

**MIDSUMMER 1937**

**25<sup>c</sup>**

# **RADIO IN INDEX**

**The All-wave DX Log of the World**



**Complete Lists**  
**North American Broadcasting Stations**  
**European Broadcasting Stations**  
**World Shortwave Stations**  
**Television Described So All**  
**Can Understand**

**No. 110**

**JUNE 1, 1937**



# RADIO INDEX



Reg. U. S. Patent Office

**ELIZABETH S. BUTLER**

*Publisher*

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THIRTEENTH YEAR

NUMBER 110

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\$1.75 Per Year

25c Per Copy

See Subscription Blank on Page 96

Published Monthly Excepting July and August

## THE RADEX PRESS

14717 Detroit Avenue

Cleveland, Ohio

Entered as second-class matter April 23, 1931, at the postoffice at Cleveland, Ohio,  
under the act of March 3, 1879.

Printed in U. S. A.

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## CHANGE OF ADDRESS

The Editorial and Advertising offices of RADEX have been moved to Cleveland, Ohio. All correspondence should now be addressed to

### THE RADEX PRESS

14717 Detroit Avenue      Cleveland, Ohio

# The MONTH'S CHANGES in STATION DATA

#### New

950 WJOY, Saginaw, Mich.  
1500 ..... Miami Beach, Fla.

#### Frequency

660 XEAO, Mexicali, B. Cfa., from 560.  
980 XEFE, Nuevo Laredo, Tams., from 1340.  
1110 XELO, Piedras Negras, Coah., from 580.

#### Power

690 XET, Monterrey, N. L., 5000 from 500.  
1230 KGGM, Albuquerque, N. Mex. 1000 from 250.  
1320 KRNT, Des Moines, Iowa, 1000 from 500.  
1330 KMO, Tacoma, Wash., 1000 from 250.  
1370 KFRO, Longview, Tex., 250 from 100.  
1390 KOY, Phoenix, Ariz., 1000 from 500.

#### Call Letters

1500 KSAL, Salina, Kans., from KSJS.

#### Network

880 WGBI, Scranton, Pa., new CBS.  
1110 KSOO, Sioux Falls, S. Dak., new NBC.  
1120 WDEL, Wilmington, Del., new NBC-Red.  
1190 WQAI, San Antonio, Tex., NBC from CBS.  
1210 KANS, Wichita, Kans., new NBC.  
1320 WORK, York, Pa., new NBC.  
1330 WTAQ, Green Bay, Wis., new CBS.  
1420 WLEU, Erie, Pa., new NBC-Blue.  
1500 WRTD, Richmond, Va., new NBC-Blue.

#### Relinstated

1480 WHIP, Hammond, Ind.

#### Owner

630 KGFX, Pierre, S. Dak., Mrs. Ida A. McNell.  
780 KEHE, Los Angeles, Calif., Hearst Radio, Inc.  
780 WMC, Memphis, Tenn., Memphis Commercial Appeal Co.  
1210 WMFN, Grenada, Miss., P. K. Ewing.  
1310 KCKN, Kansas City, Kans., KCKN Broadcasting Co.  
1400 WHDL, Olean, N. Y., WHDL, Inc.  
1500 KOVC, Valley City, N. Dak., KVOC, Inc.

#### Permit to Change Frequency

890 WILL, Urbana, Ill., 1000 from 250.  
950 KHSL, Chico, Calif., to 1260.  
1210 WMBG, Richmond, Va., to 1350.  
1310 KIT, Yakima, Wash., to 1250.  
1310 WOL, Washington, D. C., to 1230.

1420 KRLC, Lewiston, Idaho, to 1390.  
1420 WJBO, Baton Rouge, La., to 1120.

#### Permit to Change Power

560 KSFO, San Francisco, 5000 from 1000.  
890 WILL, Urbana, Ill., to 1000 from 250.  
1210 WJTN, Jamestown, N. Y., 100 from 50.  
1210 WMBG, Richmond, Va., 500 to 100.  
1310 KIT, Yakima, Wash., 250 from 100.  
1310 WOL, Washington, D. C., 1000 from 100.  
1340 WCOA, Pensacola, Fla., 1000 from 500.  
1370 KRLE, Temple, Tex., 250 from 100.  
1420 KRLC, Lewiston, Idaho, 250 from 100.  
1420 WJBO, Baton Rouge, La., 500 from 100.  
1490 WCKY, Covington, Ky., 10000 from 5000.

#### Permit to Change Location

560 KSFO, San Francisco to Oakland, Calif.  
880 WPHR, Petersburg, Va., to Richmond, (will be WRNL).  
1450 WTFI, Athens, Ga., to Atlanta.  
1500 KGFI, Corpus Christi, Tex., to Brownsville.

## Guess Again, DXers!

● ● ● By Moe Luff

1. What does WPEN stand for?
2. What does KCMO represent?
3. What is represented by the call letters WTAG?
4. The call letters WBIG stand for —?
5. What does WICA stand for?
6. What slogan is used by WTAM?
7. What is the Voice of South Dakota?
8. What does the call-sign KSAL stand for?
9. The letters KRNR represent what?
10. Whose initials are represented in WAWZ?

(Answers on Page 39)



FROM time to time during the past season, an attempt was made to explain some of the freaks of radio reception. There had been a growing conviction that atmospheric pressure had some effect on the ability of broadcast signals to bridge considerable distance. A few general observations lent credence to the idea.

At first it was thought that a region of high pressure assisted the passage of a radio wave, while one of low pressure impeded it. This thought was soon disproved when it was observed that the only time the Bureau of Standards tests from Rennes and Belfast were heard in Ohio was when a region of low pressure extended Northwest up the St. Lawrence Valley.

The week-end of the Mystery DX Contest gave rise to another theory which has subsequently been confirmed on a number of occasions. On the three mornings in question, observations were made every hour on several important stations, and the data was then checked with weather maps which showed atmospheric pressures at the time of reception.

It was observed that a station showed poor volume and severe fading when its signal crossed areas of constantly varying pressure. Furthermore, it was noticed that signals which traveled in lines of constant pressure—be it high, medium or low—showed to better ad-

vantage. Finally, it appeared that the obstructions offered by varying pressure areas were not as severe on the high frequency end of the broadcast band as on the lower parts.

Another possible contributor to reception vagaries was thought to be temperature. In the March issue of RADEX, it was pointed out that DX reception appeared to be at its best with the thermometer ranging between 20° and 40°. It had been observed on numerous occasions that a temperature drop to zero and below had been accompanied by weak signals and heavy fading, while rises above 40° increased the static interference.

This theory, however, did not take into account the experiences of DXers who live in the colder regions of the United States and Canada. Rightly enough, a reader in Saskatoon, Sask., challenges the theory by pointing out that the best possible reception takes place when the thermometer ranges anywhere from 40 to 60 degrees below zero.

"During the month of March," he reports, "our temperature has ranged from zero to 30 above. According to your theory, we should be getting the best reception. Actually, the opposite is the case. Reception has never been worse and stations such as WHO, KSL, WCCO and WGN—which usually pound in like locals—cannot be heard until late at night when the temperature has dropped."



And so the temperature theory is open for debate. It may even develop that the position of the thermometer has no effect on radio at all and freaks of reception are contingent upon entirely different factors.

A final thought concerns the possible effect of the moon on reception—and this was a favorite topic for discussion several years ago. While no definite observations have been made, there have been a number of theories propounded by readers.

One short wave listener points out that he has found high frequency reception start to pick up when the moon is in its first quarter. The improvement has continued until the moon is full, at which time a monthly peak is reached. Reception then begins to fall off and reaches a low at the last quarter, which continues until the cycle commences to pick up at the next first quarter.

Normally, broadcast band reception runs just the opposite to that experienced by the short wave fans, so one cannot help but wonder if the lunar effect would also react in the same manner. If such was the case, one might expect unsatisfactory reception between the first quarter and the full moon, with a peak coming at the last quarter.

The study of these three factors— atmospheric pressure, temperature and the moon—should be a fascinating sideline to regular DXing, and it has been suggested that a number of Radexers might be interested in working together on the various problems. By mass listening and making observations along prescribed lines, the midnight marauders might conceivably unearth and confirm some entirely new theories.

To be of any real scientific value, observations would have to be made according to an established standard and that would necessitate the use of accurate equipment. Signal

strength, for example, would be measured by a vacuum tube voltmeter or a D.C. meter in the output. Fortunately, this would be an inexpensive addition to a receiver and would become a valuable part of a DXer's equipment.

Listeners who would be interested in co-operating in an enterprise of this nature are invited to write in as soon as possible. If there is sufficient support to warrant continuation of the idea, steps will be taken to insure this as a regular feature of next winter's listening.

### **Wheels Within Wheels**

The opening of the baseball season has little to do with radio and DXing, but it does bring to mind an event of last summer. During one of Eddie Cantor's CBS programs, it was announced that the banjo-eyed comedian would make a personal appearance in Cleveland the following week. Eddie stepped to the mike, told Clevelanders what a grand bunch of people they were, told how he was looking forward to his visit to their fair city, and hoped that they would come to see him at a certain theater.

One can imagine Eddie's consternation when he learned that his message never got to Cleveland listeners, since WHK, the local CBS outlet, had been broadcasting the end of an extra-inning baseball game. Eddie stormed in the office of the WHK manager and wanted to know why a ball game had cut into his program. He was politely informed, in effect, that the station was delighted to carry the Cantor broadcasts, so long as there was no baseball to cover.

Cantor promptly expressed his views on Cleveland and WHK in particular, and left with the reminder at what the station could expect in the future. It wasn't many months later that Columbia announced that the WHK contract, which expires this summer, would

not be renewed. It is understood that WGAR will become the CBS outlet in Cleveland, with WHK apparently bound for an NBC-Blue spot. While Cantor's experience probably had nothing to do with this action of Columbia's, it is an interesting coincidence.

### Scrambled Endorsements

Another story of baseball and radio is relayed by Al Wagman, manager of the radio department at the Northeast store of Sears, Roebuck and Co. in Philadelphia. It was back in the days when the Athletics—they play ball in the American League, you know—were some pumpkins and Lefty Bob Grove was something of a pitcher.

Grove had bought a couple of Silvertone radios for his Maryland home and expressed his delight at their performance. Wagman suggested that a letter of endorsement might not be amiss and Grove responded with a very nice testimonial. In fact, the testimonial was so nice that Wagman decided to pass it on to Chicago. The biggies in the Windy City were so pleased that they planned a little Silvertone promotion for their various stores—enlargements of the testimonial, a full-size cut-out of the great Grove about to deliver his fire ball, newspaper displays, and so on.

Along about that time the Athletics won the World Series and began to cash in on their World Championship robes. A couple of days before the Silvertone publicity was due to break all over the country, the team appeared as a group before a coast-to-coast microphone for a one-time super-colossal broadcast. The sponsor was a large radio manufacturer, so Grove and his teammates told everyone what a fine radio was the Super Giant Ocean Hopper.

"Shucks," Grove afterward told Wagman, "I got paid for saying



*In first place in the RADEX Mystery DX Contest and the winner of the latest 23-tube Scott Full Range High Fidelity receiver, is Floyd Biss of Brillmount, Minn. Using an Airline receiver with an ordinary aerial, he scored 465 points in the contest.*

that! But I still like your radio best!"

And then there is the story of the fellow whom we will call Joe Zilch, because that wasn't his name at all. Joe made noise-reducing antenna systems—good ones, too. One day he heard about the retired sea captain who did nothing but tune short waves all day and then write about what he heard.

So he went over to see that captain's layout and great was his consternation to find that the aerials in use appeared to be just a maze of wires strung every which way. He didn't know that they had been laid out to point to certain short wave centers and were of a length to resonate on important wave bands.

"Captain," he said, "if I put up a real aerial for you, will you try it out and write a story on how it works?"

"Sure" grunted the obliging skipper.

And so Joe Zilch set out to get a nice story in one of the rags. Atop the captain's house he erected a tall mast. Several doors away he put up another. He obtained permits to string an aerial across the

intervening roofs. Between the masts he swung a super deluxe transposed aerial, and he ran the leads down to the captain's radio room. The completed job cost five hundred dollars and it looked like a first class broadcasting station.

"Try that on your radio," Joe told the captain, pointing to the lead-in wires.

"Sure," said the captain. "Just as soon as I see how Java is coming in."

A change to the proper aerial and a turn of the dial—and there was Java as neat as you please. "Nice going," said Joe, "but wait'll you hear how my aerial brings it in."

Accordingly the new aerial was hooked on and the captain went to work on the dial. He twisted and twirled, but Java sounded like a medium-wave European in the dead of summer.

"Take that aerial down before it hurts some one," said the captain.

And Joe had to rip down the whole business. You don't have to believe it, but that's the way we heard the story and we just thought we'd pass it along.

### Feature Story

Excerpts from a story in this section of the February RADEX: "Engineers will eventually overcome all obstacles to the problems of transmission and reception (of television), but it is questionable whether even perfect television broadcasts will appeal to the spectators. . . . Radio today requires little effort on the part of the listener. . . . With television, it will be an entirely different story. It will be necessary to turn out all the lights in the room, crowd around the receiver, and concentrate attention on a tiny screen no larger than a sheet of typewriter paper. That will require conscious effort on the part of the spectator."

Excerpts from an Associated Press story dated Hollywood, April 10: "Television, says Film Producer

Jesse Lasky, may be just around the corner, but there's a long road to be traveled before anyone gets to it. . . . The pioneer movie-maker listed three major difficulties. . . . The nerve-strain that would be necessitated by heavy concentration on a comparatively small screen. . . . He said he believed that technical frailties that now beset television will be corrected."

Excerpts from passing thoughts: "Wonder if he reads RADEX!"

## Time Conversion Table

The time given throughout RADEX, unless otherwise specified, is Eastern Standard by the 24-hour clock. Our chart this month shows Pacific Standard Time converted to the EST 24-hour clock, and GMT.

PST	EST 24-hr. clock	GMT
9 p.m.	0000	0500
10 p.m.	0100	0600
11 p.m.	0200	0700
Midn't	0300	0800
1 a.m.	0400	0900
2 a.m.	0500	1000
3 a.m.	0600	1100
4 a.m.	0700	1200
5 a.m.	0800	1300
6 a.m.	0900	1400
7 a.m.	1000	1500
8 a.m.	1100	1600
9 a.m.	1200	1700
10 a.m.	1300	1800
11 a.m.	1400	1900
Noon	1500	2000
1 p.m.	1600	2100
2 p.m.	1700	2200
3 p.m.	1800	2300
4 p.m.	1900	2400
5 p.m.	2000	0100
6 p.m.	2100	0200
7 p.m.	2200	0300
8 p.m.	2300	0400

For times throughout the entire world consult the RADEX Time Converter

Alfred G. King, President of the R9 Listeners' League, announces a Gala SWL Fest to be held in Woodhaven, Long Island, N. Y., on June 5. An all-wave radio will be given away as one of the door prizes. Anyone who would be interested is requested to get in touch with Mr. King.



## Major League BASEBALL Broadcasts

**T**HE Major League Baseball campaigns this summer are broadcast from radio stations in every city in the circuits except greater New York, where broadcasting is forbidden by the club owners. There are more baseball broadcasts on the air this summer than ever before in the history of radio. One sponsor alone, the General Mills Company, is spending more than a million dollars, sponsoring major and minor league games on eighty stations.

The stations carrying the broadcasts are shown below.

### In the American League

*Boston.* The home games of the Boston Red Sox are broadcast over the entire Colonial Network of 13 stations: WAAB Boston, WSAR Fall River, WSPR Springfield, WLBZ Bangor, WFEA Manchester, WTHH Hartford, WNBH New Bedford, WBRY Waterbury, WLLH Lowell, WLNH Laconia, WRDO Augusta, WEAN Providence and WICC Bridgeport. These games are announced by Fred. Hoey.

*Chicago.* The home and out-of-town games of the White Sox are broadcast over WBBM and WGN. Pat Flanagan announces for WBBM and Bob Elson for WGN. A resume following each game is transmitted from WHO Des Moines.

*Cleveland.* Jack Graney broadcasts all the Cleveland Indian home and away games from WHK.

*Detroit.* Ty Tyson, starting his thirteenth year of baseball broadcasting, announces all the home and road games of the Tigers for WWJ. Harry Heilmann, former Tiger star, covers the Tiger games for the Michigan Radio Network (the entire network except WXYZ): WELL Battle Creek, WIBM Jackson, WKZO Kalamazoo, WFDF Flint, WOOD-WASH Grand Rapids,



WBCM Bay City and WJIM Lansing.

*Philadelphia.* The home games of the Athletics are broadcast by William Dyer on WCAU.

*St. Louis.* All the St. Louis Browns' games are described by John O'Hara over KWK.

*Washington.* Home games of the Senators are not broadcast, but Arch McDonald covers the road games over WJSV.

*New York.* Yankee games are not broadcast in New York.

### The National League

*Boston.* The home games of the Boston Bees, described by Fred Hoey, are broadcast on the Colonial Network, listed earlier in this column.

*Brooklyn.* The games played by the Brooklyn Dodgers are not broadcast.

*Chicago.* Pat Flanagan announces all the games of the Cubs for WBBM, and Bob Elson describes them for WGN. Resumes of all games are broadcast by WHO Des Moines.

*Cincinnati.* All home and away games of the Reds are broadcast by Red Barber for WSAI, and by Harry Hartman for WCPO. Red Barber's broadcasts are broadcast by WHIO Dayton.

*New York.* The Giants' games are not broadcast.

*Philadelphia.* The Philadelphia games of the Phillies are covered by William Dyer for WCAU.

*Pittsburgh.* The out-of-town games

of the Pirates are announced by A. K. Roswell for WJAS, and are also transmitted over WWSW. Resumes following the home games are heard from each of these stations.

*St. Louis.* The activities of the Cardinals, at home and away, are followed by John O'Hara on KWK. Their home games are also heard from KWKH Shreveport and KBTM Jonesboro.

## New TELEVISION Station Planned

**T**HE Columbia Broadcasting System has applied to the Federal Communications Commission for permission to construct one of the world's most powerful television and sound transmitters at the top of the Chrysler Building in New York City.

When fully modulated the proposed station will operate with a peak power of 30 kilowatts, and the transmitter, which is to be located on the 74th floor of the skyscraper, will incorporate the latest developments in high power wide band design. It will operate on a frequency somewhere between 42 and 56 megacycles, a wave band which can be picked up only as far as the distance from the antenna to the horizon, and it is expected the station will provide coverage within a radius of approximately 40 miles over a total area of about 4800 square miles.

The antenna is to be built around that portion of the building immediately below the stainless steel needle surmounting it. This will mean that a distance of less than 100 feet separates the transmitter from the antenna and that thereby an almost distortionless transfer of power should be assured.

The Chrysler tower was chosen as the best location because of the fact that most of Manhattan's population is concentrated to the north of the tower and no higher build-

ings are located in that direction. This situation indicates that the radio waves will not be broken up or refracted by the steel skeletons of other buildings and that therefore a common fault of television, the production of double images, will be avoided.

### Columbia Pioneered

The Columbia Broadcasting System was among the earliest pioneers to undertake practical experiments in television. In 1931 Columbia broadcast sight and sound simultaneously on the same transmitter, and at the same time, started the first regular television broadcasts, continuing from 1931 to 1933. During that time what are technically known as low-definition 60-line pictures were transmitted daily on W2XAX on 2800 kcs. Although these images were considered the best of their time, Columbia discontinued them because of the realization that these coarsely defined images had little entertainment value.

The present transmitter will operate on a 441-line basis, and in addition, it will produce 60 pictures a second as compared to 20 pictures a second in the earlier television broadcasts. The images received from the new station will be comparable in fineness of detail to pictures projected by home motion picture equipment.

Because of the restrictions which exist in most European countries against commercial broadcasting, Radio Luxembourg, Europe's most powerful station which does not exercise such bans, commands more money per hour of radio time than any other single station in the world. Radio time on this station costs \$1600 per hour until 1 p.m., and \$2000 per hour after one o'clock.

The license of KEHE, Los Angeles, has been voluntarily assigned to Hearst Radio, Inc.

# The Monthly ROUND TABLE

• • • By CARLETON LORD

**A**S THIS issue is released, the 1936-1937 radio season passes into history. Some listeners will be glad that it is over, while others will regret that it didn't last longer. For everyone, it was an unusual winter—bringing surprises, disappointments, thrills and changes.

Many DXers observe that the season may be remembered for generally poor reception, and some go on record as believing that it was the worst within memory. Others have no complaints to offer and a few even claim better than ordinary reception. But we all added a few new catches to our logs, so let's skim over some of the reports!

"On the broadcast band, conditions have been very bad," bemoans Jerome Roberts, 1573 Packard Ave., Racine, Wis. "My Zenith seems to be able to pick up everything—except DX. By DX, I mean something out of this hemisphere, but it can't be found. The Cubans have been heard through the rest of the North American stations, with CMBX rolling over WTAM and CMX over-riding its competitors. A Spanish-speaking station has been blotting out WCCO of late without any trouble. Hearing the Cubans is some pleasure, however, since it points to bigger and better things in DX."

"Reception has been just fair this year," reports Thomas Black, 143 Carroll St., Pittston, Pa., "although some very good catches have been logged. At present my log shows 707 stations, of which the best are Grenoble, Marseilles, Paris, Fecamp, Rennes, Cologne, Leipzig, Munich, Belfast, LR1, LR4, LR5, PRF3, CX26, YV1RC, YV1RF, JOCK1, JOHK, 1YA, 3YA, 4YA, 5YA, VOXM, KGU, TGW, HHK and HIX. All have been heard on a seven-tube

*Second place in the RADEX Mystery DX Contest is taken by George Publow, King St., Picton, Ont. Using a Masterpiece IV to score 450 points, Mr. Publow became the lucky owner of a Midwest Model K-11 receiver.*



1930 Brunswick receiver, and I should like to hear from other Brunswick users."

"Reception generally on the BCB this past winter has been poor," advises W. J. McGrandle, 886 Home St., Winnipeg, Man. "Strong fading and a great deal of noise have been the chief faults. I am still using the vertical aerial which I described in a letter appearing on page 46 of the May 1935, RADEX, and it consistently is better than any other type which I have tried."

"At the beginning of the season," recalls Ernest Law, 10439 69th Ave., Edmonton, Alta., "I set a goal of 200 stations on the broadcast band. To date the log shows 245 catches covering North America, Alaska, Haiti, Hawaii, Australia and New Zealand. It is really surprising to see how many stations of low power have been coming through, as static was abnormally high all year."

"A few months ago I wrote you that I had heard LR1 for my first foreign station on the BCB," reminds Ray B. Edge, 14 Villa Ave., Buffalo, N. Y. "Well, I now have my verification from them. It was postmarked in Buenos Aires on February 2nd and arrived here on February 25th. It was printed in Span-

ish and I had to have it translated. Before next season gets under way, I would like to join some good DX club—preferably one that has a few members in or near Buffalo.”

“So far this season,” prefaces Lawrence Lunberg, 1020 Lowry Ave. N., Minneapolis, Minn., “I have received 114 verifications to increase my total to 456 on the broadcast band. From some of the station letters, I get the idea that the average DXer is not sending very complete reports to the broadcasters.

“For instance, I tuned KTSM, El Paso, Texas, on a test program and was only able to hear them QSA3/R2-3/XX/SS to SSS. When I reported the broadcast, I told them exactly how the station came in. In return I received a swell QSL card and a fine letter from the engineer, stating that my report was the best they had received for a long time and wishing that they could get a few more like that on future DXes.”

### Station Changes

The closing season found many changes taking place on the broadcast band. The Federal Communications Commission was particularly active, and a survey of their records shows that no less than 54 new stations have been granted construction permits. Switches in locations, frequencies and even power have been prevalent in this and other countries.

“XET has boosted its power from 500 to 5000 watts,” notifies Samuel Meyer, 271 Milburn St., Rochester, N. Y. “For years they used the lower power on 690 keys, but at last Monterrey will have a real station to serve the wide area of North-eastern Mexico.”

“Station XEAO, Mexicali, B. C., has moved to 660 keys,” informs J. W. Hansen, 3028 Fairmont Blvd., Riverside, Calif., “and they are coming in QSA5, R9. Their normal schedule calls for a sign-off at 2000 PST, although occasionally they

stay on until 2030. XELO is back on its old frequency of 1110 kcys. On April 4th I heard CMCJ broadcasting a special test on 1090 keys. They announced this frequency several times, so the switch may be permanent. Can anyone identify the Oriental station which occasionally is heard on 690 keys?”

“Contrary to many reports—my own included!—the Aussie on 600 keys is 7ZL at Hobart,” confesses Anthony C. Tarr, 909 W. Lee St., Seattle, Wash. “That frequency was assigned to the new 4QN and I guess many of us let our imaginations run wild when we heard a program there. It now develops that 4QN is not yet on the air and 7ZL is using the channel until 4QN is finished.”

“The call of the station at Shepparton, Australia, has been changed from 3WR to 3SR,” writes Ernest M. Niven, Box 437, Dunedin, N. Z. “They are now controlled by the Argus newspaper and use 2000 watts on 1260 keys. Another Argus station will be a 100-watter, 3UL, at Waragul. Hobart is to have a new station, 7HT, 1330 keys, 300 watts. This one was scheduled to commence operation on April 10th. 4BC is planning a new station at South Burnett with the call 4SB. It will start up in August with 2000 watts power. The Tamworth station, 2TM, has recently increased its power to 2000 watts. Station 2LV has changed its call to 2NZ. Station 3WV at Horscham is reported testing on 580 keys, while 3AR has changed to 630 keys.”

“Station OAX4B, 1200 keys, Lima, Peru, is operated by R. Grellaud y Cia,” contributes Edward Ayzavian, 44 South Gate Park, West Newton, Mass. “The box number of HJ1ABA, 1330 keys, Barranquilla, Colombia, is 715—not 751. Station XEAA, 920 keys, Mexicali, B. C., has a daily schedule of 1100 to 2300, while KWSC operates daily except Sun-

days and holidays from 0945 to 1000 and 1330 to 0030."

### Club Co-Operation

The 1936-1937 radio season marked the conclusion of what might be called the "Stone Age" of inter-club co-operation. After two years of noteworthy work, Emily Griswold has announced her retirement from the position of Operator of the I.C.C.P. Clearing House. And thus ends the first step of a noble experiment.

Before another winter season opens, the various radio clubs will have an opportunity to decide on the proper steps to insure the continuation of the co-operative idea. It may be deemed advisable to carry on the Clearing House scheme, in which case it is only necessary to renew the current agreement and appoint someone to act as operator for the coming year. If weaknesses in the present set-up have become evident, it should be a comparatively easy matter to provide means of correcting them.

From time to time readers have pointed out instances in which the true co-operative spirit was not kept by all of the clubs in the I.C.C.P. For example, it has been charged that one club in particular made a practice of withholding some of its special programs from its report to the Clearing House. The result was that the club in question was able to "scoop" all other bulletins on a few broadcasts every week. In support of this claim, it was pointed out that the bulletins from the Clearing House repeatedly failed to list programs subsequently announced in the publication of this club.

While it is admitted that every journalist delights in a sure-enough scoop, such a practice—if true—was in violation of the agreement to which all of the clubs pledged support. Further, by withholding notice from the members of the other organizations, the club in question

*Third place in the Mystery Contest was won by a West Coast contestant, Dale Smith, RFD 3, Box 536, Eugene, Ore. who scored 440 points to win the Hallcrafters Sku Buddy receiver.*



deprived each station of a potential audience and, of course, cut down on the possible response. Also, the club was unable to give its own members the benefit of channel-clearing help from the Clearing House.

Another reported violation was the failure of some clubs to give credit when listing specials arranged by other clubs. This, too, is contrary to the I.C.C.P. agreement.

### Another Suggestion

In the event that the Clearing House arrangement, as carried out during the past two years, has proved impractical and cannot be operated to the best interests of all DXers, the clubs would do well to decide upon a substitute plan and see that it is ready to function when the new season opens.

In the January RADEX a reader outlined an idea designed to accomplish the purposes of the Clearing House with a minimum of confusion and effort. The plan was simply to consolidate all courtesy programs committees into one group under the direction of a general chairman. The committee would be made up of CPCers from all clubs and would arrange programs to be dedicated to the clubs as a group, rather than to any organization in particular. This idea has been discussed more or less in detail in subsequent issues.

From Charles C. Norton, president of the URDXC, 2018 Green St., San Francisco, Calif., comes an objection and a suggestion:

"I do not believe in such a plan,"



he writes. "Its only purpose would be to keep stations from being pestered by too many requests for programs. I think the same thing could be accomplished by distributing the stations of the United States and Canada among the existing clubs. Let the clubs keep their present CP's and concentrate upon the stations assigned to them. To keep up the spirit of each organization, let all programs so scheduled be dedicated to the club which arranged them and to the rest of the clubs as a group. Thus an announcement might go something like this: "This DX program is dedicated to the Newark News Radio Club and all clubs of the Inter-Club Plan."

"To carry out this idea, I would suggest the formation of a committee composed of one member from each club. They would meet in some Eastern City—say New York or Philadelphia—and distribute the stations equally among all the cooperating clubs. If there were 800 stations to be divided among eight clubs, each club would get 100 stations—so many 100 watters, a certain number of stations in the 250-1000 watts class, and so on.

"All of this is, of course, just my personal view of how things should be worked out, and there are undoubtedly many others who have different views on the subject. I do think, however, that if a general CPC is formed, DXers will not have as much success as in the past.

"The URDXC will be one of the first to co-operate in whatever is decided upon by the majority. And it is our hope that all will work out a solution to the problem, so that the next season will be the greatest year in DX history."

In arriving at the ultimate decision, it will be necessary to consider the best interests of the greatest number of listeners. DXers who are members of radio clubs should make a point of writing to their chosen officers and making known

their ideas and suggestions. Only in this way can club leaders determine what policy is the will of the majority. DXers who do not belong to any club may, if they wish, send in their opinions to us. We can then determine a general consensus of readers and compare these ideas with those of the various radio clubs.

### **Taxing Broadcasters**

Another milestone for the 1936-1937 radio parade is the first serious attempt to place a special tax on broadcasting stations. Until now, broadcasters have been taxed much the same as the average business organization. As companies, they have paid local, state, and Federal taxes on property, profits and other taxable items.

But if the bill proposed by Commissioner George Henry Payne, member of the FCC, is enacted, stations will have to pay what might be termed an "air tax." For the privilege of "enjoying the use of a great national resource" and using "the people's airwaves," the broadcasters will pay a specified amount for every watt put into their aeriels.

Commissioner Payne proposes a sliding scale for the determination of the tax for each station. For every station authorized to use not in excess of 1000 watts power, a rate of one dollar a watt will be charged. Stations using from 1000 to 10,000 watts will pay at the rate of \$2.00 a watt, while those using power in excess of 10,000 watts would be taxed \$3.00 a watt.

The proposed tax would be computed by considering the number of hours a station was authorized to operate out of each twenty-four. A full-time station, for example, would be taxed at the regular rate in accordance with its power. A half-time station would pay half the amount charged for its particular power, and so on.

Stations using varying power for night and day operation would be

taxed according to the weighted average amount of power authorized by the Commission. For instance, a transmitter using 100 watts night and 250 watts day would be taxed for 175 watts, while 3000 watts would be the basis for taxing a broadcaster using 1000 watts night and 5000 watts day.

In proposing his bill, Commissioner Payne suggests that the broadcasting industry can well afford to pay the special tax because of "enormous profits." "It is a fact," he says, "that there are not more than \$40,000,000 invested in the broadcasting business and the gross revenue last year exceeded \$107,000,000, with the possibility of its reaching \$125,000,000 to \$130,000,000 in the current year. Not long ago, one station, which represented an investment of \$177,192.15, was sold for \$1,250,000; another, which represented an investment of \$146,006.02, was sold for \$452,500; and still another, which represented an investment of \$90,321.09, was sold for \$300,000—and so on."

Commissioner Payne admits that his proposed bill is purely a revenue measure—and in that sense he is entirely correct. Computed on the broadcast licenses now in effect, the tax bill would yield an annual total of \$6,946,395.

Stations affiliated with the National Broadcasting Company would be taxed \$3,016,000 yearly—and that does not include the mere million and a half which WLW would be obliged to pay. Columbia stations would fare a little better, since their aggregate bill would be just under the two million mark. The Mutual network would get off dirt cheap by paying \$341,275 for their exclusive stations.

In 1936, advertisers spent \$23,168,148 for programs over the Columbia Broadcasting System. If the tax bill went into effect, over eight per cent of that gross revenue would have to go for taxes on stations

*Using a Philco 16-B receiver, T. J. Saunders, Box 32, Bly, Oregon, won a Perfect Phone Adapter in the R.A.-DEX Contest.*



alone. The average expenditure of Columbia clients last year was \$257,292—and it would take the entire revenue from eight of their sponsors to pay the tax on Columbia stations.

The effect of such a tax on the broadcasting industry is difficult to predict, but one thing is certain—the industry will not pay it. The stations may raise their rates to cover the taxes, in which case program fare will probably suffer. Stations may make drastic reductions in operating power, with resulting losses in coverage—and again Johnnie Q. Public will suffer.

### Contest Reactions

With the files of the 1937 Mystery DX Contest closed and the prizes in the hands of the winners, we will still receive reports on the unfavorable conditions which existed over the week-end of February 20-22.

"Ole Ma Nature was really releasing her fury here on those three mornings," maintains Roy E. DeMent, P. O. Box 206, Plainview, Texas. "If the contest had been held a few days earlier or a few days later, it would have had some real DX nights! During the March frequency checks, for example, I was at the dial of my new 1937 Midwest receiver for some 14 hours on five mornings and tried to see how many FCC stations I could haul in. The net result was 152 in all, of which

128—most of them 100 watters—had not been heard before. I still believe that by holding the contest in January would give us all better reception conditions.”

“The contest is over,” observes Dale Smith, RFD 3, Box 536, Eugene, Ore., “and it sure was a real contest. While I don’t think I will rate among the winners (Mr. Smith placed third and won a Hallicrafters Sky Buddy—Ed.), I still think it’s great sport. We DXers certainly look forward to your Mystery Contests and hope that they continue an annual highlight of each season.”

While North American listeners didn’t fare so well during the contest, at least one of the stations managed to cover quite a bit of territory. From Alan Hutchins, 15 Embo St., Dunedin, N. J., comes the following report:

“At 0500 EST on the morning of February 21st, I tuned in a station on 940 keys which was broadcasting for your contest. Because of severe interference from JOBK2, I was unable to get the call letters. However, as you can see from the enclosed log, I did manage to get some program data. So would you help me obtain a verification by mailing this report to the proper station?”

“Results obtained over the contest week-end were very disappointing, although I did log two new stations. It was held too late in the season for New Zealanders, as the Australian stations have most of the channels well covered by the time the contest got under way. Perhaps you will give your New Zealand readers a chance to compete next year.”

The report forwarded by Mr. Hutchinson was, of course, for WHA at Madison, Wis., and has long since been forwarded to the station.

#### **Those All Night Squawks!**

“For some time I have considered commenting on a subject which is dear to the hearts of all BCB

DXers,” exclaims R. B. Oxrieder, State College, Pa. “From time to time I have read squawks from listeners about the all night stations. While I can sympathize with some of the complaints, it affects me with mingled amusement and irritation—at times it is hard to say which predominates—to hear complaints about an all-night station preventing reception of a station 20 to 40 keys away. If I operated an all-night station and received such a squawk, my reaction would be, ‘Nertz! Why doesn’t he get a decent set.’”

“There might be justifiable complaint when a station covers up its own channel 24 hours a day, but why blame a station when it covers four to six channels on either side. Actually, the responsibility lies with the receiver which has such poor selectivity. This type of complaint does much more harm than good, since it will cause the station manager to discount legitimate complaints. A broadcaster may be supposed to vacate a channel for an FCC check, but I haven’t heard of any regulation which says that everyone within 30 or 40 keys should close down.

“My personal opinion is that these complaints come from the same type of DXer who insists that short wave stations in foreign countries announce in English. This is particularly true of the South American stations, which use short waves for coverage much the same as we use the broadcast band. If there is one trouble with a lot of us in this country, it is the tendency to attempt to make rules and regulations for the other fellow. Yes, I’m guilty at times, too, but I try to curb it as much as I can.”

“May I take this opportunity,” ventures Julian Schaefer, 2036 W. 83rd St., Cleveland, Ohio, “to agree with Count de Veries that the DXers of today can hear from 700 to 900 stations in a couple of years. Com-

pare that with the log compiled before the days of the FCC checks. In the past 23 months, I have heard about 800 stations, of which 700 have been reported and 660 verified. From the West Coast states alone I have 74 veries. But for the FCC checks of today, it would have been impossible to hear more than a few of these. So why complain about the all night stations, when conditions actually are far better than before?"

### Vote For The BCB

"There has been considerable controversy between short wave listeners and broadcast fans," supplies Richard H. Cooper, 412 Rayburn St., Kittanning, Pa. "My support goes to the BCB boys, since a try at the higher frequencies failed to impress me beyond the 'novelty' stage. I find it much more interesting to DX on the broadcast band.

"For example, on the morning of January 11th, I was having a try at the frequency checks. At two o'clock, I turned to 1420 and heard WJBO. Since I serve on the Courtesy Programs Committee of the National Radio Club, I was interested in the dedication of WJBO's frequency check to the club. Accordingly, I had written to the engineer of the station and told him I would be listening in.

"Midway in the program, I was delightfully thrilled to hear an acknowledgement of my letter and to have a musical selection dedicated to me. Of course, many DXers have experienced this sort of 'thrill'—some of them many times. And so I feel certain that any DX fan who has had this happen to them will side with me in saying that such an occasion is part of the life and interest in DXing. Like the Mystery DX Contest, it provides that extra spark in keeping DX from becoming cut and dried."

"As a reader of RADEX," notes C. Dickinson, 37 Kent St., Chatham, Ont., "I would like to say a few

*Arthur E. Foerster, 1213 B o s a r t Ave., Indianapolis, Ind., now has a new pair of Trim Featherweight Headphones as his prize for placing fourth in the RADEX Contest.*



words in praise of the owner and manager of our local CFCO—Jack Beardall. Every Sunday morning at 10:15 EST he has a radio club broadcast. Although I am mostly interested in short waves, I do enjoy his interesting talks on aerials and radio in general."

And we of RADEX have a warm spot in our heart for Jack Beardall. During each of these radio club broadcasts, he observes a one-minute period of silence in memory of our late editor and publisher—Fred C. Butler.

### Reception Kinks

Occasionally readers report on experiments which have enabled them to better their reception. Not so long ago a Kansas City listener told how he had converted a small receiver into a pre-selector unit. And now comes Harry V. Adams, Bay View, Digby Co., N. S., who has another idea which should be of interest.

"The most interesting reception that I have had in two and a half years of DXing," he writes, "was in February of 1935. At that time I was tuning alternately a 3-tube Westinghouse regenerative receiver and a 4-tube Grimes superhet—both midget sets. After some experimenting, I decided that pick-up might be improved if the two sets are connected together. Accordingly, I hooked the aerial and ground leads together. By turning on both

sets and tuning to the same stations, I found that volume could be doubled with a very low signal-to-noise ratio.

"The morning of February 10th offered the first opportunity to try out the idea for DX work. Shortly after 0500 AST I tuned in CKBI at Prince Albert, Sask., then the most northerly Canadian station. They were on a DX program and came in fine. After their fade-out, I picked up CHWC at QSA5, R5-6 and copied a report until their sign-off at 0600.

"The next good DX came on February 12, when many small California and Texas stations were coming in very well. About 0530 AST I picked up a weak carrier near 880 keys, which proved to be 2BL. Between 0545 and 0600, the signal was QSA5, R4-5 on the speaker. Unfortunately, the increased power output blew out my speaker coil and this about ended my experimenting."

"In the years past," recalls Herbert Tucker, 57 Kenilworth Dr., Akron, Ohio, "radio to me was just a piece of apparatus producing entertainment only from local radio stations. One night I heard WEAF about ten o'clock and thought it was really a distant station. Soon I learned how to tune KFI and a few other high-powered Coast stations, but it was not until 1934 that I learned the possibilities of radio.

"Up early one Sunday morning, I turned on the radio to see if any one station could possibly have started its day of broadcasting. One station, WBIG, was heard stating that they wished reports of their signal strength. I wrote them, but didn't know I would get a verification of their station. When the unexpected card of verification arrived, I was excited and wanted more verifications. One from KSL did come the next month.

"That summer a new radio came into the house, and in the fall of

that year I started to DX. I began slowly and it wasn't until this year that the first foreign verie arrived. Since 1934, I have found a new and interesting hobby, discovered only through accidentally turning on the radio early one morning."

"Contrary to your lists," points out George Canapp, 222 S. Carey St., Baltimore, Md., "stations WSM, WICC and WAAB *do* have verification stamps. I know this to be true, as I have received them."

"In your January issue," reminds Jack Anderson, R. F. D. 2, Duncan, B. C., "you printed a letter of mine, which contained some information about my aerial. The next letter quoted was from 'Pretzelite' and I am just wondering who he is and how to address him. If you know how to reach him, will you send along the enclosed letter?"

We, too, are in the dark about Pretzelite's real name and address. If he will send us the proper information, we will forward Mr. Anderson's letter.

From Charles C. Norton, president of the URDXC, comes word of a luncheon held at the Olympic Hotel, home of KGGC, in San Francisco on March 6th. Attending were prominent DXers and local civic officials, who laid the foundation for the DX convention which will be held in conjunction with the Golden Gate International Exposition in 1939. It was decided to form a committee, under the chairmanship of Mr. Norton, to be composed of representatives from all radio clubs. This committee will meet at some future date to discuss plans for the convention. Radio club officials are requested to select some member residing in the San Francisco metropolitan area who can represent that club as a member of the committee. Communications relative to the convention should be addressed to Mr. Norton at 2018 Green St., San Francisco, Calif.



# The TELEVISION Receiver

• • • By B. FRANCIS DASHIELL

**M**ANY are of the opinion that when television comes it will force sound broadcasting into the background. Of course, this is far from being true. Television broadcasting is severely limited in the area it can cover, and for a long time its effective range will seldom be more than 25 miles. But sound broadcasting covers thousands of miles, and will always fill an important place. Furthermore, sound broadcasting will go hand in hand with visual broadcasting, for sight and sound are the twins of television.

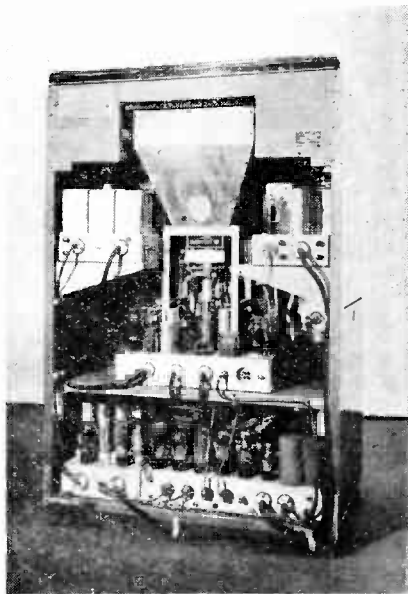
The public is expectant of an early and successful termination to the present experimental stage of television. Of course, no one can say definitely when television is to be released commercially. But we know that its success has been due to the development of the cathode ray tube. We learned last month that this work has been done by scientific investigators throughout the world.

## He Visioned Television

That this improvement covered a long period of time is proved by an interesting fact which will surprise many who think that electronic television is of recent origin. The truth is, it was proposed in 1908, while wireless was in its infancy. In one of science's most amazing prophecies, the British scientist, A. A. Campbell Swinton, said: "Distant electric vision will be solved only by the employment of two beams of cathode rays, at the sending and receiving stations, synchronously deflected by the varying fields of two electro-magnets placed at right angles to one another, so that the moving extremities of the

two beams are caused to sweep over the whole picture element in one-tenth of a second. The receiving ray must impinge on a sensitive fluorescent screen. The present difficulty lies in the transmitter, for no photo-electric phenomenon is known to be sufficiently rapid to do this. But something will be discovered before long, and distant electric vision will then be possible."

This is the first recorded suggestion of electronic television. The accuracy of Campbell Swinton's beliefs astonish the modern television engineer, for 29 years ago wireless was new, tubes were unknown, and photo cells in their infancy. Let us remember, then, that electronic television is not a "one-man" job, but has been solved in America by the



*Rear view of the experimental model Philco television receiver.*

co-operation of research workers and large industrial laboratories laboring after the ideas advanced years ago by a great scientist. If we become impatient about television, remember it has not been developed overnight, but that it is destined to become one of the world's greatest achievements.

### Television Receivers

During previous discussions of methods utilized to transmit television signals by scanning a camera view of some actual scene, we briefly covered the operations in the studio. However, since television is due to become the problem of the people who will install receivers in their homes, it is necessary that any discussion of television must be devoted principally to the receiver.

We studied the electron or cathode ray tube and its application to television in a previous article of this series. The principles involved are more or less similar to any of America's three outstanding systems of television reception. It is known that a glass tube from which all air has been withdrawn is utilized. A beam of electrons (cathode ray) sweeps rapidly across the large, flat end of the glass tube, and because of the resulting electric action, it illuminates the fluorescent screen so as to resemble a picture focused on the ground glass of a plate camera.

### Three Tube Types

At present three widely known types of cathode ray tubes are being used for television reception in experimental receivers. The one that was created in the laboratories of the Radio Corporation of America is known as the Kinescope. The product of the Farnsworth Television Corporation is called the Oscillight. And the Philco Radio and Television Corporation, which has long pioneered the problem of television, has a remarkable receiving

tube. In Europe, cathode ray tubes are also used, and progress is being made with tubes built under American patents.

### The Fluorescent Screen

The very existence of television reception lies in Campbell Swinton's idea of the cathode ray tube with its electron gun and fluorescent screen. This screen is painted on the inner surface of the large, flat end of the flask-like tube. It reproduces light in all shades of brilliancy between black and white when the electron beam that is shot from the gun falls upon the screen material. And, as the electron beam varies its power or the energy of the stream of electrons, controlled by the modulation of the incoming radio signal, the degree of light changes also in direct proportion. The screen responds instantly to the tiniest excitation by the electron beam, even during the briefest of intervals. The grid in the electron gun of the Kinescope controls the intensity of the beam in accord with the incoming picture signals. This modulation of the electron stream is accomplished in the same way any ordinary radio tube is controlled by its grid element.

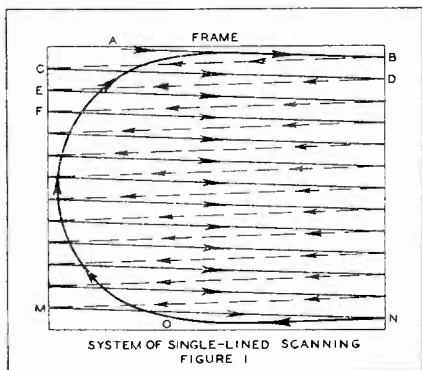
The screen is very thin and is composed of a deposit of zinc silicate. It covers an area of about 6 by 7 inches and this is usually the size of the reproduced picture. A mirror arrangement, however, is now showing a picture about 7 by 10 inches in size. A phosphorous material of this kind holds its luminescence so that the brilliancy will fade away in approximately 1/30th of a second. This is spoken of as the "decay" of the screen. If the time of decay is too long, the moving portions of the picture will "drag", like the tail of a comet, and spoil the effect. If it is too short, gaps will appear and flicker will be noticed, because of

the space that occurs between successive pictures or "frames".

### Scanning The Screen

As the electron beam from the gun flies back and forth across the fluorescent screen, its movement is in jerks due to the action of the horizontal deflecting coils. Each swing across the screen corresponds to one "tooth" in the pulsating current that resembles a series of "saw teeth" (see last month's article). When both the vertical and horizontal electromagnetic deflecting currents are adjusted and synchronized with the transmitter, a pattern consisting of 441 parallel lines is seen on the fluorescent screen.

The sharpness of this pattern and the perfection of its synchronization determines the quality of the reproduced picture. The picture is created by the application of picture signals to the control of the gun, so as to vary the intensity of the electron beam and the resulting lines of light laid down across the screen. This scanning by closely parallel lines is known as linear or single-line scanning.



In Figure 1 we see how the fluorescent screen at the viewing end of the Kinescope is covered with horizontal lines when a picture is being received. The electron beam begins at "A" with the first of 441 surges

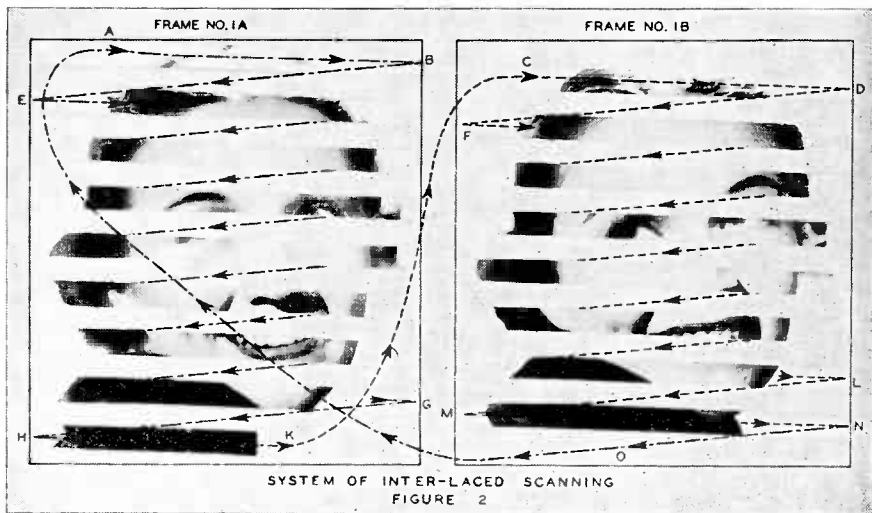
of horizontal deflecting current. (This was described in detail last month). The first "tooth" or surge in the horizontal deflecting current pushes the beam across to "B", but at the apex of the "tooth" the current suddenly drops to zero, and the beam flies back from "B" to "C" about ten times as fast as it moved from "A" to "B". At "C" the second "tooth" in the current pushes the spot steadily across to "D", from which point it again rapidly returns to "E". This action continues until the beam reaches "N" at the bottom of the frame after 441 lines have been swept across the screen in 1/30th of a second.

When the beam returns to the left, as from "B" to "C", following the path indicated by the dotted line, it ordinarily would leave a trace of light called the "return line". This is obviated, however, by the action of a synchronating signal that momentarily extinguishes the beam. Also, when the beam reaches the final point at "N", it returns to its starting point along the path "N-O-A". This, too, would create an undesirable light trace, but it is extinguished also by the synchronizing signal that comes at the end of each frame, or every 1/30th of a second.

### High-Speed Reproduction

Television, like the moving picture, consists of rapidly superimposed, individual pictures or frames. These frames are projected at a rate which causes the images to create the illusion of a continuous picture through the "persistence of human vision". In television, each frame has to be built up, element by element, and row after row, in a definite period of time. These individual frames are reproduced at a rapid rate—the standard to be approximately 30 per second.

When the eye looks upon some illuminated object, and the light is suddenly removed, the eye does not



instantly lose the sensation of vision. The fading picture retained by the eye is due to the persistence of vision. This accounts for the reason that flickering is not observed during the interval that occurs between frames of modern motion pictures. However, if the rate between frame interruptions is slow, flicker will become a serious matter. In motion picture projection there may be 24 complete light stoppages per second, with some slight flicker as a result. To prevent this, the light is also cut off at the middle of each frame for  $1/48$ th of a second. This action provides 48 equal and equally spaced light impulses, and these are equivalent to the projection of 48 individual images per second.

But, in television, we cannot stop the light impulses in the midst of the reproduction of a frame, because we are reconstructing each frame line by line. The creation of 60 full frames every second is too much to expect of present-day television. So, instead, we create 60 half frames each second. An ingenious scheme now provides the necessary 60 interruptions of light

by building each frame up of two half-frame groups of alternating lines.

#### Inter-Laced Scanning

The usual system of progressive or linear scanning is modified so that each frame is scanned twice. The first half of the frame period is scanned in  $1/60$ th of a second, but this is possible because only every other line is illuminated, such as lines 1, 3, 5, 7, 9, etc. Then the electron beam returns to the top of the frame. The second half of the frame is next scanned completely in  $1/60$ th of a second, but its lines fall *half way between* the lines previously created in the first half, and we therefore have lines 2, 4, 6, 8, 10, etc. Thus, in a frame of 441 lines, scanned in  $1/30$ th of a second, we have the *sum* of two half-frames, each of  $220\frac{1}{2}$  lines, and scanned in  $1/60$ th of a second.

This can be shown better by Figure 2. The first half-frame, No. 1A, shows how the electron beam or spot of light begins its passage over the frame at point "A". This also is similar to point "A" in Figure 1. The beam, in Figure 2, moves across

to the point "B", and leaves a trail of illumination on the fluorescent screen. This trail or line is slightly inclined to the right for the beam is *always* being gradually depressed toward the bottom of the frame by the action of the vertical deflecting current, one "tooth" of which lasts 1/30th of a second. The line of light is modulated in shadows to match the scene being transmitted, as shown by the picture strips. The beam then quickly returns to "E", which is not the next parallel line, but line 3. Moving again to the right, the beam illuminates another shadowy trail across the screen, retraces quickly to the starting point, then begins another line. This keeps up, with alternating lines, until the bottom of the frame at point "K" is reached after 1/60th of a second has passed, and 220½ lines are "drawn".

#### Beam Is Extinguished

At this instant the stream of electrons is repelled, through the action of a negative bias applied to the grid of the tube. So, while the beam is moving from "K" to "C", at the top of the second half-frame, No. 1B, it is completely extinguished, and, therefore, cannot leave an illuminated trail across the screen. At "C", the beginning of line 2, which was passed over when Frame 1A was scanned, the beam moves to point "D" and "paints" an illuminated line that falls half way between lines 1 and 3 of Frame No. 1A. This is the first "interlaced" line. The beam quickly returns to "F", which is the beginning of line 4. This action keeps up until point "N" is reached at the bottom of Frame No. 1B. This completes the second half-frame of 220½ lines in 1/60th of a second. The two frames are completely interlaced in 1/30th of a second, and the persistence of human vision retains the whole effect on the eye as a single, complete picture, as shown in Figure 3.

When the beam reaches the bottom of Frame No. 1B, it is extinguished, as it was at the bottom of 1A, but this time it retraces along the path shown—"N-O-A"—to the starting point at "A". The action begins anew to reproduce the next two half-frames within another 1/30th of a second, and we observe the illusion of motion. Television is much like moving pictures, except that the latter projects on a screen a previously photographed picture while the former must reconstruct its individual pictures before they can be recognized as such.



#### Reception Problems

The reproduction of moving scenes on the fluorescent screen of a viewing tube is television's greatest problem. Flicker has been eliminated by inter-laced scanning. A little natural static and much man-made interference remain, but not always so severe on the ultra-short waves. Sound must be re-created with true fidelity simultaneously with the scenes being reproduced on the screen. A separate radio circuit is used for sound; both it and the visual receiver working on two different wave lengths.



Television requires a wide channel for the transmission of its many frequencies. So, in order that such channels be utilized, television must operate in the ultra-short wave bands where many frequencies are available. The disadvantage of this wave band is that radio transmission follows a straight line or the line-of-sight from station to the horizon. But, if the transmitter is placed high above the earth, the optical horizon is much farther away and the reception distance is that much greater.

### **Distance Covered**

This means, then, that television must remain close to the big centers of population. People residing far away may not enjoy television for a long time. In New York and Philadelphia, where television is now being demonstrated by R.C.A., Philco and Farnsworth, and in London by B.B.C. and Marconi-E.M.I., excellent short wave reception is being obtained. Ultra-short wave relays placed about 25 miles apart have been used successfully to send signals from New York to Philadelphia. And the development of the "coaxial" cable, which guides high-frequency and radio waves, has also made reasonable wire transmission possible, particularly between the pick-up scanning camera and the more distant radio station.

Television transmissions vary between 3 and 8 meters. Eventually the 56 to 70 megacycle band will carry the burden of television. Reflection of the ultra-short waves is very common, and behind hills and large buildings the signal energy quickly falls away in strength. But, if a direct line of sight exists between the two antennas, either by the naked eye or telescope, these short wave television signals may be picked up with a maximum of intensity. A very high transmitting station, such as that on the Empire State Building in New York City,

gives a far horizon and is a great help, but seldom is practicable.

### **Sight and Sound**

The complete television receiver consists of two combined short-wave sets—one for picture and the other for sound. The reproduced image is viewed in a mirror mounted on the inner side of the lid of the cabinet, and the accompanying sound is heard through the loud speaker. This enables a small audience to sit comfortably near by. The picture and the sound units of the receiver are tuned to the television station desired. Sound and tone are adjusted in the usual manner. The picture volume is manipulated until the electron beam falls into synchronization with the transmitter. The tuning of pictures will be almost as simple as any short-wave tuning operation.

Philco's new television receiver reproduces pictures of 441 lines. It is an example of that which may become standard television practice. It has 26 tubes in all, and the picture screen presents a black and white reproduction about 7½ by 10 inches. Sight transmission is on 49 megacycles, while sound signals are received on 54 megacycles. The visual signal embraces a wave band that is nearly 5 megacycles (5,000 kilocycles) wide, but this is a natural result. It is expected that a standard separation of about three megacycles between visual and sound waves will be sufficient to prevent their interfering. All sound transmission in television will be on the higher of the two frequencies used. No cost of American television receivers has been set, for at present these sets are experimental. However, amateur experimenters have some parts and units available, particularly the new Don Lee tubes and units. But in England, where receivers are actually being sold, the prices appear to range from \$325 upward.

# What Our READERS Are SAYING

• • • TOO LATE TO CLASSIFY

**S**HORTWAVE and broadcast band information of interest to all DXers is included in these letters from RADEX readers.

An Indianapolis reader, Nolan J. Six of Liberty Beach Drive, is curious to know more about the system of inverted or "garbled" speech which is used by most of the telephone system radio stations. Without getting technical, it is best explained that the high voice frequencies are converted to lows, and the lows to highs. At the receiving end a "de-scrambling" unit reverts the voice frequencies to normal, making them understandable. Speech inversion is used by nearly all the radio telephone stations, and the London, Montreal and New York stations use, in addition, a "wobulated" carrier, which causes the carrier wave to surge at regular intervals. It is nearly impossible to tune in such a signal unless the receiver is synchronized to "wobble" in unison. The reason for scrambled speech is that telephone subscribers must be assured their private conversations are not broadcast for the entire world to hear.

Mr. Six also wonders what is heard on the low and high frequency ends of the radio spectrum. Above the North American broadcast band is the long wave group, which goes down to about ten kilocycles. In Europe part of this band is used for broadcasting, but on this continent it is set aside for airport, ship and commercial services. On the extreme high frequencies, up to 500,000 kcs. or more, are experimental stations, ultra-high frequency broadcasting stations, amateurs, and television sight and sound transmissions.

The ultra-highs are the frequen-

*Four hundred points in the RADEX Mystery Contest won a year's subscription to RADEX for Evelyn Warner, 608 S. Ivy St., Medford, Ore.*



cies to be watched, for they are rapidly being developed so satisfactory reception can be enjoyed over greater distances. Five meter (60 megacycle) amateurs have been heard across the Atlantic, but so far a two-way contact has not been established.

## Shortwaves in Washington

This report on shortwave receiving conditions in the State of Washington is submitted by Anthony C. Tarr, 909 W. Lee St., Seattle.

"On two occasions a station has been heard testing and calling other stations on 6618 kcs. It was heard also on a Thursday night, coming on the air just before PRADO signed off. Portions of recordings were played, and he remained on the air until about 0200, EST.

"Another mystery was heard on 6990 kcs., on a Sunday from 0430-0500 EST. A recorded musical program was presented, and the station announcements included the words '6990 kcs' but the call letters were not undertsandable. The announcer had a strong British accent, and might have been Australian.

"HP5J, 9605 kcs, is now being heard regularly for the first time in the west in over a year. Reception is best from 2200 to 2400.

"HJ5ABD on 6085 can now be separated from OAX4Z (6080 kcs) by Western listeners without trouble, since CRCX has apparently discontinued evening transmissions on 6090.

"OAX4J, Lima, Peru, has a much improved signal, coming in now a good R8 on 9320 kcs.

"PCJ reaches the west coast R6-7 on their Wednesday programs on 9590 kcs, from 1900 to 2200 EST, the last hour being the best here.

"XEBM, Mazatlan, was heard once after a long absence, on 15440 kcs., at 2030 EST. They are still irregular in operation.

"YN1PR, a new station in Managua, Nicaragua, is usually found on 8650, and signs off at about 2215. Advertisements for Radio Pilot are frequent.

"TG2, a new 300 watt station in Guatemala City, is operating irregularly on 6300 kcs. They have announced 6350 and 6310. They relay TG1, announcing its frequency as 1510 kcs. The owner is the Director General of Electrical Communications."

### Assorted Shorts

"I tuned in HS8PJ, Bangkok, Siam, hearing about fifteen minutes of native music," postcards Hadley Wilcox, 1120 W. 91st St., Los Angeles, Calif. "The call was plainly heard twice, and the station signed off at 0700 PST. This station is on every Wednesday on 9350 kcs."

Chester Komorowski, 368 N. Main St., Norwich, Conn., has a verification from Trujillo City, Dominican Republic, giving information on the HIX stations. HIX, with 800 watts power, is on 800 kcs. The three short-wave stations are HI1X, 900 watts, 6340 kcs, HI2X, 300 watts, 11960 kcs, and HI3X, 300 watts, 15280 kcs. Their transmitting hours are Sundays 0740-1140; Tuesday and Friday 1210-1310 and 2010-2210; other week days, 1210-1310, all times being EST."

"Please put my request for SWL

cards before readers who would be interested in exchanging with me," requests Frank H. Brenneman, 115 Carlisle St., Rochester, N. Y.

A card from YVIRG, Valera, Venezuela, mentions that they have changed with official authority from 6345 to 6230 kcs, and that their present broadcasting hours are from 1100-1300 and 1800 to 2100.

A letter from the Ministerio de Educacion Nacional, Bogota, Colombia, mentions that they will start construction of a new station soon and that HJN will be off the air until the new station is completed.

OAX4J, "La Voz del Peru para Toda la America" (The Voice of Peru for the whole of America) works on 9320 kcs, but always announces its frequency as 9520. They are on the air from 1200 to 1400 and from 1800 to 2400.

### Broadcast Band Briefs

Bob Taglauer, 223 Orchard Road, Covington, Ky., writes us about the new "Party Line" inaugurated by WLW. This is a new network consisting of five stations, WLW and WSAI, Cincinnati, KQV Pittsburgh, WFIL Philadelphia and WHN New York. Most of the programs to "piped" east will originate in WLW's studios.

From Romney, W. Va., Jim Walker writes that KRMC in Jamestown verified a report of his, and that they use 250 watts at all times, according to the verification. WBLK Clarksburg, W. Va., comes on the air at 0600 EST. WMFO Decatur, Alabama, verified his report, although this station is classed by some DXers as a non-verifier.

High powered stations soon will be under construction in Moncton, Montreal, Toronto, Vancouver, and a fifth city, according to reports received from Canada. It is believed the stations will use 50 kw power.

# Around The RADIO WORLD

## • • • GREAT BRITAIN

**B**ROADCASTING in Great Britain presents an organization which is unique in the radio field. It represents an absolute monopoly, yet the controlling body is neither a Government department nor a private commercial enterprise.

Operating under a Royal Charter, the Britain Broadcasting Corporation actually is the only organization authorized to operate a broadcasting or a television service in Great Britain or Northern Ireland. Specifically, it is charged with the development and exploitation of the broadcasting service for the benefit of the Dominions and the territories under the British Crown.

Incidental to the provision of programs, the B. B. C. is authorized to publish such papers, magazines and periodicals as may be conducive to the objects of the Corporation. It may organize public concerts in connection with the broadcasting service and collect news relating to current events in any part of the world. Finally, within certain prescribed limits, it may conduct financial operations necessary for the carrying on of its business.

The responsibility for the conduct of the B. B. C. is vested in seven Governors who are appointed for certain specified terms, not exceeding five years, by His Majesty the King in Council. The chief executive officer is the Director-General, who alone is responsible for operations and who may appoint or dismiss such staff as he believes proper for the efficient transaction of business.

For administrative purposes, the B. B. C. is divided into four main divisions, the controllers of which are responsible to the Director-Gen-

eral and his Deputy. The *Programmes Division*, as the name indicates, is in charge of all broadcast material. It plans and prepares the broadcasts of music, talks, variety, drama, television, empire service, outside features, foreign exchange and school programs.

The *Administrative Division* supervises the accounts, program finance, management of publications, staff and office administra-



*Broadcasting House, London. This new building houses the studios and offices of the British Broadcasting Corp. Programs originating in this building are heard throughout the entire world through the Empire Shortwave Service.*

tion, business management, and staff training. The *Publication Relations Division* is in charge of publicity in Great Britain and overseas, editorials of B. B. C. journals and supplementary publications, non-technical correspondence with listeners, listener research, and exhibitions.

The *Engineering Division* is responsible for the design, installation, operation and maintenance of all technical equipment, including studios, transmitters and buildings.. The B. B. C. owns and operates all technical equipment associated with

the transmission of the broadcast programs, with the exception of the telephone lines linking the various studios and transmitters, which are leased under contract from the Postmaster-General. The Engineering Division also maintains a research department where all technical problems with broadcasting are studied.

The services offered the British public by the B. B. C. are varied and complete. Naturally that of primary importance is the broadcasting of regular programs, the distribution of which is so designed that the majority of listeners with the most simple apparatus can obtain at least two programs—one of regional interest and the other of national interest—under the best possible reception conditions. Listeners with modern receivers can obtain a wider choice of entertainment.

The National program is compiled at the B. B. C. headquarters in London, but the items broadcast in it may originate in any B. B. C. studio or, indeed, from any part of the world, providing that they are of national rather than regional interest. The National program is broadcast from the 150-KW long-wave station at Droitwich as well as four 20-KW medium-wave transmitters located at London, Cardiff, Manchester and Falkirk, Scotland.

In contrast with the National programs, the B. B. C. broadcasts a number of regional features, which often include items of purely regional interest. For this purpose, the area covered by the B. B. C. has been divided into the following regions: *London*, which has 28 studios in the capital; *Midland*, with offices and six studios at Birmingham; *North*, with offices and studios at Manchester, Leeds, Newcastle and Sheffield; *West*, with offices and studios at Cardiff, Bristol, Bangor, Plymouth and Swansea; *Northern Ireland*, with offices and studios at Belfast; and *Scottish Regional*, with

offices and studios at Edinburgh, Glasgow and Aberdeen.

The Regional programs from the following stations: London Region—transmitters at London, Bournemouth and Plymouth; North Region—transmitters at Newcastle and Manchester; Midland Region—transmitter at Droitwich; Scottish Region—transmitters at Aberdeen, Westerglen and Burghhead; and West Region—transmitter at Cardiff. Besides Regional programs, the transmitters at Aberdeen and Newcastle also broadcast certain items from the National programs.

Two new transmitters for the Regional service are now under construction in North Wales and North-East England.

Most readers will be familiar with the Empire Short Wave service for the benefit of British listeners overseas. The programs are broadcast daily for a period of more than seventeen hours out of the twenty-four and are transmitted from the three short-wave stations at Daven-try.

The B. B. C. operates a regular high-definition television service from its station at Alexandra Palace in North London. Two systems developed by the Baird Television Company and the Marconi-E. M. I. Television Company are employed for this purpose. The former system transmits a picture with a definition of 240 lines and 25 frames per second, while the latter transmits a picture with a definition of 405 lines and 50 frames per second using interlaced scanning.

Television programs of an hour's duration are broadcast twice daily except Sunday. In the light of experience obtained from this station, which has a range of approximately twenty-five miles, the B. B. C. is planning additional television transmitters in other parts of the British Isles.

All programs are carefully planned to bring listeners a good bal-



ance of music, talks, variety (including light entertainment and dance music), news, and educational and religious broadcasts. The educational policy is formulated by the Central Council for School Broadcasting, a body which represents teachers and those officially concerned with the public system of education in Great Britain. A short religious service is broadcast on weekdays each morning in the National program, while on Sundays two or more services are broadcast from every B. B. C. station.

For the most part, musicians and singers are retained permanently by the B. B. C. and are subject to call for any program. In the London studios alone, there are eight regular units which include a 119-piece symphony orchestra, a 37-piece military band, a 16-piece variety orchestra, a 22-piece television orchestra, a 30-piece theater orchestra, a 22-piece Empire orchestra, a dance orchestra of 21 pieces, and a group of 16 singers. In the regions, the Midland, Northern, Scottish and Northern Ireland studios each have 35-piece orchestras on a permanent basis, while the Welsh studio has a regular orchestra of 20 pieces. In all, there are 443 musicians and singers on the permanent payroll, who in 1935 received more than a million dollars in remuneration.

Published by the B. B. C. are three weekly journals which have proved immensely popular. *The Radio Times*, with a circulation in excess of 2,800,000 copies weekly, is the official journal of the B. B. C. and contains full details of all programs broadcast from B. B. C. stations, together with articles of general interest to listeners. *World Radio*, familiar to many American enthusiasts, contains program details of stations regularly heard in Great Britain, in addition to articles of technical interest or concerning broadcasting developments abroad. The third major publication is *The*

*Twelve new National Union tubes have been inserted in the sockets of the Airline receiver used by Arthur L. Robb, 1338 Mulvane St., Topeka, Kans. He tied with Harry Gordon and Harold Wagner for fifth prize.*



*Listener*, a literary weekly, which prints a large number of talks broadcast by the B. B. C.

The B. B. C. also issues a small weekly publication, *B. B. C. Empire Broadcasting*, which contains full details of the programs broadcast by short waves from Daventry for the benefit from listeners overseas. It has also published in 1936 more than 60 supplementary publications in booklet or pamphlet form, dealing with program and technical matters of general interest to listeners.

Profits from publications have been enormous, and in 1935 they exceeded two million dollars.

Since the broadcasting of advertisements and sponsored programs is not permitted, all operations of the B. B. C. are financed by direct taxation. By act of Parliament, every owner of a radio receiving set in Great Britain must pay a license fee of ten shillings (about \$2.50) a year, which is collected by the British Post Office. Nine per cent of the total received is first deducted to cover the costs of collection and other administration operations. Then seventy-five per cent of the balance is turned over to the B. B. C.

Recent figures showed a total of 7,897,508 licenses in effect. On this basis, a revenue of more than \$12,500,000 is anticipated by the B. B. C. for 1937. (In passing, it is interesting to note that the revenue from advertising of the Columbia Broad-

casting System for 1936 was \$23,168,148.)

In consequence of the services offered by the British Broadcasting Corporation, more than 200,000 letters a year are received at the London headquarters from listeners in Great Britain and abroad. Of correspondence dealing with program matters, eighty per cent of the letters delivered in 1936 expressed appreciation for the entertainment provided. All of which might indicate that the B. B. C. is doing a pretty good job in its field.

## The Havana Conference

The conference recently concluded at Havana seems to have paved the way for a solution of the allocation problem of North American stations. This conference, attended by representatives from the United States, Canada, Cuba and Mexico, met for the purpose of drafting resolutions to be presented to the Inter-American Radio Conference which will meet on November 1 at Havana.

The resolutions adopted are very similar to the Craven-Ring report which was submitted to the FCC earlier this year, briefly outlined in the April, 1937 issue of RADEX. Consideration of this report by the FCC no doubt will now be deferred until after the next Havana Conference.

A few of the principles which were adopted in the resolution are of interest to radio fans. Two of the most important, from a DXer's viewpoint, are the suggestion that the band from 1500 to 1600 kcs. be opened up for broadcasting, and that frequencies in the band from 540 to 1600 kcs. be assigned in multiples of ten.

Some observers believe that in November the delegates will consider opening the long wave band from 160 to 240 kcs. for broadcasting. This band is now used in Europe but on this continent it is assigned to telegraphic services.

A Pan-American Radio Technical Union will be established to centralize and facilitate the exchange of radio technical information between all the participating governments: Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Newfoundland, Nicaragua, Panama, Paraguay, Peru, United States, Uruguay and Venezuela.

**I**F you are interested in television, you ought to understand radio. Mr. B. Francis Dashiell, the author of the Story of Television running currently in RADEX, has written a book called

### **The Beginners' Story of Radio**

in which the fascinating story of radio is written in plain English so everyone can understand it.

This leatherette-bound book, illustrated with 63 diagrams, explains everything that takes place within a radio receiver.

**We will send you a copy for  
only 35 cents.**

**The RADEX PRESS**

14717 Detroit Ave.  
Cleveland, O.

# Before *the* SERVICE MAN ARRIVES

● ● ● By THE TECHNICAL EDITOR

## New Tone Control

*I have a Philco 5-tube, model 37-62 radio which uses tubes 6K7G, 6A8G, 6Q7G, 6F6G and 5Y4G. As I have a good "Gen. Win" tone control consisting of a variable resistance and fixed condenser, which was used on two 45 tubes in an old set, I should like to install this in the new Philco. Can you give me some information about this scheme?*

We believe that you have intended to say that your set is model 602 and not 62 for the year 1937. Model 37-602 is the a.c.-d.c. 5-tube set which, while it has automatic and manual volume control, does not have a tone control unit.

In this 5-tube circuit all octal base glass tubes are used, and the type 6F6G is the output or power tube that feeds the loud speaker. A tone control for this tube should be connected across the primary of the output transformer which also is fed by the plate of the 6F6G tube. Your tone control should consist of a fixed condenser and a variable resistance, both connected in series.

The condenser should have a capacity of 1 microfarad and have a breakdown limit of 600 volts. The variable resistance or rheostat must have a resistance of not less than 50,000 ohms. The condenser end of the tone control is connected to the plate terminal of the 6F6G tube socket. When you look down upon the bottom of the socket in the set it will be seen that it has seven active contacts. The plate is No. 3, counting to the left from the key, in a clockwise direction.

To the other side of the condenser the closed end of the resistance unit must be connected. The moving arm or contact end of the rheostat is connected to the screen grid of the tube,



*With 420 points Robert Patterson of 2119 Kenwood Blvd., Roanoke, Va., won an RCA Spider-Web antenna to use with his Philco 89L.*

which is No. 4 contact on the socket. This contact is next to the plate or No. 3, counting still to the left of the key or in a clockwise direction. All this does is to connect a condenser and resistance in series between No. 3 and No. 4 contacts of the tube socket under the chassis. This arrangement also should connect the tone unit across the primary of the power output transformer that feeds into the loudspeaker. If your tone control does not have this series arrangement or sufficient rating, one can be made from the two specified units indicated above.

## An Inverter

*In a reply to one of your readers in a recent issue of RADEX, mention was made of a "Solar" inverter that could be used to supply power for a radio set from batteries. Can you tell me about these devices and who makes or sells them?*

The inverter mentioned is merely a trade name for a particular type of battery converter so that sufficient power can be obtained to run a standard radio receiver. We suggest that all who are interested write direct to the manufacturers for any information they may de-

sire. The address is: Solar Manufacturing Co., 599-601 Broadway, New York City, N. Y.

### Ten-Meter Failure

*I have a Midwest 18-tube set, but as yet I have not been able to receive anything on the 10 meter band. I use a Philco all-wave antenna, and hope you can tell me how to improve my reception.*

There are many reasons why a set might fail to bring in signals on the ten-meter band. No one should condemn a receiver for this failure, because 10-meter reception is a work of art, being difficult to some extent with the sets that are built for commercial work on ten meters. This wave band is one of the most erratic in existence. When it is working the results are almost too true to believe. But when it is dead, and it often is, no set on earth can get a sign of a signal from the band. So, failure on ten meters is not an indication that the set will not function on this band.

However, after a set has been given a fair and consistent trial on the ten meter band and it still fails to pull in signals, then we can reasonably wonder whether the receiver is really at fault. At least our suspicions are warranted. First, the oscillator tube in the set may not be one that will oscillate evenly at such high frequencies. Replacement with not one, but several, may be necessary before a solution to the problem presents itself. Then there is the matter of the coils for the ultra-short wave band. They may either be poorly constructed, insulated or designed. Or they may be subject to moisture and displacement. Removing the coils and drying them thoroughly before replacement has often helped matters. But, most frequently of all, we can look for some lack of alignment in the tuning of the ultra-high frequency circuits, and, no matter how good a set may be, it simply cannot

pick up these signals if it does not tune properly.

The matter of antenna, too, may enter into your problem. While most all-wave antennas should tune down to the ten meter band, it may be that a separate doublet, with each leg of the horizontal top portion made exactly one quarter of a wave length long, will suffice. We suggest that you read page 10 of the last or May, 1937, issue of RADEX for further details of the 10-meter antenna.



*Harry Humphrey, pictured in the costume of the Old Ranger, the role he portrays in Death Valley Days, is a veteran of the stage and radio. He is a mild mannered man in real life, but sounds as tough as the toughest in some of his microphone roles. Before joining the NBC in its early days he appeared on the New England stage for many years.*

### Push-Pull Power

*My seven-tube Brunswick model 15 uses two 45 tubes in parallel as audio amplifiers. The set works fine but I feel that I could get more power and volume by connecting the 45s in push-pull. Will you please advise me how to make the change and what additional parts will I have to procure?*

Your receiver, as it is now wired up, uses the two types 45 tubes in parallel; that is, the plates are connected together and so are the control grids. In this way the two tubes handle a large output with little distortion of the signal. It is very much like using a large pipe to handle a flow of water that really can be squeezed through a much smaller pipe. Before you can change this over to a push-pull circuit, you must first replace the two large choke coils placed in series in the plate lead of the type 24 tube. This, then, would tend somewhat to upset the work of the power pack. This replacement would consist of a split secondary push-pull audio transformer. The center tap would connect to the .02 bypass condenser and the 500,000 ohm resistor now in the circuit. The present speaker transformer would have to be discarded and replaced with a push-pull output transformer with secondary to match the speaker voice coil. The plates of the two tubes connect to the two ends of the split primary winding while the center tap goes to field of the speaker. All this calls for considerable change in wiring and balancing of the power circuits so we do not recommend that you attempt the alteration. The result will not be sufficiently great to warrant the change. The above facts are merely mentioned as an example of what our readers will run into if they decide upon such changes. Of course, it *can* be done if you desire, but it is hardly worth while.

### Using Metal Tubes

*As I have a R. C. A. receiver using type 42, 80, 6A7, 6B7, and 6D6 tubes, I have wondered about the newer metal tubes. In fact, I was informed that these tubes could be replaced with metal tubes if adaptors were used. As I am now getting fairly good results with this set I would not like to make the change unless I*

*were assured the results would be an improvement.*

We cannot assure you that the use of metal tubes in an older set will bring any decided improvement. There are too many factors involved, any one or more of which could throw the whole assembly out of proper arrangement. All of the tubes mentioned in your set are good tubes, efficiently arranged and assembled. We doubt whether metal tubes will do any better. Then, too, there is the matter of additional heat from the metal, and this might prove detrimental to nearby circuits and parts.

The type 42 can be replaced with a type 6F6 metal tube or a type 6F6G glass, or the 6F6MG metal-glass tube. As the 42 uses an old type 6 pin socket and the 6F6 a new octal base socket, an adaptor will be necessary. The 6A7 can be replaced with the 6A8G or MG tubes; no metal tube being available. There is no exact duplicate for the 6B7, nor is there one for the 6D6 tube. The 5Y3 is similar to the type 80 rectifier tube. In this set there is nothing to gain in replacing the present tubes with metal or glass octal tubes. Often, too, it is better to replace the entire socket than to attempt the use of adaptors. The makers of the Naald type of adaptors specialize in many kinds of tube conversion units.

### Bad Controls

*I have a 1936 R. C. A. Victor C-15. It fades badly on the short waves. Will a new type of volume control, like the volume retarder on the Lafayette set, remedy this trouble? The tone control that came with the set broke down so I put a new one on and now that is getting rough and noisy. What is wrong?*

The type of volume control in this set is the best bet for you. Changing a manufacturer's product seldom improves it, for it is designed along



certain calculated lines. The best you can do is to replace the volume control with a new one of similar make or the product of some reliable maker. There are several on the market, and controls are available for most all makes and models and of receivers. If the control you now have failed it may be due to faulty construction if it was a cheap, unknown make. Otherwise, a reputable maker will replace it or repair it.

Fading on the short waves is not unusual. In fact, this year, it is rather widespread due to natural conditions that are beyond the control of mankind. However, excessive fading can be due to the receiver, too, and an examination should be made if you think the condition abnormal. This often is not true fading, but a shifting of the oscillator frequency or creeping of the dial. If you find that a very slight retuning of the dial brings the station in again, this is the cause. A careful realignment of the set will be necessary. Tubes, too, need checking. The stability of the power unit is always questioned in cases like yours.

### **Melting Wax**

*My radio is a Sparton all-wave model 580. This set has been to the service shop twice in the past few months for an alignment of the oscillator. Now it is off 50 kilocycles on the low end of the dial—12 to 1500 kcs. Then there is a harmonic and stations are repeated at nearby points on the dial. There is wax melting from one of the condensers, but the service man says nothing is wrong. The location of these condensers is shown on a chart enclosed.*

When a set is off 50 kcs. on its dial readings it certainly is in need of intelligent aligning and adjusting. Most all service men are capable of doing this work for it is one of

the most common faults that come to the attention of the various shops. A careful alignment of the trimmer condensers and i. f. units, as well as the oscillator, should take care of this trouble, provided there is not real mechanical failure in some of the tuning units of the set.

Repeating of stations at some other portion of the dial may be due to powerful locals sending their fundamental signal into the r. f. circuit where a second harmonic takes place. Have the grid bias checked for excessive potentials. When the receiver is tuned in to a frequency equal to the second harmonic of the station transmitting, a second signal is heard. The oscillator trimmers should be adjusted, as well as the r. f. condenser tuning trimmer. Sometimes imperfect shielding in the set, poorly located leads and antenna wires, and badly arranged parts, will cause this trouble.

In any case when wax runs out of a condenser it is time for investigation and replacement of the unit. This is a sign that something is wrong, and a drained condenser is always a defective condenser. One condenser mentioned by you is the electrolytic unit, and if it has leaked and drained, even just a small portion, replace it immediately. The other condenser, connected between the 42 power tube and the second detector is a coupling condenser. If it is showing melted wax replace it at once for its failure will seriously interfere with the proper operation of the receiver.

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One new station has been licensed by the Postmaster General's Department of Australia. The new broadcaster is 3WV, Western Regional for the State of Victoria, located at Dooen, near Horsham. With 10 kilowatts power, 3WV will work on 580 kcs.



Four contestants tied with 400 points in the RADEX Mystery DX Contest to win subscriptions to this magazine for one year. On the right is Fred L. Van Voorhees, Box 125, Miller Place, N. Y., who uses a Midwest K-11 receiver for his DXing. On the left is C. E. Fultz, 612 Hilltonia Ave., Columbus, Ohio, who used a Midwest 18 tube receiver to win his prize



## Some SHORTWAVE Briefs

### China

NGOX in Nanking comes through with a good R8 signal on 6850 kcs., according to Stanley LaRue, 309 S. Bedford Drive, Beverly Hills, Calif. This station is heard between the hours of 0500 and 0640, PST. They operate daily but do not adhere strictly to their sign on and sign off times.

### Dominican Republic

HIX in Trujillo City is relayed by HIIX on 6340 kcs. and HI2X on about 11970 kcs. on Tuesdays and Fridays from 2000 to 2200 EST, Wm Buchanan of Sydney, N. S., informs us.

### Great Britain

To avoid confusion in the announcements of the call signs of the Daventry stations, an identification word has been allotted to each final letter. Those in use at present are:

- A for Aerial
- B for Broadcasting
- C for Corporation
- D for Daventry
- E for Empire
- F for Fortune
- G for Greeting
- H for Home
- I for Ireland
- J for Justice

K for King

L for Liberty

N for Nation

O for Ocean

P for Progress

T for Transmitter

A new frequency, GST on 21550 kcs., has been added to the Empire transmitters at Daventry. Although it is not proposed to operate on that frequency immediately, it may be used from time to time during the coming summer months.

The Daventry schedule for the summer will be transmitted according to the following outline:

Trans. 1, June and July, 2330-0145 EST. August, 0000-0215 EST.

Trans. 2, 0545-0855.

Trans. 3, 0915-1200.

Trans. 4, 1220-1800.

Trans. 5, 1820-2030.

Trans. 6, 2100-2300.

### Honduras

Carroll Weyrich and Bernard Ahman, who have been doing a splendid job of monitoring the British Empire transmissions for shortwave listeners, announce that they will commence verifying reports of reception of HRN, in Tegucigalpa, Honduras.

Listeners desiring QSL cards verifying reception of HRN are request-

ed to listen in on the second and third Mondays on each month from 2100 to 2200 EST, and to send their reports, with five cents to cover postage and the cost of the card, to Carroll Weyrich, 4310 Evans Chapel Road, Baltimore, Md. The cards will be similar to the GS-cards, but the message will be in Spanish and English.

### **Italy**

The evening schedule of 2RO has been changed from 9635 to 11810 kcs. to afford better reception for summer receiving conditions.

### **Japan**

The latest operating schedule of the Japanese stations at Nazaki is sent to us by John Tate, 612 Halifax St., Petersburg, Va.

Transmission No. 1, for the west coast of the USA and Canada, 0000-0100 EST daily, on JZJ 11.8 meg.

Trans. 2, for Manchukuo, at various hours throughout the day on stations JVH 14.6, JVN 10.66, JVP 7.51 and JVT 6.75 meg.

Trans. 3, for Europe, is from 1430 to 1540 EST on JZI, 9.535 and JVP 7.51 meg.

Trans. 4, for the East Coast of the USA and South America, from 1600 to 1700 EST on JVN 10.66 and JZJ 11.8 meg.

Trans. 5, for the Straits Settlements, Netherland East Indies and Australia, 2000 to 2100 EST on JZI 9.535 and JZJ 11.8 meg.

### **Portuguese East Africa**

"For the past few weeks CR7AA and CR7BA on 6137 and 11718 kcs. respectively have been received here very well. CR7BA is heard exceptionally well, with an R8-9 signal consistently. Their address is Caixa Postal 594, Louranco Marques, Port. East Africa. Programs are transmitted daily from 0630 to 0800, PST, and announcements are made in Portuguese and English at the beginning and end of each transmis-

sion." Stanley La Rue of Beverly Hills, Calif., is the writer.

### **Siam**

Stanley LaRue also tells us that HS8PJ operates on 15230 kcs. every Monday from 0500-0700 PST. The signals from this Bangkok station are fair but do not come up as loud as their 31-meter signals do on Thursdays.

### **Spain**

A new Spanish station EAQ2, Madrid, on 31.65 meters has been reported by a number of readers, testing between the hours of 1400 and 2000 EST, or sometimes even later. It has a very loud signal and should be widely heard.

### **U. S. S. R.**

The June schedule of the Soviet stations will be carried by two transmitters, RNE on 12000 and RAN on 9595 kcs.

RNE transmits on Sundays and Wednesdays from 0600-0700; Sundays from 1000-1100, and on Sunday, Monday, Wednesday and Friday 1600-1700 EST.

RAN programs are broadcast daily from 1900 to 2115 EST.

### **United States**

The application of the General Electric Co. for permission to construct shortwave stations on 9530 and 15330 kcs. at Belmont, Calif., was denied by the FCC.

### **Ships**

ZMBJ, the ship "Awatea" is heard nightly calling ZLT in Wellington at about 0115 PST.

### **Correspondence Wanted**

"I am interested in one and two tube sets, and would like to exchange SWL cards with other readers." James Cheeks, E. Sycamore St., Oxford, Ohio.

Raymond A. Skidmore, 2311 Pasadena Ave., Detroit, Mich., wishes pen pals.

"I have been DXing for about five months and my log already contains

154 stations. I am interested in s.w. broadcasts, the amateurs, and the police, and use an 8-tube Admiral receiver. I am 14 years old and would like to write to other DXers of about my own age." Frank H. Brenneman, 115 Carlisle St., Rochester, N. Y.

"I wish to correspond with other SWL's. I use several receivers, the most important being a 6-tube GE three-band superhet, and a 5-tube home constructed TRF receiver. I listen on all shortwave bands as well as to 'phone and CW amateurs. I would also like to exchange stamps." Milton Schwartz, Jr., 1056 Shenandoah St., Los Angeles, Calif.

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## Thrills At The Dials

• • • By Ray E. Everly

**W**HILE twirling the dials after midnight, one runs into numerous thrills. In my eight years of seeking the elusive ones, I've had several instances that are outstanding in my memory.

One night during the earthquake out in California, I was tuned to a station in Los Angeles. The announcer was describing the catastrophe and suddenly cried out: "Watch out, everybody! There goes the West wall of the studio!" The silence that followed the terrific rumble was appalling.

Another occasion that gave me a thrill was the time I was listening to a small 100-watter in Oklahoma. My name was read over the air as being initiated into the "Mystic Order of Night Hawks," and I was advised that my membership card was in the mail.

One Sunday afternoon I was listening to a small Indiana station and the announcer broke into the program. "We have just received

word," he said, "that the ship, on which one of our local hams is stationed, is sinking in the China Sea. Everybody pray for the safety of our hometown lad!"

Once I was tuned to a small 100-watter way up in the wilds of Northern Canada, and heard birthday greetings sent to Irving R. Potts, president of the radio club to which I belong.

And then there are those prizes for distant listeners! A small station on a graveyard channel offering a box of the finest apples for its most distant listener! Boxes of chocolates for the first correct report from each state sent to a Maryland station! A bale of cotton for the first ten reports to a Georgia station. The Florida broadcaster who offered a set of Firestone tires, a live alligator and a box of choice tangerines to distant listeners. All these were thrills which one never forgets—more so since I have received some of the prizes myself.

Radio holds thrills that no one but the DXer, prowler of the midnight ether, will ever hear or understand.

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The new broadcast band station LS11, belonging to the Government of the Province of Buenos Aires, is now on the air on its assigned frequency of 1310 kcs. For the present time only 10 kw. power will be radiated, but it is hoped, by the operators, that this can be increased to 60 kw. by June. We understand that the Post Office Department, which controls radio matters in the Argentine, does not permit stations outside the Capital to use more than 2000 watts. The Governor of B. A. Province, however, has assumed superior authority and is making his radio laws to suit himself, claiming that the provinces are independent of the Federal Government.—*Sintonia*.

# Some RADIO Personalities

. . . *Sketched by "Betty"*

EUGENE ORMONDY is one boy who made good by not working hard. He says so himself. The maestro discovered his own remarkable talent for memorizing music when, as a boy, he tried to get out of working too hard at violin practice. Often he would place a good cops-and-robbers thriller behind his music, then after going over the music once or twice he would find that he was able to play it while reading the illicit book.

CHARLES "BUDDY" ROGERS was born August 13, 1904, on a farm which his wealthy father, now a probate judge, owns and still operates just outside the city of Olathe, Kans. He attended the University of Kansas, where he was elected to the exclusive Phi Kappa Psi fraternity. Engaged in boxing, basketball, journalism and music. His better movies are "Abie's Irish Rose," "My Best Girl" (with Mary Pickford), "Road to Reno" and many others. Has made several pictures in England. Made his Broadway debut in Ziegfeld's "Hot Cha." Is very fond of sports and owns a string of valuable ponies; he is a good boxer, speaks Spanish as well as English, is an expert pianist, a good singer and an ace bridge player. His home contains all kinds of band instruments and he can play them all.

ED WYNN, always one of the most active men in show business, is looking ahead to days of loafing. Two years more, the Perfect Fool promises himself, and he'll put away the funny hats and coats, retire from the air and stage, and sail around the world in his cruiser.



*The screen's newest singing star, Shirley Ross, made her radio debut as featured localist with the Ken Murray program, heard Wednesdays on the CBS. Also heard on the same program are the famous "Oh Yeah" stogie "Oswald" and Marlyn Stuart.*

LANNY ROSS will leave the Showboat program early in July. He is now completing negotiations with another sponsor who will present him as star of a new series, and it is also probable that he will accept one of the several movie offers made him. When Ross leaves the program it will abandon its title and all nautical trimmings and become a Hollywood guest-star program. A search is being made to find a new master-of-ceremonies for the forthcoming variety show.

JERRY COOPER, replacing Fred MacMurray on the Hollywood Hotel, has appeared regularly on the CBS ever since his "discovery" in 1934. Previous to coming to radio he was engaged in semi-professional baseball. His singing career started in a New Orleans night club, where he was discovered by Roger Wolfe Kahn, and one of his first CBS appearances was with the late Will Rogers.



FRANK PARKER, NBC tenor heard on the Rippling Rhythm program, is a product of New York's lower East Side. His right name is Ciccio. He made his first money posing as a cherub, and as a boy sang in a church choir. His professional debut was as a chorus boy in a Broadway musical. Fair-complexioned, black-haired, tall and handsome, he is one of radio's most desirable bachelors.

GERTRUDE NIESEN observes that auto radios now make it possible to measure songs in terms of speed and mileage. A friend who tunes in on her radio broadcasts while driving told her that he listened to two miles of "Temptation" on a recent program, and that she held one high note for three blocks.

JACK OAKIE is famous in the movie colony as an unorthodox dresser. His red flannel shirt has become a staple costume for nightly visits to the swank Trocadero. But this is topped by his winter costume in New York fifteen years ago while he was a chorus boy in a Broadway show. Then he used to wear a raccoon coat with a turkish towel for a muffler.

JUDY CANOVA and her colleagues, Annie and Zeke, aren't that way at all when they're off the air. They are all college graduates, and are hillbillies for professional purposes only.

JACK BENNY has made an enviable record — four years running the nation's radio scribes have voted him leading comic; three years they have chosen his programs the outstanding favorites among all types of shows; and his sponsor recently signed a contract which will keep him on the air Sunday evenings until the summer of 1940.

KATE SMITH has joined ROBERT RIPLEY as an island proprietor. Kate recently purchased a sev-

en-room camp on an island in Lake Placid. Ripley's year-round home is located on an island in Long Island Sound, near New York City. His island is called Bion (Believe it or Not) Island.

GUY LOMBARDO is radio's ace tune-sleuth. He recognizes the smallest likeness, whether the "theft" be from the classics, an earlier popular melody, or from some old folk song.

DON AMECHE, master of ceremonies of the new Chase and Sanborn Hour, is a veteran radio actor who recently has won new laurels on the screen. His success was almost instantaneous after an NBC audition in Chicago that led him to leading roles in *The First Nighter*, presenting plays from the mythical



*The telephone operator who specializes in wrong numbers on Eddie Cantor's "Texaco Town" is known to her family as Helen Troy, but Eddie offered a free trip to Hollywood to anyone who could give her a suitable new name. A little Georgia girl won the trip, naming the operator Saymore Saymore.*

"Little Theater Off Times Square." The new program, replacing "Do You Want To Be An Actor?" stars Werner Janssen, celebrated symphonic conductor, Edgar Bergen, radio's only ventriloquist, and Nelson Eddy, baritone star.

## Tuning The Amateurs

● ● ● By B. L. Ahman, Jr.

**C**OMES June, and we must part ways until September next. It has been an enjoyable season writing this column for the Amateur Tuners; we have enjoyed doing it and, judging from the response received, we believe our readers have taken kindly to the column.

Some correspondents have asked for information about clubs which give news of amateurs during the summer months. Following are three clubs that have cooperated whole heartedly with us during the season.

The Newark News Radio Club, 215 Market St., Newark, N. J., has an especially complete shortwave section edited by Earl Roberts and R. B. Oxrieder, which appears in every issue of the bulletin. Write Jimmy Hart, Secretary, for further information. Dues are \$2.00 per year.

Another club is the Universal DX Club of Oradell, N. J. Shortwave and amateur news is given very generous space in this club's bulletin also. The capable editors of the s.w. news are Robert F. Gaiser and Anthony C. Tarr. Address inquiries to Mr. Gaiser at Butler, N. J. No dues were stated, but we are sure he will be glad to help anyone.

The third and last club is purely a Club for the promotion of amateur radio, the Rueda del Oeste. Membership is free to those interested, and the only cost connected is the cost of a standard multi-colored QSL card which is used by amateur and SWL members. Members are re-

quired to answer members' correspondence, and since several hundred South American amateurs are members, one can readily see the benefit of being a member. QSL replies naturally increase from our Spanish-speaking friends who are members, as rules are very rigid. Write Carroll Weyrich, U. S. Secretary of the American Delegation, 4310 Evans Chapel Road, Baltimore, Md.

So much for that. Now let's turn to news of the 20-meter band. The Mexicans still carry away the prize for the most beautiful cards as they have been doing all season. XE1LK sends a beauty; gold, silver, and many shades of blue. He has been heard many times recently so here's his QRA: Aurora de Franco, Av. de la Paz, 1125, Guadalajara, Jal.

VP9R has a new card. Green call with red wording on a white card. It is very attractive. The address is A. E. Redman, Devonshire, Bermuda. He is on the low frequency end of the band. Be sure to include a self-addressed envelope with your coupon, as he asks SWL's to observe this courtesy.

Here is a new one mentioned last month who QSL'd right away. K4ENY, Fleet Marine Base, Charlotte Amalie, Virgin Islands.

Have you received your EA9AH card yet? Ours was received recently and this is how it came. On the envelope were "Viva Espanol—Viva el General Franco," and the return address, "Estacion EA9AH, Al Servicio de las Fuerzas Militares de Marruecos, Tetuan." This was topped off with King Edward Moroccan stamps and a Tetuan British Morocco postmark. Brother Franco seems to be nobody's dummy; if the revolution is whipped he just steps across the street and he is under British protection!

Amateur YV5AG, Armando Egea, Oeste 8 No. 24, Caracas, Venezuela, answered our report in about 70 days, which is about as fast as one

can expect for foreign mail service.

It is time to close now, but before closing may we thank recent correspondents who have dropped us lines with special news? They are Lloyd S. Hahn, Wm. J. Wood, Dale Smith, H. Wilcox, G. J. Eder, C. Sergeson, J. L. Steele, J. Sanderson, James Bruns and Bill Bauer.

Work hard at the dials until next September, me hearties! Don't forget to drop us a few lines on what's happening on the amateur bands!



*Gogo DeLys, who studied law at the University of Southern California switched from that scholarly program of life to the program of complete nonsense starring Colonel Stoopnagle and Budd on Sundays on the NBC-Blue Network.*

## Call-o-Gram

The answer to the Call-o-Gram printed in last month's RADEX is given below.

W—KGW—WBOW—WWSW—  
AW — CMOX — WHN — EN  
THE — ALL — WAVE — DX —  
LOG — OF — THE — WORLD  
— M — WHB — K — A — J  
XEC — KMJ — CJAT — WOR

## Answers

*(Questions on Page 2)*

1. William PENN Broadcasting Co.
2. Kansas City, Mo.
3. Worcester Telegram and Gazette.
4. Where Business is Good.
5. Industry, Commerce and Agriculture.
6. Where the Artists Meet.
7. KGDY.
8. SALina, Kans.
9. Roseburg News Review.
10. Bishop Alma White, Zarephath.

The transmitter building of WCBD, located in Zion, Ill., was completely destroyed by fire, and the schedule of this station is now carried by WMBI, with whom they shared time. Construction will start immediately on a new station.

Three new stations have been added to the NBC Network, bringing their total up to 124 stations. WDEL, Wilmington, Del., is now a member of the Basic Red Network, while WORK, York, Pa., and KSOO, Sioux Falls, S. Dak., will be available to either the Red or the Blue Chains.

There are at least three more radio clubs which should be added to the list of DX Clubs published in RADEX last month.

The Radio Club Venezolano, with headquarters at Torre a Madrices No. 8 (altos), is located in Caracas, Venezuela. Sr. Francisco Fossa Andersen is the Secretary.

Mr. Stanley La Rue is the President of the "Before Breakfast DX Club," 309 S. Bedford Drive, Beverly Hills, Calif.

The R9 Listeners' League, 7417—87th Ave., Woodhaven, L. I., N. Y. Alfred G. King is President.

# WHAT'S ON THE AIR TONIGHT

Fill in the calls and frequencies of the stations through which you best receive the network programs. You can then turn quickly to the one that has the feature you want.

Network	Stations
Canadian (CBC)	
Columbia (C)	
Mutual (M)	
National Red (R)	
National Blue (B)	

Time: ED Eastern Daylight; E Eastern; C Central; M Mountain.

For Pacific Time subtract one hour from Mountain.

Due to change to Daylight Saving Time on April 25, some of the stations will be unable to carry particular features.

## MONDAY

ED-6:45 p.m., E-5:45, C-4:45, M-3:45

**B — Lowell Thomas**

CRCT KDKA WBAL WHZ WRZA  
WFLA WIOD WJAX WJZ WLW  
WMAL WOOD WRVA WSYR WTAM  
WXYZ

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

**C — Poetic Melodies; Jack Fulton**

WABC WADC WBT WCAO WCAU  
WDRC WEAN WEEI WFBL WGR  
WHEC WHK WJAS WJR WJSV  
WKRC WOKO WSPD WTOC WVVV

**R — Amos 'n' Andy**

KYW WBN WCAE WCHS WEAF  
WEEI WFBR WGY WJAR WLW  
WRC WTAG WTIC

ED-7:15 p.m., E-6:15, C-5:15, M-4:15

**C — "Ma and Pa;" Sketch**

WABC WADC WBIG WBNS WBT  
WCAO WCAU WDBJ WDRC WEEI  
WFBL WGR WHEC WHK WHF  
WIBX WJAS WMAS WMBG WNB  
WOKO WORC WPRO WJSJ WVVV

**R — Uncle Ezra's Radio Station**

KARK KFYR KGBX KGNC KPRC  
KSTP KTBS KTHS KVOO KYW  
WBAP WBN WCAE WKYK WCOP  
WNSH WDAF WDAY WEAF WECB  
WFAA WFRB WGF WGY WHO  
WIBA WIRE WJAR WKY WMAQ  
WNAC WOA1 WOOD WOV WRC  
WTAG WTAM WTIC WTMJ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

**B — Lum and Abner**

WBZ WBZA WEAN WJZ WLW  
WMC WSM WSYR

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

**C — Boake Carter**

KMBC KMOX KOMA KRLD WABC  
WBBM WBT WCAU WCCO WDRC  
WEAN WFBL WGR WHAS WHK  
WJAS WJR WJSV WKRC WNAC

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

**C — Horace Heidt and Orchestra**

KDB KERN KFAB KFBK KFH

KPPY KPRC KGB KHJ KLRA KLZ  
KMBC KMJ KMOX KOIN KOL  
KRLD KRNT KSL KTRH K TSA  
KTUL KVI KWG WABC WBBM  
WBRC WBT WCAO WCAU WCCO  
WDRC WFBL WFBM WGR WGST  
WHAS WHK WJAS WJR WJSV  
WKRC WLAC WMBR WNAC WNAX  
WOKO WREC WWL

**R — Burns and Allen**

CRCT KYW WBN WCAE WCSC  
WCHS WEAF WFBR WFLA WGY  
WIO WIOD WIRE WIS WJAR  
WJAX WLW WMAQ WNAC WPTF  
WHC WRVA WSOQ WTAG WTAM  
WTAR WTIC WWJ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

**C — Pick and Pat**

KFAB KMBC WABC WADC WBBM  
WBT WCAO WCAU WDRC WEAN  
WBFL WGR WGST WHEC WHK  
WHP WICC WJAS WJR WJSV  
WKRC WLBZ WMAS WNAC WOKO  
WORC WSPD

**R — Voice of Firestone**

CFCF CRCT KFYR KPRC KSD  
KSTP KTBS KVOO KYW WAVE  
WBN WCAE WCSC WCHS WDAF  
WDAY WEAF WECB WEEI WFAA  
WFBC WFRB WFLA WGY WHO  
WIBA WIOD WIRE WIS WJAR  
WJAX WJDX WKY WMAQ WMC  
WOAI WOV WPTF WRC WRVA  
WSB WSM WSMB WSOQ WTAG  
WTAM WTAR WTIC WTMJ WWJ  
WWNC

**B — Frank Munn; Abe Lyman**

KDKA KOIL KSO KWK WBAL WBZ  
WBZA WCKY WEAN WEBR WFIL  
WGAR WHAM WICC WJZ WLS  
WMAL WMT WREN WSYR WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

**C — Lux Radio Theatre**

CFRB CKAC KDB KERN KFAB  
KFBK KFPY KPRC KGB KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KRLD KRNT  
KSL KTRH K TSA KTUL KVI KWG  
WABC WADC WBBM WBNS WBRC  
WBT WCAO WCAU WCCO WDAE

WDBJ WDRC WEAN WFBL WFBM  
WGST WHAS WHEC WHK WICO  
WISN WJAS WJR WJSV WKBW  
WKRC WLAC WNAC WNAX WOKO  
WORC WQAM WRRC WWL

**R — Fibber McGee and Molly**

KFYR KPRC KSD KSTP KTBS  
KVOO KYW WAVE WBN WCAE  
WCOL WCHS WDAF WDAY WEAF  
WECB WFAA WFRB WFLA WGY  
WHO WIBA WIOD WIRE WIS  
WJAR WJAX WJDX WLW WMAQ  
WMC WNAC WOA1 WOV WOV  
WPTF WRC WSB WSM WSMB  
WSOQ WSUN WTAG WTAM WTAR  
WTIC WTMJ WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

**R — Phil Spitalny's Girl Orchestra**

CFCF CRCT KDYL KFI KGHL  
KGR KGO KGW KHQ KOA KOMO  
KPRC KSD KSTP KVOO KYW  
WAVE WBN WCAE WCHS WDAF  
WEAF WFAA WFRB WFLA WGY  
WHO WIBA WIOD WIRE WIS  
WJAR WJAX WKY WLW WMAQ  
WMC WNAC WOA1 WOV WPTF  
WRC WRVA WSB WSM WSMB  
WTAG WTAM WTAR WTIC WTMJ  
WWJ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

**R — Contented Program**

CFCF CRCT KDYL KFI KGW KHQ  
KOA KOMO KPO KPRC KSD KYW  
WBN WCAE WCHS WDAF WEA  
WEEI WFRB WFLA WGY WHO  
WIOD WIS WJAR WJAX WKY  
WMAQ WMC WOA1 WOV WPTF  
WRC WRVA WSB WSM WTAG  
WTAM WTAR WTIC WWJ WWNC

**B — Richard Himber; Stuart Allen**

KDKA KECA KEX KPSD KGA KGO  
KJR KLO KOIL KSO KVOD KWK  
WBAL WBZ WBA WCKY WKY  
WBR WENR WFIL WGAR WHAM  
WICC WJZ WMAL WMT WREN  
WSYR WTCN WXYZ

**C — Wayne King and Orchestra**

KDB KERN KFAB KFBK KFPY  
KPRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KRNT KSL KVI  
KWG WAAB WABC WADC WBBM

# MONDAY (Continued)

WBNS WBT WCAO WCAU WCCO  
WDRS WEAN WFBL WFBM WHAS  
WHK WIBW WJAS WJR WJSV  
WKBW WKRC WOKO WSPD WWL

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**R — Burns and Allen**  
KARK KDYL KFBK KFI KFYZ  
KFBX KGHJ KGRH KGNC KGO  
KGW KHQ KNJ KOA KOMO KPO  
KPRC KSD KSTP KSTAR KTBS  
KV00 KWG WAVE WDAF WDAY  
WEBC WFAA WIBA WJDX WKY  
WMC WOAI WOW WSB WSMB  
WTMJ

**ED-11:00 pm., E-10:00, C-9:00, M-8:00**  
**C — Poetic Melodies: Jack Fulton**  
KERN KFAB KFBK KFPY KFRC  
KGB KHJ KLRA KLZ KMBC KMOX  
KOLN KOL KOMA KRLL KRNT  
ESL KTRH KTSa KVI WBBM  
WBRC WCCO WFBM WGST WLAC  
WREC WWL

**R — Amos 'n' Andy**  
KDYL KFI KGW KHQ KOA KOMO  
KPO KPRC KSD WBAP WDAF  
WHO WKY WLW WMC WOAI WOW  
WSB WSM WSMB WTAM WWJ

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C — Pick and Pat**  
KFPY KGKO KLRA KLZ KMOX  
KNX KOLN KOL KOMA KRLL  
KRNT KSCJ KSFO KSL KTUL  
KVI KWKH WACO WBRC WCCO  
WFBM WHAS WLAC WREC

# TUESDAY

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**B — Lowell Thomas, See Monday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Poetic Melodies, See Monday**

**R — Amos 'n' Andy, See Monday**  
**B — Easy Aces**  
KDKA KDYL KFI KGW KHQ KOA  
KOIL KOMO KPO KSO KWK WBAL  
WBZ WBZA WCKY WENR WFIL  
WGAR WHAM WHIO WIRE WJZ  
WMAL WMT WSYR WXYZ

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — "Ma and Pa," See Mon.**

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**B — Lum and Abner, See Monday**  
**C — Alexander Woolcott**  
KFAB KFH KLRA KMOX KRLL  
KTRH KTSa KWKH WAI C WADC  
WALA WBAM WBNS WBRC WBT  
WCAO WCAU WCCO WDAE WDBO  
WDRS WEEL WFBL WFBM WGR  
WGST WHAS WHEC WHIO WHK  
WIBM WISN WJAS WJR WJSV  
WKRC WLAC WLWB WMAS WMBG  
WMBR WOKO WORC WPRO WQAM  
WREC WTOC WWL WWVA

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Boake Carter, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Hammerstein Music Hall**  
KFAB KMOX KRNT WABC WADC  
WBMM WBNS WCAO WCAU WDRS  
WEAN WFBL WFBM WGR WHAS  
WHK WJAS WJR WJSV WKRC  
WMAS WNAC WOKO WSPD

**R — Johnny with Russ Morgan**  
KFYZ KPRC KSD KSTP KTBS  
KTHS KV00 KYW WAVE WBAP  
WBEN WCAE WCSH WDAF WDAY  
WEAF WEBC WFBM WFLA WGY  
WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WNAC WOW WPTF WRC  
WRVA WSB WSM WSMB WSOC  
WSUN WTAG WTAM WTAR WTIC  
WTMJ WWJ WWNC

**B — Husbands and Wives**  
KDKA KECA KEX KFSD KGA KGO  
KJR KJO KOIL KSO KVOD KWK  
WABY WBAL WBZ WBZA WCKY  
WEAN WEBR WFIL WGAR WHAM  
WICC WJZ WLS WMAL WMT  
WREN WSYR WXYZ

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**

**C — Al Jolson; Parkyakarkas**  
CFRB KFBK KFH KLRA KMBC  
KMOX KOMA KRLL KRNT KTRH  
KTSa KTUL WABC WADC WBBM  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDRS WEEL  
WFBL WFBM WGR WGST WHAS  
WHEC WHIO WHK WIBX WJAS  
WJR WJSV WKRC WLAC WMAS  
WMBD WMBG WNAX WOKO  
WORC WPRO WQAM WREC WWL

**R — Wayne King and Orchestra**  
KFYZ KPRC KSD KSTP KTBS  
KV00 KYW WAVE WBAP WBEN  
WCAE WCKY WCSH WDAF WDAY  
WEAF WEBC WEEL WFBM WGY  
WHO WHIO WIBA WIRE WJAR  
WJDX WKY WMAQ WMC WOAI  
WOW WRC WSB WSM WSMB  
WTAG WTAM WTIC WTMJ WWJ

**B — Edgar Guest, It Can Be Done**  
KDKA KOIL KSO KWK WBAL  
WBZ WBZA WFIL WGAR WHAM  
WJZ WLS WLW WMAL WMT  
WREN WSYR WXYZ

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**

**C — Al Pearce and Gang**  
CFRB CKAC KFAB KFH KGKO  
KLRA KMBC KMOX KOMA KRLL  
KRNT KSCJ KTRH KTSa KTUL  
KWKH WABC WACO WADC WALA  
WBMM WBIG WBNS WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDRS WDDO WDRS WEAN  
WFBL WFBM WPEA WGST WHAS  
WHEC WHK WHP WIBW WIBX  
WICC WISN WJAS WJR WJSV  
WKHH WKBN WKBW WKRC  
WLAC WLWB WMAS WMBD WMBG  
WMBR WMXN WNAC WNAX  
WNBF W'NOX WOC WOKO WORC  
WOWO WPG WQAM WREC WSBT  
WSFA WSJS WSPD WTOC WWL

**R — Vox Pop; Sidewalk Interviews**  
KSD KYW WBEN WCAE WCKY  
WCSH WDAF WEAF WEEL WFBM  
WGY WHO WIRE WJAR WMAQ

WOW WRC WTAG WTAM WTIC  
WWJ

**B — Ben Bernie and Orchestra**  
KDKA KDYL KFI KFSD KFYZ  
KGW KHQ KOA KOMO KPO  
KPRC KSO KSTP KSTAR KTBS  
KV00 KWK WAVE WBAL WBAP  
WBZ WBZA WAVE WBAL WBAP  
WFBL WGAR WHAM WIBA WIOD  
WIS WJAX WJDX WJZ WKY WLS  
WLW WMAL WMC WMT WOAI  
WPTF WREN W'NOX WSB WSM  
WSMB WSOC WSYR WTAR WTAM  
WWC WXYZ

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**

**C — Jack Oakie's College**  
KFAB KFI KFPY KGKO KLRA  
KLZ KMBC KMOX KNX KOIN KOL  
KOMA KRLL KRNT KSCJ KSFO  
KSL KTRH KTSa KTUL KVI KVOR  
KWKH WABC WACO WADC WALA  
WBMM WBIG WBNS WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDRS WDDO WDRS WEEL  
WFBL WFBM WGST WHAS WHEC  
WHO WHK WHP WIBW WIBX  
WISN WJAS WJR WJSV WKBN  
WKBW WKRC WLAC WLWB WMAS  
WMBD WMBG WMBR WNAX  
WNBF W'NOX WOC WOKO WORC  
WOWO WPG WPRO WQAM WREC  
WSBT WSFA WSJS WTOC WWL

**R — Fred Astaire; Johnny Green**  
CRCT KDYL KFI KFYZ KGW  
KHQ KOA KOMO KPO KPRC KSD  
KSTP KTBS KTHS KV00 KYW  
WAVE WBAP WBEN WCAE WCKY  
WCSH WDAF WDAY WEA WERC  
WEEL WFBM WFLA WGY WHO  
WIBA WIOD WIRE WIS WJAR  
WJAX WJDX WKY WMAQ WMC  
WOAI WOW WPTF WRC WRVA  
WSM WSMB WSOC WTAG WTAM  
WTAR WTIC WTMJ WWJ WWNC

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**

**R — Jimmy Fidler Hollywood Gossip**  
KDYL KFI KGW KHQ KOA KOMO  
KPO KSD KSTAR KYW WBEN  
WCAE WCSH WDAF WEAF WFBM  
WGY WHO WJAR WLW WMAQ  
WNAC WOOD WOW WRC WTAG  
WTAM WTIC WWJ

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**

**R — Vic and Sade**  
KDYL KFI KGW KHQ KOA KOMO  
KPO KSD KSTP KYW WCAE WCSH  
WDAF WEAF WFBM WGY WHO  
WIRE WLW WMAQ WNAC WOW  
WRC WTAG WTAM WTIC WWJ

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**

**C — Poetic Melodies, See Monday**  
**R — Amos 'n' Andy, See Monday**

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**

**C — Al Jolson; Parkyakarkas**  
KFPY KGMB KLZ KNX KOLN  
KOL KSFO KSL KVI



## WEDNESDAY

ED-6:45 p.m., E-5:45, C-4:45, M-3:45

B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

C — Poetic Melodies, See Monday

R — Amos 'n' Andy, See Monday

B — Easy Aces, See Tuesday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15

C — "Ma and Pa," See Monday

R — Uncle Ezra, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

B — Lum and Abner, See Monday

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

C — Boake Carter, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

C — Cavalcade of America

KDB KERN KFAB KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KRLL KRNT  
KSL KVI KWG WABC WBBM  
WBNS WCAU WCCO WDRG WEAN  
WFBL WFBM WGR WHAS WHEC  
WHK WJAS WJR WJSV WKRC  
WLAC WMBG WNAC WOKO WTOC  
WWL

R — One Man's Family

KDYL KFI KFYR KGW KHQ KOA  
KOMO KPO KPRC KSD KSTP  
KTAR KTBS KTHS KVOO KYW  
WAPI WAVE WBPB WBEW WCAE  
WCSH WDAF WDAY WFAE WECB  
WEEI WFAA WFRB WFLA WGY  
WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WOI WOV WPTF WRC WSB  
WRVA WSB WSM WSMB WSOC  
WSUN WTAG WTAM WTCR WTIC  
WTMJ WWJ WWNC

B — Broadway Merry-go-Round

KDKA KOIL KSO KWK WBAL WBZ  
WBZA WCKY WEAN WEBR WFIL  
WGAR WHAM WICC WJZ WLS  
WMAL WMT WREN WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

C — Ken Murray; Shirley Ross

CFRB CKAC KFAB KFH KLRA  
KMBC KMOX KOMA KRLL KRNT  
KSCJ KTRH KTSR KTL KWKH  
WABC WADC WBBM WBNS WBRC  
WBT WCAU WCAU WCCO WDAE  
WDBJ WDBO WDRG WEEI WFBL  
WFBM WGR WGST WHAS WHEC  
WHIO WHK WHP WIBW WIBX  
WJAS WJR WJSV WKRC WLAC  
WLBZ WMAS WMBD WMBG  
WMBR WNAX WNOX WOKO WORC  
WOWO WRC WPRO WQAM WREC  
WWL

R — Wayne King, See Tuesday

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

C — Kostelanetz; Lily Pons

KDB KERN KFAB KFBK KFH  
KFPY KFRC KGB KGKO KGMB  
KHJ KLRA KLZ KMBC KMJ KMOX

KOH KOIN KOL KOMA KRLL  
KRNT KSCJ KSL KTRH KTSR  
KTUL KVI KVOR KWG KWKH  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WCCO WCOA WDAE WDBG  
WDBO WDNC WDOD WDRG WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHK WHP WIBW WIBX  
WICC WISN WJAS WJR WJSV  
WKBH WKBW WKRC WLAC WLBZ  
WMAS WMBD WMBG WMBR  
WNAC WNAX WNBX WNOX WOC  
WOKO WORC WOWO WPG WQAM  
WRC WSPA WSJS WSPD WTOC  
WWL

R — Town Hall Tonight

KFYR KPRC KSD KSTP KTBS  
KTHS KVOO KYW WAVE WBEW  
WCAE WCSH WDAF WDAY WFAE  
WECB WEEI WFAA WFRB WFLA  
WGY WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WOI WOV WPTF WRC WSB  
WSM WSMB WSOC WTAG WTAM  
WTAR WTIC WTMJ WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

C — Jessica Dragonette

KDB KERN KFAB KFBK KFH  
KFPY KFRC KGB KGMB KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KRLL KRNT  
KSL KTRH KTSR KTL KVI KWG  
KWKH WABC WBBM WBNS WBRC  
WBT WCAU WCAU WCCO WDAE  
WDBJ WDBO WDRG WEAN WFBL  
WFBM WGST WHAS WHEC WHK  
WHK WISN WJAS WJR WJSA  
WBBW WKRC WLAC WLBZ WMBG  
WMBR WNAC WOKO WORC WOWO  
WQAM WREC WTOC WWL

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

C — Crime Crusade; Phil Lord

KDB KERN KFAB KFBK KFH  
KFPY KFRC KGB KHJ KLRA KLZ  
KMBC KMJ KMOX KOIN KOL  
KOM A KRLL KRNT KSL KTRH  
KTSR KTL KVI KWG KWKH  
WABC WACO WBBM WBNS WBRC  
WBT WCAU WCAU WCCO WDAE  
WDBJ WDBO WDRG WEAN WFBL  
WFBM WGST WHAS WHEC WHK  
WHK WISN WJAS WJR WJSV  
WKBW WKRC WLAC WLBZ WMBG  
WMBR WNAC WOKO WORC WOWO  
WQAM WREC WTOC WWL

R — Your Hit Parade

KDYL KEX KFI KFYR KGH  
KGIK KGU KGW KHQ KOA KOMO  
KPO KPRC KSD KSTP KTAR KTBS  
KTHS KVOO KYW WAVE WCAE  
WCSH WDRG WDAF WDAY WFAE  
WECB WFAA WFRB WFLA WGY  
WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WRC WNAC WOI WOV WPTF  
WRC WRVA WSB WSM WSMB  
WSOC WSUN WSYR WTAG WTAM  
WTAR WTIC WTMJ WWJ WWNC

B — Vic and Sade

KDKA KOIL KSO KWK WBAL  
WBZ WBZA WCKY WEAN WEBR  
WENR WFIL WGAR WHAM WICC  
WJZ WMAL WMT WREN WSYR  
WTCN WXYZ

ED-10:30 p.m., E-9:30, C-8:30, M-7:30

C — Babe Ruth; Baseball Talks

KFAB KFH KLRA KLZ KMBC  
KMOX KOMA KRLL KRNT KSL  
KTRH KTSR KTL KWKH WABC  
WALA WBBM WBIG WBNS WBRC  
WBT WCAU WCAU WCCO WDAE  
WDBJ WDBO WDOD WDRG WEEI  
WFBL WFBM WGST WHAS WHEC  
WHIO WHK WHP WIBW WISN  
WJAS WJR WJSV WKBH WKBW  
WKRC WLAC WMAS WMBG  
WMBR WNAX WNOX WOC WOKO  
WORC WPRO WQAM WREC WSPA  
WTOC WWL

ED-11:00 p.m., E-10:00, C-9:00, M-8:00

C — Poetic Melodies, See Monday

R — Amos 'n' Andy, See Monday

## THURSDAY

ED-6:45 p.m., E-5:45, C-4:45, M-3:45

B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

C — Poetic Melodies, See Monday

R — Amos 'n' Andy, See Monday

B — Easy Aces, See Tuesday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15

C — "Ma and Pa," See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

C — Alexander Woolcott, See Tuesday

B — Lum and Abner, See Monday

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

C — Boake Carter, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

C — A & P Bandwagon

KFAB KMBC KMOX KRLL KRNT  
KTRH WABC WADC WBBM WBIG  
WBNS WBRC WBT WCAU WCAU  
WCCO WDAE WDBJ WDRG WEEI  
WFBL WFBM WGR WGST WHAS  
WHEC WHK WHP WIBX WJAS  
WJR WJSV WKRC WKRC WLBZ  
WMAS WMBG WMBR WOC WOKO  
WORC WPRO WQAM WTOC WWL  
WWVA

R — Rudy Vallee's Variety Hour

CFBC CRCT KDYL KFI KFYR  
KGW KHQ KOA KOMO KPO KSD  
KSTP KTAR KYW WBEW WCAE  
WCSH WDAF WDAY WFAE WECB  
WEEI WFRB WGY WHO WJAR  
WLW WMAQ WOV WRC WTAM  
WTIC WTMJ WWJ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

M — Guy Lombardo Orchestra

CKLW KDB KDON KFEL KFRC  
KFXX KGB KGDM KHJ KPMC  
KSO KVIOE KWK KXO WABYWBAL  
WFIL WGAR WKBW WMT WOL  
WOR WSAI WSYR WWSW  
Also on Canadian Network

## THURSDAY (Continued)

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

### C — Major Bowes' Amateurs

CFRB CKAC KDB KERN KFAB  
KFBB KFH KFPY KFRK KGB  
KGKO KLRA KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRLD  
KRNT KSCJ KSL KTRH K TSA  
KTUL KVI KVOR KWG KWKH  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WCCO WCOA WDAE WDBJ  
WDBO WDNC WDOF WDRC WEAN  
WFBL WFBM WFEA WGST WHAS  
WHCC WHK WHP WIBW WIBX  
WICC WISN WJAS WJR WJSV  
WKBN WKBW WKRC WLAC WLBY  
WMAS WMBD WMBG WMBR  
WMMN WMND WNAK WOC WOKO  
WORC WOWO WPG WQAM WREC  
WSFA WSJS WSPD WTOG WWL

### R — Maxwell House Show Boat

KDYL KFI KFSD KFYR KGH  
KGBR KWK KHQ KOA KOMO KPO  
KPRC KSD KSTP KTAR KTBS  
KYW WAPI WAVE WBAP WBEN  
WCAE WCHS WDAF WDAY WFAF  
WIBC WEEL WFBR WFLA WGY  
WHO WIBA WIOD WIREWIS WJAR  
WJAX WJDX WKY WLMQ WMC  
WOAI WOW WPTF WRV WRYA  
WSAI WSB WSM WSMB WSOC  
WTAG WTAM WTAR WTIC WTMJ  
WWJ WWNC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

### C — Your True Adventures

KFAB KFH KFPY KLRA KLZ  
KMBC KMOX KNX KOIN KOL  
KOMA KRLD KRNT KSFO KSL  
KTRH K TSA KTUL KVI KWKH  
WABC WBBM WBNS WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDRC WEEL WFBL WFBM  
WGST WHAS WHEC WHIO WHK  
WISN WJAS WJR WJSV WKBW  
WKRC WLAC WLBY WMBG WMBR  
WOKO WORC WPRO WQAM WREC  
WTOG WWL

### R — Bing Crosby; Bob Burns

CFRC CRCT KDYL KFI KFYR  
KGW KHQ KOA KOMO KPO KPRC  
KBD KSTP KTAR KTBS KTHS  
KV00 KYW WAVE WBAP WBEN  
WCAE WCHS WDAF WDAY WFAF  
WIBC WEEL WFBR WFLA WGY  
WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WOAI WOW WPTF WRV  
WRYA WSB WSM WSMB WSOC  
WTAG WTAM WTAR WTIC WTMJ  
WWJ WWNC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30

### C — March of Time

KFAB KFPY KLZ KMBC KMOX  
KNX KOIN KOL KOMA KRNT  
KSFO KSL KVI WABC WBBM  
WBNS WCAO WCAU WCCO WDRC  
WEEL WFBL WFBM WGST WHAS  
WHEC WHK WJAS WJR WJSV  
WKBW WKRC WOKO WPRO WWL

ED-11:00 p.m., E-10:00, C-9:00, M-8:00

### C — Poetic Melodies, See Monday

R — Amos 'n' Andy, See Monday

## FRIDAY

ED-6:45 p.m., E-5:45, C-4:45, M-3:45

B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

C — Poetic Melodies, See Mon.

R — Amos 'n' Andy, See Monday

ED-7:15 p.m. E-6:15, C-5:15, M-4:15

C — "Ma and Pa," See Monday

R — Uncle Ezra, See Monday

B — Stainless Show; Mario Cozzi

KDKA KECA KEX KFSD KGA KGO  
KJR KLO KOIL KSO KVOD KWK  
WBAL WBZ WBZA WBR WEENR  
WFIL WGAR WHAM WJZ WMAL  
WMT WSAI WSYR WXYZ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

B — Lum and Abner, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15

C — Boake Carter, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

### C — Broadway Varieties

KDB KERN KFAB KFBB KFPY  
KFRK KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRNT  
KSL KVI KWG WABC WBBM  
WBNS WBRC WBT WCAO WCAU  
WCCO WDRC WEAN WFBL WFBM  
VGR WGST WHAS WHK WJAS  
WJR WJSV WKRK WMAS WMBG  
WNAC WOKO WWL

### R — Cities Service Concert

CRCT CFYR KOA KPRC KSD  
KSTP KTHS KTHS KV00 KYW  
WRAP WBEN WCAE WCHS WDAF  
WDAY WFAF WIBC WEEL WFAA  
WFBY WGY WHO WIBA WIOD  
WJAR WKY WMAQ WOAI WOW  
WRC WRYA WSAI WTAG WTAM  
WTIC WTMJ WWJ

### B — Irene Rich; Drama

KDKA KDYL KFI KGW KHQ KOIL  
KOMO KPO KSO KTAR KWK WAVE  
WBAL WBZ WBZA WCKY WFIL  
WGAR WHAM WIRE WJZ WLS  
WMAL WMC WMT WREN WSB  
WSM WSYR WXYZ

ED-8:15 p.m., E-7:15, C-6:15, M-5:15

### B — Singin' Sam

KDKA KOIL KSO KWK WBAL  
WBZ WBZA WFIL WGAR WHAM  
WJZ WLS WMAL WMT WREN  
WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

### C — Hal Kemp; Kay Thompson

KFAB KFH KGKO KLRA KMBC  
KMOX KOMA KRLD KRNT KSCJ  
KTRH K TSA KTUL KWKH WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WCOA WDAE WDBJ WDBO  
WDNC WDOF WDRC WEEL WFBL  
WFBM WFEA WGR WGBT WHAS  
WHEC WHIO WHK WHP WIBW

WIBX WISN WJAS WJR WJSV  
WKBN WKRC WLAC WLBY WMAS  
WMAD WMBG WMBR WMMN  
WNAX WNBW WNOX WOC WOKO  
WORC WOWO WPG WPRO WQAM  
WREC WSFA WSJS WSPD WTOG  
WWL

### B — Death Valley Days

KDKA KDYL KFI KGW KHQ KOIL  
KOMO KPO KSO KWK WBAL WBZ  
WBZA WFIL WGAR WHAM WJZ  
WLS WLW WMAL WMT WREN  
WSYR WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

### C — Hollywood Hotel

CFRB CKAC KDB KERN KFAB  
KFBB KFH KFPY KFRK KGB  
KHJ KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KRLD KRNT  
KSCJ KSL KTRH K TSA KTUL KVI  
KVOR KWG KWKH WABC WADC  
WBBM WBNS WBRC WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDRC WEAN WFBL WFBM WFEA  
WGST WHAS WHEC WHK WHP  
WIBW WIBX WICC WJAS WJR  
WJSV WKBW WKRC WLAC WLBY  
WMAS WMBD WMBG WMBR  
WNAC WNAK WNOX WOKO WORC  
WPG WQAM WREC WSPD WWL

### R — Frank Munn; Bernice Claire

KSD KYW WBEN WCAE WCHS  
WDAF WFAF WEEL WFBR WGY  
WJAR WLW WMAQ WOW WRC  
WTAG WTAM WWJ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

### R — True Story Court

KSD KYW WBEN WCAE WCHS  
WFAF WEEL WFBR WGY WHO  
WHIO WJAR WMAQ WOW WRC  
WTAG WTAM WTIC WWJ

### B — Coronet; Deems Taylor

KDKA KECA KEX KFSD KGA  
KGO KJR KLO KOIL KSO KVOD  
KWK WBAL WBZ WBZA WEAN  
WBR WEENR WFIL WGAR WHAM  
WICC WJZ WLW WMAL WMT  
WREN WSYR WXYZ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

### R — First Nighter; Drama

KDYL KFI KFYR KGW KHQ KOA  
KOMO KPO KPRC KSD KSTP  
KTBS KTHS KYW WAVE WBEN  
WCAE WCHS WDAF WDAY WFAF  
WIBC WEEL WFAA WFBM WFLA  
WGY WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WPTF WRV WRYA WSB  
WSM WSMB WSOC WTAG WTAM  
WTR WTIC WTMJ WWJ WWNC

### B — Jack Pearl; Morton Bowe

KDKA KECA KFSD KGA KGO  
KJR KLO KOIL KSO KWK WABY  
WBAL WBZ WBZA WCKY WCOL  
WEAN WEBR WENR WFIL WFLA  
WGAR WHAM WICC WIOD WIS  
WJAX WJZ WMAL WMT WOOD  
WPTF WREN WRYA WSOC WSUN  
WSYR WTAR WWNC WXYZ

ED-10:30 p.m., E-9:30, C-8:30, M-7:30

C — Babe Ruth, See Wednesday

# FRIDAY (Continued)

## R — Pontiac Varsity Show

KARK KDYL KFBK KFI KFYY  
KGBX KGHK KGIR KGNC KGW  
KHQ KMJ KOA KOMO KPO KPRC  
KSD KSTP KTAR KTBS KTHS  
KV00 KWG KYW WAPI WAVE  
WBEN WCAE WC0L WCSC WWCW  
WDAF WFAF WFCB WFAA WFCB  
WFBH WFLA WGL WGY WHO  
WIBA WIOD WIRE WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WNAC WQAI WOOD WOW  
WPTP WRVA WSB WSM WSNB  
WSOC WSNW WTAG WTAM WTAR  
WTIC WTMJ WWJ WWNC

ED-11:00 p.m., E-10:30, C-9:00, M-8:30

R — Amos 'n' Andy. See Monday

ED-11:30 p.m., E-10:30, C-9:30, M-8:30

C — Hal Kemp; Kay Thompson

KFBK KFPY KGMB KGVO KLZ  
KNX KOH KOIN KOL KSEF KSL  
KVI KVOR

# SATURDAY

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

C — Saturday Swing Club

KFBK KFH KFPY KGKO KGVO  
KLZ KNOW KOH KOL KOMA KRLD  
KSCJ KSFO KSL KTRH K TSA KVI  
KVOR KWKH WABC WACO WADC  
WBIG WBNS WBT WCAO WCAE  
WCCO WDAE WDBO WDRC WDEI  
WFBL WGR WHBC WHK WHF  
WHF WBX WISN WJAS WLZ  
WMAZ WMBD WMBG WMBF WOC  
WOKO WORC WPRO WSJS WWVA

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

C — Rex Chandler; Richard Bonelli

WABC WCAU WDRC WEEI WGR  
WIBX WJAS WLZ WMAZ WOKO  
WORC WPRO

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

C — Professor Quiz

KFAB KFBK KFH KFPY KLRA  
KLZ KMBC KMOX KNX KOIN KOL  
KOMA KRLD KRNT KSFO KSL  
KTRH K TSA KVI KWKH WABC  
WBMM WBNS WBRC WBT WCAO  
WCAU WCCO WDAE WDBO WDRC  
WEEI WFBL WFBM WGST WHAS  
WHBC WHK WISN WJAS WJR  
WJSV WKRC WLAC WLZ WMBG  
WMBR WNOX WOKO WORC WQAM  
WQAM WREC WWL WWVA

R — Saturday Night Party

KSD KYW WAPI WAVE WBEN  
WCAE WCSC WCSI WDAF WFAF  
WFBH WFLA WGY WHO WIOD  
WIS WJAR WJAX WJDX WMAQ  
WMC WNAC WQW WPTF WRC  
WSB WSMB WSOC WSNW WTAG  
WTAM WTAR WTIC WWJ WWNC

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

C — Phil Duesy; Russ Morgan

KFAB KFH KMBC KMOX KRNT  
WABC WADC WBMM WBIG WBNS

WRT WCAO WCAU WCCO WCOA  
WDRD WEEI WFBL WFBM WGR  
WGST WHAS WHBC WHIO WHK  
WHP WISN WJAS WJR WJSV  
WKRC WMBD WMBG WMBF WOC  
WOKO WPRO WSRT WWVA

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

C — Grace Moore; Vincent Lopez

KDB KERN KFAB KFBK KFPY  
KFCR KGB KHJ KLRA KLZ KMBC  
KMJ KMOX KOIN KOL KOMA  
KRLD KRNT KSL KTRH K TSA  
KVI KWG WABC WBBM WBNS  
WBT WCAO WCAU WCCO WDAE  
WDBO WDRC WEAN WFBL WFBM  
WJAS WJR WJSV WKRW WKHC  
WMHR WOKO WQAM WREC WSPD  
WWL

R — Snow Village Sketches

KSD KYW WBEN WCAE WCSI  
WDAF WFAF WFBH WGY WJAR  
WMAQ WNAC WOW WRC WTAG  
WTAM WTIC WWJ

B — National Barn Dance

KDKA KOIL KPRC KSO KTBS  
KTHS KWK WBY WAPI WAVE  
WBAL WBAF WBZ WBZA WFIL  
WFLA WGAR WHAM WIOD WIRE  
WIS WJAX WJDX WJZ WKY WLS  
WMAL WMC WMT WTAM WOOD  
WPTF WREN WRVA WSB WSMB  
WSOC WSNW WSYR WTAR WYNC  
WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

C — Mary Eastman; Gus Haenschen

KDB KERN KFAB KFBK KFH  
KFPY KFCR KGB KGKO KIJJ  
KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KRLD KTRH  
K TSA KTVL KVI KWG KWKH  
WALA WBBM WBIG WBNS WBRC  
WBT WCAO WCOA WDAE WDBO  
WDDO WEAN WFBL WFBM WGST  
WHAS WHBC WKH WJAS WJR  
WJSV WKBW WLAC WMBD WMBR  
WNOX WOC WQAM WREC WSFA  
WSPD WTOC WWL WWVA

R — Shell Chateau

KDYL KFI KFSB KFYR KGHK  
KGIR KGW KHQ KOA KOMO KPO  
KSD KSTP KTAR KYW WHEN  
WCAE WCSI WDAF WDAY WFAF  
WFCB WEEI WFBH WGY WIBA  
WJAR WLW WMAQ WOW WRC  
WTAG WTAM WTIC WTMJ WWJ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

C — Your Hit Parade

KERN KFAB KFBK KFH KFPY  
KFCR KGB KGKO KGMB KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOH KOIN KOL KOMA KRLD  
KRNT KSCJ KSL KTRH K TSA  
KTVL KVI KVOR KWG KWKH  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WCCO WCOA WDAE WDBJ  
WDBO WDBC WDDO WDRG WEAN  
WFBL WFBM WFEA WGST WHAS  
WHBC WHK WHP WIBW WIBX  
WIC WISN WJAS WJR WJSV  
WKRW WKRC WLAC WLZ WMAZ  
WMBD WMBG WMBR WNBC WNAZ  
WNAZ WNOX WOC WOKO WORC

WPG WQAM WREC WSRT WSFA  
WSJS WSPD WTOC WWL WWVA

ED-10:45 p.m., E-9:45, C-8:45, M-7:45

C — Rex Chandler; Richard Bonelli

KFAB KFBK KFH KFPY KGKO  
KGVO KLRA KLZ KMBC KMOX  
KNX KOH KOIN KOL KOMA KOI  
KRLD KRNT KSCJ KSFO KSL  
KTRH K TSA KTVL KVI KVOR  
KWKH WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCCO WCHS WCOA WDAE WDBJ  
WDBO WDBC WDDO WDFB WFBM  
WGST WHAS WHBC WHIO WHK  
WHF WIBW WISN WJR WJSV  
WKBW WKRC WLAC WMBD  
WMBG WMBR WMAN WNAZ  
WNBW WNOX WOC WPAR WQAM  
WREC WSRT WSFA WSJS WSPD  
WWL WWVA

ED-11:00 p.m., E-10:00, C-9:00, M-8:00

CBC — The Northern Messenger

CFAC CFCH CFCK CFJC CFPL  
CFQC CHWK CJAT CJCA CJXC  
CJKL CJOC CJRM CJRO CJRX  
CKBI CRCK CKGB CKOC CKOV  
CKPK CKCO CKTB CKX GKY  
CRCK CHCM CRCO CRCS CRCT  
CRCV CRCW CRXC

B — National Barn Dance

KDYL KFI KFSB KFYR KGHK  
KGIR KGU KGW KHQ KOA KOMO  
KPO KSTP KTAR WDAY WFCB  
WIBA WLW WTMJ

# SUNDAY

ED-11:30 a.m., E-10:30, C-9:30, M-8:30

C — Major Bowes' "Family"

CFRB KERN KFAB KFBK KFH  
KFBK KFH KFCR KGB KGVO  
KMBC KOH KOL KRLD KSL KTRH  
K TSA KVI KVOR KWG KWKH  
WABC WACO WADC WALA WBNB  
WBRC WCAO WCCO WDAE WDBJ  
WDBO WDBC WEGG WFBL WFEA  
WHAS WHK WIBX WJAS WJR  
WKRC WLZ WMBD WMBR  
WMNN WOC WOKO WORC WPG  
WQAM WSRT WSJS WSPD WTOC

ED-11:00 a.m., E-10:00, C-9:00, M-8:00

R — Paramount on Parade

Station list not available

ED-12:30 p.m., E-11:30 a.m., C-10:30, M-9:30

C — Salt Lake Tabernacle Choir

CFRB KFAB KFBK KFBK KFH  
KFPY KFCR KGB KLZ KOH KOL  
KRLD KSL KTRH K TSA KVI KVOR  
KWG WABC WACO WADC WALA  
WBIG WBNS WBRC WCAO WCCO  
WDAE WDBJ WDBO WEGG WFBL  
WFEA WGR WHAS WICC WJAS  
WJR WKRC WLBC WMBR WMNN  
WOC WOKO WORC WQAM WSRT  
WSJS WSPD WTOC

# SUNDAY (Continued)

## B — Radie City Music Hall

CFCF CRCT KDKA KDYL KFI  
KFYR KGO KGW KHQ KOI KOMO  
KPRC KSO KVOO WAPI WBAL  
WBZ WCKY WDAY WEBC  
WGAR WHAM WIS WJDX WJZ  
WKY WMAL WOAI WREN WWSB  
WSYR WWNC

ED-1:00 p.m., E-Noon, C-11:00 a.m.,  
M-10:00

## C — Church of the Air

KFBK KFH KFPY KFRC KGB  
KHJ KMOX KOH KOL KOMA KRLD  
KRNT KSCJ KSL KTRH KTSA KVI  
KVOR KWG WABC WALA WBNS  
WBT WCAO WCCO WDAE WDBJ  
WDBO WDRG WESG WFBL WFBM  
WGR WHAS WHP WIBX WJAS  
WJSV WKBN WKRC WLAC WLZB  
WMBR WNBFW WOC WOKO WORC  
WPG WQAM WREC WSBT WSJS  
WSPD WTOC WWVA

ED:2:00 p.m., E-1:00, C-Noon, M-  
11:00 a.m.

## B — Magic Key of RCA

CFCF CRCT KDKA KDYL KFI  
KFYR KGU KGW KHQ KOA KOIL  
KOMO KPO KPRC KSO KSTP KTBS  
KTBS KVOO KWK WAPI WAVE  
WBAL WBZ WCKY WDAY  
WEBC WENR WFAA WFIL WFLA  
WGAR WHAM WHIO WIBA WIOD  
WIRE WIS WJAX WJDX WJZ WKY  
WMAL WMC WMT WOAI WPTF  
WREN WRVA WSB WSM WWSB  
WSOC WSYR WTAR WTMJ WWNC  
WXYZ

ED-3:00 p.m., E-2:00, C-1:00, M-Noon

## C — Everybody's Music

CFRR CKAC KFAB KFBB KFH  
KGKO KGVO KLRA KLZ KMBC  
KNOX KNOW KOL KRLD KSCJ  
KSL KTRH KTSA KWKH WABC  
WADC WALA WBNS WBT WCAO  
WCCO WCHS WDAE WDBJ WDBO  
WDRG WEEI WESG WFBL WFBM  
WHAS WHK WHP WIBW WIBX  
WJAS WJR WJSV WKBN WKBW  
WKBW WKRC WLAC WLZB WMAS  
WMBD WMBG WMBR WMMN  
WNBFW WOC WOKO WORC WPAR  
WPRO WQAM WSBT WSJS WTAV  
WTOC WWL

ED-5:00 p.m., E-4:00, C-3:00, M-2:00

## R — Marion Talley, Soprano

KDYL KFI KFYR KGW KHQ KOA  
KOMO KPO KSTP KYW WBNB  
WCAE WCKY WCHS WDAF WDAY  
WEAF WEBC WFBA WGY WIBA  
WIRE WJAR WMAQ WNAC WOW  
WRC WTAG WTAM WTIC WTMJ  
WWJ

## B — We, The People: Phil Lord

KDKA KECA KEX KFSD KGA  
KGHL KGIR KGO KJR KLO KOIL  
KPRC KSO KTRBS KTHS KVOO  
KWK WABY WAPI WAVE WBAL  
WBAP WBZ WIZA WEBR WENR  
WFIL WFLA WGAR WHAM WIOD  
WIS WJAX WJDX WJZ WKY WLW

WMAL WMC WMT WOAI WPTF  
WREN WRVA WSB WSM WWSB  
WSOC WSYR WTAR WWSB  
WXYZ

ED-5:30 p.m., E-4:30, C-3:30, M-2:30

## C — Guy Lombardo and Orchestra

KPH KMBC KMOX KOMA KTSA  
WAAB WABC WBNS WCAO WCAU  
WDRG WEAN WFBL WFBM WGR  
WHAS WHC WHK WIBX WIC  
WJR WJSV WMAS WOKO WORC  
WSPD WWVA

## R — Smiling Ed McConnell

KDYL KFI KFYR KGIR KGW  
KHQ KOMO KPO KSTP KYW WBNB  
WCAE WCHS WDAF WDAY WEAF  
WEBC WFBW WGY WHO WIBA  
WJAR WLW WMAK WNAC WOW  
WRC WTAG WTAM WTIC WTMJ  
WWJ

## B — Steopnagle and Budd

KDKA KECA KEX KFSD KGA  
KGO KJR KLO KOIL KSO KWK  
KWL WBZ WCKY WENR  
WFIL WGAR WHAM WHIO WIRE  
WJZ WMAL WMT WREN WSYR  
WXYZ

ED-6:00 p.m., E-5:00, C-4:00, M-3:00

## C — Joe Penner; Jimmy Grier

KFAB KFPY KLZ KMBC KMOX  
KNX KOIN KOL KOMA KRLD  
KRNT KSFO KSL KTRH KTSA  
KVI WABC WBBM WBNS WBRC  
WBT WCAO WCAU WCCO WDAE  
WDRG WEEI WFBL WFBM WGR  
WHAS WHC WHK WJA WJR  
WJSV WKBW WKRC WMBG WMBR  
WOKO WORC WPRO WQAM WREC  
WWL

## M — Ray Knight; Arnold Johnson

CKLW KHJ KWK WAAB WBAL  
WFIL WGAR WGN WLW WOR

ED-6:30 p.m., E-5:30, C-4:30, M-3:30

## C — Rubinoff and His Violin

KDB KERN KFAB KFBB KFBK  
KFH KFPY KFRC KGB KOGO  
KHJ KLRA KLZ KMJ KMOX KOH  
KOIN KOL KOMA KRLD KRNT  
KSCJ KSL KTRH KTSA KTUL  
KVI KVOR KWG KWKH WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WCOA WDAE WDBJ WDBO  
WDNC WDOD WDRG WEEI WFBL  
WFBM WFEA WGST WHAS WHC  
WHK WHP WIBW WIBX WISN  
WJAS WJR WJSV WKBW WKBW  
WKRC WLAC WLX WMAS WMBD  
WMBG WMBR WNAX WNOX WOC  
WOKO WORC WPG WQAM WREC  
WSTC WFLA WSJS WSMK WSPD  
WTOC WWL WWVA

## R — A Tale of Today

WBNB WEAFF WGY WJAR WMAQ  
WOW WRC WTAM

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

## C — Columbia Workshop

KFAB KFBB KFH KFPY KGKO  
KGVO KNOW KOH KOIN KOL

KOMA KRLD KRNT KSCJ KSFO  
KTRH KTSA KTUL KVI KVOR  
KWKH WABC WACO WADC WALA  
WBBM WBNS WBRC WBT WCAO  
WCCO WCOA WDAE WDBO WDNC  
WFBL WFBM WGR WGST WHC  
WHIO WHK WHP WIBX WISN  
WJAS WJNO WKRC WLZB WMAS  
WMBG WMMN WNOX WOKO  
WORG WPG WREC WSBT WSJS  
WSPD WTOC

## R — Jack Benny; Mary Livingstone

KSD KYA KYW WBNB WCAE  
WCHS WDAF WEAFF WFBW WGY  
WHO WJAR WLW WMAQ WNAC  
WOW WRC WTAG WTAM WTIC  
WWJ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

## C — Phil Baker; Oscar Bradley

KLRA KLZ KRLD KTRH KTSA  
KTUL KWKH WABC WACO WADC  
WALA WBIG WBNS WBRC WBT  
WCAO WCAU WCOA WDAE WDBJ  
WDBO WDNC WDOD WDRG WEAN  
WFBL WFBM WFEA WGR WGST  
WHAS WHC WHK WHP WIBX  
WICC WJAS WJR WJSV WKBW  
WKRC WLAC WLZB WMAS WMBR  
WNAC WNOX WOKO WORG WQAM  
WREC WSBT WSAF WSJS WSMK  
WSPD WTOC WWL WWVA

## R — Fireside Recitals

KSD KYW WBNB WCAE WCHS  
WDAF WEAFF WFBW WGY WIRE  
WJAR WMAQ WOW WRC WSAI  
WTAG WTAM WTIC WWJ

## B — Ozzie Nelson; Bob Ripley

KDKA KOIL KPRC KSO KTBS  
KTBS KVOO KWK WAPI WAVE  
WBAL WBAP WBZ WBZA WCKY  
WFIL WGAR WHAM WHIO WIRE  
WJDX WJZ WKY WLS WMAL WMC  
WMT WOAI WREN WBB WSM  
WWSB WSYR WXYZ

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

## R — Sunset Dreams; Morin Sisters

CFCF CRCT KSD KYW WBNB  
WCAE WCHS WDAF WEAFF WFBW  
WGY WHO WIRE WJAR WLW  
WMAQ WOAI WOOD WOW WRC  
WTAG WTAM WTIC WWJ

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

## C — Victor Moore; Helen Broderick

KFAB KFH KFPY KLRA KLZ  
KMBC KMOX KNX KOIN KOL  
KOM A KRLD KRNT KSCJ KSFD  
KSL KTRH KTSA KTUL KVI  
KWKH WABC WADC WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDRC  
WEEI WFBL WFBM WGR WGST  
WHAS WHC WHIO WHK WHP  
WIBX WJAS WJR WJSV WKBW  
WKRC WLAC WLZB WMAS WMBG  
WMBR WNAX WNBFW WNOX WOKO  
WORC WPRO WQAM WREC WSBT  
WWL WWVA

## R — Don Ameche; Edgar Bergen

CFCF CRCT KDYL KFI KFYR  
KGW KHQ KOA KOMO KPO KPRC  
KSD KSTP KTAR KTBS KVOO  
KYW WAVE WBNB WCAE WCHS



**SUNDAY (Continued)**

WDAF WDAY WEAF WEBC WFAA  
 WFRB WFLA WGY WHO WIBA  
 WIOD WIRE WIS WJAR WJAX  
 WJDX WKY WLW WMAQ WMC  
 WNAC WOAI WOW WPTF WRC  
 WRVA WSB WSM WSMB WSOC  
 WSTN WTAG WTAM WTAR WTIC  
 WTMJ WWJ WNNC

**B — G. M. "Prom" Concerts**  
 KANS KDKA KECA KERN KEX  
 KFBB KFEL KFSD KGA KGHL  
 KGHL KGHO KGIR KGO KJR KLO  
 KMJ KOIL KPO KSO KWG KWK  
 WABY WBAL WBCM WBOW WBZ  
 WBZA WCKY WCOL WEAN WEBR  
 WENR WFDF WFEA WFLG WJAR  
 WRBF WGL WHAM WICC WJIM  
 WJZ WLS WMAL WMT WOOD  
 WOW WREN WSMK WSPD WSYP  
 WTCN WXYZ

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**

**C — Eddie Cantor; Bobby Breen**  
 KPAB KFH KGKO KLRA KMBC  
 KMOX KOMA KRLL KRNT KSCJ  
 KTRH KTSB KTUL KWKH WABC  
 WACO WADC WALA WBBM WBIG  
 WBNS WBRC WBT WCAO WCAU  
 WCCO WCOA WDAE WDBJ WDBO  
 WDNC WDDO WDRC WEAN WFBL  
 WFBM WFEA WGR WGST WHAS  
 WHC WHK WHP WIBW WIBX  
 WICC WISN WJAS WJR WJSV  
 WKBW WKRC WLAC WLBZ WMAS  
 WMBD WMRB WMNN WNAX  
 WNOX WOC WOKY WQAM  
 WREB WSBT WSFA WSJS WSMK  
 WSPD WTOC WWL WWVA

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**

**B — Frank Parker; Shep Fields**  
 KDKA KECA KFSD KGA KGHL  
 KGIR KGO KJR KLO KOIL KSO  
 KTAR KWK WBAL WBZ WBZA  
 WEBC WEBR WENR WFIL WGAR  
 WHAM WICC WJZ WLW WMAL  
 WMT WREN WSYP WXYZ

**R — Manhattan Merry-Go-Round**  
 CFCF KDYL KFI KFJR KGW  
 KHQ KOA KOMO KPO KPBC KSD  
 KSTP KTBS KTHS KYW WAVE  
 WBN WCAE WCKY WCSH WDAF  
 WDAY WEAF WEBC WEEI WFAA  
 WFRB WFLA WGY WHO WIBA  
 WIOD WIRE WIS WJAR WJAX  
 WJDX WKY WMAQ WMC WOAI  
 WOW WPTF WRC WRVA WSB

WSM WSMB WSOC WTAG WTAM  
 WTAR WTIC WTMJ WWJ WNNC

**C — Ford Sunday Evening Hour**

CFRB CKAC KDB KERN KFAB  
 KFBB KFEL KFH KFYR KFRC KGB  
 KGKO KHJ KLRA KLZ KMBC  
 KMJ KMOX KOH KOIN KOL KOMA  
 KRLL KRNT KSCJ KSL KTRH  
 KTSB KTUL KVI KVOR KWG  
 KWKH WABC WACO WADC WALA  
 WBBM WBIG WBNS WBRC WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDBO WDNC WDDO WDRC  
 WEAN WFBL WFBM WFEA WGR  
 WGST WHAS WHEC WHK WHP  
 WIBW WIBX WICC WISN WJAS  
 WJR WJSV WKBW WKRC WLAC  
 WLBZ WMAS WMBD WMBR WNBC  
 WNAX WOC WOKY WQAM  
 WREB WSBT WSFA WSJS WSPD  
 WTOC WWL WWVA

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**

**R — Album of Familiar Music**  
 CFCF CRCT KDYL KFI KFJR  
 KGW KHQ KOA KOMO KPO KPBC  
 KSD KSTP KTBS KYW WAPI  
 WAVE WBN WCAE WCSH WDAF  
 WDAY WEAF WEBC WERI WFAA  
 WFRB WFLA WGY WHO WIBA  
 WIOD WIS WJAR WJAX WJDX  
 WKY WMAQ WMC WOAI WOW  
 WPTF WRC WRVA WSAI WSB  
 WSM WSMB WSOC WTAG WTAM  
 WTAR WTMJ WWJ WNNC

**B — Walter Winchell**  
 KDKA KECA KEX KFSD KGA  
 KGHL KGIR KGO KJR KLO KOIL  
 KSO KTAR KWK WBAL WBZ  
 WBZA WENR WFIL WGAR WHAM  
 WJZ WLW WMAL WMT WREN  
 WSYP WXYZ

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**

**C — Gillette Community Sing**  
 CFRB CKAC KDB KERN KFAB  
 KFBB KFEL KFH KFYR KFRC  
 KGB KGKO KGMV KGOV KHJ  
 KLRA KLZ KMBC KMJ KMOX  
 KOH KOIN KOL KOMA KRLL  
 KRNT KSCJ KSL KTRH KTSB  
 KTUL KVI KVOR KWG KWKH  
 WABC WACO WADC WALA WBBM  
 WBIG WBNS WBRC WBT WCAO  
 WCAU WCCO WCOA WDAE WDBJ  
 WDBO WDNC WDDO WDRC WEAN  
 WFBL WFBM WFEA WGST WHAS  
 WHC WHK WHP WIBW WIBX  
 WICC WISN WJAS WJR WJSV  
 WKBW WKRC WKRC WLAC WLBZ  
 WMAS WMBD WMBG WMBR

WMNN WNAC WNAX WNOX WOC  
 WOKY WORC WOWO WPG WQAM  
 WREB WSBT WSFA WSJS WSMK  
 WSPD WTOC WWL

**R — Gladys Swarthout**

KDYL KFI KGWB KGW KHQ KOA  
 KPO KPBC KSD KSTP KTAR KTBS  
 KTHS KYW WAVE WBAP WBN  
 WCAE WCSH WDAF WEAF WFRB  
 WFLA WGY WHO WIBA WIOD  
 WIRE WIS WJAR WJAX WJDX  
 WKY WMAQ WMC WNAC WOAI  
 WOOD WOW WPTF WRC WRVA  
 WSR WSM WSMB WSOC WTAG  
 WTAM WTAR WTIC WTMJ WWJ  
 WNNC

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**

**C — Kallenborn Edits the News**  
 KFH KGKO KNOW KOH KOIN KOL  
 KOMA KRLL KRNT KSCJ KSPK  
 KTRH KTSB KTUL KVI KWKH  
 WABC WACO WADC WALA WBIG  
 WBNS WDAE WDBJ WDBO WDNC  
 WDRC WEEI WFBL WHAS WHEC  
 WHIO WHK WIBX WJAS WJNO  
 WJSV WKBW WLBZ WMAS WMBR  
 WMNN WNAX WBNF WNOX WOC  
 WOKY WORC WOWO WPRO WQAM  
 WREB WSBT WSFA WSJS WSPD  
 WTOC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**

**R — Sunset Dreams; Morin Sisters**  
 KDYL KFI KFSD KGW KHQ KOA  
 KOMO KPO KPBC KTAR KTBS  
 KTHS WBAP WDAF WKY

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**

**B — Walter Winchell**  
 KDYL KFI KFSD KGHL KGIR  
 KGW KHQ KOA KOMO KPO KPBC  
 KTAR KTBS KTHS WAPI WAVE  
 WBAP WJDX WKY WMC WOAI  
 WSB WSM WSMB

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**

**B — Frank Parker; Shep Fields**  
 KPBC KTBS KTHS KVOD WAPI  
 WAVE WBAP WJDX WKY WMC  
 WOAI WSB WSM WSMB

**ED-Midnt., E-11:00 p.m., C-10:00, M-9:00.**

**C — Eddie Cantor; Bobby Breen**  
 KFBB KFYR KGOV KLZ KNX KOH  
 KOIN KOL KSFO KSL KVI KVOR

**CLASSIFIED INDEX TO CHAIN PROGRAMS**

*Time in Eastern Standard*

C—Columbia; R—National (Red); B—National (Blue); M—Mutual

**CONCERTS**

Everybody's Music, 3 p.m. Sun., C  
 Frank Black, 2 p.m. Sun., B  
 Rosario Bourdon, 8 p.m. Fri., R  
 Ford Concert, 9 p.m. Sun., C

G. M. "Prom" Concert, 8 p.m. Sun., B  
 Radio City Music Hall, 12:30 p.m. Sun., B  
 Don Voorhees, 8 p.m. Wed., C

**DANCE BANDS**

Victor Arden, 8 p.m. Fri., C



Ben Bernie, 9 p.m., Tues., B  
 Bunny Berigan, 7 p.m. Sat., C  
 Oscar Bradley, 7:30 p.m. Sun., C  
 Rex Chandler, 7:30 and 10:45 p.m. Sat., C  
 Jimmie Dorsey, 10 p.m. Thurs., R  
 Tommy Dorsey, 10 p.m. Fri., B  
 Shep Fields, 9 and 11:30 p.m. Sun., B  
 Lud Gluskin, 8:30 Wed., C  
 Al Goodman, 9 and 11:15 p.m. Thurs., R  
 Benny Goodman, 9:30 p.m. Tues., C  
 Johnny Green, 9:30 p.m. Tues., R  
 Jimmy Grier, 6 p.m. Sun., C  
 Gus Haenschen, 9:30 p.m. Sat., C  
 Phil Harris, 7 and 11:30 p.m. Sun., R  
 Horace Heidt, 8 p.m. Mon., C  
 Richard Himber, 10 p.m. Mon., B  
 Arnold Johnson, 6 p.m. Sun., M  
 Hal Kemp, 8:30 and 11:30 p.m. Fri., C  
 Henry King, 8:30 and 11:30 p.m. Wed., C  
 Wayne King, 8:30 p.m. Tues and Wed., R;  
 10 p.m. Mon., C  
 Andre Kostelanetz, 9 p.m. Wed., C  
 Guy Lombardo, 5:30 p.m. Sun., C  
 8:30 Thurs., M  
 Vincent Lopez, 9 p.m. Sat., C  
 Abe Lyman, 8:30 p.m. Mon., B; 9 p.m. Fri., R;  
 10 p.m. Wed., R  
 Russ Morgan, 8:30 and 11:30 p.m. Sat., C;  
 8 p.m. Tues., R  
 Ozzie Nelson, 7:30 p.m. Sun., B  
 Ray Noble, 8 p.m. Mon., R  
 Raymond Paige, 9 p.m. Fri., C  
 Jacques Renard, 8:30 and 11 p.m. Sun., C  
 Joe Rines, 11:30 a.m. Sun., B  
 Andy Sanella, 9 p.m. Sun., R  
 Phil Spitalny, 9:30 Mon., R  
 Rudy Vallee, 8 p.m. Thurs., R  
 Peter Van Steeden, 9 p.m. Wed., R  
 Don Voorhees, 5:30 p.m. Sun., B  
 Victor Young, 8:30 and 11:30 p.m. Tues., C

#### DIALOG

Fred Allen, 9 p.m. Wed., R  
 Amos 'n' Andy, 7 and 11 p.m. daily. except  
 Sat. and Sun., R  
 Phil Baker, 7:30 p.m. Sun., C  
 Jack Benny, 7 and 11 p.m. Sun., R  
 Milton Berle, 10 p.m. Sun., C  
 Bob Burns, 10 p.m. Thurs., R  
 Burns and Allen, 8 p.m. Mon., R  
 Charles Butterworth, 9:30 Tues., R  
 Judy Canova, 9:15 and 11:30 Sun., B  
 Eddie Cantor, 8:30 and 11 p.m. Sun., C  
 Easy Aces, 7 p.m. Tues., Wed., Thurs., B  
 Ray Knight, 6 p.m. Sun., M  
 Beatrice Lillie, 8 p.m. Wed., E  
 Lum and Abner, 7:30 p.m. daily except Sat.  
 and Sun., B  
 Victor Moore: Helen Broderick, 8 p.m. Sun., C  
 Ken Murray, 8:30 Wed., C  
 Jack Oakie, 9:30 p.m. Tues., C  
 Parkyakarkus, 8:30 Tues., C

Jack Pearl, 10 p.m. Fri., B  
 Joe Penner, 6 p.m. Sun., C  
 Pick and Pat, 8:30 and 11:30 p.m. Mon., C  
 Stoopnagle and Budd, 5:30 p.m. Sun., B  
 Uncle Ezra's Radio Station, 7:15 p.m. Mon.,  
 Wed., Fri., R

#### DRAMA

Columbia Workshop, 7 p.m. Sun., C  
 Death Valley Days, 8:30 p.m. Fri., B  
 First Nighter, 10 p.m. Fri., R  
 Gang Busters, 10 p.m. Wed., C  
 Hollywood Hotel, 9 p.m. Fri., C  
 It Can Be Done, 8:30 Tues., B  
 Phillips Lord, 10 p.m. Wed., C  
 Lux Radio Theater, 9 p.m. Mon., C  
 Ma and Pa, 7:15 p.m. Mon. through Fri., C  
 One Man's Family, 8 p.m. Wed., R  
 Irene Rich, 8 p.m. Fri., B  
 Snow Village Sketches, 9 p.m. Sat., R  
 Tale of Today, 6:30 p.m. Sun., R  
 True Story Court, 9:30 p.m. Fri., R  
 Vic and Sade, 10 p.m. Wed., B

#### POPULAR PROGRAMS

A & P Bandwagon, 8 p.m. Thurs., C  
 Album of Familiar Music, 9:30 p.m. Sun., R  
 Major Bowes, 11:30 a. m. Sun. and 9 p.m.  
 Thurs., C  
 Broadway Merry-Go-Round, 8 p.m. Wed., B  
 Cavalcade of America, 8 p.m. Wed., C  
 Chesterfield Program, 9 p.m. Wed., C  
 Cities Service Concert, 8 p.m. Fri., R  
 Contented Program, 10 p.m. Mon., R  
 Community Sing, 10 p.m. Sun., C  
 Fireside Recitals, 7:30 p.m. Sun., R  
 Fleischmann Variety Hour, 8 p.m. Thurs., R  
 Hammerstein's Music Hall, 8 p.m. Tues., C  
 Hit Parade, 10 p.m. Wed., R; 10 p.m. Sat., C  
 Hollywood Hotel, 9 p.m. Fri., C  
 Husbands and Wives, 8 p.m. Tues., B  
 Magic Key of RCA, 2 p.m. Sun., B  
 Manhattan Merry-Go-Round, 9 p.m. Sun., R  
 March of Time, 10:30 p.m. Thurs., C  
 Maxwell House Show Boat, 9 p.m. Thurs., R  
 National Barn Dance, 9 and 11:30 p.m. Sat., B  
 Packard Hour, 9:30 p.m. Thurs., R  
 Palmolive Hour, 9:30 p.m. Wed., C  
 Paramount on Parade, 12 noon Sun., R  
 Al Pearce and His Gang, 9 p.m. Tues., C  
 Pontiac Variety Show, 10:30 p.m. Fri., R  
 Professor Quiz, 8 p.m. Sat., C  
 Rubinfoff, 6:30 p.m. Sun., C  
 Shell Chateau, 9:30 p.m. Sat., R  
 Studebaker Champions, 10 p.m. Mon., B  
 True Adventures, 10 p.m. Thurs., C  
 Universal Rhythm, 7:30 and 10:45 p.m. Sat., C  
 Voice of Firestone, 8:30 p.m. Mon., R  
 Vox Pop, 9 p.m. Tues., R  
 Waltz Time, 9 p.m. Fri., R

Watch The Fun Go-By, 9 p.m. Tues., C  
We, the People, 5 p.m. Sun., B

### SINGERS

Stuart Allen, 10 p.m. Mon., B  
Fred Astaire, 9:30 p.m. Tues., R  
Gene Austin, 6 p.m. Sun., C  
Kenny Baker, 7 and 11:30 p.m. Sun., R  
Natalie Bodanya, 8:30 p.m. Mon., B  
Richard Bonelli, 7:30 and 10:45 p.m. Sat., C  
Morton Bove, 10 p.m. Fri., B  
Bobby Breen, 8:30 and 11 p.m. Sun., C  
Rachel Caralay, 9 p.m. Sun., R  
Bernice Claire, 9 p.m. Fri., R  
Mario Cozzi, 7:15 p.m. Fri., B  
Vivian Della Chiesa, 10 p.m. Mon., R  
Bing Crosby, 10 p.m. Thurs., R  
Gogo deLys, 5:30 p.m. Sun., B  
Edith Dick, 10 p.m. Sat., C  
Jessica Dragonette, 8 p.m. Fri., R; 9:30 p.m. Wed., C  
Phil Duey, 8 and 11:30 p.m. Tues., R; 8:30 Sat., C  
Deanna Durbin, 8:30 and 11 p.m. Sun., C  
Mary Eastman, 9:30 p.m. Sat., C  
Nelson Eddy, 8 p.m. Sun., R  
Nick Foran, 8 p.m. Mon., R  
Jack Fulton, 7 and 11 p.m. Mon. thru Thurs., C  
Wendell Hall, 10 p.m. Sun., C  
Helen Jepson, 9 and 11:15 p.m. Thurs., R  
Al Jolson, 8:30 and 11:30 p.m. Tues., C  
Jones and Hare, 10 p.m. Sun., C  
Frances Langford, 9 p.m. Fri., C  
Shirley Lloyd, 7:30 p.m. Sun., B  
Lullaby Lady, 10 p.m. Mon., R  
Elizabeth Lennox, 8 p.m. Fri., C  
Nick Lucas, 9 p.m. Tues., C  
Lucille Manners, 8 p.m. Fri., R  
Helen Marshall, 7:30 p.m., Sun., R  
Ed McConnell, 5:30 p.m. Sun., R  
Lucy Monroe, 9:30 p.m. Sun., R  
Grace Moore, 9 p.m. Sat., C  
Morin Sisters, 7:45 and 11 p.m. Sun., R  
Frank Munn, 9:30 p.m. Sun and 9 p.m. Fri., R; 8:30 p.m. Mon., B  
Dorothy Page, 10:30 p.m. Sat., R  
Frank Parker, 9 and 11:30 p.m. Sun., B  
Jan Peerce, 6:30 p.m. Sun., C  
Lily Pons, 9 p.m. Wed., C  
Carmella Ponselle, 8 p.m. Fri., C  
Virginia Rea, 6:30 p.m. Sun., C  
Martha Raye, 8:30 and 11:30 p.m. Tues., C  
Lanny Ross, 9 p.m. Thurs., R  
Shirley Ross, 8:30 p.m. Wed., C  
Singin' Sam, 8:15 Fri., B  
Kate Smith, 8 p.m. Thurs., C  
Margaret Speaks, 8:30 and 11:30 p.m. Mon., R  
Gladys Swarthout, 10 p.m. Sun., R  
Marion Talley, 10 p.m. Fri., R  
Conrad Thibault, 9:30 p.m. Tues., R  
Kay Thompson, 8:30 and 11:30 p.m. Fri., C  
Trudy Woods, 9:30 p.m. Tues., R

### TALKS

Boake Carter, 7:45 p.m. Mon. thru Fri., C  
Jimmy Fidler, 10:30 p.m. Tues., R  
Floyd Gibbons, 10 p.m. Thurs., C  
Eddie Guest, 8:30 p.m. Tues., B  
H. V. Kallenborn, 10:45 p.m. Sun., C  
Bob Ripley, 7:30 p.m. Sun., B  
Babe Ruth, 10:30 Wed. and Fri., C  
Sidewalk Interviews, 9 p.m. Tues., R  
Deems Taylor, 9:30 p.m. Fri., R  
Lowell Thomas, 6:45 p.m. Mon. thru Fri., B  
Trans-Atlantic Broadcast, 12:45 p.m. Sun., C  
Walter Winchell, 9:30 and 11:15 p.m. Sun., B  
Alexander Woolcott, 7:30 p.m. Tues. and Thurs., C

WDSM has been granted a modification of its Construction Permit, approving the transmitter site at 38th St. and Tower Ave., and the studio site at 107 Tower Ave., Superior, Wis.

Mr. A. Frank Katzentine of Miami Beach, Fla., has been granted a Construction Permit for a new station to operate on 1500 kes. with 100 watts power on unlimited time.

After battling with the FCC for four years, WKZO Kalamazoo, Mich., has finally been granted full time operation on 590 kes. An increase in power also was granted, from 1000 watts days to 250 watts nights and 1000 watts days.

A change in frequency from 1420 to 1210 kcs. has been granted KALB Alexandria, La. The order, which allows them 100 watts day and night, will become effective about the middle of June.

WJTL Jamestown, N. Y., joined the NBC-Blue Network on May 14. WSAN Allentown, Pa., joined NBC on May 1, and WGBI Scranton joined CBS on May second.



## THE BROADCASTING STATIONS OF EUROPE

<table border="0" style="width: 100%;"> <tr><td><b>Bergen</b></td><td></td><td></td></tr> <tr><td>LKB 850</td><td>1000</td><td></td></tr> <tr><td>LKD 686</td><td>500</td><td></td></tr> <tr><td>Fredrikstad</td><td></td><td></td></tr> <tr><td>LKF 776</td><td>1000</td><td></td></tr> <tr><td>Hamar</td><td></td><td></td></tr> <tr><td>LKH 519</td><td>700</td><td></td></tr> <tr><td>Kristianssand</td><td></td><td></td></tr> <tr><td>LKK 1276</td><td>500</td><td></td></tr> <tr><td>Narvik</td><td></td><td></td></tr> <tr><td>.....</td><td>1222</td><td>300</td></tr> <tr><td>Notodden</td><td></td><td></td></tr> <tr><td>LKN 1357</td><td>150</td><td></td></tr> <tr><td>Porsgrund</td><td></td><td></td></tr> <tr><td>LKP 850</td><td>1000</td><td></td></tr> <tr><td>Rjukan</td><td></td><td></td></tr> <tr><td>LKR 1348</td><td>150</td><td></td></tr> <tr><td>Stavanger</td><td></td><td></td></tr> <tr><td>LKS 1276</td><td>500</td><td></td></tr> <tr><td>Trondelag</td><td></td><td></td></tr> <tr><td>LKT 629</td><td>20000</td><td></td></tr> </table>	<b>Bergen</b>			LKB 850	1000		LKD 686	500		Fredrikstad			LKF 776	1000		Hamar			LKH 519	700		Kristianssand			LKK 1276	500		Narvik			.....	1222	300	Notodden			LKN 1357	150		Porsgrund			LKP 850	1000		Rjukan			LKR 1348	150		Stavanger			LKS 1276	500		Trondelag			LKT 629	20000		<table border="0" style="width: 100%;"> <tr><td><b>Lodz</b></td><td>1339</td><td>1700</td></tr> <tr><td>Lwow</td><td>795</td><td>16000</td></tr> <tr><td>Poznan</td><td>868</td><td>16000</td></tr> <tr><td>Torun</td><td>986</td><td>24000</td></tr> <tr><td>Warsaw</td><td></td><td></td></tr> <tr><td>No. 2</td><td>1384</td><td>2000</td></tr> <tr><td>Wilno</td><td></td><td></td></tr> <tr><td>.....</td><td>536</td><td>16000</td></tr> </table> <p style="text-align: center;"><b>PORTUGAL</b></p> <table border="0" style="width: 100%;"> <tr><td>Lisbon</td><td></td><td></td></tr> <tr><td>CTIAA 629</td><td>20000</td><td></td></tr> <tr><td>Paredo</td><td></td><td></td></tr> <tr><td>CTIGL 1031</td><td>5000</td><td></td></tr> </table> <p style="text-align: center;"><b>ROUMANIA</b></p> <table border="0" style="width: 100%;"> <tr><td>Bucharest</td><td></td><td></td></tr> <tr><td>.....</td><td>823</td><td>12000</td></tr> </table> <p style="text-align: center;"><b>SPAIN</b></p> <table border="0" style="width: 100%;"> <tr><td>Alcala</td><td></td><td></td></tr> <tr><td>.....</td><td>1500</td><td>200</td></tr> <tr><td>Barcelona</td><td></td><td></td></tr> <tr><td>EAJ1</td><td>795</td><td>7500</td></tr> </table>	<b>Lodz</b>	1339	1700	Lwow	795	16000	Poznan	868	16000	Torun	986	24000	Warsaw			No. 2	1384	2000	Wilno			.....	536	16000	Lisbon			CTIAA 629	20000		Paredo			CTIGL 1031	5000		Bucharest			.....	823	12000	Alcala			.....	1500	200	Barcelona			EAJ1	795	7500	<table border="0" style="width: 100%;"> <tr><td>EAJ15 1022</td><td>3000</td><td></td></tr> <tr><td>Madrid</td><td></td><td></td></tr> <tr><td>EAJ2 731</td><td>3000</td><td></td></tr> <tr><td>EAJ7 1095</td><td>10000</td><td></td></tr> <tr><td>Oviedo</td><td></td><td></td></tr> <tr><td>EAJ19 1022</td><td>700</td><td></td></tr> <tr><td>Seville</td><td></td><td></td></tr> <tr><td>EAJ5 731</td><td>5500</td><td></td></tr> <tr><td>Valencia</td><td></td><td></td></tr> <tr><td>EAJ3 850</td><td>3000</td><td></td></tr> </table> <p style="text-align: center;"><b>SWEDEN</b></p> <table border="0" style="width: 100%;"> <tr><td>Falun</td><td></td><td></td></tr> <tr><td>SCC 1086</td><td>2000</td><td></td></tr> <tr><td>Goteborg</td><td></td><td></td></tr> <tr><td>SBB 941</td><td>10000</td><td></td></tr> <tr><td>Horby</td><td></td><td></td></tr> <tr><td>SBH 1131</td><td>10000</td><td></td></tr> <tr><td>Karlskrona</td><td></td><td></td></tr> <tr><td>SCJ 1530</td><td>200</td><td></td></tr> <tr><td>Karlstad</td><td></td><td></td></tr> <tr><td>SCK 1312</td><td>250</td><td></td></tr> <tr><td>Malmo</td><td></td><td></td></tr> <tr><td>SBC 1312</td><td>2500</td><td></td></tr> 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<tr><td>.....</td><td>1375</td><td>500</td></tr> <tr><td>Beremunster</td><td></td><td></td></tr> <tr><td>.....</td><td>556</td><td>100000</td></tr> <tr><td>Monte Ceneri</td><td></td><td></td></tr> <tr><td>.....</td><td>1167</td><td>15000</td></tr> <tr><td>Softens</td><td></td><td></td></tr> <tr><td>.....</td><td>677</td><td>100000</td></tr> </table> <p style="text-align: center;"><b>U. S. S. R.</b></p> <table border="0" style="width: 100%;"> <tr><td>Dnepropetrovsk</td><td></td><td></td></tr> <tr><td>RW30 913</td><td>10000</td><td></td></tr> <tr><td>Moscow</td><td></td><td></td></tr> <tr><td>RW39 832</td><td>100000</td><td></td></tr> <tr><td>Odessa</td><td></td><td></td></tr> <tr><td>RW13 968</td><td>10000</td><td></td></tr> <tr><td>Simferopol</td><td></td><td></td></tr> <tr><td>RW73 859</td><td>10000</td><td></td></tr> <tr><td>Stalino</td><td></td><td></td></tr> <tr><td>RW26 776</td><td>10000</td><td></td></tr> </table>	Sundsvall			SBD 601	10000		Trothattan			SCQ 1312	250		Basle			.....	1375	500	Berne			.....	1375	500	Beremunster			.....	556	100000	Monte Ceneri			.....	1167	15000	Softens			.....	677	100000	Dnepropetrovsk			RW30 913	10000		Moscow			RW39 832	100000		Odessa			RW13 968	10000		Simferopol			RW73 859	10000		Stalino			RW26 776	10000	
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## SHORT WAVE STATIONS BY FREQUENCIES

*Frequencies are given in megacycles per second. Power is given in parentheses in kilowatts and decimals hereof. In our indices we show assigned frequencies. Actual frequencies on which stations are heard, when differing from those assigned, are shown in parentheses in kilocycles.*

### Abbreviations:

Ann: Announces  
 Add: Address  
 Int: Interval signal  
 s/o: Sign on and sign off  
 (\*): Will not verify  
 Tr: Transmitter

NA: North America  
 SA: South America  
 CA: Central America  
 NYC: New York City  
 Apto: Apartado (Box No.)

<p>1.734 Llepaja, Latvia (1.).</p> <p>4.002 CT2AJ, Ponta Delgada, Azores.</p> <p>4.107 HCJB, Quito, Ecuador. (15). "La Voz de los Andes." Int: 4 strokes on gong. Add: Clarence W. Jones, Casilla 691.</p> <p>4.273 RV15, Khabarovsk, USSR (Siberia). (20.)</p> <p>4.600 HC2ET, Guayaquil, Ecuador. Int: 12 chimes. Add: Box 249.</p> <p>4.795 VE9BK, Vancouver, B. C. (.25). Add: 780 Beatty St.</p> <p>4.810 YDE2, Solo, Java, N. E. I. (.2). Add: Solosche Radio Vereeniging.</p> <p>4.865 YDG5, Batavia, Java, N.E.I. (.25). Bata-vasche Radio Vereeniging.</p> <p>5.415 PMY, Bandoeng, Java, N.E.I. (.45).</p> <p>5.500 T15HH, San Ramon, Costa Rica. (.2). "La Voz de S. R."</p> <p>5.710 YV2RA, San Cristobal, Venez. "La Voz de la Tachira." s/o: "El Capitan."</p> <p>5.720 TGS, Guatemala City, Guat. (.2)</p> <p>5.720 RV15, Khabarovsk, USSR. (Siberia)</p> <p>5.725 HC1PM, Quito, Ecuador. (5735)</p> <p>5.758 YNOP, Managua, Nicaragua. "Radiodifusora Bayer."</p> <p>5.780 OAX4D, Lima, Peru. (3.5). "Radio Dusa, La Voz de Peru." s/o: "In code. Add: All America Cables, Inc., Casilla 2336 Caracas, Venez. (1.). "Radio Caracas, la habla a la Nacion." Relays YV5RA. s/o: "March One BC." Add: Apto. 2009.</p>	<p>5.820 TIGPH, San Jose, Costa Rica. "Alma Tica." Add: Apto 800.</p> <p>5.850 YV1RB, Maracaibo, Venez. "Ecos del Zulia." Relays YV1RA. s/o: "Strike Up the Band." Add: Apto 37.</p> <p>5.855 H11J, San Pedro de Macoris, D. R. (.04). s/o: "All I Do is Dream of You." Add: Apto 204.</p> <p>5.875 HRN, Tegucigalpa, Honduras. (.4) (*). "La Voz de Honduras."</p> <p>5.880 YV3RB, Barquisimeto, Venez. "La Voz de Lara." Relays YV3RA.</p> <p>5.885 H19B, Santiago, D. R. Add: Hotel Mercedes.</p> <p>5.905 T1MS (or T1LS7), Puntarenas, Costa Rica.</p> <p>5.910 HH2S, Port-au-Prince, Haiti (5925). Add: Boite 103</p> <p>YV4RH, Valencia, Venez. (5918). "Radio Valencia." Relays YV4RE.</p> <p>5.920 XERV, Alente de Bravo, Mexico.</p> <p>5.930 YV1RL, Maracaibo, Venez. "Radio Popular." Relays YV1RK.</p> <p>5.940 TG2X, Guatemala City, Guat. (.2). Policia Nacional.</p> <p>5.950 HJN, Bogota, Colombia. Add: Ministerio de Correos y Telegrafos.</p> <p>5.970 HJ4BD, Medellin, Colombia. (also on 6138). "La Voz de Catia."</p> <p>5.980 HJ2BD, Bucaramanga, Colombia. (.67) (5987-5993). Add: Calle 2a No. 1205.</p> <p>5.996 RV59, Moscow, USSR. (20.). Mme. Inna Marr, Petrovka 12.</p>
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## SHORTWAVE STATIONS BY FREQUENCIES

- 6.000 OAX5C, Ica, Peru (.1). "Radio Universal." Add: Tacna 112. Int: cuckoos. s/o: Liebestraume.
- XEBT, Mexico City, D. F. (1.) Add: Aptdo 79-44.
- 6.005 CFCX, Montreal, P. Q. (.075). Relays CFCF. Add: Canadian Marconi Co., Ltd., Box 1690.
- HP5K, Colon, Panama. "La Voz de la Victor." Add: Aptdo 33.
- VE9DN, Montreal, P. Q. Relays CFCF irreg. See CFCX 6005 kcs.
- 6.010 VE9GA, Sydney, N. S. (1.) Relays CJCB. Add: N. Nathanson
- COCO, Havana, Cuba. (.3) Add: Box 98.
- OLR2A, Prague, Czecho. See 9.550 megs.
- VK9MI, M. V. Kanimbla. (.05). McIlwraith & McEachern, Ltd., Adelaide, Australia.
- VP3MR, Georgetown, British Gulana. (5980; 5975; 6017). "The Voice of Guiana"
- 6.012 HJ3ABH, Bogota, Colombia. (1.2) "La Voz de la Victor." Same call on BCB. s/o: "Russian Lullaby." Add: Aptdo 565
- 6.015 HI3U, Santiago de los Caballeros, D. R. (.025) (6017) "La Voz del Comercio." Add: Sr. F. Bertran.
- XEWI, Mexico City, D. F. (.4). "My Voice to the World from Mexico." Add: Aptdo 2874.
- 6.018 ZHI, Singapore, Straits Settlements. (.09). Add: 2 and 4 Orchard Road.
- 6.020 DJC, Berlin, Germany. (8.) Tr: Zeesen. Int: Music box tune. s/o: Two national anthems. Add: Relchs-Rundfunk-Gesellschaft, Haus des Rundfunk, Masurenallee, Berlin-Charlottenburg 9.
- XEUW, Veracruz, Ver. (.02). "EI Eco de Sotavento desde Veracruz." Int: "Las Golondrinas." Three cents USA postage for veri. Add: Independencia 98.
- 6.025 HJ1ABJ, Santa Marta, Colombia. (.05) "La Voz de Santa Marta."
- 6.030 HJ4ABP, Medellin, Colombia. (1.) (6033) "Radio Philco".
- HP5B, Panama City, Panama. (.1) Add: Aptdo 910.
- QLR2B, Prague, Czecho. See 9.550 megs.
- VE9BJ, St. John, N. B. (.05). Admiral Beatty Hotel.
- VE9CA, Calgary, Alta. (.1). Voice of the Prairie, Ltd.
- XEBQ, Mazatlan, Sin., (.05) "La Voz del Pacifico." Int: 4 chimes. s/o: Luxembourg March. Add: Aptdo 95.
- 6.035 CXA2, Montevideo, Uruguay. (.5). (6000). Tr: Sayago. Add: Rio Negro 1631.
- 6.040 PRA8, Pernambuco, Brazil. (3.) "A Voz do Norte." Add: Av. Cruz Cabuga 394.
- W1XAL, Boston, Mass. (10.) "Dedicated to Enlightenment." Add: University Club.
- W4XB, Miami, Fla. (5.) Relays WIOD. Add: Isle of Dreams Brdcastg. Corp.
- YDA, Tandjong Priok, Java, N.E.I. (10.) s/o: "End of a Perfect Day." This is the Key Station for the NIROM Network.
- 6.042 HJ1ABG, Barranquilla, Colombia. (.15) "Emisora Atlantico". Same call on BCB. Add: Aptdo 445.
- 6.050 GSA, London, Gt. Britain. (20.). "A for Aerial." Tr: Daventry. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster Chimes. s/o: "God Save the King. Add: British Broadcasting Corp., London W1.
- XEXF, Mexico City, D. F. (.5). Secretaria de Economia.
- 6.055 HJ3ABD, Bogota, Colombia (.05). "Colombia Broadcasting." Add: Aptdo 509.
- 6.060 VQ7LO, Nairobi, Kenya. Cable and Wireless, Ltd., Box 777.
- W3XAU, Philadelphia, Pa. (10.). Tr: Newton Square. Relays CBS-WCAU. Add: 1622 Chestnut St.
- W8XAL, Cincinnati, Ohio. (10.) Tr. Mason. Relays WLW-NBC. Add: Crosley Radio Corp., 1329 Arlington St.
- 6.070 CFRX, Toronto, Ont. (1.). Relays CFRB. Add: Rogers-Majestic Corp.
- HJ3ABF, Bogota, Colombia. (.05) (6068; 6073). "La Voz de Bogota". Ann: Estacion HKF. s/o: "Song of the Islands."
- YV1RD, Maracaibo, Venez. (6075). "Radio difusora Maracaibo." Relays YVIRE.
- 6.075 XEBW, Guadalajara, Jal. (.045). Ramon Loreto.
- 6.080 DJM, Berlin, Germany. See DJC 6.020 megs.
- HPSF, Colon, Panama. (6074; 6078)
- OAX4Z, Lima, Peru. (15.) "Radio Nacional". Relays OAX4A. s/o: National Anthem. Add: Av. Petit Thouars.
- VE9CS, Vancouver, B. C. (.01). Relays CKFC. Add: 1001-1004 Stock Exchange Bldg.
- W9XAA, Chicago, Ill. (20.) "The Voice of Labor." Tr: York Township. Relays NBC-WCFL. s/o: English, French, German, Norwegian, Polish, Russian, Spanish. This transmitter uses aerial directed to Central Europe. Add: Chicago Federation of Labor, 666 Lake Shore Drive.
- ZHJ, Penang, Straits Settlements. (.049). "J for Jubilee".
- 6.085 HJ5ABD, Cali, Colombia. "La Voz del Valle." Aptdo 270.
- 6.090 CRCX, Toronto, Ont. (1.) Relays CRC-CRCT
- HJ4ABC, Ibague, Colombia. "Ecos de Combeima."
- XECU, Guadalajara, Jal.
- ZBW2, Hong Kong. (2.4). Add: Box 200.
- 6.095 JZH, Nazaki, Japan.
- 6.097 HJ4ABE, Medellin, Colombia. (1.) "La Voz de Antioquia." Relays HJ4ABK. Int: 3 chimes precede ann. Add: Emisora 4ABE.
- 6.100 W3XAL, New York, N. Y. (35.) Tr: Bound Brook, N. J. Relays NBC-WJZ. Ann: Eng., French, German, Italian and Spanish. s/o: "The Star Spangled Banner." Add: NBC, Rockefeller Plaza, NYC.
- W9XF, Chicago, Ill. (5.) Tr: Downers Grove. Relays NBC-WENR. s/o: Eng., French, German, Italian, Japanese, Russian, Spanish, Swedish. Add: NBC, Inc., Merchandise Mart.
- ..... Belgrade, Yugo-Slavia. (1.) "Radio Beograd".
- 6.108 HJ4ABB, Manizales, Colombia. "Radio Manizales."
- 6.110 GSL, London, Gt. Britain. "L for Liberty." See GSA 6.050 megs.
- 6.115 HJ1ABB, Barranquilla, Colombia. (.3) (6447). "La Voz de Barranquilla." Relays HJ1ABA. Int: 3 chimes. Add: Aptdo 715



## SHORTWAVE STATIONS BY FREQUENCIES

- OLR2C, Prague, Czechoslovakia. (35.). See 9.550 megs.
- 6.118 XEUZ, Mexico City, D. F. "Radio Nacionales." Relays XEFO
- 6.120 W2XE, New York, N. Y. (10.). Tr: Wayne, N. J. Relays CBS-WABC s/o: "The Star Spangled Banner." Add: CBS, 485 Madison Ave., NYC.
- XEFT, Veracruz, Ver. (.012). Jose Rodriguez Lopez.
- XEPW, Mexico City, D. F. "La Voz del Aguila Azteca desde Mexico." Relays XEJW.
- YDA5, Bandung, Java, N.E.I. (1.5). Add: NIROM (N. V. Nederlandsche Indische Radio Omroep Maatschappij), Tegallengah 0.23, Bandoeng.
- 6.122 HJ3ABX, Bogota, Colombia. "La Voz de Colombia." Same call on BCB.
- OAX4P, Huancayo, Peru. (.25). "Radio Andina Junin." J. Alberto Maduano, Cuzco 25.
- OAX6A, Arequipa, Peru. (.1). "Radio Arequipa." Add: Munoz Najar 141.
- 6.128 OAX7A, Cuzco, Peru. (.1). Add: Montero 43.
- 6.125 CXA4, Montevideo, Uruguay. (1.). Add: Martin Fierro 2603.
- 6.130 COCD, Havana, Cuba. (.35). "La Voz del Aire." Int: 4 chimes. Relays CMCD. s/o: "Good Night Waltz." Add: Calle 25 y "G", Vedado.
- VE9HX, Halifax, N. S. Add: Box 998. VP3BG. Georgetown, British Guiana.
- 6.138 HJ4ABD, Medellin, Colombia. "La Voz de Catia." Also works on 5.970 megs.
- 6.140 W8XK, Pittsburgh, Pa. (40.). Tr: Saxonburg. "The World's Pioneer Radio Station." Relays NBC-KDKA. Add: Grant Bldg.
- 6.145 HJ4ABU, Pereira, Colombia. "La Voz de Pereira."
- 6.150 CB615, Santiago de Chile. "Radiodifusora Pilot." s/o: "Rhapsody in Blue." Add: Cia Internacional de Radio, Casilla 16-D.
- CJRO, Winnipeg, Man. (2.). James Richardson & Sons, 157 Royal Alexandra Hotel.
- OAX1A, Chiclayo, Peru. (.2) (6170). "La Voz de Chiclayo." s/o: "Good Night Waltz." Add: Casilla 9.
- 6.153 H15N, Santiago, D. R. (.1). Sr. M. Smester.
- 6.156 YV5RD, Caracas, Venez. "Radiodifusora Venez." Relays YV5RE.
- 6.160 VPB, Colombo, Ceylon. (3). Add: Central Telegraph Office.
- 6.182 XEXA, Mexico City, D. F. (6174). Relays XEXM. S/o: "March of the Toys." Add: Secretaria de Educacion Publica.
- 6.190 H11A, Santiago de los Caballeros, D. R. (.05). "La Voz del Yaque."
- 6.200 COKC, Santiago de Cuba, (.05). "Ask for Bacardi." Relays CMKG. Add: Sres. Grau y Caminero, Apto 137.
- H18Q, Trujillo, D. R. (6198). "Emisora Carta Real, La Voz de los Muchachos."
- XEXS, Portable and Mobile in Mexico. (1.). Departamento de Salubridad Publica. Coro, Venez. (.15) (6205). "La Voz de Coro."
- 6.230 OAX4C, Lima, Peru. (.4) (6260). "Radio Grellaud." Relays OAX4B. Add: Sen Abancay 915-23.
- YV1RG, Valera, Venez. (6225). "Radio Valera."
- 6.235 HRD, La Ceiba, Honduras. (.25). "La Voz de Atlantida."
- 6.243 HIN, Trujillo, D. R. (.75). s/o: National anthem. Add: Apto 604.
- 6.250 YV5RJ, Caracas, Venezuela. "La Voz de la Esfera." Relays YV5RI.
- 6.260 OAX4G, Lima, Peru. Relays OAX4B. Add: R. Grellaud y Cia.
- 6.270 YV5RP, Caracas, Venez. (1.2). "La Voz de Philips." Relays YV5RQ. Add: Apto 508.
- 6.280 COHB, Sancti-Spiritus, Cuba. (.15) (6281). Relays CMHB. Add: Apto. 85.
- H1G, Trujillo, D. R. (.05). Int: a bawlin9 call. Add: A. Cordero P.
- 6.300 YV4RD, Maracay, Venezuela. "La Voz de Aragua." Relays YV4RG.
- 6.315 H1Z, Trujillo, D. R. (.1). Add: Calle Duarte No. 68.
- 6.340 H11X, Trujillo, D. R. (.5).
- 6.350 HRP1, San Pedro Sula, Honduras.
- 6.360 YV1RH, Maracaibo, Venezuela. "Ondas del Lago, Emisora Philco." Relays YV1RF.
- 6.380 YV5RF, Caracas, Venezuela. "Ecos del Caribe." Relays YV5RE.
- 6.385 W09, Mitchell Field, L. I., N. Y. Army airport.
- 6.400 YV5RH, Caracas, Venezuela. "Ondas Populares." Relays YV5NG. Add: Apto 1931.
- 6.410 TIPG, San Jose, Costa Rica. (1.). "La Voz de la Victor." Add: Apto 224.
- 6.420 H11S, Santiago de los Caballeros, D. R. (.02). "La Voz de la Hispaniola."
- 6.425 OAX4K, Lima, Peru (.2). "Radio Goincochea." Relays OAX4E. Add: Ocona 158.
- W2XGB, Hicksville, N. Y. (5.). Press Wireless, Inc.
- W3XL, New York, N. Y. (100.). Tr: Bound Brook, N. J. NBC control station and cue station for nearly all special broadcasts. Add: NBC, 30 Rockefeller Plaza, NYC.
- 6.440 KUP, San Francisco, Calif. Press at 2200 EST.
- 6.450 H14V, San Francisco de Macoris, D. R. (.025). "La Voz de la Marina".
- 6.479 H18A, Trujillo, D. R. "Fa Doc en el Aire."
- 6.490 Aeronautical point-to-point stations, Purple Chain: See 2.644 megs.
- 6.500 H1L, Trujillo, D. R. (.05).
- J2AA, Tokyo, Japan. Haneda Airdrome.
- YV1RM, Maracaibo, Venezuela. "Radiodifusora Maracaibo." Relays YV1RN.
- 6.510 Aeronautical point-to-point, Blue Chain: See 2.720 megs.
- 6.520 YV4RB, Valencia, Venez. "La Voz de Carabobo." Relays YV4RA. Add: Sres. Hermann y Williams Degwitz.
- Aeronautical point-to-point, Blue Chain: See 2.720 megs.
- 6.530 Aero. point-to-point, Blue Chain: See 2.720 megs.
- 6.534 EDR4, Palma, Majorca, Balearic Islands. (6565; 6583).
- 6.540 YN1GC, Managua, Nicaragua. "La Voz de los Lagos." Aero, point-to-point, Brown Chain: See 2.612 megs.
- 6.545 YV6RB, Bolivar, Venezuela. "La Voz de Ciudad." "Ecos del Orinoco." Relays YV6RA.
- 6.550 Aeronautical point-to-point, Brown Chain: See 2.612 megs.
- 6.555 H14D, Trujillo, D. R. (.025). "La Voz de Quisqueya."

## SHORTWAVE STATIONS BY FREQUENCIES

- 6.560 Aero. point-to-point, Brown Chain. See 2.612 megs.
- 6.570 Aircraft, Orange Chain. See 2.648 and 2.870 megs.
- 6.580 Aero. point-to-point, Orange Chain. See 2.648 megs.
- 6.590 Aeronautical Green Chain. See 2.608 and 2.854 megs.
- 6.600 Aero. point-to-point, Green Chain. See 2.608 megs.
- 6.615 Aeronautical: See 2.930 megs.
- 6.620 PRADO, Rio Bamba, Ecuador. (6618; 6625). "Estacion El Prado." Ann: Sometimes by a lady, Srta. Judy. Add: Apto 98.
- 6.630 HIT, Trujillo, D. R. (2). "La Voz de la RCA-Victor." Add: Apto 1105.
- 6.635 HC2RL, Guayaquil, Ecuador. (6650; 6667). "Quinta Piedad." Add: Apto 759.
- 6.662 WXH, Ketchikan, Alaska. Phones Seattle.
- 6.672 YVQ, Maracay, Venez.
- 6.690 TIEP, San Jose, Costa Rica. "La Voz de los Isthmo". Add: Apto 257.
- 6.720 CFU, Rossland, B. C. Consolidated Mining & Smelting Co. of Canada, Ltd.  
PMH, Bandoeng, Java, N.E.I. (1.5). See YDA5 6.120 megs.
- 6.730 HI3C, La Romana, D. R. "La Voz de la Feria."
- 6.750 JVT, Nazaki, Japan. (20.) Works U.S.A.
- 6.755 WOA, Lawrenceville, N. J. (\*) Works London nights.
- 6.762 TDA, Shinkio, Manchukuo. (20.). Works San Francisco. Add: Manchukuo Telegraph and Telephone Co., Ltd.
- 6.775 H1H, San Pedro de Macoris, D. R. (.15) "La Voz de Higuamo."
- 6.785 WFD, New Orleans, La. Press in winter.
- 6.800 H17P, Trujillo, D. R. (frequency drifts).
- 6.820 XGDX, Nanking, China. (.5).
- 6.860 KEL, Bolinas, Calif. (\*). Works Manila. ☒
- 6.905 GDS, Rugby, Gt. Britain. (15.) Works NYC nights. See GBW 14.440 megs.
- 6.950 GBY, Rugby, Gt. Britain. Works NYC irregs. See GBW 14.440 megs.
- 6.977 XBA, Tacubaya, D. F. Servicio Meteorologico Mexicano.
- 7.000 PZH, Paramaribo, Surinam.  
7.000 to 7.300 megs. Amateurs. United States and Canada use code only in this band. Most other countries use voice.
- 7.004 EA9AH, Tetuan, Spanish Morocco. Add: Apto 124.
- 7.100 FO8AA, Papeete, Tahiti (2). Radio Club Oceanien.  
TI2RS, San Jose, Costa Rica. "Radio Athenea."
- 7.200 YNAM, Managua, Nicaragua. (7180). "La Voz del Pacifico."
- 7.380 XECR, Mexico City, D. F. (20.). Ann: English and Spanish. Add: Departamento de Publicidad de la Secretaria de Relaciones Exteriores.
- 7.520 HCK, Quito, Ecuador.  
KKH, Kahuku, Hawaii. (\*). Phones Bolinas.
- 7.555 ..... Lawrenceville, N. J. (20.) (\*). Works London.
- 7.555 KWY, Dixon, Calif. (\*):  
..... Lawrenceville, N. J. (20.) (\*). Works London and Paris.
- 7.570 TDG, Shinkio, Manchukuo. Works Berlin. Manchukuo Telegraph & Telephone Co., Ltd.
- 7.610 KWX, Dixon, Calif. (40.) (\*).
- 7.620 IUB, Addis Ababa, Ethiopia.
- 7.700 Aeronautical point-to-point, daytime operation only, Brown Chain. See 2.612 megs.
- 7.715 KEE, Bolinas, Calif. (40.) (\*).
- 7.797 HBP, Geneva, Switzerland. (20.) "Radio Nations." Tr: Prangins. Add: M. G. Gallarati, Information Section, League of Nations.
- 7.850 HC2JSB, Guayaquil, Ecuador. "Ecuador Radio." Int: one gong. Add: Juan S. Behr.
- 7.901 LSL1, Buenos Aires, Arg. Works Rio de J. nights. Cia. Internacional de Radio, S. A., Defensa 143.
- 7.920 GDP, Rugby, Gt. Britain. Works Australia. See GBW 14.440 megs.
- 7.968 HSJ, Bangkok, Siam. Post & Telegraph Dept.
- 7.970 XGL, Shanghai, China. See XOJ 15.800 megs.
- 8.015 Aeronautical point-to-point, daytime operation only, Blue Chain: See 2.730 megs.
- 8.050 WXA, Juneau, Alaska. Works WVD at 2400 EST.
- 8.070 Aero. point-to-point, Yellow Chain. See 2.640 megs.
- 8.075 IRF, Rome, Italy.  
WEZ, Rocky Point, N. Y. (W2XBJ) (\*). Works Paris.
- 8.095 VLK, Sydney, Australia.
- 8.130 Aero. point-to-point, daytime operation only: Green Chain, see 2.608 megs. Purple Chain, see 2.644 megs.
- 8.220 Aircraft, Orange Chain. See 2.648 and 2.870 megs.  
Clipper Service, see 2.986 megs.
- 8.360 WHD, New York, N. Y. Press at 0100 EST.
- 8.370 KFS, Palo Alto, Calif. Press at 0100 EST.
- 8.430 WSC, Tuckerton, N. J. Press at 2315 EST.
- 8.500 YNLG, Managua, Nicaragua. (.5). "Nicaragua Patria de Dario."
- 8.543 I8G1, S. S. Conte Verde. See ICEJ 8.770.
- 8.560 WOO, Ocean Gate, N. J. (20.) (\*). Phones Ships. "Cast" frequency.
- 8.600 HPF4, Panama City, Panama. Works Hialeah nights.
- 8.620 WVD, Seattle, Wash. Works Alaska at 2400 EST. Alaskan Telephone Co., 517 Federal Office Bldg.
- 8.630 VOWQ, Northwest River, Labrador. Nfld. Skyways, Ltd.
- 8.665 CO9JQ, Camaguey, Cuba. (2.4). Add: Calle Gnrl. Gomez 4.
- 8.680 CBC, Rugby, Gt. Britain. Works Ships Days. See GBW 14.440 megs.
- 8.690 VWZ, Kirkee, Poona, India. (10.). Assigned 8691, 8693, 8700 and 8708 kcs. also. Phones London. Add: Indian Radio & Cable Communication Co., Poona 6.
- 8.710 KBB, Manila, Philippine Isl. (\*)

## SHORTWAVE STATIONS BY FREQUENCIES

- 8.720 VPD2 (VPD3?), Suva, Fiji. "Radio Suva." s/o: "God Save the King." Add: Amalgamated Wireless, Ltd.
- 8.730 GCI, Rugby, Gt. Britain. See GBW 14.440.
- 8.740 WXV, Fairbanks, Alaska.
- 8.770 ICEJ, S. S. Rex. Works IAC and WOO. Add: Italian Lines, 1 State St., NYC.
- 8.798 HKV, Bogota, Colombia. Add: Ministerio de Guerra.
- 8.810 FNSK, S. S. Normandic. Works Paris nights. Add: French Lines, Pier 88, North River, Foot of W. 48th St., NYC.
- IBLI, S. S. Conte di Savoia. Works IAC and WOO. See ICEJ 8.770 mags.
- 8.830 British Ships. Work GBC and WOO. Add: International Marine Radio, Connaught House, 63 Aldwych, London WC2.
- GBT, R. M. S. Queen Mary.  
GBZW, S. S. Berengaria.  
GDLJ, S. S. Homeric.  
GFVW, S. S. Majestic.  
GLRZ, S. S. Aquitania.  
French Ships. For address see FNSK 8.810 mags.  
FNSK, S. S. Normandic. Works WOO nights.  
FNSM, S. S. Paris.  
FNTQ, S. S. Ile de France.  
Furness-Bermuda Lines. Work ZFA-B and WOO. (\*)  
VQJM, S. S. Monarch of Bermuda.  
VQJP, S. S. Queen of Bermuda.  
German Ships. See 4.413 mags.  
DDBR, S. S. Berlin.  
DDCP, S. S. Cap Polonio.  
DDFF, S. S. Reliance.  
DDFT, S. S. Oceana.  
DHAO, S. S. Hansa.  
DHDL, S. S. Cap Arcona.  
DHEY, S. S. Deutschland.  
DHJZ, S. S. Hamburg.  
DHRL, S. S. New York.  
DOAH, S. S. Bremen.  
DOAI, S. S. Europa.
- 8.840 ZMBJ, M. V. Amatea. Phones Australia and New Zealand. Add: United S.S. Co., Auckland, N. Z.
- 8.948 HCJB, Quito, Ecuador. (.15) "La Voz de los Andes." Int: 4 strokes on gong. Add: Casilla 691.
- 9.010 KEJ, Bolinas, Calif. (\*)
- 9.020 GCS, Rugby, Gt. Britain. (.15). Phones NYC nights. See GBW 14.440 mags.
- 9.038 VVW, Kirkee, Poona, India. See VWZ 8.690.
- 9.040 TYA2, Pontoise, France. (10.). Works Algeria and ships. Add: Service de la T.S.F., 5 Rue Froildevaux, Paris XIV.
- 9.045 VVY, Kirkee, Poona, India. Add: See VWZ 8.690 mags.
- 9.050 NPO, Cavite, Philippine Isl. Time signals at 1255 GMT.
- 9.125 HAT4, Budapest, Hungary. (20.). "Justice for Hungary." Tr: Szekesfeharvar. Ann: English, French, Hungarian, usually by lady. s/o: National anthem. Add: Radiolabor, Kiserleti Allomas, Budapest IX, Gyali-ut 22.
- 9.168 YVR, Maracay, Venezuela.
- 9.180 ZSR, Kilipheuf, Union of S. Africa. Add: Box 962, Capetown.
- 9.250 NAA/NSS, Arlington, Va. Time signals at 0955 and 2155 EST.
- 9.280 GCB, Rugby, Gt. Britain. (.15.). Works Canada nights. See GBW 14.440.  
XGU, Shanghai, China. See XOJ 15.800.
- 9.285 XPC, Shanghai, China. See XOJ 15.800.
- 9.310 Aircraft, Orange Chain: See 2.648 mags.
- 9.332 CGA4, Drummondville, P. Q. Phones London. See CFXC. 6.005 mags.
- 9.335 OAX4J, Lima, Peru. (9328-9340). "Radio Internacional, La Voz de Lima." Relays OAX4I.
- 9.350 HS8PJ, Bangkok, Siam. Ann: "Happiness Siam Eight Progress Jubilee." Int: 3 chimes. Add: Post and Telegraph Dept.
- 9.355 WNK, Hialeah, Fla.
- 9.415 PLV, Bandoeng, Java, N.E.I. (80.). Government Radio-Dienst.
- 9.425 NAA/NSS, Arlington, Va. Time signals at 0055, 0155, 0255, 0355, 0755, 1155, 1355, 1555, 1755, 1855, 2355 EST.
- 9.428 COCH, Havana, Cuba. (.15). General Electric Co. of Cuba, No. 2 "B" St., Vedado.
- 9.435 HC20DA, Guayaquil, Ecuador. "La Voz del Aire."
- 9.448 WES, Rocky Point, N. Y. (\*)
- 9.450 TGWA, Guatemala City, Guat. (.2). "Radio Nacional". Relays TGW. Add: Ministerio de Fomento. "Radio Fort de France," Martinique. Add: Boulanger Fils.
- 9.460 ICK, Tripoli. (2).  
WKJ, New Brunswick, N. J. (\*)  
XGOX, Nanking, Kian-su, China. (.5)
- 9.470 WET, Rocky Point, N. Y. (\*) Works SA irreg.
- 9.475 EAH, Madrid, Spain. Ann: UGTI. (UGT for Union General de Tranajadores Network).
- 9.480 KES, Bolinas, Calif. (\*)  
XEDQ, Guadalajara, Jal. Int: 4 chimes in descending scale. Relays XED. Add: Apto 197.
- 9.490 OXY, Copenhagen, Denmark.  
XTV, Canton, China.
- 9.500 VK3ME, Melbourne, Australia (5.). Tr: Braybank. Add: Amalgamated Wireless (A/sia) Ltd., Box 1272L, Elizabeth St. P. O. ১২৭২  
HJ1ABE, Cartagena, Colombia. (.18). "La Voz de los Laboratorios Fuentes." Add: Apto 31.
- PRF5, Rio de Janeiro, Brazil. (60.). "A Voz do Brasil." Add: Cia. Internacional do Brasil, Box 709.
- 9.504 OLR3B, Prague, Czech. See 9.550.
- 9.505 XEFT, Veracruz, Ver. (.02). Add: Av. Independencia 28.
- 9.510 GSB, London, Gt. Britain. (20.). "B for Broadcasting." See GSA 6.850 mags.  
HJU, Buenaventura, Colombia. "La Voz del Pacifico". National Railroads of Colombia.
- 9.520 HJ4ABH, Armenia, Colombia. "La Voz de Armenia." Relays HJ4ABN.  
OAX4I, Lima, Peru. (.2) "Radio Internacional." Relays OAX4J. Add: Apto 1166.
- XEME, Merida, Yuc. (.015). (8190). "La Voz de Yucatan desde Merida." Relays XEFC. Add: 59 No. 517.
- 9.525 ZBW3, Hong Kong. Add: Box 200.
- 9.530 LKJ1, Jeloy, Norway. (1.).  
W2XAF, Schenectady, N. Y. (40.). Relays NBC-WGY. Programs commence with electrical discharge of 10,000,000 volts. Add: The General Electric Co.
- 9.535 JZI, Tokyo, Japan.
- 9.540 DJN, Berlin, Germany. See DJB, 15.200 mags.  
VPD2, Suva, Fiji. "Radio Suva." s/o: "God Save the King".
- 9.550 OLR3A, Prague, Czech. (35.). "Radio Podebrady." Tr: Podebrady. Int: trumpet tune from New World

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- Symphony. Add: Praha XII, Fochova Tr. 16.
- 9.560 DJA, Berlin, Germany. (8.). See DJB 15.200 mags.
- HJ1ABB, Barranquilla, Colombia. (.3) (Daytime only). "La Voz de Barranquilla." Relays HJ1ABA. Add: Apto 715.
- 9.562 OAX4T, Lima, Peru. (10.). "Radio Nacional". Relays OAX4A. Add: Av. Petit Thouars.
- 9.565 VUB, Bombay, India. (4.5). Add: All India Radio, Irwin House, Spratt Road, Ballard Estate.
- YV3RB, Venezuela. "La Voz de Lara."
- 9.570 W1XK, Boston, Mass. (10.) (\*) Tr: Millis. Relays NBC-WBZ-WBA.
- W8XK, Pittsburgh, Pa. (40.) (\*). This frequency loaned to W1XK.
- 9.575 HJ2ABC, Cucuta, Colombia. (.25). "La Voz de Cucuta."
- 9.580 GSC, London, Gt. Britain. \*(20.). "C for Corporation." See GSA 6.050 mags.
- 3LR, Melbourne, Australia. Tr: Lyndhurst.
- 9.585 VK2ME, Sydney, Australia. (20.). "The Voice of Aust." Tr: Pennant Hills. Int: Laughing notes of kookaburra. Add: Amalgamated Wireless, (A/sia) Ltd., 47 York St.
- 9.590 PCJ, Huizen, Netherlands. "The Happy Station." Ann: Dutch, English, French, German, Malay, Portuguese, Spanish. s/o: National anthem. Add: N. V. Philips Radio, Hilversum.
- VK6ME, Perth, W. A., Australia. (.5). Amalgamated Wireless, (A/sia), Ltd.
- W3XAU, Philadelphia, Pa. (10.). Tr: Newton Square. Relays CBS-WCAU. Add: 1622 Chestnut St.
- W8XAL, Cincinnati, Ohio (under const.)
- 9.595 HBL, Geneva, Switzerland. (18.). "Radio Nations." Tr: Prangins. Add: M. G. Gallarati, Information Section, League of Nations.
- RAN, Moscow, USSR.
- 9.600 CB960, Santiago de Chile. "Radiodifusora Pilot." s/o: "Rhapsody in Blue." Add: Cia. Internacional de Radio, Casilla 16-D.
- 9.605 HP5J, Panama City, Panama. (1.). "La Voz de Panama." Add: Apto 867.
- 9.618 HJ1ABP, Cartagena, Colombia. (.75). "Radio Cartagena." Add: Apto 37.
- 9.635 I2RO, Rome, Italy. (25.) Ann: "Radio Roma-Napoli," usually by a lady. Add: EIAR, Via Montello 5, Rome.
- 9.645 HH3W, Port-au-Prince, Hatl. (.03). Add: Box A-117.
- 9.650 YDB, Sourabaya, Java, N.E.I. (1.) (9660).
- 9.660 LRX, Buenos Aires, Argentina. (5.). "Radio El Mundo." Relays LR1. Add: Calle Maipu 555.
- 9.665 CT1AA, Lisbon, Portugal. (2.). (9650; 9693; 9770). "Radio Coloniale." Int: 3 cuckoos. Add: Senhor Abilio Nunes dos Santos Jr., Av. Antonio Augusto d'Aguilar 144.
- 9.670 TI4NRH, Heredia, Costa Rica. (9695). Amando Cespedes Marin, Apto 40.
- 9.675 DZA, Berlin, Germany. See DJB 15.200 mags.
- 9.750 COCQ, Havana, Cuba. "de la RCA-Victor." Relays CMQ. s/o: "Siboney." Add: Calle 25 No. 445, Vedado.
- WOF, Lawrenceville, N. J. (\*). Phones Paris.
- 9.840 J2AA, Tokyo, Japan. Haneda Airdrome.
- 9.860 EAQ, Madrid, Spain. (20.) (varies to 10060). "La Voz de Espana." Tr: Aranjuez Ann: English and Spanish. Broad-
- casts IBC programs from London s/o: National anthem "Himno del Reigo." IBC programs s/o "Good Night Waltz." Add: Transradio Espanola, Apto 951.
- 9.870 WON, Lawrenceville, N. J. (20.) (\*).
- 9.890 LSN2, Buenos Aires, Argentina. Works NYC nights. See LSL1, 7.901 mags.
- 9.940 CSW, Lisbon, Portugal. (5.). "Emisora Nacional." "CSW, Confidence, Surety, Wisdom." Add: Rua do Quelhas.
- San Juan, Puerto Rico. (.4). Works Hiialeah, Radio Corp. of Puerto Rico.
- 9.950 GCU, Rugby, Gt. Britain. (15.). Works NYC nights. See GBW 14.440 mags.
- 9.990 KAZ, Manila, Philippine Isl. (40.) (\*).
- 10.000 WWV, Beltsville, Md. (1.). Standard frequency transmissions Wednesdays 1315-1415 EST.
- 10.042 DZB, Berlin, Germany. See DJB 15.200 mags.
- 10.055 SUV, Cairo, Egypt. (10.). Tr: Abu Zabal.
- ZFB, Hamilton, Bermuda. (1.5.) (\*) Tr: St. George. Works NYC days.
- 10.065 CQN, Macau, Portuguese China.
- TDE, Shinkio, Manchukuo. Works Tokyo. Manchukuo Telegraph and Telephone Co., Ltd.
- 10.080 RIR, Tiflis, USSR.
- 10.105 TDB, Shinkio, Manchukuo. (20.). Works San Francisco. See TDE 10.065 mags.
- 10.125 Aeronautical point-to-point, Blue Chain. Daytime operation only. See 2.720 mags.
- 10.135 OP A. Leopoldville, Belgian Congo. Works ORK.
- 10.190 Aeronautical point-to-point, daytime only. Brown Chain. See 2.612 mags.
- 10.220 PSH, Rio de Janeiro, Brazil. (12.). Works LSX. Cia Radiotelegrafica Brasileira. Caixa Postal 500.
- 10.230 CED, Antofagasta, Chile. Cia. de Telefonos de Chile.
- 10.250 LSK3, Buenos Aires, Argentina (5.). Tr: Hurlingham. See LSL1, 7.901.
- 10.260 PMN, Bandoeng, Java, N.E.I. (1.5). Works VLJ. Gouvernements Radio-Dienst.
- 10.290 DZC, Berlin, Germany. See DJB 15.200 mags.
- 10.300 LSL2, Buenos Aires, Arg. Works London and Rio nights. See LSL1, 7.901.
- 10.310 PPM, Rio de Janeiro, Brazil.
- 10.330 ORK, Brussels, Belgium. (11.). Works Leopoldville and broadcasts. Tr: Ruysselede.
- 10.335 ZFD, Hamilton, Bermuda. (1.5) (\*). Tr: St. George.
- 10.350 LSX, Buenos Aires, Argentina. (20.). Tr: Monte Grande. Add: Cia. Radiotelegrafica Arg. S. A., San Martin 329.
- 10.378 EAJ43, Tenerife, Canary Isl. Add: Apto 225.
- 10.400 KEZ, Bolinas, Calif. (\*).
- 10.420 XGW, Shanghai, China. See XOJ 15.800.
- 10.430 TYE3, Pontoise, France. Works NYC.
- 10.460 WFD, New Orleans, La. Press in summer time.
- 10.535 JIB, Taihoku, Taiwan. (6.). Tr: Chureki. Works Tokyo. Add: Kokusai Denwa Kaisha, Chureki Station, Chureki Gai, Shinchiku, Taiwan.
- 10.578 FYB, Pontoise, France. Time signals 1955 to 2000 GMT.
- 10.610 WEA, Rocky Point, N. Y. (40.) (\*).
- 10.660 JVN, Tokyo, Japan. Tr: Nazaki.
- 10.670 CEC, Santiago de Chile. (4.). Tr: La Granja. Add: Cia. Internacional de Radio Casilla 16-D.
- 10.740 JVM, Tokyo, Japan. (20.). Tr: Nazaki.
- 10.770 GCP, Rugby, Gt. Britain. (15.). Works Sydney. See GBW 14.440 mags.

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- 10.840 **KWV**, Dixon, Calif. (20.) (\*). Works Asia.
- 10.955 **H5SPJ**, Bangkok, Siam. (5.). Tr: Sala Daeng. Add: Radio Service, Post & Telegraph Dept.
- 10.990 **ZLT**, Wellington, New Zealand. Works Australia. Add: Post & Telegraph Dept.
- 11.000 **PLP**, Bandoeng, Java, N.E.I. (1.5). Gouvernements Radio-Dienst.
- ZLT4**, Wellington, New Zealand. See **ZLT** 10.990 mags.
- 11.018 **GBTT**, S. S. Queen Mary. See 8.830 mags.
- 11.040 **CSW**, Lisbon, Port. (5.). Works also on 9.940 and 11.840 mags.
- 11.280 **HIN**, Trujillo, D. R. (.75). s/o: National anthem. Add: Apto 604.
- 11.435 **COCX**, Havana, Cuba. "La Casa Lavin." (frequency varies widely). Relays **CMX**. Relays the 9 o'clock curfew cannon shot. Add: Box 32.
- 11.500 **PMK**, Bandoeng, Java, N.E.I.
- 11.540 **XGR**, Shanghai, China. Works England. See **XOJ** 15.800.
- 11.595 **VRRR4**, Stoney Hill, Jamaica. Works Hialeah.
- 11.660 **JVL**, Tokyo, Japan. Tr: Nazaki.
- 11.670 **PPQ**, Rio de Janeiro, Brazil. Tr: Santa Cruz. Works Europe, SA, Rocky Point irreg. Add: Cia. Radiotelegraphica Brasileira, Caixa Postal 500.
- 11.680 **KIO**, Kahuku, Hawaii. (\*)
- 11.705 **SM55X**, Stockholm, Sweden. (5.). Royal Technical University.
- 11.718 **CR7BA**, Lourenco Marques, P. East Africa. (2.). Caixa Postal 594.
- 11.720 **CJRX**, Winnipeg, Man. (2.). Add: James Richardson & Sons, 157 Royal Alexandra Hotel.
- TPA4**, Paris, France. Tr: Pontoise. "Radio Coloniale." Add: Ministère des Postes, Telegraphes et Telephones, 98 bis, Blvd. Haussmann.
- 11.730 **PHI**, Hilversum, Netherlands. (23.6) (Winter frequency). **PHOHI**. See: **PCJ** 9.590 mags.
- 11.740 **HP5L**, David, Chiriqui, Panama. (.35). "Las Ondas del Baru." Add: Apto 129.
- 11.750 **GSD**, London, Gt. Britain. (20.). "D for Daventry." Tr: Daventry. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster chimes. s/o: God Save the King. Add: British Broadcasting Corp., London W1.
- 11.760 **OLR4B**, Prague, Czecho. See 15.230 mags.
- 11.770 **DJD**, Berlin, Germany. (8.) See **DJB** 15.200 mags.
- 11.780 **OER2**, Vienna, Austria. (1.5) (11778). "Radio Wien."
- 11.790 **W1XAL**, Boston, Mass. (10.). "Dedicated to Enlightenment." Add: Educational Director, University Club.
- 11.795 **DJO**, Berlin, Germany. See **DJB** 15.200 mags.
- 11.800 **JZJ**, Tokyo, Japan. Tr: Nazaki.
- OAX5A**, Ica, Peru. (1.). "Radio Universal." Add: Tacna 112.
- 11.810 **I2R04**, Rome, Italy. (25.). "Radio Roma-Napoli." Add: usually by a lady. Int: chirping of a bird. s/o: two national anthems, "Giovinezza" and "Marcia Reale." Add: Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.
- 11.820 **GSN**, London, Gt. Britain. See **GSD**, 11.750 mags.
- XEBR**, Hermosillo, Sonora. Relays **XEBH**. Add: Apto 68.
- 11.830 **W2XE**, New York, N. Y. (10.). Tr: Wayne, N. J. Relays **CBS-WABC**. s/o: "Star Spangled Banner." Add: Columbia Broadcasting System, 485 Madison Ave., NYC.
- W9XAA**, Chicago, Ill. (20.). This transmitter uses aerial directed to the Antipodes. For details see 6.080 mags.
- 11.840 **CSW**, Lisbon, Port. (5.). Works also on 9.940 and 11.040.
- 11.855 **OLR4A**, Prague, Czecho. (35.). See 15.230.
- 11.860 **DJP**, Berlin, Germany. See **DJB**, 15.200 mags.
- GSE**, London, Gt. Britain. (20.). "E for Empire." See **GSD** 11.750 mags.
- 11.870 **YDB**, Sourabaya, Java, N.E.I. (1.).
- W8XX**, Pittsburgh, Pa. See **W8XK** 15.210 mags.
- 11.875 **OLR4C**, Prague, Czecho. See 15.230.
- 11.880 **TPA3**, Paris, France. See **TPA4** 11.715 mags.
- 11.880 **XEXA**, Mexico City, D. F. (1.). Add: Secretaria de Educacion Publica.
- 11.895 **HP5I**, Aguadulce, Panama. "La Voz del Interior." Int: 3 notes on gong. s/o: "El Tambor de la Alegria."
- 11.900 **OLR4D**, Prague, Czecho. See 15.230.
- XEWI**, Mexico City, D. F. (.25) "My Voice to the World from Mexico." Add: Apto 2874.
- 11.950 **KKQ**, Bolinas, Calif. (\*) Relays programs to Hawaii.
- 11.955 **IUC**, Addis Ababa, Ethiopia.
- 11.970 **H12X**, Trujillo, D. R. (.5). J. R. Saladin.
- 12.000 **RNE**, Moscow, USSR. (20.). Programs in English, Czech, Dutch, French, German, Hungarian, Russian, Spanish and Swedish. Int: Kremlin chimes on the hour. s/o: "Internationale." Add: Mme. Inna Marr, Solianka 12.
- 12.150 **GBS**, Rugby, Gt. Britain. (15.). Works NYC afternoons. See **GBW** 14.440 mags.
- 12.235 **TFJ**, Reykjavik, Iceland. (7.5). Icelandic State Brdcastg. Service, Box 547.
- 12.290 **GBU**, Rugby, Gt. Britain. Works NYC nights. See **GBW** 14.440 mags.
- 12.295 **CB615**, Santiago, Chile. "Radio Service."
- 12.330 **Aircraft** and aéro., Orange Chain. See 2.870 mags. Clipper Service, see 2.986 mags.
- 12.630 **NAA/NSS**, Arlington, Va. Time signals at 0955 EST.
- 12.830 **CNR**, Rabat, Morocco. (12.). Direction de l'Office des Postes, des Telegraphes et des Telephones.
- 12.840 **WOO**, Ocean Gate, N. J. (26.) (\*). Works ships. "Boy" frequency.
- 12.985 **NPG**, San Francisco, Calif. Time signals at 1655 GMT.
- 13.040 **German ships**. See 4.413 mags.
- DBBR**, S. S. Berlin.
- DDCP**, S. S. Cap Polonia.
- DDFF**, S. S. Reliance.
- DFFT**, S. S. Oceana.
- BHAO**, S. S. Hansa.
- DHDL**, S. S. Cap Arcona.
- DHEY**, S. S. Deutschland.
- DHJZ**, S. S. Hamburg.
- DHRL**, S. S. New York.
- DOAH**, S. S. Bremen.
- 13.050 **Italian ships**: see 4.289 mags.
- IBEJ**, S. S. Conte Rosso.
- IBGI**, S. S. Conte Verde.
- IBLI**, S. S. Conte di Savoia.
- ICEJ**, S. S. Rex.
- 13.075 **VPD**, Suva, Fiji. s/o: "God Save the King." Add: Amalgamated Wireless, (A/sia) Ltd., Suva.
- 13.190 **FNSK**, S. S. Normandie. Works Paris afternoons. See **FNSK** 13.210 mags.
- 13.210 **DOAI**, S. S. Europa. (.07). See 4.413 mags.



## SHORTWAVE STATIONS BY FREQUENCIES

	FNSK, S. S. Normandie. Works WOO afternoons. Add: French Lines, Pier 88, North River, Foot of W. 48th St., NYC.	14.940	HIR, Trujillo, D. R. Works WNC daily. HJA3, Barranquilla, Colombia. Works WNC.
13.320	British Ships, see 8.830 megs. GBZW, S. S. Berengaria. GDLJ, S. S. Homeric. GFVV, S. S. Majestic. GLRZ, S. S. Aquitania.	14.960	ROU, . . . . . USSR. YSL, San Salvador, El Salvador. Add: Telegrafos, Telefonos y Radio Nacionales.
13.337	YVQ, Maracay, Venezuela. Works WNC days.	14.970	LZA, Sofia, Bulgaria. "Radio Sofia."
13.380	IDU, Asmara, Eritrea. Works Rome.	14.980	KAY, Manila, Philippine Isl. (*) Works Germany, England mornings; KWU nights.
13.410	WCT, San Juan, Puerto Rico. (4). Works WNC. Add: Radio Corp. of Puerto Rico.	15.000	WWV, Beltsville, Md. Standard frequency transmissions.
13.530	TDH, Shinkio, Manchukuo. Works Berlin.	15.040	RKI, Moscow, USSR.
13.585	GBB, Rugby, Gt. Britain. Works Canada and Egypt. See GBW 14.440 megs.	15.055	WNC, Miami, Fla. (4) (*). Tr: Hialeah. Works CA, SA and West Indies daily.
13.635	SPW, Warsaw, Poland. Tr: Babice.	15.080	RKI, Moscow, USSR. RV96, Moscow, USSR.
13.690	KKZ, Bolinas, Calif. (*). Works Asia.	15.110	DJL, Berlin, Germany. See DJB 15.200 megs.
13.745	CGA2, Drummondville, P. Q. Works Ships.	15.116	OLRSC, Prague, Czecho. See 15.230.
13.760	TYE2, Pontoise, France. (20). Works NYC. Add: 79 Blvd. Haussmann, Paris.	15.120	HVJ, Vatican City. (10.). Int: ticking of clock. Ann: "Laudatur Jesus Christus." Add: Pontificia Accademia Della Scienze, Roma-Castina Pio IV.
13.780	KKW, Bolinas, Calif. (*).	15.140	GSF, London, Gt. Britain. (15.). "F for Fortune." See GSD 11.750 megs.
13.820	SUZ, Cairo, Egypt. Tr: Abu Zabal. Phones Germany, England.	15.150	YDC, Bandoeng, Java, N.E.I. (3.).
13.880	VJZ, Raboul, New Guinea.	15.160	JZK, Tokyo, Japan.
13.900	WQP, Rocky Point, N. Y. (*). Works Europe.	15.175	RV96, Moscow, USSR.
13.980	TDC, Shinkio, Manchukuo. Works San Francisco.	15.180	GSO, London, Gt. Britain. See GSD 11.750 megs.
13.990	GBA2, Rugby, Gt. Britain. Works SA. See GBW 14.440 megs.	15.190	ZBW4, Hong Kong. (2.4). Add: Box 200.
14.000 to		15.200	DJB, Berlin, Germany. (8.). Tr: Zeesen. Int: Music box tune. s/o: Two national anthems. Add: Reichs-Rundfunk-Gesellschaft, Haus des Rundfunk, Masurenallee, Berlin-Charlottenburg 9.
14.400	Amateurs. Amateur 'phones are heard between 14.150 and 14.250 megs. Foreign amateurs usually work on the upper and lower edges of the band.	15.210	W8XK, Pittsburgh, Pa. (40.) (*). Tr: Saxonburg. Relays NBC-KDKA.
14.440	GBW, Rugby, Gt. Britain. (15.). Works WMA, WMF. Uses Inverted Speech and sometimes a "wobbled carrier" as well. Add: G. P. O., Armour House, St. Martin's le Grande, London EC1.	15.220	PCJ, Huizen, Netherlands. See PCJ 9.590 megs.
14.460	DZH, Berlin, Germany. See DJB, 15.200 megs.	15.230	OLR5A, Prague, Czechoslovakia. (35.) "Radio Podebrady." Tr: Podebrady. Int: trumpet tune from New World Symphony. Add: Praha XII, Fochova Tr. 16.
14.470	WMF, Lawrenceville, N. J. (*). Works Rugby.	15.245	TPA2, Paris, France. See TPA4 11.715 megs.
14.480	YNA, Managua, Nicaragua. Works WNC daily.	15.250	WIXAL, Boston, Mass. (10.). "Dedicated to Enlightenment." Add: University Club.
14.485	YSJ, San Salvador, El Salvador. Works WNC daily. Add: Telegrafos, Telefonos y Radio Nacionales.	15.260	GSI, London, Gt. Britain. "I for Island." See GSD 11.750 megs.
	HRL5, La Lima, Honduras. Works WNC daily.	15.270	HIX3, Trujillo, D. R. (5). Relays HIX.
	HRM, Tegucigalpa, Honduras. Works WNC daily.	15.270	W2XE, New York, N. Y. See 11.830 megs.
14.500	LSM2, Buenos Aires, Arg. Works Madrid, Paris, Berlin, morning and evening. Add: Defensa 143.	15.280	DJQ, Berlin, Germany. See DJB 15.200 megs.
14.530	LSN1, Buenos Aires, Arg. Works NYC morning and evening. Add: Defensa 143.		LRU, Buenos Aires, Argentina. "Radio El Mundo." Relays LRI. Add: Calle Maipu 555.
14.545	HPF, Panama City, Panama. Works WNC daily.	15.310	GSP, London, Gt. Britain. "P for Progress." See GSD 11.750 megs.
	TGF, Guatemala City, Guat. Works WNC daily.	15.320	OLR5B, Prague, Czecho. See 15.230.
	TIU, Cartago, Costa Rica. Works WNC daily. Add: Cia. Radiografica Int. de C. R.	15.330	W2XAD, Schenectady, N. Y. (25.). Relays NBC-WGY. See W2XAF 9.530 megs.
14.590	WMN, Lawrenceville, N. J. (20.) (*). Works Rugby.	15.340	DJR, Berlin, Germany. See DJE 17.760 megs.
14.635	GBL, Rugby, Gt. Britain. Works Japan. See GBW 14.440 megs.	15.355	KWU, Dixon, Calif. (15.). Works Hawaii, Philippines, Japan. Add: Trans-pacific Communication Co., 140 New Montgomery St., San Francisco.
14.640	JVH, Tokyo, Japan. (20.) Tr: Nazaki.	15.360	DZG, Berlin, Germany. See DJE, 17.760 megs.
14.800	WQV, Rocky Point, N. Y. (*).		
14.845	OCJ2, Lima, Peru. Phones SA.		
14.910	JVG, Tokyo, Japan.		
14.915	LZA, Sofia, Bulgaria. s/o: national anthem.		
14.930	HJB, Bogota, Colombia. Works WNC and SA daily.		

## SHORTWAVE STATIONS BY FREQUENCIES

- 15.370 **HAS3**, Budapest, Hungary (20.). See **HAT4** 9.125 meg. s.
- 15.415 **KWO**, Dixon, Calif. (20.). Works N.E.I. and Japan nights. See **KWU** 15.355 meg. s.
- 15.440 **XEBM**, Mazatlan, Sin. (.05). Relays **XELB**. Int: 4 chimes. Add: Aptdo 50.
- 15.800 **XOJ**, Shanghai, China. Chinese Gov't. Radio Administration, Sassoon House, Jinkee Road.
- 15.810 **LSL3**, Buenos Aires, Arg. Works London and Rio, morn. and evening. Add: Defensa 143.
- 15.905 **TDI**, Shinkio, Manchukuo. Works Berlin.
- 16.140 **GBX**, Rugby, Gt. Britain. Works SA. Uses inverted speech. Add: G.P.O., Armour House, St. Martins le Grand, London, EC1.
- 16.440 Aircraft and aeronautical, Orange Chain: See 2.870 meg. s. Clipper Service, see 2.986 meg. s.
- 16.460 **DHEY**, S. S. Deutschland. Works DAF, WOO. Add: North German Lloyd, Pier 4, Foot of 58th St., Brooklyn.
- 16.600 **DOAI**, S. S. Europa. See **DHEY** 16.460 meg. s.
- 16.765 **DHTY**, S. S. Resolute.
- 16.820 **NAA**, Arlington, Va. Time signals at 0955 EST.
- 17.080 **GBC**, Rugby, Gt. Britain. (5.). Works ships. See **GBX** 16.140 meg. s.
- 17.120 **WOO**, Ocean Gate, N. J. (20.) (\*). Works ships. "Able" frequency.
- 17.225 **ICEJ**, S. S. Rex.
- 17.310 **W3XL**, New York, N. Y. (20.). See **W3XAL** 6.100 meg. s.
- 17.480 **VWY2**, Kirkee, Poona, India. Works GAU mornings. Indian Radio and Cable Communications Co., Ltd., Poona 5.
- 17.755 **ZBW5**, Hong Kong. (2.4) Add: Box 200.
- 17.760 **DJE**, Berlin, Germany. Tr: Zeesen. Int: music box tune. s/o: two national anthems. Add: Reichs-Rundfunk-Gesellschaft, Haus des Rundfunks, Masurenallee, Berlin-Charlottenburg 9.
- 17.775 **W2XE**, New York, N. Y. (10.) See 11.830 meg. s.
- 17.775 **PHI**, Hilversum, Netherlands. (23.6). Summer frequency. See **PCJ** 9.590 meg. s.
- 17.780 **W3XAL**, New York, N. Y. (35.) See 6.100 meg. s.
- W8XK**, Pittsburgh, Pa. (40.). (Not used at present).
- W9XAA**, Chicago, Ill. (5.) (Not used at present).
- W9XF**, Chicago, Ill. (10.) (Not used at present).
- 17.785 **JZL**, Tokyo, Japan.
- 17.790 **GSG**, London, Gt. Britain. (15.). "G for Greeting." Tr: Daventry. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster Chimes. s/o: "God Save the King." Add: British Brcdstg. Corp., London W1.
- 18.090 **TYE**, Pontoise, France. Works NYC. See **TYE2**, 13.760.
- 18.270 **IUD**, Addis Ababa, Ethiopia.
- 18.310 **GAS**, Rugby, Gt. Britain. Works NYC mornings. See **GBX** 16.140 meg. s.
- 18.350 **WLA**, Lawrenceville, N. J. (\*). Works London mornings
- 18.620 **GAU**, Rugby, Gt. Britain. (15.). Works India, NYC and Capetown. See **GBX** 16.140 meg. s.
- 18.830 **PLE**, Bandoeng, Java, N.E.I. (40.). Works Dixon nights and Tokyo mornings. Governments Radio-Dienst.
- 19.140 **LSM3**, Buenos Aires, Arg. Works Madrid, Berlin, Paris, days. Add: Defensa 143.
- 19.480 **GAD**, Rugby, Gt. Britain. Works Kenya Colony. See **GBX** 16.140 meg. s.
- 19.630 **VQG**, Nairobi, Kenya Colony. Works London. Cable & Wireless, Ltd. Box 777
- 20.380 **GAA**, Rugby, Gt. Britain. (15.) See **GBX** 16.140 meg. s.
- 21.020 **LSN6**, Buenos Aires, Arg. Works NYC days. Defensa 143.
- 21.160 **LSL4**, Buenos Aires, Arg. Works London and Rio, days. Add: Defensa 143.
- 21.450 **OLR6A**, Prague, Czecho. See 15.230.
- 21.460 **W1XAL**, Boston, Mass. (10.) (Not used at present).
- 21.470 **GSH**, London, Gt. Britain. "H for Home." See **GSG** 17.790 meg. s.
- 21.480 **W2XAD**, Schenectady, N. Y. (Not used at present).
- 21.520 **JZM**, Tokyo, Japan.
- W2XE**, New York, N. Y. See 11.830 meg. s.
- 21.530 **G5J**, London, Gt. Britain. "J for Justice." See **GSG** 17.790 meg. s.
- 21.540 **W8XK**, Pittsburgh, Pa. (?). Tr: Saxenburg. Relays NBC-KDKA. Westinghouse Electric & Mfg. Co.
- 21.550 **GST**, London, Gt. Britain. See **GSG** 17.790 meg. s.
- 25.950 **W4XH**, Spartanburg, S. C. (.05) (WSPA)
- W6XKG**, Los Angeles, Calif. (.1) (KGFJ)
- 26.100 **GSK**, London, Gt. Britain. "K for King." See **GSG** 17.790 meg. s.
- ..... Charleston, W. Va. (.05) (WCHS)
- 26.400 **W9XAZ**, Milwaukee, Wis. (.5) (WTMJ)
- 28.000 to
- 30.000 Amateurs. Amateur 'phones are used between 28 and 29 meg. s.
- 30.100 Police Emergency Stations, experimental.
- 30.604 **IAG**, Golfo Aranci, Sardinia. (5.)
- 31.600 **W1XEQ**, Fairhaven, Mass. (.1) (WNBH).
- W1XER**, Boston, Mass. (.5) (WNAC).
- W1XKA**, Boston, Mass. (.05) (WBZ).
- W1XKB**, E. Springfield, Mass. (.5) (WBZA)
- W2XDG**, New York, N. Y. (5.) (WEAF-WJZ)
- W2XDV**, New York, N. Y. (WABC)
- W2XHG**, Bound Brook, N. J. (15) (WjZ)
- W3XES**, Baltimore, Md. (.3) (WCAO)
- W3XEX**, Norfolk, Va. (.05) (WTAR)
- W3XEY**, Baltimore, Md. (.1) (WFBR)
- W3XKA**, Philadelphia, Pa. (.05) (KYW)
- W4XBW**, Chattanooga, Tenn. (.1) (WDOD)
- W4XCA**, Memphis, Tenn. (.25) (WMC)
- W5XAU**, Oklahoma City, Okla. (.1) (WKY)
- W6XAS**, San Francisco, Calif. (.01) (KJBS)
- W8XAI**, Rochester, N. Y. (.1) (WHAM)
- W8XH**, Buffalo, N. Y. (.1) (WBN)
- W8XKA**, Pittsburgh, Pa. (.15) (KDKA)
- W8XWJ**, Detroit, Mich. (.1) (WWJ)
- W9XBS**, Chicago, Ill. (2.5) (WENR).
- W9XER**, Kansas City, Mo. (.05) (KMBC).
- W9XHW**, Minneapolis, Minn. (.05) (WCCO).
- W9XJL**, Superior, Wis. (.08) (WEBC).
- W9XOK**, St. Louis, Mo. (.1).
- W9XPD**, St. Louis, Mo. (.1) (KSD).
- 33.100 Police Emergency Stations.
- 35.600 High Frequency Broadcasting Stations. Same as 31.600 meg. s.
- 37.100 Police Emergency Stations.
- 38.600 High Frequency Brcdstg. Stations. Same as 31.600.
- 40.100 Police Emergency Stations.
- 41.000 High Frequency Brcdstg. Stations. Same as 31.600.
- 56.000 to
- 60.000 Amateurs. Amateur 'phones are heard in the entire band.
- 110.000 meg. s. to infinity. Amateurs.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

## KEY TO SYMBOLS

Frequency is given in kilocycles; wave lengths in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

### Second Column Symbols

- a Verifies reception for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verification 10c; letter 25c.
- h Sends own station stamp for 10c.
- i Sends own station stamp for 5c.
- j Sends own station stamp for postage.
- k Has no stamps.
- m Verifies for 5c.

- n Weather or time only.
- z No information available.

### Fourth Column Symbols

- B National "Blue" network.
- C Columbia network.
- D Day time only.
- Dn Day time with occasional evening hours.
- F Canadian Brdcast. Corp.
- M Mutual Brdcastg. Sys.
- N National "Red" and "Blue" networks.
- P Has construction permit only.

### As shown in the Index by Frequencies and Dial Numbers

- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- X Has permit to increase power.
- Y Has permit to change location.
- Z Has permit to change frequency.
- a-b-c. Small letters show stations using same transmitter.
- 1-2-3. Figures denote stations sharing time.
- ..... No information.

540 kcys. (555.2)

CJRM ak 1000 F ..... Regina, Sask.

Heard | Logged | Reported | Verified

550 kcys. (545.1)

CFNB mk 500 F (1) ..... Fredericton, N. B.  
 KFBO ak 500 2 (1) ..... St. Louis, Mo.  
 KFVR ak 1000 N (5) ..... Bismarck, N. D.  
 KOAO ak 1000 ..... Corvallis, Ore.  
 KSD ak 1000 2R (5) ..... St. Louis, Mo.  
 KTSA ak 1000 C(5) ..... San Antonio, Tex.  
 WDEV ak 500 D ..... Waterbury, Vt.  
 WGR ak 1000 C ..... Buffalo, N. Y.  
 WKRC ak 1000 O (5) ..... Cincinnati, Ohio  
 WSWA ak 500 D ..... Harrisonburg, Va.  
 KEFO ak 100 ..... Merida, Yuc.

560 kcys. (535.4)

KFDM ak 500 (1) ..... Beaumont, Tex.  
 KLZ ak 1000 C (5) ..... Denver, Colo.  
 KSFO ak 1000 C ..... San Francisco, Cal.  
 KWTO ak 5000 D ..... Springfield, Mo.  
 WFIL ak 1000 BM ..... Philadelphia, Pa.  
 WIND ak 1000 (5) ..... Gary, Ind.  
 WIS ak 1000 N (5) ..... Columbia, S. C.  
 WOAM ak 1000 C ..... Miami, Fla.

570 kcys. (526.0)

CMCX z 150 ..... Havana, Cuba  
 KGKO ak 250 O (1) Y ..... Wichita Falls, Tex.  
 KMTR ak 1000 ..... Hollywood, Calif.  
 KVI ak 1000 O (5) ..... Tacoma, Wash.  
 WKBN ak 500 1C ..... Youngstown, Ohio  
 WMCA ak 1000 ..... New York, N. Y.  
 WNAX ak 1000 C (5) ..... Yankton, S. D.  
 WOSU ak 750 1 (1) ..... Columbus, Ohio  
 WSYR ak 1000 B ..... Syracuse, N. Y.  
 WWNO ak 1000 N ..... Asheville, N. C.

580 kcys. (516.9)

CFPR ak 50 ..... Prince Rupert, B. C.  
 CHRO ak 100 F ..... Quebec, Que.  
 CKCL ag 100 F ..... Toronto, Ont.  
 CKUA ak 500 ..... Edmonton, Alta.  
 KMJ ak 500 N (1) ..... Fresno, Calif.  
 KSAC ak 500 2 (1) ..... Manhattan, Kans.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
WCHS	ak	500	C (1)	Charleston, W. Va.			
WBBO	ak	1000	C	Orlando, Fla.			
WIBW	ak	1000	C2 (5)	Topeka, Kans.			
WTAG	ak	1000	R	Worcester, Mass.			

590 kcys. (508.2)

KHQ	ak	1000	R (2.5)	Spokane, Wash.			
WEEI	ak	1000	C (5)	Boston, Mass.			
WKZO	ak	1000	D	Kalamazoo, Mich.			
WOW	ak	5000	R	Omaha, Nebr.			

600 kcys. (499.7)

CFCF	ak	400	FN	Montreal, Que.			
CJOR	ak	500		Vancouver, B. C.			
CMW	ak	1400		Havana, Cuba			
CRCW	ak	500	F (1)	Windsor, Ont.			
KFSD	ak	1000	B	San Diego, Calif.			
WCAO	ak	500	C (1)	Baltimore, Md.			
WICC	ak	500	BM (1)	Bridgeport, Conn.			
WMT	ak	1000	BM (5)	Cedar Rapids, Ia.			
WREC	c	1000	C (5)	Memphis, Tenn.			

610 kcys. (491.5)

KFRC	ck	1000	M (5)	San Francisco, Cal.			
WDAF	ak	1000	R (5)	Kansas City, Mo.			
WIP	ak	1000		Philadelphia, Pa.			
WJAY	ak	500	D	Cleveland, Ohio			
XEXM	ak	500		Mexico City, D. F.			

620 kcys. (483.6)

KGW	ak	1000	R (5)	Portland, Ore.			
KTAR	ak	1000	N	Phoenix, Ariz.			
WFLA	ak	1000	Na (5)	Clearwater, Fla.			
WHLB	ak	250	DC	Greensburg, Pa.			
WLBZ	ak	500	CM (1)	Bangor, Maine			
WSUN	ak	1000	Na (5)	St. Petersburg, Fla.			
WTMJ	ak	1000	N (5)	Milwaukee, Wis.			

630 kcys. (475.9)

CFCO	ak	100	F	Chatham, Ont.			
CFCY	ak	1000	F	Charlottetown, P.E.I.			
CJRO	ak	500	F (1)	Winnipeg, Man.			
CKOV	ak	100	F	Kelowna, B. C.			
KFRU	ak	500	1 (1)	Columbia, Mo.			
KGFX	ak	200	D	Pierre, S. D.			
WGPF	ak	500	1 N (1)	Evansville, Ind.			
WMAL	ak	250	B (.5)	Washington, D. C.			
WPRO	ak	500	C (1)	Providence, R. I.			
XEZ	z	500		Merida, Yuc.			

640 kcys. (468.5)

CMCB	ak	150		Havana, Cuba			
KFI	ak	5000	R	Los Angeles, Calif.			
WGAN	z	500	DP	Portland, Me.			
WHKC	ak	500		Columbus, Ohio			
WOI	ak	5000	D	Ames, Iowa			
XEBX	z	250		Sabinas, Coah.			

650 kcys. (461.3)

WSM	ak	50000	NM	Nashville Tenn.			
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660 kcys. (454.3)

WAAW	ak	500	D	Omaha, Neb.			
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NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

Call	Class	Freq	City	State	Heard	Logged	Reported	Verified
WEAF	ak	50000	R	New York, N. Y.				
XEAL	z	1000		Mexico City, D. F.				
XEAO	ak	250		Mexicall, B. Cfa.				

670 kcys. (447.5)

WMAQ ak 50000 N Chicago, Ill.

680 kcys. (440.9)

CMCG ak 1000 Havana, Cuba  
 KFEQ ak 2500 D St. Joseph, Mo.  
 KFO ak 50000 R San Francisco, Cal.  
 VAS akn 2000 685 Glace Bay, N. S.  
 VOWR ck 500 681 St. John's, Nfld.  
 WPTF ak 1000 N (5) Raleigh, N. C.

690 kcys. (434.5)

CFRB ak 10000 C Toronto, Ont.  
 CJCF ak 100 F Calgary, Alta.  
 XET ak 5000 Monterrey, N. L.

700 kcys. (428.3)

WLW ak 50000 NM Cincinnati, Ohio

710 kcys. (422.3)

KIRO ak 1000 Seattle, Wash.  
 KMPC ak 500 Beverly Hills, Cal.  
 WOR ak 50000 M Newark, N. J.

720 kcys. (416.4)

WGN ak 50000 M Chicago, Ill.  
 XEH ak 250 Monterrey, N. L.

730 kcys. (410.7)

CFPL ak 100 F London, Ont.  
 CJCA ak 1000 F Edmonton, Alta.  
 CKAC ak 5000 O Montreal, Que.  
 CKPR ak 100 F Fort William, Ont.  
 CMK ak 3000 Havana, Cuba  
 XEBC ak 5000 Agua Callente, L. C.  
 XEPN ak 100000 Piedras Negras, Ch.

740 kcys. (405.2)

KMMJ ak 1000 D Clay Center, Neb.  
 KTRB ak 250 D Modesto, Calif.  
 WHEB ak 250 D Portsmouth, N. H.  
 WSB ak 50000 N Atlanta, Ga.

750 kcys. (399.8)

CMCW dk 150 Havana, Cuba  
 KGU aj 2500 N Honolulu, T. H.  
 WJR ak 50000 C Detroit, Mich.  
 XEAM ak 25 Matamoros, Tams.

760 kcys. (394.5)

CMHX ak 200 Cienfuegos, Cuba  
 KKA ak 250 (5) Seattle, Wash.  
 WBAL ak 2500 BMSy Baltimore, Md.  
 WEW ak 1000 D St. Louis, Mo.



NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
WJZ	ak 50000	BSy	New York, N. Y.				
XEOK	ak 2500		Tijuana, B. Cfa.				
770 kcys. (389.4)							
CMBS	ak 150		Havana, Cuba				
KFAB	ak 10000	CSy	Lincoln, Neb.				
WBMM	ae 50000	CSy	Chicago, Ill.				
780 kcys. (384.4)							
CHWK	dk 100	F	Chilliwack, B. C.				
CKSO	ak 1000	F	Sudbury, Ont.				
CMJK	ak 250		Carnaguey, Cuba				
KEHE	ak 1000	(5)	Los Angeles, Calif.				
KFDY	ak 1000	D	Brookings, S. D.				
KFQD	ck 250		Anchorage, Alaska				
KGHL	ak 1000	N (5)	Billings, Mont.				
WEAN	ak 1000	MB	Providence, R. I.				
WMC	ak 1000	N (5)	Memphis, Tenn.				
WTAR	ak 500	NX (1)	Norfolk, Va.				
XEL	z 1000		Mexico City, D. F.				
790 kcys. (379.5)							
CMGH	ak 500		Matanzas, Cuba				
KGO	ak 7500	B	San Francisco, Cal.				
KOAM	z 1000	DP	Pittsburg, Kans.				
WGY	ak 50000	R	Schenectady, N. Y.				
800 kcys. (374.8)							
HIX	ak 800		Trujillo, D. R.				
WBAP	ak 50000	Na	Fort Worth, Tex.				
WFAA	ak 50000	Na	Dallas, Tex.				
WTBO	ak 250	D	Cumberland, Md.				
810 kcys. (370.2)							
CMCF	ak 600		Havana, Cuba				
WCCO	ak 50000	C	Minneapolis, Minn.				
WNYC	ak 1000	D	New York, N. Y.				
XEXC	z 350		Aguaascalientes, Ags.				
820 kcys. (365.6)							
CMHW	ak 100		Cienfuegos, Cuba				
WHAS	ak 50000	O	Louisville, Ky.				
XEBG	z 1000		Tijuana, B. Cfa.				
830 kcys. (361.2)							
CMJX	ak 500		Carnaguey, Cuba				
KOA	ak 50000	N	Denver, Colo.				
WEEU	ak 1000	D	Reading, Pa.				
WHDH	ak 1000	Dn	Boston, Mass.				
WRUF	ak 5000	Dn	Gainesville, Fla.				
840 kcys. (356.9)							
CFQC	ak 100	F	Saskatoon, Sask.				
CRCT	ak 5000	FN	Toronto, Ont.				
VOGY	ak 400		St. John's, Nfld.				
XERA	ck 350000		Villa Acuna, Coah.				
850 kcys. (352.7)							
KIEV	ak 250	D	Glendale, Calif.				
TIEP	z 500		San Jose, C. R.				
WESG	ak 1000	CD	Elmira, N. Y.				

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

Call Letters	Frequency	Class	City	State	Country	Heard	Logged
Reported	Verified						
<b>WKAR</b>	ak 1000	D	East Lansing, Mich.				
<b>WWL</b>	ak 10000	C	New Orleans, La.				
<b>860 kcys. (348.6)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>WABC</b>	ak 50000	C	New York, N. Y.				
<b>WHB</b>	ak 1000	DM	Kansas City, Mo.				
<b>XEMO</b>	ak 5000		Tijuana, L. C.				
<b>XFNO</b>	z 50		Mexico City				
<b>870 kcys. (344.6)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>WENR</b>	ak 50000	Na	Chicago, Ill.				
<b>WLS</b>	ak 50000	Na	Chicago, Ill.				
<b>XEFB</b>	ak 290		Monterrey N. L.				
<b>880 kcys. (340.7)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>CFJO</b>	ak 100	F	Kamloops, B. C.				
<b>OMQ</b>	ak 500		Havana, Cuba				
<b>CRCO</b>	ak 1000	F	Ottawa, Ont.				
<b>KFKA</b>	ak 500	2 (1) M	Greeley, Colo.				
<b>KLX</b>	ak 1000		Oakland, Calif.				
<b>KPOF</b>	ak 500	2	Denver, Colo.				
<b>WCOO</b>	ak 500	(1) C	Meridian, Miss.				
<b>WGBI</b>	ak 500	1	Scranton, Pa.				
<b>WPHR</b>	ak 500	DY	Petersburg, Va.				
<b>WQAN</b>	ak 250	1	Scranton, Pa.				
<b>WSUI</b>	ak 500	(1)	Iowa City, Iowa				
<b>890 kcys. (336.9)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>KARK</b>	ak 500	(1) N	Little Rock, Ark.				
<b>KPNF</b>	ak 500	2 (1)	Shenandoah, Iowa				
<b>KFPY</b>	ak 1000	C (5)	Spokane, Wash.				
<b>KUSD</b>	ak 500	2	Vermillion, S. D.				
<b>WBAA</b>	ak 500	(1)	W. Lafayette, Ind.				
<b>WGST</b>	ak 1000	C (5)	Atlanta, Ga.				
<b>WILL</b>	ak 250	(1) XZ	Urbana, Ill.				
<b>WJAR</b>	ak 1000	R	Providence, R. I.				
<b>WFMN</b>	ak 500	C (1)	Fairmont, W. Va.				
<b>XEW</b>	ak 50000		Mexico City, D. F.				
<b>900 kcys. (333.1)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>KGRU</b>	ak 500	X	Ketchikan, Alaska				
<b>KHJ</b>	ak 1000	M (5)	Los Angeles, Calif.				
<b>KSEI</b>	ak 250	(5)	Pocatello, Idaho				
<b>WBEN</b>	ak 1000	R (5)	Buffalo, N. Y.				
<b>WELI</b>	ak 500	D	New Haven, Conn.				
<b>WFMD</b>	ak 500	D	Frederick, Md.				
<b>WJAX</b>	ak 1000	N (5)	Jacksonville, Fla.				
<b>WKY</b>	ak 1000	N (5)	Oklahoma City, Okla.				
<b>WLBL</b>	ak 2500	DX	Stevens Point, Wis.				
<b>WTAD</b>	ak 1000	D	Quincy, Ill.				
<b>910 kcys. (329.6)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>CJAT</b>	ak 1000	F	Trail, B. C.				
<b>CKY</b>	ak 15000	F	Winnipeg, Man.				
<b>CRCM</b>	ak 5000	F	Montreal, Que.				
<b>XFNT</b>	ak 150000		Nuevo Laredo, Tams.				
<b>920 kcys. (325.9)</b> <input style="width: 50px; height: 20px;" type="text"/>							
<b>OMX</b>	ak 1000		Havana, Cuba				
<b>HEHK</b>	ak 1000		Port-au-Prince, Haiti				
<b>KFEL</b>	ak 500	aM	Denver, Colo.				
<b>KOMO</b>	ak 1000	R (5)	Seattle, Wash.				
<b>KPRC</b>	ak 1000	N (5)	Houston, Texas				
<b>KVOD</b>	ak 500	aB	Denver, Colo.				
<b>WAAF</b>	ak 1000	D	Chicago, Ill.				
<b>WORL</b>	ak 500	D	Boston, Mass.				

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

Call	Class	Freq	Power	City	State	Heard	Logged	Reported	Verified
WPEN	ak	250	(.5) 1	Philadelphia, Pa.					
WRAX	ak	250	1 (.5)	Philadelphia, Pa.					
WSPA	ak	1000	D	Spartanburg, S. C.					
WWJ	ak	1000	B (5)	Detroit, Mich.					
XEAA	ak	200		Mexicali, L. C.					

## 930 kcys. (322.4)

CFAC	ak	100	F	Calgary, Alta.					
CFCH	ak	100	F	North Bay, Ont.					
CFLO	ak	100	F	Prescott, Ont.					
CHNS	ak	1000	F	Halifax, N. S.					
CKPC	ak	100	F	Brantford, Ont.					
KMA	ak	1000	(5)	Shenandoah, Iowa					
KROW	ak	1000		Oakland, Calif.					
WBRC	ak	1000	C	Birmingham, Ala.					
WDBJ	ak	1000	C (5)	Roanoke, Va.					
XEBJ	ak	500		Hermosillo, Sonora					

## 940 kcys. (319.0)

KOIN	ak	1000	C (5)	Portland, Ore.					
VOAS	ak	100		St. John's, Nfld.					
WAAT	ak	500	D	Jersey City, N. J.					
WAVE	ak	1000	N	Louisville, Ky.					
WCSH	ak	1000	R (2.5)	Portland, Maine					
WDAY	ak	1000	N (5)	Fargo, N. D.					
WHA	ak	5000	D	Madison, Wis.					
WICA	z	250	DP	Ashtabula, Ohio					
XEFO	ak	5000	(XFO)	Mexico City, D. F.					
XEYO	z	500		Mexico City, D. F.					

## 950 kcys. (315.6)

CJOC	ak	100	F	Lethbridge, Alta.					
CMCD	ak	250		Havana, Cuba					
CBCS	ak	100	F	Chicoutimi, Que.					
KFWB	ak	1000	(5)	Hollywood, Calif.					
KHSL	ak	250	Dz	Chico, Calif.					
KMBC	ak	1000	C (5)	Kansas City, Mo.					
WJOY	z	500	DP	Saginaw, Mich.					
WRC	ak	500	it (1)	Washington, D. C.					

## 960 kcys. (312.3)

CFRN	ak	100	F	Edmonton, Alta.					
CHNC	ak	1000	F	New Carlisle, Que.					
XEAW	ck	50000		Reynosa, Tams.					

## 970 kcys. (309.1)

OMBY	z	150		Havana, Cuba					
KJR	ak	5000	B	Seattle, Wash.					
WCFL	ak	5000	B	Chicago, Ill.					
WIBG	ak	100	D	Glenside, Pa.					

## 980 kcys. (306.0)

KDKA	c	50000	B	Pittsburgh, Pa.					
XEAC	ak	250		Tijuana, B. Cfa.					
XEFE	z	25		Nuevo Laredo, Tams.					

## 990 kcys. (302.8)

WRZ	c	50000	BSy	Boston, Mass.					
WRZA	c	1000	BSy	Springfield, Mass.					
XEAF	ak	750		Nogales, Sonora					
XEK	ak	100		Mexico City, D. F.					
XE8	dk	250		Tampico, Tams.					

## 1000 kcys. (299.8)

OMBS	ak	500	(1)	Havana, Cuba					
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## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

			Heard	Logged	Reported	Verified
KFVD	ak 250	DnX	Los Angeles, Calif.			
VOOM	z 200	(1008)	St. John's, Nfld.			
WHO	ak 50000	R	Des Moines, Iowa			
XEBI	ak 25		Aguascalientes, Ags.			
XEBK	ak 100		Nuevo Laredo, Tams.			
XEX8	z 100		Portable in Mexico			

### 1010 kcys. (296.9)

CHML	ak 100	F	Hamilton, Ont.
CKOK	ak 100	1	Vancouver, B. C.
CKCK	ak 500	F	Regina, Sask.
CKCO	ak 100	F	Ottawa, Ont.
CKIC	ak 50		Wolfville, N. S.
CKWX	ak 100	F 1	Vancouver, B. C.
CMJA	ak 300		Camaguey, Cuba
KGGF	ak 1000	2	Coffeyville, Kans.
KQW	ak 1000		San Jose, Calif.
WHN	ak 1000	(5)	New York, N. Y.
WNAD	ak 1000	2	Norman, Okla.
WNOX	ak 1000	C (2)	Knoxville, Tenn.
XEU	ak 250		Veracruz, Ver.

### 1020 kcys. (293.9)

KYW	ak 10000	R	Philadelphia, Pa.
WDZ	ak 250	D	Tuscola, Ill.
XEJ	ak 1000		Juarez, Chih.

### 1030 kcys. (291.1)

CFGN	ak 10000		Calgary, Alta.
CKLW	ak 5000	M	Windsor, Ont.
CMCY	ak 5000		Havana, Cuba
XEB	ak 10000		Mexico City, D. F.

### 1040 kcys. (288.3)

KRLD	ak 10000	C	Dallas, Texas
KWJJ	ak 500		Portland, Ore.
KYOS	z 250	D	Merced, Calif.
WTIO	ah 50000	R	Hartford, Conn.

### 1050 kcys. (285.5)

CMKD	ak 250		Santiago, Cuba
CRCK	ak 1000	F	Quebec, Que.
KFBI	ak 5000	Dn	Abitene, Kans.
KNX	ak 50000	C	Los Angeles, Calif.
WEAU	z 1000	DP	Eau Claire, Wis.
WGVA	z 1000	DP	Indianapolis, Ind.

### 1060 kcys. (282.8)

KTHS	ak 10000	N	Hot Springs, Ark.
VOAC	z 40	1065	St. John's, Nfld.
WBAL	ak 10000	BM	Baltimore, Md.
WJAG	ak 1000	D	Norfolk, Neb.
W3XJ	z 100	P	College Park, Md.
XEAD	ak 125		Guadalajara, Jal.
XEMG	z 100		Atcapotzaco, D. F.
	z 100	P	College Park, Md.

### 1070 kcys. (280.2)

CMEX	ak 500		Havana, Cuba
OMHA	z 50		Sagua Grande, C.
KJBS	ak 500		San Francisco, Cal.
WCAZ	ak 100	D	Carthage, Ill.
WTAM	ak 50000	R	Cleveland, Ohio

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

		1080 kcys. (277.6)	Heard	Logged	Reported	Verified
WBT	ak 50000	C..... Charlotte, N. C.				
WCBD	ak 5000	1Dn..... Chicago, Ill.				
WBMI	ak 5000	1Dn..... Chicago, Ill.				
XEBI	z 20	..... Guzman, Jal.				
		1090 kcys. (275.1)				
KMOX	ak 50000	C..... St. Louis, Mo.				
XEAQ	ak 1000	..... Rosarito, L. C.				
		1100 kcys. (272.6)				
CMCJ	ak 500	..... Havana, Cuba				
CRCV	ak 5000	F..... Vancouver, B. C.				
KGDM	ak 1000	DM..... Stockton, Calif.				
KWKH	ak 10000	C..... Shreveport, La.				
WLWL	ak 5000	1..... New York, N. Y.				
WPG	ak 5000	1C..... Atlantic City, N. J.				
		1110 kcys. (270.1)				
KSOO	ak 2500	Dn N..... Sioux Falls, S. D.				
WRVA	ak 5000	CM..... Richmond, Va.				
XELO	ak 50000	..... Piedras Negras, Coah.				
		1120 kcys. (267.7)				
CHLP	ak 100	F..... Montreal, Que.				
CHSJ	ak 500	F (1)..... St. John, N. B.				
CKOC	ak 500	F (1)..... Hamilton, Ont.				
CKX	ak 100	F..... Brandon, Man.				
CMGF	dk 150	..... Matanzas, Cuba				
CMKM	ak 200	..... Manzanillo, Cuba				
KEFO	ak 100	D..... Spokane, Wash.				
KFSG	ak 500	a (2.5)..... Los Angeles, Calif.				
KRKD	ak 500	a (2.5)..... Los Angeles, Calif.				
KRSC	ak 250	..... Seattle, Wash.				
WCOP	ak 500	D..... Boston, Mass.				
WDEL	ak 250	R (.5)..... Wilmington, Del.				
WISN	ak 250	(1) C..... Milwaukee, Wis.				
WTAW	ak 500	..... College Station, Tex.				
		1130 kcys. (265.3)				
CMJI	ak 150	..... Ciego de Avila, Cuba				
KSL	ak 50000	C..... Salt Lake City, Utah				
WJJD	ak 20000	Dn..... Chicago, Ill.				
WQV	ak 1000	D..... New York, N. Y.				
XEJP	z 100	..... Mexico City, D. F.				
		1140 kcys. (263.0)				
CMBG	z 200	..... Havana, Cuba				
KVOO	ak 25000	1N..... Tulsa, Okla.				
WAPI	ak 5000	1N..... Birmingham, Ala.				
WSPR	ak 500	DM..... Springfield, Mass.				
		1150 kcys. (260.7)				
CMJF	z 200	..... Camaguey, Cuba				
WHAM	ak 50000	B..... Rochester, N. Y.				
XEC	ak 100	..... Tijuana, B. Cfa.				
XEDW	z 20	..... Minattlan, Ver.				
		1160 kcys. (258.5)				
CMHJ	ak 175	..... Cienfuegos, Cuba				
CMKG	z	..... Santiago, Cuba				
WOWO	c 10000	1B..... Fort Wayne, Ind.				
WWVA	ak 5000	1C..... Wheeling, W. Va.				
XEAS	ak 50	..... Saltillo, Coah.				



# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
XEBJ	z	20	Merida, Yuc.				
XEBZ	ad	100	Mexico City, D. F.				
XED	ak	2500	Guadalajara, Jal.				
XEP	ak	500	Juarez, Chih.				
1170 kcys. (256.3) <input type="text"/>							
CMBD	ak	500	Havana, Cuba				
WCAU	ak	50000	Philadelphia, Pa.				
1180 kcys. (254.1) <input type="text"/>							
CMJO	ak	50	Ciego de Avila, Cuba				
KEX	ak	5000	2B Portland, Ore.				
KOB	ak	10000	2 N Albuquerque, N. M.				
WDGY	ak	1000	Dn (5) Minneapolis, Minn.				
WINS	ak	1000	New York, N. Y.				
WMAZ	ak	1000	C Macon, Ga.				
XEFA	z	500	Tacuba, D. F.				
1190 kcys. (252.0) <input type="text"/>							
CMKX	z		Santiago, Cuba				
KTRC	z	250	DP Visalia, Calif.				
VONF	ak	500	1195 St. John's, Nfld.				
WATR	ak	100	D Waterbury, Conn.				
WOAI	ak	50000	N San Antonio, Tex.				
WSAZ	ak	1000	Huntington, W. Va.				
1200 kcys. (249.9) <input type="text"/>							
CHAB	ak	100	F Moose Jaw, Sask.				
CKNX	ak	50	Wingham, Ont.				
CKTB	ak	100	F St. Catharines, Ont.				
CMCO	ad	250	Havana, Cuba				
KADA	ak	100	DM Ada, Okla.				
KATE	z	100	DP Albert Lea, Minn.				
KBTM	ak	100	D Jonesboro, Ark.				
KDNC	z	100	P(.25) Lewiston, Mont.				
KELO	z	100	P Stouxs Falls, S. Dak.				
KEJB	ak	100	(.25) Marshalltown, Iowa				
KFXD	ak	100	(.25) Nampa, Idaho				
KFXJ	ak	100	(.25) Grand Junc., Colo.				
KGDF	ak	100	(.25) Fergus Falls, Minn.				
KGEK	ak	100	Sterling, Colo.				
KGFJ	ak	100	Los Angeles, Calif.				
KGHI	ak	100	(.25) Little Rock, Ark.				
KMLB	ak	100	(.25) Monroe, La.				
KOOS	ak	250	D Marshfield, Ore.				
KSUN	c	100	(.25) Lowell, Ariz.				
KVCV	z	100	Redding, Calif.				
KVEC	z	250	DP San Luis Obispo, Cal.				
KVOS	dk	100	Bellingham, Wash.				
KWG	ak	100	N Stockton, Calif.				
KWNO	z	100	DP Winona, Minn.				
WABI	ak	100	(.25) Bangor, Maine				
WAIM	ak	100	XZ Anderson, S. C.				
WAYX	ak	100	Waycross, Ga.				
WBBZ	ak	100	M Ponca City, Okla.				
WBHP	z	100	P Huntsville, Ala.				
WBNO	ak	100	1 New Orleans, La.				
WCAT	ak	100	D Rapid City, S. D.				
WCAX	ak	100	Burlington, Vt.				
WCLO	ak	100	(.25) Janesville, Wis.				
WCPO	ak	100	(.25) Cincinnati, Ohio				
WDSM	z	100	P Superior, Wis.				
WEST	ak	100	3 (.25) Easton, Pa.				
WFAM	ak	100	8 South Bend, Ind.				
WFTC	ak	100	(.25) Kinston, N. C.				
WHBC	ak	100	(.25) Canton, Ohio				
WHBY	ak	100	(.25) Green Bay, Wis.				
WIBX	ak	100	(.3) C Utica, N. Y.				
WIL	ak	100	(.25) St. Louis, Mo.				
WJBC	ak	100	6(.25) Bloomington, Ill.				
WJBL	ak	100	6 Decatur, Ill.				

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
WJEW	ak	100	1	New Orleans, La.			
WJNO	ak	100	C	W. Palm Beach, Fla.			
WJED	c	100	D	Tuscaloosa, Ala.			
WKBO	ak	100	3 (.25)	Harrisburg, Pa.			
WLVA	ak	100	(.25)	Lynchburg, Va.			
WMFR	ak	100	D	High Point, N. C.			
WMFC	ak	100	(.25)	Lapeer, Mich.			
WNRI	ak	100	(.25)	Newport, R. I.			
WOLS	z	100	DF	Florence, S. C.			
WBBL	ak	100		Columbus, Ga.			
WTHT	ak	100	DM	Hartford, Conn.			
WWAE	ak	100	8	Hammond, Ind.			

1210 kcys. (247.8)

CJCS	ak	50		Stratford, Ont.			
CJCU	z	50		Aklavik, N. W. T.			
CKBI	ak	100	F	Prince Albert, Sask.			
CKHC	ak	100	F	Hull, Que.			
CKMC	ak	50		Cobalt, Ont.			
CMHI	ak	100		Santa Clara, Cuba			
KANS	ak	100	N	Wichita, Kans.			
KASA	ck	100	M	Elk City, Okla.			
KDLR	ak	100		Devils Lake, N. D.			
KDON	z	100	M	Monterrey, Calif.			
KFJI	ak	100		Klamath Falls, Ore.			
KFOR	ak	100	CM(.25)	Lincoln, Neb.			
KFPW	ak	100		Fort Smith, Ark.			
KFVS	ak	100	6(.25)	Cape Girardeau, Mo.			
KFXM	ak	100	M9	San Bernardino, Calif.			
KGLO	z	100		Mason City, Iowa			
KGY	ak	100		Olympia, Wash.			
KIUL	ak	100		Garden City, Kans.			
KLAH	ak	100		Carlsbad, N. Mex.			
KOCA	z	100		Kilgore, Texas			
KPFA	z	100	DP	Helena, Mont.			
KPFC	ak	100	9	Pasadena, Calif.			
KROY	z	100	D	Sacramento, Calif.			
KVSO	ak	100	M	Ardmore, Okla.			
KWTN	ak	100		Watertown, S. D.			
TGW	ak	10000		Guatemala City			
WALR	ak	100		Zanesville, Ohio			
WBAX	ak	100		Wilkes Barre, Pa.			
WBBL	ak	100	S	Richmond, Va.			
WBLY	ak	100	D	Lima, Ohio			
WBRB	ak	100	3	Red Bank, N. J.			
WOOL	ak	100	N	Columbus, Ohio			
WORW	ak	100	4	Chicago, Ill.			
WEBQ	ak	100	6(.25)	Harrisburg, Ill.			
WEDC	ak	100	4	Chicago, Ill.			
WFAS	ak	100	3	White Plains, N. Y.			
WFOY	z	100		St. Augustine, Fla.			
WGBB	ak	100	3	Freeport, N. Y.			
WGOM	ak	100	(.25)	Gulfport, Miss.			
WGNY	ak	100	3	Newburgh, N. Y.			
WHBF	ak	100	(.25)	Rock Island, Ill.			
WHBU	ak	100	(.25)	Anderson, Ind.			
WIBU	ak	100	(.25)	Poynette, Wis.			
WJBY	ak	100		Gadsden, Ala.			
WJEJ	ak	100	D	Hagerstown, Md.			
WJEM	s	100	(.25)	Lansing, Mich.			
WJTN	ak	50	X	Jamestown, N. Y.			
WJW	ak	100	(.25)	Akron, Ohio			
WKOK	ak	100		Sunbury, Pa.			
WLMU	z	100	F	Middlesboro, Ky.			
WMBG	ak	100	CXZ	Richmond, Va.			
WMFG	ak	100	(.25)	Hibbing, Minn.			
WMFN	ak	100		Grenada, Miss.			
WOMT	ak	100		Manitowoc, Wis.			
WPAX	ak	100	D	Thomasville, Ga.			
WSAY	z	100	D	Rochester, N. Y.			
WSBC	ak	100	4(.25)	Chicago, Ill.			
WSIX	ak	100		Nashville, Tenn.			
WSNJ	z	100	DP	Bridgeton, N. J.			
WSOC	ak	100	N(.25)	Charlotte, N. C.			
WTAX	ak	100		Springfield, Ill.			
XPAT	ak	250		Parral, Chih.			

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

Call Letters	Class	Power	Frequency	City	Heard	Logged	Reported	Verified
XEE	ak	50		Durango, Dgo.				
XEFV	ak	100		Juarez, Chih.				
XETH	ak	100		Puebla, Pue.				
	#	100	P	Helena, Mont.				

## 1220 kcys. (245.8)

CMJE	z	50		Camaguey, Cuba				
KFKU	ak	1000	a (5)	Lawrence, Kans.				
KTMS	z	500	P	Santa Barbara, Calif.				
KTW	ak	1000	S2	Seattle, Wash.				
KWSC	ak	1000	2 (5)	Pullman, Wash.				
WCAD	ak	500	D	Canton, N. Y.				
WCAE	ak	1000	MR (5)	Pittsburgh, Pa.				
WDAE	ak	1000	C (5)	Tampa, Fla.				
WREN	ak	1000	Ba (5)	Lawrence, Kans.				
XEBL	z	50		Mazatlan, Sin.				
XEDA	z	200		Gra. Anaya, D. F.				
XETF	ak	30		Veracruz, Ver.				

## 1230 kcys. (243.8)

KGBX	ak	500		Springfield, Mo.				
KGGM	ak	1000		Albuquerque, N. M.				
KYA	ak	1000		San Francisco, Calif.				
WFBM	ak	1000	C(5)	Indianapolis, Ind.				
WNAC	ak	1000	R(5)	Boston, Mass.				
XEFJ	ak	100		Monterrey, N. L.				

## 1240 kcys. (241.8)

CJCB	ak	1000	F	Sydney, N. S.				
CMHB	z	50		Sancti Spiritus, Cuba				
KGCU	ak	250	1	Mandan, N. D.				
KLPM	ak	250	1	Minot, N. D.				
KTAT	ak	1000	M	Fort Worth, Texas				
KTFI	ak	1000		Twin Falls, Idaho				
WKAQ	ak	1000		San Juan, P. R.				
WXYZ	ak	1000	B	Detroit, Mich.				
XEKL	z	500		Leon, Guan.				
XELA	z	50		Saltillo, Coah.				

## 1250 kcys. (239.9)

CMKC	ak	150		Santiago, Cuba				
KFOX	ak	1000		Long Beach, Calif.				
WAIR	ak	250	D	Winston-Salem, N. C.				
WCAL	ah	1000	2 (2.5)	Northfield, Minn.				
WDSU	ak	1000		New Orleans, La.				
WDEI	ak	1000	1 (2.5)	Newark, N. J.				
WLB	ak	1000	2	Minneapolis, Minn.				
WNEW	ak	1000	1 (2.5)	New York, N. Y.				
WTON	ak	1000	2B (5)	Minneapolis, Minn.				
XEXH	z	250		San Luis Potosi, S.L.P.				

## 1260 kcys. (238.0)

KGVO	ak	1000	C	Missoula, Mont.				
KOIL	ak	1000	MB (2.5)	Omaha, Nebr.				
KPAC	ak	500	D	Fort Arthur, Texas				
KRGV	ak	500	X	Weslaco, Texas				
KUOA	ak	2500	D	Siloam Spgs., Ark.				
KVOA	ak	1000		Tucson, Ariz.				
WHIO	ak	1000	C (5)	Dayton, Ohio				
WNBX	ak	1000		Springfield, Vt.				
WTOC	ak	1000	C	Savannah, Ga.				

## 1270 kcys. (236.1)

CMHHD	dk	250		Calbarien, Cuba				
KGCA	ak	100	2D	Decorah, Iowa				
KOL	ak	1000	C (5)	Seattle, Wash.				
KVOR	ak	1000	C	Colorado, Sp'gs. Colo.				

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

Call Letters	Class	Freq	Station	City	Heard	Logged	Reported	Verified
KWLC	ak	100	2D	Decorah, Iowa				
WASH	ak	500	aN	Grand Rapids, Mich.				
WFBR	ak	500	R (1)	Baltimore, Md.				
WJDX	ak	1000	N (2.5)	Jackson, Miss.				
WOOD	ak	500	aN	Grand Rapids, Mich.				
XEXB	ak	50		Jalapa, Ver.				

## 1280 kcys. (234.2)

CMCU	ak	500		Havana, Cuba				
CMKO	z			Holgün, Cuba				
KFBB	ak	1000	C (2.5)	Great Falls, Mont.				
KLS	ak	250		Oakland, Calif.				
WCAM	ak	500	1	Camden, N. J.				
WCAP	ak	500	1	Asbury Park, N. J.				
WDOD	ak	1000	C (5)	Chattanooga, Tenn.				
WIBA	ak	1000	N (5)	Madison, Wis.				
WORC	ak	500	C	Worcester, Mass.				
WRR	ak	500	M	Dallas, Texas				
WTNJ	ak	500	1	Trenton, N. J.				
XEMX	z	100		Mexico City, D. F.				

## 1290 kcys. (232.4)

KDYL	ak	1000	RX	Salt Lake City, Utah				
KLCN	ak	100	D	Blytheville, Ark.				
KTRH	ak	1000	C (5)	Houston, Texas				
WEBC	ak	1000	N (5)	Duluth, Minn.				
WJAS	ak	1000	C (5)	Pittsburgh, Pa.				
WNBZ	ak	100	D	Saranac Lake, N. Y.				
WNEL	ak	1000	(2.5)	San Juan, P. R.				

## 1300 kcys. (230.6)

KALE	ak	500	C	Portland, Ore.				
KFAC	ak	1000		Los Angeles, Calif.				
KFFH	ak	1000	C	Wichita, Kans.				
WBBR	ak	1000	1	Brooklyn, N. Y.				
WEVD	ak	1000	1	New York, N. Y.				
WFAB	ak	1000	1	New York, N. Y.				
WFBC	ak	1000	(5) N	Greenville, S. C.				
WHAZ	ak	500	1X	Troy, N. Y.				
WHBL	ak	250		Sheboygan, Wis.				
WIOD	ak	1000	N	Miami, Fla.				

## 1310 kcys. (228.9)

CHCK	ak	50		Charlottetown, P.E.I.				
CJKL	ak	100	F	Kirkland Lake, Ont.				
CJLS	ak	100		Yarmouth, N. S.				
CKCV	ak	100	F	Quebec, Que.				
KAND	z	100	DP	Corsicana, Texas				
KCKN	ak	100		Kansas City, Kans.				
KCRJ	ak	100	D	Jerome, Ariz.				
KFPL	dk	100	(.25)	Dublin, Texas				
KFXR	ak	100	(.25)	Oklahoma City, Okla.				
KFYO	ak	100	(.25)	Lubbock, Texas				
KGEZ	ak	100		Kallspeil, Mont.				
KGFW	ak	100		Kearney, Nebr.				
KHUB	z	250	D	Watsonville, Calif.				
KINY	ak	100		Juneau, Alaska				
KIT	ak	100	(.25)	Yakima, Wash.				
KMED	ck	100	YZ (.25)	Medford, Ore.				
KPDN	ak	100	D	Pampa, Texas				
KRMC	z	100	1 (.25)	Jamestown, N. D.				
KRMD	ak	100		Shreveport, La.				
KROC	ak	100		Rochester, Minn.				
KRQA	ak	100		Santa Fe, N. Mex.				
KRRV	z	250	D	Sherman, Texas				
KSRO	z	250	DP	Santa Rose, Calif.				
KSUB	z	100	F	Cedar City, Utah				
KTSM	ak	100	(.25)	EI Paso, Texas				
KVOL	ak	100		Lafayette, La.				
KVOX	z	100	1P	Moorhead, Minn.				
KWOS	z	100	D	Jefferson City, Mo.				

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
KXRO	ak	100	Aberdeen, Wash.				
WAML	ak	100	Laurel, Miss.				
WBEO	ak	100	D. Marquette, Mich.				
WBOW	ak	100	(.25) N. Terre Haute, Ind.				
WBRE	ak	100	Wilkes Barre, Pa.				
WCLS	ak	100	Joliet, Ill.				
WOMI	ak	100	(.25) Ashland, Ky.				
WDAH	ak	100	S. El Paso, Texas				
WEBR	ak	100	B (.25) Buffalo, N. Y.				
WEMF	ak	100	D Milwaukee, Wis.				
WEXL	ak	50	Royal Oak, Mich.				
WFBG	ak	100	3 Altoona, Pa.				
WFDF	ak	100	Flint, Mich.				
WGH	ak	100	(.25) Newport News, Va.				
WHAT	ak	100	4 Philadelphia, Pa.				
WJAC	ak	100	3 (.25) Johnstown, Pa.				
WLAK	z	100	Lakeland, Fla.				
WLBC	ak	100	(.25) Muncie, Ind.				
WLNI	ak	100	M. Laconia, N. H.				
WMBQ	ak	100	Auburn, N. Y.				
WMFT	ak	100	(.25) Plattsburg, N. Y.				
WNBH	ak	100	M (.25) New Bedford, Mass.				
WOL	ak	100	XZ Washington, D. C.				
WRAW	ak	100	Reading, Pa.				
WROL	ak	100	(.25) Knoxville, Tenn.				
WSAJ	ak	100	Grove City, Pa.				
WSGN	ak	100	(.25) Birmingham, Ala.				
WSJS	ak	100	O Winston-Salem, N. C.				
WTAL	ak	100	Tallahassee, Fla.				
WTEL	ak	100	4 Philadelphia, Pa.				
WTJS	ak	100	(.25) Jackson, Tenn.				
WTRC	ak	100	(.25) Elkhart, Ind.				
XEAG	z	10	Cordoba, Ver.				
XECW	ak	10	Mexico City, D. F.				
XEFW	ak	250	Tampico, Tams.				
XETB	ak	125	Torreón, Coah.				
XEX	ak	125	Monterrey, N. L.				

1320 kcys. (227.1)

CMOX	ak	200	Havana, Cuba
KGHF	am	500	B Pueblo, Colo.
KGMB	ak	1000	CM Honolulu, T. H.
KID	ak	500	(1) Idaho Falls, Idaho
KRNT	ak	1000	C (5) Des Moines, Iowa
WADC	ak	1000	C(5) Akron, Ohio
WORK	ak	1000	N York, Pa.
WSMB	ak	1000	N New Orleans, La.

1330 kcys. (225.4)

CMHK	z	250	Crucés, Cuba
KGB	ak	1000	M San Diego, Calif.
KMO	ak	1000	Tacoma, Wash.
KRIS	z	250	(.5) P Corpus Christi, Tex.
KSCJ	ak	1000	C(5) Sioux City, Iowa
WDRQ	ak	1000	C(5) Hartford, Conn.
WSAI	ak	1000	MR(2.5) Cincinnati, Ohio
WTAQ	ak	1000	C Green Bay, Wis.

1340 kcys. (223.7)

CMAB	z		Finar del Rio, Cuba
CMJL	z	75	Camaguey, Cuba
KGDY	ak	250	D Huron, S. D.
KGIR	ak	1000	N(2.5) Butte, Mont.
KGNO	ak	250	Dodge City, Kans.
WCOA	ak	500	C Pensacola, Fla.
WFEA	ak	500	NM(1) Manchester, N. H.
WSPD	ak	1000	B (5) Toledo, Ohio
XEXD	z	350	Jalapa, Ver.

1350 kcys. (222.1)

OMCA	ak	450	Havana, Cuba
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NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

					Heard	Logged	Reported	Verified
CMKW	z	...	Santiago, Cuba					
KIDO	ak	1000	N (2.5) Boise, Idaho					
KWK	ak	1000	M(5) St. Louis, Mo.					
WAWZ	ak	500	1(1) Zarephath, N. J.					
WBNX	ak	1000	1 New York, N. Y.					

1360 kcys. (220.4)

CMJH	dk	50	..... Clego de Avila, Cuba
KCRC	ak	250	M..... Enid, Okla.
KGER	ak	1000	..... Long Beach, Calif.
WCSC	ak	500	(1)N..... Charleston, S. C.
WFBL	ak	1000	C(5)..... Syracuse, N. Y.
WGFS	ak	500	1 (1)..... Chicago, Ill.
WQBC	ak	1000	D..... Vicksburg, Miss.
WSBT	ak	500	1..... South Bend, Ind.

1370 kcys. (218.8)

CKOW	ak	100	F..... Moncton, N. B.
CMGE	ak	150	..... Cardenas, Cuba
KAST	ak	100	D..... Astoria, Ore.
KCMO	ak	100	..... Kansas City, Mo.
KEEN	ak	100	1..... Seattle, Wash.
KELD	z	100	..... El Dorado, Ark.
KERN	ak	100	B..... Bakersfield, Calif.
KFGQ	ak	100	D..... Boone, Iowa
KFJZ	ak	100	(.25) Fort Worth, Texas
KPRO	ak	250	D..... Longview, Texas
KGAR	ak	100	(.25) Tucson, Ariz.
KGFL	ak	100	4..... Roswell, N. M.
KGKL	ak	100	(.25) San Angelo, Texas
KICA	ak	100	4..... Clovis, N. M.
KIUP	ak	100	..... Durango, Colo.
KLUF	ak	100	..... Galveston, Texas
KMAC	ak	100	5 (.25) San Antonio, Tex.
KOBH	ak	100	..... Rapid City, S. Dak.
KOKO	z	100	P..... La Junta, Colo.
KONO	ak	100	5..... San Antonio, Tex.
KRE	ak	100	(.25) Berkeley, Calif.
KRKO	ak	50	1..... Everett, Wash.
KSLM	ak	100	..... Salem, Ore.
KTEM	z	100	DX..... Temple Texas
KTOK	bk	100	M..... Oklahoma City, Okla.
KUJ	ak	100	..... Walla Walla, Wash.
KVGB	z	100	..... Great Bend, Kans.
KWYO	ak	100	(.25) Sheridan, Wyo.
WABY	ak	100	B..... Albany, N. Y.
WAGF	ak	250	D..... Dothan, Ala.
WATL	ak	100	(.25) Atlanta, Ga.
WBLK	ak	100	D..... Clarksburg, W. Va.
WBNY	ak	100	2(.25) Buffalo, N. Y.
WBTM	ak	100	(.25) Danville, Va.
WCBM	ak	100	(.25) Baltimore, Md.
WDAS	ak	100	(.25) Philadelphia, Pa.
WDWS	ak	100	D..... Champaign, Ill.
WEOA	z	100	(.25) Evansville, Ind.
WFOR	ak	100	..... Hattiesburg, Miss.
WGL	ck	100	O..... Fort Wayne, Ind.
WGRC	ak	250	D..... New Albany, Ind.
WHBQ	ak	100	..... Memphis, Tenn.
WHDF	ak	100	(.25) Calumet, Mich.
WHLB	ak	100	..... Virginia, Minn.
WIBM	ak	100	(.25) Jackson, Mich.
WLLH	ak	100	M(.25) Lowell, Mass.
WMBR	ak	100	C(.25) Jacksonville, Fla.
WMFD	ak	100	D..... Wilmington, N. C.
WMFO	ak	100	D..... Decatur, Ala.
WMIN	ak	100	(.25) St. Paul, Minn.
WOC	ak	100	C(.25) Davenport, Iowa
WPAY	ak	100	..... Portsmouth, Ohio
WFPA	z	100	(.25)P..... Mayaguez, P. R.
WRAK	ak	100	(.25) Williamsport, Pa.
WRDO	ak	100	M..... Augusta, Maine
WRJN	ak	100	(.25) Racine, Wis.
WSAU	z	100	D..... Wausau, Wis.

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

				Heard	Logged	Reported	Verified
WSVS	ak	50	D2	Buffalo, N. Y.			
XECZ	z	160		San Luis Potosi, S.L.F.			
XEI	ak	135		Morelia, Mich.			
XELZ	z	100		Mexico City, D. F.			

1380 kcys. (217.3)

KOH	ak	500	C	Reno, Nev.			
KQV	ak	500	10	Pittsburgh, Pa.			
WALA	af	500	C(1)	Mobile, Ala.			
WKBB	ak	1000		LaCrosse, Wis.			
WNBC	ak	250	D	New Britain, Conn.			
WSMK	ak	300	10	Dayton, Ohio			

1390 kcys. (215.7)

CJGX	ak	100	F	Yorkton, Sask.			
CMJC	z	150		Camaguey, Cuba			
KLRA	ak	1000	C(2.5)	Little Rock, Ark.			
KOY	ak	1000	C	Phoenix, Ariz.			
WHK	ak	1000	C(2.5)	Cleveland, Ohio			
WQDM	d	1000	D	St. Albans, Vt.			

1400 kcys. (214.2)

CMGC	ad	150		Matanzas, Cuba			
CMKR	z	100		Santiago, Cuba			
KHBC	z	250	M	Hilo, T. H.			
KLO	ak	500	B	Ogden, Utah			
KTUL	ak	500	C(1)	Tulsa, Okla.			
WARD	ak	500	2	Brooklyn, N. Y.			
WBBC	ak	500	2(1)	Brooklyn, N. Y.			
WHDI	ak	250	D	Olean, N. Y.			
WIRE	ak	1000	MR(5)	Indianapolis, Ind.			
WLTH	ak	500	2	Brooklyn, N. Y.			
WVFW	ak	500	2	Brooklyn, N. Y.			

1410 kcys. (212.6)

CRFC	ak	50	5	Vancouver, B. C.			
CKMO	ak	100	5F	Vancouver, B. C.			
CMCQ	ak	250		Havana, Cuba			
KFJM	ak	500	(1)	Grand Forks, N. D.			
KGNC	ak	1000	N(2.5)	Amarillo, Texas			
WAAB	ak	500	M	Boston, Mass.			
WBCM	ak	500		Bay City, Mich.			
WHIS	ak	500	(1)	Bluefield, W. Va.			
WROK	ak	500	(1)	Rockford, Ill.			
WSFA	ak	500	C(1)	Montgomery, Ala.			

1420 kcys. (211.1)

CKGB	ak	100	F	Timmins, Ont.			
CRCY	ak	100	F	Toronto, Ont.			
KABC	ak	100	(.25)	San Antonio, Texas			
KABR	ak	100		Aberdeen, S. Dak.			
KALB	z	100	D	Alexandria, La.			
KBPS	ak	100	4	Portland, Ore.			
KCMC	ak	100		Texarkana, Texas			
KEUB	ak	100		Price, Utah			
KFIZ	ak	100		Fond du Lac, Wis.			
KGFF	ak	100	M(.25)	Shawnee, Okla.			
KGGC	ak	100		San Francisco, Cal.			
KGIW	ak	100	1	Alamosa, Colo.			
KIDW	ak	100	1	Lamar, Colo.			
KIUN	ak	100		Pecos, Texas			
KNET	z	100	D	Palestine, Texas			
KORE	ak	100		Eugene, Ore.			
KRBC	ak	100	(.25)	Ablene, Tex.			
KRLC	ak	100	XZ	Lewiston, Idaho			
KRLH	z	100	D	Midland, Tex.			
KUMA	ak	100		Yuma, Ariz.			
KWBG	ak	100		Hutchinson, Kans.			
KXL	ak	100	4(.25)	Portland, Ore.			

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

			Heard	Logged	Reported	Verified
WACO	ak 100	C	Waco, Texas			
WAGM	ak 100		Presque Isle, Maine			
WAFD	ak 100	D	Chattanooga, Tenn.			
WAZL	ak 100	2	Hazleton, Pa.			
WCBS	ak 100		Springfield, Ill.			
WCHV	ak 100	3(.25)	Charlottesville, Va.			
WEED	ak 100	3(.25)	Rocky Mt., N. C.			
WELL	ak 100		Battle Creek, Mich.			
WGFC	ak 100		Albany, Ga.			
WHFC	ak 100	(.25)	Cicero, Ill.			
WILM	aj 100	2	Wilmington, Del.			
WJBO	ak 100	XZ	Baton Rouge, La.			
WJBR	z 100	P	Gastonia, N. C.			
WJMS	ak 100		Ironwood, Mich.			
WLAP	ak 100	(.25)	Lexington, Ky.			
WLEU	ak 100	B (.25)	Erie, Pa.			
WMAS	ak 100	C(.25)	Springfield, Mass.			
WMBC	ak 100	(.25)	Detroit, Mich.			
WMBH	ak 100	(.25)	Joplin, Mo.			
WMBS	z 250	DP	Untontown, Pa.			
WMFJ	ak 100		Daytona Beach, Fla.			
WMSD	ak 100		Sheffield, Ala.			
WNNY	z 100	(.25)P	Watertown, N. Y.			
WPAD	ak 100	(.25)	Paducah, Ky.			
WPAR	ak 100	C	Parkersburg, W. Va.			
WPRP	z 100	P(.25)	Ponce, P. R.			

## 1430 kcys. (209.7)

CMJP	ak 75		Moron, Cuba			
KECA	ak 1000	(5)B	Los Angeles, Calif.			
KGNF	ak 1000	D	North Platte, Neb.			
KSO	ak 500	BM(1)	Des Moines, Iowa			
WRNS	ak 500	C(1)	Columbus, Ohio			
WHEC	ak 500	C(1)	Rochester, N. Y.			
WHP	ak 500	C(1)	Harrisburg, Pa.			
WNBR	ak 500	(1)	Memphis, Tenn.			
WOKO	ak 500	C(1)	Albany, N. Y.			

## 1440 kcys. (208.2)

CMOA	z 150		Havana, Cuba			
KDFN	ak 500		Casper, Wyo.			
KXYZ	ak 1000		Houston, Texas			
WBIG	ak 1000	C	Greensboro, N. C.			
WCBA	aj 500	a	Allentown, Pa.			
WMBD	ak 500	C(1)	Peoria, Ill.			
WSAN	aj 500	a	Allentown, Pa.			
XEFI	ak 250		Chihuahua, Chih.			

## 1450 kcys. (206.8)

CFCT	ak 50		Victoria, B. C.			
CHGS	ak 50	F	Summerside, P.E.I.			
CMHM	z 100		Cienfuegos, Cuba			
KGCX	ak 1000		Wolf Point, Mont.			
KIEM	ak 500		Eureka, Calif.			
KTBS	ak 1000	N	Shreveport, La.			
WGAR	ak 500	MB(1)	Cleveland, Ohio			
WHOM	ak 250		Jersey City, N. J.			
WSAR	ak 1000	M	Fall River, Mass.			
WTFI	ak 500	Y	Athens, Ga.			
XEF	ak 100		Juarez, Chih.			

## 1460 kcys. (205.4)

CMKF	z 50		Holguin, Cuba			
KSTP	ak 10000	R(25)	St. Paul, Minn.			
WJSV	ak 10000	O	Washington, D. C.			

## 1470 kcys. (204.0)

CMOK	z 150		Havana, Cuba			
KGA	ak 5000	B	Spokane, Wash.			
WLAC	ak 5000	C	Nashville, Tenn.			

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

## 1480 kcys. (202.6)

KOMA	ak	5000	C	Oklahoma City, Okla.
WHIP	z	5000	DP	Hammond, Ind.
WKBB	ak	5000	C	Buffalo, N. Y.

## 1490 kcys. (201.2)

KFBK	ak	5000	N	Sacramento, Calif.
WCKY	ak	5000	BX	Covington, Ky.

## 1500 kcys. (199.9)

CJIC	ak	100		Sault Ste. Marie, Ont.
CMCN	z			Havana, Cuba
KAWM	z	100	P	Gallup, N. Mex.
KBIX	ak	100	M	Muskogee, Okla.
KBST	z	100		Big Spring, Tex.
KDAL	ak	100		Duluth, Minn.
KDB	ak	100	M(.25)	Santa Barbara, Cal.
KGFI	ak	100	(.25)	Y. Corpus Christi, Tex.
KGKB	ak	100	(.25)	Tyler, Texas
KGKY	ak	100	(.25)	Scottsbluff, Neb.
KNEL	ak	100	D	Brady, Texas
KNOW	ak	100	C	Austin, Texas
KOTN	ak	100	D	Pine Bluff, Ark.
KOVC	ak	100		Valley City, N. Dak.
KPLC	ak	100	(.25)	Lake Charles, La.
KPLT	z	100	D	Paris, Texas
KPO	ak	100	(.25)	Wenatchee, Wash.
KRNR	ak	100	(.25)	Roseburg, Ore.
KROD	ak	100	P	El Paso, Texas
KSAL	z	100	P(.25)	Salina, Kans.
KTEP	z	100	P	El Paso, Texas
KUTA	z	100	P	Salt Lake City, Utah
KVOE	ak	100	M	Santa Ana, Calif.
KXO	ak	100		El Centro, Calif.
KYCA	z	100	(.25)	Prescott, Ariz.
WCNW	ak	199	1(.25)	Brooklyn, N. Y.
WDNO	ak	100	C	Durham, N. C.
WGAL	ak	100	(.25)	Lancaster, Pa.
WHBB	ak	100	D	Selma, Ala.
WHEF	ak	100	(.25)	Kosciusko, Miss.
WJBK	ak	100	(.25)	Detroit, Mich.
WKBB	ak	100	(.25)	E. Dubuque, Ill.
WKBV	ak	100	(.25)	Richmond, Ind.
WKBZ	ak	100	(.25)	Muskegon, Mich.
WKEU	ak	100	D	Griffin, Ga.
WMBQ	ak	100	1	Brooklyn, N. Y.
WMEX	ak	100	(.25)	Boston, Mass.
WNBK	ae	100	O	Binghamton, N. Y.
WNLC	ak	100	D	New London, Conn.
WOPI	ak	100		Bristol, Tenn.
WRDW	ak	100		Augusta, Ga.
WRGA	ak	100	(.25)	Rome, Ga.
WRFD	z	100	PB	Richmond, Va.
WSYB	ak	100		Rutland, Vt.
WTMV	ak	100	(.25)	East St. Louis, Ill.
WVRL	ak	100	1(.25)	Woodside, N. Y.
WWSW	ak	100	(.25)	Pittsburgh, Pa.

## 1510 kcys. (198.6)

CFRC	ak	100	F	Kingston, Ont.
CKCR	ak	100		Waterloo, Ont.

## 1530 kcys. (196.0)

KXBY	ak	1000		Kansas City, Mo.
WBRY	ak	1000	M	Waterbury, Conn.

## 1550 kcys. (193.4)

KPMC	ak	1000	M	Bakersfield, Calif.
WQXR	ak	1000		New York, N. Y.

	Heard	Logged	Reported	Verified

## NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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

ALABAMA	CALIFORNIA	Santa Barbara	FLORIDA
Birmingham	Bakersfield	KDB 1500 100M	Clearwater
WAPI 1140 5000 N	KERN 1370 100 B	KTMS 1220 500	WFLA 820 1000 N
WBRC 930 1000 C	KPMC 1550 1000M	Santa Rosa	Daytona Beach
WSGN 1310 100	Berkeley	KSRO 1310 250	WMFJ 1420 100
Decatur	KRE 1370 100	Stockton	Gainesville
WMFG 1370 100	Beverly Hills	KGDM 1100 1000M	WRUF 830 5000
Dothan	KMPC 710 500	KWG 1200 100 N	Jacksonville
WAGF 1370 250	Chico	KTVC 1190 250	WJAX 900 1000 N
Gadsden	KHSL 950 250	Watsonville	WMBR 1370 100 C
WJBY 1210 100	El Centro	KHUB 1310 250	Lakeland
Huntsville	KXO 1500 100M		WLAK 1310 100
WBHP 1200 100	Eureka	<b>COLORADO</b>	Miami
Mobile	KIEM 1450 500	Alamosa	WIOD 1300 1000 N
WALA 1380 500 C	Fresno	KGIW 1420 100	WQAM 560 1600 C
Montgomery	KMJ 580 500 N	Colorado Springs	WDBO 580 1000 C
WSFA 1410 500 C	Glendale	KVOR 1270 1000 C	Pensacola
Selma	KIEV 850 250	Denver	WCOA 1340 500 C
WHBB 1500 100	Hollywood	KFEL 920 500M	St. Augustine
Sheffield	KFWB 950 1000	KLZ 560 1000 C	WFOY 1210 100
WMSD 1420 100	KMTR 570 1000	KOA 830 50000 N	St. Petersburg
Tuscaloosa	Long Beach	KPOF 880 500	WSUN 620 1000 N
WJRD 1200 100	KFOX 1250 1000	KVOD 920 500 B	Tallahassee
	KGER 1380 1000	Durango	WTAL 1310 100
<b>ALASKA</b>	Los Angeles	KIUF 1370 100	Tampa
Anchorage	KECA 1430 1000 B	Grand Junction	WDAE 1220 1000 C
KFQD 780 250	KEHE 780 1000	KFJZ 1200 100	West Palm Beach
Juneau	KEAC 1300 1000	Greeley	WJNO 1200 100 C
KINY 1310 100	KET 640 50000 R	KFKA 880 500M	
Ketchikan	KFSG 1120 500	La Junta	<b>GEORGIA</b>
KGBU 900 500	KFVD 1000 250	KOKO 1370 100	Albany
	KGFJ 1200 100	Lamar	WGPC 1420 100
	KHJ 900 1000M	KIDW 1420 100	Athens
	KNX 1050 50000 C	Pueblo	WTFI 1450 500
	KRRD 1120 500	KGHF 1320 500 B	Atlanta
	Merced	Sterling	WATL 1370 100
	KVOS 1040 250	KGEK 1200 100	WGST 890 1000 C
	Modesto		WSB 740 50000 N
	KTRB 740 250	<b>CONNECTICUT</b>	Augusta
	Monterrey	Bridgeport	WRDW 1500 100
	KDON 1210 100M	WICC 600 500M	Columbus
	Oakland	Hartford	WRBL 1200 100
	KLS 1280 250	WDRG 1330 1000 C	Griffin
	KLX 880 1000	WTC 1040 50000 R	WKEU 1500 100
	KROW 930 1000	WPHT 1200 100M	Macon
	Pasadena	New Britain	WMAZ 1180 1000 C
	KPPC 1210 100	WNBC 1380 250	Rome
	Redding	New Haven	WRGA 1500 100
	KVCV 1200 100	WELI 900 500	Savannah
	Sacramento	New London	WTOG 1260 1000 C
	KFRK 1490 5000 N	WNLC 1500 100	Thomasville
	KROY 1210 100	Waterbury	WPAK 1210 100
	San Bernardino	WATR 1190 100	Waycross
	KFKM 1210 100M	WBBY 1530 1000M	WAYX 1200 100
	San Diego		
	KPSD 600 1000 R	<b>DELAWARE</b>	<b>HAWAII</b>
	KG 1330 1000M	Wilmington	Hilo
	San Francisco	WDEL 1120 250 R	KHHC 1400 250M
	KPRC 610 1000M	WILM 1420 100	Honolulu
	KGCC 1420 100		KGMB 1320 1900 C
	KGO 780 7500 B	<b>DISTRICT OF COLUMBIA</b>	KGU 750 2500 N
	KJBS 1070 500	Washington	
	KPO 680 50000 R	WJSV 1460 10000 C	<b>IDAHO</b>
	KSFO 560 1000 C	WMAL 630 250 R	Boise
	KYA 1230 1000	WOL 1310 100	KIDO 1350 1000 N
	San Jose	WRC 850 500 R	
	KQW 1010 1000		
	San Luis Obispo		
	KVEC 1200 250		
	Santa Ana		
	KVOE 1500 100M		



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<p><b>Duluth</b>  <b>KDAL</b> 1500 100  <b>WEBC</b> 1290 1000 N                      Fergus Falls  <b>KGDE</b> 1200 100                      Hibbing  <b>WMFG</b> 1210 100                      Minneapolis  <b>WCCO</b> 810 50000 C  <b>WDGY</b> 1180 1000  <b>WLB</b> 1250 1000  <b>WTCN</b> 1250 1000 B                      Moorhead  <b>KVOX</b> 1310 100                      Northfield  <b>WCAL</b> 1250 1000                      Rochester  <b>KROC</b> 1310 100                      St. Paul  <b>KSTP</b> 1460 10000 R  <b>WMIN</b> 1370 100                      Virginia  <b>WHLB</b> 1370 100                      Winona  <b>KWNO</b> 1200 100</p> <hr/> <p style="text-align: center;"><b>MISSISSIPPI</b></p> <hr/> <p>Grenada  <b>WMFN</b> 1210 100                      Gulfport  <b>WGCM</b> 1210 100                      Hattiesburg  <b>WFOR</b> 1370 100                      Jackson  <b>WJDX</b> 1270 1000 N                      Kosciusko  <b>WHEF</b> 1500 100                      Laurel  <b>WAML</b> 1310 100                      Meridian  <b>WCOC</b> 880 500 C                      Vicksburg  <b>WQBC</b> 1360 1000</p> <hr/> <p style="text-align: center;"><b>MISSOURI</b></p> <hr/> <p>Cape Girardeau  <b>KFVS</b> 1210 100                      Columbia  <b>KFRU</b> 630 500                      Jefferson City  <b>KWOS</b> 1310 100                      Joplin  <b>WMBH</b> 1420 100                      Kansas City  <b>KCMO</b> 1370 100  <b>KMBC</b> 950 1000 C  <b>KXBY</b> 1530 1000  <b>WDAF</b> 610 1000 B  <b>WHB</b> 860 1000M                      St. Joseph  <b>KFEQ</b> 680 2500                      St. Louis  <b>KFVO</b> 550 500  <b>KMOX</b> 1090 50000 C  <b>KSD</b> 550 1000 R  <b>KWK</b> 1350 1000 B  <b>WEW</b> 760 1000  <b>WIL</b> 1200 100                      Springfield  <b>KGBX</b> 1230 500  <b>KWTO</b> 560 5000</p>	<p style="text-align: center;"><b>MONTANA</b></p> <hr/> <p><b>Billings</b>  <b>KGHL</b> 780 1000 N                      Butte  <b>KGIR</b> 1340 1000 N                      Great Falls  <b>KFBB</b> 1280 1000 C                      Helena  <b>KPFA</b> 1210 100                      Kalispell  <b>KGEZ</b> 1310 100                      Lewistown  <b>KDNC</b> 1200 100                      Missoula  <b>KGVO</b> 1260 1000 C                      Wolf Point  <b>KGXC</b> 1450 1000</p> <hr/> <p style="text-align: center;"><b>NEBRASKA</b></p> <hr/> <p>Clay Center  <b>KMMJ</b> 740 1000                      Kearney  <b>KGFW</b> 1310 100                      Lincoln  <b>KFAB</b> 770 10000 C  <b>KFOR</b> 1210 100 C                      Norfolk  <b>WJAG</b> 1060 1000                      North Platte  <b>KGNE</b> 1430 1000                      Omaha  <b>KOIL</b> 1260 1000 B  <b>WAAW</b> 660 500  <b>WOW</b> 590 5000 R                      Scottsbluff  <b>KGKY</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>NEVADA</b></p> <hr/> <p>Reno  <b>KOH</b> 1380 500 C</p> <hr/> <p style="text-align: center;"><b>NEW HAMPSHIRE</b></p> <hr/> <p>Laconia  <b>WLNH</b> 1310 100M                      Manchester  <b>WFEA</b> 1340 500 N                      Portsmouth  <b>WHEB</b> 740 250</p> <hr/> <p style="text-align: center;"><b>NEW JERSEY</b></p> <hr/> <p>Asbury Park  <b>WCAP</b> 1280 500                      Atlantic City  <b>WPG</b> 1100 5000 C                      Bridgeton  <b>WSNJ</b> 1210 100                      Camden  <b>WCAM</b> 1280 500                      Jersey City  <b>WAAT</b> 940 500  <b>WHOM</b> 1450 250                      Newark  <b>WBFI</b> 1250 1000  <b>WNEW</b> 1250 1000  <b>WOR</b> 710 50000M                      Red Bank  <b>WBRB</b> 1210 100                      Trenton  <b>WTNJ</b> 1280 500                      Zarephath  <b>WAWZ</b> 1350 500</p>	<p style="text-align: center;"><b>NEW MEXICO</b></p> <hr/> <p>Albuquerque  <b>KGGM</b> 1230 1000  <b>KOB</b> 1180 10000 N                      Carlsbad  <b>KLAH</b> 1210 100                      Clovis  <b>KICA</b> 1370 100                      Gallup  <b>KAWM</b> 1500 100                      Roswell  <b>KGFL</b> 1370 100                      Santa Fe  <b>KRQA</b> 1310 100</p> <hr/> <p style="text-align: center;"><b>NEW YORK</b></p> <hr/> <p>Albany  <b>WABY</b> 1370 100  <b>WOKO</b> 1430 500 C                      Auburn  <b>WMBO</b> 1310 100                      Binghamton  <b>WBNF</b> 1500 100 C                      Brooklyn  <b>WARD</b> 1400 500  <b>WBBC</b> 1400 500  <b>WBRR</b> 1300 1000  <b>WCNW</b> 1500 100  <b>WLTH</b> 1400 500  <b>WMBQ</b> 1500 100  <b>WVFW</b> 1400 500                      Buffalo  <b>WBEN</b> 900 1000 R  <b>WBNY</b> 1370 100  <b>WEBR</b> 1310 100 B  <b>WGR</b> 550 1000 C  <b>WKBW</b> 1480 5000 C  <b>WSVS</b> 1370 50                      Canton  <b>WCAD</b> 1220 500                      Elmira  <b>WESG</b> 850 1000 C                      Freeport  <b>WGBB</b> 1210 100                      Jamestown  <b>WJTN</b> 1210 50                      Newburgh  <b>WGNV</b> 1210 100                      New York  <b>WABC</b> 860 50000 C  <b>WBNX</b> 1350 10000  <b>WBOQ</b> 860 50000  <b>WEAF</b> 660 50000 R  <b>WEVD</b> 1300 1000  <b>WFAB</b> 1300 1000  <b>WHN</b> 1010 1000  <b>WINS</b> 1180 1000  <b>WJZ</b> 760 50000 B  <b>WLWL</b> 1100 5000  <b>WMCA</b> 570 1000  <b>WNEW</b> 1250 1000  <b>WNYC</b> 810 100  <b>WOV</b> 1130 1000  <b>WQXR</b> 1550 1000                      Olean  <b>WHDL</b> 1400 250                      Plattsburg  <b>WMFF</b> 1310 250                      Rochester  <b>WHAM</b> 1150 50000 B  <b>WHEC</b> 1430 500 C  <b>WSAY</b> 1210 100</p>	<p>Saranac Lake  <b>WNBZ</b> 1290 100                      Schenectady  <b>WGY</b> 790 50000 R                      Syracuse  <b>WFBL</b> 1360 1000 C  <b>WSYR</b> 570 1000 B                      Troy  <b>WHAZ</b> 1300 500                      Utica  <b>WIBX</b> 1200 100 C                      Watertown  <b>WNNY</b> 1420 100                      White Plains  <b>WFAS</b> 1210 100                      Woodside  <b>WVRL</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>NORTH 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<b>KGCU</b> 1240 250                      Minot  <b>KLPM</b> 1240 250                      Valley City  <b>KOVC</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>OHIO</b></p> <hr/> <p>Akron  <b>WADC</b> 1320 1000 C  <b>WJWV</b> 1210 100                      Ashtabula  <b>WICA</b> 940 250                      Canton  <b>WHBC</b> 1200 100</p>
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# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<p><b>Cincinnati</b></p> <p>WCFO 1200 100 WKRC 850 1000 C WLW 700 500000 N WSAI 1330 1000 R</p> <p><b>Cleveland</b></p> <p>WGAR 1450 500 B WHK 1390 1000 C WJAY 610 500 WTAM 1070 50000 R</p> <p><b>Columbus</b></p> <p>WBNS 1430 500 C WCOL 1210 100 N WHKC 640 500 WOSU 570 750</p> <p><b>Dayton</b></p> <p>WHIO 1260 1000 C WSMK 1380 200 C</p> <p><b>Lima</b></p> <p>WBLY 1210 100</p> <p><b>Portsmouth</b></p> <p>WPAY 1370 100</p> <p><b>Toledo</b></p> <p>WSPD 1340 1000 B</p> <p><b>Youngstown</b></p> <p>WKBN 570 500 C</p> <p><b>Zanesville</b></p> <p>WALR 1210 100</p>	<p><b>KOIN</b> 940 1000 C <b>KWJJ</b> 1040 500 <b>KXL</b> 1420 100</p> <p><b>Roseburg</b></p> <p><b>KIRNE</b> 1500 100</p> <p><b>Salem</b></p> <p><b>KSLM</b> 1370 100</p>	<p><b>PENNSYLVANIA</b></p> <p><b>Allentown</b></p> <p>WCBA 1440 500 WSAN 1440 500</p> <p><b>Altoona</b></p> <p>WFBG 1310 100</p> <p><b>Easton</b></p> <p>WEST 1200 100</p> <p><b>Erle</b></p> <p>WLEU 1420 100 B</p> <p><b>Glenade</b></p> <p>WIBG 970 100</p> <p><b>Greensburg</b></p> <p>WHJB 620 250 C</p> <p><b>Greve City</b></p> <p>WSAJ 1310 100</p> <p><b>Harrisburg</b></p> <p>WHP 1430 500 C WKBO 1200 100</p> <p><b>Hazleton</b></p> <p>WAZL 1420 100</p> <p><b>Johnstown</b></p> <p>WJAC 1310 100</p> <p><b>Lancaster</b></p> <p>WGAL 1500 100</p> <p><b>Philadelphia</b></p> <p>KYV 1020 10000 R WCAU 1170 50000 C WDAS 1370 100 WFIL 560 1000 B WHAT 1310 100 WIP 610 1000 WPEN 920 250 WRAX 920 250 WTEL 1310 100</p> <p><b>Pittsburgh</b></p> <p>KDKA 980 50000 B KQV 1380 500 C WCAE 1220 1000 R WJAS 1290 1000 C WWSW 1500 100</p> <p><b>Reading</b></p> <p>WEEU 830 1000 WRAW 1310 100</p> <p><b>Seranton</b></p> <p>WGBI 880 500 WQAN 880 250</p> <p><b>Sunbury</b></p> <p>WKOK 1210 100</p> <p><b>Untontown</b></p> <p>WMBS 1420 250</p> <p><b>Wilkes-Barre</b></p> <p>WBAX 1210 100 WBEE 1310 100</p> <p><b>Williamsport</b></p> <p>WRAK 1370 100</p> <p><b>York</b></p> <p>WORK 1320 1000 N</p>	<p><b>San Juan</b></p> <p>WKAQ 1240 1000 WNEL 1290 1000</p>	<p><b>RHODE ISLAND</b></p> <p><b>Newport</b></p> <p>WNRI 1200 100</p> <p><b>Providence</b></p> <p>WEAN 780 1000M WJAR 890 1000 R WPRO 630 500 C</p>	<p><b>SOUTH CAROLINA</b></p> <p><b>Anderson</b></p> <p>WAIM 1200 100</p> <p><b>Charleston</b></p> <p>WCSC 1380 500 N</p> <p><b>Columbia</b></p> <p>WIS 560 1000 N</p> <p><b>Florence</b></p> <p>WOLS 1200 100</p> <p><b>Greenville</b></p> <p>WFBC 1300 1000 N</p> <p><b>Spartanburg</b></p> <p>WSPA 920 1000</p>	<p><b>SOUTH DAKOTA</b></p> <p><b>Aberdeen</b></p> <p>KABR 1420 100</p> <p><b>Brookings</b></p> <p>KFDY 780 1000</p> <p><b>Huron</b></p> <p>KGDY 1340 250</p> <p><b>Pierre</b></p> <p>KGFJ 630 200</p> <p><b>Rapid City</b></p> <p>KOBH 1370 100 WCAT 1200 100</p> <p><b>Sioux Falls</b></p> <p>KELO 1200 100 KSOO 1110 2500 N</p> <p><b>Vermillion</b></p> <p>KUSD 890 500</p> <p><b>Watertown</b></p> <p>KWTN 1210 100</p> <p><b>Yankton</b></p> <p>WNAX 570 1000 C</p>	<p><b>Amarillo</b></p> <p>KGNC 1410 1000 N</p> <p><b>Austin</b></p> <p>KNOW 1500 100 C</p> <p><b>Beaumont</b></p> <p>KFDM 560 500</p> <p><b>Big Spring</b></p> <p>KRST 1500 100</p> <p><b>Brady</b></p> <p>KNEL 1500 100</p> <p><b>College Station</b></p> <p>WTAW 1120 500</p> <p><b>Corpus Christi</b></p> <p>KGFI 1500 100 KRIS 1330 250</p> <p><b>Corralcane</b></p> <p>KAND 1310 100</p> <p><b>Dallas</b></p> <p>KRLD 1040 10000 C WFAP 800 50000 N WRR 1280 500M</p> <p><b>Dublin</b></p> <p>KFPL 1310 100</p> <p><b>El Paso</b></p> <p>KROD 1500 100 KTSM 1310 100 WDAH 1310 100</p> <p><b>Fort Worth</b></p> <p>KFJZ 1370 100 KTAT 1240 1000M WBAP 800 50000 N</p> <p><b>Galveston</b></p> <p>KLUF 1370 100</p> <p><b>Houston</b></p> <p>KPRC 920 1000 N KTRH 1290 1000 C KXYZ 1440 1000</p> <p><b>Kilgore</b></p> <p>KOCA 1210 100</p> <p><b>Longview</b></p> <p>KPRO 1370 250</p> <p><b>Lubbock</b></p> <p>KPYO 1310 100</p> <p><b>Midland</b></p> <p>KRIH 1420 100</p> <p><b>Palestine</b></p> <p>KNET 1420 100</p> <p><b>Pampa</b></p> <p>KPDN 1310 100</p> <p><b>Paris</b></p> <p>KPIT 1500 100</p> <p><b>Pecos</b></p> <p>KIUN 1420 100</p> <p><b>Port Arthur</b></p> <p>KPAC 1260 500</p> <p><b>San Angelo</b></p> <p>KGKL 1370 100</p> <p><b>San Antonio</b></p> <p>KABC 1420 100 KMAC 1370 100 KONO 1370 100 KTSA 550 1000 C WQAI 1190 50000 N</p> <p><b>Sherman</b></p> <p>KRRV 1310 250</p> <p><b>Temple</b></p> <p>KTEM 1370 100</p> <p><b>Texarkana</b></p> <p>KCMC 1420 100</p> <p><b>Tyler</b></p> <p>KGKB 1500 100</p> <p><b>Waco</b></p> <p>WACO 1420 100 C</p> <p><b>Weslaco</b></p> <p>KRGV 1260 500</p>
<p><b>OKLAHOMA</b></p> <p><b>Ada</b></p> <p>KADA 1200 100M</p> <p><b>Ardmore</b></p> <p>KVSO 1210 100M</p> <p><b>Elk City</b></p> <p>KASA 1210 100M</p> <p><b>Enid</b></p> <p>KORC 1360 250M</p> <p><b>Muskogee</b></p> <p>KBIX 1500 100M</p> <p><b>Norman</b></p> <p>WNAD 1010 1000</p> <p><b>Oklahoma City</b></p> <p>KFXR 1310 100 KOMA 1480 5000 C KTOK 1370 100M WKY 900 1000 N</p> <p><b>Ponca City</b></p> <p>WBBZ 1200 100M</p> <p><b>Shawnee</b></p> <p>KGFF 1420 100M</p> <p><b>Tulsa</b></p> <p>KTUL 1400 500 C KVOO 1140 25000 N</p>	<p><b>OREGON</b></p> <p><b>Astoria</b></p> <p>KAST 1370 100</p> <p><b>Corvallis</b></p> <p>KOAC 550 1000</p> <p><b>Eugene</b></p> <p>KORE 1420 100</p> <p><b>Klamath Falls</b></p> <p>KFJI 1210 100</p> <p><b>Marshfield</b></p> <p>KOOS 1200 250</p> <p><b>Medford</b></p> <p>KMED 1310 100</p> <p><b>Portland</b></p> <p>KALE 1300 500 C KBPS 1420 100 KEX 1180 5000 N KGW 620 1000 R</p>	<p><b>PUERTO RICO</b></p> <p><b>Mayaguez</b></p> <p>WPRA 1370 100</p> <p><b>Ponce</b></p> <p>WPRP 1420 100</p>	<p><b>TENNESSEE</b></p> <p><b>Bristol</b></p> <p>WOPI 1500 100</p> <p><b>Chattanooga</b></p> <p>WAPO 1420 100 WDOD 1280 1000 C</p> <p><b>Jackson</b></p> <p>WTJS 1310 100</p> <p><b>Knoxville</b></p> <p>WNOX 1010 1000 C WROL 1310 100</p> <p><b>Memphis</b></p> <p>WHBQ 1370 100 WMC 780 1000 N WNRB 1430 500 WREC 600 1000 C</p> <p><b>Nashville</b></p> <p>WLAC 1470 5000 C WSIX 1210 100 WSM 650 50000 N</p>	<p><b>TEXAS</b></p> <p><b>Ablene</b></p> <p>KRBC 1420 100</p>			

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

**Wichita Falls**  
**KGKO 570 250 C**

## UTAH

**Cedar City**  
**KSUB 1310 100**  
**Ogden**  
**KLO 1490 500 B**  
**Price**  
**KEUB 1420 100**  
**Salt Lake City**  
**KDYL 1290 1000 R**  
**KSL 1130 5000 C**  
**KUTA 1500 100**

## VERMONT

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

## VIRGINIA

**Charlottesville**  
**WCHV 1420 100**  
**Danville**  
**WBTM 1370 100**  
**Harrisonburg**  
**WSVA 550 500**  
**Lynchburg**  
**WLVA 1200 100**  
**Newport News**  
**WGH 1310 100**  
**Norfolk**  
**WTAR 780 500 N**  
**Petersburg**  
**WPHR 880 500**  
**Richmond**  
**WBBL 1210 100**  
**WMBG 1210 100 C**  
**WRTD 1500 100 B**  
**WRVA 1110 5000 C**  
**Roanoke**  
**WDBJ 930 1000 C**

## WASHINGTON

**Aberdeen**  
**KXRO 1310 100**  
**Bellingham**  
**KVOS 1200 100**  
**Everett**  
**KRKO 1370 50**  
**Olympia**  
**KGJ 1210 100**  
**Pullman**  
**KWSC 1220 1000**  
**Seattle**  
**KEEN 1370 100**  
**KIRO 710 1000**  
**KJR 978 5000 B**  
**KOL 1270 1000 C**  
**KOMO 920 1000 R**  
**KRSC 1120 250**  
**KTW 1220 1000**  
**KXA 780 250**  
**Spokane**  
**KFIO 1120 100**

**KFPY 890 1000 C**  
**KGA 1470 5000 B**  
**KHQ 590 1000 E**

**Tacoma**  
**KMO 1330 1000**  
**KVI 570 1000 C**  
**Walla Walla**  
**KUJ 1370 100**  
**Wenatchee**  
**KPQ 1500 100**  
**Yakima**  
**KIT 1310 100**

## WEST VIRGINIA

**Bluefield**  
**WHIS 1410 500**  
**Charleston**  
**WCBS 580 500 C**  
**Clarksburg**  
**WBLK 1370 100**  
**Fairmont**  
**WMNM 890 500 C**  
**Huntington**  
**WSAZ 1190 1000**  
**Parkersburg**  
**WPAR 1420 100 C**  
**Wheeling**  
**WWVA 1160 5000 C**

## WISCONSIN

**Eau Claire**  
**WEAU 1050 1000**  
**Fond du Lac**  
**KFIZ 1420 100**  
**Green Bay**  
**WBTV 1200 100**  
**WTAQ 1330 1000 C**  
**Janesville**  
**WCLO 1200 100**  
**LaCrosse**  
**WKBH 1380 1000**  
**Madison**  
**WHA 940 5000**  
**WIBA 1280 1000 N**  
**Mantowoc**  
**WOMT 1210 100**  
**Milwaukee**  
**WEMP 1310 100**  
**WISN 1120 250 C**  
**WTMJ 620 1000 N**

**Poynette**  
**WIBU 1210 100**  
**Racine**  
**WRJN 1370 100**  
**Sheboygan**  
**WHBL 1380 250**  
**Stevens Point**  
**WLBL 900 2500**  
**Superior**  
**WDSM 1200 100**  
**Wausau**  
**WSAU 1370 100**

## WYOMING

**Casper**  
**KDPN 1440 500**  
**Sheridan**  
**KWVJ 1370 100**

## CANADA

### ALBERTA

**Calgary**  
**CFAC 930 100 F**  
**OFCN 1030 10000**  
**CJCF 690 100 F**  
**Edmonton**  
**CFRN 960 100 F**  
**CJCA 730 1000 F**  
**CKUA 580 500**  
**Lethbridge**  
**CJOC 950 100 F**

### BRITISH COLUMBIA

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

### MANITOBA

**Brandon**  
**CKX 1120 100 F**  
**Winnipeg**  
**CJRC 630 500 F**  
**CKY 910 15000 F**

### NEW BRUNSWICK

**Fredericton**  
**CFNB 550 500 F**  
**Moncton**  
**CKCW 1370 100 F**  
**St. John**  
**CHSJ 1120 500 F**

### N. W. TERRITORY

**Aklavik**  
**CJCU 1210 50**

### NOVA SCOTIA

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

### ONTARIO

**Brantford**  
**CKPO 930 100 F**

**Chatham**

**CFCO 630 100 F**  
**Cobalt**  
**CKMC 1310 50**  
**Fort William**  
**CKPR 730 100 F**  
**Hamilton**  
**CHML 1010 100 F**  
**CKOC 1120 500 F**  
**Kingston**  
**CFRC 1510 100 F**  
**Kirkland Lake**  
**CJKL 1310 100 F**  
**London**  
**CFPL 730 100 F**  
**North Bay**  
**CFCH 930 100 F**  
**Ottawa**  
**CKCO 1010 100 F**  
**CRCO 880 1000 F**  
**Prescott**  
**CFLC 930 100**  
**St. Catharines**  
**CKTB 1200 100 F**  
**Sault Ste. Marie**  
**CJIC 1500 100**  
**Stratford**  
**CJCS 1210 50**  
**Sudbury**  
**CKSO 780 1000 F**  
**Timmins**  
**CKBG 1420 100 F**  
**Toronto**  
**CFRB 690 10000 C**  
**CKCL 580 100 F**  
**CRCT 840 5000 N**  
**CRCY 1420 100 F**

**Waterloo**  
**CKCR 1510 100**  
**Windsor**  
**CKLW 1030 5000 M**  
**CRCW 600 500 F**  
**Wingham**  
**CKNX 1200 50**

### PRINCE EDWARD ISLAND

**Charlottetown**  
**CFYJ 630 1000 F**  
**CHCK 1310 50**  
**Summerside**  
**CHGS 1450 50 F**

### QUEBEC

**Chicoutimi**  
**CRCS 950 100 F**  
**Hull**  
**CKCH 1210 100 F**  
**Montreal**  
**CFCF 600 400 N**  
**CHLP 1120 100 F**  
**CKAC 730 5000 C**  
**CRCM 910 5000 F**  
**New Carlisle**  
**CHNC 960 1000 F**  
**Quebec**  
**CHRC 580 100**  
**CKCV 1310 100 F**  
**CRCK 1050 1000 F**

### SASKATCHEWAN

**Moose Jaw**  
**CHAB 1200 100 F**

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<b>Prince Albert</b>		
CKBI	1210	100 F
Regina		
CJRM	540	1000
CKCK	1010	500 F
Saskatoon		
CFQC	840	1000 F
Yorkton		
CJGX	1390	100 F

## NEWFOUNDLAND

<b>St. John's</b>		
VOAC	1065	40
VOAS	940	100
VOCM	1066	200
VOGY	840	400
VONF	1195	500
VOWR	681	500

## COSTA RICA

<b>San Jose</b>		
TIEP	850	500

## GUATEMALA

<b>Guatemala City</b>		
TGW	1210	10000

## MEXICO

### AGUASCALIENTES

<b>Aguascalientes</b>		
XEBI	1000	25
XEXC	810	350

### CHIHUAHUA

<b>Chihuahua</b>		
XEFI	1440	250
<b>Juarez</b>		
XEFV	1210	100
XEF	1450	100
XEJ	1020	1000
XEP	1160	500
<b>Parral</b>		
XEAT	1210	250

### COAHUILA

<b>Pedras Negras</b>		
XELO	1110	50000
NEFN	730	100000
<b>Sabinas</b>		
XEBX	640	250
<b>Saltillo</b>		
XEAS	1160	50
XELA	1240	50
<b>Torreón</b>		
XETB	1310	125
<b>Villa Acuna</b>		
XERA	840	350000

### D. F.

<b>Atezcapotzalco</b>		
XEMG	1060	100

<b>Gra. Anaya</b>		
XEDA	1220	200

<b>Mexico City</b>		
XEAL	660	1000
XEB	1030	10000
XEBZ	1160	100
XECW	1310	10
XEFO	940	5000
XEJP	1130	100
XEK	990	100
XEL	780	1000
XELZ	1370	100
XEMX	1280	100
XENC	860	50
XEW	890	50000
XEXM	610	500
XEYO	940	500

<b>Tacuba</b>		
XEFA	1180	500

### DURANGO

<b>Durango</b>		
XEE	1210	50

### GUANAJUATO

<b>Leon</b>		
XEKL	1240	500

### JALISCO

<b>Guadalajara</b>		
XEAD	1060	125
XED	1160	2500

<b>Guzman</b>		
XEBA	1080	20

### BAJA CALIFORNIA

<b>Agua Caliente</b>		
XEBC	730	5000
<b>Mexicali</b>		
XEAA	920	200
XEAO	660	250
<b>Rosarito</b>		
XEAG	1090	1000
<b>Tijuana</b>		
XEAC	980	250
XEBG	820	1000
XEC	1150	100
XEMO	860	5000
XEOK	760	2500

### MICHOACAN

<b>Morelia</b>		
XEI	1370	125

### NUEVO LEON

<b>Monterrey</b>		
XEFF	870	200
NEFJ	1230	100
XEH	720	250
XET	690	5000
XEX	1310	125

## PUEBLA

<b>Puebla</b>		
XETH	1210	100

### SAN LUIS POTOSI

<b>San Luis Potosi</b>		
XEXZ	1370	100
XEXH	1250	250

### SINALOA

<b>Mazatlan</b>		
XEBL	1220	50

### SONORA

<b>Hermasillo</b>		
XEBH	930	500
<b>Nogales</b>		
XEAF	990	750

### TAMAULIPAS

<b>Matamoros</b>		
XEAM	750	25
<b>Nuevo Laredo</b>		
XEBK	1000	100
XEFE	980	25
XENT	910	150000
<b>Reynosa</b>		
XEAW	960	50000
<b>Tampico</b>		
XEFW	1310	250
XES	990	250

### VERACRUZ

<b>Cordoba</b>		
XEAG	1310	10
<b>Jalapa</b>		
XEXB	1270	250
XEXD	1340	350
<b>Minatitlan</b>		
XEDW	1150	20
<b>Veracruz</b>		
XETF	1220	30
XEU	1010	250

### YUCATAN

<b>Merida</b>		
XEBJ	1160	20
XEFC	550	100
XEZ	630	500

## CUBA

<b>Catharién</b>		
CMHD	1270	250
<b>Camaguey</b>		
CMJA	1010	300
CMJC	1390	150
CMJE	1220	50
CMJF	1150	200
CMJK	780	250
CMJL	1340	100
CMJX	830	500
<b>Cardenas</b>		
CMGE	1370	150
<b>Ciego de Avila</b>		
CMJH	1360	100

CMJI	1130	150
CMJO	1180	50
<b>Cienfuegos</b>		
CMHJ	1160	175
CMHM	1450	100
CMHW	820	100
CMHX	760	200

<b>Cruces</b>		
CMHK	1330	250

<b>Havana</b>		
CMBD	1170	500
CMBG	1140	200
CMBS	770	150
CMBX	1070	500
CMBY	970	150
CMBZ	1000	500
CMCA	1350	450
CMCB	640	150
CMCD	950	250
CMCF	810	600
CMCG	680	1000
CMCJ	1100	500
CMCN	1450	...
CMCO	1200	250
CMCQ	1410	250
CMCU	1280	500
CMCW	750	150
CMCX	576	150
CMCY	1030	5000
CMK	730	3600
CMOA	1440	150
CMOK	1470	150
CMOX	1320	200
CMQ	880	500
CMW	600	1400
CMX	920	1000

<b>Holguin</b>		
CMFK	1460	250
CMKO	1280	...

<b>Manzanillo</b>		
CMKM	1120	200
<b>Matanzas</b>		
CMGG	1400	150
CMGF	1120	150
CMGH	790	500

<b>Moron</b>		
CMJP	1430	75
<b>Pinar del Rio</b>		
CMAB	1340	...
<b>Sagua la Grande</b>		
CMHA	1070	50

<b>Sancti Spiritus</b>		
CMHB	1240	50

<b>Santa Clara</b>		
CMHI	1210	150

<b>Santiago</b>		
CMKC	1250	150

CMKD	1050	250
CMKG	1160	...
CMKR	1400	100
CMKW	1350	...
CMKX	1190	...

## DOMINICAN REPUBLIC

<b>Trujillo</b>		
HIX	890	500

## HAITI

<b>Port-au-Prince</b>		
HBK	920	1000



## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>CFAC</b> 930 100	<b>CJCL</b> 1310 100	<b>CMBD</b> 1170 500
Calgary, Alta.	Kirkland Lake, Ont.	Havana, Cuba
<b>CFCF</b> 600 400	<b>CJLS</b> 1310 100	<b>CMBG</b> 1140 200
Montreal, Que.	Yarmouth, N. S.	Havana, Cuba
<b>CFCH</b> 930 100	<b>CJOC</b> 950 100	<b>CMBS</b> 770 150
North Bay, Ont.	Lethbridge, Alta.	Havana, Cuba
<b>CFCN</b> 1030 10000	<b>CJOR</b> 600 500	<b>CMBX</b> 1076 500
Calgary, Alta.	Vancouver, B. C.	Havana, Cuba
<b>CFCO</b> 630 100	<b>CJBC</b> 630 500	<b>CMBY</b> 970 150
Chatham, Ont.	Winnipeg, Man.	Havana, Cuba
<b>CFCT</b> 1450 50	<b>CJRM</b> 540 1000	<b>CMBZ</b> 1000 500
Victoria, B. C.	Regina, Sask.	Havana, Cuba
<b>CFCY</b> 630 1000	<b>CKAC</b> 730 5000	<b>CMCA</b> 1350 450
Charlottetown, P.E.I.	Montreal, Que.	Havana, Cuba
<b>CFJC</b> 880 100	<b>CKBI</b> 1210 100	<b>CMCB</b> 640 150
Kamloops, B. C.	Prince Albert, Sask.	Havana, Cuba
<b>CFLC</b> 930 100	<b>CKCD</b> 1010 100	<b>CMCD</b> 950 250
Prescott, Ont.	Vancouver, B. C.	Havana, Cuba
<b>CFNB</b> 550 500	<b>CKCH</b> 1210 100	<b>CMCF</b> 810 600
Fredericton, N. B.	Hull, Que.	Havana, Cuba
<b>CFPL</b> 730 100	<b>CKCK</b> 1010 500	<b>CMCG</b> 680 1000
London, Ont.	Regina, Sask.	Havana, Cuba
<b>CFPR</b> 580 50	<b>CKCL</b> 580 100	<b>CMCJ</b> 1100 500
Prince Rupert, B. C.	Toronto, Ont.	Havana, Cuba
<b>CFQC</b> 840 1000	<b>CKCO</b> 1010 100	<b>CMCN</b> 1500
Saskatoon, Sask.	Ottawa, Ont.	Havana, Cuba
<b>CFRB</b> 690 10000	<b>CKCR</b> 1510 100	<b>CMCO</b> 1200 250
Toronto, Ont.	Waterloo, Ont.	Havana, Cuba
<b>CFRC</b> 1510 100	<b>CKCV</b> 1310 100	<b>CMCQ</b> 1410 250
Kingston, Ont.	Quebec, Que.	Havana, Cuba
<b>CFRN</b> 960 100	<b>CKCW</b> 1370 100	<b>CMCU</b> 1280 500
Edmonton, Alta.	Moncton, N. B.	Havana, Cuba
<b>CHAB</b> 1200 100	<b>CKFC</b> 1410 50	<b>CMCW</b> 750 150
Moose Jaw, Sask.	Vancouver, B. C.	Havana, Cuba
<b>CHCK</b> 1310 50	<b>CKGB</b> 1420 100	<b>CMCX</b> 570 150
Charlottetown, P.E.I.	Timmins, Ont.	Havana, Cuba
<b>CHGS</b> 1450 50	<b>CKIC</b> 1010 50	<b>CMCY</b> 1030 5000
Summerside, P.E.I.	Wolfville, N. S.	Havana, Cuba
<b>CHLP</b> 1120 100	<b>CKLW</b> 1030 5000	<b>CMGC</b> 1400 150
Montreal, Que.	Windsor, Ont.	Matanzas, Cuba
<b>CHML</b> 1010 100	<b>CKMC</b> 1210 50	<b>CMGE</b> 1370 150
Hamilton, Ont.	Cobalt, Ont.	Cardenas, Cuba
<b>CHNC</b> 960 1000	<b>CKMO</b> 1410 100	<b>CMGF</b> 1120 150
New Carlisle, Que.	Vancouver, B. C.	Matanzas, Cuba
<b>CHNS</b> 930 1000	<b>CKNX</b> 1200 50	<b>CMGH</b> 790 500
Hallifax, N. S.	Wingham, Ont.	Matanzas, Cuba
<b>CHRC</b> 580 100	<b>CKOC</b> 1120 500	<b>CMHA</b> 1070 50
Quebec, Que.	Hamilton, Ont.	Sagua la Grande, Cu.
<b>CHSJ</b> 1120 500	<b>CKOV</b> 630 100	<b>CMHB</b> 1240 50
St. John, N. B.	Kelowna, B. C.	Sancti Spiritus, Cuba
<b>CHWK</b> 780 100	<b>CKPC</b> 930 100	<b>CMHD</b> 1270 250
Chilliwack, B. C.	Brantford, Ont.	Caibarien, Cuba
<b>CJAT</b> 910 1000	<b>CKPR</b> 730 100	<b>CMHI</b> 1210 150
Trail, B. C.	Fort William, Ont.	Santa Clara, Cuba
<b>CJCA</b> 730 1000	<b>CKSO</b> 780 1000	<b>CMHJ</b> 1160 175
Edmonton, Alta.	Sudbury, Ont.	Cienfuegos, Cuba
<b>CJCB</b> 1240 1000	<b>CKTB</b> 1200 100	<b>CMHK</b> 1330 250
Sydney, N. S.	St. Catherines, Ont.	Cruces, Cuba
<b>CJCJ</b> 690 100	<b>CKUA</b> 580 500	<b>CMHM</b> 1450 100
Calgary, Alta.	Edmonton, Alta.	Cienfuegos, Cuba
<b>CJCS</b> 1210 50	<b>CKWX</b> 1010 100	<b>CMHW</b> 820 100
Stratford, Ont.	Vancouver, B. C.	Cienfuegos, Cuba
<b>CJCU</b> 1210 50	<b>CKX</b> 1120 100	<b>CMHX</b> 760 200
Aklavik, N. W. T.	Brandon, Man.	Cienfuegos, Cuba
<b>CJGX</b> 1390 100	<b>CKY</b> 910 15000	<b>CMJA</b> 1010 300
Yorkton, Sask.	Winnipeg, Man.	Camaguey, Cuba
<b>CJIC</b> 1500 100	<b>CMAB</b> 1340	<b>CMJC</b> 1390 150
S. Ste. Marie, Ont.	Pinar del Rio, Cuba	Camaguey, Cuba

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>CMJE</b> 1220 50 Camaguey, Cuba	<b>HIX</b> 800 800 Trujillo, D. R.	<b>KELO</b> 1200 100 Sioux Falls, S. Dak
<b>CMJF</b> 1150 200 Camaguey, Cuba	<b>KABC</b> 1420 100 San Antonio, Texas	<b>KERN</b> 1370 100 Bakersfield, Calif.
<b>CMJH</b> 1300 100 Ciego de Avila, Cuba	<b>KABR</b> 1420 100 Aberdeen, S. Dak.	<b>KEUB</b> 1420 100 Price, Utah
<b>CMJI</b> 1130 150 Ciego de Avila, Cuba	<b>KADA</b> 1200 100 Ada, Okla.	<b>KEX</b> 1180 5000 Portland, Ore.
<b>CMJK</b> 780 250 Camaguey, Cuba	<b>KALB</b> 1420 100 Alexandria, La.	<b>KEAB</b> 770 10000 Lincoln, Neb.
<b>CMJL</b> 1340 100 Camaguey, Cuba	<b>KALE</b> 1300 500 Portland, Ore.	<b>KFAC</b> 1300 1000 Los Angeles, Calif.
<b>CMJO</b> 1180 50 Ciego de Avila, Cuba	<b>KAND</b> 1310 100 Corsicana, Texas	<b>KFBB</b> 1280 1000 Great Falls, Mont.
<b>CMJP</b> 1430 75 Camaguey, Cuba	<b>KANS</b> 1210 100 Wichita, Kans.	<b>KFBI</b> 1050 5000 Abilene, Kans.
<b>CMJX</b> 830 500 Camaguey, Cuba	<b>KARK</b> 890 500 Little Rock, Ark.	<b>KFBK</b> 1490 5000 Sacramento, Calif.
<b>CMK</b> 730 3000 Havana, Cuba	<b>KASA</b> 1210 100 Elk City, Okla.	<b>KFDM</b> 560 500 Beaumont, Texas
<b>CMKC</b> 1230 150 Santiago, Cuba	<b>KAST</b> 1370 100 Astoria, Ore.	<b>KFDY</b> 780 1000 Brookings, S. D.
<b>CMKD</b> 1050 250 Santiago, Cuba	<b>KATE</b> 1200 100 Albert Lea, Minn.	<b>KFEL</b> 920 500 Denver, Colo.
<b>CMKF</b> 1480 250 Holguin, Cuba	<b>KAWM</b> 1500 100 Gallup, N. Mex.	<b>KFEQ</b> 680 2500 St. Joseph, Mo.
<b>CMKG</b> 1160 Santiago, Cuba	<b>KBIN</b> 1500 100 Muskogee, Okla.	<b>KFGQ</b> 1370 100 Boone, Iowa
<b>CMKM</b> 1120 200 Manzanillo, Cuba	<b>KBFS</b> 1420 100 Portland, Ore.	<b>KFII</b> 1300 1000 Wichita, Kans.
<b>CMKO</b> 1280 Holguin, Cuba	<b>KBST</b> 1500 100 Big Spring, Texas	<b>KFI</b> 640 50000 Los Angeles, Calif.
<b>CMKR</b> 1400 100 Santiago, Cuba	<b>KBTM</b> 1200 100 Jonesboro, Ark.	<b>KFIO</b> 1120 100 Spokane, Wash.
<b>CMKW</b> 1350 Santiago, Cuba	<b>KCKN</b> 1310 100 Kansas City, Kans.	<b>KFIZ</b> 1420 100 Fond du Lac, Wis.
<b>CMKX</b> 1190 Santiago, Cuba	<b>KCMC</b> 1420 100 Texarkana, Texas	<b>KFJB</b> 1200 100 Marshalltown, Iowa
<b>CMOA</b> 1440 150 Havana, Cuba	<b>KCMO</b> 1370 100 Kansas City, Mo.	<b>KFJI</b> 1210 100 Klamath Falls, Ore.
<b>CMOK</b> 1470 150 Havana, Cuba	<b>KCRC</b> 1360 250 Enid, Okla.	<b>KFJM</b> 1410 500 Grand Forks, N. D.
<b>CMOX</b> 1320 200 Havana, Cuba	<b>KCRJ</b> 1310 100 Jerome, Ariz.	<b>KFJZ</b> 1370 100 Fort Worth, Texas
<b>CMQ</b> 880 500 Havana, Cuba	<b>KDAL</b> 1500 100 Duluth, Minn.	<b>KFKA</b> 880 500 Greeley, Colo.
<b>CMW</b> 600 1400 Havana, Cuba	<b>KDB</b> 1500 100 Santa Barbara, Calif.	<b>KFKU</b> 1220 1000 Lawrence, Kans.
<b>CMX</b> 920 1000 Havana, Cuba	<b>KDFN</b> 1440 500 Casper, Wyo.	<b>KFNF</b> 890 500 Shenandoah, Iowa
<b>CRCK</b> 1030 1000 Quebec, Que.	<b>KDKA</b> 980 50000 Pittsburgh, Pa.	<b>KFOR</b> 1210 100 Lincoln, Neb.
<b>CRCM</b> 910 5000 Montreal, Que.	<b>KDLR</b> 1210 100 Devils Lake, N. D.	<b>KFOX</b> 1250 1000 Long Beach, Calif.
<b>CRCO</b> 880 1000 Ottawa, Ont.	<b>KDNC</b> 1200 250 Lewistown, Mont.	<b>KFPL</b> 1310 100 Dublin, Texas
<b>CRCS</b> 950 100 Chicoutimi, Que.	<b>KDON</b> 1210 100 Monterrey, Calif.	<b>KFPV</b> 1210 100 Fort Smith, Ark.
<b>CRCT</b> 810 5000 Toronto, Ont.	<b>KDYL</b> 1290 1000 Salt Lake City, Utah	<b>KFPY</b> 890 1000 Spokane, Wash.
<b>CRCV</b> 1100 5000 Vancouver, B. C.	<b>KECA</b> 1430 1000 Los Angeles, Calif.	<b>KFQD</b> 780 250 Anchorage, Alaska
<b>CRCW</b> 600 500 Windsor, Ont.	<b>KEEN</b> 1370 100 Seattle, Wash.	<b>KFRK</b> 610 1000 San Francisco, Calif.
<b>CRCY</b> 1420 100 Toronto, Ont.	<b>KEHE</b> 780 1000 Los Angeles, Calif.	<b>KFRE</b> 1370 250 Longview, Texas
<b>HHK</b> 920 1000 Port-au-Prince, Haiti	<b>KELD</b> 1370 100 El Dorado, Ark.	<b>KFRU</b> 630 500 Columbia, Mo.

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>KFSD</b> 800 1000 San Diego, Calif.	<b>KGHF</b> 1320 500 Pueblo, Colo.	<b>KIUN</b> 1420 100 Pecos, Texas
<b>KFSG</b> 1120 500 Los Angeles, Calif.	<b>KGHI</b> 1200 100 Little Rock, Ark.	<b>KIUP</b> 1370 100 Durango, Colo.
<b>KFUO</b> 550 500 St. Louis, Mo.	<b>KGHL</b> 780 1000 Billings, Mont.	<b>KJBS</b> 1070 500 San Francisco, Calif.
<b>KFVD</b> 1000 250 Los Angeles, Calif.	<b>KGIR</b> 1340 1000 Butte, Mont.	<b>KJR</b> 970 5000 Seattle, Wash.
<b>KFVS</b> 1210 100 Cape Girardeau, Mo.	<b>KGIW</b> 1420 100 Alamosa, Colo.	<b>KLAH</b> 1210 100 Carlsbad, N. Mex.
<b>KFWB</b> 950 1000 Hollywood, Calif.	<b>KGKB</b> 1500 100 Tyler, Texas	<b>KLCN</b> 1290 100 Blytheville, Ark.
<b>KFXD</b> 1200 100 Nampa, Idaho	<b>KGKL</b> 1370 100 San Angelo, Texas	<b>KLO</b> 1400 500 Ogden, Utah
<b>KFXJ</b> 1200 100 Grand Junction, Colo.	<b>KGKO</b> 570 250 Wichita Falls, Texas	<b>KLPM</b> 1240 250 Minot, N. D.
<b>KFXM</b> 1210 100 San Bernardino, Calif.	<b>KGKY</b> 1500 100 Scottsbluff, Neb.	<b>KLRA</b> 1390 1000 Little Rock, Ark.
<b>KFXR</b> 1310 100 Oklahoma City, Okla.	<b>KGLO</b> 1210 100 Mason City, Iowa	<b>KLS</b> 1280 250 Oakland, Calif.
<b>KFYO</b> 1310 100 Lubbock, Texas	<b>KGMB</b> 1320 1000 Honolulu, T. H.	<b>KLUF</b> 1370 100 Galveston, Texas
<b>KFYR</b> 550 1000 Bismarck, N. D.	<b>KGNC</b> 1410 1000 Amarillo, Texas	<b>KTX</b> 880 1000 Oakland, Calif.
<b>KGA</b> 1470 5000 Spokane, Wash.	<b>KGNF</b> 1430 1000 North Platte, Neb.	<b>KLZ</b> 560 1000 Denver, Colo.
<b>KGAR</b> 1370 100 Tucson, Ariz.	<b>KGNO</b> 1340 250 Dodge City, Kans.	<b>KMA</b> 930 1000 Shenandoah, Iowa
<b>KGB</b> 1330 1000 San Diego, Calif.	<b>KGO</b> 790 7500 San Francisco, Calif.	<b>KMAC</b> 1370 100 San Antonio, Texas
<b>KGBU</b> 900 500 Ketchikan, Alaska	<b>KGU</b> 750 2500 Honolulu, T. H.	<b>KMBC</b> 950 1000 Kansas City, Mo.
<b>KGBX</b> 1230 500 Springfield, Mo.	<b>KGVO</b> 1260 1000 Missoula, Mont.	<b>KMED</b> 1310 100 Medford, Ore.
<b>KGCA</b> 1270 100 Decorah, Iowa	<b>KGW</b> 620 1000 Portland, Ore.	<b>KMJ</b> 580 500 Fresno, Calif.
<b>KGCU</b> 1240 250 Mandan, N. D.	<b>KGY</b> 1210 100 Olympia, Wash.	<b>KMLB</b> 1200 100 Monroe, La.
<b>KGCX</b> 1450 1000 Wolf Point, Mont.	<b>KHBC</b> 1400 250 Hilo, T. H.	<b>KMMJ</b> 740 1000 Clay Center, Neb.
<b>KGDE</b> 1200 100 Fergus Falls, Minn.	<b>KHJ</b> 900 1000 Los Angeles, Calif.	<b>KMO</b> 1330 1000 Tacoma, Wash.
<b>KGDM</b> 1100 1000 Stockton, Calif.	<b>KHQ</b> 590 1000 Spokane, Wash.	<b>KMOX</b> 1090 50000 St. Louis, Mo.
<b>KGDY</b> 1340 250 Huron, S. D.	<b>KHSL</b> 950 250 Chico, Calif.	<b>KMPC</b> 710 500 Beverly Hills, Calif.
<b>KGER</b> 1360 1000 Long Beach, Calif.	<b>KHUB</b> 1310 250 Watsonville, Calif.	<b>KMTR</b> 570 1000 Hollywood, Calif.
<b>KGEZ</b> 1310 100 Kalispell, Mont.	<b>KICA</b> 1370 100 Clovis, N. M.	<b>KNEL</b> 1500 100 Brady, Texas
<b>KGFF</b> 1420 100 Shawnee, Okla.	<b>KID</b> 1320 500 Idaho Falls, Idaho	<b>KNET</b> 1420 100 Palestine, Texas
<b>KGFI</b> 1500 100 Corpus Christi, Tex.	<b>KIDO</b> 1350 1000 Boise, Idaho	<b>KNOW</b> 1500 100 Austin, Texas
<b>KGfJ</b> 1200 100 Los Angeles, Calif.	<b>KIDW</b> 1420 100 Lamar, Colo.	<b>KNX</b> 1050 50000 Los Angeles, Calif.
<b>KGFL</b> 1370 100 Roswell, N. M.	<b>KIEM</b> 1450 500 Eureka, Calif.	<b>KOA</b> 830 50000 Denver, Colo.
<b>KGFW</b> 1310 100 Kearney, Neb.	<b>KIEV</b> 850 250 Glendale, Calif.	<b>KOAC</b> 550 1000 Corvallis, Ore.
<b>KGFX</b> 630 200 Pierre, S. D.	<b>KINY</b> 1310 100 Juneau, Alaska	<b>KOAM</b> 790 1000 Pittsburg, Kans.
<b>KGGC</b> 1420 100 San Francisco, Calif.	<b>KIRO</b> 710 1000 Seattle, Wash.	<b>KOB</b> 1180 16000 Albuquerque, N. M.
<b>KGGF</b> 1010 1000 Coffeyville, Kans.	<b>KIT</b> 1310 100 Yakima, Wash.	<b>KOBH</b> 1370 100 Rapid City, S. Dak.
<b>KGGM</b> 1230 1000 Albuquerque, N. M.	<b>KIUL</b> 1210 100 Garden City, Kans.	<b>KOCA</b> 1210 100 Kilgore, Texas

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>KOH</b> 1380 500	<b>KRLH</b> 1420 100	<b>KTOX</b> 1370 100
Reno, Nev.	Midland, Texas	Oklahoma City, Okla.
<b>KOIL</b> 1280 1000	<b>KRMC</b> 1310 100	<b>KTBB</b> 740 250
Omaha, Neb.	Jamestown, N. Dak.	Modesto, Calif.
<b>KOIN</b> 840 1000	<b>KRMD</b> 1310 100	<b>KTRH</b> 1290 1000
Portland, Ore.	Shreveport, La.	Houston, Texas
<b>KOKO</b> 1370 100	<b>KRNR</b> 1500 100	<b>KTSA</b> 550 1000
La Junta, Colo.	Roseburg, Ore.	San Antonio, Texas
<b>KOL</b> 1270 1000	<b>KRNT</b> 1320 1000	<b>KTSM</b> 1310 100
Seattle, Wash.	Des Moines, Iowa	El Paso, Texas
<b>KOMA</b> 1480 5000	<b>KROC</b> 1310 100	<b>KTUL</b> 1400 500
Oklahoma City, Okla.	Rochester, Minn.	Tulsa, Okla.
<b>KOMO</b> 920 1000	<b>KROD</b> 1500 100	<b>KTW</b> 1220 1000
Seattle, Wash.	El Paso, Texas	Seattle, Wash.
<b>KONO</b> 1370 100	<b>KROW</b> 930 1000	<b>KUJ</b> 1370 100
San Antonio, Texas	Oakland, Calif.	Walla Walla, Wash.
<b>KOOS</b> 1300 250	<b>KROY</b> 1210 100	<b>KUMA</b> 1420 100
Marshfield, Ore.	Sacramento, Calif.	Yuma, Ariz.
<b>KORE</b> 1420 100	<b>KRQA</b> 1310 100	<b>KUOA</b> 1260 2500
Eugene, Ore.	Santa Fe, N. Mex.	Siloam Springs, Ark.
<b>KOTN</b> 1500 100	<b>KRRV</b> 1310 250	<b>KUSD</b> 890 500
Pine Bluffs, Ark.	Sherman, Texas	Vermillion, S. Dak.
<b>KOVC</b> 1500 100	<b>KRSC</b> 1120 250	<b>KUTA</b> 1500 100
Valley City, N. Dak.	Seattle, Wash.	Salt Lake City, Utah
<b>KOY</b> 1390 1000	<b>KSAC</b> 580 500	<b>KVCV</b> 1200 100
Phoenix, Ariz.	Manhattan, Kans.	Redding, Calif.
<b>KPAC</b> 1240 500	<b>KSAL</b> 1500 100	<b>KVEC</b> 1200 150
Port Arthur, Texas	Salina, Kans.	San Luis Obispo, Cal.
<b>KPDN</b> 1310 100	<b>KSCJ</b> 1330 1000	<b>KVGB</b> 1370 100
Pampa, Texas	Sloux City, Iowa	Great Bend, Kans.
<b>KPFA</b> 1210 100	<b>KSD</b> 550 1000	<b>KVI</b> 570 1000
Helena, Mont.	St. Louis, Mo.	Tacoma, Wash.
<b>KPLC</b> 1500 100	<b>KSEI</b> 900 250	<b>KVOA</b> 1260 1000
Lake Charles, La.	Pocatello, Idaho	Tucson, Ariz.
<b>KPLT</b> 1500 100	<b>KSFO</b> 500 1000	<b>KVOD</b> 920 500
Paris, Texas	San Francisco, Calif.	Denver, Colo.
<b>KPMC</b> 1550 1000	<b>KSL</b> 1130 50000	<b>KVOE</b> 1500 100
Bakersfield, Calif.	Salt Lake City, Utah	Santa Ana, Calif.
<b>KPO</b> 680 50000	<b>KSLM</b> 1370 100	<b>KVOL</b> 1310 100
San Francisco, Calif.	Salem, Ore.	Lafayette, La.
<b>KPOF</b> 880 500	<b>KSO</b> 1430 500	<b>KVQO</b> 1140 25000
Denver, Colo.	Des Moines, Iowa	Tulsa, Okla.
<b>KPPC</b> 1210 100	<b>KSOO</b> 1110 2500	<b>KVOR</b> 1270 1000
Pasadena, Calif.	Sioux Falls, S. Dak.	Colorado Sprgs., Colo.
<b>KPQ</b> 1500 100	<b>KSRO</b> 1310 250	<b>KVOS</b> 1200 100
Wenatchee, Wash.	Santa Rosa, Calif.	Bellingham, Wash.
<b>KPRC</b> 920 1000	<b>KSTP</b> 1460 10000	<b>KVOX</b> 1310 100
Houston, Texas	St. Paul, Minn.	Moorhead, Minn.
<b>KQV</b> 1380 500	<b>KSUB</b> 1310 100	<b>KVSO</b> 1210 100
Pittsburgh, Pa.	Cedar City, Utah	Ardmore, Okla.
<b>KQW</b> 1010 1000	<b>KSUN</b> 1200 100	<b>KWBG</b> 1420 100
San Jose, Calif.	Lowell, Ariz.	Hutchinson, Kans.
<b>KRBC</b> 1420 100	<b>KTAR</b> 620 1000	<b>KWG</b> 1200 100
Abilene, Texas	Phoenix, Ariz.	Stockton, Calif.
<b>KRE</b> 1370 100	<b>KTAT</b> 1240 1000	<b>KWJJ</b> 1040 500
Berkeley, Calif.	Fort Worth, Texas	Portland, Ore.
<b>KRGV</b> 1260 500	<b>KTBS</b> 1450 1000	<b>KWK</b> 1350 1000
Welasco, Texas	Shreveport, La.	St. Louis, Mo.
<b>KRIS</b> 1330 250	<b>KTEM</b> 1370 100	<b>KWKH</b> 1100 10000
Corpus Christi, Tex.	Temple, Texas	Shreveport, La.
<b>KRKD</b> 1120 500	<b>KTFI</b> 1240 1000	<b>KWLC</b> 1270 100
Los Angeles, Calif.	Twin Falls, Idaho	Decorah, Iowa
<b>KRKO</b> 1370 50	<b>KTHS</b> 1060 1000	<b>KWNO</b> 1200 100
Everett, Wash.	Hot Springs, Ark.	Winona, Minn.
<b>KRLC</b> 1420 100	<b>KTKC</b> 1190 250	<b>KWOS</b> 1310 100
Lewiston, Idaho	Visalia, Calif.	Jefferson City, Mo.
<b>KRLD</b> 1040 10000	<b>KTMS</b> 1220 500	<b>KWSC</b> 1220 1000
Dallas, Texas	Santa Barbara, Calif.	Pullman, Wash.

## NORTH AMERICAN B. C. STATIONS BY CALLS

KWTN 1210	100	WATR 1190	100	WBNY 1370	100
Watertown, S. Dak.		Waterbury, Conn.		Buffalo, N. Y.	
KWTO 560	5000	WAVE 940	1000	WBOQ 860	50000
Springfield, Mo.		Louisville, Ky.		New York, N. Y.	
KWYO 1370	100	WAWZ 1350	500	WBOW 1310	100
Sheridan, Wyo.		Zarephath, N. J.		Terre Haute, Ind.	
KXA 760	250	WAYX 1200	100	WBRB 1210	100
Seattle, Wash.		Waycross, Ga.		Red Bank, N. J.	
KXBY 1530	1000	WAZL 1420	100	WBRC 930	1000
Kansas City, Mo.		Hazleton, Pa.		Birmingham, Ala.	
KXL 1420	100	WBBA 890	500	WBRE 1310	100
Portland, Ore.		West Lafayette, Ind.		Wilkes-Barre, Pa.	
KXO 1500	100	WBAL 760	2500	WBRY 1530	1000
El Centro, Calif.		Baltimore, Md.		Waterbury, Conn.	
KXRO 1310	100	WBAL 1060	10000	WBT 1080	50000
Aberdeen, Wash.		Baltimore, Md.		Charlotte, N. C.	
KXYZ 1440	1000	WBAP 800	50000	WBTM 1370	100
Houston, Texas		Fort Worth, Texas		Danville, Va.	
KYA 1230	1000	WBAX 1210	100	WBZ 990	50000
San Francisco, Calif.		Wilkes-Barre, Pa.		Boston, Mass.	
KYCA 1500	100	WBBC 1400	500	WBZA 990	1000
Prescott, Ariz.		Brooklyn, N. Y.		Springfield, Mass.	
KYOS 1040	250	WBBL 1210	100	WCAD 1220	500
Merced, Calif.		Richmond, Va.		Canton, N. Y.	
KYW 1020	10000	WBBM 770	50000	WCAE 1220	1000
Philadelphia, Pa.		Chicago, Ill.		Pittsburgh, Pa.	
TGW 1210	10000	WBBR 1300	1000	WCAL 1250	100
Guatemala, Gua.		Brooklyn, N. Y.		Northfield, Minn.	
TIEP 850	500	WBRZ 1200	100	WCAM 1280	500
San Jose, C. R.		Ponca City, Okla.		Camden, N. J.	
VAS 685	2000	WBCM 1410	500	WCAO 600	500
Glace Bay, N. S.		Bay City, Mich.		Baltimore, Md.	
VOAC 1065	40	WBN 900	1000	WCAP 1280	500
St. John's, Nfld.		Buffalo, N. Y.		Asbury Park, N. J.	
VOAS 940	100	WBEO 1310	100	WCAT 1200	100
St. John's, Nfld.		Marquette, Mich.		Rapid City, S. Dak.	
VOCM 1008	200	WBHP 1200	100	WCAU 1170	50000
St. John's, Nfld.		Huntsville, Ala.		Philadelphia, Pa.	
VOGY 840	400	WBIG 1440	1000	WCAX 1200	100
St. John's, Nfld.		Greensboro, N. C.		Burlington, Vt.	
VONF 1195	500	WBLK 1370	100	WCAZ 1070	100
St. John's, Nfld.		Clarksburg, W. Va.		Carthage, Ill.	
VOWR 681	500	WBLE 1210	100	WCBA 1440	500
St. John's, Nfld.		Lima, Ohio		Allentown, Pa.	
WAAB 1410	500	WBNO 1200	100	WCBD 1080	5000
Boston, Mass.		New Orleans, La.		Chicago, Ill.	
WAAF 920	1000	WBNS 1430	500	WCBM 1370	100
Chicago, Ill.		Columbus, Ohio		Baltimore, Md.	
WAAT 940	500	WBNX 1350	1000	WCBS 1420	100
Jersey City, N. J.		New York, N. Y.		Springfield, Ill.	
WAAW 660	500			WCCO 810	50000
Omaha, Neb.				Minneapolis, Minn.	
WABC 860	50000			WCFL 970	5000
New York, N. Y.				Chicago, Ill.	
WABI 1200	100			WCHS 580	500
Bangor, Maine				Charleston, W. Va.	
WABY 1370	100			WCHV 1420	100
Albany, N. Y.				Charlottesville, Va.	
WACO 1420	100			WCKY 1490	5000
Waco, Texas				Covington, Ky.	
WADC 1320	1000			WCLO 1200	100
Akron, Ohio				Janesville, Wis.	
WAGF 1370	250			WCLS 1310	100
Dothan, Ala.				Joliet, Ill.	
WAGM 1420	100			WCMI 1310	100
Presque Isle, Me.				Ashland, Ky.	
WAIM 1200	100			WCNW 1500	100
Anderson, S. C.				Brooklyn, N. Y.	

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WCOA</b> 1340 Pensacola, Fla.	500	<b>WEEU</b> 830 Reading, Pa.	1000	<b>WGCM</b> 1210 Gulfport, Miss.	100
<b>WCOG</b> 880 Meridian, Miss.	500	<b>WELI</b> 900 New Haven, Conn.	500	<b>WGES</b> 1360 Chicago, Ill.	500
<b>WCOL</b> 1210 Columbus, Ohio	100	<b>WELL</b> 1420 Battle Creek, Mich.	100	<b>WGH</b> 1310 Newport News, Va.	100
<b>WCOP</b> 1120 Boston, Mass.	500	<b>WEMP</b> 1310 Milwaukee, Wis.	100	<b>WGL</b> 1370 Fort Wayne, Ind.	100
<b>WCPO</b> 1200 Cincinnati, Ohio	100	<b>WENR</b> 870 Chicago, Ill.	50000	<b>WGN</b> 720 Chicago, Ill.	50000
<b>WCRW</b> 1210 Chicago, Ill.	100	<b>WEOA</b> 1370 Evansville, Ind.	100	<b>WGNV</b> 1210 Newburgh, N. Y.	100
<b>WCSC</b> 1360 Charleston, S. C.	500	<b>WESG</b> 850 Elmira, N. Y.	1000	<b>WGPC</b> 1420 Albany, Ga.	100
<b>WCSH</b> 940 Portland, Me.	1000	<b>WEST</b> 1200 Easton, Pa.	100	<b>WGR</b> 550 Buffalo, N. Y.	1000
<b>WDAE</b> 1220 Tampa, Fla.	1000	<b>WEVD</b> 1300 New York, N. Y.	1000	<b>WGRC</b> 1370 New Albany, Ind.	250
<b>WDAF</b> 610 Kansas City, Mo.	1000	<b>WEW</b> 760 St. Louis, Mo.	1000	<b>WGST</b> 890 Atlanta, Ga.	1000
<b>WDAH</b> 1310 El Paso, Texas	100	<b>WEXL</b> 1310 Royal Oak, Mich.	50	<b>WGVA</b> 1050 Indianapolis, Ind.	1000
<b>WDAS</b> 1370 Philadelphia, Pa.	100	<b>WFAA</b> 800 Dallas, Texas	50000	<b>WGY</b> 790 Schenectady, N. Y.	50000
<b>WDAY</b> 940 Fargo, N. Dak.	1000	<b>WFAB</b> 1300 New York, N. Y.	1000	<b>WHA</b> 940 Madison, Wis.	5000
<b>WDBJ</b> 930 Roanoke, Va.	1000	<b>WFAM</b> 1200 South Bend, Ind.	100	<b>WHAM</b> 1150 Rochester, N. Y.	50000
<b>WDBO</b> 580 Orlando, Fla.	1000	<b>WFAS</b> 1210 White Plains, N. Y.	100	<b>WHAS</b> 820 Louisville, Ky.	50000
<b>WDEL</b> 1120 Wilmington, Del.	250	<b>WFBC</b> 1300 Greenville, S. C.	1000	<b>WHAT</b> 1310 Philadelphia, Pa.	100
<b>WDEV</b> 550 Waterbury, Vt.	500	<b>WFBG</b> 1310 Altoona, Pa.	100	<b>WHAZ</b> 1300 Troy, N. Y.	500
<b>WDGY</b> 1180 Minneapolis, Minn.	1000	<b>WFBL</b> 1360 Syracuse, N. Y.	1000	<b>WHB</b> 860 Kansas City, Mo.	1000
<b>WDNC</b> 1500 Durham, N. C.	100	<b>WFBM</b> 1230 Indianapolis, Ind.	1000	<b>WHBB</b> 1500 Selma, Ala.	100
<b>WDOD</b> 1280 Chattanooga, Tenn.	1000	<b>WFRR</b> 1270 Baltimore, Md.	500	<b>WHBC</b> 1260 Canton, Ohio	100
<b>WDRC</b> 1330 Hartford, Conn.	1000	<b>WFDF</b> 1310 Flint, Mich.	100	<b>WHBF</b> 1310 Rock Island, Ill.	100
<b>WDSM</b> 1200 Superior, Wis.	100	<b>WFEA</b> 1340 Manchester, N. H.	500	<b>WHBI</b> 1250 Newark, N. J.	1000
<b>WDSU</b> 1250 New Orleans, La.	1000	<b>WFIL</b> 560 Philadelphia, Pa.	1000	<b>WHBL</b> 1300 Sheboygan, Wis.	250
<b>WDWS</b> 1370 Champaign, Ill.	100	<b>WFLA</b> 620 Clearwater, Fla.	1000	<b>WHBQ</b> 1370 Memphis, Tenn.	100
<b>WDZ</b> 1020 Tuscola, Ill.	250	<b>WFMD</b> 900 Frederick, Md.	500	<b>WHBU</b> 1210 Anderson, Ind.	100
<b>WEAF</b> 660 New York, N. Y.	50000	<b>WFOR</b> 1370 Hattiesburg, Miss.	100	<b>WHBY</b> 1200 Green Bay, Wis.	100
<b>WEAN</b> 780 Providence, R. I.	1000	<b>WFOY</b> 1210 St. Augustine, Fla.	100	<b>WHDF</b> 1370 Calumet, Mich.	100
<b>WEAU</b> 1050 Eau Claire, Wis.	1000	<b>WFTC</b> 1200 Kinston, N. C.	100	<b>WHDH</b> 830 Boston, Mass.	1000
<b>WEBC</b> 1290 Duluth, Minn.	1000	<b>WGAL</b> 1500 Lancaster, Pa.	100	<b>WHDL</b> 1400 Olean, N. Y.	250
<b>WEBQ</b> 1210 Harrisburg, Ill.	100	<b>WGAN</b> 640 Portland, Me.	500	<b>WHEB</b> 740 Portsmouth, N. H.	250
<b>WEBR</b> 1310 Buffalo, N. Y.	100	<b>WGAR</b> 1450 Cleveland, Ohio	500	<b>WHEC</b> 1430 Rochester, N. Y.	600
<b>WEDC</b> 1210 Chicago, Ill.	100	<b>WGBB</b> 1210 Freeport, N. Y.	100	<b>WHEF</b> 1500 Kosciusko, Miss.	100
<b>WEED</b> 1420 Rocky Mound, N. C.	100	<b>WGBF</b> 630 Evansville, Ind.	500	<b>WHFC</b> 1420 Cicero, Ill.	100
<b>WEEI</b> 590 Boston, Mass.	1000	<b>WGBI</b> 880 Scranton, Pa.	500	<b>WHIO</b> 1260 Dayton, Ohio	1000
				<b>WHIP</b> 1480 Hammond, Ind.	5000



## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WHIS</b> 1410	500	<b>WJBK</b> 1500	100	<b>WLAP</b> 1420	100
Bluefield, W. Va.		Detroit, Mich.		Lexington, Ky.	
<b>WHJB</b> 620	250	<b>WJBL</b> 1200	100	<b>WLB</b> 1250	1000
Greensburg, Pa.		Decatur, Ill.		Minneapolis, Minn.	
<b>WHK</b> 1390	1000	<b>WJBO</b> 1420	100	<b>WLBC</b> 1310	100
Cleveland, Ohio		Baton Rouge, La.		Muncie, Ind.	
<b>WHKC</b> 640	500	<b>WJBR</b> 1420	100	<b>WLBL</b> 900	2500
Columbus, Ohio		Gastonia, N. C.		Stevens Point, Wis.	
<b>WHLB</b> 1370	100	<b>WJBW</b> 1200	100	<b>WLBZ</b> 620	500
Virginia, Minn.		New Orleans, La.		Bangor, Me.	
<b>WHN</b> 1010	1000	<b>WJBY</b> 1210	100	<b>WLEU</b> 1420	100
New York, N. Y.		Gadsden, Ala.		Erie, Pa.	
<b>WHO</b> 1000	50000	<b>WJDX</b> 1270	1000	<b>WLIH</b> 1370	100
Des Moines, Iowa		Jackson, Miss.		Lowell, Mass.	
<b>WHOM</b> 1450	250	<b>WJEJ</b> 1210	100	<b>WLMU</b> 1210	100
Jersey City, N. J.		Hagerstown, Md.		Middlesboro, Ky.	
<b>WHP</b> 1430	500	<b>WJIM</b> 1210	100	<b>WLNH</b> 1310	100
Harrisburg, Pa.		Lansing, Mich.		Laconia, N. H.	
<b>WIBA</b> 1280	1000	<b>WJJD</b> 1130	20000	<b>WLS</b> 870	50000
Madison, Wis.		Chicago, Ill.		Chicago, Ill.	
<b>WIBG</b> 970	100	<b>WJMS</b> 1420	100	<b>WLTH</b> 1400	500
Glenside, Pa.		Ironwood, Mich.		Brooklyn, N. Y.	
<b>WIBM</b> 1370	100	<b>WJNO</b> 1200	100	<b>WLVA</b> 1200	100
Jackson, Mich.		W. Palm Beach, Fla.		Lynchburg, Va.	
<b>WIBU</b> 1210	100	<b>WJOY</b> 950	500	<b>WLW</b> 700	500000
Poynette, Wis.		Saginaw, Mich.		Cincinnati, Ohio	
<b>WIBW</b> 580	1000	<b>WJR</b> 750	50000	<b>WLWL</b> 1100	5000
Topeka, Kans.		Detroit, Mich.		New York, N. Y.	
<b>WIBX</b> 1200	100	<b>WJRD</b> 1200	100	<b>WMAI</b> 630	250
Utica, N. Y.		Tuscaloosa, Ala.		Washington, D. C.	
<b>WICA</b> 940	250	<b>WJSV</b> 1460	10000	<b>WMAQ</b> 670	50000
Ashtabula, Ohio		Washington, D. C.		Chicago, Ill.	
<b>WICO</b> 600	500	<b>WJTN</b> 1210	50	<b>WMAS</b> 1420	100
Bridgeport, Conn.		Jamestown, N. Y.		Springfield, Mass.	
<b>WIL</b> 1200	100	<b>WJW</b> 1210	100	<b>WMAZ</b> 1180	1000
St. Louis, Mo.		Akron, Ohio		Macon, Ga.	
<b>WILL</b> 890	250	<b>WJZ</b> 760	50000	<b>WMBC</b> 1420	100
Urbana, Ill.		New York, N. Y.		Detroit, Mich.	
<b>WILM</b> 1420	100	<b>WKAQ</b> 1240	1000	<b>WMBD</b> 1440	500
Wilmington, Del.		San Juan, P. R.		Peoria, Ill.	
<b>WIND</b> 560	1000	<b>WKAR</b> 850	1000	<b>WMBG</b> 1210	100
Gary, Ind.		East Lansing, Mich.		Richmond, Va.	
<b>WINS</b> 1180	1000	<b>WKBB</b> 1500	100	<b>WMBH</b> 1420	100
New York, N. Y.		East Dubuque, Ill.		Joplin, Mo.	
<b>WIOD</b> 1300	1000	<b>WKBH</b> 1380	1000	<b>WMBI</b> 1080	5000
Miami, Fla.		LaCrosse, Wis.		Chicago, Ill.	
<b>WIP</b> 610	1000	<b>WKBN</b> 570	500	<b>WMO</b> 1310	100
Philadelphia, Pa.		Youngstown, Ohio		Auburn, N. Y.	
<b>WIRE</b> 1400	1000	<b>WKBO</b> 1200	100	<b>WMBQ</b> 1500	100
Indianapolis, Ind.		Harrisburg, Pa.		Brooklyn, N. Y.	
<b>WIS</b> 560	1000	<b>WKBV</b> 1500	100	<b>WMBR</b> 1370	100
Columbia, S. C.		Richmond, Ind.		Jacksonville, Fla.	
<b>WISN</b> 1120	250	<b>WKBW</b> 1480	5000	<b>WMS</b> 1420	250
Milwaukee, Wis.		Buffalo, N. Y.		Uniontown, Pa.	
<b>WJAC</b> 1310	100	<b>WKBZ</b> 1500	100	<b>WMC</b> 780	1000
Johnstown, Pa.		Muskegon, Mich.		Memphis, Tenn.	
<b>WJAG</b> 1060	1000	<b>WKEU</b> 1500	100	<b>WMCA</b> 570	1010
Norfolk, Neb.		Griffin, Ga.		New York, N. Y.	
<b>WJAR</b> 890	1000	<b>WKOK</b> 1210	100	<b>WMEX</b> 1500	100
Providence, R. I.		Sunbury, Pa.		Boston, Mass.	
<b>WJAS</b> 1290	1000	<b>WKRC</b> 550	1000	<b>WMFD</b> 1370	100
Pittsburgh, Pa.		Cincinnati, Ohio		Wilmington, N. C.	
<b>WJAX</b> 900	1000	<b>WKY</b> 900	1000	<b>WMFF</b> 1310	250
Jacksonville, Fla.		Oklahoma City, Okla.		Plattsburg, N. Y.	
<b>WJAY</b> 610	500	<b>WKZO</b> 590	1000	<b>WMFG</b> 1210	100
Cleveland, Ohio		Kalamazoo, Mich.		Hibbing, Minn.	
<b>WJBO</b> 1200	100	<b>WLAO</b> 1470	5000	<b>WMFJ</b> 1420	100
Bloomington, Ill.		Nashville, Tenn.		Daytona Beach, Fla.	
		<b>WLAK</b> 1310	100		
		Lakeland, Fla.			

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WMFN</b> 1210 100 Grenada, Miss.	<b>WORC</b> 1280 500 Worcester, Mass.	<b>WRBK</b> 1410 500 Rockford, Ill.
<b>WMFO</b> 1370 100 Decatur, Ala.	<b>WORL</b> 1320 1000 York, Pa.	<b>WROL</b> 1310 100 Knoxville, Tenn.
<b>WMFR</b> 1200 100 High Point, N. C.	<b>WORL</b> 920 500 Boston, Mass.	<b>WRR</b> 1280 500 Dallas, Texas
<b>WMIN</b> 1370 100 St. Paul, Minn.	<b>WOSU</b> 570 750 Columbus, Ohio	<b>WRTD</b> 1500 100 Richmond, Va.
<b>WMMN</b> 890 500 Fairmont, W. Va.	<b>WQV</b> 1130 1000 New York, N. Y.	<b>WRUF</b> 830 5000 Gainesville, Fla.
<b>WMPC</b> 1200 100 Lapeer, Mich.	<b>WOW</b> 590 5000 Omaha, Neb.	<b>WRVA</b> 1110 5000 Richmond, Va.
<b>WMSD</b> 1420 100 Sheffield, Ala.	<b>WOWO</b> 1160 10000 Fort Wayne, Ind.	<b>WSAI</b> 1330 1000 Cincinnati, Ohio
<b>WMT</b> 600 1000 Cedar Rapids, Iowa	<b>WPAD</b> 1420 100 Paducah, Ky.	<b>WSAJ</b> 1310 100 Grove City, Pa.
<b>WNAC</b> 1230 1000 Boston, Mass.	<b>WPAR</b> 1420 100 Parkersburg, W. Va.	<b>WSAN</b> 1440 500 Allentown, Pa.
<b>WNAD</b> 1010 1000 Norman, Okla.	<b>WPAX</b> 1210 100 Thomasville, Ga.	<b>WSAR</b> 1450 1000 Fall River, Mass.
<b>WNAX</b> 570 1000 Yankton, S. D.	<b>WPAY</b> 1370 100 Portsmouth, Ohio	<b>WSAU</b> 1370 100 Wausau, Wis.
<b>WNBC</b> 1380 250 New Britain, Conn.	<b>WPEN</b> 920 250 Philadelphia, Pa.	<b>WSAY</b> 1210 100 Rochester, N. Y.
<b>WNBFB</b> 1500 100 Binghamton, N. Y.	<b>WPG</b> 1100 5000 Atlantic City, N. J.	<b>WSAZ</b> 1190 1000 Huntington, W. Va.
<b>WNBH</b> 1310 100 New Bedford, Mass.	<b>WPHR</b> 880 500 Petersburg, Va.	<b>WSB</b> 740 50000 Atlanta, Ga.
<b>WNBR</b> 1430 500 Memphis, Tenn.	<b>WPRA</b> 1370 100 Mayaguez, P. R.	<b>WSBC</b> 1210 100 Chicago, Ill.
<b>WNBX</b> 1260 1000 Springfield, Vt.	<b>WPRO</b> 630 500 Providence, R. I.	<b>WSBT</b> 1360 500 South Bend, Ind.
<b>WNBZ</b> 1290 100 Saranac Lake, N. Y.	<b>WPRP</b> 1420 100 Ponce, P. R.	<b>WSBJ</b> 1410 500 Montgomery, Ala.
<b>WNEL</b> 1290 1000 San Juan, P. R.	<b>WPTF</b> 680 1000 Raleigh, N. C.	<b>WSGN</b> 1310 100 Birmingham, Ala.
<b>WNEW</b> 1250 1000 New York, N. Y.	<b>WQAM</b> 560 1000 Miami, Fla.	<b>WSIX</b> 1210 100 Nashville, Tenn.
<b>WNLC</b> 1500 100 New London, Conn.	<b>WQAN</b> 880 250 Scranton, Pa.	<b>WSJS</b> 1310 100 Winston-Salem, N. C.
<b>WNYY</b> 1420 100 Watertown, N. Y.	<b>WQBC</b> 1360 1000 Vicksburg, Miss.	<b>WSM</b> 650 50000 Nashville, Tenn.
<b>WNOX</b> 1010 1000 Knoxville, Tenn.	<b>WQDM</b> 1390 1000 St. Albans, Vt.	<b>WSMB</b> 1320 1000 New Orleans, La.
<b>WNRI</b> 1200 100 Newport, R. I.	<b>WQXR</b> 1550 1000 New York, N. Y.	<b>WSMK</b> 1380 200 Dayton, Ohio
<b>WNYC</b> 810 1000 New York, N. Y.	<b>WRAK</b> 1370 100 Williamsport, Pa.	<b>WSNJ</b> 1210 100 Bridgeton, N. J.
<b>WOAI</b> 1190 50000 San Antonio, Texas	<b>WRAW</b> 1310 100 Reading, Pa.	<b>WSOC</b> 1210 100 Charlotte, N. C.
<b>WOC</b> 1370 100 Davenport, Iowa	<b>WRAX</b> 920 250 Philadelphia, Pa.	<b>WSPA</b> 920 1000 Spartanburg, S. C.
<b>WOI</b> 640 5000 Ames, Iowa	<b>WBBL</b> 1200 100 Columbus, Ga.	<b>WSPD</b> 1340 1000 Toledo, Ohio
<b>WOKO</b> 1430 500 Albany, N. Y.	<b>WRC</b> 550 500 Washington, D. C.	<b>WSPR</b> 1140 500 Springfield, Mass.
<b>WOL</b> 1310 100 Washington, D. C.	<b>WRDO</b> 1370 100 Augusta, Me.	<b>WSUI</b> 880 500 Iowa City, Iowa
<b>WOLS</b> 1200 100 Florence, S. C.	<b>WRDW</b> 1500 100 Augusta, Ga.	<b>WSUN</b> 620 1000 St. Petersburg, Fla.
<b>WOMT</b> 1210 100 Manitowoc, Wis.	<b>WREC</b> 600 1000 Memphis, Tenn.	<b>WSPA</b> 550 500 Harrisonburg, Va.
<b>WOOD</b> 1270 500 Grand Rapids, Mich.	<b>WREN</b> 1220 1000 Lawrence, Kans.	<b>WSVS</b> 1370 50 Buffalo, N. Y.
<b>WOPI</b> 1500 100 Bristol, Tenn.	<b>WRGA</b> 1500 100 Rome, Ga.	<b>WSYB</b> 1500 100 Rutland, Vt.
<b>WOR</b> 710 50000 Newark, N. J.	<b>WRJN</b> 1370 100 Racine, Wis.	<b>WSYR</b> 570 1000 Syracuse, N. Y.

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WTAD</b> 900 1000	<b>XEAG</b> 1310 10	<b>XEI</b> 1370 125
Quincy, Ill.	Cordoba, Ver.	Morella, Mich.
<b>WTAG</b> 580 1000	<b>XEAL</b> 660 1000	<b>XEJ</b> 1020 1000
Worcester, Mass.	Mexico City, D. F.	Juarez, Chih.
<b>WTAL</b> 1310 100	<b>XEAM</b> 750 25	<b>XEJP</b> 1130 100
Tallahassee, Fla.	Matamoros, Tams.	Mexico City, D. F.
<b>WTAM</b> 1070 50000	<b>XEAO</b> 660 250	<b>XEK</b> 990 100
Cleveland, Ohio	Mexicall, B. C.	Mexico City, D. F.
<b>WTAQ</b> 1330 1000	<b>XEAQ</b> 1090 1000	<b>XEKL</b> 1240 500
Green Bay, Wis.	Rosarito, L. C.	Leon, Guan.
<b>WTAR</b> 780 500	<b>XEAS</b> 1100 50	<b>XEL</b> 780 1000
Norfolk, Va.	Saltillo, Coah.	Mexico City, D. F.
<b>WTAW</b> 1120 500	<b>XEAT</b> 1210 250	<b>XELA</b> 1240 50
College Station, Tex.	Paral, Chih.	Saltillo, Coah.
<b>WTAX</b> 1210 100	<b>KEAW</b> 960 50000	<b>XELO</b> 1110 50000
Springfield, Ill.	Reynosa, Tams.	Piedras Negras, Coah.
<b>WTBO</b> 800 250	<b>XEB</b> 1030 10000	<b>XELZ</b> 1370 100
Cumberland, Md.	Mexico City, D. F.	Mexico City, D. F.
<b>WTCN</b> 1250 1000	<b>XEBA</b> 1080 20	<b>XEMG</b> 1060 100
Minneapolis, Minn.	Guzman, Jal.	Atzacapotzalco, D. F.
<b>WTEL</b> 1310 100	<b>XEBO</b> 730 5000	<b>XEMO</b> 860 5000
Philadelphia, Pa.	Agua Callente, L. C.	Tijuana, L. C.
<b>WTFI</b> 1450 500	<b>XEBG</b> 820 1000	<b>XEMX</b> 1280 100
Athens, Ga.	Tijuana, B. Cfa.	Mexico City, D. F.
<b>WTHT</b> 1200 100	<b>XEBH</b> 930 500	<b>XENO</b> 800 50
Hartford, Conn.	Hermosillo, Sonora	Mexico City, D. F.
<b>WTIC</b> 1040 50000	<b>XEBJ</b> 1160 20	<b>XENT</b> 910 150000
Hartford, Conn.	Merida, Yuc.	Nuevo Laredo, Tams.
<b>WTJS</b> 1310 100	<b>XEBK</b> 1000 100	<b>XEOK</b> 760 2500
Jackson, Tenn.	Nuevo Laredo, Tams.	Tijuana, L. C.
<b>WTMJ</b> 620 1000	<b>XEBX</b> 640 250	<b>XEOX</b> 640 500
Milwaukee, Wis.	Sabinas, Coah.	Saltillo, Coah.
<b>WTMV</b> 1500 100	<b>XEBZ</b> 1160 100	<b>XEP</b> 1160 500
East St. Louis, Ill.	Mexico City, D. F.	Juarez, Chih.
<b>WTNJ</b> 1290 500	<b>XEO</b> 1150 100	<b>XEPN</b> 730 100000
Trenton, N. J.	Tijuana, L. C.	Piedras Negras, Coah.
<b>WTOG</b> 1260 1000	<b>XECW</b> 1310 10	<b>XERA</b> 840 350000
Savannah, Ga.	Mexico City, D. F.	Villa Acuna, Coah.
<b>WTRC</b> 1310 100	<b>XECZ</b> 1370 100	<b>XES</b> 990 250
Elkhart, Ind.	San Luis Potosi, S.L.P.	Tampico, Tams.
<b>WVFW</b> 1400 500	<b>XED</b> 1160 2500	<b>XET</b> 690 5000
Brooklyn, N. Y.	Guadalajara, Jal.	Monterrey, N. L.
<b>WVAE</b> 1200 100	<b>XEDA</b> 1220 200	<b>XETB</b> 1310 125
Hammond, Ind.	Gra. Anaya, D. F.	Torreon, Coah.
<b>WWJ</b> 920 1000	<b>XEDW</b> 1150 20	<b>XETF</b> 1220 30
Detroit, Mich.	Minatitlan, Ver.	Veracruz, Ver.
<b>WWL</b> 850 10000	<b>XEE</b> 1210 50	<b>XEHZ</b> 1210 100
New Orleans, La.	Durango, Dgo.	Puebla, Pue.
<b>WWNC</b> 570 1000	<b>XEF</b> 1450 100	<b>XEU</b> 1010 250
Asheville, N. C.	Juarez, Chih.	Veracruz, Ver.
<b>WWRL</b> 1500 100	<b>XEFA</b> 1180 500	<b>XEV</b> 890 50000
Woodside, N. Y.	Tacuba, D. F.	Mexico City, D. F.
<b>WWSW</b> 1500 100	<b>XEFB</b> 870 200	<b>XEX</b> 1310 125
Pittsburgh, Pa.	Monterrey, N. L.	Monterrey, N. L.
<b>WWVA</b> 1160 5000	<b>XEFC</b> 550 250	<b>XEXB</b> 1270 50
Wheeling, W. Va.	Merida, Yuc.	Jalapa, Ver.
<b>WXYZ</b> 1240 1000	<b>XEFE</b> 980 25	<b>XEXC</b> 810 350
Detroit, Mich.	Laredo, Tams.	Aguaascalientes, Ags.
<b>W3XJ</b> 1060 100	<b>XEFI</b> 1440 250	<b>XEXD</b> 1340 350
College Park, Md.	Chihuahua, Chih.	Jalapa, Ver.
<b>XEAA</b> 920 200	<b>XEFJ</b> 1230 100	<b>XEXH</b> 1250 250
Mexicall, B. C.	Monterrey, N. L.	San Luis Potosi, S.L.P.
<b>XEAC</b> 980 250	<b>XEFO</b> 940 5000	<b>XEXM</b> 610 500
Tijuana, L. C.	Mexico City, D. F.	Mexico City, D. F.
<b>XEAD</b> 1060 125	<b>XEFV</b> 1210 100	<b>XESX</b> 1000 100
Guadalajara, Jal.	Juarez, Chih.	Portable in Mexico
<b>XEAF</b> 990 250	<b>XEFW</b> 1310 250	<b>XEYO</b> 940 500
Nogales, Son.	Tampico, Tams.	Mexico City, D. F.
	<b>XEH</b> 720 250	<b>XEZ</b> 630 500
	Monterrey, N. L.	Merida, Yuc.





	Eastern Time	
	P. M.	
CEC, Santiago, 10:670		12:30
CFCX, Montreal, 6:005		12:15
CJRO, Winnipeg, 6:150		12:30
CJRO, Winnipeg, 6:150		12:45
CJRX, Winnipeg, 11:720		13:00
CJRX, Winnipeg, 11:720		13:15
COCD, Havana, 6:130		13:30
COCD, Havana, 6:130		13:45
COGH, Havana, 9:428		14:00
COCO, Havana, 6:010		14:15
CO9JO, Camaguey, 8:665		14:30
CRGX, Toronto, 6:090		14:45
CTTAA, Lisbon, 9:650		15:00
DJA, Berlin, 9:560		15:15
DJB, Berlin, 15:200		15:30
DJD, Berlin, 11:770		15:45
DJN, Berlin, 9:540		16:00
EAO, Madrid, 9:862		16:15
HAT4, Budapest, 9:125		16:30
GSA, Daventry, 6:050		16:45
GSB, Daventry, 9:510		17:00
GSC, Daventry, 9:550		17:15
GSD, Daventry, 11:730		17:30
GSF, Daventry, 15:140		17:45
GSQ, Daventry, 15:180		18:00
GSP, Daventry, 15:310		18:15
HBL, Geneva, 9:566		18:30
HBP, Geneva, 7:797		18:45
HCBH, Quito, 8:800		19:00
HCEZT, Guayaquil, 4:800		19:15
HCZRL, Guayaquil, 6:850		19:30
HII, San Pedro, 6:614	Sunday	19:45
HIX, Trujillo, 6:130	Sunday	20:00
HIZ, Trujillo, 6:315	Weekdays	20:15
HIIABH, Bar'quina, 9:560	Sunday	20:30
HIIABD, Car'enna, 7:280	Weekdays	20:45
HIIABE, Car'enna, 9:500	Weekdays	21:00
		21:15
		21:30
		21:45
		22:00
		22:15
		22:30
		22:45
		23:00
		23:15
		23:30
		23:45





## DON'T Miss THIS . . . At DEADLINE . . .

### DAILY

0440, News, TPA3, 11885 kcs.  
0700, News, TPA3, 11885  
1510, News, TPA3, 11885  
1630, News, W1XAL, 11790 (except Sunday)  
1800, News, W1XAL, 11790 (except Sunday)  
1800, News, YV5RC, 5800  
2010, News, GSB, 9510; GCS, 9580; GSD, 11750  
2230, News, DJB, 15200; DJD, 11770  
2240, News, GSB, 9510; GSC, 9580; GSD, 11750  
2330, News, TPA4, 11720

**DAILY EXCEPT SATURDAY AND SUNDAY**  
0900, News, 2RO, 11810 kcs.

### DAILY EXCEPT SUNDAY

1321, News, 2RO, 9635 kcs.  
1800, News, 2RO, 9635

### EVERY SATURDAY

0000, KDKA Dx Club, KDKA, 980; W8XK, 6110  
1400, Metropolitan Opera, W2XAD, 15330;  
W2XAF, 9530; W3XAL, 17780  
2200, American DXers' Program, HJ1ABP, 9600  
2300, Northern Messenger, CJRO, 6150; CJRX,  
11720

### EVERY SUNDAY

0000, Far North Broadcasts, KDKA, 980;  
W8XK, 6140

### EVERY MONDAY

1900, 2RO Mail Bag, 2RO, 9635  
1930, Modern Radio Course, W1XAL, 6040  
2030, Code Practice Lessons, W1XAL, 6040  
2045, Amateur Hour, YV5RC, 5800

A license has been granted for construction of a new day-time station at Wilson, N. C., to work on 1310 kcs. with 100 watts. The owners are H. W. Wilson, formerly program manager of WPTF Raleigh, and Ben Farmer, a radio engineer.

\* \* \*

Last year WHK Cleveland signed a three-year contract with the CBS, but it has been believed for some time that this contract would be allowed to expire at the end of one year. Now it is announced that WHK has signed with the NBC-Blue for five years, effective Dec. 1 this year. The present Blue outlet for Cleveland, WGAR, will go to the CBS about October 1.

\* \* \*

KAND, the new Corsicana, Texas station will go on the air the latter part of June.

\* \* \*

WILL Urbana, Ill., has finally be-

## A Timely Suggestion

The RADEX Map of the World with Time Converting Dial is the most useful accessory any radio fan could ask for.

The list of international call letter assignments has been completely revised. This up-to-the-minute list enables one to identify all stations by their call signs. A glance at the World Map gives their location, and a twirl of the dial instantly shows their time.

No calculation is necessary. The dial does all the work.

You Can't Get Along Without It.

Price only 25 cents, and we pay the postage.  
(26 cents to Ohio residents)

**THE RADEX PRESS**  
**14717 Detroit Ave., Cleveland, Ohio**

gun operating on its new frequency of 580 kcs. With new directional antenna and new station equipment, the station has already increased its listening area 125%, according to officials. \* \* \*

The call letters of the new Salina, Kans., station have been changed from KSJS to KSAL. The station is still in the process of construction. \* \* \*

CXA2, the new Uruguyan station, is back on the air, working from 1600 to 2200 EST daily on 6035 kcs. \* \* \*

A few new s.w. stations are EAQ2 on 9488 kcs in evenings. XEYU, Mexico City, 9600 kcs. from 1900 to 2200 EST. "Radio Guardia Civil," Tetuan, Spanish Morocco, 6508 kcs from 1900 to 2000 EST. PJC1, "Radio Curom" (?), on 5930 kcs. from 1830 to 2030 EST. HI5N has moved from Santiago de los Caballeros to Ciudad Moca, D. R.

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## INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

### The Radex Press

14717 Detroit Ave., Cleveland Ohio:

Enclosed find \$..... for which send me postpaid my choice of your offers as checked below:

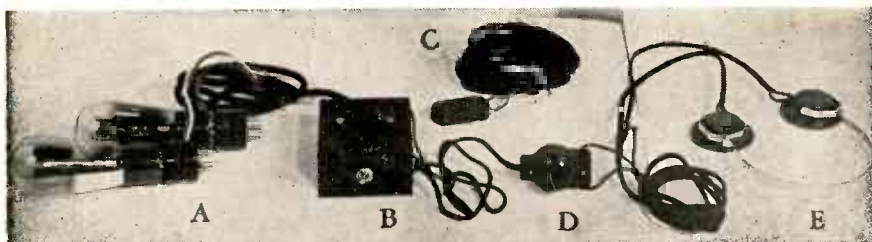
- Program "slates"       1 for 10c       2 for 15c       4 for 25c
- One Radio World Map and Time Converter ..... 25c
- One copy of the next RADEX ..... 25c
- One year's subscription to RADEX, 10 issues ..... \$1.75
- Two years ..... \$3.25       Three years ..... \$4.75
- Beginner's Story of Radio ..... .35

(If you live in Ohio, add 3% for State Sales Tax. No tax on subscriptions.)

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Street and Number .....

City and State .....



## The "Perfect" Phone Adapter

The device which makes it easy to attach headphones to any radio set. Anyone can install it, without tools, in no time at all. It cannot harm the receiver and the operation of the set is not affected in any way.

### IDEAL FOR THE HARD-OF-HEARING

Those who are very hard of hearing can enjoy radio reception by using our new HOH Model Phone Adapter. It gives sufficient volume on the headphones without it being necessary to increase the volume of the receiver above normal.

- The HOH Model Perfect Phone Adapter** ..... \$ 3.95
- The Phone Adapter with Trimm Featherweight Headphones** ..... \$12.00
- The Phone Adapter with a good pair of Trimm Headphones** ..... \$ 6.70

We can also supply accessories for group hearing aids and for "silent listening," as well as adapters to enable the hard of hearing to use their bone conduction or air conduction units with the Perfect Phone Adapter. Write us for information.

**We pay the postage on all orders**  
*If you live in Ohio add 3% for Sales Tax*

*In ordering be sure to give make and model of receiver and a list of the tubes used.*

**The Radex Press**  
 14717 Detroit Ave.  
 Cleveland, Ohio

*I sometimes think there should be a law requiring everyone to spend some of his spare time training for the future. I once thought all the cards were stacked against me. Now I'm making good money. Maybe my experience will show you the way to better pay too.*



## I THOUGHT RADIO WAS A PLAYTHING

*But Now My Eyes Are Opened--I'm Making Over \$40 a Week!*

\$40 a week. Man alive, I used to think anyone making that much was just plain lucky.

A short time ago I was just barely getting by. It was the same old story—a little job; a salary as small as the job.

If you had told me that I would soon be making \$40 and more a week in my own Radio business—I'd thought you were crazy. To me, Radio was a plaything. Now I know it's a big business where specialized training pays rich rewards.

But I am getting ahead of my story—let me tell you how it all started. I was hard up because I had been kidding myself—that's all—not because I had to be. I thought a fellow either had to be lucky or have a string of college degrees to make good money.

One day I picked up a magazine and an ad attracted me because it seemed to fit my case. It said, "I will train you to start a spare time or full time Radio service business of your own **WITHOUT CAPITAL.**"

"They're trying to kid somebody," I thought, "but I'll find out what it's all about."

I wrote in, and within a few days received a 64-page book, telling about the opportunities in Radio; how I could prepare right at home in my spare time, and how they would show me how to start making money in my neighborhood selling and repairing Radio sets. It would have sounded too good to be true if it had not been backed up by nearly 100 letters from fellows who had taken their course and were very enthusiastic about it.

What has happened since seems almost like a dream. I started to take their course, and soon I was ready to start making money in my neighborhood—as much as \$5 and \$15 a week. It wasn't long until I had saved enough money to start a full time business of my own.

That business in a surprisingly short time grew to the point where I am clearing over \$40 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for jobs in Broadcasting Stations, Radio Factories, Radio Jobbers and Dealers, Aviation Radio, Television, Short Wave Stations, Automobile, Police Radio, Loud Speaker Systems, and other branches of Radio.

### THINK IT OVER

Friend—you may not be as bad off as I was—but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next

ten years at the same salary? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

### TAKE MY TIP

Write for their book, "Rich Rewards in Radio." It won't cost you anything except a postage stamp. It shows you a lot of things which I don't believe you know now about Radio—a lot of facts and figures on the opportunities in this new, fast-growing field—where the jobs are, what they pay, how to get ready for them. Beginners as well as experienced men are making as much as \$500 to \$1,500 a year more as a result of N. R. I. Training. And at the same time they send the book, "Rich Rewards in Radio," they'll send you, without any cost or obligation, a Free Lesson, to prove that their training is easy, practical, fascinating. The lesson they send, "Radio Receiver Troubles—Their Cause and Remedy," is valuable. And when you read this lesson, you'll know why so many fellows have mastered N. R. I. Training and are now making good money as Radio Experts.

You are not placing yourself under any obligation by writing for this material as they will gladly send it to anyone who is ambitious and wants to get ahead. Mail the coupon in an envelope or paste it on a 1c postcard. Just address Mr. J. E. Smith, President, National Radio Institute, Dept. 7FO, Washington, D. C.

J. E. Smith, President,  
National Radio Institute  
Dept. 7FO, Washington, D. C.

**MAIL THIS  
COUPON**

Dear Mr. Smith:

Without obligation, send me the sample lesson and your book about spare time and full time Radio opportunities, and how I can train for them at home in spare time. (Please print plainly.)

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Address.....

City..... State.....

14X1