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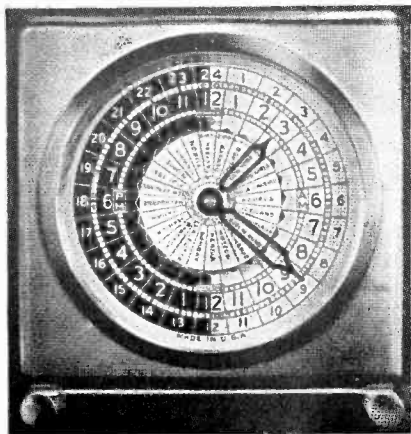
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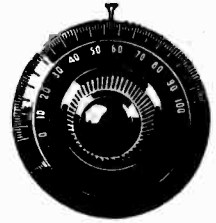
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25	.85	34	1.09	43	1.51	52	2.27
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HAM HOUNDING . . .

●●● 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 TG5GJ, 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—K4EMG, K5AF, TG9BA, VO1B, VP6FO, VP7NA, YN3DG.

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

EUROPE—EI3J, EI6G, G2TR, G6WU, GM8MN, 11MY (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 THX FOR QSL'S
 ON 20M *7.1088 AT 1645CT*
 UR SIGS QEA BJ ON 7.14MC

EXTR: CO PD PD SUP PA ZOW!
 RCVR: SUPERHET 7 TUBES
 ANT: 2 SECTION FLAT TOP 40M ZEPD

AKIRA SAGA
 2 OF 8 IMPUNCHO 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 J8CC. J9'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 CRTAG 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, Molluccas, 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.

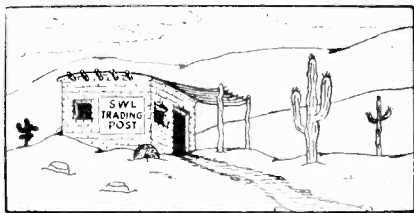
NIGERIA—A station well worth logging is ZD2H, 14.03 and 14.12, which is operated by Art Tomlinson, c/o Posts and Telegraphs, Lagos. Walter Th. Kammann of Caracas, Venezuela, reports a QSL from ZD2H.

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 Mue 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)

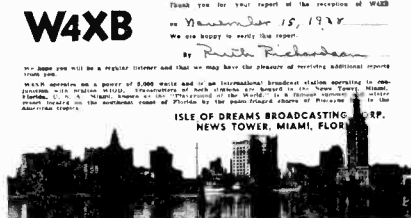
"What Army station is operating on 5730 kcs. between 9 and 10 p.m.?" is asked by Chester Roman of Chicago. . . . A. M. Hankins of Latrobe, Penna. wants to know which German shortwave station signs off at 4:25 p.m. on a frequency of approximately 9678 kcs. "They are midway between TGWA and W3XAL," says 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. Schmuck, 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



W4XB

Thank you for your report of the reception of W4XB

on November 15, 1938

We are happy to verify the report.

By *Ruth Peterson*

We hope you will be a regular listener and that we may have the pleasure of receiving additional reports from you.

W4XB operates on a power of 8,000 watts and is an international broadcast station operating in conjunction with regular service transmitters of such stations as located in New York, Miami, Florida, U. S. A. "Night Service" on the frequency of the World's 15.300 Mc. station is also available on the weekends and at Florida by the main-titled station of Havana, in the Caribbean region.

ISLE OF DREAMS BROADCASTING CORP.
NEWS TOWER, MIAMI, FLORIDA

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 WNBW on Tug Elizabeth Moran used on the same occasion. (R671—N. Y.)

Can anyone give any information on W8XYR on 4797 kcs. in Binghampton, 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—III.)

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—III.)

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. (Oskey—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: Apto do 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 being 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 broadcasting 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, Kwantsng 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.)

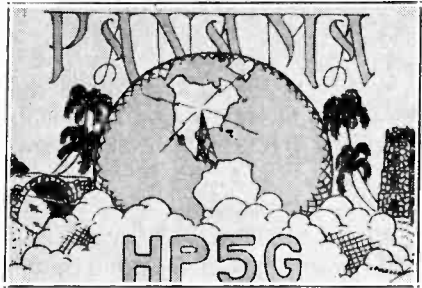
XEUZ on 6117 kcs. in Mexico City broadcasts an American hour from 11:30-midnight. The program is both interesting and educational, as a vivid picture of New and Old Mexico is painted by XEU's capable English announcer. (R834—Ala.)

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 shortwave 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 Twentry 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 Roke, 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

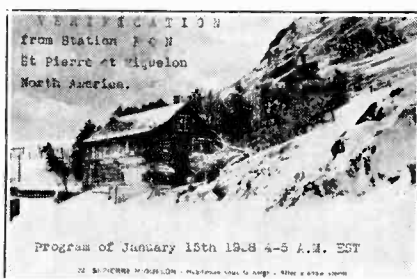
The recent pick-up in trans-Atlantic reception found many North American DXers dialing patiently for European stations. For some listeners, the current season is bringing the first taste of real success in overseas reception, while for others, it brings back memories of the international tests of a decade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

"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.

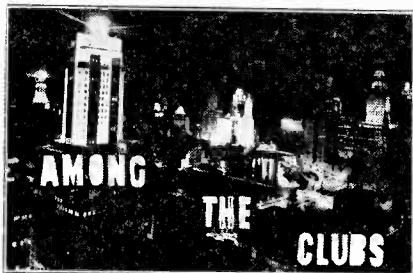
Speaking of late notices, many of our readers still seem to be unaware of the absolute press deadline on each issue. Every month we receive announcements of special broadcasts with urgent requests that the news be

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



GRAHAM HUTCHINS



LEON GROSSMAN



E. A. KNOFF



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 (g); G3BM (q); G3BY (q); G5GI (q); G5KH (hq); G5LJ (q); G5LU (q); G5QI (q); G5SA (hq); G5TP (q); G5ZG (hq); G6BL (q); 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); H17G (nq); I1KN (q); K4DDH (q); K4ENT (q); K4EZR (hq); K4FAB (q); K4FAY (q); K4FDC (q); K5AC (n); K5AN (nq); K5AT (nq); K6BAZ (n); K6MVV (klq); K6MVX (q); K6OQE (q); K6PCF (n); K6POR (k); LA1T (q); LU1CA (n); LU1DA (q); ON4AE (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); Z54H (hq); Z55T (q); Z56BW (h); Z56DY (h); Z56L (q); Z56W (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 (abfpp); 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 (pp); F3QT (m); F8AH (b); F8GM (bp); F8KI (p); F8LX (pq); F8MX (q); F8NT (bqp); F8PU (q); F8QD (bp); F8QW (p); F8RV (q); F8TU (b); F8VC (p); F8XO (p); F8ZO (q).

G1SZY (pq); G18UW (pq); GMSNW (p); GM6RG (g); GM6WD (bmq); GM8MN (bgmpq); GM8MQ (q); GW5PH (pq); G2AK (p); G2AV (abpp); G2DV (ampq); G2IW (m); G2KG (q); G2LR (h); G2PU (p); G2UT (a); G2VG (abpp); G2XN (pq); G2ZP (p); G3BM (abpp); G3QK (pq); G4AS (q); G5Bj (bqp); G5DR (p); G5DT (q); G5FA (r); G5HK (q); G5JO (bp); G5LJ (p); G5LU (pq); G5ML (abfpp); G5NI (f); G5PW (q); G5QI (p); G5SH (g); 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 (bdpp); 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 (afmpnpq); HI5X (afpp); HI6G (p); HI7BG (f); HI7G (fnp); HI7I (p); HK1AG (hqp); HK1AP (f); HK3CG (nq); HK3CK (b); HK3CL (np); HK3CO (m); HK3CW (bnp); HK4DA (b); HK4DF (eq); HK4EL (b); HK5EB (m); HK5EE (p); HP1A (q); HR5C (p); II1R (g); II1NQ (g); KA1FC (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 (gnpp); K6CMC (no); K6DDT (d); K6GAS (no); K6ILT (o); K6ILW (gnp); K6KGA (p); K6KGG (n); K6KMB (p); K6LEJ (dn); K6LKN (no); K6MTH (d); K6NZQ (n); K6OBH (i); K6OJI (n); K6OJW (g); K6OKN (g); K6OQE (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 (demnoppq); 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 (abmnpq); VP4TK (pq); VP5BR (bp); VP5IS (opq); VP6LN (bmq); VP6LV (q); VP6TR (f); VP6YB (ap); VP7ADA (f); VP7NH (f); VP7NS (amp); VP7NW (be); VP9G (np); VP9L (aghp); VP9R (afmp); VQ5ELD (g); VR6AY (cn); VS7GJ (g); VS7RP (g); VU2FO (g); VU2KK (g); XE1AJ (e); XE1BL (m); XE1BT (e); XE1BX (m); XE1CJ (pq); XE1FF (n); XE1FU (b); XE1G (q); EI1GE (n); XE1HR (p); XE2FC (p); XE2IK (p); XE2IY (p); XE2KY (e); XE3AR (pq); XE3AX (p); XE3BA (f); XE3BR (p).

YI2BA (c); YN1OP (p); YR5AA (c); YR5CF (c); YV1AD (m); YV4ABG (mpq); YV4AE (hnpq); YV4AN (mq); YV5ABF (am); YV5ABY (efpp); YV5AK (pp); ZC1JX (j); ZC2MA (g); ZE1JR (no); ZL2BE (q); ZP1AC (g); ZS1AX (g); ZS1CN (g); ZS2AF (q); ZS2AZ (pq); ZS2N (f); ZS2X (d); ZS4H (dfhqp); ZS5AW (o); ZS5CL (f); ZS5T (o); ZS6AJ (jpp); ZS6BR (op); ZS6CX (f); ZS6DW (bdfpp); ZS6DY (amp); 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 Olthoff, Detroit, Mich.
- (i) Martin Olthoff, Independence, Kans.
- (j) Alfred Razzando, Fayette City, Pa.
- (k) Richard Kitzenheim, 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.

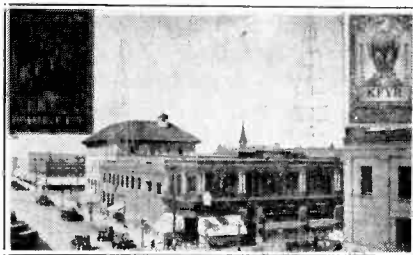
"Automatic tuning is so easy a baby can operate it, and anyone can control the set from any location within the house," Turner stated. He was getting into the spirit of the thing, and even smiled happily at Bill Wood, who had approached the two men. Bill grinned back.

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 aerials 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:

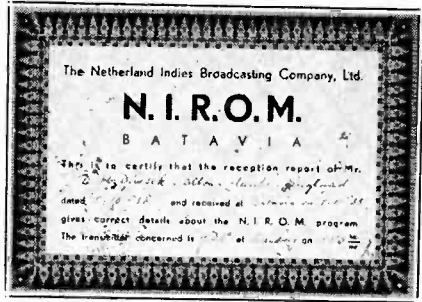
"Radio-Romania," at Bod-Brasov, on 160 kcs., with 150 kilowatts power.

"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. Zabarauskas, 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.
 WEEI—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 Stuckwisch, Chief Engineer.
 KOBH—Casey Jones, Eng. Department.
 WMBC—E. H. Clark, Chief Engineer.
 KALB—T. L. Stanley, Chief Engineer.
 WIRD—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.
 WLAW—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 its 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.

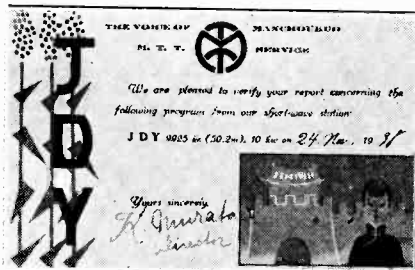
From J. T., of Phoenix, Ariz., comes a request for a description of a vertical antenna. A good many other readers write similar requests, too, but all we can tell them is that a vertical antenna is just what it calls itself. Either a wire or rod or tower may be used. It must be erected in a vertical 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 J.D.Y. 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	DIG	P11J
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	RKI	VUD3	PLP	COCM
FG8AA	TGWB	HVJ	JDY	CB960
EAQ	VUC2	VUC2	TGWA	COCQ
COCQ	TGWA	Praha	VUD2	OIE
VK3ME	Praha	RKI	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. "L 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." Aptdo. 31.
4775 HJ7GABB	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.	495 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, Armenia, 600 w. "La Voz de Armenia."

4880 VUB2	Bombay, India. 10 kw. 8 am-10 pm. All-India Radio.	6079 DJM	Berlin, Germany. 50 kw. 4:50-10:50 pm. See "Berlin" at end of list.
4885 HJ4DAP	Medellin, Colombia. 501 w. Relays HJ4DAQ, "Emisora Claridad."	6080 CKFX	Vancouver, B. C. 10 w. 2 pm-midnight. Relays CKFC, Standark Broadcasting System, 1504 Sun Bldg.
4895 HJ3CAH	Bogota, Colombia. 720 w. "La Voz de la Victor." Relays HJ3CAI. Almacenes Victor, Aptdo 565.	W9XAA	Chicago, Ill. 500 w. See W9XAA.
4920 VUM2	Madras, India. 10 kw. 7 am-12:30 pm. All-India Radio.	XEWW	Mexico City, D. F. 10 kw.
4960 VUD2	Delhi, India. 10 kw. 8am-1 pm. All-India Radio.	W3XL	New York, N. Y. 35 kw. See W3XL.
5835 YV5RR	Caracas, Venezuela. 4:30-10 pm.	YUA	Belgrade, Yugoslavia. 1 kw. 12:45 am-5:30 pm. "Radio Beograd," Bureau Central de Presse, Poste Emetteur a Ondes Courtes. Announce in Serbian, Italian, English, German, Turkish, Hungarian, Albanian, and Greek.
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."	6110 GSL	London, Gt. Britain.
5970 YV5RC	Caracas, Venezuela. 1 kw. (Reported on 5910, 5900 and 5973). W eekdays, 7 am-10 pm; Sun, 8:30 am-9:30 pm. "Radio Caracas," Apartado 2009. Relays YV5RA, and signs off with "March IBC."	6120 W2XE	New York, N. Y. 10 kw. See W2XE.
5984 HJ4DAG	Quibdo, Colombia. 150 w. "La Voz del Choco."	6122 HJ3CAX	Bogota, Colombia. 750 w. Relays HJ3CAZ, La Voz de Colombia, Aptdo 772.
6005 CFCX	Montreal, P. Q. 75 w. Relays CFCF. Canadian Marconi Co., Ltd., Box 1690.	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.
6010 CJCX	Sydney, N. S. 1 kw. Relays CJCB. Eastern Broadcasters, Ltd., Radio Bldg.	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.
VK9MI	M. V. "Kanimbla," 50 w. McIlwraith & McEacharn, Ltd., Melbourne, Vic., Australia.	COCD	Havana, Cuba. 250 w. Relays CMCD. "La Voz del Aire," S. A., Sr. J. Benitez, Aptdo. 2294.
6020 DJC	Berlin, Germany. 50 kw. 1-4:25 pm. See "Berlin" at end of list.	LKJ	Oslo, Norway, 5 kw. See "Oslo."
6030 CFVP	Calgary, Alta. 100 w. Voice of th Prairies, Ltd., Toronto General Trusts Bldg.	6132 VP3BG	Georgetown, British Guiana.
6040 W1XAL	Boston, Mass. 20 kw. See "W1XAL".	XEXA	Mexico City, D. F. 100 w. Depto. de Publicidad y Propaganda, Sr. Jose Rivera.
W4XB	Miami, Fla. 5 kw. 10 pm-1 am. Relays WIOD. Ruth Richardson, Isle of Dreams Broadcasting Corp.	6140 W8XK	Pittsburgh, Pa. 40 kw. See W8XK.
6042 HJ1ABG	Barranquilla, Colombia. 600 w. Relays HJ1ABH. "Emisora Atlantico," Aptdo. 445.	6145 HJ4DAE	Medellin, Colombia. 700 w. "La Voz de la Antioquia."
6054 HJ6FAB	Pereira, Colombia, 501 w. "La Voz de Pereira."	6150 CJRO	Winnipeg, Man. 2 kw. James Richardson & Sons, Ltd., 157 Royal Alexandra Hotel.
6050 GSA	London, Gt. Britain. 20 kw. 10:45 am-noon; 4:15-6 pm. See "London" at end of list.	6170 W2XE	New York, N. Y. Sat, Sun, 11:30 pm-1 am; other days, midnight-1 am. See "W2XE" 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.	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.
W8XAL	Cincinnati, Ohio. 10 kw. See W8XAL.	6235 HRD2	La Ceiba, Honduras. 250 w. 10-11 pm. "La Voz de Atlantida."
6065 SBO	Stockholm, Sweden. 500 w. 4:15-5 pm. Telegrafverket Tjantstebrev 5.	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.
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.	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. "El

- 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 Allomasa, Gyalui 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.
- 9525 ZBW3 2-6 pm; 10-11 pm. Statsradiofonieu, Heibergsgade 7.
- 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, 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 W1XX Springfield, Mass. 10 kw. Relays NBC-WBZ-WMZA. Westinghouse Electric & Mfg. Co.
- W8XX Pittsburgh, Pa. 40 kw. See W8XX.
- 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.	10330 ORK	
9616 HJ1ABP	Cartagena, Colombia. 608 w. 4:30-10:30 pm. "Radio Cartagena," Aptdo 37.	10660 JVN	Brussels, Belgium. 11 kw. 1:30-3 pm.
9630 H7GAD	Bucaramanga, Colombia. 650 w. Relays HJ7GAE. "Radio Bucaramanga."	10740 JVM	Tokyo, Japan.
9630 2RO3	Rome, Italy. 25 kw. 12:10-10 pm. See 2RO.	11040 CSW	Tokyo, Japan.
9645 HH3W	Port-au-Prince, Haiti. 30 w. 1-2 and 7-8 pm. C. Ricardo Widmaier, Box A-117.	11280 HIN	Lisbon, Portugal. 5 kw. 2-5:30 pm. "Emisora Nacional".
9650 1ABA	Addis Ababa, Ethiopia. 1 kw. E. I. A. R.	11402 HBO	Trujillo, D. R. 750 w. Aptdo 604.
W2XE	New York, N. Y. Mon thru Fri, 10:30-11:30 pm. See "W2XE" at end of list.	11650 COCX	Geneva, Switzerland. "Radio Nations." Sun, 7-7:45 pm.
9660 HVJ	Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am. See HVJ.	11660 JVL	Havana, Cuba. 1 kw. (Reported on 11740). Sun, 6-9 pm; Weekdays, 8 am-midnight.
9670 I2RO9	Rome, Italy. 100 kw. See 2RO.	11700 HP5A	Relays CMX, "Casa Lavin," Box 32.
W3XAL	New York, N. Y. 35 kw. See W3XL.	11705 SBP	Tokyo, Japan.
9675 DJX	Berlin, Germany. 10:35 am-4:25 pm. See "Berlin" at end of list.	11718 TPB6	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.
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.	TPA4	Stockholm, Sweden. 500 w. Sun, 1:15-4:15 pm; Wed, Sat, 8-9 pm; Daily 1-4:15 pm. Telegrafuerket Tjanstebrev 5.
9692 TI4NRH	Heredia, Costa Rica. 500 w. Sun, 7-8 am; Tu, Th, Sat, 9-10 pm. Amando Cespedes Marin, Apartado 40.	11718 TPB6	Paris, France. 7-9:15 pm. See "Paris."
9700	"Radio Martinique," Fort de France, Martinique. 1500 w. 1:15-2:45 pm; 6-10 pm. Sign off with Marsaillaise. Poste Seri, Boite 136.		Paris, France. 7-9:15 pm; 9:30 pm-midnight. See "Paris."
9715 COCQ	Havana, Cuba. 1 kw. "de la RCA Victor," Calle 25 No. 225.	11720 CJRX	Winnipeg, Man. 2 kw. James Richardson & Sons, 157 Royal Alexandra Hotel.
9730 CB970	Valparaiso, Chile. (Reported on 9710). 6:30-11 pm.	11730 PHI	Huizen Netherlands. 23.6 kw. See Hilversum.
9830 IRF	Rome, Italy. 20 kw. 12:40-1 pm; 1:37-3:30 pm; 6-9 pm. See "Rome" at end of list.	W1XAL	Boston, Mass. 20 kw. See W1XAL.
9833 COCM	Havana, Cuba. 1 kw. (Reported on 9805 and 9840). 8 am-10:30 pm. "Trans Radio Columbia," 23 No. 1113, Vedado.	11735 LKQ	Oslo, Norway. 5 kw. See "Oslo."
9860 EAQ	Madrid, Spain. "The Voice of Republican Spain," Apartado 951.	11740 HVJ	Vatican City. 15 kw. Tues, 8:30-9 am. See HVJ.
9925 JDY	Dairen, Kwantung. 10 kw. 7-8 am. Manchuria Telephone and Telegraph Co.	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."
9940 CSW	Lisbon, Portugal. 5 kw. (Reported on 9735).	11760 TGWA	Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; Weekdays, 12:45-1:45 pm. See TGWA.
9960 COBC	Havana, Cuba. (Reported on 9980). 6:55 am-midnight. "El Progreso Cubano." Aptdo 132.	11770 DJD	Berlin, Germany. 50 kw. 11:30 am-4:25 pm; 4:50-10:50 pm. See "Berlin."
10042 DZB	Berlin, Germany.	11790 W1XAL	Boston, Mass. 20 kw. See W1XAL.
10050 TIEMC	San Jose, Costa Rica. Relays TIEH. Apartado 1049.	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."
10220 PSH	Rio de Janeiro, Brazil. 12 kw. Mon, 6-9 pm. Relays PRF4; signs off with Brazilian National Hymn. Cia. Radio Interna-	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
			cional do Brasil, Caixa Postal 709.

- W8XK W8XAL. Pittsburgh, Pa. 40 kw. See W8XK.
- 11880 VLR3 Melbourne, Australia. 1-3 am. See VLR.
- 11885 TPA3 Paris, France. 25 kw. 2-5 am; 11:15 am-6 pm. See "Paris."
- TPB7 Paris, France. 25 kw. 9:30 pm-midnight. See "Paris."
- 11900 I2RO13 Rome Italy. 100 kw. See 2RO.
- 12235 TFJ Reykjavik, Iceland. 7500 w. Sun, 1:45-2:30 pm. Icelandic State Broadcasting Service, Box 547.
- 12450 HCJB Quito, Ecuador. Daily exc. Mon, 7:15-10:30 pm.
- 15100 I2RO12 Rome, Italy. 100 kw. See 2RO.
- 15110 DJL Berlin, Germany. 50 kw. 12:05-2 am; 8-9 am; 10:35 am-4:25 pm. See "Berlin."
- 15120 HVJ Vatican City. 15 kw. Tues, 10:30-11 am; Sun, 1-1:30 pm. See HVJ.
- 15130 TPB11 Paris, France. 25 kw. 2-5 am. See "Paris."
- W1XAL Boston, Mass. 20 kw. See W1XAL.
- 15140 GSF London, Gt. Britain. 15 kw. 3-5:25 am; 5:45-8:50 am; 9 am-non. See "London."
- 15160 JZK Tokyo, Japan. 50 kw.
- VUD3 Delhi, India. 5 kw. 2-4:15 am; 10 pm-midnight. All-India Radio.
- XEWW Mexico City, D. F. 10 kw. "La Voz de la America Latina desde Mexico." Aptdo. 2516.
- 15170 LKV Oslo, Norway. 5 kw. See Oslo.
- 15170 TGWA Guatemala City, Guat. 10 kw. Sun, 12:45-3:15 pm. Weekdays 12:45-1:45 pm. See TGWA.
- 15180 GSO London, Gt. Britain. 3-5:25 am; 4:15-8:30 pm. See "London."
- TAQ Ankara, Turkey. 20 kw. 9:30-11 am.
- 15200 DJB Berlin, Germany. 8 kw. 8-9 am; 4:50-10:50 pm; Sun only, 11:10 am-12:25 pm. See "Berlin."
- 15210 W8XK Pittsburgh, Pa. 40 kw. See W8XK.
- 15220 PCJ2 Huizen, Netherlands. 60 kw. Tues, 3-4:30 am; Wed, 9:30-11:30 am. See Hilversum.
- 15243 TPA2 Paris, France. 25 kw. 6-11 am. See "Paris."
- 15250 W1XAL Boston, Mass. 20 kw. See W1XAL.
- 15260 GSI London, Gt. Britain. 3-5:25 am; 12:20-1:30 pm.
- 15270 W2XE New York, N. Y.
- W3XAU Philadelphia, Pa. 10 kw. 3-7 pm. See "W3XAU."
- 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."
- LRU Buenos Aires, Argentina. 5 kw. 8 am-1 am. "Radio El Mundo." Calle Maipu 555.
- 15330 W2XAD Schenectady, N. Y. 25 kw. See W2XAD.
- 15310 GSP London, Gt. Britain. 1:45-4 pm. See "London."
- 15340 DJR Berlin, Germany. 50 kw. 12:05-11 am. See "Berlin."
- 17760 DJE Berlin, Germany. 50 kw. 12:05-5:50 am; 6-7:50 am. See "Berlin."
- 17770 PHI2 Huizen, Netherlands. 23.6 kw. Sun, 6:25-9:40 am; M, Th, 7:40-8:40 am. See Hilversum.
- 17790 GSG London, Gt. Britain. 5:45-8:50 am; 9 am-noon; 12:20-4 pm. See "London."
- 17810 GSV London, Gt. Britain. 5:45-8:50 am; 12:20-4 pm. See "London."
- 17830 W2XE New York, N. Y.
- 21470 GSH London, Gt. Britain. 5:45-8:50 am; 9 am-noon. See "London."
- 21520 W3XAU Philadelphia, Pa. 10 kw. 1-2:30 pm. See "W3XAU."
- 21530 GSJ London, Gt. Britain. 5:45-8:50 am. See "London."
- 21550 GST London, Gt. Britain.
- 21565 DJJ Berlin, Germany. 6-7:50 am. See "Berlin."
- 25725 W3XAU Philadelphia, Pa. 10 kw. See W3XAU.
- 25950 W4XH Spartanburg, S. C. WSPA.
- W6XKG Los Angeles, Calif. KGFJ.
- 26050 W3XEX Norfolk, Va. WTAR.
- W9XH South Bend, Ind.
- W9XTC Minneapolis, Minn. WTCN.
- 26100 GSK London, Great Britain. See London.
- W9XJL Superior, Wis. WEBC.
- 26150 W9XUP St. Paul, Minn. KSTP.
- 26400 W9XAZ Milwaukee, Wis. WTMJ.
- 26450 W9XA Kansas City, Mo. 1 kw. Evrett L. Dillard, Commercial Radio Equipment Co.
- 26500 W9XTA Harrisburg, Ill. Schenert Radio Service.
- 26550 W2XQO Flushing, N. Y. WMCA.
- 31100 W3XIW Reading, Pa.
- 31600 W1XEQ Fairhaven, Mass. WNBH.
- W1XER Boston, Mass. The Yankee Network.
- W1XKA Boston, Mass. WBZ.
- W1XKB Springfield, Mass. WBZA.
- W1XOE Boston, Mass. CBS.
- W2XDG New York, N. Y. WEAJ-WJG.
- W2XDV New York, N. Y. WABC.
- W3XHG 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 Lighting & Power Co.
- W5XGC Humble, Texas. Houston Lighting & 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, Nebr.
- 42000 to 56000 Television
- W1XG Boston, Mass. General Tele-
vision Corp.
- W2XAX New York, N. Y. Columbia
Brdcstg. System.
- W2XBS New York, N. Y. NBC, nIc.
- 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 Tele-
vision, Inc.
- W6XAO Los Angeles, Calif. Don Lee
Brdcstg. System.
- W8XAN Jackson, Mich. Sparks-Withing-
ton 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
Brdcstg. 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, Shorningsgaten 28, Oslo, Norway.
- Tokyo—Transmitters are at Nazaki. Sign off with national anthem, "Kimagayo." Broad-
casting 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 "Giovinazza" 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." Pontifia 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, "Giovinazza" and "Marcha Reale." Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.
- TGWA—Radiodifusora National, "La Voz de Kuatemala." 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, Unviersity 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) unlttd. (Com).
 KECA, Los Angeles, CP move to San Diego (E).
 KEEN, Seattle, CP 1420 kcs, 100 (.25) unlttd. (E).
 KERN, Bakersfield, CP 1380 kcs, 1 kw. (C).
 KEX, Portland, CP 1160 kcs, unlttd. (E).
 KFAB, Lincoln, CP DA night, 1080 kcs, 50 kw unlttd.
 KFQP, St. Joseph, CP 500 w. nights, 2500 w. to ss at San Francisco (C).
 KFJZ, Fort Worth, CP 930 kcs, 500 w. unlttd, DA night (E).
 KFSD, San Diego, CP 5 kw. (C).
 KGKL, San Angelo, mod. lic. 250 w. unlttd. (C).
 KGNQ, Dodge City, CP 500 w. unlttd. (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. unlttd DA night (E).
 KRBA, Lufkin, CP 250 w. (E).
 KRKO, Everett, CP 100 (.25) unlttd. (E).
 KRRV, Sherman, CP 880 kcs, 1 kw unlttd, 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. unlttd. (E).
 KSEI, Pocatello, CP 600 kcs, 1 kw. unlttd. (C).
 KLAT, Ft. Worth, CP 1000 (5), and move to Wichita Falls. (E).
 KTBS, Shreveport, CP 620 kcs, 1000 (5) unlttd. (C).
 KTEM, Temple, mod. of lic. 100 (.25) unlttd. (E).
 KTKC, Visalia, CP 890 kcs, 1 kw unlttd, DA nite (C).
 WALA, Mobile, CP 1 kw unlttd. (C).
 WAZL, Hazelton, mod. lic. 1320 kcs, 100 w. unlttd. (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) unlttd. (E).
 WDEL, Wilmington, mod. of CP for 1 kw. (E).
 WDGY, Minneapolis, mod. of lic. for unlttd. (C).
 WDRC, Hartford, CP 5 kw. (C).
 WEAU, Eau Claire, CP 5 kw. (E).
 WEBQ, Harrisburg, mod. lic. 1310 kcs. 100 (.25) unlttd. (C).
 WEDC, Chicago, CP 100 (.25) specified hrs. (C).
 WFMD, Frederick, CP 500 w. unlttd, DA nite (C).
 WGRC, New Albany, CP 880 kcs, 250 w. unlttd, 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) unlttd. (E).
 WHDH, Boston, CP 5 kw. unlttd. (E).
 WHLS, Port Huron, mod. of lic. 100 (.25) unlttd. (C).
 WIP, Philadelphia, CP 5 kw, move trans. to Brooklawn, N. J., DA (E).
 WIRE, Indianapolis, mod. of CP for 1 kw. (P).
 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) unlttd (E).
 WJBL, Decatur, CP 1310 kcs, 100 (.25) unlttd. (C).
 WJBW, New Orleans, mod. of lic. unlttd. (C).
 WJMS, Ashland, CP 1370 kcs, 100 w. unlttd. (E).
 WJNO, W. Palm Beach, mod. lic. 250 w. unlttd. (E).
 WJRD, Tuscaloosa, mod. of lic. for 100 (.25) unlttd. (C).
 WKOK, Sunbury, mod. of lic. unlttd. (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. unlttd. (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. unlttd. (C).
 WNAC, Boston, CP 5 kw. (C).
 WOC, Davenport, CP 1390 kcs. 1 kw. unlttd. (E).
 WOMI, Owensboro, mod. lic. 1200 kcs. (C).
 WPG, Atlantic City, CP unlttd, move studio to New York, trans. to Kearney, N. J., requesting facilities of WBIL and WOV. CP change owner to Greater N. Y. Brdcstg. Corp. (E).
 WPRA, Mayaguez, CP 780 kcs, 1000 (2.5) unlttd. (C).
 WRAW, Reading, CP 250 w. (C).
 WREN, Lawrence, CP move to Kansas City. (E).
 WRR, Dallas, CP 1 kw (E).
 WSFA, Montgomery, CP 1410 kcs, 1 kw unlttd. (E).
 WSJS, Winston Salem, CP 100 (.25) (E).
 WSNJ, Bridgeton, CP 100 (.25) unlttd (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).
 WTOL, 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).
 Topcka, 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).
 KPEL, 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).
 KVOB, Denver, CP 630 kcs, 1 kw. (C).
 WEXL, Royal Oak, SP 1300 kcs, 250 w. (E).
 WFLH, Philadelphia, CP 1000 (5) unltld. (E).
 WRBL, Columbus, CP 1350 kcs, 1 kw. (C).
 Dalhart, Texas, Dalhart Brdcastg. Co., 1500 kcs,

- 100 (.25) (C).
- Elgin, Ill., Elgin Brcdstg. Ass'n., 1170 kcs, 100 w. days (E).
- Evanston, Ill., Northwestern Brcdstg. 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.

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

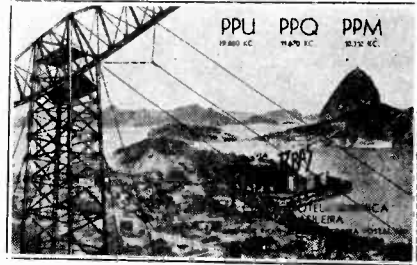
- 540 CBK Watrous, Sask., from Saskatoon
- 740 KMMJ Grand Island, Nebr., from Clay Center
- 1510 CKCR Kitchener, Ont., from Waterloo

Call Letters

- 1210 WLOK Lima, Ohio, from WBLY

Owner

- 600 WREC Broadcasting Service, Memphis, Tenn.



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

- 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 WWL 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 WCKY Covington, Ky., to 50000.

Permit to Change Frequency

- 770 KFAB Lincoln, 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.)

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

Watrous, Sask.
Regina, Sask.
Nassau, Bahamas

EASTERN STANDARD TIME

9:30 am-1:30 am.

550 kcs. (545.1 m.)

CFNB	a	500	F(1)
CMW	e	1400	....
KFUO	a	500	2(1)

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.

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)
WVA	a	500	D

Bismarck, N. Dak.
Corvallis, Ore.
St. Louis, Mo.
San Antonio, Tex.
Waterbury, Vt.
Buffalo, N. Y.
Cincinnati, Ohio
Harrisonburg, Va.

8 am-1 am.
noon-midnight.
7 am-LS.
6:30 am-2 am.
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.
San Francisco, Calif.
Springfield, Mo.
Philadelphia, Pa.
Gary, Ind.
Columbia, S. C.
Miami, Fla.

8 am-2 am.
9:10 am-3 am.
7 am-12:30 am.
7 am-5 am.
6:45 am-midnight.
6:30 am-midnight.

570 kcs. (526 m.)

KGKO	a	1000	B(5)
KMTR	a	1000	....
KVI	a	1000	C(5)
TISCV	z	100	575
WKBN	a	500	1C
WMCA	a	1000	....
WNAX	a	1000	C(5)
WOSU	a	750	1(1)

Ft. Worth, Texas
Los Angeles, Calif.
Tacoma, Wash.
Alajuela, Costa Rica
Youngstown, Ohio
New York, N. Y.
Yankton, S. Dak.
Columbus, Ohio

8 am-2 am.
9 am-3 am.
MTWTF, 9-11 am; MTWT, 1-3 pm; M,
8-10 pm; W, 8-11 pm.
6 am-1 am.

WSYR	a	1000	Ba
WSYU	a	1000	Qa
WWNC	a	1000	N

Syracuse, N. Y.
Syracuse, N. Y.
Asheville, N. C.

Monday Thru Friday

Eastern Standard

580 kcs. (516.9 m.)

CKPR	a	100	....	Prince Rupert, B. C.	
CHRC	a	100	....	Quebec, P. Q.	7:30 am-midnight.
CKCL	a	100	F	Toronto, Ont.	7:30 am-12:30 am.
CKPR	a	1000	....	Fort William, Ont.	8 am-11:30 pm.
CKUA	c	500	F	Edmonton, Alta.	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.	10:30-11:30 am; 1:30-3 pm; 5:30-6:30 pm.
WCHS	a	500	C(1)	Manhattan, W. Va.	6 am-1 am.
WDBO	a	1000	C(5)	Orlando, Fla.	7 am-12:05 am.
WIBW	a	1000	C2(5)	Topeka, Kans.	5:30-10:30am; 11:30 am-1:30 pm; 3:30 pm-1 am.
WILL	a	5000	D	Urbana, Ill.	8:30 am-LS.
WTAG	a	1000	R	Worcester, Mass.	7:30 am-midnight.
XEMU	z	250	....	Piedras Negras, Coah.	

590 kcs. (508.2 m.)

CMCY	a	15000	....	Havana, Cuba	
KHQ	a	1000	R(5)	Spokane, Wash.	9:45 am-3 am.
WEEI	a	1000	C(5)	Boston, Mass.	6:30 am-1 am.
WKZO	a	1000	BDX	Kalamazoo, Mich.	7 am-5:15 pm.
WOW	a	1000	R(5)	Omaha, Nebr.	6:45 am-2 am.

600 kcs. (499.7 m.)

CFCF	a	500	BF	Montreal, P. O.	7:45 am-1 am.
CJOR	a	500	....	Vancouver, B. C.	10 am-3 am.
FQN	a	250	609	St. Pierre, Miquelon	
KFSD	a	1000	B	San Diego, Calif.	10 am-3 am.
WCAO	g	500	C(1)	Baltimore, Md.	7 am-midnight.
WICC	f	500	BM(1)	Bridgeport, Conn.	6 am-1:30 am.
WMT	a	1000	BM(5)	Cedar Rapids, Iowa	
WREC	a	1000	C(5)	Memphis, Tenn.	

610 kcs. (491.5 m.)

CHNC	a	1000	F	New Carlisle, P. Q.	7 am-11:15 pm.
KFAR	z	1000	P	Fairbanks, Alaska	
KERC	b	1000	M(5)	San Francisco, Calif.	
WCLE	a	500	DM	Cleveland, Ohio	6:45 am-LS.
WDAF	a	1000	R(5)	Kansas City, Mo.	7 am-1 am.
WIOD	a	1000	Na	Miami, Fla.	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.	MWF, 7 am-1 am.
WHJB	a	250	CD	Greensburg, Pa.	
WLBZ	a	500	MN(1)	Bangor, Maine	
WSUN	a	1000	Na(5)	St. Petersburg, Fla.	TThSat, 7:55 am-1 am.
WTMJ	a	1000	N(5)	Milwaukee, Wis.	

630 kcs. (475.9 m.)

CFCO	a	100	F	Chatham, Ont.	7:30 am-1:30 pm; 4:30-10:30 pm.
CFCY	a	1000	F	Charlottetown, P.E.I.	
CJRC	a	1000	F	Winnipeg, Man.	8:30 am-2 am.
CKOV	a	100	F	Kelowna, B. C.	10 am-2 am.
CMCD	a	15000	....	Havana, Cuba	
KFRU	a	500	1(1)	Columbia, Mo.	M, 7 am-9:30 pm; TWT, 7 am-1 am; F, 7 am-6:30 pm.
KGFX	a	200	D	Pierre, S. Dak.	

Monday Thru Friday

Eastern Standard

WGFB	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.
CJCF	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	500000	....	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.
XFPN	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.
WSB	a	50000	R	Atlanta, Ga.

750 kcs. (399.8 m.)

CMBL	a	200	....	Havana, Cuba
KGIU	a	2500	LN	Honolulu, Hawaii
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.
WEW	a	1000	D	St. Louis, Mo.
W17	a	50000	BSy	New York, N. Y.
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.
CKSO	a	1000	F	Sudbury, Ont.
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.
WEAN	a	1000	BM(5)	Providence, R. I.
WMC	a	1000	R(5)	Memphis, Tenn.
WPIC	a	250	D	Sharon, Pa.
WTAR	g	1000	N	Norfolk, Va.
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.
WGY	a	50000	R	Schenectady, N. Y.

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.	
XEPB	a	200		Monterrey, N. L.	
XERC	z	500	A	Mexico City, D. F.	

880 kcs. (340.7 m.)

CBO	a	1000		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.	
TIIS	b	500		San Jose, Costa Rica	

Monday Thru Friday

Eastern Standard

WCOG	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.	
WIAR	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	
WRFN	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.	
WBLB	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.
WCSH	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.
CMKL	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	Los 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	I	Vancouver, B. C.
CKCK	a	1000	F	Regina, Sask.
CKCO	a	100	F	Ottawa, Ont.
CKK	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-mid-
night; Th, 10:30 am-12:30 am.
9 am-2 am.

CMGQ	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	
KIBS	a	500	I	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. - 3:50 am - 4:25-39
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(1.5)	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.
WVO	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.	
WWVA	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-LS.
VONF	a	500	1195	St. John's Nfld.	
WATR	a	100	DXZ	Waterbury, Conn.	
WOAI	a	5000	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.	MWTF, 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.
KGFI	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.
WDMS	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.	
WMPC	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	
WWAE	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	5	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)	Poyette, 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.
WMFG	a	100	(.25)	Hibbing, Minn.	
WOCH	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-1S.
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	1009	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.
WCDF	a	1000	C(5)	Tampa, Fla.	7 am-midnight.
WGNY	a	250	D	Newburgh, N. Y.	
WALL	a	....	aa(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.
WFBM	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.	
XEKI	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 Avria, 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.)



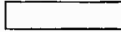
CMCG	a	200	....	Havana, Cuba	
CMJK	a	200	....	Camaguey, Cuba	
KDYL	a	1000	R(5)	Salt Lake City, Utah	
KLCN	a	100	D	Blytheville, Ark.	
KTRH	a	1000	C(5)	Houston, Texas	7:30 am-3:30 am.
WEBC	a	1000	N(5)	Duluth, Minn.	7:30 am-1 am.
WJAS	a	1000	C(5)	Pittsburgh, Pa.	
WJHP	z	250	P	Jacksonville, Fla.	

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)
WBBR	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		
KFYO	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		
KRBA	a	100	D	Lufkin, Texas	7 am-6:15 pm.	
KRMD	a	100	(.25)	Shreveport, La.	7:30 am-1 am.	
KROC	a	100	(.25)	Rochester, Minn.	7 am-1 am.	
KROA	a	100	....	Santa Fe, N. Mex.	9 am-4 pm; 6:30-11:30 pm.	
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	L	Joliet, Ill.		
WCMI	a	100	(.25)	Asbland, 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	5	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	5(.25)	Johnstown, Pa.	8:30-10:30 am; 4:30-6:30 pm; 9:30 pm-midnight.	
WLAJ	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.	
WMRO	a	100	(.25)	Auburn, N. Y.		

Monday Thru Friday

Eastern Standard

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.
WDRC	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.	

Monday Thru Friday

Eastern Standard

KGFR	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-1S.
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.
KFIZ	a	100	M(.25)	Fort Worth, Texas	8 am-midnight.
KFRQ	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.	
KLUF	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-1S.
WATL	a	100	(.25)	Atlanta, Ga.	7 am-2 am.
WBKX	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-1S.
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.

Monday Thru Friday

Eastern Standard

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.
WPRO	a	100	(.25)	Mayaguez, P. R.	
WRAC	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.
KTRA	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.
KIO	a	500	BX	Ogden, Utah	9:30 aam-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.
WEGE	z	500	2(1)	Brooklyn, N. Y.	
WHDL	a	250	.....	Olean, N. Y.	
WIRE	a	1000	MR(5)	Indianapolis, Ind.	
WJTH	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.	

Monday Thru Friday

Eastern Standard

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		
KARC	a	100	M(.25)	San Antonio, Tex.	7:30 am-12:30 am.	
KATE	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-LS.	
KFUB	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.		
WAPO	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.		
WMBC	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)
WMB5	a	100	(.25)	Uniontown, Pa.	7 am-8 pm.	(4 am-5 pm)
WMPJ	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.		
KGNF	a	1000	D	North Platte, Nebr.	8 am-LS.	
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		

Monday Thru Friday

Eastern Standard

WHEC	a	500	C(1)	Rochester, N. Y.	
WHP	a	500	C(1)	Harrisburg, Pa.	7:30 am-1 am.
WMP5	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-1 S.
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		
KWFW	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.	
WCNW	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.	
WGAJ	a	100	(.25)	J Lancaster, Pa.		
WGIL	z	250	D	Galesburg, Ill.		
WGKV	z	100	P	Charleston, W. Pa.		
WHBB	a	100	....	Selma, Ala.	8 am-10 pm.	
WIBK	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.	
WKWZ	a	100	(.25)	Muskegon, Mich.	7 am-10 pm.	
WKEU	a	100	D	Griffin, Ga.		
WMEX	a	100	(.25)	Boston, Mass.		
WNBK	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.		
WWSW	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, HB9BC, 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		Jonesboro		KGB 1330 1000 M		New London	
Anniston		KBTM 1200 100	Little Rock	San Francisco	WNLC 1500 100 M	Waterbury	
WTMA 1420 100		KARK 890 500 N	KGHI 1200 100	KFRG 610 1000 M	WATR 1190 100	WRRY 1530 1000 M	
Birmingham		KLRA 1390 1000 C	Pine Bluff	KGO 790 7500 B	DELAWARE		
WAPI 1140 5000 C		KOTN 1500 100	Siloam Springs	KJRS 1070 500	Wilmington		
WBRC 930 1000 R		KUOA 1260 5000		KPO 680 50000 R	WDEL 1120 250 R		
Decatur		CALIFORNIA		KSAN 1420 100	WILM 1420 100	DISTRICT OF COLUMBIA	
WMFO 1370 100		Bakersfield	KERN 1370 100 N	KSFO 560 1000 C	Washington		
Dothan		KPMG 1550 1000 M	Berkeley	KYA 1230 1000	WJSV 1460 10000 C	WMAL 630 250 B	WOL 1230 1000 M
WAGF 1370 250		KRE 1370 100	Beverly Hills	San Jose	WRC 950 1000 R	FLORIDA	
Gadsden		KMPC 710 500	Chico	KQW 1010 1000 M	Daytona Beach		
WJBY 1210 100		KHSL 1260 250	El Centro	San Luis Obispo	WMFJ 1420 100	Gainesville	
Huntsville		KXO 1500 100 M	Eureka	KVEC 1200 100	WRUF 830 5000	Jacksonville	
WBHP 1200 100		KIEM 1450 500 M	Fresno	Santa Ana	WJAX 900 1000 N	WJHP 1290 250	WMBR 1370 100 C
Mobile		KARM 1310 100 C	Glendale	Santa Barbara	WML 1230 1000 M	Lakeland	
WALA 1380 500 C		KMJ 580 1000 N	KIEV 850 250	KDB 1500 100 M	WLAK 1310 100 N	Miami	
WMOB 1200 100		KIEV 850 250	Long Beach	KDTMS 1220 500 B	WIOD 610 1000 N	WMBF 610 1000	WQAM 560 1000 C
Montgomery		KIEV 850 250	Los Angeles	KSRO 1310 100	WQAM 560 1000 C	Miami Beach	
WCOV 1210 100		KECA 1430 1000 B	Los Angeles	Stockton	WKAT 1500 100	Ocala	
WSFA 1410 500 C		KEHE 780 1000	Los Angeles	KGDM 1100 1000 M	..... 1500 100	Orlando	
Selma		KEFE 780 1000	Los Angeles	KWG 1200 100 N	WDBO 580 1000 C	Pensacola	
WBFB 1500 100		KFCI 1300 1000	Los Angeles	Visalia	WCOA 1340 500 C	St. Augustine	
Muscle Shoals City		KFI 640 50000 R	Los Angeles	KTKC 1190 250 M	WFOY 1210 100	St. Petersburg	
WMSD 1420 100		KFSF 1120 500	Los Angeles	Watsonville	WSUN 620 1000 N	Tallahassee	
Tuscaloosa		KFYD 1000 1000	Los Angeles	KHUB 1310 250	WTAL 1310 100	Tampa	
WJRD 1200 250		KFWB 950 1000	Los Angeles	COLORADO			
ALASKA		KGFI 1200 100	Los Angeles	Alamosa	Alamosa		
Anchorage		KHJ 900 1000 M	Los Angeles	KGIW 1420 100	Colorado Springs		
KFOD 780 250		KMTR 570 1000	Los Angeles	Colorado Springs	KVOR 1270 1000 C		
Fairbanks		KNX 1050 50000 C	Los Angeles	Denver	KFEL 920 500 M		
KFAR 610 1000		KRKD 1120 500	Los Angeles	Denver	KLZ 560 1000 C	KOA 830 50000 R	
Juneau		KYOS 1040 250	Los Angeles	Denver	KPOF 880 1000	KQDF 920 500 B	
KINY 1430 250		KTRB 740 250	Los Angeles	Durango	KVOD 920 500 B	Grand Junction	
Ketchikan		KYCA 1500 100	Los Angeles	KIUP 1370 100	KJRS 1070 500		
KGBU 900 500		KYCA 1500 100	Los Angeles	Grand Junction	KPOF 880 1000		
ARIZONA		KYCA 1500 100	Los Angeles	KFJX 1200 100	KQDF 920 500 B		
Globe		KYCA 1500 100	Los Angeles	Greeley	KVOR 1270 1000 C		
KWJB 1210 100		KYCA 1500 100	Los Angeles	KFKA 880 500 M	KQDF 920 500 B		
Jerome		KYCA 1500 100	Los Angeles	La Junta	KQDF 920 500 B		
KCRJ 1310 100		KYCA 1500 100	Los Angeles	KOKO 1370 100	KQDF 920 500 B		
Lowell		KYCA 1500 100	Los Angeles	Lamar	KQDF 920 500 B		
KSUN 1200 100		KYCA 1500 100	Los Angeles	KIDW 1420 100	KQDF 920 500 B		
Phoenix		KYCA 1500 100	Los Angeles	Pueblo	KQDF 920 500 B		
KOY 1390 1000 C		KYCA 1500 100	Los Angeles	KGHF 1320 500 B	KQDF 920 500 B		
KTAR 620 1000 N		KYCA 1500 100	Los Angeles	Sterling	KQDF 920 500 B		
Prescott		KYCA 1500 100	Los Angeles	KGEK 1200 100	KQDF 920 500 B		
KYCA 1500 100		KYCA 1500 100	Los Angeles	CONNECTICUT			
Safford		KYCA 1500 100	Los Angeles	Bridgeport	WICC 600 500 M		
KGLU 1420 100		KYCA 1500 100	Los Angeles	Hartford	WDRG 1330 1000 C		
Tucson		KYCA 1500 100	Los Angeles	WTRC 1040 50000 R	WTHG 1200 100 M		
KGAR 1370 100 C		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
KVOA 1260 1000		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
ARKANSAS		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
Blytheville		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
KLCN 1290 100		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
El Dorado		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
KELD 1370 100		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
Fort Smith		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
KFPW 1210 100		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
Hot Springs		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		
KTHS 1060 10000 N		KYCA 1500 100	Los Angeles	WTHG 1200 100 M	WTHG 1200 100 M		

ALBANY	
WGPC 1420 100	
WGAU 1310 100	
Atlanta	
WAGA 1450 500 B	
WATL 1370 100	
WGST 890 1000 C	
WSB 740 50000 R	
Augusta	
WBDW 1500 100 C	

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Boston		
WAAB	1410	500M
WBZ	990	50000 B
WCOP	1120	500
WEEI	590	1000 C
WHDH	830	1000
WMEX	1500	100
WNAC	1230	1000 R
WORL	920	500
Fall River		
WSAR	1450	1000M
Greenfield		
WHAI	1210	250M
Lawrence		
WLAW	680	1000
WLLH	1370	100M
Lowell		
WLLH	1370	100
New Bedford		
WLLH	1370	100M
Pittsfield		
WBRK	1310	100 C
Springfield		
WBZA	990	1000 B
WMAS	1420	100 C
WSPR	1140	500M
Worcester		
WORC	1280	500 C
WTAG	580	1000 R

MICHIGAN		
Battle Creek		
WELL	1420	100 B
Bay City		
WRCM	1410	500
Calumet		
WHDF	1370	100
Detroit		
WJBK	1500	100
WJL	750	50000 C
WMBC	1420	100
WWJ	920	1000 R
WVYZ	1240	1000 B
East Lansing		
WKAR	850	1000
Fliht		
WFDF	1310	100 B
Grand Rapids		
WASH	1270	500 N
WOOD	1270	500 N
Ironwood		
WJMS	1420	100
Jackson		
WIBM	1370	100 B
Kalamazoo		
WKZO	590	1000 B
Lansing		
WJIM	1210	100 B
Lapeer		
WMPC	1200	100
Marquette		
WBEO	1310	100
Muskegon		
WKBZ	1500	100
Port Huron		
WHLS	1370	250
Royal Oak		
WEXL	1310	50

MINNESOTA		
Albert Lea		
KATE	1420	100
Duluth		
KDAL	1500	100 C
WEBC	1290	1000 N
Fergus Falls		
KGDE	1200	100
Hibbing		
WMFG	1210	100
Mankato		
KYSM	1500	100
Minneapolis		
WCCO	810	50000 C
WDGY	1180	1000 C
WLB	760	5000
WTCN	1250	1000 B
Moorhead		
KVOX	1310	100
Northfield		
WCAL	760	5000
Rochester		
KROC	1310	100
St. Cloud		
KFAM	1420	100
St. Paul		
KSTP	1460	10000 R
WMIN	1370	100
Virginia		
WILB	1370	100 C
Winona		
KWNO	1200	250

MISSISSIPPI		
Grenada		
WGRM	1210	100
Gulfport		
WGCM	1210	100
Hattiesburg		
WFOR	1370	100
Jackson		
WIDX	1270	1000 R
WSLI	1420	100
Laurel		
WAML	1310	100
Meridian		
WCOC	880	1000 C
Vicksburg		
WQBC	1360	1000

MISSOURI		
Cape Girardeau		
KFVS	1210	100
Columbia		
KFRU	630	500
Jefferson City		
KWOS	1310	100
Joplin		
WMBH	1420	100
Kansas City		
KCMO	1370	100
KITE	1530	1000
KMBC	950	1000 C
WDAF	610	1000 R
WHB	860	1000M
Poplar Bluff		
KWOC	1310	100

St. Joseph		
KFEQ	680	2500
St. Louis		
KFUO	550	500
KMOX	1090	50000 C
KSD	550	1000 R
KWK	1350	1000 B
KXOK	1250	1000
WEW	760	1000
WIL	1200	100
Springfield		
KGBX	1230	500 N
KWTO	560	5000

MONTANA		
Billings		
KGHL	780	1000 N
Bozeman		
KIBM	1420	100
Butte		
KGIT	1343	1000 N
Great Falls		
KFBB	1280	1000 C
Helena		
KPFA	1210	100 N
Kalispell		
KGEZ	1310	100
Missoula		
KGVO	1260	1000 C
Wolf Point		
KGCX	1450	1000

NEBRASKA		
Grand Island		
KMMJ	740	1000
Kearney		
KGFW	1310	100
Lincoln		
KFAB	770	10000 C
KFOR	1210	100 C
Norfolk		
WJAG	1060	1000
North Platte		
KGNF	1430	1000
Omaha		
KOIL	1260	1000 B
WAAW	660	500
WOW	590	1000 R
Scottsbluff		
KGKY	1500	100

NEVADA		
Reno		
KOH	1380	500 C

NEW HAMPSHIRE		
Laconia		
WLNH	1310	100M
Manchester		
WFEA	1340	500 N
Portsmouth		
WHEB	740	250

NEW JERSEY		
Asbury Park		

WCAP	1280	500
Atlantic City		
WPG	1100	5000 C
Bridgeton		
WSNJ	1210	100
Camden		
WCAM	1280	500
Jersey City		
WAAT	940	500
WHOM	1450	250
Newark		
WHBI	1250	1000
WOR	710	50000M
Red Bank		
WBRB	1210	100
Trenton		
WTNJ	1280	500
Whippany		
W3XDD	...	50000
Zarephath		
WAWZ	1350	500

NEW MEXICO		
Albuquerque		
KGBM	1230	1000
KOB	1180	10000 N
Carlsbad		
KLAH	1210	100
Clovis		
KICA	1370	100
Gallup		
KAWM	1500	100
Hobbs		
KWEV	1500	100
Roswell		
KGFL	1370	100
Santa Fe		
KRQA	1310	100

NEW YORK		
Albany		
WABY	1370	100 N
WOKO	1430	500 C
Auburn		
WMOB	1310	100
Binghamton		
WNBF	1500	100 C
Brooklyn		
WARD	1400	500
WBBC	1400	500
WBBR	1300	1000
WCNW	1500	100
WVFW	1400	500
Buffalo		
WBEN	900	1000 R
WBNY	1370	100
WBRB	1310	100 B
WGR	550	1000 C
WKBW	1480	5000 C
WWSV	1370	50
Canton		
WCAD	1220	500
Elmira		
WENY	1200	250
WESG	850	1000 C
Freeport		
WGBB	1210	100

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Jamestown			
WJTN	1210	100	B
Newburgh			
WGNV	1220	250	
New York			
WABC	860	50000	C
WRLI	1100	5000	
WRNX	1350	1000	
WBOQ	860	50000	
WGAZ	660	50000	B
WKVD	1300	1000	
WHN	1010	1000	
WINS	1180	1000	
WJZ	760	50000	B
WLTH	1400	500	
WMCA	570	1000	
WNEW	1250	1000	
WNYC	810	1000	
WOV	1130	1000	
WQXR	1550	1000	
Olean			
WHDL	1400	250	
Pattsburg			
WMFF	1310	100	B
Rochester			
WHAM	1150	50000	B
WHFC	1430	500	C
WSAY	1210	100	
Saranac Lake			
WNBZ	1290	100	
Schenectady			
WGY	790	50000	R
Syracuse			
WFRL	1360	1000	C
WSYR	570	1000	B
WSYU	570	1000	
Troy			
WHAZ	1300	1000	
WTRY	950	1000	
Utica			
WIBX	1200	100	C
White Plains			
WFAS	1210	100	
Woodside			
WWTL	1500	100	

NORTH CAROLINA

Asheville			
WWNC	570	1000	N
Charlotte			
WBT	1080	50000	C
WSOC	1210	100	N
Durham			
WDNC	1500	100	C
Fayetteville			
WFNC	1340	250	
Gastonia			
WGNC	1420	100	
Goldsboro			
WGRR	1370	100	
Greensboro			
WBIG	1440	1000	C
High Point			
WMFR	1200	100	
Kinston			
WFCT	1200	100	
Raleigh			
WPTF	680	5000	N
WRAL	1210	100	

Rocky Mount			
WEED	1420	100	
Salisbury			
WSTP	1500	100	
Wilmington			
WMFD	1370	100	
Wilson			
WGTM	1310	100	
Winston-Salem			
WAHR	1250	250	
WSJS	1310	100	C

NORTH DAKOTA

Bismarck			
KFYR	550	1000	N
Devils Lake			
KDLR	1210	100	
Fargo			
WDAY	940	1000	N
Grand Forks			
KFAM	1410	500	
Jamestown			
KRMC	1370	100	
Mandan			
KGCU	1240	250	
Minot			
KLPM	1360	500	
Valley City			
KOVC	1500	100	

DHID

Akron			
WADC	1320	1000	C
WJW	1210	100	
Ashtabula			
WICA	940	250	
Canton			
WHRC	1200	100	
Cincinnati			
WCPO	1200	100	
WKRC	550	1000	C
WLW	700	50000	N
WSAI	1330	1000	N
WSXO	700	500000	
Cleveland			
WGLE	610	500	M
WGAR	1450	1000	C
WLIK	1390	1000	B
WTAM	1070	50000	R
Columbus			
WBNS	1430	1000	C
WCOL	1210	100	N
WHKC	640	500	M
WOSU	570	750	
Dayton			
WHIO	1260	1000	C
WSMK	1380	250	C
Lima			
WLOK	1210	100	
Portsmouth			
WPAY	1370	100	
Toledo			
WSPD	1340	1000	B
WTOL	1200	100	
Youngstown			
WFMJ	1420	100	
WKBN	570	500	C
Zanesville			
WALR	1210	100	

OKLAHOMA

Ada			
KADA	1200	100	M
Ardmore			
KVSO	1210	100	M
Eik City			
KASA	1210	100	M
Enid			
KCRC	1360	250	M
Muskogee			
KBIX	1500	100	M
Norman			
WNAD	1010	1000	
Oklahoma City			
KOCY	1310	100	
KOMA	1480	5000	C
KTOK	1370	100	M
WKY	900	1000	N
Okmulgee			
KHBB	1210	100	
Ponca City			
WBBZ	1200	100	M
Shawnee			
KGFF	1420	100	M
Tulsa			
KOME	1310	250	
KTUL	1400	1000	C
KVOO	1140	25000	N

OREGON

Astoria			
KAST	1370	100	
Baker			
KBKR	1500	100	
Bend			
KBND	1310	100	
Corvallis			
KOAC	550	1000	
Eugene			
KORE	1420	100	M
Klamath Falls			
KFJI	1210	100	
La Grande			
KLBM	1420	100	
Marshfield			
KOOS	1200	100	M
Medford			
KMED	1410	250	N
Portland			
KALE	1300	1000	M
KRPS	1420	100	
KEX	1180	5000	B
KGW	620	1000	R
KOIN	940	1000	C
KWJJ	1040	500	
KXL	1420	100	
Roseburg			
KRRR	1500	100	M
Salem			
KSLM	1370	100	M

PENNSYLVANIA

Allentown			
WCBA	1440	500	
WSAN	1440	500	N
Altoona			
WFRG	1310	100	

Easton			
WEST	1200	100	
Erie			
WLEU	1420	100	B
Glenside			
WIBG	970	100	
Greensburg			
WHLB	620	250	C
Grove City			
WSAJ	1310	100	
Harrisburg			
WHP	1430	500	C
WKBO	1200	100	N
Hazleton			
WAZL	1420	100	
Johnstown			
WJAC	1310	100	
Lancaster			
WGAL	1500	100	N
New Castle			
WKST	1250	250	
Philadelphia			
KYW	1020	10000	R
WCAU	1170	50000	C
WVAS	1370	100	
WFIL	560	1000	B
WHAT	1310	100	
WIP	610	1000	
WPEN	920	1000	
WTEL	1310	100	
Pittsburgh			
KDKA	980	50000	B
KQV	1380	500	C
WCAE	1290	1000	R
WJAS	1290	1000	C
WWSW	1500	100	
Reading			
WEED	830	1000	B
WRAW	1310	100	
Seranton			
WGBI	880	500	C
WQAN	880	500	
Sharon			
WPIC	780	250	
Sunbury			
WKOK	1210	100	
Uniontown			
WMBS	1420	100	
Wilkes-Barre			
WBAX	1210	100	M
WBRE	1310	100	N
Williamsport			
WRAC	1370	100	
York			
WORK	1320	1000	N

PUERTO RICO

Mayaguez			
WPRA	1370	100	
Ponce			
WPRP	1420	100	
San Juan			
WKAQ	1240	1000	
WNEL	1290	1000	
RHODE ISLAND			
Providence			
WEAN	780	1000	M

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

WJAR 850 1000 R
WPRO 630 500 C

SOUTH CAROLINA

Anderson
WAIM 1200 100 C
Charleston
WCSC 1360 500 N
WTMA 1210 100
Columbia
WCOS 1370 100
WIS 560 1000 N
Florence
WOLS 1200 100
Greenville
WFIC 1300 1000 N
Rock Hill
WRNL 1500 100
Spartanburg
WSPA 920 1000

SOUTH DAKOTA

Aberdeen
KABR 1390 500
Brookings
KFDY 780 1000
Pierre
KGFY 630 200
Rapid City
KOBH 1370 100
WCAT 1200 100
Sioux Falls
KELD 1200 100 N
KSOU 1110 5000 N
Vermillion
KUSD 890 500
Yankton
WNAX 570 1000 C

TENNESSEE

Bristol
WOPF 1500 100
Chattanooga
WAPO 1420 100 N
WDD 1280 1000 C
Jackson
WTJS 1310 100
Johnson City
WJIL 1200 100
Knoxville
WNOX 1010 1000 C
WROL 1310 100 N
Memphis
WHBQ 1370 100
WMC 780 1000 R
WMPS 1430 500 B
WREC 600 1000 C
Nashville
WLAC 1470 5000 C
WSIX 1210 100
WSM 650 50000 N

TEXAS

Abilene
KRBC 1420 100 M

Amarillo
KFDA 1500 100
KGNC 1410 1000 N
Austin
KNOW 1500 100 C
KTBC 1120 1000
Beaumont
KFDM 560 500 N
KRIC 1410 100 M
Big Spring
KBST 1500 100 M
Brady
KNEL 1500 250
Brownsville
KGPI 1500 100
College Station
WTAW 1120 500
Corpus Christi
KRIS 1330 500 N
Corsicana
KAND 1310 100 M
Dallas
KRUD 1040 1000 C
WFAA 800 50000 N
WRR 1280 500 M

Denton
KDNT 1120 100
Duhlin
KFEL 1310 100
El Paso
KROD 1500 100
KFSM 1310 100 N
WDAH 1310 100
Fort Worth
KFYZ 1370 100 M
KGKO 570 1000 R
KTAT 1240 1000 M
WBAP 800 50000 N
Galveston
KLEF 1370 100 M
Greenville
KGYL 1200 100

Houston
KPRC 920 1000 R
KTRH 1290 1000 C
KXYZ 1440 1000 B
Huntsville
KSAM 1500 100
Kilgore
KOGA 1210 100
Laredo
KPAB 1500 100
Longview
KFRO 1370 250 M
Lubbock
KPYO 1310 100 M
Lufkin
KRBA 1310 100
Midland
KRIL 1420 100
Palestine
KNLT 1420 100
Pampa
KIDN 1310 100
Paris
KPLT 1500 250 M
Pecos
KIUN 1370 100
Port Arthur
KPAC 1260 500

San Angelo
KGKL 1370 100
San Antonio
KABC 1420 100 M
KMAC 1370 100
KONO 1370 100
KTSA 550 1000 C
WQAI 1190 50000 N
Sherman
KRRV 1310 250 M
Temple
KTEM 1370 250 M
Texarkana
KCMC 1420 100 M
Tyler
KGBK 1500 100 M
Vernon
KVVV 1500 100
Waco
WACO 1420 100 C
Weslaco
KRGV 1260 1000 N
Wichita Falls
KWFT 620 250

UTAH

Cedar City
KNSB 1310 100
Logan
KVNJ 1200 100
Ogden
KLO 1400 500 R
Price
KELR 1420 100
Salt Lake City
KDYL 1290 1000 R
KSL 1130 50000 C
KUTA 1500 100 N

VERMONT

Burlington
WCAX 1200 100
Rutland
WSYB 1500 100
St. Albans
WQDM 1390 1000
Springfield
WNRX 1260 1000 C
Waterbury
WDEV 550 500

VIRGINIA

Charlottesville
WCHV 1420 100
Danville
WBTV 1370 100
Harrisonburg
WSVA 550 500
Lynchburg
WLVA 1200 100
Newport News
WGH 1310 100
Norfolk
WTAR 780 1000 N
Pettersburg
WPIV 1210 100

Richmond

WBRL 1210 100
WBFG 1350 500 R
WRNL 880 500
WTTD 1500 100 B
WVA 1110 5000 C
Roanoke
WDBJ 930 1000 C

WASHINGTON

Aberdeen
KXRO 1310 100 M
Bellingham
KWOS 1200 100 M
Centralia
KELA 1440 500 M
Everett
KTKO 1370 500 M
Longview
KWLK 780 250
Olympia
KGY 1210 100 M
Pullman
KWSC 1220 1000
Seattle
KEEN 1370 100
KIRO 710 1000 C
KJR 970 5000 B
KOL 1270 1000 M
KOMO 920 1000 R
KRSC 1120 250
KTW 1220 1000
KXA 760 250

Spokane

KFPO 1120 100
KPPY 890 1000 C
KGA 1470 5000 B
KHQ 590 1000 R
Tacoma
KMO 1330 1000 M
KVI 570 1000 C
Vancouver
KVAN 880 250
Walla Walla
KUJ 1370 100
Wenatchee
KIT 1250 250 M
Yakima
KPQ 1500 100

WEST VIRGINIA

Beckley
WJLS 1210 100
Bluefield
WHIS 1410 500
Charleston
WCHS 580 500 C
WGKV 1500 100
Clarksburg
WBLK 1370 100
Fairmont
WMMN 890 1000 C
Huntington
WSAZ 1190 1000
Parkersburg
WPAR 1420 100 C
Wheeling
WVVA 1160 5000 C

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
WHBY 1200 100
WTAQ 1330 1000 C
Janesville
WCLO 1200 100
LaCrosse
WKBH 1380 1000 C
Madison
WHA 940 5000
WIBA 1280 1000 N
Manitowoc
WOMT 1210 100
Milwaukee
WEMP 1310 100
WISN 1120 250 C
WTMJ 820 1000 N
Poynette
WIBU 1210 100
Racine
WRIN 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
KDPN 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
CJ CJ 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
Trall
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 5000
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
CKKR 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
CIGS 1450 50 F

QUEBEC

Chicoutimi
CJBJ 1120 100 F
Hull
CKCH 1210 100 F
Montreal
CBF 910 5000 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
CKRM 540 1000 F
CKCK 1010 1000 F
Saskatoon
CFQC 840 1000 F
Watrous
CBK 540 50000
Yorkton
CJGJ 1390 100 F

COSTA RICA

San Jose
TIEP 830 3000
TIGH 725 600
TILJ 775 450
TILS 880 500
TIPG 625 5000
TIRH 950 2000
TIRM 750 500
TIRS 915 250
FIX 650 1000
TIXD 800 1000
TISCV 575 100

CUBA

Bayamo
CMKL 950 200
Calbarien
CMHD 1270 200
Camaguey
CMJA 860 200
CMJC 1390 200
CMJE 1230 200
CMJP 930 200
CMJK 1290 200
CMJW 1070 200
CMJX 740 200
Cardenas
CMGE 1370 200
Ciego de Avila
CMJI 1360 200
CMII 1130 200
CMJO 1260 200
Cienfuegos
CMJJ 1160 200
CMHM 1450 200
CMHX 1480 200
Cruces
CMHK 1210 200
Guantanamo
CMKS 710 200
Guines
CM9RT 1580 200
Havana
CMPC 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
CMB5	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
CMCH	1110	200
CMCI	970	5000
CMCL	730	10000
CMCM	850	200
CMCO	1200	200
CMCP	1050	200
CMCQ	1410	200
CMCR	660	200
CMCU	780	200
CMCV	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		
CMKP	1460	250
CMKO	1280	200
Manzanillo		
CMKE	1310	...
CMKM	1080	200
Matanzas		
CMGF	1120	200
CMGH	790	200
Moron		
CMGP	1420	200
Palma Soriano		
CMKZ	1430	200
Pinar del Rio		
CMAB	1240	200
Placetas		
CMHP	1100	200
Sagua la Grande		
CMHA	1090	200
Sancti Spiritus		
CMHB	1240	200
Santa Clara		
CMHI	1060	200
CMHW	680	290
Santiago		
CMKC	1250	200
CMKD	910	1000
CMKG	1150	200
CMKQ	1490	200
CMKR	1100	200
CMKW	750	200
CMKX	1190	200
Trinidad		
CMHT	920	200

DOMINICAN REPUBLIC

Ciudad	Trujillo
HIIN	1090 740
HIX	800 800
HIIT	1050 50

EL SALVADOR

San Salvador	
YSS	640 500

GUATEMALA

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

HONDURAS

Tegucigalpa	
TRP	1450 50

MEXICO AGUASCALIENTES

Aguascalientes	
XEIH	1000 250

BAJA CALIFORNIA

Mexicali	
XEAA	750 200
XEAO	660 250
XECL	960 1000
Rosarito Beach	
XERB	1090 150000
Tijuana	
XERG	890 1000
XEAC	980 5000
XEC	1150 100
XELO	730 50000
XEMO	860 5000

CHIHUAHUA

Chihuahua	
XEBU	1240 50
XERW	1340 250
XEPI	1440 250
XEM	1380 500
Juarez	
XEP	1450 100
XEPV	1210 50
XEI	1020 1000
XEP	1160 500
Parral	
XEAT	1210 250

COAHUILA

Piedras Negras	
XEMU	580 250
XEPN	730 100000
Sabinas	
XEBX	640 250
Saltillo	
XEAS	1160 100
Torreon	

XETB	1310 500
Villa Acuna	
XEDH	1310 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
XEIP	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
XENN	1170 1000

DURANGO

Durango	
XEBP	1150 250
XEB	1210 50

GUANAJUATO

Irapuato	
XEBO	1310 25
Leon	
XELK	1240 500

JALISCO

Guadalajara	
XED	1160 2500
Guzman	
XEBA	1080 20

MEXICO

Texcoco	
XEXE	1270 17
Toluca	
XECH	1490 250

MICHOACAN

Morelia	
XEL	1370 125

NUEVO LEON

Monterrey	
XEPF	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	
XEBL	1220 50

SONORA

Cananea	
XEPQ	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
XEPF	980 250
XENT	910 150000
Reynosa	
XEAW	960 100000
Tampico	
XECA	1250 250
XEPW	1310 300
XES	990 250

VERACRUZ

Cordoba	
XEAG	1310 10
Jalapa	
XEXB	1270 250
Minatitlan	
XEDW	1150 20
Orizaba	
XEXD	1340 350
Veracruz	
XEDP	1220 12
XEU	1010 250

YUCATAN

Merida	
XEPC	1340 100
XEME	1240 50
XEZ	630 500

MIQUELON

St. Pierre	
PQN	609 250

NEWFOUNDLAND

St. John's	
VOAC	1065 40
VOCM	1008 200
VOGY	840 400
VONP	1195 500
VOWR	681 500

NORTH AMERICAN B. C. STATIONS BY CALLS

CBA	1050	50000	CHLT	1210	100	CKIC	1010	50
Sackville, N. B.			Sherbrooke, P. Q.			Wolfville, N. S.		
CBF	910	50000	CHML	1010	100	CKLW	1030	5000
Montreal, P. Q.			Hamilton, Ont.			Windsor, Ont.		
CBJ	1120	100	CHNC	610	1000	CKMK	1210	50
Chicoutimi, P. Q.			New Carlisle, P. Q.			Cobalt, Ont.		
CBK	540	50000	CHNS	930	1000	CKMO	1410	100
Watrous, Sask.			Halifax, N. S.			Vancouver, B. C.		
CBL	840	50000	CHRC	580	100	GKNX	1200	100
Toronto, Ont.			Quebec, P. Q.			Wingham, Ont.		
CBM	960	5000	CHSJ	1120	100	CKOC	1120	500
Montreal, P. Q.			St. John, N. B.			Hamilton, Ont.		
CBO	880	1000	CHWK	760	100	CKOV	630	100
Ottawa, Ont.			Chilliwack, B. C.			Kelowna, B. C.		
CBR	1100	5000	CJAT	910	1000	CKPC	930	100
Vancouver, B. C.			Trail, B. C.			Ivanford, Ont.		
CBV	950	1000	CJBR	1030	1000	CKPR	580	100
Quebec, P. Q.			Rimouski, P. Q.			Fort William, Ont.		
CBY	1420	100	CJCA	730	1000	CKRN	1370	100
Toronto, Ont.			Edmonton, Alta.			Rouyn, P. Q.		
CFAC	930	1000	CJCB	1240	1000	CKSO	780	1000
Calgary, Alta.			Sydney, N. S.			Sudbury, Ont.		
CFAR	1370	100	CJ CJ	690	100	CKTB	1200	100
Flin Flon, Man.			Calgary, Alta.			St. Catharines, Ont.		
CFCF	600	500	CJCS	1210	50	CKUA	580	500
Montreal, P. Q.			Stratford, Ont.			Edmonton, Alta.		
CFCH	930	100	CJCU	1210	50	CKWX	1010	100
North Bay, Ont.			Aklavik, N. W. T.			Vancouver, B. C.		
CFCN	1030	10000	CJGX	1390	100	CKX	1120	1000
Calgary, Alta.			Yorkton, Sask.			Brandon, Man.		
CFCO	630	100	CJIC	1500	100	CKY	910	15000
Chatham, Ont.			S. Ste. Marie, Ont.			Winnipeg, Man.		
CFCT	1450	500	CJKL	1310	100	CMAB	1240	200
Victoria, B. C.			North Bay, Ont.			Pinar del Rio, Cuba		
CFCY	630	1000	CJLS	1310	100	CMBC	1140	200
Charlottetown, P.E.I.			Yarmouth, N. S.			Havana, Cuba		
CFGP	1200	100	CJOC	950	100	CMBD	1260	500
Grande Prairie, Alta.			Lethbridge, Alta.			Havana, Cuba		
CFJC	880	1000	CJOR	600	500	CMBF	1560	5000
Kamloops, B. C.			Vancouver, B. C.			Havana, Cuba		
CFLC	930	100	CJRC	630	1000	CMBG	690	200
Prescott, Ont.			Winnipeg, Man.			Havana, Cuba		
CFNB	550	500	CJRM	540	1000	CMBH	1600	5000
Fredericton, N. B.			Regina, Sask.			Havana, Cuba		
CFOS	1370	100	CKAC	730	5000	CMBL	750	200
Owen Sound, Ont.			Montreal, P. Q.			Havana, Cuba		
CFPL	730	100	CKBI	1210	100	CMBQ	1320	5000
London, Ont.			Prince Albert, Sask.			Havana, Cuba		
CFPR	580	50	CKCA	1420	100	CMBS	1170	200
Prince Rupert, B. C.			Kenora, Ont.			Havana, Cuba		
CFQC	840	1000	CKCD	1010	100	CMBX	1080	200
Saskatoon, Sask.			Vancouver, B. C.			Havana, Cuba		
CFRB	690	10000	CKCH	1210	100	CMBY	1440	200
Toronto, Ont.			Hull, P. Q.			Havana, Cuba		
CFRC	1510	100	CKCK	1010	1000	CMBZ	940	200
Kingston, Ont.			Regina, Sask.			Havana, Cuba		
CFRN	960	100	CKCL	580	100	CMC	1530	200
Edmonton, Alta.			Toronto, Ont.			Havana, Cuba		
CHAB	1200	100	CKCO	1010	100	CMCA	1350	200
Moose Jaw, Sask.			Ottawa, Ont.			Havana, Cuba		
CHCK	1310	50	CKCR	1510	100	CMCB	1230	200
Charlottetown, P.E.I.			Kitchener, Ont.			Havana, Cuba		
CHGB	1200	100	CKCV	1310	100	CMCD	630	15000
St. Ann, P. Q.			Quebec, P. Q.			Havana, Cuba		
CHGS	1450	50	CKCW	1370	100	CMCF	810	5000
Summerside, P.E.I.			Moncton, N. B.			Havana, Cuba		
CHLN	1420	100	CKFC	1410	50	CMCG	1290	200
Three Rivers, P. Q.			Vancouver, B. C.			Havana, Cuba		
CHLP	1120	100	CKGB	1420	100	CMCI	1110	200
Montreal, P. Q.			North Bay, Ont.			Havana, Cuba		

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	660	200	CMKG	1150	200	KBIX	1500	100
Havana, Cuba			Santiago, Cuba			Muskogee, Okla.		
CMCU	790	200	CMKL	950	200	KBKR	1500	100
Havana, Cuba			Bayamo, Cuba			Baker, Ore.		
CMCW	1380	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			Texarkana, Texas		
CMHA	1090	200	CMKX	1190	200	KCMO	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	1410	....	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	Lincoln, Neb.	KFUO 550 500	St. Louis, Mo.	KGIW 1420 100	Alamosa, Colo.
KFAC 1300 1000	Los Angeles, Calif.	KFVD 1000 1000	Los Angeles, Calif.	KGKB 1500 100	Tyler, Texas
KFAM 1420 100	St. Cloud, Minn.	KFVS 1210 100	Cape Girardeau, Mo.	KGKL 1370 100	San Angelo, Texas
KFAR 610 1000	Fairbanks, Alaska	KFWB 950 1000	Los Angeles, Calif.	KGKO 570 1000	Fort Worth, Texas
KFBB 1280 1000	Great Falls, Mont.	KFXD 1200 100	Nampa, Idaho	KGKY 1500 100	Scottsbluff, Neb.
KFBI 1050 5000	Ahilene, Kans.	KFXJ 1200 100	Grand Junction, Colo.	KGLO 1210 100	Mason City, Iowa
KFBK 1490 10000	Sacramento, Calif.	KFXM 1210 100	San Bernardino, Calif.	KGLU 1420 100	Safford, Ariz.
KFDA 1500 100	Amarillo, Texas	KFYO 1310 100	Lubbock, Texas	KGMB 1320 1000	Honolulu, T. H.
KFDM 560 500	Beaumont, Texas	KFYR 550 1000	Bismarck, N. D.	KGNC 1410 1000	Amarillo, Texas
KFDY 780 1000	Brookings, S. D.	KGA 1470 5000	Spokane, Wash.	KGNF 1430 1000	North Platte, Neb.
KFEL 920 500	Denver, Colo.	KGAR 1370 100	Tucson, Ariz.	KGNO 1340 250	Dodge City, Kans.
KFEQ 680 2500	St. Joseph, Mo.	KGB 1330 1000	San Diego, Calif.	KGO 790 7500	San Francisco, Calif.
KFGQ 1370 100	Boone, Iowa	KGBU 900 500	Vetchikan, Alaska	KGU 750 2500	Honolulu, T. H.
KFH 1300 1000	Wichita, Kans.	KG BX 1230 500	Springfield, Mo.	KGVL 1200 100	Greenville, Texas
KFI 640 50000	Los Angeles, Calif.	KGCA 1270 100	Decorah, Iowa	KGVO 1260 1000	Missoula, Mont.
KFIO 1120 100	Spokane, Wash.	KGCI 1200 100	Coeur d'Alene, Idaho	KGW 620 1000	Portland, Ore.
KFIZ 1420 100	Fond du Lac, Wis.	KGCU 1240 250	Mandan, N. D.	KGY 1210 100	Olympia, Wash.
KFJB 1200 100	Marshalltown, Iowa	KG CX 1450 1000	Wolf Point, Mont.	KHBC 1400 250	Hilo, T. H.
KFJI 1210 100	Klamath Falls, Ore.	KGDE 1200 100	Fergus Falls, Minn.	KHBB 1210 100	Okmulgee, Okla.
KFJM 1410 500	Grand Forks, N. D.	KGDM 1100 1000	Stockton, Calif.	KHJ 900 1000	Los Angeles, Calif.
KFJZ 1370 100	Fort Worth, Texas	KGEK 1200 100	Sterling, Colo.	KHQ 590 1000	Spokane, Wash.
KFKA 880 500	Greeley, Colo.	KGER 1360 1000	Long Beach, Calif.	KHSL 1260 250	Chico, Calif.
KFKU 1220 1000	Lawrence, Kans.	KGEZ 1310 100	Kalispell, Mont.	KHUB 1310 250	Watsonville, Calif.
KFNF 890 500	Shenandoah, Iowa	KGFF 1420 100	Shawnee, Okla.	KICA 1370 100	Clovis, N. M.
KFOR 1210 100	Lincoln, Neb.	KGFI 1500 100	Brownsville, Tex.	KID 1320 500	Idaho Falls, Idaho
KFOX 1250 1000	Long Beach, Calif.	KG FJ 1200 100	Los Angeles, Calif.	KIDO 1350 1000	Boise, Idaho
KFPL 1310 100	Dublin, Texas	KGFL 1370 100	Roswell, N. Mex.	KIDW 1420 100	Lamar, Colo.
KFPW 1210 100	Fort Smith, Ark.	KGFW 1310 100	Kearney, Neb.	KIEM 1450 500	Eureka, Calif.
KFPY 890 1000	Spokane, Wash.	KGFX 630 200	Pierre, S. D.	KIEV 850 250	Glendale, Calif.
KFQD 780 250	Anchorage, Alaska	KG GF 1010 1000	Coffeyville, Kans.	KINY 1430 250	Jumeau, Alaska
KFRC 610 1000	San Francisco, Calif.	KGGM 1230 1000	Albuquerque, N. M.	KIRO 710 1000	Seattle, Wash.
KFRO 1370 250	Longview, Texas	KGHF 1320 500	Pueblo, Colo.	KIT 1250 250	Yakima, Wash.
KFRU 630 500	Columbia, Mo.	KGHI 1200 100	Little Rock, Ark.	KITE 1530 1000	Kansas City, Mo.
KFSD 600 1000	San Diego, Calif.	KGHL 780 1000	Billings, Mont.	KIUL 1210 100	Garden City, Kans.
KFSG 1120 500	Los Angeles, Calif.	KGIR 1340 1000	Butte, Mont.	KIUN 1370 100	Pecos, Texas

NORTH AMERICAN B. C. STATIONS BY CALLS

KIUP	1370	100	KOH	1380	500	KRKO	1120	500
Durango, Colo.			Reno, Nev.			Los Angeles, Calif.		
KJBS	1070	500	KOIL	1260	1000	KRRC	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	KRBD	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	1360	500	KOMO	920	1000	KRRR	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	560	1000	KOVC	1500	100	KROY	1210	100
Denver, Colo.			Valley City, N. Dak.			Sacramento, Calif.		
KMA	930	1000	KOY	1390	1000	KRAA	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	KFLT	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	600	50000	KSD	550	1000
St. Louis, Mo.			San Francisco, Calif.			St. Louis, Mo.		
KMPC	710	500	KPOF	880	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	KSDO	1110	5000
Los Angeles, Calif.			San Jose, Calif.			Sioux Falls, S. Dak.		
KOA	830	50000	KRBA	1310	100	KSRO	1310	100
Denver, Colo.			Lufkin, Texas			Santa Rosa, Calif.		
KOAC	550	1000	KRBC	1420	100	KSTP	1460	10000
Chevallis, 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.		
KOBH	1370	100	KRGV	1260	1000	KTR	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.			Arduore, 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		
KTCK	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	KWG	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	TISCV	575	100
Modesto, Calif.			Portland, Ore.			Atajuela, 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		
KV00	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	....	WAP0	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 Hazelton, 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 Fort 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.	WCAZ 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.	WDOO 1280 1000 Chattanooga, Tenn.
WBEO 1310 100 Marquette, Mich.	WCBS 1420 100 Springfield, Ill.	WDRC 1330 1000 Hartford, Conn.
WBHP 1200 100 Huntsville, Ala.	WCCO 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.	WCHS 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.	WBBE 1290 1000 Duluth, Minn.
WBOQ 860 50000 New York, N. Y.	WCMI 1310 100 Ashland, Ky.	WBBQ 1210 100 Harrisburg, Ill.
WBOW 1310 100 Terre Haute, Ind.	WCNW 1500 100 Brooklyn, N. Y.	WBBR 1310 100 Buffalo, N. Y.
WBRB 1210 100 Red Bank, N. J.	WCOA 1340 500 Pensacola, Fla.	WBC 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 1435	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.	
WDF 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.		Roston, Mass.		Indianapolis, Ind.	
WGBF 630	500	WHDL 1100	250	WIS 560	1000
Evansville, Ind.		Olean, N. Y.		Columbia, S. C.	
WGBI 880	500	WHEB 710	250	WISN 1120	250
Scranton, Pa.		Portsmouth, N. H.		Milwaukee, Wis.	
WGBR 1370	100			WJAC 1310	100
Goldboro, N. C.				Johnstown, Pa.	

NORTH AMERICAN B. C. STATIONS BY CALLS

WJAG	1060	1000	WKBZ	1500	100	WMB5	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.			Wilmingon, 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	WMIN	1370	100
Jackson, Miss.			Lawrence, Mass.			St. Paul, Minn.		
WJEJ	1210	100	WLB	760	5000	WMMN	890	500
Hagerstown, Md.			Minneapolis, Minn.			Blount, W. Va.		
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	2000	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	WNAC	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	WNBF	1500	100
Washington, D. C.			Lynchburg, Va.			Ringhamton, 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.		
W KAR	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	WQAI	1190	50000
Youngstown, Ohio			Richmond, Va.			San Antonio, Texas		
WKBO	1200	100	WMBH	1420	100	WQC	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	WMOB	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, Me.	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 580 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	Pail 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	Seranton, Pa.	WSBT 1360 500	South Bend, Ind.	WTJS 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.	WTMW 1500 100	East St. Louis, Ill.
WRAC 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.		
WWAE	1200	100	XEBU	1240	50	XEL	1150	250
Hammond, Ind.			Chihuahua, Chih.			Mexico City, D. F.		
WWJ	920	1000	XEBW	1340	250	XELO	730	50000
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	500
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.		
WWVA	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.		
W8X0	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.			Torreon, Coah.		
XEAT	1210	250	XEFE	980	250	XETH	1210	100
Parral, Chih.			Nuevo Laredo, Tams.			Puebla, Pua.		
XEAW	960	100000	XEFI	1440	250	XEU	1010	250
Reynosa, Tams.			Chihuahua, Chih.			Veracruz, 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.		
XEB0	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 Riessen. *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 Mooringsport 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 Jessee. *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, KXI Bldg.

KXO, El Centro, Calif., 1500 kcs., 100 w. unlt'd. *Network:* MBS. *Manager:* F. M. Bowles. *Licensee:* E. R. Irey and F. M. Bewles, 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'd. *Trans*: North Mankato. *Aerial*: vertical, 281 ft. *Licensee*: F. B. Clements & Co., 101 N. Second St.
- KYW, Philadelphia, Pa., 1020 kcs., 10000 W. unlt'd. *Network*: NBC-Red. *Trans*: White-marsh Townsh. *Aerial*: 4 towers, 245 ft., directional. *Manager*: Leslie W. Joy. *Licensee*: West-inghouse Electric and Mfg. Co., 1619 Chestnut St.
- WAAB, Boston, Mass., 1410 kcs., 500 w. nights, 1 kw. to LS., unlt'd. *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*: Drivers 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'd. *Network*: CBS. *Trans*: Wayne Town-ship, 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'd. *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'd. *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'd. *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'd. *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'd. *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'd. *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'd. *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'd. *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'd. *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'd. *Network*: CBS. *Trans*: Sandusky. *Aerial*: 2 towers, 210 ft. Directional after SS. *Manager*: Thad Holt. *Licensee*: Alabama Poly-technic Institute, University of Ala. State College.
- WAPO, Chattanooga, Tenn., 1420 kcs., 100 w. nights, 250 w. to LS., unlt'd. *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 WFWF. *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 1000th 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.
L. C. Reed, Wilmington, Del.
Mrs. 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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- Two years..... \$3.25 Three years..... \$4.75

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Print Name Plainly

Street and Number

City and State

THE DX CALENDAR

Time Is Eastern Standard

Special Programs

- Apr. 8, 2:30-5:30 am, W'MMN, 890 kcs., Fairmont, W. Va.
 Apr. 30, 5-6 am, WAZL, 1420 kcs., Hazleton, Pa. (NNRC).
 May 7, 3-3:30 am, WLAI, 1420 kcs., Lexington, Ky. (NNRC).

Regular DX Programs

- Every Sunday:
 10:15-10:45 am, CFCO, 630 kcs, Chatham, Ont.
 3-5 am, NEAC, 980 kcs., Tijuana, B. Cfa.
 First and Third Sunday:
 2-4 am, WJBO, 1120 kcs, Baton Rouge, La.
 Every Tuesday:
 11:45 am-noon, W9XA, 26450 kcs, Kansas City, Mo.
 Every Wednesday:
 12:30 am, KOY, 1390 kcs., Phoenix, Ariz.
 First and Third Wednesday:
 1:45-2 pm, WTAR, 780 kcs, Norfolk, Va.
 Every Thursday:
 2:45-3 am, KSL, 1130 kcs, Salt Lake City, Utah. (Spartari announcements).
 Every Saturday:
 2:30-2:45 am, KLS, 1280 kcs., Oakland, Calif.
 10:15-10:30 am, WFEU, 830 kcs, Reading, Pa.
 First day of month:
 4-4:30 am, WPAY, 1370 kcs., Portsmouth, Ohio.
 Last day of month:
 3-5 am, KWSC, 1220 kcs., Pullman, Wash.

"This Hobby Called DXing"

An outline of the Art of Tuning and an explanation of all the things that perplex the new DXer, was given in an article called "This Hobby Called DXing," which appeared in the January, 1939, issue of RADEX. All radio fans who wish to know how and what to write to radio stations, how to get verifications, how to hear distance, and who wish to understand the codes, prefixes and abbreviations used in DXing, should obtain this issue of RADEX. It is still available at the regular price of 25c per copy.

GET MORE DX WITH HEADPHONES

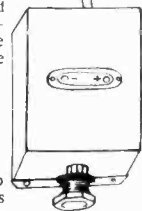
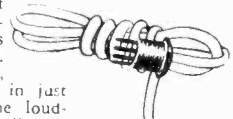


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 Trimm "Professional." 4000 ohms. 4.00
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