

RADIO IN DEX

The All-Wave Radio Log Authority

Oct. 1939

No. 132

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RADIO IN REX

OCTOBER 1, 1939

16th Year

No. 132

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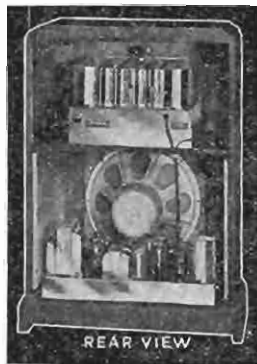
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Radexing With The Radexers

By Ray La Rocque

The word "Radexing", in case you haven't guessed, is our own contribution to the dictionary (not yet accepted by Webster). It signifies, and justly so, we think, that great hobby known as DX on the standard broadcast band. It is undoubtedly true, that ever since the hobby's early days, RADEX has been the magazine for the fan who wanted to thrill to reception of distant signals on the regular or medium waves. So why not, say we, refer to the hobby as "Radexing"?

This month, as the season begins to climb to its mid-winter peak, we hope to acquaint you a little better with the manner in which we intend to present the news to you in our monthly get-togethers.

THIS 'N' DATA

First, a brief review of what the sub-titles represent: "This 'n' Data" contains a little of every type of news. "Veri Signers" will give you additions and changes to the verification signature list in Midsummer RADEX. "P. O. Box R9" is a department containing letters from readers discussing topics of interest to everyone. "Covering the Continents" will be the feature section of the standard broadcast department and will contain reports on reception of stations throughout the world. This section will be divided into Domestic, Latin-American, Trans-Atlantic, and Trans-Pacific news. Preceding the reports on stations in each sector of the globe will be a brief forecast of reception conditions at the time the magazine reaches the newsstands each month.

WBLK in Clarksburg, and WGRV in Charleston, West Virginia will become affiliates of the NBC on September 24, bringing the total of stations for the NBC to 174. . . . In observance of National Lutheran Radio Week, October 29-November 4, Rev. G. Christian Barth, Cincinnati, Ohio,



Commemorating the Golden Empire Centennial at Sacramento, KFBK is now issuing this special verification card. It is in orange and blue, on a yellow background, and as brilliant and colorful as their celebration, which will continue until December 2. (Courtesy of Ray Shaffar).

member of Synod's Board of Directors, will sponsor a globe encircling sacred Lutheran DX program over WLW during the morning of Thursday, November 2 from 1:30-2 a.m. The program will also be broadcast over WLW's shortwave station WLWO. H. H. Hohenstein of KFUE, a real friend of the DX hobby, wants all Radexers to listen and report on reception of the program to Pastor Barth at WLW.

From the World DX Alliance Bulletin we learn that on September 24, the Canadian Broadcasting Corporation will officially take over complete control of radio in Canada. . . . A very clever and satisfactory arrangement! We mean the one which allows the Puerto Rican stations, WNEL and WKAQ, to rebroadcast non-commercial programs—especially those in Spanish from the United States shortwave stations W3XL-W3XAL, and W2XE-W3XAU respectively. . . . In Palestine, advertising is prohibited on the radio, but the citrus-fruit industry is given generous boosts in the broadcasts of the Agri-

culture Dept. In Guatamala, though, the only station which does not accept advertising is TGS.

From QSA-5, the bulletin of the DXIEC we quote from the following letter by Joe Lippincott, East Vassalboro, Maine: "If you want to do DXers a real favor, tell them to get ready for Fall DXing by writing to Richard Holland, Gonic, N. H. and ask for the list of TA's with the time heard last winter. Most of the schedules will not have changed and this list includes 160 TA's with the time heard by a chap in Massachusetts. Cost of the list is 10c, plus a 3c stamp. Rich is a fine DXer, but needs a little encouragement as there are not others around him and he is unable to subscribe to magazines due to having had infantile paralysis and not being able to make any money. It might encourage the boys to know I have heard 60 TA's and 40 TP's from here on the East coast. My set cost me only \$40!" (We know the list—it is worth the expense, we know the DXer—he will appreciate your writing to him, and we know our Radex readers—they will help Rich! —RL)

P. O. BOX R9

ROMNEY, WEST VIRGINIA—Jim Walker: "Clifford Drain and I are starting the 'Mountain State DX'ers Alliance' and wish to correspond with other DXers in this state. There will be no dues—just fun!"

LONDON, GREAT BRITAIN—Richard Wright of Chicago, on vacation: "I went to see an SWL I've been corresponding with in Bristol. He gave me a copy of the Montreux Wavelength Plan which goes into effect at midnight (GMT) March 3-4, 1940. It is like our Harvard Plan except that it is actually going in operation! I don't know whether you have a copy or not so when I'm in London I'll get a copy for you. England will keep the same stations, but will change all frequencies. They will



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add a transmitter at Norwich. France will have 7 African frequencies and Spain—one, so maybe we'll get some Africans in a couple of seasons. There are to be three international common wavelengths as well as four national ones—Switzerland, Yugoslavia, Bulgaria, and Greece. It doesn't mention one for Spain or Portugal, so I don't know what is happening to their common waves."

SAINT LOUIS, MISSOURI—Raymond W. Sahlbach, 3239 Liberty St.: "As a suggestion, I think it would be a fine idea for clubs to get dedications from the station that used to broadcast DX programs back in the 1934-35 season, but don't know. As there are always new DXers coming into the hobby each year, I think this would be just what the new, as well as most old DXers could use. As for myself, I could stand hearing some courtesy programs from stations such as KGNO, HIH, and HJN, and many others who have now changed calls. There are many other that are impossible to log due to their stations which are on FCC schedules time on the air."

KINY's jump to 1000 watts when it occurs will undoubtedly make it the best target for DXers who are shooting for Alaska. West coast listeners reported in previous seasons that the little 250 watt Juneau station on 1430 was the best among the Alaskans. With added power on the same channel it should be heard much farther east in this country. The case of KGMB may prove to be a different story, however. KGMB will also increase power, from 1.5 kw., but they are moving from 1320 kcs., to the other end of the band on 590 kcs. Reception on the lower frequencies is not as good over such long distances as it is on the high frequency end. However, we shall see what the winter has in store. . . . Radexers may hear Panama City this season, but it'll be Panama City, Florida! That city has been granted

a new station to operate on 1200 kcs. with 100 watts after dark and 250 watts in the daylight hours.

VERI SIGNERS

Many have sent us names of veri signers, but we list below only those names which were not shown in the indices in the Midsummer issue of RADEX.

CMCD—J. Benitez, Mgr., XEQ—J. M. Marroqui II, CMBL—Laureano Suarez, ZNS—K. P. Brown, Sec'y., XEMO—F. Ferreira, Ch. Eng., and D. Molina, Mgr., XEAW—H. D. Munal, CMCJ—P. Fernandez Truita, XEP—Esteban Parra, Gerente, CKRN—J. O. Tardif, Mgr., CMBY—Pedro Marti, Ch. Eng., TGW—Ed. Vasquez Bruni, Announcer, CMBF—J. P. Malvido, Director, CMCY—Alberto Valdi, CMCK—Luis Casas, Administrador, CMBC—O. Fernandez, CMBX—Alberto Alvarez, Prop., CMGF—Bernabe de la Torre, CMQ—Miguel Gabriel, KNET—B. V. Hammond, KVWC—Mrs. C. C. Minyard, Sec'y., WSLI—Vassar Dubard, for S. Sewell, Mgr. Credit for the above is due to Harold V. Brown, R1042, Floydada, Texas; Ray Shaffar, Waterloo, Iowa; D. C. Morrison, Berkeley, Calif.; Francis Coradetti, Narberth, Penna.; and Moe Luff, Bronx, New York City.

READVILLE, MASSACHUSETTS—Desmond Callan (R987), Green St.: "In answer to Mr. Keller of Chicago in June RADEX, I have a few tips on the hard-to-get stations. WAGM was heard on a chance test last fall, but I had never heard of a QSL then, so all I did was to log the station. They are scheduled for FCC tests on the second Monday of the month, but are never on at the time. Ditto for WDEV on 550 kcs. on the second Friday.

WBOQ's engineer answered me and said that the station is used only at very irregular intervals—about a year apart. I'd call a veri from them pretty good. W3XDD said their choice of frequencies include 560, 900, and

1340 kcs., for testing out new Western Electric equipment made by Bell Mfg., Inc., It, too, is very infrequently heard.

"In reply to my letter regarding WAGM and other Northern New England stations who are listed, but seldom heard checking, the local FCC bureau gave me quite a satisfactory answer. Every station in their monitoring district is monitored at some time of the day, night, or early morning, and that WAGM was very definitely on the air June 12. I couldn't hear it, as WHP (1430 kcs.) was testing out a new 5 kw. rig with a terrific signal. It is true that some stations are not monitored every month, but almost every station adheres strictly to their early morning test schedule."

**COVERING THE CONTINENTS
Domestic Dialings**

Look in this section for news from the United States, Canada, and their surrounding island possessions.

FORECAST: October should bring some real opportunities for DX. The season is just opening and the weather is just beginning to be ideal for DX and there are so many new ones to be had for mere trying that one good night should put a large bulge in the log book in the form of many new domestic stations.

Comments from the "K" District: KFDA in Amarillo, Texas came on for the first time July 18, and KVAN is scheduled for August 15-25th, with the promise of DX programs for this fall. I will keep in touch with KVAN for these tests as he will not come on the FCC schedule. (Raymond W. Sahlbach, St. Louis, Mo.)

KFJZ, according to the FCC, will surrender its license and KTAT will change call letters and assume the KFJZ call. Then the new KFJZ will become the key station of the Texas network replacing the deleted station. (RX)

KRSC ought to be much easier to log in the east with their new 1000

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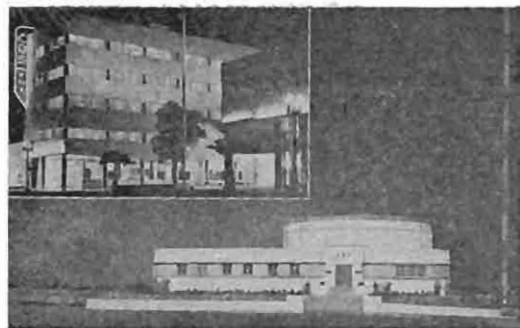
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This veri card from KNX shows their new studio buildings at Columbia Square, Los Angeles, and the transmitter, which is at Torrance Park, 22 miles away. (Courtesy of James Hodgden).

watts than formerly with but 250 watts.

With the W Calls: W3XDS of the RCA Mfg. Co. in New York City has been granted temporary authority to operate on 950 kcs. during early morning hours to conduct tests regarding fading on amplitude modulated facsimile signals. (RX)

W2XBK, location 1819 Broadway, New York City, was heard April 29th from 7-8 p.m. The announcer said that reports would be appreciated, but no mention was made of verifications. W2XBK was heard on 1600 kcs. (Bob Blanchard, Brooklyn, N. Y.)

WING, it has been announced, has signed a long term NBC contract for both the Red and Blue network programs. (Robert W. Wertz, Dayton, Ohio)

The trend in granting new stations is definitely toward the smaller communities as witnessed by the following list of cities which will have new stations this season: Suffolk, Va.; Spartanburg, S. C.; Sumter, S. C.; Grants Pass, Ore.; Brunswick, Ga.; Mansfield, Ohio; Greenville, N. C.; Fort Dodge, Iowa; Vincennes, Ind.; Cookeville, Tenn.; Pontiac, Mich.; Greenville, Miss.; Niagara Falls, N. Y.; Ft. Lauderdale, Fla.; Plainview, Texas; Moultrie, Ga.; Sault Ste. Marie, Mich.; Yuma, Ariz.; and Heroin, Ill.

Canada: CKCA announced they were using 250 watts. . . CJGX on 1430 kcs. heard here—or was it 3ZB??? (Jim Walker, Romney, W. Va.)

CBA on 1050 kcs. at Sackville, N. B. and CBK on 540 kcs. at Watrous, Sask., both with 50000 watts are new stations added to my log this summer. (Jack Welsh, R790, Kingston, Ill.)

Latin America

Look in this section for news from Mexico, Cuba, and other South and Central American countries. We may toss in a few West Indies Republics for a side dish.

FORECAST: October should prove to be one of the finest months for Latin American DX and the hours from sunset till around 10 or 11 p.m. should be spent in careful search of powerful signals from this section which may be overpowering some of our domestic stations, or squeezing through between stations on a split frequency.

Ecuador: Of the 18 licensed stations in this country, only two of them operate on the broadcast band. Judging from the power used, it is very doubtful that they will be logged by any United States DXer. They are HCJB on 978 kcs. with 50 watts, and HC2ROZ on 900 kcs. with 100 watts.

Guatemala: Every broadcast station in this little republic is owned by some Department of the Government except little 50 watt TGX on 1400 kcs., which is newspaper owned.

Haiti: HHK on 920 kcs. is the only station with sufficient power in this country to be heard in the U.S.A. HHK uses 1000 watts. There is an HHW on 1230 kcs. using but 35 watts. Both stations are in Port-au-Prince.

Mexico: XEAU on 1310 kcs. at Tiajuana, Lower California was heard during the summer months with 250 watts. (Jack Welsh, Kingston, Ill.)

Tuning the TA's

Look for news of stations in Europe, Northern and Eastern Africa

along with all surrounding islands in this setion.

FORECAST: Though we cannot safely predict good TA reception in October, we can say that it is possible, especially during the final days of the month when the nights are gradually lengthening. They should be watched around midnight to 2 a.m. when some of the early broadcasters sign on the air and again around sunset till about 6-7 p.m. when they sign off the air.

Bulgaria: The Montreux plan will affect Bulgaria's three stations as follows: Sofia will change to 834 from 850 kcs., Varna will remain on 1276 kcs., and Stara-Zagora will change to 1348 from 1400 kcs.

Great Britain: BBC now has 15 transmitters on the broadcast band. Three national, ten regional, and two local. Below is a list of the stations now and as they will appear after the changes are made in March according to the Montreux Plan.

Kcs. Now	Location	Power.	Kcs. Mar. 4
668	Moorside Edge (R)	70 kw.	671
767	Westerglen (R)	70 "	789
767	Burghhead (R)	60 "	789
804	Washford (R)	70 "	871
804	Pennon (R)	5 "	871
877	Brookman's Park (R)	70 "	916
977	Lisnagarvey (R)	100 "	1051
1013	Droitwich (R)	70 "	1087
1050	Start Point (R)	100 "	1222
1122	Stagshaw (L)	60 "	1186
1149	Brookman's Park (N)	40 "	1141
1149	Moorside Edge (N)	40 "	1141
1149	Westerglen (N)	50 "	1141
1285	Aberdeen (L)	5 "	1411
....	Norwich (Nw)	?	1402
1474	Clevedon (R)	20 "	1465

NOTES: (R) Means regional stations, (N) means national, and (L) means local. If two or more stations are on the same channel, they are synchronized. The two West regional stations (Clevedon and Start Point), though on different channels, are synchronized.

Aberdeen and Stagshaw often relay their regional program, but not always. London (Brookman's Park) on 877 kcs. is called the Regional station—the others are designated as West Regional, North Regional, etc.

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22	.79	31	1.00	40	1.35	49	1.95
23	.81	32	1.03	41	1.39	50	2.04
24	.83	33	1.06	42	1.45	51	2.15
25	.85	34	1.09	43	1.51	52	2.27
26	.87	35	1.13	44	1.57	53	2.39
27	.90	36	1.16	45	1.64	54	2.53
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All regional and local stations may make smaller networks of two or they may relay the National program. National stations on 1149 kcs. relay long wave Droitwich on 200 kcs. all the time they are on the air, but are not on quite as long as Droitwich. They make no station break announcements but start a program with 'This is the National Program' or the 'Regional program from the North' as the case may be. So, the announcement really covers the originating station, not the transmitting station. If Daventry also carries the program, they add, 'and the Empire Program'. (For the above list and information we have to thank Richard Wright, Chicago, Illinois, who spent the summer in England).

Netherlands: At the Montreux Conference, the Netherlands received two medium wavelengths in exchange for the 1875 meter (long wave) channel. Although there are some features of the long waves that are desirable, there was some interference from a Romanian station on the channel. When the conference assignments go into effect in March, 1940, two new transmitters at Jaarsveld are to be opened on 726 and 843 kcs., called Hilversum I and II respectively. They will use 120 kilowatts per station and should be as easy as the proverbial pie for DXers over here. (U.S. Dept. of Commerce)

Sweden: Falun will be the location of the new Swedish station on 1086 kcs. The station will use 100,000 watts replacing the present 2000 watt station at that location. It will be Sweden's most powerful station on the medium waves and will be surpassed only by the 150 kw. long wave station at Motala. It is hoped that the station will be in operation by Christmas. (Lennart Anderson, Denair, Calif.)

Trans-Pacific Topics

Look in this section for all station news pertaining to Asiatic as well as Oceanic stations, and the west coast



A local view card showing the Falls of the Hanabanilla River, issued as a verification by station CMHJ of Cienfuegos, Cuba. (Courtesy of Prof. Spatari of the Spatari Language League).

of Africa if this section of the universe happens to furnish anything in the way of broadcasting.

FORECAST: Australia, New Zealand, and Hawaii should be at their peak of the season this month. They will gradually decrease in strength after October and will not "peak" again till March—so get them now! Just previous to sunrise is the time to try for these stations. The Japanese and other Asiatic stations are not ready to be heard yet by the average fan on the east coast. Midwinter is the season to try for those fellows—and even then you'll have a merry time logging at least one of them.

Dutch East India: This island possession of the Netherlands does not lack broadcasting stations, but very few of them come within the range of the standard broadcast band. Were it not for the fact that the band now extends to 1600 kcs., we wouldn't be able to count any of them. They range in power from 25-100 watts so that it is not very probable that anyone in this locality would hear them. YUD-2 on 1560, YDD3 on 1585, YDB6 on 1570, YDE3 on 1520, YDA4 on 1550, YDB7 on 1530, and YDB5 on 1595 kcs.

Hawaii: KGMB in Honolulu veri-

fies with a government post card showing a map of Hawaii in green and printing in black. (B. Podall, Gilman, Vt.)

New Zealand: 4YA on 790 kcs., 3YA on 720 kcs., 2YC on 840 kcs., 2YA on 570 kcs., and 1YA on 650 kcs. are perhaps in that order the most easily heard stations in this country. It is suggested you try for these about an hour before sunrise and don't give up if you do not hear anything the first time. Keep trying till the sun is well up in the heavens. Should you be successful with these, then try a few of these Australians: 2CR on 550 kcs., 3WA on 580 kcs., 4QN on 630 kcs., 5CK on 640 kcs., 2CO on 670 kcs., 2NR on 700 kcs., 7NT on 710 kcs., and 3GI on 830 kcs.

By next month, the season will be well enough advanced so that we can present you with reports of actual reception of some of the foreign stations listed in our items this month along with many more. It is with deep appreciation for your reports which have assisted greatly in compiling these first few departments this season, and with your continued cooperation and criticisms we feel certain that everyone is going to have a very profitable and pleasant DX season while Radexing with us each month in RADEX!

VIDEO VARIETIES

A new schedule more than doubling the number of program hours over W2XBS, has been announced by the NBC. Under the new schedule, studio telecasts from Radio City will be increased to three evenings a week, and outdoor telecasts will be stepped up to three hours weekly. The studio programs will be broadcast on Tuesday, Thursday and Friday evenings, from 8:30-9:30 pm, EDST. Other studio programs will be broadcast at noon on Tuesday, Wednesday, Thursday and Saturday, each program being one hour in length.

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August 7, 1939

The Radex Publishing Co.
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Att: Mr. Page Taylor, Editor

Re: Television DX

Gentlemen:

With reference to your article "Television is Here", pages 5-10 inclusive which appeared in your June 1, 1939 issue of Radio Index, we wish to comment as follows:-

In February 1929, in Columbus, Ohio, we were successful in receiving television from Washington, D.C., New York City, and Chicago. It was broadcast on 5000 Mc approximately. The scanning was 4B line, mechanical, and receiving mechanical also, by means of the revolving disc. This is covered in great detail in our thesis for the Ohio State University, 1930, Bachelor of Electrical Eng'g.

We write this letter therefore, to give your readers an incentive for television DX, or more nearly correct-"Radiovision DX".

At that time silhouette and half-time pictures were broadcast. Our reception was very satisfactory and regular.

Respectfully submitted,

Stanley Jay
Stanley Jay
WBNS
C. W. Lorenzstein, N. Loewenstein
WBKVD

television in Cincinnati took place on the top floor of the Carew Tower, where the Crosley Corporation gave a special showing of its experimental equipment. As yet there has been no broadcasting of programs, but an application is now under consideration by the FCC calling for video and audio transmitters of 1000 watts each, to operate in the 50-56 megacycle band.

Television Standards

The FCC, in response to a request by the Radio Manufacturers Association, has issued a report covering television standards. Following are quotations from the report:

"We feel that television technology stands at approximately the same point on its road of development as did the automobile business immediately prior to the advent of mass production. At that time automobiles were expensive, few, and hand-tooled."

It appeared they would remain a luxury attachment to the wealthy household."

"Had the government been asked at that time to fix standards of performance for the automobile industry as the FCC is asked to do for television, it would have been very unlikely that any agency of the government could have foreseen the changes which swept over automobile engineering in a few short years as a result of free private enterprise, and uncontrolled competition between engineers and manufacturers."

"The Television Committee of the FCC is of the opinion that credit is due the engineers of the Radio Manufacturers Association for their contribution and honest efforts in the interests of orderly progress in the development of the technical aspects of television. It is entirely possible that the technical quality of television produced in accordance with the proposed standards may be accepted by the public as a practical beginning, provided the public is also informed that improvements in quality and reduction in cost of equipment are possible as a result of future progress in scientific and engineering research."

Based upon the 14-page report, the Television Committee made the recommendation that the FCC neither approve nor disapprove the standards proposed by the RMA, but in taking this action the public should be informed that in failing to approve the standards the Commission does not believe the proposed standards to be objectionable.

Notes

The Chairman of the Board of Governors of the Canadian Broadcasting Corp., Mr. L. W. Brockington, K. C., made several interesting comments on television in a recent speech. Regarding long distance television he said:

"Attention has recently been directed in the press to a (London)



Thomas S. Lee, president of the Mutual-Don Lee Network, and Harry R. Lubcke, director of television, show how they stay at home and direct a telecast by conference telephone. The performer in the studio several miles away was snapped by a double exposure technique. First the men were photographed by regular flashbulb, then all lights in the room were turned off and the figure on the screen photographed by a time exposure. This is one of the very few television pictures on which the image on the screen has not been "faked."

telecast picked up at Long Island by the NBC. This can only be described as in the nature of a 'freak transmission.' Whatever the explanation of this phenomenon, it cannot be interpreted at present as anything other than an amazing exception. I might mention, however, that one of the BBC officials at present in Canada asked me to find out if the CBC would install in Western Canada a television receiving set, because it was the belief of engineers that perhaps there was something more than merely 'freak transmission' to this extraordinary distance."

ON THE WEST COAST

• • • By ANTHONY C. TARR

Reporters in the Mountain Standard and Pacific Standard Time Zones may send their reports direct to Anthony C. Tarr, 909 W. Lee St., Seattle, Wash.

sprinkled like pepper all over the band." Harold makes up for this by some nice short-wave catches, as tabulated in this column and we can certainly sympathize with his complaint, being afflicted with a half dozen locals of our own.

"I am especially interested in short-wave DXing," admits Arthur T. Cushen, New Zealand, "and after five months listening I have reported to 234 stations, 157 of which have so far verified. My receiver is a five valve Philips super and I use a 300 foot antenna, 30 feet high, directed toward North America, which gives great results."

SHORTWAVES Australia

VLR, 9580 ks, now carries the programs of VLR3, 11885 ks. (Fern—R211, T.H. 2)

A new shortwave transmitter is under construction by the Australian Broadcasting Commission and will probably use the call letters VLW. (Hutchins—Australia)

Several low-powered VK8's are again being heard by our Australian correspondent. As reported in May RADEX, these are on sheep ranches, homesteads, etc., and radio is their only means of intercommunication. They operate on 56 meters, seldom give their call letters, but a few have been identified, namely VK8TV, 81W, and 81J. Usually they simply use the operators' nicknames. Should any American listener succeed in logging them, "I will do my utmost to get a verification for you," offers Graham D. Hutchins, 10 Ordinance Quarters, Maribyrnong W3, Victoria, Brazil

PSH, Rio de Janeiro, 10220 kcs, gives an English program on Monday from 4:30 to 5:30 pm and issues

In attempting to edit a specialized column designed for the particular benefit of West Coast listeners, we are also cognizant of the fact that thousands of RADEX readers on the East Coast will peruse this section, possibly with some misgivings as to what help it may be to them. Let them not hesitate, for herein will be found considerable information on schedules and changes of the Pacific Coast and Asiatic stations which they are most anxious to hear. We listeners in the West, therefore, have met within the pages of RADEX not only for our own mutual benefit, since our listening conditions are essentially similar, but also to assist our brother DXers in the East, keeping them posted on events here in our part of the country. The spirit of camaraderie among DXers everywhere is thus accentuated within these columns and we will be doubly pleased if our reports help some Easterner add one or two new stations to his log.

May we remind our new readers that those in the PST and MST zones, as well as those in Asia and Oceania, should send their reports direct to the editor of this column. Please include your RADEX Club membership number, if you are a member. If not, we urge you to join. A request to RADEX will bring you a membership card without cost.

"I am very glad to hear that RADEX is instituting a column for West Coast DXers," advises Harold Satterthwaite, Los Angeles, Cal. "We haven't been getting the breaks that we should. I have four powerful radio stations close to me and find the broadcast band worthless due to harmonics and image frequencies

Klystron: A New Circuit

Nine months ago a new tube, and a new circuit using that tube, were announced at Stanford University in California. While its possibilities in some radio fields were immediately evident, it is possible that further study will disclose many new uses. The tube is the rhumbatron, and the circuit using it is the klystron. The tube generates very shortwaves which are also very powerful, and easy to control. Unlike other radio waves, those produced by the rhumbatron can be concentrated, reflected and controlled just like a beam of light. The Klystron, utilizing the rhumbatron, will be used on commercial airlines for landing beams. Like a huge cigar, the beam transmitter points upward and outward from the airport, and the beams are so narrowly defined that pilots can follow them with utmost confidence to a blind landing.

In line with its recognized policy of maintaining a complete course, the National Radio Institute of Washington, D. C. announces that a new series of text books concerning television have been added to the training which NRI students receive. This list is of such interest to all television fans that we reproduce it herewith: Require-ments of a Television System; The Theory of Light; Geometric and Electronic Optics; Uses for Optics in Electronics and Television; Practical Electronic Control Equipment; Essential Circuits in a Television Receiver; Cathode Ray Tubes for Television Receivers; Antennas, Preselction, Frequency Converters and Sound Channels for Television Receivers; Video I. F. Amplifiers, Video Detectors and Automatic Gain Controls; Video Frequency Amplifiers and D. C. Restoring Circuits; Impulse Separators, Sweep Circuits, and Power Supplies for Television Receivers; Servicing of Television Receivers; How the Transmitter; Picture and R. F. Circuits in Television Transmitters.

The Radio Manufacturers Association, at a meeting in Chicago, released a statement designed to caution the country that, technically, television is receivable only to the optical horizon, and that, in all probability, over 90% of the country will not be served by television for some time to come, for the economic questions are serious ones and remain to be solved. Radio owners are advised that there is no possibility of their present receivers becoming obsolete, and the purchase of new receivers should not be deferred because of television. "Even where television is available," the report states, "it must be considered as a supplemental service, and for that reason will not render the modern radio set obsolete any more than an airplane renders the modern automobile obsolete."

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a veri card picturing the harbor. Address: Caixa Postal 709. (Satterthwaite—Calif.)

China

XMHA verified by card, and reports may be addressed to 445 Race Course Road, Shanghai. The station manager, E. L. Healey, advises that their DX record to date is Dorchester, Mass. An American's view of the news is presented at 6:15 am. It is said to be well worth listening to. Although their card states their frequency to be 11,910 kcs., reports indicate they are on about 11,860 kcs. (Satterthwaite—Calif.)

"Maybe this letter will get into our enemy's hands, so there will be no address of the sender. No doubt you will recognize whom we are." Thus reads a letter from China giving the schedules of three stations there. Fortunately for DXers, the letter arrived safely at its destination, with the following information, the times being expressed here in PST:

XPSA Kweiyang, Kweichow, 7140 kcs. Daily 2:30 am to 7:55 am.

XGOX Chungking. Vernal equinox to Autumnal equinox on 17,800 kcs. Autumnal equinox to Vernal equinox on 15,200 kcs. 6:30 pm to 8:30 pm, beamed to U.S.A.

XGOY, Chungking. Vernal equinox to Autumnal equinox on 11,900 kcs. Autumnal equinox to Vernal equinox on 9,500 kcs. 1-3 pm, 2:30-4:10 am, 4:15-4:55 am, 5-7:30 am, and 8-8:30 am.

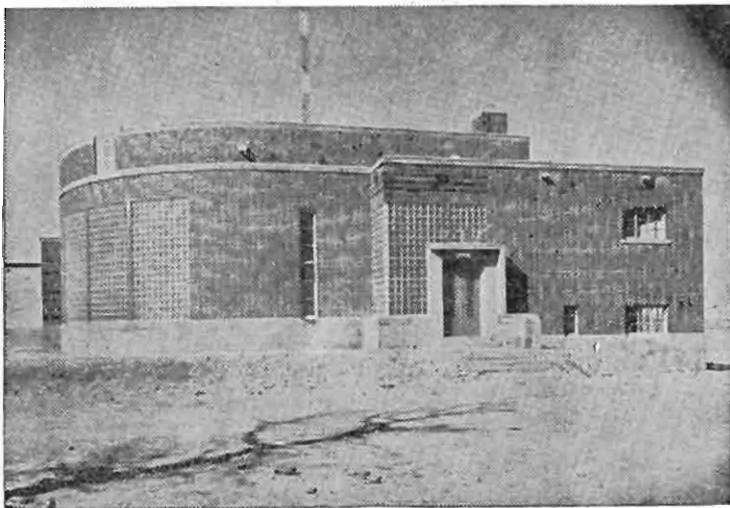
Various directional antennas are used on the five transmissions of XGOY, none being listed toward the U.S.A. (Hutchins—Australia).

Manchukuo

MTCY, Hsingking on 6125 kcs. has a fairly strong signal here after 3 am. They relay JFAK frequently. (Orlaw, VE5 and ACT).

KZEH, Box 119, Manila, was heard testing on 9585 kcs. and asking for reports at 4 am. They announce 9580 kcs. (Fern—R211, TH2). This has also been reported as KZHS (IDA). So far, nothing but a heterodyne with VLR reported here on the coast.

KZ1B, Box 440, Manila, is well heard on the Pacific Coast but a severe heterodyne from VK3ME, also



The transmitter building and part of the tower of the Canadian Broadcasting Corporation's new 50,000 watt station at Sackville, N. B., which serves the Maritime Provinces.

on 9500 ks., impairs the readability. Try for them at 6 am when a program of dance music is presented. (A.C.T.)

A new station in Manila, KZRH, on 6100 kcs., relays a CBB station of the same call on 1200 kcs. (Cushen, R1220 NZ3).

Taiwan

TIE2, Tyureki, from 6:05 to 7:20 am on 9695 kcs. Relays JFAK (IDA and Orlaw, VE5).

JIE, Tyureki, on 7295 kcs. with same schedule (IDA).

Thailand

HS8PJ, Bangkok, verifies by letter, but a very complete, lengthy report is advised to satisfy their exacting requirements. (Satterthwaite—Calif.) Like many other stations, now that their experimental days are over Thailand (Siam), is not so free with their veries as they were before they ascertained their coverage.

U.S.A.

W6XBE has changed call to KGEI. They operate on 9530 kcs. from 9 to 12 pm and also have a program directed to Asia and Oceania from 4 to 9 am. On 15330 kcs. they present a program to South America from 3:30 to 8:15 pm. Reports are requested addressed to General Electric Station KGEI, Treasure Island, San Francisco, Calif.

BROADCAST BAND

Two special programs from South American stations have been arranged by William Cunningham, Pasadena, Calif., to be dedicated to the URDXC. The first is from LS-11, La Plata, Buenos Aires, Argentina, to be presented October 31 from 3 to 5 am, EST (12 M to 2 am, PST), on a frequency of 1310 kcs. using 30 KW power. Correct reports will be verified.

Another special program will emanate from ZP-15, Villarrica, Paraguay, on 700 kcs. using 1 KW. This will occur November 15 from 4 to 6 am, EST, (1 to 3 am, PST), and will also be relayed by ZP-14 on 11721 kcs.

Verifications will reward correct reports and on each of the above two programs there will be occasional English announcements.

"I have just logged KSLM, Salem, Oregon, using their new frequency of 1360 kcs. with added power," writes H. H. Crow, Jr., Sacramento, Calif. "According to the Kansas City Star, KCMO is now on 1450 kcs. with 1000 watts, unlimited time. KROY, Sacramento, has been granted permission to operate with unlimited time and their schedule is from 6:30 am to 1 am. Mr. Will Thompson, Jr., is the station manager.

"KBND, Bend, is the only station in Oregon besides KGW that is 100% factory equipped," continues Mr. Crow. "They use a 175 foot antenna tower located on the bank of the Deschutes River. Their transmitter is a standard 250-G, 100-250 watt RCA, feeding the antenna through a 400 foot concentric transmission line. Their veri is signed by August Hiebert, chief engineer."

Our reporter wishes us to correct a statement appearing in RADEX wherein it was recorded that Kilgore, Texas, was the smallest town in the U.S. with a radio station. "At the time KOCA's application for a new station was granted," affirms Mr. Crow, "the FCC accepted the figure of 15,000 as Kilgore's population. Kilgore is a new boom town in the East Texas oil fields. Please correct this." All right—now what is the smallest town?

The following additions to the frequency check calendar are supplied by our Sacramento reader:

KTKC, 1190 kcs., Visalia, 2nd Monday, 5:50-6:05.

WJHL, 1200 kcs., Johnson City, 2nd Tuesday, 4:45-5:00.

KBND, 1310 kcs., Bend, 2nd Tuesday, 6:00-6:15.

WBNO, 1420 kcs., New Orleans, 2nd Tuesday, 5:05-5:20. The above times are all am, EST.

Schedules of some other frequency

checks are forwarded by D. C. Morrison, Berkeley, Calif., who has heard these stations two or more times and thus believes the schedules to be constant:

KVNU, 1200 kcs., Logan, 2nd Tuesday, 6:00-6:15.

KLBM, 1420 kcs., La Grande, 2nd Tuesday, 7:05-7:20.

KAAT, 1200 kcs., Astoria, 2nd Tuesday, 7:10-7:25.

KOBH, 1370 kcs., Rapid City, 2nd Saturday, 5:50-6:05.

"The verification received here from KFYZ," continues Mr. Morrison, "reports a DX program on the second Wednesday from 3:15 to 3:45 am, but they have been heard only on the second Thursday. Possibly they meant the second Wednesday night (or Thursday morning). KGHL, Billings, Montana, has been heard on the first Saturdays of May, June and July on 780 kcs., from 4:20 to 4:40 am. KIT, Yakima, Wash., was logged on 1250 kcs., on the first Wednesday, 4:15 to 4:30 am with a program announced as an 'RCA frequency test program.' Their letterhead gives the power as 1000 watts. KMO, Tacoma, Wash., on 1330 kcs., was also heard on the first Wednesday from 4:30 to 4:45 am. This, too, was a frequency check directed to the RCA monitoring station at Point Reyes, California."

To avoid confusion between this column and the regular RADEX frequency check calendar, all the above checks have been recorded in EST, so that readers may add them to their calendar without having to convert the time. As always, however, regular reception reports herein will be in PST for our Western readers.

KWSC, Pullman, Wash., presents a regular monthly DX program on the last Sunday of each month from midnight to 3 am, PST. Reports stating weather conditions at the point of reception are requested.

While we were preparing this column, another report came in from

D. C. Morrison, Berkeley, Calif. "The new CBK on 540 kcs. has been heard since July 27 with fair signal strength," he reports, "with only slight interference from KSFO. They sign off here at 11 pm and announce they will return at 12 noon, MST. XELO is back on its old frequency of 670 kcs. and suffers severe interference from KPO on 680 kcs. This change of frequency from 730 kcs. has left XEQ in the clear and the latter station can usually be heard before 10 pm. KROY on 1210 kcs. now signs off at 1 am. KRKD, 1120 kcs., were formerly on the air all night but now sign off at midnight or earlier, leaving a clear channel to KRSC, Seattle, who signs off at 1:30 am."

"A mobile station in a railway carriage with the call 5ZB has been touring the North Island of New Zealand," states Arthur T. Cushen, Invercargill, N. Z. (The Southernmost City in the World). "The station is owned by the National Commercial Broadcasting Service and operates on 1360 kcs. with a power of 250 kcs. Station 7UV, Ulverstone, has changed frequency to 1250 kcs."

AMATEUR NEWS

The writer has just received a QSL from KF6PUL who was heard on ten meters during the ARRL contest last season. Inasmuch as it was mailed from Honolulu, we assume the operator is no longer on Baker Island. The island, incidentally, is one mile long and 1500 yards wide.

From an article by Wm. H. G. Metcalfe, operator of VU2EU, which appeared in "QSAS", official bulletin of the DXers International Exchange Club, (Dryden, Wash.), we gain the following useful information regarding active stations in India:

VU2JK, 14204 kcs., mostly phone, 20 watts input. Not known to QSL reports often, operating times generally 5:30 am to 2 pm.

VU2FU, 14220 kcs., phone only, 50 watts input. Sometimes QSL's. On the air daily from 5:30 am to 2 pm.

VU2FO, 9 watts input to an electron-coupled oscillator. Works daily on 20 meters and will QSL only when IRC is enclosed.

VU2FS, various frequencies on 20 meter band, phone and CW, with ten watts input. Generally QSL's. Operating time irregular.

VU2ED, 14072 and electron-coupled, 30 watts input. Operates daily and generally QSL's reports if IRC is enclosed.

VU2LL, 14320 kcs., phone only, 10 watts input. Operates daily but seldom QSL's.

VU2FQ, 14180 kcs., phone only, 60 watts input. Works daily and will QSL for IRC.

VU2HU, 14302 kcs., phone and CW, 25 watts input. Operates daily and will acknowledge reports for IRC.

VU2JG, various frequencies on both phone and CW. At present is in camp working portable gear with 10 watts input. Will QSL only if IRC is enclosed. QRA: Lieut. J. R. Farr, 1st Battn., The Devonshire Regt., Connaught Barracks, Rawalpindi, Punjab, India.

FN1C, 14200 kcs., phone and CW, 10 watts input. Operates daily and QSL's for IRC.

VU2EU himself operates only with CW, using 5 watts input on 14380, 14344, and 14005 kcs. He uses a portable transmitter, working daily from 5:30 am to 2:30 pm and will always QSL reports for IRC. He is 5000 feet above sea level and reports exceptionally good results.

VU2BM will shortly be on the air using a transmitter purchased from VU2FX, who has returned to England. Reports for VU2BM may be sent in care of VU2EU, enclosing an IRC. VU2EU's address is c/o Peshawar District Signals, Peshawar, North West Frontier, India.

High Frequency

Robert Skyten	100%
Lennart Anderson	23%
Robert Blanchard	17%
William W. Flynn	15%
Harold Satterthwaite	12%

Robert Skyten monopolizes the high scoring this month as he appears in the Report-o-Meter for the first time this season. Scoring among the remaining reporters was pretty equally divided as will be noted. Among the many who came close to attaining a select spot in the meter were Jack Welsh, Robert May, George Nahas, and Desmond Callahan.

Remember that by reporting new stations and station changes immediately, and by making your reports contain all information necessary in helping others log that station you will be earning points necessary to achieve a position among the first five reporters next month, thereby gaining recognition in our Report-o-Meter.

ASK US ANOTHER

Robert W. May (R689), Rome, Ga. queries with the following: "I heard a mystery station on 7-27-39. Possibly some other Radexer can help me identify it. It was on about 43.5 megacycles. I tuned it in at 6:30 p.m. and listened for 45 minutes. The signal was R9 plus, but distortion was so great that I could not make out what was said. The program consisted of classical and brass band music. (We haven't an official list of stations using the new frequency modulation type of broadcasting, but from the description above we are led to believe that it was one of these stations that you heard. Unless one has a receiver equipped for reception of those particular signals, reception is extremely distorted and it is on the channels in the 42-43 megacycle band that such broadcasting is being

Globe Trotting

By Ray LaRocque

conducted at present.—RL)

A station in Brazil on 12000 kcs., often heard with the same program as PSH on 10220 kcs. is a puzzler for Robert Skyten, Podunk Rd., East Brookfield, Mass. Can anyone identify it? . . . William W. Flynn (R937), Box 55, Dahinda, Saskatchewan wants to know about a station announcing in Spanish and playing Spanish music, heard about 10 p.m. interfering with the signals of WMI, Lorain, Ohio on 9400 kcs.

QUOTE AND UNQUOTE

Alfred H. Bacon (R119, B.C.2), New Westminster, B. C.: "The veri from OZF has been received after a further appeal. Thanks for the cards and RADEX insertions which helped a lot."

Robert Wilson, Portland, Maine: "I lost my VE9CS card, so I wrote to them and received a new one. In case you haven't noticed, the call was changed in December 1938 to CKFX on 6070 kcs. with 2 watts!"

William W. Flynn, Dahinda, Saskatchewan: "You will notice that I have a new address, just 12 miles from my last one. This one has given me a new occupation, from teacher to grain buyer. The grain elevator is about 80 ft. high and gives me a vertical aerial of about 60 ft. from which I am expecting big results."

ULTRA HIGH

Notable among the new stations on the ultra high bands is the appearance of new stations for broadcasting frequency modulated type of signals. And still more notable, is the appearance in stores of receivers for tuning these stations. The receivers appear for sale for the first time at a remarkably low price! We have heard demonstrations and after listening, are convinced that this type

of broadcasting will be the next big step forward to be made by radio. The tone quality of signals of this type is nearly unbelievable, and the static free reception—even electrical storms—is something for every DXer to anticipate. Of course, there are several wrinkles to be ironed yet, such as the lack of available channels due to extremely wide signals, but this and other difficulties should be corrected in due time and will be overshadowed by the advantages of the new method of broadcasting. One station will be able to cover areas greater than those which now require dozens of stations—this, of course is due to the fact that no static crashes are heard when volume is turned higher for weaker signals.

W2—on 42180 kcs. A new station



"Happy New Year" says this card from CB1180 at Santiago, Chile. Cuba.

Nacional de Agricultura.

Sergio Gonzales L. of Cardenas, This station is owned by the Sociedad

for frequency modulated type of broadcasting to be located in New York City.

W1— on 43200 kcs. in Hartford, Conn. will be another station of this type. The construction permit was granted to the owners of WTIC.

W2XJI on 26300 kcs. at Newark carries Newark News Radio Club tips every Saturday from 4:15-4:45 (Blanchard, R485, N. Y.)

W8XNU on 25950 kcs. heard with steady signal at 6 p.m. relaying WLW. (May—Ga.)

W9XYZ on 31600 kcs., 35600 kcs., 38600 kcs., and 41000 kcs. is a new one replacing W9XPD on this assignment. Both stations in St. Louis, Mo., and both relay KSD.

NOT SO SHORT WAVES

TN-7 on 7550 kcs. at Kelly field heard in the early evening.

VE9RL on 2250 kcs. heard announcing as the Montreal Police.

Nassau, Bahamas, heard on approximately 2225 kcs.

WWMA (2730 kcs.) Detroit, Mich.; KYZF (2630) Alpine, Texas; KYZG (2630) Tucson, Ariz.; and WWMC (2730) are border patrol stations which were logged here.

WAAR (2190 kcs.) portable for WROK, WAHJ (2100) portable for WDWS, KJRU (2735) Tug "Montrose" with 15 watts, and WTHA (2735) Tug "Tim Moran" with 50 watts were all heard recently. (All the above Not-so-short Waves by Welsh—R790, Ill.)

WCY on 2514 kcs. at Cleveland, and WAK on 2558 kcs. at New Orleans, La. are coastal harbor stations heard here in the evening. Also heard were W9XGD at Lake Bluff, Ill., and W??? on 2670 kcs. at Eriestation, Pa.—the latter is a coast guard station. (Roman—Ill.)

SHORTWAVES IN REVIEW

Australia

VK3ME on 9503 kcs., and VLR on 9580 kcs., were heard at 4 a.m. with a good signal. (Flynn—R937, Sask.)

Bulgaria

The government is considering establishment of a short wave station of 1500-2000 watts if the necessary funds become available.

Ceylon

VPB on 6160 kcs. at Colombo has discontinued operations. The transmitter is now operating on the broadcast band. (S. W. Bulletin of the Cuban S. W. Club.)

China

XGOY on 11900 kcs. (announced frequency) of Chungking, comes on the air at 5:30 a.m. with a strong signal. They broadcast news in English at 6:20 a.m. News in English is also given at 9 a.m., but not heard well except on west coast. (Anderson—Calif., and Skyten—R786, Mass.)

XGOX on 17800 kcs. broadcasts to America from approximately 9-11 p.m. Signal is fair. (Anderson—Calif.)

XMHA on 11910 kcs. in Shanghai using 1 kw. revealed in a letter that their long distance record is Dorchester, Mass. Reception from there is good in California. An American News Commentary by Olcott is well worth listening to at 9:15 a.m. Quixote Radio Club says their schedule is 11 p.m. to 11 a.m., and 6:45-8 p.m. Address is 445 Race Course Rd., Shanghai. (Satterthwaite—Calif.)

XMHA on 11855 kcs. at Shanghai is heard mornings coming in with a weak signal. (Skyten—R786, Mass.)

Colombia

HJ3CAX heard on 6020 kcs signing off with the Indian Love Call at 11 p.m. (Flynn—R937, Sask)

Costa Rica

TIPG on 9612 kcs. heard at 9:20 p.m. with English announcement along with information about weather conditions in Costa Rica. (Blanchard—R485, N. Y.)

Cuba

COBS on 7770 kcs. in Havana is a new station heard with good signals daily. Programs are relays of those sent by broadcast station CMBS. (Skyten—R786, Mass.)

COCO on 8675 kcs. (approximate) at Havana is heard nightly on this frequency, having moved from 6010 kcs. (Skyten—R786, Mass.)

Czechoslovakia

OLR5A on 15230 kcs. of Prague carries the German program nightly for North America from 6:45 p.m. (Skyten—R786, Mass.)

France

TPB-7 on 11885 kcs. at Paris heard from 10:05-10:15 p.m. with news in English. Gong was struck after each news item.

French Indo China

"Radio Saigon" has the following complete schedule:

On 6:45-7:15 p. m., 12:15 a.m. to 12:45 a.m. and 6-8:30 a.m.

On 11780 kcs. from 11:15 a.m. to 12:15 p.m., and 8:30-9:45 a.m.

Special English program is conducted on 6116 kcs. from 6-6:45 a.m. and another English session is held on 11780 kcs. from 8:30-8:45 a.m. (Satterthwaite—Calif.)

Germany

DJD on 11770 kcs., DJP on 11855 kcs., and DJB on 15200 kcs. of Berlin are used on Germany's program to North America between 4:50-10:50 p.m. (Skyten—R786, Mass.)

DJZ on 11800 kcs. heard between 5-5:30 p.m. carrying the same program as DJD. (Nahas—N. Y.)

DZG on 15360 kcs. is the station heard broadcasting Arabic music on this frequency. (Skyten—R786, Mass.)

DXB on 9610 kcs. at Berlin was heard at 4:15 p.m. with news in English and again later in the evening. Signal is usually very good. (Skyten—R786, Mass.)

Guatemala

TGWA on 9685 kcs. at Guatemala City and TGWB on 6490 kcs. were

heard R8-9 from 11-11:30 p.m. with excellent music. TGWA was heard to announce the following list of stations in operation: TGWC, TG-1, TG-2, TGX, TGX-1, TGQ, TGQA, TGW, TGWA, and TGWB. (Welsh—R790, Ill., and Flynn—R937, Sask.)

Hungary

HAD, formerly HAAQ2 in Budapest should be in operation by the time these notes reach your eyes. They will operate on:

9625 kcs. from 7-9 p.m. for So. America.

11850 kcs. from 2-6 p.m. for No. America.

21680 kcs. from 11 a.m. to 2 p.m. for No. America.

Address is Research Station of the Royal Hungarian Post Radio Station, Gyali ut 22, Budapest, Hungary, for immediate verification. (QSA-5 of the DXIEC)

India

VUD-4 on 15290 kcs. was heard from 9-10 p.m. with news in English at 9:50 p.m. They signed off promptly at 10. VUD-4 was heard with a strong signal. (Skyten—R786, Mass.)

Italy

Complete schedule:

12RO-3 (9635 kcs.) from 12:07-2:55 p.m. and 5:30-9 p.m.

12RO-4 (11810) from 4:30 a.m. to 3 p.m., and 6-9 p.m.

12RO-6 (15300) from 4:10-4:55 a.m., 10 a.m. to 12:06 p.m., 1:40-2:30 p.m., 3-5:30 p.m. and 7:30-9 p.m.

12RO-8 (17820) from 5-8:45 a.m., and 6-7:25 p.m.

12RO-9 (9670) from 12:40-5:30 p.m., and 6-6:30 p.m.

12RO-12 (15100) and 12RO-13 (11900) not in use.

IQA (14795) from 4:30-4:55 a.m., 12:07-12:56 p.m., and 1:50-2:30 p.m.

IQY (11673) from 5:20-5:40 a.m., 1:50-2:30 p.m. and 6-9 p.m.

IRF (9835) from 5:20-5:40 a.m., 12-1 p.m., and 3-3:25 p.m.

IAC (6355) from 2:30-3 p.m. and 6-6:30 p.m.

Japan

Complete schedule for Overseas broadcast:

Pacific Coast, Hawaii, and Canada: 12:30-1:30 a.m. (JZK-15160)

Eastern No. America: 7-7:30 a.m. (JZK-15160) and 8-8:30 p.m. (JZL-17785)

China and South Seas: 8-9:30 a.m. (JZK-15160 and JZJ-11800)

Europe: 2:30-4 p.m. (JZK-15160 and JZJ-11800)

South America: 4:30-5:30 p.m. (JZL-17785 and JZI-9535)

JZK sends a card showing a pagoda and cherry blossoms in one corner and a modern building in the other by way of contrast. (Flynn—R937, Sassa.)

Luxembourg

"Radio Luxembourg" on 11782.5 kcs. (announced) is a new experimental shortwave station in the Grand Duchy of Luxembourg. The station was heard from 5-6 p.m. and 6-7 p.m. with strong signals. Announcements were in English, French, Spanish, and Dutch. Male announcer requested reports sent to: S. W. Experimental Station "Radio Luxembourg", Grand Duchy of Luxembourg. (Skyten—R786, Mass.)

Mexico

XEBN on 6090 kcs. relays XEFO in Mexico City until 11 p.m. daily. (S. W. Bulletin of the Cuban S. W. Club)

XEWW on 9503 kcs. at Mexico City heard at 9:15 p.m. with Mexican dance orchestra and chimes like NBC every fifteen minutes. (Blanchard—R485, N. Y.)

Paraguay

ZP-14 on 11740 kcs. (approximate) at Villarica is owned by Friedman Hnos. and was heard between 5:30 and 7 p.m. with a very fine signal ranging between R8-9. All announcements were in Spanish. "Coca Cola" was advertised frequently. (Nahas—N. Y.)

Poland

SPW on 13635 kcs. heard at 8:45 p.m. with identification of station in

English and announcing schedule and data for program of the following day. (Blanchard—R485, N. Y.)

Portugal

CSW-8 on 7260 kcs. of Lisbon. heard from 4-5 p.m. on Tues., Thurs., and Saturday with announcements in English and French. Reports were requested to be sent to: Emisora Nacional, Lisbon, Portugal. CSW-8 signs off with clock striking the hour, followed by the national anthem "Portuguesa" by the band. (Skyter—R786, Mass.)

Spain

EAQ on 9855 kcs. at Madrid, heard at 6:06 p.m. broadcasting Spanish dance music with station identification every fifteen minutes. (Blanchard—R485, N. Y.)

Sweden

SBU on 9535 kcs., and SBT on 15155 kcs. are new stations at Motala. SBT is on simultaneously with SBP on 11705 kcs. These two stations broadcast for America from 8-9 p.m. on Wed. and Sat. and have their regular daily schedule extending from 1-4:15 p.m. daily. At 4:15 SBU along with SBO on 6065 kcs. continue the program till 5 p.m. when they sign off. The address: Radiotjanst Kungagatan 8, Stockholm, Sweden. (Anderson—Calif., and Skyten—R786, Mass.)

Thailand**(Formerly Siam)**

HS6PJ on 19020 kcs. of Bangkok heard with fair signal from 9:45 to 10 a.m. when they signed off with the playing of the national anthem. This station is on Mondays from 8-10 a.m. (Skyten—R786, Mass.)

HS8PJ on 9510 kcs. is heard daily except Monday from 8-10 a.m. with good signal. (Anderson—Calif.)

Union of South Africa

Complete schedule of the South African Broadcasting Corp. is furnished by F. D. Collett of that Company. It will be found in the shortwave station list. (RX)

U.S.A.

Under the rules of the FCC, the

shortwave stations of this country are no longer experimental, and drop their numerical calls in favor of four letter calls similar to standard broadcast stations. Below is a list of the new calls with W3XL, W3XAL, W2XE, and W9XF excepted. New calls for the latter four stations are not yet known.

- | | |
|-----------------------------|----------|
| W-1XK Millis, Mass., | now WBOS |
| W-1XAL Boston, Mass., | now WSLA |
| W-1XAR Boston, Mass., | now WSLR |
| W-2XAD Schenectady, N.Y., | now WGEA |
| W-2XAF Schenectady, N.Y., | now WGEO |
| W-3XAU Philadelphia, Pa., | now WCAB |
| W-4XB Miami, Fla., | now WDJM |
| W-6XBE San Francisco, Cal., | now KGEI |
| W-8XAL Cincinnati, Ohio, | now WLWO |
| W-8XK Pittsburgh, Pa., | now WPIT |
| W-9XAA Chicago, Ill., | now WCBI |

(RX, also May—R689, Ga., and Skyten—R786, Mass.)

WSLR on 25600 kcs. in Boston, Mass. is a new frequency for this station—making three frequencies available. (RX)

WCAB schedule:

15270 kcs. from 11:45 a.m. to 12:45 p.m., 1:30-6:15 p.m. daily and 1-6 p.m. on Sunday.

9590 kcs. on Monday, Thursday, and Saturday from 6:30-7:15 p.m. on Sunday.

9590 kcs. on Monday, Thursday, and Saturday from 6:30-7:15 p.m. and 7:30-11:30 p.m. and 12-1 a.m. with sign off one hour later Saturday.

6060 kcs. on Tuesday, Wednesday, and Friday from 6:30-7:15 p.m. and 7:30-10:30 p.m. with sign off 1½ hours later on Wednesday, plus Sunday 7:30 p.m. to midnight.

KGEI at San Francisco verified with a card exactly the same in design as that used by W2XAD. Schedule for KGEI: On 15330 kcs. from 6:30-11:15 p.m., and on 9530 kcs. from 7 a.m. to noon and midnight to 3 a.m. (Callan—R987, Mass.)

U.S.S.R.

RV-96 on 15180 kcs. sends cards showing some public buildings. A friend received a picture of Lennin's Memorial, while I received a picture of some department store or apartment building. (Flynn—R937, Sask.)

R-?? on 15410 kcs. at Moscow is

heard at different times of the day with strong signals, usually at night and in the morning until 1 p.m. (Skyten—R786, Mass.)

Yugoslavia

Belgrade has not any printed QSL card, but they verify with a very nice typed card. (Podall—Vt.)

YUG on 15240 kcs. is the call of the new shortwave station at Belgrade. The station was heard on the 14th of last month from 7-8:15 p.m. They announced that they would test on 31.26 and 25.56 meters. YUG comes in with an R9 plus signal. The same program was relayed by DJL on 15110 kcs., and DZH on 14460 kcs. (Skyten—R786, Mass.)

Special Item

The following stations have announced that three prizes will be awarded to listeners for each Spatari program reported. TG-1, TG-2, and YN3DG. First prizes—100 Spatari labels, embossed in three colors. Second prize—one honorary membership to the Spatari Radio Language League and ten seals of the League emblem. Third prize—One universal radio time comparison chart which enables the listener to check every country and zone of the world at a glance.

Radex Reporters

- R119, B.C.2: Alfred H. Bacon, New Westminster, B. C.
- R485: Robert L. Blanchard, Brooklyn, N. Y.
- R689: Robert W. May, Rome, Ga.
- R786: Robert Skyten, East Brookfield, Mass.
- R790: Jack Welsh, Kingston, Ill.
- R937: William W. Flynn, Dahinda, Sask.
- R987: Desmond Callan, Readville, Mass.
- Lennart Anderson, Denair, Calif.
- Haigis P. Bedrosian, Caryville, Mass
- Warren Dame, Saxonville, Mass.
- A. V. Deterly, Baton Rouge, La.
- Carl Forestieri, Bronx, New York, N. Y.
- H. H. Hohenstein, KUFO, St. Louis, Mo.
- Carl Horton, Athol, Mass.
- George Nahas, Brooklyn, N. Y.
- Albert Pickering, West Medway, Mass.
- Bertram Podall, Gilman, Vt.
- Chester Roman, Chicago, Ill.
- Harold Satterthwaite, Los Angeles, Calif.
- Walter V. Scholz, 2nd, Webster Groves, Mo.
- Jim Walker, Romney, West Va.
- Robert W. Wertz, Dayton, Ohio.
- Robert Wilson, Portland, Me.
- Richard Wright, Chicago, Ill.

NOTE: If you have a RADEX Club indicia, your shortwave editor would appreciate it if you would

kindly accustom yourself to signing it along with your name on reports. We cannot include it in our acknowledgment list unless the indicia accompanies your name on each letter. Thanks!

The Reader's Write

"Last November I started a new log," contributes Arthur Moxley, Ottawa, Ont., "and have managed to log some 450 stations on my 5-tube RCA Victor. I have found that a great majority of the stations between 1200 and 1500 kcs. can be logged on the monthly frequency checks. My best catch is TGW, which was heard between 12:30 and 12:55 on February 15th."

"I see where quite a few of the boys have written you about their experiences in DXing," observes Frank Billingsley, Jr., Ellenboro, N. C. "I have been DXing about a month and my log stands at 71 stations, with 17 either verified or reported. I am using a 9-tube Zenith with a 50-foot antenna, but I plan to get a Hallicrafters communications receiver soon and hope to have my log up to 200 stations by this time next year. I think my best catches are WGNY, WCOA, KXYZ, KPRC, WFDF, WJBO and KTRH."

"While I have read your magazine for quite a while, I've only been DXing since December," points out Lawrence O'Connor, Kansas City, Mo. "I haven't tried my luck on the frequency checks yet, but I have managed to log 180 stations. Thirty-six of these have been verified, and I have reports out to many more. Some of the better catches are KCRC, KPAB, KTAR, KOB, KOH, KGIR,

KRIS, WABC, WEAJ, WOR, WBZ, WJSV, WIP, KLO, WIOD, KOY, KIDO, KJR, KHJ, KMTR, KDYL, KPMC, KGER, KYW, CKY, KGA and KMO. When I get steady work, I'm really going after those veries."

"I have been doing quite a bit of DXing with my two-year-old, 6-tube Knight receiver," reports Harold Hancock, Endicott, N. Y. "During the daytime, I have heard such stations as WHO, WKBZ, WHAI, WATR, KMA, WLAW, WSAY, WJTN, WNLC, WSAL, WRAK, WPRO and WMFJ. Between 6 and 10 p.m., I have heard every 100-watter in Florida, Illinois and New York. Outside of these, my best nighttime catches are KFI, KPO, KNX, XEAA, XEAW, CJRM, KDYL, WOC, KOA, KSL, KOB, KGFV, WPAR, WBLK, WLBC and WFAM."

"I recently tried my hand at daytime DXing," admits Olin McDivitt, Eldred, Pa. "Using an 11-tube RCA communications receiver, I was able to hear 100 stations between 10:45 a.m. and 2 p.m. Some of the better catches included WMT, WCLE, WHKC, WSM, WMAQ, WPTF, WLW, WGN, CKAC, WSB, WJR, BBM, CCO, HAS, WENR, WMMN, WWJ, CFL, WHO, KMOX, WJJD, WAPI, WNAC, KWK and WLAC. WIBA and WMBD usually are not heard until the early evening, but they were coming through this morning."

"I started my DXing activities a little over a month ago," advises Allen G. Verrill, Brockton, Mass. "Since then, I think I have done very well, logging 212 stations and receiving 57 verifications. Among my prize veries are KFPW, WJRD, WJNO, KFDY, KGER, KFPY, WFTC, WKAQ,

KDYL, KMA, KFFL, WJLS, CKNX, CHSJ, WIBW, WPAX, WFOY, KSL, KOY and KQW. Reception conditions have not been all that one could desire, but taking everything into consideration, the results haven't been so bad. I am using an RCA Victor table model with a 60-foot doublet antenna on the roof of the YMCA building."

"So far this season I have raised my log from 466 to 538 stations," adds up Nicholas Woytan, Syracuse, N. Y. "Reception this year was the best I have found in my eight years of DXing. I got my first TA in the form of Radio Normandie, and then followed up with Rennes and Poste Parisien. KGIR and KOH brought me stations in two states which I have needed—Montana and Nevada. Latest veries received are KFDY, KGIR, WSPR, WTAQ, KTRI, WCHS and LSII."

"H. L. Lindquist, who publishes *Stamps* magazine, has been giving publicity to programs which pertain to stamp collecting," postcards J. F. Satterthwaite, Toledo, Ohio. "There are an amazing lot of them. He has also compiled a list of stamps which have some relation to radio. Famous names like Edison, Volta and Ampere have appeared on commemorative stamps. And then there are stamps for the Cairo Radio Congress, as well as the Newfoundland stamp which shows the signal tower where the first trans-Atlantic radio signal was received. This angle has excited tremendous interest, not only from stamp collectors, but SWL's and DXers."

Pat Webb, 1526 Hicks Ave., San Antonio, Texas writes, "There is a

station in the Dutch East Indies on every morning from 6:30 until 10:30 p.m. I do not believe this station was listed with the other East Indian stations last month, but it comes in quite dependably and is the only one that I am able to receive here. I cannot identify it because all the announcements are in Dutch, but the music is quite good. Last Sunday a station in Hungary was heard on 15370 kcs. It was very weak and QRM'd by CW interference, but I was able to hear part of an English news broadcast at about 9:15 a.m. The announcement was made that it was the Hungarian government station at Budapest. . . . William W. Flynn, Wagner School, Dummer, Saskatchewan has an unknown station on 7800 kcs. carrying stock market reports from 6:55-7:08 p.m. and on 11800 kcs. a Chilean station was heard from 10:30-11 p.m. broadcasting popular American music such as "Star Dust", etc. They signed off with "Taps" played on a trumpet. "Can anyone identify it for me?" asks friend Flynn.

Weston Richard, Zion, Illinois asks the location of WANC. He heard them calling CQ-75 meters. . . . Bob Park, 5950 East Boulevard, Vancouver, B. C. asks about a new Chinese station on 9500 kcs. heterodyning XEWW every morning till 11:30. Programmes consist of Chinese news and talks with military music. Signs off with Chinese National Anthem.

SUN SPOT STUDY

● As the radio services grow and congestion increases, due to the limited frequencies available, studies of the sun spot cycle offer great hope for the improvement of all radio services in the near future. This view was expressed recently by engineers of the Federal Communications Commission in reporting upon "sunspots" and their effect on radio wave transmission.

Sunspot activity constitutes one of the most interesting and at the same time troublesome phases of radio today. The National Bureau of Standards, the Army, the Navy, and the Coast Guard are cooperating with the Commission in a continuous study on land and sea of the effect of the solar sunspot cycle on radio.

Sunspots are no more than the name implies—dark spots on the surface of the sun which come and go. The number of these spots has been found to vary periodically over a period of 11 years. It is believed that these spots are the centers of violent electromagnetic eruptions or disturbances on the sun's surface. With the coming of radio, it was found that these periods within which violent outbreaks of sunspots occurred on the sun—often called magnetic storms—had a pronounced effect on radio transmission. In addition it was also determined that a certain correlation could be made between the general trend of radio transmission and the number of sunspots occurring throughout the 11 year period. It is this period which is called the solar sunspot cycle.

High frequency waves such as those used for international broadcasting are always weakened, and sometimes blotted out completely for many hours or even days during the course of one of these magnetic storms. Radio engineers and the managers of radio stations are thus able, with the knowledge of the cycle or period of activity of magnetic storms, to choose their program time in advance in the case of international broadcasts, in such manner as to avoid, whenever possible, those times when interruptions to their service appear to be most likely.

As the average number of sunspots varies in a regular manner over this period of 11 years and since there is a definite relationship between them and the transmission of radio waves, the importance and necessity of continuous experi-

mental observations is readily understandable.

The magnitude of the work involved is not so generally appreciated, however. In a survey made for broadcasting by the Federal Communications Commission in 1935, in which the radio industry cooperated, 58 field intensity meters were operated at 11 different locations in the United States for a period of six months. Over 4000 continuous 24-hour records of the field intensity of clear channel stations in the United States were obtained over some 500 different paths, varying in distance from 60 to 2700 miles. It took a staff of the Commission's engineering department over 6 months to make a statistical analysis of the most important part of this data. In a more recent survey, made by the Commission for the marine service, data were secured on somewhat more than 100 vessels, and measurements of field intensity and noise covering another period of six months were made on a number of vessels on voyages throughout the world.

The information obtained in this way is used by the Commission in assigning the frequencies and powers of broadcast stations and in fixing the minimum distances between stations operating on the same or adjacent frequencies.

Look for your name

Your name may be hidden somewhere in this issue of RADEX! Look for it! If you find it (*followed by the words, "reads RADEX"*) you will receive a free Verti-Flex Aerial, by writing to us within one month after your name appears.

Any reader interested may have his name, or his friends' names, put into our Chance Box from which the lucky names will be drawn at random. There is no charge. Just write the names and addresses on a postal card and send to us.

Watch the Next Issue of Radex.
You May Be One of the
LUCKY PRIZE WINNERS

Sets, Signals and Servicing

• • • By The Technical Editor

● Revival of portable battery sets is interesting. People seem to favor the idea of not having to plug in a set everywhere they go, either around the house or on a vacation trip. In small sets, there's nothing like batteries for quietness and good tone. New tubes and batteries make modern sets of this kind entirely different from anything with which we have had experience in the older days. These sets are efficient, quiet and economical to run. And the concealed antennas, built in the shape of a small loop, are not at all bad. Their names are more formidable, and we'll hear a lot more in time about "waveantennas", "aeroscopes", "wave magnets", "intennas", and what not.

● It is expected that television will make some sort of glittering debut from nearby and also across the seas. Frankly, we do not believe it will change radio over night. The owner of a radio set will very likely hold on until television dominates the field sufficiently to make the acquisition of television receivers a matter of self defense. Manufacturers now have television receivers ready. In the field are General Electric, R. C. A., Westinghouse, Philco, Du Mont, Stromberg-Carlson and a few others of lesser fame. Then Hallicrafters, Farnsworth, Crosley, Pilot and others are about ready to enter the fray. And there are the Andrea and Meissner television kits. But Zenith, whose receivers are said to be ready, has none for sale and believes that television is not ready for general acceptance of expensive and complicated receivers. This frank policy won't do any harm to an old established radio manufacturer in the long run. Anyway, it's a nice plaything if you live near a transmitter, close enough that summer static doesn't muss up the pictures too much.

Now is time to think seriously about improved signals, new sets, old sets, and servicing. The passing of Summer and the arrival of Fall brings to the radio world many new and exciting events—at this time the long line of new 1940 radio models as well as the latest innovations and inventions. Certainly radio has not been asleep while we have enjoyed a

mid-summer break in our activities; in fact, radio was very active, as a brief survey of the field will show.

Television claimed the spotlight and shows promises of growing up before very long. Even the new radio sets have given in to the future possibilities of television by providing attachments and internal circuits for the reception of television's sound waves. But for the time being we can skip over this long-heralded addition to the radio family. It has neither supplanted broadcasting nor will our receivers become obsolete for many years to come. And there are several very good reasons for this.

The service range of any television transmitter is greatly restricted. But this is one of the things over which Nature has complete control; there is little that we can do about it. Because of the very high radio frequencies that must be used, which have the visible range of the human eye toward the horizon, television signals cannot carry far. If a listener, as well as a watcher, happens to live within this range he should obtain fair to good reception; otherwise it cannot be accomplished unless unusual conditions prevail.

Television sets in all probability will continue to be expensive. If we attempt to build one we'll find it to be a hopeless job for any but a skilled experimenter. Then, lest we forget, the danger from high voltages make dabbling with the insides of a television receiver a hazardous pastime. RADEX, however, is keeping abreast of the television field, and timely articles will appear from time to time.

The summer season richly rewarded those who could not tear themselves entirely away from their dials and the shortwave lanes of the air. And many of us came to the positive conclusion that small antennas

serve well during the summer months. Amid heat, humidity, and abounding static, two 4-foot lengths of wire pulled in foreign stations night after night. When attached to the doublet terminals of the set and strung horizontally in opposite directions along the wall, this system provided safe and quiet reception. But with the coming of Winter a return to larger outdoor aerials is in order.

Reception by means of small indoor antennas is becoming quite the fashion in radio circles this season. Many of the manufacturers of 1940 models are putting this idea into practical use with a zeal that is astounding. In fact, more than one-third of all the sets being offered have built-in antenna systems. The smaller types of 1940 sets almost generally are incorporating loop antennas.

The small sets, or portables, make up about 25 percent of the total output of the 850 models so far being offered for 1940 by the well-known manufacturers. This does not include the mail-order or independent chain concerns. Outstanding in this production for 1940 is Emerson with 63 models, Philco with 57, Zenith with 56, Stewart-Warner with 45, Fada with 43, and RCA-Victor with 39.

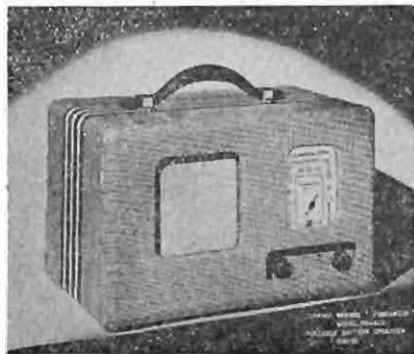
Even the battery portables have taken the country by storm. They, too, use the built-in antennas, and the little batteries utilized are so small and light in weight as to constitute only a minor item. The life of the new batteries and tubes is such as to give a pleasant shock to the owner.

The 1940 trend is still toward low-priced receivers, and while manufacturers might be cutting a bit here and there and eliminating more than the radio engineer feels happy about, it is a fact that the purchaser of a 1940 set gets more for his money than ever before. Nearly 28 million homes now have radio sets, but many of them are becoming aged and need replacing. The 1940 radios have beauty, improved tone, and simple operation.

Automatic tuning is a feature that is no longer new. So, if the old set is rendered utterly obsolete by the new line and is in need of expensive repairs and replacements, let it go and get a new set and be prepared for some fine DXing this coming radio season.

It is still a far cry from the new loop antennas to the long-awaited perfect antenna. In a future issue of RADEX we shall present a timely article on modern antennas as a result of a comprehensive survey being conducted by the Technical Editor. In the meantime it is well to bear in mind that the principal purpose of the antenna is simply to intercept passing waves so that electric currents can be induced in the wire. In this case any piece of wire serves this fundamental purpose. However, there is the question of man-made static, and because of it, and the fact that radio sets are not examples of precise selectivity, we still must seek for that elusive antenna scheme which some time will create a new millionaire over night.

The first cool days bring a rush to the radio servicing shops. Sets need overhauling and cleaning. Tuning adjustments and tube replacements



The Stewart-Warner "Companion," a portable radio which needs no aerial nor ground. It is self-powered, for use at the camp, the beach, in car, boat or trailer.

are in order if we are to obtain the fullest measure of satisfaction when we get down to real DXing. We have always recommended that only competent servicemen work on your set. While most servicemen are good, unfortunately a blacksmith or steam-roller mechanic can be found trying to accomplish the impossible. RADEX stands for good and honest servicing of radio sets. It appears, from the many letters that reach the Technical Editor, that some plain and essential facts about radio servicing will soon be forthcoming in a future "crack-down" article. However, many of our readers are immediately in trouble, and since the recent mail has been interesting, we know that our readers want to see what is bothering so many of us.

C. E. S., Sacramento, Calif.: My set has gone wild since it came back from a radio shop. The 1,800 kcs. amateurs come in on 1,580 kcs.

Answer. This set has been abused or maladjusted. Any good serviceman should be able to do a good job of aligning a receiver. Unless the condenser plates have been bent or the coils altered or damaged, or the dial misplaced, a realignment is the only solution.

C. A. S., Fort Riley, Kans.: I have an Atwater Kent 317 which gives a snapping noise and then the volume drops to zero. I pull a light cord and the set begins again.

Answer. Look for dirty contacts on the different sections of the waveband switch. Check the soldered contacts on the several terminals of the oscillator coil. All contacts are under suspicion, but pay particular attention to the bypass condensers and resistors. Pull at all flexible leads while the set is running, and soundly tap all covered parts and coils.

J. L. S., Lancaster, Pa.: I have a Philco 14 which works nicely but I want to receive foreign shortwaves by rebuilding it. How do I change kilocycles into megacycles?

Answer. Rebuilding this set is quite out of the question since its range is from 550 to 1,500 kilocycles on the broadcast band and from 1,500 to 4,000 kilocycles

on the short wave band. Because most of the foreign stations are heard on the 8,000 to 12,000 portion of the shortwave band this is why you cannot hear them. It would be necessary to add another shortwave band to your set, and this is almost a constructional impossibility. If you wish to use the receiver we suggest that a shortwave converter might be useful. They may be purchased from nearly all large radio supply houses.

A megacycle is merely a group of 1,000 kilocycles, and the converting of these units has been explained from time to time in the various departments of RADEX. When you read or see on your dial such figures as 1.5 or 4.0 megacycles it means 1,500 or one and one-half thousand kilocycles, or 4,000 kilocycles, respectively. On the other hand, 3,800 kilocycles means 3.8 megacycles.

From J. A. R., at Blakesburg, Iowa, comes: "I have a Rad-O-Phone set made for a Sentinel radio. Can I use it with my RCA 87K1 so the speaker will act as a microphone?"

Answer: It is difficult to use this kit with your set so that headphones can be utilized, unless you go to a good serviceman and have him rearrange the circuits in the kit to fit your individual set. The speaker cannot be used as a microphone. "A" and "B" power-pack that takes voltage from a storage battery and delivers 2 volts for the tubes, and 45, 67, 90, 135 and 180 volts for the plates and speaker. In this case the drain on the storage battery is about 3 amperes an hour. You can purchase one of these units for less than you can attempt to construct one. A 7-tube set should run about 50 hours on one large storage battery when fully charged.

Gene Kosolapoff, 461 Allwen Drive, Dayton, Ohio: "I received a positive avalanche of cards and letters in response to my query in April issue. Having answered all those received to date, I want to thank the boys for their efforts. I think it would elimi-

nate a lot of confusion if the Time Zone in which the time is given were shown in each report." (RADEX converts all time in reports to E.S.T., and regardless of whether it is stated or not—all time is Eastern Standard Time. Your shortwave editor begs your pardon if errors creep into our pages in these months when Daylight Saving Time is in effect in many places. Failure of readers and of the stations to state whether their schedule is given in Standard or Daylight time necessarily confuses us a little. So bear with us until next September when everyone goes back to Standard Time.—RL)

C. J. Fern, Jr., Lihue, Hawaii: "Exasperated, amazed, and a few other things to say the least, to find that I hit the jackpot in the March issue, I am going to try again with this epistle. For those people who are looking for programs consisting wholly or in part of American dance tunes, here are a few: CB1180, from 10-11 p.m. daily. If you are not sure of the station, at this time they also advertise Emerson Radios after each selection, much in the manner of KGFJ. TIEP swings it from 11:30-midnight daily, but there's a bit of QRM on them, too!

Carl Martin, 701 Kearney St., Atchinson, Kansas: "I have a doublet aerial, 25 feet on each end, running north-west by south-est. The south-east end points almost directly at South America. Now according to what I have been told this aerial should be good for reception from Europe and Australia, but poor from South Africa and South America. Reception is fairly good from Australia. It is also good from South Africa and South America. I would

certainly appreciate any suggestions as to what I might do to improve my reception of Europe on twenty meters."

W. T. Wallace, Palo Alto, California: "I note with satisfaction your inauguration of a new department devoted to the 'in between' frequencies. There, most of the commercial and re-broadcast stations are located, and there is a lack of tabulated information concerning them. Perhaps this department will be able to render some first-aid in this respect."

"I am an active DX bug," proclaims George Burnett, Buffalo, N.Y., "and since I am forced to do most of my DXing in the daytime, I thought I'd put in my two cent's worth on the current discussion. Using a Hallicrafters 'Sky Challenger' receiver, I heard the following stations: KWTO, WIND, WKBN, WSYR, WKZO, WOW, CFCE, WMT, WREC, WCLE, WTMJ, CFCO, WHKC, WSM, WEAJ, WMAQ, CFRB, WLW, WOR, WGN, CFPL, WSB, WJR, WJZ, WBBM, WPIC, WGY, WFAA, WCCO, WHAS, CBL, WESG, WABC, WENR, CBO, CBF, WWJ, CKPC, WICA, KMBC, CBY, WCFL, KDKA, WBZ, WHO, CHML, KYW, CKLW, WTIC, CBM, WBAL, WTAM, WBT, KMOX, WRVA, CKOC, WJJD, KVOO, WHAM, WOWO, WWVA, WCAU, WINS, WSAZ, CKTB, WJTN, WCAE, WJAS, WDRC, WFBL, KQV, WHK, WHDL, WLEU, WHEC, WSAN, WGAR, WJSV, WNBF, CKCR, WBRY, WQXR and WGBI."

The Story of the Incomplete Manuscript and the Quick-Thinking Announcer

During the first days of radio, the following episode actually happened:

Once upon a time, there was a radio announcer at the Broadcasting Station in Munich who had the remarkable ability of capturing the attention of his listeners. He was always successful when he was on the air, but the Station at that time was not. Many times the transmitter wouldn't function and there was nothing but silence on the air. This happened as often as ten times a day.

One day, the announcer was reading a very interesting manuscript "Round about the Cordilleras". He had received the manuscript only a day before and had taken it with him on his nightly visit to the different Beer Gardens of Munich. Perhaps at the conclusion of his merry rounds an argument arose and he used the manuscript as a weapon of defense,— at any rate, the day following a few pages from the manuscript could not be found. As the story goes, our announcer did not notice it until he was at the microphone. He read to page 4 and alas! — pages 5 to 8 were missing. As soon as he noticed it, he immediately uttered: "Krr, pt, pt!" and remained silent. The control engineer who was accustomed to this sort of thing thought the transmitter for some reason or other had again failed to function and waited patiently. In the meantime, the technicians from the sending station telephoned that everything was in working condition and that the transmitter showed no signs of being out of order. They asked for the reason of the silence. Everybody was puzzled while the control engineer and technicians were very busy testing for the cause of the "break-down". Three minutes had already passed, and just as the control-

engineer was on his way to test the microphone and to see what the trouble was, our announcer uttered: "Krrr, pt, pt!" and continued his program with page 9, as if nothing had happened.

SIGNALS FROM MARS?

MARS, the planet which has long captured the imagination of Earth dwellers, paid us a visit on July 27, when he came within 36,000,000 miles of our planet, the closest he will be for another seventeen years. It appears that most scientists believe now that life is hardly possible on Mars, but some, particularly the late Dr. Lowell, have believed that life exists there. If true, then the Martians are living on a dying world, where most of the oxygen has entered the rocks, oxidizing the iron present and rusting it, giving Mars its typical reddish color. Martians would be seeking a new world on which to live, and July 27 would be the obvious time for them to make an attempt at communication.

The last time Mars came so close was in August, 1924. At that time, Mutual Broadcasting System engineers reported hearing signals which, although unidentified, were believed to have originated on Mars. This year, members of the staff of the Hayden Planetarium and Mutual engineers collaborated in an effort to detect radio signals from the ruddy planet. Scores of powerful receivers were tuned to various frequencies at Baldwin, Long Island, at the Press Wireless receiving station, in an effort to pick up these signals. At the time of writing, no success has been reported.

OZF on 9520 kcs. now issues a card with positive verification. Previously, acknowledgments were all that the station issued. . . . ZHP's card is verified. Frequency given as 9690 kcs. and owned by British Malaya Broadcasting Corp., Thompson Rd., Singapore, Strait Settlements. . . Radio Martinique sent a card with a picture of a girl pointing toward France. CDC on 15150 kcs. took over two months to verify for A. V. Deterly. . . . SP25's card is yellow and white with a large black oval in center. . . . COBX's card is linen finish with a typical scene of Cuba, showing palm trees and a Cuban senorita lying in a hammock. The print is light green with call in large red print. . . . LKC verified with a glossy finish card printed in English with photographs of the Norwegian State broadcasting station. On the other side is a beautiful photograph of the Norwegian Mountains and a Lake. . . . The "Radio Nations" antenna system is pictured on a veri from Switzerland. . . . OAX4J kcs. sends out a double card in red and black. Peru is printed in $\frac{3}{4}$ inch letters in black.

W8XK card is a penny postal type with call printed in large red letters and message in black. . . . W2XAD and W2XAF at Schenectady verify with a nice card showing a map of the world with leading cities of the world and giving the various local time—a handy card for any DXer! . . . JZJ vericard is a brown photo of the station's directional antenna system at the top of the card with their 50 kw. transmitters pictured at bottom of card. On the reverse side is the veri message. RAN verifies with a photo of a Russian ship and officers standing on deck. Veri is on reverse side.

Across The Editor's Desk

Mr. Fly, FCC Head

JAMES LAWRENCE FLY was born at Seagoville, Dallas County, Texas, February 22, 1898. He graduated from Dallas (Texas) High School in 1916, and entered the United States Naval Academy, Annapolis, Maryland, the next year (1917). He received his commission as ensign in 1920 and remained in the Navy until 1923 when he resigned. Entered Harvard Law School in 1923; received L.L.B. degree in 1926.

Mr. Fly's first legal training was received from the law firm of Burlingham, Veeder, Masten and Fearey, New York City, where he served as a law clerk while attending Harvard Law School (1925). He was admitted to the Massachusetts and New York State Bars in 1926, and practiced with the firm of White and Case, New York City, until 1929.

From 1929 to 1934 Mr. Fly served as a Special Assistant United States Attorney General acting as government counsel in actions involving restraint of trade under federal anti-trust laws and regulatory measures under commerce power.

In 1934 Mr. Fly became general solicitor and head of the legal department of the Tennessee Valley Authority, and served in this capacity until 1937 when he became general counsel of the Tennessee Valley Authority.

President Roosevelt nominated Mr. Fly to be a member of the Federal Communications Commission on July 27, 1939. He was confirmed by the Senate on August 1 without opposition, and took the oath of office September 1, at which time he was designated by the President to serve as Chairman.

Chairman Fly's term of office expires June 30, 1942. He fills the unexpired term of the late Anning S. Prall.

Mr. Fly is married and is the father of two children, a boy and a girl. He is a Democrat and a member of the Protestant Church.

Anniversary

KTSM in El Paso celebrated its Tenth Anniversary on August 20 by inviting their listeners to visit the studios and join in the festivities. Visitors were shown the entire station, including transmitter, studios, control rooms and offices. An amateur station was also in operation, and the making of transcriptions was demonstrated.

Mr. Valentine of KPAB announces that this station, 1500 kcs., broadcasts a six-hour Mexico Fourist Program daily from midnight until 6 am CST, except from the 8th to the 14th

of the month, when it is from midnight to 2 am CST. Souvenirs of Old Mexico are sent to every person reporting these programs.

Electronic Peddler

That television may revolutionize the technique of retail merchandising and effect department store advertising revenues of newspapers is a possibility was suggested by Dr. W. R. G. Baker, head of the radio and television department of the General Electric Company. Speculating purely as an engineer, Dr. Baker declared that television ultimately would become an "electronic peddler," bringing daily to housewives an animated presentation of a store's wares in a fashion made possible by no other medium.

"In a few years from now," he continued, "when television receivers will be standard equipment in millions of homes, instead of going to the motor shows to see the new models paraded and demonstrated, we will sit in our living room and see this done in a more convincing and dramatic fashion. Our wives and daughters will see the season's new hats and gowns paraded on live models, see cooking demonstrations, receive lessons in interior decorating and gardening, see all kinds of products and appliances in actual use."

Lip-Reading

The discovery that a whole new world is opening for the totally deaf was made by Mrs. Evelyn Sass, national lip-reading champion in 1930, during a visit to the G-E television studio at New York's World Fair. Mrs. Sass said that she was able to understand many of the speaker's words by telecast, but to make all of his words understandable to the deaf, the participant in a telecast program would have to take special pains to keep his mouth in full view of the camera and accentuate his lip movements to some extent.



The largest and smallest tubes used in RCA Victor home television receivers. The big one is a 12 inch Kinescope on which images are reproduced. (RCA Victor Photo).

Facsimile For Dallas

Station WFAA of the Dallas Morning News has purchased RCA radio facsimile equipment for experimental transmission of printed text and pictures through its ultra high frequency station W5XD. The programs will be transmitted on 25250 kcs. with a power of 1000 watts.

The station will be installed in the W5XD studios atop the Tower Petroleum Building.

Other newspaper-owned stations in this country which are now transmitting facsimile material with similar RCA equipment include WBNS in Columbus, Ohio (Columbus Dispatch); KSD in St. Louis (St. Louis Post-Dispatch); WBEN of the Buffalo Evening News; KMJ in Fresno and KFBK in Sacramento, Calif. broadcasting for the McClatchey newspapers, the Sacramento Bee, the Fresno Bee and the Modesto Bee. WOR of Newark, N. J. and radio stations in France, Italy, Germany and the Soviet Union are also using the same kind of equipment.

World Series

Exclusive broadcasting rights for the 1939 Baseball World Series were awarded to the Mutual Broadcasting System by baseball's commissioner, Judge Landis. Mutual also has an option for the 1940 world series broadcasts.

WAR NEWS

George Jacobs of Cincinnati supplies the following data on war news broadcasts direct from Europe. Warsaw broadcasts through SPW at 6 and 9 pm. Paris is heard through TPB11, 11885 kcs. at 10 pm. Rome 2R04 on 11810 kcs. transmits at 7:30 pm. Berlin comes through on DJD, 11770 kcs. at 8:15 pm. London's DSD on 11750 kcs. is heard at 11 A.M. and 8:15 P.M. Moscow's RAN on 9600 kcs. at 7 pm. Budapest on 9125, HAT 4, speaks at 7:30 pm.

Dominican Republic

From Sr. Jose R. Saladin Pereyra of Ciudad Trujillo, Under Secretary of State of the Dominican Republic, we have an official list of the radio stations in that country.

Ciudad Trujillo

	kcs.	
HIX	800	Gobierno Dominicano
HI1X	6340	Gobierno Dominicano
HI2X	11960	Gobierno Dominicano
HI3X	15280	Gobierno Dominicano
HIG	900	Andres Cordero Puello
HI1G	6280	Andres Cordero Puello
HI2G	9290	Andres Cordero Puello
HIL	6500	J. C. Teixido
HIZ	1370	Frank Hatton
HI1Z	6316	Frank Hatton
HIT	6630	F. A. Sanabia
HI6Y	6660	Alfonso Cuervo
HI8Q	1475	Julio A. Garcia
HI6H	6600	Emilio Garden, Jr.
HI2D	6206	Accion Catolica
HIN	1090	J. M. Bonetti Burgos
HI1N	6243	J. M. Bonetti Burgos
		Santiago de los Caballeros
HI1A	6182	Rafael Wetern
HI3U	6015	Fernando Bertran
HI1L	6480	Maria J. Tavares
HI1S	6420	Generoso Sarnelli
HI9B	6383	Jacinto L. Sanchez
		San Pedro de Macoris
HI1J	6025	Fausto M. Donastorg
HIH	6780	Domingo Dominguez
		La Romana
HI3C	6105	A. Herrero Hernandez
		San Cristobal
HI8T	6122	Raul Henriquez
		San Francisco de Macoris
HI4V	6170	Luis R. Betances R.
		Puerto Plata
HI5P	6565	J. M. Modesto

Turner Dial Fixes

Turner Dial seated himself in one of the comfortable chairs reserved for his customers. The rays of the early morning sun slanted along the row of new 1940 radios, and a cool breeze drifted through the open door of Higrade Radio Sales and Service. After a few minutes Dial tossed his morning paper to a nearby counter and rose to his feet. "Let 'em fight if they want to," he grumbled to himself. "Anyway, these new radios will bring their wars right into our homes, and that's plenty close." Turner had arrived at the store early this bright Fall morning. Now he strolled outside. People were hurrying to work, and a few spoke as they passed. Dial's attention was attracted to a young man who was alertly dodging traffic in the street. "Morning," he called, as the youth approached. "You're early, too."

Bill Wood, Higrade's irrepresible assistant, grinned. "Thought I'd get an early start," he answered. "Remember I went out to see some friends last night? Well, I found they had a dead radio. Looked it over but couldn't get a peep from it. I'll take the truck out there and get it. They want it back tonight. Lots of war talk, and nobody wants to miss anything." Bill hurried to the rear of the store where the service shop was located.

Turner Dial followed. "If you get that set right away I'll have plenty of time to work on it," he advised.

The usual business of the day began. First there was the mail man with letters, bills and manufacturer's service bulletins and advertisements. Then came customers complaining of difficulties they had encountered the night before; some new customers and prospects; and several telephone calls for service. Turner was glad when Bill returned to give him a hand. But before long they were free, and Turner stepped to the service shop and examined the chassis and speaker of the receiver that Bill Wood had brought in. They came from a large console, for, after all, what was

a Rattling Dead Set

... By B. Francis Dashiell



the use of lugging in a heavy cabinet?

"Hook it up," directed Dial. He watched Bill plug in the cord and snap the switch and spin the tuning gadgets. But no sound came forth.

"That's the way it acted last night," volunteered Bill. "I did everything I could up there. Tested the antenna and leads, shoved the tubes around, thumped all the parts, and yanked on the wires!"

"No wonder!" commented Turner in a sarcastic tone. He pulled off his coat and rolled up his sleeves. "You catch any customers," he added to Bill. "I'll pitch into this. It won't take so long."

The tubes were aglow and a quick check showed them to be in good shape, having been replacements recently made. But not a sound ventured forth from the speaker. Turner knew that if the trouble was in the antenna or the radio- or intermediate-frequency coils and circuits at least a little sound would be heard. With even a broken wire a local station might be heard faintly. This could be possible because high-frequency currents in this part of the circuit can jump breaks in the coils because of capacity action.

Reaching for a cord attached to a small magnetic loud speaker fastened to the wall before him, Turner dug

the sharp points of the probes into the output terminals of the audio transformer on the speaker frame. Instantly music came from the speaker on the wall. "Loud speaker trouble," said Turner in an undertone.

But Bill Wood overheard him. "So it's in the speaker?" he asked. Then he added, with his usual optimism: "That's just what I told 'em last night."

"Oh yeah!" snapped Turner with some heat. "Why didn't you inform me too? It might have saved some time! Well, since you're hanging around in my way, suppose you take the speaker cone off the frame. Don't tear it!"

Turner lighted his pipe as Bill Wood removed the screws holding the clamping ring and flexible rim of the speaker cone to the speaker frame. With a sharp knife Bill commenced to cut the felt cone from the metal frame. "Use some of that lacquer solvent to soften the cement," directed Dial. "It's safer and helps do a quicker and better job."

Soon the cone lay exposed. Turner already had detached the flexible wires that led from the tiny coil that perched upon the apex of the cone from the large audio transformer. One wire was white and other maroon. The tiny coil, known as the 'voice coil,' was very delicate. The fine wire making up its few turns appeared to be slightly loose. Turner reached for his magnifying glass. "Humph!" he grunted characteristically. "A broken wire in the voice coil," this added for Bill's benefit. "Say!" he demanded, "did your friends complain about this set acting noisy or in a peculiar manner before it went dead?"

"Sure. I forgot to tell you," he added excitedly. "They said the set gave a buzzing and rattling sound for a long time on certain notes. Then it seemed to rasp and chatter."

Turner Dial stepped away from the service bench. "The voice coil winding is loose, for some reason or other," he commented. "It's been rubbing on the inner surface of the pole pieces, and that caused the rattling sound, or chatter. It's a com-

(Please turn to page 95)

DXer's Appointment Calendar

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

Clubs: World DXers' Alliance (WDXA); Globe Circlers' DX Club (GCDXC); International Short Wave Club (ISWC); Newark News Radio Club (NNRC); Universal Radio DX Club (URDXC); Cleveland Radio Club (CRC).

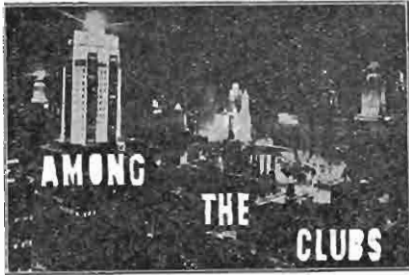
- Oct. 2, 8 pm, meeting of the Irvington Chapter, The Radex Club, 870 Sanford Ave., Irvington, N. J.
- Oct. 4, 2-3 am, WSPD, Toledo, Ohio, 1340 kcs., "Parade Across Ohio" for NNRC.
- Oct. 6, Card party sponsored by The Irvington Chapter.
- Oct. 7, 2-4 am, WCOL, Columbus, Ohio, 1210 kcs., "Parade Across Ohio" for NNRC.
- Oct. 8, 1-3:30 am, TGWA, 9685 kcs., Guatemala City. Special DX Concert.
- Oct. 9, 3:30-3:45 am, WQDM, 1390 kcs., St. Albans, Vt. Talks on ham radio.
- Oct. 10, 3:35-3:50 am, WICA, Ashtabula, Ohio, 940 kcs., "Parade Across Ohio" for NNRC.
- Oct. 14, 4:15-4:30 am, WOSU, Columbus, Ohio, 570 kcs., "Parade Across Ohio" for NNRC.
- Oct. 15, at 1 am, YN3DG, 13900 kcs., Leon, Nicaragua, for NNRC.
- Oct. 15, 1-2 am, TG1 on 1310 and TG2 on 6190 kcs., for WDXA and GCDXC.
- Oct. 16, 3-4 am, WADC, Akron, Ohio, 1320 kcs., "Parade Across Ohio" for NNRC.
- Oct. 18, 2-3 am, WLOK, Lima, Ohio, 1210 kcs., "Parade Across Ohio" for NNRC.
- Oct. 18, 3-4 am, WPAY, Portsmouth, Ohio, 1370 kcs., "Parade Across Ohio" for NNRC.
- Oct. 20, 2-3 am, WJW, Akron, Ohio, 1210 kcs., "Parade Across Ohio" for NNRC.
- Oct. 21, 2-4 am, WKRC, Cincinnati, Ohio, 550 kcs., "Parade Across Ohio" for NNRC.
- Oct. 21, 4:15-4:55 pm, TAP, 9460 kcs., Ankara, Turkey. To celebrate tenth anniversary of ISWC.
- Oct. 22, YN3DG, 13900 kcs. will broadcast a special program dedicated to RADEX and arranged by Prof. Carlo Spatari. The time is 1 am, EST. YN3DG verifies for a dime as IRC's are not good in Nicaragua. Address Dennis E. Gallo, YN3DG-DDSL, Leon, Nicaragua.
- Oct. 22, 1-3:30 am, TGWA, 9685 kcs., Guatemala City. Special DX Concert.
- Oct. 22, 2-4 am, WGAR, Cleveland, Ohio, 1450 kcs., "Parade Across Ohio" for NNRC.
- Oct. 29, 1-2 am, WCPO, Cincinnati, Ohio, 1200 kcs., "Parade Across Ohio" for NNRC.
- Oct. 29, 1-2 am, TG1 on 1310 and TG2 on 6190 will dedicate a special program to RADEX, arranged by Prof. Carlo Spatari. This station verifies free of charge. Address Col. Eduardo Perez F., Director General of Communications, Radio Morse, Guatemala City, Guat.
- Oct. 31, 3-5 am, LS11, La Plata, Argentina, 30 kw., 1310 kcs. Send IRC for veries to Radio Provincia. (Arranged by Wm. Cunn-

- ingham for URDXC).
- Nov. 2, 1:30-2 am, WLW on 700 and WLWO on 6060 kcs., Cincinnati, Ohio, for National Lutheran Radio Week. Reports to Pastor Barth, c/o WLW.
- Nov. 6, 8 pm, meeting of the Irvington Chapter of The Radex Club, at 870 Sanford Ave., Irvington, N. J.
- Nov. 8, 4:30-4:45 am, WEOA, Evansville, Ind., 1370 kcs., "Parade Across Indiana," for NNRC.
- Nov. 9, 4:25-4:40 am, WGBF, Evansville, Ind., 630 kcs., "Parade Across Indiana" for NNRC.
- Nov. 12, 10-10:10 am, YL2CD, 28080 kcs. Send reports to A. Vitolius, Miera-iela, 52-5, Riga, Latvia. (Arranged by J. E. Gardner, for CRC).
- Nov. 13, 3:30-3:45 am, WQDM, 1390 kcs., St. Albans, Vt. Talks on ham radio.
- Nov. 15, 4-6 am, ZP15 on 700 kcs. and ZP14 on 11721 kcs., Villarica, Paraguay. Arranged by Wm. Cunningham for URDXC.
- Nov. 19, 10-10:10 am, YL2CD, 28080 kcs. Send reports with IRC to A. Vitolius, Miera-iela, 52-5, Riga, Latvia. Arranged by J. E. Gardner for CRC.
- Nov. 24, 2-3 am, WGRC, New Albany, Ind., 1370 kcs., "Parade Across Indiana," for NNRC.
- Dec. 8, 1:30-5:30 am, WJAG, 1060 kcs., Norfolk, Nebr.

Regular DX Programs

- First day of month, 4-4:30 am, WPAY, 1370 kcs., Portsmouth, Ohio.
- Last day of month, 3-5 am, KWSC, 1220 kcs., Pullman, Wash.
- Every Saturday, 2:30-2:45 am, KLS, 1280 kcs., Oakland, Calif.
- Every Saturday, 10:15-10:30 am, WEEU, 830 kcs., Reading, Pa.
- Every Saturday at 10 pm, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari—10c for veries).
- Every Saturday, 4:15-4:45 pm, W2XJI, 26300 kcs., Newark, N. J. (NNRC tips).
- Every Saturday, 10 pm, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari program).
- Every Sunday, 2-2:30 am, TG1 on 1310 and TG2 on 6190 kcs., Guatemala City, Guat.
- Every Sunday, 10:15-10:45 am, CFCCO, 630 kcs., Chatham, Ont.
- Every Sunday, 3-5 am, XEAC, 980 kcs., Tijuana, B. Cfa.
- Every Sunday, 12:30-1 am, TGQA on 6400 and TGO on 1450 kcs., Quezaltenango, Guatemala. (Spatari program, all reports verified free).
- First Sunday, at 1 am, YN3DG, 13900 kcs., Leon, Nicaragua. (Spatari program).
- First and Third Sunday, 2-4 am, WJBO, 1120 kcs., Baton Rouge, La.
- Every Tuesday, 11:45 am-noon, W9XA, 26450 kcs., Kansas City, Mo.
- Every Wednesday, 12:30 am, KOY, 1390 kcs., Phoenix, Ariz.
- First and Third Wednesday, 1:45-2 pm, WTAR, 780 kcs., Norfolk, Va.
- Every Thursday, 2:45-3 am, KSL, 1130 kcs., Salt Lake City, Utah. (Spatari announcements).
- 1st to 7th, midnight to 6 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexican souvenirs sent to reporters).

8th to 14th, midnight to 2 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexican souvenirs sent to reporters). 15th to 31st, midnight to 6 am, KPAB, 1500 kcs., Laredo, Tex. (Mexico Tourist Program; Mexican souvenirs sent to reporters). Second Friday, 12:30-1 am, WJAG, 1060 kcs., Norfolk, Nebr.



THE International Listeners Association, with which was combined the World Wide Hobby Club, announces that the name of their joint organization has been changed to the DXer's International Exchange Club. A new step forward to protect the interests of SWL's is the publication in their official bulletin "QSA5", regular lists of non-repliers, or those card swappers who are found to consistently neglect replying to cards sent them for exchange. Complaints are sent to the editor of the hobby columns, Charles West Dyke, who consolidates these lists of "Nons", and the names of those with several complaints against them are published in the bulletin. All SWL card swappers, regardless of club affiliation, are invited to send their lists to Mr. West Dyke at Hotel Winchester, San Francisco, California. Particulars as to membership in the DXIEC, and a sample copy of "QSA5", may be obtained from club headquarters at Box 808, Dryden, Wash.

A big contest, open to all DXers, has been announced by the National Radio Club. Opening officially on October 1, all who wish to enter will have sufficient time to study the rules, and get their receivers in shape. A cash prize of \$20.00 is offered, and it is expected other prizes will be announced prior to the official opening. The contest, briefly, will be to receive as many verifications as possible from broadcast band stations, between October 1, 1939, and October 1, 1940. No station with over 1000 watts power will count, and all stations must be 500 miles or more away from the listener. More complete details can be obtained from club headquarters at 317 E. Tenth St., Erie, Pa.

The Hollywood Television Society, 763 Gower St., Hollywood, Calif., announces that they have close to one hundred members, of which approximately half have television receivers. Most of the receivers are owned by experimentally-minded members, as a consequence of which the sets are very often undergoing revisions. The five inch cathode ray tube is the most popular size of tube as it seems to offer the most satisfactory picture in consideration of the price of the tube and associated equipment. When a five inch tube

is swept so that the corners of the picture are off the screen, they have found that it may be viewed by a dozen or more persons satisfactorily. The secretary of the Society is Marshall Brooke, and television enthusiasts in the Los Angeles area can obtain information about the Society from him.

The R9 Listeners' League, 7417 37th Ave., Wood Haven, L. I., N. Y., a five year old radio club, is not a DX Club but a fraternal order for all radio-minded persons, men, boys, YL's and XYL's, according to their president, Alfred G. King. Their aim is to promote friendship between radio listeners in all countries, and to help them in their hobbies, whether the hobby is radio, match box covers, postcards, or anything else. The R9LL News, a monthly publication, contains lists of correspondents, card swappers and hobbyists. Membership carries a number of interesting privileges. The president, at the above address, will gladly furnish information to anyone interested in joining.

David Herbert, Jr., of Lancaster, Calif. informs us that he has organized a club for shortwave listeners, to be known as the All Wave Club. Persons interested may obtain membership application cards from Mr. Herbert at Box 709, Lancaster. We have not seen a bulletin from this club, and it was not stated whether or not one would be published.

Charles C. Norton, president of the Universal Radio DX Club, 2976 Juniper St., San Diego, Calif., announces that the URDXC will sponsor a series of 20 meter band contests this season, to be known as the "Champion of the Week" contests. These contests proved very popular last season. A beautiful certificate of merit in DX reception will be awarded to the winners. Information on joining this club and a sample copy of the bulletin may be obtained by writing Mr. Norton at the above address, and enclosing return postage.

At the request of Mr. Norton, we are pleased to correct a statement made in Mid-summer RADEX, in which it was stated that bulletins from his club had not been received by us. The URDXC bulletins have been received at our Teaneck office regularly and we regret any inconvenience that has been caused as a result of our mis-statement.

Miracles Like

BURBANK'S

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HAM HOUNDING . . .

• • • By HUGH HUNTEM

It won't be long now. By the time you're reading these words let us fervently hope that the bands are as wide open as Bing Crosby's prairies in "The Funny Old Hills," and that you're all tuning in those DX catches.

We've got some FB reports on some newcomers that have been logged on 10 and 20 meters. We know a good many amateurs who have promised to QSL, but we'll tell you about those later. But right now we're going to mingle with the hams and blow their horns a little (just as if they couldn't blow their own!), tell a little about them, their idiosyncracies, and their experiences in ham radio.

K7AZS we heard one night when the band wasn't so hot. In fact, it was very poor, although this Alaskan came in with a good R8 signal. He may be classed as 100 percent. QSL, incidentally, but don't forget that Alaska is just the same as another state in the union. Don't waste good money and send him an international reply coupon if you hear him on the air. He'll be very satisfied to receive good U.S. stamps, because that kind of postage will bring his letters to you all OK.

William "Bill" Wagner is part-owner of KFQD (and who hasn't tried to tune in this fb BCB catch?) and is the station's chief engineer.

He also is an ardent ham and his bid to fame is an antenna system not exactly unusual but still a little out of the ordinary, being a product of necessity due to his location. The antenna is a Marconi, but the radiator is always an odd multiple of one-fourth wave length, and point of feed (current loop) is always one-half wave or multiple above ground. This adjustment is effected by use of an antenna band switch which cuts in the correct amount of inductance of the loading coil and also of the correct capacity.

The reason for this outlay is that in Alaska it is impossible to get a good ground due to the frozen condition of the gravel. Too, the ground has very poor conductivity, so Bill is satisfied with this counterpoise effect he has discovered. He reports that because of it his signals are OK.

Another interesting observation of his: He says that amateur radio plays a more important part in actual service in Alaska than in any other section of the country, because the territory is so large and there are so many isolated places without any other type of communication. The hams up there really do a lot of good.

A picture of Bill at the controls of K7AZS is shown on these pages. His QRA is Radio Station KFQD, Anchorage, Alaska.

Now let's hop halfway around the world from Alaska and pay VK7LZ a call. His QSL card is also reproduced on one of these pages. He is a good Tasmanian catch—and will QSL for postage.

Mr. Wright, the op, has one to tell on some of us over here.

"Some SWL's and many amateurs have written me and asked if England still sends convicts over here and if the natives of Tasmania are savage," he chuckled.

"Well, those people probably think we are still living in an age comparable to your Wild West days in America. The fact is that the Tasmanian aborigine is extinct and the closest thing to a convict that has arrived at the island in the past 100 years is a Czech refugee!"

And that should make a few faces over here very red, indeed!

We wonder how many have heard YL2CD this month? Since the conditions were so poor during his last test transmissions, Mr. Vitoliu kindly consented to again give SWL's a chance to log this little-heard coun-

	YV5RU	Caracas, Venez. "Estudios Universo," Mario Garcia Arocha.	6000 CXA2	Montevideo, Uruguay. 5 kw. Cia. de Radio Publicidad Continental, J. C. Gomez 1431. 10 am-10 pm.
4930	YV4RP	Valencia, Venez. "Radio Valencia," Luis Croquer.	HH2S	Port-au-Prince, Haiti. Societe Haitienne de Radiodiffusion, Box 103. (7-10 pm).
4940	YV5RO	Caracas, Venez. "La Voz de Venez.," Marquis y Linares.	RV59	Moscow, U.S.S.R. 7-9:15 pm.
4950	YV4RO	Valencia, Venez. "La Voz de Carabobo," Herman Degwitz.	XEBT	Mexico City, D. F. 500 w. Interval signal, cuckoo calls, and sign off with "Liebestraume." El Buen Tono, S. A., Apartado 79-44. 11 am-1 am.
4960	VUD2	Delhi, India. 10 kw. 7:30 am-1 pm. All-India Radio.		
	YV5RS	Caracas, Venez. "Radio Libertador," Victor M. Soto.	6005 CFCX	Montreal, P. O. 75 w. Relays CFCF. Canadian Marconi Co., Ltd., Box 1690. Sun, 10 am-11:15 pm. Weekdays 8:45 am-2 am.
4975	YV1RJ	Coro, Venez. "Radio Falcon," J. A. Mendoza.		
4980	YV5RT	Caracas, Venez. "Gobierno Nacional."	HP5K	Colon, Panama. 200 w. Relays HOK, "La Voz de La Victor, Apartado 33. Noon-2 pm; 6 am-midnight.
4990	YV3RX	Barquisimeto, Venez. "La Voz de Lara," Arturo Ramos Maggi.	6007 XYZ	Rangoon, Burma. 1500 w. Burma Independent Wireless Sub-Division, W. J. Byrnes, Strand Road. Sun, 8:30-10:30 pm; Daily 5:30-9 am; 8:20-10:30 pm).
5000	YV5RK	Caracas, Venez. Gobierno Nacional.	ZRH	Pretoria, Union of So. Africa. 5 kw. See "Johannesburg." Sat, 9:30 am-4:45 pm; Sun, 8:40 am-noon; 12:15-3:15 pm; Other days, 9:30 am-3:30 pm; 11:45 pm-12:50 am.
5010	YV5RM	Caracas, Venez. "Radio-difusora Venez.," Degwitz y Sibletz.	6010 CJCX	Sydney, N. S. 1 kw. Relays CJC.B. Eastern Broadcasters, Ltd., Radio Bldg. Sun, noon-1:30 pm; Weekdays 9 am-2:30 pm.
5020	YV4RQ	Puerto Cabello, Venez. Radio Pto. Cabello," Rafael A. Segura.	PRA8	Pernambuco, Brazil. 5 kw. "A Vox do Norte," Radio Club do Brasil, Avenida Cruz Cabuga 394. Time signals at Noon and 7 pm Brazil Time. Sign off with national anthem. 9 am-noon; 1-3 pm; 4-9 pm.
5040	YV5RN	Caracas, Venez. Radio Caracas," Almacen Americano.	6015 HI3U	Santiago de los Caballeros, D. R. 100 w. "La Voz del Comercio," Fernando Bertran, Apartado 23. Sign off, "Mario la O" on organ and national anthem. 7:15-9 am; noon-2 pm; 4:45-8 pm.
5146	PMY	Bandoeng, Java, N. E. I. 1 kw. Sat, 8 pm-3:30 am. Sun, 5:30 am-noon. Other days, 5:30 am-noon; 7 pm-3 am.	XEWI	Mexico City, D. F. 400 w. Institucion Municipal de la V. I., Mina 56.
5300	ZIK3	Belize, Brit. Honduras. (8:30-8:50 pm).	6020 DJC	Berlin, Germany. 50 kw. See "Berlin." 11:30 am-4:25 pm.
5713	TGS	Guatemala City, Guat. 200 w. Wed, Thur, Sat, 6-9 pm. Radiotransmisora de la Casa Presidencial."	XEUW	Veracruz, Ver. C. 20 w. "El Eco de Sotavento desde Veracruz," Av. Independencia 98. Veries for 3c USA stamp. 8 am-midnight.
5824	TIGPH	San Jose, Costa Rica. 1 kw. "Alma Tica," Gonzalo Pinto H., Aptdo. 800. (7 pm-midn't).	6025 HIIJ	San Pedro de Macoris, D. R. 100 w. Fausto M. Donastorg, Aptdo. 204.
5875	HRN	Tegucigalpa, Honduras. 500 w. "La Voz de Honduras," Mr. Paul John. Interval, notes from national anthem, and signs off with "Goodnight Waltz." 8 pm-midnight.	6030 CFPV	Calgary, Alta. 100 w. Voice of the Prairies, Ltd., Toronto General Trusts Bldg. (Thur, 9 am-1 am; Sun, noon-midn't.) Panama City, Panama. 100 w. Estacion Radiodifusora Miramar de la Radio Panama, Apartado 910. 5-10 pm.
5880	ZEA	Salisbury, Southern Rhodesia. 325 w. Gen'l P. O., Station Sec'y., Box 792. Sun, 3-5 am.	6035 TI7RVM	Mexico City, D. F. 400 w. Institucion Municipal de la V. I., Mina 56.
5940	PJC1	Willemstad, Curacao. 150 w. "Radio Curon," Curacaosche Radio Vereeniging, Emmastad, Curacao. 7:45-9:35 pm.		
5945	TG2X	Guatemala City, Guat. 200 w. "Policia Nacional." Tue, Wed, Fri, 11 am-1 pm. Sat, 11 am-3 pm.		
5975	CS2WD	Lisbon, Portugal. 250 w. Radio Renascenca, Rua do Capelo 5-2 esq.		
	OAX4P	Huancayo, Peru. 250 w. "Radio Andina Junin," J. Alberto Maduana, Cuzco 25.		
5980	VONG	St. John's, Newfoundland. Newfoundland Brdcastg. Corp. Relays VONF. 8:30 am-12:30 pm; 4:30-9:30 pm.		
5984	HJ4DAG	Quibdo, Colombia. 150 w. "La Voz del Choco.		
5995	VUD2	Delhi, India. 10 kw. All-India Radio. 7:30 am-12:30 pm.		

- 6040 WSLA Boston, Mass. 20 kw. See WSLA.
- WDJM Miami, Fla. 5 kw. 10 pm-1 am. Relays WIOD. Ruth Richardson, Isle of Dreams Broadcasting Corp.
- YDA Tandjong Priok, N.E.I. 10 kw. NIROM. Sign off, "End of a Perfect Day."
- 6042 HJ1ABG Barranquilla, Colombia. 600 w. Relays HJ1ABH. "Emisora Atlantico," Aptdo. 445
- 6044 ZP14 Villarrica, Paraguay. 1 kw. "Radio Cultura."
- 6045 XETW Tampico, Tams. 100 w. Relays XEFW, Flores y Martinez, Francisco 1, Madero 204 Ote. Sun, 10 am-4 pm. Weekdays, 10 am-10 pm.
- 6053 VK9MI M. V. "Kanimbla." 50 w. Sign off "God Save the King." McIlwraith & McEacharn, Ltd., Melbourne, Australia. (7:15 am).
- 6054 HJ6FAB Pereira, Colombia. 501 w. "La Voz de Pereira."
- 6055 Bern, Switzerland. 25 kw. See eBrn."
- 6060 VQ7LO Nairobi, Kenya. Cable & Wirelss, Ltd., Box 777. 11 am-2:30 pm.
- WCAI Philadelphia, Pa. 10 kw. See "WCAI." (Sat, 12:01-2 am; Tu, W, F, 6:30-7:15 pm; Su, W, 7:30 pm-midn't; Tu, F, 7:30-10:30 pm).
- WLWO Cincinnati, Ohio. 10 kw. See "WLWO."
- 6065 SBO Stockholm, Sweden. 500 w. 5:15-5 pm. Telegrafverket Tjanstebrev 5.
- 6070 CFRX Toronto, Ont. 1 kw. Sun, 10:30 am-midnight. Weekdays 7:30 am-midnight. Relays CFRB. Rogers Radio Broadcasting Co., 622 Fleet St.
- 6079 DJM Berlin, Germany. 50 kw. See Berlin."
- 6080 CKFX Vancouver, B. C. 10 w. Relays CKFC Standard Brdstg. Sys., 1504 Sun Bldg. 2 pm-midnight.
- HP5F Colon, Panama.
- WCBI Chicago, Ill. 500 w. See "WCBI."
- 6082 OAX4Z Lima, Peru. 10 kw. Radio Nacional." Relays OAX4A, Av. Petit Thouars 447.
- 6090 ZNS Nassau, Bahamas. Superintendent of Telegraphs, Box 48 (No postage required for veries).
- 6097 1/2 ZRJ Johannesburg, Union of So. Africa. 200 w. See "Johannesburg." Sat, midnight to 12:50 am; 3:15-7 am; 8:30-11:30 am; Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 8:40-11:30 am; Other days, 3:15-7 am; 9 am-1:30 pm; 11:45 pm-12:50 am.
- ZRK Capetown, Union of So. Africa. 5 kw. See "Johannesburg." Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 9 am-11:45 am; noon-3:20 pm; Weekdays, 3:20-7:20 am; 9-11:45 am; noon-4 pm; 11:45 pm-12:50 am.
- 6100 W3XL New York, N. Y. 35 kw. See W3XL.
- W9XF Chicago, Ill. 10 kw. Relays NBC-WENR. Audience Mail Dept., NBC, Inc., Merchandise Mart. Sat, 1:05-2 am; 4-5:30 pm; Sun, 1-5:45 pm; Other days, 1:05-2 am; 4-5:45 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.
- 6105 HI3C La Romana, D. R. 30 w. A. Herrero Hernandez.
- 6110 GSL London, Gt. Britain. "L for Liberty." See "London."
- XEGW Mexico City, D. F. 250 w. Jose G. Garza Fox, San Juan de Letran 81.
- 6116 Saigon, Fr. Indo-China. "Radio Saigon." (6 am).
- 6120 W2XE New York, N. Y. 10 kw. See "W2XE." Midnight-1 am.
- 6122 HI8T San Cristobal, D. R. 30 w. Raul Henriquez.
- 6122 FK8AA Noumea, New Caledonia. Relays FJP. Announces, "Ici Noumea," and signs off with Marseillaise. 44 rue de l'Alma. Tues, Sat, 2:30-3:30 am.
- HJ3CAX Bogota, Colombia. 750 w. Relays HJ3CAZ, La Voz de Colombia, Aptdo 772.
- TGWB Guatemala City, Guat. 1 kw. Sun, 10:30 am-5:15 pm; 7 pm-midnight. Weekdays, 7:45-9 am; 12:45-3:45 pm; 7:30 pm-12:15 pm. See TGWA.
- 6130 CHNX Halifax, N. S. 500 w. Sat, 8 am-11:30 pm; Sun, noon-11:15 pm; other days, 7 am-11:15 pm. Maritime Broadcasting Co., Lord Nelson Hotel
- COCD Havana, Cuba. 250 w. Relays CMCD. "La Voz del Aire," S. A., Sr. J. Benitez, Aptdo. 2294.
- LKJ Oslo, Norway, 5 kw. See "Oslo."
- 6132 VP3BG Georgetown, British Guiana. Mexico City, D. F. 100 w. Depto. de Publicidad y Propaganda, Sr. Jose Rivera.
- 6137 OR7AA Lourenco Marques, Port. East Africa. Radio Club de Mocambique, Caixa Postal 594. Sun, 5-7 am; 10 am-2 pm; Weekdays, midnight-1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm.
- 6140 SP48 Warsaw, Poland. 5 kw. 3-5:30 pm.
- WPIT Pittsburgh, Pa. 40 kw. See "WPIT."
- 6145 HJ4DAE Medellin, Colombia. 700 w. "La Voz de la Antioquia."

WDAE, Tampa, mod. of lic., 780 kcs.
 WGAN, Portland, CP 1390 kcs., 1000(5) unlt.
 WGBF, Evansville, CP 1250 kcs., 1000(5) unlt.
 WGRC, New Albany, CP 880 kcs., 250 w. unlt.
 WHA, Madison, CP 670 kcs. 50 kw. unlt. (facilities of WMAQ).
 WJMS, Ashland, CP 1370 kcs. 100 w. unlt.
 WKAQ, San Juan, CP 620 kcs. 5 kw.
 WLAP, Lexington, CP 1270 kcs. 1 kw. unlt.
 WMBC, Detroit, CP 600 kcs. 250 w. unlt.
 WMBR, Jacksonville, CP 1120 kcs. 500(1) unlt.
 WMFF, Plattsburg, CP 1240 kcs. 1 kw.
 WNBX, Springfield, CP Keene, N. H., 1 kw. unlt.
 WOC, Davenport, CP 1390 kcs. 1 kw. unlt.
 WPG, Atlantic City, CP New York (facilities WBIL and WOV).
 WREN, Lawrence, CP Kansas City.
 WROL, Knoxville, CP 620 kcs. 500(1).
 WSBT, South Bend, CP 930 kcs. 500 w. unlt.
 WSFA, Montgomery, CP 1410 kcs. 1 kw. unlt.
 WSPR, Springfield, mod. of lic. for 1240 kcs. 250 (.5) unlt.
 WTCN, Minneapolis, CP 710 kcs. 10 kw. unlt.

Applications for New Stations

Albemarle, N. C., Albemarle Brdcastg. Station, 1370 kcs. 100 w. days.
 Ashland, Wis., WJMS, Inc., 1370 kcs. 100 w. unlt.
 Asheville, N. C., Publix-Bamford Theaters, Inc., 1430 kcs. 1 kw. unlt.
 Atlantic City, N. J., Atl. City Brdcastg. Co., 1100 kcs. 5 kw. sharing with WBIL.
 Atlantic City, N. J., Neptune Brdcastg. Corp., 1420 kcs. 100(.25).
 Bellingham, Wash., Bell Brdcastg. Co., Inc., 1200 kcs. 100(.25).
 Birmingham, Ala., B. News Co., 590 kcs. 1 kw. unlt.
 Boston, Mass., Mayflower Brdcastg. Corp., 1410 kcs. 500(1).
 Bridgeport, Conn., Chas. Greenblatt, 1190 kcs. 250 w. ltd.
 Bridgeport, Conn., Harold Thomas, 1310 kcs. 100(.25) unlt.
 Brown City, Mich., Thumb Brdcastg. Co., 880 kcs. 1 kw. days.
 Brownwood, Tex., Brown County Brdcastg. Co., 990 kcs. 1 kw. days.
 Burlington, Iowa, Burlington Brdcastg. Co.
 Cedar Rapids, Iowa, The Gazette Co., 1420 kcs. 100 w. unlt.
 Cheyenne, Wyo., Western Brdcastg. Co., 1210 kcs. 100(.25).
 Cleveland, Ohio, Cuyahoga Valley Brdcastg. Co., 1500 kcs. 100 w. days.
 Clinton, Iowa, Clinton Brdcastg. Corp.
 Columbus, Miss., Birney Imes, 1370 kcs. 100(.25) unlt.
 Cordele, Ga., Cordele Dispatch Pub. Co., 1500 kcs. 100(.25).
 Ely, Wyo., Eastern Nev. Brdcastg. Co., 1500 kcs. 100 days.
 Erie, Pa., Presque Isle Brdcastg. Co., 1500 kcs. 100(.25) unlt.
 Everett, Wash., Cascade Brdcastg. Co., 1420 kcs. 100(.25) unlt.
 Fremont, Nebr., Nebr. Brdcastg. Corp., 1370 kcs. 100(.25) unlt.
 Grants Pass, Ore., Ore. Brdcastg. System, 1370 kcs. 100(.25).

Grants Pass, Ore., Southern Ore. Brdcastg. Co., 1310 kcs. 100 unlt.
 Hancock, Mich., Copper Country Brdcastg. Co., 1370 kcs. 100(.25) S. H.
 Hannibal, Mo., Courier Post Pub. Co.
 Hickory, N. C., Catawba Valley Brdcastg. Co., 1370 kcs. 100(.25).
 Las Vegas, Nev., Las Vegas Brdcastg. Co., 1420 kcs. 100(.25).
 Las Vegas, Nev., Nev. Brdcastg. Co., 1370 kcs. 100(.25) unlt.
 Lawton, Okla., Carver, Williams & Ross, 1420 kcs. 100 unlt.
 Logan, W. Va., Frey and Greever, 1200 kcs. 100 days.
 Louisville, Ky., Gateway Brdcastg. Co., 880 kcs. 500 unlt.
 Martinsville, W. Va., M. Brdcastg. Co., 1420 kcs. 250 days.
 Martinsville, W. Va., Patrick Henry Brdcastg. Co., 1420 kcs. 100(.25).
 Marysville, Calif., Yuba-Sutter Broadcasters, 1320 kcs. 250 unlt.
 Montebello, Calif., Bureau of Education, 1420 kcs. 100 days (request contingent upon move of KECA to San Diego).
 Niagara Falls, N. Y., N. F. Gazette Pub. Co., 1260 kcs. 1 kw.
 Norfolk, Va., Colonial Brdcastg. Corp., 1370 kcs. 100(.26).
 North Sacramento, Calif., Grant Union High School District, 1370 kcs. 100 days.
 Ogdensburg, N. Y., St. Lawrence Brdcastg. Corp., 1310 kcs. 100(.25).
 Olney, Ill., Olney Brdcastg. Co., 1210 kcs. 100(.25) unlt.
 Opelika, Ala., Opelika-Auburn Brdcastg. Co., 1370 kcs. 100(.25).
 Orlando, Fla., Hazlewood Co., 1390 kcs. 1 kw. unlt.
 Pawtucket, R. I., Pawtucket Brdcastg. Co., 1390 kcs. 1 kw. unlt.
 Phoenix, Ariz., M. C. Reese, 1200 kcs. 100(.25) unlt.
 Ponce, P. R., Portorican American Brdcastg. Co., 1340 kcs. 1 kw.
 Pontiac, Mich., King-Trendle Brdcastg. Corp., 1440 kcs. 250 unlt.
 Riverside, Calif., Brdcastg. Corp. of America, 1390 kcs. 1 kw.
 Riverside, Calif., Richard T. Sampson, 1390 kcs. 250 days.
 Rochester, N. Y., Edward J. Doyle, 1270 kcs. 500 days.
 Saginaw, Mich., Saginaw Brdcastg. Co.
 Salina, N. Y., Sentinel Brdcastg. Corp., 620 kcs. 1 kw. unlt.
 Sandusky, Mich., Thumb Brdcastg. Co., 880 kcs. 1 kw. days.
 San Juan, P. R., Enrique Abarca Sanfeliz, 580 kcs. 1 kw. unlt.
 San Juan, P. R., United Theaters, Inc., 580 kcs. 1 kw. unlt.
 Santa Monica, Calif., A. E. Austin, 1160 kcs. 100(.25).
 Scranton, Pa., Lackawanna Brdcastg. Co., 1370 kcs. 100(.25).
 Scranton, Pa., Union Brdcastg. Co., 1370 kcs. 100(.25) unlt.
 Shelby, N. C., Jos. A. Lattimore, 1370 kcs. 100(.25) unlt.
 Spartanburg, S. C., S. Advertising Co., 1370 kcs. 100(.25) unlt.

(Please turn to page 82)

The SHORTWAVE STATIONS

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

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

2320 TGWC	Guatemala City, Guat. 1 kw. See TGWA. Sun, 10:30 am-5:15 pm; 7 pm-midnight. Other days, 7:45-9 am; 12-45-3:45 pm; 7:30 pm-12:15 am.	4810 YV1RU	Maracaibo, Venez. "Radio-difusora Maracaibo," Luis Mantellini H.
2340 HOA	Panama City, Panama. "Ron Dalley." Salvador Graziani, Box 1121. (6-10 pm).	4815 HJ2BAB	Cucuta, Colombia. 600 w. Relays HJ2BAC, "La Voz de Cucuta."
2437 HRN	Tegucigalpa, Honduras. 500 w. Noon-1:30 pm; 7-10:30 pm. "La Voz de Honduras."	4820 YV3RN	Barquisimeto, Venez. "Radio Barquisimeto," Amilcar Segura.
3400 YV5RW	Caracas, Venez. "Radio Turmerito," Cesar Banuls.	4825 HJ5EAD	Cali, Colombia. 720 w. "La Voz del Valle."
3450 YV6RC	Barcelona, Venez. Gobierno Edo Anzoategui.	4830 YV5RH	Caracas, Venez. Relays YV5RG, "Ondas Populares," Gonzalo Veloz Mancera, Apto. 1931.
3480 YV3RF	Acarigua, Venez. "La Voz del Llano," Pausides Sigala.	4835 HJ1ABE	Cartagena, Colombia. 525 w. Relays HJ1ABF, "La Voz de los Labs. Fuentes," Apartado 31.
3480 2ZB	Wellington, New Zealand. 200 w. At 7 am.	4840 VUC2	Calcutta, India. 10 kw. 7:30 am-1 pm. All-India Radio.
3488 XZZ	Rangoon, Burma. 50 w. W. J. Byrnes, Burma Independent Wireless Sub-Division, Strand Road. (Sun, 8:30-10:30 pm; Daily 5:30-9 am; 8:20-10:30 pm).	YV4RX	Maracay, Venez. "Radio Maracay," Luis Croquer.
3490 CR7AB	Lourenco Marques, Mozambique. Sun, 5-7 am; 10 am-2 pm; Weekdays, midnight to 1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm. Radio Club de Mocambique, Box 594.	4845 HJ3CAD	Bogota, Colombia. 720 w. "Nueva Granada."
3500 YV5RV	La Guaira, Venez. "Emisora Vargas," Gonzalo Veloz Mancera.	4850 YV1RZ	Trujillo, Venez. "Radio Valera," L. Febres Jelambi.
4002 CT2AJ	Ponta Delgada, Azores. Wed, Sat, 5-7 pm.	4860 YV1RL	Maracaibo, Venez. 300 w. Relays YV1RK "Radio Popular," sign off "National Emblem March." Jose A. Higuera, Apartado 247. (6-11 pm).
4107 HCJB2	Quito, Ecuador. 1 kw. 7-8:15 am; 11:30 am-2:30 pm; 2:45-10:15 pm. "Broadcasting Provincial," Clarence W. Jones, Casilla 691.	4865 HJ2BAJ	Santa Marta, Colombia. 751 w. 10:30 am-2 pm; 5-11 pm. "La Voz de Santa Marta."
4273 RV15	Khabarovsk, U.S.S.R. 20 kw. 4-10 am. Miss Rowena Meyer, Radio Committee.	4870 YV2RN	San Cristobal, Venez. "La Voz del Tachira," Jesus Diaz Gonzalez.
4300 4ZB	Dunedin, New Zealand. 30 w. At 6 am.	4875 HJ6FAH	Armenia, Colombia. 600 w. 9 am-2 pm; 6-11:30 pm. "La Voz de Armenia."
4770 YV1RT	Maracaibo, Venez. "La Voz de la Fe," Pedro A. Bermudez V.	4878 ZTD	Durban, Union of S. Africa. See "Johannesburg." (11:45 pm-12:50 am).
4775 HJGAB	Bucaramanga, Colombia. 750 w. 6-10:45 pm. "Radio Santandar."	4880 VUB2	Bombay, India. 10 kw. 8 am-1 pm. All-India Radio.
4780 YV1RO	Trujillo, Venez. "Radio Trujillo," Pedro J. Torres.	YV6RU	Ciudad Bolivar, Venez. "Ecos del Orinoco," E. Torres Valencia.
4785 HJ1ABB	Barranquilla, Colombia. 600 w. Relays HJ1ABA, "La Voz de Barranquilla," Apartado 715. Interval signal, 3 chimes.	4885 HJ4DAP	Medellin, Colombia. 501 w. Relays HJ4DAQ, 9 am-2 pm; 7 pm-midnight. "Emisora Claridad."
4790 YV5RY	Caracas, Venez. "La Voz de la Esfera," Edmundo Suegart.	4890 YV1RX	Maracaibo, Venez. "Ondas del Lago," Nicolas Vale Quintero.
4795 HJ3CAF	Bogota, Colombia. 750 w. La Voz de Bogota.	4895 HJ3CAH	Bogota, Colombia. 720 w. "La Voz de la Victor." Relays HJ3CAI. Almacenes Victor, Apto. 565.
HJ6FAI	Ibague, Colombia. 501 w. "Ecos del Combeima."	4900 YV6RT	Ciudad Bolivar, Venez. "Radio Bolivar," Miranda & Behrens.
4800 YV1RV	Maracaibo, Venez. "Ecos del del Zulia," Luis Garcia.	4910 YV1RY	Coro, Venez. "Radio Coro," Roger Leyba.
4805 HJ6FAB	Manizales, Colombia. 501 w. "Radio Manizales."	4920 VUM2	Madras, India. 10 kw. 7:30 am-1 pm. All-India Radio.

PAoEH (c); PAoIP (h); PAoMC (c);
 PAoMZ (ac); PK6XX (j); PY2AC (j);
 PY2BC (c); PY2BH (c); PY2ER (j);
 PY2GA (c); PY2GC (cj); P2KB (c);
 P3EN (cj); PY4E (j); PY5AQ (cj);
 PY7AI (cj); PY7BA (c); PY8AB (j);
 PY9DK (c); SM5SI (h); SPIQE (c);
 TG5JG (ch); TG9BA (chj); T2TADC (c);
 TI2AV (c); TI2EA (j); TI2FG (c); TI2MC
 (f); TI2PG (ch); TI2RC (c); TI3AV (f);
 VK2ADU (fj); VK2AGU (f); VK2AKR (f);
 VK2BQ (c); VK2UC (cj); VK3KU (j);
 VK3VP (j); VK4ADT (f); VK4GS (c);
 VK4JP (j); VK4KO (j); VK4MW (cj);
 VK5RO (j); VO1Y (aj); VP1WB (j);
 VP2AD (c); VP2LC (cj); VP3CO (chj);
 VP3KC (h); VP3LF (chj); VP4BK (c);
 VP6FO (cj); VP6LN (j); VP6VB (cj);
 VP7NS (acj); VP7NU (cj); VP9L (j);
 VP9R (acj); VO2PL (h); YN1IP (j);
 YV1AQ (cfj); YV4AE (cfj); YV4AL (c);
 YV4AX (c); YV5ABE (j); V5ABF (ac);
 5ABQ (j); YV5ACA (c); YV5ACH (c);
 YV5AK (cfj); YV5AR (c); YV5AZ (c);
 ZS5Q (h); ZS6AJ (h).

CST—10 Meters

Reported by (d): CE3AG; CE3CZ;
 K4FAB; K5AT; K6MVX; K6NZO;
 K6OQM; K6PLZ; LU8AB; NY1AE;
 TI2FG; TI2RC; TI3AV; YN3DG.

CST—20 Meters

CE1AH (i); CE1AM (k); CE1AO (i);
 CE1AR (j); CE2BQ (i); CE2BX (i);
 CE3AG (i); CE3BK (i); CE3CD (i);
 CE3CG (i); CE3CM (i); E3O (i); E3CZ
 (ii); CE3DW (i); CN8AU (k); CN8BB
 k; O8AR (e); CO8JK (e); CT1AY (k);
 CT1BK (k); CT1OR (k); CT1PM (k);
 CT1QG (k); CT2BF (k); CX2CO (k);
 EI2B (k); EI2L (k); EK1AF (dk); F3OX
 (k); F3PS (d); F8K1 (k); F8NT (k);
 F8TU (k); F8UE (k); F8VP (e); G15Y
 (k); GM6RG (k); GM6WD (k); GM8MN
 (k); GW3KY (e); G2CG (k); G2PU (dek);
 G2UT (k); G2WZ (d); G2XV (k); G3GQ
 (k); G4CY (k); G4IH (k); G5JO (ek);
 G5NO (k); G5VM (e); G5XA (k); G6GH
 (e); G6JL (e); G6KL (k); G6PC (k);
 G6VQ (k); G8CP (k); G8IG (k); G8LP
 (k); G8MX (k); G8SB (k); G8SW (k);
 HC1JB (e); HC2CC (k); HC2HP (i);
 HH2B (ik); HH2PB (i); HH5PA (k);
 HI2AIL (e); HK1AA (d); HK1AG (dik);
 HK1AH (i); HK1AK (e); HK3CG (i);
 HK3CO (i); HK3CX (i); HK4DX (i);
 HK4GC (i); HPIA (ik); HR2A (i); KAI1B
 (d); KA1ME (dek); KA7EF (dk); KF6QKH
 (k); K4EJF (e); K4FAY (di); K4FKC
 (dek); K5AF (k); K5AX (k); K6BJJ (k);
 K6KGA (k); K601J (k); K6PCF (j);
 K6PLZ (e); K6PQW (i); K6PTW (ek);
 LU1QA (k); LU5AM (i); LU5AN (i);
 LU5MD (i); LU5MP (i); LU7AC (ik);
 L8AB (i); LY1J (k).
 NY4AB (k); OA3B (k); OA4AI (k);
 OA4AR (k); OA4AW (k); OA4R (i);
 ON4SC (k); ON4VK (k); PAoMZ (k);
 PK6XX (ek); PY1MH (k); PY2BH (eik);
 PY2GC (ik); PY3DZ (k); PY4EJ (ik);
 P5AG (k); PY5AQ (ik); TG5JG (dk);
 TG9AA (ik); TG9BA (ik); TG9JG (e);
 TI2AC (i); TI2LR (f); TI2PG (i); TI4AC
 (ik); VK2ADR (e); VK2AGU (k); VK2AIU
 (k); VK2AJT (e); VK2JGU (e); VK2PU
 (e); VK4CW (e); VK4PF (e); VK5RN
 (e); VK6KW (e); VK6MW (e); VP1BA
 (k); VP1WB (eik); VP2AT (k); VP2LC
 (k); VP3CO (ek); VP4TK (k); VP5PZ

(k); VP6FO (k); VP6ML (k); VP7NS
 (ik); P7NU (ik); VP9C (e); VP9L (ek);
 VP9R (k); VQ2CM (k); XE1CC (i);
 XE2HY (e); YN1IP (i); YV1AB (d);
 YV4AL (i); YV5ABF (di); ZL2BE (k);
 ZS-H (k).

PST—10 Meters

Reported by (g): VK2GU; VK3CP;
 VK3CZ; VK3XP; YV5AE; ZL1GZ; ZL1HY;
 ZL1MR; L2BE; ZL3BV; ZL3CV; ZL3KZ;
 ZL4AF; ZL4FR; ZL4FW.

PST—20 Meters

Reported by (g): CE1AG; CE1AH;
 CE1AR; CE1AS; CE1BC; CE2BX; CE3AT;
 CE3BW; CE3CG; CE3CM; CE3CO;
 CE4AC; CX1AA; CX2CO; GM2U; G2PU;
 G5JO; G6LK; HC1FG; HK1AA; HK4DA;
 J2KN; J4CT; J5CW; J7CB; J8CI; KA1AF;
 KA1AP; KA1CS; KA1CW; KA1ER;
 KA1FH; KA1FS; KA1HS; KA1JM;
 KA1LN; KA1ME; KA1VL; KA1ZL;
 KA7EF; KA7HB; K4FAY; K4FKC;
 KLAF; K6BAZ; K6BNR; K6CMC; K6LW;
 K6LVC; K6NYD; K6NZQ; K6OWS;
 K6OJI; K6OQE; K6PTW; K6RCB;
 K7AO; K7GTP; K7LZ; LU1DJU; LU1HI;
 LU1QA; LU4AC; LU5CZ; LU6DJ; LU7BC;
 LU7BK; LU8AB; LU8AE; LU8EC;
 OA4AW; OA4C; OA4R; ON4VK; PK2AY;
 PK2LZ; PK3WI; PK4KS; PK6XX;
 PY2HC; TG5JG; TG9AA; TG9BA; TI2PA;
 TI2RC; TI2SU; TI3AV; TI4AC; VK2ADE;
 VK2ADT; VK2ADU; VK2AGH; VK2AGR;
 VK2AGU; VK2AHA; VK2AHP; VK2AIL;
 VK2AIQ; VK2AIZ; VK2AJP;
 VK2AJT; VK2AKR; VK2BN; VK2BQ;
 VK2CP; VK2HS; VK2NO; VK2NS;
 VK2OQ; VK2QI; VK2QR; VK2RB;
 VK2TI; VK2TU; VK2UC; VK2YL;
 VK2ZC; VK3AW; VK3BZ; VK3DA;
 VK3DG; VK3EH; VK3EK; VK3GG;
 VK3IG; VK3JG; VK3OA; VK3QG;
 VK3QK; VK3RN; VK3RZ; VK3US;
 VK3VQ; VK3WX; VP1BA; VP1WB;
 VP5PZ; VP6GO; VP7NU; VS2AL;
 VU2AS; XU1B; XU5TH; XU6KL;
 XU8RB; XZ2EX; XZ2JB; ZS6DV.

Hawaii—20 Meters

Reported by (b): CE3AT; CE3CZ;
 CO2AM; CO2RG; CO2UF; HC1FG; HH2B;
 HI3NO; HK1AG; J8CI; KA1CS; KA1ER;
 KA1JP; KA1ME; KA7EF; KB6OCL;
 LU4CZ; LU7BK; LU8AB; PK2AY;
 PK2WL; PK4AU; PK4DG; PK6XX;
 PY2AC; VK2ADG; VK2ADR; VK2AFE;
 VK3GG; VK4HG; VK4JP; VK4JU;

(Please turn to page 82)

Radio Amateur Call Book

LATEST EDITION

Lists over 40,000 amateurs in every country in the world, and complete lists of all the high frequency commercial stations. Every listener interested in amateur stations should have one. 292 pages.



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The Month's Changes in Station Data

New

1100 Pontiac, Mich.
 1200 KHAS Hastings, Nebr.
 1200 KWBD Plainview, Texas.
 1200 WESX Salem, Mass.
 1200 WRSR Panama City, Fla.
 1200 Sault Ste. Marie, Mich.
 1210 Yuma, Ariz.
 1310 KVIC Victoria, Texas.
 1310 KWFC Hot Springs, Ark.
 1310 WFIG Sumter, S. C.
 1310 WJFB Herrin, Ill.
 1310 WJPR Greenville, Miss.
 1370 WHUB Cookeville, Tenn.
 1370 WMGA Moultrie, Ga.
 1420 CKLN Nelson, B. C.
 1530 Akron, Ohio.

Frequency

1370 WJAC Johnstown, Pa., from 1310.

Power

550 WDEV Waterbury, 1000 from 500.
 890 KARK Little Rock, 1000 from 500(1).
 1200 WCLO Janesville, 250 from 100(.25).
 1200 WLVA Lynchburg, 250 from 100(.25).
 1210 WHAI Greenfield, 250 from 100(.25).
 1210 WJLS Beckley, 250 from 100(.25).
 1210 WSCB Chicago, 250 from 100(.25).
 1310 WEBR Buffalo, 250 from 100(.25).
 1310 WEMP Milwaukee, 250 from 100(.25).
 1370 KTOK Oklahoma City, 250 from 100(.25).
 1370 WBLK Clarksburg, 250 from 100(.25).
 1380 WING Dayton, 250(.5) from 200.

Network

1260 KVOA Tucson, new NBC.
 1370 WBLK Clarksburg, new NBC.

Owner

1140 WSPR WSPR, Inc., Springfield, Mass.
 1310 KOMA Oil Capital Sales Corp., Tulsa, Okla.
 1310 WSAV WSAV, Inc., Savannah, Ga.
 1560 CMBF Radio Emisora Nacional, Havana, Cuba.

Permit to Change Power

590 WKZO Kalamazoo, to 250(1).
 630 WPRO Providence, to 1000(5).
 760 KXA Seattle, to 1000.
 770 KFAB Lincoln, to 50000.
 850 WKAR E. Lansing, to 5000.
 880 WRNL Richmond, to 1000.
 890 KFNF Shenandoah, to 1000(5).
 900 KGBU Ketchikan, to 1000.
 900 WELI New Haven, to 250(.5).
 920 KFEL Denver, to 1000.
 920 KVOD Denver, to 1000.
 940 WICA Ashtabula, to 500.
 1190 KTKC Visalia, to 1000.
 1250 KIT Yakima, to 500(1).

CP—Construction permit.
 mod.—modification.
 lic.—license.
 ltd.—limited time.
 unlt.—unlimited time.
 S. H.—specified hours.

1250 WKST New Castle to 1000.
 1350 KWK St. Louis, to 5000.
 1350 WMBG Richmond, to 1000(5).
 1370 KFRO Longview, to 1000.
 1370 WPRO Mayaguez, to 1000(2.5).
 1430 KINY Juneau, to 1000.
 1430 WHP Harrisburg, to 1000(5).
 1460 KSTP St. Paul, to 50000.
 1460 WISV Washington, to 50000.
 1490 WCKY Covington, to 50000.
 1500 KSAL Salina, to 500(1).

Permit to Change Location

1050 KFBI Abilene, to Wichita, Kans.
 1200 WHBY Green Bay to Appleton, Wis.
 1210 WGRM Grenada to Greenwood, Miss.
 1500 WKBB E. Dubuque, to Dubuque, Iowa.

Permit to Change Frequency

770 KFAB Lincoln, Nebr., to 1080.
 900 WELI New Haven, to 930.
 920 KVOD Denver, to 630.
 1190 KTKC Visalia, to 890.
 1200 WJBL Decatur, to 1310.
 1260 KPAC Port Arthur, to 1220.
 1310 WBOW Terre Haute, to 1200.
 1320 KGMB Honolulu, to 590.
 1370 KFRO Longview, to 1340.
 1370 WPRO Mayaguez, to 780.
 1450 KTBS Shreveport, to 620.
 1500 KSAL Salina, to 1120.

Stations Using Special Frequencies

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

Applications to the FCC

KABC, San Antonio, CP 630 kcs. 1000(5) unlt.
 KEEN, Seattle, CP 1370 kcs. to 1420 kcs.
 KERN, Bakersfield, CP 1380 kcs., 1000 w.
 KEX, Portland, CP 1160 kcs. unlt.
 KFBB, Great Falls, mod. of lic. for 900 kcs., 5 kw.
 KFIO, Spokane, CP 950 kcs., 1 kw. unlt.
 KFLZ, Ft. Worth, CP 930 kcs., 500 w. unlt.
 KFNF, Shenandoah, mod. of CP to move to Council Bluffs.
 KFPW, Ft. Smith, CP 1370 kcs.
 KGLO, Mason City, CP 1270 kcs., 1 kw. unlt.
 KGMB, Honolulu, CP 590 kcs. 1000(5) unlt.
 KMAC, San Antonio, CP 930 kcs., 1000 w. unlt.
 KOH, Reno, CP 630 kcs., 1 kw. unlt.
 KOVC, Valley City, CP 1340 kcs., 500(1).
 KOY, Phoenix, mod. of lic. for 550 kcs.
 KRMC, Jamestown, CP 900 kcs., 1 kw.
 KROC, Rochester, CP 920 kcs., 500(1) unlt.
 KRRV, Sherman, CP 880 kcs., 1 kw. unlt.
 KSD, St. Louis, CP 630 kcs.
 KSEL, Pocatello, CP 600 kcs., 1 kw. unlt.
 KTAT, Ft. Worth, CP Wichita Falls, 1000(5).
 KTBS, Shreveport, CP 620 kcs., 1000(5) unlt.
 KUTA, Salt Lake City, CP 570 kcs., 1 kw.
 KWK, St. Louis, CP 630 kcs.
 KXL, Portland, CP 730 kcs., 10 kw. unlt.
 KXOK, St. Louis, CP 630 kcs., 1000(5).
 WABI, Bangor, CP 560 kcs., 1 kw. unlt.
 WAPI, Birmingham, CP 1070 kcs., 50 kw. unlt.
 WCAD, Canton, CP Watertown, N. Y.

and 14.2 megs. This station is supposed to be located in China near the Tibet border, but K6CQK believes that he is in Mongolia.

OCEANIA

The usual number of VK's have been heard but the band needs a good brushing up in that direction, too.

The best news from down under is that by this time VR6AY will again be back on the air. His transmitter has been repaired. It has been rumored that a portable station, VR6AB, has been operating on the island. However, according to the WDXA, the station is a pirate, and they know for certain that Andy Young's rig is the only one on Pitcairn Island.

Quite a few KA's have been heard lately. The best time, of course, to log them is early in the morning—about 6 or 7 am, and with a north and south antenna. Most active on 20 meter phone are: KA1AF, 1AP, 1CS, 1CW, 1ER, 1FH, 1FS, 1HS, 1JM, 1LB, 1ME, 1YL, 1ZL, 7EF, and 7HB.

A new station in the Fiji Islands on 20 meter phone has been reported by "Radio Times", Australian publication. It is VR2QF, not listed in the call book.

Jack Welsh, Kingston, Ill., reports hearing KF6QKH, of Baker Island, on the high end of the American phone band, talking to a W4.

KG6NVJ verifies with a QSL card having the call in blue outlined in black against a silver background. KF6DHW has returned to Honolulu and his place at Phoenix has been taken over by KF6PMO.

NORTH AMERICA

We have a very interesting letter from Thomas Myers, VP5AD, founder and secretary of the Jamaica Amateur Radio Club, telling us of the club's activities. There are now 30 members, 26 more than the club started with in February of this year.

A field day was held recently, dur-

ing which a transmitter built entirely by club members was used in contacting several countries in Europe and the island of Guam. Power used was 60 watts.

Myers gave us a list of bootleg calls which he said were being used. They are: VP5AM, VP5PD, VP5PQ, VP5PI, VP5DR, VP5SS, and VP5ANH. There have been no licenses issued for these calls, he said, so if you hear any of these stations, it would be well to ignore them.

VP4TJ, located in Trinidad, was overheard in a QSO with W5FUW, saying that he was using from three to five watts to an 802 tube! He was Q5 R8 in Ohio—figure that out! He gave his QRA as VP4TJ, in care of Radio Distribution, Port of Spain, Trinidad.

YN3DG and YN1IP are the Nicaraguan stations most commonly heard. Has anyone received QSL's from them?

Bermuda phone stations, listed by VP9L in a QSO are as follows: VP9R, VP9G, VP9J, and VP9L. VP9X is on CW.

Many are reporting reception of NY4AB.

SOUTH AMERICA

Chilean stations are being heard rather nicely and outrank the other countries in South America, according to our listeners' reports. There seems to be little DX heard from South America, however. Chileans most active are: CE1AH, 1AO, 1AR, 2BQ, 2BX, 3AG, 3BK, 3CD, 3CG, 3CM, 3CO, 3CZ, and 3DW (list by Jas Roberts).

We have a letter from ON4HC who says that South Americans were very hard to QSO during the past few months. It seems that similar conditions existed all over Europe, possibly with the exception of Spain and Portugal.

LU8AB is a 100 percent QSL ham, and if you haven't got his QSL then write to him if you catch him on the air. Felix Gunther is his name, and

he probably is one of the most noted amateurs in the world. He also operates LU1DA. He is a customs broker in Buenos Aires and has a summer home in the resort town of Hurlingame, just 30 miles from the city. He operates LU1DA there in the summer and LU8AB in the city during the winter months.

But winter up here means summer down there so this winter LU1DA will probably be heard more often than LU8AB.

Among the interesting QSO's of LU1DA is listed a conversation with a submarine, submerged off the northeastern coast of North America.

CHATTER: Ten meter reports will be given in future by Ralph Kastner (R1088), who proudly announces the purchase of a new Howard 430 receiver.....More stations that QSL: ZS5Q, CX2CO, YV4AE, VK2ADU, VK2AGU, and EK1AF, furnished by Demon DX-er George Nahas, chairman of the Brooklyn Radex chapter.....Bertram Podall (R946), 15-year-old DX-er of Gilman, Vermont, just missed a Danish ham because VP7NS came on the air using the same frequency.....For a revelation in DX try the commercial CW stations, if you can read even a little bit of code, advises Ken Munn of Albuquerque, N. Mexico. He has logged PLK, XOB, PLJ, JYO, FZG3, and PCT. He also had his 11-tube Midwest lined up and advises everyone who has a receiver three or four years old to do so.

Some of the better DX calls heard:

Jack Welsh: KF6QKH, LY1J, VQ2CM.

Bill Wells: CN8BD, CP1BA, CT1PW, CX3BL, ES5D, HB9BL, HB9DE, I1SM, I1TKM, LY1J, ON4QY, SU1AX, SU1MW, YS1AP.

R. L. Blanchard: SM7UC, SP1RG, CT1PT, PAOMZ, FA8VP, CT2BP.

C. J. Fern: J8CI, KA1CS, KA1JP, KA7EF, KB6OCL, PK2AY, PK2WL, PK4AU, PK4DG, VQ2CM, VS2AK, XUOA, XU6KL.



Letters are black and red on a field of yellow, with the island of Tasmania in the center of the QSL of VK7LZ. Watch closely for him, since, as his card states, he is a 100 per cent QSL station.

Amateur Calls Heard

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

EST—10 Meters

Reported by (c): CE2BX; CX1AA; HI2K; K4DSD; K4FDC; K4FGS; LU1DJ; LU7BK; LU8AB; VP6YB.

EST—20 Meters

CE1AC (c); CE1AM (j); CE1AO (c); CE1AS (c); CE3CG (cj); CE3DW (j); CN8AM (c); CT1IP (c); CT1OR (c); CT1OX (c); CT2BP (acfh); CX2CO (cfj); EA7BA (acf); EK1AF (acf); FA8VP (a); FR8L (f); F8NT (c); GI5ZY (cj); GM2UL (c); GM6WD (cj); GM6RG (j); GM8MN (j); GW3AX (j); GW3KY (j); G2AI (j); G2AV (j); G2BB (c); G2HK (c); G2IW (j); G2PU (cj); G2SG (c); G2ST (c); G2UT (j); G2XV (j); G3BM (j); G3QK (c); G3YJ (c); G3YK (c); G4AS (j); G5BD (c); G5BJ (c); G5DR (j); G5JO (c); G5LU (j); G5ML (c); G5SO (c); G5TP (cj); G6BY (c); G6CL (j); G6DL (c); G6ML (c); G6RH (c); G6WT (j); G6ZI (c); G8CL (c); G8NT (a); G8SB (j); G8SI (f); G8WS (fj); HA1K (c); HB9AB (h); HB9CD (h); HB9J (c); HC1FG (c); HH2B (c); HH5PA (cfj); HI2K (c); HI3N (j); HI5C (c); HI7G (c); HK1AE (j); HK1AG (j); HK1AK (f); HK1AO (c); HK2CG (f); HK3CG (j); HK3CO (c); HK4DX (c); HPIA (c); HR5C (j); I1PB (c); K4DSE (j); K4EIL (c); K4EJF (cj); K4EMG (c); K4FAB (j); K4FAY (cj); K4FKC (cj); K4UG (c); K6BLZ (h); K61AE (j); K6KGA (c); K6LEJ (ch); K6MVA (fj); K6NYD (c); K6OJE (h); K6OJI (c); K6OQE (fj); K6OTH (h); K6OXI (j); LU1HI (c); LU1IC (c); LU3DF (j); LU3HA (j); LU5CD (f); LU5CK (j); L7AC (cj); LU8AB (j).
 NY4AB (cj); OA4HN (h); ON4AU (a); ON4HS (c); ON4VK (acj); PAoAD (h);

try. Only a few had heard him during his transmissions earlier in the year.

And if you haven't heard him yet don't give up. Two more are scheduled for November. The date of this month's broadcasts were given as follows: Sept. 10, 17, and 24 from 0500 to 0510 GMT (midnight to 10 minutes after, EST) on 14.04 megs. Next month the transmissions will be on 10 meters: Nov. 12 and 19 from 1500 to 1510 GMT (10 to 10:10 pm, EST) on 28.08 megs.

We sincerely hope the amateurs using these frequencies are cooperating by keeping them open so that YL2CD can be logged. We would like to take this opportunity to thank them.

Let's get down to the DX situation. Who's on the air? Where are they? Traveling east, we find the continent of

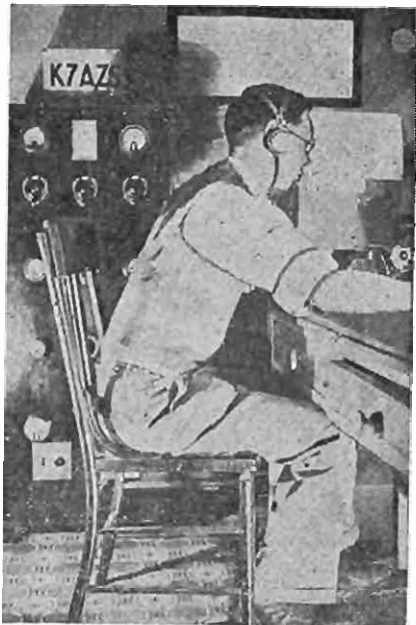
EUROPE

GW3KY recently sent a QSL card and mimeographed notice to Dick Callihan (R1184), who passed it along to us. The notice from the Welsh station read something like this:

"If you are a shortwave listener, DX correspondent, or are in any way interested in helping your friends to obtain a card from GW3KY, you will assist by making this known wherever possible.

"All QSL'S will be answered if return postage is sent. If you have not received a card, and you have written to GW3KY, it may be that your letter was sent by mistake to G3KY, since he says that he is being pestered by cards intended for GW3KY. Therefore, if you have not received a QSL, write again, but don't forget to include postage. Due to the large number of requests received, it is impossible for us to undertake the expense of mailing."

The card is a beauty, printed on a silver background. In the upper right hand corner is a flag, consisting of two horizontal bars, upper



William "Bill" Wagner at the helm of K7AZ in Anchorage, Alaska. He is part-owner of BCB Station KFQD, farthest north of any in U.S. or pos-

one silver, lower one green, with a red dragon superimposed. The printing is green and the call letters red.

ZB2B on about 14.015 megs. has been heard. He's located in Gibraltar and is the only active phone there that we know. SV1CA is still on the air. HA1K has concluded his tests but still is being heard occasionally on about 14.075 megs.

We heard a few stations calling OZ2EA in Denmark not so long ago, but couldn't log him. He was on 20 meter fone.

G8JQ was heard by Jack Welsh operating the rig of W8DST while the British ham was in the U.S. on a visit.

We hear that ZC6RL will soon be operating on 20 meter phone. He'll be heard on the low frequency side of the American phone band. Still



The novel QSL card of Alice Rodriguez, the first lady operator in Puerto Rico. Colors are silver, black, orange, and purple.

active is ZC6HS, P.O. Box 163, Haifa, Palestine. Don't forget that these hams are all working under-cover and that reports should be sent in plain envelopes with no mention of radio.

SP1QE was heard by Scott Frothingham; Bill Wells logged LY1J playing recordings, then after a CQ talking to CO2RH; SP1RG and SM7UC heard by R. L. Blanchard (R485).

AFRICA

Found: a chance to log the little-heard island of Mauritius, unless you've also heard the same ham we have. We had to get up early in the morning to hear him—7 am. But he came in QSA 4 R 6-7! He is a new one, VQ8JM. His frequency is approximately 14.13 megs. He told

W8BYR in a QSO that a letter addressed in care of VQ8AS would reach him. But mail to VQ8AS should be sent in care of VQ8AF, according to the call book (vicious circle). Well, the QRA of VQ8AF is V. de Robillard, Box 106, Port Louis, Mauritius.

South Africans haven't been coming in very well at all. We wonder how many have logged OQ5AA, who is back on the air again? Has anyone a QSL from ZE1JX? The Southern Rhodesia ham failed to QSL for us although he received his IRC all OK.

Many report QSL's from EK1AF, who may be heard Q5R9. SU1AX, SU1MW heard. OQ5ZZ, Gatti Expedition, operates on Wednesday and Friday between 5:30 and 8 pm. Poste Restante, Stanleyville, Belgian Congo is the QRA.

ASIA

The reception from Asia has been notoriously poor—even the hams have been saying that. But they're saying, too, that they expect better conditions from now on.

Our QTH representative in Los Angeles, William Pieper (R627), sends a very fine report. He received an interesting card from J8CI, with odd clubs shown on each side of the card. On these clubs carved Japanese or Korean symbols may be seen, while at the top of each is a grotesque face. This Japanese amateur may be put on the 100 percent. QSL list.

Other J stations reported heard by Bill are: J4CT, J5CW, and J7CB. PK2AY, 2LZ, 3WI, 4KS, and 6XX are active. VS2AK, VS2AL, VU2AS, XU1B, XU5TH, XU6KL, XU8RB, XZ2EX, and XZ2JB were logged.

C. J. Fern, of Lihue, Hawaii, is also hearing J8CI, and informs us that his QRA is Katsumi Ninomiya, 66 Tojincho, Keijofu, Chosen, Japan.

Fern also reports XU6KL on 14.04 megs. His QRA is Box 15, Kweilin, Kwangsi Province, China. Frequencies for XUOA given as 14.12, 14.05,

- 6147 ½ ZRD Durban, Union of So. Africa. 200 w. See "Johannesburg." Sat, 3:30-7:30 am; 9-11:15 am; Sun, 5:30-7 am; 9-11:16 am; Weekdays, 11:45 pm-12:50 am.
- 6150 CJRO Winnipeg, Man. 2 kw. James Richardson & Sons, Ltd., 157 Royal Alexandra Hotel.
- 6150 TIEMC San Jose, C. Rica. 250 w. "Radio El Mundo," Rafael Hinc Ch.
- 6165 TILS San Jose, Costa Rica. 2 kw. "Para Ti," Luis Saenz Mata, Aptdo. 3.
- 6165 Bern, Switzerland. 25 kw. See "Bern."
- 6170 HI4V San Francisco de Macoris, D. R. 100 w. Luis R. Betances R.
- 6170 W2XE New York, N. Y. 10 kw. See "W2XE."
- 6174 XEXA Mexico City, D. F. Relays XEXM, Departamento Autonomo de Prensa Publicidad (DAPP). Sign off, "March of the Toys." 8:30 am-midnight.
- 6182 HI1A Santiago de los Caballeros, D. R. 75 w. "La Voz del Yague," Rafael Western. (Weekdays, 8-10 pm).
- 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 HVJ.
- 6190 KGEI San Francisco, Calif. 20 kw. See "KGEI."
- 6190 TG2 Guatemala City, Guat. 200 w. "Radio Morse," Director General of Electrical Communications. (Sat, 7:30-9 am; 6 pm-1 am; Sun, 7:30-11 am; 3-8 pm; Other days, 7:30-9 am; 6-11 pm).
- WGEO Schenectady, N. Y. 40 kw. See "WGEA."
- 6200 COKG Athlone, Ireland. Santiago de Cuba. 1200 w. Relays CMKG. "Ask For Bacardi." Sres. Grau y Caminero, Aptdo. 137. Daily exc. Sat, 9 am-11 pm.
- XEXS Mexico City, D. F. 100 w. Departamento de Salubridad Publica.
- ZGE Kuala Lumpur, F.M.S. Institute of Medical Research. Sun, Tue, Fri, 6:40-8:40 am. Saigon, Fr Indo-China.
- "Radio Boy-Landry," Establishments Boy-Landry. 5:30-9 am.
- 6235 HRD2 La Ceiba, Honduras. 250 w. 8-11 pm. "La Voz de Atlantida."
- 6243 HI1N Trujillo, D. R. 700 w. Weekdays, noon-2:30 pm; 5:45-10 pm. Sign off national anthem. Relays HIN. J. M. Bonetti Burgos.
- 6280 HI1G Trujillo, D. R. 200 w. Relays HI1G. Andres Cordero Puello.
- 6282 COHB Sancti-Spiritus, Cuba 150 w. Relays CMHB, V. E. Wiess y O. Ramirez, Calle Independencia 33. 9-11 pm.
- 6295 OAX4G Lima, Peru. 400 w. Relays OAX4B, "Radio Grellaud," Roberto Grellaud y Cia., Sen Abencay 915-23 (7-9:30 pm). Villarica, Paraguay, 1 kw. "Radio Cultura."
- 6312 ZP14
- 6316 HI1Z Trujillo, D. R. 100 w. Relays HI1Z. Frank Hatton.
- 6330 COCW Havana, Cuba. 7 am-midnight. Relays CMW. "La Voz de las Antillas," Apartado 130.
- 6335 OAX1A Chiclayo, Peru. 200 w. "La Voz de Chiclayo." Elias Aguirre 171, Casilla 9. Sign off, "Good Night Waltz." (Sat, 10 pm-midnight; Other days, 8-11 pm).
- 6340 HI1X Trujillo, D. R. 900 w. Relays HIX. J. R. Saladin. (Tues, Fri, 8-10 pm).
- 6351 HRP1 San Pedro Sula, Honduras. 100 w. 12:30 pm-12:30 am. "El Eco de Honduras."
- 6355 IAC Rome, Italy. See "Rome." (3-3:35 pm).
- 6380 ZIZ Basseterre, St. Kitts. (Reported on 6384). Daily 4-5 pm; Wed, 7:7:30 pm.
- 6383 HI9B Santiago, D. R. 200 w. Jacinto L. Sanchez, Aptdo. 95.
- 6420 HI1S Santiago de los Caballeros, D. R. 20 w. "La Voz de La Hispaniola." (6-11 pm).
- TGQA Quezaltenango, Guat. 200 w. Relays TGQ, "La Voz de Quezaltenango," Director General of Electrical Communications. (Sat, 10 pm-1 am; Sun, 1-3 pm; Other days, 9-11 pm).
- 6480 HI1L Santiago, D. R. 100 w. "Emisora Nacional," Maria J. Tavarez, Calle Pres. Trujillo 97. (6:30-8 am; 5:30-7 pm; 8-9:45 pm).
- 6425 W2XGB Hicksville, N. Y. 10 kw. Press Wireless, Inc.
- 6490 TGWB Guatemala City, Guat. 1 kw. (Reported on 6495). See TGWA.
- 6500 HIL Trujillo, D. R. 60 w. J. C. Teixido, Aptdo. 623.
- 6550 TIRCC San Jose, C. Rica. 500 w. Accion Catolica, Prbo. Carlos Borge, Aptdo. 1064.
- 6565 HI5P Puerto Plata, D. R. 30 w. J. M. Modesto.
- 6590 COCU Havana, Cuba. Jorge Garcia Serra, Estrada aPlma 25, Vibora. (Sun, 6:55 am-midnight; Weekdays, 6:55 am-11 pm).
- 6600 HI6P Trujillo, D. R. 100 w. Emilio Garden, Jr.
- 6622 PRADO Rio Bamba, Ecuador. Fabrica de Tejidos "de El Prado," Aptdo. 98. (Thur, 9-11 pm).
- 6630 HIT Trujillo, D. R. 100 w. "La Voz de La RCA-Victor," F. A. Sanabia, Aptdo. 1105. Interval, bells; sign off, national anthem. (Sun, 10:45 pm-12:45 am; Weekdays, 5:45-8:45 pm).
- 6638 HC2RL Guayaquil, Ecuador. 200 w. "Quinta Piedad," Dr. Roberto Levi, Casilla 759; Interval, "Hello, America," sign off,

- 6660 HI6Y national anthem. (Sun, 5:30-7:30 pm; Tues, 9-11 pm).
Trujillo, D. R. 30 w. Alfonso Cuervo.
- 6675 HBQ Geneva, Switzerland. "Radio Nations." (Sun, 1:45-2:45 pm).
- 6690 VK8SK Broken Hill, Australia. At 2:30 am. Australian Aerial Medical Service.
- 6700 TIEP San Jose, C. Rica. 1 kw. "La Voz del Tropico." Eduardo Pinto H., Aptdo. 257. (4-11 pm).
- 6710 PMH Bandoeng, Java, N.E.I. 1500 w.
- 6780 HIH San Pedro de Macoris. D. R. 250 w. "La Voz de Hig-uamo," Domingo Dominguez.
- 6800 PZH Paramaribo, Surinam.
- 6960 Z2B Wellington, New Zealand. 200 w. Amateurs.
- 7000 to 7300 Valladolid, Spain. 7:30 am-5:30 pm.
- 7006 FET1
- 7010 XPSA Kweiyang, China. 10 kw. (Reported on 6970 and 7140). (5:30-10:55 am).
- 7088 P11J Dordrecht, Netherlands. 50 w. Technical College. (Sat, 10 am-12:50 pm).
- 7090 FO8AA Papeete, Tahiti. Radio Club Oceanien. (Tues, Fri, 11 pm-midnight).
- 7100 EA9BJ Spanish Morocco.
- 7177 CR6AA Lobito, Angola. (Wed, Sat, 2:45-4:30 pm).
- 7200 EA8AE Las Palmas, Canaries. (Reported on 7150).
- 7220 I2RO11 Rome, Italy. 100 kw. See "2RO."
- 7222 YV9AB In Venezuela on Guiana-Brazil Border. Expedition Tecnico de Minería y Geologia, Ministerio de Fomento, Caracas.
- 7260 FET8 Spanish Morocco. (5-7 pm).
- 7270 EA8AS Teneriff, Canaries. Relays EAJ43. (Wed, 4-5 pm).
- 7300 VIG Port Moresby Papua. Relays 4 pm. A call sign, not time.
- 7310 Madrid, Spain. "Radio Nacional."
- 7380 XECR Mexico City, D. F. 20 kw. Secretaria de Relaciones Exteriores. (Sun, 6-8 pm).
- 7435 FG8AH Pointe-a-Pitre, Guadeloupe. "Radio Guadeloupe," Box 125. (6-7:30 pm).
- 7500 EAJ43 Santa Cruz de Tenerife, Canaries. Relays "Radio Nacional of Burgos." (8-9 am).
- 7510 JVP Tokyo, Japan. 50 kw. See "Tokyo" at end of list.
- 7797 HBP Geneva, Switzerland. "Radio Nations." (Sat, 5:30-6:30 pm).
- 7894 YSD San Salvador. Relays YSS, "Alma Cuscatleca." Director General de Telegrafos, Telefonos, y Radio Nacionales.
- 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.
- 8700 COCO Havana, Cuba. 1 kw. Relays CMCK, Luis Casas Romero, Aptdo 98.
- 8820 HCJB Quito, Ecuador. 1 kw. "La Voz de los Andes," Clarence
- 8830 COCQ Havana, Cuba. 1 kw. Relays CMQ, "De La RCA-Victor," Calle 25 No. 225. (Reported on 8850).
- 9030 COBZ Havana, Cuba. 250 w. Relays CMBZ, "Radio Salas," Aptdo. 866. Opens, nightingales and canaries; interval, 4 chimes; closes, national anthem. (6:45 am-1 am).
- 9100 COBX Havana, Cuba. Relays CMBX. Alberto Alvarez, San Miguel 194.
- 9125 HAT4 Budapest, Hungary. 20 kw. Sun, Wed, 7-8 pm; Sat, 6-7 pm. Radiolabor, Kiserleti Allomasa, Gyalui-ut 22, Budapest IX.
- 9125 HC2CW Guayaquil, Ecuador. "Ondas del Pacifico," Aptdo 1166.
- 9234 Bucuresti, Romania. 2 kw. "Radio Experimental," Societatea Romana de Radiodifuziune, Str. Gral. Berthelot 60.
- 9290 HI2G Trujillo, D. R. 200 w. Relays HIG. Andres Cordero Puello.
- 9295 XTC Shanghai, China. (8-9 am).
- 9350 HS8PJ Bangkok, Thailand (formerly "Siam"). Post and Telegraph Dept. Fort de France, Martinique. "Radio Fort de France."
- 9363 COBC Havana, Cuba. Relays CMBC, "El Progreso Cubano," Aptdo 132. (6:55 am-midnight). (Reported on 10000).
- 9400 Saigon, Fr. Indo-China. 10 w. "Radio Michel-Robert," (Weekdays, 7-8:30 am). Willemstad, Curacao. "Radio Curom," Emmastad.
- 9415 PJC2 Bandoeng, Java, N.E.I. 80 kw. Governments Radio-Dienst.
- 9415 PLV
- 9437 COCH Havana, Cuba. 5 kw. Gen'l. Elec. Co. of Cuba, Aptdo. 41. (8 am-midnight).
- 9465 TAP Ankara, Turkey. 20 kw. 11:30 am-5 pm. See "Ankara."
- 9490 KZIB Manila, P. I. Box 440.
- 9500 OFD Lahti, Finland. 1 kw. See "Lahti." (Weekdays, 5-6:30 am; 10 am-5 pm).
- XEWW Mexico City, D. F. 10 kw. 8:55 am-midnight. "La Voz de la America Latina desde Mexico." Aptdo. 2516. Relays XEW. Cadena Radio-difusora Mexicana.
- XGOY Lungso, China.
- 9501 PRF5 Rio de Janeiro, Brazil, 60 kw. "A Voz do Brasil," Cia. Internacional do Brasil, Box 709.
- 9510 CXA8 Colonia, Uruguay. 2500 w. Relays LR3. "Real de San Carlos." (6 am-10 pm).
- 9510 GSB London, Gt. Britain. 20 kw. "B for Broadcasting." See

- "London." (Midnight to 2:20 am; 6:20-9:15 pm; 9:40-11:30 pm).
- HS8PJ Bangkok, Thailand (formerly "Siam"). Opening and interval signals, 3 ascending chimes. Post and Telegraph Dept., Col. Phra Aram.
- VK3ME Melbourne, Australia. 5 kw. Weekdays, 4:7 am. Amalgamated Wireless, (A/sia), Ltd., 167 King St.
- 9520 OZF Copenhagen, Denmark. 6 kw. 2-6 pm; 10-11 pm. Stats-radiofonisk, Heibergsgade 7.
- SP31 Warsaw, Poland. 5 kw. (3-5:30 pm).
- XEDQ Guadalajara, Jal. 100 w. "Hablando a los Continentes desde Guadalajara," Relays XED, Aptdo. 197. Interval, 4 chimes; sign off, "Jarabe Tapatio."
- 9523 ZRG Pretoria, Union of So. Africa. 5 kw. See "Johannesburg," (Sat, 5-7 am; 9:30 am-4:45 pm; 11:45 pm-12:50 am; Sun, 5:30-7 am; 8:30 am-noon; 12:15-3:15 pm; Other days, 5-7 am; 9:30 am-3:30 pm; 11:45 pm-12:50 am).
- 9524 Luxembourg. "Radio Luxembourg," (11 am-1 pm).
- 9525 ZBW3 Hong Kong. 2500 w. Hong Kong Broadcasting Committee, Box 200.
- 9530 KGEI San Francisco, Calif. 20 kw. See "KGEI," (3-9 am).
- 9530 LKC Oslo, Norway. 5 kw. See "Oslo."
- VUC2 Calcutta, India. 10 kw. 2:30-4:30 am. All-India Radio.
- WGEO Schenectady, N. Y. 40 kw. See "WGEA."
- 9535 JZI Tokyo, Japan. 20 kw. See "Tokyo," (4:40-5:30 pm).
- Bern, Switzerland. 25 kw. See "Bern."
- 9536 VPD2 Suva, Fiji. 2 kw. Amalgamated Wireless, (A/sia), Ltd. (5:30-7 am).
- 9540 DJN Berlin, Germany. 50 kw. (12:05-2:30 am; 9:30-11 am; 4:50-10:50 pm.) See "Berlin" at end of list.
- 9544 HH2S Port-au-Prince, Haiti. Societe Haitienne de Radio-diffusion, Boite Postal 103.
- 9550 HVJ Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am. See HVJ.
- TPB11 Paris, France. 25 kw 11:15 pm-6 pm. See "Paris" at end of list.
- VUB2 Bombay, India. 10 kw. 12:30-4 am; 5-7:30 am; 10-11 pm. All India Radio.
- WGEA Schenectady, N. Y. 25 kw. See "WGEA."
- 9560 DJA Berlin, Germany. 50 kw. See "Berlin." (6:30-10:30 pm).
- 9562 OAX4T Lima, Peru. 10 kw. "Radio Nacional." Relays OAX4A. (Reported on 9560). Peruvian Gov't., Av. Petit Thouars 447. (7-8 am; 11:30 am-1:30 pm).
- 9570 WBOS Springfield, Mass. 10 kw. Relays NBC-WBZ-WBZA. Westinghouse Electric & Mfg. Co.
- WPIT Pittsburgh, Pa. 40 kw. See "WPIT."
- 9580 GSC London, Gt. Britain. 20 kw. "C for Corporation." See "London." (1:30-4 pm; 4:20-6 pm; 6:25-9:20 pm; 9:40-11:30 pm).
- VLR Melbourne, Vic., Australia. 2000 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. See "Hilversum." (Sun, 1:40-3 pm; 7:15-9:50 pm; Tu, 1:45-3:30 pm; 7-10:15 pm; W, 7:15-8:40 pm; F, 8-9 pm).
- 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. (Sun, midn't-2 am; 4:30-8:30 am; 11:30 am-1:30 pm).
- 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.
- 9590 WCAI Philadelphia, Pa. 10 kw. See "WCAI." (M, Th, midn't-1 am; 6:30-7:15 pm; M, Sat, 7:30-11:30 pm; Th, 8-11 pm; Sat, 6:30-7 pm).
- WLWO Cincinnati, Ohio. 10 kw. See "WLWO."
- 9595 HBL Geneva, Switzerland. 20 kw. "Radio Nations."
- 9600 XEYU Mexico City, D. F. (9-11 pm).
- 9606 ZRL Capetown, Union of So. Africa. 5 kw. See "Johannesburg." (Sun, 3:30-4:30 am (or 4-5 am); 5:30-7 am; 9-11:45 am; noon-3 pm; Weekdays, 3:20-7:20 am; 9-11:45 am; noon-4 pm; 11:45 pm-12:50 pm).
- 9615 TIPG San Jose, C. Rica. 2 kw. "La Voz de la Victor." Claudia Martinez. (Reported on 9610). (7 am-11:30 pm; English hour Wed, Sat, 9-10 pm).
- 9616 HJ1ABP Cartagena, Colombia. 608 w. 4:30-10:30 pm. "Radio Cartagena," Aptado 37.
- 9620 HAD Budapest, Hungary. (6-9 pm).
- 9630 HJ7GAD Bucaramanga, Colombia. 650 w. Relays HJ7GAE. "Radio Bucaramanga."
- 12RO3 Rome, Italy. 100 kw. See
- 9635 12RO3 Rome, Italy. 100 kw. See 1:01-2:55 pm; 5:30-9 pm).
- 9645 HH3W Port-au-Prince, Haiti. 30 w. 1-2 and 7-8 pm. C. Ricardo Widmaier, Box A-117.
- 9645 JLT2 Tokyo, Japan. See "Tokyo." (8-8:30 pm).
- 9650 IABA Addis Ababa, Ethiopia. 1 kw. E. I. A. R. (Sun, 3:30-3:55 am).

- W2XE New York, N. Y. 10 kw. See "W2XE."
- 9660 CR6AA Lobito, Angola.
- HVJ Vatican City. 15 kw. Wed, 2:30-3 pm; Sun, 5-5:30 am. See HVJ.
- 9670 I2RO9 Rome, Italy. 100 kw. See "Rome." (12:40-5:30 pm; 6-6:30 pm).
- W3XAL New York, N. Y. 35 kw. See W3XL.
- 9675 DJX Berlin, Germany. 10:35 am-4:25 pm. See "Berlin" at end of list.
- 9685 TGWA Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; 7 pm-midnight; weekday, 12:45-1:45 pm; 10-11:30 pm. See TGWA.
- 9690 HMF Baghdad, Iraq. Qasr-El-Lahoor Brdcstg. Station. (3 pm).
- 9692 TI4NRH Heredia, Costa Rica. 750 w. Sun, 7-8 am; Tu, Th, Sat, 9-10 pm. Amando Cespedes Marin, Apartado 40.
- 9700 "Radio Martinique," Fort de France, Martinique. 1500 w. 1:15-2:45 pm; 6-10 pm. Sign off with Marseillaise. Poste Seri. Boite 136.
- 9730 CB970 Valparaiso, Chile. (Reported on 9710). 6:30-11 pm.
- 9755 ZRO Durban, Union of So. Africa. 200 w. See "Johannesburg." (Sat, 3:30-7:30 am; 9-11:15 am; 11:20 am-4 pm; Sun, 5:30-7 am; 9-11:15 am; 11:20 am-3:20 pm; Other days, 3:30-7:30 am; 9-11:15 am; 11:20 am-3:45 pm).
- 9835 IRF Rome, Italy. 20 kw. See "Rome." (5:20-5:40 am; noon-12:25 pm; 12:40-1 pm; 1:50-2:30 pm; 6-9 pm).
- 9860 EAO Madrid, Spain.
- 9925 JDY Dairen, Kwantung. 10 kw. 7-8 am. Manchuria Telephone and Telegraph Co.
- 9985 COCM Havana, Cuba. 1 kw. Relays CCM, "Trans Radio Columbia," 23 No. 1113, Vedado.
- 10220 PSH Rio de Janeiro, Brazil. 12 kw. Relays PRF4; signs off with Brazilian National Hymn. Cia. Radio Internacional do Brasil, Caixa Postal 709. (Weekdays, 6-7 pm; M, 8-8:30 pm; F, 7-7:30 pm).
- 10330 ORK Brussels, Belgium. 11 kw. 1:30-3 pm.
- 10660 JVN Tokyo, Japan.
- 10740 JVM Tokyo, Japan.
- 11402 HBO Geneva, Switzerland. "Radio Nations." Sun, 7-7:45 pm.
- 11535 SPD Warsaw, Poland. 2 kw. Polskie Radio, 5 Masowiecka St.
- 11650 COCX Havana, Cuba. 1 kw. (Reported on 11740). Sun, 6-9 pm; Weekdays, 8 am-midnight. Relays CMX, "Casa Lavin," Box 32, Tokyo, Japan.
- 11660 JVL Rome, Italy. See "Rome." (5:20-5:40 am; 12:07-12:56 pm; 1:50-2:30 pm).
- 11673 IQY Panama City. 300 w. Sun, 9 am-1 pm; 6-10 pm. Week-
- days, 11:45 am-1 pm; 6-10 pm. "Radio Teatro Estrella de Panama." Sign off with "Anvil Chorus." Radio Teatro, Aptdo. 954.
- 11705 JLG3 Tokyo, Japan. See "Tokyo." (8-8:30 pm).
- 11705 SBP Stockholm, Sweden. 500 w. Sun, 1:15-4:15 pm; Wed, Sat, 8-9 pm; Daily 1-4:15 pm. Telegrafverket Tjanstebrev 5.
- 11718 CR7BH Lourenco Marques, Port. E. Agric. 200 w. Radio Club de Mocambique, Caixa 594. (Sun, 5-7 am; 10 am-12 pm; Weekdays, midn't-1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm).
- 11718 TPB6 Paris, France. 7-9:15 pm. See "Paris."
- TPA4 Paris, France. 7-9:15 pm; 9:30 pm-midnight. See "Paris."
- 11720 CJRX Winnipeg, Man. 2 kw. James Richardson & Sons, 157 Royal Alexandra Hotel.
- 11721 ZP14 Villarrica, Paraguay. "Radio Cultura." (7:07-9:07 pm).
- 11730 PHI Huizen Netherlands. 23.6 kw. See Hilversum.
- WSLA Boston, Mass. 20 kw. See "WSLA."
- 11730 WSLR Boston, Mass. 20 kw. See "WSLA."
- 11735 LKQ Oslo, Norway. 5 kw. See "Oslo." (11 am-2 pm).
- 11740 HVJ Vatican City. 15 kw. Tues, 8:30-9 am. See HVJ.
- 11750 GSD London, Gt. Britain. 20 kw. "D For Davenport." See "London." (Midn't-2:30 am; 12:25-4 pm; 4:20-6 pm; 6:20-9:15 pm; 9:40-11:30 pm).
- 11760 TGWA Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm; Weekdays, 12:45-1:45 pm. See TGWA.
- 11770 DJD Berlin, Germany. 50 kw. 11:30 am-4:30 pm; 4:50-10:50 pm. See "Berlin."
- 11780 HP5G Panama City, Pan. 750 w. "Ron Dalley." Opens, closes, with Prelude from "Traviata." Salvador Graziani, Box 1121. (6-10 pm).
- 11780 Saigon, Fr. Indo-China. "Radio Saigon." (6 am).
- 11790 WSLA Boston, Mass. 20 kw. See "WSLA."
- 11800 JZJ Tokyo, Japan. 50 kw. See "Tokyo." (8-9:30 am; 2:30-4 pm).
- 11801 DJZ Berlin, Germany. See "Berlin." (4:50-10:50 pm).
- 11810 I2RO4 Rome, Italy. 100 kw. See "Rome." (4:30-4:55 am; 5-7:25 am; 7:30-8:45 am; 10 am-3 pm; 6-9 pm).
- 11820 GSN London, Gt. Britain.
- 11830 W2XE New York, N. Y. 10 kw.
- WCBI Chicago, Ill. 500 w. See "WCBI."
- 11840 OLR4A Prague, Bohemia. 35 kw. "Radio Podebrady." (M, Tu, W, Th, F, 8-10:30 am; Sun, 7:15-9:55 pm).

11850 HAD	Budapest, Hungary. (2-6 pm).	XEWW	Mexico City, D. F. 10 kw.
11870 VUM2	Madras, India 10 kw. 4-4:30 am. All-India Radio.		"La Voz de la America Latina desde Mexico," Aptdo. 2516.
11880 VLR3	Melbourne, Australia. 1-3 am. See VLR.	15170 LKV	Oslo, Norway. 5 kw. See Oslo.
11885 TPA3	Paris, France. 25 kw. 2-5 am; 11:15 am-6 pm. See "Paris."	15170 TGWA	Guatemala City, Guat. 10 kw. Sun, 12:45-5:15 pm. Week-days, 12:45-1:45 pm. See TGWA.
TPB7	Paris, France. 25 kw. 9:30 pm-midnight. See "Paris."	15180 GSO	London, Gt. Britain. "O For Ocean." See "London." (4:20-6 pm; 6:25-9:20 pm).
11900 I2RO13	Rome, Italy. 100 kw. See 2RO.	15195 TAQ	Ankara, Turkey. 20 kw. Turkish Brdcstg. System. Daily 5:30-7 am.
11900 XGOY	Chungking, China. Central Brdcstg. Station. (5:30-10:30 am; 11-11:30 am; 4-6:30 pm).	15200 DJB	Berlin, Germany. 8 kw. See "Berlin." (5-11 am; 4:50-10:50 pm; Sun, 11:10 am-12:25 pm).
11900 XMHA	Shanghai, China. 445 Racecourse Road. (Reported on 11840 and 11857). (6 am).	15210 WPIT	Pittsburgh, Pa. 40 kw. See "WPIT."
11900	Hanoi, Fr. Indo-China. "Radio Hanoi II." 20 rue de la Pepiniere. (Sat, 8:30-10:30 pm; Sun, 12:01-9:30 am; Other days, 12:01-2:30 am; 6-9:30 am).	15220 PCJ2	Hilversum, Netherlands. 60 kw. See "Hilversum." (Sun, 7:40-9:05 am; M, Th, 7:40-9 am; Tu, 1-2:30 am; W, 9:30-11:30 am; Tu, W, F, Sat, 7:40-8:45 am).
11930 PPH	Rio de Janeiro, Brazil. (5:30 am).	15240 CR7BD	Lourenco Marques, Mozambique. Radio Club de Mocambique, Box 594. (Sun, 5-7 am; 10 am-2 pm; Other days, midn't-1 am; 4:30-6:30 am; 9:30-11 am; noon-4 pm).
11960 HI2X	Trujillo, D. R. 900 w. Relays HIX. J. R. Saladin, Gobierno Dominicano. (Sun, 7:40-10:40 am).	15243 TPA2	Paris, France. 25 kw. 6-11 am. See "Paris."
12230 COCE	Havana, Cuba. "La Voz del Transporte," Prado 18. (8 am-midn't.)	15260 GSI	London, Gt. Britain. "I For Island." See "London." (midn't-2:20 am; 12:15-4 pm).
12235 TFJ	Reykjavik, Iceland. 7500 w. Sun, 1:45-2:30 pm Icelandic State Broadcasting Service, Box 547.	15270 W2XE	New York, N. Y.
12460 HCJB	Quito, Ecuador. (Reported on 12450). Clarence W. Jones, Casilla 691. (Daily exc. Mon, 10-11 pm).	15280 DJQ	Berlin, Germany. 50 kw. Daily, 12:05-11 am; 4:50-10:50 pm. See "Berlin."
13900 YN3DG	Leon, Nicaragua. (Verifies for 10c). (Sat, Sun, 10 pm).	15280 HI3X	Trujillo, D. R. 900 w. (Reported on 17400). Relays HIX. Secretaria de Comunicaciones y Obras Publicas. (Tu, F, 8:10-10:10 pm; Sun, 7:40-9:40 pm).
14125 YV9AB	In Venezuela on Guiana-Brazil Border. Expedicion de la Gran Sabana, Ministerio de Fomento, Caracas.	LRU	Buenos Aires, Argentina. 5 kw. 8 am-1 am. "Radio El Mundo," Calle Maipu 555.
14795 IQA	Rome, Italy. See "Rome." (4:30-4:55 am).	15300 I2RO6	Rome, Italy. 100 kw. See "Rome." (4:10-4:55 am; 10 am-12:06 pm; 1:40-2:30 pm; 3-5:30 pm; 7:30-9 pm).
14935 PSE	Rio de Janeiro, Brazil. W, 4-4:10 pm; Th, Sat, 3-3:30 pm).	15300 LYZ4	Kaunas, Lithuania. (Reported on 15130). (Sun, 1 pm).
15110 DJL	Berlin, Germany. 50 kw. 12:05-2 am; 8-9 am; 10:35 am-4:25 pm. See "Berlin."	15310 GSP	London, Gt. Britain. "P For Progress." See "London." (12:17-1:15 pm; 1:15-4 pm; 4:20-6 pm).
15120 HVJ	Vatican City. 15 kw. Tues, 10:30-11 am; Sun, 1-1:30 pm. See HVJ.	15330 KGEI	San Francisco, Calif. 20 kw. See "KGEI." (1-4 am; 5-8 am; 12:30-8 pm).
15130 TPB11	Paris, France. 25 kw. 2-5 am. See "Paris."	15340 DJR	Berlin, Germany. 50 kw. See "Berlin." (4:55-10:50 pm).
WSLA	Boston, Mass. 20 kw. See "WSLA."	15410	Bucuresti, Romania. 50 kw. "Radio Bucuresti." (9-10:15 pm).
15130 WSLR	Boston, Mass. 20 kw. See "WSLA."	17760 DJE	Berlin, Germany. 50 kw. See "Berlin." (12:05-5:30 am; 6-7:45 am; 11:10 am-12:25 pm; 4:55-9 pm).
15140 GSF	London, Gt. Britain. 15 kw. "F For Fortune." See "London." (5:45-8:50 am; 9 am-noon; 4:20-6 pm; 6:20-9:15 pm).	17770 PH12	Huizen, Netherlands. 23.6 kw. See "Hilversum." (Sun, 6:40-10:05 am; M, Th, 7:40-
15160 JZK	Tokyo, Japan. 50 kw. See "Tokyo." (12:30-1:30 am; 7-7:30 am; 2:30-4 pm; 8-9:30 am).		
VUD3	Delhi, India. 5 kw. 2-4:15 am; 10 pm-midnight. All-India Radio.		

- 9 am; Tu, W, F, Sat, 7:40-8:45 am.)
- 17780 W3XL New York, N. Y. 35 kw. See "W3XL."
- 17785 JZL Tokyo, Japan. See "Tokyo." (4:30-5:30 pm; 8-8:30 pm).
- 17790 GSG London, Gt. Britain. 5:45-8:50 am; 9 am-noon; 12:20-4 pm. See "London."
- 17800 TGWA Guatemala City, Guat. 10 kw. See "TGWA."
- 17810 GSV London, Gt. Britain. 5:45-8:50 am; 12:20-4 pm. See "London."
- 17830 W2XE New York, N. Y. 10 kw. See "W2XE." (Sat, 8:15 am-noon; 12:30-6 pm; Sun, 8 am-noon; 12:30-6 pm; Other days, 8:15-10 am; 1-6 pm).
- 17840 HVJ Vatican City. 15 kw, See HVJ.
- 21470 GSH London, Gt. Britain. 5:45-8:50 am; 9 am-noon. See "London."
- 21530 GSJ London, Gt. Britain. 5:45-8:50 am. See "London."
- 21565 DJJ Berlin, Germany. 6-7:50 am. See "Berlin."
- 21630 W3XAL New York, N. Y. 35 kw. See W3XAL.
- Rome—"Radio Roma-Napoli." Transmitter at Prato-Smeraldo. Interval signal, chirping of bird. Announcements usually by a lady. Sign off with 2 anthems, "Giovinezza" and "Marcia Reale." Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.
- Tokyo—Transmitters are at Nazaki. Sign off with national anthem, "Kimagayo." Nippon Hoso Kyokai, 2-Chome, Uchisaiwaicho, Kojimachi-ku.
- HVJ—Announcements in Dutch, Italian, Polish, English, German, French, Spanish, Russian. A clock or metronome ticks seconds during 5 minutes preceding broadcasts. Bells of St. Peters strike hour. Open and close with Laudetur Jesus Christus." Pontifica Accademia Della Scienze, Roma-Castina Pio IV.
- KGEI—Transmitter at Treasure Island. General Elec. Co., 235 Montgomery St., San Francisco, Calif.
- TGWA—Radiodifusora National, "La Voz de Guatemala." Relay TGW. Return postage is not necessary for verifications.
- VLR—Transmitter at Lyndhurst. Australian Broadcasting Commission (Victorian Division), P. O. Box 1686, GPO, Melbourne, Vic., Australia.
- WCAI—Trans. at Newtown Square. Relays CBS-WCAU. WCAU Brdcastg. Co., 1622 Chestnut St., Philadelphia, Pa.
- WCBI—"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.
- WGEA—Transmitter at South Schenectady. Relays NBC-WGY. Programs commence with discharge of man-made lightening. General Elec. Co., 1 River Road.
- WLWO—Transmitter at Mason. Relays NBC-WLW. Crosley Corp., 1329 Arlington St., Cincinnati, Ohio.
- WPIT—Transmitter at Saxonburg. Relays NBC-KDKA. Westinghouse Electric & Mfg. Co., Grant Bldg., Pittsburgh, Pa.
- WSLA—"Dedicated to Enlightenment." World Wide Broadcasting Corp., Educational Director, University Club, Boston, Mass.
- 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.
- 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.

Addresses

- Ankara—"Radio Ankara." Ann: Turkish. Eng, Fr, Ger. Sign off, National anthem. Turkish Brdcastg. System, Correspondence Dept.
- Berlin—These transmitters are located at Zeesen, near Berlin. Interval signal is the tune, repeated several times, "Ever Be True and Honest," and sign off theme, two national anthems, "Horst Wessel Lied" and "Deutschlandlied". Address is Reichs-Rundfunk G. m. b. H., Haus des Rundfunk, Masurenallee, Berlin-Charlottenberg 9.
- Hilversum—Transmitters at Huizen. PCJ is "The Happy Station." Announcements in Dutch, German, French, English, Spanish, Portuguese. Sign off with National Anthem. N. V. Philips' Radio, Eindhoven.
- Johannesburg—All programs originate in J/B. Announce "Johannesburg Calling." English and Afrikaans. Open with bugle call. South African Broadcasting Corp., Box 4559, Johannesburg.
- London—Transmitters are at Daventry. Interval signals are Bow Bells; Greenwich time signal on even hours; and, irregularly, Big Ben, preceded by Westminster Chimes, strikes the hours. Sign off with "God Save The King." British Broadcasting Corp., London W1.
- Oslo—Norsk Rikskringkasting, Shortingsgaten 28, Oslo, Norway.
- Paris—Transmitters at Essarts-le-Roi. Announce as "ParisMondial," (Paris Embracing The World), and sign off with "La Marseillaise." Minister of Posts, Telegraphs and Telephones, 98 bis Blvd. Haussmann.
- The Ultra High Frequency Stations above 30,000 kcs. will be printed in the November issue.

DXer's Picture Gallery



The Irvington Chapter of the Radex Club. Standing in the back are Katherine Bossett, Jack Mauris, William Howe, Wallace Howe, and Warren Carpenter. In the front are Margaret Bosset, Eleanor Saum and Evelyn Carpenter.



William Wheatley, a Brooklyn, N. Y. DXer, member of the Metropolitan Chapter of the Radex Club.



Robert L. Blanchard, Jr., an active member of the Brooklyn Metropolitan Chapter of The Radex Club.



The transmitter building of WTRC, Elkhart, Ind. DXer Roger Mais, who submitted the picture, is standing in the doorway.



Thaddeus Grabek and his DX listening corner. This Niagara Falls, N. Y. DXer has cards from five continents hanging on the wall beside him.

The WORLD'S Radio Stations

(Continued From September Issue)

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

Effective March 4, 1940, many European stations will change frequencies. The frequencies to be used after that date are shown in parentheses in the last column.

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

1626	KOSC	SP	50	Oklahoma City, Okla. Same.	
	KOSO	SP	1000	Portable in Okla. State of Okla., Dept. of Pub. Safety.	
	KOSP	SP	150	Portable in Okla. Same.	
	KOSR	SP	150	Portable in Okla. Same.	
	KOSU	SP	50	Portable in Okla. Same.	
	KOSW	SP	150	Portable in Okla. Same.	
	KOSX	SP	150	Portable in Okla. Same.	
	KOSY	SP	50	Portable in Okla. Same.	
	WBSP	SP	1000	Charleston, W. Va. Dept. of Pub. Safety.	
	WMWV	SP	1000	Moundsville, W. Va. Same.	
1628	WPWV	SP	1000	Charlestown, W. Va. Same.	
	WSWV	SP	1000	Shinnston, W. Va. Same.	
1630	WWTA	....	500	St. Albans, Vt. U. S. Bureau of Customs.
	WSXGN	E	10	Dallas, Texas. Magnolia Petroleum Co.	
1634	CJD	F	....	Campbell River, B. C. Minister of Lands for R. C.
	CJE	T	....	Ceepeecee, B. C. Canadian Packing Co.
	VAC	T	....	Cape Lazo, B. C. Dept. of Transport.
	VAF	T	....	Alert Bay, B. C. Dept. of Transport.
	VBB	....	....	Sault Ste. Marie, Ont.
	VBE	....	....	Point Edward, Ont.
	VBG	....	....	Toronto, Ont.
	VBH	....	....	Port Arthur, Ont.
	VDG	C	....	Atli Inlet, B. C. Kelley Logging Co., Ltd.
	WEY	MF	50	Boston, Mass.	
	WKDT	MF	500	Detroit, Mich.	
	WNYF	MF	500	New York City, N. Y. Fire Dept., Municipal Bldg.	
	KBNP	SP	1000	Reno, Nevada. State of Nev.	
	WPHE	SP	1000	Indianapolis, Ind. Dept. of Pub. Safety.	
	WPHS	SP	60	Chesterton, Ind. Same.	
WPHU	SP	60	Jasper, Ind. Same.		
WQFE	SP	60	Seymour, Ind. Same.		
WQFW	SP	60	Columbia City, Ind. Same.		
WQGB	SP	120	Putnamville, Ind. Same.		
WRSA	SP	250	Seituate, R. I. Division of State Police.		
WSPI	SP	60	Portable in Ind. Dept. of Pub. Safety.		
1638	KANP	FA	100	Seattle, Wash. Pan-American Airways, Inc.	
	KHCYI	A	100	NC-18997. American Export Airlines.	
	KIDA	FA	20	Tanana, T. A. Pacific Alaska Airways, Inc.	
1642	VEZ	FA	....	Burwash Landing, Y. T. Dominion Gov't.
	KASP	SP	1000	Little Rock, Ark. State Police.	
	KHCGP	SP	30	Airplane NC-18498. Michigan State Police.	
	KQDC	SP	30	Mobile in Ark. State Police.	
	WRDH	SP	1000	Houghton Heights, Mich. (5 kw days). State Police.	
	WRDP	SP	1000	Paw Paw, Mich. Same.	
	WRDS	SP	1000	E. Lansing, Mich. (5 kw days). Same.	
	1646	KAJL	C	5	Naknek, Bristol Bay, T. A. Pacific American Fisheries, Inc.
		KAKL	C	Kasaan, T. A. Same.
		KALG	Squaw Harbor, T. A. Same.
KALH		....	100	Port Moller, T. A. Pacific American Fisheries, Inc.
KALI		....	100	Lazy Bay, T. A. Same.
KALJ		....	....	King Cove, T. A. Same.
KALL		....	30	Nelson Lagoon, T. A. Pacific American Fisheries, Inc.
KALQ		....	30	Petersburg, T. A. Same.
KALU		....	30	Naknek, T. A. Same.
KAOG		RB	3	Los Angeles, Calif. Don Lee.	
KEMA		RB	25	Shenandoah, Iowa. May Seed Co.	
KIDB		....	....	Kasaan, T. A. Pacific American Fisheries.
KIJK		C	....	Squaw Harbor, T. A. Same.
KNEB		RB	10	Tacoma, Wash. Puget Sound Brdctg. Co.	
KSOR		RB	100	Sacramento, Calif. McClatchey Brdctg. Co.	
WAUB		RB	40	Nashville, Tenn. WSIX.	
WAUC		RB	50	Syracuse, N. Y. Onondaga Radio Brdctg. Corp.	
WBAC		RB	2	Portable. N. J. Brdctg. Corp.	
WOMW		S	....	"Minniehaha".
WOMX		S	....	"Empress".
WOMY	S	....	"Glenwood".	
WOPE	S	....	"Admiralty".	
1652	KPMP	....	16	Los Angeles, Calif. Paramount Communications.

1658	WSXGN	E	10	Dallas, Texas. Magnolia Petroleum Co.	
	KKFD	MP	50	Kensington Park, Calif. Kensington Fire District.	
	KNHD	SP	400	Redwood Falls, Minn. Bureau of Criminal Apprehension.	
	KSPT	SP	500	Pecos, Tex. Dept. of Pub. Safety.	
	KSW	MP	800	Berkeley, Calif.	
	KTSP	SP	1000	Longview, Texas. Dept. of Pub. Safety.	
	KTST	SP	200	Tyler, Tex. Same as KSPT.	
	WPGC	SP	1000	S. Schenectady, N. Y. (5 kw days).	
	WQFR	SP	250	Portable in N. Y.	
	1660	KAJH	20	Anchorage, T. A. Libby, McNeill & Libby.
KAMT		....	50	Kenal, T. A. Same.
KNCE		....	100	Ekuk, T. A. Same.
KNCF		....	100	Egegik, T. A. Same.
KNGS		....	70	Koggiung, T. A. Same.
1666	WMP	SP	1000	Framingham, Mass. Commonwealth of Mass.	
	WPEL	SP	1000	W. Bridgewater, Mass. Same.	
	WPEV	SP	50	Portable in Mass. Same.	
	WPEW	SP	1000	Northampton, Mass. Same.	
	WBRE	SP	100	Portable in Mass. Dept. of Pub. Safety.	
	WSPN	SP	20	Nantucket, Mass. Same.	
	WSPQ	SP	20	Oak Bluffs, Mass. Same.	
1674	KGHK	MP	20	Palo Alto, Calif.	
	KGZT	MP	100	Santa Cruz, Calif.	
	KHPA	SP	1000	Lees Summit, Mo. Highway Patrol.	
	KHPB	SP	1000	Macon, Mo. Same.	
	KHPC	SP	1000	Kirkwood, Mo. Same.	
	KHPD	SP	1000	Springfield, Mo. Same.	
	KHPE	SP	1000	Poplar Bluff, Mo. Same.	
	(KHPF)	SP	1000	Jefferson City, Mo. Same.	
	KIUK	SP	1000	Jefferson City, Mo. Same.	
	KQCO	MP	150	Salinas, Calif. Monterey County Sheriff.	
	KSPH	MP	25	Hillsborough, Calif. Town of H.	
	KWCP	MP	50	Watsonville, Calif. City of W.	
	WAMF	SP	500	Portable in Pa. State Police.	
	WPIB	SP	20	Mobile on Airplane. Commonwealth of Pa. Motor Police.	
	1682	WPSP	SP	1000	Harrisburg, Pa. Same.
		KAGC	SP	500	Fairfield, Iowa.
		KACD	SP	500	Atlantic, Iowa.
KADJ		SP	1000	Sacramento, Calif. (5 kw days). Dept. of Motor Vehicles, Highway Patrol.	
KADK		MP	500	Hilo, Hawaii. County of Hawaii.	
KAPI		SP	250	Grass Valley, Calif. Same as KADJ.	
KGHO		SP	1000	Des Moines, Iowa. Bureau of Investigation	
KNFN		SP	400	Cedar Falls, Iowa. Same.	
KNFO		SP	400	Storm Lake, Iowa. Same.	
KQDO		SP	100	San Luis Obispo, Calif. Same as KADJ.	
KSCY	SP	50	Yreka, Calif. Same as KADJ.		
KSPR	SP	300	Redding, Calif. Same as above.		
KADW	SP	50	Portable in Iowa. Same as KGHO.		
1688	CID	F	....	Campbell River, B. C. Minister of Lands for B. C.
1690	CJR	P	....	Belleville, Ont. City of B.
	VDM	St	....	Halifax, N. S.
1692	WQFT	SP	100	Jackson, Miss. (2500 w. days). Commission of Pub. Safety.	
	CZB	F	....	Portable in Ohio.
	KNGG	SP	1000	Bellevue, P. Q. Laurentian Forest Protective Ass'n., Ltd.	
	WAKJ	SP	350	Phoenix, Ariz. Ariz. State Highway Dept.	
	WAKR	SP	850	Duval County, Fla.	
	WAKS	SP	350	Pensacola, Fla.	
	WAKT	SP	350	Orlando, Fla.	
	WAKU	SP	350	Tampa, Fla.	
	WAKZ	SP	250	Ft. Myers, Fla.	
	WDSP	SP	....	W. Palm Beach, Fla.
	WEVN	....	250	New Castle, Del.
	WHWN	SP	250	Belair, Md.	
	WJRF	SP	200	Waterloo, Md.	
	WMSC	SP	250	Gover, Del. State of Del. Highway Dept.	
	WMSE	SP	250	Cumberland, Md.	
	WMSF	SP	250	Easton, Md.	
	WMSH	SP	250	Frederick, Md.	
WMSR	SP	250	Conowingo, Md.		
WMSW	SP	250	Randallstown, Md.		
1706	KGPC	MP	500	Waldorf, Md.	
	KOHA	....	50	St. Louis, Mo. City of S. L.
	KOHB	....	100	Astoria, Ore.
	KOHC	....	10	Baker, Ore.
	KOHD	....	50	Coquille, Ore.
	KOHE	....	50	The Dalles, Ore. Station 10.
	KOHF	EM	10	Eugene, Ore.	
	KOHG	....	10	Portable in Ore. State of Ore., Police & Highway Dept.
	KOHH	EM	10	Grant's Pass, Ore.	
	KQHI	EM	10	Portable in Ore. Same as KOHF.	
				10	Portable in Ore. Same as KOHF.

	KOHJ	EM	10	Portable in Ore. Same as KOHF.
	KOHK	....	1000	Klamath Falls, Ore. Station 3.
	KOHL	....	1000	La Grande, Ore.
	KOHL	SP	500	Milwaukie, Ore.
	KOHN	SP	500	Bend, Ore. Station 4.
	KOHO	P	10	Portable in Ore.
	KOHP	SP	100	Pendleton, Ore., Station II.
	KOHQ	SP	100	Medford, Ore. Same as KOHF.
	KOHR	SP	50	Roseburg, Ore. Station 5.
	KOHS	....	1000	Salem, Ore. Station 1.
	KOHU	....	50	Burns, Ore. Station 7.
	KOHV	....	10	Portable in Ore. Same as KOHF.
	KOHW	EM	10	Portable in Ore. Same as KOHF.
	KOHX	EM	10	Portable in Ore. Same as KOHF.
	KOHY	EM	10	Portable in Ore. Same as KOHF.
	KOHZ	EM	10	Portable in Ore. Same as KOHF.
	WANH	SP	1000	Raleigh, N. C. State of N. C.
	WANI	SP	1000	Williamston, N. C. Same as WANH.
	WANJ	SP	1000	Asheville, N. C. Same as WANH.
	WANK	SP	1000	Salisbury, N. C. Same as WANH.
	WANL	SP	1000	Elizabethtown, N. C. Same as WANH
	WKDU	MP	500	Cincinnati, Ohio. City of C.
	WPET	MP	500	Lexington, Ky. City of L.
1708	CKT	P	....	Pentleton, B. C.
	CY2Q	P	....	Atlin, B. C. B. C. Provincial Police.
	CZC	P	....	Bralorne, B. C. Same as CY2Q.
	CZN	P	....	Cranbrook, B. C.
	CZ7A	P	....	Alert Bay, B. C. Same as CY2Q.
	KANX	T	15	Windham, T. A. N. B. Randall.
1710	CZ6F	P	....	Hamilton, Ont.
1712	COL2	P	....	Havana, Cuba.
	KACU	P	500	Longview, Texas. Gregg County Sheriff.
	KADM	MP	50	Gainesville, Tex. City of G.
	KADT	MP	50	Marshall, Tex. City of M.
	KAPM	MP	100	Wailuku, T. H. County of Maul.
	KGHY	MP	50	Whittier, Calif.
	KGJX	MP	400	Pasadena, Calif. City of P.
	KGPI	MP	100	Beaumont, Texas. City of B.
	KGPL	MP	500	Los Angeles, Calif. City of L. A.
	KGPR	MP	500	Honolulu, T. H. City and County of H.
	KGPR	MP	400	Fort Worth, Tex.
	KGZL	MP	....	Shreveport, La. City of S.
	KGZQ	MP	50	Waco, Tex. City of W.
	KGZY	MP	50	San Bernardino, Calif. City of S. B.
	KHAA	MP	100	Wahiawa, Oahu, T. H. City & County of Honolulu.
	KHAB	MP	100	Kaneohe, T. H. Same as KHAA.
	KHAO	MP	50	Pearl City, Hawaii. Same as KHAA.
	KHTP	MP	500	Houston, Tex. City of H.
	KKPD	MP	50	Kilgore, Tex. City of K.
	KNFJ	MP	50	Pomona, Calif.
	KNGE	MP	50	Cleburne, Texas.
	KNGL	MP	50	Galveston, Tex.
	KNGX	MP	200	Los Angeles, Calif. City of L. A.
	KNHF	MP	50	Denton, Texas. City of D.
	KPAT	MP	60	Port Arthur, Tex. City of P. A.
	KQAD	MP	....	Indio, Calif. Riverside County Radio.
	KQDN	MP	50	Lufkin, Tex. City of L.
	KSBC	MP	500	San Bernardino, Calif. San Ber.-Riverside Counties.
	KQEG	MP	25	Gardena, Calif. City of G.
	KVP	MP	500	Dallas, Texas. City of D.
	VYR	MP	400	Montreal, P. Q. City of M.
	WAKF	MP	50	Everett, Mass. City of E.
	WAKV	MP	50	Fall River, Mass. City of F. R.
	WBRI	MP	50	Bristol, R. I. Town of B.
	WMPB	MP	50	Brookton, Mass. City of B.
	WMPH	MP	50	Newport, R. I. City of N.
	WMPN	MP	50	Nedham, Mass. Town of N.
	WMPR	MP	50	Revere, Mass. City of R.
	WPDB	MP	500	Chicago, Ill. City of C.
	WPDC	MP	500	Chicago, Ill. City of C.
	WPDD	MP	500	Chicago, Ill. City of C.
	WPDU	MP	400	Pittsburgh, Pa. City of P.
	WPED	MP	100	Arlington, Mass. Town of A.
	WPEI	MP	100	Somerville, Mass. City of S.
	WPEI	MP	50	E. Providence, R. I.
	WPFA	MP	50	Newton, Mass. City of N.
	WPFN	MP	100	Fairhaven, Mass. City of F.
	WPGF	MP	150	Providence, R. I.
	WPGU	MP	50	Cohasset, Mass.
	WPGV	MP	500	Boston, Mass. City of B.
	WPHG	MP	50	Medford, Mass. City of M.
	WPIA	MP	40	Warren, R. I. Town of W.
	WQFL	MP	50	Oak Park, Ill. Village of O. P.
	WQFX	MP	100	Waukegan, Ill. Lake County Police.
1715	....	....	....	The Amateur Band extends from 1715 to 2000 kos.

1734	....	B	1000	Liepaja, Latvia. Latvijas Radiofons (1366).
1750	CMCP	P	500	Havana, Cuba. Policia Nacional. Dir., Jose Lara.
1865	HRX2	C	400	Sarabia y Carballo, Cerro.
2000	WUMS	....	75	La Lima, Honduras. Tels R. R. Co.
2022	CZ6H	C	....	Proctorville, Ohio. David Thomas.
	CZ7Y	T	....	Bouchette, P. Q. Canadian International Paper Co.
	KAIH	RB	25	Banff, Alta. Dept. of Mines & Resources.
	WAAO	RB	100	Portable. Earl C. Anthony, Inc.
	WAFY	RB	25	Bloomington, Ill. A. M. & B. C. McGregor.
	WAHE	RB	50	St. Paul, Minn. Minn. Brdstg. Corp.
	WAOE	RB	50	Norfolk, Va. WTAR Radio Corp.
	WDAJ	RB	40	Aurora, Ill. Martin O'Brien.
	WGTO	RB	25	Tampa, Fla. Tampa Times.
2030	CY2L	T	....	Wilson, N. C. WGTM, Inc.
	CY2O	T	....	Baie Comeau, P. Q. Ont. Paper Co., Ltd.
	CY3E	T	....	Chutes aux Outardes, P. Q. Same as CY2L.
2036	KGHP	MP	....	Clarke City, P. Q. Gulf Paper & Pulp Co.
	KGHX	ZP	....	Lawton, Okla. City of L.
	KGHZ	ZP	100	Santa Ana, Calif. Orange County.
	KHPG	ZP	200	Little Rock, Ark. City of L. R.
	KNFE	ZP	500	Kirkwood, Mo. State of Mo. Highway Patrol.
	KQBX	ZP	50	Duluth, Minn. City of D.
	WFFI	ZP	50	Mobile in Wash.
	WPGG	ZP	300	Columbus, Ga. City of C.
	WPGQ	ZP	300	Findlay, Ohio.
	WPHK	ZP	300	Columbus, Ohio. State of Ohio.
	WPHT	ZP	300	Massillon, Ohio. Same as WPGQ.
	WQMG	ZP	300	Wilmington, Ohio. Same as WPGQ.
	WQPJ	ZP	50	Cambridge, Ohio. Same as WPGQ.
	WQPX	ZP	250	Pontiac, Mich. City of P.
	WQPY	ZP	....	French Village, Ill. State of Ill.
	WQPZ	ZP	....	Portable in Ill. Same as WQPJ.
2040	CYQ	Q	19	Portable in Ill. Same as WQPJ.
	KGHP	MP	....	Portable. Same as WQPJ.
	KGHX	ZP	....	Amos, P. Q. Canadian Nat'l. R. R.
	KGHZ	ZP	....	Lawton, Okla. City of L.
	KHPG	ZP	....	Santa Ana, Calif. Orange County.
	KNFE	ZP	....	Little Rock, Ark. City of L. R.
	KQBX	ZP	....	Jefferson City, Mo. State of Mo.
	WFFI	ZP	....	Kirkwood, Mo. State of Mo. Highway Patrol.
	WPGG	ZP	....	Duluth, Minn. City of D.
	WPGQ	ZP	....	Mobile in Wash.
	WPHK	ZP	....	Columbus, Ga. City of C.
	WPHT	ZP	....	Findlay, Ohio. State of Ohio.
	WQMG	ZP	....	Columbus, Ohio. Same as WPGG.
	WQPJ	ZP	....	Massillon, Ohio. Same as WPGG.
	WQPX	ZP	....	Wilmington, Ohio. Same as WPGG.
	WQPY	ZP	....	Cambridge, Ohio. Same as WPGG.
	WQPZ	ZP	....	Pontiac, Mich. City of P.
2044	KGHP	ZP	....	French Village, Ill. State of Ill.
2058	KAAR	RB	....	Portable in Ill. Same as WQPJ.
	KAQE	RB	....	Portable in Ill. Same as WQPJ.
	KAOF	RB	....	Lawton, Okla. City of L.
	KBOL	RB	....	Denver, Colo. KLZ Brdstg. Co.
	KDEA	RB	....	Shenandoah, Iowa. KFNF, Inc.
	KDJB	RB	....	Shenandoah, Iowa. KFNF, Inc.
	WAHL	RB	....	Omaha, Nebr. Woodmen of the World.
	WATS	RB	....	Portable. KANS.
	WAUT	RB	....	Mason City, Iowa. Globe-Gazette.
	WAXE	RB	....	Paducah, Ky. Paducah Brdstg. Co.
	WBAO	RB	....	Akron, Ohio. Allen T. Simmons.
	WBAQ	RB	....	Evansville, Ind. Evansville on the Air, Inc.
	WHMB	RB	....	Richmond, Va. Havens & Martin, Inc.
	WNYK	RB	....	Newark, N. J. Bamberger Brdstg. Serv., Inc.
	WNYL	RB	....	Newark, N. J. Same as WBAO.
	WNYN	RB	....	Anniston, Ala. WHMA.
	WNYO	RB	....	New York City. N. Y. Municipal Brdstg. Sys.
	WRDI	RB	....	New York City. Same as WNYK.
	WTHB	RB	....	New York City. Same as WNYK.
	WTNK	RB	....	New York City. Same as WNYK.
2090	KAQG	RB	....	Danville, Ill. Northwestern Pub. Co.
	KEMA	RB	....	Tampa, Fla. Tampa Times.
	KNEB	RB	....	Trenton, N. J. WOAX, Inc.
	KSCR	RB	....	Los Angeles, Calif. Don Lec.
	WAUB	RB	....	Shenandoah, Iowa. May Seed So.
	WAUQ	RB	....	Tacoma, Wash. Puget Sound Brdstg. Co.
2092.5	KANX	T	....	Sacramento, Calif. McClatchey Brdstg. Co.
2102	KAIH	RB	....	Nashville, Tenn. WSIX.
	WAAO	RB	....	Syracuse, N. Y. Onondaga Radio Brdstg. Corp.
	WAFY	RB	....	Windham, T. A. N. B. Randall.
	WAHE	RB	....	Portable. Earle C. Anthony, Inc.
	WAOE	RB	....	Bloomington, Ill. A. M. & D. C. McGregor.
		RB	....	St. Paul, Minn. Minn. Brdstg. Corp.
		RB	....	Norfolk, Va. WTAR Radio Corp.
		RB	....	Aurora, Ill. Martin O'Brien.

	WDAJ	RB	40	Tampa, Fla. Tampa Times.
2110	W8TO	RB	30	Wilson, N. C. WGTN, Inc.
	KMCK	S	....	"Islamorada." John D. Reilly. (Used only near Boston).
	WCEK	S	50	"Bluffn." State of Calif., Dept. of Natural Resources. (Used only near San Francisco).
	WPKS	S	30	"Aleksander I." Pete Damarla.
	WPMP	S	30	"J. B. Edwards." Ole J. Edwards.
	WPPC	S	50	"North Star." Sam Loner.
	WQBM	S	50	"Albacore." Same as WCEK.
2118	W3XNY	E	....	Portable-Mobile. Bell Telephone Labs., Inc.
	KMCK	S	....	S. S. "Islamorada." John D. Reilly. (Used only near Miami).
	KYZC	....	....	Chula Vista, Calif. U. S. Immigration Border Patrol.
	KYZE	....	....	Fl Centro, Calif. Same as KYZC.
	WQCK	....	100	Yacht "Ginsv." Thorne Donnelley
2126	W3XNY	E	....	Portable-Mobile. Bell Telephone Labs., Inc.
	KJJB	S	50	S. S. "Elizabeth River." Philadelphia & Norfolk S. S. Co.
	KJLY	S	50	S. S. "Hampton Roads." Same as KJJB.
	KMKH	S	50	Yacht "Samona."
	WCEK	S	50	S. S. "Bluffn." State of Calif. Dept. of Natural Resources. (Used only near Seattle).
	WPKS	S	30	S. S. "Aleksander I." Pete Damarla.
	WPMP	S	30	S. S. "J. B. Edwards." Ole J. Edwards.
	WPPC	S	50	S. S. "North Star." Sam Loner.
	WQBM	S	50	S. S. "Albacore." Same as WCEK.
2150	CY2L	T	....	Rafe Comeau. P. Q. Ont. Paper Co., Ltd.
	CY20	T	....	Chutes aux Outardes, P. Q. Same as CY2L.
	KAAR	RB	40	Denver, Colo. KLZ Brdstg. Co.
	KAOE	RB	50	Shenandoah, Iowa. KFNF, Inc.
	KAOF	RB	50	Shenandoah, Iowa. KFNF, Inc.
	KBOL	RB	20	Omaha, Nebr. Woodmen of the World.
	KDJB	RB	125	Mason City, Iowa. Globe-Gazette.
	WAHL	RB	40	Paducah, Ky. Paducah Brdstg. Co.
	WATS	RB	100	Akron, Ohio. Allen T. Simmons.
	WAUT	RB	50	Evansville, Ind. Evansville on the Air, Inc.
	WAXE	RB	500	Richmond, Va. Havens & Martin, Inc.
	WBAO	RB	?	Newark, N. J. Chamberger Brdstg. Serv., Inc.
	WRAQ	RB	30	Newark, N. J. Same as WBAO.
2166	WTNK	RB	40	Trenton, N. J. WOAX, Inc.
2174	W3XNY	E	....	Portable-Mobile. Bell Telephone Labs., Inc.
	KLQE	S	50	Yacht "Carolina." S. S. "Caroline." Jos. M. Schenck 20th Century-Fox Film Corp. Beverly Hills, Calif.
	KLWY	S	....	Yacht "Ginsv."
	KMKH	S	....	Yacht "Samona."
	VGBQ	S	....	Yacht "Savelvn."
	WBDY	S	....	Yacht "Bolero II."
	WCEK	S	50	S. S. "Bluffn." State of Calif. Dept. of Natural Resources. (Used only near San Pedro).
	WDFV	S	....	Yacht "Content."
	WJDM	S	....	Yacht "Sartarsia."
	WKFK	S	....	Tug "Rocona."
	WKFM	S	....	Derrick Barge 4.
	WKFN	S	....	Tug "Sonoma."
	WOJB	S	....	Yacht "El Dorado."
	WOKQ	S	....	Yacht "The Chief."
	WOLR	S	....	Yacht "Mariner."
	WPKS	S	30	S. S. "Aleksander I." Pete Damarla.
	WPMP	S	30	S. S. "J. B. Edwards." Ole J. Edwards.
	WPPC	S	50	S. S. "North Star." Sam Loner.
	WQBM	S	50	S. S. "Albacore." Same as WCEK.
2182	KYZD	....	....	Del Rio, Texas. U. S. Immigration Border Patrol.
	KYZL	....	....	McAllen, Tex. Same as KYZD.
	WAD	CHT	400	Laredo, Tex. Same as KYZD.
	WAY	....	....	Port Washington, Wis. Lorain County Radio Corp.
2190	KAOG	RB	8	Lake Bluff, Ill. Thorne Donnelley.
	KEMA	RB	25	Los Angeles, Calif. Don Lee.
	KNEB	RB	10	Shenandoah, Iowa. May Seed Co.
	KSCR	RB	100	Tacoma, Wash. Puget Sound Brdstg. Co.
2198	WAUQ	RB	50	Sacramento, Calif. McClatchey Brdstg. Co.
	KMCK	S	....	Syracuse, N. Y. Onondaga Radio Brdstg. Corp. S. S. "Islamorada." John D. Reilly. (Used only near New York City.)
2204	W3XNY	E	....	Portable-Mobile. Bell Telephone Labs., Inc.
2212	CZ7F	T	....	Clearwater Bay, Ont. Kenricia Gold Mines, Ltd.
2228	CZ2B	T	....	Bridge River, B. C. North-West Telephone Co.
2240	CZ9X	FA	....	Carcross, Y. T. Northern Airways, Ltd.
2246	CY6Q	T	....	Campbelton, N. B. Town of C. Electric Light Dept.
2256	CZ6H	T	....	Bouchette, P. Q. Canadian International Paper Co.
2260	CYC	C	....	Amos, P. Q. Canadian Nat'l. R. R. Co.
2260	CZ7U	T	....	Baker Creek, B. C. North-West Telephone Co.
2284	CKO	T	....	Crane Island, P. Q. Dept. of Public Works.

	CZ3H	T	....	Brion Island, P. Q. Dominion Gov't.
2290	CY2L	T	....	Bafe Comeau, P. Q. Ont. Paper Co., Ltd.
	CY20	T	....	Chutes aux Outardes, P. Q. Same as CY2L.
2292	CFW	T	....	Bones Bay, B. C. Canadian Fishing Co., Ltd.
	CJE	T	....	Ceepeecee, B. C. Canadian Packing Co.
	CJS	C	....	Butedale, B. C. Same as CFW.
	KAMB	SEM	50	Alhambra, Calif. Southern Calif. Edison Co.
	KQDZ	SEM	50	Anaheim, Calif. (1 unit—20w). Same as KAMB.
	VAC	T	....	Cape Lazo, B. C. Dept. of Transport.
	VAF	T	....	Alert Bay, B. C. Same as VAC.
	VDG	C	....	Atli Inlet, B. C. Kelley Logging Co.
	VXZ	T	....	Cumshewa Inlet, B. C. Allison Logging Co.
2310	CY6A	P	....	Cornwall, Ont. Town of C.
	CY6U	P	....	Brantford, Ont. City of B.
2318	CYZ	P	400	Toronto, Ont.
2320	TGWC	B	1000	Guatemala City, Guat.
2340	HOA	B	....	Panama City, Panama.
2366	CZ60	....	....	Ottawa, Ont.
	WAKC	....	400	Freehold, N. J. Monmouth County Welfare House, Brier Hill Rd.
2382	KGHT	MP	25	Brownsville, Tex. City of B.
	KGHV	MP	500	Corpus Christi, Tex. City of C. C.
	KNFE	MP	400	Duluth, Minn. City of D.
	KNHB	MP	100	Green Bay, Wis. City of G. B.
	WAKE	MP	500	Oshkosh, Wis. Winnebago County.
	WASP	MP	100	Selma, Ala. City of S.
	WMPF	MP	100	Elkhorn, Wis. Walworth County Sheriff.
	WMPM	MP	500	Montgomery, Ala. City of M.
	WPDN	MP	50	Auburn, N. Y.
	WPEA	MP	40	Syracuse, N. Y. City of S.
	WPFM	MP	400	Birmingham, Ala. City of B.
	WPGW	MP	400	Mobile, Ala. City of M.
2385	KNLF	F	15	Crater Lake Nat'l. Park, Ore. (Mt. Scott Ranger Station).
	KNLG	F	15	Crater Lake Nat'l. Park, Ore.
	KNLH	F	15	Crater Lake Nat'l. Park, Ore. (Lost Creek Ranger Station).
2390	CGZ	P	400	Vancouver, B. C. Corp. of the City of V.
	CJW	P	15	St. John, N. B. Dept. of Pub. Safety.
	CJZ	P	20	Verdun, P. Q. City of V.
2392	CY2Q	P	....	Atlin, B. C. B. C. Provincial Police.
	CZC	P	....	Bralorne, B. C. Same as CY2Q.
2396	CZ7A	P	....	Alert Bay, B. C. Same as CY2Q.
	VYW	P	600	Winnipeg, Man. Board of Police Commissioners.
2398	K6XAK	E	1000	Winnipeg, Man. Board of Police Commissioners.
	W6XQW	E	1000	Kaena Point, Oahu, T. H. Globe Wireless, Ltd.
	W6XXT	E	5000	Palo Alto, Calif. Stanford University.
	W8XUK	E	10	Portable. Press Wireless, Ltd.
	W8XUL	E	10	Portable. W. Va. Univ. Dept. of Physic.
	W10XJJ	E	25	Portable. Same as W8XUK.
2406	KGHZ	MP	100	Portable. Harvey Radio Labs., Inc.
	KGPW	MP	100	Little Rock, Ark. City of L. R.
	KNHE	MP	100	Salt Lake City, Utah. City of S. L. C.
	KQEH	MP	250	Fort Smith, Ark. City of F. S.
	WRJP	MP	50	Hot Springs, Ark. Garland County.
2414	KACE	MP	50	Brainerd, Minn. City of B.
	KACJ	MP	250	Olympia, Wash. City of O.
	KACK	MP	50	Wenatchee, Wash. Chelan County.
	KACN	MP	200	Bellingham, Wash. City of B.
	KACO	MP	15	Ventura, Calif.
	KACS	MP	500	Tracy, Calif. City of T.
	KACV	MP	50	Bakersfield, Calif. Kern County.
	KADL	MP	50	Walla Walla, Wash. City of W. W.
	KAPH	MP	500	Port Orchard, Wash. Kitsap County. Sheriff.
	KAPL	MP	50	Stockton, Calif. San Joaquin County.
	KASE	MP	250	Hoquiam, Wash. City of H.
	KASF	MP	50	Modesto, Calif. Stanislaus County Sheriff.
	KGAZ	SP	....	Bremerton, Wash. City of B.
	KGHS	MP	100	Mobile in Wash.
	KGHW	MP	50	Spokane, Wash. City of S.
	KGPA	Fire	500	Centralia, Wash. City of C.
	KGPF	MP	25	Seattle, Wash.
	KGPS	MP	50	Santa Fe, N. Mex.
	KGZA	MP	500	Bakersfield, Calif. City of B.
	KGZM	MP	100	Fresno, Calif. City of F.
	KGZN	MP	100	El Paso, Tex. City of E. P.
	KGZO	MP	35	Tacoma, Wash. City of T.
	KGZV	MP	125	Santa Barbara, Calif. City of S. B.
	KGZX	MP	50	Aberdeen, Wash. City of A.
	KNFA	MP	500	Albuquerque, N. Mex. City of A.
	KNFI	MP	50	Clovis, N. Mex. City of C.
	KNFP	MP	50	Mt. Vernon, Wash. Skagit County.
	KNQU	MP	100	Everett, Wash. City of E.
	KNGY	MP	40	Yakima, Wash.
				Lodi, Calif. City of L.

	KQAX	SP	30	To be used in State of Wash. when service from regular
	KQAW	SP	5	Municipal Police station is not available.
	KQAY	SP	50	Mobile in Wash.
	KQAZ	SP	50	Mobile in Wash.
	KQBX	SP	50	Same as KQAW.
	KQDM	MP	100	Mobile in Wash.
	KQEC	MP	50	Colfax, Wash. Whitman County Sheriff.
	KSOM	MP	250	Pt. Townsend, Wash. Jefferson County.
	KWAY	SP	....	Merced, Calif. Merced County Sheriff.
	WAKN	MP	50	Mobile in Wash.
	WCK	MP	500	Herkimer, N. Y. Village of H.
	WMO	MP	50	Detroit, Mich. City of D.
	WMPF	MP	50	Highland Park, Mich. City of H. P.
	WPDA	MP	150	Waycross, Ga. City of W.
	WPDJ	MP	....	Tulare, Calif. City of T.
	WPDY	MP	500	Passaic, N. J. City of A.
	WPDY	MP	400	Detroit, Mich. City of D.
	WPFH	MP	200	Atlanta, Ga. City of A.
	WPII	MP	250	Baltimore, Md. City of C.
	WPGH	MP	300	Columbus, Ga. City of C.
	WPGJ	MP	100	Albany, N. Y. City of A.
	WPGM	MP	50	Utica, N. Y. City of U.
	WQFB	MP	250	La Grange, Ga. City of U.
	WQFJ	MP	50	Macon, Ga. City of O.
	WQFV	MP	250	Oneonta, N. Y. City of O.
2422	KACA	MP	50	Augusta, Ga. City Council of A.
	KACI	MP	100	Atchison, Kans. City of A.
	KADS	MP	50	Eureka, Calif. Humboldt County Police.
	KAGD	MP	25	Marysville, Calif. City of M.
	KASG	MP	350	Woodland, Calif. City of W.
	KGPE	MP	500	Willows, Calif. Glenn County Sheriff.
	KGPG	MP	50	Kansas City, Mo. City of K. C.
	KGZG	MP	50	Vallejo, Calif. City of V.
	KHCP	MP	100	Topeka, Kans. City of T.
	KNGF	MP	500	Eureka, Calif. Humboldt County Police.
	KNGV	MP	50	Sacramento, Calif. City of S.
	WKMS	MP	50	Salina, Kans. City of S.
	WMJ	MP	500	Rockland, Maine. King County.
	WNFP	MP	50	Buffalo, N. Y. City of B., 757 E. Perry St.
	WNFP	MP	135	Niagara Falls, N. Y. City of N. F.
	WPDR	MP	200	Niagara Falls, N. Y. City of N. F.
	WPDW	MP	400	Rochester, N. Y. City of R.
	WPHB	MP	100	Washington, D. C. City of P.
	WRHT	CT	50	Portland, Maine. City of P.
2430	KAKI	MP	250	Nashua, N. H. City of N.
	KGPB	MP	500	Nashville, Tenn. Davidson County Sheriff.
	KGZJ	MP	100	Combine, T. A. Columbia River Packers Ass'n.
	KNGP	MP	250	Minneapolis, Minn. City of M.
	KNHG	MP	10	Phoenix, Ariz. City of P.
	WAKH	MP	50	Shreveport, La. City of S.
	WAME	MP	50	Prescott, Ariz. City of P.
	WBRP	MP	250	Bloomfield, N. J. Town of B.
	WCPD	MP	50	Baton Rouge, La. East Baton Rouge Parish.
	WPDI	MP	250	Baton Rouge, La. City of B. R.
	WPDM	MP	400	Charleston, S. C. City Council of C.
	WPEK	MP	250	Columbus, Ohio. City of C.
	WFFD	MP	....	Dayton, Ohio. City of D.
	WFFK	MP	500	New Orleans, La. City of N. O.
	WPGI	MP	100	Highland Park, Ill. City of P.
	WPHO	MP	50	Hackensack, N. J. Bergen County Police.
	WPRH	MP	50	Portsmouth, Ohio. City of P.
	WQFO	MP	50	Zanesville, Ohio. City of R. H.
	WSAG	MP	200	Lancaster, Ohio. City of L.
2437	HRN	B	500	Ashland, Ky. City of A.
2442	KADV	MP	50	Tegucigalpa, Honduras. "La Voz de Honduras."
	KASD	MP	50	Eugene, Ore. City of E.
	KGHU	MP	100	San Angelo, Tex. City of S. A.
	KGPP	MP	500	Austin, Tex. City of A.
	KGPX	MP	500	Portland, Ore. City of P.
	KGZH	MP	25	Denver, Colo. (1 kw days). City and County of D.
	KGZR	MP	50	Klamath Falls, Ore. City of K. F.
	KNHM	MP	100	Salem, Ore. City of S.
	KPDG	MP	250	Fargo, N. Dak. City of F.
	WAKO	MP	50	Greeley, Colo. City of G.
	WAMB	MP	40	Ft. Lauderdale, Fla. City of F. L.
	WAMG	MP	100	Connersville, Ind. City of C.
	WASF	MP	50	Kalamazoo, Mich. City of K.
	WBNC	MP	50	Elwood, Ind. E. Police Dept.
	WBPD	MP	40	New Castle, Ind. City of N. C.
	WMDZ	MP	400	Bloomington, Ind. City of B.
	WMPI	MP	100	Indianapolis, Ind. City of A.
	WPDE	MP	200	Anderson, Ind. City of A.
				Louisville, Ky. City of L.

	WPDF	MP	150	Flint, Mich. City of F.
	WPDH	MP	100	Richmond, Ind. City of R.
	WFDL	MP	50	Lansing, Mich. City of L.
	WFES	MP	500	Grand Rapids, Mich. City of G. R.
	WFES	MP	500	Saginaw, Mich. City of S.
	WFFC	MP	300	Muskegon, Mich. City of M.
	WFFE	MP	100	Reading, Pa. City of R.
	WFFG	MP	400	Jacksonville, Fla.
	WFFT	MP	50	Lakeland, Fla. City of L.
	WFFX	MP	50	Palm Beach, Fla. Town of P. B.
	WFFY	MP	400	Yonkers, N. Y. City of Y.
	WFFZ	MP	500	Miami, Fla. City of M.
	WPGL	MP	400	Binghamton, N. Y. City of B.
	WPGP	MP	100	Muncie, Ind. City of M.
	WPHM	MP	500	Orlando, Fla. City of O.
	WQFM	MP	100	Wilkes-Barre, Pa. City of W. B.
2450	WWTK	EM	....	Bullion Depository, Ky.
	KACF	MP	100	Chickasha, Okla. City Police.
	KACL	MP	50	Altus, Okla. City of A.
	KACP	MP	50	Fonca City, Okla. City of P. C.
	KACR	MP	50	Seminole, Okla. City of S.
	KADG	MP	40	Tulsa, Okla. Used on an airplane.
	KADH	MP	50	Mangum, Okla. City of M.
	KAPB	MP	50	Cushing, Okla. City of C.
	KAPC	MP	50	Drumright, Okla. City of D.
	KAPD	MP	50	Eldorado, Kans. City of E.
	KAPE	MP	100	Norman, Okla. Cleveland County.
	KAPF	MP	50	Okmulgee, Okla. City of O.
	KARD	MP	100	Ardmore, Okla. City of A.
	KAYJ	....	....	Noyes Island, T. A. R. R. Farlish.
	KBMJ	....	....	Drier Bay, T. A. Northwestern Herring Co.
	KFL	CH	50	Ketchikan, T. A. R. Farlish.
	KGHN	MP	50	Hutchinson, Kans. City of H.
	KGHP	MP	50	Lawton, Okla. City of L.
	KGPH	MP	250	Oklahoma City, Okla.
	KGPO	MP	100	Tulsa, Okla. City of T.
	KGZ	MP	400	Wichita, Kans. City of W.
	KGZF	MP	25	Chanute, Kans. City of C.
	KGZP	MP	50	Coffeyville, Kans. City of C.
	KNGK	MP	100	Duncan, Okla. City of D.
	KNGM	MP	50	Rapid City, S. Dak.
	KNGT	MP	50	Muskogee, Okla.
	KNHO	MP	50	Ada, Okla. City of A.
	KOM	CH	....	Noyes Island, T. A. R. R. Farlish.
	KTM	MP	50	Bartlesville, Okla. City
	KRX	....	50	Drier Bay, T. A. Northwestern Herring Co.
	KVPB	MP	40	Huron, S. Dak. City of H.
	KWCM	MP	100	Shawnee, Okla. City of S.
	WMPD	MP	100	Waukesha, Wis. City of W.
	WPKK	MP	500	Millwaukee, Wis. City of M.
	WPEE	MP	400	Brooklyn, N. Y. City of New York.
	WPEF	MP	400	New York City (Bronx). City of N. Y.
	WPEG	MP	500	New York City (Manhattan). City of N. Y.
	WPEP	MP	100	Kenosha, Wis. City and County of K.
	WPHF	MP	400	Richmond, Va. City of R. Dept. of Pub. Safety.
	WQFG	MP	100	Roanoke, Va.
	WQFH	MP	50	Lynchburg, Va. City of L.
	WQFI	MP	250	Petersburg, Va. City of P.
2458	KACM	MP	50	Big Spring, Tex. City of B. S.
	KADR	MP	40	Abilene, Tex. City of A.
	KAPI	MP	40	Sweetwater, Tex. City of S.
	KGJI	MP	200	Wichita Falls, Tex. City of W. F.
	KGZW	MP	150	Lubbock, Tex. City of L.
	KNFB	MP	500	Idaho Falls, Idaho.
	KNGW	MP	200	Brownwood, Tex. City of B.
	WAGR	MP	40	Urbana, Ill. City of U.
	WAMN	MP	50	Lorain, Ohio. City of L.
	WASB	MP	100	Decatur, Ill. Macon County Sheriff.
	WDPW	MP	100	Wilmington, N. C. City of W.
	WMPJ	MP	40	Clinton, Ill. DeWitt County.
	WPDG	MP	250	Youngstown, Ohio. City of Y.
	WPDO	MP	250	Akron, Ohio. City of A.
	WPDV	MP	250	Charlotte, N. C. City of C.
	WDFS	MP	500	Asheville, N. C. Buncombe County.
	WPGD	MP	50	Rockford, Ill. City of R.
	WPHD	MP	100	Stuebenville, Ohio.
	WQFZ	MP	500	Ottawa, Ill. La Salle County Polloe.
	WRBH	MP	50	Cleveland, Ohio. City of C.
2466	KAKI	C;T	50	Combine, T. A. Columbia River Packers Ass'n.
	KAWP	MP	100	Iowa City, Iowa. City of I. C.
	KBJU	T	....	Selawik, T. A. Northern Radio Co.
	KGBT	C	50	Selawik, T. A. Northern Radio Co.
	KGOZ	MP	100	Cedar Rapids, Iowa. City of C. R.
	KGPD	MP	400	San Francisco, Calif. City and County of S. F.

	KGPI	MP	400	Omaha, Nebr. City of O.
	KGPK	MP	100	Sioux City, Iowa. City of S. C.
	KGPM	MP	100	San Jose, Calif.
	KGPN	MP	100	Davenport, Iowa. City of D.
	KGZG	MP	100	Des Moines, Iowa. City of D. M.
	KFBA	MP	50	Elvtheville, Ark. City.
	KQAR	MP	50	Burlington, Iowa. City of B.
	KGBT	MP	50	Dubuque, Iowa. City of D.
	WAKB	MP	50	New London, Conn. City of N. L.
	WAKG	MP	50	Clearwater, Fla. Pinellas County.
	WFFT	MP	200	Tampa, Fla. City of T.
	WMPW	MP	50	Waterbury, Conn. City of W.
	WPEC	MP	400	Memphis, Tenn. City of M.
	WPEM	MP	50	Woonsocket, R. I. City of W.
	WPFV	MP	50	Pawtucket, R. I. City of P.
	WPFW	MP	50	Bridgeport, Conn. City of B.
	WPGA	MP	50	Bay City, Mich. City of B. C.
	WPGB	MP	50	Port Huron, Mich. City of P. H.
	WPGK	MP	50	Cranston, R. I. City of C.
	WPGX	MP	100	Worcester, Mass. City of W.
	WPHA	MP	50	Fitchburg, Mass. City of F.
	WPHN	MP	100	Tampa, Fla. City of T.
	WPHP	MP	100	Jackson, Mich. City of J.
	WQFA	MP	100	New Haven, Conn.
	WQFC	MP	50	Gainesville, Fla. City of G.
	WQFK	MP	50	Clearwater, Fla. City of C.
	WRDR	MP	350	Grosse Pointe, Mich. Township of G. P.
	YVSPC	P	....	Caracas, Venezuela. Servicio Radio Policial.
2474	KANX	T	15	Windham, T. A. N. B. Randall.
	KGHG	MP	50	Las Vegas, Nev.
	KGHM	MP	50	Reno, Nev. City of R.
	KNFH	MP	50	Garden City, Kans. City of G. C.
	KNGH	MP	50	Dodge City, Kans.
	WAFU	MP	50	Lima, Ohio. City of L.
	WAKI	MP	50	Sandusky, Ohio. City of S.
	WAMH	MP	25	Shelby, Ohio. S. Police Dept.
	WKMP	MP	50	Kenton, Ohio. K. Police Dept.
	WMPK	MP	100	Fremont, Ohio. City of F.
	WPDP	MP	50	Philadelphia, Pa. City of P.
	WPFO	MP	40	Knoxville, Tenn. City of K.
	WPFQ	MP	50	Swarthmore, Pa. Borough of S.
	WDFS	MP	500	Asheville, N. C. Buncombe County.
	WPGZ	MP	50	Johnson City, Tenn. City of J. C.
	WPHY	MP	100	Elizabethton, Tenn. Carter County.
	WQFY	MP	50	Mansfield, Ohio. City of M.
	WRDQ	MP	400	Toledo, Ohio. City of T.
	WQZT	MP	100	Bucyrus, Ohio. City of B.
2482	KGZE	T	50	San Antonio, Tex. City of S. A. and State of Texas.
	KIJU	T	....	Todd, T. A. Perlit Straits Packing Co.
	KQAJ	MP	50	Joplin, Mo. City of J.
	KGQ	CH	....	Todd, T. A. Same as KIJU.
	WPGT	MP	50	New Castle, Pa. City of N. C.
	WPHZ	MP	50	Oil City, Pa. City of O. C.
	WQFF	MP	50	Monessen, Pa. City of M.
	WQFU	MP	50	Sharon, Pa. City of S.
2490	KACQ	SP	10	Kataloch, Wash. State of Wash.. Highway & Patrol Dept.
	KADF	MP	250	Yuma, Ariz. Yuma County.
	KADI	MP	50	Oceanside, Calif. City of O.
	KADQ	MP	50	Brea, Calif. City of B.
	KASH	MP	50	Portable in Wash. Same as KACQ.
	KAXV	SP	50	Portable in Wash. Same as KACQ.
	KBIE	SP	50	NC-14620. State of Wash., Dept. of Fisheries.
	KBMP	MP	50	Brawley, Calif. City of B.
	KGAZ	SP	....	Mobile in Wash. Same as KACQ.
	KGHD	SP	50	Seattle, Wash.
	KGHE	SP	50	Snoqualmie Pass, Wash. Same as KACQ.
	KGHQ	SP	10	Chinook Pass, Wash. Same as KACQ.
	KGHX	MP	400	Santa Ana, Calif. Orange County.
	KGZD	MP	400	San Diego, Calif. City of S. D.
	KGZU	MP	20	Lincoln, Nebr.
	KNFC	....	50	Port Angeles, Wash.
	KNFG	SP	250	Olympia, Wash. Same as KACQ.
	KNFK	SP	50	Bellingham, Wash. Same as KACQ.
	KNFM	SP	25	Compton, Calif.
	KNFX	SP	10	Ellensburg, Wash. Same as KACQ.
	KNGA	EM	10	Goldendale, Wash. Same as KACQ.
	KNGB	MP	50	Yakima, Wash.
	KNGC	MP	50	Vancouver, Wash.
	KNGD	SP	50	Walla Walla, Wash. Same as KACQ.
	KNGJ	MP	50	El Centro, Calif. City of E. C.
	KNGN	MP	25	Norfolk, Nebr.
	KNGQ	SP	50	Wenatchee, Wash. Same as KACQ.
	KNGR	SP	250	Spokane, Wash. Same as KACQ.

KNGZ	SP	10	Ephrata, Wash. Same as KACQ.
KQAX	SP	30	Mobile in Wash.
KQBX	SP	50	Mobile in Wash.
KQCS	SP	50	Colfax, Wash. Same as KACQ.
KQCT	SP	30	Portable in Wash. (2 units). Same as KACQ.
KQCZ	SP	30	Portable in Wash. Same as KACQ.
KSPN	SP	50	Portable in Wash. (On snow plow). Same as KACQ.
KSPM	SP	50	Portable in Wash. Same as KACQ.
KSPW	SP	50	Portable in Wash. Dept. of Highways.
KWAY	SP	....	Mobile in Wash.
KWSA	EM	....	Portable in Wash.
KWSB	EM	50	Portable, on snow plow, in Wash. Same as KACQ.
KWSD	EM	50	Port. on snow plow in Wash. Same as KACQ.
WAKA	MP	50	Huntington, Ind. City of H.
WAKK	MP	50	Frankfort, Ind. City of F.
WAMI	MP	50	Bluffton, Ind. City of B.
WAMJ	MP	100	Natchez, Miss. City of N.
WAMK	MP	50	Jackson, Miss. City of J.
WASC	MP	50	Peru, Ind. City of P.
WBWV	MP	50	Bluefield, W. Va. City of B.
WMPG	MP	50	Greenville, Miss. City of G.
WMPL	MP	40	La Porte, Ind. City of L. P.
WMPQ	MP	100	Logansport, Ind. City of L.
WMPV	MP	50	Valparaiso, Ind. City of V.
WPDT	MP	50	Kokomo, Ind. City of K.
WPDZ	MP	200	Fort Wayne, Ind. City of F. W.
WPPF	MP	30	Clarksburg, W. Va. City of C.
WPGN	MP	100	South Bend, Ind. City of S. B.
WPGO	MP	25	Huntington, N. Y. Town of H.
WPGS	MP	40	Mineola, N. Y. Nassau County.
WPHI	MP	50	Charleston, W. Va. City of C.
WPHJ	MP	100	Fairmont, W. Va. City of F.
WPHQ	MP	50	Parkersburg, W. Va. City of P.
WQFQ	MP	50	Lafayette, Ind.
WQSC	SP	50	Colfax, Wash. Same as KACQ.

This list will be continued in the November issue.

Explanation of the Third Column Symbols:

- A—Aircraft.
- B—Broadcast.
- C—Commercial Telegraph.
- F—Forestry.
- G—Government.
- P—Police.
- S—Ship.
- T—Radio Telephone.
- FA—Aeronautical (ground).
- GEO—Geophysical.
- RC—Circular radiobeacon.
- RD—Directional radiobeacon.
- RG—Direction finding station.
- LH—Lighthouse.
- RR—Radio range station.
- MP—Municipal police.
- SP—State police.
- ZP—Zone police.
- EM—Emergency.

- SEM—Special emergency.
- MF—Marine fire.
- MR—Marine Relay.
- PR—Press relay.
- RB—Relay broadcast.
- FAC—Facsimile.
- TV—Television video.
- TA—Television audio.
- NCE—Non-commercial educational.
- CC—Coastal Telegraph.
- CH—Coastal harbor.
- CHC—Coastal harbor telegraph.
- CHT—Coastal harbor telephone.
- E
- E1 } Experimental.
- E2 }
- GE—General Experimental.
- SE—Special Experimental.
- E3 }

QUESTIONS AND ANSWERS

E. G., in Lansing, Mich., complains: "I have a Majestic 91. It fades badly, but upon switching it off and then on it plays normally for a while. Servicemen repaired it, but the trouble started up again in a few days."

Answer: There are so many causes of this trouble that is forgiveable for your serviceman to overlook some of

them. In fact, before long, this annoyance is to be the reason for a special article. However, defective condensers are at the root of this trouble nine times out of ten. Test the cathode by-pass condensers and replace if defective. There are a number of these in the radio-frequency and detector circuits.

NORTH AMERICAN STATIONS BY FREQUENCIES WITH NAMES OF OWNERS

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

Second Column Symbols

A—Status in doubt.
B—National "Blue" Network.
C—Columbia Network.
D—Daytime only.
E—Minor Network.
F—Canadian Network.
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 loca-
tion.
Z—Has Permit to change fre-
quency.

a-b-c—Small letters show sta-
tions using same trans-
mitter.
1-2-3—Figures denote stations
sharing time.
?—Reported but not officially
confirmed.
...—No information.

Fourth Column Symbols

a—verifies for return postage.
b—Verifies only occasionally.
d—Verifies for government
postal card.
f—Verifies for 10 cents.
g—Card for postage; veri-
stamp for 10c.
z—No information available.

540 kcs. (552.2 m.)

CBK F 50000

a Watrous, Sask.

Canadian Brdctsg. Corp.

550 kcs. (545.1 m.)

CFNB F 1000
CMW ... 1400
KFUO 2 500(1)
KFYR N 1000(5)
KOAC ... 1000
KSD ..R 1000(5)
K TSA C 1000(5)
WDEV D 1000
WGR C 1000(5)
WKRC C 1000(5)
WSVA D 500

a Fredericton, N. B.
a Havana, Cuba.
a St. Louis, Mo.
a Bismarck, N. Dak.
a Corvallis, Ore.
a St. Louis, Mo.
a San Antonio, Texas
a Waterbury, Vt.
a Buffalo, N. Y.
a Cincinnati, Ohio
a Harrisonburg, Va.

James S. Neill & Sons
Troncoso y Gil
Evangelical Lutheran Synod
Meyer Brdctsg. Co.
State Agricultural College
St. Louis Post-Dispatch
Sunshine Brdctsg. Co.
Radio Station WDEV
Buffalo Brdctsg. Corp.
Columbia Brdctsg. Syst.
Shenandoah Valley Brdctsg. Corp.

560 kcs. (535.4 m.)

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

a Beaumont, Texas
a Denver, Colo.
a San Francisco, Calif.
a Springfield, Mo.
a Philadelphia, Pa.
a Gary, Ind.
a Columbia, S. C.
a Miami, Fla.

Beaumont Brdctg. Corp.
KLZ Brdctsg. Co.
Associated Broadcasters, Inc.
Ozarks Brdctsg. Co.
WFIL Brdctsg. Co.
Johnson-Kennedy Radio Corp.
Station WIS, Inc.
Miami Brdctsg. Co.

570 kcs. (526 m.)

KGKO N 1000(5)
KMTR ... 1000
KVI C 1000(5)
T15CV 575 100
WKBN C1 500(1)
WMAM DP 250
WMCA ... 1000
WNAX C 1000(5)
WOSU 1 1000
WSYR Ba 1000
WSYU Qa 1000
WWNC C 1000

a Fort Worth, Tex.
a Los Angeles, Calif.
a Tacoma, Wash.
z Alajuela, Costa Rica
a Youngstown, Ohio
z Marinette, Wis.
a New York, N. Y.
a Yankton, S. Dak.
a Columbus, Ohio.
a Syracuse, N. Y.
a Syracuse, N. Y.
a Asheville, N. C.

KGKO Brdctsg. Co.
KMTR Radio Corp.
Puget Sound Brdctsg. Co.
"Ecos del Poas"
WKBN Brdctsg. Corp.
M. & M. Brdctsg. Co.
Knickerbocker Brdctsg. Co.
WNAX Brdctsg. Co.
Ohio State University
Central N. Y. Brdctsg. Corp.
Central N. Y. Brdctsg. Cor.
Asheville Citizen-Times Co.

580 kcs. (516.9 m.)

CFPR ... 50
CHRC ... 100
CKCL F 100

a Prince Rupert, B. C.
a Quebec, P. Q.
a Toronto, Ont.

Felix E. Batt
CHRC, Ltd.
Dominion Battery Co.

CKPR	F	1000
CKUA	F	500
KMJ	KN	1000
KSAC	Z	500(1)
WCHS	C	500(1)
WDBO	C	1000(5)
WIBW	CZ	1000(5)
WILL	D	5000
WTAG	R	1000
XEMU	...	250

- a Fort William, Ont.
- b Edmonton, Alta.
- a Fresno, Calif.
- a Manhattan, Kans.
- a Charleston, W. Va.
- a Orlando, Fla.
- a Topeka, Kans.
- a Urbana, Ill.
- a Worcester, Mass.
- z Piedras Negras, Coah.

- Dougall Motor Car Co. University of Alta. McClatchey Brdstg. Co. State College of Agriculture Charleston Brdstg. Co. Orlando Brdstg. Co. Topeka Brdstcg. Ass'n. Universit of Ill. Worcester Telegram Pub. Co. Cia. Radiodifusora de Pedras N.

590 kcs. (508.2 m.)

CMCY	...	15000
KHQ	R	1000(5)
WEEI	C	1000(5)
WKZO	BDX	1000
WOW	R	1000(5)

- a Havana, Cuba.
- a Spokane, Wash.
- a Boston, Mass.
- a Kalamazoo, Mich.
- a Omaha, Nebr.

- Manuel D. Outran Cia. Louis Wasmer, Inc. Columbia Brdstcg. Sys. WKZO, In. Woodmen of the World

600 kcs. (499.7 m.)

CFCF	BF	500
CFQC	F	1000
CJOR	...	500
FQN	609	250
KFSD	B	1000
TIGPH	605	1000
WCAO	C	500(1)
WICC	BM	500(1)
WMT	BM	1000(5)
WREC	C	1000(5)

- a Montreal, P. Q.
- a Saskatoon, Sask.
- a Vancouver, B. C.
- a St. Pierre, Miquelon
- a San Diego, Calif.
- a San Jose, Costa Rica
- a Baltimore, Md.
- f Bridgeport, Conn.
- a Cedar Rapids, Iowa
- a Memphis, Tenn.

- Canadian Marconi Co. A. A. Murphy & Sons, Ltd. CJOR, Ltd. Radio Club St. Pierrais Airfan Radio Corp., Ltd. "Alma Tica," Gonzalo Pinto H. Monumental Radio C. Yankee Netork, Inc. Iowa Brdstcg. Co. WREC Brdstcg. Service

610 kcs. (491.5 m.)

CHNC	F	1000
KFAR	P	1000
KFRC	M	1000(5)
WCLE	DM	500
WDAF	R	1000(5)
WIOD	Na	1000
WIP	...	1000
WMBF	Qa	1000

- a New Carlisle, P. Q.
- z Fairbanks, Alaska
- b San Francisco, Calif.
- a Cleveland, Ohio
- a Kansas City, Mo.
- a Miami, Fla.
- a Philadelphia, Pa.
- a Miami, Fla.

- Gaspesian Radio Co., Ltd. Midnight Sun Brdstcg. Co. Don Lee Brdstg. Sys. Cleveland Radio Brdstcg. Cor. Kansas City Star Isle of Dreams Brdstcg. Corp. Pa. Brdstg. Co. Isle of Dreams Brdstcg. Corp.

620 kcs. (483.6 m.)

KGW	R	1000(5)
KTAR	N	1000
KWFT	C	250(1)
TIPG	625	5000
WFLA	Na	1000(5)
WHJB	CD	250
WLBZ	MN	500(1)
WSUN	Na	1000(5)
WTMJ	N	1000(5)

- a Portland, Ore.
- a Phoenix, Ariz.
- z Wichita Falls, Tex.
- b San Jose, Costa Rica
- a Tampa, Fla.
- a Greensburg, Pa.
- a Bangor, Maine
- a St. Petersburg, Fla.
- a Milwaukee, Wis.

- Oregonian Pub. Co. KTAR Brdstcg. Co. Wichita Brdstcg. Co. "La Voz de la Victor" Fla. West Coast Brdstcg. Co. Pittsburgh Radio Supply House Maine Brdstcg. Co., Inc. Chamber of Commerce The Journal Co.

630 kcs. (475.9 m.)

CFCO	F	100
CFCY	F	1000
CJRC	F	1000
CKOV	F	1000
CMCD	...	15000
KFRU	i	500(1)
KGFX	D	200
WGBF	NI	500(1)
WMAL	B	250(5)
WPRO	CX	500(1)
XEZ	...	500

- a Chatham, Ont.
- a Charlottetown, P. E. I.
- a Winnipeg, Man.
- a Kelowna, B. C.
- a Havana, Cuba
- a Columbia, Mo.
- a Pierre, S. Dak.
- a Evansville, Ind.
- a Washington, D. C.
- a Providence, R. I.
- a Merida, Yuc.

- John Beardall Island Radio Brdstg. Co. James Richardson & Sons Okanagan Broadcasters, Ltd. "La Voz del Aire" KFRU, Inc. Mrs. Ida A. McNeil, Adm. Evansville on the Air, Inc. National Brdstcg. Co., Inc. Cherry & Webb Brdstcg. Co. Jorge L. Palomeque

640 kcs. (468.5 m.)

HOK	...	...
KFI	R	50000
VONF	...	12500
WGAN	CL	500
WHKC	LM	500
WOI	D	5000
XEBX	...	250
YSS	...	500

- z Colon, Panama
- z Los Angeles, Calif.
- a St. John's, Nfld.
- a Portland, Maine
- a Columbus, Ohio
- a Ames, Iowa
- z Sabinas, Coah.
- a San Salvador, E. S.

- "La Voz de la Victor" Earle C. Anthony, Inc. Brdstcg. Corp. of Nfld. Portland Brdstcg. Sys., Inc. Associated Radiocasting Corp. Iowa State College "La Voz de la Carbonifera" Govt. of El Salvador

650 kcs. (461.3 m.)

TIGPH P ...
WSM KMN 50000

z San Jose, C. R.
a Nashville, Tenn.

Gonzalo Pinto H.
Nat'l. Life & Accident Ins. Co.

660 kcs. (454.3 m.)

CMOA ... 200
KOWH D 500
WEAF R 50000
XEAL A 1000
XEAO ... 250

z Havana, Cuba
a Omaha, Nebr.
a New York, N. Y.
z Mexico City, D. F.
a Mexicali, B. Cfa.

Juan Fernandez Duran
World Pub. Co.
National Brdcastg. Co., Inc.
Cia. Pan-Americana de Radio, S.A.
Chavez y Castro Sucrs.

670 kcs. (447.5 m.)

WMAQ R 50000

b Chicago, Ill.

National Brdcastg. Co., Inc.

680 kcs. (440.9 m.)

CMHW ... 200
KFEQ ... 500(2.5)
KPO R 50000
VAS 685 2000
WLAW D 1000
WPTF JN 5000

f Santa Clara, Cuba
a St. Joseph, Mo.
a San Francisco, Calif.
f Glace Bay, N. S.
a Lawrence, Mass.
a Raleigh, N. C.

Guillermo Domenech Gulisch
KFEQ, Inc.
National Brdcastg. Co., Inc.
Canadian Marconi Co., Ltd.
Hildreth & Rogers Co.
WPTF Radio Co.

690 kcs. (434.5 m.)

CFRB C 10000
CJCJ F 100
CMBC ... 200
TIGH ... 1000
XET ... 5000

a Toronto, Ont.
a Calgary, Alta.
z Havana, Cuba
b San Jose, Costa Rica
a Monterrey, N. L.

Rogers Radio Brdcastg. Co.
Albertan Publishers, Ltd.
"El Progreso Cubano"
"America Latina"
El Pregonero del Norte, S.A.

700 kcs. (428.3 m.)

VOWR ... 500
WLW KMN 50000
WBXO Exp 500000

b St. John's, Nfld.
a Cincinnati, Ohio
a Cincinnati, Ohio

Wesley United Church
Crosley Corp.
Crosley Corp.

710 kcs. (422.3 m.)

CMKS ... 200
KIRO CHJ 1000
KMPC L 500
WOR KM 50000

a Guantanamo, Cuba
a Seattle, Wash.
a Beverly Hills, Calif.
a Newark, N. J.

Candido Savon Suarez
Queen City Brdcastg. Co.
KMPC The Station of the Stars
Bamberger Brdcastg. Serv., Inc.

720 kcs. (416.4 m.)

CMK ... 200
T14NRH 725 750
WGN KM 50000
XEH ... 250

a Havana, Cuba
f Heredia, Costa Rica
b Chicago, Ill.
a Monterrey, N. L.

Radiodifusion O'Shea
Amando Cespedes Ramon
WGN, Inc.
Constantino de Ternava

730 kcs. (410.7 m.)

CFPL F 100
CJCA F 1000
CKAC C 5000
XELO ... 50000
XEPN AQ 100000
XEQ ... 50000

a London, Ont.
a Edmonton, Alta.
a Montreal, P. Q.
a Tijuana, B. Cfa.
a Piedras Negras, Coah.
a Mexico City, D. F.

London Free Press
North Western Publishers Ltd.
La Presse Pub. Co., Ltd.
Cia. Radiodifusora de Piedras N.
Piedras N. Brdcastg. Co.
Radio Panamericana S. A.

740 kcs. (405.2 m.)

CMJX ... 200
KMMJ L 1000
KTRB D 250
WHEB D 250
WSB R 50000

z Camaguey, Cuba
a Grand Island, Nebr.
a Modesto, Calif.
a Portsmouth, N. H.
a Atlanta, Ga.

Rodolfo Gonzales Solis
KMMJ, Inc.
McTammany & Bates
Granite State Brdcastg. Corp.
Atlanta Journal Co.

750 kcs. (399.8 m.)

CMBL ... 200
KGU LN 2500
TING ... 375

a Havana, Cuba
a Honolulu, Hawaii
z San Jose, Costa Rica

Radio Cadena Suaritos
Advertiser Pub. Co., Ltd.
"Reina Del Espacio"

WJR C 50000
 XEAA ... 200
 XEAM ... 25

760 kcs. (394.5 m.)

KXA X 250(.5)
 WBAL BHMSy 2500
 WCAL D2 5000
 WEW D 1000
 WJZ BSy 50000
 WLB D2 5000

770 kcs. (389.4 m.)

CMKW ... 200
 KFAB CSyXZ 10000
 TILJ 775 450
 WBBM CSy 50000

780 kcs. (384.4 m.)

CHWK F 100
 CKSO F 1000
 CMQ N 25000
 KECA ... 25000
 KFDY D 1000
 KFOD ... 250
 KGHL N 1000(.5)
 KWLK D 250
 WEAN BM 1000(.5)
 WMC JR 5000
 WPIC D 250
 WTAR JN 5000
 XEN ... 1000

790 kcs. (379.5 m.)

CMGH ... 200
 KGO B 7500
 KOAM DN 1000
 WGY R 50000
 ZNS ... 1000

800 kcs. (374.8 m.)

HIX ... 800
 TIXD ... 100
 WBAP ENa 50000
 WFAA ENa 50000
 WTBO D 250

810 kcs. (370.2 m.)

CMCF ... 5000
 WCCO C 50000
 WNYC D 1000
 XEBZ ... 100
 XEDF ... 100

820 kcs. (365.6 m.)

WHAS C 50000
 XEBG ... 1000

830 kcs. (361.2 m.)

CMHI ... 200
 KOA R 50000
 TIEP ... 3000
 WEEU DR 1000
 WHDH L 1000
 WRUF L 5000

840 kcs. (356.9 m.)

CBL F 50000
 VOGY ... 400
 XERA ... 250000

a Detroit, Mich.
 a Mexicali, B. Cfa.
 z Matamoros, Tam.

a Seattle, Wash.
 a Baltimore, Md.
 a Northfield, Minn.
 a St. Louis, Mo.
 a New York, N. Y.
 a Minneapolis, Minn.

z Santiago de Cuba
 a Lincoln, Nebr.
 z San Jose, C. Rica
 a Chicago, Ill.

f Chilliwack, B. C.
 a Sudbury, Ont.
 a Havana, Cuba
 a Los Angeles, Calif.
 a Brookings, S. Dak.
 b Anchorage, Alaska
 a Billings, Mont.
 a Longview, Wash.
 a Providence, R. I.
 a Memphis, Tenn.
 a Sharon, Pa.
 a Norfolk, Va.
 g Mexico City, D. F.

a Matanzas, Cuba
 a San Francisco, Calif.
 a Pittsburg, Kans.
 a Schenectady, N. Y.
 d Nassau, Bahamas

a Trujillo, D. R.
 z San Jose, Costa R.
 a Fort Worth, Texas
 a Dallas, Texas
 a Cumberland, Md.

a Havana, Cuba
 g Minneapolis, Minn.
 a New York, N. Y.
 a Mexico City, D. F.
 a Nuevo Laredo, Tam.

a Louisville, Ky.
 z Tijuana, B. Cfa.

a Santa Clara, Cuba
 a Denver, Colo.
 a San Jose, C. Rica
 a Reading, Pa.
 a Boston, Mass.
 a Gainesville, Fla.

a Toronto, Ont.
 a St. John's, Nfld.
 a Villa Acuña, Coah.

WJR, The Goodwill Station
 Alberto Gonzales
 Manuel L. Salinas

American Radio Telephone Co.
 WBAL Brdcs. Co.
 St Olaf College
 St. Louis University
 National Brdcs. Co., Inc.
 University of Minn.

Claudio Alvarez Soriano
 KFAB Brdcs. Co.
 "Estacion San Jose"
 Columbia Brdcs. Sys., Inc.

Chilliwack Brdcs. Co., Ltd.
 Sudbury Star
 "Del Jabon Candado"
 Earle C. Anthony, Inc.
 S. Dak. State College
 Anchorage Radio Club, Inc.
 Northwestern Auto Supply Co.
 Twin City Brdcs. Corp.
 Yankee Network, Inc.
 Memphis Commercial Appeal Co.
 Sharon Herald Brdcs. Co.
 WTAR Radio Corp.
 "Radio Mundial"

"Rialto"
 National Brdcs. Co., Inc.
 Pittsburg Brdcs. Co.
 General Electric Co.
 Superintendent of Telegraphs

Gobierno Dominicano
 "Voz de la Republica"
 Carter Publications, Inc.
 A. H. Belo Corp.
 Associated Brdcs. Corp.

General Electric of Cuba
 Columbia Brdcs. Sys., Inc.
 City of N. Y.
 Refugio Esperza Vda. de Valezzi
 "El Pregonero del Bravo"

Louisville Times Co.
 Angel B. Fernandez

Laviz y Paz
 National Brdcs. Co., Inc.
 "La Voz del Tropico"
 Berks Brdcs. Co.
 Matheson Radio Co., Inc.
 University of Fla.

Canadian Brdcs. Corp.
 Newfoundland Hotel
 Ca. Mex. Radiodifusora Fronteriza

850 kcs. (352.7 m.)

CMCM	...	200
KIEV	D	250
WESG	CD	1000
WKAR	DX	1000
WWL	C	50000

a	Havana, Cuba
a	Glendale, Calif.
a	Elmira, N. Y.
a	E. Lansing, Mich.
a	New Orleans, La.

Transradio Columbia
Cannon System, Ltd.
Cornell University
Mich. State College
Loyola University

860 kcs. (348.6 m.)

CMJA	...	200
TIEMC	...	250
WABC	Ca	50000
WBOQ	QA	50000
WHB	DM	1000
XEMO	...	5000

a	Camaguey, Cuba
z	San Jose, C. Rica
a	New York, N. Y.
a	New York, N. Y.
a	Kansas City, Mo.
a	Tijuana, B. Cfa.

Rafael Valdes
"Radio el Mundo"
Columbia Brdctsg. Sys., Inc.
Columbia Brdctsg. Sys., Inc.
WHB Brdctsg. Co.
Fernando Federico Ferreira

870 kcs. (344.6 m.)

CMHO	...	5000
WENR	Ba	50000
WLS	Ba	50000
XEFB	...	200
XERC	A	500

z	Sagua la Grande, Cuba
b	Chicago, Ill.
a	Chicago, Ill.
a	Monterrey, N. L.
z	Mexico City, D. F.

.....
National Brdctsg. Co., Inc.
Agricultural Brdctsg. Co.
Jesus Quintalilla
Carlos Dragome Narro

880 kcs. (340.7 m.)

CBO	F	1000
CFJC	F	1000
CMX	...	15000
KFKA	M2	500(1)
KLX	...	1000
KPOF	...	1000
KVAN	DP	250
TILS	...	500
WCOC	C	1000
WGBI	CI	500(1)
WQAN	I	500(1)
WRNL	DX	500
WSUI	...	500(1)

a	Ottawa, Ont.
a	Kamloops, B. C.
a	Havana, Cuba
a	Greeley, Colo.
a	Oakland, Calif.
a	Denver, Colo.
z	Vancouver, Wash.
b	San Jose, C. Rica
a	Meridian, Miss.
f	Scranton, Pa.
a	Scranton, Pa.
a	Richmond, Va.
a	Iowa City, Iowa

Canadian Brdctsg. Corp.
Kamloops Sentinel, Ltd.
Casa Lavin
Mid-Western Radio Corp.
Tribune Bldg. Co.
Pillar of Fire
Vancouver Radio Corp.
"Radio Para Ti"
Miss. Brdctsg. Co., Inc.
Scranton Broadcasters, Inc.
Scranton Times
Richmond Radio Corp.
State University of Iowa

890 kcs. (336.9 m.)

KARK	N	1000
KFNF	X2	500(1)
KFPY	C	1000(5)
KUSD	Z	500
WBAA	...	500(1)
WGST	C	1000(5)
WJAR	R	1000(5)
WMMN	C	1000(5)
XEW	...	100000

a	Little Rock, Ark.
a	Shenandoah, Iowa
a	Spokane, Wash.
a	Vermillion, S. Dak.
a	W. Lafayette, Ind.
a	Atlanta, Ga.
a	Providence, R. I.
a	Fairmont, W. Va.
a	Mexico City, D. F.

Ark. Radio & Equipment Co.
KFNF, Inc.
Symons Brdctsg. Co.
University of S. Dak.
Purdue University
Ga. School of Technology
Outlet Co.
Monongahela Valley Brdctsg. Co.
Cadena Radiodifusora Mexicana

900 kcs. (333.1 m.)

HIG	...	250
KGBU	X	500
KHJ	M	1000(5)
KSEI	N	250(1)
TIAFB	...	600
WBEN	R	1000(5)
WELI	DXZ	500
WFMD	D	500
WJAX	N	1000(5)
WKY	N	1000(5)
WLBL	D	5000
WTAD	D	1000

z	Trujillo, D. R.
a	Ketchikan, Alaska
a	Los Angeles, Calif.
a	Pocatello, Idaho
z	San Jose, C. Rica
a	Buffalo, N. Y.
a	New Haven, Conn.
a	Frederick, Md.
a	Jacksonville, Fla.
a	Oklahoma City, Okla.
a	Stevens Point, Wis.
a	Quincy, Ill.

Andres Cordero Puello
Alaska Radio & Serv. Co., Inc.
Don Lee Brdctsg. Sys.
Radio Serv. Corp.
Mayid Borzuna
WBEN, Inc.
City Brdctsg. Corp.
Monocacy Brdctsg. Co.
City of Jacksonville
WKY Radiophone Co.
University of Wis.
Ill. Brdctsg. Corp.

910 kcs. (329.6 m.)

CBF	FN	50000
CJAT	F	1000
CKY	F	15000
CMBO	...	5000
CMKD	...	1000
XENT	...	150000

a	Montreal, P. Q.
a	Trail, B. C.
a	Winnipeg, Man.
a	Havana, Cuba
a	Santiago de Cuba
a	Nuevo Laredo, Tam.

Canadian Brdctsg. Corp.
Kootenay Brdctsg. Co., Ltd.
Manitoba Telephone System
Ideas Pazos
Radioemisora Oriental
Cla. Industrial Universal S. A.

920 kcs. (325.9)

CMHT	...	200
KFEL	aMX	500
KOMO	R	1000(5)
KPRC	R	1000(5)
KVOD	Ba	500
TIRS	925	200
WAAF	D	1000
WORL	D	500
WPEN	...	1000
WSPA	D	1000
WWJ	R	1000(5)

- z Trinidad, Cuba
- a Denver, Colo.
- a Seattle, Wash.
- a Houston, Texas
- a Denver, Colo.
- z San Jose, C. Rica
- a Chicago, Ill.
- a Boston, Mass.
- a Philadelphia, Pa.
- a Spartanburg, S. C.
- a Detroit, Mich.

Fernando E. Soto del Valle
Eugene P. O'Fallon, Inc.
Fishers Blend Station, Inc.
Houston Printing Corp.
Colorado Radio Corp.
"Radio Athena"
Drivers Journal Pub. Co.
Brdcstg. Serv. Organization
Wm. Penn Brdcstg. Co.
Voice of South Carolina
Evening News Ass'n.

930 kcs. (322.4 m.)

CFAC	F	1000
CFCH	F	100
CFLC	...	100
CHNS	F	1000
CKPC	...	100
CMJF	...	200
KMA	B	1000(5)
KROW	...	1000
WBRC	R	1000(5)
WDBJ	C	1000(5)
XEBH	...	500

- a Calgary, Alta.
- a North Bay, Ont.
- a Prescott, Ont.
- a Halifax, N. S.
- a Brantford, Ont.
- z Camaguey, Cuba
- a Shenandoah, Iowa
- a Oakland, Calif.
- a Birmingham, Ala.
- a Roanoke, Va.
- a Hermosillo, Son.

South Western Publishers, Ltd.
R. H. Thomson
Radio Ass'n. of Prescott
Maritime Brdcstg. Co., Ltd.
Telephone City Brdcstg., Ltd.
John L. Stowers
May Seed & Nursery Co.
Educational Brdcstg. Corp.
Birmingham Brdcstg. Co., Inc.
Times World Corp.
Carlos Balderrama

940 kcs. (319 m.)

CMBZ	...	200
KOIN	C	1000(5)
TIOS	...	500
WAAT	D	500
WAVE	N	1000
WCSH	R	1000(2.5)
WDAY	N	1000(5)
WHA	D	5000
WICA	DX	250
XEFO	...	5000

- a Havana, Cuba
- a Portland, Ore.
- z San Jose, C. Rica
- a Jersey City, N. J.
- a Louisville, Ky.
- a Portland, Maine
- a Fargo, N. Dak.
- a Madison, Wis.
- a Ashtabula, Ohio
- a Mexico City, D. F.

Radio Salas
KOIN, Inc.
"Radio Titania"
Bremer Brdcstg. Corp.
WAVE, Inc.
Congress Square Hotel Co.
WDAY, Inc.
University of Wis.
WICA, Inc.
Partido de la Revolucion Mex.

950 kcs. (315.6 m.)

CBV	F	1000
CJRM	F	1000
CMKL	...	200
KFWB	...	1000(5)
KMBC	C	1000(5)
VOAR	...	25
WRC	R	1000(5)
WTRY	DP	1000

- a Quebec, P. Q.
- a Regina, Sask.
- z Bayamo, Cuba
- a Los Angeles, Calif.
- a Kansas City, Mo.
- z St. John's, Nfld.
- a Washington, D. C.
- z Troy, N. Y.

Canadian Brdcstg. Corp.
J. Richardson & Sons, Ltd.
Alberto Alvarez Ferrera
Warner Bros. Brdcstg. Cor.
Midland Brdcstg. Co.
National Brdcstg. Co., Inc.
Troy Brdcstg. Co., Inc.

960 kcs. (312.3 m.)

CBM	FR	5000
CFRN	F	100
XEAW	...	100000
XECL	...	1000

- a Montreal, P. Q.
- a Edmonton, Ata.
- a Reynosa, Tam.
- z Mexicali, B. Cfa.

Canadian Brdcstg. Corp.
G. R. A. Rice
Cia. Int. Difusora Reynosa
Alfonso A. Lacarra

970 kcs. (309.1 m.)

CMCK	...	5000
KJR	B	5000
WCFL	N	5000
WIBG	D	100

- z Havana, Cuba
- a Seattle, Wash.
- a Chicago, Ill.
- a Glenside, Pa.

Luis Casas R.
Fishers Blend Station, Inc.
Chicago Fed. of Labor
Seaboard Radio Brdcstg. Corp.

980 kcs. (306 m.)

KDKA	B	50000
XEAC	...	5000
XEFE	...	250

- b Pittsburgh, Pa.
- a Tijuana, B. Cfa.
- z Nuevo Laredo, Tam.

Westinghouse Elec. & Mfg. Co.
Jorge I. Rivera
Rafael T. Carranza

990 kcs. (302.8 m.)

WBZ	BSy	50000
WBZA	BSy	1000
XEAF	...	750

- a Boston, Mass.
- a Springfield, Mass.
- a Nogales, Son.

Westinghouse Elec. & Mfg. Co.
Westinghouse Elec. & Mfg. Co.
Cia. Radiodifusora Sonorense

XEK ... 100
XES ... 250

a Mexico City, D. F.
a Tampico, Tam.

Arturo Martinez
Fernando Sada

1000 kcs. (299.8 m.)

KFVD L 1000
TIFA ... 250
WHO KR 50000
XEBI ... 250

a Los Angeles, Calif.
z San Jose, C. Rica
a Des Moines, Iowa
a Aguascalientes, Ags.

Standard Brdcstg. Co.
"La Voz de Italia"
Central Brdcstg. Co. @
Pedro C. Rivas

1010 kcs. (296.9 m.)

CHML F 100
CKCD I 100
CKCK F 1000
CKCO F 100
CKIC ... 50
CKWX FI 100
CMCU ... 200
KGGF M2 1000
KQW M 1000

a Hamilton, Ont.
a Vancouver, B. C.
a Regina, Sask.
a Ottawa, Ont.
a Wolfville, N. S.
a Vancouver, B. C.
a Havana, Cuba
a Coffeyville, Kans.
a San Jose, Calif.

Maple Leaf Radio Co., Ltd.
Vancouver Daily Province
Leader-Post, Ltd.
Dr. G. M. Geldert
Acadia University
Western Brdcstg. Co., Ltd.
Jorge Garcia Serra
Hugh J. Powell
Pacific Agricultural Foundation,
Ltd.

WHN ... 1000(5)
WNAD 2 1000
WNOX C 1000(5)
XEFO ... 50
XEU ... 250

a New York, N. Y.
a Norman, Okla.
a Knoxville, Tenn.
a Cananea, Son.
a Veracruz, Ver. C.

Marcus Loew Booking Agency
University of Okla.
Scripps-Howard Radio, Inc.
Pedro L. Diaz
Fernando Pazos S.

1020 kcs. (293.9 m.)

KYW R 10000
WDZ D 1000
XEJ ... 1000

b Philadelphia, Pa.
a Tuscola, Ill.
a Juarez, Chih.

Westinghouse Elec. & Mfg. Co.
WDZ Brdcstg. Co.
Pedro Meneses Jr.

1030 kcs. (291.1 m.)

CFCN F 10000
CJBR F 1000
CKLW FM 5000
TIHO ... 500
XEB ... 10000

a Calgary, Alta.
a Rimouski, P. Q.
a Windsor, Ont.
z San Jose, C. Rica
a Mexico City, D. F.

Voice of the Prairies, Ltd.
J. A. Brilliant
Western Ont. Brdcstg. Co., Ltd.
"Radio Costa Rica"
El Buen Tono, S. A.

1040 kcs. (288.3 m.)

KRLD C 50000
KWJJ HL 500
KYOS DM 250
VOCM ... 100
WTIC HR 50000

a Dallas, Texas
a Portland, Ore.
a Merced, Calif.
z St. John's, Nfld.
a Hartford, Conn.

KRLD Radio Corp.
KWJJ Brdcstg. Co., Inc.
Merced Brdcstg. Co.
St. John's Evening Telegram
Travelers Brdcstg. Serv. Corp.

1050 kcs. (285.5 m.)

CBA F 50000
CMCH ...
CMCP ... 200
HIT ... 50
KFBI LY 5000
KNX C 50000
WEAU L 1000(5)
WIBC D 1000

a Sackville, N. B.
z—Havana, Cuba
z—Havana, Cuba
z—Trujillo, D. R.
a Abilene, Kans.
b Los Angeles, Calif.
a Eau Claire, Wis.
a Indianapolis, Ind.

Canadian Brdcstg. Corp.
Radio Popular
Radio Popular, S. A.
A. L. Pichardo
Farmers & Bankers Brdcstg. Corp.
Columbia Brdcstg. Sys.
Central Brdcstg. Co.
Indiana Brdcstg. Corp.

1060 kcs. (282.8 m.)

KTHS HN 10000
VOAC 1065 40
WBAL BM 10000
WJAG L 1000

a Hot Springs, Ark.
z St. John's, Nfld.
a Baltimore, Md.
a Norfolk, Nebr.

Chamber of Commerce
WBAL Brdcstg. Co.
Norfolk Daily News

1070 kcs. (280.2 m.)

CMJW ... 200
KJBS L 500
TINBC P 5000
WCAZ D 100
WTAM R 50000

z Camaguey, Cuba
a San Francisco, Calif.
z San Jose, C. Rica
a Carthage, Ill.
a Cleveland, Ohio

"La Voz del Pueblo"
Julius Brunton & Sons Co.
Superior Brdcstg. Serv., Inc.
National Brdcstg. Co., Inc.

1080 kcs. (277.6 m.)

CMBX	...	200	a	Havana, Cuba
CMKM	...	200	a	Manzanillo, Cuba
WBT	C	50000	a	Charlotte, N. C.
WCBD	LI	5000	a	Chicago, Ill.
WMBI	LI	5000	g	Chicago, Ill.
XEBA	...	20	z	Guzman, Jal.
XEBK	...	100	z	Nuevo Laredo, Tam.
XEDP	...	500	a	Mexico City, D. F.

Vicente Espinosa
Raimundo Comas Soler
Columbia Brdcstg. Sys.
WCBD, Inc.
Moody Bible Institute
Javier Velasco
"Indo Latin Voice"
Depto. de Publicidad y Prop-
aganda

1090 kcs. (275.1 m.)

CMHA	...	200	z	Sagua la Grande, Cuba
HIN	...	100	z	Trujillo, D. R.
KMOX	C	50000	a	St. Louis, Mo.
XERB	...	150000	a	Rosarito Beach, B. Cfa.

Abelardo Menocal
J. M. Bonetti Burgos
Columbia Brdcstg. Sys.
.....

1100 kcs. (272.6 m.)

CBR	F	5000	a	Vancouver, B. C.
CMHP	...	200	z	Placetas, Cuba
KGDM	DM	1000	f	Stockton, Calif.
KWKH	CH	50000	a	Shreveport, La.
WBIL	I	5000	a	New York, N. Y.
WPG	CI	5000	a	Atlantic City, N. J.
XECL	?	1000	z	Mexicali, B. Cfa.
...	DP	1000	z	Pontiac, Mich.

Canadian Brdcstg. Corp.
Guevara y Gonzales
E. F. Peffer
International Brdcstg. Corp.
Arde Bulova
City of Atlantic City
Alfonso A. Lacarra
Pontiac Brdcstg. Co.

1110 kcs. (270.1 m.)

CMCJ	...	200	a	Havana, Cuba
KSOO	LN	5000	a	Sioux Falls, S. Dak.
WRVA	CM	50000	a	Richmond, Va.

Radio Emisora Comercial
Sioux Falls Broadcast Ass'n.
Larus & Bros. Co., Inc.

1120 kcs. (267.7 m.)

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

Canadian Brdcstg. Corp.
La Patrie Pub. Co.
N. B. Brdcstg. Co.
Wentworth Radio Brdcstg. Co.,
Ltd.
Manitoba Telephone Sys.
Bernabe R. de la Torre
Spokane Brdcstg. Corp.
Echo Park Evangelistic Ass'n.
Radio Broadcasters, Inc.
Radio Sales Corp.
State Capitol Brdcstg. Ass'n.
Mass. Brdcstg. Corp.
WDEL, Inc.
Hearst Radio, Inc.
Baton Rouge Brdcstg. Co., Inc.
Agricultural & Mechanical College

1130 kcs. (265.3 m.)

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

Gilberto Gesse Lopez
Radio Serice Corp.
WJJD, Inc.
International Brdcstg. Corp.
Salvador Monterrubio R.

1140 kcs. (263 m.)

CMBG	...	200	z	Havana, Cuba
KVOO	N	25000	a	Tulsa, Okla.
WAPI	C	5000	a	Birmingham, Ala.
WSPR	LM	500	a	Springfield, Mass.

"Voz de Oro"
Southwestern Sales Corp.
Ala. Polytechnic Institute
WSPR, Inc.

1150 kcs. (260.7 m.)

CMKG	...	2000	z	Santiago, Cuba
WHAM	N	50000	a	Rochester, N. Y.
XEBP	...	250	z	Durango, Dgo.
XEC	...	100	a	Tijuana, B. Cfa.
XEDW	...	300	a	Minatitlan, Ver. C.
XEL	...	250	z	Mexico City, D. F.

Emilio Grau Medina
Stromberg-Carlson Mfg. Co.
Manuel Cano Maldonado
Luis F. Encisco
Hector Silva Canto
Financiera de Inersiones S.A.

1160 kcs. (258.5 m.)

CMHJ	B...	200
WOWO	B1	10000
WWVA	C1	5000
XEAS	...	100
XED	...	2500
XEP	...	500

a	Cienruegos, Cuba
a	Fort Wayne, Ind.
a	Wheeling, W. Va.
a	Saltillo, Coah.
a	Guadalajara, Jal.
a	Juarez, Chih.

Romualdo Ugalde
Westinghouse Radio Stations, Inc.
W. Va. Brcdstg. Corp.
La Voz del Comercio en Saltillo
Cia Radiofonografica
Esteban Perra

1170 kcs. (256.3 m.)

CMBS	...	200
WCAU	C	50000
XEXX	...	1000

a	Havana, Cuba
a	Philadelphia, Pa.
z	Mexico City, D. F.

Enrique Artalejo
WCAU Brcdstg. Co.
Universidad Nacional de Mexico

1180 kcs. (254.1 m.)

KEX	B	5000
KOB	N	10000
WDGY	M	1000 (5)
WINS	L	1000
WMAZ	CL	1000 (5)

a	Portland, Ore.
a	Albuquerque, N. Mex.
a	Minneapolis, Minn.
a	New York, N. Y.
a	Macon, Ga.

Oregonian Pub. Co.
Albuquerque Brcdstg. Co.
Dr. George W. Young
Hearst Radio, Inc.
Southeastern Brcdstg. Co., Inc.

1190 kcs. (252 m.)

CMKX	...	200
KTKC	DMXZ	250

z	Santiago de Cuba
f	Visalia, Calif.

Oscar Vidal Benitez
Tulare-Kings Counties Radio
Ass'n.
Soutnriand Industries, Inc.
WSAZ, Inc.

WOAI	EN	50000
WSAZ	L	1000

a	San Antonio, Texas
a	Huntington, W. Va.

1200 kcs. (249.9 m.)

CFGP	...	100
CHAB	F	100 (.25)
CHGB	F	100

a	Grande Prairie, Alta.
z	Moose Jaw, Sask.
z	St. Anne de la Pocattierre, P. Q.

Northern Brcdstg. Corp.
CHAB, Ltd.
G. Thomas Desjardins

CKNX	...	100
CKTB	F	100
CMCO	...	200
KAWA	EM	100
KAST	...	100 (.25)
KBTM	D	100
KELO	N	100 (.25)
KFJB	...	100 (.25)
KFXD	...	100 (.25)
KFXJ	...	100 (.25)
KGDE	...	100 (.25)
KGEK	...	100
KGFJ	...	100
KGHI	...	100 (.25)
KHAS	P	100 (.25)
KMLB	...	100 (.25)
KOOS	M	100 (.25)
KSUN	...	100 (.25)
KVCV	M	100
KVEC	M	100 (.25)
KVNU	...	100
KVOS	M	100
KWBD	DP	100
KWG	N	100
KWNO	...	100 (.25)
TIRCC	...	500
WABI	C	100 (.25)
WAIM	C	100
WAYX	...	100 (.25)
WBAB	P	100 (.25)
WBBZ	M	100 (.25)
WBHP	...	100
WCAT	D	100
WCAX	...	100 (.25)
WCI O	...	250
WCPO	...	100 (.25)
WDSM	P	100
WENY	P	100 (.25)
WEST	...	100 (.25)
WFSX	P	100
WFAM	4	100
WFTC	...	100 (.25)
WHBC	...	100 (.25)
WHPV	F	100 (.25)

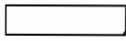
z	Wingham, Ont.
a	St. Catharines, Ont.
a	Havana, Cuba
a	Ada, Okla.
a	Astoria, Ore.
a	Jonesboro, Ark.
a	Sioux Falls, S. Dak.
a	Marshalltown, Iowa
a	Nampa, Idaho
a	Grand Junction, Colo.
b	Fergus Falls, Minn.
f	Sterling, Colo.
a	Los Angeles, Calif.
a	Little Rock, Ark.
z	Hastings, Nebr.
a	Monroe, La.
a	Marshfield, Ore.
a	Lowell, Ariz.
a	Redding, Calif.
a	San Luis Obispo, Calif.
z	Logan, Utah
a	Bellingham, Wash.
z	Plainview, Texas
a	Stockton, Calif.
a	Winona, Minn.
z	San Jose, C. Rica
a	Bangor, Maine
a	Anderson, S. C.
a	Waycross, Ga.
z	Atlantic City, N. J.
a	Ponca City, Okla.
a	Huntsville, Ala.
a	Rapid City, S. Dak.
a	Burlington, Vt.
a	Janesville, Wis.
z	Cincinnati, Ohio
z	Superior, Wis.
z	Elmira, N. Y.
a	Easton, Pa.
z	Salem, Mass.
a	South Bend, Ind.
a	Kinston, N. C.
a	Canton, Ohio
a	Green Bay, Wis.

Wingham Radio Club
E. T. Sandell
Enrique Lasanta
C. C. Morris
Astoria Brcdstg. Co.
Regional Brcdstg. Co.
Sioux Falls Broadcast Ass'n.
Marshall Elec. Co.
Frank E. Hurt
Western Slope Brcdstg. Co.
Charles L. Jaren
Elmer G. Beehler
Ben S. McGlashan
Ark. Brcdstg. Co.
Nebr. Brcdstg. Co.
Liner's Brcdstg. Station, Inc.
KOOS, Inc.
Copper Elec. Co.
Golden Empire Brcdstg. Co.
Valley Elec. Co.
Cache Valley Brcdstg. Co.
KVOS, Inc.
W. B. Dennis
McClatchey Brcdstg. Co.
Winona Radio Service
"Accion Catolica"
Community Brcdstg. Service
W. E. Hall, Anderson College
Jack Williams
Press-Union Pub. Co.
Adelaide L. Carrell
Wilton Harvey Pollard
S. Dak School of Mines
Burlington Daily News, Inc.
Gazette Printing Co.
Scripps-Howard Radio, Inc.
WDSM, Inc.
Elmira Star-Gazette, Inc.
Associated Broadcasters, Inc.
North Shore Brcdstg. Co.
South Bend Tribune
Jonas Weiland
Ohio Brcdstg. Co.
WHBY, Inc.

WIBX	C	100(.25)	a	Utica, N. Y.
WIL	...	100(.25)	a	St. Louis, Mo.
WJBC	5	100(.25)	a	Bloomington, Ill.
WJBL	Z5	100	a	Decatur, Ill.
WJBW	L	100	a	New Orleans, La.
WJHL	...	100(.25)	a	Johnson City, Tenn.
WJNO	D	100(.25)	a	W. Palm Beach, Fla.
WJRD	C	250	a	Tuscaloosa, Ala.
WKBO	N	100(.25)	a	Harrisburg, Pa.
WLVA	...	250	a	Lynchburg, Va.
WMFR	...	100	a	High Point, N. C.
WMOB	DP	100	z	Mobile, Ala.
WMPC	...	100(.25)	a	Lapeer, Mich.
WOLS	...	100	a	Florence, S. C.
WRBL	C	100(.25)	a	Columbus, Ga.
WRSR	P	100(.25)	z	Panama City, Fla.
WSAL	D	250	z	Salisbury, Md.
WSKB	DP	100	z	McComb, Miss.
WTHT	M	100	a	Hartford, Conn.
WTOL	...	100	a	Toledo, Ohio
WWAE	4	100	a	Hammond, Ind.
....	P	100(.25)	z	Sault Ste. Marie, Mich.

WIBX, Inc.	
Missouri Brdcstg. Corp.	
Kaskaskia Brdcstg. Co.	
Commodore Brdcstg. Co.	
Charles C. Carlson	
Johnson City Brdcstg. Co.	
WJNO, Inc.	
James R. Doss, Jr.	
Keystone Brdcstg. Corp.	
Lynchburg Brdcstg. Corp.	
Radio Station WMFR, Inc.	
S. B. Quigley	
First Methodist Church	
O. Lee Stone	
Columbus Brdcstg. Co.	
Panama City Brdcstg. Co.	
Frank M. Stearns	
McComb Brdcstg. Corp.	
Hartford Times, Inc.	
Community Brdcstg. Co.	
Hammond-Calumet Brdcstg. Corp.	
Hiawathaland Brdcstg. Co.	

1210 kcs. (247.8 m.)



CHLT	...	100	z	Sherbrooke, P. Q.
CJCS	...	50	a	Stratford, Ont.
CJOC	F	100	a	Lethbridge, Alta.
CKBI	F	100	a	Prince Albert, Sask.
CKCH	F	100	a	Hull, P. Q.
CKMC	...	50	a	Cobalt, Ont.
CMHK	...	200	z	Cruces, Cuba
KALB	...	100(.25)	a	Alexandria, La.
KANS	N	100	a	Wichita, Kans.
KASA	M	100	a	Elk City, Okla.
KDLR	...	100(.25)	a	Devils Lake, N. Dak.
KDON	M	100	a	Monterey, Calif.
KFJI	...	100	a	Klamath Falls, Ore.
KFOR	CM	100(.25)	a	Lincoln, Nebr.
KFPW	...	100	a	Fort Smith, Ark.
KFVS	5	100(.25)	z	Cape Girardeau, Mo.
KFXM	M2	100	a	San Bernardino, Calif.
KGLO	C	100(.25)	z	Mason City, Iowa
KGy	M	100	a	Olympia, Wash.
KHBG	D	100	a	Okmulgee Brdcstg. Corp.
KIUL	...	100	a	Garden City Brdcstg. Co.
KLAH	...	100(.25)	a	Carlsbad Brdcstg. Co.
KOCA	...	100(.25)	a	Carlsbad, N. Mex.
KOVO	P	100(.25)	a	Kilgore, Texas
KPFA	EN	100(.25)	z	Provo, Utah
KPPC	2	100	a	Helena, Mont.
KROY	C	100	a	Pasadena, Calif.
KVSO	M	100(.25)	a	Sacramento Calif.
KWJB	...	100(.25)	a	Ardmore, Okla.
KWTN	A	100	a	Globe, Ariz.
KXOX	DP	250	a	Watertown, S. Dak.
WALR	...	100	z	Sweetwater, Tex.
WBAX	M	100	a	Zanesville, Ohio
WBBL	S	100	a	Wilkes-Barre, Pa.
WBRB	3	100	a	Richmond, Va.
WCOL	N	100	a	Red Bank, N. J.
WCOU	M	100(.25)	a	Columbus, Ohio
WCOV	D	100	a	Lewiston, Maine
WCRW	4	100	z	Montgomery, Ala.
WFBO	5	100(.25)	a	Chicago, Ill.
WEDC	4	100	a	Harrisburg, Ill.
WFAS	3	100	a	Chicago, Ill.
WFOY	...	100(.25)	a	White Plains, N. Y.
WGBB	3	100	a	St. Augustine, Fla.
WGCM	...	100	a	Freeport, N. Y.
WGRAM	Y	100(.25)	a	Gulfport, Miss.
WHAI	M	250	a	Grenada, Miss.
WHBU	...	100(.25)	a	Greenfield, Mass.
WIRU	E	100(.25)	a	Anderson, Ind.
WINN	P	100(.25)	a	Poynette, Wis.
WJ9Y	...	100(.25)	z	Louisville, Ky.
WJEJ	...	100	a	Gadsden, Ala.
WJIM	B	100(.25)	a	Hagerstown, Md.
WJLS	...	250	z	Lansing, Mich.
			z	Beckley, W. Va.

La Tribune, Ltd.	
Frank M. Squires	
H. R. Carson, Ltd.	
Prince Albert Radio Club	
CKCH Radio Brdcstg. Co.	
R. L. MacAdam	
R. G. Gonzalez	
Alexandria Brdcstg. Co.	
KANS brdcstg. Co.	
E. M. Woody	
KDLR, Inc.	
Monterey Peninsula Brdcstg. Co.	
KFJI Broadcasters, Inc.	
Cornbelt Brdcstg. Corp.	
Southwestern Hotel Co.	
Hirsch Battery & Radio Co.	
Lee Bros. Brdcstg. Co.	
Mason City Globe Gazette Co.	
KGy, Inc.	
Okmulgee Brdcstg. Corp.	
Garden City Brdcstg. Co.	
Carlsbad Brdcstg. Co.	
Oil Capital Brdcstg. Ass'n.	
Citizens Voice & Air Show	
Peoples Forum of the Air	
Pasadena Presb. Church	
Royal Miller	
Ardmore Pub. Co., Inc.	
Sims Brdcstg. Co.	
Greater Kampeska Radio Corp.	
Sweetwater Radio, Inc.	
WALR Brdcstg. Corp.	
John H. Stenger, Jr.	
Grace Covenant Presb. Church	
Monmouth Brdcstg. Co.	
WCOL, Inc.	
Twin City Brdcstg. Co., Inc.	
Capital Brdcstg. Co., Inc.	
Clinton R. White	
Harrisburg Brdcstg. Co.	
Emil Denmark, Inc.	
Westchester Brdcstg. Corp.	
Fountain of Youth Properties, Inc.	
Harry H. Carman	
WGCM, Inc.	
P. K. Ewing	
John W. Haigis	
Anderson Brdcstg. Corp.	
W. C. Forrest, The Electric Farm	
Ky. Brdcstg. Corp.	
Gadsden Brdcstg. Co., Inc.	
Hagerstown Brdcstg. Co.	
WJIM, Inc.	
Joe L. Smith, Jr.	

WJMC	D	250
WJTN	B	100(.25)
WJW	...	100(.25)
WKOK	...	100
WLOK	D	100
WMFG	C	100(.25)
WOCB	P	100(.25)
WOMT	...	100
WPAX	P	100(.25)
WPIV	...	100(.25)
WRAL	M	100(.25)
WSAY	...	250
WSBC	...	100(.25)
WSIX	...	100(.25)
WSNJ	...	100(.25)
WSOC	MN	100
WTAX	...	100(.25)
WTMA	...	250
XEAT	...	50
XEE	...	50
XEFV	...	100
XETH	...	100(.25)
...	P	...

z	Rice Lake, Wis.
a	Jamestown, N. Y.
a	Akron, Ohio
a	Sunbury, Pa.
a	Lima, Ohio
a	Hibbing, Minn.
z	Hyannis, Mass.
a	Manitowoc, Wis.
a	Thomasville, Ga.
z	Petersburg, Va.
z	Raleigh, N. C.
a	Rochester, N. Y.
a	Chicago, Ill.
a	Nashville, Tenn.
a	Bridgeton, N. J.
a	Charlotte, N. C.
a	Springfield, Ill.
z	Charleston, S. C.
a	Parral, Chih.
a	Durango, Dgo.
a	Juarez, Chih.
a	Puebla, Pue.
z	Yuma, Ari.

Walter H. McGenty
James Brdcsq. Co., Inc.
WJW, Inc.
Sunbury Brdcsq. Corp.
Fort Industry Co.
Head of the Lakes Brdcsq. Co.
Cape Cod Brdcsq. Co.
Francis M. Kado
H. Wimpy
Petersburg Newspaper Corp.
Capitol Brdsg. Co., Inc.
Brown Radio Service
WSBC, Inc.
WSIX, Inc.
Eastern States Brdcsq. Corp.
WSOC, Inc.
WTAX, Inc.
Atlantic Coast Brdcsq. Co.
David G. Cervantes
Alejandro O. Stevenson, Jr.
Dario Cordoba
Ramon Huerta G.
Yuma Brdcsq. Co.

1220 kcs. (245.8 m.)

KFKU	a	1000(5)
KTMS	B	500
KTW	S2	1000
KWSC	Z	1000(5)
TIGPH2	1225	1000
WCAD	D	500
WCAE	MR	1000(5)
WDAE	C	1000(5)
WGNV	D	250
WREN	aB	1000(5)
XEBL	...	50
XEDA	...	200
XETF	...	12

a	Lawrence, Kans.
z	Santa Barbara, Calif.
a	Seattle, Wash.
a	Pullman, Wash.
b	San Jose, C. Rica
a	Canton, N. Y.
a	Pittsburgh, Pa.
a	Tampa, Fla.
a	Newburgh, N. Y.
a	Lawrence, Kans.
z	Mazatlan, Sin.
z	Gral. Anaya, D. F.
a	Veracruz, Ver. C.

University of Kans.
News Press Pub. Co.
First Presb. Church
State College of Wash.
"Nueva Alma Tica"
St. Lawrence University
WCAE, Inc.
Tampa Times Co.
Peter Goelet
WREN Brdcsq. Co.
Ignacio L. Saiz
Pedro Riestra Diaz
Jose Rodriguez Lopez

1230 kcs. (243.8 m.)

CMCB	...	200
CMJE	...	200
KGBX	N	500
KGGM	C	1000
KYA	...	1000(5)
WFBM	C	1000(5)
WNAC	R	1000(5)
WOL	M	1000
XEG	...	250
XECA	...	250

a	Havana, Cuba
z	Camaguey, Cuba
a	Springfield, Mo.
a	Albuquerque, N. Mex.
a	San Francisco, Calif.
a	Indianapolis, Ind.
a	Boston, Mass.
a	Washington, D. C.
z	Monterrey, N. L.
z	Tampico, Tam.

La Metropolitana
Primo Alfonso Casares
Springfield Brdcsq. Co.
N. Mex. Brdcsq. Co.
Hearst Radio, Inc.
WFBM, Inc.
Yankee Network, Inc.
American Brdcsq. Co.
Rodolfo Junco de la Vega
Nicolas M. Picet

1240 kcs. (241.8 m.)

CJCB	F	1000
CMAB	...	200
CMHB	...	200
KGCU	...	250
KTAT	M	1000
KTFI	N	1000
WHBF	M	1000(2.5)
WKAQ	C	1000
WXYZ	B	1000
XEBU	...	50
XEKL	A	500
XEME	...	50

a	Sydney, N. S.
z	Pinar del Rio, Cuba
z	Sancti Spiritus, Cuba
a	Mandan, N. Dak.
a	Fort Worth, Texas
a	Twin Falls, Idaho
a	Rock Island, Ill.
a	San Juan, Puerto Rico
a	Detroit, Mich.
z	Chihuahua, Chih.
b	Leon, Gto.
z	Merida, Yuc.

Eastern Broadcasters, Ltd.
Hotel Ricardo
V. E. Weiss y Cia.
Mandan Radio Ass'n.
Tarrant Brdcsq. Co.
Radio Brdcsq. Corp.
Rock Island Brdcsq. Co.
Radio Corp. of Puerto Rico
King-Trendle Brdcsq. Corp.
Feliciano Lopez Islas
Hemmer y Romero S. de R.L.
Perfeto Villamil Cisero

1250 kcs. (239.9 m.)

CMKC	...	200
KFOX	...	1000
KIT	MX	250(.5)
KXOK	...	1000
WAIR	DM	250
WDSU	B	1000
WHBI	2	100(2.5)
WKST	DX	250

a	Santiago, Cuba
a	Long Beach, Calif.
a	Yakima, Wash.
z	St. Louis, Mo.
a	Winston-Salem, N. C.
a	New Orleans, La.
a	Newark, N. J.
a	New Castle, Pa.

Pinol Batlle y Cia.
Nichols & Warinner, Inc.
Carl E. Haymond
Star-Times Pub. Co.
Radio Station WAIR
WDSU, Inc.
May Radio Brdcsq. Corp.
Keystone Brdcsq. Co.

WMRO D 250
 WNEW 2 1000(5)
 WTCN B 1000(5)
 XEAI ... 500

z Aurora, Ill.
 a New York, N. Y.
 a Minneapolis, Minn.
 z Mexico City, D. F.

Martin R. O'Brien
 Wodaam Corp.
 Minn. Brdctsg. Corp.
 Carmen Gutierrez

1260 kcs. (238 m.)

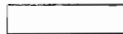


CMBD ... 200
 CMJO ... 200
 KGVO C 1000(5)
 KHSL M 250
 KOIL CM 1000(5)
 KPAC DZ 500
 KRGV MN 1000
 KUOA D 500
 KVOA N 1000
 WFVA DP 250
 WHIO C 1000(5)
 WNBX CM 1000
 WTOC C 1000

z Havana, Cuba
 a Ciego de Avila, Cuba
 a Missoula, Mont.
 a Chico, Calif.
 a Omaha, Nebr.
 a Port Arthur, Texas
 a Weslaco, Texas
 a Siloam Springs, Ark.
 a Tucson, Ariz.
 z Fredericksburg, Va.
 a Dayton, Ohio
 a Springfield, Vt.
 a Savannah, Ga.

Luiz Perez Garcia
 Bonifacio Ildefonso
 Mosby's, Inc.
 Golden Empire Brdctsg. Co.
 Central States Brdctsg. Co.
 Port Arthur College
 KRGV, Inc.
 KUOA, Inc.
 Arizona Brdctsg. Co.
 Fredericksburg Brdctsg. Corp.
 Miami Valley Brdctsg. Corp.
 Twin State Brdctsg. Corp.
 Savannah Brdctsg. Co.

1270 kcs. (236.1 m.)

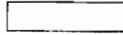


CMHD ... 200
 KGCA D2 100
 KOL M 1000(5)
 KVOR C 1000
 KWLC D2 100
 WASH aDN 500
 WFR R 1000(5)
 WJDX R 1000(5)
 WOOD aN 500
 XEXB A 250
 XEXE ... 17

d Caibarien, Cuba
 a Decorah, Iowa
 a Seattle, Wash.
 a Colorado Springs, Colo.
 a Decorah, Iowa
 a Grand Rapids, Mich.
 a Baltimore, Md.
 a Jackson, Miss.
 a Grand Rapids, Mich.
 a Jalapa, Ver. C.
 z Texcoco, D. F.

Manuel Alvarez M.
 Charles W. Greenley
 Seattle Brdctsg. Co.
 Out West Brdctsg. Co.
 Luther College
 King-Trendle Brdctsg. Corp.
 Baltimore Radio Show, Inc.
 Lamar Life Insurance Co.
 King-Trendle Brdctsg. Corp.
 Gobierno del Est. de Veracruz
 H. Ayuntamiento de Texcoco

1280 kcs. (234.2 m.)

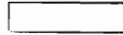


CMKO ... 200
 KFBB C 1000(5)
 KLS ... 250
 WCAM 2 500
 WCAP 2 500
 WDDO C 1000(5)
 WIBA N 1000(5)
 WORC C 500
 WRR M 500
 WTNJ 2 500
 XEMX ... 100

z Holguin, Cuba
 a Great Falls, Mont.
 a Oakland, Calif.
 a Camden, N. J.
 a Asbury Park, N. J.
 a Chattanooga, Tenn.
 a Madison, Wis.
 a Worcester, Mass.
 a Dallas, Texas
 a Trenton, N. J.
 z Mexico City, D. F.

Manuel Angulo Farran
 Buttrey Brdctsg. Co.
 Warner Brothers
 City of Camden
 Radio Industries Broadcast Co.
 WDDO Brdctsg. Corp.
 Badger Brdctsg. Co.
 Alf. F. Kleindienst
 City of Dallas
 WOAX, Inc.
 Alfonso Traslosheros A.

1290 kcs. (232.4 m.)

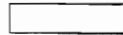


CMCG ... 200
 CMJK ... 200
 KDYL R 1000(5)
 KLCN D 100
 KTRH C 1000(5)
 WATR ... 250
 WEBC N 1000(5)
 WJAS C 1000(5)
 WJHP P 250
 WNBZ D 100
 WNEL .. 1000(2.5)

a Havana, Cuba
 a Camaguey, Cuba
 a Salt Lake City, Utah
 a Slytheville, Ark.
 a Houston, Texas
 a Waterbury, Conn.
 a Duluth, Minn.
 a Pittsburgh, Pa.
 z Jacksonville, Fla.
 a Saranac Lake, N. Y.
 a San Juan, Puerto Rico

La Onda, S. A.
 Feliciano Isaac
 Intermountain Brdctsg. Corp.
 C. L. Lintzenich
 KTRH Brdctsg. Co.
 WATR Co., Inc.
 Head of the Lakes Brdctsg. Co.
 Pittsburgh Radio Supply House
 The Metropolis Co.
 Up-State Brdctsg. Corp.
 Juan Piza

1300 kcs. (230.6 m.)



KALE M 1000
 KFAC ... 1000
 KFH 2 1000(5)
 WBRR C 1000
 WEVD 2 1000
 WFBC N 1000(5)
 WHAZ 2 1000
 WHBL .. 250(1)

a Portland, Ore.
 a Los Angeles, Calif.
 a Wichita, Kans.
 a Brooklyn, N. Y.
 a New York, N. Y.
 a Greenville, S. C.
 a Troy, N. Y.
 g Sheboygan, Wis.

KALE, Inc.
 Los Angeles Brdctsg. Co.
 Radio Station KFH Co.
 Watch Tower Bible Society
 Debs Memorial Radio Fund, Inc.
 Greenville News-Piedmont Co.
 Rensselaer Polytechnic Institute
 Press Pub. Co.

1310 kcs. (228.9 m.)

CHCK	...	50	a	Charlottetown, P. E. I.	CHCK Radio Brdstg. Co.
CJKL	F	100	a	Kirkland Lake, Ont.	Northern Brdstg. Co.
CJLS	F	100	a	Yarmouth, N. S.	Laurie L. Smith
CKCV	F	100	a	Quebec, P. Q.	CKCV, Ltd.
CMKE	?	...	z	Manzanillo, Cuba	.....
KAND	DM	100	a	Corsicana, Texas	Navarro Brdstg. Ass'n.
KARM	C	100	a	Fresno, Calif.	George Harm
KBND	...	100(.25)	z	Bend, Ore.	The Bend Bulletin
KCKN	...	100	a	Kansas City, Kans.	KCKN Brdstg. Co.
KCRJ	...	100(.25)	a	Jerome, Ariz.	Central Ariz. Brdstg. Co.
KFPL	...	100(.25)	f	Dublin, Texas	KFPL Brdstg. Station
KFYO	M	100(.25)	a	Lubbock, Texas	Plains Radio Brdstg. Co.
KGEZ	...	100	a	Kalispell, Mont.	Donald C. Treloar
KGFV	...	100(.25)	a	Kearney, Nebr.	Central Nebr. Brdstg. Corp.
KHUB	...	100(.25)	a	Watsonville, Calif.	John P. Scripps
KOCY	...	100(.25)	a	Oklahoma City, Okla.	Plaza Court Brdstg. Co.
KOME	DEM	250	z	Tulsa, Okla.	Oil Capital Sales Corp.
KPDN	D	100	a	Pampa, Texas	R. C. Hoiles
KRBA	D	100	a	Lufkin, Texas	Red Lands Brdstg. Ass'n.
KRMD	...	100(.25)	a	Shreveport, La.	KRMD, Inc.
KROC	N	100(.25)	a	Rochester, Minn.	Southern Minn. Brdstg. Co.
KRRV	DM	250	a	Sherman, Texas	Red River Valley Brdstg. Corp.
KSRO	...	100(.25)	a	Santa Rosa, Calif.	PressDemocrat Pub. Co.
KSUB	...	100	a	Cedar City, Utah	Johnson & Perry
KTSM	N	100(.25)	a	El Paso, Texas	Tri-State Brdstg. Co.
KVIC	P	100(.25)	z	Victoria, Texas	Radio Enterprises, Inc.
KVOL	...	100(.25)	a	Lafayette, La.	Evangeline Hotel
KVOX	...	100(.25)	a	Moorhead, Minn.	KVOX Brdstg. Co.
KVSF	...	100	z	Santa Fe, N. Mex.	N. Mex. Brdstg. Co.
KWFC	P	100(.25)	z	Hot Springs, Ark.	Hot Springs Brdstg. Co.
KWOC	D	100	a	Poplar Bluff, Mo.	Radio Station KWOC
KWOS	...	100(.25)	a	Jefferson City, Mo.	Tribune Printing Co.
KXRO	M	100(.25)	a	Aberdeen, Wash.	KXRO, Inc.
TGI	...	...	d	Guatemala City, Guat.	"Radio Morse"
WAML	...	100(.25)	a	Laurel, Miss.	New Laurel Radio Station, Inc.
WBEO	L	100(.25)	a	Marquette, Mich.	Lake Superior Brdstg. Co.
WBOW	NZ	100(.25)	a	Terre Haute, Ind.	Banks of the Wabash, Inc.
WBRE	N	100(.25)	a	Wilkes-Barre, Pa.	Louis G. Baltimore
WBRK	M	100(.25)	a	Pittsfield, Mass.	Voice of the Berkshires
WCLS	...	100	a	Joliet, Ill.	WCLS, Inc.
WCMI	...	100(.25)	a	Ashland, Ky.	Ashland Brdstg. Co.
WDAH	S	100(.25)	a	El Paso, Texas	Tri-State Brdstg. Co.
WEBR	B	250	a	Buffalo, N. Y.	WEBR, Inc.
WEMP	...	250	a	Milwaukee, Wis.	Milwaukee Brdstg. Co.
WEXL	...	50	a	Royal Oak, Mich.	Royal Oak Brdstg. Co.
WFBG	...	100	a	Altoona, Pa.	Gable Brdstg. Co.
WFDL	B	100	a	Flint, Mich.	Flint Brdstg. Co.
WFIG	P	100(.25)	z	Sumter, S. C.	J. Samuel Brody
WGAU	...	100(.25)	a	Athens, Ga.	J. K. Patrick & Co.
WGH	...	100(.25)	a	Newport News, Va.	Hampton Roads Brdstg. Corp.
WGTM	D	100	a	Wilson, N. C.	WGTM, Inc.
WHAT	4	100	a	Philadelphia, Pa.	Independence Brdstg. Co.
WJPF	P	100(.25)	z	Herrin, Ill.	Orville W. Lyerla
WJPR	P	100(.25)	z	Greenville, Miss.	John R. Pepper
WLAK	N	250	z	Lakeland, Fla.	Lake Region Brdstg. Co.
WLBC	P	250	a	Muncie, Ind.	Donald A. Burton
WLBK	M	100(.25)	z	Bowling Green, Ky.	Bowling Green Brdstg. Co.
WLNH	P	100	a	Laconia, N. H.	Northern Brdstg. Co.
WMBO	...	100(.25)	a	Auburn, N. Y.	WMBO, Inc.
WMFF	B	100(.25)	a	Plattsburg, N. Y.	Plattsburg Brdstg. Corp.
WNBH	M	100(.25)	a	New Bedford, Mass.	E. Anthony & Sons
WRAW	...	100	a	Reading, Pa.	Reading Brdstg. Co.
WROL	N	100(.25)	a	Knoxville, Tenn.	Stuart Brdstg. Corp.
WSAJ	...	100	a	Grove City, Pa.	Grove City College
WSAV	P	100	z	Savannah, Ga.	WSAV, Inc.
WSGN	B	100(.25)	a	Birmingham, Ala.	Birmingham News Co.
WSJS	C	250	a	Winston-Salem, N. C.	Piedmont Pub. Co.
WTAL	...	100(.25)	a	Tallahassee, Fla.	Fla. Capitol Broadcasters, Inc.
WTFL	4	100	a	Philadelphia, Pa.	Foulkrod Radio Eng. Co.
WTJS	...	100(.25)	a	Jackson, Tenn.	Sun. Pub. Co., Inc.
WTRC	...	100(.25)	a	Elkhart, Ind.	Truth Pub. Co., Inc.
XEAG	...	10	z	Cordoba, Ver. C.	Diodoro Zuniga
XERO	...	25	z	Irapuato, Gto.	Alfonso Martinez
XEFW	...	300	z	Tampico, Tam.	Flores y Martinez
XETB	...	500	a	Torreón, Coah.	Aurelio G. Zaragoza
XEX	...	500	a	Monterrey, N. L.	El Heraldo del Comercio

1320 kcs. (227.1 m.)

CMTR	...	200	z	Havana, Cuba	La Traviata
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KGHF B 500
 KGMB CMZ 1000
 KID ..C 500(1)
 KRNT ..C 1000(5)
 WADC C 1000(5)
 WORK N 1000
 WSMB R 1000(5)

a Pueblo, Colo.
 a Honolulu, Hawaii
 a Idaho Falls, Idaho
 a Des Moines, Iowa
 a Akron, Ohio
 a York, Pa.
 a New Orleans, La.

Curtis P. Ritchie
 Honolulu Brcdstg. Co., Ltd.
 KID Brcdstg. Co.
 Iowa Brcdstg. Co.
 Allen T. Simmons
 York Brcdstg. Co.
 WSMB, Inc.

1330 kcs. (225.4 m.)

KGB M 1000
 KMO M 1000
 KRIS MN 500
 KSCJ C 1000(5)
 WDRC C 1000(5)
 WSAI MN 1000(5)
 WTAQ C 1000(5)

a San Diego, Calif.
 a Tacoma, Wash.
 a Corpus Christi, Tex.
 a Sioux City, Iowa
 g Hartford, Conn.
 a Cincinnati, Ohio
 a Green Bay, Wis.

Don Lee Brcdstg. Sys.
 KMO, Inc.
 Gulf Coast Brcdstg. Co.
 Sioux City Journal
 WDRC, Inc.
 Crosley Corp.
 WHBY, Inc.

1340 kcs. (223.7 m.)

KDTH DP 500
 KGIR EN 1000(5)
 KGNO ... 250(1)
 WCOA N 500(1)
 WFEA MN 500(1)
 WFNC DP 250
 WSPD B 1000(5)
 XEAP ... 50
 XEBS ... 200
 XEDH ... 200
 XEFC ... 100
 XEBW ... 250
 XEXD A 350

z Dubuque, Iowa
 a Butte, Mont.
 b Dodge City, Kans.
 a Pensacola, Fla.
 a Manchester, N. H.
 z Fayetteville, N. C.
 a Toledo, Ohio
 z Obregon, Son.
 z Mexico City, D. F.
 z Villa Acuna, Coah.
 a Merida, Yuc.
 a Chihuahua, Chih.
 z Orizaba, Ver. C.

Telegraph Herald Co.
 KGIR, Inc.
 Dodge City Brcdstg. Co.
 Pensacola Brcdstg. Co.
 Sioux City Journal
 Cumberland Brcdstg. Co.
 Fort Industry Co.
 Emilio Mazanilla
 Maria Remedios Delgado
 Vicente Hernandez
 Julio Molina-Font
 Voice of Industry & Commerce
 Gobierno del Est. de Veracruz

1350 kcs. (222.1 m.)

CMCA ... 200
 KIDO N 1000(2.5)
 KWK BM 1000(5)
 WAWZ 2 1000
 WBNX 2 1000
 WMBG RX 500

a Havana, Cuba
 a Boise, Idaho
 a St. Louis, Mo.
 a Zarephath, N. J.
 a New Cork, N. Y.
 a Richmond, Va.

Testar y Gonzales
 Boise Brcdstg. Station
 Thomas Patrick, Inc.
 Pillar of Fire
 WBNX Brcdstg. Co., Inc.
 Havens & Martin, Inc.

1360 kcs. (220.4 m.)

CMJH ... 200
 KCRC EM 250
 KGER ... 1000
 KLPM ... 500(1)
 KSLM M 500
 WCSC N 500(1)
 WFBL C 1000(5)
 WGES 2 500(1)
 WQBC D 1000
 WSBT C2 500

d Ciego de Avila, Cuba
 a Enid, Okla.
 a Long Beach, Calif.
 a Minot, N. Dak.
 a Salem, Ore.
 a Charleston, S. C.
 a Syracuse, N. Y.
 a Chicago, Ill.
 a Vicksburg, Miss.
 a South Bend, Ind.

Luis Marauri H.
 Enid Radiophone Co.
 Consolidated Brcdstg. Corp.
 John B. Cooley
 Oregon Radio, Inc.
 S. C. Brcdstg. Co., Inc.
 Onondaga Radio Brcdstg. Corp.
 Oak Leaves Brcdstg. Station
 Delta Brcdstg. Co., Inc.
 South Bend Tribune

1370 kcs. (218.8 m.)

CFAR ... 100
 CFOS ... 100
 CKCW F 100
 CKRN ... 100
 CMGE ... 200
 HI Z ... 75
 KEEN 3 100
 KELD ... 100
 KERN N 100
 KFGQ D 100
 KFJZ M 100(.25)
 KFRO DMXZ 250
 KGFL 4 100
 KGKL M 100(.25)
 KICA 4 100
 KIUN ... 100
 KIUF ... 100
 KLUF M 100(.25)
 KMAC 5 100(.25)

a Flin Flon, Man.
 z Owen Sound, Ont.
 a Moncton, N. B.
 z Rouyn, P. Q.
 a Cardenas, Cuba
 z Trujillo, D. R.
 a Seattle, Wash.
 z El Dorado, Ark.
 a Bakersfield, Calif.
 a Boone, Iowa
 a Fort Worth, Tex.
 a Longview, Texas
 a Roswell, N. Mex.
 a San Angelo, Texas
 a Clovis, N. Mex.
 a Pecos, Texas
 a Durango, Colo.
 a Galveston, Tex.
 a San Antonio, Tex.

Arctic Radio Corp.
 Owen Sound Sun-Times
 Moncton Brcdstg. Co., Ltd.
 Cie. Radiodiffusion Rouyn-
 Noranda
 Genero Sebater
 Frank Hatton
 KVL, Inc.
 Radio Enterprises, Inc.
 McCatchely Brcdstg. Co.
 Boone Biblical College
 Ft. Worth Broadcasters, Inc.
 Voice of Longview
 KGFL, Inc.
 KGKL, Inc.
 Western Broadcasters, Inc.
 Hawkins & Tubbs
 San Juan Brcdstg. Co.
 KLUF Brcdstg. Co.
 W. M. McAllister

KOBH	...	100(.25)	a	Rapid City, S. Dak.	Black Hills Brdcstg. Co.
KOKO	...	100	a	La Junta, Colo.	Southwest Brdcstg. Co.
KONIO	5	100	a	San Antonio, Tex.	Mission Brdcstg. Co.
KRE	...	100(.25)	a	Berkeley, Calif.	Central Calif. Broadcasters
KRKO	3	50	a	Everett, Wash.	Lee Mudgett
KRMC	...	100(.25)	a	Jamestown, N. Dak.	Roberts McNab Hotel Co.
KTEM	E	100(.25)	a	Temple, Texas	Bell Brdcstg. Co.
KTOK	EMN	250	a	Oklahoma City, Okla.	Okla. Brdcstg. Co.
KTSW	...	100	a	Emporia, Kans.	Emporia Brdcstg. Co., Inc.
KTUC	...	100(.25)	a	Tucson, Ariz.	Tucson Motor Serv. Co.
KUJ	...	100	a	Walla Walla, Wash.	KUJ, Inc.
KVGB	...	100	z	Great Bend, Kans.	Helen Townsley
KVRS	...	100(.25)	a	Rock Springs, Wyo.	Wyoming Brdcstg. Co.
KWYO	...	100(.25)	a	Sheridan, Wyo.	Big Horn Brdcstg. Co.
WABY	BM	100(.25)	a	Albany, N. Y.	Adirondack Brdcstg. Co.
WAGF	D	250	a	Dothan, Ala.	Dothan Brdcstg. Co.
WATF	...	100(.25)	a	Atlanta, Ga.	Atlanta Brdcstg. Co.
WBLK	N	250	a	Clarksburg, W. Va.	The Exponent Co.
WBNY	Z	100(.25)	a	Buffalo, N. Y.	Roy L. Albertson
WBTH	D	100	z	Williamson, W. Va.	Williamson Brdcstg. Corp.
WBTM	...	100(.25)	a	Danville, Va.	Piedmont Brdcstg. Corp.
WCBM	...	100(.25)	a	Baltimore, Md.	Baltimore Brdcstg. Corp.
WCNC	P	100(.25)	z	Elizabeth City, N. C.	Albemarle Brdcstg. Co.
WCOS	P	100(.25)	z	Columbia, S. C.	Carolina Advertising Corp.
WDAS	...	100(.25)	a	Philadelphia, Pa.	WDAS Brdcstg. Station, Inc.
WDWS	...	100(.25)	a	Champaign, Ill.	Champaign News-Gazette, Inc.
WEOA	C	100(.25)	a	Evansville, Ind.	Evansville on the Air, Inc.
WFOR	...	100	a	Hattiesburg, Miss.	Forrest Brdcstg. Co.
WGBR	P	100	z	Goldsboro, N. C.	Eastern Carolina Brdcstg. Co.
WGL	N	100(.25)	a	Fort Wayne, Ind.	Westinghouse Radio Stations, Inc.
WGRC	D	250	a	New Albany, Ind.	WHBQ, Inc.
WHBO	...	100	a	Memphis, Tenn.	Upper Mich. Brdcstg. Co.
WHDF	...	100(.25)	a	Calumet, Mich.	Head of the Lakes Brdcstg. Co.
WHLB	C	100(.25)	a	Virginia, Minn.	Port Huron Brdcstg. Co.
WHLS	...	100(.25)	a	Port Huron, Mich.	M. L. Medley
WHUB	P	100(.25)	z	Cookeville, Tenn.	WIBM, Inc.
WIBM	B	100(.25)	a	Jackson, Mich.	Asheville Daily News
WISE	P	100	z	Asheville, N. C.	WJAC, Inc.
WJAC	...	100(.25)	a	Johnstown, Pa.	Merrimac Brdcstg. Co.
WLLH	MSy	100(.25)	a	Lowell, Mass.	Merrimac Brdcstg. Co.
WLLH	Sy	100	a	Lawrence, Mass.	Fla. Brdcstg. Co.
WMBR	C	100(.25)	a	Jacksonville, Fla.	Richard A. Dunlea
WMFD	...	100(.25)	a	Wilmington, N. C.	James R. Doss, Jr.
WMFO	D	100	a	Decatur, Ala.	Frank R. Pidcock, Sr.
WMGA	P	100(.25)	z	Moultrie, Ga.	WMIN Brdcstg. Co.
WMIN	...	100(.25)	a	St. Paul, Minn.	Tri-City Brdcstg. Co.
WOC	C	100(.25)	a	Davenport, Iowa	Vee Bee Corp.
WPAY	...	100	a	Portsmouth, Ohio	Puerto Rico Advertising Co.
WPRA	XX	1000(.25)	a	Mayaguez, P. R.	WRAC, Inc.
WRAC	...	100(.25)	a	Williamsport, Pa.	WRDO, Inc.
WRDO	MN	100	a	Augusta, Maine	Racine Brdcstg. Corp.
WRJN	...	100(.25)	a	Racine, Wis.	Northern Brdcstg. Co.
WSAU	...	100(.25)	a	Wausau, Wis.	Seneca Vocational High School
WSVS	D2	50	b	Buffalo, N. Y.	Pinellas Brdcstg. Co.
WTSP	P	100(.25)	z	St. Petersburg, Fla.	Zeferino Z. Jiminez
XECZ	...	100	z	San Luis Potosi, S. L. P.	Carlos Gutierrez M.
XEI	...	125	a	Morelia, Micho.	Maria Gardena de Zetina
XELZ	...	100	z	Mexico City, D. F.	Northwest Brdcstg. Co.
...	LP	100(.25)	z	Ft. Dodge, Iowa	Tom M. Bryan
...	P	100(.25)	z	Ft. Lauderdale, Fla.	Richland, Inc.
...	DP	250	z	Mansfield, Ohio.	

1380 kcs. (217.3 m.)

CMCW	...	200	d	Havana, Cuba	J. Vilarino y Cia.
KOH	C	500	a	Reno, Nev.	The Bee, Inc.
KQV	C	500(1)	b	Pittsburgh, Pa.	KQV Brdcstg. Co.
WALA	CX	500(1)	a	Mobile, Ala.	Pape Brdsg. Co.
WING	...	250(.5)	a	Dayton, Ohio	WSMK, Inc.
WKBH	...	1000	a	La Crosse, Wis.	WKBH, Inc.
WNBC	R	250(1)	a	New Britain, Conn.	State Brdcstg. Corp.
XEM	...	500	z	Chihuahua, Chih.	.....

1390 kcs. (215.7 m.)

CMJC	...	200	z	Camaguey, Cuba	Miguel Guillen Perez
KABR	...	500(1)	a	Aberdeen, S. Dak.	Aberdeen Broadcast Co.

KLRA C 1000(5)
 KOY C 1000
 KRLC ... 250
 WHK KBM 1000(5)
 WQDM D 1000

a Little Rock, Ark.
 g Phoenix, Ariz.
 a Lewiston, Idaho
 a Cleveland, Ohio
 f St. Albans, Vt.

Ark. Brcdstg. Co.
 Salt River Valley Brcdstg. Co.
 H. E. Studebaker
 Radio Air Service Corp.
 Regan & Bostwick

1400 kcs. (214.2 m.)

CMKR ... 200
 KHBC CM 250
 KLO B 1000(5)
 KTUL C 1000(5)
 TGX
 WARD 2 500
 WBBC 2 500
 WHDL D 250
 WIRE MR 1000(5)
 WLTH 2 500
 WVFW 2 500

z Santiago de Cuba
 a Hilo, Hawaii
 a Ogden, Utah
 a Tulsa, Okla.
 d Guatemala City, Guat.
 a Brooklyn, N. Y.
 a Brooklyn, N. Y.
 a Olean, N. Y.
 a Indianapolis, Ind.
 a New York, N. Y.
 a Brooklyn, N. Y.

Jaime Nadal
 Honolulu Brcdstg. Co.
 Interstate Brcdstg. Corp.
 Tulsa Brcdstg. Co.
 Partido Liberal Progresista
 U.S. Brcdstg. Corp.
 Brooklyn Brcdstg. Corp.
 WHDL, Inc.
 Indianapolis Brcdstg., Inc.
 Voice of Brooklyn, Inc.
 Paramount Brcdstg. Corp.

1410 kcs. (212.6 m.)

CKFC 2 50
 CKMO 2 100
 CMCQ ... 200
 KFJM ... 500(1)
 KGNC N 1000(2.5)
 KMED N 250
 WAAB M 1000
 WBCM ... 500(1)
 WHIS ... 500(1)
 WROK ... 500(1)
 WSFA C 500(1)

a Vancouver, B. C.
 a Vancouver, B. C.
 a Havana, Cuba
 a Grand Forks, N. Dak.
 a Amarillo, Texas
 b Medford, Ore.
 a Boston, Mass.
 a Bay City, Mich.
 a Bluefield, W. Va.
 a Rockford, Ill.
 a Montgomery, Ala.

Standart Brcdstg. System
 B. C. Brcdstg. Sys., Ltd.
 La Voz de Cuba
 University of N. Dak.
 Plains Radio Brcdstg. Co.
 Mrs. W. J. Virgin
 Yankee Network, Inc.
 Bay Brcdstg. Co., Inc.
 Daily Telegraph Printing Co.
 Rockford Broadcasters, Inc.
 Montgomery Brcdstg. Co.

1420 kcs. (211.1 m.)

CBY F 100
 CHLN ... 100
 CKCA ... 100(1.25)
 CKLN ... 100
 CMJP ... 200
 KABC M 100(1.25)
 KATE ... 100(1.25)
 KBPS 4 100
 KCMC M 100(1.25)
 KDNT D 100
 KEUB ... 100
 KFAM N 100(1.25)
 KFIZ E 100
 KGFF EM 100(1.25)
 KGIW 3 100
 KGLU ... 100(1.25)
 KIDW 3 100
 KLBM ... 100(1.25)
 KNET D 100
 KORE M 100
 KRBC M 100(1.25)
 KRBM E 100(1.25)
 KRIC ... 100(1.25)
 KRLH ... 100
 KSN ... 100
 KTRI ... 100(1.25)
 KUMA ... 100
 KVAK DP 100
 KWAL P 100(1.25)
 KWBG ... 100
 KXL 4 100(1.25)
 WACO CM 250
 WAGM ... 100
 WAPO N 100(1.25)
 WAZL ... 100
 WCBS ... 100(1.25)
 WCHV ... 100(1.25)
 WEED ... 100(1.25)
 WELL B 100
 WFMJ DP 100
 WGNC ... 100(1.25)

a Toronto, Ont.
 z Three Rivers, P. Q.
 a Kenora, Ont.
 z Nelson, B. C.
 a Moron, Cuba
 a San Antonio, Texas
 a Albert Lea, Minn.
 a Portland, Ore.
 a Texarkana, Texas
 a Denton, Texas
 a Price, Utah
 a St. Cloud, Minn.
 a Fond du Lac, Wis.
 a Shawnee, Okla.
 a Alamosa, Colo.
 a Safford, Ariz.
 a Lamar, Colo.
 z La Grande, Ore.
 a Palestine, Texas
 a Eugene, Ore.
 a Abilene, Texas
 z Bozeman, Mont.
 z Beaumont, Texas
 a Midland, Texas
 a San Francisco, Calif.
 f Sioux City, Iowa
 a Yuma, Ariz.
 z Atchison, Kans.
 z Wallace, Idaho
 a Hutchinson, Kans.
 b Portland, Ore.
 b Waco, Texas
 a Presque Isle, Maine
 a Chattanooga, Tenn.
 a Hazleton, Pa.
 a Springfield, Ill.
 a Charlottesville, Va.
 a Rocky Mount, N. C.
 a Battle Creek, Mich.
 z Youngstown, Ohio
 z Gastonia, N. C.

Canadian Brcdstg. Corp.
 Three Rivers Le Nouvelliste
 Kenora Brcdstg. Co., Ltd.
 F. F. Payne
 Cesar Canals
 Alamo Brcdstg. Co., Inc.
 Albert Lea Brcdstg. Co.
 Benson Polytechnic School
 KCMC, Inc.
 Harwell V. Shepard
 Eastern Utah Brcdstg. Co.
 The Times Pub. Co.
 Reporter Printing Co.
 KGFF Brcdstg. Co., Inc.
 E. L. Allen
 Gila Brcdstg. Co.
 Lamar Brcdstg. Co.
 Harold & Mrs. Eloise Finley
 Palestine Brcdstg. Ass'n.
 Eugene Brcdstg. Station
 Reporter Brcdstg. Co.
 KRBM Broadcasters
 KRIC, Inc.
 Clarence Scharbaur
 Golden Gate Brcdstg. Corp.
 Sioux City Brcdstg. Co.
 Dr. A. H. Schermann
 Carl Latenser
 Howarth and Berger
 Nation's Center Brcdstg. Co.
 KXL Broadcasters
 Frontier Brcdstg. Co., Inc.
 Aroostook Brcdstg. Corp.
 W. A. Patterson
 Hazleton Brcdstg. Serv., Inc.
 WCBS, Inc.
 Community Brcdstg. Corp.
 Wm. Avera Wynne
 Enquirer News Co.
 Wm. F. Maag, Jr.
 WGNC, Inc.

WGPC	...	100	a	Albany, Ga.
WHFC	...	100(.25)	a	Cicero, Ill.
WHMA	D	100	a	Anniston, Ala.
WILM	...	100	a	Wilmington, Del.
WJMS	...	100	a	Ironwood, Mich.
WLAP	...	100(.25)	a	Lexington, Ky.
WLEU	B	100(.25)	a	Erie, Pa.
WMAS	C	100(.25)	a	Springfield, Mass.
WMBC	...	100(.25)	a	Detroit, Mich.
WMBH	...	100(.25)	a	Joplin, Mo.
WMBS	...	100(.25)	a	Uniontown, Pa.
WMFJ	...	100	a	Daytona Beach, Fla.
WMSD	...	100	a	Muscle Shoals City, Ala.
WNOE	...	100(.25)	a	New Orleans, La.
WPAD	...	100(.25)	a	Paducah, Ky.
WPAR	C	100	a	Parkersburg, W. Va.
WPRP	...	100(.25)	a	Ponce, Puerto Rico
WSLI	...	100(.25)	a	Jackson, Miss.
WSPB	P	100(.25)	z	Sarasota, Fla.

Albany Brdcstg. Co., Inc.
WHFC, Inc.
Harry M. Ayers
Delaware Brdcstg. Co.
WJMS, Inc.
American Brdcstg. Corp.
WLEU Brdcstg. Corp.
WMAS, Inc.
Mich. Brdcstg. Co.
Joplin Brdcstg. Co.
Fayette Brdcstg. Corp.
W. W. Esch
Muscle Shoals Brdcstg. Corp.
WBNO, Inc.
Paduah Brdcstg. Co., Inc.
Ohio Valley Brdcstg. Corp.
Julio M. Conesa
Standard Life Ins. Co.
WSPB, Inc.

1430 kcs. (209.7 m.)

CJGX	F	1000	a	Yorkton, Sask.
CMKX	...	200	z	Palma Soriano, Cuba
KGNF	D	1000	a	North Platte, Nebr.
KINY	X	250	a	Juneau, Alaska
KSO	BM	1000(5)	a	Des Moines, Iowa
WBNS	C	1000(5)	a	Columbus, Ohio
WHCC	C	500(1)	a	Rochester, N. Y.
WHP	C	500(1)	a	Harrisburg, Pa.
WMPS	B	500(1)	a	Memphis, Tenn.
WOKO	CK	500(1)	a	Albany, N. Y.
XERH	?	500	z	Mexico City, D. F.

Yorkton Brdcstg. Co., Ltd.
Joaquin Venero Obregon
Great Plains Brdcstg. Co.
Edwin A. Kraff
Iowa Brdcstg. Co.
WBNS, Inc.
WHCC, Inc.
WHP, Inc.
Memphis Commercial Appeal
WOKO, Inc.
.....

1440 kcs. (208.2 m.)

CKGB	F	100	a	Timmins, Ont.
CMBY	...	200	a	Havana, Cuba
KDFN	...	500	a	Casper, Wyo.
KELA	M	1000	a	Centralia, Wash.
KXYZ	BM	1000	a	Houston, Texas
WBIG	C	1000(5)	a	Greensboro, N. C.
WCBA	a	500	a	Allentown, Pa.
WBBD	C	1000(5)	a	Peoria, Ill.
WSAN	aN	500	a	Allentown, Pa.
XEFI	...	250	a	Chihuahua, Chih.

R. H. Thomson
Callejas y Estefani
Donald Lewis Hathaway
Central Brdcstg. Corp.
Harris County Brdcstg. Co.
N. C. Brdcstg. Co.
Lehigh Valley Brdcstg. Co.
Peoria Brdcstg. Co.
Lehigh Valley Brdcstg. Co.
Feliciano Lopez Islas

1450 kcs. (206.8 m.)

CFCT	...	500	a	Victoria, B. C.
CHGS	F	50	f	Summerside, P. E. I.
CMHM	...	200	z	Cienfuegos, Cuba
HRN	...	500	z	Tegucigalpa, Hond.
KCMO	...	1000	a	Kansas City, Mo.
KGCX	...	1000	a	Wolf Point, Mont.
KIEM	M	500(1)	a	Eureka, Calif.
KTBS	NZ	1000	a	Shreveport, La.
TGO	...	200	a	Quezaltenango, Guat.
WAGA	B	500(1)	a	Atlanta, Ga.
WGAR	C	1000(5)	a	Cleveland, Ohio
WHOM	...	250	a	Jersey City, N. J.
WSAR	M	1000	f	Fall River, Mass.
XEF	...	100	a	Juarez, Chih.

Victoria Brdcstg. Ass'n.
R. T. Holman, Ltd.
Hotel Union
La Voz de Honduras
KCMO Brdcstg. Co.
E. E. Krebsbach
Redwood Brdcstg. Co.
Tri-State Brdcstg. Cys.
Dir. of Electrical Communications
Liberty Brdcstg. Corp.
WGAR Brdcstg. Co.
New Jersey Brdcstg. Corp.
Doughty & Welch Elec. Co.
Gilberto Gil

1460 kcs. (205.4 m.)

CMKF	...	250	z	Holguin, Cuba
KSTP	RX	10000(25)	z	St. Paul, Minn.
WJSV	CX	10000	a	Washington, D. C.

Manuel J. De Gongora
Nat'l. Battery Brdcstg. Co.
Columbia Brdcstg. Sys.

1470 kcs. (204 m.)

CMCX	...	200	z	Havana, Cuba
HISQ	1475	100	z	Trujillo, D. R.
KGA	BM	5000	a	Spokane, Wash.
WLAC	...	5000	a	Nashville, Tenn.

La Onda Popular
Julio A. Garcia
Louis Wasmer
WLAC Brdcstg. Service

1480 kcs. (202.6 m.)

CMHX	...	200	a	Cienfuegos, Cuba
KOMA	C	5000	a	Oklahoma City, Okla.
WHIP	D	5000	z	Hammond, Ind.
WKBW	C	5000	a	Buffalo, N. Y.

J. Garcia R.
KOMA, Inc.
Hammond-Calumet Brcdstg. Corp.
Buffalo Brcdstg. Corp.

1490 kcs. (201.2 m.)

CMKQ	...	200	z	Santiago de Cuba
KFBK	KN	10000	a	Sacramento, Calif.
WCKY	NX	10000	a	Covington, Ky.
XECH	?	250	z	Toluca, Mex.
XEDR	...	100	z	Guaymas, Son.

Mario Abril Dumois
McClathey Brcdstg. Co.
L. B. Wilson, Inc.
.....
Modesto Ortega

1500 kcs. (199.9 m.)

CJIC	F	100	a	Sault Ste. Marie, Ont.
CMOX	...	200	a	Havana, Cuba
KAWM	...	100	a	Gallup, N. Mex.
KBIX	EM	100	a	Muskogee, Okla.
KBKR	P	100(.25)	z	Baker, Ore.
KBST	M	100	a	Big Spring, Texas
KDAL	C	100	a	Duluth, Minn.
KDB	M	100(.25)	a	Santa Barbara, Calif.
KDRO	P	100(.25)	z	Sedalia, Mo.
KFDA	M	100	z	Amarillo, Texas
KGFI	...	100(.25)	a	Brownsville, Texas
KGKB	M	100(.25)	a	Tyler, Texas
KGKY	W	100(.25)	a	Scottsbluff, Nebr.
KNEL	...	250	a	Brady, Texas
KNOW	C	100	a	Austin, Texas
KOTN	D	100	a	Pine Bluff, Ark.
KOVG	...	100(.25)	a	Valley City, N. Dak.
KPAB	...	100(.25)	a	Laredo, Texas
KPLC	...	100(.25)	a	Lake Charles, La.
KPLT	DM	250	a	Paris, Texas
KPQ	M	100(.25)	a	Wenatchee, Wash.
KRNR	M	100(.25)	a	Roseburg, Ore.
KROD	P	100	z	El Paso, Texas
KSAL	XZ	100(.25)	a	Salina, Kans.
KSAM	D	100	z	Huntsville, Texas
KTOH	P	100(.25)	z	Lihue, Hawaii
KUTA	N	100	a	Salt Lake City, Utah
KVOE	M	100	a	Santa Ana, Calif.
KVWC	...	100(.25)	z	Vernon, Texas
KWEW	D	100	z	Hobbs, N. Mex.
KXO	M	100	a	El Centro, Calif.
KYCA	P	100(.25)	z	Prescott, Ariz.
KYSM	N	100(.25)	a	Mankato, Minn.
WCNW	2	100(.25)	a	Brooklyn, N. Y.
WDAN	...	100(.25)	a	Danville, Ill.
WDNC	C	100(.25)	a	Durham, N. C.
WGAL	N	100(.25)	a	Lancaster, Pa.
WGIL	D	250	a	Galesburg, Ill.
WGKV	N	100	z	Charleston, W. Va.
WHBB	...	100	a	Selma, Ala.
WJKB	...	100(.25)	a	Detroit, Mich.
WKAT	...	100(.25)	z	Miami Beach, Fla.
WKBB	CY	100(.25)	a	E. Dubuque, Ill.
WKBV	...	100(.25)	a	Richmond, Ind.
WKBZ	...	100(.25)	a	Muskegon, Mich.
WKEU	D	100	a	Griffin, Ga.
WKIN	DP	100	z	Kingston, N. Y.
WMEX	...	100(.25)	a	Boston, Mass.
WNBF	C	100(.25)	a	Binghamton, N. Y.
WNLC	M	100	a	New London, Conn.
WOMI	...	100(.25)	a	Owensboro, Ky.
WOPJ	...	100	a	Bristol, Tenn.
WRDW	C	100(.25)	a	Augusta, Ga.
WRGA	...	100(.25)	a	Rome, Ga.
WRTD	B	100	a	Richmond, Va.
WSTP	M	100(.25)	a	Salisbury, N. C.
WSYB	M	100	a	Rutland Vt.
WTMC	...	100	z	Ocala, Fla.
WTMY	...	100(.25)	a	E. St. Louis, Ill.
WWRL	2	100(.25)	a	Woodside, N. Y.
WWSW	...	100(.25)	a	Pittsburgh, Pa.

J. C. Whitby; J. G. Hyland
Perez y Chisholm
A. W. Mills
Okla. Press Pub. Co.
Louis P. Thornton
Red Spring Herald Brcdstg. Co.
Red River Brcdstg. Co.
Santa Barbara Broadcasters, Ltd.
Drolich Brothers
Amarillo Brcdstg. Corp.
Eagle Brcdstg. Co.
East Texas Brcdstg. Co.
Hilliard Co., Inc.
G. L. Burns
Frontier Brcdstg. Co., Inc.
Universal Brcdstg. Corp.
KOVG, Inc.
Mervel M. Valentine
Calcasieu Brcdstg. Co.
North Texas Brcdstg. Co.
Westcoast Brcdstg. Co.
News-Review Pub. Co.
Dorrence D. Roderick
KSAL, Inc.
Sam Houston Brcdstg. Ass'n.
Garden Island Pub. Co.
Utah Brcdstg. Co.
Voice of the Orange Empire, Ltd.
Northwestern Brcdstg. Co.
W. E. Whitmore
Irey and Bowles
Southwest Brcdstg. Co.
F. B. Clements & Co.
Arthur Faske
Northwestern Pub. Co.
Durham Radio Corp.
WGAL, Inc.
Galesburg Brcdstg. Co.
Kanawha Valley Brcdstg. Co.
Selma Brcdstg. Co.
Jas. F. Hopkins, Inc.
A. Frank Katzentine
Sanders Brothers
Knox Radio Corp.
Ashbacker Radio Corp.
Station WKEU
Kingston Brcdstg. Corp.
The Northern Corp.
Howitt-Wood Radio Co.
Thames Brcdstg. Corp.
Owensboro Brcdstg. Co.
Radiophone Station WOPJ
Augusta Brcdstg. Co.
Rome Brcdstg. Corp.
Times Dispatch Radio Corp.
Piedmont Brcdstg. Corp.
Philip Weiss Music Co.
John T. Alsop, Jr.
Miss. Valley Brcdstg. Co.
Long Island Brcdstg. Corp.
Walker & Downing Radio Corp.

...	P	100(.25)	z	Brunswick, Ga.	Coastal Brdcstg. Co.
...	DP	250	z	Greenville, N. C.	Greenville Brdcstg. Co.
1510 kcs. (198.6 m.) 					
CFRC	F	100	a	Kingston, Ont.	Queen's University
CKCR	...	100	a	Waterloo, Ont.	W. C. Mitchell; G. Liddle
1520 kcs. (197.3 m.) 					
TGW	...	5000	d	Guatemala City, Guat.	Radiodifusora Nacional
1530 kcs. (196 m.) 					
CMC	...	200	z	Havana, Cuba	La Voz del Transporte
KITE	...	1000	a	Kansas City, Mo.	First Nat'l. Television, Inc.
WBRY	CM	1000	a	Waterbury, Conn.	American Republican, Inc.
...	P	1000	z	Akron, Ohio	Summit Radio Corp.
1550 kcs. (193.4 m.) 					
KPMC	M	1000	a	Bakersfield, Calif.	Pioneer Mercantile Co.
WQXR	...	1000	a	New York, N. Y.	Interstate Brdcstg. Co.
1560 kcs. (192.2 m.) 					
CMBF	...	5000	z	Havana, Cuba	Radio Emisora Nacional
1580 kcs. (189.8 m.) 					
CM9RT	...	200	z	Guines, Cuba	Raul Torres Pardal
1600 kcs. (187.4 m.) 					
CMBH	...	5000	z	Havana, Cuba	Alberto Alvarez Ferrera

APPLICATIONS

(Continued from Page 43)

Springfield, Ohio, Radio Voice of Springfield, 1310 kcs. 100 unlt'd.
 Springfield, Ohio, S. Radio Corp., 1310 kcs. 100 unlt'd.
 Springfield, Ohio, S. Radio Service, 780 kcs. 250 days.
 Suffolk, Va., S. Brdcstg. Corp., 1420 kcs. 100(.25) unlt'd.
 Syracuse, N. Y., Civic Brdcstg. Corp., 1500 kcs. 100 unlt'd.
 Tacoma, Wash., Tacoma Brdcstg. Co., 1420 kcs. 100(.25).
 Tacoma, Wash., Michael J. Mingo, 1400 kcs. 250 unlt'd.
 Traverse City, Mich., Northern Brdcstg. Co., 570 kcs. 500 days.
 Valdosta, Ga., John F. Arrington, Jr., 1230 kcs. 250 unlt'd.
 Vincennes, Ind., Samuel M. Emison, 1420 kcs. 100 unlt'd.
 Vincennes, Ind., Vin. Newspapers, Inc., 1420 kcs. 100 unlt'd.
 Washington, D. C., Lawrence J. Heller, 1310 kcs. 100(.25).
 Watertown, N. Y., Black River Valley Brdcstg. Co.
 Watertown, N. Y., Watertown Brdcstg. Corp.
 Willmar, Minn., Lakeland Brdcstg. Co., 680 kcs. 250 days.

Wisconsin Rapids, Wis., Wm. F. Huffman, 580 kcs. 250 unlt'd.
 Worcester, Mass., Winfield A. Schuster, 1200 kcs. 100 unlt'd.
 Worcester, Mass., C. T. Sherer Co., Inc., 1200 kcs. 100(.25).
 Yuma, Ariz., Silver Crest Theaters, 1420 kcs. 100 S. H.

CALLS HEARD

(Continued from Page 41)

VK2AGU; VK2YL; VK3BZ; VK3DA;
 VK4KA; VK4KH; VK4MF; VK4PF;
 VK4VJ; VK5SW; VP1WB; VQ2CM;
 VS2AK; XE1AC; XE1CQ; XE1FF;
 XE2AS; XE2HY; XE2IK; XUoA; XU6KL;
 YVAA9; YV4AE.

The Reporters

- (a) Robert Blanchard, Brooklyn, N. Y.
- (b) C. J. Fern, Jr., Lihue, Hawaii.
- (c) Scott Frothingham, Plandome, N. Y.
- (d) Ralph Kastner, New Braunfels, Texas.
- (e) John Macrae, Winnipeg, Man.
- (f) George Nahas, Brooklyn, N. Y.
- (g) Wm. Pieper, Los Angeles, Calif.
- (h) Bertram Podall, Gilman, Vermont.
- (i) Jack Roberts, Waco, Texas.
- (j) Jack Welch, Lynn, Mass.
- (k) Jack Welch, Kingston, Ill.

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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

ALABAMA	
Anniston	1420
WHMA	1420
Birmingham	
WAPI	1140
WBRC	930
WSGN	1310
Docteur	
WMFO	1370
Dothan	
WAGF	1370
Gadsden	
WBYB	1210
Huntsville	
WEHP	1200
Mobile	
WALA	1380
WMOB	1200
Montgomery	
WCQV	1210
WSFA	1410
Selma	
WHBB	1300
Muscle Shoals	
City	
WMSD	1420
Tuscaloosa	
WJRD	1200
ALASKA	
Anchorage	
KFQD	780
Fairbanks	
KFAR	610
Juneau	
KJNY	1430
Ketchikan	
KGRU	900
ARIZONA	
Globe	
KWJZ	1210
Jerome	
KCRJ	1310
Lowell	
KSUN	1200
Phoenix	
KOY	1390
KTAR	620
Prescott	
KYCA	1500
Safford	
KGLU	1420
Tucson	
KTUC	1370
KVOA	1260
Yuma	
....	1210
ARKANSAS	
Blytheville	
KLCN	1290

El Dorado	
KELD	1370
Fort Smith	
KFPV	1210
Hot Springs	
KTHS	1060
KWFC	1310
Jonesboro	
KBTM	1200
Little Rock	
KARK	890
KGHI	1200
KLRA	1390
Pine Bluff	
KOTN	1500
Shoam Springs	
KUOA	1260
CALIFORNIA	
Bakersfield	
KERN	1370
KPMC	1550
Berkeley	
KRE	1370
Beverly Hills	
KMPG	710
Chico	
KHSL	1260
El Centro	
KKO	1500
Eureka	
KIEM	1450
Fresno	
KARM	1310
KMJ	580
Glendale	
KKEV	850
Long Beach	
KFOX	1250
KGER	1360
Los Angeles	
KECA	780
KFAC	1300
KFI	640
KFSG	1120
KFVD	1000
KFWB	950
KGEM	1200
KHJ	900
KMTL	570
KNX	1050
KRKC	1120
Merced	
KYOS	1040
Modesto	
KTRB	740
Monterey	
KDON	1210
Oakland	
KLS	1280
KLX	880
KROW	930
Pasadena	
KPPC	1210
Redding	
KVCV	1200
Sacramento	
KFBK	1490
KROY	1210

San Bernardino	
KTFX	1210
San Diego	
KFSD	600
KGB	1330
San Francisco	
KFRC	610
KGO	790
KJBS	1070
KPO	680
KSAN	1420
KSFO	560
KYA	1230
San Jose	
KQW	1010
San Luis Obispo	
KVEE	1200
Santa Ana	
KVOE	1500
Santa Barbara	
KDB	1500
KTMS	1220
Santa Rosa	
KSRO	1310
Stockton	
KODM	1100
KWG	1200
Visalia	
KTKC	1190
Watsonville	
KHUB	1310
COLORADO	
Alamosa	
KGIW	1420
Colorado Springs	
KVOR	1270
Denver	
KFEL	920
KLZ	560
KOA	830
KPOF	880
KVOD	920
Durango	
KIUP	1370
Grand Junction	
KFXJ	1200
Greeley	
KPKA	880
La Junta	
KOKO	1370
Lamar	
KLDW	1420
Pueblo	
KGHF	1320
Sterling	
KGEK	1200
CONNECTICUT	
Bridgeport	
WICC	600
Hartford	
WDRC	1330
WTIC	1040
WTHT	1200
New Britain	
WNBC	1380

New Haven	
WELI	900
New London	
WNLC	1500
Waterbury	
WATR	1290
WBRY	1530
DELAWARE	
Wilmington	
WDEL	1120
WILM	1420
DISTRICT OF COLUMBIA	
Washington	
WJWV	1460
WMAL	630
WOL	1230
WRC	950
FLORIDA	
Daytona Beach	
WMPJ	1420
Gainesville	
WRUF	830
Jacksonville	
WJAX	900
WJHP	1290
WMBR	1370
Lakeland	
WLAK	1310
Miami	
WIOD	610
WMBF	610
WQAM	560
Miami Beach	
WKAT	1500
Ocala	
WTMC	1500
Orlando	
WDBO	580
Panama City	
WRSR	1200
Pensacola	
WCOA	1340
St. Augustine	
WFOY	1210
St. Petersburg	
WSTN	620
WTSP	1370
Sarasota	
WSPB	1420
Tallahassee	
WTAL	1310
Tampa	
WDAE	1220
WFLA	620
West Palm Beach	
WJNO	1200
GEORGIA	
Albany	
WGPC	1420
Athens	
WGAU	1310
Atlanta	
WAGA	1450

WATL	1370
WMBI	1080
WGST	890
WSB	740
Augusta	
WLDW	1500
Columbus	
WRBL	1200
Griffin	
WKBU	1500
Macon	
WMAZ	1180
Moultrie	
WMGA	1370
Rome	
WRGA	1500
Savannah	
WSAV	1310
WTQC	1260
Thomasville	
WPAZ	1210
Waycross	
WAYX	1200
HAWAII	
Hilo	
KHBC	1400
Honolulu	
KGMB	1320
KGU	750
KTHU	
KTOH	1500
IDAHO	
Boise	
KIDO	1350
Idaho Falls	
KID	1320
Lewiston	
KRLC	1390
Nampa	
KFXD	1200
Pocatello	
KSEI	900
Twin Falls	
KTFF	1240
Wallace	
KWAL	1420
ILLINOIS	
Aurora	
WMRO	1250
Bloomington	
WJBC	1200
Carthage	
WCZA	1070
Champaign	
WDWS	1370
Chicago	
WAAF	920
WBBM	770
WCBD	1080
WCFL	970
WCRW	1210
WEDC	1210
WENR	870
WGES	1360
WGN	720
WJJD	1130
WLS	870

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

WMAQ 670	Boone	WHAS 820	WNAC 1280	Hibbing
WMBI 1080	KFGQ 1370	WINN 1210	WORL 920	WMPG 1210
WSBC 1210	Cedar Rapids	Owensboro	Fall River	WMPK 1210
Cicero	WMT 600	WOMI 1500	WSAR 1450	KYSM 1500
VHFC 1420	Davenport	Paducah	Greenfield	Minneapolis
Danville	WOC 1370	WPAD 1420	WHAT 1210	WCCO 810
WDAN 1500	Decorah		Hyannis	WDGY 1189
Deatur	KGCA 1270	LOUISIANA	WOCB 1210	WLB 760
WJBL 1200	KWLC 1270	Alexandria	Lawrence	WTCN 1250
East Dubuque	Des Moines	KALB 1210	WLAW 680	Moorhead
WKBB 1500	KRNT 1320	Baton Rouge	WLLH 1370	KVOX 1810
East St. Louis	KSO 1430	WJBO 1120	WLLH 1370	Northfield
WTMV 1500	WHO 1000	Lafayette	WNLF 1310	WCAL 769
Galesburg	Dubuque	KVOL 1310	WBRK 1310	Rochester
WGIL 1500	KDTH 1340	Lake Charles	WESX 1200	KROC 1310
Harrisburg	Iowa City	KPLC 1500	Springfield	St. Cloud
WEBQ 1210	WSUI 880	Monroe	WMAA 990	KFAM 1420
Herrin	Marshalltown	KMLB 1200	WMSA 1420	St. Paul
WJFF 1310	KFJB 1200	New Orleans	WSPR 1140	KSTP 1460
Joliet	Mason City	WDSU 1250	WVBC 1140	WMLN 1370
WCLS 1310	KGLO 1210	WJBW 1200	WVBC 1140	Virginia
Poorla	Shenandoah	WNOE 1420	WVBC 1140	WVBC 1370
WMBD 1440	KFNF 890	WSMB 1320	WVBC 1140	Winona
Quincy	KMA 930	WVWL 850	WVBC 1140	KWNO 1200
WTAD 900	Sioux City	Shreveport		
Rockford	KSCJ 1330	KRMD 1310		MISSISSIPPI
WRCK 1410	KTRI 1420	KTBS 1450		Greenville
Rock Island		KWKH 1100		WJPR 1310
WHBF 1240	KANSAS			Grenada
Springfield	Ahilese			WGRM 1210
WCBS 1420	KFBI 1050			Gulfport
WTAX 1210	Atchison			WGCM 1210
Tuscota	KVAK 1420			Hattiesburg
WDZ 1020	Coffeyville			WFOR 1870
Urbana	KGGF 1010			Jackson
WILL 580	Dodge City			WJDX 1370
	KGNO 1340			WSLI 1420
INDIANA	Emporia			Laurel
Anderson	KTSW 1370			WAML 1310
WHBU 1210	Garden City			McComb
Elkhart	KIUL 1210			WSKB 1200
WTRC 1310	Great Bend			Meridian
Evansville	KVGB 1370			WCOG 880
WEA 1370	Hutchinson			Vicksburg
WGBF 630	KWBG 1420			WQBC 1360
Fort Wayne	Kansas City			
WGL 1370	KCKN 1310			MISSOURI
WOWO 1160	Lawrence			Cape Girardeau
Gary	KFKU 1220			KFVS 1210
WIND 500	WREN 1220			Columbia
Hammond	Manhattan			KFRU 630
WHIP 1480	KSAC 580			Jefferson City
WWAE 1200	Pittsburg			KWOS 1310
Indianapolis	KOAM 790			Jonln
WFBM 1230	Salina			WMBH 1420
WIBC 1050	KSAL 1500			Kansas City
WIRE 1400	Topeka			KCMO 1450
Munle	WIBW 580			KITE 1530
WLBC 1310	Wichita			KMBC 950
New Albany	KANS 1210			WDAF 610
WGRC 1370	KFH 1300			WHB 860
Richmond	KENTUCKY			Poplar Bluff
WKBV 1500	Ashland			KWOC 1310
South Bend	WCMI 1310			St. Joseph
WFAM 1200	Bowling Green			KPEQ 680
WSBT 1360	WBLJ 1310			St. Louis
Terre Haute	Covington			KFUP 550
WBOW 1310	WCKY 1490			KMOX 1090
West Lafayette	Lexington			KSD 860
WBAA 890	WLAP 1420			KWK 1350
	Louisville			KXOK 1250
IOWA	WAVE 940			WEW 760
Ames				WIL 1200
WOI 640				

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Sedalla
KDRO 1500
 Springfield.
KGBX 1230
KWTO 560

MONTANA

Billings
KGHL 780
 Bozeman
KRBM 1420
 Butte
KGIR 1340
 Great Falls
KFBB 1280
 Helena
KPPA 1210
 Kallispell
KGEZ 1310
 Missoula
KGVO 1260
 Wolf Point
KGCX 1450

NEBRASKA

Grand Island
KMMJ 740
 Hastings
KHAS 1200
 Kearney
KGFW 1310
 Lincoln
KFAB 770
KFOR 1210
 Norfolk
WJAG 1060
 North Platte
KGNF 1430
 Omaha
KOIL 1260
KOWH 660
WOW 590
 Scottsbluff
KGKY 1500

NEVADA

Reno
KOH 1380

NEW HAMPSHIRE

Laconia
WLNH 1310
 Manchester
WFPA 1340
 Portsmouth
WHEB 740

NEW JERSEY

Asbury Park
WCAP 1280
 Atlantic City
WBAB 1200
WPG 1100
 Bridgeton
WSNJ 1210
 Camden
WCAM 1280

Jersey City
WAAT 940
WHOM 1450
 Newark
WHBI 1250
WOR 710
 Red Bank
WBRB 1210
 Trenton
WTNJ 1280
 Zarephath
WAWZ 1350

NEW MEXICO

Albuquerque
KGGM 1230
KOB 1180
 Carlsbad
KLAH 1210
 Clovis
KICA 1370
 Gallup
KAWM 1500
 Hobbs
KWEW 1500
 Roswell
KGFL 1370
 Santa Fe
KVSF 1310

NEW YORK

Albany
WABY 1370
WOKO 1430
 Auburn
WMBO 1310
 Binghamton
WNEF 1500
 Brooklyn
WARD 1400
WBBC 1400
WBRR 1300
WCNW 1500
WVFW 1400
 Buffalo
WHEN 900
WBNY 1370
WEER 1310
WGR 550
WKBW 1480
WSVS 1370
 Canton
WCAD 1220
 Elmira
WENY 1200
WESG 850
 Freeport
WGBB 1210
 Jamestown
WJTN 1210
WJST 1210
WKIN 1500
 Newburgh
WGNV 1220
 New York
WABC 860
WBLL 1100
WBNX 1250
WBOQ 860
WEAF 660
WBDV 1300

WHN 1310
WINS 1180
WJZ 760
WLTH 1400
WMCA 570
WNEW 1250
WNYC 810
WOV 1130
WQXE 1550
 Olean
WHDL 1400
 Plattsburgh
WMFF 1310
 Rochester
WHAM 1150
WHEC 1430
WSAY 1210
Saranac Lake
WNBZ 1290
 Schenectady
WGY 790
 Syracuse
WFBL 1380
WYR 570
WSYU 570
 Troy
WHAZ 1300
WTRY 950
 Utica
WIBX 1200
 White Plains
WFAS 1210
 Woodside
WWRL 1500

NORTH CAROLINA

Asheville
WISE 1370
WWNC 570
 Charlotte
WBT 1080
WSOC 1210
 Durham
WDNC 1500
 Elizabeth City
WCNC 1370
 Fayetteville
WFNC 1340
 Gastonia
WGNC 1420
 Goldsboro
WGBR 1370
 Greensboro
WBIG 1440
 High Point
WMFR 1200
 Kinston
WFTC 1200
 Raleigh
WPTF 680
WRAL 1210
 Rocky Mount
WEED 1420
 Salisbury
WSTP 1500
 Wilmington
WMFD 1370
 Wilson
WGTM 1310
 Winston-Salem
WAIR 1250
WSJS 1310

NORTH DAKOTA

Bismarok
KFYR 550
 Devils Lake
KDLR 1210
 Fargo
WDAY 940
 Grand Forks
KFJM 1410
 Jamestown
KERM 1370
 Mandan
KGCU 1240
 Minot
KLPM 1360
 Valley City
KOVC 1500

OHIO

Akron
WADC 1320
WJW 1210
 Ashtabula
WICA 940
 Canton
WTBC 1200
 Cincinnati
WCPO 1200
WKRC 550
WLW 700
WSAI 1330
WSXO 700
 Cleveland
WCLE 610
WGAR 1450
WHK 1390
WTAM 1070
 Columbus
WBNS 1430
WCOL 1210
WHKC 640
WOSU 570
 Dayton
WHO 1260
WING 1380
 Lima
WLOK 1210
 Portsmouth
WPAY 1370
 Toledo
WSPD 1240
WTOL 1200
 Youngstown
WFMJ 1420
WKBN 570
 Zanesville
WALR 1210

OKLAHOMA

Ada
KADA 1200
 Ardmore
KVSO 1210
 Elk City
KASA 1210
 Enid
KCRC 1360
 Muskogee
KBIX 1500
 Norman
WNAD 1010
 Oklahoma City
KOCY 1310

KOMA 1480
KPOK 1370
WKY 900
 Okmulgee
KHBG 1210
 Ponca City
WBZ 1200
 Shawnee
KGFF 1420
 Tulsa
KOME 1310
KTUL 1400
KVOO 1140

OREGON

Astoria
KAST 1200
 Baker
KBKR 1500
 Bend
KBND 1310
 Corvallis
KOAC 550
 Eugene
KORE 1420
 Klamath Falls
KFTJ 1210
 La Grande
KLBM 1420
 Marshfield
KOOS 1200
 Medford
OMED 1410
 Portland
KALE 1300
KBPS 1420
KEX 1190
KGW 620
KOIN 940
KWJ 1040
KXL 1420
 Roseburg
KRNB 1500
 Salem
KSLM 1360

PENNSYLVANIA

Allentown
WCBA 1440
WSAN 1440
 Altoona
WFBG 1310
 Easton
WEST 1200
 Erie
WLEU 1420
 Glenside
WIBG 970
 Greensburg
WHJB 620
 Grove City
WSAJ 1310
 Harrisburg
WHP 1430
WKBO 1200
 Hazleton
WAZL 1420
 Johnstown
WGAC 1370
 Lancaster
WGAL 1500
 New Castle
WKST 1250
 Philadelphia
KYW 1020

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

WCAU 1170
WDAS 1370
WFIL 560
WHAT 1310
WIP 610
WPEN 920
WTEL 1310
Pittsburgh
KDKA 980
KQV 1380
WCAE 1220
WJAS 1290
WWSW 1500

Reading
WREU 830
WRAW 1310
Scranton
WGBI 880
WQAN 880
Sharon
WPIC 780
Sunbury
WKOK 1210
Unimtown
WMBS 1420
Wilkes-Barre
WBAX 1210
WBRF 1310
Williamsport
WRAK 1370
York
WORK 1320

PUERTO RICO

Mayaguez
WPRR 1370
Ponce
WPRP 1420
San Juan
WKAQ 1240
WNEL 1290

RHODE ISLAND

Providence
WEAN 780
WJAR 890
WPRO 630

SOUTH CAROLINA

Anderson
WAIM 1200
Charleston
WCSC 1360
WTMA 1210
Columbia
WCOS 1370
WIS 560
Florence
WOLS 1200
Greenville
WFBC 1300
Spartanburg
WSPA 920
Sumter
WFIG 1310

SOUTH DAKOTA

Aberdeen
KABR 1390

Brookings
KFDY 780
Pierre
KGFX 630
Rapid City
KOBH 1370
WCAT 1200
Sioux Falls
KSOO 1200
KSOO 1110
Vermillion
KUSD 890
Yankton
WNAX 570

TENNESSEE

Bristol
WOPI 1500
Chattanooga
WAPO 1420
WDOO 1280
Cookeville
WHUB 1370
Jackson
WTJS 1310
Johnson City
WJHL 1200
Knoxville
WNOX 1010
WROL 1310
Memphis
WHBQ 1370
WMC 780
WMPB 1430
WREC 600
Nashville
WLAC 1470
WSIX 1210
WSM 660

TEXAS

Abilene
KBBC 1420
Amarillo
KFDA 1500
KGNC 1410
Austin
KNOW 1500
KTBC 1120
Beaumont
KFDM 560
KRIC 1410
Big Spring
KBST 1500
Brady
KNEL 1500
Brownsville
KGFI 1500
College Station
WTAW 1120
Corpus Christi
KRIS 1330
Corsicana
KAND 1310
Dallas
KRLD 1040
WFAA 800
WBR 1280
Denton
KDNT 1420
Dublin
KFPL 1310

El Paso
KRDD 1500
KTSM 1310
WDAH 1310
Fort Worth
KFJZ 1370
KGKO 570
KTAT 1240
WBAP 800
Galveston
KLUF 1370
Houston
KPRC 920
KTRH 1290
KXYZ 1440
Huntsville
KSAM 1500
Kilgore
KOCA 1210
Laredo
KPAB 1500
Longview
KFRO 1370
Lubbock
KFYO 1310

Lufkin
KRBA 1310
Midland
KRLH 1420
Palestine
KNEI 1420
Pampa
KPDN 1310
Paris
KPLT 1500
Pecos
KIUN 1370
Plainview
KWBD 1200
Port Arthur
KPAC 1260
San Angelo
KGKL 1370
San Antonio
KABC 1420
KMCC 1370
KONO 1370
KTTA 550
WQAI 1180
Sherman
KREY 1310
Sweetwater
KXOX 1210
Temple
KTEM 1370
Texarkana
KCMC 1420
Tyler
KGKB 1500
Vernon
KVWC 1500
Victoria
KVIC 1310
Waco
WACO 1420
Weslaco
KRGV 1260
Wichita Falls
KWFT 620

UTAH

Cedar City
KSUB 1310
Logan
KVNU 1200

Ogden
KLO 1400
Price
KEUB 1420
Provo
KOVO 1210
Salt Lake City
KDYL 1290
KSL 1130
KUTA 1500

VERMONT

Burlington
WCAX 1200
Rutland
WSYB 1500
St. Albans
WQDM 1390
Springfield
WNBX 1260
Waterbury
WDEV 550

VIRGINIA

Charlottesville
WCHV 1420
Danville
WBTM 1370
Fredericksburg
WFVA 1260
Harrisonburg
WSVA 550
Lynchburg
WLVA 1200
Newport News
WGH 1310
Norfolk
WTAR 780
Petersburg
WPIV 1210
Richmond
WBBL 1210
WMBG 1350
WRNL 880
WRVD 1500
WRVA 1110
Roanoke
WDBJ 930

WASHINGTON

Aberdeen
KXRO 1310
Bellingham
KVOS 1200
Centralia
KELA 1440
Everett
KRKO 1370
Longview
KWLK 780
Olympia
KGY 1210
Pulman
KWSC 1220
Seattle
KEEN 1370
KIRO 710
KJE 970
KOL 1270
KOMO 920
KRSC 1120

KTW 1220
KXA 760
Spokane
KFIO 1120
KFPY 890
KGA 1470
KHQ 590
Tacoma
KMO 1330
KVI 570
Vancouver
KVAN 880
Walla Walla
KUJ 1370
Wenatchee
KPO 1500
Yakima
KIT 1250

WEST VIRGINIA

Beckley
WJLS 1210
Bluefield
WHIS 1410
Charleston
WCHS 580
WQKV 1500
Clarksburg
WBLK 1370
Fairmont
WMMN 890
Huntington
WSAZ 1190
Parkersburg
WPAT 1420
Wheeling
WWVA 1160
Williamson
WBTH 1370

WISCONSIN

Eau Claire
WEAU 1050
Fond du Lac
KFIZ 1420
Green Bay
WBXY 1200
WTAQ 1390
Janesville
WGLD 1200
LaCrosse
WKBH 1380
Madison
WHA 940
WIBA 1280
Manitowoc
WOMT 1210
Marinette
WMAM 570
Milwaukee
WEMP 1310
WISN 1120
WTMJ 620
Poynette
WIBU 1210
Racine
WRJN 1370
Rice Lake
WJMC 1210
Sheboygan
WHBL 1300

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Stations Point	
WLBK	900
Superior	900
WDSM	900
Wausau	1370
WSAU	1370

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

BAHAMAS	
Nassau	
ZNS	790

CANADA ALBERTA

Calgary	
CFAC	930
CFCN	1030
CJCJ	690
Edmonton	
CFRN	960
CJCA	730
CKUA	580
Grande Prairie	
CFGP	1200
Lethbridge	
CJOC	1210

BRITISH COLUMBIA

Chilliwack	
CHWK	780
Kamloops	
CFJC	880
Kelowna	
CKOV	630
Nelson	
CKLN	1420
Prince Rupert	
CFPR	580
Trail	
CJAT	910
Vancouver	
CBB	1100
CJOB	600
CKDC	1010
CKFC	1410
CKMO	1410
CKWX	1010
Victoria	
CFCT	1450

MANITOBA

Brandon	
CKX	1120
Flin Flon	
CFAB	1370
Winnipeg	
CJRC	630
CKY	910

NEW BRUNSWICK

Fredericton	
CFNB	550
Moncton	
CKW	1370
St. John	
CKA	1050
St. John	
CHSJ	1120

NOVA SCOTIA

Glace Bay	
VAS	685
Halifax	
CHNS	930
Sydney	
CJCB	1240
Wolfville	
CKIC	1010
Yarmouth	
CJLS	1310

ONTARIO

Brantford	
CKPC	930
Chatham	
CFCO	630
Cobalt	
CKMC	1210
Fort William	
CKPR	580
Hamilton	
CHML	1010
CKOC	1120
Konora	
CKCA	1420
Kingston	
CFRC	1510
Kirkland Lake	
CJKL	1310
London	
CFPL	730
North Bay	
CFCH	930
Ottawa	
CBO	880
CKCO	1010
Owen Sound	
CFOS	1370
Prescott	
CFLC	930
St. Catharines	
CKTB	1200
Sault Ste. Marie	
CJIC	1500
Stratford	
CJCS	1210
Sudbury	
CKSO	780
Timmins	
CKGB	1440
Toronto	
CBL	840
CBY	1420
CFRB	690
CKCL	580
Waterloo	
CKCE	1510

Windsor	
OKLW	1030
Wingham	
CKNX	1200

PRINCE EDWARD ISLAND

Charlottetown	
CFCY	630
CHCK	1310
Summerside	
CHGS	1450

QUEBEC

Chicoutimi	
CKB	1120
Him	
CKCH	1210
Montreal	
CBP	910
CBM	960
CFCF	600
CHLP	1120
CKAC	730
New Carlisle	
CHNC	610
Quebec	
CHRC	580
CKCV	1310
CBV	950
Rimouski	
CJBR	1030
Rouyn	
CKRN	1370
St. Anne de la Pocatiere	
CHGB	1200
Sherbrooke	
CHLT	1210
Three Rivers	
CHLN	1420

ASKATCHEWAN

Moose Jaw	
CHAB	1200
Prince Albert	
CKBI	1210
Regina	
CJRM	950
CKCK	1010
Saskatoon	
CFQC	600
Watrous	
CKB	540
Yorkton	
CJGX	1430

COSTA RICA

Aiajuela	
TH5CV	575
San Jose	
TFAPB	900
TEMC	860
TIEP	830
TIFA	1000
TIGH	690
TIGPH	600
TIGPH2	1225
TIHO	1030
TLJ	775

FLS	880
TINBC	1070
TING	750
TIOS	940
TIPQ	628
TIRS	920
TLX	650
TIXD	800

CUBA

Bayamo	
CMKL	950
Calbarien	
CMHD	1270
Camaguey	
CMJA	860
CMJC	1390
CMJE	1230
CMJF	930
CMJK	1290
CMJW	1070
CMJX	740
Cardenas	
CMGE	1370
Ciego de Avila	
CMJH	1360
CMJI	1130
CMJO	1260
Cienfuegos	
CMBJ	1160
CMBM	1450
CMBX	1480
Crucis	
CMHK	1210
Guantanamo	
CMKS	710
Guines	
CMGT	1580
Havana	
CMBC	690
CMBD	1260
CMBF	1560
CMBG	1140
CMBH	1600
CMBL	750
CMBQ	910
CMBS	1170
CMBX	1080
CMBY	1440
CMBZ	940
CMC	1530
CMCA	1350
CMCB	1230
CMCD	630
CMCF	810
CMCG	1290
CMCH	1050
CMCJ	1110
CMCK	970
CMCL	730
CMCM	850
CMCO	1200
CMCP	1050
CMCQ	1410
CMCU	1010
CMCR	1320
CMCW	7380
CMCX	1470
CMCY	570
CMK	720
CMOA	660
CMOX	1500
CMQ	730
CMW	550
CMX	880

Holguin	
CMKF	1460
CMKO	1280
Manzanillo	
CMKE	1310
CMKM	1080

Matanzas	
CMGF	1120
CMGH	790
Moron	
CMJP	1420
Palma Soriano	
CMKZ	1430
Pinar del Rio	
CMAB	1240

Placetas	
CMHP	1100
Sagua la Grande	
CMHA	1090
CMHO	870

Sancti Spiritus	
CMHB	1240
Santa Clara	
CMHI	830
CMHW	680

Santiago	
CMKC	1250
CMKD	910
CMKG	1150
CMKQ	1490
CMKR	1400
CMKW	750
CMKX	1190
Trinidad	
CMHT	920

DOMINICAN REPUBLIC

Ciudad Trujillo	
HIG	900
HIN	1090
HIX	800
HIT	1050
HIZ	1370
HISQ	1470

EL SALVADOR

San Salvador	
YSS	640

GUATEMALA

Guatemala City	
TGW	1520
TGX	1400
TGI	1310
Quezaltenango	
TGQ	1450

HONDURAS

Tegucigalpa	
HRE	1450

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

MEXICO BAJA	Saltillo	JALISCO	SINALOA	Veracruz
CALIFORNIA	Agua Calientes	Guadajajara	Mazatlan	Minatitlan
XEBI 1000	XEAS 1180	XED 1160	XEBL 1220	XEDW 1150
Mexicali	Torreón	Guzman	SONORA	Orizaba
XEAA 750	XETB 1310	XEBA 1080	MEXICO	XEDX 1340
XEAO 660	Villa Acuna	MEXICO	Texcoco	Veracruz
XECL 1100	XEDH 1340	Texcoco	XEXE 1270	XETF 1220
Rosarito Beach	XERA 840	Toluca	XEHC 1400	XEU 1010
XERB 1090	DISTRITO FEDERAL	MICHOCAN	Morelia	YUCATAN
Tijuana	Gral. Anaya	Morelia	XFI 1370	Merida
XEAC 980	XEDA 1220	NUEVO LEON	Monterrey	XEFC 1340
XEBG 820	Mexico City	Monterrey	XEFB 870	XEME 1240
XEC 1150	XEAI 1250	XEG 1280	XEH 720	XEZ 630
XELO 730	XEAL 680	XEF 690	XEX 1310	MIQUELON
XEMO 860	XEB 1030	PUEBLA	PUEBLA	St. Pierre
CHIHUAHUA	XEBS 1340	Puebla	XETH 1210	FQN 609
Chihuahua	XEBZ 810	SAN LUIS POTOSI	San Luis Potosi	NEWFOUND- LAND
XEBU 1240	XEDP 1080	San Luis Potosi	XECZ 1370	St. John's
XEBW 1340	XEFO 940	VERACRUZ	Cordoba	VOAC 1065
XEFI 1440	XEJP 1130	Cordoba	XEAG 1310	VOAR 950
XEM 1380	XEK 990	PANAMA	Colon	VOCM 1040
Juarez	XEL 1150	Colon	HOK 640	VOGY 840
XEF 1450	XELZ 1370	DURANGO	Durango	VONF 640
XEFV 1210	XEN 730	Durango	XEBP 1150	VOWR 700
XEJ 1020	XEQ 730	COAHUILA	XEE 1210	
XEP 1160	XERC 870	Piedras Negras	GUANAJUATO	
Parral	XERH 1430	XEMU 580	Irapuato	
XEAT 1210	XEW 890	XEPN 730	Leon	
COAHUILA	XEXX 1170	Sabinas	XEKL 1240	
Piedras Negras		XEBX 640		

BRITISH COLUMBIA

(Continued from page 41).

"Eva R," CYNM
 "Forest Ranger," VCMR
 "Hemlock," VGXP
 "Nesika," CYMP
 "Oliver Clarke," VGJR
 "P. Z. Caverhill," VGXQ

(The writer wishes to acknowledge the helpful criticism of Mr. G. A. Playfair, Forest Service, Campbell River, in connection with the preparation of this article.)

THE IMPROVED RADEX
 WILL HELP YOUR FRIENDS
 TOO!

WILL YOU PLEASE HELP BY
 TELLING THEM ABOUT IT?

—The Editor

The Augmented Call Letter Index

The supplementary call letter index of North American Broadcasting Stations, which started in our September, 1938 issue, has been incorporated with our regular list of broadcasting stations. The supplementary index would require about two years to complete, while the same information can be given in our regular lists in a few months. In the current issue of RADEX, the mailing addresses of all the stations are given. Next month we shall show the names of the licensees and in subsequent issues we shall show the locations of the transmitters, the aerial data and the names of the verification signers.

Walter R. Brown, 54 Main Street,
 Westport, Conn., reads Radex.

NORTH AMERICAN B. C. STATIONS BY CALL LETTERS

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

CBA	1050	CHGB	1200	CKCL	580	CMBQ	910	CMHJ	1160	CMKW	770
CBF	910	CHGS	1450	CKCO	1010	CMBS	1170	CMHK	1210	CMKX	1190
CBJ	1120	CHLN	1420	CKCR	1510	CMBX	1080	CMHM	1450	CMKZ	1430
CBK	540	CHLP	1120	CKCV	1310	CMBY	1440	CMHO	870	CMOA	660
CBL	840	CHLT	1210	CKCW	1370	CMBZ	940	CMHP	1100	CMOX	1500
CBM	960	CHML	1010	CKFC	1410	CMC	1530	CMHT	920	CMQ	780
CBO	880	CHNC	610	CKGB	1440	CMCA	1350	CMHW	680	CMW	550
CBR	1100	CHNS	930	CKIC	1010	CMCB	1230	CMHX	1480	CMX	880
CBV	950	CHRC	580	CKLN	1420	CMCD	630	CMJA	860	CM9RT	1580
CBY	1420	CHSJ	1120	CKLW	1030	CMCF	810	CMJC	1390	FQN	600
CFAC	930	CHWK	780	CKMC	1210	CMCG	1290	CMJE	1230	HIG	900
CFAR	1370	CJAT	910	CKMO	1410	CMCJ	1110	CMJF	930	HIN	1090
CFCF	600	CJBR	1030	CKNX	1200	CMCH	1050	CMJH	1360	HIT	1050
CFCH	930	CJCA	730	CKOC	1120	CMCK	970	CMJI	1430	HIX	800
CFCN	1030	CJCB	1240	CKOV	630	CMCL	730	CMJK	1290	HIZ	1370
CFCO	630	CJCJ	690	CKPC	930	CMCM	850	CMJO	1260	H18Q	1470
CFCT	1450	CJCS	1210	CKPR	580	CMCO	1200	CMJP	1420	HOK	640
CFCY	630	CJGX	1430	CKRN	1370	CMCP	1050	CMJW	1070	HRN	1450
CFGP	1200	CJIC	1500	CKSO	780	CMCQ	1410	CMJX	740	KABC	1420
CFJC	880	CJKL	1310	CKTB	1200	CMCR	1320	CMK	720	KABR	1390
CFLC	930	CJLS	1310	CKUA	580	CMCU	1010	CMKC	1250	KADA	1200
CFNB	550	CJOC	1210	CKWX	1010	CMCW	1380	CMKD	910	KALB	1210
CFOS	1370	CJOR	600	CKX	1120	CMCX	1470	CMKE	1310	KALE	1300
CFPL	730	CJRC	630	CKY	910	CMCY	590	CMKF	1460	KAND	1310
CFPR	580	CJRM	950	CMAB	1240	CMGE	1370	CMKG	1150	KANS	1210
CFQC	600	CKAC	730	CMBC	690	CMGF	1120	CMKL	950	KARK	890
CFRB	690	CKBI	1210	CMBD	1260	CMGH	790	CMKM	1080	KARM	1310
CFRC	1510	CKCA	1420	CMBF	1560	CMHA	1090	CMKO	1280	KASA	1210
CFRN	960	CKCD	1010	CMBG	1140	CMHB	1240	CMKQ	1490	KAST	1200
CHAB	1200	CKCH	1210	CMBH	1600	CMHD	1270	CMKR	1400	KATE	1420
CHCK	1310	CKCK	1010	CMBL	750	CMHI	830	CMKS	710	KAWM	1500

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

KRIS 1330	KTBC 1120	KVOO 1140	KYA 1230	VOWR 700	WBBL 1210
KRKD 1120	KTBS 1450	KVOR 1270	KYCA 1500	WAAB 1410	WBBM 770
KRKO 1370	KTEM 1370	KVOS 1200	KYOS 1040	WAAF 920	WBBR 1300
KRLC 1390	KTFI 1240	KVOX 1310	KYSM 1500	WAAT 940	WBBZ 1200
KRLD 1040	KTHS 1060	KVRS 1370	KYW 1020	WABC 860	WBCM 1410
KRLH 1420	KTKC 1190	KVSF 1310	TGQ 1450	WABI 1200	WBEN 900
KRMC 1370	KTMS 1220	KVSO 1210	TGW 1520	WABY 1370	WBEO 1310
KRMD 1310	KTOH 1500	KVWC 1500	TGX 1400	WACO 1420	WBHP 1200
KRNR 1500	KTOK 1370	KWAL 1420	TGI 1310	WADC 1320	WBIG 1440
KRNT 1320	KTRB 740	KWBD 1200	TIAFB 900	WAGA 1450	WBIL 1100
KROC 1310	KTRH 1290	KWBG 1420	TIEMC 860	WAGF 1370	WBLK 1370
KROD 1500	KTRI 1420	KWEW 1500	TIEP 830	WAGM 1420	WBNS 1430
KROW 930	KTSA 550	KWFC 1310	TIFA 1000	WAIM 1200	WBNX 1350
KROY 1210	KTSM 1310	KWFT 620	TIGH 690	WAIR 1250	WBNY 1370
KRRV 1310	KTSW 1370	KWKG 1200	TIGPH 605	WALA 1380	WBOQ 860
KRSC 1120	KTUC 1370	KWJB 1210	TIGPH2 1225	WALR 1210	WBOW 1310
KSAC 580	KTUL 1400	KWJJ 1040	TIHO 1030	WAML 1310	WBRB 1210
KSAL 1500	KTW 1220	KWK 1350	TILJ 775	WAPI 1140	WBRC 930
KSAM 1500	KUJ 1370	KWKH 1100	TILS 880	WAPQ 1420	WBRE 1310
KSAN 1420	KUOA 1260	KWLC 1270	TINBC 1070	WARD 1400	WBRK 1310
KSCJ 1330	KUSD 890	KWLK 780	TING 750	WASH 1270	WBRY 1530
KSD 550	KUTA 1500	KWNO 1200	TIOS 940	WATL 1370	WBT 1080
KSEI 900	KVAK 1420	KWOC 1310	TIPG 625	WATR 1290	WBTH 1370
KSFO 560	KVAN 880	KWOS 1310	TIRS 920	WAVE 940	WBTM 1370
KSL 1130	KVCV 1200	KWSC 1220	TIX 650	WAWZ 1350	WBZ 990
KSLM 1360	KVEC 1200	KWTO 560	TIXB 800	WAYX 1200	WBZA 990
KSO 1430	KVGB 1370	KWYO 1370	TI4NRH 725	WAZL 1420	WCAD 1220
KSOO 1110	KVI 570	KXA 760	TI5CV 575	WBAA 890	WCAE 1220
KSRO 1310	KVIC 1310	KXL 1420	VAS 685	WBAB 1200	WCAL 760
KSTP 1460	KVNU 1200	KXO 1500	VOCM 1040	WBAL 760	WCAM 1280
KSUB 1310	KVOA 1260	KXOK 1250	VONF 640	WBAL 1060	WCAO 600
KSUN 1200	KVOD 920	KXOX 1210	VOGY 840	WBAP 800	WCAP 1280
KTAR 620	KVOE 1500	KXRO 1310	VOAC 1065	WBAX 1210	WCAT 1200
KTAT 1240	KVOL 1310	KXYZ 1440	VOAR 950	WBBC 1400	WCAU 1170

WCAX	1200	WDBJ	930	WFAA	800	WGN	720	WHJB	620	WJAG	1060
WCAZ	1070	WDBO	580	WFAM	1200	WGNC	1420	WHK	1390	WJAR	890
WCBA	1440	WDEL	1120	WFAS	1210	WGNV	1220	WHKC	640	WJAS	1290
WCBD	1080	WDEV	550	WFBC	1300	WGPC	1420	WHLB	1370	WJAX	900
WCBM	1370	WDGY	1180	WFBG	1310	WGR	550	WHLS	1370	WJBC	1200
WCBS	1420	WDNC	1500	WFBL	1360	WGRC	1370	WHMA	1420	WJBK	1500
WCCO	810	WDOD	1280	WFBM	1230	WGRM	1210	WHN	1010	WJBL	1200
WCFL	970	WDRC	1330	WFBR	1270	WGST	890	WHO	1000	WJBO	1120
WCHS	580	WDSM	1200	WFDF	1310	WGTM	1310	WHOM	1450	WJBW	1200
WCHV	1420	WDSU	1250	WFEA	1340	WGY	790	WHP	1430	WJBY	1210
WCKY	1490	WDWS	1370	WFIG	1310	WHA	940	WHUB	1370	WJDX	1270
WCLE	610	WDZ	1020	WFIL	560	WHAI	1210	WIBA	1280	WJEJ	1210
WCLO	1200	WEAF	660	WFLA	620	WHAM	1150	WIBC	1050	WJHL	1200
WCLS	1310	WEAN	780	WFMD	900	WHAS	820	WIBG	970	WJHP	1290
WCMI	1310	WEAU	1050	WFMJ	1420	WHAT	1310	WIBM	1370	WJIM	1210
WCNC	1370	WEBC	1290	WFNC	1340	WHAZ	1300	WIBU	1210	WJJD	1130
WCNW	1500	WEBQ	1210	WFOR	1370	WHB	860	WIBW	580	WJLS	1210
WCOA	1340	WEBR	1310	WFOY	1210	WHBB	1500	WIBX	1200	WJMC	1210
WCOC	880	WEDC	1210	WFTC	1200	WHBC	1200	WICA	940	WJMS	1420
WCOL	1210	WEED	1420	WFVA	1260	WHBF	1240	WICC	600	WJNO	1200
WCOP	1120	WEEI	590	WGAL	1500	WHBI	1250	WIL	1200	WJPF	1310
WCOS	1370	WEEU	830	WGAN	640	WHBL	1300	WILL	580	WJPR	1310
WCOU	1210	WELI	900	WGAR	1450	WHBQ	1370	WILM	1420	WJR	750
WCOV	1210	WELL	1420	WGAU	1310	WHBU	1210	WIND	560	WJRD	1200
WCPO	1200	WEMP	1310	WGBB	1210	WHBY	1200	WING	1380	WJSV	1460
WCRW	1210	WENR	870	WGBF	630	WHDF	1370	WINN	1210	WJTN	1210
WCSC	1360	WENY	1200	WGBI	880	WHDH	830	WINS	1180	WJW	1210
WCSH	940	WEOA	1370	WGBR	1370	WHDL	1400	WIOD	610	WJZ	760
WDAE	1220	WESG	850	WGCM	1213	WHEB	740	WIP	610	WKAQ	1240
WDAF	610	WEST	1200	WGES	1360	WHEC	1430	WIRE	1400	WKAR	850
WDAH	1310	WESX	1200	WGH	1310	WHFC	1420	WIS	560	WKAT	1500
WDAN	1500	WEVD	1310	WGIL	1500	WHIO	1260	WISE	1370	WKBB	1500
WDAS	1370	WEW	760	WGL	1370	WHIP	1480	WISN	1120	WKBH	1380
WDAY	940	WEXL	1310	WGKV	1500	WHIS	1410	WJAC	1370	WKBN	570

WKBO 1200	WMBC 1420	WNBZ 1290	WPRA 1370	WSAY 1310	WTAW 1120
WKBY 1500	WMBD 1440	WNEL 1290	WPRO 730	WSAY 1210	WTAX 1210
WKBW 1480	WMBF 610	WNEW 1250	WPRP 1420	WSAZ 1190	WTBO 800
WKBZ 1500	WMBG 1350	WNLC 1500	WPTF 680	WSB 740	WTCN 1250
WKEU 1500	WMBH 1420	WNOE 1420	WQAM 560	WSBC 1210	WTEL 1310
WKIN 1500	WMBI 1080	WNOX 1010	WQAN 880	WSBT 1360	WTHT 1200
WKOK 1210	WMBO 1310	WNYC 810	WQBC 1360	WSFA 1410	WTIC 1040
WKRC 550	WMBR 1370	WOAI 1190	WQDM 1390	WSGN 1310	WTJS 1310
WKST 1250	WMBS 1420	WOC 1370	WQXR 1550	WSIX 1210	WTMA 1210
WKY 900	WMC 780	WODD 1210	WRAK 1370	WSJS 1310	WTMC 1500
WKZO 590	WMCA 570	WOI 340	WRAL 1210	WSKB 1200	WTMJ 620
WLAC 1470	WMEX 1500	WOKO 1430	WRAW 1310	WSLI 1420	WTMV 1500
WLAK 1310	WMFD 1370	WOL 1230	WRBL 1200	WSM 650	WTNJ 1280
WLAP 1420	WMFF 1310	WOLS 1200	WRC 950	WSMB 1320	WTOC 1260
WLAW 680	WMFG 1210	WOMI 1500	WRDO 1370	WSNJ 1210	WTOL 1200
WLB 760	WMFJ 1420	WOMT 1210	WRDW 1500	WSOC 1210	WTRC 1310
WLBC 1310	WMFO 1370	WOCB 1210	WREC 600	WSPA 920	WTRY 950
WLBJ 1310	WMFR 1200	WOPI 1500	WREN 1220	WSPB 1420	WTSP 1370
WLBL 900	WMGA 1370	WOR 710	WRGA 1500	WSPD 1340	WVFW 1400
WLBZ 620	WMIN 1370	WORC 1280	WRJN 1370	WSPR 1140	WWAE 1200
WLEU 1420	WMMN 890	WORK 1320	WRNL 880	WSTP 1500	WWJ 920
WLLH 1370	WMOB 1200	WORL 920	WROK 1410	WSUI 880	WWL 850
WLLH 1370	WMPC 1200	WOSU 570	WROL 1310	WSUN 620	WWNC 570
WLNH 1310	WMP5 1430	WOV 1130	WRR 1280	WSVA 550	WWRL 1500
WLOK 1210	WMRO 1250	WOW 590	WRSR 1200	WSVS 1370	WWSW 1500
WLS 870	WMSD 1420	WOWO 1160	WRTD 1500	WSYB 1500	WWVA 1160
WLTH 1400	WMT 600	WPAD 1420	WRUF 830	WSYR 570	WXYZ 1240
WLVA 1200	WNAC 1230	WPAR 1420	WRVA 1110	WSYU 570	W8XO 700
WLW 700	WNAD 1010	WPAX 1210	WSAI 1330	WTAD 900	XEAA 750
WMAL 630	WNAX 570	WPAY 1370	WSAJ 1310	WTAG 580	XEAC 980
WMAM 570	WNBC 1380	WPEN 920	WSAL 1200	WTAL 1310	XEAF 990
WMAQ 670	WNBF 1500	WPG 1100	WSAN 1440	WTAM 1070	XEAG 1310
WMA5 1420	WNBH 1310	WPIC 780	WSAR 1450	WTAQ 1330	XEAI 1250
WMAZ 1180	WNBX 1260	WPIV 1210	WSAU 1370	WTAR 780	XEAL 660

XEAM 750	XEBP 1150	XEDH 1340	XEG 1230	XEMX 1280	XEU 1010
XEAO 660	XEBS 1340	XEDP 1080	XEH 720	KEN 780	XEW 890
XEAP 1340	XEBU 1240	XEDR 1490	XEI 1370	XENT 910	XEX 1310
XEAS 1160	XEBW 1340	XEDW 1150	XEJ 1020	XEP 1160	XEXB 1270
XEAT 1210	XEBX 640	XEE 1210	XEJP 1130	XEPN 730	XEXD 1340
XEAW 960	XEBZ 810	XEF 1450	KEK 990	XEQ 730	XEXE 1270
XEB 1030	XEC 1150	XEFB 870	XEKL 1240	XERA 840	XEXX 1170
XEBA 1080	XECA 1230	XEFC 1340	XEL 1150	XERB 1090	XEZ 630
XEBG 820	XECH 1490	XEFE 980	XELO 730	XERC 870	YSS 640
XEBH 990	XECL 1100	XEFI 1440	XELZ 1370	XERH 1430	ZNS 790
XEBI 1000	XECZ 1370	XEFO 940	XEM 1380	XES 990	
XEBK 1080	XED 1160	XEFQ 1010	XEME 1240	XET 690	
XEBL 1220	XEDA 1220	XEFV 1210	XEMO 860	XETB 1310	
XEBO 1310	XEDF 810	XEFW 1310	XEMU 580	XETH 1210	

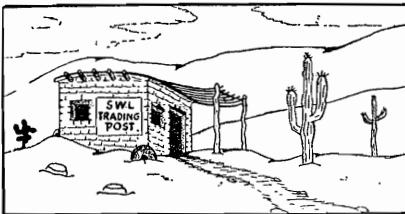
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Eric Butcher, formerly of the Caribbean Listening Post at Catano, Puerto Rico, has returned to Cokeville, Wyo. and will exchange SWL cards with all foreign listeners.

Walter Welch of Lynn, Mass. gives rise to an excellent idea. He suggests that readers see how many stations, outside of the U. S. and Canada, can be logged, in a given period of time, on one band. An interesting contest could be carried on in the following manner. Several listeners in one city can agree to tune 20 meters for a period of one hour and each record every foreign call heard. Following the tuning, the listeners may get together and compare results. It is possible to log as many as 50 calls, or more, in an hour's time.

TURNER DIAL

(Continued from Page 33)

mon trouble. Finally a wire broke or wore through and the speaker went dead. But noises of that kind are also caused by the voice coil being off center, bits of dirt or metal dust filling the space between the coil and the two pole pieces, or by the cone being warped or torn. Loose screws in the speaker often rattle. But it is when a voice coil scrapes against the poles that most of these speaker rattles are created."

Turner now cleaned the air gap of the speaker field magnet. Dirt and dust had been interfering with the free suspension and movement of the voice coil. Then he picked up and examined the voice coil and cone assembly more carefully. He could replace the unit with a new one. That was the usual procedure. Placing new voice coils on old cones is not worth the trouble. But Turner Dial quickly discovered that the break had occurred at one end of the winding where the flexible lead joined. In a few moments he had repaired the break and tested the coil for electrical continuity. "O. K." he called. Then with a few dabs of thin coil "dope" used for varnishing radio coils he soon covered the surface of the winding and cemented it firmly back in place. Turner set the cone aside to dry.

"Recentering a cone and coil takes a little time and patience," remarked Turner to Bill Wood. He laid down his pipe and picked up the speaker cone so that its apex and voice coil turned down, and placed it in the speaker frame. More of the coil dope was spread over the ring. Quickly adjusting the cone to its original position Turner replaced the outer ring and inserted the screws so as to clamp the rim of the cone to the speaker frame. Then he cut three narrow strips from one of his business cards lying on the nearby desk.

"These strips act like little shims for centering the voice coil," Turner

told Bill Wood. Dial pushed each of the strips through the openings spaced 120 degrees apart around the metal "spider" attached to the inner center of the cone, so as to fit snugly into the space between the now invisible voice coil and the surrounding magnetic poles. A set screw passing through the center of the spider and cone then was slightly loosened, and this permitted the voice coil to recenter itself in position. Of course, not all voice coils have center set screws for recentering; in cheaper speakers this is accomplished merely by shifting the rim of the cone before it is clamped between the frame and the ring. Turner pulled gently at all three cardboard shims and decided that the tension on each was the same. He tightened the set screw and pulled out the strips. This left the voice coil suspended freely and centrally within its polar opening.

Bill Wood snapped on the switch after Dial had plugged in the cable. "Never turn on a set when the speaker is disconnected," admonished Turner in a serious tone. He then grasped the speaker frame and its clamping ring at the rim of the cone and pressed on the inner surface of the cone with his thumbs so as to move the voice coil gently in and out. No scraping noise was noticed. Dial knew then that the voice coil was not misplaced. Music was coming clearly from the loud speaker all this time, and when Bill Wood shot the volume up to its maximum there was no distortion or chatter.

Turner Dial slipped into his well-worn chair and reached toward the desk for his pipe. "It's O. K., Bill," he said. "Take it home."

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Selected Back Numbers

The Oceania Broadcasting Stations, Sept. '38.

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

Dialing the Europeans, Nov. '38.

Dialing the Asiatics, Dec. '38.

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

Stations of France and Norway, March '39.

Stations of New Zealand, April '39.

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

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

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

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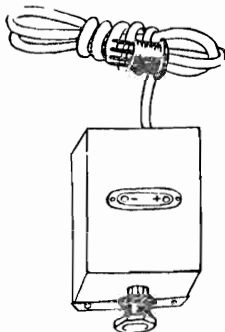
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