

Full Text of

North American Regional Broadcasting Agreement

(Allocations Treaty Adopted at Havana, December 13, 1937)

(See pages 50-80 for assignments scheduled under treaty)

I

Purpose and Scope of This Agreement

1. **Purpose of Agreement**—The purpose of this Agreement is to regulate and establish principles covering the use of the standard broadcast band in the North American Region so that each country may make the most effective use thereof with the minimum technical interference between broadcast stations.

2. **North American Region**—The North American Region (hereinafter referred to as "Region") for the purpose of this Agreement shall be deemed to include and to consist of the following countries: Canada, Cuba, Dominican Republic, Haiti, Mexico, Newfoundland, and United States of America.

3. **Standard broadcast band**—The standard broadcast band shall be deemed to be the band of frequencies extending from 550 to 1600 kc, both inclusive, both 550 kc. and 1600 kc. being the carrier frequencies of broadcasting channels as hereinafter defined. The Governments agree, subject to the provisions of Article 7 of the General Radio Regulations annexed to the International Telecommunications Convention Madrid, 1932, that this band of frequencies shall be allocated exclusively to broadcasting in the Region.

4. **Sovereign right to use channels**—The sovereign right of all countries, parties to this Agreement, to the use of every channel in the standard broadcast band is recognized. The Governments recognize, however, that until technical developments reach a state permitting the elimination of radio interference of international character, a regional arrangement between them is necessary in order to promote standardization and to minimize interference.

5. **Regional character of Agreement**—The Governments recognize that this Agreement, and each provision thereof, is a regional arrangement within the meaning of, and authorized by the International Telecommunications Convention and the General Radio Regulations annexed thereto.

II

Technical

A. Definitions

1. **Broadcast station**—A station the emissions of which are primarily intended to be received by the general public.

2. **Broadcast channels—550 to 1600 kc.**—A broadcast channel is a band of frequencies ten (10) kc. in width, with the carrier frequency at the center. Channels shall be designated by their assigned carrier frequencies. Carrier frequencies assigned to broadcast stations shall begin at 550 kc. and be in successive steps of 10 kc. No intermediate frequency shall be assigned as the carrier frequency of any broadcast station.

3. **Service areas:**

(a) **Primary service area**—The primary service area of a broadcast station is the area in which the ground wave is not subject to objectionable interference or objectionable fading.

(b) **Secondary service area**—The secondary service area of a broadcast station is the area served by the sky wave and not subject to objectionable interference. The signal is subject to intermittent variations in intensity.

4. **Dominant stations**—A "dominant" station is a Class I station, as hereinafter defined, operating on a clear channel.

5. **Secondary station**—A "secondary" station is any station except a Class I station operating on a clear channel.

6. **Objectionable interference**—Objectionable interference is the degree

of interference produced when, at a specified boundary or field intensity contour with respect to the desired station, the field intensity of an undesired station (or the root-mean-square value of field intensities of two or more stations on the same frequency) exceeds for ten (10) percent or more of the time the values hereinafter set forth in this Agreement.

7. **Power**—The power of a radio transmitter is the power supplied to the antenna. The power in the antenna of a modulated-wave transmitter shall be expressed in two numbers, one indicating the power of the carrier frequency supplied to the antenna, and the other the actual maximum percentage of modulation.

8. **Spurious radiation**—A spurious radiation from a transmitter is any radiation outside the frequency band of emission normal for the type of transmission employed, including any harmonic modulation products, key clicks, parasitic oscillations and other transient effects.

9. **English, French and Spanish equivalents**—It is agreed that, as used in this Agreement, the French and Spanish words below set forth are respectively the equivalent of, and mean the same as, the English terms opposite which they appear:

English	French	Spanish
Clear channel	Frequence Libre	Canal despejado
Objectionable interference	Brouillage nuisible	Interferencia objetable

Classes of Channels and Allocation Thereof

1. **Three classes**—The 106 channels in the standard broadcast band are divided into three principal classes—clear, regional and local.

2. **Clear channel**—A clear channel is one on which the dominant station or stations render service over wide areas and which are cleared of objectionable interference, within their primary service areas and over all or a substantial portion of their secondary service areas.

3. **Regional channel**—A regional channel is one on which several stations may operate with powers not in excess of 5 kw. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field intensity contour.

4. **Local channel**—A local channel is one on which several stations may operate with powers not in excess of 250 watts. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field intensity contour.

5. **Number of channels of each class**—The number of channels of each class shall be as follows:

Clear channels	59
Regional channels	41
Local channels	6

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6. **Allocation of specific channels to each class**—The channels are allocated to the several classes as follows:

Clear channels. The following channels are designated as clear channels: 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 800 810 820 830 840 850 860 870 880 890 900 940 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1160 1170 1180 1190 1200 1210 1220 1500 1510 1520 1530 1540 1550 1560 1570 and 1580.

Regional channels. The following channels are designated as regional channels: 550 560 570 580 590 600 610 620 630 790 910 920 930 950 960 970 980 1160 1250 1260 1270 1280 1290 1300 1310 1320 1330 1350 1360 1370 1380 1390 1410 1420 1430 1440 1460 1470 1480 1590 1600.

Local channels. The following channels are designated as local channels: 1230 1240 1340 1400 1450 and 1490 kc.

7. **Use of regional and local channels by countries**—All countries may use all regional and all local channels, subject to the power limitations and standards for prevention of objectionable interference set forth in this Agreement.

8. **Priority of use of clear channels by countries**—

(a) The clear channels are assigned for priority of use by Class I and II stations in the several countries in accordance with the table set forth in Appendix I.

(h) Each such channel shall be used in a manner conforming to the best engineering practice with due regard to the service to be rendered by the dominant stations operating thereon, as set forth elsewhere in this Agreement. If, for one year within the term of this Agreement, a country fails to make any use of a clear channel thus assigned to it, the channel shall be considered open for use by the other countries, parties to this Agreement, pursuant to such arrangement as may be agreed upon by their respective administrations and without any necessity for revision of this Agreement.

(c) No country to which a clear channel has been thus assigned shall permit, or agree to permit, any other country to use such channel in a manner not in conformity with this Agreement without first giving 60 days (calendar days) advance notice of its intention so to do to all other countries, parties to this Agreement. If during this period of 60 days (calendar days) any other country shall present objections to such proposed use of the channel, the country to which the clear channel has been assigned shall not permit, or agree to permit, such proposed use until the difference presented by the objection has been amicably resolved.

(d) If within the period of this Agreement the country to which a clear channel has been assigned shall have made use of the channel but not in the manner above prescribed or not to the extent required by the provisions of this Agreement, such country shall be considered as having relinquished that portion of the rights which it has not used and at the expiration of this Agreement the other countries party thereto shall have the right, if they see fit, to withdraw the unused privileges from such country and to reassign them to any or all of the other interested countries.

G—Classes of Stations and Use of The Several Classes of Channels

1. **Classes of stations**—Broadcast stations are divided into four principal

(Continued on page 400)

Changes of Channel Assignments Under the Havana Treaty

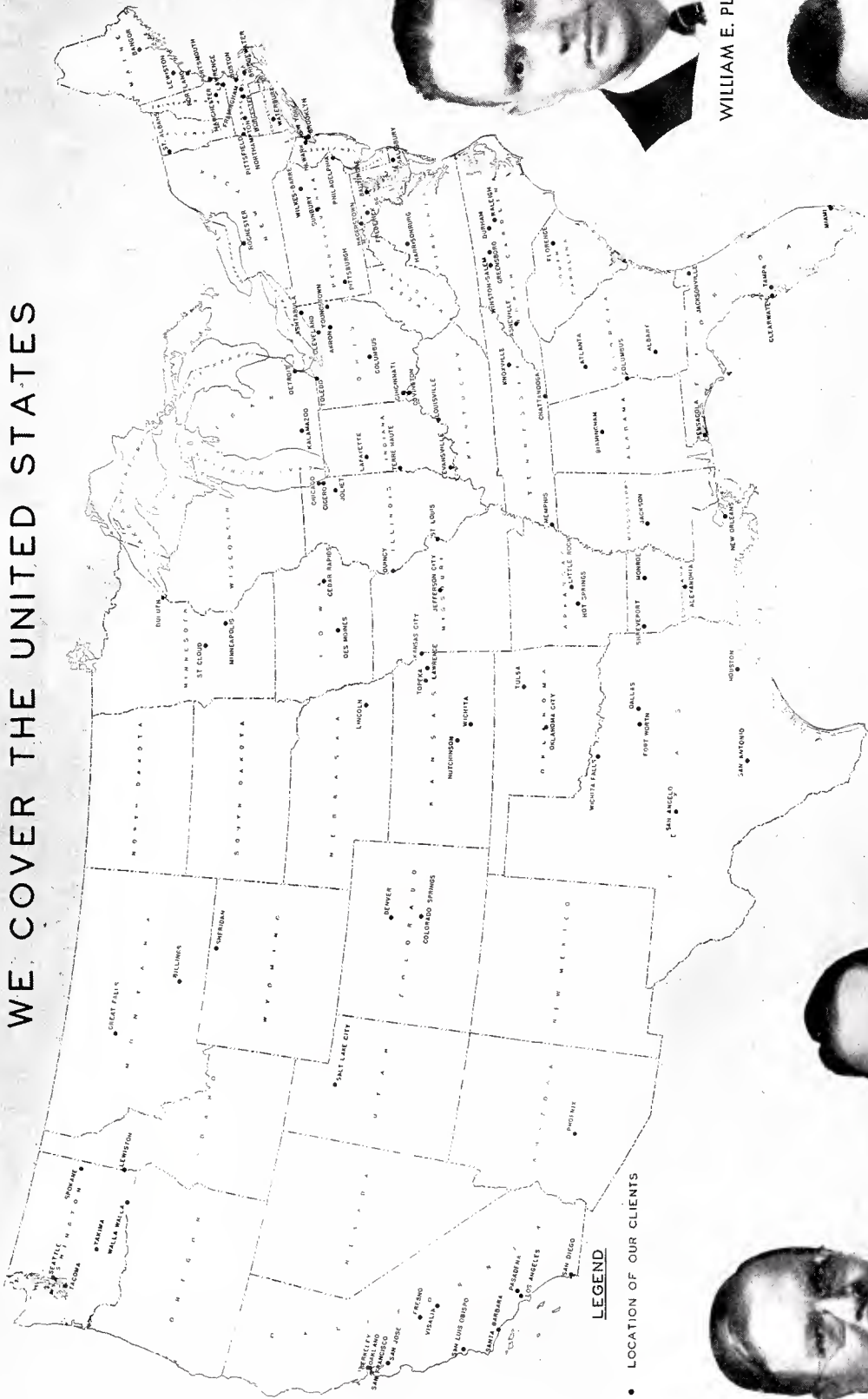
A broadcast station assigned to a channel in Column 1 will be changed to the channel on the same horizontal line in Column 2 to comply with North American Regional Broadcasting Agreement (see note). Figures indicate kilocycles.

Col. 1	Col. 2	Col. 1	Col. 2	Col. 1	Col. 2
550	550	910	*	1260	1290
560	560	920	950	1270	1300
570	570	930	960	1280	1310
580	580	940	970	1290	1320
590	590	950	980	1300	1330
600	600	960	*	1310	1340
610	610	970	1020	1320	1350
620	620	980	1030	1330	1360
630	630	990	1030	1340	1370
640	640	1000	1040	1350	1380
650	650	1010	690, 740,	1360	1390
660	660		990 or 1050	1370	1400
670	670	1020	1060	1380	1410
680	680	1030	*	1390	1420
690	*	1040	1080	1400	1430
700	700	1050	1070	1410	1440
710	710	1060	1090	1420	1450
720	720	1070	1100	1430	1460
730	*	1080	1110	1440	1470
740	750	1090	1120	1450	1480
750	760	1100	1130	1460	1500
760	770	1110	1140	1470	1510
770	780 or 1110	1120	1150	1480	1520
780	790	1130	1160	1490	1530
790	810	1140	1070 or 1170	1500	1490
800	820	1150	1180	1510	*
810	830	1160	1170 or 1190	1520	*
820	840	1170	1200	1530	1590
830	850	1180	1170 or 1200	1540	*
840	*	1190	1210	1550	1600
850	870	1200	1230	1560	*
860	880	1210	1240	1570	*
870	890	1220	1250	1580	*
880	910	1230	1260	1590	*
890	920	1240	1270	1600	*
900	930	1250	1280		

*Not assigned in I. S.

Some changes in individual cases not in accordance with the above change of channels may be necessary to avoid interference on adjacent channels or other considerations. See pages 50-80 for proposed individual station assignments, listed by call letters and frequencies.

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pal classes, to be designated Class I, Class II, Class III, and Class IV, respectively.

2. *Definitions of classes*—The four classes of broadcast stations are defined as follows:

Class I: A dominant station operating on a clear channel and designed to render primary and secondary service over an extended area and at relatively long distances. Class I stations are subdivided into two classes:

Class I-1: A Class I station which operates with power of 50 kw or more and which has its primary service area, within the limits of the country in which the station is located, free from objectionable interference from other stations on the same and adjacent channels, and its secondary service area, within the same limits, free from objectionable interference from stations on the same channel, in accordance with the engineering standards hereinafter set forth.

Class I-B: A Class I station which operates with power of not less than 10 kw or more than 50 kw and which has its primary service area free from objectionable interference from other stations on the same and adjacent channels and its secondary service area free from objectionable interference from stations on the same channel, in accordance with the engineering standards hereinafter set forth.

(a) When two Class I-B stations on the same channel are separated by a distance of 2800 miles or more, neither station shall be required to install a directional antenna.

(b) When two Class I-B stations on the same channel are separated by a distance of more than 1800 miles and less than 2800 miles, it will, in the absence of proof to the contrary, be assumed that each station is free of objectionable interference caused by the other and neither shall be required to install directional antennae or take other precautions to avoid such interference. In case the existence of objectionable interference is proved, the governments concerned will consult with each other regarding the desirability and practicability of installation of directional antennae or the taking of other precautions to eliminate the interference and will determine by special arrangement the measures, if any, to be taken.

(c) When two Class I-B stations on the same channel are separated by a distance of less than 1800 miles, it will, in the absence of proof to the contrary, be assumed that the installation of directional antennae or the taking of other precautions to avoid interference is necessary, and the governments concerned will consult with each other and will take such measures as may be agreed upon between them to the end that the objectionable interference may be reduced or eliminated.

Class II: A "secondary" station which operates on a clear channel and is designed to render service over a primary service area which, depending on geographical location and power used, may be relatively large, but which is limited by and subject to such interference as may be received from Class I stations. A station of this class shall operate with power of not less than 0.25 kw, or more than 50 kw. Whenever necessary a Class II station shall use a directional antenna or other means to avoid interference, in accordance with the engineering standards hereinafter set forth, with Class I stations and with other Class II stations.

Class III: A station which operates on a regional channel and is designed to render service primarily to a metropolitan district and the rural area contained therein and contiguous thereto. Class III stations are subdivided into two classes:

Class III-A: A Class III station which operates with power not less than one kilowatt or more than five kilowatts and the service area of which is subject to interference in ac-

cordance with the engineering standards hereinafter set forth.

Class III-B: A Class III station which operates with a power not less than 0.5 kw or more than 1 kw night and 5 kw daytime and the service area of which is subject to interference in accord with the engineering standards hereinafter set forth.

Class IV: A station using a local channel and designed to render service primarily to a city or town and the suburban and rural areas contiguous thereto. The power of a station of this class shall not be less than 0.1 kw or more than 0.25 kw and its service area is subject to interference in accord with the engineering standards hereinafter set forth.

3. *Change of class*—If a station or stations in Class III-B located in any country can, through the use of directional antennae or otherwise, so reduce the interference caused or received by such station or stations to the field contour to which interference to stations in Class III-A is allowed, such station or stations shall automatically be classified and included in Class III-A and shall thereafter be so recognized and treated by the Administrations of all countries within the Region.

4. *Use of clear channels:*

(a) In principle and subject only to the exception hereinafter set forth, Class I stations shall be assigned only to clear channels.

(b) Class II stations may be assigned to clear channels only on condition that objectionable interference will not be caused to any Class I stations. Where any country has priority of use of a clear channel for any class I-A station, no other country shall assign any Class II station to that channel for nighttime operation (from sunset to sunrise at the location of the Class II station) unless such Class II station is located not less than 650 miles from the nearest border of the country in which the Class I-A station is located; provided, however, that where an assignment for a Class II station is specifically stated in Appendix I, such assignment shall be deemed as authorized under the limitations therein set forth.

5. *Use of regional channels:*

(a) In general only Class III-A and Class III-B stations shall be assigned to regional channels.

(b) On condition that interference be not caused to any Class III-A or Class III-B station, and subject to such interference as may be received from Class III-A or Class III-B stations, Class IV stations may be assigned to regional channels.

(c) Because of their geographical location with respect to the North American continent, special consideration will be given to the use by Cuba, the Dominion Republic, Haiti and Newfoundland of stations of Classes I and II assigned to certain regional channels under certain conditions, with respect to power and precautions to avoid objectionable interference as set forth in Appendix VII.

6. *Use of local channels*—Only Class IV stations shall be assigned to local channels.

D. Service and Interference

1. *Satisfactory signal*—It is recognized that, in the absence of interference from other stations and in regions where the natural electrical noise level is not abnormally high, a signal of 100 microvolts per meter constitutes a usable signal in rural and sparsely settled areas but that, because of the higher electrical noise levels in more thickly populated communities, greater field intensities (ranging as high as 25 millivolts or more in cities) are necessary to render satisfactory service. It is further recognized that it is not possible to accord protection to stations from objectionable interference over the entire areas over which their signals are or may be above the electrical noise level, particularly at night, and that it is necessary to specify boundaries

or contours at or within which stations are protected from objectionable interference from other stations.

2. *Areas protected from objectionable interference*—The boundaries or contours at and within which the several classes of stations shall be protected from objectionable interference are as set forth in Appendix II. No station, however, need be protected from objectionable interference at any point outside the boundaries of the country in which such station is located.

With respect to the root-mean-square values of interfering field intensities referred to herein, it shall be understood to apply in determining the interference between existing stations and no station thereafter assigned the channel shall increase the root-mean-square value of the interfering field intensity above the maximum specified in the attached tables.

3. *Objectionable interference on the same channel*—Objectionable interference shall be deemed to exist to a station when, at the boundary or field intensity contour specified in Appendix II with respect to the class to which the station belongs, the field intensity of an interfering station (or the root-mean-square value of the field intensities of two or more interfering stations) operating on the same channel, exceeds for ten (10) percent or more of the time the value of the permissible interfering signal set forth opposite such class in Appendix II.

4. *Interference to dominant clear channel stations*—A station shall be considered as not capable of causing objectionable interference to a Class I clear channel station on the same frequency when it is separated from the dominant clear channel station by a difference of 70 degrees or more of longitude.

5. *Objectionable interference on adjacent channels*—It is recognized, in principle, that objectionable interference may be caused to a desired station when, at or within the specified contours of a desired station, the field intensity of the ground wave of an undesired station operating on an adjacent channel (or the root-mean-square value of the field intensities of two or more such undesired stations operating on the same adjacent channel) exceeds a value determined by the following ratio:

Separation between channels	Minimum permissible ratio of desired to undesired signals
10 kc.	1 to 0.5
20 kc.	1 to 10
30 kc.	1 to 50

For convenient reference, the maximum permissible values of interfering signals on such adjacent channels at specified contours are set forth in Appendix III, Table I.

6. *Application of standards to existing stations:*

(a) For the purpose of estimating objectionable interference, all stations (other than those of Class II) shall be assumed to use the maximum power permitted to their respective classes. In this connection, the power of Class I-A stations shall be considered to be 50 kw, or the actual power, if higher.

(b) After this agreement has been placed in operation a station thereafter assigned a channel already assigned to other stations shall not be considered as preventing existing stations from increasing their power to the maximum allowed their class, even though such power increase may limit the newly assigned station to a field intensity contour of higher value than that permitted its class.

7. *Frequency stability*—The operating frequency of each broadcast station shall be maintained to within 50 cycles of the assigned frequency until January 1, 1939, and thereafter the frequency of each new station or each station where a new transmitter is installed shall be maintained within 20 cycles of the assigned frequency,

and after January 1, 1942, the frequency of all stations shall be maintained within 20 cycles of the assigned frequency.

8. *Spurious radiation*—The governments shall endeavor to reduce and, if possible, eliminate spurious radiations from broadcast stations. Such radiations shall be reduced in all cases until they are not of sufficient intensity to cause interference outside the frequency band required for the type of emission employed. With respect to type A-3 emissions (radio-telephony) the transmitter should not be modulated in excess of its modulation capability to the extent that interfering spurious radiations occur, and, with respect to amplitude modulation, the operating percentage of modulation should not be less than seventy-five (75) percent on peaks of frequent recurrence. Means should be employed to insure that the transmitter is not modulated in excess of its modulation capability.

E. Determination of Presence of Objectionable Interference

1. *Antenna performance*—For the purpose of calculating the presence and the degree of objectionable interference, stations of the several classes shall be assumed to produce effective field, corrected for absorption, for one kilowatt of input power to the antenna, as follows:

Class of Station	At One Mile	At One Kilometer
I	225 mv/m	362 mv/m
II and III	175 mv/m	282 mv/m
IV	150 mv/m	241 mv/m

In case a directional antenna is employed, the interfering signal of a broadcasting station will vary in different directions. To determine the interference in any direction, in the absence of actual interference measurements, the horizontal and vertical field intensity patterns of the directional antenna must be calculated and by comparing the appropriate vectors in the horizontal or vertical pattern with that of a nondirectional with the same effective field, the interfering signal toward any other station can be expressed in terms of kilowatts. This rating in kilowatts shall be applied in the use of mileage separation tables or in computing distances from the propagation curves or tables.

2. *Power*—The power of a station shall, for the purposes of notifications required by this Agreement, be determined in one of the following manners:

(a) By taking the product of the square of the antenna current and the antenna resistance (antenna input power).

(b) By determination of the station's effective field intensity, corrected for absorption, by making sufficient field intensity measurements on at least eight radials as nearly equally spaced as practicable and by relating the field intensity thus determined to the effective field intensity of a station having the antenna efficiency stipulated above for its class.

3. *Methods of determining the presence of objectionable interference*—The existence or absence of objectionable interference from stations on the same or adjacent channels shall be determined by one of the following methods:

(a) By actual measurements contained in the method hereinafter prescribed; or, with the mutual consent of the countries concerned:

(b) By reference to the propagation curves in Appendices IV and V, or

(c) By reference to the distance tables set forth in Appendix VI.

4. *Actual proof of existence or absence of objectionable interference*—The existence or absence of objectionable interference may be proved by field intensity measurements or recordings made with suitable apparatus, duly calibrated, by Government

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engineers or other engineers as may be mutually acceptable to the Governments concerned. Such field intensity measurements shall be made in the manner and for the periods of time mutually agreed upon by the Governments concerned.

The contracting Governments agree to facilitate the making of the measurements by requiring the stations involved to remain silent or operate in the manner deemed necessary, and at such times as not to interrupt regular schedules.

5. Proof based on propagation curves and distance tables:

(a) *Sky wave curves*—In computing the distance to the 50 per cent sky wave field intensity contour of a Class I station of a given power, and also in computing the 10 percent sky-wave field intensity of an alleged interfering station, of any class and given power, at a specified distance, use may be made of the appropriate graphs set forth in Appendix V, entitled "Average Sky Wave Field Intensity Corresponding to the Second Hour after Sunset in the Recording Station, 100 Millivolt per Meter at One Mile (161 at one kilometer)".

(b) *Ground wave curves*—The distance to any specified ground wave field intensity contour may be determined from appropriate ground wave curves plotted for the frequency under consideration and the conductivity and dielectric constant of the earth between the station and desired contour. The frequency and the conductivity of the earth must be considered in every case and where the distance is great due allowance must be made for loss due to curvature of the earth. A family of curves is necessary for this purpose. A graph for a conductivity of 10-13 is set forth in Appendix IV, entitled "Ground Wave

Field vs. Distance for One Kilowatt Radiated From Short Antenna". Three frequencies in the standard broadcast band are given. For other frequencies and soil conditions (conductivity and dielectric constant) other curves are required. A conductivity of 10-13 is considered average and is used throughout in determining the ground wave value for computing the mileage separation tables.

(c) *Distance tables*—Table I shows the required day separation in miles between broadcast stations on the same channel. Table II gives the required distance in miles from the boundary of a country in which a Class I-A station is located for the daytime operation of a Class II station on the same channel in another country. Table III gives the required separation in miles between broadcast stations on adjacent channels during both daytime and nighttime. Table IV gives the required night separation in miles between broadcast stations operating on the same channel. The assumed conditions of operation are given in Appendix VI.

The tables are based upon the use of nondirectional antennas but, in case a directional antenna is employed at a particular station, it will be necessary to consider the radiation distribution of the directional antenna involved and to modify the mileage separation accordingly. The night separation tables for stations on the same frequency are computed from the skywave curve given in Appendix V. These curves are based on extensive measurements of the skywave produced by broadcasting stations and shall be considered as accurate in all cases unless proof to the contrary is available as set out in Section E 4. The mileage separation tables for the same channel during daytime and for

adjacent channels day and night are computed from the groundwave curve in Appendix IV. Tables apply only in case the frequency is 1000 kc and the assumed soil conductivity and dielectric constant prevail. Since these values vary in every case the tables for daytime and adjacent channel separation cannot be used except as a general guide. In any case under consideration an estimate of the mileage separation required may be made from the operating frequency and known or assumed soil conditions. To determine the interference accurately, measurements must be made in accordance with Section E 4 on the frequency under consideration or on another frequency and from the curves the values may be determined for the desired frequency.

F. Miscellaneous

1. *Engineering standards*—The engineering standards set forth in this Agreement are subject to revision when justified by technical advances in the art, with the mutual consent of the governments parties to this Agreement.

Attachments:
Appendix I—Priority of use of clear channels for Class I and II stations.

Appendix II—Protected service and interference.

Appendix III—Adjacent channel interference.

Appendix IV—Ground wave graphs.

Appendix V—Sky wave graphs.

Appendix VI—Mileage separation tables.

Appendix VII—Engineering requirements for use of regional channels by Class II stations.

III

Notification and Effect Thereof

1. *Initial notification*—Each Government shall, as soon as possible af

ter ratification of this Agreement, and in any event not later than 180 days prior to the effective date thereof, transmit to the other Governments:

(a) A complete list of all broadcast stations actually in operation in its country in the standard broadcast band both as of the date of the signing of this Agreement and as of the date of transmitting said list, showing with respect to each station its call signal, location, frequency, power, and antenna characteristics together with all changes authorized to be made with respect to said stations on or before the effective date of this Agreement, and the classification claimed for each such station.

(b) A complete list of all changes authorized to be made with respect to said stations after the effective date of this Agreement, the dates on or before which such changes are to be consummated, and the classification claimed for each such station under this Agreement when the proposed change has been consummated.

(c) A complete list of all new broadcast stations authorized but not yet in operation, showing with respect to each such station its call signal, location, frequency, power and antenna characteristics, the date and or before which each such station shall commence operation, and the classification claimed for it under this Agreement.

(d) The Governments agree that prior to the effective date of this Agreement, they will, so far as possible, resolve all conflicts that may arise between them as a result of the foregoing initial listings, and that, notwithstanding some such conflicts may

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remain unresolved, they will cooperate to the end that there be no delay in putting the provisions of this Agreement into full force and effect on that date.

(e) In resolving conflicts in the use of clear channels, and in the listing of Class I and Class II stations, the provisions of this Agreement and particularly of Appendix I shall be controlling. In resolving conflicts in the use of regional and local channels, and in the listing of Class III and Class IV stations, priority of use shall be recognized in each country with respect to stations which at the time of signing of this Agreement are in actual operation, which in substance conform to the definitions of said classes as set forth in this Agreement, and with respect to which no substantial change is made or proposed; a change of frequency in order to conform to the designation of channels in this Agreement shall not be deemed a substantial change.

2. *Subsequent notifications*—After the effective date of this Agreement and throughout the period during which it shall remain in effect, each Government shall promptly notify the other Governments by registered letter of all further changes in existing broadcast stations and of all further new broadcast stations, together with similar information with regard to each such change or new station, and the proposed date on which each such change is to go into effect and on which each such new station is to actually commence operation.

3. *Effect of notification*—Each government may, within 30 days of receiving notification of any proposed change in the assignment of an existing station or of the authorization of a new station in another country, not-

ify the Government of the latter country of any objection it may have thereto under the terms of this Agreement.

4. *Conflict between notifications*—To be valid, notifications of changes in the assignments of existing stations, or of authorizations of new stations must be such that the assignments proposed therein are in accordance with this Agreement and are such as not to involve objectionable interference to existing stations in other countries, assigned and operating in accordance with this Agreement. As between two or more notifications of changes or authorizations of new stations proceeding from different countries, after the effective date of this Agreement, priority in the date of mailing of notification shall govern.

5. *Cessation of effect*—(a) A notification of a proposed change in the assignment of an existing station or of an authorization of a new station shall cease to have any force and effect if, within one year of the date thereof such change shall not have been actually consummated or such new station shall not have actually commenced continuous operation.

(h) In special cases in which circumstances beyond the control of the Administration concerned have prevented the completion of the change or the construction of the new station, the term of the original notification may be extended for a period of six months.

6. *Berne Bureau*—The foregoing notifications shall be made independently of and in addition to those which, under current practice, are sent to the Bureau of the International Telecommunications Union.

IV

Arbitration

In case of disagreement between two or more contracting Governments concerning the execution of this Agreement the dispute, if it is not settled through diplomatic channels, shall be submitted to arbitration at the request of one of the Governments in disagreement. Unless the parties in disagreement agree to adopt a procedure already established by treaties concluded between them for the settlement of international disputes, the procedure shall be that provided for in Article 15 of the International Telecommunications Convention of Madrid, 1932.

V

Ratification, Execution and Denunciation

1. *Ratification*—To be valid this Agreement must be ratified by Canada, Cuba, Mexico and the United States of America.

If and when three of said four countries shall have ratified and the fourth shall, through unavoidable circumstances, have been unable to ratify but shall have signified to those countries that have ratified its readiness, pending ratification and as an administrative measure, to put the provisions of this Agreement (including the contents of Appendix I) into effect in whole or in part, then such country, together with those countries which shall have ratified, may, by administrative agreement between them, fix a definite date on which they shall give effect to such provisions, which date shall preferably be one year from the date of such administrative agreement.

The ratification must be deposited, as soon as possible, through diplomatic channels, in the archives of the Government of Cuba. This same Government shall, through diplomatic channels, notify the other signatory Governments of the ratifications as soon as they are received.

2. *Effect of ratification*—This Agreement shall be valid only as between such countries as shall have ratified it.

3. *Execution*—The contracting Governments undertake to apply the provisions of this Agreement, and to take steps necessary to enforce said provisions upon the private operating agencies recognized or authorized by them to establish and operate broadcast stations within their respective countries.

4. *Denunciation*—Each contracting Government shall have the right to denounce this Agreement by a notification addressed, through diplomatic channels, to the Government of Cuba, and announced by that Government, through diplomatic channels, to all the other contracting Governments. This denunciation shall take effect at the expiration of the period of one year from the date on which the notification was received by the Government of Cuba. This effect shall apply only to the author of the denunciation. This Agreement shall remain in force for the other contracting Governments but only as between such Governments.

VI

Effective Date and Term of the Agreement

1. Except for the provisions of Section 1 of Part III, Section 1 of Part V, and paragraph 3 of Table VI of

(Continued on page 403)

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Consulting Radio Engineers

WASHINGTON, D. C.

Appendices and Tables: Allocation Provisions of Havana Agreement

APPENDIX I

Under the provisions of Section II of this Agreement each country may use all the 106 channels when technical conditions with respect to interference to established stations are such as to render such use practicable. However, priority of use on specified clear channels is recognized for the following number of Class I and II stations in each country.

Country	Number of Stations
Canada	14
Cuba	9*
Dominican Republic	1
Haiti	1
Mexico	15
Newfoundland	2*
United States	63

*See Table V for special arrangements provided for Cuba and Newfoundland.

These stations and the conditions of their operation are as specified in Tables II, III, IV, V, VI, VII and VIII following herewith.

TABLE II
Class I-A Stations

Frequency	Location of Stations
630	Quebec, Canada
730	Mexico, D. F.
740	Ontario, Canada
800	Sonora, Mexico
860	Ontario, Canada
900	Mexico, D. F.
990	Manitoba, Canada
1010	Alberta, Canada
1050	Nuevo Leon, Mexico
1220	Yucatan, Mexico
1540	Santa Clara, Cuba
1570	Nuevo Leon, Mexico
1580	Quebec, Canada

TABLE III
Class I-B Stations

Frequency	Location of stations	Power Limitation (Kw.)	Requirements as to directional antennas
810	New York, U. S. A.	—	None
810	California, U. S. A.	—	To be determined
940	Quebec, Canada	5 kw. min. permissible	Determine from operation
940	Mexico, D. F.	—	Determine from operation
1000	Jalisco, Mexico	20	To be determined
1000	Washington, U. S. A.	—	To be determined
1000	Illinois, U. S. A.	—	To be determined
1010	Havana, Cuba	—	Determine from operation
1060	Mexico, D. F.	—	To be determined
1060	Pennsylvania, U. S. A.	—	To be determined
1070	Maritime Provinces, Canada	—	None
1070	California, U. S. A.	—	None
1080	Connecticut, U. S. A.	—	To be determined
1080	Texas, U. S. A.	—	To be determined
1090	Baja Calif., Mexico	—	To be determined
1090	Maryland, U. S. A.	—	To be determined
1090	Arkansas, U. S. A.	—	To be determined
1110	North Carolina, U. S. A.	—	To be determined
1110	Nebraska, U. S. A.	—	To be determined
1130	British Columbia, Canada	5 kw. min. permissible	None
1130	New York-New Jersey, U. S. A.	—	None
1140	Chihuahua, Mexico	—	To be determined
1140	Virginia, U. S. A.	—	To be determined
1170	Oregon, U. S. A.	—	To be determined
1170	Oklahoma, U. S. A.	—	To be determined
1170	West Virginia, U. S. A.	—	To be determined
1190	Sinaloa, Mexico	—	To be determined
1190	Indiana, U. S. A.	—	To be determined
1550	Ontario, Canada	—	Determine from operation
1550	Vera Cruz, Mexico	20	Determine from operation
1560	Havana, Cuba	—

Text of the Havana Treaty

(Continued from page 402)

Appendix I annexed hereto (which provisions shall go into effect immediately upon this Agreement becoming valid), this Agreement shall become effective one year after the date it shall have been ratified by the fourth of those Governments whose ratification is requisite to the validity of this Agreement. The Governments will cooperate to the end that, wherever possible, the provisions of this Agreement shall be carried out in advance of said effective date.

2. This Agreement shall remain in effect for a period of five years after said effective date.

VII Adherence

This Agreement shall be open to adherence in the name of Newfoundland.

In witness whereof the respective plenipotentiaries have signed the Agreement in triplicate, one copy in English, one in Spanish, and one copy in French, each of which shall remain deposited in the archives of the Government of Cuba and a copy of each of which shall be forwarded to each Government.

Done at Habana, Cuba, December 13, 1937.

TABLE IV
Class II Stations

Frequency	Location of stations	Power Limitation (Kw.)	Requirements as to directional antennas
640	Newfoundland	—	None
690	Kansas-Oklahoma, U. S. A.	—	To be determined ^a
740	Calif., U. S. A.	—	To be determined ^b
800	Ontario, Canada	5	To be determined
810	Tamaulipas (Tampico) Mexico	50	To be determined
900	Quebec, Canada	5	To be determined
990	Tennessee, U. S. A.	—	To be determined ^c
1000	Oriente, Cuba	10	To be determined
1050	New York, U. S. A.	—	To be determined
1060	Alberta, Canada	10	To be determined
1070	Alabama, U. S. A.	—	To be determined
1080	Manitoba, Canada	15	To be determined
1080	Haiti	10	To be determined
1110	Mexico, D. F.	20	To be determined
1130	Louisiana, U. S. A.	—	To be determined
1170	Dominican Republic	10	To be determined
1190	Havana, Cuba	15	To be determined

^a Permissible to increase field intensity above 25 uv/m (10% skywave) west of Minnesota on Canadian border.

^b Same as ^a except west of North Dakota.

^c Same as ^a except east of Minnesota. Also 650 miles from border requirement waived.

TABLE V
Class II Stations^a on Regional Channels
(Cuba and Newfoundland)

Frequency	Location of Stations	Maximum Power in kw.
560	Newfoundland	10
570	Santa Clara, Cuba	15
590	Havana, Cuba	25
630	Havana, Cuba	15
1270	Havana, Cuba	10

^a These stations shall use directional antennas to prevent objectionable interference to the Class III stations on the channel in accordance with Appendix VII.

TABLE VI

Special Conditions Affecting the United States

The 24 Class I and II stations in the United States which use clear channels with other countries party to this agreement are given in Tables III and IV. The remaining 39 Class I and II stations of the United States will be assigned the following clear channels:

640 660 660 670 680 700 710 720 750 760 770 780 820 830 840 850 870 880 890 1020 1030 1040 1100 1120 1160 1180 1200 1210 1500 1510 1520 1530

It is recognized that the United States must make extensive adjustments in the assignments of its existing stations in order to make possible the carrying out of this Agreement, that these adjustments will require approximately a year, and that it is not possible for the United States at this time to specify on which of the said 32 channels it will have priority of use for Class I-A stations, Class I-B stations and Class II stations respectively, nor the locations of such stations, power and other information with respect thereto. The United States may assign Class I-A stations to at least 25 of said channels. The United States agrees that ninety days before the effective date of this Agreement it will communicate this information to each of the other countries parties to this Agreement, and such information, when communicated, shall be considered part of this Agreement as if fully set forth herein.

Nothing stated in this Agreement shall be construed to preclude the United States of America from asserting, and enjoying recognition of, priority of use with reference to certain other Class II stations (not included in the 63 stations mentioned in Table I) which are now in actual operation in the band 640-1190 kc. and which are known under the Regulations of the Federal Communications Commission as "limited time stations" and "daytime stations" (having hours of operation limited to sunset taken either at their respective locations or at the locations of the respective dominant stations on clear channels and in some cases including hours not actually used by said dominant stations) which stations may, so far as permitted by the terms of this Agreement and the engineering standards herein set forth, be given assignments substantially equivalent to those they now enjoy.

TABLE VII

Special Conditions Regarding the Use of 1010 kc. by Cuba and Canada

With regard to the use of the clear channel of 1010 kc. by a Class I-A station in Canada, and by a Class I-B station in Cuba, both countries mutually agree that the interfering signal shall not exceed for 10 per cent of the time or more the value of 50 microvolts per meter at the following points of measurement: in Cuba at any point east of the province of Camaguey, and in Canada at any point west of the province of Manitoba.

TABLE VIII

Special Conditions Affecting Canada

Nothing stated in this Agreement shall be construed to preclude Canada from asserting priority of use with reference to certain Class III and IV stations now in operation in Canada on existing clear and regional channels which through this Agreement will become of a class of channel which may not permit their use by Class III and IV stations.

(Continued on page 404)

Appendices and Tables: Allocation Provisions of Havana Agreement

(Continued from page 403)

PROTECTED SERVICE CONTOURS AND PERMISSIBLE INTERFERENCE SIGNALS FOR BROADCAST STATIONS

APPENDIX II

TABLE I

Class of station	Class of channel used	Permissible power	Boundary or signal intensity contour of area protected from objectionable interference ^a		Permissible interfering signal ^b	
			Day	Night	Day	Night ^c
I A	Clear	50 kw or more	Boundary of country in which station is located		5 uv/m	25 uv/m ^d
I B	Clear	10 kw to 50 kw	100 uv/m	500 uv/m	5 uv/m	25 uv/m
II	Clear ^d	0.25 kw to 50 kw	500 uv/m ^e	2500 uv/m ^e (50% sky wave) (Ground wave)	25 uv/m ^e	125 uv/m ^e
III A	Regional	1 kw to 5 kw	500 uv/m	2500 uv/m (Ground wave)	25 uv/m	125 uv/m
III B	Regional	0.5 kw to 1 kw night and 5 kw day	500 uv/m	4000 uv/m (Ground wave)	25 uv/m	200 uv/m
IV	Local	0.1 kw to 0.25 kw	500 uv/m	4000 uv/m (Ground wave)	25 uv/m	200 uv/m

^aIn accordance with other provisions in this Agreement this freedom of interference does not apply outside the boundaries of the country in which the station is located.
^bFrom other stations on same channel only. For adjacent channels see Appendix III, Table I.

^cSky wave field intensity exceeded for 10% of the time.

^dNo Class II station shall be assigned to the same channel as a Class I-A station for nighttime operation (from sunset to sunrise) less than 650 miles of the nearest border of the country in which the Class I-A station is located.

^eThese values are with respect to interference from all stations except Class I, which stations may cause interference to a field intensity contour of higher value. However, it is recommended that Class II stations be so located that the interference received from Class I stations will not exceed these values. If the Class II stations are limited by Class I stations to higher values, then such values shall be the standard established with respect to interference from all other classes of stations.

APPENDIX III

TABLE I

ADJACENT CHANNEL INTERFERENCE

Channel separation between desired and undesired stations	Maximum ground wave field intensity of undesired station
10 kc	0.25 mv/m
20 kc	5.0 mv/m
30 kc	25.0 mv/m

The undesired ground wave signal shall be measured at or within the 0.5 mv/m ground wave contour of the desired station. These values apply to all classes of stations both day and night and are based on ground waves only. No adjacent channel interference is considered on the basis of an interfering sky wave.

APPENDIX VI Mileage Separation Tables

The required separations between broadcasting stations as tabulated below are based upon the following conditions:

- The use of nondirectional antennas.
- Antenna efficiencies (in mv/m at one mile for one kilowatt).
 Class I—225 mv/m
 Class II and III—175 mv/m
 Class IV—150 mv/m
- Frequency, 1000 kc.
- Soil conductivity, $s = 10-13$.
- Soil dielectric constant, $e = 15$.
- Groundwave transmission as shown on chart in Appendix IV.
- Skywave transmission as shown on chart in Appendix V.
- Protection to service areas as shown in Appendix II, Table I.
- Ratio of desired to undesired signal:

Channel Separation Same frequency	Ratio of Desired to Undesired
10 kc.	2:1
20 kc.	1:10
30 kc.	1:50

TABLE I
REQUIRED DAY SEPARATION IN MILES BETWEEN BROADCAST STATIONS ON THE SAME CHANNEL

Class and Power	Class IV		Classes II and III							Class I					
	100 W.	250 W.	0.25 Kw.	0.5 Kw.	1 Kw.	5 Kw.	10 Kw.	25 Kw.	50 Kw.	10 Kw.	25 Kw.	50 Kw.	100 Kw.	250 Kw.	500 Kw.
Class IV															
100 W.	143	165	172	192	213	265	285	310	335	390	417	437	462	486	513
250 W.	165	173	180	200	221	273	293	318	343	415	442	462	487	511	538
Classes II and III															
0.25 Kw.	172	180	183	203	224	276	296	321	346	418	446	465	490	514	541
0.5 Kw.	192	200	203	210	231	283	303	328	353	446	473	493	518	542	569
1 Kw.	213	221	224	231	239	291	311	336	361	467	494	514	539	563	590
5 Kw.	265	273	276	283	291	313	333	358	383	520	547	567	592	616	643
10 Kw.	285	293	296	303	311	333	345	370	395	540	567	587	612	636	663
25 Kw.	310	318	321	328	336	358	370	389	414	565	592	612	637	661	688
50 Kw.	335	343	346	353	361	383	395	414	430	587	614	634	659	683	710
Class I															
10 Kw.	390	415	418	446	467	520	540	565	587	556	585	605	620	655	682
25 Kw.	417	442	446	473	494	547	567	592	614	585	612	632	657	682	709
50 Kw.	437	462	465	493	514	567	587	612	634	605	632	652	677	702	729
100 Kw.	462	487	490	518	539	592	612	637	659	628	657	677	697	727	754
250 Kw.	486	511	514	542	563	616	636	661	683	655	682	702	727	751	778
500 Kw.	513	538	541	569	590	643	663	688	710	682	709	729	754	778	805

TABLE II

REQUIRED DISTANCE IN MILES FROM THE BOUNDARY OF A COUNTRY IN WHICH A CLASS I-A STATION IS LOCATED FOR DAYTIME OPERATION OF A CLASS II ON THE SAME CHANNEL

Power of Station	Class II						
Miles from Boundary	0.25 Kw.	0.5 Kw	1 Kw.	5 Kw.	10 Kw.	25 Kw.	50 Kw.
	237	261	282	335	355	380	402

(Continued on page 406)

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Appendices and Tables: Allocation Provisions of Havana Agreement

(Continued from page 404)

TABLE III
REQUIRED DAY AND NIGHT SEPARATION IN MILES BETWEEN BROADCAST STATIONS ON ADJACENT CHANNELS

Class & Power	Class IV									Classes II and III											
	0.1 Kw.			0.25 Kw.			0.5 Kw.			1 Kw.			5 Kw.			10 Kw.					
	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.			
Class IV																					
0.1 Kw.	73	37	32	82	45	40	86	47	42	94	55	50	105	63	58	133	84	79	149	98	93
0.25 Kw.	82	45	40	90	48	41	94	50	43	102	58	51	113	66	59	141	87	80	157	101	94
Classes II & III																					
0.25 Kw.	86	47	42	94	50	43	96	51	43	104	59	51	115	67	59	143	88	80	159	102	94
0.5 Kw.	94	55	50	102	58	51	104	59	51	112	62	52	123	70	60	151	91	81	167	105	95
1 Kw.	105	63	58	113	66	59	115	67	59	123	70	60	131	73	62	159	94	83	175	108	97
5 Kw.	133	84	79	141	87	80	143	88	80	151	91	81	159	94	83	180	104	87	196	118	101
10 Kw.	149	98	93	157	101	94	159	102	94	167	105	95	175	108	97	196	118	101	210	123	104
25 Kw.	172	115	110	180	118	111	182	119	111	190	122	112	198	125	114	219	135	118	233	140	121
50 Kw.	190	131	126	198	134	127	200	135	127	208	138	128	216	141	130	237	151	134	251	156	137
Class I																					
10 Kw.	162	107	102	170	110	103	172	111	103	180	114	104	188	117	106	209	127	118	223	132	113
25 Kw.	183	126	121	191	129	122	193	130	122	201	133	123	209	136	125	230	146	129	244	151	132
50 Kw.	203	144	139	211	147	140	213	148	140	221	151	141	229	154	143	250	164	147	264	169	150
500 Kw.	277	211	206	285	214	207	287	215	207	295	218	208	303	221	210	324	231	214	338	236	217

Class and Power	Class II						Class I											
	25 Kw.			50 Kw.			10 Kw.			25 Kw.			50 Kw.			500 Kw.		
	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.	10 Kc.	20 Kc.	30 Kc.
Class IV																		
0.1 Kw.	172	115	110	190	131	126	162	107	102	183	126	121	203	144	139	277	211	206
0.25 Kw.	180	118	111	198	134	127	170	110	103	191	129	122	211	147	140	285	214	207
Classes II and III																		
0.25 Kw.	182	119	111	200	135	127	172	111	103	193	130	122	213	148	140	287	215	207
0.5 Kw.	190	122	112	208	138	128	180	114	104	201	133	123	221	151	141	295	218	208
1 Kw.	198	125	114	216	141	130	188	117	106	209	136	125	229	154	143	308	221	210
5 Kw.	219	135	118	237	151	134	209	127	110	230	146	129	250	164	147	324	231	214
10 Kw.	233	140	121	251	156	137	223	132	113	244	151	132	264	169	150	338	236	217
25 Kw.	250	149	125	268	165	141	242	145	123	261	160	136	281	178	154	355	245	221
50 Kw.	268	165	141	284	172	145	260	161	139	279	168	144	297	185	158	371	252	225
Class I																		
10 Kw.	242	145	123	260	161	139	232	137	115	253	156	134	273	174	152	347	241	219
25 Kw.	261	160	136	279	168	144	253	156	134	272	163	139	292	181	157	366	248	224
50 Kw.	281	178	154	297	185	158	273	174	152	292	181	157	310	190	161	384	257	227
500 Kw.	356	245	221	371	252	225	347	241	219	366	248	224	384	257	227	451	291	247

TABLE IV

Required Night Separation in Miles Between Broadcast Stations on the Same Channels

The following tables indicate the mileage protection each class must give all other classes.

Class I-A	Class I-A	Not required to protect Class II stations on same channel at night.			
TABLE IV A					
Class I-B	Class I-B	Must protect other Class I-B stations as shown below.			
<i>Class I-B</i>		<i>5 kw.</i>	<i>10 kw.</i>	<i>25 kw.</i>	<i>50 kw.</i>
10 kw.		2665	3010	3280	3500
25 kw.		3010	3243	3500	3660
50 kw.		3280	3500	3660	

TABLE IV—C

CLASS III-Aa MUST PROTECT OTHER CLASSES AS SHOWN BELOW

Class III-A	Class III-A				Class III-B
	1 Kw.	5 Kw.	.5 Kw.	1 Kw.	
1 Kw.	739	1025	550	553	
5 Kw.	1025	1039	847	851	

aSee Appendix VII for protection Class III stations should give Class II stations on regional channels.

TABLE IV D

Class III B b Must protect other classes as shown below.

Class III B	Class III A		Class III B	
	1 kw.	5 kw.	.5 kw.	1 kw.
.5 kw.	735	1020	383	550
1. kw.	739	1025	550	553

TABLE IV-B

CLASS II—MUST PROTECT OTHER CLASSES AS SHOWN BELOW

Class II	Class II Stations							Class I-B Stations			Class I-A Stations Distance from Nearest Border of Country in Which Class I-A Station is Located
	.25 Kw.	.5 Kw.	1 Kw.	5 Kw.	10 Kw.	25 Kw.	50 Kw.	10 Kw.	25 Kw.	50 Kw.	
.25 Kw.	451	602	732	1018	1186	1271	1529	1378	1610	1760	1038
.5 Kw.	602	606	736	1022	1140	1275	1533	1508	1735	1890	1180
1 Kw.	732	736	739	1035	1143	1280	1535	1658	1885	2080	1335
5 Kw.	1018	1022	1039	1157	1292	1547	1805	2165	2395	2550	1880
10 Kw.	1186	1140	1143	1157	1162	1298	1533	2450	2680	2830	2122
25 Kw.	1271	1275	1280	1292	1298	1310	1560	2880	3120	3260	2575
50 Kw.	1529	1533	1535	1547	1553	1560	1570	3090	3330	3480	2730

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TABLE IV E

Class IV—Must protect other classes as shown below.

Class IV	Class III A		Class III B		Class IV
	1 kw.	5 kw.	.5 kw.	1 kw.	
.1 kw.	300	300	Daytime separation determines		Daytime separation determines
.25 kw.	395	407			

b See Note a, Table IV-c

TABLE IV F

Distance Class II Stations must be from Class I A and I B Stations to obtain recommended protection to Class II Station (2.5 mv/m ground wave contour).

Class II (a)	10 kw.	Class I A and I B Stations		
		25 kw.	50 kw.	500 kw.
.25 kw.	1248	1462	1520	2767
.5 kw.	1252	1470	1523	2771
1. kw.	1256	1473	1528	2775
5. kw.	1270	1484	1541	2789
10. kw.	1275	1490	1546	2793
25. kw.	1285	1498	1743	2803
50. kw.	1293	1510	1750	2812

Note (a): Must use directional antenna to protect dominant station or stations with these separations.

TABLE IV G

Distance Class IV Stations must be from Class III-A and III-B Station to obtain recommended protection to Class IV Station (4.0 mv/m ground wave contour).

Class IV Power	Class III-A or III-B		
	.5	1.0	5.0
.10	377	547	847
.25	381	551	851

APPENDIX VII

Engineering Requirements for the Use of Regional Channels by Class II Station under the Provisions of Section C 5 c.

A Class II station assigned to a regional channel in accordance with Section C 5 c shall use a directional antenna or other means to limit the interfering signal within the protected service area of any Class II station on the channel to the value set forth in Appendix II, Table I. The interfering signal in case of projected operation shall be determined from the characteristics of the antenna and appropriate curve in Appendix V. In case of actual operation the interfering signal shall be determined by the method described in Section E 4.

Class III stations, operating on a channel to which a Class II station is assigned, should limit the interference to the Class II station in conformity with the provisions of Appendix II, Table I.

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Log of U. S. Broadcast Stations Under Havana Treaty

Call Letter List as of January 1, 1941 Showing New Assignments Tentatively Scheduled for March 29, 1941

ABBREVIATIONS

U—Unlimited Time. D—Daytime. N—Night Time. S—Shares Time. SH—Specified Hours. LS—Power Until Local Sunset.
L—Limited Time With Dominant Station. CP—Construction Permit.

EXPLANATION

Powers shown are those at present authorized, except for local stations, all of which are listed for 250 watts fulltime in accord with treaty provisions. All times are U unless otherwise designated. Where LS and D powers are shown, the upper power designation is the night power. For definitions of station classes see Page 398.

(For text of North American Broadcasting Agreement, see Pages 398-407)

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class	Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
K													
KABC	San Antonio, Tex.	250	1420	1450	U	IV	KFDA	Amarillo, Tex.	250	1200	1230	U	IV
KABR	Aberdeen, S. D.	5,000	1390	1420	U	III-A	KFDM	Beaumont, Tex.	1,000	560	560	U	III-A
KADA	Ada, Okla.	250	1200	1230	U	IV	KFDY	Brookings, S. D.	1,000	780	790	SHD	III
KALB	Alexandria, La.	250	1210	1240	U	IV	KFEL	Denver, Col.	1,000	920	950	U	III-A
KALE	Portland, Ore.	5,000	1300	1330	U	III-A	KFEQ	St. Joseph, Mo.	500 2,500-LS	680	680	L-KPO	II
KAND	Corsicana, Tex.	250	1310	1340	U	IV	KFGQ	Boone, Ia.	250	1370	1400	SHD	IV
KANS	Wichita, Kan.	250	1210	1240	U	IV	KFH	Wichita, Kan.	1,000 5,000 CP-5,000-LS	1300	1330	U	III-A
KARK	Little Rock, Ark.	5,000	890	920	U	III-A	KFL	Los Angeles, Cal.	50,000	640	640	U	I-A
KARM	Fresno, Cal.	250	1310	1340	U	IV	KFIO	Spokane, Wash.	100	1120	1150	D	IV
KASA	Elk City, Okla.	250	1210	1240	U	IV	KFIZ	Fond du Lac, Wis.	250	1420	1450	U	IV
KAST	Astoria, Ore.	250	1200	1230	U	IV	KFJB	Marshalltown, Ia.	250	1200	1230	U	IV
KATE	Albert Lea, Minn.	250	1420	1450	U	IV	KFJI	Klamath Falls, Ore.	250	1210	1240	U	IV
KAWM	Gallup, N. M.	250	1500	1490	U	IV	KFJM	Grand Forks, N. D.	500 1,000-LS	1410	1440	U	III-B
KBIX	Muskogee, Okla.	250	1500	1490	U	IV	KFJZ	Fort Worth, Tex.	1,000 CP-5,000	1240	1270	U	III-A
KBIZ	Ottumwa, Ia.	250	1210	1240	U	IV	KFKA	Greeley, Col.	1,000	880	910	S-KPOF	III-A
KBKR	Baker, Ore.	250	1500	1490	U	IV	KFKU	Lawrence, Kan.	1,000 5,000-LS	1220	1250	S-WREN	III-A
KBND	Bend, Ore.	250	1310	1340	U	IV	KFMB	San Diego, Cal.	250	1420	1450	U	IV
KBPS	Portland, Ore.	250	1420	1450	S-KXI	IV	KFNF	Shenandoah, Ia.	500 1,000-LS	890	920	S-KUSD	III-B
KBST	Big Spring, Tex.	250	1500	1490	U	IV	KFOR	Lincoln, Neb.	250	1210	1240	U	IV
KBTM	Jonesboro, Ark.	250	1200	1230	U	IV	KFOX	Long Beach, Cal.	1,000	1250	1280	U	III-A
KBWD	Brownwood, Tex.	500	1350	1380	U	III-B	KFPL	Dublin, Tex.	250	1310	1340	U	IV
KCKM	Kansas City, Kan.	250	1310	1340	U	IV	KFPW	Ft. Smith, Ark.	250	1370	1400	U	IV
KCMC	Texarkana, Tex.	250	1420	1450	U	IV	KFPY	Spokane, Wash.	5,000	890	920	U	III-A
KCMO	Kansas City, Mo.	1,000 5,000-LS	1450	1480	U	III-B	KFQD	Anchorage, Alaska	250	780	790	SH	IV
KCRC	Enid, Okla.	250 (Proposed 1,000)	1360	1390	U	IV III-A	KFRD	San Francisco, Cal.	5,000	610	610	U	III-A
KCRJ	Jerome, Ariz.	250	1310	1340	U	IV	KFRO	Longview, Tex.	1,000	1340	1370	U	III-B
KDAL	Duluth, Minn.	250	1500	1490	U	IV	KFRU	Columbia, Mo.	250	1370	1400	U	IV
KDB	Santa Barbara, Cal.	250	1500	1490	U	IV	KFSD	San Diego, Cal.	5,000	600	600	U	III-A
KDFN	Casper, Wyo.	1,000	1440	1470	U	III-B	KFSG	Los Angeles, Cal.	1,000 2,500-LS	1120	1150	S-KRKD	III-A
KDKA	Pittsburgh, Pa.	50,000	980	1020	U	I-A	KFUO	Clayton, Mo.	1,000 CP-5,000	830	850	L-KOA	II
KDLR	Devils Lake, N. D.	250	1210	1240	U	IV	KFVD	Los Angeles, Cal.	1,000	1000	1020	L-KDKA	II
KDNT	Denton, Tex.	250	1420	1450	U	IV	KFVS	Cape Girardeau, Mo.	250	1370	1400	U	IV
KDON	Monterey, Cal.	250	1210	1240	U	IV	KFWB	Los Angeles, Cal.	5,000	950	980	U	III-A
KDRO	Sedalia, Mo.	250	1500	1490	U	IV	KFXD	Nampa, Ida.	250	1200	1230	U	IV
KDTH	Dubuque, Ia.	1,000	1340	1370	U	III-B	KFXJ	Grand Junction, Col.	250	1200	1230	U	IV
KDYL	Salt Lake City, Utah	1,000 5,000-LS CP-5,000-U	1290	1320	U	III-A	KFXM	San Bernardino, Cal.	250	1210	1240	S-KPPC	IV
KECA	Los Angeles, Cal.	1,000 5,000-LS CP-5,000	780	790	U	III-A	KFYO	Lubbock, Tex.	250	1310	1340	U	IV
KELA	Centralia, Wash.	1,000	1440	1470	U	III-A	KFYR	Bismarck, N. D.	1,000 5,000-LS CP-5,000-U	550	550	U	III-A
KELD	El Dorado, Ark.	250	1370	1400	U	IV	KGA	Spokane, Wash.	5,000 (Proposed 10,000)	1470	1510	U	II I-B
KELO	Sioux Falls, S. D.	250	1200	1230	U	IV	KGB	San Diego, Cal.	1,000	1330	1360	U	III-A
KENO	Las Vegas, Nev.	250	1370	1400	U	IV	KGBU	Ketchikan, Alaska	500	900	930	U	III-B
KERN	Bakersfield, Cal.	1,000	1380	1410	U	III-A	KGBX	Springfield, Mo.	5,000	1230	1260	U	III-A
KEUB	Price, Utah	250	1420	1450	I	IV	KGCU	Mandan, N. D.	250 (Proposed 500)	1240	1270	U	IV III-B
KEVR	Seattle, Wash.	250	1370	1400	S-KRKO	IV	KGCC	Wolf Point, Mont.	1,000	1450	1480	U	III-A
KEX	Portland, Ore.	5,000 (Proposed 50,000)	1160	1190	U	II I-B	KGDE	Fergus Falls, Minn.	250	1200	1230	U	IV
KEYS	Corpus Christi, Tex.	250	1500	1490	I	IV	KGDM	Stockton, Cal.	1,000	1100	1130	D	II
KFAB	Lincoln, Neb.	10,000 (Proposed 50,000)	770	1110	U	I-B	KGDK	Sterling, Col.	250	1200	1230	U	IV
KFAC	Los Angeles, Cal.	1,000	1300	1330	I	III-A	KGER	Long Beach, Cal.	1,000	1360	1390	U	III-A
KFAM	St. Cloud, Minn.	250	1420	1450	I	IV	KGEZ	Kalispell, Mont.	250 or 1,000	1310 1310	1340 1460	U	IV III-B
KFAR	Fairbanks, Alaska	1,000	610	610	U	III-A	KGFF	Shawnee, Okla.	250	1420	1450	U	IV
KFBB	Great Falls, Mont.	1,000 5,000-LS CP-5,000	1280	1310	U	III-A							
KFBC	Cheyenne, Wyo.	250	1420	1450	U	IV							
KFBI	Wichita, Kan.	1,000 5,000-LS	1050	1070	U	II							
KFBK	Sacramento, Cal.	10,000	1490	1530	U	I-B							

IN THIS MAGIC CIRCLE

More people live within 50 miles of Greensboro than in any other area of equal size in the Southeast. These people make more products, earn more wages and get more for their crops. WBIG serves the No. 1 spot of the South with 5000 watts day—1000 watts night—power packed with pulling programs of CBS, fine local talent and news.



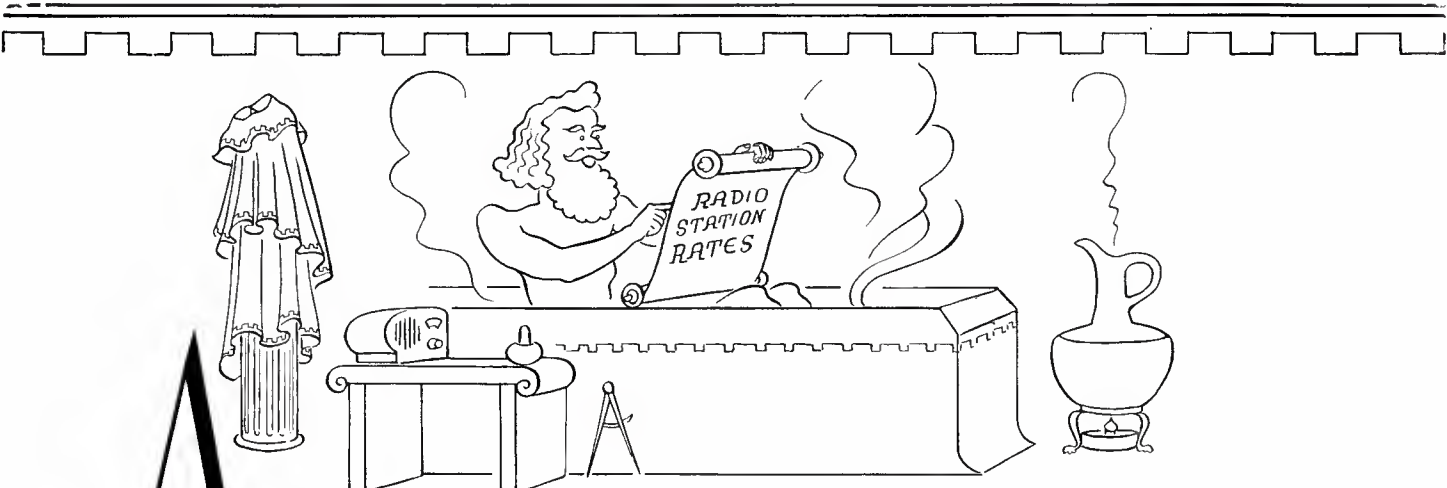
5000 W. Day **WBIG** 1000 W. Night
CBS Affiliate

Greensboro, North Carolina

Edney Ridge, Director

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
KGFI	Brownsville, Tex.	250	1500	1490	U	IV
KGFL	Los Angeles, Cal.	250	1200	1230	U	IV
KGFL	Roswell, N. M.	250	1370	1400	U	IV
KGFW	Kearney, Neb.	250	1310	1340	U	IV
KGFX	Pierre, S. D.	200	630	630	SHD	IV
KGGF	Coffeyville, Kan.	1,000	1010	690	SH-WNAD	II
KGGM	Albuquerque, N. M.	1,000	1230	1260	U	III-A
KGHF	Pueblo, Col.	500	1320	1350	U	III-B
KGHI	Little Rock, Ark.	250	1200	1230	U	IV
KGHL	Billings, Mont.	1,000 5,000—LS CP-5,000	780	790	U	III-A
KGIR	Butte, Mont.	5,000	1340	1370	U	III-A
KGIW	Alamosa, Col.	250	1420	1450	SH-KIDW	IV
KGKB	Tyler, Tex.	250	1500	1490	U	IV
KGKL	San Angelo, Tex.	250	1370	1400	U	IV
KGKO	Fort Worth, Tex.	1,000 5,000—LS CP-5,000—U	570	570	U	III-A
KGKY	Scottsbluff, Neb.	250	1500	1490	U	IV
KGLO	Mason City, Ia.	250 CI-1,000	1210 CP-1270	1300	U	III-B
KGLU	Safford, Ariz.	250	1420	1450	U	IV
KGMB	Honolulu, T. H.	5,000	590	590	U	III-A
KGNC	Amarillo, Tex.	1,000 2,500—LS CP-5,000—LS	1410	1440	U	III-A
KGNF	North Platte, Neb.	1,000	1430	1460	D	III
KGNO	Dodge City, Kan.	250 1,000—LS	1340	1370	U	III-B
KGO	San Francisco, Cal. (Proposed 10,000)	7,500	790	810	U	II I-B
KGU	Honolulu, T. H.	2,500	750	760	L-WJR	II
KGVO	Missoula, Mont.	1,000 5,000—LS	1260	1290	U	III-A
KGW	Portland, Ore.	1,000 5,000—LS	620	620	U	III-A
KGY	Olympia, Wash.	250	1210	1240	U—except when KTW operating	IV
KHAS	Hastings, Neb.	250	1200	1230	U	IV
KHBC	Hilo, T. H.	250	1200	1230	U	IV
KHBG	Okmulgee, Okla.	250	1210	1240	U	IV
KHJ	Los Angeles, Cal.	1,000 5,000—LS CP-5,000	900	930	U	III-A
KHQ	Spokane, Wash.	5,000	590	590	U	III-A
KHSL	Chico, Cal.	500 1,000—LS	1260	1290	U	III-B
KHUB	Watsonville, Cal.	250	1310	1340	U	IV
KICA	Clovis, N. M.	250	1370	1400	U	IV
KID	Idaho Falls, Ida.	500 5,000—LS	1320	1350	U	III-B
KIDO	Boise, Ida.	1,000 2,500—LS	1350	1380	U	III-A
KIDW	Lamar, Col.	250	1420	1450	SH-KCIW	IV
KIEM	Eureka, Cal.	500 1,000—LS	1450	1480	U	III-B
KIEV	Glendale, Cal.	250	850	870	D	II
KINY	Juneau, Alaska	1,000	1430	1460	U	III-A
KIRO	Seattle, Wash.	10,000	710	710	U	I-B
KIT	Yakima, Wash.	1,000	1250	1280	U	III-A
KITE	Kansas City, Mo.	1,000	1530	1590	U	III-A
KIUL	Garden City, Kan.	250	1210	1240	U	IV
KIUN	Pecos, Tex.	250	1370	1400	U	IV
KIUP	Durango, Col.	250	1370	1400	U	IV
KJBS	San Francisco, Cal.	500	1070	1100	L-WTAM	II
KJR	Seattle, Wash. (Proposed 10,000)	5,000	970	1000	U	II I-B
KLAH	Carlsbad, N. M.	250	1210	1240	U	IV
KLBM	LaGrande, Ore.	250	1420	1450	U	IV
KLCN	Blytheville, Ark.	100	1290	1320	D	IV
KLO	Ogden, Utah	5,000	1400	1430	U	III-A
KLPM	Minot, N. D.	1,000	1360	1390	U	III-A
KLRA	Little Rock, Ark.	5,000	1390	1420	U	III-A
KLS	Oakland, Cal.	250 CP-1,000	1280	1310	U	III-A
KLUF	Galveston, Tex.	250	1370	1400	U	IV
KLX	Oakland, Cal.	1,000	880	910	U	III-A
KLZ	Denver, Col.	5,000	560	560	U	III-A
KMA	Shenandoah, Ia.	1,000 5,000—LS	930	960	U	III-A
KMAC	San Antonio, Tex.	250	1370	1400	S-KONO	IV
KMBC	Kansas City, Mo.	5,000	950	980	U	III-A
KMED	Medford, Ore.	1,000	1410	1440	U	III-A
KMJ	Fresno, Cal.	5,000	580	580	U	III-A


Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
KMLB	Monroe, La.	250	1200	1230	U	IV
KMMJ	Crand Island, Neb.	1,000	740	750	L-WSB	II
KMO	Tacoma, Wash.	1,000 CP-5,000	1330	1360	U	III-A
KMOX	St. Louis, Mo.	50,000	1090	1120	U	I-A
KMPC	Beverly Hills, Cal.	1,000 5,000—LS CP-5,000—U	710	710	U	II
KMTR	Los Angeles, Cal.	1,000	570	570	U	III-A
KMYC	Marysville, Cal.	250	1420	1450	U	IV
KMYR	Denver, Col.	250	1310	1340	U	IV
KNEL	Brady, Tex.	250	1500	1490	U	IV
KNET	Palestine, Tex.	250	1420	1450	U	IV
KNOW	Austin, Tex.	250	1500	1490	U	IV
KNX	Los Angeles, Cal.	50,000	1050	1070	U	I-B
KOA	Denver, Col.	50,000	830	850	U	I-A
KOAC	Corvallis, Ore.	1,000 CP-5,000—LS	550	550	U	III-A
KOAM	Pittsburg, Kan.	1,000	790	810	D	II
KOB	Albuquerque, N. M.	50,000	1180	1030	U	II
KOBH	Rapid City, S. D.	250	1370	1400	U	IV
KOCA	Kilgore, Tex.	250	1210	1240	U	IV
KOCY	Oklahoma City, Okla.	250	1310	1340	U	IV
KODL	The Dalles, Ore.	250	1200	1230	U	IV
KOH	Reno, Nev.	1,000	630	630	U	III-A
KOHL	Omaha, Neb.	1,000 5,000—LS CP-5,000—U	1260	1290	U	III-A
KOIN	Portland, Ore.	5,000	940	970	U	III-A
KOKO	La Junta, Col.	250	1370	1400	U	IV
KOL	Seattle, Wash.	1,000 5,000—LS	1270	1300	U	III-A
KOMA	Oklahoma City, Okla. (Proposed 50,000)	5,000	1480	1520	U	II I-B
KOME	Tulsa, Okla.	250	1310	1340	U	IV
KOMO	Seattle, Wash.	1,000 5,000—LS CP-5,000—U	920	950	U	III-A
KONB	Omaha, Neb.	250	1500	1490	U	IV
KONO	San Antonio, Tex.	250	1370	1400	S-KMAC	IV
KOOS	Marshfield, Ore.	250	1200	1230	U	IV
KORE	Eugene, Ore.	250	1420	1450	U	IV
KORN	Fremont, Neb.	250	1370	1400	U	IV
KOTN	Pine Bluff, Ark.	250	1500	1490	U	IV
KOVC	Valley City, N. D.	250	1500	1490	U	IV
KOVO	Provo, Utah	250	1210	1240	U	IV
KOWH	Omaha, Neb.	500	660	660	D	II
KOY	Phoenix, Ariz.	1,000	550	550	U	III-A
KPAB	Laredo, Tex.	250	1500	1490	U	IV
KPAC	Port Arthur, Tex.	500	1220	1250	U	III-B
KPDN	Pampa, Tex.	250	1310	1340	U	IV
KPFA	Helena, Mont.	250	1210	1240	U	IV
KPHO	Phoenix, Ariz.	250	1200	1230	U	IV
KPLC	Lake Charles, La.	250	1500	1490	U	IV
KPLT	Paris, Tex.	250	1500	1490	U	IV
KPMC	Bakersfield, Cal.	1,000	1550	1600	U	III-A
KPO	San Francisco, Cal.	50,000	680	680	U	I-B
KPOF	Denver, Col.	1,000	880	910	S-KFKA	III-A
KPOW	Powell, Wyo.	250	1200	1230	U	IV
KPPC	Pasadena, Cal.	250	1210	1240	S-KFXM	IV
KPQ	Wenatchee, Wash.	250	1500	1490	U	IV
KPRC	Houston, Tex.	1,000 5,000—LS CP-5,000—U	920	950	U	III-A
KQV	Pittsburgh, Pa.	1,000	1380	1410	U	III-B
KQW	San Jose, Cal.	5,000	1010	740	U	II
KRBA	Lufkin, Tex.	250	1310	1340	U	IV
KRBC	Abilene, Tex.	250	1420	1450	U	IV
KRBM	Bozeman, Mont.	250	1420	1450	U	IV
KRE	Berkeley, Cal.	250	1370	1400	U	IV
KRGV	Weslaco, Tex.	1,000	1260	1290	U	III-A
KRIC	Beaumont, Tex.	250	1420	1450	U	IV
KRIS	Corpus Christi, Tex.	500 CP-1,000	1330	1360	U	III-A
KRJF	Miles City, Mont.	250	1310	1340	U	IV
KRKD	Los Angeles, Cal.	1,000 2,500—LS	1120	1150	S-KFSG	III-A
KRKO	Everett, Wash.	250	1370	1400	S-KEVR	IV
KRLC	Lewiston, Ida.	250	1370	1400	U	IV
KRLD	Dallas, Tex.	50,000	1040	1080	U	I-B
KRLH	Midland, Tex.	250	1420	1450	U	IV
KRMC	Jamestown, N. D.	250	1370	1400	U	IV



A Archimedes would have been a good time-buyer

You've read about Archimedes; remember? He knew all there was to know about astronomy, hydrostatics, mechanics, geometry and optics. With a little more study he'd have made a first-class time-buyer.

He's the chap who discovered the law of specific gravity [we hope]. That discovery produced his most famous quotation, viz: "Eureka!"

If Archimedes were a radio time-buyer today he'd have used that expression when a Free and Peters man told him about  ... in Oakland.

He'd have used it because he'd have found... as a lot of time-buyers have found... a station that will do a stand-up job for a limited budget... and a bonus job for the larger advertisers who have put to good use the principle of adding the top-flight independent in a territory to a schedule of network time or network station spots.

Just a few of those at KROW are General Mills, Chrysler Motors, Carnation Milk, Beaumont Laboratories [4-Way Cold Tablets], Plymouth Motor Corporation, White Laboratories [Chooz] and Grove's Bromo Quinine.

Listen, Mr. Time-Buying Archimedes. Make that same discovery in the San Francisco Bay area. Call in your Free and Peters man and have a "Eureka" today!

KROW

**RADIO CENTER BUILDING
NINETEENTH and BROADWAY
OAKLAND • CALIFORNIA**
Studios in Oakland & San Francisco



PHILIP G. LASKY, GENERAL MANAGER

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
KRMD	Shreveport, La.	250	1310	1340	U	IV
KRRR	Roseburg, Ore.	250	1500	1490	U	IV
KRNT	Des Moines, Ia.	1,000 5,000—LS CP-5,000—C	1320	1350	U	III-A
KROC	Rochester, Minn.	250	1310	1340	U	IV
KROD	El Paso, Tex.	250 CP-500 1,000—LS	600	600	U	III-B
KROW	Oakland, Cal.	1,000	930	960	U	III-A
KROY	Sacramento, Cal.	250	1210	1240	U	IV
KRRV	Sherman, Tex.	1,000	880	910	U	III-B
KRSC	Seattle, Wash.	1,000	1120	1150	U	III-A
KSAC	Manhattan, Kan.	500 1,000—LS	580	580	S-WIBW	III-B
KSAL	Salina, Kan.	1,000	1120	1150	U	III-B
KSAM	Huntsville, Tex.	250	1500	1490	U	IV
KSAN	San Francisco, Cal.	250	1420	1450	U	IV
KSCJ	Sioux City, Ia.	1,000 5,000—LS CP-5,000—C	1330	1360	U	III-A
KSD	St. Louis, Mo.	1,000 5,000—LS	550	550	U	III-B
KSEI	Pocatello, Ida.	250 1,000—LS	900	930	U	III-B
KSFO	San Francisco, Cal.	1,000 5,000—LS	560	560	U	III-A
KSL	Salt Lake City, Utah	50,000	1130	1160	U	I-A
KSLM	Salem, Ore.	1,000	1360	1390	U	III-A
KSO	Des Moines, Ia.	1,000 5,000—LS	1430	1460	U	III-A
KSOO	Sioux Falls, S. D.	5,000	1110	1140	L-WRVA	II
KSRO	Santa Rosa, Cal.	250 CP-1,000	1310 CP-1320	1350	U	III-B
KSTP	St. Paul, Minn.	50,000	1460	1500	U	I-B
KSUB	Cedar City, Utah	250	1310	1340	U	IV
KSUN	Lowell, Ariz.	250	1200	1230	U	IV
KSWO	Lawton, Okla.	250	1120	1150	D	IV
KTAR	Phoenix, Ariz.	5,000	620	620	U	III-A
KTBC	Austin, Tex.	1,000	1120	1150	SHD-WTAW	III
KTBS	Shreveport, La.	1,000	1450	1480	U	III-B
KTEM	Temple, Tex.	250	1370	1400	U	IV
KTFI	Twin Falls, Ida.	1,000	1240	1270	U	III-A
KTHS	Hot Springs, Ark.	10,000 (Proposed 50,000)	1040	1090	U	I-B
KTVC	Visalia, Cal.	1,000	890	920	U	III-B
KTMS	Santa Barbara, Cal.	1,000	1220	1250	U	III-B
KTOH	Lihue, T. H.	250	1500	1490	U	IV
KTOK	Oklahoma City, Okla.	250	1370	1400	U	IV
KTRB	Modesto, Cal.	250	740	860	D	II
KTRH	Houston, Tex.	1,000 5,000—LS CP-5,000—U	1290	1320	U	III-A
KTRI	Sioux City, Ia.	250	1420	1450	U	IV
KTSA	San Antonio, Tex.	1,000 5,000—LS	550	550	U	III-A
KTSM	El Paso, Tex.	500	1350	1380	U	III-B
KTSW	Emporia, Kan.	250	1370	1400	U	IV
KTUC	Tucson, Ariz.	250	1370	1400	U	IV
KTUL	Tulsa, Okla.	5,000	1400	1430	U	III-A
KTW	Seattle, Wash.	1,000	1220	1250	S-KWSC	III-A
KUIN	Grants Pass, Ore.	250	1310	1340	U	IV
KUJ	Walla Walla, Wash.	250 CP-1,000	1390	1420	U	III-A
KUOA	Siloam Springs, Ark.	5,000	1260	1290	D	III
KUSD	Vermillion, S. D.	500	890	920	S-KFNF	III-B
KUTA	Salt Lake City, Utah	250 CP-1,000	1500 CP-570	570	U	III-B
KVAK	Atchison, Kan.	250	1420	1450	U	IV
KVAN	Vancouver, Wash.	250	880	910	D	IV
KVCV	Redding, Cal.	250	1200	1230	U	IV
KVEC	San Luis Obispo, Cal.	250	1200	1230	U	IV
KVFD	Ft. Dodge, Ia.	250	1370	1400	SII	IV
KVGB	Great Bend, Kan.	250	1370	1400	U	IV
KVLI	Tacoma, Wash.	5,000	570	570	U	III-A
KVIC	Victoria, Tex.	250	1310	1340	U	IV
KVNU	Logan, Utah	250	1200	1230	U	IV
KVOA	Tucson, Ariz.	1,000	1260	1290	L	III-A
KVOD	Denver, Col.	1,000	630	630	U	III-A
KVOE	Santa Ana, Cal.	250	1500	1490	U	IV
KVOL	Lafayette, La.	250	1310	1340	U	IV
KVOO	Tulsa, Okla.	2,000 (Proposed 50,000)	1140	1170	U	I-B
KVOR	Colorado Springs, Col.	1,000	1270	1300	U	III-A
KVOS	Bellingham, Wash.	250	1200	1230	U	IV

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
KVOX	Moorhead, Minn.	250	1310	1340	U	IV
KVRS	Rock Springs, Wyo.	250	1370	1400	U	IV
KVSF	Santa Fe, N. M.	250	1310	1340	U	IV
KVSO	Ardmore, Okla.	250	1210	1240	U	IV
KVWC	Vernon, Tex.	250	1500	1490	U	IV
KWAL	Wallace, Ida.	250	1420	1450	U	IV
KWAT	Watertown, S. D.	250	1210	1240	U	IV
KWBG	Hutchinson, Kan.	250	1420	1450	U	IV
KWEW	Hobbs, N. M.	250	1500	1490	U	IV
KWFC	Ilot Springs, Ark.	250	1310	1340	U	IV
KWFT	Wichita Falls, Tex.	1,000 5,000—LS	620	620	U	III-A
KWG	Stockton, Cal.	250	1200	1230	U	IV
KWIL	Albany, Ore.	250	1210	1240	U	IV
KWJB	Globe, Ariz.	250	1210	1240	U	IV
KWJJ	Portland, Ore.	500	1060 SA-1040	1080	L-KRLD, WTIC	II
KWK	St. Louis, Mo.	1,000 5,000—LS CP-5,000—U	1350	1380	U	III-A
KWKH	Shreveport, La.	50,000	1100	1130	U	II
KWLC	Decorah, Ia.	100	1270	1300	D-SH	IV
KWLK	Longview, Wash.	250	1370	1400	U	IV
KXO	Willmar, Minn.	250	1310	1340	U	IV
KWNO	Winona, Minn.	250	1200	1230	U	IV
KWOC	Poplar Bluff, Mo.	250	1310	1340	U	IV
KWOS	Jefferson City, Mo.	250	1310	1340	U	IV
KWSC	Pullman, Wash.	5,000	1220	1250	S-KTW	III-A
KWTO	Springfield, Mo.	5,000 1,000 (5 to 6 a.m.)	560 560	560	D (5 a.m. to local sunset)	III
KWYO	Sheridan, Wyo.	250	1370	1400	U	IV
KXA	Seattle, Wash.	1,000	760	770	L-WJZ	II
KXL	Portland, Ore.	250	1420	1450	S-KBPS	IV
KXO	El Centro, Cal.	250	1500	1490	U	IV
KXOK	St. Louis, Mo.	5,000	630	630	U	III-A
KXOX	Sweetwater, Tex.	250	1210	1240	U	IV
KXRO	Aberdeen, Wash.	250	1310	1340	U	IV
KXYZ	Houston, Tex.	1,000	1440	1470	U	III-A
KYA	San Francisco, Cal.	1,000 5,000—LS	1230	1260	U	III-A
KYAN	Cheyenne, Wyo.	250	1370	1400	U	IV
KYCA	Prescott, Ariz.	250	1500	1490	U	IV
KYOS	Merced, Cal.	250	1040	1080	D	II
KYSM	Mankato, Minn.	250	1500	1230	U	IV
KYUM	Yuma, Ariz.	250	1210	1240	U	IV
KYW	Philadelphia, Pa.	50,000	1020	1060	U	I-B

W

WAAB	Boston, Mass.	1,000	1410	1440	U	III-A
WAAF	Chicago, Ill.	1,000	920	950	D	III
WAAT	Jersey City, N. J.	500 CP-1,000	940	970	U	III-B
WABC	New York, N. Y.	50,000	860	880	U	I-A
WABI	Bangor, Me.	250	1200	1230	U	IV
WABY	Albany, N. Y.	250	1370	1400	U	IV
WACO	Waco, Tex.	250	1420	1450	U	IV
WADC	Akron, O.	5,000	1320	1350	U	III-A
WAGA	Atlanta, Ga.	500 1,000—LS	1450	1480	U	III-B
WAGE	Salina, N. Y.	1,000	620	620	U	III-B
WAGF	Dothan, Ala.	250	1370	1400	U	IV
WAGM	Presque Isle, Me.	250	1420	1450	U	IV
WAIM	Anderson, S. C.	250	1200	1230	U	IV
WAIR	Winston-Salem, N. C.	250	1310	1340	U	IV
WAJR	Morgantown, W. Va.	250	1200	1230	U	IV
WAKR	Akron, O.	1,000	1530	1590	U	III-A
WALA	Mobile, Ala.	5,000	1380	1410	U	III-A
WALB	Albany, Ga.	1,000	1530	1590	U	III-B
WAML	Laurel, Miss.	250	1310	1340	U	IV
WAOV	Vincennes, Ind.	250	1420	1450	U	IV
WAPL	Birmingham, Ala.	5,000 (Proposed 50,000)	1140	1070	U	II
WAPO	Chattanooga, Tenn.	250 CP-1,000 5,000—LS	1420 CP-1120	1150	U	III-B
WARD	Brooklyn, N. Y.	500	1400	1430	S-WBBC, WLTH, WVFW	III-B
WARM	Scranton, Pa.	250	1370	1400	U	IV
WASH	Grand Rapids, Mich.	500	1270	1300	S-WOOD	III-B
WATL	Atlanta, Ga.	250	1370	1400	U	IV
WATN	Watertown, N. Y.	250	1210	1240	U	IV
WATR	Waterbury, Conn.	250	1290	1320	U	IV
WATW	Ashland, Wis.	250	1370	1400	U	IV

a **QUIZ** for Radio Time Buyers

What Wichita
Radio Station covers
the most Kansas
and Okla-
homa coun-
ties?

1

What Wichita
Radio Station has the
strongest signal under
ALL
conditions,
favorable or
unfavorable

?

2

What Wichita
radio station will do
the biggest selling job
for you in
Kansas and
Oklahoma

?

3

here are the **ANSWERS**

1 KFBI—Field measurements prove the KFBI half millivolt contour includes nearly twice as many Kansas and Oklahoma counties as any other Wichita station.

2 KFBI—Not only has greater coverage in miles from Wichita — KFBI is dominant close in, which means **LISTENERS** even when reception conditions are unfavorable.

3 KFBI—Is **STAFFED FOR SELLING**—is the station which can be and is heard best —will do the best selling job for you.

Put KFBI to work for YOU!

KAY PYLE
General Manager

KFBI **WICHITA**



Pioneer Voice of Kansas

Affiliated with Mutual Broadcasting System and the Kansas State Network. Represented by Howard H. Wilson Company.

BROADCASTING • Broadcast Advertising

1941 Yearbook Number • Page 55

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
WAVE	Louisville, Ky.	5,000	940	970	U	III-A
WAWZ	Zarephath, N. J.	1,000	1350	1380	S-WBNX	III-A
WAYX	Waycross, Ga.	250	1200	1230	U	IV
WAZL	Hazleton, Pa.	250	1420	1450	U	IV
WBAA	West Lafayette, Ind.	500 1,000 LS CP-1,000 5,000-LS	890	920	U	III-B
WBAB	Atlantic City, N. J.	250	1200	1230	U	IV
WBAL	Baltimore, Md.	10,000 CP-5,000	1060	1090	U	I-B
WBAP	Fort Worth, Tex.	50,000	800	820	S-WFAA	I-A
WBAX	Wilkes-Barre, Pa.	250	1210	1240	U	IV
WBBC	Brooklyn, N. Y.	500	1400	1430	S-WARD, WLTH, WVFW	III-B
WBBL	Richmond, Va.	250	1210	1240	SH	IV
WBBM	Chicago, Ill.	50,000	770	780	U	I-A
WBBR	Brooklyn, N. Y.	1,000	1300	1330	S-WEVD, WHAZ Proposed	III-A IV
WBBZ	Ponca City, Okla.	250	1200	1230	U	IV
WBCM	Bay City, Mich.	500 1,000-LS	1410	1440	U	III-B
WBN	Buffalo, N. Y.	5,000	900	930	U	III-A
WBHP	Huntsville, Ala.	250	1200	1230	U	IV
WBIG	Greensboro, N. C.	1,000 5,000-LS CP-5,000-U	1440	1470	U	III-A
WBIR	Knoxville, Tenn.	250	1210	1240	U	IV
WBLJ	Dalton, Ga.	250	1200	1230	U	IV
WBLK	Clarksburg, W. Va.	250	1370	1400	U	IV
WBML	Macon, Ga.	250	1420	1240	U	IV
WBNS	Columbus, O.	1,000 5,000-LS	1430	1460	U	III-B
WBNX	New York, N. Y.	5,000	1350	1380	S-WAWZ	III-A
WBNY	Buffalo, N. Y.	250	1370	1400	S-SVSV	IV
WBOC	Salisbury, Md.	250	1500	1490	U	IV
WBOW	Terre Haute, Ind.	250	1200	1230	U	IV
WBRB	Red Bank, N. J.	250	1210	1240	S-WGBB	IV
WBRC	Birmingham, Ala.	1,000 5,000-LS CP-5,000-U	930	960	U	III-A
WBRE	Wilkes-Barre, Pa.	250	1310	1340	U	IV
WBRK	Pittsfield, Mass.	250	1310	1340	U	IV
WBRW	Welch, W. Va.	250	1310	1340	U	IV
WBRY	Waterbury, Conn.	1,000 CP-5,000	1530	1590	U	III-A
WBT	Charlotte, N. C.	50,000	1080	1110	U	I-B
WBTA	Batavia, N. Y.	250	1500	1490	U	IV
WBTH	Williamson, W. Va.	250	1370	1400	U	IV
WBTM	Danville, Va.	250	1370	1400	U	IV
WBZ	Boston, Mass.	50,000	990	1030	U-Synchro- nized with WBZA	I-B
WBZA	Boston, Mass.	1,000	990	1030	U-Synchro- nized with WBZ	II
WCAD	Canton, N. Y.	500	1220	1250	SHD	III
WCAE	Pittsburgh, Pa.	5,000	1220	1250	U	III-A
WCAL	Northfield, Minn.	5,000	760	770	S-WLB (1/3 daytime)	II
WCAM	Camden, N. J.	500	1280	1310	S-WCAP, WTNJ	III-B
WCAO	Baltimore, Md.	500 1,000-LS	600	600	U	III-B
WCAP	Asbury Park, N. J.	500	1280	1310	S-WCAM, WTNJ	III-B
WCAR	Pontiac, Mich.	1,000	1100	1130	D	II
WCAT	Rapid City, S. D.	250	1200	1230	U	IV
WCAU	Philadelphia, Pa.	50,000	1170	1200	U	I-A
WCAX	Burlington, Vt.	250	1200	1230	U	IV
WCAZ	Carthage, Ill.	100	1070	1080	D	II
WCBA	Allentown, Pa.	500 (Proposed 5,000)	1440	1470	S-WSAN	III-B III-A
WCBD	Chicago, Ill.	5,000	1080	1110	L-WBT, KFAB S-WMBI	II
WCBI	Columbus, Miss.	250	1370	1400	U	IV
WCBM	Baltimore, Md.	250	1370	1400	U	IV
WCBS	Springfield, Ill.	250	1420	1450	U	IV
WCBT	Roanoke Rapids, N. C.	250	1200	1230	U	IV
WCCO	Minneapolis, Minn.	50,000	810	830	U	I-A
WCED	DuBois, Pa.	250	1200	1230	U	IV
WCFL	Chicago, Ill.	5,000 (Proposed 50,000)	970	1000	U	II I-B
WCHS	Charleston, W. Va.	5,000	580	580	U	III-A
WCHV	Charlottesville, Va.	250	1420	1450	U	IV
WCKY	Cincinnati, O.	50,000	1490	1530	U	I-B

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
WCLE	Cleveland, O.	500	610	610	D	III
WCLO	Janesville, Wis.	250	1200	1230	U	IV
WCLS	Joliet, Ill.	250	1310	1340	U	IV
WCMI	Ashland, Ky.	250	1310	1340	U	IV
WCNC	Elizabeth City, N. C.	250	1370	1400	U	IV
WCNW	Brooklyn, N. Y.	250	1500	1490	SH-WWRL	IV
WCOA	Pensacola, Fla.	500 1,000-LS	1340	1370	U	III-B
WCOC	Meridian, Miss.	1,000	880	910	U	III-A
WCOL	Columbus, O.	250	1200	1230	U	IV
WCOP	Boston, Mass.	500	1120	1150	U	III-B
WCOS	Columbia, S. C.	250	1370	1400	U	IV
WCOU	Lewiston, Me.	250	1210	1240	U	IV
WCOV	Montgomery, Ala.	250	1210	1240	U	IV
WCPO	Cincinnati, O.	250	1200	1230	U	IV
WCRW	Chicago, Ill.	250	1210	1240	SH-WEDC, WSBC	IV
WCSC	Charleston, S. C.	500 1,000-LS (Proposed 1,000)	1360	1390	U	III-B
WCSH	Portland, Me.	1,000 2,500-LS CP-5,000-U	940	970	U	III-A
WDAE	Tampa, Fla.	5,000	1220	1250	U	III-A
WDAF	Kansas City, Mo.	5,000	610	610	U	III-A
WDAK	West Point, Ga.	250	1310	1340	U	IV
WDAN	Danville, Ill.	250	1500	1490	U	IV
WDAS	Philadelphia, Pa.	250	1370	1400	U	IV
WDAY	Fargo, N. D.	5,000	940	970	U	III-A
WDBC	Escanaba, Mich.	250	1500	1490	U	IV
WDBJ	Roanoke, Va.	1,000 5,000-LS CP-5,000-U	930	960	U	III-A
WDBO	Orlando, Fla.	5,000	580	580	U	III-A
WDEF	Chattanooga, Tenn.	250	1370	1400	U	IV
WDEL	Wilmington, Del.	250 1,000-LS CP-5,000-U	1120	1150	U	III-A
WDEV	Waterbury, Vt.	1,000	550	550	D	III
WDGY	Minneapolis, Minn.	1,000 5,000-LS	1180	1130	L-KOB	II
WDLP	Panama City, Fla.	250	1200	1230	U	IV
WDMJ	Marquette, Mich.	250	1310	1340	U	IV
WDNC	Durham, N. C.	250	1500	1490	U	IV
WDOD	Chattanooga, Tenn.	1,000 5,000-LS CP-5,000-U	1280	1310	U	III-A
WDRS	Hartford, Conn.	5,000	1330	1360	U	III-A
WDSM	Superior, Wis.	250	1200	1230	U	IV
WDSU	New Orleans, La.	1,000 CP-5,000	1250	1280	U	III-A
WDWS	Champaign, Ill.	250	1370	1400	U	IV
WDZ	Tuscola, Ill.	1,000	1020	1050	D	II
WEAF	New York, N. Y.	50,000	660	660	U	I-A
WEAN	Providence, R. I.	1,000 5,000-LS CP-5,000-U	780	790	U	III-A
WEAU	Eau Claire, Wis.	1,000 5,000-LS	1050	1070	L-KFBI	II
WEBC	Duluth, Minn.	1,000 5,000-LS	1290	1320	U	III-A
WEBQ	Harrisburg, Ill.	250	1210	1240	U	IV
WEBR	Buffalo, N. Y.	250	1310	1340	U	IV
WEDC	Chicago, Ill.	250	1210	1240	SH-WCRW, WSBC	IV
WEED	Rocky Mount, N. C.	250	1420	1450	U	IV
WEEL	Boston, Mass.	5,000	590	590	U	III-A
WEUU	Reading, Pa.	1,000	830	850	D	II
WELL	New Haven, Conn.	250 500-LS CP-500 1,000-LS	930	960	U	III-B
WELL	Battle Creek, Mich.	250	1420	1400	U	IV
WEMP	Milwaukee, Wis.	250	1310	1340	U	IV
WENR	Chicago, Ill.	50,000	870	890	S-WLS	I-A
WENY	Elmira, N. Y.	250	1200	1230	U	IV
WEOA	Evansville, Ind.	250	1370	1400	U	IV
WERC	Erie, Pa.	250	1500	1490	U	IV
WEST	Easton, Pa.	250	1200	1230	U	IV
WESX	Salem, Mass.	250	1200	1230	U	IV
WEVD	New York, N. Y.	1,000	1300	1330	S-WBBR, WHAZ	III-B
WEW	St. Louis, Mo.	1,000	760	770	D	II
WEXL	Royal Oak, Mich.	250	1310	1340	U	IV
WFAA	Dallas, Tex.	50,000	800	820	S-WBAP	I-A
WFAM	South Bend, Ind.	250	1200	1230	U-D S-WJOB-N	IV

THE NATION'S ORIGINAL NEWS STATION

KSTP—the first station in the nation to maintain a complete news bureau—has always been first in the Twin Cities' market when it comes to news. A five-man news staff completely reprocesses more than 75,000 words of U. P. dispatches which pour in daily. Listeners expect and get complete news coverage of local, national and international happenings day and night. Our news service is just one of the many features which make KSTP dominant in the 7th retail market.

Ask Us About News Period Availabilities

KSTP

MINNEAPOLIS - ST. PAUL
NBC BASIC RED NETWORK
50,000 WATTS - CLEAR CHANNEL

Calendar of Events

(Continued from page 40)

SEPTEMBER (Continued)

- 15—National Retail Demonstration, Sept. 15-19; American Legion Convention, Sept. 15-18, Milwaukee; Federal income tax, third payment; Constitution Week, Sept. 15-20.
- 17—Constitution Day (Constitution adopted, 1787).
- 21—National Dog Week, Sept. 21-27; National Newspaper Boys' Week, Sept. 21-27.
- 22—Better Parenthood Week, Sept. 22-28; Rosh Hashanah (1st day) Jewish New Year; The Silk Parade, Sept. 22-27.
- 23—Rosh Hashanah (2nd Day); Autumn begins today; first air mail flight in U. S., 1911, Earl Ovington, first mail pilot.
- 27—College football season starts.
- 28—Daylight saving ends; Gold Star Mother's Day; American Indian Day.

OCTOBER

- Flower—Dahlia, Hops; Birthstone—Opal, Tourmaline, Beryl.*
- 1—Yom Kippur (Day of Atonement), Jewish holiday; moving day in many cities; Missouri Day (celebrated in state's schools).
 - 2—Nationally Advertised Brands Week, Oct. 2-12; National Hardware Open House, Oct. 2-11.
 - 4—National Furniture Week, Oct. 4-11; Loyalty Day, Oct. 4-5.
 - 5—National Letter Writing Week, Oct. 5-11; Fire Prevention Week, Oct. 5-11.
 - 7—First U. S. Railroad, 1826.
 - 8—Rodeo at Madison Square Garden, Oct. 8-26.
 - 9—Chicago Fire, Oct. 9-11, 18"1; Canadian Thanksgiving Day.
 - 12—National Wine Week, Oct. 12-19; Columbus Day (celebrating discovery of America, 1492).
 - 13—Columbus Day (Holiday—See your State Statute).
 - 14—William Penn born 1644.
 - 16—National Selective Service Registration Day, 1940 (conscription); U. S. Mint established in Philadelphia, 1786.
 - 19—National Pharmacy Week, Oct. 19-25.
 - 26—Girl Scout Week, Oct. 26-Nov. 1; National Donut Week, Oct. 26-Nov. 1.
 - 27—Navy Day; Theodore Roosevelt born 1858; first World War shot fired by American troops, 1917.
 - 28—Statue of Liberty unveiled on Bedloe's Island, 1886; anniversary of freedom of U. S. Press, 1733.
 - 30—Nevada admitted to Union, 1864.
 - 31—Hallowe'en; National Apple Week, Oct. 31-Nov. 8; birthday of Juliette Low, founder of Girl Scouts.

NOVEMBER

- Flower—Chrysanthemum; Birthstone—Topaz.*
- 1—All Saints' Day; National Author's Day; National Art Week, Nov. 1-7.

- 2—North and South Dakota joined Union 1889.
- 4—Election Day.
- 5—National Horse Show, Nov. 5-12; Official Speech Week, Nov. 5-10.
- 7—Air express, first shipment from Dayton to Columbus, Ohio, 1910.
- 8—Montana joined Union, 1889.
- 10—Father and Son Week, Nov. 10-16; American Education Week, Nov. 10-16.
- 11—Armistice Day, ending of World War, 1918; Washington joined Union, 1889; Red Cross Week, Nov. 11-30.
- 13—Robert Louis Stevenson born 1850.
- 16—Book Week, Nov. 16-22; Oklahoma entered Union, 1907; Russia recognized by United States, 1933.
- 18—Congress adopted Standard Time in 1883.
- 19—Lincoln's Gettysburg Address, 1863.
- 20—Thanksgiving Day by Presidential proclamation.
- 21—North Carolina joined Union, 1789.
- 25—Christmas Seal Campaign, Nov. 25 to Dec. 25.
- 27—Thanksgiving Day in some states.
- 28—First U. S. Government Post Office, 1783.
- 29—Louisa May Alcott, author of "Little Women," born 1832.
- 30—U. S. Patent System established 1836.

DECEMBER

- Flower—Holly, Poinsettia; Birthstone—Turquoise, Ruby, Lapis Lazuli, Bloodstone.*
- 1—Opening of Girl Scout Winter Camps, Dec. 1 to Mar. 1; National Prosperity Week, Dec. 1-6.
 - 2—National Contract Bridge Championships (Fall Session), Dec. 2-8.
 - 3—Illinois admitted to Union, 1818.
 - 4—Thomas Carlyle born 1795.
 - 5—18th Amendment repealed, 1933.
 - 7—International Golden Rule Week, Dec. 7-14; Delaware joined Union, 1787.
 - 8—Feast of Immaculate Conception.
 - 10—Mississippi joined Union, 1817.
 - 11—Indiana admitted to Union, 1816.
 - 12—Pennsylvania joined Union, 1787.
 - 14—Alabama joined Union, 1819.
 - 15—Federal income tax, last payment.
 - 16—Boston Tea Party, 1773; Beethoven, composer, born 1770.
 - 17—John Greenleaf Whittier born 1807; Wilbur Wright's first flight, 1903.
 - 18—New Jersey entered Union, 1787.
 - 21—Winter begins today for Central, Mountain and Pacific States Zones; Forefather's Day (landing of Pilgrims in 1620, celebrated mostly in New England).
 - 22—Winter begins today for Eastern States Zone.
 - 25—Christmas Day; National Hobby Week, Dec. 25-Jan. 1.
 - 28—Iowa admitted to Union, 1846.
 - 29—Texas admitted to Union, 1845.
 - 31—New Year's Eve.

IN THE 7th RETAIL MARKET

KSTP

MINNEAPOLIS ● ST. PAUL, MINN.

The Northwest's Leading Radio Station

PLANALYZED PROMOTION

AN EXCLUSIVE KSTP EXTRA!

KSTP's own, *thorough-going* method of merchandising and promoting your KSTP radio campaign. First comes the *analysis* of your particular sales problems in the great KSTP Market—one of America's "Big Ten". Then—and *only then*—comes the promotion *plan*. Thus—KSTP's exclusive *Planalyzed Promotion*. Ask about it.

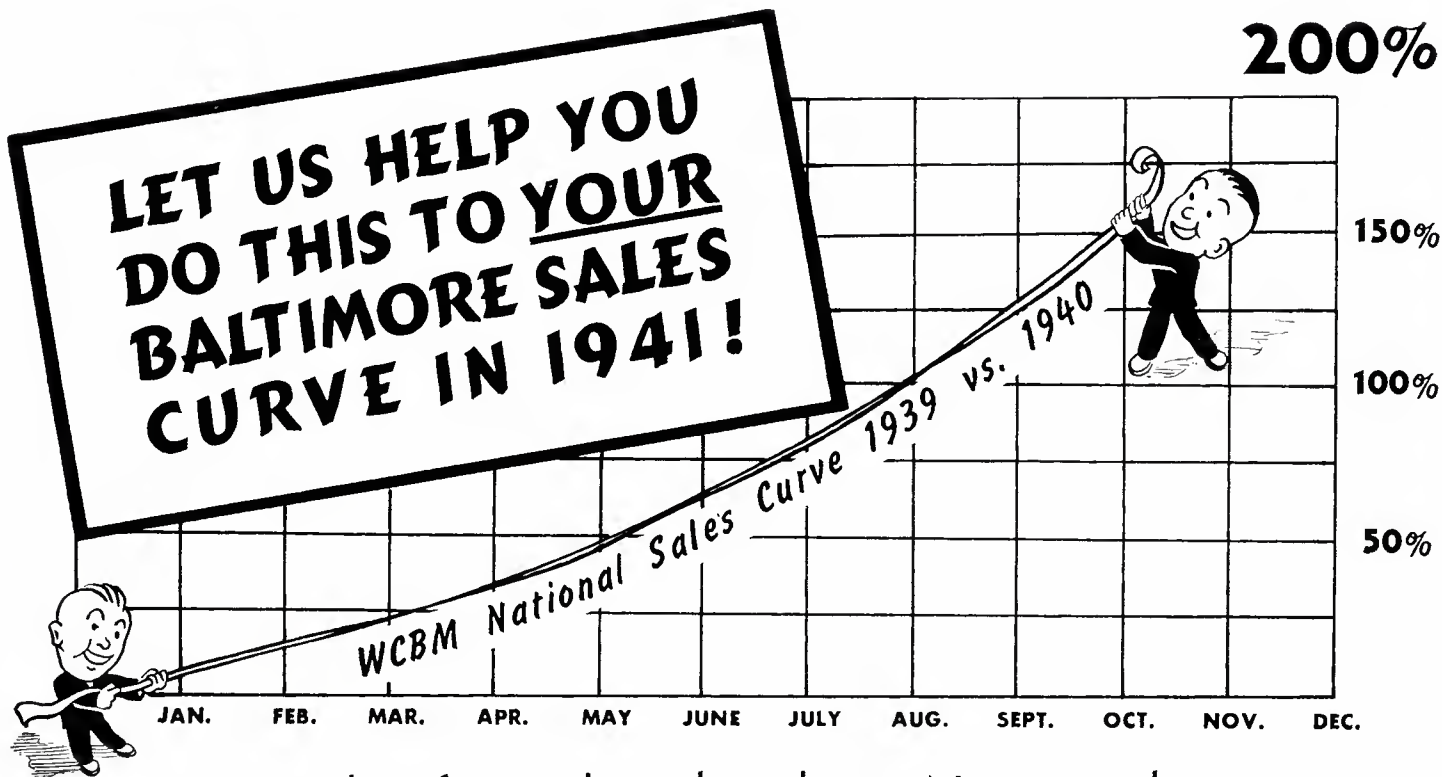
Write for unsolicited comments from the nation's foremost advertising agencies and major radio advertisers for whom this exclusive KSTP service was created.

Commanding the Dominant Audience
in this Rich Retail Sales Area . . .

NBC BASIC RED NETWORK

EDWARD PETRY & CO., NATIONAL REPRESENTATIVES

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class	Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
WFAS	White Plains, N. Y.	250	1210	1240	S-WGBB	IV	WHBL	Sheboygan, Wis.	250 1,000-LS	1300	1330	U	III-B
WFBC	Greenville, S. C.	1,000 5,000-LS CP-5,000-U	1300	1330	U	III-A	WHBQ	Memphis, Tenn.	250	1370	1400	U	IV
WFBG	Altoona, Pa.	250	1310	1340	U	IV	WHBU	Anderson, Ind.	250	1210	1240	U	IV
WFBL	Syracuse, N. Y.	5,000	1360	1390	U	III-A	WHBY	Appleton, Wis.	250	1200	1230	U	IV
WFBM	Indianapolis, Ind.	5,000	1230	1260	U	III-A	WHCU	Ithaca, N. Y.	1,000	850	870	L-AVWL	II
WFBR	Baltimore, Md.	1,000 5,000-LS	1270	1300	U	III-A	WHDF	Calumet, Mich.	250	1370	1400	U	IV
WFCI	Providence, R. I.	1,000	1390	1420	U	III-B	WHDH	Boston, Mass.	1,000	830	850	L-KOA	II
WFDP	Flint, Mich.	250 CP-1,000	1310 CP-880	910	U	III-B	WHDL	Olean, N. Y.	250	1420	1450	U	IV
WFEA	Manchester, N. H.	500 1,000-LS CP-5,000-U	1340	1370	U	III-B	WHEB	Portsmouth, N. H.	1,000	740	750	L-WSB	II
WFHR	Wisconsin Rapids, Wis.	250	1310	1340	U	IV	WHEC	Rochester, N. Y.	500 1,000-LS	1430	1460	U	III-B
WFIG	Sumter, S. C.	250	1310	1340	U	IV	WHFC	Cicero, Ill.	250	1420	1450	U	IV
WFIL	Philadelphia, Pa.	1,000	560	560	U	III-A	WHIO	Dayton, O.	1,000 5,000-LS CP-5,000-U	1260	1290	U	III-A
WFLA	Tampa, Fla.	5,000	620	620	SH-WSUN	III-A	WHIP	Hammond, Ind.	5,000	1480	1520	6:00 a.m. to LS at Buffalo, N. Y.	II
WFMD	Frederick, Md.	500	900	930	U	III-B	WHIS	Bluefield, W. Va.	500 1,000-LS	1410	1440	U	III-B
WFMJ	Youngstown, O.	250	1420	1450	U	IV	WHIZ	Zanesville, O.	250	1210	1240	U	IV
WFNC	Fayetteville, N. C.	250	1340	1370	D	IV	WHJB	Greensburg, Pa.	250	620	620	D	IV
WFOR	Hattiesburg, Miss.	250	1370	1400	U	IV	WHK	Cleveland, O.	5,000	1390	1420	U	III-A
WFOY	St. Augustine, Fla.	250	1210	1240	I	IV	WHKC	Columbus, O.	500	640	640	L-KFI	II
WFPG	Atlantic City, N. J.	250	1420	1450	U	IV	WHKY	Hickory, N. C.	250	1370	1400	U	IV
WFTC	Kinston, N. C.	250	1200	1230	U	IV	WHLB	Virginia, Minn.	250	1370	1400	U	IV
WFTL	Ft. Lauderdale, Fla.	250	1370	1400	U	IV	WHLD	Niagara Falls, N. Y.	1,000	1260	1290	D	III
WFTM	Fort Myers, Fla.	250	1210	1240	U	IV	WHLN	Harlan, Ky.	250	1420	1450	I	IV
WFVA	Fredericksburg, Va.	250	1260	1290	D	IV	WHLS	Port Huron, Mich.	250	1370	1450	U	IV
WGAC	Augusta, Ga.	250	1210	1240	U	IV	WHMA	Anniston, Ala.	250	1420	1450	U	IV
WGAL	Lancaster, Pa.	250	1500	1490	U	IV	WHN	New York, N. Y.	1,000 5,000-LS	1010	1050	U	II
WGAN	Portland, Me.	5,000	560	560	U	III-A	WHO	Des Moines, Ia.	50,000	1000	1040	U	I-A
WGAR	Cleveland, O.	1,000 5,000-LS	1450	1480	U	III-B	WHOM	Jersey City, N. J.	500 1,000-LS	1450	1560	U	II
WGAU	Athens, Ga.	250	1310	1340	U	IV	WHOP	Hopkinsville, Ky.	250	1200	1230	U	IV
WGBB	Freeport, N. Y.	250	1210	1240	S-WBRB, WFAS	IV	WHP	Harrisburg, Pa.	1,000 5,000-LS	1430	1460	U	III-B
WGBF	Evansville, Ind.	1,000 5,000-LS	1250	1280	U	III-B	WHUB	Cookeville, Tenn.	250	1370	1400	U	IV
WGBI	Scranton, Pa.	500 1,000-LS	880	910	S-WQAN	III-B	WHYN	Holyoke, Mass.	250	1370	1400	U	IV
WGBR	Goldsboro, N. C.	250	1370	1400	U	IV	WIBA	Madison, Wis.	1,000 5,000-LS CP-5,000-U	1280	1310	U	III-A
WGCM	Gulfport, Miss.	250	1210	1240	U	IV	WIBC	Indianapolis, Ind.	1,000 CP-5,000-LS	1050	1070	U	II
WGES	Chicago, Ill.	5,000 1,000-LS (Sunday)	1360	1390	S-WSBT	III-B	WIBG	Glenside, Pa.	1,000	970	990	D	II
WGA	Gainesville, Ga.	250	1210	1240	U	IV	WIBM	Jackson, Mich.	250	1370	1450	U	IV
WGH	Newport News, Va.	250	1310	1340	U	IV	WIBU	Poynette, Wis.	250	1210	1240	U	IV
WGIL	Galesburg, Ill.	250	1500	1400	U	IV	WIBW	Topeka, Kan.	1,000 5,000-LS CP-5,000-U	580	580	S-KSAC	III-A
WGKV	Charleston, W. Va.	250	1500	1490	I	IV	WIBX	Utica, N. Y.	250	1200	1230	U	IV
WGL	Ft. Wayne, Ind.	250	1370	1450	U	IV	WICA	Ashtabula, O.	1,000	940	970	D	III
WGN	Chicago, Ill.	50,000	720	720	U	I-A	WICC	Bridgeport, Conn.	500 1,000-LS	600	600	U	III-B
WGNC	Gastonia, N. C.	250	1420	1450	U	IV	WIGM	Medford, Wis.	250	1500	1490	U	IV
WGNV	Newburg, N. Y.	250	1220	1250	U	IV	WIL	St. Louis, Mo.	250	1200	1230	U	IV
WGOV	Valdosta, Ga.	250	1420	1450	U	IV	WILL	Urbana, Ill.	5,000	580	580	D	III
WGPC	Albany, Ga.	250	1420	1450	U	IV	WILM	Wilmington, Del.	250	1420	1450	U	IV
WGR	Buffalo, N. Y.	1,000 5,000-LS	550	550	U	III-B	WIND	Gary, Ind.	1,000 5,000-LS CP-5,000-U	560	560	U	III-A
WGRB	Grands Rapids, Mich.	250	1200	1230	U	IV	WING	Dayton, O.	5,000	1380	1410	U	III-A
WGRG	New Albany, Ind.	250	1370	1400	U	IV	WINN	Louisville, Ky.	250	1210	1240	U	IV
WGRM	Greenwood, Miss.	250	1210	1240	I	IV	WINS	New York, N. Y.	1,000	1180	1000	L-WCFL	II
WGST	Atlanta, Ga.	1,000 5,000-LS	890	920	U	III-A	WINX	Washington, D. C.	250	1310	1340	U	IV
WGTC	Greenville, N. C.	250	1500	1490	U	IV	WIOD	Miami, Fla.	1,000 CP-5,000	610	610	U	III-A
WGTM	Wilson, N. C.	250	1310	1340	U	IV	WIP	Philadelphia, Pa.	5,000	610	610	U	III-A
WGY	Schenectady, N. Y.	50,000	790	810	U	I-B	WIRE	Indianapolis, Ind.	5,000	1400	1430	U	III-A
WHA	Madison, Wis.	5,000	940	970	D	III	WIS	Columbia, S. C.	1,000 5,000-LS CP-5,000-U	560	560	U	III-A
WHA1	Greenfield, Mass.	250	1210	1240	U	IV	WISE	Asheville, N. C.	250	1370	1400	U	IV
WHA2	Saginaw, Mich.	500	950	980	D	III	WISH	Indianapolis, Ind.	1,000 5,000-LS	1280	1310	U	III-B
WHAM	Rochester, N. Y.	50,000	1150	1180	U	I-A	WISN	Milwaukee, Wis.	5,000	1120	1150	U	III-A
WHAS	Louisville, Ky.	50,000	820	840	U	I-A	WITH	Baltimore, Md.	250	1200	1230	U	IV
WHAT	Philadelphia, Pa.	250	1310	1340	S-WTEL	IV	WJAZ	Springfield, O.	250	1310	1340	U	IV
WHAZ	Troy, N. Y.	1,000	1300	1330	S-WBBR WEVD Proposed III-A	III-A	WJAC	Johnstown, Pa.	250	1370	1400	U	IV
WHB	Kansas City, Mo.	1,000	860	880	D	II	WJAG	Norfolk, Neb.	1,000	1060	780	L-WBBM	II
WHBB	Selma, Ala.	250	1500	1490	U	IV	WJAR	Providence, R. I.	1,000 5,000-LS CP-5,000-U	890	920	U	III-A
WHBC	Canton, O.	250	1200	1230	U	IV	WJAS	Pittsburgh, Pa.	1,000 5,000-LS	1290	1320	U	III-A
WHBF	Rock Island, Ill.	1,000 5,000-LS CP-5,000-U	1240	1270	U	III-A							
WHBI	Newark, N. J.	1,000 2,500-LS	1250	1280	S-WNEW	III-A							



The fact that leading National Advertisers purchased OVER 100% MORE WCBM Time thus far during 1940 than during 1939 is convincing evidence that

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WCBM

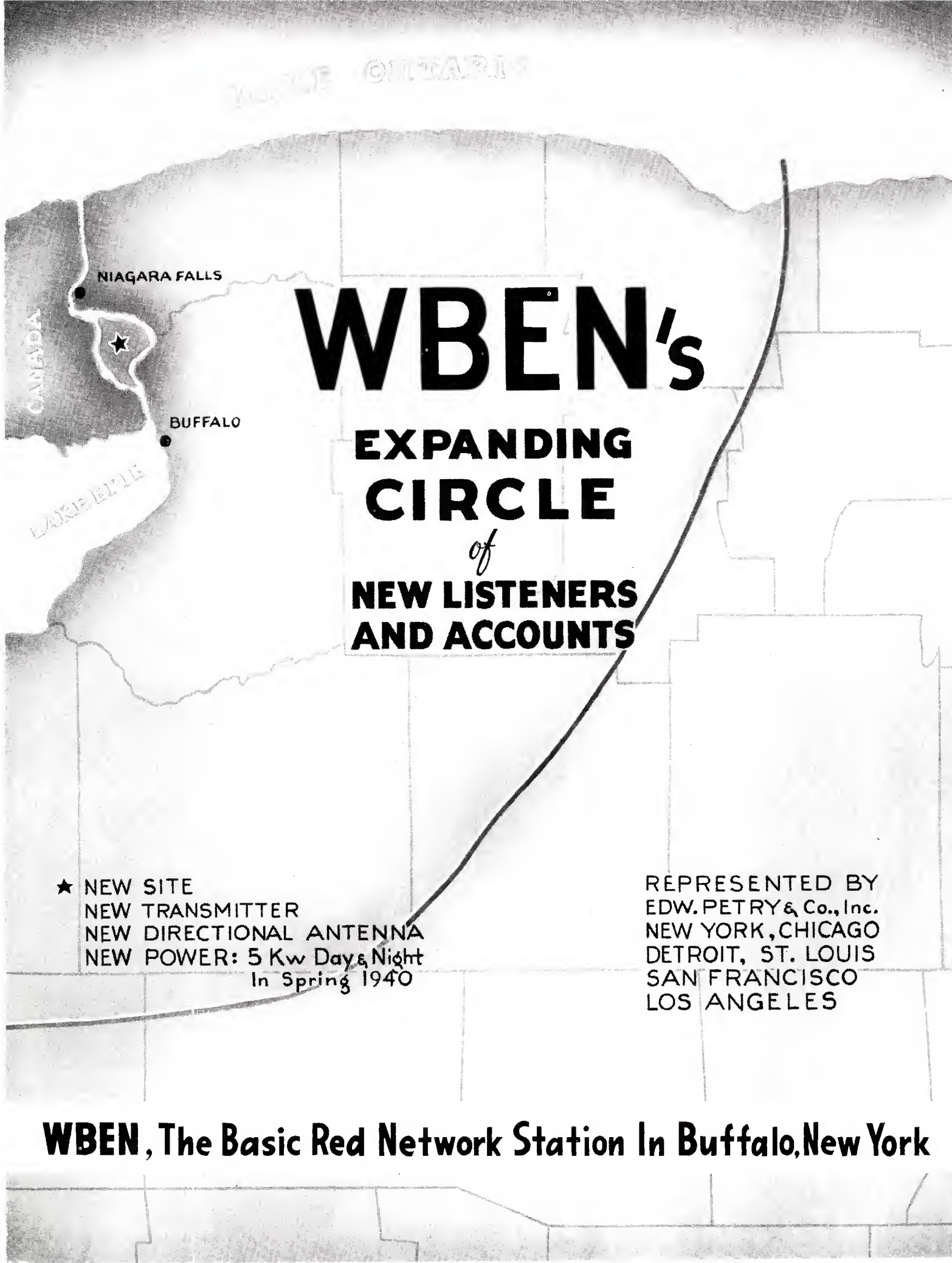
MEMBER **MUTUAL** BASIC NETWORK

Baltimore, Maryland

JOHN ELMER, *President* GEORGE H. ROEDER, *General Manager*

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class	Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
WJAX	Jacksonville, Fla.	1,000 5,000-LS	900	930	U	III-A	WLOL	Minneapolis, Minn.	1,000	1300	1330	U	III-B
WJBC	Bloomington, Ill.	250	1200	1230	U	IV	WLPM	Suffolk, Va.	250	1420	1450	U	IV
WJBB	Detroit, Mich.	250	1500	1490	U	IV	WLS	Chicago, Ill.	50,000	870	890	S-WENR	I-A
WJBO	Baton Rouge, La.	1,000 CP-5,000	1120	1150	U	III-A	WLTH	New York, N. Y.	500	1400	1430	S-WARD WBBC WVFW	III-B
WJBW	New Orleans, La.	250	1200	1230	U	IV	WLVA	Lynchburg, Va.	250	1200	1230	U	IV
WJBY	Gadsden, Ala.	250	1210	1240	U	IV	WLW	Cincinnati, O.	50,000	700	700	U	I-A
WJDX	Jackson, Miss.	1,000 5,000-LS	1270	1300	U	III-A	WMAL	Washington, D. C.	5,000	630	630	U	III-A
WJEJ	Hagerstown, Md.	250	1210	1240	U	IV	WMAM	Marinette, Wis.	250	570	570	D	IV
WJHL	Johnson City, Tenn.	1,000	880	910	U	III-B	WMAN	Mansfield, O.	250	1370	1400	U	IV
WJHO	Opelika, Ala.	250	1370	1400	U	IV	WMAQ	Chicago, Ill.	50,000	670	670	U	I-A
WJHP	Jacksonville, Fla.	250	1290	1320	U	IV	WMAS	Springfield, Mass.	250	1420	1450	U	IV
WJIM	Lansing, Mich.	250	1210	1240	U	IV	WMAW	Worcester, Mass.	250	1200	1230	U	IV
WJJD	Chicago, Ill.	20,000	1130	1160	L-KSL	II	WMAZ	Macon, Ga.	1,000 5,000-LS	1180	940	D to 9 p.m.	II
WJLS	Beckley, W. Va.	250	1210	1240	U	IV	WMBC	Detroit, Mich.	250	1420	1400	U	IV
WJMC	Rice Lake, Wis.	250	1210	1240	U	IV	WMBD	Peoria, Ill.	1,000 5,000-LS	1440	1470	U	III-B
WJMS	Ironwood, Mich.	250	1420	1450	U	IV			(Proposed 5,000)				III-A
WJNO	W. Palm Beach, Fla.	250	1200	1230	U	IV	WMBG	Richmond, Va.	1,000 5,000-LS	1350	1380	U	III-B
WJOB	Hammond, Ind.	250	1200	1230	N-B S-WFAM-N	IV	WMBH	Joplin, Mo.	250	1420	1450	U	IV
WJPF	Herrin, Ill.	250	1310	1340	U	IV	WMBI	Chicago, Ill.	5,000	1080	1110	L-WBT, KFAB S-WCBD	II
WJPR	Greenville, Miss.	250	1310	1340	U	IV	WMBO	Auburn, N. Y.	250	1310	1340	U	IV
WJR	Detroit, Mich.	50,000	750	760	U	I-A	WMBR	Jacksonville, Fla.	250	1370	1400	U	IV
WJRD	Tuscaloosa, Ala.	250	1200	1230	U	IV	WMBS	Uniontown, Pa.	250 CP-1,000	1420 CP-590	590	U	III-B
WJSV	Washington, D. C.	50,000	1460	1500	U	I-B	WMC	Memphis, Tenn.	1,000 5,000-LS	780	790	U	III-A
WJTN	Jamestown, N. Y.	250	1210	1240	U	IV	WMCA	New York, N. Y.	1,000 5,000-LS	570	570	U	III-A
WJW	Akron, O.	250	1210	1240	U	IV	WMEX	Boston, Mass.	5,000	1470	1510	U	II
WJZ	New York, N. Y.	50,000	760	770	U	I-A	WMFD	Wilmington, N. C.	250	1370	1400	U	IV
WKAQ	San Juan, Puerto Rico	1,000 CP-5,000	1240 CP-620	620	U	III-A	WMFF	Plattsburg, N. Y.	250	1310	1340	U	IV
WKAR	East Lansing, Mich.	5,000	850	870	D	II	WMFG	Hibbing, Minn.	250	1210	1240	U	IV
WKAT	Miami Beach, Fla.	1,000	1330	1360	U	III-B	WMFJ	Daytona Beach, Fla.	250	1420	1450	U	IV
WKBB	Dubuque, Ia.	250	1500	1490	U	IV	WMFR	High Point, N. C.	250	1200	1230	U	IV
WKBH	LaCrosse, Wis.	1,000 CP-5,000	1380	1410	U	III-A	WMGA	Moultrie, Ga.	250	1370	1400	U	IV
WKBN	Youngstown, O.	500 1,000-LS	570	570	SH-WOSU	III-B	WMIN	St. Paul, Minn.	250	1370	1400	U	IV
WKBO	Harrisburg, Pa.	250	1200	1230	U	IV	WMJM	Cordele, Ga.	250	1500	1490	U	IV
WKBV	Richmond, Ind.	250	1500	1490	U	IV	WMMN	Fairmont, W. Va.	1,000 5,000-LS CP-5,000-U	890	920	U	III-A
WKBW	Buffalo, N. Y.	5,000 CP-50,000	1480	1520	U	II I-B	WMOB	Mobile, Ala.	250	1200	1230	U	IV
WKBZ	Muskegon, Mich.	250	1500	1490	U	IV	WMOG	Brunswick, Ga.	250	1500	1490	U	IV
WKBU	Griffin, Ga.	250	1500	1450	U	IV	WMPC	Lapeer, Mich.	250	1200	1230	SH	IV
WKGA	Tampa, Fla.	1,000 5,000-LS	940	970	U	III-B	WMPS	Memphis, Tenn.	500 1,000-LS	1430	1460	U	III-B
WKIP	Poughkeepsie, N. Y.	250	1420	1450	U	IV	WMRC	Greenville, S. C.	250	1500	1490	U	IV
WKMO	Kokomo, Ind.	250	1420	1400	U	IV	WMRN	Marion, O.	250	1500	1490	U	IV
WKNE	Keene, N. H.	5,000	1260	1290	U	III-A	WMRO	Aurora, Ill.	250	1250	1280	D	IV
WKNY	Kingston, N. Y.	250	1500	1490	U	IV	WMSD	Muscle Shoals City, Ala.	250	1420	1450	U	IV
WKOK	Sunbury, Pa.	250	1210	1240	U	IV	WMSL	Decatur, Ala.	250	1370	1400	U	IV
WKPA	New Kensington, Pa.	250	1120	1150	D	IV	WMT	Cedar Rapids, Ia.	1,000 5,000-LS CP-5,000-U	600	600	U	III-A
WKPT	Kingsport, Tenn.	250	1370	1400	U	IV	WMUR	Manchester, N. H.	1,000 5,000-LS	610	610	U	III-B
WKRC	Cincinnati, O.	1,000 5,000-LS	550	550	U	III-B	WMVA	Martinsville, Va.	250	1420	1450	U	IV
WKRO	Cairo, Ill.	250	1500	1490	U	IV	WMWH	Augusta, Ga.	250	1420	1450	U	IV
WKST	New Castle, Pa.	1,000	1250	1280	U	III	WNAB	Bridgeport, Conn.	250	1420	1450	U	IV
WKWK	Wheeling, W. Va.	250	1370	1400	U	IV	WNAC	Boston, Mass.	1,000 5,000-LS CP-5,000-U	1230	1260	U	III-A
WKY	Oklahoma City, Okla.	1,000 5,000-LS CP-5,000-U	900	930	U	III-A	WNAD	Norman, Okla.	1,000	1010	690	SH-KGGF	II
WKZO	Kalamazoo, Mich.	1,000	590	590	U	III-B	WNAX	Yankton, S. D.	1,000 5,000-LS CP-5,000-U	570	570	U	III-A
WLAC	Nashville, Tenn.	5,000 (Proposed 50,000)	1470	1510	U	II I-B	WNBC	New Britain, Conn.	1,000 CP-5,000-LS	1380	1410	U	III-B
WLAG	La Grange, Ga.	250	1210	1240	U	IV	WNBK	Binghamton, N. Y.	250	1500	1490	U	IV
WLAK	Lakeland, Fla.	250	1310	1340	U	IV	WNBH	New Bedford, Mass.	250	1310	1340	U	IV
WLAP	Lexington, Ky.	250	1420	1450	U	IV	WNBZ	Saranac Lake, N. Y.	100	1290	1320	D	IV
WLAV	Grand Rapids, Mich.	250	1310	1340	U	IV	WNEL	San Juan, Puerto Rico	1,000 2,500-LS CP-5,000-U	1290	1320	U	III-A
WLAW	Lawrence, Mass.	5,000	680	680	U	II	WNEW	New York, N. Y.	1,000 5,000-LS CP-5,000-U	1250	1280	S-WHBI	III-A
WLB	Minneapolis, Minn.	5,000	760	770	S-WCAL (2/3 daytime)	II	WNLC	New London, Conn.	250	1500	1490	U	IV
WLBK	Muncie, Ind.	250	1310	1340	U	IV	WNOE	New Orleans, La.	250	1420	1450	U	IV
WLBK	Bowling Green, Ky.	250	1310	1340	U	IV	WNOX	Knoxville, Tenn.	1,000 5,000-LS	1010	990	U	II
WLBL	Stevens Point, Wis.	5,000	900	930	D	III	WNYC	New York, N. Y.	1,000	810	830	L-WCCO	II
WLBZ	Bangor, Me.	500 1,000-LS	620	620	U	III-B							
WLEU	Erie, Pa.	250	1420	1450	U	IV							
WLH	Lowell, Mass.	250	1370	1400	U	IV							
WLNH	Laconia, N. H.	250	1310	1340	U	IV							
WLOF	Orlando, Fla.	250	1200	1230	U	IV							
WLOG	Logan, W. Va.	250	1200	1230	U	IV							
WLOK	Lima, O.	250	1210	1240	U	IV							

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LOS ANGELES

WBEN, The Basic Red Network Station In Buffalo, New York

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class	Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Time Designation	Class
WOAI	San Antonio, Tex.	50,000	1190	1210	U	I-A	WSB	Atlanta, Ga.	50,000	740	750	U	I-A
WOC	Davenport, Ia.	250	1370	1450	U	IV	WSBC	Chicago, Ill.	250	1210	1240	SH-WCRW, WEDC	IV
WOCB	Osterville, Mass.	250	1210	1240	U	IV	WSBT	South Bend, Ind.	500	1360 CP-930	960	U	III-B
WOI	Ames, Ia.	5,000	640	640	D	II	WSFA	Montgomery, Ala.	500 1,000-LS	1410	1440	U	III-B
WOKO	Albany, N. Y.	500 1,000-LS	1430	1460	U	III-B	WSGN	Birmingham, Ala.	250	1310	1340	U	IV
WOL	Washington, D. C.	1,000	1230	1260	U Proposed	III-B III-A	WSIX	Nashville, Tenn.	250	1210	1240	U	IV
WOLF	Syracuse, N. Y.	250	1500	1490	U	IV	WSJS	Winston-Salem, N. C.	250 CP-1,000	1310 CP-600	600	U	III-B
WOLS	Florence, S. C.	250	1200	1230	U	IV	WSKB	McComb, Miss.	250	1200	1230	U	IV
WOMI	Owensboro, Ky.	250	1500	1490	U	IV	WSLB	Ogdensburg, N. Y.	250	1370	1400	U	IV
WOMT	Manitowoc, Wis.	250	1210	1240	U	IV	WSLI	Jackson, Miss.	250	1420	1450	U	IV
WOOD	Grand Rapids, Mich.	500	1270	1300	S-WASH	III-B	WSLS	Roanoke, Va.	250	1500	1490	U	IV
WOPL	Bristol, Tenn.	250	1500	1490	U	IV	WSM	Nashville, Tenn.	50,000	650	650	U	I-A
WOR	Newark, N. J.	50,000	710	710	U	I-B	WSMB	New Orleans, La.	5,000	1320	1350	U	III-A
WORC	Worcester, Mass.	1,000	1280	1310	U	III-B	WSNJ	Bridgeton, N. J.	250	1210	1240	U	IV
WORD	Spartanburg, S. C.	250	1370	1400	U	IV	WSOC	Charlotte, N. C.	250	1210	1240	U	IV
WORK	York, Pa.	1,000	1320	1350	U	III-B	WSOO	Sault Ste. Marie, Mich.	250	1200	1230	U	IV
WORL	Boston, Mass.	1,000	920	950	D	III	WSOY	Decatur, Ill.	250	1310	1340	U	IV
WOSU	Columbus, O.	1,000	570	570	SH-WKBN	III-A	WSPA	Spartanburg, S. C.	1,000	920	950	U	III-B
WOV	New York, N. Y.	10,000	1100	1130	U	I-B	WSPB	Sarasota, Fla.	250	1420	1450	U	IV
WOW	Omaha, Neb.	5,000	590	590	U	III-A	WSPD	Toledo, O.	5,000	1340	1370	U	III-A
WOWO	Ft. Wayne, Ind. (Proposed 50,000)	10,000	1160	1190	U	I-B	WSPR	Springfield, Mass.	500 CP-1240	1140	1270	U	III-B
WPAB	Ponce, Puerto Rico	1,000	1340	1370	U	III-A	WSTP	Salisbury, N. C.	250	1500	1490	U	IV
WPAD	Paducah, Ky.	250	1420	1450	U	IV	WSTV	Steubenville, O.	250	1310	1340	SH-WSAJ	IV
WPAR	Parkersburg, W. Va.	250	1420	1450	U	IV	WSUI	Iowa City, Ia.	1,000 5,000-LS	880	910	U	III-A
WPAT	Paterson, N. J.	1,000	900	930	D	III	WSUN	St. Petersburg, Fla.	5,000	620	620	SH-WFLA	III-A
WPAX	Thomasville, Ga.	250	1210	1240	U	IV	WSVA	Harrisonburg, Va.	500 CP-1,000	550	550	D	III
WPAY	Portsmouth, O.	250	1370	1400	U	IV	WSVS	Buffalo, N. Y.	250	1370	1400	SH-D-WBNY	IV
WPEN	Philadelphia, Pa.	1,000 CP-5,000	920	950	U	III-A	WSYB	Rutland, Vt.	250	1500	1490	U	IV
WPER	Leland, Fla.	250	1310	1340	U	IV	WSYR	Syracuse, N. Y.	1,000	570	570	U	III-A
WPIC	Sharon, Pa.	1,000	780	790	D	III	WTAD	Quincy, Ill.	1,000	900	930	U	III-B
WPID	Petersburg, Va.	250	1210	1240	U-Except Sunday when WBBL operates	IV	WTAG	Worcester, Mass.	1,000 5,000-LS	580	580	U	III-A
WPRO	Providence, R. I.	5,000	630	630	U	III-A	WTAL	Tallahassee, Fla.	250	1310	1340	U	IV
WPRP	Ponce, Puerto Rico	250 CP-1,000 5,000-LS	1420 CP-1480	1520	U	II	WTAM	Cleveland, O.	50,000	1070	1100	U	I-A
WPTF	Raleigh, N. C.	5,000 CP-50,000	680	680	U	II	WTAQ	Green Bay, Wis.	5,000	1330	1360	U	III-A
WQAM	Miami, Fla.	1,000	560	560	U	III-A	WTAR	Norfolk, Va.	5,000	780	790	U	III-A
WQAN	Scranton, Pa.	500 1,000-LS	880	910	S-WGBI	III-B	WTAW	College Station, Tex.	500 CP-1,000-LS	1120	1150	SH-D-KTBC	III
WQBC	Vicksburg, Miss.	1,000	1360	1390	D	III	WTAX	Springfield, Ill.	250	1210	1240	U	IV
WQDM	St. Albans, Vt.	1,000	1390	1420	D	III	WTBO	Cumberland, Md.	250	800	820	L-WFAA, WBAP	II
WQXR	New York, N. Y.	5,000	1550	1600	U	III-A	WTCM	Traverse City, Mich.	250	1370	1400	U	IV
WRAK	Williamsport, Pa.	250	1370	1400	U	IV	WTCN	Minneapolis, Minn.	1,000 5,000-LS	1250	1280	U	III-A
WRAL	Raleigh, N. C.	250	1210	1240	U	IV	WTEL	Philadelphia, Pa.	250	1310	1340	S-WHAT	IV
WRBW	Reading, Pa.	250	1310	1340	U	IV	WTHT	Hartford, Conn.	250	1200	1230	U	IV
WRBL	Columbus, Ga.	250	1200	1230	U	IV	WTIC	Hartford, Conn.	50,000	1040	1080	U	I-B
WRC	Washington, D. C.	5,000	950	980	U	III-A	WTJS	Jackson, Tenn.	250 CP-1,000	1310 CP-1360	1390	U	III-B
WRDO	Augusta, Me.	250	1370	1400	U	IV	WTMA	Charleston, S. C.	250	1210	1240	U	IV
WRDW	Augusta, Ga.	250	1500	1490	U	IV	WTMC	Ocala, Fla.	250	1500	1490	U	IV
WREC	Memphis, Tenn.	1,000 5,000-LS CP-5,000-LS	600	600	U	III-A	WTMJ	Milwaukee, Wis.	1,000 5,000-LS CP-5,000-LS	620	620	U	III-A
WREN	Lawrence, Kan.	1,000 5,000-LS	1220	1250	S-KFKU	III-A	WTMV	E. St. Louis, Ill.	250	1500	1490	U	IV
WRGA	Rome, Ga.	250	1500	1490	U	IV	WTNJ	Trenton, N. J.	500	1280	1310	S-WCAM, WCAP	III-B
WRJN	Racine, Wis.	250	1370	1400	U	IV	WTOC	Savannah, Ga.	1,000 5,000-LS	1260	1290	U	III-A
WRLC	Toccoa, Ga.	250	1420	1450	U	IV	WTOL	Toledo, O.	250	1200	1230	U	IV
WRNL	Richmond, Va.	1,000	880	910	U	III-B	WTRC	Elkhart, Ind.	250	1310	1340	U	IV
WROK	Rockford, Ill.	500 1,000-LS	1410	1440	U	III-B	WTRY	Troy, N. Y.	1,000	950	980	U	III-B
WROL	Knoxville, Tenn.	500 1,000-LS	620	620	U	III-B	WTSP	St. Petersburg, Fla.	250 CP-500 1,000-LS	1370 CP-1350	1380	U	III-B
WRR	Dallas, Tex.	500 CP-5,000	1280	1310	U	III-A	WVFW	Brooklyn, N. Y.	500	1400	1430	S-WARD, WBBC, WLTH	III-B
WRUF	Gainesville, Fla.	5,000	830	850	L-KOA	II	WWDC	Washington, D. C.	250	1420	1450	U	IV
WRVA	Richmond, Va.	50,000	1110	1140	U	I-B	WWJ	Detroit, Mich.	1,000 5,000-LS CP-5,000-LS	920	950	U	III-A
WSAI	Cincinnati, O.	1,000 5,000-LS CP-5,000-LS	1330	1360	U	III-A	WWL	New Orleans, La.	50,000	850	870	U	I-A
WSAJ	Grove City, Pa.	250	1310	1340	SH	IV	WWNC	Asheville, N. C.	1,000	570	570	U	III-A
WSAM	Saginaw, Mich.	250	1200	1230	SII	IV	WWNY	Watertown, N. Y.	500	1270	1300	D	III
WSAN	Allentown, Pa. (Proposed 5,000)	500	1440	1470	S-WCBA	III-B III-A	WWRL	Woodside, N. Y.	250	1500	1490	SH-WCNW	IV
WSAR	Fall River, Mass.	1,000	1450	1480	U	III-B	WWSW	Pittsburgh, Pa.	250	1500	1490	U	IV
WSAU	Wausau, Wis.	250	1370	1400	U	IV	WWVA	Wheeling, W. Va. (Proposed 50,000)	5,000	1160	1170	U	II I-B
WSAV	Savannah, Ga.	250	1310	1340	U	IV	WXYZ	Detroit, Mich.	5,000	1240	1270	U	III-A
WSAY	Rochester, N. Y.	250	1210	1240	U	IV							
WSAZ	Huntington, W. Va.	1,000 CP-900	1190	930	U	III-B							


That **POWERFUL POPULAR PIONEER** Station for Akron
WADC

POWERFUL as Atlas




WADC gives a big lift to sales with 400% more power than other Akron stations combined.

PIONEER as Daniel Boone



Established April 8, 1925 by present owner. WADC was Co-founder of CBS.

POPULAR as Christmas



... because management with 27 years in show business, plus 15 years in radio, knows what listeners want—and gives it to them!

That Station for **RESULTS**

WADC

AKRON OHIO

ALLEN T. SIMMONS, OWNER
5000 WATTS DAY and NIGHT • Basic CBS
 Represented by **GEORGE P. HOLLINGBERY CO.**

Log of U. S. Broadcast Stations Under Havana Treaty

Frequency List as of January 1, 1941 Showing New Assignments Tentatively Scheduled for March 29, 1941

ABBREVIATIONS

U—Unlimited Time. D—Daytime. N—Night Time. S—Shares Time. SH—Specified Hours. LS—Power Until Local Sunset.
L—Limited Time With Dominant Station. CP—Construction Permit. DA—Directional Antenna.

EXPLANATION

Powers shown are those at present [authorized, except for local stations, all of which are listed for 250 watts fulltime in accord with treaty provisions. All powers are U unless otherwise designated. Where LS and D powers are shown, the upper power designation is the night power. For definitions of station classes see Page 398.

(For text of North American Broadcasting Agreement, see Pages 398-407)

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class	Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
550 KILOCYCLES						590 KILOCYCLES					
KOY.....	Phoenix, Ariz.	1,000	175	U	III-A	KGMB.....	Honolulu, Hawaii	5,000	175	U	III-A
KSD.....	St. Louis, Mo.	1,000 5,000—LS	200 DA-N	U	III-B	WEEI.....	Boston, Mass.	5,000	DA	U	III-A
WGR.....	Buffalo, N. Y.	1,000 5,000—LS	175	U	III-B	WKZO.....	Kalamazoo, Mich.	1,000	189 DA-N	U	III-B
KFYR.....	Bismarck, N. D.	1,000 5,000—LS	210	U	III-A	WOW.....	Omaha, Neb.	5,000	180	U	III-A
WKRC.....	Cincinnati, O.	1,000 5,000—LS	DA	U	III-B	WMBS.....	Uniontown, Pa.	1,000	175 DA-N	U	III-B
KOAC.....	Corvallis, Ore.	1,000 5,000—LS	DA	U	III-A	KHQ.....	Spokane, Wash.	5,000	235	U	III-A
KTSA.....	San Antonio, Tex.	1,000 5,000—LS	175	U	III-A	600 KILOCYCLES					
WDEV.....	Waterbury, Vt.	1,000	180	D	III	KFSD.....	San Diego, Cal.	5,000	175	U	III-A
WSVA.....	Harrisonburg, Va.	1,000	175	D	III	WICC.....	Bridgeport, Conn.	500 1,000—LS	DA	U	III-B
560 KILOCYCLES						WMT.....	Cedar Rapids, Ia.	5,000	180 DA-N	U	III-A
KSFO.....	San Francisco, Cal.	1,000 5,000—LS	175	U	III-A	WCAO.....	Baltimore, Md.	500 1,000—LS	175	U	III-B
KLZ.....	Denver, Colo.	5,000	DA	U	III-A	WSJS.....	Winston-Salem, N. C.	1,000	DA-N	U	III-B
WQAM.....	Miami, Fla.	1,000	175	U	III-A	WREC.....	Memphis, Tenn.	5,000	DA	U	III-A
WIND.....	Gary, Ind.	5,000	DA	U	III-A	KROD.....	El Paso, Tex.	500 1,000—LS	...	U	III-B
WGAN.....	Portland, Me.	5,000	175 DA-N	L	III-A	610 KILOCYCLES					
KWTO.....	Springfield, Mo.	5,000 1,000 (5 a.m. to 6 a.m.)	190	D (5 a.m. to local sunset)	III	KFAR.....	Fairbanks, Alas.	1,000	175	U	III-A
WFIL.....	Philadelphia, Pa.	1,000	175	U	III-A	KFRC.....	San Francisco, Cal.	5,000	175	U	III-A
WIS.....	Columbia, S. C.	5,000	175 DA-N	U	III-A	WIOD.....	Miami, Fla.	5,000	DA	U	III-A
KFDM.....	Beaumont, Tex.	1,000	175	U	III-A	WDAF.....	Kansas City, Mo.	5,000	185	U	III-A
570 KILOCYCLES						WMUR.....	Manchester, N. H.	1,000 5,000—LS	DA	U	III-B
KMTR.....	Los Angeles, Cal.	1,000	175	U	III-A	WCLE.....	Cleveland, O.	500	175	D	III
WMCA.....	New York City	1,000 5,000—LS	DA	U	III-A	WIP.....	Philadelphia, Pa.	5,000	DA	U	III-A
WSYR.....	Syracuse, N. Y.	1,000	DA	U	III-A	620 KILOCYCLES					
WWNC.....	Asheville, N. C.	1,000	175	U	III-A	KTAR.....	Phoenix, Ariz.	5,000	DA	U	III-A
WOSU.....	Columbus, O.	1,000	175	SH-WKBN	III-A	WFLA.....	Tampa, Fla.	5,000	183 DA-N	SII-WSUN	III-A
WKBN.....	Youngstown, O.	500 1,000—LS	175	SH-WOSU	III-B	WSUN.....	St. Petersburg, Fla.	5,000	183 DA-N	SII-WFLA	III-A
WNAX.....	Yankton, S. D.	5,000	190 DA-N	U	III-A	WLBZ.....	Bangor, Me.	500 1,000—LS	180	U	III-B
KGKO.....	Fort Worth, Tex.	1,000 5,000—LS	180 DA-N	U	III-A	WAGE.....	Salina, N. Y. (near Syracuse)	1,000	175 DA-N	U	III-B
KUTA.....	Salt Lake City, Utah	1,000	DA	U	III-B	KGW.....	Portland, Ore.	1,000 5,000—LS	210	U	III-A
KVI.....	Tacoma, Wash.	5,000	190	U	III-A	WHJB.....	Greensburg, Pa.	250	150	D	IV
WMAM.....	Marinette, Wis.	250	175	D	IV	WKAQ.....	San Juan, P. R.	5,000	195	U	III-A
580 KILOCYCLES						WROL.....	Knoxville, Tenn.	500 1,000—LS	175 DA-N	U	III-B
KMJ.....	Fresno, Cal.	5,000	175	U	III-A	KWFT.....	Wichita Falls, Tex.	1,000 5,000—LS	DA	U	III-B
WDBO.....	Orlando, Fla.	5,000	175 DA-N	U	III-A	WTMJ.....	Milwaukee, Wis.	5,000	190 DA-N	U	III-A
WILL.....	Urbana, Ill.	5,000	DA	D	III	630 KILOCYCLES					
KSAC.....	Manhattan, Kan.	500 1,000—LS	175	S-WIBW	III-B	KVOD.....	Denver, Colo.	1,000	205 DA-N	U	III-A
WIBW.....	Topeka, Kan.	5,000	190 DA-N	S-KSAC	III-A	WMAL.....	Washington, D. C.	5,000	DA	U	III-A
WTAG.....	Worcester, Mass.	1,000 5,000—LS	DA	U	III-A	KXOK.....	St. Louis, Mo.	5,000	DA	U	III-A
WCHS.....	Charleston, W. Va.	5,000	175 DA-N	U	III-A	KOH.....	Reno, Nev.	1,000	175 DA-N	U	III-A
						WPRO.....	Providence, R. I.	5,000	210 DA-N	U	III-A
						KGFX.....	Pierre, S. D.	200	150	SH-D	IV

It's

Good Business

The Blue Ribbon Stations in the Blue Ribbon territory of the West.



FOR YOU TO CHECK THE WEST'S THIRD MARKET



A Greater Market . . . More People, More Dollars

★ The story of the past year in Interior California is a story of sensational progress. More than 73 millions of expenditures in one great public project alone*. California led the nation in population increase**. Private construction at an all-time high mark. Now more than ever before, California's Great Central Valleys offer the most fertile soil in the entire West for advertising dollars. The McClatchy Stations are an integral part of this marvelous development. They are powered to do a real job. Check the McClatchy Stations as a point of good business.

* Central Valleys Project.

** Unofficial figures 1940 census.

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McCLATCHY BROADCASTING COMPANY

REPRESENTED NATIONALLY by the PAUL H. RAYMER CO.



Memo: _____

Check the West's
Third Market
Call a McClatchy
representative
e.e.

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
640 KILOCYCLES					
	Los Angeles, Cal.	50,000	225	U	I-A
	Ames, Ia.	5,000	180	D	II
	Columbus, O.	500	175	L-KFI	II
650 KILOCYCLES					
	Nashville, Tenn.	50,000	225	U	I-A
660 KILOCYCLES					
KOWH	Omaha, Neb.	500	175	D	II
WEAF	New York City	50,000	DA	U	I-A
670 KILOCYCLES					
WMAQ	Chicago, Ill.	50,000	225	U	I-A
680 KILOCYCLES					
KPO	San Francisco, Cal.	50,000	225	U	I-B
WLAW	Lawrence, Mass.	5,000	175 DA-N	U	II
KFEQ	St. Joseph, Mo.	500 2,500 LS	175	L-KPO	II
WPTE	Raleigh, N. C.	50,000	187 DA-N	U	II
690 KILOCYCLES					
	Coffeyville, Kan.	1,000	DA	SII-WNAD	II
WNAD	Norman, Okla.	1,000	DA	SII-KGGF	II
700 KILOCYCLES					
WLW	Cincinnati, O.	50,000	260	U	I-A
710 KILOCYCLES					
KMPC	Beverly Hills, Cal.	5,000	DA	U	II
WOR	Newark, N. J.	50,000	DA	U	I-B
KIRO	Seattle, Wash.	10,000	DA	U	I-B
720 KILOCYCLES					
WGN	Chicago, Ill.	50,000	250	U	I-A
740 KILOCYCLES					
KQW	San Jose, Cal.	5,000	DA	U	II
750 KILOCYCLES					
WSB	Atlanta, Ga.	50,000	225	U	I-A
KMMJ	Grand Island, Neb.	1,000	180	L-WSB	II
WUEB	Portsmouth, N. H.	1,000	175	L-WSB	II
760 KILOCYCLES					
KGU	Honolulu, Hawaii	2,500	175	L-WJR	II
WJR	Detroit, Mich.	50,000	225	U	I-A
770 KILOCYCLES					
WLB	Minneapolis, Minn.	5,000	175	S-WCAL (2/3 daytime)	II
WCAL	Northfield, Minn.	5,000	180	S-WLB (1/3 daytime)	II
WEW	St. Louis, Mo.	1,000	175	D	II
WJZ	New York City	50,000	235	U	I-A
KXA	Seattle, Wash.	1,000	175	L-WJZ	II
780 KILOCYCLES					
WBBM	Chicago, Ill.	50,000	225	U	I-A
WJAG	Norfolk, Nebr.	1,000	175	L-WBBM	II
790 KILOCYCLES					
KFQD	Anchorage, Alaska	250	150	SH	IV
KECA	Los Angeles, Cal.	5,000	200 DA-N	U	III-A
KGHI	Billings, Mont.	5,000	205 DA-N	U	III-A
WPIC	Sharon, Pa.	1,000	175	D	III
WPRA	Mayaguez, P. R.	1,000 2,500 LS	175	U	III-A
WEAN	Providence, R. I.	5,000	DA	U	III-A
KFDY	Brookings, S. D.	1,000	175	SII-D	III
WMC	Memphis, Tenn.	1,000 5,000 LS	235 DA-N	U	III-A
WTAR	Norfolk, Va.	5,000	181 DA-N	U	III-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
810 KILOCYCLES					
KGO	San Francisco, Cal.	7,500 (Proposed 10,000)	225	U	II I-B
KOAM	Pittsburgh, Kan.	1,000	185	D	II
WGY	Schenectady, N. Y.	50,000	235	U	I-B
820 KILOCYCLES					
WTBO	Cumberland, Md.	250	175	L-WFAA-WBAP	II
WFAA	Dallas, Tex.	50,000	245	S-WBAP	I-A
WBAP	Fort Worth, Tex.	50,000	245	S-WFAA	I-A
830 KILOCYCLES					
WCCO	Minneapolis, Minn.	50,000	245	U	I-A
WNYC	New York City	1,000	DA	L-WCCO	II
840 KILOCYCLES					
WHAS	Louisville, Ky.	50,000	250	U	I-A
850 KILOCYCLES					
KOA	Denver, Colo.	50,000	225	U	I-A
WRUF	Gainesville, Fla.	5,000	175	L-KOA	II
WHDH	Boston, Mass.	1,000	175	L-KOA	II
KFUO	Clayton, Mo.	5,000	175	L-KOA	II
WEEU	Reading, Pa.	1,000	175	D	II
860 KILOCYCLES					
KTRB	Modesto, Cal.	250	175	D	II
870 KILOCYCLES					
KIEV	Glendale, Cal.	250	175	D	II
WWL	New Orleans, La.	50,000	DA	U	I-A
WKAR	East Lansing, Mich.	5,000	175	D	II
WHCU	Ithaca, N. Y.	1,000	175	L-WWL	II
880 KILOCYCLES					
WHB	Kansas City, Mo.	1,000	175	D	II
WABC	New York City	50,000	225	U	I-A
890 KILOCYCLES					
WENR	Chicago, Ill.	50,000	240	S-WLS	I-A
WLS	Chicago, Ill.	50,000	240	S-WENR	I-A
910 KILOCYCLES					
KLX	Oakland, Cal.	1,000	175	U	III-A
KPOF	Denver, Colo.	1,000	175	S-KFKA	III-A
KFKA	Greeley, Colo.	1,000	175	S-KPOF	III-A
WSUI	Iowa City, Ia.	1,000 5,000-LS	DA	U	III-A
WFDF	Flint, Mich.	1,000	DA	U	III-B
WCOC	Meridian, Miss.	1,000	190	U	III-A
WGBL	Seranton, Pa.	500 1,000-LS	175	S-WQAN	III-B
WQAN	Seranton, Pa.	500 1,000-LS	175	S-WGBI	III-B
WJHL	Johnson City, Tenn.	1,000	175 DA-N	U	III-B
KRRV	Sherman, Tex.	1,000	DA	U	III-B
WRNL	Richmond, Va.	1,000	DA	U	III-B
KVAN	Vancouver, Wash.	250	175	D	IV
920 KILOCYCLES					
KARK	Little Rock, Ark.	5,000	212 DA-N	U	III-A
KTKC	Visalia, Cal.	1,000	180 DA-N	U	III-B
WGST	Atlanta, Ga.	1,000 5,000-LS	185	U	III-A
WBAA	West Lafayette, Ind.	1,000 5,000-LS	175 DA-N	U	III-B
KFNF	Shenandoah, Ia.	500 1,000-LS	220	S-KUSD	III-B
WJAR	Providence, R. I.	5,000	DA	U	III-A
KUSD	Vermillion, S. D.	500	175	S-KFNF	III-B
KPPY	Spokane, Wash.	5,000	210	U	III-A
WMMN	Fairmont, W. Va.	5,000	177 DA-N	U	III-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
930 KILOCYCLES					
KGBU.....	Ketchikan, Alaska	500	175	U	III-B
KHJ.....	Los Angeles, Cal.	5,000	DA	U	III-A
WJAX.....	Jacksonville, Fla.	1,000 5,000—LS	190	U	III-A
KSEI.....	Pocatello, Ida.	250 1,000—LS	175	U	III-B
WTAD.....	Quincy, Ill.	1,000	185 DA-N	U	III-B
WFMD.....	Frederick, Md.	500	185 DA-N	U	III-B
WPAT.....	Paterson, N. J.	1,000	175	D	III
WBEN.....	Buffalo, N. Y.	5,000	200 DA-N	U	III-A
WKY.....	Oklahoma City, Okla.	5,000	190 DA-N	U	III-A
WSAZ.....	Huntington, W. Va.	1,000	DA	U	III-B
WLBL.....	Stevens Point, Wis.	5,000	200	D	III

940 KILOCYCLES					
WMAZ.....	Macon, Ga.	1,000 5,000—LS	175 DA-N	D to 9 p.m.	II

950 KILOCYCLES					
KFEL.....	Denver, Colo.	5,000	DA	U	III-A
WAAF.....	Chicago, Ill.	1,000	175	D	III
WORL.....	Foston, Mass.	1,000	185	D	III
WWJ.....	Detroit, Mich.	5,000	210 DA-N	U	III-A
WPEN.....	Philadelphia, Pa.	5,000	175 DA-N	UU	III-A
WSPA.....	Spartanburg, S. C.	1,000	180 DA-N	U	III-B
KPRC.....	Houston, Tex.	5,000	200 DA-N	U	III-A
KOMO.....	Seattle, Wash.	5,000	245 DA-N	U	III-A

960 KILOCYCLES					
WBRG.....	Birmingham, Ala.	5,000	175 DA-N	U	III-A
KROW.....	Oakland, Cal.	1,000	175	U	III-A
WELI.....	New Haven, Conn.	1,000	170 DA-N	U	III-B
WSBT.....	South Bend, Ind.	500	DA	U	III-B
KMA.....	Shenandoah, Ia.	1,000 5,000—LS	225	U	III-A
WDBJ.....	Roanoke, Va.	5,000	210 DA-N	U	III-A

970 KILOCYCLES					
WKGA.....	Tampa, Fla.	1,000 5,000—LS	175 DA-N	U	III-B
WAVE.....	Louisville, Ky.	5,000	DA	U	III-A
WCSH.....	Portland, Me.	5,000	DA	U	III-A
WAAT.....	Jersey City, N. J.	1,000	175 DA-N	U	III-B
WDAY.....	Fargo, N. D.	5,000	175 DA-N	U	III-A
WICA.....	Ashtabula, O.	1,000	175	D	III
KOIN.....	Portland, Ore.	5,000	224 DA-N	U	III-A
WHA.....	Madison, Wis.	5,000	175	D	III

980 KILOCYCLES					
KFWB.....	Los Angeles, Cal.	5,000	220	U	III-A
WRC.....	Washington, D. C.	5,000	185 DA-N	U	III-A
WHAL.....	Saginaw, Mich.	500	175	D	III
KMBC.....	Kansas City, Mo.	5,000	224 DA-N	U	III-A
WTRY.....	Troy, N. Y.	1,000	DA	U	III-B

990 KILOCYCLES					
WIBG.....	Glenside, Pa.	1,000	175	D	II
WNOX.....	Knoxville, Tenn.	1,000 5,000—LS	235 DA-N	U	II

1000 KILOCYCLES					
WCFL.....	Chicago, Ill.	5,000 (Proposed 10,000)	225 DA	U	II I-B
WINS.....	New York City	1,000	175	L-WCFL	II
KJR.....	Seattle, Wash.	5,000 (Proposed 10,000)	250 DA-N	U	II I-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1020 KILOCYCLES					
KFVD.....	Los Angeles, Cal.	1,000	185	L-KDKA	II
KDKA.....	Pittsburgh, Pa.	50,000	295	U	I-A
1030 KILOCYCLES					
WBZ.....	Boston, Mass.	50,000	DA	U-Synchronized with WBZA	I-B
WBZA.....	Springfield, Mass.	1,000	175	U-Synchronized with WBZ	II
KOB.....	Albuquerque, N. M.	50,000	225 DA-N	U	II
1040 KILOCYCLES					
WHO.....	Des Moines, Ia.	50,000	225	U	I-A
1050 KILOCYCLES					
WDZ.....	Tuscola, Ill.	1,000	180	D	II
WHN.....	New York City	1,000 5,000—LS	175 DA-N	U	II

1060 KILOCYCLES					
KYW.....	Philadelphia, Pa.	50,000	DA	U	I-B

1070 KILOCYCLES					
WAPI.....	Birmingham, Ala.	5,000 (Proposed 50,000)	225 DA-N	U	II
KNX.....	Los Angeles, Cal.	50,000	245	U	I-B
WIBC.....	Indianapolis, Ind.	1,000 5,000—LS	190 DA	U	II
KFBI.....	Wichita, Kan.	1,000 5,000—LS	175 DA-N	U	II
WEAU.....	Eau Claire, Wis.	1,000 5,000—LS	190 DA-N	L-KFBI	II

1080 KILOCYCLES					
KYOS.....	Merced, Cal.	250	175	D	II
WTIC.....	Hartford, Conn.	50,000	225 DA-N	U	I-B
WCAZ.....	Carthage, Ill.	100	185	D	II
KWJJ.....	Portland, Ore.	500	190	L-KRLD, WTIC	II
KRLD.....	Dallas, Tex.	50,000	225 DA-N	U	I-B

1090 KILOCYCLES					
KTHS.....	Hot Springs, Ark.	10,000 (Proposed 50,000)	225 DA-N	U	I-B
WBAL.....	Baltimore, Md.	50,000	225 DA-N	U	I-B

1100 KILOCYCLES					
KJBS.....	San Francisco, Cal.	500	175	L-WTAM	II
WTAM.....	Cleveland, O.	50,000	225	U	I-A

1110 KILOCYCLES					
WCBD.....	Chicago, Ill.	5,000	225	L-WBT, KFAB S-WMBI	II
WMBI.....	Chicago, Ill.	5,000	250	L-WBT, KFAB S-WCBD	II
KFAB.....	Lincoln, Neb.	10,000 (Proposed 50,000)	225 DA-N	U	I-B
WBT.....	Charlotte, N. C.	50,000	225 DA-N	U	I-B

1120 KILOCYCLES					
KMOX.....	St. Louis, Mo.	50,000	225	U	I-A

1130 KILOCYCLES					
KGDM.....	Stockton, Cal.	1,000	175	D	II
KWKH.....	Shreveport, La.	50,000	253 DA-N	U	II
WCAR.....	Pontiac, Mich.	1,000	185	D	II
WDGY.....	Minneapolis, Minn.	5,000 10,000—LS	175 DA-N	U	II
WOV.....	New York City	10,000	DA	U	I-B

1140 KILOCYCLES					
KSOO.....	Sioux Falls, S. D.	5,000	180 DA-N	L-WRVA	II
WRVA.....	Richmond, Va.	50,000	DA	U	I-B



NEWS for 1941!



NEW POWER! By a decision of the Federal Communications Commission rendered the latter part of 1940, W-I-N-D was granted a nighttime power boost of from 1,000 to 5,000 watts. When broadcasting on a frequency of 560 kilocycles with 5,000 watts power, radio engineers have determined that such a station's primary coverage area is equivalent or better to a station broadcasting with 50,000 watts power on any frequency above 900 kilocycles.

A reprint and chart from Printers Ink showing coverage on a basis of the relationship between frequency and power, may be had upon request by writing to W-I-N-D.

NEW TRANSMITTER! To utilize the advantages of our increased power and desirable frequency, W-I-N-D has installed a complete new transmitter. This transmitter is the last word in radio technical improvements. The transmitter is the only 5,000 watt high fidelity, high level modulated air-cooled plant in the Chicago Area.

Through the use of an audio feed-back, distortion of less than 3 per cent is possible over a frequency rate of between 30 and 10,000 cycles. This equipment gives W-I-N-D the finest technical plant in the Chicago Area.

NEW TOWERS! Three new Truscon towers of the latest design have been erected. The towers are designed to give W-I-N-D an unique directive antenna array that will aim its beam where it will cover the most densely populated areas in the greater Chicago market.

It is engineering like this that will bring an ever increasing number of listeners to the outstanding W-I-N-D Columbia network and W-I-N-D produced programs.

National
Sales Offices
230 No. Michigan Ave.
Chicago, Ill.

W-I-N-D

Studios
In Gary, the Heart of the busy Calumet Steel Production Area,
and in Chicago at 230 North Michigan Avenue.

National
Sales Representative
The Foreman Company
New York & Chicago

1941 and a NEW RADIO HEADQUARTERS FOR CHICAGO



Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1150 KILOCYCLES					
KFSG	Los Angeles, Cal.	1,000 2,500—LS	175	S-KRKD	III-A
KRKD	Los Angeles, Cal.	1,000 2,500—LS	175	S-KFSG	III-A
WDEL	Wilmington, Del.	5,000	DA	U	III-A
KSAL	Salina, Kans.	1,000 DA-N	200	U	III-B
WJBO	Baton Rouge, La.	5,000	225 DA	U	III-A
WCOP	Boston, Mass.	500	185 DA-N	U	III-B
KSWO	Lawton, Okla.	250	DA-N	D	IV
WKPA	New Kensington, Pa.	250	150	D	IV
WAPO	Chattanooga, Tenn.	1,000 5,000—LS	195 DA-N	U	III-B
KTBC	Austin, Tex.	1,000	175	SH-D-WTAW	III
WTAW	College Station, Tex.	1,000	175	SH-D-KTBC	III
KRSC	Seattle, Wash.	1,000	175	U	III-A
KFIO	Spokane, Wash.	100	150	D	IV
WISN	Milwaukee, Wis.	5,000	DA	U	III-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1160 KILOCYCLES					
WJJD	Chicago, Ill.	20,000	175	L-KSL	II
KSL	Salt Lake City, Utah	50,000	225	U	I-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1170 KILOCYCLES					
KVOO	Tulsa, Okla.	25,000 (Proposed 50,000)	175 DA-N	U	I-B
WWVA	Wheeling, W. Va.	5,000 (Proposed 50,000)	195 DA	U	I-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1180 KILOCYCLES					
WHAM	Rochester, N. Y.	50,000	245	U	I-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1190 KILOCYCLES					
WOWO	Fort Wayne, Ind.	10,000 (Proposed 50,000)	245 DA	U	I-B
KEX	Portland, Ore.	5,000 (Proposed 50,000)	225 DA	U	I-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1200 KILOCYCLES					
WCAU	Philadelphia, Pa.	50,000	225	U	I-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1210 KILOCYCLES					
WOAI	San Antonio, Tex.	50,000	225	U	I-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1230 KILOCYCLES					
WBHP	Huntsville, Ala.	250	175	U	IV
WMOB	Mobile, Ala.	250	150	U	IV
WJRD	Tuscaloosa, Ala.	250	175	U	IV
KSUN	Lowell, Ariz.	250	185	U	IV
KPHO	Phoenix, Ariz.	250	150	U	IV
KBTM	Jonesboro, Ark.	250	180	U	IV
KGHI	Little Rock, Ark.	250	150	U	IV
KGFJ	Los Angeles, Cal.	250	150	U	IV
KVCV	Redding, Cal.	250	150	U	IV
KVEC	San Luis Obispo, Cal.	250	185	U	IV
KWG	Stockton, Cal.	250	150	U	IV
KFXJ	Grand Junction, Colo.	250	180	U	IV
KGEK	Sterling, Colo.	250	150	U	IV
WTHT	Hartford, Conn.	250	150	U	IV
WLOF	Orlando, Fla.	250	150	U	IV
WDLP	Panama City, Fla.	250	150	U	IV
WJNO	West Palm Beach, Fla.	250	175	U	IV
WRBL	Columbus, Ga.	250	180	U	IV
WBLJ	Dalton, Ga.	250	...	U	IV
WAYX	Waycross, Ga.	250	150	U	IV
KHBC	Hilo, Hawaii	250	150	U	IV
KFXD	Nampa, Ida.	250	150	U	IV
WJBC	Bloomington, Ill.	250	180	U	IV
WJOB	Hammond, Ind.	250	150	U-D S-WFAM-N	IV
WBOW	Terre Haute, Ind.	250	190	U	IV
KFJB	Marshalltown, Ia.	250	180	U	IV
WHOP	Hopkinsville, Ky.	250	180	U	IV
KMLB	Monroe, La.	250	175	U	IV
WJBW	New Orleans, La.	250	185	U	IV
WABI	Bangor, Me.	250	195	U	IV
WITH	Baltimore, Md.	250	...	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1230 KILOCYCLES—Continued					
WESX	Salem, Mass.	250	175	U	IV
WMAW	Worcester, Mass.	250	...	U	IV
WGRB	Grand Rapids, Mich.	250	150	U	IV
WMPG	Lapeer, Mich.	250	150	SH	IV
WSAM	Saginaw, Mich.	250	130	SH	IV
WOOO	Sault Ste. Marie, Mich.	250	150	U	IV
KGDE	Fergus Falls, Minn.	250	150	U	IV
KYSM	Mankato, Minn.	250	200	U	IV
KWNO	Winona, Minn.	250	190	U	IV
WSKB	McComb, Miss.	250	190	U	IV
WIL	St. Louis, Mo.	250	150	U	IV
KHAS	Hastings, Nebr.	250	190	U	IV
WBAB	Atlantic City, N. J.	250	150	U	IV
WENY	Elmira, N. Y.	250	240	U	IV
WIBX	Utica, N. Y.	250	150	U	IV
WMFR	High Point, N. C.	250	150	U	IV
WFTC	Kinston, N. C.	250	175	U	IV
WCBT	Roanoke Rapids, N. C.	250	150	U	IV
WHBC	Canton, O.	250	265	U	IV
WCPO	Cincinnati, O.	250	150	U	IV
WCOL	Columbus, O.	250	150	U	IV
WTOL	Toledo, O.	250	150	U	IV
KADA	Ada, Okla.	250	175	U	IV
WBBZ	Ponca City, Okla.	250	150	U	IV
KAST	Astoria, Ore.	250	175	U	IV
KODL	The Dalles, Ore.	250	150	U	IV
KOOS	Marshfield, Ore.	250	150	U	IV
WCED	Du Bois, Pa.	250	150	U	IV
WEST	Easton, Pa.	250	170	U	IV
WKBO	Harrisburg, Pa.	250	150	U	IV
WAIM	Anderson, S. C.	250	150	U	IV
WOLS	Florence, S. C.	250	165	U	IV
WCAT	Rapid City, S. D.	250	180	U	IV
KELO	Sioux Falls, S. D.	250	150	U	IV
KFDA	Amarillo, Tex.	250	150	U	IV
KVNU	Logan, Utah	250	150	U	IV
WCAX	Burlington, Vt.	250	150	U	IV
WLVA	Lynchburg, Va.	250	150	U	IV
KVOS	Bellingham, Wash.	250	175	U	IV
WLOG	Logan, W. Va.	250	150	U	IV
WAJR	Morgantown, W. Va.	250	150	U	IV
WHBY	Appleton, Wis.	250	150	U	IV
WCLO	Janesville, Wis.	250	195	U	IV
WDSM	Superior, Wis.	250	175	U	IV
KPOW	Powell, Wyo.	250	...	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1240 KILOCYCLES					
WJBY	Gadsden, Ala.	250	175	U	IV
WCOV	Montgomery, Ala.	250	175	U	IV
KWJB	Globe, Ariz.	250	180	U	IV
KYUM	Yuma, Ariz.	250	150	U	IV
KDON	Monterey, Cal.	250	150	U	IV
KPPC	Pasadena, Cal.	250	150	S-KFXM	IV
KROY	Sacramento, Cal.	230	175	U	IV
KFXM	San Bernardino, Cal.	250	150	S-KPPC	IV
WFTM	Fort Myers, Fla.	250	150	U	IV
WFOY	St. Augustine, Fla.	250	175	U	IV
WGAC	Augusta, Ga.	250	150	U	IV
WGGA	Gainesville, Ga.	250	150	U	IV
WLAG	LaGrange, Ga.	250	...	U	IV
WBML	Macon, Ga.	250	150	U	IV
WPAX	Thomasville, Ga.	250	150	U	IV
WCRW	Chicago, Ill.	250	150	SH-WEDC, WSBC	IV
WEDC	Chicago, Ill.	250	150	SH-WCRW, WSBC	IV
WSBC	Chicago, Ill.	250	150	SH-WCRW, WEDC	IV
WEBQ	Harrisburg, Ill.	250	150	U	IV
WTAX	Springfield, Ill.	250	150	U	IV
WHBU	Anderson, Ind.	250	150	U	IV
KBIZ	Ottumwa, Ia.	250	...	U	IV
KIUL	Garden City, Kan.	250	150	U	IV
KANS	Wichita, Kan.	250	150	U	IV
WINN	Louisville, Ky.	250	150	U	IV
KALB	Alexandria, La.	250	150	U	IV

SALES HIGH SPOTS!

**CUMBERLAND
RATED
"A- No. 1"**



WE QUOTE FROM FORBES: Sept. 15, 1940

A—"120% and higher"
(comparison with same time year ago) **CUMBERLAND**

#1—"Best territories" **CUMBERLAND**

"Area for special consideration" **CUMBERLAND**

Yes, Cumberland ranks far above the national average in sales opportunity . . . in income . . . in retail sales. And here's an area without consistent effective daytime outside network coverage. That's why . . .

you need

WTBO

Cumberland, Maryland

800 KC. • CLEAR CHANNEL • 250 WATTS • UNITED PRESS • MARYLAND COVERAGE NETWORK • MEMBER NAB
National Representatives: INTERNATIONAL RADIO SALES Inc.

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1240 KILOCYCLES—Continued					
WCOU.....	Lewiston, Me.	250	180	U	IV
WJEJ.....	Hagerstown, Md.	250	150	U	IV
WHAI.....	Greenfield, Mass.	250	175	U	IV
WOCB.....	Hyannis, Mass.	250	150	U	IV
WJIM.....	Lansing, Mich.	250	150	U	IV
WMFG.....	Hibbing, Minn.	250	150	U	IV
WGRM.....	Greenwood, Miss.	250	150	U	IV
WGCM.....	Gulfport, Miss.	250	150	U	IV
KPFA.....	Helena, Mont.	250	150	U	IV
KFOR.....	Lincoln, Nebr.	250	150	U	IV
WSNJ.....	Bridgeton, N. J.	250	175	U	IV
WBRB.....	Red Bank, N. J.	250	150	S-WGBB	IV
KLAH.....	Carlsbad, N. M.	250	180	U	IV
WGBB.....	Freeport, N. Y.	250	150	S-WBRB, WFAS	IV
WJTN.....	Jamestown, N. Y.	250	175	U	IV
WSAY.....	Rochester, N. Y.	250	150	U	IV
WATN.....	Watertown, N. Y.	250	150	U	IV
WFAS.....	White Plains, N. Y.	250	150	S-WGBB	IV
WSOC.....	Charlotte, N. C.	250	150	U	IV
WRAL.....	Raleigh, N. C.	250	175	U	IV
KDLR.....	Devils Lake, N. D.	250	180	U	IV
WJW.....	Akron, O.	250	150	U	IV
WLOK.....	Lima, O.	250	150	U	IV
WHIZ.....	Zanesville, O.	250	150	U	IV
KVSO.....	Ardmore, Okla.	250	150	U	IV
KASA.....	Elk City, Okla.	250	150	U	IV
KHBG.....	Okmulgee, Okla.	250	175	U	IV
KWIL.....	Albany, Ore.	250	...	U	IV
KFJI.....	Klamath Falls, Ore.	250	150	U	IV
WKOK.....	Sunbury, Pa.	250	150	U	IV
WBAX.....	Wilkes-Barre, Pa.	250	175	U	IV
WTMA.....	Charleston, S. C.	250	175	U	IV
KWAT.....	Watertown, S. D.	250	150	U	IV
WBIR.....	Knoxville, Tenn.	250	150	U	IV
WSIX.....	Nashville, Tenn.	250	150	U	IV
KOCA.....	Kilgore, Tex.	250	170	U	IV
KXOX.....	Sweetwater, Tex.	250	180	U	IV
KOVO.....	Provo, Utah	250	170	U	IV
WPID.....	Petersburg, Va.	250	180	U-except Sunday when WBL operates	IV
WBBL.....	Richmond, Va.	250	150	SH	IV
KGy.....	Olympia, Wash.	250	150	U-except when KTW is operating	IV
WJLS.....	Beckley, W. Va.	250	180	U	IV
WOMT.....	Manitowoc, Wis.	250	150	U	IV
WIBU.....	Poynette, Wis.	250	190	U	IV
WJMC.....	Rice Lake, Wis.	250	180	U	IV
1250 KILOCYCLES					
KTMS.....	Santa Barbara, Cal.	1,000	DA	U	III-B
WDAE.....	Tampa, Fla.	5,000	DA	U	III-A
KFKU.....	Lawrence, Kan.	1,000 5,000—LS	175	S-WREN	III-A
WREN.....	Lawrence, Kan.	1,000 5,000—LS	175	S-KFKU	III-A
WCAD.....	Canton, N. Y.	500	175	SH-D	III
WGNy.....	Newburgh, N. Y.	250	180	D	IV
WCAE.....	Pittsburgh, Pa.	5,000	215 DA-N	U	III-A
KPAC.....	Port Arthur, Tex.	500	187.5 DA-N	U	III-B
KWSC.....	Pullman, Wash.	5,000	180	S-KTW	III-A
KTW.....	Seattle, Wash.	1,000	175	S-KWSC	III-A
1260 KILOCYCLES					
KYA.....	San Francisco, Cal.	1,000 5,000—LS	230	U	III-A
WOL.....	Washington, D. C.	1,000	DA	U Proposed	III-B III-A
WFBM.....	Indianapolis, Ind.	5,000	245 DA-N	U	III-A
WNAC.....	Boston, Mass.	5,000	DA	U	III-A
KGBX.....	Springfield, Mo.	5,000	175 DA-N	U	III-A
KGGM.....	Albuquerque, N. M.	1,000	190	U	III-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1270 KILOCYCLES					
KTFL.....	Twin Falls, Ida.	1,000	250	U	III-A
WHBF.....	Rock Island, Ill.	5,000	DA	U	III-A
WSPR.....	Springfield, Mass.	500	DA	U	III-B
WXYZ.....	Detroit, Mich.	5,000	227 DA-N	U	III-A
KGCU.....	Mandan, N. D.	250 (Proposed 500) 1,000—LS	180	U	IV
KFJZ.....	Fort Worth, Tex.	5,000	DA	U	III-A
1280 KILOCYCLES					
KFOX.....	Long Beach, Cal.	1,000	175	U	III-A
WMRO.....	Aurora, Ill.	250	175	D	IV
WGBF.....	Evansville, Ind.	1,000 5,000—LS	200 DA-N	U	III-B
WDSU.....	New Orleans, La.	5,000	DA	U	III-A
WTCN.....	Minneapolis, Minn.	1,000 5,000—LS	210	U	III-A
WHBL.....	Newark, N. J.	1,000 2,500—LS	175	S-WNEW	III-A
WNEW.....	New York City	5,000	DA	S-WHBI	III-A
WKST.....	New Castle, Pa.	1,000	190 DA-N	U	III-B
KIT.....	Yakima, Wash.	1,000	185	U	III-A
1290 KILOCYCLES					
KVOA.....	Tucson, Ariz.	1,000	175	U	III-A
KUOA.....	Siloam Springs, Ark.	5,000	250	D	III
KHSL.....	Chico, Cal.	500 1,000—LS	190	U	III-B
WTOC.....	Savannah, Ga.	1,000 5,000—LS	175 DA-N	U	III-A
KGVO.....	Missoula, Mont.	1,000 5,000—LS	190	U	III-A
KOIL.....	Omaha, Nebr.	5,000	210 DA-N	U	III-A
WHLd.....	Niagara Falls, N. Y.	1,000	190	D	III
WHIO.....	Dayton, O.	5,000	200 DA-N	U	III-A
KRGV.....	Weslaco, Tex.	1,000	185	U	III-A
WKNE.....	Keene, N. H.	5,000	DA	U	III-A
WFVA.....	Fredericksburg, Va.	250	180	D	IV
1300 KILOCYCLES					
KVOR.....	Colorado Springs, Colo.	1,000	190	U	III-A
KGLO.....	Mason City, Ia.	1,000	205 DA-N	U	III-B
WFBR.....	Baltimore, Md.	1,000 5,000—LS	DA	U	III-A
WASH.....	Grand Rapids, Mich.	500	175	S-WOOD	III-B
WOOD.....	Grand Rapids, Mich.	500	175	S-WASH	III-B
WJDX.....	Jackson, Miss.	1,000 5,000—LS	215	U	III-A
WVNY.....	Watertown, N. Y.	500	175	D	III
KOL.....	Seattle, Wash.	1,000 5,000—LS	230	U	III-A
1310 KILOCYCLES					
KLS.....	Oakland, Cal.	1,000	175	U	III-A
WISH.....	Indianapolis, Ind.	1,000 5,000—LS	DA-N	U	III-B
WORC.....	Worcester, Mass.	1,000	DA	U	III-B
KFBB.....	Great Falls, Mont.	5,000	250 DA-N	U	III-A
WCAP.....	Asbury Park, N. J.	500	175	S-WCAM, WTNJ	III-B
WCAM.....	Camden, N. J.	500	175	S-WCAP, WTNJ	III-B
WTNJ.....	Trenton, N. J.	500	190	S-WCAM, WCAP	III-B
WDOD.....	Chattanooga, Tenn.	5,000	215 DA-N	U	III-A
WRR.....	Dallas, Tex.	5,000	DA-N	U	III-A
WIBA.....	Madison, Wis.	5,000	DA-N	U	III-A
1320 KILOCYCLES					
KLCN.....	Blytheville, Ark.	100	175	D	IV
WATR.....	Waterbury, Conn.	250	DA	U	IV
WJHP.....	Jacksonville, Fla.	250	150	U	IV
WEBC.....	Duluth, Minn.	1,000 5,000—LS	225	U	III-A
WNBZ.....	Saranac Lake, N. Y.	100	150	D	IV
WJAS.....	Pittsburgh, Pa.	1,000 5,000—LS	185	U	III-A
WNEL.....	San Juan, P. R.	5,000	175	U	III-A
KTRH.....	Houston, Tex.	5,000	230	U	III-A
KDYL.....	Salt Lake City, Utah	5,000	245	U	III-A

IN WESTERN NEW YORK



STANDS FOR SELLING POWER

WHAM, with its husky 50,000 watts, makes a powerful salesman for the products you want to sell to the prosperous folks of Western New York.

Here's power that dominates a whole 43 county area—power that, day or night, brings dependable reception of the local and national programs that listeners prefer. WHAM's clear-channel dependability and friendly power make it a welcome visitor in the radio homes where sales count—and WHAM will cover the whole territory for you for approximately one-third the cost of localized coverage.

WHAM'S 43 COUNTY PRIMARY AREA

The 31 counties of Western New York plus 12 counties of Pennsylvania make up the area blanketed by WHAM's clear channel 50,000 watts. In this area are the vineyards of the Finger Lakes, Western New York's rich fruit belt, the northern dairylands, the fertile rolling farm lands of central Western New York, the oil fields of Pennsylvania and New York, together with most of the great industrial and trade centers in upstate New York and Northern Pennsylvania. WHAM is the *only* station including all this in its primary area.

WHAM LISTENERS ARE PROSPEROUS

Among WHAM area's more than three and one-half million inhabitants, according to latest available figures, there are

more than 95 radios to every one hundred homes. Of these homes, more than 64% are owned by the families who live in them, a percentage higher than any single state average and far above the national average. Total retail sales exceed \$1,100,000,000. Profitable farming and year around industrial activity combine to put spendable dollars in the pockets of WHAM listeners.

WHAM PROGRAMS ARE AUDIENCE WINNERS

The outstanding features of both NBC Blue and Red Networks—seven of them, for the second successive year, among the top ten named by *Radio Daily* in its last Poll—plus programs high in local interest—all add up to the program leadership that creates listener loyalty.

WHAM IS A BETTER BUY

With WHAM you can reach every corner of this vast market with one station—at a cost approximately one-third of that which you would have to pay for localized coverage.

50,000 Watts . . . Clear Channel . . . Full Time . . . NBC Blue and Red Networks. Owned and operated by the Stromberg-Carlson Telephone Manufacturing Company, Inc. . . . William Fay, General Manager.

WHAM

ROCHESTER, N. Y.
TRANSMITTER: VICTOR, N. Y.
"THE STROMBERG-CARLSON STATION"

National Representatives: George P. Hollingbery Co.

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1330 KILOCYCLES					
KFAC.....	Los Angeles, Cal.	1,000	175	U	III-A
KFH.....	Wichita, Kan.	5,000	245 DA-N	U	III-A
WLOL.....	Minneapolis, Minn.	1,000	DA	U	III-B
WBBR.....	Brooklyn, N. Y.	1,000	175	S-WEVD, WHAZ Prop.	III-B III-A
WEVD.....	New York City	1,000	175	S-WBBR, WHAZ Prop.	III-B 111-A
WHAZ.....	Troy, N. Y.	1,000	175	S-WBBR, WEVD Prop.	III-B III-A
KALE.....	Portland, Ore.	5,000	180 DA-N	U	III-A
WFBC.....	Greenville, S. C.	5,000	185 DA-N	U	III-A
WHBL.....	Sheboygan, Wis.	250 1,000-LS	200	U	III-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1340 KILOCYCLES					
WSGN.....	Birmingham, Ala.	250	150	U	IV
KCRJ.....	Jerome, Ariz.	250	150	U	IV
KWFC.....	Hot Springs, Ark.	250	150	U	IV
KARM.....	Fresno, Cal.	250	200	U	IV
KHUB.....	Watsonville, Cal.	250	175	U	IV
KMYR.....	Denver, Colo.	250	150	U	IV
WINX.....	Washington, D. C.	250	150	U	IV
WPER.....	DeLand, Fla.	250	...	U	IV
WLAK.....	Lakeland, Fla.	250	180	U	IV
WTAL.....	Tallahassee, Fla.	250	150	U	IV
WGAU.....	Athens, Ga.	250	175	U	IV
WSAV.....	Savannah, Ga.	250	175	U	IV
WDAK.....	West Point, Ga.	250	150	U	IV
WSOY.....	Decatur, Ill.	250	180	U	IV
WJPF.....	Herrin, Ill.	250	150	U	IV
WCLS.....	Joliet, Ill.	250	185	U	IV
WTRC.....	Elkhart, Ind.	250	180	U	IV
WLBC.....	Muncie, Ind.	250	150	U	IV
KCKN.....	Kansas City, Kan.	250	150	U	IV
WCMI.....	Ashland, Ky.	250	150	U	IV
WLBJ.....	Bowling Green, Ky.	250	180	U	IV
KVOL.....	Lafayette, La.	250	175	U	IV
KRMD.....	Shreveport, La.	250	150	U	IV
WNBH.....	New Bedford, Mass.	250	150	U	IV
WBRK.....	Pittsfield, Mass.	250	150	U	IV
WLAV.....	Grand Rapids, Mich.	250	150	U	IV
WDMJ.....	Marquette, Mich.	250	150	U	IV
WEXL.....	Royal Oak, Mich.	250	150	U	IV
KVOX.....	Moorehead, Minn.	250	175	U	IV
KROC.....	Rochester, Minn.	250	180	U	IV
KWLM.....	Willmar, Minn.	250	175	U	IV
WJPR.....	Greenville, Miss.	250	185	U	IV
WAML.....	Laurel, Miss.	250	180	U	IV
KWOS.....	Jefferson City, Mo.	250	185	U	IV
KWOC.....	Poplar Bluff, Mo.	250	150	U	IV
KGEZ.....	Kalispell, Mont. (See 1460 kc.)	250	190	U	IV
KRJE.....	Miles City, Mont.	250	150	U	IV
KGFV.....	Kearney, Nebr.	250	175	U	IV
WLNH.....	Laconia, N. H.	250	180	U	IV
KVSF.....	Santa Fe, N. M.	250	150	U	IV
WMBO.....	Auburn, N. Y.	250	175	U	IV
WEBR.....	Buffalo, N. Y.	250	150	U	IV
WMFP.....	Plattsburg, N. Y.	250	150	U	IV
WGTM.....	Wilson, N. C.	250	150	U	IV
WAIR.....	Winston-Salem, N. C.	250	...	U	IV
WIZE.....	Springfield, O.	250	150	U	IV
WSTV.....	Steubenville, O.	250	150	SH-WSAJ	IV
KOCY.....	Oklahoma City, Okla.	250	150	U	IV
KOME.....	Tulsa, Okla.	250	195	U	IV
KBND.....	Bend, Ore.	250	180	U	IV
KUIN.....	Grants Pass, Ore.	250	250	U	IV
WFBG.....	Altoona, Pa.	250	150	U	IV
WSAJ.....	Grove City, Pa.	250	150	SH	IV
WHAT.....	Philadelphia, Pa.	250	150	S-WTEL	IV
WTEL.....	Philadelphia, Pa.	250	150	S-WHAT	IV
WRAW.....	Reading, Pa.	250	150	U	IV
WBRE.....	Wilkes-Barre, Pa.	250	180	U	IV
WFIG.....	Sumter, S. C.	250	150	U	IV
KAND.....	Corsicana, Tex.	250	175	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1340 KILOCYCLES—Continued					
KFPL.....	Dublin, Tex.	250	175	U	IV
KFYO.....	Lubbock, Tex.	250	150	U	IV
KRBA.....	Lufkin, Tex.	250	175	U	IV
KPDN.....	Pampa, Tex.	250	175	U	IV
KVIC.....	Victoria, Tex.	250	175	U	IV
KSUB.....	Cedar City, Utah	250	170	U	IV
WGH.....	Newport News, Va.	250	170	U	IV
KXRO.....	Aberdeen, Wash.	250	180	U	IV
WBRW.....	Welch, W. Va.	250	150	U	IV
WEMP.....	Milwaukee, Wis.	250	150	U	IV
WFHR.....	Wisconsin Rapids, Wis.	250	150	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1350 KILOCYCLES					
KSRO.....	Santa Rosa, Cal.	1,000	DA	U	III-B
KGHE.....	Pueblo, Colo.	500	175	U	III-B
KID.....	Idaho Falls, Ida.	500 5,000-LS	200	U	III-B
KRNT.....	Des Moines, Ia.	5,000	210 DA-N	U	III-A
WSMB.....	New Orleans, La.	5,000	228 DA-N	U	III-A
WADC.....	Akron, O.	5,000	DA	U	III-A
WORK.....	York, Pa.	1,000	175	U	III-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1360 KILOCYCLES					
KGB.....	San Diego, Cal.	1,000	175	U	III-A
WDRG.....	Hartford, Conn.	5,000	DA	U	III-A
WKAT.....	Miami Beach, Fla.	1,000	175	U	III-B
KSCJ.....	Sioux City, Ia.	5,000	214 DA-N	U	III-A
WSAI.....	Cincinnati, O.	1,000	250 DA-N	U	III-A
KRIS.....	Corpus Christi, Tex.	1,000	204	U	III-A
KMO.....	Tacoma, Wash.	5,000	175	U	III-A
WTAQ.....	Green Bay, Wis.	5,000	DA	U	III-A

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1370 KILOCYCLES					
WCOA.....	Pensacola, Fla.	500 1,000-LS	175	U	III-B
KDTH.....	Dubuque, Ia.	1,000	175 DA-N	U	III-B
KGNO.....	Dodge City, Kan.	250 1,000 LS	175	U	III-B
KGIR.....	Butte, Mont.	5,000	175	U	III-A
WFEA.....	Manchester, N. H.	5,000	DA	U	III-B
WFNC.....	Fayetteville, N. C.	250	150	D	IV
WSPD.....	Toledo, O.	5,000	175 DA-N	U	III-A
WPAB.....	Ponce, P. R.	1,000	175	U	III-A
KPRO.....	Longview, Tex.	1,000	185 DA-N	U	III-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1380 KILOCYCLES					
WTSP.....	St. Petersburg, Fla.	500 1,000 LS	...	U	III-B
KIDO.....	Boise, Ida.	1,000 2,500-LS	190	U	III-A
KWK.....	St. Louis, Mo.	5,000	DA	U	III-A
WAWZ.....	Zarephath, N. J.	1,000	DA	S-WBNX	III-A
WBNX.....	New York City	5,000	DA	S-WAWZ	III-A
KBWD.....	Brownwood, Tex.	500	...	U	III-B
KTSM.....	El Paso, Tex.	500	175	U	III-B
WMBG.....	Richmond, Va.	1,000 5,000-LS	DA	U	III-B

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1390 KILOCYCLES					
KGER.....	Long Beach, Cal.	1,000	175	U	III-A
WGES.....	Chicago, Ill.	500 1,000-LS (Sundays)	175	S	III-B
WQBC.....	Vicksburg, Miss.	1,000	175	D	III
WFBL.....	Syracuse, N. Y.	5,000	235 DA-N	U	III-A
KLPM.....	Minot, N. D.	1,000	185	U	III-A
KCRC.....	Enid, Okla.	250 Proposed 1,000	175	U	IV III-A
KSLM.....	Salem, Ore.	1,000	180	U	III-A
WCSC.....	Charleston, S. C.	500 1,000-LS Proposed 1,000	175	U	III-B III-A
WTJS.....	Jackson, Tenn.	1,000	DA-N	U	III-B



JUST SIX AND ONE-HALF MILES

as the crow flies...

That's how far our new transmitter is from Times Square. But we don't stop with just New York (no trifling package); we've received mail from points as remote as West Virginia, several towns near Boston, and even Nova Scotia!



NO SIGN ON...NO SIGN OFF!

Twenty-four hours every day WMCA is on the air with its directional beam concentrated into the most thickly populated sections of New York, New Jersey, and Connecticut, reaching a potential audience of more than 13,000,000 people.

We can talk to Nova Scotia, but we concentrate on selling to New York and its environs. And we do! That's why our sponsors stay with us—some for as many as fifteen years! WMCA is the **logical** medium to sell the world's greatest market!

5000 WATTS DAY • 1000 WATTS ALL NIGHT



WMCA

FIRST ON YOUR DIAL • NEW YORK

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1400 KILOCYCLES					
WMSL	Decatur, Ala.	250	150	U	IV
WAGF	Dothan, Ala.	250	150	U	IV
WJHO	Opelika, Ala.	250	150	U	IV
KTUC	Tucson, Ariz.	250	150	U	IV
KELD	El Dorado, Ark.	250	150	U	IV
KFPW	Fort Smith, Ark.	250	150	U	IV
KRE	Berkeley, Cal.	250	175	U	IV
KIUP	Durango, Colo.	250	150	U	IV
KOKO	La Junta, Colo.	250	185	U	IV
WFTL	Ft. Lauderdale, Fla.	250	180	U	IV
WMBR	Jacksonville, Fla.	250	175	U	IV
WATL	Atlanta, Ga.	250	150	U	IV
WMGA	Moultrie, Ga.	250	225	U	IV
KRLC	Lewiston, Ida.	250	215	U	IV
WDWS	Champaign, Ill.	250	150	U	IV
WGIL	Galesburg, Ill.	250	150	U	IV
WEOA	Evansville, Ind.	250	150	U	IV
WKMO	Kokomo, Ind.	250	...	U	IV
WGRC	New Albany, Ind.	250	195	U	IV
KFGQ	Boone, Ia.	250	150	SH-D	IV
KVFD	Fort Dodge, Ia.	250	215	SH	IV
KTSW	Emporia, Kan.	250	180	U	IV
KVGB	Great Bend, Kan.	250	185	U	IV
WRDO	Augusta, Me.	250	150	U	IV
WCBM	Baltimore, Md.	250	150	U	IV
WHYN	Holyoke, Mass.	250	...	U	IV
WLH	Lowell, Mass.	250	150	U	IV
WELL	Battle Creek, Mich.	250	150	U	IV
WHDF	Calumet, Mich.	250	185	U	IV
WMBC	Detroit, Mich.	250	150	U	IV
WTCM	Traverse City, Mich.	250	150	U	IV
WMIN	St. Paul, Minn.	250	175	U	IV
WHLB	Virginia, Minn.	250	175	U	IV
WCBH	Columbus, Miss.	250	150	U	IV
WFOR	Hattiesburg, Miss.	250	150	U	IV
KFVS	Cape Girardeau, Mo.	250	150	U	IV
KFRU	Columbia, Mo.	250	150	U	IV
KORN	Fremont, Nebr.	250	190	U	IV
KENO	Las Vegas, Nev.	250	150	U	IV
KICA	Clovis, N. M.	250	175	U	IV
KGFL	Roswell, N. M.	250	150	U	IV
WABY	Albany, N. Y.	250	150	U	IV
WBNY	Buffalo, N. Y.	250	150	U	IV
WSVS	Buffalo, N. Y.	250	150	All hours except those WSVS operates SH-D-WBNY	IV
WLSB	Ogdensburg, N. Y.	250	150	U	IV
WISE	Asheville, N. C.	250	150	U	IV
WCNC	Elizabeth City, N. C.	250	175	U	IV
WGBR	Goldboro, N. C.	250	180	U	IV
WHKY	Hickory, N. C.	250	150	U	IV
WMFD	Wilmington, N. C.	250	150	U	IV
KRMC	Jamestown, N. D.	250	180	U	IV
WMAN	Mansfield, O.	250	175	U	IV
WPAY	Portsmouth, O.	250	150	U	IV
KTOK	Oklahoma City, Okla.	250	175	U	IV
WJAC	Johnstown, Pa.	250	150	U	IV
WDAS	Philadelphia, Pa.	250	185	U	IV
WARM	Scranton, Pa.	250	150	U	IV
WRAK	Williamsport, Pa.	250	180	U	IV
WCOS	Columbia, S. C.	250	190	U	IV
WORD	Spartanburg, S. C.	250	150	U	IV
KOBH	Rapid City, S. D.	250	150	U	IV
WDEF	Chattanooga, Tenn.	250	150	U	IV
WHUB	Cookeville, Tenn.	250	150	U	IV
WKPT	Kingsport, Tenn.	250	150	U	IV
WHBQ	Memphis, Tenn.	250	150	U	IV
KLUF	Galveston, Tex.	250	175	U	IV
KIUN	Pecos, Tex.	250	150	U	IV
KGKL	San Angelo, Tex.	250	175	U	IV
KMAC	San Antonio, Tex.	250	175	S-KONO	IV
KONO	San Antonio, Tex.	250	150	S-KMAC	IV
KTEM	Temple, Tex.	250	175	U	IV
WBTM	Danville, Va.	250	150	U	IV
KRKO	Everett, Wash.	250	150	S-KEVR	IV
KWLK	Longview Wash.	250	150	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1400 KILOCYCLES—Continued					
KEVR	Seattle, Wash.	250	150	S-KRKO	IV
WBLK	Clarksburg, W. Va.	250	200	U	IV
WBTH	Williamson, W. Va.	250	150	U	IV
WKWK	Wheeling, W. Va.	250	...	U	IV
WATW	Ashland, Wis.	250	150	U	IV
WRJN	Racine, Wis.	250	175	U	IV
WSAU	Wausau, Wis.	250	150	U	IV
KYAN	Cheyenne, Wyo.	250	190	U	IV
KVRS	Rock Springs, Wyo.	250	175	U	IV
KWYO	Sheridan, Wyo.	250	185	U	IV
1410 KILOCYCLES					
WALA	Mobile, Ala.	5,000	190 DA-N	U	III-A
KERN	Bakersfield, Cal.	1,000	175	U	III-A
WNBC	New Britain, Conn.	1,000	DA	U	III-B
WING	Dayton, O.	5,000—LS	175 DA-N	U	III-A
KQV	Pittsburgh, Pa.	1,000	185 DA-N	U	III-B
WKBH	La Crosse, Wis.	1,000	200	U	III-A
1420 KILOCYCLES					
KLRA	Little Rock, Ark.	5,000	215 DA-N	U	III-A
WHK	Cleveland, O.	5,000	205 DA-N	U	III-A
WFCI	Pawtucket, R. I.	1,000	DA	U	III-B
KABR	Aberdeen, S. D.	5,000	194 DA-N	U	III-A
WQDM	St. Albans, Vt.	1,000	175	D	III
KUJ	Walla Walla, Wash.	1,000	175	U	III-A
1430 KILOCYCLES					
WIRE	Indianapolis, Ind.	5,000	244 DA-N	U	III-A
WARD	Brooklyn, N. Y.	500	180	S-WBBC, WLTH, WVFW	III-B
WBBC	Brooklyn, N. Y.	500	175	S-WARD, WLTH, WVFW	III-B
WVFW	Brooklyn, N. Y.	500	175	S-WARD, WBBC, WLTH	III-B
WLTH	New York City	500	175	S-WARD, WBBC, WVFW	III-B
KTUL	Tulsa, Okla.	5,000	238 DA-N	U	III-A
KLO	Ogden, Utah	5,000	DA	U	III-A
1440 KILOCYCLES					
WSFA	Montgomery, Ala.	500 1,000—LS	190	U	III-B
WROK	Rockford, Ill.	500 1,000—LS	200	U	III-B
WAAB	Boston, Mass.	1,000	250	U	III-A
WBCM	Bay City, Mich.	500 1,000—LS	175	U	III-B
KFJM	Grand Forks, N. D.	500 1,000—LS	175	U	III-B
KMED	Medford, Ore.	1,000	175	U	III-A
KGNC	Amarillo, Tex.	1,000	175	U	III-A
WHIS	Bluefield, W. Va.	2,500—LS 500 1,000—LS	175	U	III-B
1450 KILOCYCLES					
WHMA	Anniston, Ala.	250	150	U	IV
WMSD	Muscle Shoals City, Ala.	250	150	U	IV
KGLU	Safford, Ariz.	250	175	U	IV
KMYC	Marysville, Cal.	250	150	U	IV
KFMB	San Diego, Cal.	250	...	U	IV
KSAN	San Francisco, Cal.	250	150	U	IV
KGIW	Alamosa, Colo.	250	150	SH-KIDW	IV
KIDW	Lamar, Colo.	250	150	SH-KGIW	IV
WNAB	Bridgeport, Conn.	250	150	U	IV
WILM	Wilmington, Dal.	250	150	U	IV
WWDC	Washington, D. C.	250	...	U	IV
WMFJ	Daytona Beach, Fla.	250	150	U	IV
WSPB	Sarasota, Fla.	250	180	U	IV
WGPC	Albany, Ga.	250	150	U	IV
WMWH	Augusta, Ga.	250	150	U	IV
WKEU	Griffin, Ga.	250	150	U	IV
WRLC	Toxcoca, Ga.	250	...	U	IV
WGOV	Valdosta, Ga.	250	150	U	IV
KWAL	Wallace, Ida.	250	185	U	IV
WHFC	Cicero, Ill.	250	150	U	IV
WCBS	Springfield, Ill.	250	150	U	IV
WGL	Fort Wayne, Ind.	250	150	U	IV
WAOV	Vincennes, Ind.	250	150	U	IV
WOC	Davenport, Ia.	250	150	U	IV
KTRI	Sioux City, Ia.	250	150	U	IV
KVAK	Atchison, Kan.	250	175	U	IV
KWBG	Hutchinson, Kan.	250	150	U	IV
WHLN	Harlan, Ky.	250	...	U	IV
WLAP	Lexington, Ky.	250	150	U	IV
WPAD	Paducah, Ky.	250	185	U	IV

NAMES MAKE NEWS

The names of K S L advertisers make big news in Western America. Here national spot users have converted journalism's oldest adage into modern radio fact.

1940 was K S L's biggest national spot year. 1941 begins even bigger. K S L has power where power is needed--power plus audience acceptance. It takes K S L's 50,000 watts to reach the wide Intermountain market--a rich, hard-to-reach market that stretches across Utah, Idaho, Montana, Nevada, eastern Oregon and Washington, western Wyoming and Colorado.

K S L does the job! Year-after-year renewals of national spot contracts establish K S L as Western America's best radio buy.

Salt Lake City
50,000 Watts
1130 Kilocycles

KSL

Affiliated with the
Columbia
Broadcasting System

National Representative EDWARD PETRY & COMPANY, INC.

New York — Chicago — Detroit — St. Louis — San Francisco — Los Angeles

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1450 KILOCYCLES—Continued					
WNOE	New Orleans, La.	250	180	U	IV
WAGM	Presque Isle, Me.	250	150	U	IV
WMAS	Springfield, Mass.	250	240	U	IV
WJMS	Ironwood, Mich.	250	150	U	IV
WIBM	Jackson, Mich.	250	150	U	IV
WHLS	Port Huron, Mich.	250	190	U	IV
KATE	Albert Lea, Minn.	250	150	U	IV
KFAM	St. Cloud, Minn.	250	185	U	IV
WSLI	Jackson, Miss.	250	180	U	IV
WMBH	Joplin, Mo.	250	200	U	IV
KRBM	Bozeman, Mont.	250	175	U	IV
KFUN	Las Vegas, Nev.	250	150	U	IV
WFPG	Atlantic City, N. J.	250	150	U	IV
WHDL	Olean, N. Y.	250	210	U	IV
WKIP	Poughkeepsie, N. Y.	250	150	U	IV
WGNC	Gastonia, N. C.	250	150	U	IV
WEED	Rocky Mount, N. C.	250	175	U	IV
WFMJ	Youngstown, O.	250	150	U	IV
KGFF	Shawnee, Okla.	250	200	U	IV
KORE	Eugene, Ore.	250	150	U	IV
KLBM	La Grande, Ore.	250	185	U	IV
KBPS	Portland, Ore.	250	150	S-KXL	IV
KKL	Portland, Ore.	250	150	S-KBPS	IV
WLEU	Erie, Pa.	250	150	U	IV
WAZL	Hazleton, Pa.	250	150	U	IV
KRBC	Abilene, Tex.	250	175	U	IV
KRIC	Beaumont, Tex.	250	175	U	IV
KDNT	Denton, Tex.	250	150	U	IV
KRLH	Midland, Tex.	200	150	U	IV
KNET	Palestine, Tex.	250	150	U	IV
KABC	San Antonio, Tex.	250	150	U	IV
KCMC	Texarkana, Tex.	250	150	U	IV
WACO	Waco, Tex.	250	150	U	IV
KEUB	Price, Utah	200	175	U	IV
WCHV	Charlottesville, Va.	250	175	U	IV
WMVA	Martinsville, Va.	250	150	U	IV
WLPM	Suffolk, Va.	200	180	U	IV
WPAR	Parkersburg, W. Va.	250	150	U	IV
KFIZ	Fond du Lac, Wis.	250	150	U	IV
KFBC	Cheyenne, Wyo.	250	150	U	IV
1460 KILOCYCLES					
KINY	Juneau, Alaska	1,000	200	U	III-A
KSO	Des Moines, Ia.	1,000	234	U	III-A
		5,000—LS	DA-N		
KGEZ	Kalispell, Mont. (See 1340 Kc.)	1,000	DA	U	III-B
KGNF	North Platte, Neb.	1,000	175	D	III
WOKO	Albany, N. Y.	500	175	U	III-B
		1,000—LS			
WHEC	Rochester, N. Y.	500	220	U	III-B
		1,000—LS			
WBNS	Columbus, O.	1,000	190	U	III-B
		5,000—LS	DA-N		
WHP	Harrisburg, Pa.	1,000	193	U	III-B
		5,000—LS	DA-N		
WMPS	Memphis, Tenn.	500	175	U	III-B
		1,000—LS			
1470 KILOCYCLES					
WMBD	Peoria, Ill.	1,000	205	U	III-B
		5,000—LS			
		(Proposed 5,000)	DA-N		III-A
WBIG	Greensboro, N. C.	5,000	225	U	III-A
			DA-N		
WBCA	Allentown, Pa.	500	180	S-WSAN	III-B
		(Proposed 5,000)	DA		III-A
WSAN	Allentown, Pa.	500	180	S-WCBA	III-B
		(Proposed 5,000)	DA		III-A
KYYZ	Houston, Tex.	1,000	175	U	III-A
KELA	Centralia, Wash.	1,000	190	U	III-A
KDFN	Casper, Wyo.	1,000	210	U	III-B
1480 KILOCYCLES					
KIEM	Eureka, Cal.	500	175	U	III-B
		1,000—LS			
WAGA	Atlanta, Ga.	500	240	U	III-B
		1,000—LS			
KTBS	Shreveport, La.	1,000	175	U	III-B
WSAR	Fall River, Mass.	1,000	DA	U	III-B
KCMO	Kansas City, Mo.	1,000	179	U	III-B
		5,000—LS	DA-N		
KGCX	Wolf Point, Mont.	1,000	175	U	III-A
WGAR	Cleveland, O.	1,000	233	U	III-B
		5,000—LS	DA-N		
1490 KILOCYCLES					
WHBB	Selma, Ala.	250	150	U	IV
KYCA	Prescott, Ariz.	250	150	U	IV
KOTN	Pine Bluff, Ark.	250	150	U	IV
KKO	El Centro, Cal.	250	150	U	IV
KVOE	Santa Ana, Cal.	250	175	U	IV
KDB	Santa Barbara, Cal.	250	150	U	IV
WNLC	New London, Conn.	250	175	U	IV
WTMC	Ocala, Fla.	250	175	U	IV
WRDW	Augusta, Ga.	250	190	U	IV
WMOG	Brunswick, Ga.	250	180	U	IV

Call Letters	Location	Power in Watts	Radiation mv/m	Time Designation	Class
1490 KILOCYCLES—Continued					
WMJM	Cordele, Ga.	250	180	U	IV
WRGA	Rome, Ga.	250	150	U	IV
KTOH	Lihue, Hawaii	250	150	U	IV
WKRO	Cairo, Ill.	250	...	U	IV
WDAN	Danville, Ill.	250	230	U	IV
WTMV	East St. Louis, Ill.	250	150	U	IV
WKBY	Richmond, Ind.	250	150	U	IV
WKBB	Dubuque, Ia.	250	200	U	IV
WOMI	Owensboro, Ky.	250	180	U	IV
KPLC	Lake Charles, La.	250	150	U	IV
WBOC	Salisbury, Md.	250	150	U	IV
WJBK	Detroit, Mich.	250	150	U	IV
WDBC	Escanaba, Mich.	250	...	U	IV
WKBZ	Muskegon, Mich.	250	190	U	IV
KDAL	Duluth, Minn.	250	150	U	IV
KDRO	Sedalia, Mo.	250	180	U	IV
KONB	Omaha, Neb.	250	150	U	IV
KGKY	Scottsbluff, Neb.	250	150	U	IV
KAWM	Gallup, N. M.	250	150	U	IV
KWEW	Hobbs, N. M.	250	180	U	IV
WBTA	Batavia, N. Y.	250	...	U	IV
WBNF	Binghamton, N. Y.	250	200	U	IV
WCNW	Brooklyn, N. Y.	250	150	SH-WWRL	IV
WOLF	Syracuse, N. Y.	250	150	U	IV
WKNY	Kingston, N. Y.	250	185	U	IV
WWRL	Woodside, N. Y.	250	175	SH-WCNW	IV
WDNC	Durham, N. C.	250	225	U	IV
WGTC	Greenville, N. C.	250	220	D	IV
WSTP	Salisbury, N. C.	250	225	U	IV
KOVC	Valley City, N. D.	250	150	U	IV
WMRN	Marion, O.	250	150	U	IV
KBIX	Muskogee, Okla.	250	150	U	IV
KBKR	Baker, Ore.	250	180	U	IV
KENR	Roseburg, Ore.	250	150	U	IV
WERC	Erie, Pa.	250	150	U	IV
WGAL	Lancaster, Pa.	250	150	U	IV
WWSW	Pittsburgh, Pa.	250	175	U	IV
WMRC	Greenville, S. C.	250	150	U	IV
WOPI	Bristol, Tenn.	250	150	U	IV
KNOW	Austin, Tex.	250	150	U	IV
KBST	Big Spring, Tex.	250	180	U	IV
KNEL	Brady, Tex.	250	150	U	IV
KGFI	Brownsville, Tex.	250	150	U	IV
KEYS	Corpus Christi, Tex.	250	...	U	IV
KSAM	Huntsville, Tex.	250	150	U	IV
KPAB	Laredo, Tex.	250	175	U	IV
KPLT	Paris, Tex.	250	175	U	IV
KGRB	Tyler, Tex.	250	175	U	IV
KVWC	Vernon, Tex.	250	175	U	IV
WSYB	Rutland, Vt.	250	175	U	IV
WSLS	Roanoke, Va.	250	150	U	IV
KPQ	Wenatchee, Wash.	250	195	U	IV
WGKV	Charleston, W. Va.	250	175	U	IV
WIGM	Medford, Wis.	250	...	U	IV
1500 KILOCYCLES					
WJSV	Washington, D. C.	50,000	DA	U	I-B
KSTP	St. Paul, Minn.	50,000	DA	U	I-B
1510 KILOCYCLES					
WMEX	Boston, Mass.	5,000	DA	U	II
WLAC	Nashville, Tenn.	5,000	175	U	II
		(Proposed 50,000)	DA-N		I-B
KGA	Spokane, Wash.	5,000	200	U	II
		(Proposed 10,000)	DA		I-B
1520 KILOCYCLES					
WHIP	Hammond, Ind.	5,000	DA	6 a.m. to LS Buffalo, N. Y.	II
WKBW	Buffalo, N. Y.	50,000	250 DA	U	I-B
KOMA	Oklahoma City, Okla.	5,000	190	U	II
		(Proposed 50,000)	DA-N		I-B
WPRP	Ponce, P. R.	1,000	175	U	II
		5,000—LS			
1530 KILOCYCLES					
KFBK	Sacramento, Cal.	10,000	235 Proposed DA	U	I-B
WCKY	Cincinnati, O.	50,000	DA	U	I-B
1560 KILOCYCLES					
WHOM	Jersey City, N. J.	500	230	U	II
		1,000—LS	DA-N		
1590 KILOCYCLES					
WBRY	Waterbury, Conn.	5,000	DA	U	III-A
WALB	Albany, Ga.	1,000	DA-N	U	III-B
KITE	Kansas City, Mo.	1,000	175	U	III-A
WAKR	Akron, O.	1,000	175 DA	U	III-A
1600 KILOCYCLES					
KPMC	Bakersfield, Cal.	1,000	175	U	III-A
WQXR	New York City	5,000	250	U	III-A



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Log of Canadian Broadcast Stations Under Havana Treaty

Call Letter List Showing New Assignments Under Havana Treaty Tentatively Scheduled for March 29, 1941

(As released by Radio Branch, Department of Transport, Dominion of Canada, Ottawa)

ABBREVIATIONS

D—Daytime. N—Night Time. DA—Directional Antenna

Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Class	Call Letters	Location	Power in Watts	Present Frequency in Kc.	New Frequency in Kc.	Class
CBK	Watrous, Sask.	50,000	540	540	I-A	CKVD	Val d'Or, Que.	100	1200	1230	IV
CFNB	Fredericton, N. B.	1,000	550	550	III-B	CKBI	Prince Albert, Sask.	250	1210	1240	IV
CKOV	Kelowna, B. C.	1,000	630	560	III-A	CFPR	Prince Rupert, B. C.	50	580	1240	IV
CJKL	Kirkland Lake, Ont.	1,000	560	560	III-B	CBJ	Chicoutimi, Que.	100	1120	1240	IV
CKUA	Edmonton, Alta.	500	580	580	III-B	CKMC	Cobalt, Ont.	50	1210	1240	IV
CKPR	Port Arthur, Ont.	1,000	580	580	III-B	CJCS	Stratford, Ont.	50	1210	1240	IV
CKCL	Toronto, Ont.	1,000—DA	580	580	III-B	CKCH	Hull, Que.	100	1210	1240	IV
CJOR	Vancouver, B. C.	1,000	600	600	III-A	CHLT	Sherbrooke, Que.	100	1210	1240	IV
CFQC	Saskatoon, Sask.	1,000	600	600	III-A	CKNB	Campbellton, N. B.	100	1210	1240	IV
CFCF	Montreal, Que.	500	600	600	III-B	CJCB	Sydney, N. S.	1,000	1240	1270	III-A
CJRC	Winnipeg, Man.	1,000	630	610	III-A	CJBR	Rimouski, Que.	1,000	1030	1300	III-A
CJAT	Trail, B. C.	1,000	910	610	III-A	CHML	Hamilton, Ont.	100	1010	1310	IV
CHNC	New Carlisle, Que.	1,000	610	610	III-A	CFRN	Edmonton, Alta.	100	960	1340	IV
CJRM	Regina, Sask.	1,000	950	620	III-A	CKCO	Ottawa, Ont.	100	1010	1340	IV
CJCA	Edmonton, Alta.	1,000	730	630	III-A	CKCV	Quebec, Que.	100	1310	1340	IV
CFCY	Charlottetown, P. E. I.	1,000	630	630	III-A	CHCK	Charlottetown, P. E. I.	50	1310	1340	IV
CFCO	Chatham, Ont.	100	630	630	IV	CJLS	Yarmouth, N. S.	100	1310	1340	IV
CBF	Montreal, Que.	50,000	910	690	I-A	CFGP	Grande Prairie, Alta.	250	1310	1340	IV
CBL	Toronto, Ont.	50,000	840	740	I-A	CHWK	Chilliwack, B. C.	100	780	1340	IV
CKSO	Sudbury, Ont.	1,000	780	790	III-B	CKPC	Brantford, Ont.	100	930	1380	IV
CKLW	Windsor, Ont.	5,000	1030	800	II	CJOC	Lethbridge, Alta.	100	1370	1400	IV
CFRB	Toronto, Ont.	10,000	690	860	I-A	CFAR	Flin Flon, Man.	100	1370	1400	IV
CKAC	Montreal, Que.	5,000	730	900	II	CKRN	Rouyn, Que.	250	1370	1400	IV
CBO	Ottawa, Ont.	1,000	880	910	III-B	CHRC	Quebec, Que.	100	580	1400	IV
CFJC	Kamloops, B. C.	1,000	880	910	III-A	CKCW	Moncton, N. B.	100	1370	1400	IV
CBM	Montreal, Que.	5,000	960	940	I-B	CFPL	London, Ont.	100	730	1400	IV
CFAC	Calgary, Alta.	1,000	930	960	III-A	CFOS	Owen Sound, Ont.	100	1370	1400	IV
CHNS	Halifax, N. S.	1,000	930	960	III-A	CKMO	Vancouver, B. C.	100	1410	1410	IV
CKCK	Regina, Sask.	1,000	1010	980	III-A	CKLN	Nelson, B. C.	100	1420	1450	IV
CBV	Quebec, Que.	1,000	950	980	III-B	CKCA	Kenora, Ont.	100—N. 250—D.	1420	1450	IV
CKWX	Vancouver, B. C.	1,000	950	980	III-A	CBY	Toronto, Ont.	100 CP-1000	1420	1450	IV
CKY	Winnipeg, Man.	15,000	910	990	I-A	CHLN	Three Rivers, Que.	100	1420	1450	IV
CFCN	Calgary, Alta.	10,000	1030	1010	I-A	CFLC	Prescott, Ont.	100	930	1450	IV
CBA	Sackville, N. B.	50,000	1050	1070	I-B	CJGX	Yorkton, Sask.	1,000	1430	1460	III-A
CBR	Vancouver, B. C.	5,000	1100	1130	I-B	CKGB	Timmins, Ont.	1,000	1440	1470	III-B
CKX	Brandon, Man.	1,000	1210	1150	III-A	CFCT	Victoria, B. C.	500	1450	1480	III-B
CKOC	Hamilton, Ont.	500—N. 1,000—D.	1120	1150	III-B	CHGS	Summerside, P. E. I.	50	1450	1480	IV
CHSJ	St. John, N. B.	1,000	1120	1150	III-B	CKCB	Waterloo, Ont.	100	1510	1490	IV
CHAB	Moose Jaw, Sask.	250	1200	1230	IV	CFRC	Kingston, Ont.	100	1510	1490	IV
CJCJ	Calgary, Alta.	100	690	1230	IV	CHLP	Montreal, Que.	100	1120	1490	IV
CFCH	North Bay, Ont.	100	930	1230	IV	CJIC	Sault Ste. Marie, Ont.	100	1500	1490	IV
CKNX	Wingham, Ont.	100	1200	1230	IV	CKRC	Revelstoke, B. C.	100	1500	1490	IV
CKTB	St. Catharines, Ont.	100	1200	1230	IV						
CHGB	St. Anne de la Pocatiere, Que.	100	1200	1230	IV						

NOTE—These allocations are made under the provisions of the North American Regional Broadcasting Agreement, subject to such adjustment as may be necessary to eliminate conflicts arising from the allocations of other countries and without prejudice to applications now pending for new or increased facilities in Canada.—Sept. 27th, 1940.

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