am-11 pm.
WRDW	a	100	C(.25)	Augusta, Ga.	
WRGA	a	100	(.25)	Rome, Ga.	7:30 am-11 pm.
WRKL	z	100	DP	Rock Hill, S. C.	7 am-1 am.
WRTD	a	100	B	Richmond, Va.	
WSTP	a	100	(.25)	Salisbury, N. C.	
WSYB	a	100	....	Rutland, Vt.	8:30-9 pm.
WTMV	a	100	(.25)	E. St. Louis, Ill.	
WWRL	a	100	1(.25)	Woodside, N. Y.	
WWWSW	z	100	(.25)	Pittsburgh, Pa.	
.....	z	100	P	Ocala, Fla.	

1510 kcs. (198.6 m.)

CFRC	a	100	F	Kingston	8 am-11:15 pm.
CKCR	a	100	Kitchener, Ont.	

1520 kcs. (197.3 m.)

TGW	d	5000	Guatemala City, Guat.
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1530 kcs. (196 m.)

CMC	z	200	Havana, Cuba	
KITE	a	1000	Kansas City, Mo.	6 am-3 am.
WBRY	a	1000	M	Waterbury, Conn.	8 am-midnight.

Monday Thru Friday

Eastern Standard

1550 kcs. (193.4 m.)

KPMC a 1000 M Bakersfield, Calif.

9:45 am-3 am.
7:30-11 am; 4 pm-
midnight.

WQXR a 1000 New York, N. Y.

1560 kcs. (192.2 m.)

CMBF z 5000 Havana, Cuba

1580 kcs. (189.8 m.)

CM9RT z 200 Guines, Cuba

1600 kcs. (187.4 m.)

CMBH z 5000 Havana, Cuba

HAM HOUNDING

(Continued from page 9)

non-QSL. Some have complained about KA1ME, but we received his card and were surprised to find that it was printed especially for SWL's.

UGANDA—VQ5ELD has been heard on 14.035, but we are sorry to say that we do not have the QTH of this station. According to the call book, reports should be sent to the Radio Society of East Africa, Box 570, Nairobi, Kenya.

REMARKABLE RECORD

George J. Eder of Philadelphia, Penna., although not being able to tune when Asian phones might be heard, has compiled a neat list of DX catches and we will list some of his better calls. YR5CF, YR5AA, OZ9Q, ES5D, SV1KE, YI2BA, OK4EA, SU1CH, SU1RD, SU1KG, SU1AM, OQ5AA, ON4CSL, VR6AY, OX2QY, NX2Z, FT4AM, FA3HC, FA3QV, HA8N, LA1F, LA8C, K7AOC, HB9BL, HB9BG, FB8AF, SP1DC, SP2HH, PK4AA. Mr. Eder, incidently, has logged over 1000 stations outside of the U. S. and Canada.

NEW VENEZUELANAS

Walter Kammann writes, "I have some news which might be of interest to your readers: Station YVAB9, belonging to an expedition, financed by our government, and operating on 14.125 and 14.122 on the 20 meter band, and on 7.222 and 7.284 on the 40 meter band, is now in operation. The slogan used is, "Expedicion de la Gran Sabana" and they transmit only in Spanish, nearly

every day, at 7:00 am EST. Reports on their transmissions are requested and will be verified by letter, if correct. It is not necessary to send postage. Address: Ministerio de Fomento, Servicio Tecnico de Minería y Geología, Expedicion de la Gran Sabana, Caracas, Venezuela.

Although not an amateur band station, YVA, also owned by the Venezuelan Government, transmit educational programs, daily, at 7:00 pm, on 5.225. Reports should be addressed: Ministerio del Trabajo y de Comunicaciones, Servicio de Cultura y Publicidad, Caracas, Venezuela.

"BYE BYE"

Again we find that we have taken up the space set aside for this article so, as much as we regret, we'll have to say 73. If any of you have any suggestions as to what you would like to see in these articles, just pass the word along and we'll do our best to oblige. In the meantime, lads and lassies, best o' DX and all that goes with it.

CUT ME OUT

Cut me out, paste me on a postal card with your name and address, and mail to RADEX, 362 Cedar Lane, Teaneck, N. J. I'll bring you complete supplies and instructions on how to earn one of our advertised globes, clocks, headphones or phone adapters, in a few minutes of your time.

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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

ALABAMA		
Anniston		
WHMA	1420	100
Birmingham		
WAPI	1140	5000 C
WBRC	930	1000 R
WSGN	1310	100 B
Deatur		
WMFO	1370	100
Dothan		
WAGF	1370	250
Gadsden		
WJBY	1210	100
Huntsville		
WBHP	1200	100
Mobile		
WALA	1380	500 C
WMOB	1200	100
Montgomery		
WCOV	1210	100
WSFA	1410	500 C
Selma		
WHBB	1500	100
Muscle Shoals City		
WMSD	1420	100
Tuscaloosa		
WJRD	1200	250
ALASKA		
Anchorage		
KFQD	780	250
Fairbanks		
KFAR	610	1000
Juneau		
KINY	1430	250
Ketchikan		
KGBU	900	500
ARIZONA		
Globe		
KWJB	1210	100
Jerome		
KCRJ	1310	100
Lowell		
KSUN	1200	100
Phoenix		
KOY	1390	1000 C
KTAR	620	1000 N
Prescott		
KYCA	1500	100
Safford		
KGLU	1420	100
Tucson		
KGAR	1370	100 C
KVOA	1260	1000
ARKANSAS		
Blytheville		
KLCN	1290	100
El Dorado		
KELD	1370	100
Fort Smith		
KFPW	1210	100
Hot Springs		
KTHS	1060	10000 N

Jonesboro		
KBTM	1200	100
Little Rock		
KARK	890	500 N
KGHI	1200	100
KLRA	1390	1000 C
Pine Bluff		
KOTN	1500	100
Siloam Springs		
KUOA	1260	5000
CALIFORNIA		
Bakersfield		
KERN	1370	100 N
KPMC	1550	1000M
Berkeley		
KRE	1370	100
Beverly Hills		
KMPC	710	500
Chico		
KHSL	1260	250
El Centro		
KXO	1500	100M
Eureka		
KIEM	1450	500M
Fresno		
KARM	1310	100 C
KMJ	580	1000 N
Glendale		
KIEV	850	250
Long Beach		
KFOX	1250	1000
KGER	1360	1000
Los Angeles		
KFCA	1430	1000 B
KEFE	780	1000
KFAK	1300	1000
KFI	640	50000 R
KFSG	1120	500
KFVD	1000	1000
KFWB	950	1000
KGfJ	1200	100
KHJ	900	1000M
KMTR	570	1000
KNX	1050	50000 C
KRKD	1120	500
Merced		
KYOS	1040	250
Modesto		
KTRB	740	250
Monterey		
KDON	1210	100M
Oakland		
KLS	1280	250
KLX	880	1000
KROW	930	1000
Pasadena		
KPPC	1210	100
Redding		
KVCV	1200	100
Sacramento		
KFBK	1490	10000 N
KROY	1210	100 C
San Bernardino		
KFXM	1210	100M
San Diego		
KFSD	600	1000 B

KGB	1330	1000M
San Francisco		
KFRC	610	1000M
KGO	790	7500 B
KJBS	1070	500
KPO	680	50000 R
KSAN	1420	100
KSFO	1560	1000 C
KYA	1230	1000
San Jose		
KQW	1010	1000M
San Luis Obispo		
KVEC	1200	100
Santa Ana		
KVOE	1500	100M
Santa Barbara		
KDB	1500	100M
KTMS	1220	500 B
Santa Rosa		
KSRO	1310	100
Stockton		
KGDM	1100	1000M
KWG	1200	100 N
Visalia		
KTKC	1190	250M
Watsonville		
KHUB	1310	250
COLORADO		
Atamosa		
KGIW	1420	100
Colorado Springs		
KVOR	1270	1000 C
Denver		
KFEL	920	500M
KLZ	560	1000 C
KOA	830	50000 R
KPOF	880	1000
KVOD	920	500 B
Durango		
KIUP	1370	100
Grand Junction		
KFXJ	1200	100
Greeley		
KFKA	880	500M
La Junta		
KOKO	1370	100
Lamar		
KIDW	1420	100
Pueblo		
KGHF	1320	500 B
Sterling		
KGEK	1200	100
CONNECTICUT		
Bridgeport		
WICC	600	500M
Hartford		
WDRC	1330	1000 C
WTIC	1040	50000 R
WTHT	1200	100M
New Britain		
WNBC	1380	250 R
New Haven		
WELI	900	500

New London		
WNLC	1500	100M
Waterbury		
WATR	1190	100
WBRY	1530	1000M
DELAWARE		
Wilmington		
WDEL	1120	250 R
WILM	1420	100
DISTRICT OF COLUMBIA		
Washington		
WJWS	1460	10000 C
WMAL	630	250 B
WOL	1230	1000M
WRC	950	1000 R
FLORIDA		
Daytona Beach		
WMFJ	1420	100
Gainesville		
WRUF	830	5000
Jacksonville		
WJAX	900	1000 N
WHP	1290	250
WMBR	1370	100 C
Lakeland		
WLAK	1310	100 N
Miami		
WIOD	610	1000 N
WMBF	610	1000
WQAM	560	1000 C
Miami Beach		
WKAT	1500	100
Ocala		
....	1500	100
Orlando		
WDBO	580	1000 C
Pensacola		
WCOA	1340	500 C
St. Augustine		
WFOY	1210	100
St. Petersburg		
WSUN	620	1000 N
Tallahassee		
WTAL	1310	100
Tampa		
WDAE	1220	1000 C
WFLA	620	1000 N
West Palm Beach		
WJNO	1200	100 C
GEORGIA		
Albany		
WGPC	1420	100
Athens		
WGAU	1310	100
Atlanta		
WAGA	1450	500 B
WATL	1370	100
WGST	890	1000 C
WSB	740	50000 R
Augusta		
WRDW	1500	100 C

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Columbus		
WRBL	1200	100
Griffin		
WKEU	1500	100
Macon		
WMAZ	1780	1000 C
Rome		
WRGA	1500	100
Savannah		
WSAV	1310	100
WTOC	1260	1000 C
Thomasville		
WPAX	1210	100
Waycross		
WAYX	1200	100

HAWAII		
Hilo		
KHBC	1400	250 M
Honolulu		
KGMB	1320	1000 C
KGU	750	2500 N
Lihue		
KTOH	1500	100

IDAHO		
Boise		
KIDO	1350	1000 N
Coeur d'Alene		
KGCI	1200	100
Idaho Falls		
KID	1320	500
Lewiston		
KRLC	1390	250
Nampa		
KFXD	1200	100
Pocatello		
KSEI	900	250 N
Twin Falls		
KTFI	1240	1000 N
Wallace		
KWAL	1420	100

ILLINOIS		
Aurora		
WMRO	1250	250
Bloomington		
WJBC	1200	100
Carthage		
WCAZ	1070	100
Champaign		
WDWS	1370	100
Chicago		
WAAF	920	1000
WBBM	770	5000 C
WCBD	1080	5000
WCFL	970	5000 N
WCRW	1210	100
WEDC	1210	100
WENR	870	5000 B
WGES	1360	5000
WGN	720	5000 M
WJJD	1130	20000
WLS	870	5000 B
WMAQ	870	5000 R
WMBI	1080	5000
WSBC	1210	100

Cleora		
WHFC	1420	100
Danville		
WDAN	1500	250
Decatur		
WJBL	1200	100
East Dubuque		
WKBB	1500	100 C
East St. Louis		
WEMV	1500	100
Galesburg		
WGIL	1500	250
Harrisburg		
WEBQ	1210	100
Joliet		
WCLS	1310	100
Peoria		
WMPD	1440	1000 C
Quincy		
WTAD	900	1000
Rockford		
WROK	1410	500
Rock Island		
WHBF	1240	1000
Springfield		
WCBS	1420	100
WTAX	1210	100
Tuscola		
WDZ	1020	250
Urbana		
WILL	580	5000

INDIANA		
Anderson		
WHBU	1210	100
Elkhart		
WTRC	1310	100
Evansville		
WBOA	1370	100 C
WGBF	650	500 N
Fort Wayne		
WGL	1370	100 N
WOWO	1160	10000 B
Gary		
WIND	560	1000
Hammond		
WHIP	1480	5000
WWAE	1200	100
Indianapolis		
WFBM	1230	1000 C
WIBC	1050	1000
WIRE	1400	1000 R
Muncie		
WLBC	1310	100
New Albany		
WGRC	1370	250
Richmond		
WKBV	1500	100
South Bend		
WFRM	1200	100
WSBT	1360	500
Terre Haute		
WBOW	1310	100 N
West Lafayette		
WBAA	890	500

IOWA		
Ames		
WOI	640	5000

Boone		
KFGQ	1370	100
Cedar Rapids		
WMT	600	1000 B
Davenport		
WOC	1370	100 C
Decorah		
KGCA	1270	100
KWLC	1270	100
Des Moines		
KRNT	1320	1000 C
KSO	1430	1000 B
WHO	1000	5000 R
Dubuque		
KDTH	1340	500
Iowa City		
WSUI	880	500
Marshalltown		
KFJB	1200	100
Mason City		
KGLO	1210	100 C
Shenandoah		
KFNF	890	500
KMA	930	1000 B
Sioux City		
KSCJ	1330	1000 C
KTRI	1420	100

KANSAS		
Abilene		
KFBI	1050	5000
Atchison		
KVAK	1420	100
Coffeyville		
KGGF	1010	1000 M
Dodge City		
KGNO	1340	250
Emporia		
KTSW	1370	100
Garden City		
KIUL	1210	100
Great Bend		
KVGB	1370	100
Hutchinson		
KWBG	1420	100
Kansas City		
KCKN	1310	100
Lawrence		
KFKU	1220	1000
WREN	2220	1000 B
Manhattan		
KSAC	580	500
Pittsburg		
KOAM	790	1000 N
Salina		
KSAL	1500	100
Topeka		
WIBW	580	1000 C
Wichita		
KANS	1210	100 B
KFH	1300	1000 C

KENTUCKY		
Ashland		
WCMI	1310	100
Covington		
WCKY	1490	10000 N
Lexington		
WLAP	1420	100

Louisville		
WAVE	940	1000 N
WHAS	820	50000 C
WINN	1210	100
Owensboro		
WOMI	1500	100
Paducah		
WPAD	1420	100

LOUISIANA		
Alexandria		
KALR	1210	100
Baton Rouge		
WJBO	1120	500 B
Lafayette		
KVOL	1310	100
Lake Charles		
KPLC	1500	100
Monroe		
KMLB	1200	100
New Orleans		
WBNO	1420	100
WDSU	1250	1000 B
WJRW	1200	100
WSMB	1320	1000 R
WWL	850	50000 C
Shreveport		
KTRM	1310	100
KTRB	1450	1000 N
KWKH	1100	10000 C

MAINE		
Augusta		
WRDO	1370	100 M
Bangor		
WABI	1200	100
WLBZ	620	500 N
Lewiston		
WCOU	1210	100 M
Portland		
WCSH	940	1000 R
WGAN	640	500
Presque Isle		
WAGM	1420	100

MARYLAND		
Baltimore		
WBAL	760	2500 B
WBAL	1060	10000 B
WCAO	600	500 C
WCBM	1370	100
WFTB	1270	500 R
College Park		
W3XJ	1660	100
Cumberland		
WTBO	800	250
Frederick		
WFMD	900	500
Hagerstown		
WJBJ	1210	100
Salisbury		
WSAL	1200	250

MASSACHUSETTS		
Barnstable		
WOCB	1210	100

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Jamestown	Rocky Mount	OKLAHOMA	Easton
WJTN 1210 100 B	WEED 1420 100	Ada	WEST 1200 100
Newburgh	Salisbury	KADA 1200 100 M	Erie
WGNY 1220 250	WSTP 1500 100	Ardmore	WLEU 1420 100 B
New York	Wilmington	KVSO 1210 100 M	Glenside
WABC 860 50000 C	WMFD 1370 100	Elk City	WIBG 970 100
WBIL 1100 5000	Wilson	KASA 1210 100 M	Greensburg
WBNX 1350 1000	WGTM 1310 100	Enid	WHJB 620 250 C
WBOQ 860 50000	Winston-Salem	KCRC 1360 250 M	Grove City
WEAF 660 50000 R	WAIR 1250 250	Muskogee	WSAJ 1310 100
WEVD 1300 1000	WSJS 1310 100 C	KBIX 1500 100 M	Harrisburg
WHN 1010 1000		Norman	WHP 1430 500 C
WINS 1180 1000	NORTH DAKOTA	WNAD 1010 1000	WKBO 1200 100 N
WJZ 760 50000 B	Bismarck	Oklahoma City	Hazleton
WLTH 1400 500	KFYR 550 1000 N	KOCY 1310 100	WAZL 1420 100
WMCA 570 1000	Devils Lake	KOMA 1480 5000 C	Johnstown
WNEW 1250 1000	KDLR 1210 100	KTOK 1370 100 M	WJAC 1310 100
WNYC 810 1000	Fargo	WKY 900 1000 N	Lancaster
WOV 1130 1000	WDAY 940 1000 N	Okmulgee	WGAL 1500 100 N
WQXR 1550 1000	Grand Forks	KHBG 1210 100	New Castle
Olean	KFJM 1410 500	Ponca City	WKST 1250 250
WHDL 1400 250	Jamestown	WBBZ 1200 100 M	Philadelphia
Pattsburg	KRMC 1370 100	Shawnee	KYW 1020 10000 R
WMFF 1310 100 B	Mandan	KGFT 1420 100 M	WCAU 1170 50000 C
Rochester	KGCU 1240 250	Tulsa	WDAZ 1370 100
WHAM 1150 50000 B	Minot	KOME 1310 250	WFIL 560 1000 B
WHEC 1430 500 C	KLPM 1360 500	KTUL 1400 1000 C	WHAT 1310 100
WSAY 1210 100	Valley City	KVOO 1140 25000 N	WTP 610 1000
Saranac Lake	KOVC 1500 100		WPEN 920 1000
WNBZ 1290 100		OREGON	WTEL 1310 100
Schenectady		Astoria	Pittsburgh
WGY 790 50000 R	OHIO	KAST 1370 100	KDKA 980 50000 B
Syracuse	Akron	Baker	KQV 1380 500 C
WFBL 1360 1000 C	WADC 1320 1000 C	KBKR 1500 100	WCAE 1220 1000 R
WSYR 570 1000 B	WJW 1210 100	Bend	WJAS 1290 1000 C
WSYU 570 1000	Ashtabula	KBND 1310 100	WWSW 1500 100
Troy	WICA 940 250	Corvallis	Reading
WHAZ 1300 1000	Canton	KOAC 550 1000	WEUU 830 1000 R
WTRY 950 1000	WIBC 1200 100	Eugene	WRAW 1310 100
Utica	Cincinnati	KORE 1420 100 M	Seranton
WIBX 1200 100 C	WCPO 1200 100	Klamath Falls	WGBI 880 500 C
White Plains	WKRC 550 1000 C	KFJI 1210 100	WQAN 880 500
WFAS 1210 100	WLW 700 50000 N	La Grande	WSharon
Woodside	WSAI 1330 1000 N	KLBM 1420 100	WPIC 780 250
WWRL 1500 100	WSSO 700 500000	Marshfield	Sunbury
	Cleveland	KOOS 1200 100 M	WKOK 1210 100
NORTH CAROLINA	WCLE 610 500 M	Medford	Uniontown
Asheville	WGAR 1450 1000 C	KMED 1410 250 N	WMBS 1420 100
WUNC 570 1000 N	WHK 1390 1000 B	Portland	Wilkes-Barre
Charlotte	WTAM 1070 50000 R	KALE 1260 1000 M	WBAX 1210 100 M
WBT 1080 50000 C	Columbus	KBPS 1420 100	WBRE 1310 100 N
WSOC 1210 100 N	WBNS 1430 1000 C	KEX 1180 5000 R	Williamsport
Durham	WCOL 1210 100 N	KGW 820 1000 R	WRAK 1370 100
WDNC 1500 100 C	WHKC 640 500 M	KOIN 940 1000 C	York
Fayetteville	WOSU 570 750	KWJJ 1040 500	WORK 1320 1000 N
WFNC 1340 250	Dayton	KXL 1420 100	
Gastonia	WHO 1260 1000 C	Roseburg	PUERTO RICO
WGNK 1420 100	WSMK 1380 250 C	KRNR 1500 100 M	Mayaguez
Goldsboro	Lima	Salem	WPRR 1370 100
WGBR 1370 100	WLOK 1210 100	KSLM 1370 100 M	Ponce
Greensboro	Portsmouth		WPRP 1420 100
WBG 1440 1000 C	WPA Y 1370 100	PENNSYLVANIA	San Juan
High Point	Toledo	Allentown	WKAQ 1240 1000
WMFR 1200 100	WSPD 1340 1000 B	WCBA 1440 500	WNEI 1290 1000
Kinston	WTOL 1200 100	WSAN 1440 500 N	RHODE ISLAND
WFTC 1200 100	Youngstown	Altoona	Providence
Raleigh	WFMJ 1420 100	WFBG 1310 100	WEAN 780 1000 M
WPTF 680 5000 N	WKBN 870 500 C		
WRAL 1210 100	Zanesville		
	WALR 1210 100		

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

WJAR 550 1000 R	Amarillo	San Angelo	Richmond	
WPRO 680 500 C	KFDA 1500 100	KGKL 1370 100	WBBL 1210 100	
SOUTH CAROLINA				
Anderson	KGNC 1410 1000 N	San Antonio	WMBG 1350 500 R	
WAIM 1200 100 C	Austin	KABC 1420 100M	WRNL 880 500	
Charleston	KNOW 1500 100 C	KMAC 1370 100	WRPT 1500 100 B	
WCSC 1360 500 N	KTBC 1120 1000	KONO 1370 100	WRVA 1110 5000 C	
WTMA 1210 100	Beaumont	KTSA 550 1000 C	Roanoke	
Columbia	KFDM 560 500 N	WOAI 1190 50000 N	WDEJ 930 1000 C	
WCOS 1370 100	KRIC 1410 100M	Sherman	WASHINGTON	
WIS 560 1000 N	Big Spring	KRRV 1310 250M	Aberdeen	
Florence	KBST 1500 100M	Temple	KXRO 1310 100M	
WOLS 1200 100	Brady	KTEM 1370 250M	Bellingham	
Greenville	KNEL 1500 250	Texarkana	KVOS 1200 100M	
WFCB 1300 1000 N	Brownsville	KCMC 1420 100M	Centralia	
Roek Hill	KGFI 1500 100	Tyler	KELA 1440 500M	
WIKL 1500 100	College Station	KGKB 1500 100M	Everett	
Spartanburg	WTAW 1120 500	Vernon	KRKO 1370 50M	
WSPA 920 1000	Corpus Christi	KVWC 1500 100	Longview	
SOUTH DAKOTA				
Aberdeen	KRIS 1330 500 N	Waco	KWLK 780 250	
KABR 1390 500	Corsicana	WACO 1420 100 C	Olympia	
Brookings	KAND 1310 100M	Waslaco	KGY 1210 100M	
KFDY 780 1000	Dallas	KRGV 1260 1000 N	Pullman	
Pierre	KRLD 1040 10000 C	Wichita Falls	KWSC 1220 1000	
KGFX 630 200	WFAA 800 50000 N	KWFT 620 250	Seattle	
Rapid City	WRR 1280 500M	UTAH		
KOBH 1370 100	Denton	Cedar City	KEEN 1370 100	
WCAT 1200 100	KDNT 1420 100	KSUB 1310 100	KIRO 710 1000 C	
Sioux Falls	Dublin	Logan	KJR 970 5000 B	
KELO 1200 100 N	KFPL 1310 100	KVNU 1200 100	KOL 1270 1000M	
KSOO 1110 5000 N	El Paso	Ogden	KOMO 920 1000 R	
Vermillion	KROD 1500 100	KJO 1400 500 B	KRSC 1120 250	
KUSD 890 500	KTSM 1310 100 N	Price	KTW 1220 1000	
Yankton	WDAH 1310 100	KEUB 1420 100	KXA 760 250	
WNAX 570 1000 C	Fort Worth	Salt Lake City	Spokane	
TENNESSEE				
Bristol	KFJZ 1370 100M	KDYL 1290 1000 R	KFO 1120 100	
WOPI 1500 100	KGKO 570 1000 B	KSL 1130 50000 C	KFPY 890 1000 C	
Chattanooga	KTAT 1240 1000M	KUTA 1500 100 N	KGA 1470 5000 B	
WAPO 1420 100 N	WBAP 800 50000 N	VERMONT		
WDOD 1280 1000 C	Galveston	Burlington	KGI 590 1000 R	
Jackson	KLUF 1370 100M	WCAX 1200 100	KMO 1330 1000M	
WTJS 1310 100	Greenville	Rutland	KVI 570 1000 C	
Johnson City	KGVL 1200 100	WSYB 1500 100	Vancouver	
WJHL 1200 100	Houston	St. Albans	KVAN 880 250	
Knoxville	KPRC 920 1000 R	WQDM 1390 1000	Walla Walla	
WNOX 1010 1000 C	KTRH 1290 1000 C	Springfield	KUJ 1370 100	
WROL 1310 100 N	KXYZ 1440 1000 B	WNBX 1260 1000 C	Wenatchee	
Memphis	Huntsville	Waterbury	KIT 1250 250M	
WHBQ 1370 100	KSAM 1500 100	WDEV 550 500	Yakima	
WMC 780 1000 B	Kilgore	WEST VIRGINIA		
WMPS 1430 500 B	KOCA 1210 100	Beckley	WJLS 1210 100	
WREC 600 1000 C	Larode	Bluefield	WCHV 1420 100	
Nashville	KPAB 1500 100	WHIS 1410 500	Danville	
WLAC 1470 5000 C	Longview	WGKV 1500 100	Harrisonburg	
WSIX 1210 100	KFRO 1370 250M	WBLK 1370 100	WSVA 550 500	
WSM 650 50000 N	Lubbock	Fairmont	Lynchburg	
TEXAS				
Abilene	KFYO 1310 100M	WMMN 890 1000 C	WLVA 1200 100	
KRBC 1420 100M	Lufkin	Huntington	Newport News	
	KIRBA 1310 100	WSAZ 1190 1000	WGH 1310 100	
	Midland	Parkersburg	Norfolk	
	KLLH 1420 100	WPAR 1420 100 C	WTAR 780 1000 N	
	Palestine	Wheeling	Petersburg	
	KNET 1420 100	WVVA 1160 5000 C	WPTV 1210 100	
	Pampa			
	KPDN 1310 100			
	Paris			
	KPLT 1500 250M			
	Pecos			
	KIUN 1370 100			
	Port Arthur			
	KPAC 1260 500			

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Williamson		
WBTH	1370	100
WISCONSIN		

Eau Claire		
WEAU	1050	1000
Fond du Lac		
KFIZ	1420	100
Green Bay		
WBXY	1200	100
WTAQ	1330	1000 C
Janesville		
WCLO	1200	100
LaCrosse		
WKBB	1380	1000 C
Madison		
WHA	940	5000
WIBA	1280	1000 N
Manitowoc		
WOMT	1210	100
Milwaukee		
WEMP	1310	100
WISN	1120	250 C
WTMJ	620	1000 N
Poynette		
WIBU	1210	100
Racine		
WRJN	1370	100
Rice Lake		
WJMC	1210	250
Sheboygan		
WHBL	1300	250
Stevens Point		
WLBL	900	5000
Superior		
WDSM	1200	100
Wausau		
WSAU	1370	100

WYOMING		
Casper		
KDFN	1440	500
Rock Springs		
KVRS	1370	100
Sheridan		
KWYO	1370	100

BAHAMAS		
Nassau		
ZNS	540	400

CANADA ALBERTA		
Calgary		
CFAC	930	1000 F
CFCN	1030	10000
CJCF	690	100 F
Edmonton		
CFRN	960	100 F
CJCA	730	1000 F
CKUA	580	500 F
Grande Prairie		
CFGP	1200	100
Lethbridge		
CJOC	950	100 F

BRIT. COLUMBIA		
Chilliwack		
CHWK	780	100 F
Kamloops		
CFJC	880	1000 F
Kelowna		
CKOV	630	100 F
Prince Rupert		
CFPR	580	50
Trail		
CJAT	910	1000 F
Vancouver		
CBR	1100	5000 F
CJOR	600	500
CKCD	1010	100
CKFC	1410	50
CKMO	1410	100
CKWX	1010	100 F
Victoria		
CFCT	1450	500

MANITOBA		
Brandon		
CKX	1120	1000 F
Flin Flon		
CFAR	1370	100
Winnipeg		
CJRC	630	1000 F
CKY	910	15000 F

NEW BRUNSWICK		
Fredericton		
CFNB	550	500 F
Moncton		
CKCW	1370	100 F
Sackville		
CBA	1050	50000
St. John		
CHSJ	1120	100 F

N. W. TERRITORY		
Aklavik		
CJCU	1210	50

NOVA SCOTIA		
Glace Bay		
VAS	685	2000
Halifax		
CHNS	930	1000 F
Sydney		
CJCB	1240	1000 F
Wolfville		
CKIC	1010	50
Yarmouth		
CJLS	1310	100 F

ONTARIO		
Brantford		
CKPC	930	100
Chatham		
CFCO	630	100 F
Cobalt		
CKMC	1210	50
Fort William		
CKPR	580	100 F

Hamilton		
CHML	1010	100 F
CKOC	1120	500 F
Kenora		
CKCA	1420	100
Kingston		
CFRC	1510	100 F
Kitchener		
CKCR	1510	100
London		
CFPL	730	100 F
North Bay		
CFCH	930	100 F
CJKL	1310	100 F
CKGB	1420	100 F
Ottawa		
CBO	880	1000 F
CKCO	1010	100 F
Owen Sound		
CFOS	1370	100
Prescott		
CFPL	930	100
St. Catharines		
CKTB	1200	100 F
Sault Ste. Marie		
CJJC	1500	100 F
Stratford		
CJCS	1210	50
Sudbury		
CKSO	780	1000 F
Toronto		
CBL	840	50000 F
CBY	1420	100 F
CFRB	690	10000 C
CKCL	580	100 F
Windsor		
CKLW	1030	5000 F
Wingham		
CKNX	1200	100

PRINCE EDWARD ISLAND		
Charlottetown		
CFCY	630	1000 F
CHCK	1310	50
Summerside		
CHGS	1450	50 F

QUEBEC		
Chicoutimi		
CBJ	1120	100 F
Hull		
CKCH	1210	100 F
Montreal		
CBF	910	50000 N
CBM	960	5000 F
CFCF	600	500 B
CHLP	1120	100 F
CKAC	730	5000 C
New Carlisle		
CHNC	610	1000 F
Quebec		
CHRC	580	100
CKCV	1310	100 F
CBV	950	1000 F
Rimouski		
CJBR	1030	1000 F

Rouyn		
CKRN	1370	100
St. Anne de la Pocatiere		
CHGB	1200	100
Sherbrooke		
CHLT	1210	100
Three Rivers		
CHLN	1420	100

SASKATCHEWAN		
Moose Jaw		
CHAB	1200	100 F
Prince Albert		
CKBI	1210	100 F
Regina		
CJRM	540	1000 F
CKCK	1010	1000 F
Saskatoon		
CFQC	840	1000 F
Watrous		
CBK	540	50000
Yorkton		
CJGJ	1300	100 F

COSTA RICA		
San Jose		
TIEP	830	3000
TIGH	725	600
TILJ	775	450
TILS	830	500
TIPG	625	5000
TIRH	950	2000
TIRM	750	500
TIRS	915	250
TEX	650	1000
TIYD	800	1000
TI5CV	575	100

CUBA		
Bayamo		
CMKL	950	200
Caibarien		
CMHD	1270	200
Camaguey		
CMJA	860	200
CMJC	1390	200
CMJB	1230	200
CMJF	930	200
CMJK	1290	200
CMJW	1070	200
CMJX	740	200
Cardenas		
CMGE	1370	200
Ciego de Avila		
CMJH	1360	200
CMJI	1130	200
CMJO	1260	200
Cienfuegos		
CMHJ	1160	200
CMHM	1450	200
CMEX	1480	200
Cruces		
CMHK	1210	200
Guantanamo		
CMKS	710	200
Guines		
CM9RT	1580	200
Havana		
CMBC	1140	200
CMBD	1260	200

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

CMBG	690	200
CMBF	1560	5000
CMBG	690	200
CMBH	1600	5000
CMBL	750	200
CMBQ	1320	5000
CMBS	1170	200
CMBX	1080	200
CMBY	1440	200
CMBZ	940	200
CMC	1530	200
CMCA	1350	200
CMCB	1230	200
CMCD	630	15000
CMCF	810	5000
CMCG	1290	200
CMCJ	1110	200
CMCK	970	5000
CMCL	730	10000
CMCM	850	200
CMCO	1200	200
CMCP	1050	200
CMCQ	1410	200
CMCR	660	200
CMCU	780	200
CMCW	1380	200
CMCX	1470	200
CMCY	570	15000
CMK	720	200
CMOA	910	200
CMOX	1500	200
CMQ	1010	25000 N
CMW	550	1400
CMX	880	20000

Holguin		
CMKF	1460	250
CMKO	1280	200
Manzanillo		
CMKE	1310	...
CMKM	1080	200
Matanzas		
CMGF	1120	200
CMGH	790	200
Moron		
CMJP	1420	200
Palma Soriano		
CMKZ	1430	200
Pinar del Rio		
CMAB	1240	200
Piactas		
CMHP	1100	200
Sagua la Grande		
CMHA	1090	200
Sancti Spiritus		
CMHB	1240	200
Santa Clara		
CMHI	1060	200
CMHW	680	200
Santiago		
CMKC	1250	200
CMKD	910	1000
CMKG	1150	200
CMKQ	1490	200
CMKR	1400	200
CMKW	750	200
CMKX	1190	200
Trinidad		
CMHT	920	200

DOMINICAN REPUBLIC

Ciudad Trujillo		
HIN	1090	740
HIX	800	800
HIT	1050	50

EL SALVADOR

San Salvador		
YSS	640	500

GUATEMALA

Guatemala City		
TGW	1520	5000
TGX	1400	...
TGI	1310	...
Quezaltenango		
TTQ	1450	200

HONDURAS

Tegucigalpa		
TRF	1450	50

MEXICO**AGUASCALIENTES**

Aguascalientes		
XEBI	1000	250

BAJA CALIFORNIA

Mexicali		
XEAA	750	200
XEAO	660	250
XECL	960	1000
Rosarito Beach		
XERB	1090	150000
Tijuana		
XEBG	820	1000
XEAC	980	5000
XEC	1150	100
XELO	730	50000
XEMO	860	5000

CHIHUAHUA

Chihuahua		
XEBU	1240	50
XEBW	1340	250
XEFI	1440	250
XEM	1380	500
Juarez		
XEF	1450	100
XEFV	1210	50
XEJ	1020	1000
XEP	1160	500
Parral		
XEAT	1210	250

COAHUILA

Piedras Negras		
XEMU	530	250
XEPN	730	100000
Sabinas		
XEBX	640	250
Saltillo		
XEAS	1160	100
Torreon		

XETB	1310	500
Villa Acuna		
XEDH	1340	200
XERA	840	250000

DISTRITO FEDERAL

Grat. Anaya		
XEDA	1220	200
Mexico City		
XEAI	1250	500
XEAL	660	1000
XEB	1030	10000
XEBS	1340	200
XEBZ	810	100
XEDP	1080	500
XEFO	940	5000
XEJP	1130	100
XEK	990	100
XEL	1150	250
XELZ	1370	100
XEN	780	1000
XEQ	730	50000
XERC	870	500
XERH	1430	500
XEW	890	100000
XEXX	1170	1000

DURANGO

Durango		
XEBP	1150	250
XEE	1210	50

GUANAJUATO

Irapuato		
XEBO	1310	25
Leon		
XEKL	1240	500

JALISCO

Guadalajara		
XED	1160	2500
Guzman		
XEBA	1080	20

MEXICO

Texcoco		
XEXE	1270	17
Toluca		
XECH	1490	250

MICHOACAN

Morelia		
XEI	1370	125

NUEVO LEON

Monterrey		
XEFB	870	200
XEG	1230	250
XEH	720	250
XET	690	5000
XEX	1310	500

PUEBLA

Puebla		
XETH	1210	100

SAN LUIS POTOSI

San Luis Potosi		
XECZ	1370	100

SINALOA

Mazatlan		
XEEL	1220	50

SONORA

Cananea		
XEFQ	1010	50
Guaymas		
XEDR	1490	100
Hermosillo		
XEBH	930	500
Nogales		
XEAF	990	750
Obregon		
XEAP	1340	50

TAMAULIPAS

Matamoros		
XEAM	750	25
Nuevo Laredo		
XEBK	1080	100
XEDF	810	100
XEFE	980	250
XENT	910	150000
Reynosa		
XEAW	960	100000
Tampico		
XECA	1230	250
XEFW	1310	300
XES	990	250

VERACRUZ

Cordoba		
XEAG	1310	10
Jalapa		
XEBX	1270	250
Minatitlan		
XEDW	1150	20
Orizaba		
XEDX	1340	350
Veracruz		
XETF	1220	12
XEU	1010	250

YUCATAN

Merida		
XEFC	1340	100
XEME	1240	50
XEZ	630	500

MIQUELON

St. Pierre		
FQN	609	250

NEWFOUNDLAND

St. John's		
VOAC	1065	40
VOCM	1006	200
VOGY	840	400
VONF	1195	500
VOWR	681	500

NORTH AMERICAN B. C. STATIONS BY CALLS

CMCK	970	5000	CMJX	740	200	KARK	890	500
Havana, Cuba			Camaguey, Cuba			Little Rock, Ark.		
CMCL	730	10000	CMK	720	200	KARM	1310	100
Havana, Cuba			Havana, Cuba			Fresno, Calif.		
CMCM	850	200	CMKC	1250	200	KASA	1210	100
Havana, Cuba			Santiago, Cuba			Elk City, Okla.		
CMCO	1200	200	CMKD	910	1000	KAST	1370	100
Havana, Cuba			Santiago, Cuba			Astoria, Ore.		
CMCP	1050	200	CMKE	1310	....	KATE	1420	250
Havana, Cuba			Manzanillo, Cuba			Albert Lea, Minn.		
CMCQ	1410	200	CMKF	1460	250	KAWM	1500	100
Havana, Cuba			Holguin, Cuba			Gallup, N. Mex.		
CMCR	560	200	CMKG	1150	200	KBIX	1500	100
Havana, Cuba			Santiago, Cuba			Muskogee, Okla.		
CMCU	780	200	CMKL	950	200	KBKR	1500	100
Havana, Cuba			Bayamo, Cuba			Baker, Ore.		
CMCW	1360	200	CMKM	1080	200	KBND	1310	100
Havana, Cuba			Manzanillo, Cuba			Bend, Ore.		
CMCX	1470	200	CMKO	1280	200	KBPS	1420	100
Havana, Cuba			Holguin, Cuba			Portland, Ore.		
CMCY	590	15000	CMKQ	1490	200	KBST	1500	100
Havana, Cuba			Santiago, Cuba			Big Spring, Texas		
CMGE	1370	200	CMKR	1400	200	KBTM	1200	100
Cardenas, Cuba			Santiago, Cuba			Jonesboro, Ark.		
CMGF	1120	200	CMKS	710	200	KCKN	1310	100
Matanzas, Cuba			Guantanamo, Cuba			Kansas City, Kans.		
CMGH	790	200	CMKW	770	200	KCMC	1420	100
Matanzas, Cuba			Santiago, Cuba			Texasarkana, Texas		
CMHA	1090	200	CMKX	1190	200	KCOM	1370	100
Sagua la Grande, Cuba			Santiago, Cuba			Kansas City, Mo.		
CMHB	1240	200	CMKZ	1430	200	KCRC	1360	250
Sancti Spiritus, Cuba			Palma Soriano, Cuba			Enid, Okla.		
CMHD	1270	200	CMOA	910	200	KCRJ	1310	100
Caibarien, Cuba			Havana, Cuba			Jerome, Ariz.		
CMHI	1060	200	CMOX	1500	200	KDAL	1500	100
Santa Clara, Cuba			Havana, Cuba			Duluth, Minn.		
CMHJ	1160	200	CMQ	1010	25000	KDB	1500	100
Cienfuegos, Cuba			Havana, Cuba			Santa Barbara, Calif.		
CMHK	1210	200	CMW	550	1400	KDFN	1440	500
Cruces, Cuba			Havana, Cuba			Casper, Wyo.		
CMHM	1450	200	CMX	880	20000	KDKA	980	50000
Cienfuegos, Cuba			Havana, Cuba			Pittsburgh, Pa.		
CMHP	1100	200	CM9RT	1580	200	KDLR	1210	100
Placetas, Cuba			Guines, Cuba			Devils Lake, N. D.		
CMHT	920	200	FQN	609	250	KDNT	1420	100
Trinidad, Cuba			St. Pierre, Miquelon			Denton, Texas		
CMHW	680	200	HIN	1090	740	KDON	1210	100
Santa Clara, Cuba			Ciudad Trujillo, D. R.			Monterey, Calif.		
CMHX	1480	200	HIT	1050	50	KDTH	1340	500
Cienfuegos, Cuba			Ciudad Trujillo, D. R.			Dubuque, Iowa		
CMJA	860	200	HIX	800	800	KDYL	1290	1000
Camaguey, Cuba			Ciudad Trujillo, D. R.			Salt Lake City, Utah		
CMJC	1390	200	HP50	1440	....	KECA	1430	1000
Camaguey, Cuba			Panama City, Panama			Los Angeles, Calif.		
CMJE	1230	200	HRN	1450	500	KEEN	1370	100
Camaguey, Cuba			Tegucigalpa, Hon.			Seattle, Wash.		
CMJF	930	200	KABC	1420	100	KEHE	780	1000
Camaguey, Cuba			San Antonio, Texas			Los Angeles, Calif.		
CMJH	1360	200	KABR	1390	500	KELA	1440	500
Ciego de Avila, Cuba			Aberdeen, S. Dak.			Centralia, Wash.		
CMJI	1130	200	KADA	1200	100	KELD	1370	100
Ciego de Avila, Cuba			Ada, Okla.			El Dorado, Ark.		
CMJK	1290	200	KALB	1210	100	KELO	1200	100
Camaguey, Cuba			Alexandria, La.			Sioux Falls, S. Dak.		
CMJO	1260	200	KALE	1300	1000	KERN	1370	100
Ciego de Avila, Cuba			Portland, Ore.			Bakersfield, Calif.		
CMJP	1420	200	KAND	1310	100	KEUB	1420	100
Camaguey, Cuba			Corsicana, Texas			Price, Utah		
CMJW	1070	200	KANS	1210	100	KEX	1180	5000
Camaguey, Cuba			Wichita, Kans.			Portland, Ore.		

NORTH AMERICAN B. C. STATIONS BY CALLS

KFAB 770 10000	KFUO 550 500	KGIW 1420 100
Lincoln, Neb.	St. Louis, Mo.	Alamosa, Colo.
KFAC 1300 1000	KFVD 1000 1000	KGKB 1500 100
Los Angeles, Calif.	Los Angeles, Calif.	Tyler, Texas
KFAM 1420 100	KFVS 1210 100	KGKL 1370 100
St. Cloud, Minn.	Cape Girardeau, Mo.	San Angelo, Texas
KFAR 610 1000	KFWB 950 1000	KGKO 570 1000
Fairbanks, Alaska	Los Angeles, Calif.	Fort Worth, Texas
KFBB 1280 1000	KFXD 1200 100	KGKY 1500 100
Great Falls, Mont.	Nampa, Idaho	Scottsbluff, Neb.
KFBI 1050 5000	KFXJ 1200 100	KGLO 1210 100
Abilene, Kans.	Grand Junction, Colo.	Mason City, Iowa
KFBK 1490 10000	KFXM 1210 100	KGLU 1420 100
Sacramento, Calif.	San Bernardino, Calif.	Safford, Ariz.
KFDA 1500 100	KFYO 1310 100	KGMB 1320 1000
Amarillo, Texas	Lubbock, Texas	Honolulu, T. H.
KFDM 560 500	KFYR 550 1000	KGNC 1410 1000
Beaumont, Texas	Bismarck, N. D.	Amarillo, Texas
KFDY 780 1000	KGA 1470 5000	KGNF 1430 1000
Brookings, S. D.	Spokane, Wash.	North Platte, Neb.
KFEL 920 500	KGAR 1370 100	KGNO 1340 250
Denver, Colo.	Tucson, Ariz.	Dodge City, Kans.
KFEQ 680 2500	KGB 1330 1000	KGQ 790 7500
St. Joseph, Mo.	San Diego, Calif.	San Francisco, Calif.
KFGQ 1370 100	KGBU 900 500	KGU 750 2500
Boone, Iowa	Tetchikan, Alaska	Honolulu, T. H.
KFH 1300 1000	KGBX 1230 500	KGVL 1200 100
Wichita, Kans.	Springfield, Mo.	Greenville, Texas
KFI 640 50000	KGCA 1270 100	KGVO 1260 1000
Los Angeles, Calif.	Decorah, Iowa	Missoula, Mont.
KFIO 1120 100	KGCI 1200 100	KGW 620 1000
Spokane, Wash.	Coeur d'Alene, Idaho	Portland, Ore.
KFIZ 1420 100	KGCU 1240 250	KGY 1210 100
Pond du Lac, Wis.	Mandan, N. D.	Olympia, Wash.
KFJB 1200 100	KGCC 1450 1000	KHBC 1400 250
Marshalltown, Iowa	Wolf Point, Mon.	Hilo, T. H.
KFJI 1210 100	KGDE 1200 100	KHBB 1210 100
Klamath Falls, Ore.	Fergus Falls, Minn.	Oklmulgee, Okla.
KFJM 1410 500	KGDM 1100 1000	KHJ 900 1000
Grand Forks, N. D.	Stockton, Calif.	Los Angeles, Calif.
KFJZ 1370 100	KG EK 1200 100	KHQ 590 1000
Fort Worth, Texas	Sterling, Colo.	Spokane, Wash.
KFKA 880 500	KGER 1360 1000	KHSL 1260 250
Greeley, Colo.	Long Beach, Calif.	Chico, Calif.
KFKU 1220 1000	KGEZ 1310 100	KHUB 1310 250
Lawrence, Kans.	KallsPELL, Mont.	Watsonville, Calif.
KFNF 890 500	KGFF 1420 100	KICA 1370 100
Shenandoah, Iowa	Shawnee, Okla.	KIDV 1370 100
KFOR 1210 100	KGFI 1500 100	Clovis, N. M.
Lincoln, Neb.	Brownsville, Tex.	KID 1320 500
KFOX 1250 1000	KG FJ 1200 100	Idaho Falls, Idaho
Long Beach, Calif.	Los Angeles, Calif.	KIDO 1350 1000
KFPL 1310 100	KGFL 1370 100	Boise, Idaho
Dublin, Texas	Roswell, N. Mex.	KIDW 1420 100
KFPW 1210 100	KGFW 1310 100	Lamar, Colo.
Fort Smith, Ark.	Kearney, Neb.	KIEM 1450 500
KFPY 890 1000	KGFX 630 200	Eureka, Calif.
Spokane, Wash.	Pierre, S. D.	KIEV 850 250
KFQD 780 250	KGGF 1010 1000	Glendale, Calif.
Anchorage, Alaska	Coffeyville, Kans.	KINY 1430 250
KFRC 610 1000	KGGM 1230 1000	Juneau, Alaska
San Francisco, Calif.	Albuquerque, N. M.	KIRO 710 1000
KFRO 1370 250	KGHF 1320 500	Seattle, Wash.
Longview, Texas	Pueblo, Colo.	KIT 1250 250
KFRU 630 500	KGHI 1200 100	Yakima, Wash.
Columbia, Mo.	Little Rock, Ark.	KITE 1530 1000
KFSD 600 1000	KGHL 780 1000	Kansas City, Mo.
San Diego, Calif.	Billings, Mont.	KIUL 1210 100
KFSG 1120 500	KGIR 1340 1000	Garden City, Kans.
Los Angeles, Calif.	Butte, Mont.	KIUN 1370 100
		Pecos, Texas

NORTH AMERICAN B. C. STATIONS BY CALLS

KIUP	1370	100	KOH	1380	500	KRKD	1120	500
Durango, Colo.			Reno, Nev.			Los Angeles, Calif.		
KJBS	1070	500	KOIL	1260	1000	KRKO	1370	50
San Francisco, Calif.			Omaha, Neb.			Everett, Wash.		
KJR	970	5000	KOIN	940	1000	KRLC	1390	250
Seattle, Wash.			Portland, Ore.			Lewiston, Idaho		
KLAH	1210	100	KOKO	1370	100	KRLD	1040	10000
Carlsbad, N. Mex.			La Junta, Colo.			Dallas, Texas		
KLBM	1420	100	KOL	1270	1000	KRLH	1420	100
La Grande, Ore.			Seattle, Wash.			Midland, Texas		
KLCN	1290	100	KOMA	1480	5000	KRMC	1370	100
Blytheville, Ark.			Oklahoma City, Okla.			Jamestown, N. Dak.		
KLO	1400	500	KOME	1310	250	KRMD	1310	100
Ogden, Utah			Tulsa, Okla.			Shreveport, La.		
KLPM	1350	500	KOMO	920	1000	KRNR	1500	100
Minot, N. D.			Seattle, Wash.			Roseburg, Ore.		
KLRA	1390	1000	KONO	1370	100	KRNT	1320	1000
Little Rock, Ark.			San Antonio, Texas			Des Moines, Iowa		
KLS	1280	250	KOOS	1200	100	KROC	1310	100
Oakland, Calif.			Marshfield, Ore.			Rochester, Minn.		
KLUF	1370	100	KORE	1420	100	KROD	1500	100
Galveston, Texas			Eugene, Ore.			El Paso, Texas		
KLX	880	1000	KOTN	1500	100	KROW	930	1000
Oakland, Calif.			Pine Bluff, Ark.			Oakland, Calif.		
KLZ	550	1000	KOVC	1500	100	KROY	1210	100
Denver, Colo.			Valley City, N. Dak.			Sacramento, Calif.		
KMA	930	1000	KOY	1390	1000	KRQA	1310	100
Shenandoah, Iowa			Phoenix, Ariz.			Santa Fe, N. Mex.		
KMAC	1370	100	KPAB	1500	100	KRRV	1310	250
San Antonio, Texas			Laredo, Texas			Sherman, Texas		
KMBC	950	1000	KPAC	1260	500	KRSC	1120	250
Kansas City, Mo.			Port Arthur, Texas			Seattle, Wash.		
KMED	1410	250	KPDN	1310	100	KSAC	580	500
Medford, Ore.			Pampa, Texas			Manhattan, Kans.		
KMJ	580	1000	KPFA	1210	100	KSAL	1500	100
Fresno, Calif.			Helena, Mont.			Salina, Kans.		
KMLB	1200	100	KPLC	1500	100	KSAM	1500	100
Monroe, La.			Lake Charles, La.			Huntsville, Texas		
KMMJ	740	1000	KPLT	1500	250	KSAN	1420	100
Grand Island, Neb.			Paris, Texas			San Francisco, Calif.		
KMO	1330	1000	KPMC	1550	1000	KSCJ	1330	1000
Tacoma, Wash.			Bakerfield, Calif.			Sioux City, Iowa		
KMOX	1090	50000	KPO	680	50000	KSD	550	1000
St. Louis, Mo.			San Francisco, Calif.			St. Louis, Mo.		
KMPC	710	500	KPOF	850	1000	KSEI	900	250
Beverly Hills, Calif.			Denver, Colo.			Pocatello, Idaho		
KMTR	570	1000	KPPC	1210	100	KSFO	560	1000
Los Angeles, Calif.			Pasadena, Calif.			San Francisco, Calif.		
KNEL	1500	250	KPQ	1500	100	KSL	1130	50000
Brady, Texas			Wenatchee, Wash.			Salt Lake City, Utah		
KNET	1420	100	KPRC	920	1000	KSLM	1370	100
Palestine, Texas			Houston, Texas			Salem, Ore.		
KNOW	1500	100	KQV	1380	500	KSO	1430	1000
Austin, Texas			Pittsburgh, Pa.			Des Moines, Iowa		
KNX	1050	50000	KQW	1010	1000	KS00	1110	5000
Los Angeles, Calif.			San Jose, Calif.			Sioux Falls, S. Dak.		
KOA	830	50000	KRBA	1310	100	KSR0	1310	100
Denver, Colo.			Lufkin, Texas			Santa Rosa, Calif.		
KOAC	550	1000	KRBC	1420	100	KSTP	1460	10000
Corvallis, Ore.			Abilene, Texas			St. Paul, Minn.		
KOAM	790	1000	KRBM	1420	100	KSUB	1310	100
Pittsburg, Kans.			Bozeman, Mont.			Cedar City, Utah		
KOB	1180	10000	KRE	1370	100	KSUN	1200	100
Albuquerque, N. M.			Berkeley, Calif.			Lowell, Ariz.		
KQBH	1370	100	KRGV	1260	1000	KTAR	620	1000
Rapid City, S. Dak.			Westaco, Texas			Phoenix, Ariz.		
KOCA	1210	100	KRIC	1420	100	KTAT	1240	1000
Kilgore, Texas			Beaumont, Texas			Fort Worth, Texas		
KOCY	1310	100	KRIS	1330	500	KTBC	1120	1000
Oklahoma City, Okla.			Corpus Christi, Tex.			Austin, Texas		

NORTH AMERICAN B. C. STATIONS BY CALLS

KTBS 1450 1000	KVSO 1210 100	TILJ 775 450
Shreveport, La.	Ardmore, Okla.	San Jose, Costa Rica
KTEM 1370 250	KVWC 1500 100	TILS 880 500
Temple, Texas	Vernon, Texas	San Jose, Costa Rica
KTFI 1240 1000	KWAL 1420 100	TIPG 625 5000
Twin Falls, Idaho	Wallace, Idaho	San Jose, Costa Rica
KTHS 1060 10000	KWBG 1420 100	TIRH 950 2000
Hot Springs, Ark.	Hutchinson, Kans.	San Jose, Costa Rica
KTKC 1190 250	KWEW 1500 100	TIRM 750 500
Visalia, Calif.	Hobbs, N. Mex.	San Jose, Costa Rica
KTMS 1220 500	KWFT 620 250	TIRS 915 250
Santa Barbara, Calif.	Wichita Falls, Texas	San Jose, Costa Rica
KTOH 1500 100	KWKG 1200 100	TIX 650 1000
Lihue, Hawaii	Stockton, Calif.	San Jose, Costa Rica
KTOK 1370 100	KWJB 1210 100	TIXD 800 1000
Oklahoma City, Okla.	Globe, Ariz.	San Jose, Costa Rica
KTRB 740 250	KWJJ 1040 500	T15CV 575 100
Modesto, Calif.	Portland, Ore.	Alajuela, Costa Rica
KTRH 1290 1000	KWK 1350 1000	VAS 685 2000
Houston, Texas	St. Louis, Mo.	Glace Bay, N. S.
KTRI 1420 100	KWKH 1100 10000	VOAC 1065 40
Sioux City, Iowa	Shreveport, La.	St. John's Nfld.
KTSA 550 1000	KWLC 1270 100	VOCM 1006 200
San Antonio, Texas	Decorah, Iowa	St. John's Nfld.
KTSM 1310 100	KWLK 780 250	VOGY 840 400
El Paso, Texas	Longview, Wash.	St. John's Nfld.
KTSW 1370 100	KWNO 1200 250	VONF 1195 500
Emporia, Kans.	Winona, Minn.	St. John's Nfld.
KTUL 1400 1000	KWOC 1310 100	VOWR 681 500
Tulsa, Okla.	Poplar Bluff, Mo.	St. John's Nfld.
KTW 1220 1000	KWOS 1310 100	WAAB 1410 500
Seattle, Wash.	Jefferson City, Mo.	Boston, Mass.
KUJ 1370 100	KWSC 1220 1000	WAAF 920 1000
Walla Walla, Wash.	Pullman, Wash.	Chicago, Ill.
KUOA 1260 5000	KWTO 560 5000	WAAT 940 500
Siloam Springs, Ark.	Springfield, Mo.	Jersey City, N. J.
KUSD 890 500	KWYO 1370 100	WAAW 660 500
Vermillion, S. Dak.	Sheridan, Wyo.	Omaha, Neb.
KUTA 1500 100	KXA 760 250	WABC 860 50000
Salt Lake City, Utah	Seattle, Wash.	New York, N. Y.
KVAK 1420 100	KXL 1420 100	WABI 1200 100
Atchison, Kans.	Portland, Ore.	Bangor, Maine
KVAN 880 250	KXO 1500 100	WABY 1370 100
Vancouver, Wash.	El Centro, Calif.	Albany, N. Y.
KVCV 1200 100	KXOK 1250 1000	WACO 1420 100
Redding, Calif.	St. Louis, Mo.	Waco, Texas
KVEC 1200 100	KXRO 1310 100	WADC 1320 1000
San Luis Obispo, Cal.	Aberdeen, Wash.	Akron, Ohio
KVGB 1370 100	KXYZ 1440 1000	WAGA 1450 500
Great Bend, Kans.	Houston, Texas	Atlanta, Ga.
KVI 570 1000	KYA 1230 1000	WAGF 1370 250
Tacoma, Wash.	San Francisco, Calif.	Dothan, Ala.
KVNU 1200 100	KYCA 1500 100	WAGM 1420 100
Logan, Utah	Prescott, Ariz.	Presque Isle, Me.
KVOA 1260 1000	KYOS 1040 250	WAIM 1200 100
Tucson, Ariz.	Merced, Calif.	Anderson, S. C.
KVOD 920 500	KYSM 1500 100	WAIR 1250 250
Denver, Colo.	Mankato, Minn.	Winston-Salem, N. C.
KVOE 1500 100	KYW 1020 10000	WALA 1380 500
Santa Ana, Calif.	Philadelphia, Pa.	Mobile, Ala.
KVOL 1310 100	TGQ 1450 200	WALR 1210 100
Lafayette, La.	Quezaltenango, Guat.	Zanesville, Ohio
KVOO 1140 25000	TGW 1520 5000	WAML 1310 100
Tulsa, Okla.	Guatemala City, Guat.	Laurel, Miss.
KVOR 1270 1000	TGX 1400	WAPI 1140 5000
Colo. Springs, Colo.	Guatemala City, Guat.	Birmingham, Ala.
KVOS 1200 100	TGI 1310	WAFO 1420 100
Bellingham, Wash.	Guatemala City, Guat.	Chattanooga, Tenn.
KVOX 1310 100	TIEP 830 300	WARD 1400 500
Moorhead, Minn.	San Jose, Costa Rica	Brooklyn, N. Y.
KVRS 1370 100	TIGH 725 600	
Rock Springs, Wyo.	San Jose, Costa Rica	

NORTH AMERICAN B. C. STATIONS BY CALLS

WASH 1270 500	Grand Rapids, Mich.	WBRY 1530 1000	Waterbury, Conn.	WCOU 1210 100	Lewiston, Maine
WATL 1370 100	Atlanta, Ga.	WBT 1080 50000	Charlotte, N. C.	WCOV 1210 100	Montgomery, Ala.
WATR 1190 100	Waterbury, Conn.	WBTH 1370 100	Williamson, W. Va.	WCPO 1200 100	Cincinnati, Ohio
WAVE 940 1000	Louisville, Ky.	WBTM 1370 100	Danville, Va.	WCRW 1210 100	Chicago, Ill.
WAWZ 1350 500	Zarephath, N. J.	WBZ 990 50000	Boston, Mass.	WCSC 1360 500	Charleston, S. C.
WAYX 1200 100	Waycross, Ga.	WBZA 990 1000	Springfield, Mass.	WCSH 940 1000	Portland, Me.
WAZL 1420 100	Hazleton, Pa.	WCAD 1220 500	Canton, N. Y.	WDAE 1220 1000	Tampa, Fla.
WBAA 890 500	West Lafayette, Ind.	WCAE 1220 1000	Pittsburgh, Pa.	WDAF 610 1000	Kansas City, Mo.
WBAL 760 2500	Baltimore, Md.	WCAL 760 5000	Northfield, Minn.	WDAH 1310 100	El Paso, Texas
WBAL 1060 10000	Baltimore, Md.	WCAM 1280 500	Camden, N. J.	WDAN 1500 250	Danville, Ill.
WBAP 800 50000	Port Worth, Texas	WCAO 600 500	Baltimore, Md.	WDAS 1370 100	Philadelphia, Pa.
WBAX 1210 100	Wilkes-Barre, Pa.	WCAP 1280 500	Asbury Park, N. J.	WDAY 940 1000	Fargo, N. Dak.
WBBC 1400 500	Brooklyn, N. Y.	WCAT 1200 100	Rapid City, S. Dak.	WDBJ 930 1000	Roanoke, Va.
WBBL 1210 100	Richmond, Va.	WCAU 1170 50000	Philadelphia, Pa.	WDBO 580 1000	Orlando, Fla.
WBBM 770 50000	Chicago, Ill.	WCAX 1200 100	Burlington, Vt.	WDEL 1120 250	Wilmington, Del.
WBBR 1300 1000	Brooklyn, N. Y.	WCZA 1070 100	Carthage, Ill.	WDEV 550 500	Waterbury, Vt.
WBBZ 1200 100	Ponca City, Okla.	WCBA 1440 500	Allentown, Pa.	WDGY 1180 1000	Minneapolis, Minn.
WBCM 1410 500	Bay City, Mich.	WCBD 1080 5000	Chicago, Ill.	WDNC 1500 100	Durham, N. C.
WBEN 900 1000	Buffalo, N. Y.	WCBM 1370 100	Baltimore, Md.	WDOD 1280 1000	Chatanooga, Tenn.
WBEO 1310 100	Marquette, Mich.	WCBS 1420 100	Springfield, Ill.	WDRG 1330 1000	Hartford, Conn.
WBHP 1200 100	Huntsville, Ala.	WCGO 810 50000	Minneapolis, Minn.	WDSM 1200 100	Superior, Wis.
WBIG 1440 1000	Greensboro, N. C.	WCFL 970 5000	Chicago, Ill.	WDSU 1250 1000	New Orleans, La.
WBIL 1100 5000	New York, N. Y.	WCBS 580 500	Charleston, W. Va.	WDWS 1370 100	Champaign, Ill.
WBLK 1370 100	Clarksburg, W. Va.	WCHV 1420 100	Charlottesville, Va.	WDZ 1020 250	Tuscola, Ill.
WBNO 1420 100	New Orleans, La.	WCKY 1490 10000	Covington, Ky.	WEAF 660 50000	New York, N. Y.
WBNS 1430 1000	Columbus, Ohio	WCLE 610 500	Cleveland, Ohio	WEAN 780 1000	Providence, R. I.
WBNX 1350 1000	New York, N. Y.	WCLO 1200 100	Janesville, Wis.	WEAU 1050 1000	Eau Claire, Wis.
WBNY 1370 100	Buffalo, N. Y.	WCLS 1310 100	Joliet, Ill.	WEBC 1290 1000	Duluth, Minn.
WBOQ 860 50000	New York, N. Y.	WCMI 1310 100	Ashland, Ky.	WEBQ 1210 100	Harrisburg, Ill.
WBOW 1310 100	Terre Haute, Ind.	WCNW 1500 100	Brooklyn, N. Y.	WEBR 1310 100	Buffalo, N. Y.
WBRB 1210 100	Red Bank, N. J.	WCOA 1340 500	Pensacola, Fla.	WEDC 1210 100	Chicago, Ill.
WBRC 930 1000	Birmingham, Ala.	WCOC 880 1000	Meridan, Miss.	WEED 1420 100	Rocky Mount, N. C.
WBRE 1310 100	Wilkes-Barre, Pa.	WCOL 1210 100	Columbus, Ohio	WEI 590 1000	Boston, Mass.
WBRK 1310 100	Pittsfield, Mass.	WCOP 1120 500	Boston, Mass.	WEU 830 1000	Reading, Pa.
		WCOS 1370 100	Columbus, S. C.	WELI 900 500	New Haven, Conn.

NORTH AMERICAN B. C. STATIONS BY CALLS

WELL 1420	100	WGCM 1210	100	WHEC 1438	500
Battle Creek, Mich.		Gulfport, Miss.		Rochester, N. Y.	
WEMP 1310	100	WGES 1360	500	WHFC 1420	100
Milwaukee, Wis.		Chicago, Ill.		Cicero, Ill.	
WENR 870	50000	WGH 1310	100	WHIO 1260	1000
Chicago, Ill.		Newport News, Va.		Dayton, Ohio	
WENY 1200	250	WGIL 1500	250	WHIP 1480	5000
Elmira, N. Y.		Galesburg, Ill.		Hammond, Ind.	
WEOA 1370	100	WGL 1370	100	WHIS 1410	500
Evansville, Ind.		Fort Wayne, Ind.		Bluefield, W. Va.	
WESG 850	1000	WGKV 1500	100	WHJB 620	250
Elmira, N. Y.		Charleston, W. Va.		Greensburg, Pa.	
WEST 1200	100	WGN 720	50000	WHK 1390	1000
Easton, Pa.		Chicago, Ill.		Cleveland, Ohio	
WEVD 1300	1000	WGNC 1420	100	WHKC 640	500
New York, N. Y.		Gastonia, N. C.		Columbus, Ohio	
WEW 760	1000	WGNY 1220	250	WHLB 1370	100
St. Louis, Mo.		Newburgh, N. Y.		Virginia, Minn.	
WEXL 1310	50	WGPC 1420	100	WHLS 1370	250
Royal Oak, Mich.		Albany, Ga.		Port Huron, Mich.	
WFAA 800	50000	WGR 550	1000	WHMA 1420	100
Dallas, Texas		Buffalo, N. Y.		Anniston, Ala.	
WFAM 1200	100	WGRC 1370	250	WHN 1010	1000
South Bend, Ind.		New Albany, Ind.		New York, N. Y.	
WFAS 1210	100	WGRM 1210	100	WHO 1000	50000
White Plains, N. Y.		Grenada, Miss.		Des Moines, Iowa	
WFBC 1300	1000	WGST 890	1000	WHOM 1450	250
Greenville, S. C.		Atlanta, Ga.		Jersey City, N. J.	
WFBG 1310	100	WGTM 1310	100	WHP 1430	500
Altoona, Pa.		Wilson, N. C.		Harrisburg, Pa.	
WFBL 1360	1000	WGY 790	50000	WIBA 1280	1000
Syracuse, N. Y.		Schenectady, N. Y.		Madison, Wis.	
WFBM 1230	1000	WHA 940	5000	WIBC 1050	1000
Indianapolis, Ind.		Madison, Wis.		Indianapolis, Ind.	
WFBR 1270	500	WHA1 1210	250	WIBG 970	100
Baltimore, Md.		Greenfield, Mass.		Glenside, Pa.	
WFDF 1310	100	WHAM 1150	50000	WIBM 1370	100
Flint, Mich.		Rochester, N. Y.		Jackson, Mich.	
WFEA 1340	500	WHAS 820	50000	WIBU 1210	100
Manchester, N. H.		Louisville, Ky.		Poynette, Wis.	
WFIL 560	1000	WHAT 1310	100	WIBW 580	1000
Philadelphia, Pa.		Philadelphia, Pa.		Topeka, Kans.	
WFLA 620	1000	WHAZ 1300	1000	WIBX 1200	100
Tampa, Fla.		Troy, N. Y.		Utica, N. Y.	
WFMD 900	500	WHB 860	1000	WICA 940	250
Frederick, Md.		Kansas City, Mo.		Ashtabula, Ohio	
WFMJ 1420	100	WHBB 1500	100	WICC 600	500
Youngstown, Ohio		Selma, Ala.		Bridgeport, Conn.	
WFNC 1340	250	WHBC 1200	100	WIL 1200	100
Fayetteville, N. C.		Canton, Ohio		St. Louis, Mo.	
WFOR 1370	100	WHBF 1240	1000	WILL 580	5000
Hattiesburg, Miss.		Rock Island, Ill.		Urbana, Ill.	
WFOY 1210	100	WHBI 1250	1000	WILM 1420	100
St. Augustine, Fla.		Newark, N. J.		Wilmington, Del.	
WFTC 1200	100	WHBL 1300	250	WIND 560	1000
Kinston, N. C.		Sheboygan, Wis.		Gary, Ind.	
WGAL 1500	100	WHBQ 1370	100	WINN 1210	100
Lancaster, Pa.		Memphis, Tenn.		Louisville, Ky.	
WGAN 640	500	WHBU 1210	100	WINS 1180	1000
Portland, Me.		Anderson, Ind.		New York, N. Y.	
WGAR 1450	1000	WHBY 1200	100	WIOD 610	1000
Cleveland, Ohio		Green Bay, Wis.		Miami, Fla.	
WGAU 1310	100	WHDF 1370	100	WIP 610	1000
Athens, Ga.		Calumet, Mich.		Philadelphia, Pa.	
WGBB 1210	100	WHDH 830	1000	WIRE 1400	1000
Freeport, N. Y.		Boston, Mass.		Indianapolis, Ind.	
WGBF 630	500	WHDL 1400	250	WIS 560	1000
Evansville, Ind.		Olean, N. Y.		Columbia, S. C.	
WGBI 880	500	WHEB 740	250	WISN 1120	250
Soranton, Pa.		Portsmouth, N. H.		Milwaukee, Wis.	
WGBR 1370	100			WJAC 1310	100
Goldsboro, N. C.				Johnstown, Pa.	

NORTH AMERICAN B. C. STATIONS BY CALLS

WJAG	1060	1000	WKBY	1500	100	WMBS	1420	100
Norfolk, Neb.			Muskegon, Mich.			Uniontown, Pa.		
WJAR	890	1000	WKEU	1500	100	WMC	780	1000
Providence, R. I.			Griffin, Ga.			Memphis, Tenn.		
WJAS	1290	1000	WKOK	1210	100	WMCA	570	1000
Pittsburgh, Pa.			Sunbury, Pa.			New York, N. Y.		
WJAX	900	1000	WKRC	550	1000	WMEX	1500	100
Jacksonville, Fla.			Cincinnati, Ohio			Boston, Mass.		
WJBC	1200	100	WKST	1250	250	WMFD	1370	100
Bloomington, Ill.			New Castle, Pa.			Wilmington, N. C.		
WJBK	1500	100	WKY	900	1000	WMFF	1310	100
Detroit, Mich.			Oklahoma City, Okla.			Plattsburg, N. Y.		
WJBL	1200	100	WKZO	590	1000	WMFG	1210	100
Decatur, Ill.			Kalamazoo, Mich.			Hibbing, Minn.		
WJBO	1120	500	WLAC	1470	5000	WMFJ	1420	100
Baton Rouge, La.			Nashville, Tenn.			Daytona Beach, Fla.		
WJBW	1200	100	WLAK	1310	100	WMFO	1370	100
New Orleans, La.			Lakeland, Fla.			Decatur, Ala.		
WJBY	1210	100	WLAP	1420	100	WMFR	1200	100
Gadsden, Ala.			Lexington, Ky.			High Point, N. C.		
WJDX	1270	1000	WLAW	680	1000	WWIN	1370	100
Jackson, Miss.			Lawrence, Mass.			St. Paul, Minn.		
WJEJ	1210	100	WLB	760	5000	WMMN	890	500
Hagerstown, Md.			Minneapolis, Minn.			Paterson, N. J.		
WJHL	1200	100	WLBC	1310	100	WMOB	1200	100
Johnson City, Tenn.			Muncie, Ind.			Mobile, Ala.		
WJHP	1290	250	WLBL	900	5000	WMPC	1200	100
Jacksonville, Fla.			Stevens Point, Wis.			Lapeer, Mich.		
WJIM	1210	100	WLBZ	620	500	WMPS	1430	500
Lansing, Mich.			Bangor, Me.			Memphis, Tenn.		
WJJD	1130	20000	WLEU	1420	100	WMRO	1250	250
Chicago, Ill.			Erie, Pa.			Aurora, Ill.		
WJLS	1210	100	WLLH	1370	100	WMSD	1420	100
Beckley, W. Va.			Lawrence, Mass.			Muscle Shoals C., Ala.		
WJMC	1210	250	WLLH	1370	100	WMT	600	1000
Rice Lake, Wis.			Lowell, Mass.			Cedar Rapids, Iowa		
WJMS	1420	100	WLNH	1310	100	WNAAC	1230	1000
Ironwood, Mich.			Laconia, N. H.			Boston, Mass.		
WJNO	1200	100	WLOK	1210	100	WNAD	1010	1000
W. Palm Beach, Fla.			Lima, Ohio			Norman, Okla.		
WJR	750	50000	WLS	870	50000	WNAX	570	1000
Detroit, Mich.			Chicago, Ill.			Yankton, S. D.		
WJRD	1200	250	WLTH	1400	500	WNBC	1380	250
Tuscaloosa, Ala.			New York, N. Y.			New Britain, Conn.		
WJSV	1460	10000	WLVA	1200	100	WBNF	1500	100
Washington, D. C.			Lynchburg, Va.			Binghamton, N. Y.		
WJTN	1210	100	WLW	700	50000	WNBH	1310	100
Jamestown, N. Y.			Cincinnati, Ohio			New Bedford, Mass.		
WJW	1210	100	WMAL	630	250	WNBX	1260	1000
Akron, Ohio			Washington, D. C.			Springfield, Vt.		
WJZ	760	50000	WMAQ	670	50000	WNBZ	1290	100
New York, N. Y.			Chicago, Ill.			Saranac Lake, N. Y.		
WKAQ	1240	1000	WMAS	1420	100	WNEL	1290	1000
San Juan, P. R.			Springfield, Mass.			San Juan, P. R.		
WKAR	850	1000	WMAZ	1180	1000	WNEW	1250	1000
East Lansing, Mich.			Macon, Ga.			New York, N. Y.		
WKAT	1500	100	WMBC	1420	100	WNLC	1500	100
Miami Beach, Fla.			Detroit, Mich.			New London, Conn.		
WKBB	1500	100	WMBD	1440	1000	WNOX	1010	1000
East Dubuque, Ill.			Peoria, Ill.			Knoxville, Tenn.		
WKBH	1380	1000	WMBF	610	1000	WNYC	810	1000
LaCrosse, Wis.			Miami, Fla.			New York, N. Y.		
WKBN	570	500	WMBG	1350	500	WOAI	1190	50000
Youngstown, Ohio			Richmond, Va.			San Antonio, Texas		
WKBO	1200	100	WMBH	1420	100	WOC	1370	100
Harrisburg, Pa.			Joplin, Mo.			Davenport, Iowa		
WKBV	1500	100	WMBI	1080	5000	WOCB	1210	100
Richmond, Ind.			Chicago, Ill.			Barnstable, Mass.		
WKBW	1480	5000	WMBO	1310	100	WOI	640	5000
Buffalo, N. Y.			Auburn, N. Y.			Ames, Iowa		
			WMBR	1370	100	WOKO	1430	500
			Jacksonville, Fla.			Albany, N. Y.		

NORTH AMERICAN B. C. STATIONS BY CALLS

WOL 1230 1000	Washington, D. C.	WRBL 1200 100	Columbus, Ga.	WSMK 1380 250	Dayton, Ohio
WOLS 1200 100	Florence, S. C.	WRC 950 1000	Washington, D. C.	WSNJ 1210 100	Bridgeton, N. J.
WOMI 1500 100	Owensboro, Ky.	WRDO 1370 100	Augusta, Ma.	WSOC 1210 100	Charlotte, N. C.
WOMT 1210 100	Manitowoc, Wis.	WRDW 1500 100	Augusta, Ga.	WSPA 920 1000	Spartanburg, S. C.
WOOD 1270 500	Grand Rapids, Mich.	WREC 600 1000	Memphis, Tenn.	WSPD 1340 1000	Toledo, Ohio
WOPI 1500 100	Bristol, Tenn.	WREN 1220 1000	Lawrence, Kans.	WSPR 1140 500	Springfield, Mass.
WOR 710 50000	Newark, N. J.	WRGA 1500 100	Rome, Ga.	WSTP 1500 100	Salisbury, N.C.
WORC 1280 500	Worcester, Mass.	WRJN 1370 100	Racine, Wis.	WSUI 880 500	Iowa City, Iowa
WORK 1320 1000	York, Pa.	WRKL 1500 100	Rock Hill, S. C.	WSUN 620 1000	St. Petersburg, Fla.
WORL 920 500	Boston, Mass.	WRNL 880 500	Richmond, Va.	WSVA 550 500	Harrisonburg, Va.
WOSU 570 750	Columbus, Ohio	WROK 1410 500	Rockford, Ill.	WSVS 1370 50	Buffalo, N. Y.
WOV 1130 1000	New York, N. Y.	WROL 1310 100	Knoxville, Tenn.	WSYB 1500 100	Rutland, Vt.
WOW 590 1000	Omaha, Neb.	WRR 1280 500	Dallas, Texas	WSYR 570 1000	Syracuse, N. Y.
WOWO 1160 10000	Fort Wayne, Ind.	WRTD 1500 100	Richmond, Va.	WSYU 570 1000	Syracuse, N. Y.
WPAD 1420 100	Paducah, Ky.	WRUF 830 5000	Gainesville, Fla.	WTAD 900 1000	Quincy, Ill.
WPAR 1420 100	Parkersburg, W. Va.	WRVA 1110 5000	Richmond, Va.	WTAG 560 1000	Worcester, Mass.
WPAX 1210 100	Thomasville, Ga.	WSAI 1330 1000	Cincinnati, Ohio	WTAL 1310 100	Tallahassee, Fla.
WPAY 1370 100	Portsmouth, Ohio	WSAJ 1310 100	Grove City, Pa.	WTAM 1070 50000	Cleveland, Ohio
WPEN 920 1000	Philadelphia, Pa.	WSAL 1200 250	Salisbury, Md.	WTAQ 1330 1000	Green Bay, Wis.
WPG 1100 5000	Atlantic City, N. J.	WSAN 1440 500	Allentown, Pa.	WTAR 780 1000	Norfolk, Va.
WPIC 780 250	Sharon, Pa.	WSAR 1450 1000	Fall River, Mass.	WTAW 1120 500	College Station, Tex.
WPIV 1210 100	Petersburg, Va.	WSAU 1370 100	Wausau, Wis.	WTAX 1210 100	Springfield, Ill.
WPRA 1370 100	Mayaguez, P. R.	WSAV 1310 100	Savannah, Ga.	WTBO 800 250	Cumberland, Md.
WPRO 630 500	Providence, R. I.	WSAY 1210 100	Rochester, N. Y.	WTCN 1250 1000	Minneapolis, Minn.
WPRP 1420 100	Ponce, P. R.	WSAZ 1190 1000	Huntington, W. Va.	WTEL 1310 100	Philadelphia, Pa.
WPTF 680 5000	Raleigh, N. C.	WSB 740 50000	Atlanta, Ga.	WTHT 1200 100	Hartford, Conn.
WQAM 560 1000	Miami, Fla.	WSBC 1210 100	Chicago, Ill.	WTIC 1040 50000	Hartford, Conn.
WQAN 880 500	Scranton, Pa.	WSBT 1360 500	South Bend, Ind.	WTIS 1310 100	Jackson, Tenn.
WQBC 1360 1000	Vicksburg, Miss.	WSFA 1410 500	Montgomery, Ala.	WTMA 1210 100	Charleston, S. C.
WQDM 1390 1000	St. Albans, Vt.	WSGN 1310 100	Birmingham, Ala.	WTMJ 620 1000	Milwaukee, Wis.
WQXR 1550 1000	New York, N. Y.	WSIX 1210 100	Nashville, Tenn.	WTMV 1500 100	East St. Louis, Ill.
WRAK 1370 100	WilliamSPORT, Pa.	WSJS 1310 100	Winston-Salem, N. C.	WTNJ 1280 500	Trenton, N. J.
WRAL 1210 100	Raleigh, N. C.	WSLI 1420 100	Jackson, Miss.	WTOC 1260 1000	Savannah, Ga.
WRAW 1310 100	Reading, Pa.	WSM 650 50000	Nashville, Tenn.	WTOL 1200 100	Toledo, Ohio
		WSMB 1320 1000	New Orleans, La.	WTRC 1310 100	Elkhart, Ind.

NORTH AMERICAN B. C. STATIONS BY CALLS

	WTRY	950	1000		XEBP	1150	250		XEK	990	100
	Troy, N. Y.				Durango, Dgo.				Mexico City, D. F.		
	WVFW	1400	500		XEBS	1340	200		XEKL	1240	500
	Brooklyn, N. Y.				Mexico City, D. F.				Leon, Guan.		
	WVAE	1200	100		XEBU	1240	50		XEL	1150	250
	Hammond, Ind.				Chihuahua, Chih.				Mexico City, D. F.		
	WWJ	920	1000		XEBW	1340	250		XELO	730	5000C
	Detroit, Mich.				Chihuahua, Chih.				Tijuana, B. Cfa.		
	WWL	850	50000		XEBX	640	250		XELZ	1370	100
	New Orleans, La.				Sabinas, Coah.				Mexico City, D. F.		
	WWNC	570	1000		XEBZ	810	100		XEM	1380	50C
	Asheville, N. C.				Mexico City, D. F.				Chihuahua, Chih.		
	WWRL	1500	100		XEC	1150	100		XEME	1240	50
	Woodside, N. Y.				Tijuana, L. C.				Merida, Yuc.		
	WWSW	1500	100		XECA	1230	250		XEMO	860	5000
	Pittsburgh, Pa.				Tampico, Tam.				Tijuana, L. C.		
	WVVA	1160	5000		XECH	1490	250		XEMU	580	250
	Wheeling, W. Va.				Toluca, Mex.				Piedras Negras, Coah.		
	WXYZ	1240	1000		XECL	960	1000		XEMX	1280	100
	Detroit, Mich.				Mexicali, B. Cfa.				Mexico City, D. F.		
	W3XDD	....	50000		XECZ	1370	100		XEN	780	1000
	Whippany, N. J.				San Luis Potosi, S.L.P.				Mexico City, D. F.		
	W8XO	700	500000		XED	1160	2500		XENT	910	150000
	Cincinnati, Ohio				Guadalajara, Jal.				Nuevo Laredo, Tams.		
	XEAA	750	200		XEDA	1220	200		XEP	1160	500
	Mexicali, B. C.				Gral. Anaya, D. F.				Juarez, Chih.		
	XEAC	980	5000		XEDF	810	100		XEPN	730	100000
	Tijuana, B. Cfa.				Nuevo Laredo, Tams.				Piedras Negras, Coah.		
	XEAF	990	750		XEDH	1340	200		XEQ	730	50000
	Nogales, Son.				Villa Acuna, Coah.				Mexico City, D. F.		
	XEAG	1310	10		XEDP	1080	500		XERA	840	250000
	Cordoba, Ver.				Mexico City, D. F.				Villa Acuna, Coah.		
	XEAI	1250	500		XEDR	1490	100		XERB	1090	150000
	Mexico City, D. F.				Guaymas, Son.				Rosarito Beach, B. Cfa.		
	XEAL	660	1000		XEDW	1150	300		XERC	870	500
	Mexico City, D. F.				Minatitlan, Ver.				Mexico City, D. F.		
	XEAM	750	25		XEE	1210	50		XERH	1430	500
	Matamoros, Tams.				Durango, Dgo.				Mexico City, D. F.		
	XEAO	660	250		XEF	1450	100		XES	990	250
	Mexicali, B. C.				Juarez, Chih.				Tampico, Tams.		
	XEAP	1340	50		XEFB	870	200		XET	690	5000
	Obregon, Son.				Monterrey, N. L.				Monterrey, N. L.		
	XEAS	1160	100		XEFC	1340	100		XETB	1310	500
	Saltillo, Coah.				Merida, Yuc.				Torreón, Coah.		
	XEAT	1210	250		XEFE	980	250		XETH	1210	100
	Parral, Chih.				Nuevo Laredo, Tams.				Puebla, Pue.		
	XEAW	960	100000		XEFI	1440	250		XEU	1010	250
	Reynosa, Tams.				Chihuahua, Chih.				Vera Cruz, Ver.		
	XEB	1030	10000		XEFO	940	5000		XEW	890	100000
	Mexico City, D. F.				Mexico City, D. F.				Mexico City, D. F.		
	XEBA	1080	20		XEFQ	1010	50		XEX	1310	500
	Guzman, Jal.				Cananea, Son.				Monterrey, N. L.		
	XEBG	820	1000		XEFV	1210	50		XEXB	1270	250
	Tijuana, B. Cfa.				Juarez, Chih.				Jalapa, Ver.		
	XEBH	930	500		XEFW	1310	300		XEXD	1340	350
	Hermosillo, Sonora				Tampico, Tams.				Orizaba, Ver.		
	XEBI	1000	250		XEG	1230	250		XEXE	1270	17
	Aguascalientes, Ags.				Monterrey, N. L.				Texcoco, Mex.		
	XEBK	1080	100		XEH	720	250		XEXX	1170	1000
	Nuevo Laredo, Tams.				Monterrey, N. L.				Mexico City, D. F.		
	XEBL	1220	50		XEI	1370	125		XEZ	630	500
	Mazatlan, Sin.				Morelia, Mich.				Merida, Yuc.		
	XEBO	1310	25		XEJ	1020	1000		YSS	640	500
	Irapuato, Guan.				Juarez, Chih.				San Salvador, E. S.		
					XEJP	1130	100		ZNS	540	400
					Mexico City, D. F.				Nassau, Bahamas		

BROADCASTING STATIONS OF NORTH AMERICA

Compiled from RADEX records, with the assistance of Ed. M. Vichers.

This supplementary call letter index began in the September, 1938 issue of RADEX, and will appear on these pages every month until completed.

The abbreviations used throughout this list are familiar to all our readers, except perhaps "CP" for Construction Permit, "LS" for Local Sunset, and "ss" for sunset.

Continued from last month

KVOX, Moorhead, Minn., 1310 kcs., 100 w. nights, 250 watts to LS, unlt'd. *Transmitter*: 14th St. and 12th Ave. *Aerial*: vertical, 179 ft. *Manager*: M. M. Marget. *Licensee*: KVOX Broadcasting Co., 722 Center Ave.

KVRS, Rock Springs, Wyo., 1370 kcs., 100 w. nights, 250 k. to LS, unlt'd. *Manager*: Ken iNelson. *Licensee*: Wyoming Broadcasting Co.

KVSO, Ardmore, Okla., 1210 kcs., 100 w. nights, 250 w. to LS, unlt'd. *Network*: Mutual. *Aerial*: vertical, 184 ft. *Manager*: Albert Rieser. *Licensee*: Ardmoreite Publishing Co., Chickasaw and Northwest Blvd.

KVWC, Vernon, Texas, 1500 kcs., 100 w. UNDER CONSTRUCTION. *Aerial*: vertical, 150 ft. *Licensee*: R. H. Nichols.

KWAL, Wallace, Idaho, 1420 kcs., 100 w. nights, 250 w. to LS. UNDER CONSTRUCTION. Chester Howarth and Clarence Berger.

KWBG, Hutchinson, Kans., 1420 kcs., 100 w. unlt'd. *Manager*: W. B. Greenwald. *Licensee*: Nation's Center Broadcasting Co., Inc., 100 E. Avenue "A".

KWFT, Wichita Falls, Texas, 620 kcs., 250 w. nights, 1 kw. to LS, unlt'd. UNDER CONSTRUCTION. *Aerial*: vertical, 400 ft. *Manager*: D. A. Kahn. *Licensee*: Wichita Broadcasting Co., 807 Hamilton Bldg.

KWG, Stockton, Calif., 1200 kcs., 100 w. unlt'd. *Network*: NBC. *Trans*: Weber and "E" Sts. *Manager*: George Ross. *Licensee*: McClatchey Broadcasting Co., Hotel Wolf.

KWJB, Globe, Ariz., 1210 kcs., 100 w. nights, 250 w. to LS, unlt'd. *Trans*: Sycamore and Devereaux Sts. *Aerial*: vertical, 204 ft. *Manager*: Bartley T. Sims. *Licensee*: Sims Broadcasting Co.

KWJJ, Portland, Ore., 1060 kcs., 500 w. limited time. (Using 1040 kcs. at present, under Special Authorization). *Trans*: Oaks Park. *Aerial*: vertical, 229 ft. *Manager*: John C. Egan. *Licensee*: KWJJ Broadcasting Co., Inc., 622 Salmon St., S. W.

KWK, St. Louis, Mo., 1350 kcs., 1000 w. nights, 5 kw. to LS, unlt'd. Has CP for 5 kw. unlt'd, with directional aerial. *Networks*: Mutual, and NBC-Blue. *Trans*: 500 E. Logan St. *Aerial*: vertical, 400 ft. *Manager*: Clarence G. Cosby. *Licensee*: Thomas Patrick, Inc., Hotel Chase.

KWKH, Shreveport, La., 850 kcs., 10,000 w. unlt'd. (Using 1100 kcs. at present, under Special Authorization). *Network*: CBS. *Trans*: near Shreveport, on Mooringport Road. *Aerial*: 2 towers, 198 ft., directional at night. *Manager*: John C. McCormack. *Licensee*: International Broadcasting Corp., Box 17.

KWLC, Decorah, Iowa, 1270 kcs., 100 w. days, sharing time with KGCA. Reports to Dr. O. J. H. Preuss, Luther College.

KWLK, Longview, Wash., 780 kcs., 250 w. days. *Trans*: Ocean Beach Highway. *Aerial*: vertical, 230 ft. *Manager*: M. F. Woodling. *Licensee*: Twin City Broadcasting Corp., National Bank of Commerce Bldg.

KWNO, Winona, Minn., 1200 kcs., 250 w. days. *Trans*: 831 W. Sarnia. *Aerial*: vertical, 199 ft. *Manager*: A. E. Mickel. *Licensee*: Winona Radio Service, 216 Center St.

KWOC, Poplar Bluff, Mo., 1310 kcs., 100 w. days. *Aerial*: vertical, 185 ft. *Manager*: Randall Jesse. *Licensee*: Fields McCarthy Co., 216 Poplar St.

KWOS, Jefferson City, Mo., 1310 kcs., 100 w. nights, 250 w. to LS, unlt'd. *Trans*: St. Mary's Blvd. *Aerial*: vertical, 204 ft. *Manager*: R. L. Rose. *Licensee*: Tribune Printing Co., 210 Monroe St.

KWSC, Pullman, Wash., 1220 kcs., 1000 w. nights, 5 kw. to LS, sharing time with KTW. *Aerial*: vertical, 224 ft. *Manager*: Kenneth E. Yeend. *Licensee*: State College of Washington.

KWTO, Springfield, Mo., 560 kcs., 5000 w. days. *Transmitter*: 508 St. Louis St. *Aerial*: vertical, 436 ft. *Manager*: Ralph D. Foster. *Licensee*: Ozarks Broadcasting Co., St. Louis at Kimbrough.

KWYO, Sheridan, Wyo., 1370 kcs., 100 w. nights, 250 w. to LS, unlt'd. *Aerial*: vertical, 186 ft. *Manager*: H. W. Siebert. *Licensee*: Big Horn Broadcasting Co., Inc.

KXA, Seattle, Wash., 760 kcs., 250 w. nights, 500 w. to LS, limited time. Has CP for 1000 watts. *Aerial*: vertical, 175 ft. *Manager*: Florence Wallace. *Licensee*: American Radio Telephone Co., 312 Bigelow Bldg.

KXL, Portland, Ore., 1420 kcs., 100 w. nights, 250 w. to LS, sharing time with KBPS. *Aerial*: vertical, 200 ft. *Manager*: T. W. Symons, Jr. *Licensee*: KXL Broadcasters, KXL Bldg.

KXO, El Centro, Calif., 1500 kcs., 100 w. unlt'd. *Network*: MBS. *Manager*: F. M. Bowles. *Licensee*: E. R. Irely and F. M. Bowles, Box 140.

KXOK, St. Louis, Mo., 1250 kcs., 1000 w. unlt'd. *Trans*: Venice, Ill. *Aerial*: 2 towers, 180 ft. *Program Director*: Allen Franklin. *Licensee*: Star-Times Publishing Co., Star-Times Bldg.

KXRO, Aberdeen, Wash., 1310 kcs., 100 w. nights, 250 w. to LS, unlt'd. *Network*: MBS. *Trans*: 1308 Collidge Road. *Aerial*: vertical, 179 ft. *Manager*: Harry R. Spence. *Licensee*: KXRO, Inv., 207 Market St.

KXYZ, Houston, Texas, 1440 kcs., 1000 w. unlt'd. *Network*: MBS, and NBC-Blue. *Aerial*: vertical, 163 ft. *Manager*: T. Frank Smith. *Licensee*: Harris County Broadcasting Co., Gulf Bldg.

KYA, San Francisco, Calif., 1230 kcs., 1000 w. nights, 5 kw. to LS, unlt'd. *Aerial*: vertical, 450 ft. *Manager*: Reiland Quinn. *Licensee*: Hearst Radio, Inc., 988 Market St.

- KYCA, Prescott, Ariz., 1500 kcs., 100 w. nights, 250 w. to LS. Status unknown; in District of Columbia Court of Appeals.
- KYOS, Merced, Calif., 1040 kcs., 250 w. days *Aerial*: vertical, 218 ft. *Manager*: John W. Crews. *Licensee*: Merced Star Publishing Co., Grade St.
- KYSM, Mankato, Minn., 1500 kcs., 100 w. nights, 250 w. to LC., unlt. *Trans*: North Mankato. *Aerial*: vertical, 281 ft. *Licensee*: F. B. Clements & Co., 101 N. Second St.
- KYW, Philadelphia, Pa., 1020 kcs., 10000 W. unlt. *Network*: NBC-Red. *Trans*: White-marsh Townsh. *Aerial*: 4 towers, 245 ft., directional. *Manager*: Leslie W. Joy. *Licensee*: Westinghouse Electric and Mfg. Co., 1619 Chestnut St.
- WAAB, Boston, Mass., 1410 kcs., 500 w. nights, 1 kw. to LS., unlt. *Trans*: Squantum. *Aerial*: vertical, 420 ft. *Network*: MBS. *Manager*: Roy Harlow. *Licensee*: The Yankee Network, Inc., 21 Brookline Ave.
- WAAF, Chicago, Ill., 920 kcs., 1000 w. days. *Trans*: 1001 Exchange Ave. *Aerial*: vertical, 231 ft. *Manager*: Wm. E. Hutchinson. *Licensee*: Drovers Journal Publishing Co., Palmer House.
- WAAT, Jersey City, N. J., 940 kcs., 500 w. days (to 6 pm). *Trans*: 26 Journal Sq. *Manager*: Paul H. LaStayo. *Licensee*: Bremer Broadcasting Corp., 50 Journal Square.
- WAAW, Omaha, Nebr., 660 kcs., 500 w. days. *Trans*: Route 2, Florence Station. *Manager*: W. F. Myers. *Licensee*: Omaha Grain Exchange, Nineteenth & Harney.
- WABC, New York, N. Y., 860 kcs., 50000 w. unlt. *Network*: CBS. *Trans*: Wayne Township, N. J. *Aerial*: vertical, 550 ft. *Licensee*: Columbia Broadcasting System, 485 Madison Ave.
- WABI, Bangor, Maine, 1200 kcs., 100 w. nights, 250 w. to LS., unlt. *Trans*: Brewer. *Aerial*: vertical, 265 ft. *Manager*: Ralph M. Wallace. *Licensee*: Community Broadcasting Service, 57 State St.
- WABY, Albany, N. Y., 1370 kcs., 100 w. nights, 250 w. to LS., unlt. *Network*: NBC-Blue. *Trans*: Baintree and Newton Sts., Colonie. *Aerial*: vertical, 184 ft. *Manager*: Harold E. Smith. *Licensee*: Adirondack Broadcasting Co., Inc., Strand Theater Bldg.
- WACO, Waco, Texas, 1420 kcs., 100 w. nights, 250 w. to LS., unlt. *Network*: MBS. *Manager*: James W. Pate. *Licensee*: KTSA Broadcasting Co., Amicable Bldg.
- WADC, Akron, Ohio, 1320 kcs., 1000 w. nights, 5 kw. to LS., unlt. *Network*: CBS. *Trans*: Tallmadge. *Aerial*: vertical, 360 ft. Reports to Robert Wilson. *Licensee*: Allen T. Simmons, Box 29.
- WAGA, Atlanta, Ga., 1450 kcs., 500 w. nights, 1 kw. to LS., unlt. *Network*: NBC-Blue. *Aerial*: vertical, 375 ft. *Manager*: Jess Swicegood. *Licensee*: Liberty Broadcasting Co., Western Union Bldg.
- WAGF, Dothan, Ala., 1370 kcs., 250 w. days. *Trans*: Fairgrounds, Dothan. *Aerial*: 2 towers, 70 ft. *Manager*: Julian C. Smith. *Licensee*: Dothan Broadcasting Co., Box 25.
- WAGM, Presque Isle, Maine, 1420 kcs., 100 w., specified hours. *Aerial*: 2 towers, 96 ft. *Manager*: R. W. MacIntosh. *Licensee*: Aroostook Broadcasting Corp., Maain St.
- WAIM, Anderson, S. C., 1200 kcs., 100 w. unlt. *Network*: CBS. *Manager*: Ennis Bray. *Licensee*: Wilton E. Hall, Anderson College, 112 E. Market St.
- WAIR, Winston-Salem, N. C., 1250 kcs., 250 w. days. *Trans*: Reynolds Park. *Aerial*: vertical, 180 ft. *Manager*: Geo. D. Walker. *Licensee*: Radio Station WAIR, Robert E. Lee Hotel.
- WALA, Mobile, Ala., 1380 kcs., 500 w. nights, 1 kw. to LS., unlt. *Network*: CBS. *Trans*: 106 St. Joseph St. *Aerial*: 2 towers, 45 ft. *Manager*: W. O. Pape. *Licensee*: Pape Broadcasting Co., Box 288.
- WALR, Zanesville, Ohio, 1210 kcs., 100 w. unlt. *Manager*: Ronald B. Woodyard. *Licensee*: WALR Broadcasting Corp., 1st Trust & Bank Bldg.
- WAML, Laurel, Miss., 1310 kcs., 100 w. nights, 250 w. to LS., unlt. *Trans*: Fairgrounds. *Aerial*: vertical, 187 ft. *Manager*: R. V. DeGruy. *Licensee*: New Laurel Radio Station, Inc., Box 26.
- WAPI, Birmingham, Ala., 1140 kcs., 5000 w. unlt. *Network*: CBS. *Trans*: Sandusky. *Aerial*: 2 towers, 210 ft. Directional after SS. *Manager*: Thad Holt. *Licensee*: Alabama Polytechnic Institute, University of Ala. State College.
- WAPQ, Chattanooga, Tenn., 1420 kcs., 100 w. nights, 250 w. to LS., unlt. *Network*: NBC. *Trans*: Rossville Blvd. *Aerial*: vertical, 205 ft. *Manager*: R. G. Patterson. *Licensee*: W. A. Patterson, Read House, 9th Broad St.
- WARD, Brooklyn, N. Y., 1400 kcs., 500 w. sharing time with WBBC, WLTH and WVFV. *Trans*: Long Island City. *Aerial*: vertical, 185 ft. *Manager*: Aaron Kronenberg. *Licensee*: U. S. Broadcasting Corp., 427 Fulton St.

(To be continued next month)

TIME CONVERTER

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

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● During the month just passed, we have blanketed the states of Virginia, Wisconsin, Louisiana and North Carolina, and the provinces of British Columbia, Manitoba, Saskatchewan and the Yukon Territory. All the states shown in solid black on the map at the head of this column, have at least five members of the Radex Club. Only one new country was added, Costa Rica.

We are more than pleased to announce that we have reached the 1000 mark, our 1000'th member having been enrolled on March 14.

● The Irvington Chapter of The Radex Club invites club members or readers to meet with them. This Chapter was formed by Miss Margaret Bossett, for the purpose of providing a means for DXers in the New Jersey Metropolitan area to get together frequently and discuss their tuning success or troubles. The communities of Maplewood, Milburn, Union, Hillside, Elizabeth, Kearny, Harrison, the Oranges, and Newark are all within easy commuting distance from Irvington.

Information concerning the dates of meetings can be obtained from Miss Bossett, 870 Sanford Avenue, or from RADEX, Teaneck, N. J.

Verified All Continents

The Verified All Continents Club, described in detail in the February issue, has met with very good response from our members. Many of them have qualified for the plaques certifying their reception of radio stations on the various continents, most of them for five continents or less. Only seven members have plaques from all six continents. They are:

J. Herbert Hyde, Elmwood, Conn.

C. Reed, Wilmington, Del.

Geo. E. Allen, Lafayette, R. I.

William Pieper, Los Angeles, Calif.

J. R. Hahn, Akron, Ohio.

D. H. Dussek, Alton, England.

Edward Lang, Philadelphia, Pa.

One of the members, upon receipt of his plaques, wrote, "They are worth while and I prize them most highly. I have them hanging in my den."

The plaques, well printed on heavy pasteboard, 5½ inches square, are available to our members at the nominal charge of ten cents each, which just covers the cost of producing them, mailing them out, and returning the verifications which are submitted as required. There is a different plaque for each continent, each printed in two colors, but no two plaques in the series are alike in color or design. The designs are pictures of animals peculiar to the several continents. Thus, the plaque for North America pictures a buffalo, and is printed in black and brown on a yellow card. South America, showing a llama, is in black and orange on a green card. A bear is shown on Europe's plaque, printed in black and silver on a red card. For Asia an elephant is pictured and the colors are purple and black on a blue card. Africa's plaque is black and red, on gold, and the award for Oceania shows a kangaroo, black and green on a grey card.

It is very easy to get these awards. To get the award for the continent on which you live, send three verifications, each one from a different country on your continent. To get the award from any other continent, send only one verification from that continent. The verifications may be from broadcast band stations, from shortwave broadcasting stations, or from amateur stations.

● Membership in The Radex Club is available to anyone who is interested in DXing. There is no charge, and no obligation. Whether you are a subscriber or a newsstand reader, you can become a member of this club simply by making application on a postal card.

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

Across the Service Bench

(Continued from page 45)

though it is attached securely to a cold-water pipe. Many of the newer sets work about as well without a ground as with one. But the older types require a ground. The Philco 87 is a tuned radio frequency set. Make sure that the lead to the ground terminal is unbroken and securely sol-

dered at all points where the circuit is grounded. One side of all tuning condensers, R-F transformers and neutralizing condensers are grounded. The volume control in the antenna circuit has two grounded terminals. A poor contact in any of these could give this trouble. Of course, a careful realignment and neutralizing of the set is in order, as well as a check on the tubes.

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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.

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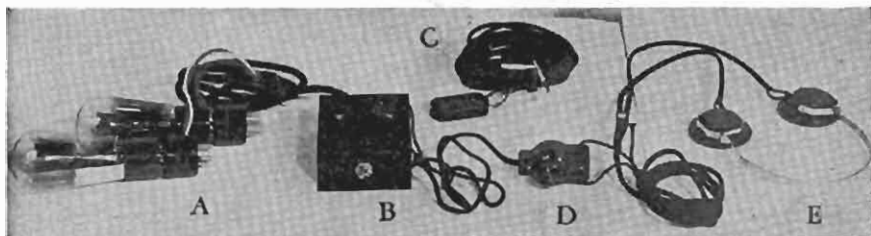
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