

MIDSUMMER EDITION 1933

RADIO INDEX

A COMPLETE RADIO LOG OF THE WORLD



25^c

Sweeping Changes in Canada
How to Build a Simple Short Wave
Converter

The Most Interesting Station in
the World

No. 70

JUNE 1, 1933



RADIO IN INDEX

Reg. U. S. Patent Office

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NINTH YEAR

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QUICK INDEX to STATION DATA

The red wire of the battery cable connects to the positive A and negative B battery terminals; the black wire to negative A; the blue wire to the 4½ volt C battery, negative terminal; the yellow wire to the 2½ volt B battery; the white wire to the 6½ volt B battery; and the brown wire to the 90-volt B and also one side of the loud speaker. Your tubes should be tested and replaced if weak. Clean the set carefully to free it of all dust, especially between the variable condenser leaves. If it persists being weak test the transformers for burned-out primaries, or open fixed condensers or broken wires in the r.f. coils.

Wiring Up AK Model 20
My Atwater Kent model 20 battery set is now being used after a long period of rest. Having lost the wiring hook-up diagram I wish to verify the wiring to the batteries, for the set only brings in nearby stations of great power.

The -26s in the set cannot be replaced with newer types. If this set is noisy it might be well to test the by-pass condenser located on the right-hand side of the volume control. This condenser by-passes the choke of the speaker, the terminals connecting to one speaker post and to the plate of the -71A tube. Frequently this trouble occurs in the AK -40 receiver. And of course, the condenser plates should be cleaned to remove all traces of dust.

It is hardly ever possible to state definitely the cause of signal cut-off. In most cases this has been found due to some defect in a filter or by-pass condenser which shorts for a time and then heals automatically for a short time. Sometimes connections to condensers will open for a time due to some expansion or contraction of the material of which the condenser is made.

Critical performance of the regeneration control is usually due to excessive detector plate potential, too large a plate coil, too large a throttle condenser, too large a choke coil in the detector plate circuit, or failure properly to by-pass the detector plate supply lead. It must be realized that trouble may develop from any combination of these factors. The remedy usually applied to such circuits is to provide a resistance-capacity filter at the detector plate input. This consists of a 1.0 mfd. condenser con-

Short-Wave Signals Cut Off
I have a Pilot Super-Wasp battery model K-110. The set was noisy and I took it apart and resoldered every connection. It now cuts off and on rapidly as if a wire still is loose. The regeneration control will not increase the volume even if pulled down until it falls into oscillation. There is no gradual increase in volume. The position where the set oscillates very loud is where the antenna condenser is set around 50 to 65, and the other around 50 to 90. At other points there is no oscillation. What do you think is wrong?

My Atwater Kent model 20 battery set is now being used after a long period of rest. Having lost the wiring hook-up diagram I wish to verify the wiring to the batteries, for the set only brings in nearby stations of great power.

You state you are using the original tubes, except the -27. Old tubes pull down the efficiency of the set, and we are sure that if you retube the receiver the results will be greatly satisfactory. Although the tubes may seem to test well, they are too far gone to be useful further. You might try replacing the -27 with a 56. The -71A can be replaced with a -45 if a suitable voltage reducing adapter is used in the socket for more power and volume. Your present -27 is the

Can I modernize my Atwater Kent model 40 receiver? I have the original tubes, except the -27, which came in the set in 1930.

Using Old Tubes

The manufacturer's caution about operating the set with the speaker disconnected means with the entire speaker cable plugged out of its socket. Place your speaker silencing switch in either the green or brown wire leading to the smaller of the dual speakers from the second speaker plug leading to the speaker voice coils. This cuts out the voice coils of both speakers and renders them inoperative, but permits the rest of the speaker field coils and unit to remain in the circuit so as to not damage the power pack of the set. Be careful about your wiring insulation, for the -47 tubes operate on 400 volts, a potential seriously high if carelessly handled.

The manufacturer's caution about being needed. Two water adapters for -47 tubes will use two 1.0 mfd. fixed condensers, 500 volt test, and a 50,000 ohm resistor. February issue of RAdEX, on page 3, center as shown in Figure 4, of the Phones are connected to this re-

How shall I attach headphones to my Kolster K-140 receiver, and where are the speaker wires? The maker advises against the operation of this set with the speaker disconnected as it may ruin the receiver.

Phones on Kolster

ital as is necessary to run your set.

spects, and you will obtain every bit of efficiency that it is possible to give. The -80 rectifier need not be replaced with a newer type because it now gives as much amperage and poten-

(Continued from page 10)

Fading and Other Troubles

The station publishes a Magazine in Spanish entitled URA, which is sent to Members which also have a beautiful Diploma of Membership and a label button in 3 enamel colors. The URA has special stationery and lovely seals to go in accordance with the biggest aim to develop a most friendly Club, already represented in the Madrid last Convention, and having Delegates in all the American Conventions. All that has been the conclusion of pure amateurship in radio, developed with the aim to please in the land of Heredia, a name which was put in the map, by the station TI-4-NRH.

The station verifies each report, by sending a beautiful certificate printed in five colors, the only and most unique demonstration of its kind, ardently desired by fans.

The Verifications

The wave is very steady, with little fading, and the music, either recorded or Spanish talent, distinguished by bugle calls between numbers, known the world thruout.

Its power is marvelous, as heard from Canada to stations anywhere from Peru. The wave is very steady, with little fading, and the music, either recorded or Spanish talent, distinguished by bugle calls between numbers, known the world thruout.

(Continued from page 11)

The Most Friendly Station

In September there will be complete new data from broadcasting stations with their time on the air, a new and enlarged DX Calendar, and a new plan for securing short-wave station information. Watch for it.

"Those listeners in the east who have not heard WSAR, Fall River, Mass., can try for him on Monday nights until 9:00 o'clock, when WHOM comes on," suggests Samuel Kink, 844 So. 16th St., Newark, N. J.

are those of Bogota standard. We assume that these times 10 p.m. Following is from St. John's, Nfld., received March 15th the air of HJN as follows: 12:45 p.m. issue is a marvel" gives the time on helpful every month and that the May thinks that "Radex is getting more Rudolph Kure of Cincinnati, who 2:00 p.m. and 3:30 to 11:00 p.m. Weekdays on at 8:30 a.m. until 5:30 p.m. and 7:00 to 11:00 a.m. to 5:30 p.m. and 7:00 to 11:00 on the air as follows: Sundays, 11:00

some interesting information in regard to CKY. He gives their time-Block, Winnipeg, Man., gives us Gustave Solomon, 404 Bon Accord Irish Free State.

ert recently tuned in 6CK, Cork, 8:30 EST Wednesday evenings. Rob-He has received one of them on 1345 17 Janssen Place, Kansas City, Mo. 10:30 EST, says Robert Rosenberger, puts on a special DX every night until Radio Normandie, Recamp, France, watts. Am not sure about the power."

49 meters. VE9EH has about 250 town, has a shortwave transmitter on p.m. to 8:15 p.m. CFQY, Charlotte-reports, sign off. On again at 2:30 until 1:00 p.m. Time and weather broadcast till 12:00 a.m. and recordings mornings on at 11:00 a.m. church Huskers 9 to 10:00 p.m. Sunday evenings George Wade and his Corn grams and hockey matches. Saturday Canadian Radio Commission pro-8:00 p.m. They also broadcast all the on again at 4:00 p.m. and sign off at 12:30 to 2:00 p.m. other programs;

"Here is some information on CHGS," advises Stewart Hunter, Box 200, Kensington, P.E.I. "Weekdays 7:30 a.m. to 9:00 a.m. Musical Clock program; 10:30 to 11:30 a.m. Home Hour; 11 to 12:30 Rural Program;

foundand's sealing fleet is broadcast daily at 10:00 p.m." "The latest news concerning Newfoundland's sealing fleet is broadcast 9:00 p.m. Sunday 8:00 to 9:00 p.m. continuing some nights until 8:00 p.m. except Sunday, 6:00 to 8:00 the broadcast begins at 12:30 p.m. 12:00 to 2 p.m., except Sunday when 1 1/2 hours later than EST. Daily cast Schedule, Newfoundland time VONF's verification; Regular Broad- at 3:57 a.m. Following is from St. John's, Nfld., received March 15th the greatest thrill of all was VONF, KXXA, KID, WAGM and KDPN. But KRMID, the last three using 50 watts; catches are KFXM, KGRK, CKPR, Columbia complete. Some of my best have nine states and the District of cept Nevada, have been logged and Ave., Toledo, Ohio. "All states, ex- Sidney R. Steele, 3606 Homewood stations, using a Radiola 18," reports of 1929, and have to date logged 478 "I have been DXing since the fall

Some DX Tips

"that I would like to hear from At-water Kent Model 480 owners and the results and kinds of aerials they are using." "Reception has been very freakish the past week," declares Robert Ros-emberger, 17 Janssen Place, Kansas City, Mo. "I have pulled in LR8, LS8 Viborg, Finland, and Poste Partien, also LR2. LR2 is now on 910 and can be caught before XEW comes on strong in the evening." "About 4 a.m. this morning I heard KGBU after a couple of years' occasional trying for them," remarks J. A. Ringness, Morris, Minn. "Also XEFV, WDRG, WRDW and WEEU." Editor's Note: When a name is preceded by an asterisk (*) it indicates the writer would like to hear from others, preferably those owning the same kind of set.

WMMN on a test program one morning, by turning the dial up toward 880 kcys. I heard CMX. You have WMMN and CMX both on 890 kcys. CMX was on 885 or 880 kcys. when I heard them. I would like to hear from DXers from the Southern and New England states."

Little Radex Clubs

"Three of us, all RADEX readers, have started a little gathering," announces R. E. Moran, 1309 Wellington St., Ottawa, Ont., "and we meet every Sunday afternoon at each other's homes and review the weekend activities in DXing. I have a log around 475. Ernest Ball a log of 500 or more, and Fred Wakerell over 600. The three of us heard a station on 1180 kcys. on Sunday a. m. March 26, playing band selections. I heard it again on Monday, the 27th, at 4:29 a. m. EST, playing band selections again, but no announcements. I wonder if any other RADEX reader has had similar experience. If so, would he please get in touch with me."

"I think that I can consider myself very fortunate during the past month," boasts Charles Meyer, Jr., 411 Blake St., St. Joseph, Mo. "On March 26 I was very agreeably surprised to hear a voice on 720 kcys., state that my station was 2YA, Wellington, New Zealand. I listened to them from 4:00 until they signed off at 4:25 a. m. The reason I was so amazed was because I am not using an aerial but a Muter aerial eliminator, grounded to a pipe driven about two feet in the ground in the furnace room where the ground is as dry as a bone. Among my better catches in 1933 are: KPCB, KFXM, WJEJ, KGFG, KXL and XEFB (100-watters); WSVS, WGNV, XEFV, WEXL and WGLC (50-watters)."

With a three-tube receiver of his own design, Gilbert Van Vranken, Jr., 2230 N. El Molino Ave., Pasadena, Calif., has achieved some remarkable results. His total log of 299 stations, loud-speaker reception, includes stations in Argentine, Colombia, Venezue-

la, New Zealand, Australia, China, Japan, Porto Rico, Alaska, Hawaii, as well as continental North America. He has verifications from 4BH, 2YA, YV1BC, two Honolulu stations and many others. Gilbert says that 2B1, 4RK, 2YA and 4BH come in exceptionally well quite often but that 5CK with more power is very difficult. The set operates on batteries.

Verifying Locals

"The following will prove a DXer should verify locals," suggests Karl J. Halpern, 495 E. 3rd St., Brooklyn, N. Y. "WPAP, WHN and WRNY are to be under one call, WHN, transmitter 750 watts. WQAO on Sundays only for church programs. WMSG, WBNX, WCDA, all to WYNN. Yes, good old Ed Wynn, owner. Transmitter 500 watts. WAWZ, early mornings 5:00 to 8:00 a. m. and special Sunday services. WYNN on from 8:00 a. m. to 1:00 a. m. What will a local fan do about WPAP, WHN (500 watts), WRNY, WMSG, WBNX and WCDA? How can he prove he heard those stations when he hasn't a veri?"

"The Australian, New Zealand and Japanese stations have been exceptionally good the past month," records E. N. Luken, Crooks, S. Dak. "4BC, 2BL and 2CO seem to be the best and to put on the best programs although the last few mornings 2UE in Sydney has been real strong. I consider my best catch down that way to be 2GN, Goulburn, Australia, as they claim only 50 watts power though that doesn't seem possible. These stations come in strongest here between 4:00 and 5:00 a. m. CST; however I can usually hold 4BC and 2UE till 6:00 a. m."

"I own a Philco 7-tube set and have a total of 463 stations," informs* Russell McCoy, 432 Madison St., Gary, Ind. "Although a DXer since early radio, have not done so awfully much DXing this winter, due to illness, but my first night at the set this fall brought me my two prize catches since radioing. They were YV1BC

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AMPLIVOX LABORATORIES, 82 East 95th St., Brooklyn, N. Y.

Power St., Akron, Ohio. "Since May, 1932, I have heard 338 identified stations, including five s.w. heard on the regular b.c. set. My best catch is KFIO. All of these are on the air at the present time or listed in RADEX. I would like to nominate for pestations (pests) such stations as WFIW and WEXL, who are on the air too much of the time."

"I have not written to RADEX for a long time, so here goes," salutes Kazimir Nowotarski, 2484 Thurman Ave., Cleveland, Ohio. "My log has been increased to 611 stations, all of which have been received on my two-tube receiver. My best verified catches are: 2YA, CKMO, KPQ, KXO, KFXM, KPCB, 10-AB, 10-AK, 10-BI, 10-BP, 10-BQ, KGFU, CHGS, WKAQ, KFPM, KFSD and YV1BC. I have 53 stations on the Pacific coast, of which 40 are verified."

"I am only 13 years old and as I go to school I have no time to DX, except on Friday, Saturday and Sunday," comments Don Martinez, 1469 26th Ave., San Francisco, Calif., "but I managed to get around 211 stations in about six months, with 94 verified, which includes 18 Japanese, one Chinese in Nanking; 2CO in Corowa; 2YA in Wellington, KGU in Honolulu, and KGBU, Ketchikan, and a number of Canadians and Mexicans. I am still trying for Europe and South America and hope to get them soon."

"I have 351 stations, but they are darn hard to get now," complains

Clarence Wakefield, Wiarnton, Ont. "I only DX some Sunday mornings. I usually get to bed about 10:30 and get up a little after two, but some Sundays I roll over and go to sleep again instead."

Well, maybe the Editor can get a little sleep during the next two months. Cheerio, until September.

*Names marked with an asterisk would like to hear from other Radexers, particularly those owning the same kind of set.

Final DX Reports

(Continued from page 30)

keys. I also logged an hour of 2YA's program on Sunday morning, March 12, from 3:30 to 4:30 CST. This program came in very good through the speaker with very little fading. I have sent for verifications from both of these stations."

"I have been DXing since August, 1932, and in that short time I have heard 319 stations," writes Morton Meehan, 563 Adams Ave., Elizabeth, N. J. "My best are: HJN (awfully loud), KVI, KTM, CMQ, XES, 10-BP, 10-AK, NAA, KGNO, WHET, WKAQ, CKY, WABZ, KOY, WJBW, KMLB, KTFI, KHQ, CMX, CMC, and a flock of others. About 10:00 p. m. when the weather is good for DXing, I have heard CMC between KOA and CKGW. You have them listed as being on CKGW's channel. I heard

Baltimore," reports B. L. Ahman, Jr., 3313 Westerald Ave., Baltimore, Md. "I just listened to HJN (685 kcys.) Bogota, Colombia, on Sunday morning at 3:45 a.m. Their signals were very loud and clear. I am waiting for a verification. I have just received verifications from CKMO, CJRM, WKAQ, CMBY, CMAF, CMCY, XEW, XEO, XER, XEPM, XEAW, XENT, KFI, KGO, KSL, KOA and WIBC, a 50-watter from Muncie, Ind."

"My present log stands at 370 with 44 of 100 watts or less," reports Clarence Markel, Jr., 622 1/2 N. 7th St., Quincy, Ill. "A few of the best are WJBK, WEXL, CHML, 10-AB, WBHS, KTFI, WRLT, XET and XES. This list includes 43 states with 20 police calls and 24 s. w. My best police calls are WMP, WPD, WPH, and KGPL."

"I have had good luck with my Deforest Crosley, 8-tube set," reports Oliver Stevens, 1835 Gerrard St. E., Toronto, Ont., "and have received some excellent catches, such as KGKO, KFSD, WBAO, XEK, XEU, KFVD, WBBZ, WABL, KTFI, KDYL, XEM, WSMB, WQBC, KGRG, WSPA, and here's a peach, CKWX, 100 watts, Vancouver, B. C. Try and beat that!"

Mrs. L. P. Ayres, 9 Fern Ave., Carbondale, Pa., reports a total log of 626 stations on her RCA-60 with all states except Wyoming and Nevada. She has 25 stations of from 5 to 50 watts in 15 states and Canada and 150 stations 100-watts in 38 states, Canada, Mexico and Cuba. "I have a two-tube Crosley receiver and have had 360 broadcast-ing stations, 80 police calls, and 2 Canadian s. w. stations," comments Charles Muffy, RFD No. 3, Gratton, Ohio. "My best DX is KTFI, Twin Falls, Idaho, using 500 watts. My farthest distance is KGA, Spokane, Wash., using 5000 watts."

His Pet "Pestations"

"I have a 5-tube Gloritone receiver," comments Edward Bond, 318

Baltimore," reports B. L. Ahman, Jr., 3313 Westerald Ave., Baltimore, Md. "I just listened to HJN (685 kcys.) Bogota, Colombia, on Sunday morning at 3:45 a.m. Their signals were very loud and clear. I am waiting for a verification. I have just received verifications from CKMO, CJRM, WKAQ, CMBY, CMAF, CMCY, XEW, XEO, XER, XEPM, XEAW, XENT, KFI, KGO, KSL, KOA and WIBC, a 50-watter from Muncie, Ind."

"My log of stations on the broadcast band, at the present time, contains 641 stations," declares Raleigh A. Biss, 129 W. Lake St., Chisholm, Minn., "including 12 Mexicans, 3 Cubans, and WKAQ, San Juan. A few of the best catches are WRAM, KCMC, WOP, WDRC, WALZ, WINS, KXO, KABC, WAWZ, WJEJ, WRBC, KGGM, WSIX, XEX, XEE, XEJ, KGAH, KADM, KWSC, CMBD, CKCI, GJOC and GJOR. I have heard all states with the exception of Vermont, New Hampshire, Delaware and South Carolina."

Some Brief Reports

"I just started DXing three months ago, and now have 137 stations," writes Cameron Greenleaf, Hewlett, L. I., N. Y. "I am a boy of 13 and therefore can't stay up late. Some of my best catches are: WBAP, WFAA, WOAI, KMOX, KWK, WOWO, WHO, WOC, KSL, KDYL, XEW, KTBS, KVOB, WMAL, KIDO, KFAB, 6 in Canada and 5 in Florida. I have had short-wave stations WIXAU, WIXAZ,

"Since I last wrote you," advises Ralph V. Caldwell, R. D. 1, Clarksville, Pa., "I have received a few new stations. Up to the last day of January, I had 572 stations. I added up to February 25th fourteen stations, or a total of 586. Among the best I heard during February were KPM, KDB, KECA, KID, and XES. My best in January, KGER, KGR, WAGM, and KXO, and, thanks to Rader, I got the one station that I have been hunting for, KDFN, Casper, Wyo., completing my list of the states." "DX is exceptionally good here in

"Through the DX calendar I have been able to pick up close to 40 new stations since the first of January," admits F. L. Biss, Britton, Minn. "The first issue I bought was January, 1933. I have picked up 123 new stations this year, 24 of them are in Australia and New Zealand, KGU, KGB, YVIBC, HJN, CFBO, and scores of others. This certainly has been an excellent season. I would like to correspond with a DXer in Delaware." "Since my last report I have received 20 more stations, bringing my

total up to 305," remarks L. A. Brodhecker, Box 82, Brownstown, Ind. "In this total are five ship stations at 600 meters, two police calls below the 1500 band, two stations from Mexico City, one from Porto Rico, 24 stations in California. The total also represents 45 states; 15 out of Canada, including 10-AB, 6 stations from Havana, and 7 from Mexico. Am headed now for the 350 mark. My first report was 165 stations." "I use a little Clarion AC-61 model, 6 tubes, and in less than two years have a log of 529 calls, all at present on the air—deletions don't count with me—only live ones." boasts Stanley A. Schmuch, 94 Otis St., East Cambridge, Mass. "My list includes stations in U. S., Canada, Cuba, Mexico, Porto Rico, Venezuela, and France. Among them are 10-BI, CKOV, YVIBC and Poste Parisien. All heard on the regular b.c. band, and a few a little below 200 meters." "During a period of less than a month I have received 163 stations in the U. S., Canada, Mexico and Cuba," comments C. E. Bryant, Jr., Booneville, Ark. "I have received 40 states in the U. S. I also have received a station on every kilocycle between 540 and 1500 with some long-wave stations, about 520. We have a 10-tube long-wave Clarion which gives excellent service. I have no trouble at all separating stations on different kilocycles."

Completes State Roster

Mexicans, HJN and YVIBC from South America," reports K. Hildebrand, Doaktown, N. B. "The three provinces that I still need are Saskatchewan, Alberta and British Columbia. During February added 35 new stations to my log. My best catches are WHBC, 10-BQ, 10-BQ, 15 watts; WCAZ, 25 watts; KMLB, KBTM, KCMC, KGFJ, KMLB, KDFN, XEJ, CMCW, HJN and YVIBC." "I have had my 11-tube Majestic for two months and have had 247 stations in the U. S., 11 in Canada, 3 in Cuba, 7 in Mexico, and KGU, in Hawaii," reports Wm. McDaniel, The Gazette, Charleston, W. Va. "Of the 247 in the U. S., 27 are on the Pacific Coast and are in 42 states. I also have had 3 police stations, and a station announced as W2XAR, New York. These come in above 1500 kcs., as I have some extra space on my dial. W2XAR is on from 5:00 to 6:00 p. m. on weekdays." "I have been getting the 'good old reliable' for the last two years," declares Frank Frazier, 225 Menomonee St., Chicago, Ill., "and have had 247 stations verified since, including Porto Rico, Mexico and Canada. My best stations are WOOL, 25 watts; KGCX, WGNV, KRMD, 50 watts; KFTL, KGFJ and WJBY, 50 watts. Received verification from WOSC to-day that they are on from 7:00 a. m. to 2:00 p. m. and 5:00 to 10:00 p. m. CST. I have a Graybar 310."

Gets 24 from Oceania

"Well, I have boosted my log to 541 and 558 verified. My best verified include: 10-BQ, KGFT, KERN, KJBS, KFXM, WGM, CMCU, XEN, CHCK, WIBG, VONF, KDFN, KOB, KGFK, KGKL, KFXR, KGR and CHLP," reports *Clarence Burnham, 147 East Main St., Gloucester, Mass. "Have requests for verification out to YV1BC, WKAQ, CHCO, KIPM, and WSVS, KOH, KGIR, CMJK, and KALE, which I consider good catches. Have also heard HHK, KGFL, KVL, KREG, and VOAS. On my log I have 164 100-watters or less, with 132 verified. Have 28 on the Pacific coast with 14 verified."

"Last night I logged my 800th station, and decided to celebrate by sending a line to Rader, the thing that started me on this hobby of DXing in January, 1932," declares Ivor Nixon, 265 Pacific Ave., Toronto, Ont. "This total includes 439 shortwave stations (mostly amateurs) and 361 broadcast. The latter includes 35 2000-milers, and among them are such stations as CJOR, KGFL, KEVD, KXL, KVL, KJBS, YV1BC, KERN, KWG and KPFC. This last I consider my best. The receiver is the same old one-peanut-tuber."

From an Arizona Airport

"I started in DXing about last December with a Majestic 11-tube pentode 307 model, which is a product of 1933, very new," comments Henry Castano, Yuma Airport, Yuma, Ariz. "This place where the field is located is about six and a half miles from the city of Yuma, which I think is a very good location for getting the real distance. Mr. Redondo, who is the proud owner of this radio, is also manager of this field, and myself, his DXer, have received stations from 50 watters to 100,000 watters."

"On November 20, 1930, I bought a 7-tube battery Crosley radio, and besides these stations I have logged and verified 46 states, North Dakota and Wyoming being the exceptions. I logged all 473 on an 8-tube Majestic Model 91."

station, I'd like to hear from him or her. Doesn't look like the heavy static will help me boost my log to 600 before the end of April."

"My set is a 5-tube Lafayette, with a 100-foot aerial under the roof," advises Delbert C. Thomas, Triangle Fraternity, State College, Pa. "Have been DXing only a few months, having received my set in September, but so far have a b.c. log of 280 stations, including HJN and YV1BC. Have also received 10-BQ and 10-AK, with 10-BQ verified. Have received 11 California stations with four 500-watters. By transposing my aerial lead-in to the grid of the first detector tube, I can receive short-wave stations and have a log of 39 police and airport stations and 30 amateur stations. Not a bad log for only a few months."

His First Year

"This is my first year at DXing," says Kenneth Korsican, 2407 Club Blvd., Durham, N. C. "It began about January 1st. As I have done no DXing after about 11:00 p. m., I have only a list of 125 stations on the b. c. band and ten on the beginning of short wave up to 1750 keys. My best catch was WAW, a 500-watter, Omaha, Nebr. Another 500-watter that I can get easily is WCOG of Meridian, Miss. I would like to hear from someone on building a short-wave converter and a transmitter. I am using a Colonial 10-tube super-het."

"I am writing to tell you my results at DXing this season," says Charles Leboeuf, Box 222, North Grosvenordale, Conn. "I have been able to log 167 stations, making a total of 473. My best catches are: WKAQ, 10-BQ, VONF, CMJK, KGFK, HIX, HJN, and XEK, a 100-watter station in Mexico. All verified. I have also logged YV1BC and Poste Parisien, verifications on the way. Besides these stations I have logged and verified 46 states, North Dakota and Wyoming being the exceptions. I logged all 473 on an 8-tube Majestic Model 91."

100 BEST S. W. STATIONS

VPN Nassau, Bahamas
 *VRT-ZPA Hamilton, Bermuda
 *WEM Rocky Point, N. Y.
 *WKA Lawrenceville, N. J.
 *WKR Lawrenceville, N. J.
 *WNC Hialeah, Florida
 *WVD Seattle, Wash.
 *WOO Ocean Gate, N. J.
 12,899 23,336 Phones Ships
 4,749 63,13
 8,561 35,02
 6,618 45,30
 WXH Ketchikan, Alaska
 6,662 45,00
 W1XAL Boston, Mass.
 6,040 49,64 Irregular

P W1XAZ Springfield, Mass.
 9,560
 W3XAD Schenectady, N. Y. a. m.
 31,36 7:00 a.m.-1:00 a. m.
 15,320 19:57 Daily 1-8 p.m.; Sat.
 Sun. to 4.
 W2XAF Schenectady, N. Y. B
 9,530 31:46 Daily, 7-11 p.m.
 W2XE Wayne, N. J. B
 15,258 19:55 11 a.m.-1 p.m.
 25,36 8-5 p.m.
 49,02 6-11 p.m.
 6,116
 W3XAL Bound Brook, N. J. B
 17,772 16:57 8 a.m.-4 p.m.
 6,096 49:17 Sat. 4:30 p.m.-1 a.m.
 W3XAU Philadelphia, Pa. B
 9,565 31:28 Irregular
 8,057 49:50
 W8XK Pittsburgh, Pa. B
 6,140 48:53 Relays KDKA 4-11 p.m.
 11,872 25:25 Relays KDKA 9 a. m.-4 p.m.
 15,204 19:72
 21,451 13:98 9 a.m.-2 p.m.

B W9XF Chicago, Ill.
 6,095 49:18 4:30-8 p.m.; 9:30-2 a. m.
 XAM Merida, Yucatan
 5,766 62:00
 *XDA Mexico City
 5,879 61:00
 11,760 25:50
 YMA Managua, Nicaragua
 14,480 20:70
 *YVQ Maracay, Venezuela
 13,337 22:48
 *YVR Maracay, Venezuela
 18,296 16:89
 YVIBC Caracas, Venez. B
 6,119 49:00 Relays 960 kos.; 10:30 a.m.-1 p.m.; 5:15-10 p.m.
 YVBC Caracas, Venezuela B
 9,500 31:56 4:30-10 p.m.; Sun., 7:30-9:30 p.m.
 ZSS Capetown South Africa P
 18,856 15:90 Phones London

Stations Caught
 (Continued from page 84)

tom, N. Z. Does anyone know of a Z2BA?

HJN, Please Verify

VPN Nassau, Bahamas
 *VRT-ZPA Hamilton, Bermuda
 *WEM Rocky Point, N. Y.
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 *WKR Lawrenceville, N. J.
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 15,204 19:72
 21,451 13:98 9 a.m.-2 p.m.

tom, N. Z. Does anyone know of a Z2BA?

HJN, Please Verify

“Just a note to let HADEX know how DXing is in Schenectady now,” comments George B. Holland, Jr., 1340 Baker Ave., Schenectady, N. Y. “Pacific 100-watters are coming in fine. Have KPCB, KJBS, CKWX, KERN, KGFJ, KWG, KFXM, with CKWX, KWG verified, and the others yet to be heard from. My set goes from 540 kcys. to 1725, and the following are my results: 540 to 1500 kcys., 568 with 283 verified; 1500 to 1725 kcys., 8 experimental with 3 verified, 76 amateurs with 13 verified, 18 police with one verified. Where is Z2BA? Heard him calling CQ at 3:37 a. m. EST February 1st. I can't locate anything like it in Call Book. Have had KGU the last two mornings but not good enough for a vert.” ZLZBA is an amateur in Wellington's has logged and verified this lives more than 1000 miles from St. Johns has logged and verified this

1219	22.68	British Ships			
GSC	19.78	Santiago, Chile	11 a.m.-4 p.m.		
CGA	13.96	Pyramonville, Que.	9 a.m. to 2 p.m.		
GNR	9.340	Rebio, Morocco	Nights		
CTLA	12.820	Lisbon, Portugal	3.38 2 p.m.-6:30		
DAF	9.592	Norden, Germany	Tues.-Fri. 5-7 p.m.		
DAF	12.360	Norden, Germany	Talks to Ships		
DFB	3.464	Nauen, Germany	35.42		
DGC	6.675	Nauen, Germany	44.91		
DIC	10.246	Nauen, Germany	29.26		
DJA	9.552	Nauen, Germany	3.18 2 p.m.-6:30		
DJB	15.190	Zeeen, Germany	8 a.m.-noon		
DJC	6.017	Zeeen, Germany	48.83 Irregular		
DJD	11.753	Zeeen, Germany	25.51		
DJE	17.761	Madrid, Spain	18.88		
EAO	9.862	Madrid, Spain	30.40 5:30-7 p.m.; Sat. 3 p.m.		
FTK	19.684	Paris, France	15.23 3 p.m.		
FTM	15.863	Paris, France	18.90 5:30-7 p.m.		
FTS	12.282	Paris, France	15.55 10 a.m.-2 p.m.		
GEM	13.025	Paris, France	23.00		
GSA	6.650	London, England	49.50		
GSB	8.510	London, England	31.55		
GSC	9.585	London, England	31.28		
GSD	11.750	London, England	25.51		
19.885	London, England	15.07	10:30 a.m.-3:30 p.m.		
19.895	London, England	15.07	10:30 a.m.-3:30 p.m.		
19.895	London, England	15.07	10:30 a.m.-3:30 p.m.		
19.895	London, England	15.07	10:30 a.m.-3:30 p.m.		
19.895	London, England	15.07	10:30 a.m.-3:30 p.m.		

The Hundred Best S. W. Stations by Calls . . .

8,566	35.00	Italian Ships
8,831	33.37	British Ships
9,012	33.37	*KEL, Bohas, Calif. Tests irregularly
9,273	32.33	GCB, Rugby, England, Phosnes Canada
9,340	32.27	Rabat, Morocco, Sun., 2:30-5 p.m.
9,390	32.10	CGA, Drummondville, Quebec, Phosnes
9,410	31.66	PLV, Bandoeng, Java, Irregular
9,480	31.63	PLW, Bandoeng, Java, Phosnes Australia
9,500	31.56	YABC, Caracas, Venezuela, 4:30-10 p.m.; Sun., 7:30-9:30 p.m.
9,503	31.55	VKMB, Melbourne, Australia, Wed. 5-6:30 a.m.; Sat., 5-7 a.m.
9,510	31.53	GSB, Davenport, England, To S. Africa 1-5:30 p.m., To Canada 6-8 p.m.
9,520	31.49	OXY, Skamleback, Denmark, 2-6:30 p.m.
9,530	31.46	WZAF, Schenecady, N. Y., 7 to 11 p.m.
9,552	31.38	DJA, Zeeseo, Germany, 2 p.m.-6:30 p.m.
9,560	31.36	W1XAZ, Springfield, Mass., 7 a.m.-1 a.m.
9,580	31.30	HBL, Geneva, Switzerland, Sun., 5:45-8:30 a.m.
9,585	31.28	GSC, Davenport, England, 4:30-6:30 a.m.; 8:30 a.m.-12:30 p.m.; 1-5:30 p.m.; 6-8 p.m.
9,585	31.28	W3XAV, Philadelphia, Pa., Irregular
9,582	30.90	EAG, Madrid, Spain, 5:0-7 p.m.
9,685	30.30	LSN, Buenos Aires, Argentina, 6 a.m.
9,895	30.30	LSN, Buenos Aires, Argentina, 6 p.m. and 6 p.m.
9,900	30.01	KAZ, Manila, P. I., 3-7 a.m.
10,060	29.80	*VRT, ZFB, Hamilton, Bermuda, Phosnes
10,163	29.50	German Ships
10,212	29.35	PSE, Rio de Janeiro, Brazil, Tests
10,246	29.26	DIC, Neuen, Germany
10,250	28.50	VKNAB, Sydney, Australia, Irreg.
10,250	28.50	*KWP, Dixon, Calif., Phosnes Hawaii and Manila
11,370	26.60	XAM, Manila, Luzon, Tues.
11,710	25.60	VEJHR, Winnipeg, Manitoba, Tues.
11,725	25.57	PHOHI, Bindhoven, Holland
11,750	25.51	GSD, Davenport, England, To Oceania
11,898	25.20	Pontofese, France, 4-7 p.m.
12,241	24.41	GBU, Rugby, England, Phosnes N. Y. afternoo
12,394	24.19	DAR, Norden, Germany, Phosnes Ships
12,820	23.38	CNR, Rabat, Morocco, Sun., 7:30 a.m.-9 a.m.
12,839	23.36	WOO, Ocean Gate, N. J., Phosnes Ships
13,085	23.00	German Ships
13,219	22.68	British Ships
13,296	22.55	CGA, Drummondville, Quec, 9 a.m.-2 p.m.
13,337	22.45	*VVO, Maraca, Venezuela, Phosnes His-
13,500	22.09	GBB, Rugby, England, Talks Canada
13,816	21.70	SUZ, Cairo, Egypt, 7 a.m. and 3:30 p.m.
14,450	20.75	GBW, Rugby, England, 6 a.m. and 6 p.m.
14,480	20.70	YMA, Managua, Nicaragua, Phosnes
14,545	20.69	RXF, Panama City, Panama, Phosnes
14,930	20.08	*HJB, Bogota, Colombia, Phosnes
14,980	20.01	KAY, Manila, P. I., 3-7 a.m.
15,055	19.91	*WNO, Hialeah, Florida, Phosnes Pan-
15,120	19.83	HVJ, American stations, days
15,140	19.81	GSE, Davenport, England, 4:30-6:30 a.m.
15,190	19.78	DJB, Zeeseo, Germany, 8 a.m.-noon
15,204	19.72	W8XX, Pittsburgh, Pa., Relays KDKA
15,234	19.68	Pontofese, France, 8 a.m.-11 a.m.
15,258	19.65	W2XE, Wayne, N. J., 11 a.m.-1 p.m.
15,320	19.57	WZAD, Schenecady, N. Y., Daily 1-3 p.m.; Sat.-Sun. to 4
15,410	19.46	*KWO, Dixon, Calif., Phosnes Hawaii 2-7 p.m.
15,444	18.44	*HJY, Bogota, Colombia, 11 a.m. and 10 a.m.
15,611	18.61	GAV, Rugby, England, Phosnes N. Y. days
15,670	18.60	*OCI, Lima, Peru, 2 p.m.
15,938	18.30	PLB, Bandoeng, Java, Tues.-Fri., 5-10:40 a.m.
15,956	18.28	ZSS, Capetown, South Africa, Phosnes
15,958	18.28	LSR, Buenos Aires, Arg., 11 a.m. and London, mornings
15,55	19.282	FTM, St. Assise, France, 10 a.m.-2 p.m. 4 p.m.
15,24	19.678	*CEC, Santiago, Chile, 11 a.m. and 4 p.m.
15,23	19.895	BAQ, Madrid, Spain, Phosnes
15,27	19.856	LSQ, Buenos Aires, Argentina, 10:30-10:30 p.m.
15,27	19.856	LSN, Buenos Aires, Argentina, 8 a.m. and 4 p.m.
14,24	21.054	*WKA, LaWenecville, N. J., 8 a.m.-4 p.m. and 4 p.m.
21,069	14.23	PSA, Rio de Janeiro, Brazil, 8 a.m. P
21,400	14.01	*WFK, LaWenecville, N. J., 8 a.m.-4 p.m. P
21,470	13.96	GSH, Davenport, England, P
21,451	13.93	W8XK, Pittsburgh, Pa., 9 a.m.-2 p.m. B

4.174	71.82	British Ships
4.174	71.82	German Ships
4.283	70.00	Italian Ships
4.513	66.43	VPA Nassau, Bahamas, Phons Hialeah P
4.753	63.08	*WOO Ocean Gate, N. J. Phons Ships P
5.045	59.42	*VRT-ZFA Hampton, Phons
5.766	52.00	XAM Merida, Yucatan, Tests XDA 10
5.879	51.00	*XDA Mexico City, Tests XAM 10 a.m.-8 p.m. irreg. P
5.925	50.60	HJ4BB, Medellin, Colombia, Mon. Wed., Fri. 7:30 to 10:30 p.m.; Tues, Thur, Sat, Sun, 6-8 p.m. B
5.996	50.00	RV99, Moscow, USSR, 3-6 p.m. B
6.005	49.83	VE9DR, Montreal, Quebec, Daily, 7:30 p.m.-mid. B
6.017	49.83	DKC, Leason, Germany B
6.040	49.64	W1XAL, Boston, Mass., Irregular B
6.050	49.56	GSA, Devontry, England, To Canada 6-9 p.m. B
6.057	49.50	W3XAV, Philadelphia, Pa., irreg. B
6.070	49.39	VE9CG, Vancouver, B. C., Fri. 12:30-1:45 a.m.; noon to mid. B
6.090	49.23	VE9BJ, St. John, N. B., 5 p.m. and 11 p.m. B
6.092	49.22	VE9GW, Bowmanville, Ont. B
6.095	49.18	VE9GV, Bowmanville, Ont. 11 a.m.-3 p.m.; Sun, 7-8 p.m. B
6.096	49.17	W3XAL, Boudbrook, N. J., Sat. 4:30 p.m.-2 a.m. B
6.116	49.02	W2XZ, Wayne, N. J., 6-11 p.m. B
6.119	49.00	Y1YBC, Caracas, Venez. Releays 900 kcs. B
6.121	48.98	VE9HX, Halifax, N. S. Sat. and Sun. 5:30-10:30 p.m. B
8.562	35.02	*WOO Ocean Gate, N. J. Phons Ships P
8.103	37.00	HCB, Quito, Ecuador, 7:30-9:45 p.m. B
7.790	38.49	HBP, Geneva, Switzerland, Sun. 5-5:45 p.m. B
7.685	39.01	TLR, Cartago, Costa Rica, Phons Hialeah P
7.605	39.42	*KWY, Dixon, Calif. Phons Hawaii and Manila P
7.562	39.65	*KWY, Dixon, Calif. Phons Hawaii and 2 a.m. P
7.518	39.89	*KDK-KKH, Kahu, Hawaii, 9 p.m. and 9 p.m. P
7.465	40.16	*HJP, Bogota, Colombia, Phons Hialeah daily B
7.402	40.50	*HJABD, Bogota, Colombia, 9-11 p.m. B
7.396	40.54	*WEM, Rocky Point, N. Y. P
7.139	42.00	HJ4AB, Naxiales, Colombia, Sat. 10 p.m.-mid. B
6.888	43.54	*KBO, Kahu, Hawaii, Phons Calif. and land P
6.752	44.41	*WOA, Lawrenceville, N. J. Phons Bng-land P
6.675	44.91	DKK, Nauen, Germany, Heard 9 p.m. with WBJ P
6.662	45.00	WXH, Ketchikan, Alaska, Phons Seattle, night P
6.618	45.30	WVD, Seattle, Wash., Phons Ketchikan, night P
6.618	45.31	PR4D, Rikobamb, Ecuador, Thur. 9-11 p.m. B
6.378	47.00	*HJ4AB, Cali, Colombia B
6.272	47.80	HIA, Santaró de los Cabaleros, S. Domingo, 1:40-4:40 p.m., Sunday B
6.246	48.00	*HJ4AB, Bogota, Colombia, 8-11 p.m. 4-11 p.m. B
6.140	48.83	W8XK, Pitsburgh, Pa. Releays KDKA Broadcast B. Phone P.

Stations marked with an asterisk (*) will not verify.

April: Complete list by frequencies and waves.

December: Canadian stations by provinces and Complete list by call letters.

November: American stations by states.

September: Foreign stations arranged by countries.

For complete lists of short-wave stations see the following issues of this magazine:

second column, wave-lengths in meters.

Submitted by our readers as being most regularly received. Times are given in Eastern Standard. First column gives frequency in megacycles (for kilocycles read the decimal-point as a comma) and the

One Hundred Best Short Wave Stations By Frequencies and Wave Lengths

NEW ZEALAND	Auckland	500	1YA	820	Grey-mouth	45	3ZE	1300
		20	1ZB	1420		80	3ZR	1300
		76	1ZJ	1320	Hamilton	45	1ZH	630
		10	1ZM	1260	Hastings	20	2ZL	1400
		25	1ZQ	1190		8	4ZI	1160
		80	1ZR	1090	Invercargill	125	4ZP	1160
		5	1ZS	1420	Napier	7.5	2ZB	1290
		500	3YA	980		65	2ZH	1290
		100	3ZM	1200	New Plymouth	50	2ZR	1360
		250	3ZC	1450		100	2YB	1230
		500	4YA	650	Otago	20	4ZC	1280
		20	4YB	1080		5	4ZC	1340
		10	4ZF	1080		150	2ZF	1050
		100	4ZL	1220	Palmerston North	200	2ZO	1050
		45	4ZM	1080		105	2ZP	900
		40	4ZO	1080	Waioa	120	2ZK	600
		1080	4ZW	1080	Wellington	5000	2YA	720
		1150	2ZJ	1210		400	2ZW	1120

INDEX BY COUNTRIES AND CITIES

SOUTH AMERICA

ARGENTINE

Azul
Bahia Blanca
Buenos Aires

LU9 50
LP2 1000
LP4 1000
LP7 800
LP8 670
LP9 590
LRI 790
LR2 910
LR3 950
LR4 990
LR5 830
LR6 870
LR7 750
LR8 1150
LR9 1030
LRS 710
LS1 5000
LS2 5500
LS5 5000
LS6 1500
LS8 2000
LS9 3500
LV2 4500
LV3 1500
LV7 200

Cordoba
La Plata
Las Heras
Mar del Plata
Mendoza
Punta Alta
Rosario

San Juan
Santa Fe
Tucuman

BOLIVIA

La Paz

BRAZIL

Curityba
Franca
Juiz de Fora
Mogy das Cruzes
Pelotas
Pernambuco
Porto Alegre
Ribeirao Preto
Rio de Janeiro

PRAN 8
PRAZ 50
PRAY 200
PRAY 50
PRAD 920
PRAP 300
PRAG 3000
PRAI 10
PRAA 2000
PRAB 500
PRAC 500
PRAC 500
PRAX 2000
PRAE 1000
PRAR 500

CHILE

Rancagua
Santiago

10 10
10 10
CE67 1000
CE70 1000
CE74 1000
CE78 1000
CE82 1000
CE86 1000
CE90 1000
CE94 1000
CE98 1000
CE102 100
250
750

COLOMBIA

Bogota

PARAGUAY

Asuncion

PERU

Lima

URUGUAY

Montevideo

20 1265
100 1305
100 1345
100 CE88 880
50 785
20 1045
20 1153
50 1249

HIN 2000 690
HJ3ABD 20 881

ZPI 1000 1135
ZP4 300 1000
ZP5 150 1465
150 1775

OAX 5000 790
OAXM 12 1428

CX6 1000 850
CX10 1000 730
CX12 500 770
CX14 1000 810
CX16 250 850
CX18 2000 890
CX20 2000 930
CX22 250 970
CX24 1000 1010
CX26 2000 1050
CX30 250 1130
CX32 200 1170
CX34 500 1210
CX36 250 1250
CX38 100 1290
CX40 100 1330
CX42 500 1370
CX44 20 1410
CX46 100 1450
CX48 50 1490
CX40 30 1340
CW44 30 1420
CW44 30 1180
CW34 50 1220
CW36 30 1260
CW38 30 1300
CW30 30 1140
CW46 20 1460

YV1BC 5000 960
YV2BC 100 882
YV3BC 50 1200

EUROPE

VENEZUELA

Caracas

TUCUMANBO

Salto

PAYSANDU

AUSTRIA

Graz
Innsbruck

Klagenfurt
Linz

Salzburg
Vienna

BELGIUM

Antwerp
Brussels

Chatelneau
Dampremy
Ghent

7000 852
500 1058
500 1220
500 1373
500 1451
500 1581
780

ON4EB 50 1455
ON4FO 100 1219
ON4GT 100 1375
ON4RB 3600 589
ON4RC 100 1448
ON4R1 15000 590
ON4R2 15000 887
ON4CB 200 1388
ON4CG 25 1453
ON4RG 400 1219

INDEX BY LOCATIONS WITH MAP KEY

Key No.	Location	Key No.	Location
1050	CMTG	500	XEFA
790	CMTK	500	XEG
960	CMTL	100	XEK
1240	CMTN	1000	XEN
1375	CMGB	5000	XEFO
1150	CMJH	1000	XEP
1335	CMJI	250	XETA
1110	CMJO	1000	XETR
1125	CMHJ	500	XETW
1290	CMHL	5000	XEW
834	CMGA	1210	XEX
1225	CMHK	2000	XFG
1300	CMKI	1000	XFI
680	CMAR	5000	XFO
965	CMAY	500	XFX
1270	CMBC	50	XFC
965	CMBD	1000	XEC
1070	CMBG	890	XETU
1140	CMBJ	100	XETV
1485	CMBK	1000	XEA
1445	CMBL	500	XED
1185	CMBN	1155	XEI
1485	CMBR	1310	XEJ
780	CMBS	150	XEK
925	CMBW	150	XEL
1230	CMBY	250	XEM
1010	CMBZ	150	XEN
840	CMC	500	XEP
1230	CMCA	150	XEQ
1070	CMCB	150	XEH
1140	CMCD	250	XEJ
890	CMCH	50	XEL
1405	CMCI	250	XEM
1185	CMCJ	15	XEK
1405	CMCK	15	XEL
925	CMCN	250	XEN
780	CMCO	1000	XEP
1365	CMCR	150	XEQ
630	CMCU	150	XEH
965	CMCW	150	XEJ
1325	CMCY	1000	XEL
1395	CMDB	40	XEM
730	CMDK	3150	XEN
630	CMDO	500	XEP
890	CMDX	750	XEQ
1265	CMGB	30	XER
820	CMGC	100	XES
987	CMGH	15	XET
1040	CMGI	15	XEU
1360	CMJF	7.5	XEV
1249	CMAB	20	XEW
1030	CMAI	30	XEX
1034	CMKC	150	XEY
790	CMHC	250	XEZ
1395	HIX	15	XEA
1180	HJK	15000	XEB
630	HIX	1000	XEC
920	HHK	1000	XED
572	-----	2000	XEF
1050	CMTG	50	XEFA
790	CMTK	500	XEG
960	CMTL	100	XEK
1240	CMTN	1000	XEN
1375	CMGB	5000	XEFO
1150	CMJH	1000	XEP
1335	CMJI	250	XETA
1110	CMJO	1000	XETR
1125	CMHJ	500	XETW
1290	CMHL	5000	XEW
834	CMGA	1210	XEX
1225	CMHK	2000	XFG
1300	CMKI	1000	XFI
680	CMAR	5000	XFO
965	CMAY	500	XFX
1270	CMBC	50	XFC
965	CMBD	1000	XEC
1070	CMBG	890	XETU
1140	CMBJ	100	XETV
1485	CMBK	1000	XEA
1445	CMBL	500	XED
1185	CMBN	1155	XEI
1485	CMBR	1310	XEJ
780	CMBS	150	XEK
925	CMBW	150	XEL
1230	CMBY	250	XEM
1010	CMBZ	150	XEN
840	CMC	500	XEP
1230	CMCA	150	XEQ
1070	CMCB	150	XEH
1140	CMCD	250	XEJ
890	CMCH	50	XEL
1405	CMCI	250	XEM
1185	CMCJ	15	XEK
1405	CMCK	15	XEL
925	CMCN	250	XEN
780	CMCO	1000	XEP
1365	CMCR	150	XEQ
630	CMCU	150	XEH
965	CMCW	150	XEJ
1325	CMCY	1000	XEL
1395	CMDB	40	XEM
730	CMDK	3150	XEN
630	CMDO	500	XEP
890	CMDX	750	XEQ
1265	CMGB	30	XER
820	CMGC	100	XES
987	CMGH	15	XET
1040	CMGI	15	XEU
1360	CMJF	7.5	XEV
1249	CMAB	20	XEW
1030	CMAI	30	XEX
1034	CMKC	150	XEY
790	CMHC	250	XEZ
1395	HIX	15	XEA
1180	HJK	15000	XEB
630	HIX	1000	XEC
920	HHK	1000	XED
572	-----	2000	XEF
1050	CMTG	50	XEFA
790	CMTK	500	XEG
960	CMTL	100	XEK
1240	CMTN	1000	XEN
1375	CMGB	5000	XEFO
1150	CMJH	1000	XEP
1335	CMJI	250	XETA
1110	CMJO	1000	XETR
1125	CMHJ	500	XETW
1290	CMHL	5000	XEW
834	CMGA	1210	XEX
1225	CMHK	2000	XFG
1300	CMKI	1000	XFI
680	CMAR	5000	XFO
965	CMAY	500	XFX
1270	CMBC	50	XFC
965	CMBD	1000	XEC
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1140	CMBJ	100	XETV
1485	CMBK	1000	XEA
1445	CMBL	500	XED
1185	CMBN	1155	XEI
1485	CMBR	1310	XEJ
780	CMBS	150	XEK
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1230	CMBY	250	XEM
1010	CMBZ	150	XEN
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1070	CMCB	150	XEH
1140	CMCD	250	XEJ
890	CMCH	50	XEL
1405	CMCI	250	XEM
1185	CMCJ	15	XEK
1405	CMCK	15	XEL
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630	CMCU	150	XEH
965	CMCW	150	XEJ
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1040	CMGI	15	XEU
1360	CMJF	7.5	XEV
1249	CMAB	20	XEW
1030	CMAI	30	XEX
1034	CMKC	150	XEY
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1395	HIX	15	XEA
1180	HJK	15000	XEB
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1240	CMTN	1000	XEN
1375	CMGB	5000	XEFO
1150	CMJH	1000	XEP
1335	CMJI	250	XETA
1110	CMJO	1000	XETR
1125	CMHJ	500	XETW
1290	CMHL	5000	XEW
834	CMGA	1210	XEX
1225	CMHK	2000	XFG
1300	CMKI	1000	XFI
680	CMAR	5000	XFO
965	CMAY	500	XFX
1270	CMBC	50	XFC
965	CMBD	1000	XEC
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1140	CMBJ	100	XETV
1485	CMBK	1000	XEA
1445	CMBL	500	XED
1185	CMBN	1155	XEI
1485	CMBR	1310	XEJ
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1230	CMBY	250	XEM
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1070	CMCB	150	XEH
1140	CMCD	250	XEJ
890	CMCH	50	XEL
1405	CMCI	250	XEM
1185	CMCJ	15	XEK
1405	CMCK	15	XEL
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1365	CMCR	150	XEQ
630	CMCU	150	XEH
965	CMCW	150	XEJ
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1030	CMAI	30	XEX
1034	CMKC	150	XEY
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960	CMTL	100	XEK
1240	CMTN	1000	XEN
1375	CMGB	5000	XEFO
1150	CMJH	1000	XEP
1335	CMJI	250	XETA
1110	CMJO	1000	XETR
1125	CMHJ	500	XETW
1290	CMHL	5000	XEW
834	CMGA	1210	XEX
1225	CMHK	2000	XFG
1300	CMKI	1000	XFI
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987	CMGH	15	XET
1040	CMGI	15	XEU
1360	CMJF	7.5	XEV
1249	CMAB	20	XEW
1030	CMAI	30	XEX
1034	CMKC	150	XEY
790	CMHC	250	XEZ
1395	HIX	15	XEA
1180	HJK	15000	XEB
630	HIX	1000	XEC
920	HHK	1000	XED
572	-----	2000	XEF
1050	CMTG	50	XEFA
790	CMTK	500	XEG
960	CMTL	100	XEK
1240	CMTN	1000	XEN
1375	CM		

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

State	City	Call Number	Call Number	Call Number	Call Number	
SOUTH DAKOTA	Brookings H-15	1000	KFDY	550	WATTS	
	Flora H-14	250	KGDY	1340	WATTS	
	Mitchell H-14	100	KGDA	1370	WATTS	
	Pierre G-13	200	KGFX	630	WATTS	
	Rapid City H-12	100	WCAT	1200	WATTS	
	Sinox Falls H-15	1000	KSOO	1110	WATTS	
	Vermillion I-15	500	KUSD	890	WATTS	
	Watertown G-15	1210	KGCR	1210	WATTS	
	Yankton I-15	1000	WNAK	570	WATTS	
	Bristol L-23	100	WOPJ	1500	WATTS	
	Chatanooga N-21	1000	WDOD	1280	WATTS	
	Jackson M-19 br	100	WJJS	1310	WATTS	
	Knoxville M-22	1000	WNXJ	560	WATTS	
	Memphis N-19	100	WROJ	1310	WATTS	
	Memphis N-19	100	WBOJ	1370	WATTS	
	Memphis N-19	500	WNMC	780	WATTS	
	Memphis N-19	500	WNBR	1430	WATTS	
	Nashville M-21	500	WRBC	600	WATTS	
	Nashville M-21	5000	WLAC	1470	WATTS	
	Nashville M-21	50000	WSM	650	WATTS	
	Springfield M-20	100	WSIX	1210	WATTS	
	TENNESSEE					
	Austin Q-14	100	KQOM	1500	WATTS	
	Beaumont R-17	500	KWVG	560	WATTS	
Brownsville U-15	500	KTAV	1260	WATTS		
College Sta. Q-15	500	WTAV	1120	WATTS		
Corpus Christi S-14	100	KCFI	1090	WATTS		
Dallas P-15	10000	KRLD	1500	WATTS		
Dallas P-15	50000	WRB	800	WATTS		
Dublin P-14	500	KFPL	1280	WATTS		
Dublin P-14	100	KTSM	1310	WATTS		
El Paso P-9	100	WDAH	1310	WATTS		
Fort Worth P-15	100	KFAZ	1370	WATTS		
Fort Worth P-15	1000	KTAT	1240	WATTS		
Fort Worth P-15	5000	KFBX	800	WATTS		
Galveston R-16	100	KFLX	1370	WATTS		
Galveston R-16	500	KFTL	1290	WATTS		
Galveston R-16	15	KFRV	1310	WATTS		
Galveston R-16	500	KPRG	1260	WATTS		
Houston R-16	1000	KPRC	920	WATTS		
Lubbock O-12 tr	500	KXZZ	1120	WATTS		
Lubbock O-12 tr	250	KXTR	1440	WATTS		
Lubbock O-12 tr	100	KFYD	1310	WATTS		
Lubbock O-12 tr	100	KFYO	1310	WATTS		
San Angelo Q-13	100	KGKL	1370	WATTS		
San Antonio R-14	100	KABC	1420	WATTS		
San Antonio R-14	100	KMAC	1370	WATTS		
San Antonio R-14	100	KONO	1370	WATTS		
San Antonio R-14	50000	WOAI	1190	WATTS		
Tyler P-16 rc	1000	KTSA	1290	WATTS		
Waco Q-15	100	WACO	1500	WATTS		
Wichita Falls O-14	250	KGKO	570	WATTS		
UTAH						
Ogden I-7	1000	KDYL	1290	WATTS		
Ogden I-7	500	KLO	1400	WATTS		
Salt Lake City I-7	50000	KSL	1130	WATTS		
VERMONT						
Burlington F-27	100	WCAX	1200	WATTS		
Burlington G-27	100	WSYB	1500	WATTS		
St. Albans F-27	100	WODM	1370	WATTS		
Springfield G-27	250	WNBS	1260	WATTS		
Waterbury F-27 c	500	WDEV	550	WATTS		
VIRGINIA						
Arlington J-25	1000	NAA	690	WATTS		
Danville I-25	100	WBTM	1370	WATTS		
Emory L-23	500	WBLC	1350	WATTS		
Lynchburg L-25	100	WCHA	1370	WATTS		
Newport News L-26	100	WCHT	1310	WATTS		
Norfolk L-26	500	WTPR	780	WATTS		
Petersburg L-26	100	WPHR	1200	WATTS		
Portsmouth L-26 tc	500	WPOR	780	WATTS		
Richmond K-26	100	WMBG	1210	WATTS		
Richmond K-26	5000	WRVA	1110	WATTS		
Roanoke L-24	250	WRBX	1410	WATTS		
WASHINGTON						
Aberdeen D-2	100	KXRO	1310	WATTS		
Bellevue C-3	100	KVOS	1200	WATTS		
Bellevue C-3	50	KFBL	1370	WATTS		
Everett C-3	100	KGY	1210	WATTS		
Olympia E-5	1000	KWSC	970	WATTS		
Pullman E-5	1000	KJR	1220	WATTS		
Seattle C-3	5000	KOL	1270	WATTS		
Seattle C-3	1000	KOMO	920	WATTS		
Seattle C-3	100	KPCC	650	WATTS		
Seattle C-3	100	KRSC	1120	WATTS		
Seattle C-3	1000	KRW	1220	WATTS		
Seattle C-3	1000	KTVW	1220	WATTS		
Spokane D-5	250	KXFA	1370	WATTS		
Spokane D-5	100	KVL	1370	WATTS		
Spokane D-5	1000	KWA	1470	WATTS		
Spokane D-5	1000	KXG	1340	WATTS		
Tacoma D-3	5000	KGA	1470	WATTS		
Tacoma D-3	1000	KHO	1470	WATTS		
Tacoma D-3	500	KMO	1330	WATTS		
Tacoma D-3	250	KMI	1370	WATTS		
Tacoma D-3	500	KVI	570	WATTS		
Tacoma D-3	100	KPJ	1370	WATTS		
Tacoma D-3	100	KQJ	1370	WATTS		
Tacoma D-3	100	KIT	1310	WATTS		
WEST VIRGINIA						
Bluefield L-24	250	WHIS	1410	WATTS		
Charleston K-23	250	WQBU	880	WATTS		
Charleston K-23	250	WMMN	580	WATTS		
Farmington J-24	250	WMMN	580	WATTS		
Huntington K-23	500	WSAZ	1190	WATTS		
Huntington K-23	5000	WVA	1160	WATTS		
Wheeling J-24	250	WHIS	1410	WATTS		
WISCONSIN						
Bau Claire G-18	1000	WTAQ	1330	WATTS		
Fond du Lac H-19	100	KRTZ	1420	WATTS		
Green Bay G-19	100	KRBY	1200	WATTS		
Janesville I-19	100	WCLO	1200	WATTS		
La Crosse H-18	1000	WKBH	1380	WATTS		
Madison H-19	1000	WHA	940	WATTS		
Madison H-19	500	WIBA	1280	WATTS		
Manitowoc H-20	100	WOMT	1210	WATTS		
Manitowoc H-20	250	WHAD	1120	WATTS		
Manitowoc H-20	250	WISN	1120	WATTS		
Manitowoc H-20	1000	WTMJ	620	WATTS		
Poynette H-19	100	WRB	1120	WATTS		
Racine I-20	100	WRUN	1370	WATTS		
Sheboygan G-19	500	WHLB	1410	WATTS		
Stevens Point G-19	2500	WLBL	900	WATTS		
Superior F-17	1000	WEBC	1290	WATTS		
WYOMING						
Casper H-10	500	KDFN	1440	WATTS		
CANADA						
Calgary B-7	500	CFAC	690	WATTS		
Calgary B-7	10000	CFCN	1030	WATTS		
Calgary B-7	500	CFJ	690	WATTS		

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

State	City	Station	Power	Class	
NEVADA	Las Vegas	L-5	500	Watts	
	Reno	I-3	100	KGIX	
NEW HAMPSHIRE	Laconia	G-28	100	WKAV	
	Manchester	G-28	500	WFEA	
	Portsmouth	G-28	250	WHEB	
	NEW JERSEY	Asbury Park	J-27	500	WCAP
		Atlantic City	J-27	500	WPJ
		Camden	I-26	500	WCAM
		Jersey City	I-27	500	WAAT
		Newark	I-27	250	WHOM
		Paterson	I-27	1000	WAM
		Red Bank	I-27	250	WGCJ
		Trenton	I-26	500	WOR
		Zarephath	I-27	250	WOWZ
		NEW MEXICO	Albuquerque	N-7	250
Clovis	O-11		100	KICA	
Roswell	M-10		100	KCFL	
NEW YORK	Albany		G-27	500	WOKO
	Auburn		H-25	100	WMBO
	Binghamton		H-25	100	WNBW
	Brooklyn		I-27	500	WARD
	Buffalo		H-24	1000	WBBC
	Canter		F-26	500	WBRR
	Chester		H-25	50	WFOJ
	Elmira		H-25	1000	WLTH
	Freeport		I-27	100	WMBQ
	Hudson Falls		G-27	50	WMLB
	Jamestown		H-24	50	WMBR
	New York City		I-27	50000	WJWA
	Yonkers	I-27	50	WGBB	
	MISSISSIPPI	Greenville	O-18	100	WRFI
		Hattiesburg	Q-19	100	WQGM
		Jefferson	L-17	500	WJDX
		Jackson	P-19	1000	WJBF
		Meridian	P-20	500	WVHC
		St. Paul	G-17	25000	KSTP
		MISSOURI	St. Joseph	K-16	1000
St. Louis			L-18	500	WQBC
Cap. Girardeau			L-19	100	WAMT
Columbia			K-17	500	WHFE
Grant City			J-16	100	WJDX
Jefferson City			L-17	500	WJBF
Joplin			M-16	100	WQGM
Kansas City			K-16	1000	WKFI
Springfield			M-17	100	KSTP
Springfield			M-17	100	WCAL
Springfield			M-17	100	KENTX
MONTANA			Billings	F-9	1000
	Butte	F-7	500	KRHM	
	Great Falls	E-8	1000	WLB	
	Kalispell	D-7	100	WDJY	
	Missoula	E-7	100	WCCO	
	North Platte	J-13	500	WAMT	
	Norfolk	J-15	1000	WHFE	
	Omaha	J-15	1000	WJDX	
	Scottsbluff	I-11	1000	WQBC	
	York	J-15	500	WCCJ	
NEBRASKA	Clay Center	J-14	100	KGDE	
	Lincoln	J-15	5000	WCCO	
	Lincoln	J-15	100	KGDE	
	Lincoln	J-14	100	WCCO	
	Lincoln	J-14	100	WQBC	
	Lincoln	J-14	100	WAMT	
	Lincoln	J-14	100	WHFE	
	Lincoln	J-14	100	WJDX	
	Lincoln	J-14	100	WQGM	
	Lincoln	J-14	100	WKFI	
	Lincoln	J-14	100	KSTP	
	Lincoln	J-14	100	WCAL	
	Lincoln	J-14	100	KENTX	
	Lincoln	J-14	100	KGFX	
	Lincoln	J-14	100	KRHM	
	Lincoln	J-14	100	WLB	
	Lincoln	J-14	100	WDJY	
	Lincoln	J-14	100	WCCO	
	Lincoln	J-14	100	WQBC	
	Lincoln	J-14	100	WAMT	
	Lincoln	J-14	100	WHFE	
	Lincoln	J-14	100	WJDX	
	Lincoln	J-14	100	WQGM	
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
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Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
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Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
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Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
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Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
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Lincoln	J-14	100	WKFI		
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Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
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Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
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Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
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Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
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Lincoln	J-14	100	WKFI		
Lincoln	J-14	100	KSTP		
Lincoln	J-14	100	WCAL		
Lincoln	J-14	100	KENTX		
Lincoln	J-14	100	KGFX		
Lincoln	J-14	100	KRHM		
Lincoln	J-14	100	WLB		
Lincoln	J-14	100	WDJY		
Lincoln	J-14	100	WCCO		
Lincoln	J-14	100	WQBC		
Lincoln	J-14	100	WAMT		
Lincoln	J-14	100	WHFE		
Lincoln	J-14	100	WJDX		
Lincoln	J-14	100	WQGM		
Lincoln	J-14	100	WKFI		

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

State	City	Station	Power	Class
ILLINOIS	Carhage	J-18	10000	WCAZ
	Chicago	I-20	10000	KFKX
	Chicago	I-20	10000	KTVW
	Chicago	I-20	10000	WBBM
	Chicago	I-20	10000	WCFL
	Chicago	I-20	10000	WCOR
	Chicago	I-20	10000	WGN
	Chicago	I-20	10000	WLS
	Chicago	I-20	10000	WMAQ
	Chicago	I-20	10000	WILL
INDIANA	Anderson	J-21	100	WKBY
	Connersville	K-21	100	WTRC
	Elkhart	I-21 bc	100	WGFB
	Evansville	L-20	100	WGL
	Fort Wayne	J-21	10000	WOVO
	Gary	I-20	10000	WKS
	Hammond	I-20 bc	100	WVAE
	Indianapolis	J-21	1000	WEBM
	Lafayette	J-20	500	WBA
	Muncie	I-20	50	WFLM
IOWA	Ames	I-17	5000	WOI
	Boone	I-17	100	KFGO
	Cedar Rapids	I-18	100	KWCR
	Council Bluffs	J-16	1000	KOIL
	Davenport	I-18	50000	WOC
	Decorah	H-18	100	KGCA
	Des Moines	I-17	100	KWLC
	Des Moines	I-17	100	KSO
	Lowell	I-18	50000	WHO
	Lowell	I-18	50000	WSUI
KANSAS	Abilene	K-15 bl	1070	WCAZ
	Coffeyville	M-15 tr	1070	KFKX
	Dodge City	L-13	1070	KTVW
	Dodge City	L-13	1070	WBBM
	Dodge City	L-13	1070	WCFL
	Dodge City	L-13	1070	WCRW
	Dodge City	L-13	1070	WEDC
	Dodge City	L-13	1070	WENR
	Dodge City	L-13	1070	WGS
	Dodge City	L-13	1070	WJLD
KENTUCKY	Abilene	K-15 bl	1070	WCAZ
	Coffeyville	M-15 tr	1070	KFKX
	Dodge City	L-13	1070	KTVW
	Dodge City	L-13	1070	WBBM
	Dodge City	L-13	1070	WCFL
	Dodge City	L-13	1070	WCRW
	Dodge City	L-13	1070	WEDC
	Dodge City	L-13	1070	WENR
	Dodge City	L-13	1070	WGS
	Dodge City	L-13	1070	WJLD
LOUISIANA	Monroe	P-18	100	WKBI
	New Orleans	R-19	100	WBO
	New Orleans	R-19	100	WCLT
	New Orleans	R-19	100	WKBB
	New Orleans	R-19	100	WJBC
	New Orleans	R-19	100	WMBD
	New Orleans	R-19	100	WTAD
	New Orleans	R-19	100	KFLV
	New Orleans	R-19	100	WHBF
	New Orleans	R-19	100	WTAX
MARYLAND	Presque Isle	D-29 lc	1210	WHBU
	Baltimore	J-26	10000	WBAL
	Baltimore	J-26	10000	WCAO
	Baltimore	J-26	10000	WCBA
	Baltimore	J-26	10000	WBFB
	Baltimore	J-26	10000	WTBO
	Baltimore	J-26	10000	WJFJ
	Baltimore	J-26	10000	WAGM
	Baltimore	J-26	10000	WLEC
	Baltimore	J-26	10000	WCSH
MAINE	Augusta	F-28	100	WRDO
	Augusta	F-28	100	WABI
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
	Augusta	F-28	100	WVAB
MASSACHUSETTS	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
	Boston	G-28	500	WBOS
MICHIGAN	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
	Fall River	H-28	250	WSAR
NEW YORK	Albany	K-15 bl	5000	KRFB
	Coffeyville	M-15 tr	1070	KFKX
	Dodge City	L-13	1070	KTVW
	Dodge City	L-13	1070	WBBM
	Dodge City	L-13	1070	WCFL
	Dodge City	L-13	1070	WCRW
	Dodge City	L-13	1070	WEDC
	Dodge City	L-13	1070	WENR
	Dodge City	L-13	1070	WGS
	Dodge City	L-13	1070	WJLD

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

State	City	Key	State	City	Key
ALABAMA	Anniston O-21 tr	Warts	ALABAMA	WAMC	1420
	Birmingham O-21	Warts		WAPL N	1140
				WBRG C	930
	Gadsden O-21	Warts		WKBC C	1310
				WJBY C	1210
	Huntsville N-21 c	Warts		WBHS C	1200
	Mobile Q-20	Warts		WODX C	1410
	Montgomery P-21	Warts		WSFA C	1410
	Troy P-21 rc	Warts		WHEI C	1210
ALASKA		Warts			
	Anchorage	Warts		KFOD	250
	Juneau	Warts		KIFH	1510
	Ketchikan	Warts		KGBU	900
ARIZONA		Warts			
	Jerome M-6	Warts		KCRJ	1310
	Phoenix N-6	Warts		KOY C	1390
				KTAR N	620
	Prescott M-6	Warts		KFJM	1500
	Tucson O-7	Warts		KGAR	1370
	Yuma O-5 fl	Warts		KUMA	1420
ARKANSAS		Warts			
	Bayteville M-19	Warts		KLCN	1290
	Fort Smith N-16	Warts		KVOA	1260
	Hot Springs N-17	Warts		KRPW	1210
	Little Rock N-17	Warts		KTHS N	1040
				KARK	990
				KGHI	100
				KJMA	1000
	Paragould M-18	Warts		KRTM C	1200
	Tearkana O-17 bl	Warts		KCMC	1420
CALIFORNIA		Warts			
	Bakersfield L-2 br	Warts		KERN C	1200
	Berkeley J-2	Warts		KRR	1370
	Berkeley Hills M-3 bl	Warts		KMPG	500
	Centurk M-3	Warts		KELW	780
	El Centro N-4	Warts		KXO	500
	Eureka H-1 tc	Warts		KIEM	1210
	Fresno K-2	Warts		KJM	500
	Hollywood M-3	Warts		KMTR	100
				KNX	500
	Long Beach M-3	Warts		KFOX C	1000
				KGER	1360
	Los Angeles M-3	Warts		KECA N	1430
				KFAC	1300
				KFI	640
				KFSG	1120
				KFD	250
				KFWB	1000
				KGFJ	100
				KHJ	1000
				KRKD	500
				KRTM	1120
				KLS	250
				KLX	1000
				KROW	500
				KRPC	1210
				KFBK	1310
				KFXM	1210
				KFSD	600
				KGB	1330
				KKFC	610
				KFWI	930
				KGGC	1420
				KGO	790
				KJBS	1070
				KPO	5000
				KYVA	1000
					1230
ALABAMA	San Jose J-1	Warts	ALABAMA	San Jose J-1	Warts
	Santa Barbara M-2	Warts		KREG	1500
	Stockton J-7	Warts		KDB	1100
				KGM	1100
				KWG C	1200
				KVOR C	1270
				KFBL	500
				KFXE	920
				KLTZ	1000
				KOA	830
				KPOF	880
				KFJA	1200
				KFXJ	1200
				KIDW	1420
				KGFH	1320
				KGIW	1420
				KGEK	1200
CONNECTICUT		Warts	CONNECTICUT		Warts
	Bridgeport H-27	Warts		WDRG C	1330
	Hartford H-27	Warts		WTC	1060
				WCAC	600
	Storrs H-28	Warts		WDEL	1120
DELAWARE		Warts	DELAWARE		Warts
	Wilmington J-26	Warts		WILM	1420
DISTRICT OF COLUMBIA		Warts	DISTRICT OF COLUMBIA		Warts
	Washington J-26	Warts		WJVA	1000
				WRC	500
				WOL	1310
FLORIDA		Warts	FLORIDA		Warts
	Clearwater R-24	Warts		WFLA	1000
	Clearwater R-24 bc	Warts		WRTI	1450
	Athens P-22 c	Warts		WGST	890
	Atlanta O-22	Warts		WJTL	1370
				WSB	5000
				WRDW	1500
				WRBL	1200
				WKBU	1500
				WMAZ	180
				WEDV	1500
				WTOC	1260
				WQDX	1210
HAWAII		Warts	HAWAII		Warts
	Honolulu	Warts		KGMB C	1320
				KGU N	750
IDAHO		Warts	IDAHO		Warts
	Boise G-5	Warts		KIDO	1000
	Boise G-5	Warts		KIDP	1320
	Idaho Falls G-7	Warts		KFXD	1200
	Nampa G-5	Warts		KSEL	250
	Pocatello H-7	Warts		KGKX	1420
	Sand Point E-5 rc	Warts		KTFI	1240
	Twin Falls H-6	Warts			

Pacific	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
Mountain	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
Central	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
Eastern	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
Atlantic	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	

TIME CONVERSION TABLE

CHNS	1050	Haltax, N. S.	CKLW	540	Windsor-London, Ont.
CHNC*	840	Toronto, Ont.	CKIC*	840	Red Deer, Alta.
CHMT	890	Hamilton, Ont.	CKIG	1010	Wolville, N. S.
CHMA	580	Edmonton, Alta.	CKGW	840	Toronto, Ont.
CHLS*	730	Vanouver, B. C.	CKFG	1410	Vanouver, B. C.
CHLP	1120	Montreal, Que.	CKGV	1310	Quebec, Que.
CHSG	1120	Summerside, P. E. I.	CKGR	645	Waterloo, Ont.
CHCK	1310	Charlottetown, P. E. I.	CKGO	1010	Ottawa, Ont.
CHCH*	1200	Kingston, Ont.	CKGT	580	Toronto, Ont.
CFRC	915	Kingston, Ont.	CKGK	1010	Regina, Sask.
CFRB	690	Toronto, Ont.	CKGI*	645	Quebec, Que.
CFQC	890	Saskatoon, Sask.	CKGD	1010	Vanouver, B. C.
CFNB	1210	Fredericton, N. B.	CKAG	730	Montreal, Que.
CFJC	930	Montreal, Que.	CKRM	880	Planning, Sask.
CFJG	1120	Kamloops, B. C.	CKOR	1210	Vanouver, B. C.
CFJY	630	Charlottetown, P. E. I.	CKOC	580	Lehrbridge, Alta.
CFCT	1430	Victoria, B. C.	CKOY	690	Yorkton, Sask.
CFCO	1210	Chatham, Ont.	CKGJ	690	Calgary, Alta.
CFCH	1030	North Bay, Ont.	CKGQ	880	Sydney, N. S.
CFCE	930	Montreal, Que.	CKJG	730	Edmonton, Alta.
CFCA	1120	Toronto, Ont.	CHYC*	730	Montreal, Que.
CFBC	1030	St. John, N. B.	CHWC	1010	Regina, Sask.
CFAB	690	Calgary, Alta.	CHRC	645	Quebec, Que.

*Not in official list; evidently to be deleted.

REVISED INDEX OF CANADIAN STATIONS BY CALL LETTERS

1470 kcs.	5000	Spokane, Wash.	KGA
	50	Azul, Arg.	L9
	200	Gavle, Sweden.	SCE
	5000	Nashville, Tenn.	WLAC
1480 kcs.	15	Havana, Cuba.	CMRK
	40	Havana, Cuba.	CMBR
	5000	Oklahoma City, Okla.	ROMA
	250	Kristianhamn, Sweden.	SCM
	5000	Bullio, N. Y.	WRW
	50	Albury, Australia.	ZAY
1490 kcs.	50	Montevideo, Uruguay.	CX48
	250	Jonkoping, Sweden.	SCH
	5000	Covington, Ky.	WCKY
1500 kcs.	100	Santa Barbara, Calif.	KDB
	100	Corpus Christi, Texas.	KGFI
	100	Moorhead, Minn.	KGFK

INDEX BY FREQUENCIES AND DIAL NUMBERS

1000	GRMZ	Grant City, Mo.
100	KGB	Tyler, Texas.
100	KGY	Scottsbluff, Neb.
100	KNOW	Austin, Texas.
100	KRM	Prescott, Ariz.
100	KPD	Wenatchee, Wash.
100	KRBG	Santa Ana, Calif.
100	KXD	El Centro, Calif.
100	WFD	Rome, Ga.
100	WFB	Kosciusko, Miss.
100	WKBV	Connersville, Ind.
100	WKBZ	Ladington, Mich.
100	WKET	Lagrange, Ga.
100	WLOB	Boston, Mass.
100	WMBQ	Brooklyn, N. Y.
100	WMTL	Brooklyn, N. Y.
100	WMPG	Lapeer, Mich.
100	WNB	Binghamton, N. Y.
100	WOF	Bristol, Tenn.
100	WPEN	Philadelphia, Pa.
100	WRDW	Augusta, Ga.
100	WSB	Rhland, Va.
100	WVRL	Woodside, N. Y.
100	WWSW	Pittsburgh, Pa.
100	XEFZ	Coyocuan, D. F.
100	ZAK	Melbourne, Australia.
250		Bartles, France.
1000		Riga, Latvia.

INDEX BY FREQUENCIES AND DIAL NUMBERS

1380 kcs. 217.3 m.

CMJG	150	1382	Camaguey, Cuba.
KOH	150		Kemo, Nev.
KQY	500		Pittsburg, Pa.
LDG	50		Mar del Plata, Arg.
ONCEG	200	1388	Ottomoni, Belgium.
ONBXC	100	1388	Charlotten, Belgium.
SCB	250	1382	Karlsbad, Sweden.
WRBH	1000		LaCrosse, Wis.
WSMK	200		Dayton, Ohio.
49H	125		Torreon, Coahu.
KFTB	600		Brisbane, Australia.
1382	500		Komberg, Germany.
1388	1000		Rancagua, Chile.

1390 kcs. 215.7 m.

CMBD	40	1395	Havana, Cuba.
HII	15	1395	San Pedro, D. R.
KLTA	1000		Little Rock, Ark.
KOY	1500		Phoenix, Ariz.
LT10	100		Santa Fe, Arg.
SOE	200	1391	Halmstad, Sweden.
WHK	1000		Cleveland, Ohio.
ZGN	50		Goulburn, Australia.

1400 kcs. 214.2 m.

CMCH	50	1405	Havana, Cuba.
CMCM	15	1405	Havana, Cuba.
KLO	500		Ogden, Utah.
KOCW	250		Chikaskas, Okla.
WRD	500		Brooklyn, N. Y.
WRBA	500		Lafayette, Ind.
WRX	500		Brooklyn, N. Y.
WRFE	500		Brooklyn, N. Y.
WLTH	500		Indianapolis, Ind.
ZLH	20		Hastings, N. Z.
3GT	50		Geelong, Australia.
1000			Aberdeen, G. B.

1410 kcs. 212.6 m.

CKRC	50		Vancouver, B. C.
CKMO	100		Vancouver, B. C.
CX44	20		Montevideo, Uruguay.
KFTV	500		Hookford, Ill.
KGRS	1000		Amarillo, Texas.
WAAB	500		Boston, Mass.
WBGM	500		Bay City, Mich.
WDAG	1000		Amarillo, Texas.
WHBL	250		Sheboygan, Wis.
WHIS	250		Bluefield, W. Va.
WODX	500		Mobile, Ala.
WRBX	250		Roanoke, Va.
WSPA	500		Montgomery, Ala.
ZKO	200	1415	Newcastle, Australia.

1420 kcs. 211.1 m.

HAF-2	3000	1428	Paysandu, Uruguay.
KABC	100		San Antonio, Texas.
KRBS	100		Portland, Ore.
KCMC	100		Texarkana, Ark. Wis.
KFTZ	100		Fond du Lac, Wis.
KGFC	100		Shawnee, Okla.
KGCC	100		San Francisco, Calif.
KGIV	100		Trinidad, Colo.
KGIX	100		Las Vegas, Nev.
KGKX	100		Sand Point, Idaho.
KICK	100		Red Oak, Iowa.
KIDW	100		Lamar, Colo.
KORE	100		Buena, Ore.
KUMA	100		Yuma, Ariz.
KWCR	100		Cedar Rapids, Iowa.
KXL	100		Portland, Ore.

1430 kcs. 209.7 m.

O4M	12	1428	Lima, Peru.
WAGM	100		Praque Isle, Maine.
WANM	100		Auniston, Ala.
WAZL	100		Hazleton, Pa.
WEHS	100		Ciervo, Ill.
WELL	50		Battle Creek, Mich.
WENC	100		American, Ga.
WHDL	100		Tipper Lake, N. Y.
WHFC	100		Ciervo, Ill.
WILM	100		Whittington, Del.
WBO	100		New Orleans, La.
WMS	100		Lironwood, Mich.
WKBI	100		Ciervo, Ill.
WLPF	100		Kansas City, Kans.
WMAS	100		Springfield, Mass.
WMBH	100		Detroit, Mich.
WFAD	100		Dolph, Mo.
WSPA	100		Spartanburg, S. Car.
WTBO	100		Cumberland, Md.
IZB	20		Auckland, N. Z.
IZS	5		Auckland, N. Z.
3AW	300	1425	Melbourne, Australia.
1000			Newcastle, G. B.

1440 kcs. 208.2 m.

GMBL	20	1445	Havana, Cuba.
CSHS	1000	1448	Porto, Portugal.
KDPN	500		Casper, Wyo.
KIS	250		Oakland, Calif.
KXXZ	250		Houston, Texas.
ON4FC	100	1448	Brussels, Belgium.
TJFS	7.5	1441	Cartago, C. R.
WBIG	500		Greensboro, N. Car.
WBA	250		Allenstown, Pa.
WMBD	500		Peoria, Ill.
WAN	250		Allenstown, Pa.
WTAD	500		Quincy, Ill.

1450 kcs. 206.8 m.

CX46	100		Montevideo, Uruguay.
KTBS	1000		Shreveport, La.
ON4EB	100	1455	Veriers, Belgium.
ON4ER	50	1455	Antwerp, Belgium.
ON4FG	25	1455	Danpremy, Belgium.
SCA	150		Boras, Sweden.
TJEP	7.5		San Jose, C. R.
WGAR	500		Cleveland, Ohio.
WHOM	250		Jersey City, N. J.
WBAR	250		Fall River, Mass.
WTPI	500		Athens, Ga.
XEAB	7.5		Nuevo Laredo, Tams.
3ZM	100		Christchurch, N. Z.

1460 kcs. 205.4 m.

OW46	20		Tuarembu, Uruguay.
KSTP	2500		St. Paul, Minn.
SCW	200		Ornskoldsvik, Sweden.
WJST	1000		Washington, D. C.
ZPE	150	1465	Asunton, Paraguay.
7UV	200	1465	Uverstone, Australia.

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1350 kc. 222.1 m. [] [] []

1360 kc. 220.4 m. [] [] []
 CMCR 1365 Havana, Cuba. 150
 CMPJ 7.5 Moron, Cuba. 100
 KGER 1000 Long Beach, Calif. 50
 KGIR 500 Bufile, Mont. 50
 PRAJ 2000 Rio de Janeiro, Brazil. 100
 WOSC 500 Charleston, S. Car. 100
 WFBJ 1000 Syracuse, Ill. 100
 WGES 500 Chicago, Ill. 100
 WJES 1000 Gary, Ind. 100
 WQBC 500 Vicksburg, Miss. 100
 22ZK 50 Nelson, N. Z. 50
 1364 1500 Bezers, France. 100
 1364 250 St. Etienne, France. 100

1370 kc. 218.8 m. [] [] []
 CMGE 1375 Cardenas, Cuba. 50
 CX42 500 Montevideo, Uruguay. 100
 HRB 2300 Tegucigalpa, Hond. 100
 KRCR 100 Ind. Okla. 100
 KFBJ 50 Everett, Wash. 50
 KFCM 100 Grand Forks, N. Dak. 100
 KFJZ 100 Fort Worth, Texas. 100
 KFTX 100 Galveston, Texas. 100
 KGAR 100 Tucson, Ariz. 100
 KGDV 100 Mitchell, S. Dak. 100
 KGFG 100 Oklahoma City, Okla. 100
 KGFL 100 Roswell, N. Mex. 100
 KGTK 100 San Angelo, Texas. 100
 KIGA 100 Clovis, N. Mex. 100
 KMAC 100 San Antonio, Texas. 100
 KONO 100 San Antonio, Texas. 100
 KOOS 100 Marshfield, Ore. 100
 KREI 100 Berkeley, Calif. 100
 KSO 100 Des Moines, Iowa. 100
 KUI 100 Walla Walla, Wash. 100
 KVL 100 Seattle, Wash. 100
 KWKC 100 Kansas City, Mo. 100
 ON4GT 100 Brussels, Belgium. 100
 WBTM 100 Danville, Va. 100
 WCBM 100 Baltimore, Md. 100
 WDAS 100 Philadelphia, Pa. 100
 WGL 100 Fort Wayne, Ind. 100
 WGLC 50 Hudson Falls, N. Y. 50
 WHBD 100 Mount Crabb, Ohio. 100
 WHBF 100 Memphis, Tenn. 100
 WHDF 100 Calumet, Mich. 100
 WJBM 100 Detroit, Mich. 100
 WJEG 100 Williamsport, Pa. 100
 WJTL 100 Atlanta, Ga. 100
 WLEY 100 Lexington, Mass. 100
 WLVJ 100 Pysandun, Uruguay. 30
 WMBR 100 Tampa, Fla. 100
 WFBF 100 Hatfieldburg, Miss. 100
 WQDM 100 St. Albans, Vt. 100
 WRBK 100 Williamsport, Pa. 100
 WRAM 100 Williamsburg, N. Car. 100
 WRDO 100 Racine, Wis. 100
 WRJN 100 Buffalo, N. Y. 100
 WSAS 50 Buffalo, N. Y. 50
 WSPS 100 Hartford, Conn. 100
 XEFP 100 Plymouth, G. B. 200
 500 Salzburg, Austria. 100

1320 kc. 227.1 m. [] [] []
 CMCY 1000 Havana, Cuba. 125
 KGHF 250 Pueblo, Colo. 250
 KGBM 250 Honolulu, Hawaii. 250
 KIDJ 250 Idaho Falls, Idaho. 250
 KSCJ 250 Guatemala City, Gua. 250
 WADC 1000 Akron, Ohio. 800
 WMSB 500 New Orleans, La. 500
 WJZ 250 Auckland, N. Z. 250
 2MO 10000 Reamp, France. 128
 Gmundl, Australia. 128
 1325 1000 Flensburg, Germany. 500
 1319 300 Adelaide, Australia. 300
 XEI 150 Morlea, Mich. 150
 XEFL 100 Monterrey, N. L. 100
 WTRC 100 Elkhart, Ind. 100
 WTSJ 100 Jackson, Tenn. 100
 WTEL 100 Philadelphia, Pa. 100
 WSAJ 100 Winston-Salem, N. Car. 100
 WTRW 100 Knoxville, Tenn. 100
 WOL 100 Reading, Pa. 100
 WNBH 100 Washington, D. C. 100
 WMBO 100 New Bedford, Mass. 100
 WLBG 100 Auburn, N. Y. 100
 WKBG 100 Muncie, Ind. 50
 WKBW 100 Birmingham, Ala. 100
 WKBV 100 John, Ill. 100
 WKAV 100 Leonora, N. H. 100
 WJAC 100 Johnson, Pa. 100
 WIAS 100 Ottumwa, Iowa. 100
 WHAT 100 Philadelphia, Pa. 100
 WGH 100 Newport News, Va. 100
 WGTJ 100 Lancaster, Pa. 100
 WFDJ 100 Flint, Mich. 100
 WFBG 100 Altoma, Pa. 100
 WXTL 50 Royal Oak, Mich. 50
 WERR 100 Buffalo, N. Y. 100
 WDAO 100 El Paso, Texas. 100
 WJCT 100 John, Ill. 100
 WBRW 100 Wilkes-Barre, Pa. 100
 WBOB 100 Terre Haute, Ind. 100
 WBOJ 100 Marquette, Mich. 100
 WMAJ 100 Laurel, Miss. 100
 WBO 100 Umea, Sweden. 200
 SCB 200 Umea, Sweden. 200
 KXRO 100 Aberdeen, Wash. 100

1330 kc. 225.4 m. [] [] []
 CMJI 45 Ciego de Avila, Cuba. 1335
 CX40 100 Montevideo, Uruguay. 100
 KMB 250 San Diego, Calif. 250
 KMO 250 Tacoma, Wash. 250
 KSCJ 1000 Sioux City, Iowa. 1333
 LTR 75 St. Joseph, C. R. 75
 WDRG 500 Hartford, Conn. 500
 WSAI 500 Cincinnati, Ohio. 500
 WTAJ 1000 Jean Clare, Wis. 15
 2ZIN 15 Hastings, N. Z. 250
 4RO 250 Rockhampton, Australia. 1337
 6CK 1500 Cork, Ireland. 1337

1340 kc. 223.7 m. [] [] []
 CW40 30 Pysandun, Uruguay. 30
 KFPY 1000 Spokane, Wash. 1000
 KGDY 250 Huron, S. Dak. 250
 KNDY 250 Dodge City, Kans. 250
 10000 1444 Luxembourg, Lux. 1444
 SCG 200 Helsingborg, Sweden. 200
 WCOA 500 Pensacola, Fla. 500
 WLEF 250 Portland, Maine. 250
 WSPD 1000 Toledo, Ohio. 1000
 2XN 50 Lismore, Australia. 50
 4ZR 100 Otago, N. Z. 100
 1345 100 Santiago, Chile. 100

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1280 kcs.	234.2 m.	1280	KFRB	Great Falls, Mont.	1000
		200	LUT	Puna Alta, Arg.	200
		500	WACM	Camden, N. J.	500
		500	WACP	Asbury Park, N. J.	500
		1000	WDOD	Charlottesville, Tenn.	1000
		500	WIBA	Dallas, Texas.	500
		500	WRRJ	Trenton, N. J.	500
		50	3TR	Sale, Australia.	50
		2000	4GC	Otago, N. Z.	2000
		1284		Sao Paulo, Brazil.	1284
		1000		Loz, Poland.	1283
1290 kcs.	232.4 m.	20	GMLH	Cienfuegos, Cuba.	20
		100	CX38	Montevideo, Uruguay.	100
		1000	KDYL	Salt Lake City, Utah.	1000
		500	KFDL	Galveston, Texas.	500
		100	KTGN	Blytheville, Ark.	100
		1000	KRTA	San Antonio, Texas.	1000
		1000	WEBC	Superior, Wis.	1000
		1000	WJAS	Pittsburgh, Pa.	1000
		50	WNBS	Saranac Lake, N. Y.	50
		100	XEAC	San Luis Potosi, S. L. P.	100
		500	XFB	Jalapa, Ver.	500
		7.5	2ZB	Napier, N. Z.	7.5
		65	2ZH	Napier, N. Z.	65
		200	4BK	Brisbane, Australia.	200
		250		Kiel, Germany.	250
		1292		Noorkoping, Sweden.	1292
1300 kcs.	230.6 m.	20	CMKJ	Guantanamo, Cuba.	20
		50	CE38	Salto, Uruguay.	50
		1000	KALE	Los Angeles, Calif.	1000
		1000	KFAC	Portland, Ore.	1000
		1000	KTRJ	Wichita, Kans.	1000
		500	SCB	Portland, Ore.	500
		1250	SCB	Malamo, Sweden.	1250
		1301	SCD	Trollhattan, Sweden.	1301
		250	SCD	Uddevalla, Sweden.	250
		30	SCR	St. John's, Nfld.	30
		1000	WBRB	Brooklyn, N. Y.	1000
		500	WEVD	New York, N. Y.	500
		1000	WEAB	New York, N. Y.	1000
		500	WHAZ	Troy, N. Y.	500
		1000	WLOD	Miami, Fla.	1000
		1000	WOD	Kansas City, Mo.	1000
		50	3BA	Baltimore, Australia.	50
		45	3ZE	Greyhound, N. Z.	45
		80	3ZR	Greyhound, N. Z.	80
		250		Helsingborg, Sweden.	250
		1304		Olivera, Portugal.	1304
		20		Santiago, Chile.	1305
1310 kcs.	228.9 m.	100	CHCK	Charlottesville, P. E. I.	100
		100	CXCV	Quebec, Que.	100
		100	KCRJ	Jerome, Ariz.	100
		100	KFBK	Sacramento, Calif.	100
		100	KFGQ	Boone, Iowa.	100
		100	KFPJ	Duolin, Texas.	100
		15	KFKM	Greenville, Texas.	15
		100	KFXR	Oklahoma City, Okla.	100
		100	KFYD	Lubbock, Texas.	100
		100	KGBX	Springfield, Mo.	100
		100	KGCX	Wolf Point, Mont.	100
		100	KGEZ	Kalispell, Mont.	100
		100	KGFV	Keatney, Neb.	100
		100	KIHF	Juneau, Alaska.	100
		100	KIT	Yakima, Wash.	100
		100	KJED	Medford, Ore.	100
		100	KRMD	Shreveport, La.	100
		100	KRTSM	El Paso, Texas.	100
1270 kcs.	236.1 m.	150	GMBG	Cuba.	150
		50	CTJBP	Lisbon, Portugal.	50
		1275		Havana, Cuba.	1275
		100	KGA	Decorah, Iowa.	100
		1000	KOL	Seattle, Wash.	1000
		1000	KYON	Colorado Springs, Colo.	1000
		100	KWLC	Decorah, Iowa.	100
		500	LKK	Kristianssand, Norway.	500
		3500	L89	Buenos Aires, Arg.	3500
		500	TVA	Tunis, Tunisia.	500
		500	WASH	Grand Rapids, Mich.	500
		500	WFBP	Baltimore, Md.	500
		1000	WJDX	Jackson, Miss.	1000
		500	WOOD	Grand Rapids, Mich.	500
		150	ZP4	Asuncion, Paraguay.	150
		1000	ZSM	Sydney, Australia.	1000
1260 kcs.	238.0 m.	30	CW36	Salto, Uruguay.	30
		1000	KOLI	Condon, N. Y.	1000
		500	KRGV	Hartington, Texas.	500
		1000	KUOA	Fort Smith, Ark.	1000
		500	KVOA	Tucson, Ariz.	500
		500	KWVG	Brownsville, Texas.	500
		200	SCV	Orpèd, Sweden.	200
		500	WLBW	Eric, Pa.	500
		500	WNBX	Springfield, Vt.	500
		500	WTOG	Savannah, Ga.	500
		10	Z1M	Auckland, N. Z.	10
		50	3WR	Wangeratta, Australia.	50
		3000		Bordeaux, France.	3000
		1265		Nimes, France.	1265
		20		Santiago, Chile.	1265
1250 kcs.	239.9 m.	250	CX36	Montevideo, Uruguay.	250
		1000	KFMX	Northfield, Minn.	1000
		1000	KFOX	Long Beach, Calif.	1000
		1000	WAAM	Newark, N. J.	1000
		1000	WGAL	Northfield, Minn.	1000
		1000	WDSU	New Orleans, La.	1000
		250	WGCP	Newark, N. J.	250
		1000	WLB	St. Paul, Minn.	1000
		1000	WODA	Paterson, N. J.	1000
		1000	WRHM	Minneapolis, Minn.	1000
		500	XEFA	Mexico City, D. R.	500
		1500		Betzers, France.	1500
		500		Nimes, France.	500
		2000		Nurnberg, Germany.	2000
1240 kcs.	241.8 m.	20	CMAB	Pinar del Rio, Cuba.	20
		50	KGCU	Mandan, N. Dak.	50
		250	KIPM	Minot, N. Dak.	250
		1000	KTAT	Fort Worth, Texas.	1000
		500	KTAT	Twin Falls, Idaho.	500
		1800	PRP	Slavanger, Norway.	1800
		1247	OPOT	Oporto, Portugal.	1247
		600	SBE	Boden, Sweden.	600
		1000	WACQ	Asco, Texas.	1000
		1000	WEAQ	San Juan, P. R.	1000
		1000	XEYV	Detroit, Mich.	1000
		70	XEYV	Lampico, Iams.	70
		2000	ZNC	Nevacisile, Australia.	2000
		50		Palparaiso, Chile.	50
		1249		Valparaiso, Chile.	1249
1240 kcs.	241.8 m.	10		Rancagua, Chile.	1239
		1000		Belgas, Belgium.	1236
		1238		Belgas, Belgium.	1238
		100	2YB	New Plymouth, N. Z.	100
		500	WFSB	South Bend, Ind.	500
		1000	WFAC	Boston, Mass.	1000
		1000	WFBM	Indianapolis, Ind.	1000
		2000	L88	Buenos Aires, Arg.	2000
		1000	KYA	San Francisco, Calif.	1000

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1190 kcs. 252.0 m.

EAJ15	1000	1193	Barcelona, Spain.
EAJ18	1000	1193	Almeria, Spain.
LS2	5500	.....	Buenos Aires, Arg.
VONF	100	1195	St. John's, Nfld.
WOAI	50000	.....	San Antonio, Texas.
WSAZ	500	.....	Huntington, W. Va.
1ZQ	25	.....	Auckland, N. Z.
4MK	100	.....	Mackay, Australia.
.....	250	1193	Trollhattan, Sweden.

1200 kcs. 249.9 m.

CHCH	100	.....	Montreal, Que.
CKOV	100	.....	Kelowna, B. C.
CMGB	30	1205	Matanzas, Cuba.
KBTM	100	.....	Paragould, Ark.
KERN	100	.....	Bakersfield, Calif.
KFJB	100	.....	Marshalltown, Iowa.
KFWF	100	.....	St. Louis, Mo.
KFXD	100	.....	Nampa, Idaho.
KFXJ	100	.....	Grand Junction, Colo.
KGDE	100	.....	Fergus Falls, Minn.
KGEK	100	.....	Yuma, Colo.
KGFJ	100	.....	Los Angeles, Calif.
KGHI	100	.....	Little Rock, Ark.
KGVO	100	.....	Missoula, Mont.
KMLB	100	.....	Monroe, La.
KVOS	100	.....	Bellingham, Wash.
KWG	100	.....	Stockton, Calif.
SCI	200	1202	Kalmar, Sweden.
TFA	1200	.....	Reykjavik, Iceland.
WABI	100	.....	Bangor, Maine.
WBBX	100	.....	New Orleans, La.
WBBZ	100	.....	Ponca City, Okla.
WBHS	100	.....	Huntsville, Ala.
WCAT	100	.....	Rapid City, S. Dak.
WCAX	100	.....	Burlington, Vt.
WCLO	100	.....	Janesville, Wis.
WCOD	100	.....	Harrisburg, Pa.
WFAM	100	.....	South Bend, Ind.
WFBC	100	.....	Greenville, S. Car.
WFBE	100	.....	Cincinnati, Ohio.
WBHC	10	.....	Canton, Ohio.
WBHY	100	.....	Green Bay, Wis.
WIBX	100	.....	Utica, N. Y.
WIL	100	.....	St. Louis, Mo.
WJBC	100	.....	LaSalle, Ill.
WJBL	100	.....	Decatur, Ill.
WJBW	100	.....	New Orleans, La.
WKJC	100	.....	Lancaster, Pa.
WLAP	100	.....	Louisville, Ky.
WNBO	100	.....	Washington, Pa.
WNBW	10	.....	Carbondale, Pa.
WORC	100	.....	Worcester, Mass.
WPHR	100	.....	Petersburg, Va.
WRBL	100	.....	Columbus, Ga.
WWAE	100	.....	Hammond, Ind.
YV3BC	50	.....	Caracas, Venezuela.
3ZC	250	.....	Christchurch, N. Z.
5KA	300	.....	Adelaide, Australia.
10-AB	25	.....	Moose Jaw, Sask.
10-AK	15	.....	Stratford, Ont.
10-BI	25	.....	Prince Albert, Sask.
10-BP	25	1199	Wingham, Ont.
10-BQ	15	.....	Brantford, Ont.
10-BU	15	.....	Canora, Sask.
.....	800	1205	Nice, France.
.....	500	.....	Toulon, France.

1210 kcs. 247.8 m.

CFCO	100	.....	Chatham, Ont.
CFNB	100	.....	Fredericton, N. B.
CJOR	500	.....	Vancouver, B. C.
6KMC	100	.....	Cobalt, Ont.
CX34	500	.....	Montivideo, Uruguay.
HTR	10000	11	Trieste, Italy.
KASA	100	.....	Elk City, Okla.
KDLR	100	.....	Devils Lake, N. D.
KFJI	100	.....	Klamath Falls, Ore.

KFOR	100	.....	Lincoln, Neb.
KFPW	100	.....	Fort Smith, Ark.
KFVS	100	.....	Cape Girardeau, Mo.
KFXM	100	.....	San Bernardino, Calif.
KGCR	100	.....	Watertown, S. Dak.
KGY	100	.....	Olympia, Wash.
KIEM	100	.....	Eureka, Calif.
KPPC	50	.....	Pasadena, Calif.
KWEA	100	.....	Shreveport, La.
ON4FO	100	1219	Brussels, Belgium
ON4RG	400	1219	Ghent, Belgium.
ON4RW	200	1219	Liege, Belgium.
WALR	100	.....	Zanesville, Ohio.
WBAX	100	.....	Wilkes-Barre, Pa.
WBBL	100	.....	Richmond, Va.
WCBS	100	.....	Springfield, Ill.
WCRW	100	.....	Chicago, Ill.
WEBQ	100	.....	Harrisburg, Ill.
WEBC	100	.....	Chicago, Ill.
WFAS	100	.....	White Plains, N. Y.
WGBB	100	.....	Freeport, N. Y.
WGCM	100	.....	Gulfport, Miss.
WGNV	50	.....	Chester, N. Y.
WHBF	100	.....	Rock Island, Ill.
WHBU	100	.....	Anderson, Ind.
WHET	100	.....	Troy, Ala.
WIBU	100	.....	Poynette, Wis.
WJBI	100	.....	Red Bank, N. J.
WJBU	100	.....	Lewisburg, Pa.
WJBY	100	.....	Gadsden, Ala.
WJEJ	100	.....	Hagerstown, Md.
WJW	100	.....	Akron, Ohio.
WKFI	100	.....	Greenville, Miss.
WMBG	100	.....	Richmond, Va.
WOCL	50	.....	Jamestown, N. Y.
WOMT	100	.....	Manitowoc, Wis.
WPAW	100	.....	Providence, R. I.
WQDX	100	.....	Thomasville, Ga.
WSBC	100	.....	Chicago, Ill.
WSEN	100	.....	Columbus, Ohio.
WSIX	100	.....	Springfield, Tenn.
WSOC	100	.....	Gastonia, N. C.
WTAX	100	.....	Springfield, Ill.
XEX	500	.....	Mexico City, D. F.
2CH	1000	.....	Sydney, Australia.
2ZE	10	.....	Eketahuna, N. Z.
.....	100	.....	Hull, Que.

1220 kcs. 245.8 m.

CMHK	15	1225	Cruces, Cuba.
CW34	50	.....	Salto, Uruguay.
KFKU	500	.....	Lawrence, Kans.
KTW	1000	.....	Seattle, Wash.
KWSC	1000	.....	Pullman, Wash.
OFG	600	.....	Abo, Finland.
SCB	200	.....	Eskilstuna, Sweden.
SCL	200	.....	Kiruna, Sweden.
SCP	400	.....	Saffle, Sweden.
SCU	300	.....	Varberg, Sweden.
WACD	500	.....	Canton, N. Y.
WCAE	1000	.....	Pittsburgh, Pa.
WDAE	1000	.....	Tampa, Fla.
WREN	1000	.....	Lawrence, Kans.
4ZL	100	.....	Dunedin, N. Z.
6KG	100	.....	Kalgoorlie, Australia.
.....	500	1229	Basle, Switz.
.....	500	.....	Berne, Switz.
.....	400	.....	Bloemendaal, Holland.
.....	250	.....	Cartagena, Spain.
.....	500	.....	Cassel, Germany.
.....	100	1225	Linz, Austria.
.....	120	.....	Santiago, Chile.
.....	120	.....	Swansea, G. B.

1230 kcs. 243.8 m.

CMBY	250	.....	Havana, Cuba.
CMCA	150	Havana, Cuba.
KFQD	250	Anchorage, Alaska.
KGGM	250	Albuquerque, N. Mex.

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1070 kcs. 280.2 m. [][]

CMBG	225	Havana, Cuba.
CMCB	150	Havana, Cuba.
KJBS	100	San Francisco, Calif.
OKR	14000	1075	Bratislave, Czech.
WCAZ	50	....	Carthage, Ill.
WDZ	100	....	Tuscola, Ill.
WTAM	50000	....	Cleveland, Ohio
XEG	500	1075	Mexico City, D. F.
2KY	1500	....	Sydney, Australia.

1080 kcs. 277.6 m. [][]

JOBK-2	10000	1085	Osaka, Japan.
LKO	60000	1083	Oslo, Norway.
LT3	250	....	Rosario, Arg.
WBT	25000	....	Charlotte, N. Car.
WCB D	5000	....	Zion, Ill.
WMBI	5000	....	Chicago, Ill.
3SH	50	....	Swan Hill, Australia.
4ZB	20	....	Dunedin, N. Z.
4ZF	10	....	Dunedin, N. Z.
4ZM	45	....	Dunedin, N. Z.
4ZO	40	....	Dunedin, N. Z.
4ZW	50	....	Dunedin, N. Z.
.....	500	....	Alexandria, Egypt.
.....	200	....	Caen, France.
.....	60000	1085	Heilsberg, Germany.
.....	500	1085	Konigsberg, Germany.
.....	500	....	Port Said, Egypt.

1090 kcs. 275.1 m. [][]

IIT O	7000	1096	Turin, Italy.
KMOX	50000	....	St. Louis, Mo.
XEAI	100	....	Mexico City, D. F.
XGOB	250	....	Loyang, China.
1ZR	80	....	Auckland, N. Z.
.....	250	1091	Angers, France.
.....	1500	1098	Poznan, Poland.

1100 kcs. 272.6 m. [][]

CRCV	500	....	Vancouver, B. C.
KGDM	250	....	Stockton, Calif.
WLWL	5000	....	New York, N. Y.
WPG	5000	....	Atlantic City, N. J.
7LA	300	....	Launceston, Australia.
.....	1300	1103	Rennes, France.
.....	.....	1105	Santiago, Chile.

1110 kcs. 270.1 m. [][]

CMJO	50	....	Ciego de Avila, Cuba.
IIBA	20000	1112	Bari, Italy.
KSOO	1000	....	Sioux Falls, S. Dak.
LS 5	5000	....	Buenos Aires, Arg.
PAZ	50	....	Franca, Brazil.
WRVA	5000	....	Richmond, Va.
XENT	150000	1115	Nuevo Laredo, Tams.
2HD	200	....	Newcastle, Australia.
.....	250	1112	Bremen, Germany.
.....	1500	1112	Kaiserslautern, Germany.
.....	.....	.....	Thesalonik, Greece.

1120 kcs. 267.7 m. [][]

CFCA	100	....	Toronto, Ont.
CFJC	100	....	Kamloops, B. C.
CHGS	100	....	Summerside, P. E. I.
CHLP	100	....	Montreal, Que.
CMHJ	40	1125	Cienfuegos, Cuba.
EAJ3	1500	1121	Valencia, Spain.
EAJ19	700	1121	Ovideo, Spain.
KFIO	100	....	Spokane, Wash.
KFSG	500	....	Los Angeles, Calif.
KRKD	500	....	Los Angeles, Calif.
KRSC	100	....	Seattle, Wash.
KTRH	500	....	Houston, Texas.
LV5	500	....	San Juan, Arg.

WDEL	250	....	Wilmington, Del.
WHAD	250	....	Milwaukee, Wis.
WISN	250	....	Milwaukee, Wis.
WTAW	500	....	College Station, Texas.
2UW	1500	1125	Sydney, Australia.
2ZW	400	....	Wellington, N. Z.

1130 kcs. 265.3 m. [][]

CX30	250	....	Montivideo, Uruguay.
KSL	50000	....	Salt Lake City, Utah.
WJJD	20000	....	Chicago, Ill.
WOV	1000	....	New York, N. Y.
XEH	250	1132	Monterrey, N. L.
ZPI	1000	1135	Asuncion, Paraguay.
6ML	300	1135	Perth, Australia.
.....	1300	....	Lille, France.
.....	11000	1137	Moravska, Czech.

1140 kcs. 263.0 m. [][]

CMBJ	150	....	Havana, Cuba.
CMCD	250	....	Havana, Cuba.
CW30	.....	....	Tucumero, Uruguay.
KVOO	5000	....	Tulsa, Okla.
LN	50000	1147	London, G. B.
WAPI	5000	....	Birmingham, Ala.
XETA	250	....	Mexico City, D. F.
3YB	25	....	Melbourne, Australia.
4BC	600	1145	Brisbane, Australia.
.....	100	1145	Santiago, Chile.

1150 kcs. 260.7 m. [][]

CMJH	30	....	Ciego de Avila, Cuba.
LR8	3000	....	Buenos Aires, Arg.
PRAK	500	1153	Rio de Janeiro, Brazil.
WHAM	25000	....	Rochester, N. Y.
XED	500	1155	Guadalajara, Jal.
2WG	50	1155	Wagga, Australia.
2ZJ	75	....	Gisborne, N. Z.
2ZM	110	....	Gisborne, N. Z.
10-AT	25	1155	Trail, B. C.
.....	17000	1157	Frankfurt-am-Main, Germany.
.....	7500	1153	Kalundborg, Denmark.
.....	2000	1157	Trier, Germany.
.....	20	1153	Valparaiso, Chile.

1160 kcs. 258.5 m. [][]

SBH	10000	1166	Horby, Sweden.
WOWO	10000	....	Fort Wayne, Ind.
WWVA	5000	....	Wheeling, W. Va.
4ZI	8	....	Invercargill, N. Z.
4ZP	125	....	Invercargill, N. Z.

1170 kcs. 256.3 m. [][]

CMJE	50	1175	Camaguey, Cuba.
CX32	200	....	Montivideo, Uruguay.
JOCK-2	10000	1175	Nagoya, Japan.
MRD	1500	1175	Toulouse, France.
WCAU	50000	....	Philadelphia, Pa.
4TO	100	....	Townsville, Australia.

1180 kcs. 254.1 m. [][]

CMBN	150	1185	Havana, Cuba.
CMCJ	250	1185	Havana, Cuba.
CEB2	30	....	Salto, Uruguay.
HLJK	15000	....	Santo Domingo, D. R.
KEX	5000	....	Portland, Ore.
KOB	20000	....	Albuquerque, N. Mex.
TICR	30	....	San Jose, C. R.
WDGY	1000	....	Minneapolis, Minn.
WINS	500	....	New York, N. Y.
WMAZ	500	....	Macon, Ga.
3DB	500	Melbourne, Australia.
.....	14000	1184	Gleitwitz, Germany.
.....	100	1185	Santiago, Chile.

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960 kcs. 312.3 m.

CMBD	150	965	Havana, Cuba.
CMCW	150	965	Havana, Cuba.
CMJL	50	Camaguey, Cuba.
JOCK	300	....	Kyoto, Japan.
OFC	2500	....	Jacobstad, Finland
PRAP	300	967	Pernambuco, Brazil.
RW75	10000	968	Vinnitsa, USSR.
XEAW	10000	965	Reynosa, Tams.
YV1BC	5000	....	Caracas, Venezuela.
5DN	1000	....	Adelaide, Australia.
.....	1000	968	Cardiff, G. B.

PFBI	20000	1013	Hilversum, Holland.
PH9	6400	1013	Amsterdam, Holland.
TIGA	30	1014	Cartago, C. R.
WHN	250	....	New York, N. Y.
WIS	500	....	Columbia, S. Car.
WNAD	500	....	Norman, Okla.
WPAP	250	....	New York, N. Y.
WQAO	250	....	New York, N. Y.
WRNY	250	....	New York, N. Y.
XEJ	500	1015	Juarez, Chih.
XEU	100	....	Veracruz, Ver.
3HA	200	....	Hamilton, Australia.

970 kcs. 309.1 m.

CX22	250	....	Montivideo, Uruguay.
JOBG	500	....	Maebashi, Japan.
KJR	5000	....	Seattle, Wash.
SCC	500	977	Falun, Sweden.
WCFL	1500	....	Chicago, Ill.
XGOD	1000	973	Hangchow, China.
3BO	200	....	Bendigo, Australia.
.....	750	977	Zagreb, Yugo.

1020 kcs. 293.9 m.

CE102	100	1025	Santiago, Chile.
KYW	10000	....	Chicago, Ill.
OKK	2600	1022	Kostice, Czech.
WRAX	250	....	Philadelphia, Pa.
XEFC	10	....	Merida, Yuc.
2UE	1000	1025	Sydney, Australia.
.....	700	1022	Limoges, France

980 kcs. 303.9 m.

CE98	1000	....	Santiago, Chile.
CMGF	100	987	Matanzas, Cuba.
CNO	25	983	Casablanca, Morocco.
JOXK	500	....	Tokushima, Japan.
KDKA	50000	....	Pittsburgh, Pa.
3YA	500	....	Christchurch, N. Z.
.....	13000	986	Bordeaux, France.
.....	250	985	Santiago, Chile.

1030 kcs. 291.1 m.

CFBO	500	....	St. John, N. B.
CFCN	10000	....	Calgary, Alta.
CKNC	100	....	Toronto, Ont.
CMHI	30	....	Santa Clara, Cuba.
CMEK	150	1034	Santiago, Cuba.
LR9	5000	....	Buenos Aires, Arg.
OFH	13200	1031	Viborg, Finland.
XEB	10000	....	Mexico City, D. F.
YR	500	....	Lyons, France.

990 kcs. 302.8 m.

JOFG	300	....	Fukui, Japan.
LR4	20000	....	Buenos Aires, Arg.
NN	50000	995	Manchester, England.
TITV	7.5	999	San Jose, C. R.
WBZ	25000	....	Boston, Mass.
WBZA	1000	....	Springfield, Mass.
XEK	100	....	Mexico City, D. F.

1040 kcs. 288.3 m.

CMGH	15	....	Matanzas, Cuba.
KRLD	10000	....	Dallas, Texas.
KTHS	10000	....	Hot Springs, Ark.
SN	50000	....	Falkirk, G. B.
WESG	1000	....	Elmira, N. Y.
WKAR	1000	....	East Lansing, Mich.
5PI	50	1041	Port Pirie, Australia.
.....	1000	....	Bournemouth, G. B.
.....	800	1049	Montpellier, France.
.....	20	1045	Valparaiso, Chile.

1000 kcs. 299.8 m.

KFVD	250	....	Los Angeles, Calif.
PRAR	500	1006	Sao Paulo, Brazil.
WHO	50000	....	Des Moines, Iowa.
WOC	50000	....	Davenport, Iowa.
WORK	1000	....	York, Pa.
XEA	100	....	Guadalajara, Jal.
XEB	50	....	Toluca, D. F.
XEFE	100	....	Nuevo Laredo, Tams.
XEPI	100	....	Chihuahua, Chih.
XEPJ	100	....	Monterrey, N. L.
XEFS	40	....	Queretaro, Qro.
XEL	10	....	Saltillo, Coah.
ZP8	300	....	Asuncion, Paraguay.
ZTP	50	....	Pretoria, S. Africa.
4GR	50	....	Toowoomba, Australia.
.....	350	....	Hague, Holland.
.....	11000	1004	Tallin, Estonia.

1050 kcs. 285.5 m.

CHNS	500	....	Halifax, N. S.
CMJG	50	....	Camaguey, Cuba.
CTIAA	2000	1056	Lisbon, Portugal.
CTIAN	10	1056	Lisbon, Portugal.
CTIBM	50	1056	Lisbon, Portugal.
CTIDS	10	1058	Lisbon, Portugal.
CTIEB	50	1056	Lisbon, Portugal.
CX26	2000	....	Montivideo, Uruguay.
KFBI	5000	....	Abilene, Kans.
KNX	25000	....	Hollywood, Calif.
XES	250	1055	Tampico, Tams.
2CA	50	....	Camberra, Australia.
2ZF	150	....	Palmerston N., N. Z.
2ZO	200	....	Palmerston N., N. Z.
.....	500	1058	Berlin, Germany.
.....	500	1058	Innsbruck, Austria.
.....	500	1058	Magdeburg, Germany.
.....	500	1058	Stettin, Germany.

1010 kcs. 296.9 m.

CHWC	500	....	Regina, Sask.
CKCD	100	....	Vancouver, B. C.
CKCK	500	....	Regina, Sask.
CKCO	100	....	Ottawa, Ont.
CKIC	50	....	Wolfville, N. S.
CKOC	100	....	Hamilton, Ont.
CKWX	100	....	Vancouver, B. C.
CMBZ	150	....	Havana, Cuba.
CX24	1000	....	Montivideo, Uruguay.
KGGF	500	....	Coffeyville, Kans.
KQW	500	....	San Jose, Calif.

1060 kcs. 282.8 m.

CT1GK	50	1062	Lisbon, Portugal.
KWJJ	500	....	Portland, Ore.
LT9	100	....	Rosario, Arg.
WBAL	10000	....	Baltimore, Md.
WJAG	1000	....	Norfolk, Neb.
WTIC	50000	Hartford, Conn.
4MB	50	Maryborough, Australia.
.....	750	1067	Copenhagen, Denmark.

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860 kcs. 348.6 m.

CE86	1000	865	Santiago, Chile.
EAJ1	8000	Barcelona, Spain.
LV10	350	Las Heras, Arg.
RW30	3000	869	Dnepropetrovsk, USSR.
RW70	10000	.....	Leningrad, USSR.
SP1T	6000	867	Strasbourg, France.
TIVL	30	.....	San Jose, C. R.
WABC	50000	.....	New York, N. Y.
WHB	500	.....	Kansas City, Mo.
XFX	500	.....	Mexico City, D. F.

870 kcs. 344.6 m.

JOAK-1	10000	.....	Tokyo, Japan.
LR6	2100	.....	Buenos Aires, Arg.
OKB	36000	878	Brno, Czech.
WENR	50000	.....	Chicago, Ill.
WLS	50000	.....	Chicago, Ill.
XEAD	250	875	Mexico City, D. F.

880 kcs. 340.7 m.

CE88	100	.....	Valparaiso, Chile.
CJCB	100	.....	Sydney, N. S.
CJRM	500	.....	Moose Jaw, Sask.
CJRW	500	.....	Fleming, Sask.
CRCO	500	.....	Ottawa, Ont.
CT1GL	150	885	Lisbon, Portugal.
HJ3ABD	20	881	Bogota, Colombia.
KFKA	500	.....	Greeley, Colo.
KLX	1000	.....	Oakland, Calif.
KPOF	500	.....	Denver, Colo.
TIC	15	882	San Jose, C. R.
VUL	100	882	Lahore, India.
WCOC	500	.....	Meridian, Miss.
WGBI	250	.....	Scranton, Pa.
WQAN	250	.....	Scranton, Pa.
WSUI	500	.....	Iowa City, Iowa.
YV2BC	100	882	Caracas, Venezuela.
6PR	200	.....	Perth, Australia.
No. 2	15000	887	Brussels, Belgium.

890 kcs. 336.9 m.

CFQC	500	.....	Saskatoon, Sask.
CHML	50	.....	Hamilton, Ont.
CMCF	250	.....	Havana, Cuba.
CMX	750	.....	Havana, Cuba.
CX18	250	.....	Montivideo, Uruguay.
KARK	250	.....	Little Rock, Ark.
KFNF	500	.....	Shenandoah, Iowa.
KSEI	250	.....	Pocatello, Idaho.
KUSD	500	.....	Pemillion, S. Dak.
VOGY	100	.....	St. John's, Nfld.
WGST	250	.....	Atlanta, Ga.
WILL	250	.....	Urbana, Ill.
WJAR	500	.....	Providence, R. I.
WMMN	250	.....	Fairmont, W. Va.
XETU	100	.....	Pachuca, Hdo.
7EO	50	.....	Hobart, Australia.
.....	5500	896	Cadiz, Spain.
.....	1900	896	Poznan, Poland.

900 kcs. 333.1 m.

CE90	1000	905	Santiago, Chile.
IMI	50000	905	Milan, Italy.
JODK-2	10000	.....	Keijo, Korea.
KGBU	500	.....	Ketchikan, Alaska.
KHJ	1000	.....	Los Angeles, Calif.
LV9	500	.....	Rosario, Arg.
WBEN	1000	.....	Buffalo, N. Y.
WJAX	1000	.....	Jacksonville, Fla.
WKY	1000	.....	Oklahoma City, Okla.
WLBL	2500	.....	Stevens Point, Wis.
ZILY	1500	.....	Hoten, Manchuria
ZZP	105	.....	Wairoa, N. Z.

910 kcs. 329.6 m.

CFRC	50	915	Kingston, Ont.
CKY	5000	.....	Winnipeg, Man.
LB2	5500	.....	Buenos Aires, Arg.
PP	50000	914	Paris, France
TIGR	50	911	San Jose, C. R.
XEW	5000	.....	Mexico City, D. F.
XFF	500	915	Chihuahua, Chih.
4RK	2000	.....	Rockhampton, Australia.

920 kcs. 325.9 m.

CMBW	150	925	Havana, Cuba.
CMCN	250	925	Havana, Cuba.
HHK	1000	.....	Port-au-Prince, Haiti.
JOJK	500	.....	Niigata, Japan.
KEEL	500	.....	Denver, Colo.
KFXF	500	.....	Denver, Colo.
KOMO	1000	.....	Seattle, Wash.
KPRC	1000	.....	Houston, Texas.
LV2	500	.....	Cordoba, Arg.
PRAD	50	.....	Felotas, Brazil.
FRAE	1000	921	Sao Paulo, Brazil.
WAAF	500	.....	Chicago, Ill.
WBSS	500	.....	Babson Park, Mass.
WWJ	1000	.....	Detroit, Mich.
.....	60000	923	Breslau, Germany.

930 kcs. 322.4 m.

CFCH	100	.....	North Bay, Ont.
CFLC	100	.....	Prescott, Ont.
CKPC	100	.....	Preston, Ont.
CKX	500	.....	Boston, Man.
CKX	500	.....	Camaguey, Cuba.
CMJF	200	.....	Lisbon, Portugal.
CT1BO	150	936	Montivideo, Uruguay.
CX20	2000	.....	Nagasaki, Japan.
JOAG	500	.....	San Francisco, Calif.
KFWI	500	.....	York, Neb.
KGBZ	500	.....	Shenandoah, Iowa.
KMA	500	.....	Oakland, Calif.
KROW	500	.....	937 Rio de Janeiro, Brazil.
PRAB	500	.....	932 Goteborg, Sweden.
SBB	10000	.....	Birmingham, Ala.
WBRC	500	.....	Roanoke, Va.
WDBJ	250	.....	Glenaside, Pa.
WIBG	25	.....	Melbourne, Australia.
3UZ	500	.....

940 kcs. 319.0 m.

CE94	1000	945	Santiago, Chile.
INA	1500	941	Naples, Italy.
JONK	500	.....	Nagano, Japan.
KOIN	1000	.....	Portland, Ore.
WAAT	500	.....	Jersey City, N. J.
WCSE	100	.....	Portland, Maine.
WDAY	1000	.....	Fargo, N. Dak.
WFIW	1000	.....	Hopkinsville, Ky.
WHA	1000	.....	Madison, Wis.
XEFO	5000	.....	Mexico City, D. F.
.....	2500	941	Dresden, Germany.
.....	1000	941	Sofia, Bulgaria.

950 kcs. 315.6 m.

CMHD	250	.....	Caibarien, Cuba.
CT1DH	10	952	Lisbon, Portugal.
IGE	10000	959	Genoa, Italy.
KFWB	1000	.....	Los Angeles, Calif.
KGHL	1000	.....	Billings, Mont.
KMBC	1000	.....	Kansas City, Mo.
LR3	7500	.....	Buenos Aires, Arg.
RW55	1000	959	Engels, USSR.
WRC	500	.....	Washington, D. C.
XOPP	100	952	Peiping, China.
ZGB	3000	Sydney, Australia.
.....	250	Bremen, Germany.
.....	1500	959	Cracow, Poland.
.....	2500	Marseilles, France.

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JOBR-I	10000	Osaaka, Japan.	810 kcs.	370.2 m.	
RKQ	2500	Honolulu, Hawaii			
LF7	1000	Buenos Aires, Arg.			
MR	25000	Davenport, G. B.			
PRAA	2000	Rio de Janeiro, Brazil.			
RWB4	10000	Vladivostok, USSR.			
VOWR	500	St. John's, Nfld.			
VZLO	1000	Nairobi, Kenya.			
WFR	10000	Detroit, Mich.			
XEAN	5000	Juarez, Chih.			
	250	Mont-de-Marsan, France.			
760 kcs.					
JOAK	1000	Dairen, Manchuria.			
KXA	250	Seattle, Wash.			
LT4	250	Bahia, Brazil.			
WBAL	10000	Bahia, Brazil.			
WEW	1000	St. Louis, Mo.			
WZ	5000	New York, N. Y.			
4QG	5000	Brisbane, Australia.			
	12000	Bucharest, Rumania.			
770 kcs.					
CX12	500	Montevideo, Uruguay.			
JOHK	10000	Sendai, Japan.			
KFAB	5000	Lancaster, Neb.			
RW26	10000	Shahin, USSR.			
VUN	200	Madras, India.			
WBBM	25000	Chicago, Ill.			
	120000	Leipzig, Germany.			
	8000	Toulouse, France.			
780 kcs.					
CE78	1000	Santiago, Chile.			
CHWR	100	Chilivack, B. C.			
CKPR	100	Fort William, Ont.			
CMS	150	Havana, Cuba.			
CNCG	1000	Havana, Cuba.			
JOFR	500	Shizuoka, Japan.			
KELW	500	Burbank, Calif.			
KTW	500	Los Angeles, Calif.			
LT1	4500	Rosario, Arg.			
PRAJ	200	Juiz de Fora, Brazil.			
PRAN	8	Curtitiba, Brazil.			
PRAY	50	Mogy das Cruzes, Brazil.			
WEAN	500	Providence, R. I.			
WMC	500	Memphis, Tenn.			
WFOR	500	Portsmouth, Va.			
WJAR	500	Norfolk, Va.			
KFP	1000	Mexico City, D. F.			
	200	Alexandria, Egypt.			
	300	Cairo, Egypt.			
	16000	Lwow, Poland.			
	50	Valparaiso, Chile.			
790 kcs.					
CMHC	250	Tulaneu, Cuba.			
CMJK	300	Camaguey, Cuba.			
JOGR	10000	Kumamoto, Japan.			
RGO	7500	San Francisco, Calif.			
LRI	5000	Buenos Aires, Arg.			
OAX	5000	Lima, Peru.			
RW37	1000	Moskva, USSR.			
SR	50000	Pahkik, G. B.			
WGY	50000	Scheuchstadt, N. Y.			
800 kcs.					
LB2	500	Bahia Blanca, Arg.			
WBAP	50000	Fort Worth, Texas.			
WFAA	50000	Dallas, Texas.			
3LO	500	Melbourne, Australia.			
	1500	Hamburg, Germany.			
810 kcs.					
CNRH	500	Halthax, N. S.			
CX14	1000	Montevideo, Uruguay.			
EA75	1500	Seville, Spain.			
IBZ	1000	Bolzano, Italy.			
JOCK-I	10000	Nagoya, Japan.			
LKF	700	Fredrikstad, Norway.			
LT	1200	Paris, France.			
OFA	10000	Helsinki, Finland.			
RW20	10000	Khar'kov, USSR.			
VOAS	75	St. John's, Nfld.			
VUC	3000	Calcutta, India.			
WCCO	5000	Minneapolis, Minn.			
WNYC	500	New York, N. Y.			
XPC	350	Aguascaientes, Arg.			
XFL	1000	Mexico City, D. F.			
ZTC	1000	Capetown, S. Africa.			
820 kcs.					
CMG2	1000	Santiago, Chile.			
CMGC	30	Matanzas, Cuba.			
FRGC	1500	Paris, France.			
LKB	1000	Bergen, Norway.			
LT7	200	Leumann, Arg.			
RW68	1500	Tehlabinsk, USSR.			
RW89	4000	Ljevsk, USSR.			
WHAS	25000	Louisville, Ky.			
YLA	13000	Algeria, N. Z.			
	700	Fredrikstad, Norway.			
830 kcs.					
CMGA	100	Colon, Cuba.			
JOIK	10000	Sapporo, Japan.			
KOA	12500	Denver, Colo.			
LBS	1600	Buenos Aires, Arg.			
RW57	4000	Traspol, USSR.			
TBEA	700	San Jose, C. R.			
WEBU	1000	Reading, Pa.			
WHDD	1000	Boston, Mass.			
WRFB	5000	Gainesville, Fla.			
XELW	500	Mexico City, D. F.			
	60000	Buttgar, Germany.			
840 kcs.					
CHNC	5000	Toronto, Ont.			
CKGW	5000	Toronto, Ont.			
CKLC	1000	Red Deer, Alta.			
CMC	500	Havana, Cuba.			
CPRY	5000	Toronto, Ont.			
F3CD	12000	Saigon, Indo China.			
LR	50000	London, England.			
LT8	350	Rosario, Arg.			
VUB	3000	Bombay, India.			
XETH	100	Puebla, Pue.			
XETM	150000	Matamoros, Tama.			
ZBW	12000	Hong Kong, China.			
850 kcs.					
CX6	1000	Montevideo, Uruguay.			
CX16	2500	Montevideo, Uruguay.			
HP1	15000	Bangkok, Siam.			
JOFR	20000	Hiroshima, Japan.			
KIEF	100	Glendale, Calif.			
KWKH	10000	Shreveport, La.			
PRAC	50	Rio de Janeiro, Brazil.			
PRAI	100	Ribeirao Preto, Brazil.			
WFL	10000	New Orleans, La.			
XFPD	2500	Tijuana, B. C.			
ZBL	5000	Sydney, Australia.			
ZHL	350	Rangoon, India.			
	7000	Graz, Austria.			
850 kcs.					
370.2 m.					
370.2 m.					
356.9 m.					
352.7 m.					
379.5 m.					
374.8 m.					

RW8	1200	520 kcs.	576.6 m.	RW3	10000	580 kcs.	516.9 m.
WD8	250			AS	500		
WTB	1000			AT	500		
WOB	250			AV	500		
WTAG	250			AW	500		
XFN	10000			AX	500		
ZFB	750			AY	500		
ZFN	1500			BA	500		
ZPL	3000			BB	500		
				BC	500		
				BD	500		
				BE	500		
				BF	500		
				BG	500		
				BH	500		
				BI	500		
				BJ	500		
				BK	500		
				BL	500		
				BM	500		
				BN	500		
				BO	500		
				BP	500		
				BQ	500		
				BR	500		
				BS	500		
				BT	500		
				BV	500		
				BW	500		
				BX	500		
				BY	500		
				BZ	500		
				CA	500		
				CB	500		
				CC	500		
				CD	500		
				CE	500		
				CF	500		
				CG	500		
				CH	500		
				CI	500		
				CJ	500		
				CK	500		
				CL	500		
				CM	500		
				CN	500		
				CO	500		
				CP	500		
				CQ	500		
				CR	500		
				CS	500		
				CT	500		
				CU	500		
				CV	500		
				CW	500		
				CX	500		
				CY	500		
				CZ	500		
				DA	500		
				DB	500		
				DC	500		
				DD	500		
				DE	500		
				DF	500		
				DG	500		
				DH	500		
				DI	500		
				DJ	500		
				DK	500		
				DL	500		
				DM	500		
				DN	500		
				DO	500		
				DP	500		
				DQ	500		
				DR	500		
				DS	500		
				DT	500		
				DU	500		
				DV	500		
				DW	500		
				DX	500		
				DY	500		
				DZ	500		
				EA	500		
				EB	500		
				EC	500		
				ED	500		
				EE	500		
				EF	500		
				EG	500		
				EH	500		
				EI	500		
				EJ	500		
				EK	500		
				EL	500		
				EM	500		
				EN	500		
				EO	500		
				EP	500		
				EQ	500		
				ER	500		
				ES	500		
				ET	500		
				EU	500		
				EV	500		
				EW	500		
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				JP	500		

OWNERS		
580	CHCA	Moncton, N. B. to Canadian Radio Broadcasting Commission
680	WTFE	Raleigh, N. C., to WPTF Radio Co.
880	CHCO	Vanouver, B. C., to Canadian Radio Broadcasting Commission
1100	CHCV	Vanouver, B. C., to Canadian Radio Broadcasting Commission
1290	KFUL	Galveston, Texas, to Southwest Broad-casting Commission
1310	WFDF	Flint, Mich., to Flint Broadcasting Co. east Co.
1390	KUOA	Fayetteville, Ark., to KUOA, Inc.
1440	WSAN	Allentown, Pa., to WSAN, Inc.
CALLS		
540	CKLW	Windsor, Ont., formerly CROK
580	CHCA	Moncton, N. B., formerly CNRA
880	CHCO	Ottawa, Ont., formerly CNRO
1100	CHCV	Vanouver, B. C., formerly CNRV
1400	WARD.	Brooklyn, N. Y., formerly WCGU
DELETED		
595	CHGC	London, Ont.
1200	KGEW	Fort Morgan, Colo.
1420	WBRE,	Brig. Pa.

1100	CRCY	Vancouver, B. C., from 1030
1210	CEGO	Charlham, Ont., from 1010
1310	KUOA	Fayetteville, Ark., from 1390
1360	CHCK	Charlottesville, P. E. I., from 960
1370	KGNO	Dodge City, Kans., from 880
1410	KRCF	Vancouver, B. C., from 780
1410	KRMQ	Vancouver, B. C., from 630
1430	CFCT	Victoria, B. C., from 630
1500	WHO	Des Moines, Iowa, 5000 to 50000
1600	WOC	Davenport, Iowa, 5000 to 50000
1010	KROC	Hamilton, Ont., 1000 to 100
1080	CKNC	Toronto, Ont., 500 to 100
1120	CECA	Chatham, Ont., 250 to 100
1210	WTRC	Elkhart, Ind., 50 to 100
1310	KGNO	Dodge City, Kans., 100 to 250
580	CCKL	Toronto, Ont., 500 to 100
580	CRCQ	Moncton, N. B., 700 to 500
630	CMGQ	Havana, Cuba, 250 to 500
680	HJN	Bogota, Colombia, 2000 to 1000
850	KFPO	San Francisco, Calif., 5000 to 50000
880	CFRW	Fleming, Sask., 1000 to 500
940	WAAT	Jersey City, N. J., 500 to 500
1000	WHO	Des Moines, Iowa, 5000 to 50000
1000	WOC	Davenport, Iowa, 5000 to 50000
1010	KROC	Hamilton, Ont., 1000 to 100
1080	CKNC	Toronto, Ont., 500 to 100
1120	CECA	Chatham, Ont., 250 to 100
1210	WTRC	Elkhart, Ind., 50 to 100
1310	KGNO	Dodge City, Kans., 100 to 250
1410	KRCF	Vancouver, B. C., from 780
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1430	CFCT	Victoria, B. C., from 630
1500	WHO	Des Moines, Iowa, 5000 to 50000
1600	WOC	Davenport, Iowa, 5000 to 50000
1010	KROC	Hamilton, Ont., 1000 to 100
1080	CKNC	Toronto, Ont., 500 to 100
1120	CECA	Chatham, Ont., 250 to 100
1210	WTRC	Elkhart, Ind., 50 to 100
1310	KGNO	Dodge City, Kans., 100 to 250
1410	KRCF	Vancouver, B. C., from 780
1410	KRMQ	Vancouver, B. C., from 630
1430	CFCT	Victoria, B. C., from 630
1500	WHO	Des Moines, Iowa, 5000 to 50000
1600	WOC	Davenport, Iowa, 5000 to 50000

POWER

(Continued from page 1)

THE MONTHS CHANGES

Kate Smith, 8:30 p.m., Tues., Wed., Thurs., C.	Chalices Dorey, 7:00 p.m., Thursday, C.
Southernaires Male Quartet, 7:00 p.m., Monday, R.	Phil Dawley, 10:10 p.m., Sunday, B.
Street Singer, 12:45 p.m., Sun.; 9:15 p.m., Mon., Wed., Fri., C.	Do Re Mi, 9:00 p.m., Mon.; 8:00 p.m., Thurs.; 11:15 p.m., Fri., C.
Tastyest Diners, 6:30 p.m., Mon., Fri.; 8:30 p.m., Wed., B.	Messia Dragmettes, 8:00 p.m., Friday, R.
Conrad Thibault, 9:30 p.m., Wednesday, B.	Mary Beaton, 9:30 p.m., Sunday; 8:00 p.m., Thursday, C.
Three Keys, 7:00 p.m., Tues.; 8:30 p.m., Thurs., R.	Elton Boys, 9:00 p.m., Monday, C.
Three X Sisters, 6:30 p.m., Tues. and Wed. B.	Evon Evans, 9:30 p.m., Sun.; 8:00 p.m., Thurs., C.
Ortiz Thaxel, 9:30 p.m., Mon.; 8:00 p.m., Sat., R.	Fields and McHugh, 11:15 p.m., Friday, B.
Rangy Weeks, 8:45 p.m., Mon.; 9:00 p.m., Wed. and Sat., R.	Irene Franklin, 10:15 p.m., Wed. and Fri., B.
Witching Hour, 11:30 p.m., Saturday, B.	Gypsy Nights, 7:15 p.m., Saturday, C.
America's Grub Street, 6:00 p.m., Saturday, C.	Don Hall Trio, 11:15 p.m., Sunday, R.
American Tappety Legs, 7:00 p.m., Saturday, B.	Herman Hupfeld, 8:45 p.m., Tuesday, B.
Boake Carter, 7:45 p.m., daily, ex. Sat. and Sun., C.	Theo Karle, 7:00 p.m., Monday, C.
Century of Progress, 7:15 p.m., daily, ex. Sun., R.; 10:30 p.m. Wed., B.	Loving Kaufman, 8:45 p.m., Tues., Thurs., C.
Irvin Cobb, 9:00 p.m., Wed. and Fri., C.	Jeannine Lang, 9:30 p.m., Thurs.; 9:00 and 11:30 p.m., Friday, R.
Lady Dan, 1:30 p.m., Sunday, C.	Label Jack Little, 11:15 p.m., Wed.; 10:30 p.m., Fri., C.
Little Jack Little, 11:15 p.m., Mon., Wed., Sat., B.	Nino Martin, 9:30 p.m., Tues.; 8:00 p.m., Fri., C.
Radio Patrol, 3:30 p.m., Sunday, R.	Smiling Ed McConnell, 2:00 p.m., Sunday, C.
Will Rogers, 9:00 p.m., Sunday, B.	Tomy MacLaughlin, 9:15 p.m., Tuesday, C.
Stigmund Spaeth, 9:30 p.m., Tuesday, B.	James Melton, 7:00 p.m., Sun.; 6:45 p.m., Tues.; 11:00 p.m., Thurs., R.
Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., B.	Frank Mann, 9:30 p.m., Sunday, R.
Merle Thorne, 7:45 p.m., Thursday, B.	Monarch Mystery Tantor, 2:00 p.m., Sunday, B.
Voice of Experience, 8:00 p.m., Wednesday, C.	Gertrude Niesen, 10:45 p.m., Saturday, C.
Carvelth Wells, 10:30 p.m., Wednesday, R.	Donald Nova, 8:30 p.m., Wednesday, R.
Frederick William Wile, 7:00 p.m., Saturday, C.	William O'Neal, 11:15 p.m., Monday, C.
Walter Winchell, 9:30 and 11:15 p.m., Sunday, B.	Pickens Sisters, 9:45 p.m., Sunday, B.; 6:45 p.m., Sat., R.
	Signa Sam, 8:00 p.m., Monday, C.
	Sixteen Male Voices, 11:30 p.m., Wednesday, B.
	Sizlers Trio, 8:30 p.m., Mon.; 11:00 p.m., Thurs., B.

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Daylight Saving

- R-7, 9:30 p.m., Saturday.
Miss Lilla, 10:30 p.m., Tuesday.
Laves at Stake, 10:00 p.m., Tuesday.
Marge Voice, 8:15 p.m., Tuesday.
Neighbors, 10:30 p.m., Monday.
Northwestern Chronicle, 2:30 p.m., Sunday.
Pages of Romance, 5:30 p.m., Thursday.
Rin Tin Tin, 8:30 p.m., Thursday.
Book Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C.
Roses and Dymms, 6:30 p.m., Sunday.
Sooomyland Sketches, 8:00 p.m., Monday.
Radio City Symphony, 12:15 p.m., Sunday, B.
Radio City Symphony, 12:15 p.m., Sunday, B.
Rosenfeld's Viennese, 8:00 p.m., Sunday, B.
Stunt Symphony, 7:30 p.m., Wednesday, B.
Symphonette, 4:15 p.m., Sunday, B.
Waldorf-Astoria, 6:00 p.m., daily, ex. Sunday, R.
DANCE BANDS
Victor Arden, 2:30 p.m., Sunday, C.
Albert Bartlett, 2:15 p.m., Sunday, C.
Ben Bernie, 9:00 p.m. and 12:30 a.m., Tuesday, R.
Don Bestor, 6:00 p.m., Saturday, B.
Frank Black, 10:00 p.m., Friday, B.
Art Coogan, 8:00 p.m., Wed.; 6:15 p.m., Sat., C.
Clayde Doerr, 5:30 p.m., Sunday, R.
Eddie Duchoin, 11:00 p.m., Sun.; 12 mid., Wed., C.
Ivo Eriwan, 9:15 p.m., Wednesday, R.
Gen Gray, 12 mid., Tuesday; 7:30 p.m., Sat., C.
Richard Hinber, 6:30 p.m., Monday, R.
Johnny Johnson, 12 mid., Saturday, R.
Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues., R.; 9:30 p.m., Thurs., B.
Ted Lewis, 11:30 p.m., Mon. and Thurs., C.
Guy Lombardo, 10:00 p.m., Wednesday, C.
Vincent Lopez, 10:15 p.m., Sun.; 6:45 p.m., Sat., B.
Bert Lymann, 7:00 p.m., Saturday, R.
Abe Lyman, 11:30 p.m., Sun., Tues., Fri.; 8:45 p.m., Tues., Wed., Thurs., C.
Dolph Martin, 7:30 p.m., Monday, C.
Freddie Martin, 11:30 p.m., Wed.; 11:00 p.m., Sat., C.
Joe Moss, 7:30 p.m., Sunday, R.
George Nelson, 6:15 p.m., Tuesday, C.
Ben Pollack, 12 mid., Sun.; 11:30 p.m., Sat., C.
William Robinson, 9:00 p.m., Tuesday, B.
B. A. Roth, 10:00 p.m., Saturday, R.
Harold Walling, 11:30 p.m., Saturday, R.
Rudy Vallee, 8:00 p.m., Thursday, C.
Fred Warner, 10:00 p.m., Wednesday, C.
DRAMA
Columbia Dramatic Guild, 9:00 p.m., Sunday, C.
Dick Walling, 6:45 p.m., Sunday, B.
Death Valley Days, 9:00 p.m., Thursday, B.
Erno Cines, 8:00 p.m., Tues. and Wed., B.
First Nights, 10:30 p.m., Friday, B.
Folks from Dixie, 1:30 p.m., Sunday, R.
Foreign Legion, 8:30 p.m., Friday, C.
Goldberg, 10:00 p.m., daily, ex. Sat. and Sun., R.
John Henry, 10:00 p.m., Sun. and Thurs., C.
Sherlock Holmes, 9:00 p.m. and 12:15 a.m., Wednesday, B.
CONCERTS
Howard Barlow, 3:15 p.m., Sun.; 10:45 p.m., Mon., Tues., Thurs., C.
Catholics, 8:00 p.m., Sunday, C.
Gibbert and Sullivan Gents, 10 p.m., Saturday, B.
Impressions of Italy, 5:00 p.m., Sunday, R.
L'Haire Exquisite, 6:00 p.m., Sunday, B.
Walter Logan, 12:30 p.m., Sunday, R.
Minneapolis Symphony, 11:30 p.m., Sunday, B.
National Opera, 8:00 p.m., Sunday, B.
Orchestral Gems, 11:30 p.m., Sunday, R.
Radio City Symphony, 12:15 p.m., Sunday, B.
Rosenfeld's Viennese, 8:00 p.m., Sunday, B.
Stunt Symphony, 7:30 p.m., Wednesday, B.
Symphonette, 4:15 p.m., Sunday, B.
Waldorf-Astoria, 6:00 p.m., daily, ex. Sunday, R.
RELIGIOUS
Ed Wynn, 9:30 p.m., Tuesday, R.
Woodbury Program, 8:30 p.m., Wednesday, R.
Widder Institute, 4:15 p.m., Sunday, B.
Singer Ministrel, 9:00 p.m., Monday, B.
Saturday Pivottiles, 9:45 p.m., Saturday, C.
Royal Vespers, 8:00 p.m., Wednesday, R.
Richfield Country Club, 10:30 p.m., Friday, R.
Fond's Program, 9:30 p.m., Friday, R.
Old Gold, 10:00 p.m., Wednesday, C.
Nestle's Program, 8:00 p.m., Friday, B.
Bothra Minstrel, 7:00 p.m., Sun., B.; 7:00 p.m., Fri., R.
Maxwell House, 9:00 p.m. and 1:00 a.m., Thursday, R.
Manhattan Marty-Ground, 9:00 p.m., Sunday, R.
Lucky Strike, 10:00 p.m., Thursday, R.
Inside Story, 9:30 p.m., Friday, C.
Household Mystical Memories, 10:00 p.m., Tuesday, B.
Happy Wonder Bakers, 6:30 p.m., Mon., Wed., C.
Golden Country Club, 10:00 p.m., Monday, C.
Jack F. B.'s Melody, 9:30 p.m., Monday, B.
and Fri., B.
Five Star Theatre, 10:00 p.m., Tues., C.; 7:30 p.m., Sun., R.
Fiddler's Theat, 4:00 p.m., Monday, C.
Evening in Paris, 9:30 p.m., Monday, C.
Corn Cob Pupp Chib, 10:00 p.m., Wednesday, R.
Concerted Program, 10:00 p.m., Monday, R.
Columbia Revue, 10:15 p.m., Sunday, C.
Chicago Club, 8:00 p.m., Monday, B.
Cities Service, 8:00 p.m., Friday, R.
Chicago Variety, 8:30 p.m., Sunday, C.
Chevrolet Program, 10:00 p.m., Friday, R.
Chesapeake, 10:00 p.m., Friday, C.
Chase and Sandborn, 8:00 p.m., Sunday, R.
California Melodios, 10:15 p.m., Thursday, C.
Major Powers' Family, 11:15 a.m., Sunday, R.
Armour Program, 9:30 p.m., Friday, B.
Album of Familiar Music, 9:30 p.m., Sunday, R.
A. & P. Gypsies, 9:00 p.m., Monday, R.
POPULAR PROGRAMS
Ohman and Arden, 2:30 p.m., Sun., C.; 9:30 p.m., Sun., R.
Mitscha Leibitzki, 9:30 p.m., Wednesday, R.
Vee Lavashvitz, 4:15 p.m., Sunday, R.
Archer Gibson, 9:00 p.m., Friday, B.
Fray and Braggotti, 7:30 p.m., Sun.; 1:15 p.m., Thurs., C.
PIANO AND ORGAN
Soomyland Sketches, 8:00 p.m., Monday, R.
Roses and Dymms, 6:30 p.m., Sunday, C.
Book Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C.
Rin Tin Tin, 8:30 p.m., Thursday, B.
Pages of Romance, 5:30 p.m., Thursday, B.
Northwestern Chronicle, 2:30 p.m., Sunday, B.
Neighbors, 10:30 p.m., Monday, R.
Marge Voice, 8:15 p.m., Tuesday, R.
Laves at Stake, 10:00 p.m., Tuesday, R.
Miss Lilla, 10:30 p.m., Tuesday, B.
R-7, 9:30 p.m., Saturday, R.
Countess Olga Albert, 6:45 p.m., Mon. and Thurs., R.
Francis Alda, 6:00 p.m., Tuesday, R.
Elvira Alman, 7:30 p.m., Mon., Wed. and Sat., R.
Armad, 2:45 p.m., Sunday, C.
Mildred Bailey, 7:00 p.m., Wed. and Fri., C.
Betty Barthel, 10:30 p.m., Friday, R.
Rene Bordoni, 7:45 p.m., Tuesday and Saturday, B.
Boeswell Sisters, 8:15 p.m., Wed.; 9:15 p.m., Sat., C.
Fanny Brice, 8:00 p.m., Wednesday, R.

WDBO WDOD WDRC WDSB WGR
 WHEC WBS WJWS WJWB WOKO
 WLBW WFLX WNAZ WODX WOKO
 WPG WQAM WSBT WSSJ WSPD
 WTQG WTHR WTTC WWA
 ED-1:15 p.m., E-12:15, M-10:15
 KDKA WBAL WBZ WBZ WOKY
 WGAR WHAM WJR WJZ WMAL
 MAQ WMAQ WYR
 ED-1:30 p.m., E-12:30, C-11:30, M-10:30
 CROK KMBK KMOX WAAB
 WBBM WCAW WCOA WCCO
 WBS WAWS WKRC WMBG
 R - Folks from Dixie
 CPOE KGW KFI KESD KFYR KGO
 KGW KHQ KOA KOMO KPRC KSD
 KSTP KTBZ KVOO WAPY WBN
 WCAE WCFB WDFW WDAY WEAR
 WBEZ WBEY WFLA WFRB WFI
 WGY WHO WIBA WIOD WIS WJAR
 WJX WKY WMA WOI
 WWR WRC WRA WSAI WVB WVCN
 WSMB WTQG WTAM WJW WJWC
 ED-2:00 p.m., E-1:00, C-12:00, M-11:00
 C - Smiling Ed Macdonald
 CROK KEBN KMBK KMOX KOA
 KGB KHJ KIZ KMBK KNOX KOA
 KOL KST KVI KWB WAB WBN
 WRT WCCO WWS WJWS WGST
 WBS WHEC WWS WJWS WSPD
 WTQG WTHR WTR
 R - Monarch Mystery Tour
 WLAZ WNAZ WOVQ WQAM WRR
 KDKA KDL KFI KFYR KGO KOA
 KOL KST KPRC KWCW KWR KWB
 WBAZ WOKY WDAY WFBZ WGAR
 WHAM WIBA WJX WJR
 WJZ WMAQ WREN WTAM WJWC
 R - Fighting Mixed Chorus
 CPOE KSD KTBZ KTBZ KTW WAPY
 WBS WCAE WCKY WOSH WEAR
 WBEZ WFLA WJX WJZ
 WSMB WTMQ WJW WJWC
 ED-2:15 p.m., E-1:15, C-12:15, M-11:15
 B - International Radio Forum
 KDKA KOIL KOL KWCW KWK
 WBAL WJZ WMAL WMAQ WREN
 WSYR
 C - Albert Kameo KMOX WABC WBBM
 CROK KMBK KMOX WABC WBBM
 WCAW WCAW WGR WHEC WOKO
 WWS WJWS WKRC WNAZ WOKO
 WOMO
 ED-2:30 p.m., E-1:30, C-12:30, M-11:30
 R - Joe Green's Martha Band
 CPOE CROK WBS WCAE WCKY
 WDAZ WEAR WGR WGY WTAM
 WMAQ WOV WRC WJG WJWM
 B - Northwestern Chronicle, Drama
 KDKA KDL KFI KESD KFYR
 KGHJ KIR KGO KGW KHQ KOA
 KOL KPRC KOA KWB
 KTBZ KTRH KVOO KWCW KWK
 WBYZ WBYZ WFLA WFLA WGX
 WHAM WBA WIOD WIS WJX
 WJX WJR WJZ WJZ WJZ WJZ
 WMA WMC WPT WWA
 C - Victor Arden and Orchestra
 MSB WSM WSMB WTMJ WJWC
 CROK KMBK KMOX WABC WBBM
 WCAW WCAW WGR WHEC WOKO
 WWS WJWS WKRC WNAZ WOKO
 WOMO
 ED-2:30 p.m., E-1:30, C-12:30, M-11:30
 R - The Lawyer and Public
 WCOO WDAZ WDBZ WDBO
 WDRC WDSB WFLA WFLA WGST
 WBS WBYZ WBYZ WBYZ WBYZ
 WKBW WLBW WNAZ WNOX
 WODX WOKO WOP WPG WTAM
 WTAR WTTC WWA
 ED-6:30 p.m., E-5:30, C-4:30, M-3:30
 C - Roses and Drums
 CROK KMBK KMOX KRLD WAB
 WAB WABD WCAW WCOA WDSB
 WGN WGR WHAS WHR WJWS
 WJWS WKRC

R - *Irvin S. Cobb*, See Wednesday
RSD WBEN WBSH WDAE WFAE
WMAQ WRC WTAG WTAM WTIC
M-8-15 p.m., E-8-15, C-7-15, M-6-15
C - *Street Singer*, See Monday
ED-9-30 p.m., E-8-30, C-7-30, M-6-30
R - *Font's Program*
WDAE WBEN WBSH WGY WHO
WDRB WDBO WDDO WDRD WGST
WMAQ WOHM WTAG WRC WSAI
WLAG WTAM WJZ
C - *Edwin C. Hill, Inside Story*
CROK KTH KTRA KMBC KMOX
ROMA KBLD KTRH KTVB WABC
WABC WOHM WTAG WRC WSAI
WMAQ WOHM WTAG WRC WSAI
B - *Armour Program—Phil Baker*
KDKA KDYL KPI KPSD KGO KGW KHQ
KRA KAOL KOMO KPRC KSO KTF
KRA WFA WJR WJZ WMAQ
WMAQ WOAL WREN WREVA WSB
WSM WSMB WTMJ WNNC
R - *Chevrolet—Jack Benny*
KYL KPI KTRH KRYR KGH
KGR KGO KGW KHQ KRA KOMO
KTRC KSTP KTRR KTVB
KTRH KVOO WREN WBSH
WDAE WDAE WFAE WFB WGY
WMAQ WRC WTAG WSAI
WHO WBA WIOD WJZ WLR
WAX WAZ WLT WLV WMC
WOI WOV WRC WVA WVA
WMA WSM WTAG WTAM WTIC
C - *Gieselerfield—Lou Holz*
CRLW KQB KEBN KPRC KPPY
KTRC KGH KHA KIZ KMBC
KPI KMOK KOH KOI KOI KMBC
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-00 p.m., E-5-00, C-4-00, M-3-00
R - *Don Bestor and Orchestra*
KDKA KOIL KSO KWOR KWR
WBL WEN WHAM WJR WJZ
WMA WREN WYR
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-00 p.m., E-5-00, C-4-00, M-3-00
R - *Don Bestor and Orchestra*
KDKA KOIL KSO KWOR KWR
WBL WEN WHAM WJR WJZ
WMA WREN WYR
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-15 p.m., E-9-15, C-8-15, M-7-15
R - *Irene Franklyn*, See Wednesday
ED-10-30 p.m., E-9-30, C-8-30, M-7-30
R - *Richfield Country Club*
WREN WCAE WFAE WFB WRC
WGY WJH WLT WRC WTC
C - *Little Jack Little*
CFLR CCKLW KPH KTRA KIZ
KMBC KBLD KSL KTRC ROR
VAAB WABC WBA WBSA WBRD
WCAO WCAO WCD WDEJ
WDBO WDDO WDRD WDSU WEA
WFL WFBM WFAE WGST WHAS
WHEC WHR WHP WJAS WJAZ
WJST WKB WLB WOD WOKO
WMAQ WMBG WMLC WOD WOKO
WRC WSBJ
B - *First Night, Drama*
WSS WSPD WTAG
KRA KIDL KPI KPSD KGO KGW
KHA KOA KOI KOMO KPRC
ED-8-30 p.m., E-5-30, C-4-30, M-3-30
C - *Billy Burton and Orchestra*
CROK KTRH WAB WABC
WACO WADC WBG WDO WEA
WDBA WDBJ WDO WDC
WDRB WEN WFA WGR WGT
WHD WHP WIC WJW WJZ
WMA WLBZ WNOX WOD WOKO
WRC WAG WVA WWA
WSJS WSPD WTAG WTR WVA
WMA WBSA WBSB WBSL WBSL
WOKO WORG WQAM WSAI
ED-7-45 p.m., E-8-45, C-5-45, M-4-45
R - *The World Today*
KTRC KTRB WREN WDAE WFAE
WENR WFB WJA WJAZ WJY
WMA WMS WMA WMA WMA
WOL WOC WOV WPT WRC
WSAI WTAG WTAM WJZ WNNC
B - *Irene Bordoni*, See Tuesday
ED-8-00 p.m., E-7-00, C-6-00, M-5-00
R - *Ortiz Trade, Mexican Tense*
CROK KFYR KOA KPO KPRC KSD

SATURDAY

WPG WSBT WSPD WTC
WMA WSM WTAG WTAM WTIC
WOI WOV WRC WVA WVA
WAX WAZ WLT WLV WMC
WHO WBA WIOD WJZ WLR
WMA WSM WTAG WTAM WTIC
ED-9-00 p.m., E-8-00, C-7-00, M-6-00
R - *Font's Program*
WDAE WBEN WBSH WGY WHO
WDRB WDBO WDDO WDRD WGST
WMAQ WOHM WTAG WRC WSAI
WLAG WTAM WJZ
C - *Edwin C. Hill, Inside Story*
CROK KTH KTRA KMBC KMOX
ROMA KBLD KTRH KTVB WABC
WABC WOHM WTAG WRC WSAI
WMAQ WOHM WTAG WRC WSAI
B - *Armour Program—Phil Baker*
KDKA KDYL KPI KPSD KGO KGW KHQ
KRA KAOL KOMO KPRC KSO KTF
KRA WFA WJR WJZ WMAQ
WMAQ WOAL WREN WREVA WSB
WSM WSMB WTMJ WNNC
R - *Chevrolet—Jack Benny*
KYL KPI KTRH KRYR KGH
KGR KGO KGW KHQ KRA KOMO
KTRC KSTP KTRR KTVB
KTRH KVOO WREN WBSH
WDAE WDAE WFAE WFB WGY
WMAQ WRC WTAG WSAI
WHO WBA WIOD WJZ WLR
WAX WAZ WLT WLV WMC
WOI WOV WRC WVA WVA
WMA WSM WTAG WTAM WTIC
C - *Gieselerfield—Lou Holz*
CRLW KQB KEBN KPRC KPPY
KTRC KGH KHA KIZ KMBC
KPI KMOK KOH KOI KOI KMBC
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-00 p.m., E-5-00, C-4-00, M-3-00
R - *Don Bestor and Orchestra*
KDKA KOIL KSO KWOR KWR
WBL WEN WHAM WJR WJZ
WMA WREN WYR
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-00 p.m., E-5-00, C-4-00, M-3-00
R - *Don Bestor and Orchestra*
KDKA KOIL KSO KWOR KWR
WBL WEN WHAM WJR WJZ
WMA WREN WYR
C - *America's Grub Street*
CROK KTRC KAB KPH KSOJ KSL
KTRH KFOR WAB WABC WADC
WBBM WBOH WBG WBRD WBT
WCO WCAO WDC WDEAN WFL
WDOO WDRD WDSU WEA WFA
WRC WIC WISN WJZW WKBH
WMAQ WOHM WTAG WSAI WSPD
WLAG WTAR WTC WVA
ED-8-15 p.m., E-9-15, C-8-15, M-7-15
R - *Irene Franklyn*, See Wednesday
ED-10-30 p.m., E-9-30, C-8-30, M-7-30
R - *Richfield Country Club*
WREN WCAE WFAE WFB WRC
WGY WJH WLT WRC WTC
C - *Little Jack Little*
CFLR CCKLW KPH KTRA KIZ
KMBC KBLD KSL KTRC ROR
VAAB WABC WBA WBSA WBRD
WCAO WCAO WCD WDEJ
WDBO WDDO WDRD WDSU WEA
WFL WFBM WFAE WGST WHAS
WHEC WHR WHP WJAS WJAZ
WJST WKB WLB WOD WOKO
WMAQ WMBG WMLC WOD WOKO
WRC WSBJ
B - *First Night, Drama*
WSS WSPD WTAG
KRA KIDL KPI KPSD KGO KGW
KHA KOA KOI KOMO KPRC
ED-8-30 p.m., E-5-30, C-4-30, M-3-30
C - *Billy Burton and Orchestra*
CROK KTRH WAB WABC
WACO WADC WBG WDO WEA
WDBA WDBJ WDO WDC
WDRB WEN WFA WGR WGT
WHD WHP WIC WJW WJZ
WMA WLBZ WNOX WOD WOKO
WRC WAG WVA WWA
WSJS WSPD WTAG WTR WVA
WMA WBSA WBSB WBSL WBSL
WOKO WORG WQAM WSAI
ED-7-45 p.m., E-8-45, C-5-45, M-4-45
R - *The World Today*
KTRC KTRB WREN WDAE WFAE
WENR WFB WJA WJAZ WJY
WMA WMS WMA WMA WMA
WOL WOC WOV WPT WRC
WSAI WTAG WTAM WJZ WNNC
B - *Irene Bordoni*, See Tuesday
ED-8-00 p.m., E-7-00, C-6-00, M-5-00
R - *Ortiz Trade, Mexican Tense*
CROK KFYR KOA KPO KPRC KSD

WEDNESDAY—(Cont'd)

B — Conrad Thibault, Baritone
 KDRA KOL KPRB KSO KSTP
 KTBS KTBS RVOO KWCR KWK
 WBAL WBZ WBZ WENZ WFAA
 WGAR WBAM WDXZ WZV WKY
 WJW WMC WOAI WREN WSJ
 WSM WSM

ED-10:00 p.m., E-9:00, C-8:30, M-7:00
C — Old Gold—Fred Waring
 CKOK KID KERN KFRB KFPY
 KRCO KCB KHJ KLRA TLZ KMB
 KMJ KNOX KOIN KOI KOMO
 KSL KVAI KTBS KTSA KVI KWG
 WABR WABC WAOB WBRB WBT
 WACH WACO WADU WCCO WDAE
 WDBO WDOB WDOU WDUU WFTL
 WFBM WGN WGST WHAS WHEC
 WKRC WOX WWSJ WWSW WQAM
 WRCB WRR WSPD

R — Conn Cob Pipe Club
 KDYL KRI KGHJ KRIR KGO KGW
 KHQ KOA KOMO KSD WBN
 WCAE WCH WDAE WFAE WFEI
 WENR WFR WGY WHO WJR
 WLT WLV WOC WOV WRG WRA
 WTAG WTAM WTLG WTV

ED-9:00 p.m., E-8:00, C-7:00, M-6:00
C — Irvine S. Cobb
 CFBZ GKOK KFRB KLRA KLZ
 KMBG KRLD KRIR KTSA
 KVOB WABC WADU WBGH
 WGOA WCOO WDAE WDBJ
 WDBO WDOB WDRG WDSU WFSB
 WFTL WFBM WFLA WGST
 WHPR WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

R — Famous Brands—Fanny Weeks
 KSD WBN WBAE WCH WDAE
 WFAE WFG WGY WTL
 WMAQ WRG WTAG WTMJ WTLG
 WJW

B — Sherlock Holmes
 GKOK KGBW KDKA KOL KWCR
 KWV WBL WBZ WBA WZAR
 WHAM WJR WJZ WLS WLN WFN

ED-8:15 p.m., E-8:15, C-7:15, M-6:15
C — Street Singer, See Monday
R — Vic Edwin and Band
 KDYL KVA KPSD KFRB KGO KGW
 KHQ KOA KOMO KPRB KSD KSTP
 KTBS RVOO WBN WDAE WFBG
 WCH WFR WFLA WGY WHO
 WBAE WADU WJW WJX
 WDXZ WKY WLT WLVG WLVW
 WOC WOV WRG WRA WRSJ WRSZ
 WSM WTAM WTLG WTV WZAR

ED-8:30 p.m., E-8:30, C-7:30, M-6:30
C — Guy Lombardo—Bums and Allan
 GKOK KMBG KNOX KOMO
 KTRB KTRB WABC WADU
 WGOA WCOO WDAE WDBJ
 WFBM WGN WHR WJAS WJZ
 WKBM WKRC WNAO WNOX WOVW
 WSPD

R — Nilsa Lovick, Pianist
 GKOF GKGW KVDI KFL KGO KGW
 KHQ KOA KOND KSD WBN
 WABR WCKY WCH WDAE WFBG
 WFLA WHO
 WFR WJW WJZ WLVG WLVW WNOX
 WOC WOV WRG WRA WRSJ WRSZ
 WSM WTLG WTLG WTV WZAR

B — Conrad Thibault, Baritone
 KDRA KOL KPRB KSO KSTP
 KTBS KTBS RVOO KWCR KWK
 WBAL WBZ WBZ WENZ WFAA
 WGAR WBAM WDXZ WZV WKY
 WJW WMC WOAI WREN WSJ
 WSM WSM

ED-10:45 p.m., E-9:45, C-8:45, M-7:45
C — Light Opera Gems
 CFBZ GKOK KFRB KLZ KMBG
 KRLD KSOI KSI KTSA RVOO
 WABR WADU WJW WJX
 WDXZ WKY WLT WLVG WLVW
 WOC WOV WRG WRA WRSJ WRSZ
 WSM WTAM WTLG WTV WZAR

ED-10:15 p.m., E-9:15, C-8:15, M-7:15
R — Irene Franklin, Songs
 KSO KTBS KWCR KWK KTV WARI
 WBL WCKY WFA WFLA WGAR
 WIOU WIS WJAZ WJR WZK WZL
 WML WMC WOAI WREN WSMB
 WSYR WYWG

ED-10:30 p.m., E-9:30, C-8:30, M-7:30
B — Company of Progress
 CKOK KOL KSO KWCR KWR
 KTV WJZY WJZ WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

C — Edwin C. Hill, See Monday
R — Dance Hits of Yesterday
 WAPL WBN WCAE WCKY WCH
 WFBM WFLA WGST WHPR
 WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

ED-9:15 p.m., E-8:15, C-7:15, M-6:15
C — Street Singer, See Monday
R — Vic Edwin and Band
 KDYL KVA KPSD KFRB KGO KGW
 KHQ KOA KOMO KPRB KSD KSTP
 KTBS RVOO WBN WDAE WFBG
 WCH WFR WFLA WGY WHO
 WBAE WADU WJW WJX
 WDXZ WKY WLT WLVG WLVW
 WOC WOV WRG WRA WRSJ WRSZ
 WSM WTAM WTLG WTV WZAR

ED-8:15 p.m., E-8:15, C-7:15, M-6:15
C — Street Singer, See Monday
R — Vic Edwin and Band
 KDYL KVA KPSD KFRB KGO KGW
 KHQ KOA KOMO KPRB KSD KSTP
 KTBS RVOO WBN WDAE WFBG
 WCH WFR WFLA WGY WHO
 WBAE WADU WJW WJX
 WDXZ WKY WLT WLVG WLVW
 WOC WOV WRG WRA WRSJ WRSZ
 WSM WTAM WTLG WTV WZAR

B — Sixteen Male Voices
 WSRL WSSJ WSPD
 WOXD WOKO WORG WPG WQAM
 WLBY WMBD WMBG WMT WNAO
 WNSJ WTS WKBW WLVG WLVW
 WTK WTR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD

ED-12:00 p.m., E-11:00, C-10:00, M-9:00
E — Eddie Duchin and Orchestra
 GKOK KFRB KLZ KMBG KSCJ
 KTRB KVOB WABC WBRB WBT
 WACH WACO WADU WCCO WDAE
 WDBO WDOB WDRG WDSU WFSB
 WFTL WFBM WFLA WGST WHAS
 WHPR WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

ED-12:15 a.m., E-11:15, C-10:15, M-9:15
B — Sherlock Holmes
 KDYL KFL KFSJ KGHJ KGR
 KGO KGW KHQ KOA KOMO KTAR

THURSDAY

ED-6:45 p.m., E-4:45, C-3:45, M-2:45
R — Orphan Annie, See Monday
ED-6:00 p.m., E-5:00, C-4:00, M-3:00
C — Waldorf-Astoria, See Monday
R — V. Kalember, See Monday
 CFBZ GKOK KFRB KLZ
 KMBG KRLD KRIR KTSA
 KVOB WABC WADU WBGH
 WGOA WCOO WDAE WDBJ
 WDBO WDOB WDRG WDSU WFSB
 WFTL WFBM WFLA WGST
 WHPR WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

ED-6:15 p.m., E-5:15, C-4:15, M-3:15
C — Ozzie Nelson and Orchestra
 CFBZ GKOK WAB WAB WACO
 WBG WBO WCH WCAE WDAE WDBJ
 WDBO WDOB WDRG WDSU WFSB
 WFTL WFBM WFLA WGST
 WHPR WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

ED-6:45 p.m., E-5:45, C-4:45, M-3:45
R — Olga Albani, See Monday
C — Just Plain Bill, See Monday
B — Lowell Thomas, See Monday
R — Orphan Annie, See Monday
 B — Amos 'n' Andy, See Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00
B — Amos 'n' Andy, See Monday
 CFBZ CKLV KFL KLZ KMBG KSL
 KTSA KORB WAB WABC WBG
 WBO WCO WCAE WDAE WDBJ
 WDBO WDOB WDRG WDSU WFSB
 WFTL WFBM WFLA WGST WHAS
 WHPR WIR WTV WIGC WJBN
 WJWS WJZY WJZW WLVG WLVW
 WZBY WZLW WZVC WZVW
 WNOX WONO WPG WQAM
 WRCB WRSJ WRSZ WSPD WTLG

ED-11:00 p.m., E-10:00, C-9:00, M-8:00
 B — Amos 'n' Andy
 KDYL KFI KAND KGO KGW KHQ
 KOA KOIL KOMO KPBC KSTP

ED-8:30 p.m., E-8:30, C-4:30, M-3:30
 B — Three X Sisters
 KSO KWCR KWK WKOK WJZ
 WLW WMAL WRDN WSYR

ED-8:15 p.m., E-7:15, C-6:15, M-5:15
 C — Magic Voice
 CKOK KMBC KMOX WABC WADC
 WCQO WQAU WDRC WEAB WFLB
 WFBM WGN WGR WNAO WNR
 WSPD WJWS WJWB WKRC WNAO WOKO

ED-10:45 p.m., E-9:45, C-8:45, M-7:45
 C — Howard Barlow's Symphony
 CERR CKOK KFAB KFH KHZ
 KMBG KSCJ KSL KTRH KFOR
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WTLAR WUOC
 WSBT WSSJ WSPD WUOR WUAM

ED-6:15 p.m., E-5:15, C-4:15, M-3:15
 C — Ozzie Nelson and Orchestra
 CERR KFH KHZ KTRH
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-8:00 p.m., E-7:00, C-6:00, M-5:00
 R — Blackstone, Sanderson-Cumitt
 KSP KSTP KYW WHEB WQAE
 WCHS WDAE WFAE WFBG WELI
 WFL WGY WHV WJAZ WOC WOV
 WRG WSAT WTAG WTAM WJW
 B — Eno Crime Club
 KDKA KOIL KSO KWCR KWK
 WBAI WBB WGBA WGR WHAM
 C — Waidor-Astoria, See Monday
 R — Rals and Dunn See Monday

ED-10:45 p.m., E-9:45, C-8:45, M-7:45
 C — Neighbors, Drama
 CERR CKOK KFH KHZ KTRH
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-6:00 p.m., E-5:00, C-4:00, M-3:00
 R — Waidor-Astoria, See Monday
 C — Rals and Dunn See Monday
 B — Orphan Annie See Monday
 ED-5:45 p.m., E-4:45, C-3:45, M-2:45
 WJSD WSPD WUOR WUAM
 WMAX WDXB WSPD WUOR WUAM
 WJAN WKBN WLBW WLWB WMBD
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-8:00 p.m., E-7:00, C-6:00, M-5:00
 R — The Goldbergs, See Monday
 C — Boake Carter, See Monday
 WSMB WSRB WTV WISN WJWS
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-10:00 p.m., E-9:00, C-8:00, M-7:00
 C — Golden Country Club
 WABF WABC WQAO WQIC WJWS
 WSTP WHEC WHF WIOC WJAS
 WSTP WHEC WHF WIOC WJWS
 WSTP WHEC WHF WIOC WJWS
 WSTP WHEC WHF WIOC WJWS

ED-12:00 p.m., E-11:00, C-10:00, M-9:00
 C — Leon Belasco and Orchestra
 CKOK KFAB KIRA KIZ KMBC
 KTRH KSCJ KTRH KFOR WABR
 WACO WQAN WQAO WJAZ WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:45 p.m., E-6:45, C-5:45, M-4:45
 B — Irene Bordoni
 CERR CKOK KRA KYZR KOIL
 KPBC KSO KWCR KWK KYW
 WBAI WBB WGBA WGR WHAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-9:30 p.m., E-8:30, C-7:30, M-6:30
 C — Evening in Paris
 CKOK KIZ KMBC KMOX KOMA
 KSTP WBC WQAO WUOR WUAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-11:30 p.m., E-10:30, C-9:30, M-8:30
 C — Tod Lewis and Orchestra
 CERR CKOK KFAB KFH KHZ
 KMBG KSCJ KSL KTRH KFOR
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
 C — Jack Dempsey's Gymnasium
 CERR WABC WQAO WUOR WUAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-8:30 p.m., E-7:30, C-6:30, M-5:30
 C — William O'Neal Tenor
 CERR CKOK WAAB WABC WADC
 WQAU WDRC WNBW WFLB WFBG
 WHEC WHK WIOC WJAS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:15 p.m., E-6:15, C-5:15, M-4:15
 C — Buck Rogers, See Monday
 B — Radio in Education
 KDKA KDYL KECA KEK KFSD
 KFFR KGAR KGR KIR KOA KOIL
 KPO KTBS KVOO KWCR WBZ
 WBZA WENN WFLA WJAZ WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:00 p.m., E-6:00, C-5:00, M-4:00
 B — Amos 'n' Andy, See Monday
 R — Three Keys
 WBAI WBB WGBA WGR WHAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-9:15 p.m., E-8:15, C-7:15, M-6:15
 C — Street Singer
 CERR KFH KIRA KMBC KTRH
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-11:15 p.m., E-10:15, C-9:15, M-8:15
 B — Everett Marshall, Baritone
 KDYL KFI KFYR KGO KGW KHQ
 KOA KOIL KOMO KPBC KSTP
 KTRH KSCJ KSL KTRH KFOR
 KFOR KARB WABC WBOC WBRG
 WEAN WFAN WRBM WNK WBW
 WTCG WTV WISN WJWS WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-8:45 p.m., E-7:45, C-6:45, M-5:45
 B — James Melton, Tenor
 KOA WEAB WFR WHV WHS
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-8:00 p.m., E-7:00, C-6:00, M-5:00
 C — Just Plain Bill, See Monday
 B — Orphan Annie, See Monday
 R — Lowell Thomas, See Monday
 WBAI WBB WGBA WGR WHAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:45 p.m., E-6:45, C-5:45, M-4:45
 B — Ann Butler, Comedienne
 WBAI WBB WGBA WGR WHAM
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
 R — Mid-Week Hymn Sing
 KFFR KGO KOMO KTBS
 KTRH KVOO WBN WDAE WFAE
 WFBM WFL WIS WJAZ WJSD
 WJAN WKBN WLBW WLWB WMBD
 WMAX WDXB WSPD WUOR WUAM

MONDAY—(Continued)

ED-5:45 p.m., E-4:45, C-3:45, M-2:45
B - Little Orphan Annie
 CKGW KDKA WBAL WJAZ WJZ
B - Little Orphan Annie
 CKGW KDKA WBAL WJZ WJZ
 WJZ WJZ WJZ WJZ WJZ WJZ
ED-7:00 p.m., E-6:00, C-5:00, M-4:00
B - Anous 'n' Andy
 CKGW KDKA WBAL WJZ WJZ
 WJZ WJZ WJZ WJZ WJZ WJZ
C - Thee, Katie, Tenor
 WJZ WJZ WJZ WJZ WJZ WJZ

ED-7:15 p.m., E-6:15, C-5:15, M-4:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
 WJAZ WJAZ WJAZ WJAZ WJAZ
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
 WJAZ WJAZ WJAZ WJAZ WJAZ
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-8:00 p.m., E-7:00, C-6:00, M-5:00
C - Singin' Sam
 CKOK KMBG KMOC WJAZ WJAZ
 WJAZ WJAZ WJAZ WJAZ WJAZ
WFRM WGN WGH WGR WHR WJAS

ED-8:15 p.m., E-7:15, C-6:15, M-5:15
C - Carson Robinson and Buckaroos
 KFRB KFH KFLA KMBC KIRH
 WJAZ WJAZ WJAZ WJAZ WJAZ
B - Soonyland Sketches
 WJAZ WJAZ WJAZ WJAZ WJAZ
B - Clioette Club Eskimos
 KDKA KOL KSO KWR KWR
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-8:30 p.m., E-7:30, C-6:30, M-5:30
B - Singlers Trio
 CKOK KMBG KMOC WBAL WJAZ
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-8:45 p.m., E-7:45, C-6:45, M-5:45
B - Famous Brands - Tanny Weeks
 WJAZ WJAZ WJAZ WJAZ WJAZ
B - The Star Theatre
 KDKA KTRB WBAL WJAZ WJAZ
ED-9:00 p.m., E-8:00, C-7:00, M-6:00
B - A. G. Gingles
 KSD WBAL WJAZ WJAZ WJAZ
ED-9:15 p.m., E-8:15, C-7:15, M-6:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-9:30 p.m., E-8:30, C-7:30, M-6:30
B - Elvia Milman
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-9:45 p.m., E-8:45, C-7:45, M-6:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-10:00 p.m., E-9:00, C-8:00, M-7:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-10:15 p.m., E-9:15, C-8:15, M-7:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ

MONDAY
ED-5:45 p.m., E-4:45, C-3:45, M-2:45
B - Little Orphan Annie
 CKGW KDKA WBAL WJAZ WJZ
 WJZ WJZ WJZ WJZ WJZ WJZ
ED-6:00 p.m., E-5:00, C-4:00, M-3:00
B - Waldorf-Astoria Orchestra
 CKGW KFRY KGO KOA KPRC
 WJAZ WJAZ WJAZ WJAZ WJAZ
C - Rest and Dune
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-7:15 p.m., E-6:15 C-5:15, M-4:15
C - Backloggers - Year 2433
 CKOK KMBG KMOC WJAZ WJAZ
ED-7:30 p.m., E-6:30, C-5:30, M-4:30
B - The Star Theatre
 KDKA KTRB WBAL WJAZ WJAZ
ED-7:45 p.m., E-6:45, C-5:45, M-4:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-8:00 p.m., E-7:00, C-6:00, M-5:00
B - Elvia Milman
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-8:15 p.m., E-7:15, C-6:15, M-5:15
C - Carson Robinson and Buckaroos
 KFRB KFH KFLA KMBC KIRH
ED-8:30 p.m., E-7:30, C-6:30, M-5:30
B - Singlers Trio
 CKOK KMBG KMOC WBAL WJAZ
ED-8:45 p.m., E-7:45, C-6:45, M-5:45
B - Famous Brands - Tanny Weeks
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-9:00 p.m., E-8:00, C-7:00, M-6:00
B - A. G. Gingles
 KSD WBAL WJAZ WJAZ WJAZ
ED-9:15 p.m., E-8:15, C-7:15, M-6:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-9:30 p.m., E-8:30, C-7:30, M-6:30
B - Elvia Milman
 WJAZ WJAZ WJAZ WJAZ WJAZ
ED-9:45 p.m., E-8:45, C-7:45, M-6:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-10:00 p.m., E-9:00, C-8:00, M-7:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ

ED-10:15 p.m., E-9:15, C-8:15, M-7:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-10:30 p.m., E-9:30, C-8:30, M-7:30
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-10:45 p.m., E-9:45, C-8:45, M-7:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-11:00 p.m., E-10:00, C-9:00, M-8:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-11:15 p.m., E-10:15, C-9:15, M-8:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-11:30 p.m., E-10:30, C-9:30, M-8:30
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-11:45 p.m., E-10:45, C-9:45, M-8:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-12:00 a.m., E-11:00, C-10:00, M-9:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ

ED-12:15 a.m., E-11:15, C-10:15, M-9:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-12:30 a.m., E-11:30, C-10:30, M-9:30
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-12:45 a.m., E-11:45, C-10:45, M-9:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-1:00 a.m., E-12:00, C-11:00, M-10:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-1:15 a.m., E-12:15, C-11:15, M-10:15
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-1:30 a.m., E-12:30, C-11:30, M-10:30
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-1:45 a.m., E-12:45, C-11:45, M-10:45
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ
ED-2:00 a.m., E-1:00, C-12:00, M-11:00
B - The Goldbergs
 KFRY KPRC WBEN WCAE WJAZ

WHAT'S ON THE AIR TONIGHT?

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

Call	Dial	Call	Dial	Call	Dial

COLUMBIA (C).....WABC NATIONAL, Red (R).....WEAR NATIONAL, Blue (B).....WJZ

TIME: ED Eastern Daylight; E Eastern; C Central; M Mountain.
 For Pacific Time subtract one hour from Mountain.
 RADIEX is the only publication listing stations in alphabetical order for your convenience.
 While these programs are correct at the time of going to press changes are made from time to time.

STATIONS CAUGHT *and* Those That GOT AWAY

THESE would be very little fun in DX or in any other hobby, for that matter, if we couldn't brag a bit to others about our progress and talk over our triumphs and disappointments. So here we are at the regular monthly meeting of the greatest radio club on earth—the RADEX family. Our first speaker is a new member of the tribe.

"I have just discovered RADEX and like it very much," comments Max-

well Hall, 806 Fifth St., Marietta,

Ohio. "It seems to me that your idea

of having certain minimum require-

ments for counting DX reception is

an excellent one. When we report

receiving a certain number of sta-

tions it should be generally under-

stood just what we mean. This is

more important than verification. At

our house we have been interested

in seeing how large a portion of the

stations licensed by the F.R.C. we

can get. Counting only stations

listed in the F.R.C. bulletin of Jan-

uary 1, 1933, we have listed since

December 1, 1931, 507 out of 608

stations, and including all stations

listed in 12 states, Puerto Rico and

D. of C., all but one in 17 states, and

at least half the stations in all other

states. We have also identified 23

stations in Canada, 16 in Cuba, 14 in

Mexico, and one in Colombia. The

above includes one or more stations

on every standard frequency in the

regular broadcast band between 540

and 1500 kcs."

Added 151 New Ones

"For lack of space and other reasons I am unable to erect a really efficient aerial, an aerial suited to real distant reception," writes Rudolph Kure, 3633 Vine St., Clifton, Cincinnati, Ohio. "In spite of this handicap and the bad location I am dwelling in, with my rejuvenated

RCA 60—although the number of stations logged then was pretty high and the higher the number the harder it is to add new ones—I managed to log 151 new stations from October 1, 1932 to March 13, 1933. And good stations, too, such as KPJM, Prescott, Ariz., 100 watts; CKOV, Kelowna, B. C., 100 watts; KFXM, San Bernardino, Calif.; 10-BQ, CKIC, WAGM, CHGS, CHRC, KREG, KFTO, YVIBC and HJN, giving me a total of 836 stations."

"I have now received 550 stations,

218 veris," comments George E.

Lowrey, David St., Brampton, Ont.

"All the states and provinces logged,

but not Newfoundland. One in

France, YVIBC and HJN in South

America; ZBL and 4QG in Australia,

and 2YA in New Zealand; KGU

logged and verified. 15 100-watt

stations on the west coast; 31 stations in

California logged. Connecticut, D.

of C., New Hampshire, North Caro-

lina, Porto Rico, Tennessee, and Mani-

toya completed. CKIC, a 50-watt,

was logged and verified at 7:00 p. m.,

also CHNS of Nova Scotia, after

6:00 p. m. My best is KPFM rating

75.3 with 10-BI, 10-AB and CMJH

coming close. WHBC is my lowest

powered station, having 10 watts,

logged with lots of volume on April

1st."

Can't Get Over Seas

"I have been much interested in letters from other DXers published in your magazine," comments F. Herbert Peters, Woodbury, N. J., "but so far have hesitated to write to you because my record must seem rather small beside some of those published. However, if you are interested, here goes: I have logged 279 stations since October on a Philco 9-tube baby

(Continued on page 71)

*Would you like a fine world-globe?
See back cover.*

Brooklyn, N. Y.
Laboratories, 82 East 95th Street,
The "Phone Receptor" is manu-
factured and sold by the Amplivox
the phone receptor.

Any signal that can be heard with
the speaker can be heard on the
phones. The volume of sound is
identified on the speaker due to the
high noise level, can be heard with
the phone receptor.

Any signal that can be heard with
the speaker can be heard on the
phones. The volume of sound is
identified on the speaker due to the
high noise level, can be heard with
the phone receptor.

(Continued from page 6)

A Phone Receptor

*Forsthe Range, Bozeman, Montana.

ably heard.
I heartily endorse any fight that
you may make towards the rapid and
complete extinction of "channel hogs."
I wish to add KXL to this list. They
seem to be on the air indefinitely
every Saturday morning, playing
records for Gertie and Joe and for
the Broadway Cab Co., and announc-
ing most infrequently. Once I listened
to them for an hour and twenty min-
utes without their giving the slight-
est indication of who or where they
were. Perhaps the F.R.C., if it func-
tions at all, could work out a ratio
between time on the air and power.
Or perhaps the ax is the sole solu-
tion.

have been most satisfactory. When
my log began to include a few real
good catches, I started to seek verti-
cations, writing only to 3000-meters,
and 2000-meters if less than 1000
watts. I have been most careful, writ-
ing only after having logged definite-
ly at least 15 consecutive minutes of
reception, and I never even log a sta-
tion whose call I have not unquestion-
ably heard.

I have been DXing since last No-
vember with a Philco 35, after having
been out of the DX game since 1923.
Due to a remarkable location, results

From readers of RAMEX.
I should greatly ap-
preciate any suggestions from you or
drive me crazy. I should greatly ap-
preciate any suggestions from you or
hour deadline is a good idea, but it
merely raise one eyebrow. The 24-
tion, but the vast majority, I fear,
enough to accept my explana-
week. A few stations have been gen-
have destroyed numerous reports that
once every three or four weeks. I
service varies from once a week to
lection is made by neighbors, and this
so in winter. Mail delivery and col-
to town but once every five weeks or
delivery up this way and we venture
works in winter. There is no mail
phone is five miles away and it rarely
can get through. The nearest tele-
Christmas until Easter, only a horse
from town on a road that, from
tions are adopting. I live 18 miles
in the 24-hour limit that many sta-
hours after reception, and never with-
ing my report to the mail within 48
dozen, have I succeeded in get-
ONLY in one case out of over two

Verifying Under Difficulties

By IRVING VAN ZANDT, JR.*

*545 Baker Street, Lansing, Mich.

continent on earth.
My receivers are a Model No. 111
A. C. Philco (11 tubes) and a Model
No. 4 Philco converter (3 tubes). My
verticality on a weather-proof insula-
aerial is a 2" copper tube mounted
on top of the house. Also I have
an 8" copper ball on this tube and it
looks very much like a tall flag pole.
My ground is made of 40 feet of one-
half inch copper tube wound into a
six-foot coil and sunk into the ground.
I filled in, with the earth around it,
about fifty pounds of rock salt. Well,
with this outfit, again I am a DXer,
and you and your magazine are to
blame for it.

roadcast stations were taken over, or at least the programs were sponsored, by commercial advertisers. Their sole aim seemed to be dedicated to the task of impressing us with our possible social handicap if we did not use a certain brand of tooth paste or cold cure, etc. It was about this time that I lost my enthusiasm for DXing.

Last fall, as I was looking over some radio magazines on the news stand, I ran on to RADEX. The station listing in RADEX looked very impressive, also the DXers' comments, I purchased a copy and in it I read several "preposterous claims" of trans-Pacific reception on the broadcast band. After giving this trans-Pacific business some careful consideration, I decided to try it myself. I designed and installed the most efficient aerial and ground system that I could think of and had room for, and in this installation I decided to spare no expense.

Well, sir, the installation was soon made to my satisfaction and I selected a good clear night in December, set the alarm for 3:30 a.m. and was all set for my initial test to definitely prove to myself that 10,000-mile broadcast reception was impossible. I tuned in first on 750 kcys. for KGU, and of all things impossible, I heard him, very clearly. Then I tuned in on 720 kcys. and heard a man announcing the next portion of his program. His accent was very distinctly English. Could this possibly be Zealand? It was—ZLZYA.

Following I shall list a few foreign stations that I have since heard on the broadcast band: ZLZYA, KGMB, RUS, HIX, HHK, TIGR, WKAQ, KGBU, VOWR, YVIBC, HJN, VK5CK, VK6WF, VK6CL, VK4QG, VK3LO, VK2BL, VK4RK, VK4BC, VK4TO, JOBK, JOHK, JOGK, JOCK, JOIK, JOFK, JOAK and XGOA. In addition to this list I have heard many Canadian, Mexican and Cuban stations. Incidentally, I do some short-wave DXing. My shortwave log consists of over 100 foreign phone stations, located in 35 countries in every

thousands of watts, and most of our also power was increased to many marched on, our station list increased, all your friends about. As time fact, it was an event to proudly tell station out on the Pacific Coast. In and it was a real thrill to tune in a stations were few and of low power, er, I was a DXer. In those days our of the one-tube "Blooper" receiver—

AWAY back about 1922, in the days

By JOHN DE MYER*
DX Claims Impossible
He Tried to Prove

only over KPO on the Pacific Coast. The "Goldbergs" are now heard

* * *

After a lay-off of several months KOI's Mid-Week Jubilee has returned to the air. Wen Niles is the new master of ceremonies.

* * *

Danti Barsi, one of the "Chile Pepers."

Jack Hall's "Keep Smiling Revue" on KTAB is featuring a thirty-piece accordion orchestra every Wednesday afternoon, under the direction of

* * *

a good round of music. beauty, household hints, coupled with which consists of chats on styles, Barbara Lee conducts the program 8 to 9 a. m., daily except Sunday. sponsoring a program over KVA from The Emporium, one of San Francisco's larger department stores, is

* * *

Walter Kelsey.

phony orchestra. Sweeten succeeds cert master of the Salt Lake Symphony and previous to that was concert master of the Salt Lake Symphony Theatre in San Francisco for 10 years and previous to that was conductor of KRRC. He directed the orchestra at the RKO-Golden Gate Claude Sweeten is now musical director of KRRC. He directed the

* * *

from the New Lido Cafe.

orchestra over KPWI broadcasting overmight. He is now heard with his caston upon which he left it anywhere

FAN CHAT from the Pacific Coast

●●● By CHARLES C. NORTON, Vice-President Transcontinental Radio DX Club

TOM WALLACE was born in Bisbee, Arizona, about 32 years ago; is 5 feet 10 inches tall, weighs 170 pounds, has blue eyes, light brown hair, athletic shoulders and clear-cut features. At high and college he excelled in sports: football, baseball, basketball, track. Also, he sang in the University of Arizona Glee Club, played in the campus band, went in for dramatics, held various offices, was president of his fraternity, Kappa Sigma, during his senior year, and upon graduation in 1922 operated a tire business in Oklahoma for about a year. From that he went into real estate in Long Beach, California, and then came an opportunity to act as instructor in physical education and athletic coach for the Long Beach High School. Radio opened 3 new avenues; he sang over KFI for 3 years, switched to KNX and has been more than active announcing sports, appearing in dramas and writing ever since. There is an attractive Mrs. Thomas Jay Wallace, and three children, two boys and a little girl, complete the happy family.

Rob Roberts, after an absence of a year, has returned as the General Manager of KTAB. He resigned from that job last year to enter his own radio advertising business which he still maintains. Roberts was largely responsible for building up KTAB to the top of the medium class stations in the San Francisco Bay area at that time. He has many new plans for the growth of the station and is busy formulating them. KTAB Building in San Francisco, to which it recently moved from Oakland.

The Mauna Keans (KQW), specializing in native Hawaiian music, were originally the Mauna Kea Trio.

Joe Wright, whose orchestra has been heard over KYA until a recent fire destroyed the cafe from which they played, is mourning the loss of a Stradivarius violin destroyed by the fire. He says that during the entire time that the valuable instrument was in his possession this was the only occasion by the hundreds.

Monroe Upton was born in Bandon, Oregon, in 1898, finished school in Marshfield, went to sea as a ship's radio operator, spent a year with a radio station in Shanghai, saw more travel, landed in San Francisco and began broadcasting 6 years ago. Although he is best known as a comedian—his "Lord Biggewater" on Associated Spotlight has them in stitches—he is a successful writer and has turned out several books. Six feet tall, blonde, blue eyes, married.

(Continued on page 75)

On the morning of April 9th I received the surprise of my life when I tuned in 2CO, 2YA, 4QG, 3LO, 4BC, and on April 11th and 12th I again tuned in 4QG. I noticed something which I have not seen in print in your magazine and that is the wave band is very narrow. In other words, it requires finer tuning for Australia. Those who have been trying for Australia better take note. No one would believe me when I told them what I received on a Baby Grand, so I am getting them verified, if I can. I received KGU also on March 25th."

Regarding CMQ

"I have just received my verification from CMQ," announces Francis E. Andrew, 96 22nd St., Warwood, Wheeling, W. Va. "They write in English and have changed power to 500 watts. They inform me that they are on the air every Sunday from 2 to 3 a. m. with special programs dedicated to radiolians in foreign countries, which we hope you will enjoy. I have been logging stations since March 17 and have 151 to date. Have sent to about 70 for verification and have received 29 to date. I know that most of these are commonplace, but I really am proud of W.L.B.C. My radio is four years old and has very little selectivity. I am about 250 feet from a street car line. There is also a leaky transformer across the street which, despite numerous protests, is still interfering."

"I never did any DXing until three months ago," confesses Theo. Emmons, 88 River St., Niles, Mich., "and since then have logged several 100, 250 and 500-watt stations on the west coast and Canada. Some of them are KXA, KGDM, KFVD, KMPG, KFVI, CHGS and 10-BF, a 25-watter. My two best catches are HJN and 2YA. I logged an hour of HJN's DX program on Sunday morning, February 26. This program was announced in English, the call letters being given after every musical selection. I received them on 685

WBBM, Chicago, was that night.

"So why not anything?"

Best In Four Years

Guy B. Welch, 114 Brown Street, Reynoldsville, Pa., thinks "there is no doubt that this year has been the best for reception in the four years past. This is indicated by the fact that I can pick up Australian and New Zealand stations which I have tried to hear in other years ever since I started and this in spite of the fact that my old 8-tube Philco is now in its last stages. I'm sure that with a new set similar to mine I could have logged at least 20 foreigners." Guy reports the following "outlaws" now rampant in his state and wonders what the FRC is doing: WJAE, 1030 kcs., in Brookville, Pa., on daily; XYZ, 1010 kcs., Dubois Pa., daily; WRT, 800 kcs., Indiana, Pa., daily; have other readers logged these?

"After reading other readers' reports in DXing, I thought I would tell you about mine, since I am rather proud of it," comments C. Albin Johnson, 561 Trenton Ave., Wilkinsburg, Pa. "I have only been DXing since last October and to date I have received 222 stations. I have only recently started writing for verifications. Included are stations from Mexico, Canada, Cuba and Porto Rico. I have not had such good luck with the far western states. I have logged quite a number in California, but that is the only state in the far west where I have logged more than one. The best I have received are KABC, KDB and WKAQ, Porto Rico. Am using an American Bosch Model 200. Am not using any aerial as it works better when I attach the aerial connection to my ground."

"Radez started me DXing," blames J. Dickenson, 2109 Winnipeg St., Regina, Sask. "Being a policeman I can tune in when I get home in the morning at 4:00 a. m. My log stands at present at 171 stations, all of which are listed in Radez and are operating at present. I am using a Philco Model 20 Baby Grand TRF."

And this is the one-man radio show—Smiling Ed McConnell—who is heard each Sunday at 2:00 p. m. EDT from Cincinnati over the Columbia net.



WTSL was changed to WAML. Neither did I again count XEPN when they changed their wave from 885 to 585 kcys.” Although I have been a Radexer since November, 1931, this is my first letter to you,” greets Wilkins B. Green, 63 Thyra Ave., Toronto, Ont. “I have a Kolster CK66 model, which I have had since last May, and since then I have managed to log 494 stations, of which 84 are 100 watts, 8 fifties, 4 twenty-fives, 2 fifteen, and one lone ten. I have logged 84 over 2000 miles away. Some of my best catches are ZYA, KGU, YVIBC, HJN, KXO, KPGB, CKMO, KPFP and several others. In regard to the records claimed by some of your listeners, I would like to say that in radio reception almost anything is possible. Take the incident of my reception of KPFM, a 15-watt station over 1500 miles away. At the time of the reception it came in a great deal louder than WEBR, a 100-watt station on the same band, but only 40 miles, and it was as loud as

“In the six months since October 1st, I have logged 365 stations on the 1-b.c. band, including 329 in the U. S., 22 in Canada, 7 in Mexico, one in Porto Rico, and one in South America,” reports Alf Raymond, Avon, Ill. “I have logged stations on all of the 97 channels, and 44 states. My log is on the same plan as that of A. L. Long, Oklahoma City, in that I never log a station unless I hear the call letters and I am DXing for my own pleasure. I revise my log every month with the latest copy of RADEX, and the stations logged, as numbered above, are all active stations and are listed in the new copy of RADEX. Here are some stations to illustrate my plan. I did not add another station to my log when the call XEJD was changed to XEAW, or when

Revises Log Monthly

lately that I built this little outfit. “Have a DX log of 533 stations, all verified by either card or letter and am a member of the Buffalo News DX Club,” advises Joseph B. Reilley, 5 Forest Park, Jamestown, N. Y. “Am a make-up man on our morning newspaper here and get home about 2:30 a. m. just in time to DX. All my verifications but ten are verified from stations heard after 2:30 a. m. and are all real verifications. Have all our states verified, all the provinces of Canada (never have had Newfoundland), have a dozen from Cuba, the same number from Mexico, WKAQ in Porto Rico, YVIBC in Venezuela, HIX in Santo Domingo, and expect one from HJN in Bogota soon. In the summer of 1931 I received \$5.00 in gold from the Buffalo News DX Club for logging the longest distance, smallest powered station during June, which, as you know, is about the noisiest month of the year for DX, and the station was KPFM in Greenville, Texas, using 15 watts, and have a verified letter of ten consecutive records, I think is the most valuable verification in my collection.”

watters half way around the globe, while I don't question their authenticity, my sympathies are all with the anonymous agnostic," complains Arthur L. Robb, Topoka, Kans. "My claim I have never heard Japan, Hawaii, New Zealand, Australia, or cricket matches. The only station I have heard off of the North American continent was HJN on the morning of February 26th. While countless other listeners had enormous volume' and heard call and location 'is times' I had a hard time holding a faint signal long enough to hear one station identification. Here are some questions: Does XER use the call XEF any more? I haven't heard it now for about a year. Also, has anyone heard XEPN since it left 885 for 585?"

Logs Italy On B. C. Band

"I just want to tell you what I have been doing with my 2-tube battery receiver," writes Charles H. Peterson, W2CFW, 168 Beacon Ave., Jersey City, N. J. "Have had the set about a month and have heard 37 states and 5 countries. My best catch is IMI in Milan, Italy. I heard them on the morning of March 25th and was listening to them from 2:30 to 4:00 a. m. EST., on 905 kcys. They were coming in fairly well, but managed to get enough of their broadcast to send for a verification. Perhaps some of your readers heard this station also. I think that the morning of March 27th was about the best I ever heard. All the west coast stations were coming in as loud as Chicago. Some of the stations I heard were KPO, KGO, KHJ, KFI, KNX, KGB, KFPY and finally finished the evening with KERN, the little 100-watter in Bakersfield. I built the receiver, using the old Ambassador coil to kill time while I'm not using my amateur transmitter. I operate an amateur station and operate on the 20 meter band, but DX has been so poor down there



Pearl Pickens is registering something or other as she listens to Carson Robison in the Friday night series "Triple Bar X Days and Nights" on the CBS at 8:30 p. m. EDST.

of the stations has failed to send verification to date. Therefore I am very optimistic regarding those yet to come. I make it a set rule never to ask for verification until I have heard at least two station identifications and thirty minutes of the program. Class me with the 'Baron' or 'Ripley' if you will. Nevertheless I have sent to most of the Australians and New Zealanders a log of reception that encompasses from two to three and a half hours of their programs, with very few blank spaces due to fading out, static, etc. Now follows a list of my star catches. Don't forget all these stations were heard for more than an hour and a half at least: 2CO, 7ZI, JOAK, 3AR, 5CK, 4YA, 2YA, 5CL, 4QG, 3LO, 1YA, JOIK, 2BL, JOBK, 4RK, 2GB, 5DN, 3YA, 2UE, 4BC, WKAQ, KGU, YV1BC, CMX, CMBY, CMCD and CMJ. I must thank RADIX for them all, as it showed me just where to go for them."

"Concerning the publicity on those remarkable catches of five and ten-

ly the same time, so naturally if a report was sent to 4RK he would verify it because he was really broadcasting the matches, but still they could have been coming from Paris-Parisien, and again it was really too early for reliable trans-Pacific reception. This is the reason I think it was not 4RK, but Poste Parisien."

His Year's Report

"Well the DX season is all over the shouting, so I will do mine now," exclaimed Lee F. Blodgett, 917 1/2 W. Montgomery St., Creston, Iowa. "I have never had an article about my DXing in print except for the local paper news items. As I live in a small town I have a lot of my good verification news published in the local newspaper. I now have 545 stations in my log from 11 countries of the world. I have 10 countries verified to date. My best foreign stations are: 2YA, 2BL, 4QG, 4BC, 5CK and KGU. Of this list 4BC, 2YA and KGU verified, as well as JOIK and JOCK of course. I also have WKAQ and YV1BC verified. I now have 381 verified in 44 states of the U. S. A., 6 provinces of Canada verified, but I have heard 7 states in Mexico heard and 7 verified. My set is an Earl Model 21-22, using none of the screen-grid tubes. The antenna, which I intend to junk for a cage type next season, runs N-W by S-W on the first 100 feet, with a lead-in directional on feet and S-W by N-E on the last 50 feet, with any information on a cage antenna that anyone who has tried one can give me."

Verifies 100 Per Cent

"After reading of the numerous DX catches by many readers," comments C. Hesterman, 506 Fourth Ave. N., Saskatoon, Sask., "I, with many verifications from some of the stations and the others should come within the next two weeks. Not one

address, because I wish to verify this, my best catch. Europe from Santa Barbara! I failed to understand their Spanish, but have the music, time, etc. I am buying a phonograph hook-up to take records of my more distant stations. Now for the statistics. In those three weeks, by rather concentrated effort, I have logged 308 long-wave stations and 120 short-wave, making a total of 428 stations. Among the long wave are the following: 32 in Australia, 17 in Japan, 4 New Zealand, 2 Tasmania, 4 Cuba, 2 Hawaii, 2 Alaska, 1 Formosa, EAJ1, and of course XGOA, and 18 in Canada and 14 in Mexico. This makes 97 foreign stations or 57 trans-Pacific, and 211 U. S. stations. The latter record is rather poor because I spent most of my short time on the foreign ones. On short wave I have the usual Europeans and 7 in South America. Lots of police and airport stations bring the total to 428. Your magazine has been the deciding factor in bringing out what I believe is a good record from a superb radio."

Take Your Choice

"In your April issue, I notice some verifications from 4RK in Rockhampton on reports about the recent cricket matches played in Australia," remarks Clyde W. Ham, 1002 S. Lafayette St., Shelby, N. C. "I would like to say that the following Australian stations broadcast the matches: 5CL, 5CK, 2FC, 2BL, 3LO, 3AR, 4QG, 4RK, 2GO, 7ZL, 6WF, 2GB, 5KA, 5DN, 3UZ, 4BH. All of the class A stations gave the scores at the fall of each wicket. Talks were given from other stations by the following: Don Bradman, W. Woodfull, and Stan McCabe. I am of the belief that your readers who received veris from Rockhampton did not really hear 4RK, but did hear Poste Parisien. Some of your readers will know what I mean by this. Well 4RK was broadcast- ing the matches as explained, as was the French station, both at practical-

ten minutes of this the whole story was read in English, sentence after sentence. Very evidently this was a lesson in English, with a fairy tale as the practice theme. At 2:55 a man and read news cables of world interest. The first news was of the Japanese situation in Manchuria. Then a cable from Washington regarding prohibition here, followed by a report that Mayor Cermak was dangerously wounded by the assassin. Then a few New York stock exchange quotations. Then a cable from Ottawa and one from London. This news was broadcast from 2:55 to 3:00 a. m. PST, over the entire Japanese network of Iokw stations, as were the English lessons. While this is the first time I have heard this, it is probably a regular nightly feature. This was the first time I have listened to a Japanese program than in a news report from nearby domestic stations. As a coincidence with the news report, we have been snowed in here all this month (February) and our last mail delivery came a week ago. I live ten miles from the city. But here I am getting the latest news from Japan."

Europe From Santa Barbara

"Having become interested in the DX game only a short time ago," writes E. B. Martin, Deane School, Santa Barbara, Calif., "I cannot boast of long use of RADEX, but the two issues I have used have afforded me every possible advantage in getting distance. I have been DXing for three weeks with my new Scott All-Wave and am very pleased with its performance. Please find for me, either through your readers or through Washington, the address of EAJL, in Barcelona, on 860 keys. I have a very nice program received from them last Tuesday and have been trying frantically to find their

word by word report of our programme and the session featuring the Kelly family is a serial comedy drama presented one episode per week, entitled 'On Enterprise Farm,' and is a feature presented on behalf of United Metal Industries of Brisbane, Queensland."

Spokane Gets News via Japan

"Had a rather interesting experience this morning while listening to the Japanese," writes S. S., R. No. 4, Spokane, Wash. "This morning DX seemed to be in the doldrums so decided to listen to the Japs awhile, and at 2:45 tuned in JOIK and heard a fellow say in English, 'So she said to Walter, followed by a minute's talk in Jap, when this sentence was repeated, some more Jap, then, 'And he made her queen of the Broadlands.' This was also repeated after a little more Jap explanations, then more English sentences followed by more Jap. After about



Meet the "Greek Grocer" with Fred Waring and his Peninsularians on the Old Gold program, Wednesdays at 10:00 p. m. B.D.S.T. Take our tip and listen to him murder the good King's English. In humdrum, everyday life he is George Givot, of the Omaha Grocers.

FINAL Reports on Closing Season

• • • From the Radexers

log some of the Australians first, having found through experiments that directional aeri-als give me greater reception in the direction I am searching.

"Following is a quotation from my verification from 4BC: 'Your two most interesting letters of the 17th and 19th December, '32, reporting reception of 4BC programmes to hand with thanks, and we wish to congratulate you on your very excellent reception. The programme accurately reported in your letter of the 17th December was a relay from 200 miles away in the Australian bush of a real Aboriginal Corroboree, which was relayed to every Australian state and from station 3ME, Melbourne, on short waves for European reception. Your letter of the 19th December is practically a



Introducing H. V. Kallenborn, expert commentator on world affairs, whose program, "Current Events" is heard each Sunday at 7:00 p. m. EDST and Thursdays at 6:00 p. m. EDST, over WABC and the Columbia network.

EITHER radio is permanently improving due to the activities of the engineers, or the season of 1932-1933 has been an unusually favorable one and the pendulum may swing backward another year. There is no doubt that more and farther stations have been reported this season than in any that have preceded it. Scores of our readers who have fished in vain for those elusive T-P's in the past, have this year brought them in. And more of them have been reported from the Middle West and even from the Atlantic Seaboard than ever before. No longer are they confined to reports from the Pacific Coast division of the fraternity.

Has Ten T-P's

"I operate a 1932 Lucerne 7-tube TRF Northern Electric set," declares William Ansell, 168 Wascana St., North Regina, Sask., "and on November 15, 1932, my log stood at 137 stations, and then I commenced DXing, and to date my log has reached 369 stations, an increase of 232 this winter. I have logged 43 states and in addition the District of Columbia, KGBU, WKAQ, and KGU; 7 provinces in Canada; 5 Cuban and 19 Mexican. My trans-Pacific log to date is 2CO, 3AR, 5CK, 2YA, 4QG, 3LO, 2BL, 4RK, 3HA and 4BC. Have also heard one Chinese and several Jap stations, but have been unable to log them. My log consists in part of 110 stations operating on 250 watts power and under, including 81 100-watters, but, with the exception of trans-Pacific stations, I consider my greatest catches to be OKIC, Wolfville, N. S., and CHGS, Summerside, P. E. I., 50 and 100-watters respectively. I can use from 90 to 400 feet of antenna including lead-ins as conditions require, and have often used the maximum in order to

No extra charge outside the U. S. A.

69

City and State.....

Street and Number.....

Write Name plainly.....

- Leatherette Cover..... 50
 One two-year subscription with leatherette cover and Map-Converter, both free..... 3.50
 Two subscriptions to RADEX with one leatherette cover and Map-Converter, both free..... 3.50
 One year's subscription to RADEX, 10 issues and World Map-Converter, free..... 1.75
 Trial subscription, next five issues of RADEX..... \$1.00
 One copy of the next RADEX..... 25c
 One Radio World Map and Time Converter..... 25c
 One radio map of North America..... 15c
 1 for 10c 2 for 15c 4 for 25c
- Enclosed find \$..... for which send me postpaid my choice of your offers as checked below:
- Program "States".....

The Radex Press, Inc.
Hanna Building
Cleveland, Ohio.

INSURE YOUR RADIO ENJOYMENT
SEND THIS BLANK TODAY

I am on the Spartan 7-tube super. I am on the second floor of a three-story building, four blocks from downtown district, and have only a picture-moulding antenna and a ground to a steam pipe and consequently have much man-made static to contend with.

"The first night or two I received nothing but U. S. and Canadian stations including some 35 police, a few airport and airplane stations, and, of course, quite a number of amateurs. However, on the third day, which was Sunday, I received GSE and GSF with good loud speaker volume. A few evenings after that I received a station announcing as HJ-4-ABB at Manzanales, Colombia. Later I received HJB at Bogota, Colombia, with added Hawaii, Holland, Java, Portugal, Costa Rica and Switzerland to my list of countries heard which now totals twenty-five."

"My log shows 543 stations, both long and short wave," advises C. C. Borgen, Box 224, Mountain Lake, Minn. "On the short waves, I have GSA, GSC, GSD, DGT, YV1BMO, YVQ, IZBO, PLV, VK2ME, VK3ME, FYA, HKC, and VE9GW, the latter in daytime as clear as W8XK."

"As a result of my last letter in RADEX I have acquired several new friends in different parts of the country and I would be glad to hear from others particularly those who are using Spartan sets or Philco converters."

From Benigno Contreras, Box 74, Marina Station, Mataguez, Porto Rico, comes this report: "Although static has been more bothersome than ever this season and I am disappointed in my b. c. band reception, on the short waves I have had better luck. I have added Hawaii, Holland, Java, Portugal, Costa Rica and Switzerland to my list of countries heard which now totals twenty-five."

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Authors of "Somebody Loves You" and other songs hits, May Singh, Breen and Peter de Rose (otherwise Mr. and Mrs.) are heard in piano and ukulele melodies each morning at 10:00 EDT excepting Tuesdays, Thursdays and Sundays.

frequently between 6 and 9 p. m., on and around 4 megacycles, EST, to ships talking to WOO on 4.75 meg. I have heard DDAS, DDNY, and GMBJ and can be sure of one of the Bermuda ships almost any night. My best catch is the Empress of Britain, 1800 miles off New York. The 'Monarch' and 'Queen of Bermuda' can also be heard talking to VRT-ZFA in the early evening, the Bermuda phone having a very strong signal.

"Regarding the Empire's stations GSA, GSB, etc.," adds Mr. William-son, "it may be of interest to readers to know that they merely acknowledge reports with a printed card which says: 'We regret that we do not issue specific verifications of re- sults.'"

"His First Results
"Although several others here have had this same converter and could get no satisfaction with it, I am very much pleased with the Philco s. w. converter which I purchased a week or so ago," reports Eugene L. Beebe, 210 Franklin St., West, Jackson, Mich. "I am using it in connection with a

months I have been listening quite of Montreal. "For the last few fans," contributes K. P. Williamson, hope that may be of value to the shore transmissions, so here's some RDX regarding reception of ship to "I haven't seen many reports in present very good sound programs." kcs. and WIXAU, Boston, on 1550 think W2XAR, Long Island, on 1550 terstown Road, Pikesville, Md. "I advises Frank W. Politt, 1427 Reisd- I enjoy the television sound stations," "Although I have no television set, stations. ocean liners, airplanes and police them, not to mention numerous He has heard stations on every con- loudspeaker every day for a month. tells us that he logged EAQ on the Richard Zorn of Tucson, Ariz., reception."

anyone else who gets good daylight during the week is confined to the Rica. As I work nights my listening trials, and best of all, NRH in Costa burra, and the travel talks about Aus- mornings with their laughing Kooka- wavelengths, VK2ME early Sunday in spite of W2XE, Davenport, on three

also reports fine reception from EAQ, Caracas, which I can hear in Rome, EAQ, Madrid, like a local, signs off daily near 4 o'clock, IZRO eigners as DJD in Germany, which St., Atlanta, Ga. "I have such for- vises Henry King, Jr., 743 Simpson DX'er for the past two months," ad- "I have been an ardent short wave hour to all those 41 meter codes."

Spanish amateur, after listening an Peru, came in. Tuned in EAR262, a to give up when OAIR, Negritos, band for about 2 hours and was about Y. "I was tuning in the 20 meter vises Clarence Sargent, Dansville, N. per cent of a good DX record," ad- "Patience probably plays about 50 16 year old readers.

would be pleased to hear from other closest he has gotten. He is 16 and mala City, station TGX being the anything in South America, Guate- Winnipeg, Man., is unable to hear Bartlett Bemister, 522 Clifton St., tralia, Europe, Africa and Asia. With a good log of stations in Aus- and GSA on his Philco converter.

Carveth Wells, traveler, explorer and natural- ist, who makes the truth sound like a terrible whopper. He turns natural history into a "believe-it-or-not." On a split NBC Red net- work from Chicago at 10:30 p. m., Wednes- days, EDST.



Doyle E. Carpenter, Emmetsburg, Iowa, comments on his reception of PHI, Huitzen, Holland, at noon, an- nouncing in English. He writes: "I were working with Bangkok near 2 p. m., EST. DIQ was on Wednesday p. m., at about 8 o'clock with music, and also heard DJC the same night. Have been getting Radio Colomiale well on all three freqs. Its address is 103 Rue de Grenelle, Paris. I get their new broadcast in English best near 8:45 a. m., on 15,234 kcs."

"GSF has become my best 19-meter station," writes Geo. K. Glass, 1320 Cadillac Blvd., Detroit, Mich. "I re- ceived a card from VK2ME verity- ing my log just 9 weeks after the re- ception. I also got quite a booklet from YVIB replete with photos and even a Lucky Strike ad." Mr. Glass lists 19 new stations received in the past month. . . . says he is able to hear YVIB with W2XE on top of it. . . and expresses his satisfaction with the promptness and courtesy with which the BOC verifies the Dav- entry station reports.

J. F. Maney, Spring Lane, Stone- ham, Mass., says he "can't under- stand how those fellows with I-tube sets fail to get foreigners. Have a National SWAC and aside from Java, Japan and Russia have heard everywhere else. PHI came in with terrific volume last Saturday." Mr. Maney would like to hear from own- ers of the National FB7.

A reader who wishes his name withheld reports a Colombian station near 42 meters at 9 p. m., announce- session of that country. The schedule of VE9GW as given in the lists this month was contrib- uted by Alf Raymond, Avon, Ill. He also reports fine reception from EAQ

land Ave., Richmond, Va. He con- tinues, "They sent me one and it's surely the best looking veri I've ever received. NRH takes pride in the fact that it is the only amateur sta- tion in the world providing programs for the short wave listener."

We are printing this month a short article on station TI-4-NRH of Costa Rica, which was written especially for RABEX by Sr. Amando Cespedes M., the operator of the station. This will be found on another page and we are sure readers will find it highly interesting, being written by the man who has done more than any other person to spread the fame of that little Central American Republic.

"All you short-wavers who want to get a really elaborate verification from a pretty hard-to-get station, try for TI-4-NRH on 31 meters, suggests W. T. R. Morris, Jr., 3219 Gar-

S. W. DX Chat

errally between 5 and 8 a. m., EST, on 14,980 kcs., working with Berlin, VK2ME has been testing with VJDY, the S. S. Katoomba, which plays between Sydney and Perth. A few nights ago on about 32 meters, heard Mukden, Manchuria. The call here seems to be accepted as ZILY."

Dolores Gillen, attractive young NBC dramatic actress, plays the part of Alice Dudley, daughter of the newspaper editor in "Northwestern Chronicle" on the Blue net Sundays at 2:30 p. m. EDST.



One of our overseas correspondents reports that VK6AG at Perth, Western Australia, has returned to the air on 40 meters, transmitting at a time that is hardly favorable for general reception in the United States. Readers on the Pacific Coast may be able to hear it near 6 a. m. on Sundays, Pacific Time. The station of the Kuala Lumpur Radio Society located at Kuala Lumpur, Federated Malay States, broadcasts several mornings each week on 49.1 meters with the call sign ZGE. It has been heard a few times in the U. S. A. near 7 a. m., EST. A station that should be received here is VWZ at Kirkee, Poona, India, working duplex telephony with London. VWZ is on 17.3 meters. From 6 to 8 a. m., EST, should be the most favorable time for reception. Quoting from Mr. Walker's letter, "On Thursday heard KOR calling GMBJ, the Empire of Britain, on 40-41 meters and working the same boat. KOO and KOR are at Dixon, Calif. KAY, Manila, has been on a lot lately, gen-

From the Other Side

Station WPEY at Chattanooga, Tenn., has been deleted. Hialeah, Florida, station WNC, has been heard working with several South American countries in addition to the formerly chronicled Pan-Americans. All the stations which have so far been heard talking with WNC are listed here: Argentina, LSR; Bahamas, VFN; Chile, CEC; Colombia, HJB and HJP; Costa Rica, TTR; Guatemala, TGA; Nicaragua, YNA; Panama, RXF; Peru, OCI and Venezuela, YVQ, CEC, OCI and LSR are usually heard near 3-4 p. m., EST, and TGA and YNA near 5-6 p. m. The others are on the air at various times during the day from 10 a. m. to 6 p. m.

tion of the Philippines, Plaza Moraga, Manila: KAX, 19.980; KAY, 14.980; KAZ, 9.990; KBI, 21.140; KBJ, 13.240; KBR, 6.680; KTO, 16.240; KTF, 8.120; KTR, 10.910; KUS, 18.220; KUV, 12.280; KUW, 9.110. The frequencies are given in megacycles. Of these, KAY and KAZ have been heard testing by readers.

Whether new stations will be built at Shanghai is not known, but it is believed that the stations of the Chinese Government Radio Administration will be brought into use. These stations are, XGK, 18.692; XGL, 7.963; XGN, 16.383, and XGO, 7.575 megacycles. They may be addressed at Sassoon House, Jinke Road, Shanghai, China.

Mr. E. N. Luken, a RAXer in Crooks, S. Dak., reports station WXH at Ketochikan, Alaska, on 45 meters or 6.662 megas., testing with WBD or WPD, Seattle, Wash., on 45.3 meters or 6.618 megas. It appears that the long awaited Alaskan radiotelephone circuit is now in operation.

Airways and Police

Of particular interest are the new Canadian Airways stations. CJU, Winnipeg, Manitoba, operates on 86.9 and 97.7 meters (3.450 and 3.068 megas.). The other stations are UYO, Echo Bay, Northwest Territories; CGK, Ft. Chipweyan, Alberta; UYN, Ft. McMurray, Alta., and UYM, Fort Rae, N. W. T. These four stations transmit on 2.481 megas. (120.8 meters); 3.450 (86.9); 4.751 (63.1); 8.353 (35.89), and 12.951 (23.15).

Several new police stations have recently been licensed, the first of these not yet having call letters assigned. It is located at Asheville, N. C., and uses the 258 kcs. frequency with 100 wats. Others are:

WPEL — W. Bridgewater, Mass., 1574 kcs., 500 wats.
 WPII — Columbus, Ga., 2414 kcs., 50 wats.
 WPOF — Knoxville, Tenn., 2470 kcs., 100 wats.

We have been advised that the stations owned by Transpacific Communications, Ltd., located at Dixon, California (KWO, KWU, KWV and KWX) have been licensed to add Manila as a point of communication, while KEB at Bohinas is now authorized to communicate with Shanghai, Manila and Honolulu. These circuits are not yet in operation, but the trans-Pacifics will be as follows:

The stations of the Radio Corpora-

The T-P Phones

11.800 25.40, IZRO, Rome, Italy.
 many.
 11.753 25.51 DJD, Zeesen, Ger-
 11.711 25.60, Pontoise, France.
 9.862 30.40, EAQ, Madrid, Spain.
 Australia.
 9.855 31.28, VK2ME, Sydney,
 land.
 9.510 31.53, GSB, Davenport, Eng-
 Australia.
 9.503 31.55, VK3ME, Melbourne,
 Ecuador.
 6.618 45.31, PRADO, Riobamba,
 Ecuador.
 6.119 49.00, YV1BC, Caracas, Ven-
 ezuela.
 6.050 49.56, GSA, Davenport, Eng-
 land.
 6.050 49.56, GSA, Davenport, Eng-
 land.
 6.050 49.56, GSA, Davenport, Eng-
 land.

Following are the ten stations most often reported to us by readers. These are recommended especially to beginners as the most dependable and most easily tuned of the stations broadcasting musical programs regularly.

Ten For Practice

(A/sia), Ltd., 47 York St., Syd-
 ney, Australia.
 VK2ME: Amalgamated Wireless
 (A/sia), Ltd., 47 York St., Syd-
 ney, Australia.
 VK3ME: Amalgamated Wireless
 (A/sia), Ltd., Box No. 1272L,
 Elizabeth St. P. O., Melbourne,
 Australia.

Amalgamated Wireless is very anxious to receive reports of reception and always acknowledges them. They may be addressed as follows:

Amalgamated Wireless is about equal to the two stations as compared with 2ME's 4,000 wats as compared with 2ME's 12,000 wats, the volume and quality spite the fact that 3ME uses only

THIS SUMMER on the SHORT WAVES

• • • By PAGE TAYLOR

Broadcasts was inaugurated on July 5, 1931, and continues to hold the interest of thousands of fans. These programs are transmitted every Sunday morning and may easily be heard by anyone with the most simple kind of receiver. The schedule of 2ME is changed slightly each month so as to obtain optimum results in each zone to which the various parts of the program are addressed. The schedule for the next three months will be as follows, time in EST.

June: 12 to 2 a. m.; 5 to 9 a. m.; 11:30 a. m. to 1:30 p. m.

July: 12 to 2 a. m.; 4:30 to 8:30 a. m.; 11:30 a. m. to 1:30 p. m.

August: 12 to 2 a. m.; 4:30 to 8:30 a. m.; 10:30 a. m. to 12:30 p. m.

VK3ME is heard on Wednesday mornings from 5 to 6:30 and on Saturdays from 5 to 7 a. m., EST. De-



Permit us to present the distinguished Lieutenant Commander Rudy Valle in his pretty naval uniform. Rudy enters the navy via the staff of the Governor of Maine. The Lieutenant Commander still directs the Fleischmann Hour on the NBC-WEAR net each Thursday night at 8:00 EDT.

ANY of our readers who are constructing the converter described in Mr. Dashiell's department are probably wondering just what they will be able to hear on it before "good DX commences again in the winter." These persons who have tuned exclusively in the broadcast band may be surprised to learn that the greatest distances are more easily accomplished on short waves during sultry summer weather than during the winter months. Many stations are very difficult to tune during the winter while they are heard with tremendous volume in the summer. This is particularly true of the Australian stations.

On completing the converter the builder should confine a few days to becoming familiar with it, following the procedure outlined in the article "Breaking into the Short Waves" in the May number of RAdex. After the required fundamentals have been acquired, if the tuner will confine his efforts to the ten best stations mentioned this month he will avoid many pitfalls usually encountered by the beginner. Perhaps of greatest interest among the stations listed are the two Australian stations.

The Friendly Australians

These friendly stations are among the oldest short wave stations in the world, VK2ME having broadcast the first British Empire Program on September 5, 1927, on a wavelength of 28.5 meters. Since that time Amalgamated Wirelless has pioneered in many radio activities, adding immeasurably to our store of radio knowledge. Their efforts to please by transmitting interesting and instructive programs are earning for them the reputation once held by PCJ, that of being the station with the largest audience in the world.

The present series of World Wide

You can't tell these radio artists by their names—particularly after the numerologist has been working on them. Latest to fall under the spell of the "number lady" are the Nell Sisters, that trio of blonde blues-singers. In the home town of Indianapolis, Lucille, Ann and Gwyneth are known as the Neal girls. But they were told that luck, fame and fortune awaited them if they put an "l" in their name.

* * *

She uses the pillow to help her cry in various ages, from an hour to four-teen years old. She laughs and coos, too, and her varied imitations are heard on many NBC programs, including the Maxwell House Show Boat, on Thursdays at 9:00 p.m. EDST, over an NBC (Red) network, on which she has the important role of Henry Maxwell.

She uses the pillow to help her cry for several officials, and was solemnly hired."

Success in imitating was the walling of a baby. Miss Cox put on her hat and went right up to the National Broadcasting Company. She cried

Sally Belle Cox



The beginning of Miss Cox's unusual professional career was described in a recent issue of the New Yorker magazine. "Miss Cox seemed destined for a tearless life when, five years ago, she got a job at an orphan asylum in Cleveland," the New Yorker said, and told how she amused the children by imitating a wailing child. "It brought down the house, and the squawler shut up and let somebody squaw! that could squaw!." One day she read in the paper that the one sound the radio people had had no

Most young ladies can get along with their weeping with the aid of a small hankie, but earning a living by crying requires more equipment. And any time you hear a baby crying on NBC programs, you can be pretty sure it is Sally Belle Cox, aged twenty-five.

The Official Weeper

When the stock market took its famous nose-dive, dragging real estate values along with it, Myrt remembered those vaudeville skits she once wrote. She remembered all of the real-life tragedies and comedies behind the scenes, often far more vividly than those before the foot-lights—and "Myrt and Marge" was born. Of course, there were a few difficulties in getting those first sample scripts before P. K. Wrigley, but a girl who'd spent some sixteen years fighting for success could hardly be stopped by a half-dozen secretaries. And in radio Myrtle Vail has attained a success greater than that afforded by musical comedy, or vaudeville, chicken-farming, or real estate.

When Donna was fifteen, she served notice on the family that she was joining their act, or some other act—this in spite of the private school influence. The show became Damerel, Vail & Company," Donna being the "& Company." For two years she toured with mother and dad. Then they bought a chicken farm, and took up real-estate as a sideline, and a sub-division was soon flourishing.

nerships.

was writing the acts. A year later she was back with her husband in vaudeville. This time she

George, Jr., appeared on the scene. went into temporary retirement, and omitted from her curriculum. Myrt Chicago, with instructions that she be placed in a private girls' school in two-a-day. Then young Donna was the continent eleven times in the "Vail." In eight years they crossed rights and toured the big-time circuit. Myrtle stepped into the theatrical picture at the age of fifteen, in the current show, "The Umpire." From her isolated position she took one long look at the rising star, Damerel, and fell in love. Damerel was so busy with the make-believe love-making on the stage that more than a year passed before he realized the real thing was going on back stage. Then came a prompt marriage and one of those story-book types of stage partnerships.

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The Rise of "Myrt"

Two years after their marriage the Damerels were playing opposite one another in "The Merry Widow." When Franz Lehar wrote the first condensed version for vaudeville presentation this couple grabbed the rights and toured the big-time circuit. Myrtle stepped into the theatrical picture at the age of fifteen, in the current show, "The Umpire." From her isolated position she took one long look at the rising star, Damerel, and fell in love. Damerel was so busy with the make-believe love-making on the stage that more than a year passed before he realized the real thing was going on back stage. Then came a prompt marriage and one of those story-book types of stage partnerships.

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Phil Baker and his Accordion



SHORT STORIES of your FAVORITES

• • • By "Betty"

Bernie, the "Old Maestro" of today. By that time Phil had deserted the piano in favor of his accordion. When the team split, each became a star in his own right. When America entered the World War, Phil joined the Navy. "That did wonders for me," he declares. "I never had the nerve to speak a line on the stage until I put on that uniform. And now, well, even Beetle can't keep me quiet." A flash at Phil's career since the war years brings in the names of some of the most successful musical comedies and revues the American stage has seen. He was starred in



With Myrtle Vale out of "Myrt and Marge" by reason of an automobile accident, Bobby Brown, director of the series, is a busy man. In addition to directing, he now writes the script, a task formerly performed by Myrt. Here's Brown conferring with Marge on the new plot which, by reason of necessity, revolves about the question, "Where is Myrt?"

ARUNAWAY boy from New York, hungry and broke, leaped at the chance to make fifty cents by appearing in an amateur night show at the Bowdoin Square theatre in Boston.

Years later that boy became the first \$5,000 a week headliner and master-of-ceremonies in the great picture-and-vaudeville houses of America.

Now the boy, Phil Baker, is starring on the Armour program, heard every Friday night over a coast-to-coast NBC (Blue) network at 9:30 p.m. EDT.

The story of Phil's stage career, from that amateur night in Boston, covers well over twenty years.

Returning to his New York home after the runaway to Boston, he eventually became secretary to Carl Laemmle in the old IMP Film Company. Mary and Lottie Pickford and King Baggot were the company's stars. Bored by a secretary's chores, young Phil spent all his leisure moments at a movie house around the corner from his home. He almost lived there, he says, sitting down front and watching with envy the nimble fingers of the girl pianist. One hot night the girl was taken ill and had to leave. The picture was continuing without music when Phil, without invitation, slipped down to the piano and began to play. He could only play three tunes, among them "Hearts and Flowers," but the manager gave him a job, and he was really started on his career.

And Then to Vaudeville

Phil's first real stage venture was in vaudeville, accompanying a violinist on the piano. Later he formed the team of Bernie and Baker with Ben

recory will not reach us in time for this issue. We hope secretaries of the clubs will send us the information requested in the May issue, so that we may have a complete roster of the leading DX Clubs of North America in our September issue.

"May I draw your attention to the fact that station WKAU, Laconia, N. H., mentioned in the April RADEX, has been off the air for at least two months?" complains B. B. Bosworth, 50 Glymer St., Burlington, Vt.

"I listened to a DX program over XERFV, Juarez, Mexico, on March 26," writes Charles Meyer, Jr., 411 Blake St., St. Joseph, Mo., "and I distinctly heard them say that XERFV was the greatest little 50-watt station in the world, while in the April RADEX you list them at 100 watts."

"Early on the morning of April 23rd, I received a station on 1170 keys. With the call letters of WJKY, Sandusky, Ohio," reports George R. Schmeider, 3148 Yorkshire Road, Cleveland Heights, Ohio, who wants to know what this station was doing on the broadcast band. Who knows WJKY?

Sufficient data for a DX Club Directory? New Zealand long-waver."

Converter Brought Zealand

not be put into effect. There is no reason at all why it should

This suggestion is well made and Mexico City, D. F., etc.?"

Morelia, Mich.; N. Laredo, Tams; possible to list them as Juarez, Chih.; in the list by states. Would it be order to find the state, have to look with 'X' they are in Mexico, but in We know that since their calls begin etc., why not list them by their states? Morelia, Mexico; N. Laredo, Mex.; the Mex's as being in Juarez, Mexico; list by frequencies, instead of listing Ave., Cambridge, Ohio. "In your quires Earl R. Roberts, 105 Gumber Ave., Cambridge, Ohio. "In your reports."

"May I make a suggestion?" in- reports. "Two or three 'stamp-collectors' in 140 this season, was almost Zero—only reports in two late programs I gave results. The percentage of doubtful your campaign for better reports adds: "I must congratulate you on that country soon. Senator Karmar will be three or four new stations in up to the moment. He thinks there terially in bringing our Cuban data GMCF, Havana, Cuba, helps us ma-

Presenting the "Men About Town" who provide the vocal harmonies for B. A. Rolfe and his Terraplan Orchestra on the Saturday Night Dancing Party over the NBC Red network at 10:00 p. m. EST. Will Donaldson and Frank Luther (top) and Phil Dewey and Jack Parker (bottom).



there are many more DXers who agree with me. It does seem as though if enough pressure was brought to bear and enough protests sent in that we could get the R. R. C. to do a little something about it. I would suggest that we all pull together and try to get KGFJ to sign off for at least one hour a night, say from one to two, or two to three, during the DX season each year, say from the first of October until the first of May. I don't think that would be asking too much and it would give us DXers here on the coast at least an even break. It would then show that KGFJ was at least human any way."

And the Unlicensed Station

"Here is some more dope on out-laws," complains R. B. Rolfe, 1741 Burnett Ave., Waco, Texas. "The Rosebud station, 720 kcys, has apparently gone off the air, as I can't raise him any more. But there is BLTX on 1000 kcys, in Belton, Texas. They use the slogan 'The Playground of Central Texas' and there is also a station in Taylor, Texas, on 980 kcys. They don't have any special time on the air, as I get them at odd times. The Belton station also comes in at odd times. The Taylor station has never given any call other than 'This is the Cotton Belt station in Taylor.' There is also a station in Temple, Texas, with studios in the Doring (?) Hotel. Their call is also a slogan, 'The Voice of Bell County,' which is all I have ever heard them announce. What has become of XEPN? I can't get him any more. He used to be good 24 hours a day, on 585 kcys, but now I can never get him at all. My radio is a Philco Model 90 9-tube Baby Grand, and 1500 kcys. is as low as the dial reads. The Home Benefit Life Insurance Assn. station in Martin comes in about as far as 30 kcys. would be below 1500. Are they a shortwave station? My pals say they are. I don't see how they could be."

Arthur Johnson, Secretary New-foundland Boxing Commission, Box

Some Station Affinities

"Alfred H. Bacon, New Westminster, B. C., writes for help about stations who almost absolutely block various kilocycles," writes Miss C. A. Brinkerhoff, 317 Clinton Ave., Oak Park, Ill. "Now I have never been able to tune in KGFJ on 1200 kcys, though I do get KERN and KWG. It seems to me that various radios have super-sensitiveness, for if I bring in a station once that special one is almost always in evidence. On 570 kcys. WEAO and WNOX are always there in full force, and only in specially good DX weather can other stations cut in. On 580 I can sometimes cut through WIBW. On 600 WMT, Waterloo, Iowa, day and night is never silent it seems to me. 620 gives WTMJ; 660 WEAF; 880 WSUI; 910 XEW; 960 XEAW; 1200 WVAR; 1210 WSBC or WEDC; 1300 KFH; 1310 WCLT or WKBC spoils all DX usually until after 11:00 p. m. KRJZ is ever evident on 1370; WHFC drops out everything on 1420 until early morning. These are a few stations which bother me for early DX. Perhaps after 1 or 2 a. m. it would be better and locals would be off also, but it is marvelous how a fine selective radio can act so strangely at times."

Our good friend, Raoul Karman of

"I wish to refer," writes H. F. Strain, 15081 Vose St., Van Nuys, Calif., "to the article on page 19 of the April number by Mr. Alfred H. Bacon, New Westminster, B. C. I think his article is well in regard to the 'wave hogs' and I most heartily agree with him, and especially in regard to our local KGFJ. I have been knocked out of getting nearly every station on the 1200 channel simply due to KGFJ. The only ones that I have on that channel are stations that I got at some time before they went on that frequency. I think it is an outrage and a shame. I know that

The 24 Hour Pest

sets. "Here is another entry for your 'baby' department, which seems to be ever growing," remarks Bill McPherson, 134 Murray St., Peterborough, Ont. "I have my home-made one-geant tube set, on which I have received 202 stations in a little over two months. I have received all the 50 k.w. stations in the U. S., 4 stations in Mexico, CMAJR and CMAF, Canada are CKY, CKCR, CFCO and CHGS. I would like to know when We hesitate to give records made on

West 11th Street, New York City, writes us of two one-tube sets he has built, the first one using a screen-grid tube and the second a 230. He logged a total of 301 stations with the two sets.

Chicago station. No battery is used W1W, WGST, WSB and one other listened to WENR, WSM, KDKA, long. With this arrangement I have my double-wire aerial about 175 feet one-twentieth the power. All this can be practically eliminated while the latter comes in fine even with only mitter and six from WGST, the first only two miles from WSB's trans- have ever been able to build. Living might be interested in my crystal set, which is the most selective that I

multiple-wire aeras? body really settled this question of pick-up than the wire, but has any- Perhaps the ribbon gives greater as much difference on the later. fore, while there is some, though not louder on the former receiver than be- Stations come in much ence on my crystal set than my tube ribbon system replacing a seven- strand one. Now I notice more differ- At the present time, my aerial consists of a double copper signal strength.

At the present time, my aerial consists of a double copper ribbon system replacing a seven- strand one. Now I notice more differ- ence on my crystal set than my tube receiver. Stations come in much louder on the former receiver than be- fore, while there is some, though not as much difference on the later. Perhaps the ribbon gives greater pick-up than the wire, but has any- body really settled this question of multiple-wire aeras?

"Incidentally, some of your readers might be interested in my crystal set, which is the most selective that I have ever been able to build. Living only two miles from WSB's transmitter and six from WGST, the first can be practically eliminated while the latter comes in fine even with only one-twentieth the power. All this on my double-wire aerial about 175 feet long. With this arrangement I have listened to WENR, WSM, KDKA, W1W, WGST, WSB and one other Chicago station. No battery is used to bias the crystal. Anyone desiring me a stamped, addressed envelope, Do you know anything about the 'Tunicoil' tuner manufactured by the Radio Products Co., of Kansas City, Mo.?"

me a stamped, addressed envelope, this hook-up may have it by sending me a stamped, addressed envelope. Do you know anything about the 'Tunicoil' tuner manufactured by the Radio Products Co., of Kansas City, Mo.?"

A favorite of many thousands of children, Madge Tucker plays "The Lady Next Door," Mondays, Tuesdays, Thursdays and Fridays at 4:45 p. m. EDST and Saturday at 5:00.



TRIALS and TROUBLES of the EDITOR

constitute a home-study course in radio. How many of our readers want Mr. Dashiell to prepare such a course? Let us hear from you. As the ads say, "Write now—today."

For years we have wanted a really good world globe large enough to be of real, practical value. We have found it at last and one of them now ornaments your Editor's desk where it is used daily. It is surprising what a different aspect the countries of the world take on when presented in globe form and how many things are made clear that cannot be grasped from a series of maps on different pages. Hereofore a good large globe cost from \$15.00 to \$20.00 but at last we have found one at a very reasonable price and we are passing the advantage on to our readers. With one of these globes and a R.A.D.E.X. Time Converter, the radio listener can say

"OK, Australia."

Building Sets

There is still a widespread interest in building a set of one's own, particularly the smaller sets of one, two and three tubes. No music seems quite so sweet as that which comes from a set which one has himself created. As a child is to its mother, so a radio set is to the one who constructs it.

"Now that we have heard so much about two-tube records, why not have a one-tube set competition and see who can build the best set ('bloodless' by all means), and the most efficient hookup using one of the new tubes," suggests Douglas Wauchop, 501 S. Candler St., Decatur, Ga. "Those who 'blood' should be disqualified and also dismembered! Do you think there is anything in the theory that double-wire aerials are less efficient than single? I have been told that each wire has a tendency to neutralize the other, thus lowering the

THIS May issue of this compen-

dium of radio information was all ready for the press when the first reports of the kilocycle earthquake in Canada first reached us. Time and Tide and R.A.D.E.X. can wait for no man. Much as we disliked to do so, we had to let the May issue go forward without the latest Canadian data.

Press reports from the Dominion are apprehensive that this reallocation is merely prophetic of others yet to come and that the new Radio Commission in Ottawa is going to follow the modern education principle of "learning by doing." Many complaints of conditions following the recent shift are coming from Canada, some intimating that it is all a part of a vast conspiracy on the part of the new Commission to keep U. S. vibrations out of Canada or at least out of Canadian sets.

Our sympathy goes both to Canadian listeners and to the new Radio Commission. It's some problem. We hope that we shall be able to give a complete picture in the proper departments of this issue of the Canadian broadcasting situation "as is." Some of the reports that have reached us are contradictory and we are awaiting official word from the Ottawa authorities.

Radio in A B C

Our Technical Editor has under consideration a series of Simple Lessons in Radio to start with the September issue. These would be written in as nearly non-technical language as may be used to present a highly technical subject. The plan is to begin with the simplest phase of radio and lead the reader, through a series of ten monthly lessons, into an understanding of the real principles underlying radio. These articles would

THE WORLD'S Most Friendly STATION

• • • By AMANDO CESPEDES MARIN

to 15 watts, and with them the NRH obtained long DX records from India, Russia and Japan, Denmark, Holland, and South Africa, not obstant that North and South America became obsolete to the waves, for some skip effects.

It has been all very queer, and to-day, when the NRH files have 16,800 letters from 46 countries on earth, you can not but repeat the phrase of Mr. Rigle in Massillon, Ohio, which reads: "—and I certainly hope we all hear you daily from now on, as you seem to be the only friendly station there is anymore."

Broadcasting Is Fun

It is all love down here and fun, therefore we all make merriment, and when Miss Céspedes speaks, we laugh and when my boy plays the piano we applaud and when the music is pretty I whistle, no matter if 52 years is upon me. I am just beginning to live. And radio is my plaything. The voice of the youngest announcer is that one of Alvarito, 4 years old, and the only announcer in the world, which has been heard ever since 45 days old.

The NRH has been a friend and it ever will be, because she does not carry paid up advertising of any nature, but that of his owner announcing his gospel of Friendship, or the headquarters of the Union Radio Americana, a big Club started for and by the listeners and radio followers in the American Continental countries, under the Spanish language do-

The station works every evening from 4:30 to 5:30 p. m. central standard time, and is using two bottles DeForest type 503A in push pull, which nominally most give at least 200 watts. The modulation is done with two 845 type tubes, but one of them is under silence, and thus, some

(Continued on page 79)

Editor's Note: We are pleased to present this message to our readers from the builder and operator of what is undoubtedly the most unique station in all the world, TI-4-NRH. We are giving it in the author's own words that our readers may enjoy the pleasant sincerity of the writer. In no other way could they catch the extreme friendliness which the author so evidently feels for the radio listeners of all the world.

FIVE years ago, by this time, the waves from a little tiny broadcaster were sprouting from 3800

feet shack, in the ever green mountains of near-by the city of Heredia, in the Benjamin Republic of the Americas, the girde of the Continent, known as Costa Rica.

And since then all the readers of RADEX have known more or less of the marvellous success of the old NRH, a pure amateur station, built for fun and maintained through out by the help of amateur fans in the world, all admiring the so many events occurred in the "junk" amidst friendship, flowers and coffee trees.

It is the only known case in the world, that with tiny 7½ wats power, the whole continents were conquered with mere broadcasting efforts to please, in three years. Then, for two more years the power was increased



Here's one reason why visitors try to witness the broadcast of *Pond's Program* each Friday night at 8:30 EDT in the Red studios of the NBC. Her name is Lee Wiley.

Will my Majestic "B" eliminator,

60 vs. 30 Cycles

the estimated number on the dial. found some spaces to either side of ing, actual wave lengths may be But since these are theoretical read- points, and these can be calculated. should be heard at intermediate other wave lengths or frequencies 135 meters, respectively. Various switches, you should get either 40 or dial with the low and high wave is purely mathematical. At 50 on the condenser is used when tuning. This three tubes, therefore, a r.f. ampli- but the volume will be low because by a detector will give greater gain, amplifier. Two stages of r.f. followed detector, with a -31 tube as an audio frequency amplifier and a -30 as a gain if you use a -32 tube as a radio- We believe you will obtain better

Your receiver now employs 56, 57, 58 and 59 tubes. We cannot advise any change from these tubes. This set is the latest, except in a few re-

140 Zenith Tubes

Can I change the tubes in my Zenith model 140 receiver to still newer types and get better satisfaction?

Which is the best for a 2-volt and 3-tube short-wave circuit: One r.f. tube, one detector tube, one audio frequency tube; one detector, two audios; or two r.f. tubes, and one detector tube?

Short Wave Circuits

that would otherwise arise. originals, in order to reduce the hum later should be twice the size of the condensers in the filter system, which replace the transformer and parallel is nothing that you can do except volt line to which it is attached. There partial short-circuit across the 110- coil becomes a carrier of more cur- than at 30 cycles, and therefore the of a coil of wire at 60 cycles is higher considerable current. The resistance former will tend to heat up and use hum. The primary coil of the trans- output and there will also be much on 30 cycles it will not deliver its full cycles. If you use your eliminator No alternating current device de-

which works on 110 volts at 60 cycles, operate the same on house current of 50 cycles in another locality?

Converter With AK 85

Can my Atwater Kent model 85 receiver be used with some kind of short-wave converter?

Your receiver can be used with any

short-wave converter on the market. See the March, 1932, and May, 1933, issues of RABX for articles on these converters. The instrument is simply attached to your receiver and all short-wave tuning done by a single control on the converter instead of the broadcast set. They are very satisfactory, and perhaps you have read of some of the remarkable results our readers are obtaining with this kind of radio reception.

Dial Reads 0 to 100

The dial of my Stewart-Warner short-wave converter reads 0-100. How can I tell where different frequencies can be located?

Since your dial on the converter is divided into 0 to 100 spaces it is dif-

icult to state where certain kilocycles will be found without experimentation. The preparation of a curve from a few known stations is the most satisfactory plan. This con-

verter has two switch positions and the dial readings change when the switch is moved. Thus, if a straight-line variable condenser is used, the 0 reading should be for either 15 or 65 meters, and the 100 for 65 or 200 meters, provided the entire coil and

condenser is used when tuning. This is purely mathematical. At 50 on the dial with the low and high wave switches, you should get either 40 or 135 meters, respectively. Various

other wave lengths or frequencies should be heard at intermediate points, and these can be calculated. But since these are theoretical readings, actual wave lengths may be found some spaces to either side of

the estimated number on the dial. found some spaces to either side of ing, actual wave lengths may be But since these are theoretical read- points, and these can be calculated. should be heard at intermediate other wave lengths or frequencies 135 meters, respectively. Various

switches, you should get either 40 or dial with the low and high wave is purely mathematical. At 50 on the condenser is used when tuning. This three tubes, therefore, a r.f. ampli- but the volume will be low because by a detector will give greater gain, amplifier. Two stages of r.f. followed detector, with a -31 tube as an audio frequency amplifier and a -30 as a gain if you use a -32 tube as a radio-

We believe you will obtain better

intermediate frequencies. The -47s in power amplification cannot be im-

proved upon in this set.

Can I procure a separate automatic volume control device to attach to my receiver which is not so equipped? We do not know of any separate automatic volume control that can be

A Separate A.V.C.

The first r.f. tube in your set, a 5B, may be replaced with a new 5B, provided a suitable adapter to convert the present 5-contact socket to a 6-hole socket is used. We believe a small improvement will be noted, and there will be a saving of current consumption. We do not recommend changing the first and second detectors or

Can new tubes be used in my RCA-Victor model 50 receiver?

RCA 50 With New Tubes

attached to a radio set. Because automatic volume control is a complicated affair, requiring changes in wiring and the circuit of the receiver, we doubt whether the idea is practicable. When a.v.c. is designed for a set having only manual control it must be built within, and attached to, the parts and circuit of the broadcast receiver.

No wonder Raymond Knight goes "Cuckoo" listening to a perfectly charming singer like Mary McCoy hitting her notes in burlesque. For she can sing. She had leading roles in two Broadway operetta hits after studying under Mme. Schumann-Heink. At 10:30 p. m., Saturdays, EDST, on the NBC Blue chain.

may be put in either of the leads from the transformer output. The silencing switch may be considered as feeding just a single speaker. The dual speakers are connected together, and the wires leading from the output transformer are connected together, and the wires of the 56 first audio tube with a 5-hole wafel adapter. The dual speaker connection is made to the plate of this tube. You can also attach the phones to the 56 driver tube in the right rear corner of your Zenith chassis. Connector of Figure 3, by attaching to the upper left-hand corner as shown in the upper left-hand corner of Figure 3, by attaching to the

Or the phones may be connected as shown in Figure 4 of the February, 1933, article. The two large holes at the bottom are the filament or heater terminals; the grids, numbers 1 and 3, are tied to the plate. Thus they all have the same potential. Any of these and the plate may be used to attach the phones as shown in Figure 4 of the February, 1933, article. The two large holes at the bottom are the filament or heater terminals; the grids, numbers 1 and 3, are tied to the plate. Thus they all have the same potential. Any of these and the plate may be used to attach the phones

You can connect phones to the two 59 power tubes, but you cannot obtain adapters for these 7-contact sockets. It will be necessary to make the connections to plate contacts of the power tube sockets. These may be located by looking down upon the sockets: The two large holes at the bottom are the filament or heater terminals; the grids, numbers 1 and 3, are tied to the plate. Thus they all have the same potential. Any of these and the plate may be used to attach the phones as shown in Figure 4 of the February, 1933, article.

Phones on Zenith 430

A short-wave set should never be placed in close proximity to another tuned circuit, such as a broadcast receiver. The latter may have serious effects on short-wave reception unless the latter set is very well shielded. A separate aerial must be used, and never run the two sets at the same time if fairly close together.



the start and cannot be eliminated. Such r.f. amplification schemes, when reception is clear and perfect, will tend to increase the range and sensitivity of smaller sets, those of few tubes and little or no radio amplification.

Two-Volt Tubes

I wish to use 2-volt tubes in my Radola 20 battery set that now utilizes the -99 tubes. Please explain what to do.

The -80 series of tubes can be used in your set in all positions except the power tube (now a -20), for which a -81 should be substituted. If you use a 6-volt A battery or an eliminator it will be necessary to insert a suitable resistance in the filament lead in order to cut down the voltage to the 2-volts needed for the new tubes. We recommend the use of a 2-volt storage cell or the new Aircell battery. The present volume rheostat will be turned all the way on, and slightly less if the Aircell is used. The resistance, if 6-volts are used, should be of 12 ohms and is inserted in series in the yellow A plus wire next to the rheostat. The same B battery for the -80s and the -81 power tube will be suitable, and the same holds good for the C battery now on the -20 tube.

Short Wave Harmonics

My short wave receiver brings in local stations and some others that are not on short waves. Also I use this set and keep it near my Radola 3 battery receiver, using the same aerial and ground. What seems to be wrong here?

All short-wave sets bring in harmonics of local or other strong broadcast stations if their harmonics fall within the range of the particular short wave coil being used. These harmonics are always multiples of the original frequency and are two, three, four, five, etc., times the broadcast frequency. For instance, if a station broadcasts on 1,000 kcs., it will emit harmonics on 2,000, 3,000, 4,000, 5,000, etc., kilocycles—all of which

Can you tell me the location of the various tubes and the value of the volume control in my Silver Marshall 9-tube receiver?

Locating Tubes

a black trace through them.

We assume that your receiver is model 36A. The model 724 is identical, except that it has only three variable condensers in the gang instead of four as in the 36A.

Looking down upon the receiver, standing at the rear, the tubes are as follows: Left to right in a row beginning in the rear of the four-gang variable condensers—the first -24 is the radio-frequency tube; second -24, the first detector; third -27 is the oscillator; fourth -24, the first intermediate frequency tube; fifth -24, the second intermediate frequency; and sixth -24, the second detector. In the rear will be found the -80 rectifier, and two -45s, connected in push-pull audio power output.

The value of the volume control is 3,000 ohms. It is a simple potentiometer with the arm and one end connected together to one end of a resistor of 375 ohms which in turn is grounded. The other end of the control connects into the circuit. In the 724 model receiver this control is similar except that the additional 375 ohm resistor is not used between the control and the ground.

New R.F. Amplifier

What about the "Amplitenna" device, and will it increase the sensitivity of my receiver?

The "Amplitenna" scheme, which has been published in another radio magazine, has not been tested by RAEEX. However, it is said to increase antenna signals before they pass into the radio set. It is a sort of pre-stage amplifier. The drawback, which has always hindered these radio-frequency untuned amplifiers from being in wider use with radio sets, is that all static and other noises are so amplified as to prevent even fair reception on the set. A high noise level is handed the set right at

FADING, Broad Tuning

and OTHER TROUBLES

• • • By the TECHNICAL EDITOR

DURING evenings and early morn-

ing the radio programs come in good for a while, then the reception becomes blurred and distorted for a minute or so. Then it clears up but only to do the same things again. The service man checked my Philco I12 and found nothing wrong. It seems to do this on all stations. Is it a disadvantage of the automatic volume control?

Fading accompanied by blurring is characteristic of distant reception, and is attributed to wave-interference. This is made more pronounced by automatic volume control, which brings the fading signal in strong at its lowest field strength at the time when wave-interference occurs. When signal fading is absent, the automatic volume control naturally is working at its minimum volume and the interfering station is drowned out and reception is clear. Then as fading comes on and the a.v.c. comes into action the interfering station becomes louder and you have distortion and blurring. When fewer stations are on the air there is less likelihood of so much station interference.

Broad Tuning

I have an Acme 6-tube receiver and it seems to tune very broadly on nights when reception is good. This prevents stations from coming in clearly at all times.

The trouble you are experiencing is due to the fact that so many stations are now on the air. The more power a broadcasting station has, and the louder its signals are received, the more dial space it covers on a receiving set. When reception at nights is very good, signals come in

louder and more stations are heard. Thus, reception is spread out over a wider portion of the dial in a ratio proportional to the selectivity of the set, and more interference is noted. Frequently selectivity in an old receiver becomes poor because of the accumulation of dust within the set. A radio set should be cleaned carefully twice a year. The plates of the variable condensers must be polished carefully and cotton pipe cleaners are best for this purpose. All parts should be brushed and dusted off. If tubes are old, they should be tested, and replaced, if weak.

Phones on AK 55

I wish to attach headphones to my Atwater Kent model 55 set, but wish advice for this particular receiver.

Your receiver has two power tubes in push-pull amplification. We suggest that you use the hook-up that is shown in Figure 4 of the article in the February issue of RADCX, as this corresponds to the circuit in your set. Use the water adapter shown in "A" of Figure 2 for the -45 tube, or the one at "B" for the -47 tube. Place an adapter beneath each tube in the same position shown in Figure 2.

Insert the tube in its socket and press down on the water and fit snugly in place. Flexible wires, which have been soldered to the proper lug, as shown in Fig. 2, then run to the phones through the condensers and resistor. Two wires run from the output of the audio transformer which is fed by the two power tubes, either -45s or -47s. They terminate at the socket into which the speaker cable is plugged. The silencing switch can be placed in either one of these two wires which are colored yellow with

(Continued on page 33)

The Amplivox "Phone Receptor" enables the owner of any radio set to listen with phones to distant signals. The outstanding feature of the unit is its ability automatically to cut out the speaker at will, but without unbalancing the receiver. The Receptor should fill a long-felt want where listeners wish to DX during the static season or at late hours when the loudspeaker is undesirable. The device is made for any type of 4, 5, 6 and 7-tube power tubes. One or two socket-prong adapters are connected with a five-foot cable to a metal headphone-jack box. In the case of push-pull power circuits the tubes are removed from the output stages of the set. The two adapters are then inserted into the socket-prong sockets of the adapters. When the tubes are desired the plug is inserted in the jack box and the loudspeaker is automatically silenced without its circuit being opened. The jack merely connects the phones in series with the grid contacts of the power socket or sockets, and in turn grounds the grids of the power tube

A Phone Receptor

distant reception, it should hardly be necessary to emphasize the necessity of having a perfect aerial and ground, good tubes and soldered connections. Such factors are of vital importance for, without these, foreign reception can not be expected. I have found it essential to have up-to-date lists of transmitting stations, to know times in foreign countries and to have a systematic manner of logging. Through the years RAEDEX has fulfilled these requirements in every respect and without this assistance, I should not have been able to accomplish such reception."

Mr. Caraven has a Remler 10-tube Superheterodyne receiver, a single wire inverted L antenna and an Oilie Ross ground. He is a member of the International DXers Alliance.

even finds this one although he does not say whether he received it on his regular broadcast receiver or on a short wave set: From The Western India Wireless Association, Poona, India: "We have the greatest pleasure confirming your report of reception from our experimental transmitter VU2BY. This transmitter operates on 175 meters with ten watts input, but this last few days we have increased the output to 50 watts and now work on 42 meters between 8:00 and 9:00 p. m. I. S. T. We work Thursdays and Saturdays. Yours is the first real long-distance report we have had and I think, with the power employed, it must constitute a record for telephony anywhere."

"I have been DXing for many years," writes Mr. Caraven, "beginning at a time when foreign reception was considered impossible. It is my firm belief that DXers are today pioneering the field for that future everyday matter. To those desiring



A microphone view of the broadcast of the Best Foods Musical Grocery Store, Herbert Polesie, Jeanne Lang and Tom Howard and his derby. NBC-WEAF net, Fridays at 9:00 p. m. EDST and again at 12:30 a. m.

REMARKABLE RECEPTION

in B. C. Band

THOSE of us who give three cheers when we tune in Cuba can only stand aghast when we consider the reception recently reported by C. R. Caraven, 1840 East Georgia St., Vancouver, British Columbia. We have on our desk half a dozen really remarkable verifications of stations in the broadcast band.

The first is from Oostmarcken Rundfunk, Konigsberg in East Prussia, on the Baltic Sea east of Poland. It says in part: "After your communication, there can be no doubt that you have heard our sender. Your two noticeable tones, which were repeated three times, stand between pauses. The sender of Konigsberg worked on 1382 kcs. with a strong wave of 600 watts."

The second is from Radio Journal Praha XII, at Praha (The Prague) in Czechoslovakia and from it we quote: "There can be no doubt about your picking up our station although we are emitting on 614 kcs. and not at 616 (!) as you assumed. We are working with a power of 120 k. w. and 488.6 meters wavelength. This is the first time that we have been received in Canada and it would be very interesting for us to have a report from time to time." The explanation point is our own. How could Mr. Caraven make such a big mistake as two kilocycles when reporting his reception?

The next is from Radio Bucuresti in Bucarest, Roumania: "The reception heard by you has been from station Bucarest. Herewith we acknowledge the reception by you of our program in the day of January 1st." From CX-26, Montevideo, Uruguay, comes this: "At the same time as we thank you for your valuable data we have the pleasure to confirm to you that reception as that night we

made in fact a transmission dedicated to the hams at a great distance. Before becoming broadcasters we had been enthusiastic amateurs and it is in memory of our reception of DX then that we at times give those emissions dedicated to the radio amateurs. The detailed information that you gave us is for us of inestimable value for the care of the observations and for the considerable distance that separates us. We are pleased to inform you that you are the record-holder for reception from CX-26, Radio Uruguay, at a distance."

For good measure we have this verification from 7ZL, Hobart, Tasmania: "The information you give is correct and corresponds with our station log."

And somewhat in the short waves,



Lots of people who thought they were listening to Greta Garbo on the air, were hearing Alice Hill. She now has the part of "Helma Jasper," Jack Arnold's secretary, in "Myrt and Marge," daily except Saturday and Sunday on the See-Bee-Bess at 7:00 p. m. EDST.

CANADIAN CHANGES

Official data from the Canadian Radio Commission enables us to make the necessary revision in all of our lists. A number of stations do not appear in the official list. The presumption is that these will be deleted. They are marked with an asterisk in the list by calls, CJGC, London, and CKOK, Windsor, are combined with the call CKLW. This station will use 540 kcs. at least for a time.

Select some point on the dial of the receiver between 1,000 and 1,500 kilocycles where no signal or interference can be heard. Set the volume control at its maximum but without undue noise. With the antenna tuning condenser (9) remaining in one position, the oscillation condenser (10) is rotated until the characteristic "rushing" noise or sound is heard. This means that oscillation is taking place, and the beat frequency will be produced at the proper frequency to which the broadcast receiver is tuned. The two condensers are then simultaneously rotated, very, very slowly, until a short-wave signal is picked up. Further adjustment of these condensers, and perhaps a final micrometer adjustment of the dial of the broadcast set together with its volume control, should bring short-wave stations in at their maximum strength.

Operating the Converter

coil (15), resistors (6, 7 and 8), and fixed condensers (1, 2, 3, 4 and 5) are arranged in the proper circuit positions, the converter is ready to test. Terminal post marked "A" is connected to the antenna terminal of the broadcast set. The filament adapter is placed directly on top of a conveniently selected socket in the set and the tube replaced. Switch S_1 of the converter is closed. When the converter is not in use it need not be disconnected. The switch is placed at S_2 , which then connects the antenna directly to the broadcast set.

ber panel, a metal panel and base are advised. And, in fact, it will be well if the entire converter is built within a metal container. The metal panel, base, shields, partitions, variable condenser frames, and other parts, must be well grounded to the converter ground connection. A wire must connect this ground terminal to the ground connection or negative B supply of the broadcast receiver with which the converter is used.

Securing Filament Current

The two tubes of the converter obtain their filament current from one of the tubes in the broadcast receiver. The additional load of 2 amperes on the filament winding of the broadcast set will not ordinarily affect the average a.c. set. A water adapter, with either four or five holes, to fit beneath some tube that takes 2.5 volts, is used for this purpose. The filament contacts of the 56 and 58 sockets (13 and 14) are connected in parallel with twisted cord to the water adapter. A switch to turn the converter on and off is inserted in one of the leads.

The plates of the two tubes require 180 volts. This is taken off also from the broadcast set at some point such as a common plate supply lead, voltage divider, speaker field coil, or in the filter system. Or 180 volts of B batteries can be used, and operation will be smoother and more quiet. Another water adapter can be utilized to connect to the plate of some tube that takes approximately 180 volts within the set.

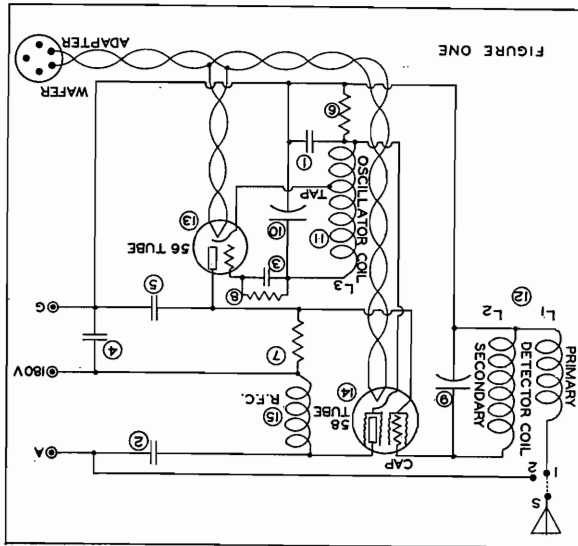
After the radio-frequency choke

arranged on the base to suit the builder. But the two coils should be spaced as far apart as practicable so there will be no magnetic coupling between them. The oscillator coil L_2 should be closely associated with its 56 type tube. All wires must be as short as possible for careful assembly. Shields over the two coils are not recommended, but the 58 detector tube should be placed within a metallic tube shield. While the converter can be assembled on a wooden base and hard rub-

For the 20-40 meter detector coil, the secondary L_2 . Its oscillator coil L_2 has 8 turns, tapped 2% turns from the bottom. For the 40-80 meter coil, wind 5 turns on L_1 and 18 turns on the primary L_1 . The oscillator coil L_2 has 18 turns, tapped 6 turns from the bottom. For the 80-200 meter coil, wind 10 turns on the primary L_1 , and 50 turns on secondary L_2 . For the oscillator coil L_2 , wind 17 turns from the bottom.

refer to similar numbers on the drawings.

One .001 mfd. fixed condenser (1)
Two .0001 mfd. ditto (2 and 3)
Two .1 mfd. ditto (4 and 5)
One 5000 ohms resistor (6)
One 50,000 ohms ditto (7)
One 100,000 ohms ditto (8)
Two .00015 mfd. variable condensers (9 and 10)
Two 4-pin tube sockets (11 and 12)
One 5-pin tube socket (13)
One 6-pin tube socket (14)
One 50-millihenry r. f. choke coil (15)
Eight 1 1/2 inch diameter plug-in coil forms, 4 prongs to fit sockets 11 and 12 (16 to 23 inch. size)
One wafer socket adapter to fit under any 2 1/2 volt tube in broadcast receiver to obtain current to heat converter tubes.
One 56 type super-triode oscillator tube, 5-pin tube, 6-pin super-control amplifier
Small quantity of No. 28 d.c. magnet wire.
Numbers in parentheses refer to similar numbers on the drawings.



LIST OF PARTS

In the detector or antenna coil, L_1 is the primary coil wound at the bottom of the form, and L_2 is the secondary coil wound above L_1 , but with a space of not more than 1/2 inch between the two coils. Wind the wire tightly, evenly and carefully, with the ends passing directly to the proper pins to which they must be soldered.

For the 10-20 meter detector coil, wind 3 turns on the primary L_1 , and 4 turns on the secondary L_2 . For the oscillator coil on another form, L_2 , wind 4 turns with a tap taken off at exactly 1 1/2 turns from the bottom.

The ends of the coil wires—two from each the primary and secondary—of L_1 and L_2 , respectively, connect to the four pins of the base, while the two ends of the oscillator coil L_2 , and the single wire cathode tap, connect to but three prongs of the base, as shown in Figure 2. One prong of the oscillator coil form remains unused. It will be noted that the number of turns of wire on the detector coil secondary L_2 and the oscillator coil L_2 , are equal. This gives the dials a tendency to track rather nicely. The assembly of the parts may be

detector coils, and four for the oscillation. Take four blanks for the same direction. All must be wound in the same double-cotton-covered copper magnet wire. All coils are wound with number 26 wave-lengths.

All coils are wound with number 26 wave-lengths. sockets when changing to different frequencies that in turn is fed to the antenna terminal of the broadcast receiver. In other words, the short waves are increased in wave length so as to fall within the tuning limits of the broadcast receiver.

For instance, if a short-wave signal is received, the broadcast receiver is tuned to that frequency. The antenna terminal of the broadcast receiver is then turned to the frequency of the broadcast receiver. In other words, the short waves are increased in wave length so as to fall within the tuning limits of the broadcast receiver.

The circuits have been designed to provide a "beat" frequency of between 1,000 and 1,500 kilocycles, to which the broadcast set must be tuned permanently while the short wave converter is used. The two frequencies—that of the incoming signal wave, and that created by the oscillator of the converter—are mixed together and create a "beat" note or frequency that in turn is fed to the antenna terminal of the broadcast receiver. In other words, the short waves are increased in wave length so as to fall within the tuning limits of the broadcast receiver.

Converts S. W. to Long

There are two coils in use at one time when the converter is working. These coils represent the only difficult work in making this converter, and it is important that these instructions be carefully followed if satisfactory results are to be obtained. One coil is the antenna or detector coil, indicated by L_1 and L_2 , and the other is the oscillator coil, L_3 . However, because each coil responds only to a limited portion of the short-wave band, it is necessary to wind a number of sets or pairs of coils. A total of eight will be needed, two to a set, or four pairs in all. Blank forms (16 to 23) for the coils are about $1\frac{1}{2}$ inches in diameter, and are fitted with four prongs or pins to fit standard 4-contact sockets (11 and 12). They can be procured from any radio supply house, and many have bakelite handles to facilitate removal from sockets when changing to different wave-lengths.

Making the Coils

That will balance to perfection over the entire wave band. impossible to build coils and circuits that will balance to perfection over the entire wave band. not recommended for sets that are ranged on a single shaft, but it is work in making this converter, and these coils represent the only difficult work in making this converter, and it is important that these instructions be carefully followed if satisfactory results are to be obtained. One coil is the antenna or detector coil, indicated by L_1 and L_2 , and the other is the oscillator coil, L_3 . However, because each coil responds only to a limited portion of the short-wave band, it is necessary to wind a number of sets or pairs of coils. A total of eight will be needed, two to a set, or four pairs in all. Blank forms (16 to 23) for the coils are about $1\frac{1}{2}$ inches in diameter, and are fitted with four prongs or pins to fit standard 4-contact sockets (11 and 12). They can be procured from any radio supply house, and many have bakelite handles to facilitate removal from sockets when changing to different wave-lengths.

LAST month a list of parts necessary for our short-wave converter was published, and if they now have been gathered together we are ready to proceed with actual construction. RADEX herewith presents exclusively for its readers a special converter circuit designed for this magazine. It is shown in Figure 1. Its originator, Mr. Henry K. Bradford, member I. R. E., is a well-known short-wave expert and technical official of the National Radio Institute, of Washington, D. C.

The converter employs a 58 type r.f. pentode tube as detector, and a type 56 for oscillator. The latter is a Hartley modification with its cathode coupled to the detector. The antenna control grid circuit of the detector is tuned with a short-wave variable condenser, while a similar condenser is used to control oscillations. These two condensers may be connected on a single shaft, but it is not recommended for sets that are home constructed. It is practically impossible to build coils and circuits that will balance to perfection over the entire wave band.

By B. FRANCIS DASHIELL

BUILDING a Short-Wave CONVERTER

JUNE DX CALENDAR

Special Programs for Distant Listeners

A. M. time is given as the night before. Thus early Monday morning programs are listed in under Sunday night. Time is given in Eastern Standard so that programs may be listed in proper sequence.

SUNDAY NIGHT

June 4th
12:00-2:00—CMCH, 1405, Havana, Cuba.
June 4th, 11th, 18th, 25th
12:15-1:00—KS00, 1110, Sioux Falls, S. D.
1:00-3:00—WGES, 1360, Chicago, Ill.

MONDAY NIGHT

June 5th
9:00-2:00—WAWZ, 1350, Zarephath, N. J.
June 5th, 12th, 19th, 26th
12:00-2:30—WMLI, 1500, Brooklyn, N. Y.
1:00-5:00—WSUI, 850, Iowa City, Iowa.
5:00-5:45—WCHH, 1430, Columbus, Ohio.
5:15-5:30—WHF, 1430, Harrisburg, Pa.

TUESDAY NIGHT

May 30th, June 27th
2:30-3:30—WCLO, 1200, Janesville, Wis.
June 20th
2:00-3:00—WJMS, 1420, Ironwood, Mich.
3:30-7:00—WRHF, 1370, Williamsport, Pa.

WEDNESDAY NIGHT

May 31st
2:30-4:00—CHWK, 780, Chilliwhack, B. C.
June 7th
2:00-2:30—WHBF, 1210, Rock Island, Ill.
12:00-1:00—WHBL, 1410, Sheboygan, Wis.
June 14th
4:00-6:00—KFBI, 1050, Abilene, Kans.

THURSDAY NIGHT

June 1st
9:00-11:00—OFH, 1031, Vuipuri, Finland.
4:00-5:00—KASA, 1210, Elk City, Okla.
June 1st, 8th, 15th, 22nd, 29th
11:00-12:30—WHOM, 1450, Jersey City, N. J.
12:00-1:00—KRLO, 550, St. Louis, Mo.
12:00-2:30—WMLI, 1500, Brooklyn, N. Y.
1:00-2:00—WBRX, 1200, New Orleans, La.
1:00-2:00—WENC, 1420, Americus, Ga.

FRIDAY NIGHT

June 2nd
4:15-4:45—WNBZ, 1290, Saranac Lake, N. Y.
June 30th
2:30-4:00—CHWK, 780, Chilliwhack, B. C.
June 2nd, 9th, 16th, 23rd, 30th
12:30-1:30—WCAJ, 590, Lincoln, Neb.
1:00-1:30—CFCN, 1030, Calgary, Alta.
1:30-3:30—KGBK, 1200, Yuma, Colo.
4:30-5:00—CJMH, 1150, Ciego de Avila, Cuba.

THE MONTH'S CHANGES

FREQUENCY

570	WFOH	New York, N. Y., from 810
580	CJOC	Lebbidge, Alta., from 1120
580	CJCA	Moncton, N. B., from 630
600	CFPE	Montreal, Que., from 1030
630	CFQY	Charlottetown, P. E. I., from 589
630	HJX	Santo Domingo, D. R., from 579
690	HJN	Bogota, Colombia, from 685
730	CJVA	Edmonton, Alta., from 745
780	CHWK	Chilliwhack, B. C., from 665
780	CKPR	Fort William, Ont., from 890
810	WNYC	New York, N. Y., from 570
880	CJRM	Moose Jaw, Sask., from 665
880	CJRW	Fleming, Sask., from 665
880	CRCO	Ottawa, Ont., from 600
880	CRCO	Saskatoon, Sask., from 910
890	CHMT	Hamilton, Ont., from 880
910	CKY	Winnipeg, Man., from 780
915	CFRC	Kingston, Ont., from 930
930	CFCH	North Bay, Ont., from 910
980	CFIC	Prescott, Ont., from 915
1010	CHWC	Regina, Sask., from 960
1010	CKCD	Vancouver, B. C., from 730
1010	CKCK	Regina, Sask., from 960
1010	CKCO	Ottawa, Ont., from 890
1010	CKOC	Hamilton, Ont., from 635
1010	CKWX	Vancouver, B. C., from 730
1030	CFBO	St. John, N. B., from 890
1030	CFCN	Calgary, Alta., from 985
1030	CKNC	Toronto, Ont., from 960
1050	CHNS	Halifax, N. S., from 815

(Continued on page 45)

A RADIO PROGRAM "SLATE"

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dead
Who never to himself hath said—"

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Use the Radio "Slate" and you
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adapters for slipping under your
tubes so that you may use headphones
during periods when static is too
great for the speaker or when the
rest of the family want to sleep.

See our February issue for full de-
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