

Spectrum  
Allocation

DEPARTMENT OF COMMERCE  
RADIO SERVICE BULLETIN

ISSUED MONTHLY BY RADIO DIVISION

Washington, August 31, 1928—No. 137

CONTENTS

Table with 2 columns: Item and Page. Items include Abbreviations and symbols, New stations, Alterations and corrections, Miscellaneous, Changes in radiobeacon stations, Vessels equipped with a radio compass, etc.

ABBREVIATIONS AND SYMBOLS

The necessary corrections to the list of Commercial and Government Radio Stations of the United States and to the International List of Radiotelegraph Stations, appearing in this bulletin under the heading "Alterations and corrections," are published after the stations affected in the following order:

- Name = Name of station.
Loc. = Geographical location. W=west longitude. N=north latitude. S=south latitude. E=east longitude.
Call System = Call signal (letters) assigned.
Range = Radio system used and sparks per second.
W. l. = Normal range in nautical miles.
Fy. = Wave lengths in meters; normal wave lengths in italics.
Service = Frequency in kilocycles; normal frequency in italics.
= Nature of service maintained:
FX= Point-to-point (fixed service).
PG= General public (ship to shore).
PR= Limited public.
RC= Radio compass.
FA= Aeronautical station.
AB= Aviation beacon.
RB= Radio beacon.
P= Private.
O= Government business exclusively.
Hours = Hours of operation:
N= Continuous service.
X= No regular hours.
F. T. Co. = Federal Telegraph Co.
I. R. T. Co. = Intercity Radio Telegraph Co.
I. W. T. Co. = Independent Wireless Telegraph Co.
K. & C. = Kilbourne & Clark Manufacturing Co.
M. R. T. Co. = Mackay Radio & Telegraph Co.
R. C. A. = Radio Corporation of America.
R. M. C. A. = Radiomarine Corporation of America.
T. R. T. Co. = Tropical Radio Telegraph Co.
U. R. Corp. = Universal Radio Corp.
W. S. A. Co. = Wireless Specialty Apparatus Co.
C. w. = Continuous wave.
I. c. w. = Interrupted continuous wave.
A. c. = Alternating current.
V. t. = Vacuum tube.
U. S. L. = Applies only to the list of Commercial and Government Radio Stations of the United States.
Δ = Equipped with a radio compass (direction finder).

## NEW STATIONS

## Commercial land stations, alphabetically, by names of stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations published by the Berne Bureau]

Station	Call signal	Wave lengths	Service	Hours	Station controlled by—
Fifth zone (portable) <sup>1</sup>	KGIA	180.2	FX		Geophysical Research Corporation
Do. <sup>1</sup>	KGIB	180.2	FX		Do.
Do. <sup>1</sup>	KOIC	180.2	FX		Do.
Do. <sup>1</sup>	KGID	180.2	FX		Do.
Main base <sup>2</sup>	KFK	13.758, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	X	Byrd Antarctic expedition.
Do. <sup>3</sup>	WFA	13.758, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	X	Do.
Subbase <sup>3</sup>	WFD	13.758, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	X	Do.
Do. <sup>3</sup>	WFE	13.758, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	X	Do.

<sup>1</sup> System, composite v. t. telegraph, i. c. w.; hours, 8 a. m. to 5 p. m. daily except Sundays.

<sup>2</sup> Systems, composite v. t. telegraph, i. c. w.

<sup>3</sup> System, composite v. t. telegraph, c. w.

## Commercial ship stations, alphabetically, by names of vessels

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations published by the Berne Bureau]

Name of vessel	Call signal	Rated	Service	Hours	Owner of vessel	Station controlled by—
Boston College	WTBG	8	PG	X	Atlantic & Pacific Fish Co.	
Cool	KUIM	8	PG	X	Portland Trawling Co.	
Cormorant	WGDV					
Cyprus	WTBE					
Emma R. S.	WDRR				Guy H. Silva	
Georgetown	WTBH	8	PG	X	Atlantic & Pacific Fish Co.	
Gulfhawk	WJCO	8	PG	X	Gulf Refining Co.	
Gulfwing	WJCP	8	PG	X	do.	
Holy Cross	WTBI	8	PG	X	Atlantic & Pacific Fish Co.	
John F. Cushing	WGDV				Great Lakes Dredge & Dock Co.	
Kingfisher	KOQR	8	PG	X	Portland Trawling Co.	
Loon	KUGJ	8	PG	X	do.	
Martha Foss	WGDQ				Foss Co.	
Munwood	WGDQ	8	PG	X	Munson S. S. Co.	
Plover	KUFT	8	PG	X	Portland Trawling Co.	
Roland	WGDV				Harbor Tug & Barge Co.	
Rhenango	WGDV					
Vanda	WGDS					
Wild Goose	KOTB	8	PG	X	Portland Trawling Co.	

<sup>1</sup> Wave length, 493.4.

Commercial land and ship stations, alphabetically, by call signals

[b, ship station; c, land station]

Call signal	Name of station	Call signal	Name of station
KFK	Main base.....c	WGDP	Shenango.....b
KGIA	Fifth zone (portable).....c	WGDO	Martha Foss.....b
KQIB	do.....c	WGDR	Emma R. S.....b
KOIC	do.....c	WGDS	Vanda.....b
KGID	do.....c	WGDU	Cormorant.....b
KOQR	Kingfisher.....b	WGDV	John S. Cushing.....b
KOTS	Wild Goose.....b	WGDX	Roland.....b
KUFT	Plover.....b	WJCO	Gulphawk.....b
KUGJ	Loon.....b	WJCP	Gulfwing.....b
KUJM	Coot.....b	WTBE	Cyprus.....b
WFA	Main base.....c	WTBG	Boston College.....b
WFD	Subbase.....c	WTBH	Georgetown.....b
WFE	do.....c	WTBI	Holy Cross.....b
WGDO	Munwood.....b		

Commercial aircraft stations, alphabetically, by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by
Fairchild plane 1.....	WFC	13.768, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	N	Byrd Antarctic expedition.
Fokker plane 1.....	WFF	13.768, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.	P	N	Do.

1 System, composite v. t. telegraph, i. c. w.

Commercial aircraft stations, alphabetically, by call signals

Call signal	Name of station	Call signal	Name of station
WFC	Fairchild plane.	WFF	Fokker plane.

Broadcasting stations, alphabetically, by names of States and cities

[Additions to the List of Radio Stations of the United States, edition of June 30, 1928]

State and city	Call signal	Wave length (meters)	Frequency (kilocycles)	Power (watts)
Portable: Nebraska.....	KGIF	217.4	1,380	7½

Broadcasting stations, alphabetically, by call signals

Call signal	Location of station (address)	Owner of station	Power (watts)	Wave length (meters)	Frequency (kilocycles)
KGIF	Nebraska (portable) ..	Robert B. Howell, 811 Omaha National Bank Building, Omaha, Nebr.	7½	217.4	1,380

*Government land stations, alphabetically, by names of stations*

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by—
Atlanta, Ga.....	WHZ		FA		Department of Commerce, Bureau of Lighthouses.
Greensboro, N. C.....	WRW		FA		Do.
Moline, Ill.....	WTI		FA		Do.
Richmond, Va.....	WNR		FA		Do.
Spartanburg, S. C.....	WFT		FA		Do.
Toledo, Ohio.....	KRL		FA		Do.
Wichita, Kans.....	WEK		FA		Do.

*Government land and ship stations, alphabetically, by call signals*

[b, ship station; a, land station]

Call signal	Name of station	Call signal	Name of station
KRL	Toledo, Ohio.....c	WFT	Spartanburg, S. C.....c
WEK	Wichita, Kans.....c	WRW	Greensboro, N. C.....c
WTI	Moline, Ill.....c	WNR	Richmond, Va.....c
WHZ	Atlanta, Ga.....c		

*Special land stations, alphabetically, by names of stations*

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1928]

Station	Call signal	Wave length (meters)	Frequency (kilo-cycles)	Power (watts)	Station controlled by—
California: San Francisco.	W6XT	8.76, 17.34, 34.68, 70.09, 140.2.	34,240, 17,300, 8,650, 4,280, 2,140.	800	Charles L. Watson and Ralph C. Gray.
Illinois: Chicago.	W9XAA	61.22 to 63.83	4,900 to 4,700	500	Chicago Federation of Labor.
Do.	W9XC	34.68, 70.09, 140.2.	8,650, 4,280, 2,140.	10,000	Universal Wireless Communication Co.
Maryland: Baltimore.	W3XE	8.76, 17.34, 34.68, 70.09, 140.2.	34,240, 17,300, 8,650, 4,280, 2,140.	500	Baltimore Radio Show.
New Jersey: Jersey City.	W2SBY	8.76, 17.34, 34.68, 70.09, 140.2.	34,240, 17,300, 8,650, 4,280, 2,140.	460	Walter C. Von Brandt.
New York: Jackson Heights.	W2XAU	10.979, 16.402, 17.867, 22.06, 26.79, 33.17, 45.63, 53.57, 65.60, 34.68, 70.09, 140.2.	27,325, 18,290, 16,800, 13,600, 11,200, 9,045, 6,574, 5,600, 4,572, 8,650, 4,280, 2,140.		John R. McKenna.
New York: New York.	W2XQ	34.68, 70.09, 140.2.	8,650, 4,280, 2,140.	10,000	Universal Wireless Communication Co.
Portable.	W6XQ	315 to 353, 1,500 to 6,000.	950 to 850, 200 to 58.	500	Bell Telephone Laboratories.
	W6XR	857, 938.	350, 320.	500	Nightingale Radios (Inc.), 180 Motor Ave., Salt Lake City, Utah.

*Special land stations, grouped by districts*

Call signal	District and station	Call signal	District and station
W2XAU	Second district: Jackson Heights, N. Y.	W9XAA	Ninth district: Chicago, Ill.
W2XBY	Jersey City, N. J.	W9XC	Do.
W2XQ	New York, N. Y.		
W3XE	Third district: Baltimore, Md.		
W6XQ	Sixth district: Portable.		
W6XR	Do.		
W6XT	San Francisco, Calif.		

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## ALTERATIONS AND CORRECTIONS

## COMMERCIAL LAND STATIONS

[Alterations and corrections to be made to the list of Commercial and Government Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations published by the Berne bureau]

- BOLINAS, CALIF. (KES).—W. l., 28.819.  
 BOLINAS, CALIF. (KLL).—W. l., 21.866.  
 BOLINAS, CALIF. (KSS).—W. l., 14.409.  
 BOSTON, MASS. (WBF).—System, composite v. t. telegraph and telephone; w. l., 17.1, 23.15, 28.7, 44.2, 600, 690, 1,700, 2,025, 2,350.  
 CLEVELAND, OHIO (WTK).—Rates, minimum charge \$1 per radiogram.  
 HIALEAH, FLA.—W. l., add 23.2, 28.73, 44.3.  
 MOBILE, ALA. (WNN).—W. l., add 23.2, 28.73, 44.3.  
 NEW YORK, N. Y. (WKW).—*Read*, Rocky Point, N. Y.  
 NEW ORLEANS, LA. (WNU).—W. l., add 23.15, 28.7, 44.2.  
 OCEAN TOWNSHIP, N. J. (WNC).—System, Western Electric v. t. telegraph and telephone.  
 OCEAN TOWNSHIP, N. J. (WND).—System, Western Electric v. t. telegraph and telephone; w. l., 14.24, 16.36, 22.4, 32.71, 44.41.  
 ROCKY POINT, N. Y. (WEQX).—Call changed to WEX, effective October 1, 1928. List of changes in Bulletin No. 135 for June, 1928, incorrectly cited the old call as WEQK.  
 ROCKY POINT, N. Y. (WQA).—W. l., 14.138.  
 ROCKY POINT, N. Y. (WQQ).—W. l., 14.808.  
 ROCKY POINT, N. Y. (WQV).—W. l., 20.27.  
 ROCKY POINT, N. Y. (WQX).—W. l., 14.866.  
 ROCKY POINT, N. Y. (WQY).—W. l., 14.925.

## COMMERCIAL SHIP STATIONS, ALPHABETICALLY, BY NAMES OF VESSELS

[Alterations and corrections to be made to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1928, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

- AFOUNDRIA.—Station controlled by R. M. C. A. (U. S. L.).  
 AMIDA.—W. l., add 2,128, 2,190, 2,400.  
 CALIFORNIA STANDARD.—W. l., add 2,128, 2,190, 2,400.  
 CHELSEA.—Call changed to WFAT.  
 CROSS KEYS.—Name changed to Golden Peak; owner of vessel, Oceanic & Oriental Navigation Co.  
 ELDRIDGE.—Name changed to Tacoma; owner of vessel, Tacoma-Oriental S. S. Co.  
 ELKRIDGE.—Name changed to Golden Star; owner of vessel, Oceanic & Oriental Navigation Co.  
 FAVORITE (KIFG).—W. l., add 35.78, 47.81, 54.3.  
 FRANKLIN.—Owner of vessel, Texas Co.  
 HEREDIA.—W. l., 600, 640, 660, 705, 750, 800, 1,875, 1,961, 1,987, 2,098, 2,128, 2,190.  
 ILLYRIA.—W. l., add 2,128, 2,190, 2,400.  
 MONTAGUE.—Name changed to Golden Tide; owner of vessel, Oceanic & Oriental Navigation Co.  
 NAKEEN.—W. l., 53.57, 109.7; service, P; hours, X.  
 POINT FERMIN.—Owner of vessel, Gulf Pacific Line.  
 QUEST.—W. l., 53.57, 122.4.  
 SAMSON.—Name changed to City of New York; call changed to WFBT; system, General Electric v. t. telegraph, i. c. w.; w. l., 13.758, 17.857, 17.945, 22.75, 26.55, 26.78, 34.05, 45.59, 53.1, 68.1, 91.2, 600, 705, 750, 800; service, PG; hours, N.  
 SUJERSEYCO.—Name changed to Makawao.  
 SUNDANCE.—Station controlled by R. M. C. A. (U. S. L.).  
 THE LAMBS.—Name changed to Exporter.  
 WEST CADRON.—Name changed to Iowa; owner of vessel, States S. S. Co.  
 WEST CALERA.—Name changed to Golden Harvest; owner of vessel, Oceanic & Oriental Navigation Co.  
 WEST CARMONA.—Name changed to Golden State.  
 WEST CONOB.—Name changed to Golden Eagle.

WEST ELCAJON.—Name changed to Golden Kauri; owner of vessel, Oceanic & Oriental Navigation Co.  
 WEST HUMHAW.—Owner of vessel, American-West African Line.  
 WEST ISON.—Name changed to Everett.  
 WEST IVAN.—Name changed to Golden West; owner of vessel, Oceanic & Oriental Navigation Co.  
 WEST KEBAR.—Owner of vessel, American-West African Line.  
 WEST MADAKET.—Station controlled by R. M. C. A. (U. S. L.).  
 WEST NIGER.—Name changed to Nevada; owner of vessel, States S. S. Co.  
 WEST NOMETUM.—Name changed to Pennsylvania; owner of vessel, States S. S. Co.  
 WEST O'ROWA.—Name changed to Kentucky; owner of vessel, States S. S. Co.  
 WHEATLAND MONTANA.—Name changed to Seattle; owner of vessel, Tacoma-Oriental S. S. Co.  
 ZAREMBO.—Owner of vessel, American-West African Line.  
 Strike out all particulars of the following-named vessels, Bathalum, Gold Shell, Pearl Shell. Wm. A. Lydon.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY, BY CALL SIGNALS

KDFW, read Golden State; KDNH, read Makawao; KDQI, read Kentucky; KEBZ, read Exporter; KELK, read Golden Kauri; KGBC, call changed to WFAT; KICN, read Tacoma; KIFP, read Golden Eagle; KINN, read Everett; KISF, read Seattle; KISG, read Golden Star; KOMV, read Golden Tide; KOTD, read Golden Peak; KOZJ, read Nevada; KOZS, read Golden West; KUDK, read Iowa; KUMM, read Golden Harvest; KUSG, read Pennsylvania; WKW, read Rocky Point, N. Y.; WRBO, call changed to WFBT, read City of New York; strike out all particulars following the call signals, KGCC, KIQT, WBCY, WBCZ.

BROADCASTING STATIONS, BY CALL SIGNALS

[Alterations and corrections to be made to the list of Commercial and Government Radio Stations of the United States, edition of June 30, 1923]

KFWC (Ontario, Calif.).—Owner of station, James R. Fouch, Valley Boulevard.  
 KGB (San Diego, Calif.).—Owner of station, Southwestern Broadcasting Corporation.  
 KWTC (Santa Ana, Calif.).—Owner of station, Pacific Broadcasting Federation.  
 WGL (Secaucus, N. J.).—Call changed to WOV.  
 WIVA (Norfolk, Va.).—Call changed to WNEW.  
 Strike out all particulars of the following-named stations: WCOT (Providence, R. I.); WNBA (Forest Park, Ill.); WTRL (Midland Park, N. J.).

COMMERCIAL AIRCRAFT STATIONS, ALPHABETICALLY, BY NAMES OF VESSELS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1923, and to the International List of Radiotelegraph Stations, published by the Berns Bureau]

FLOYD BENNETT.—Call changed to WFB, effective October 1, 1923; system, composite v. t. telegraph, i. c. w.; w. l., 13.758, 17.857, 17.945, 22.75, 26.55, 28.78, 34.05, 45.59, 53.1, 53.57, 68.1, 91.2, 600, 750, 800.

GOVERNMENT LAND STATIONS, ALPHABETICALLY, BY NAMES OF STATIONS

[Alterations and corrections to be made to the list of Commercial and Government Radio Stations of the United States, edition of June 30, 1923, and to the International List of Radiotelegraph Stations, published by the Berns Bureau]

ANACOSTIA, D. C.—Service, FA.  
 BELLEFONTE, PA.—System, composite v. t. telegraph and telephone, and arc; w. l., 901, 1,287, 1,429.  
 BETHANY BEACH, DEL.—Call changed to NBN.  
 DRYDEN, TEX.—Loc. (approximately) 102° 10' 00" W., 30° 12' 30" N.; system, United States Army v. t. telegraph; hours, 7.30 a. m. to 4.30 p. m. daily, 7.30 to 10 a. m. Sundays and holidays.



## OBITUARY

The division deeply regrets to announce the death of Otto R. Redfern, supervisor of radio, in charge of the seventh radio district. Mr. Redfern had been with this service continuously since October, 1916, with the exception of the period of the World War during which time he served as lieutenant in the United States Navy. Before his appointment to supervisor of radio at Seattle he was attached to the second radio district with headquarters at New York City.

## GENERAL ORDERS OF THE FEDERAL RADIO COMMISSION

*Regulations governing hearings on application for construction permits, renewals of licenses, etc. (General Order No. 37, August 22, 1928).*—It is ordered that in every case where the commission, upon examination of any application for a construction permit, for a station license, for a renewal of a station license, or for modification of a station license, does not reach a decision that public interest, convenience, or necessity would be served by the granting of such application.

1. The secretary of the commission shall forthwith notify the applicant to that effect and shall at the same time notify the applicant of the time and place for a hearing on such application, the time and place to be fixed as hereinafter directed.

2. Unless the commission shall specifically provide otherwise, the place for such hearing shall be at the office of the commission at Washington, D. C.

3. Unless the commission shall specifically provide otherwise, the time for such hearing shall be at the hour of 10 o'clock a. m., on the first Tuesday falling after the lapse of a period of 20 days from the date on which the secretary shall mail such notification to such applicant.

4. No applicant will be heard unless 10 days or more prior to the date set for such hearing he shall have communicated to the secretary a written notice of his desire to be heard by the commission, together with a statement of the approximate time which, in his opinion, the presentation of his case will require. Said notice and said statement may be communicated to the secretary by telegraph.

5. Hearings shall commence at the hour of 10 o'clock a. m., on Tuesday of each week and shall continue throughout the week until the cases set for each Tuesday have all been heard, continued, or otherwise disposed of.

6. Every applicant desiring a continuance of the hearing on his application shall, not later than the day prior to that on which such hearing is set, deliver to the secretary a written motion to that effect (which motion may be made by telegraph), accompanied by a brief statement of his reasons in support of such motion. Such motion may be granted or denied by any member of the commission, or if none of them is present at the office of the commission, then by the secretary; each action with respect to such a motion shall be reported to the commission at its first meeting following such action.

7. The commission may, of its own motion, continue any hearing to a later date.

8. Every person desiring that witnesses be summoned or that the production of books, documents, or papers be compelled shall make written application therefor to the secretary on forms to be provided by the secretary on request.

9. Evidence may be heard by any one or more of the members of the commission. Where a hearing takes place before less than a quorum (that is, three) of the commission, the applicant shall, upon request duly made in the record, be entitled to present argument in support of his application before a quorum of the commission.

10. Each case will be given a docket number and, so far as possible, such docket number shall be noted on all correspondence, papers, or motions having to do with such case.

*Extension of broadcast station licenses (General Order No. 38, August 22, 1928).*—It is ordered that with the exception hereinafter set forth all existing licenses to broadcast, subject to such modifications and extensions as may be appended thereto, be, and the same are hereby, further extended for a period of 30 days to terminate at 3 o'clock a. m., eastern standard time, October 1, 1928.

This order shall not apply, and no extension of any existing license to broadcast shall be deemed to be granted, with respect to any broadcasting station listed in, or later made subject to, General Order No. 32 of this commission, issued on May 25, 1928, the continued use or operation of such station to be subject to such order or orders as the commission may hereafter enter.



*Extension of coastal, point-to-point, technical and training school, experimental, ship, and amateur station licenses (General Order No. 39, August 22, 1928).*—It is ordered that all existing licenses covering coastal, point-to-point, technical and training, experimental, ship, and amateur radio transmitting stations, heretofore extended by the commission's General Orders 1, 3, and 26 be, and the same are hereby, further extended for a period of 61 days to terminate at 3 o'clock a. m., eastern standard time, November 1, 1928. This order, however, is subject to the conditions that it shall not be deemed or construed as a finding or decision by the commission, or as any evidence whatsoever, that the continued use or operation of any of said stations serves, or will serve, public interest, convenience, or necessity, or that public interest, convenience, or necessity would be served by the granting of any pending application for a renewal or any of said licenses; and any licensee subject to this order who continues to use or operate his station during the period covered by this order shall be deemed to have consented to said conditions.

This order shall not apply to any licenses heretofore issued by this commission for periods of time which have not expired, all licensees in such cases to be governed by the terms and conditions of their respective licenses.

*Allocation of channels in the broadcast band to the different zones a separation of 10 kilocycles to be maintained, etc. (General Order No. 40, August 30, 1928).*—The commission has determined that the definite assignment of a band of frequencies for broadcasting, the maintenance of a separation of 10 kilocycles between frequencies used in broadcasting, the reservation of certain frequencies for exclusive use by stations in the Dominion of Canada, and the setting aside of a certain number of other frequencies for shared use by the United States and the Dominion of Canada, all as hereinafter specified in this order, will serve public interest, convenience, or necessity.

The commission has further determined after careful consideration that the allocation of frequencies, of time for operation and of station power, for use by broadcasting stations to the respective zones, as hereinbelow specified in this order, (a) is necessary in order to comply in part with the requirements of section 9 of the radio act of 1927 as amended by section 5 of the act of Congress, March 28, 1928, in so far as it requires that the licensing authority shall as nearly as possible make and maintain an equal allocation of bands of frequency or wave lengths, of periods of time for operation, and of station power, to each of the zones when and in so far as there are applications therefor, and (b) will promote public interest and convenience and will serve public necessity, in so far as this can be done in a manner consistent with the requirements of said section 9 of the radio act of 1927 as amended by section 5 of the act of Congress, March 28, 1928, and will greatly improve reception conditions in the broadcast band by the elimination of a large portion of the interference which now exists: It is therefore ordered:

PARAGRAPH 1. That a band of frequencies extending from 550 to 1,500 kilocycles, both inclusive, be, and the same is hereby, assigned to and for the use of broadcasting stations, said band of frequencies being hereinafter referred to as the broadcast band. This order is not to be construed as prohibiting the licensing of maritime mobile services on the frequency of 1,365 kilocycles, as provided by the International Radiotelegraph Convention of 1927.

PAR. 2. That within said broadcast band a separation of 10 kilocycles be maintained between the frequencies assigned for use by broadcasting stations.

PAR. 3. That, of the frequencies within said broadcast band (a) the frequencies of 690, 730, 840, 910, 960, and 1,030 kilocycles be, and the same are hereby, reserved for use by broadcasting stations located in the Dominion of Canada and shall not be assigned to any broadcasting station licensed by this commission; (b) the frequencies of 580, 600, 630, 780, 880, 890, 930, 1,010, 1,120, 1,200, and 1,210 kilocycles be, and the same are hereby, set aside for simultaneous use by broadcasting stations located both in the Dominion of Canada and in the United States, its territories and possessions, and no station will be authorized by this commission on any of these frequencies with an authorized power which will cause interference at the boundary line between the Dominion of Canada and the United States of America, or in excess of 500 watts at any place within the United States of America or the Territories of Alaska and Porto Rico.

PAR. 4. That the frequencies within said broadcast band (subject to the foregoing) and periods of time for operation and station power to be used by

Davis

broadcasting stations on said frequencies be, and the same are hereby, allocated equally to the zones, as follows:

A. The following frequencies are allocated to the first, second, third, fourth, and fifth zones, respectively, as below indicated for use by broadcasting stations, the amount of power to be used by such stations to be determined by further order of the commission: First zone, 660, 710, 760, 860, 990, 1,060, 1,100, and 1,150 kilocycles; second zones, 700, 750, 820, 980, 1,020, 1,070, 1,110, and 1,170 kilocycles; third zone, 650, 740, 800, 850, 1,040, 1,080, 1,140 and 1,190 kilocycles; fourth zone, 670, 720, 770, 810, 870, 1,000, 1,090, and 1,160 kilocycles; fifth zone, 640, 680, 790, 830, 970, 1,050, 1,130, and 1,180 kilocycles.

B. The following frequencies are allocated each for use by not less than two zones, with broadcasting stations in those zones being permitted to operate simultaneously, each station to have an authorized power not to exceed 5 kilowatts, the particular zone entitled to share in the allocation of any particular frequency to be determined by further order of the commission: 1,460, 1,470, 1,480, and 1,490 kilocycles.

C. The following frequencies are allocated for use by not less than two nor more than three zones, the broadcasting stations in those zones being permitted to operate simultaneously and to have an authorized power not to exceed 1,000 watts, the particular zones entitled to share in the allocation of any particular frequency to be determined by further order of the commission: 580, 590, 600, 610, 620, 630, 780, 880, 890, 900, 920, 930, 940, 950, 1,010, 1,120, 1,220, 1,230, 1,240, 1,250, 1,260, 1,270, 1,280, 1,290, 1,300, 1,320, 1,330, 1,340, 1,350, 1,360, 1,380, 1,390, 1,400, 1,410, and 1,430 kilocycles. (Except that in those cases where the station locations and powers are such that interference will not be caused, four or five zones instead of three zones may share one or more of the foregoing frequencies where practicable.)

D. The following frequencies are allocated for use in all five zones with broadcasting stations permitted to operate simultaneously, each station to have an authorized power not to exceed 1,000 watts: 550, 560, 570, 1,440, and 1,450 kilocycles.

E. The following frequencies are allocated for use in all five zones by broadcasting stations in simultaneous operation with an authorized power not to exceed 100 watts, the number of such stations to be permitted to operate simultaneously in each zone on each of said frequencies to be determined by further order of the commission: 1,200, 1,210, 1,310, 1,370, 1,420, and 1,500 kilocycles.

F. Whenever the word "frequency" is used in the preceding subparagraphs A, B, C, D, and E of this paragraph, it is to be understood as connoting periods of full-time operation; that is to say, 24 hours daily, and every allocation herein of a frequency to a particular zone is to be considered as carrying with it an assignment of full-time operation on that frequency to that zone.

PAR. 5. That the allocation hereinbefore ordered in paragraph 4 of this order be, and the same is hereby declared to be, effective on October 1, 1928, at the hour of 3 o'clock a. m., eastern standard time; and that the provisions of paragraphs 1, 2, and 3 be, and the same are hereby declared to be, effective as of the date of the issuance of this order.

#### CAPE TOWN (SOUTH AFRICA) TIME SIGNALS

After September 15, 1928, this station, located at Slang Kop Point, Cape of Good Hope, in approximately longitude 18° 19' E., latitude 34° 09' S., call signal VNC, will transmit a series of time signals on 600 meters, spark daily between 20<sup>h</sup> 56<sup>m</sup> 00<sup>s</sup> and 21<sup>h</sup> 00<sup>m</sup> 00<sup>s</sup>, G. M. T. corresponding to 22<sup>h</sup> 56<sup>m</sup> 00<sup>s</sup> and 23<sup>h</sup> 00<sup>m</sup> 00<sup>s</sup>, standard time, respectively. The signals will be actuated automatically from the Royal Observatory at the cape by direct line and will be as follows:

11 class A  
etc  
↓

> 5,000 w

5,000 w

1,000 w

1,000 w

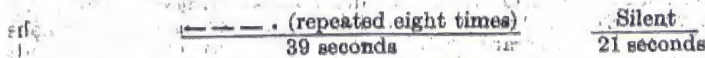
G. M. T.

h.	m.	s.	to	h.	m.	s.	
20	56	05		20	56	50	----- repeated 5 times at 10 second intervals.
	57	00		57	50		----- repeated 10 times at 5 second intervals.
	57	55		58	00		{ 55 56 57 58 59 60 Time signal.
	58	08		58	10		---
	58	18		58	20		---
	58	28		58	30		---
	58	38		58	40		---
	58	48		58	50		---
	58	55		59	00		{ 55 56 57 58 59 60 Time signal.
	59	06		59	10		---
	59	16		59	20		---
	59	26		59	30		---
	59	36		59	40		---
	59	46		59	50		---
20	59	55		21	00	00	{ 55 56 57 58 59 60 Time signal.

EXPERIMENTAL RADIOBEACON AND SUBMARINE OSCILLATOR ESTABLISHED ON  
CONINGBEG (IRELAND) LIGHT VESSEL

This light vessel, located in approximately longitude 6° 40' W., latitude 52° 02' N., has been equipped with a radiobeacon and a submarine oscillator. These signals can be used by vessels fitted with submarine signal receivers and direction finders, and also by vessels fitted with ordinary radio receiving apparatus and submarine receivers. The range of the submarine oscillator is about 10 to 15 miles. The wave length of the radiobeacon is 1,000 meters and the range about 45 miles.

The characteristic of both signals, transmitted simultaneously, is a series of eight groups, each group consisting of three dashes and one dot sent every minute, thus—



Duration of dash=1 second; duration of dot= $\frac{1}{4}$  second. Intervals between dashes and between third dash and dot in each group= $\frac{1}{4}$  second; interval between groups=1 second. The two signals being synchronous can be used to determine the distance from the light vessel.

The light vessel emits the wireless and submarine signals simultaneously. The speed of the latter depends on the velocity of sound through water, which is approximately 1 mile in  $1\frac{1}{4}$  seconds, and the submarine signal would therefore be received at 1 mile distant in  $1\frac{1}{4}$  seconds, at 2 miles in  $2\frac{1}{2}$  seconds, etc., counting the first wireless signal as zero, then 1, 2, 3, 4, etc. The number so counted gives the distance in miles, and the distance to half a mile can be estimated.

Having ascertained the approximate distance as described above, the accuracy of the timing of the signal should be tested with the second hand of a watch or with a stop watch. If the total period from the commencement of one series of signals to the commencement of the next series is not 60 seconds, the distance obtained should be divided by 60 and the result multiplied by the actual number of seconds occupied by the period of the signal. The result will be the correct distance.

Combined headphones, having one earpiece for connection with the wireless receiver and the other for the submarine receiver facilitate the reception of the synchronous signals for ascertaining distance.

Vessels which are fitted with submarine signal receivers but not with wireless direction-finding apparatus can obtain the bearing of the light vessel by means of the submarine signal receivers in the usual way and receive the wireless signals on the ordinary receiving apparatus. The distance can then be ascertained as detailed above.

Mariners are requested to report to the Secretary, Irish Lights Office, Dublin, giving full particulars of the results obtained, the approximate distance at which each signal was received, the longest range at which accurate determinations of

distance could be made, and the results of any checks which it may have been possible to make on the accuracy of the information obtained, together with any remarks as to the utility of the signals and the desirability of continuing them permanently.

RADIOPHONE TIME SIGNALS TRANSMITTED BY CHELMSFORD, ENGLAND

This station, call signal 5SW, located in approximately longitude 0° 28' E., latitude 51° 44' N., transmits time signals daily, except Saturdays and Sundays, on 24 meters, power, 20,000 watts, from Greenwich Observatory, at 13<sup>h</sup> and 21<sup>h</sup> G. M. T. (one hour earlier during the period of British summer time). The signal consists of six dots ( . . . . . ) at one-second intervals, the commencement of the final dot being the exact hour. These signals have been established by arrangement with the British Broadcasting Corporation. Attention is called to the fact that the station is operating experimentally and that the wave length may be changed or the transmission suspended or discontinued without previous notice.

RADIOBEACONS ESTABLISHED AT NOLSO AND MYGGENÆS, FAROE ISLANDS

A radiobeacon will be established at Nolso Light Station, in approximately 61° 57' 30" N., 6° 38' 30" W. The characteristic of the signal will be the letters NO NO NO ( — . — — — — . — — — — . — — — — ) followed by 28 dashes; period 4 minutes. The duration of the signal will be 2 minutes; silent 2 minutes. The signal will be transmitted on a frequency of 316 kilocycles (950 meters).

A radiobeacon will be established at Myggenæs Light Station, in approximately 62° 06' N., 7° 40' E. The characteristic of the signal will be the letters MY MY MY ( — — — — . — — — — . — — — — . — — — — . — — — — ), followed by the letter A ( — ) which will be repeated 19 times; period 5 minutes. The duration of the signal will be 1 $\frac{1}{4}$  minutes; silent 3 $\frac{1}{2}$  minutes. The signal will be transmitted on a frequency of 286 kilocycles (1,050 meters).

The above radiobeacons will be placed in operation only on request through the Thorshavn Radio Station (call signal OXJ on low frequency—OYP on high frequency).

HEALTH REGULATIONS FOR VESSELS EQUIPPED WITH RADIO ENTERING PORTS OF AUSTRALIA

The master of every oversea vessel equipped with wireless apparatus shall, before arrival of the vessel at the first port of entry in Australia, inform the quarantine officer at that port by wireless of the state of health on board the vessel. The wireless message shall be sent not less than 12 hours before the expected time of arrival of the vessel at the first port of entry. The information given, which shall be set out in the order specified below, shall include:

1. The name of the vessel and the expected date and time of arrival.
2. (a) Number of passengers on the vessel, (b) number of crew on the vessel, (c) number of passengers landing at the port.
3. Name of oversea port of departure and date of departure therefrom. Name of the last oversea port called at and date of departure therefrom.
4. Number and nature of cases of quarantinable disease and number and nature of cases of other disease specified in regulation No. 56 that have occurred during the voyage.
5. Number and nature of any such cases on the vessel when the message is sent, and the number of such cases booked for the port the vessel is approaching.
6. Number and nature of any cases in hospital other than those referred to in the last preceding paragraph. (b) When a case or an additional case of quarantinable or other disease specified in regulation 56 occurs on a vessel after the dispatch of the wireless message referred to in paragraph (a) above, a further wireless message shall be sent to the quarantine officer giving notice of such case or cases. (c) When a case or an additional case of quarantinable or other disease as specified in regulation 56 occurs on a vessel after departure from the first port of entry and prior to arrival at a subsequent port of call in Australia, the master of the vessel shall send a wireless message to the quarantine officer at the next port at which the vessel is to call, giving notice of such case.

NOTE.—Quarantinable disease means smallpox, plague, cholera, yellow fever or leprosy, or any disease declared by the governor general by proclamation to be a quarantinable disease.—*Statutory Rules 1928, No. 41.*

SWAN ISLAND METEOROLOGICAL INFORMATION

The United States Weather Bureau has made arrangements for the reopening of the meteorological station at Swan Island in the western Caribbean Sea (approximately 84° W. and 17° 30' N.) in cooperation with the Tropical Radio Telegraph Co., for the months of August, September, and October, 1928. Meteorological observations from Swan Island are of great value during the hurricane season, not only to shipping in the Gulf of Mexico and the Caribbean, but to the United States Weather Bureau in the issuing of its warnings and advices of storms and hurricanes. The observations are taken at 7 a. m. and 7 p. m. daily, seventy-fifth meridian time. They are immediately transmitted by radio to the Weather Bureau at Washington on wave lengths of 600 and 630 meters at 7.15 a. m. and 7.15 p. m., seventy-fifth meridian time. There is no objection to ships copying these reports for their individual use and information.

LIST OF HIGH-FREQUENCY CHANNELS ALLOCATED TO COMMERCIAL STATIONS

In reference to the list of high-frequency channels published in the May 31, 1928, No. 134, edition of the RADIO SERVICE BULLETIN, there is now published hereunder a list of the stations to which the channels have been assigned.

Frequency (kilocycles)	Call signal	Location	Owner
6,710	WEHR-WER	Rocky Point, N. Y.	Radio Corporation of America
6,720	WBO	Dearborn, Mich.	Ford Motor Co.
6,725	WQO	Rocky Point, N. Y.	Radio Corporation of America.
6,740	WEAJ-WEJ	do	Do.
6,755	WND	Deal Beach, N. J.	American Telephone & Telegraph Co.
6,770	WNN	Boston, Mass., and Mobile, Ala.	Tropical Radio Telegraph Co.
6,785	WBF	do	Do.
6,815	KNW	Palo Alto, Calif.	Mackay Radio & Telegraph Co.
6,845	KEUN-KEN	Bollinas, Calif.	Radio Corporation of America.
6,860	KEL	do	Do.
6,875		Guam	Mackay Radio & Telegraph Co.
6,890	WQXX-WGX	San Juan, P. R.	Radio Corporation of America.
6,900	WLG	Bypro, Ky.	By Products Coal Co.
6,920	WEPE-WEE	Rocky Point, N. Y.	Radio Corporation of America.
6,935	WEQB-WEB	do	Do.
6,950	WEOP-WKP	do	Do.
6,965	WIZ	New Brunswick, N. J.	Do.
7,340		New York, N. Y.	American Publishers Committee.
7,355		New York, N. Y., and Philadelphia, Pa.	Do.
7,370		New York, N. Y.	Do.
7,400	WEM	Rocky Point, N. Y.	Radio Corporation of America.
7,415	KSIO-KKH	Kahuka, Hawaii	Do.
7,430		San Francisco, Calif.	Robert Dollar S. S. Co.
7,445		Seattle, Wash.	Do.
7,520	WEGG-WEG	Rocky Point, N. Y.	Radio Corporation of America.
7,600	KTZ	Naknek, Alaska	Alaska Packers Association.
	KFU	Alameda, Calif.	Do.
7,625		Los Angeles, Calif.	American Publishers Committee.
		Milwaukee, Wis.	Do.
7,640		New York, N. Y., and Washington, D. C.	Do.
7,655		Guam	Mackay Radio & Telegraph Co.
7,670		Bayville, N. Y.	Do.
7,715	KEWE-KEE	Bollinas, Calif.	Radio Corporation of America.
7,730		Bayville, N. Y.	Mackay Radio & Telegraph Co.
7,745	KNW	Palo Alto, Calif.	Do.
7,760	KNN	Honolulu, Hawaii	Do.
7,775	WTF	Akron, Ohio	Firestone Plantation Co.-Standard Oil Co. of New Jersey.
	WMU	Baytown, N. J.	Do.
7,820		New York, N. Y., and Chicago, Ill.	American Publishers Committee.
7,835		do	Do.
7,850		Floral Park, N. Y.	Do.
7,925		San Francisco, Calif.	Do.
7,955		San Francisco, Calif. and Chicago, Ill.	Do.
8,010	WLC	Rogers City, Mich.	Michigan Limestone & Chemical Co.
8,075	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
8,680			

1 Especially assigned for experimental work.

*6.7 MHz  
"shortwave"*

Frequency (kilocycles)	Call signal	Location	Owner
8,720	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
8,850	KNW	Palo Alto, Calif.	Do.
8,930		Sayville, N. Y.	Do.
8,950	WELL-WEL	Rocky Point, N. Y.	Radio Corporation of America.
8,970	KNW	Palo Alto, Calif.	Mackay Radio & Telegraph Co.
8,990	WEQC-WEC	Rocky Point, N. Y.	Radio Corporation of America.
9,010	KEJJ-KEJ	Bollinas, Calif.	Do.
9,070	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
9,170	WND	Deal Beach, N. J.	American Telephone & Telegraph Co.
9,280		Guam	Mackay Radio & Telegraph Co.
9,410		San Francisco, Calif.	Robert Dollar S. S. Co.
9,450	WEDS-WES	Rocky Point, N. Y.	Radio Corporation of America.
9,470	WETT-WET	do.	Do.
9,490	WFX-WEM	do.	Do.
9,750	WNC	Deal Beach, N. J.	American Telephone & Telegraph Co.
9,870	WMI	do.	Do.
10,390	KERR-KER	San Francisco, Calif.	Radio Corporation of America.
10,410	KES-KES	Bollinas, Calif.	Do.
10,450	WAX	Miami, Fla.	Tropical Radio Telegraph Co.
	WNN	Mobile, Ala.	Do.
10,470	WBF	Boston, Mass.	Do.
	WNU	New Orleans, La.	Do.
10,490	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
10,550	WLO	Deal Beach, N. J.	American Telephone & Telegraph Co.
10,610	WEQA-WEA	Rocky Point, N. Y.	Radio Corporation of America.
10,630	WEDD-WED	do.	Do.
10,750	WKI	Newark, N. J.	Federal Telegraph Co.
10,810	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
10,830		Guam	Do.
10,900		Palo Alto, Calif.	Do.
10,930		San Francisco, Calif.	Robert Dollar S. S. Co.
11,680	KIO	Kahuku, Hawaii	Radio Corporation of America.
11,950	KKQQ-KKQ	San Francisco, Calif.	Do.
12,850			
12,940	WAX	Miami, Fla.	Tropical Radio Telegraph Co.
	WNN	Mobile, Ala.	Do.
12,970	WNU	New Orleans, La.	Do.
13,000	KNW	Palo Alto, Calif.	Mackay Radio & Telegraph Co.
13,030	KNN	Honolulu, Hawaii	Do.
13,390	WND	Deal, N. J.	American Telephone & Telegraph Co.
13,420	WHR	Rocky Point, N. Y.	Radio Corporation of America.
13,450	WEQX-WEX	do.	Do.
13,480	WAJ	do.	Do.
13,690	KKZZ-KKZ	Bollinas, Calif.	Do.
13,720	KLL	do.	Do.
13,750		Guam	Mackay Radio & Telegraph Co.
13,780	WGT	San Juan, P. R.	Radio Corporation of America.
13,840	WPE	Rocky Point, N. Y.	Do.
13,870	WEQY-WIY	do.	Do.
13,900	WOP	do.	Do.
13,930	WIK	do.	Do.
13,960		Guam	Mackay Radio & Telegraph Co.
14,470	WNC	Deal Beach, N. J.	American Telephone & Telegraph Co.
14,590	WMI	do.	Do.
14,680		Palo Alto, Calif.	Mackay Radio & Telegraph Co.
14,710		do.	Do.
14,740		Sayville, N. Y.	Do.
14,770		do.	Do.
14,800	WEEM-WKM	Rocky Point, N. Y.	Radio Corporation of America.
14,830	WKUU-WKU	do.	Do.
14,860		Seattle, Wash.	Robert Dollar S. S. Co.
14,890		do.	Do.
14,920	WAZZ-WAZ	New Brunswick, N. J.	Radio Corporation of America.
15,040	WQQG-WQG	Rocky Point, N. Y.	Do.
15,450	KWE	Bollinas, Calif.	Do.
15,460	KKRR-KRR	do.	Do.
15,490	KEMM-KEM	do.	Do.
15,580		Garden City, N. Y.	American Publishers Committee.
15,610		New York, N. Y.	Do.
15,640		Chicago, Ill.	Do.
15,670		New York, N. Y.	Do.
15,700		Floral Park, N. Y.	Do.
15,730		San Francisco, Calif.	Do.
15,760		Boston, Mass.	Do.
15,850		San Francisco, Calif.	American Publishers Committee (New York, N. Y.).
15,880		do.	American Publishers Committee (Los Angeles, Calif.).
		do.	American Publishers Committee (Chicago, Ill.).
15,910	WQO-WKO	Rocky Point, N. Y.	Radio Corporation of America.
16,000	WKQQ-WKQ	do.	Do.
16,030	WKWW-WKW	do.	Do.

1 Especially assigned for experimental work.

Frequency (kilocycles)	Call signal	Location	Owner
16, 270	WLO	Deal Beach, N. J.	American Telephone & Telegraph Co.
17, 300			
17, 420	KNN	Honolulu, Hawaii	Mackay Radio & Telegraph Co.
17, 580	WBF	Boston, Mass.	Tropical Radio Telegraph Co.
17, 660	KNW	Palo Alto, Calif.	Mackay Radio & Telegraph Co.
17, 700		Guam	Do.
17, 860	WQC	Rocky Point, N. Y.	Radio Corporation of America.
17, 900	WLL	do.	Do.
17, 940	WQB	do.	Do.
17, 980	KQZZ-KQZ	Bolinas, Calif.	Do.
18, 020	KQJ-KQJ	do.	Do.
18, 060	KUN	do.	Do.
18, 260	KNW	Palo Alto, Calif.	Mackay Radio & Telegraph Co.
18, 340	WND	Deal Beach, N. J.	American Telephone & Telegraph Co.
18, 780		Palo Alto, Calif.	Mackay Radio & Telegraph Co.
18, 820		San Francisco, Calif.	Robert Dollar S. S. Co.
18, 860	WQV	Rocky Point, N. Y.	Radio Corporation of America.
18, 900	WDE	do.	Do.
18, 940	WTF	do.	Do.
18, 980	WFX	do.	Do.
19, 020	KQHH-KQH	Kahuku, Hawaii	Do.
19, 220	WNC	Deal Beach, N. J.	American Telephone & Telegraph Co.
19, 540		Palo Alto, Calif.	Mackay Radio & Telegraph Co.
19, 680		Sayville, N. Y.	Do.
19, 820		do.	Do.
19, 740		Quam	Do.
19, 780	WTF	Akron, Ohio	Akron Firestone Plantations-Standard Oil Co. of N. J.
		Baytown, N. J.	Do.
19, 820	WMU	Baytown, N. J.	American Telephone & Telegraph Co.
20, 100	WMI	Deal Beach, N. J.	American Telephone & Telegraph Co.
20, 180	WQY	Rocky Point, N. Y.	Radio Corporation of America.
20, 260	WQX	do.	Do.
20, 300	WQQ	do.	Do.
20, 380		Sayville, N. Y.	Mackay Radio & Telegraph Co.
20, 780	KMM	Bolinas, Calif.	Radio Corporation of America.
20, 820	KSS	do.	Do.
20, 980		Sayville, N. Y.	Mackay Radio & Telegraph Co.
21, 060	WND	Deal Beach, N. J.	American Telephone & Telegraph Co.
21, 220	WQA	Rocky Point, N. Y.	Radio Corporation of America.
21, 260	WBU	do.	Do.
21, 300	WQWW-WQW	San Francisco, Calif.	Do.
21, 380		Sayville, N. Y.	Mackay Radio & Telegraph Co.
21, 420	WLO	Deal Beach, N. J.	American Telephone & Telegraph Co.
22, 670		Seattle, Wash.	Robert Dollar S. S. Co.

<sup>1</sup> Especially assigned for experimental work.

Reserved for special assignment: 10,050, 10,090, 10,160, 10,230, 17,140, 18,180, and 18,720.

CROSS INDEX OF ARTICLE NUMBERS OF THE INTERNATIONAL RADIOTELEGRAPH CONVENTION

As some difficulty has been experienced in locating articles of the convention, as published in the English translation promulgated by this country and the French text promulgated by the Berne Bureau due to the renumbering of the articles in the French text, the following cross index is published for the benefit of those concerned.

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*List of broadcasting stations of Canada*

[This list supersedes and cancels all previous lists]

Call signal	Owner of station	Location of station	Wave length (meters)	Frequency (kilo-cycles)	Power input to antenna (watts)
CFAC	The Calgary Herald.....	Herald Building, Calgary, Alberta.	434.5	690	500
CFBO	C. A. Munro (Ltd.).....	Imperial Theater, St. John, New Brunswick.	386.9	800	50
CFCA	Star Publishing & Printing Co.	Southwest Corner Yongo Street and St. Clair Avenue, Toronto, Ontario.	356.9	840	500
CFCF	Canadian Marconi Co.....	Mount Royal Hotel, Montreal, Quebec.	410.7	730	1,650
CFCH	Abitibi Power & Paper Co. (Ltd.)	Iroquois Falls, Ontario.....	499.7	600	250
CFCN	W. W. Grant (Ltd.).....	708 Crescent Road NW., Calgary, Alberta.	434.5	600	1,800
CFCO	Western Ontario Better Radio Club.	49 Park Avenue E., Chatham, Ontario.	247.8	1,210	25
CFCT	Victoria Broadcasting Association.	1405 Douglas Street, Victoria, British Columbia.	475.9	630	500
CFCY	The Island Radio Co.....	143 St. George Street, Charlottetown, Prince Edward Island.	312.3	960	100



List of broadcasting stations of Canada—Continued

Call sig- nal	Owner of station	Location of station	Wave length (meters)	Fre- quency (kilo- cycles)	Power input to antenna (watts)
CFJC	N. S. Dalgleish & Sons and Weller & Weller.	186 Victoria Street, Kam- loops, British Columbia.	267.7	1,120	15
CFPL	Radio Association of Prescott.	Victoria Hall, Prescott, On- tario.	295.9	1,010	50
CFMC	Monarch Battery Co.	Montreal Street, Kingston, Ontario.	267.7	1,120	20
CFNB	James S. Neill & Sons (Ltd.)	212 Waterloo Row, Frederic- ton, New Brunswick.	247.8	1,210	50
CFQC	The Electric Shop (Ltd.)	1322 Osler Street, Saskatoon, Saskatchewan.	329.5	910	500
CFRB	Standard Radio Manufactur- ing Corporation (Ltd.)	Lot 70, Township of King, York County, Ontario.	312.3	960	1,000
CFRC	Queen's University (Depart- ment of Electrical Engineer- ing)	Fleming Hall, Queen's Uni- versity, Kingston, Ontario.	267.7	1,120	500
CHCA	The Albertan Publishing Co. (Ltd.) (uses station CJCJ, the Radio Service and Re- pair Shop, Calgary, Al- berta).	Calgary, Alberta	434.5	690	250
CHOK	W. E. Burke	36 Upper Hillsboro Street, Charlottetown, Prince Ed- ward Island.	312.3	960	30
CHCS	The Hamilton Spectator	Spectator Building, Hamilton, Ontario.	340.7	880	10
CHCT	Messrs. G. F. Tull & Aylern (Ltd.) (uses station CKLC, the Alberta Pacific Grain Co., Red Deer, Alberta).	Red Deer, Alberta	355.9	840	1,000
CHGS	R. T. Holman (Ltd.)	Holman Building, Summer- side, Prince Edward Island.	267.7	1,120	25
CHLS	W. G. Russell (uses station CKOD, the Vancouver Daily Province, Vancouver, British Columbia).	Vancouver, British Columbia.	410.7	730	50
CHMA	Christian and Missionary Al- liance.	9618 106A Avenue, Edmonton, Alberta.	516.9	580	250
CHML	Maple Leaf Radio Co. (Ltd.)	Yale Avenue, Mount Hamil- ton, Ontario.	340.7	880	50
CHNC	Toronto Radio Research So- ciety (uses station CKNC, Canadian National Carbon Co., Toronto, Ontario).	Hillcrest Park, Toronto, On- tario.	516.9	580	500
CHNS	Northern Electric Co. (Ltd.) (to be replaced by CHNS, Halifax Herald (Ltd.), when completed).	Carleton Hotel, Halifax, Nova Scotia.	322.4	930	100
CHNS <sup>1</sup>	Halifax Herald (Ltd.)	Lord Nelson Hotel, Halifax, Nova Scotia.	322.4	930	500
CHRC	E. Fontaine	Victoria Hotel, Quebec, Que- bec.	340.7	880	5
CHWO	R. H. Williams & Sons (Ltd.)	Corner Hamilton Street and Eleventh Avenue, Regina, Saskatchewan.	322.3	960	15
CHWK	Chilliwack Broadcasting Co. (Ltd.)	Wellington Avenue, Chill- wack, British Columbia.	247.8	1,210	5
CHYC	Northern Electric Co. (Ltd.)	121 Shearer Street, Montreal, Quebec.	410.7	730	750
CJBC	Jarvis Street Baptist Church (uses one of the stations in Toronto city or district).	Toronto, Ontario	(516.9) (580.9) 312.3	(580) (840) 960	500 500 1,000-5,000
CJBR	Saskatchewan Co-Operative Wheat Producers (Ltd.)	Regina, Saskatchewan	312.3	960	500
CJOA	The Edmonton Journal (Ltd.)	Journal Building, Edmonton, Alberta.	516.9	580	500
CJOJ	Radio Service and Repair Shop	Eighteenth Avenue and Sev- enth Street East, Calgary, Alberta.	434.5	690	250
CJGQ	London Free Press Printing Co. (Ltd.)	Hotel London, London, On- tario.	329.5	910	500
CJGX	The Winnipeg Grain Exchange	Yorkton, Saskatchewan	475.9	630	500
CJHS	Radio Service (Ltd.)	233 First Avenue, S., Saska- toon, Saskatchewan.	329.5	910	250
CJOC	J. E. Palmer	1235 Fifth Avenue A, S., Leth- bridge, Alberta.	267.7	1,120	50

<sup>1</sup> Station under construction.

## List of broadcasting stations of Canada—Continued

Call signal	Owner of station	Location of station	Wave length (meters)	Frequency (kilocycles)	Power input to antenna (watts)
CJOR	G. C. Chandler.....	Block 20, Sea Island, British Columbia.	291.1	1,030	50
CJRM	Jas. Richardson & Sons (Ltd.)..	337 Coteau Street, W., Moose Jaw, Saskatchewan.	296.9	1,010	500
CJRW	do.....	Fleming, Saskatchewan.....	296.9	1,010	500
CJBC	The Evening Telegram (uses station CKCL, the Dominion Battery Co. (Ltd.), Toronto, Ontario).	Toronto, Ontario.....	516.9	580	500
OKAO	La Presse Publishing Co. (Ltd.)..	Corner St. James Street and St. Lawrence Boulevard, Montreal, Quebec.	410.7	730	1,200
OKOD	Vancouver Daily Province.....	142 Hastings Street, W., Vancouver, British Columbia.	410.7	730	50
OKCI	Le "Soleil" (Ltd.).....	Victoria Hotel, Quebec, Quebec.	340.7	880	22½
CKCK	Leader Publishing Co. (Ltd.)..	Regina, Saskatchewan.....	312.3	960	500
CKCL	The Dominion Battery Co. (Ltd.)..	20 Trinity Street, Toronto, Ontario.	516.9	580	500
OKCO	Dr. G. M. Geldert (for Ottawa Radio Association).	282 Somerset Street, W., Ottawa, Ontario.	484.5	690	100
OKOR	John Patterson.....	Arcade Building, Brantford, Ontario.	296.9	1,010	50
OKOV	G. A. Vandry.....	66 St. Joseph Street, Quebec, Quebec.	340.7	880	50
OKFC	United Church of Canada.....	Corner Thurlow and Pendrell Streets, Vancouver, British Columbia.	410.7	730	50
CKGW	Gooderham & Worts.....	Bowmanville, Ontario.....	312.3	960	5,000
CKLO	Alberta Pacific Grain Co. (Ltd.)..	Red Deer, Alberta.....	356.9	840	1,000
CKMC	R. L. MacAdam.....	Cobalt (East Side), Ontario..	247.8	1,210	15
CKMO	Sprott-Shaw Radio.....	Room 1604 Bekins Building, Vancouver, British Columbia.	410.7	730	50
CKNC	Canadian National Carbon Co. (Ltd.)..	Hillcrest Park, Toronto, Ontario.	516.9	580	500
CKOC	Wentworth Radio & Auto Supply Co. (Ltd.)..	Royal Connaught Hotel, Hamilton, Ontario.	340.7	880	100
CKOW	Nestle's Food Co. of Canada (uses station CPCA, Star Publishing & Printing Co., Toronto, Ontario).	Toronto, Ontario.....	356.9	840	500
CKPC	Wallace Russ.....	40 Russ Avenue, Eagle Street, Preston, Ontario.	247.8	1,210	25
CKPR	E. O. Swan.....	Midland, Ontario.....	267.7	1,120	50
CKSH	City of St. Hyacinthe, Quebec.	Mondor and Cascades Streets, St. Hyacinthe, Quebec.	296.9	1,010	50
OKUA	University of Alberta.....	Campus, University of Alberta, Edmonton, Alberta.	516.9	580	500
CKWX	A. Holstead and Wm. Hanlon..	1220 Seymour Street, Vancouver, British Columbia.	410.7	730	100
OKY	Manitoba Telephone System..	Sherbrooke Street, Winnipeg, Manitoba.	384.4	780	500
CNRA	Canadian National Railways..	Moncton, New Brunswick....	475.9	630	500
CNRC	Canadian National Railways (uses station CFAO, Calgary Herald, Calgary, Alberta).	Calgary, Alberta.....	434.5	690	500
CNRE	Canadian National Railways (uses station CJCA, Edmonton Journal (Ltd.), Edmonton, Alberta).	Edmonton, Alberta.....	516.9	580	500
CNRM	Canadian National Railways (uses station CHYC, Northern Electric Co. (Ltd.), or station CKAC, La Presse Publishing Co. (Ltd.), or station CFCF, Canadian Marconi Co., Montreal, Quebec).	Montreal, Quebec.....	410.7	730	1,000-1,650
CNRO	Canadian National Railways..	Jackson Building, Ottawa, Ontario.	434.5	690	500
CNRR	Canadian National Railways (uses station CKOV, G. A. Vandry, Quebec, Quebec).	Quebec, Quebec.....	340.7	880	50
CNRR	Canadian National Railways (uses station CKCK, Leader Publishing Co., (Ltd.), Regina, Saskatchewan).	Regina, Saskatchewan.....	312.3	960	500

\* The call signal CFCF is used by this station during Sunday broadcasts only.

List of broadcasting stations of Canada—Continued

Call signal	Owner of station	Location of station	Wave length (meters)	Frequency (kilocycles)	Power input to antenna (watts)
CNRS	Canadian National Railways (uses station CFQC, Electric Shop (Ltd.), Saskatoon, Saskatchewan).	Saskatoon, Saskatchewan	329.5	910	500
CNRT	Canadian National Railways (uses station CFCA, Star Printing & Publishing Co., Toronto, Ontario).	Toronto, Ontario	356.9	840	500
CNRV	Canadian National Railways	Vancouver, British Columbia (Lulu Island)	391.1	1,030	500
CNRW	Canadian National Railways (uses station CKY, Manitoba Telephone System, Winnipeg, Manitoba).	Winnipeg, Manitoba	384.4	780	500

LIST OF THE PRINCIPAL BROADCASTING STATIONS OF THE WORLD ARRANGED IN ORDER OF WAVE LENGTH

Wave length (meters)	Location	Call signal	Remarks
<i>Europe</i>			
4,000	Königswusterhausen	AFP	Germany.
2,900	do.	AFP	Do.
2,650	Eifel Tower		(F. L.) Paris: Time signals in code 0926 and 2228 G. M. T. and B. S. T.; opening signal, seconds counted in French.
2,525	Berlin (Wolf's Bureau), News		
2,000	Kovno (Kannas)		Lithuania: Interval signal; strokes on gong.
1,950	Scheveningen		Holland.
1,950	Hulzen		Do.
1,870	Kozice (Kassa)		Czechoslovakia.
1,820	Norddeich		Germany: Weather report, 11 p. m.
1,806	Angora		Turkey.
1,765	Paris	CFR	Radio Paris: Opening signal, electric gong at 12.30 and 8.30; clock chimes at the hour.
1,604.8	Davenport	SXX	England: Time signals, 10.30 a. m. and 6.30 p. m.
1,522	Lahti		Finland.
1,304	Motala		Sweden.
1,250	Zeesen (Königswusterhausen)		Germany: Opening and interval signals, Metro-nome.
1,200	Stamboul		Turkey.
1,190	Boden	BASE	Sweden.
1,163	Kalundborg		Denmark: Opening signal, 3 strokes of a gong.
1,160	Ryvang		Denmark.
1,111	Warsaw	AXO	Poland: Opening and interval signals, W in Morse
1,100	De Bilt	POFF	Holland: Weather report, 9.15 p. m.
1,071	Hilversum	ANRO	Holland.
1,010	Basle		Switzerland.
760	Geneva	HBI	Switzerland: Opening signal, 3 long whistles.
720	Ostersund		Sweden: Relays Sundsval.
680	Lausanne	HB2	Switzerland: Opening signal; chimes and carillon.
588.2	Zurich	HBZ	Switzerland: Interval signal, gong.
577	Vienna (Stubenring)		Austria.
577	Freiburg		Germany.
566	Cracow		Poland.
566	Augsburg		Germany: Relays Munich.
566	Bloemendaal		Holland: Sundays only.
566	Mikkil (St. Michel)		Finland.
555.8	Hamar		Norway.
555.5	Budapest		Hungary: Opening signal, 4 notes repeated.
548	Milan	FMI	Italy: Opening signal, tuning note.
545.6	Sundsval	SABD	Sweden.
535.7	Munich		Germany: Opening and interval signals, MUNG, in Morse, followed by 8 notes.
526.3	Riga		Latvia.
517.2	Vienna (Rosenbugel)		Austria.
511	Aalesund		Norway.
508.5	Brussels	SBR	Belgium: Opening signal, whistle.
500	Tromsø		Norway.

## LIST OF THE PRINCIPAL BROADCASTING STATIONS OF THE WORLD ARRANGED IN ORDER OF WAVE LENGTH—continued

Wave length (meters)	Location	Call signal	Remarks
<i>Europe—Continued</i>			
500	Aberdeen.....	2BD	Scotland.
500	Uppsala.....		Sweden: Relay station.
500	Linköping.....	SMUW	Do.
500	Porsgrund.....		Norway: Relay station.
491.8	Daventry.....	5GB	England: Experimental.
484	Berlin (Witzleben).....		Germany: Interval signal, clock chimes.
476	Lyons.....		P. T. T. La Doua, France: Relays Ecole Supérieure, Paris.
468.8	Langenburg.....		Germany: Opening signal, chimes 4 bells: interval, U, in Morse.
462	Barcelona.....	EAJ13	Spain: (Radio Catalana).
461.5	Oslo.....		Norway.
458	Paris.....		P. T. T. Ecole Supérieure.
454.5	Stockholm.....	SASA	Sweden: Opening signal, folk song on a spinet; interval; rapid ringing of a bell.
447.8	Rome.....	1RO	Italy: Opening signal, oscillating valve, followed by "Pronto"; interval, trumpet call and "Radio Roma."
447.8	Rjukan.....		Norway: Relay station.
446	Malmberget.....		Sweden: Relay station.
441.2	Brunn (Brno).....	OKB	Czechoslovakia.
435	Wilna.....		Poland.
434.8	Seville.....	EAJ5	Union Radio, Spain.
428.6	Frankfurt-on-Main.....		Germany: Opening signal, 3 strokes of gong; interval, metronome.
422	Kattowitz.....		Poland.
416.5	Göteborg.....	BABB	Sweden.
416	Grenoble.....		France.
412	Notodden.....		Norway: Relay station.
411	Berne.....	HBA	Switzerland: Opening signal, post horn or tuning note; interval, 2 strokes of gong.
408	Tallinn (Reval).....		Estonia.
405.4	Glasgow.....	880	Scotland.
405	Salamanca.....	EAJ22	Spain.
400	Mont de Marzan.....		Radio Club Landrais, France.
400	Aix-la-Chapelle.....		Germany.
400	Cádiz.....	EAJ3	Spain: Opening signal, metronome.
400	Madrid.....	EAJ2	Radio España, Spain.
400	Cork.....	8CK	Irish Free State.
400	Plymouth.....	8PX	England: Relay station.
400	Tammerfors.....		Finland: Relay station.
394.7	Hamburg.....		(H. A. in Morse), Germany.
389.6	Toulouse.....		France. (Radio da Midi): Interval signal, metronome.
384.6	Manchester.....	2ZY	England.
379.7	Stuttgart.....		Germany: Interval signal, 3 notes.
375	Helsingfors (Helsinki).....		Finland.
375	Madrid.....	EAJ7	Spain (Union Radio): Opening signal, bugle call.
370.4	Bergen.....		Norway.
370	Paris.....		Radio L. L.
365.8	Leipzig.....		Germany: Interval signal, metronome or RR in Morse.
361.4	London.....	2LO	England.
357.1	Graz.....		Austria (V in Morse).
353	Cardiff.....	5WA	Wales.
348.9	Prague.....		Czechoslovakia.
344.8	Barcelona.....	EAJ1	Spain (Radio Barcelona).
342.9	Posen.....		Poland.
340.9	Hilzen.....		Holland.
340.9	Paris.....		Petit Parisien.
337.4	Copenhagen.....		Denmark: Opening signal, 3 strokes of gong.
335	Cartagena.....	EAJ16	Spain.
335	San Sebastian.....	EAJ8	Do.
333.3	Reykjavik.....		Iceland.
333.3	Naples.....	INA	Italy: Opening signal, oscillating valve; interval, metronome.
329.7	Gielwitz.....		Germany: Relay station.
325.1	Bournemouth.....	6BM	England.
325	Almeria.....	EAJ18	Spain.
322.6	Breslau.....		Germany: Interval signal, metronome.
319.1	Dublin.....	2BN	Ireland: Opening signal, tuning note.
315.8	Falun.....	SMZK	Sweden.
312.5	Newcastle.....	8NO	England.
310	Agen.....		France.
310	Oviedo.....		Spain.
309	Zagreb.....		Yugoslavia. Opening signal: Metronome. Interval: 2 strokes on bell.

LIST OF THE PRINCIPAL BROADCASTING STATIONS OF THE WORLD ARRANGED IN ORDER OF WAVE LENGTH—continued

Wave length (meters)	Location	Call signal	Remarks
<i>Europe—Continued</i>			
306.1	Belfast.....	2BE	Ireland.
304	Bjorneborg.....		Finland. Relay station.
303	Konigsberg.....		Germany. Interval signal: 2 notes A. and D. repeated.
302	Paris.....		Radio Vitus.
300	Marsailles.....		P. T. T. France.
300	Bratislava (Pressburg).....		Czechoslovakia: Interval signal, 4 bells, F. A. C. C.
297	Liverpool.....	6LV	England: Relay station.
297	Hanover.....		Germany: Relay station; interval signal, strokes on gong, followed by IIB in Morse.
297	Varborg.....		Sweden: Relay station.
297	Jyvaskyla.....		Finland: Relay station.
294.1	Dundee.....	2DE	Scotland: Relay station.
294.1	Hull.....	6KH	England: Relay station.
294.1	Stoke.....	68T	Do.
294.1	Swansea.....	68X	Do.
294.1	Innsbruck.....		Austria: Relay station; interval signal, metronome.
294.1	Udevalla.....		Sweden: Relay station.
291.3	Lyon.....		France: Radio Lyon.
288.8	Bordeaux Lafayette P. T. T.....		France.
288.8	Edinburgh.....	2EH	Scotland: Relay station.
285	Limoges.....		France.
283	Cologne.....		Germany.
279	Trollhattan.....		Sweden: Relay station.
277.8	Leeds.....	2LS	England: Relay station.
277.8	Kaiserslautern.....		Bavaria.
277	Barcelona.....	EAJ13	Spain (Radio Catalana).
275.2	Dresden.....		Germany: Relay station.
275.2	Jacobstad.....		Finland.
275.2	Norrkoping.....	SMVV	Sweden: Relay station.
275.2	Nottingham.....	5NG	England: Relay station.
275	Ghent.....		Belgium.
272.7	Sheffield.....	6FL	England: Relay station.
272.7	Bremen.....		Germany: Relay station.
272.7	Danzig.....		Do.
272.7	Hudiksvall.....		Sweden: Relay station.
272.7	Klagenfurt.....		Austria: Relay station; interval signal, metronome.
267.3	Lille, P. T. T.....		France.
260.0	Malmö.....	SASO	Sweden.
263	Kiel.....		Germany: Relay station; interval signal, KL in Morse.
254.2	Kalmar.....	SMSN	Sweden.
254.2	Linz.....		Austria: Relay station.
252.1	Bradford.....	2LS	England: Relay station.
252.1	Cassel.....		Germany: Relay station.
252.1	Montpelier.....		France.
252.1	Saffle.....	SMTS	Sweden: Relay station.
250	Uleaborg.....		Finland: Relay station.
249.7	Eskilstuna.....	SMUC	Sweden: Relay station.
249.7	Munster.....		Germany (M5 in Morse).
246	Juan les Pins.....		Nice, France.
246	Toulouse, P. T. T.....		France.
243.0	Trondhjem.....		Norway.
241.0	Nurnberg.....		Germany: Relay station.
240	Viborg.....		Finland.
240	Nimes.....		France.
238.1	Kiruna.....		Sweden: Relay station.
238.1	Bordeaux.....		France.
236.2	Orebro.....		Sweden: Relay station.
236.2	Stettin.....		Germany: Relay station.
230.2	Boras.....	SMBY	Sweden: Relay station.
230	Schaerbeck.....		Germany.
229.4	Halsingborg.....	SMBE	Sweden: Relay station.
229	Umea.....	SMBN	Do.
222.2	Strasbourg.....		France.
220.6	Karlstadt.....	SMXZ	Sweden: Relay station.
217.4	Luxembourg.....	LOAA	Belgium.
216.3	Halmstad.....	SMSB	Sweden: Relay station.
204.1	Havle.....	BMXF	Do.
202.7	Kristinehamn.....	SMTY	Do.
201.8	Jonkoping.....	SMZD	Do.
200	Pecatap.....		France.
198	Blarritz.....		Do.
196	Karlskrona.....	SMSM	Sweden: Relay station.
187.5	Ornskoldsvik.....		Do.
180	Beziers.....		France.

LIST OF THE PRINCIPAL BROADCASTING STATIONS OF THE WORLD ARRANGED IN ORDER OF WAVE LENGTH—continued.

Wave length (meters)	Location	Call signal	Remarks
<i>Europe—Continued</i>			
85	Zurich Radio Club	H9XD	Switzerland.
84.25	Copenhagen "Radiolyt-teren."	D7RL	Denmark.
80	Nogent-sur-Seine	F8AV	France.
79	Vienna	OHK2	Austria.
67.65	Doberitz	AFK	P. & T. Experimental, Germany.
61	Paris	F8GO	Radio L. L.
64.7	Nauen	AGJ	Germany.
62.5	Karlsborg	SAS	Sweden.
45.0	Rome	IIAX	Via Savola 80, Italy.
40.2	Lyons	YR	Radio Lyon, France.
37.65	Doberitz	AFK	P. & T. Experimental, Germany.
37	Paris		Radio Vitus.
37	Vienna	EATH	Austria.
32.5	Caterham		England (G. Marcuse 2NM).
32.05	Copenhagen	D7MK	Denmark: "Radioposten."
32	Eiffel Tower		Paris (F. L.): Time signals.
32	Zurich Radio Club	H9XD	Switzerland.
32	Berne	H900	Switzerland: Telegraph and radio service.
31.5	Helsingfors		Finland (Helsinki).
31.25	Bergen		Norway.
31.4	Eindhoven	POJJ	Phillips Lamp Works, Holland.
30.75	Agen		France.
30.7	Madrid	EAM	Spain.
30	Bergen	LGN	Norway.
24	Chelmsford	68W	England.
22.2	Vienna		Austria.
18.4	Kootwijk	POLL	Holland (State telegraph).
17.2	Nauen	AGO	Germany.
15.5	Nancy		France.
<i>Australia</i>			
1,250	Perth	6WF	
510	Hobart	7ZL	Tasmania.
481	Melbourne	3AR	
442	Sydney	2FC	
395	Adelaide	5CL	
385	Brisbane	4QG	
371	Melbourne	3LO	
353	Sydney	2BL	
32.9	Perth	6AG	
32.5	Sydney	2BL	
32	Melbourne	3LO	
28.5	Sydney	2FC	
28.5	do.	2ME	
<i>New Zealand</i>			
420	Wellington	2YA	
<i>North and East Africa</i>			
1,850	Carthage	TNV	
416	Rabat		Morocco.
853	Algiers, P. T. T.		Do.
805	Casablanca	CNO	
90	Nairobi		Kenya.
61	Casablanca	AIN	Morocco.
42.8	Constantine	8KR	Tunis.
<i>South Africa</i>			
443.5	Johannesburg	JB	
406.5	Durban		
375	Capetown		1,500 watts.
32	Johannesburg	JB	
<i>India and Ceylon</i>			
800	Colombo	VPB	Ceylon.
370.4	Calcutta	7CA	
367	Bombay	7BY	

LIST OF THE PRINCIPAL BROADCASTING STATIONS OF THE WORLD ARRANGED IN ORDER OF WAVE LENGTH—continued

Wave length (meters)	Location	Call signal	Remarks
<i>Japan</i>			
400	Osaka.....	JOBK	Experimental station; monthly schedule; days, 15, 16, 17, 18, 19, 20, 21, 22; wave, 30, 60, 85, 70, 80, 60, 35, 70; power, 0.5 kilowatt.
380	Kumamoto.....	JOJK	
353	Hiroshima.....	JOFK	
Variable.	Tokyo.....	JOAK	
345	Tokyo.....	JOAK	
39.5	Taipei.....	JFAB	
37.5	Hirasio.....	JHBB	
<i>Java</i>			
31.66	Bandoeng.....	ANE	
17	Malabar.....	ANH	
18.03	Bandoeng.....	ANE	
<i>South America</i>			
380	Lima.....	OAX	Peru. Argentina. Do.
291.2	Buenos Aires.....	LOS	
210	do.....	LON	

REFERENCES TO CURRENT RADIO LITERATURE

This is a monthly list of references prepared by the Bureau of Standards and is intended to cover the more important papers of interest to professional radio engineers which have recently appeared in periodicals, books, etc. The number at the left of each reference classifies the reference by subject, in accordance with the scheme presented in A Decimal Classification of Radio Subjects—An Extension of the Dewey System, Bureau of Standards Circular No. 138, a copy of which may be obtained for 10 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C. The various articles listed below are not obtainable from the Government. The various periodicals can be secured from their publishers and can be consulted at large public libraries.

R100.—Radio principles

- R113 Eckersley, T. L. The polarization and fading of short wave wireless. *Nature* (London), 121, p. 707, May 5, 1928. *Experimental Wireless* (London), 5, p. 397, July, 1928.  
The received rays are shown to be circularly or elliptically polarized and effect which has not been heretofore observed on long distance stations just outside the skip distance. Effect of earth's magnetic field in changing the plane of polarization is followed up for very short waves (14-50 m.). A unidirectional receiving antenna was used. These phenomena attributed to a double refraction phenomenon producing two circular polarized waves.
- R113 Hollingworth, J. The polarization of radio waves. *Proc. Royal Soc. of London*, 119A, pp. 444-464; June, 1928.  
General discussion on polarization of radio waves due to Heaviside layer. A modified method is given for studying the effect of frequencies less than 30 kilocycles.
- R120 O'Neill, H. M. Characteristics of certain broadcasting antennae at the South Schepctady development. *Proc. Inst. Radio Engrs.*, 16, pp. 872-889, July, 1928.  
Characteristics of various antennae used for broadcasting. Measurements at the station discussed. Effect of signal strength as measured locally for different antenna heights and effect of high steel towers on antennae operated at 380 meters are treated.
- R126 Parker, H. Radio grounds for broadcast receivers. *Radio* (San Francisco), 10, pp. 29-30; August, 1928.  
Data on resistivity of soil for best grounds for broadcast reception.
- R130 Prince, D. C. Four-element tube characteristics as affecting efficiency. *Proc. Inst. Radio Engrs.*, 16, pp. 805-821; June, 1928.  
Study of ratio of grid and plate currents of symmetrical tubes (cylindrical grids and plates) shows that it is quite different from that with ordinary commercial tubes. The difference appears to be due to combination of secondary emission from the plate and unsymmetrical arrangement of the grid wires.
- R132 Williams, N. H. The screen-grid tube. *Proc. Inst. Radio, Engrs.*, 16, pp. 840-843; June, 1928.  
Emphasis of paper on the very high amplification (up to eighty times per stage) which can be obtained by use of screen-grid tube. Shows that the current through the tube is approximately independent of the plate voltage, and therefore the voltage amplification is given by the product of the mutual conductance and the load impedance.

*R200.—Radio measurements and standardization*

- R134.45 David, M. Superreaction. (Superregeneration), *L'Onde Electrique*, 7, pp. 217-260; June, 1928. Discussion of work done to date on superregeneration.
- R201 Marrison, W. A. Thermostat design for frequency standards. *Proc. Inst. Radio Engrs.*, 16, pp. 976-980; July, 1928.  
Special design of thermostatic control for frequency standardization. Thermal system arranged so that the variations reaching the object to be controlled are materially reduced below those existing at responding element. This is accomplished by using a layer of material which attenuates temperature variations between the object to be controlled and the region about the responding element.
- R230 Useful data charts—Inductance, capacity, and frequency—short wave band. *Wireless World and Radio Review*, 23, pp. 82-83; July 18, 1928.  
Handy chart for calculation of above.

*R300.—Radio apparatus and equipment*

- R330 McLachlan, N. W. The output stage and the Pentode. *Wireless World and Radio Review*, 23, pp. 30-33; July 11, 1928.  
New electron tube for use as loud-speaker tube. Curves and characteristics of tube are given.
- R382 Replogle, D. E. Additional notes on iron core reactances. *QST*, 12, p. 46; August, 1928.  
Design chart for filter reactors.

*R400.—Radio communication systems*

- R431 Carson, J. R. The reduction of atmospheric disturbances. *Proc. Inst. Radio Engrs.*, 16, pp. 966-75; July, 1928.  
Analysis of an arrangement which provides for high frequency selection plus low frequency balancing after detection for reduction of atmospherics.

*R500.—Applications of radio*

- R520 Hanson, M. P. Aircraft radio installations. *Proc. Inst. Radio Engrs.*, 16, pp. 921-65; July, 1928.  
Technical aspects of aircraft radio design and installation given. Illustrates trend of development during recent years.
- R520.5 Jolliffe, C. B., and Zandonini, E. M. Bibliography on aircraft radio. *Proc. Inst. Radio Engrs.*, 16, pp. 985-99; July, 1928.  
List of 257 references to domestic and foreign periodicals.
- R526.1 Smith-Rose, R. L. Directional wireless and marine navigation rotating loop beacons. *Nature (London)*, 221, p. 745, May 5, 1928. *Experimental Wireless (London)*, 5, p. 402, July, 1928.  
Radiobeacon system of directional wireless transmission developed by the Royal Air Force, Great Britain. This beacon may be of value to marine navigation. At distances over 60 miles over sea night effects change the true bearing somewhat. Rotating loop transmitting system seems to have certain advantages over the rotating loop receiving system.
- R526.1 Dellinger, J. H., and Pratt, H. Development of radio aids to air navigation. *Proc. Inst. Radio Engrs.*, 16, pp. 890-920; July, 1928.  
Technical description of the system developed by the Bureau of Standards on a radiobeacon system and telephone service from ground to aircraft.

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# General Order 40

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**General Order 40** was an order issued on August 30, 1928 by the new Federal Radio Commission under the Radio Act of 1927 which provided for a reallocation of the commercial broadcast radio spectrum.

As a result of implementaion of General Order 40, most U.S. radio stations were forced to change their broadcast frequencies. The frequency changes went into effect at 3:00 a.m. Eastern time on November 11, 1928.

The goals of the FRC in reallocating the frequencies were to reduce interference and "clutter" on the air, to provide better access to the airwaves to smaller cities, and "underserved" areas, and to rid the air of "temporary" and "portable" stations. This was achieved by designating each frequency as either a frequency for one (or more) clear channel stations broadcasting with maximum power, a frequency to be shared by regional stations with less power, or a frequency to be shared by many local stations with limited power. Each clear channel frequency was reserved for one principal station in one of five U.S. zones or in Canada. Some of these clear frequencies were shared with one or more lower power stations in locations remote from the principal station. The U.S. was divided into the five zones used by the Radio Act of 1927, as shown on the map to the right.



Five U.S. zones used for frequency allocation

The allocation scheme introduced by General Order 40 stayed in place for over twelve years, until the implementation of the North American Radio Broadcasting Agreement in March 1941.

The table below presents a general outline of the frequency allocations under the order. For "Clear" frequencies, the zone allocated to the principal station on that frequency is given, along with the principal station that actually occupied the frequency, the previous frequency of the actual principal station, and other stations that shared the frequency. Station call signs shown in parentheses are stations owned by the same licensee of the principal station on that frequency.

Freq. (kHz)	Used for	Max. Power (watts)	Zone	Principal station(s)		Other stations sharing frequency (zone)
				Calls, City	Prev. freq.	
550	Regional	1000	—	—	—	7 U.S. stations
560	Regional	1000	—	—	—	10 U.S. stations
570	Regional	1000	—	—	—	11 U.S. stations
580	Regional	1000	—	—	—	6 U.S. stations 8 Canadian stations
590	Regional	1000	—	—	—	5 U.S. stations
600	Regional	1000	—	—	—	7 U.S. stations 3 Canadian stations
610	Regional	1000	—	—	—	5 U.S. stations
620	Regional	1000	—	—	—	6 U.S. stations
630	Regional	1000	—	—	—	4 U.S. stations 3 Canadian stations
640	Clear	TBD	5	KFI, Los Angeles	640	WOI, Ames, IA (4) WAIU, Columbus, OH (2)
650	Clear	TBD	3	WSM, Nashville	890	KPCB, Seattle (5)
660	Clear	TBD	1	WEAF, New York	610	WAAW, Omaha (4)
670	Clear	TBD	4	WMAQ, Chicago	670	<i>none</i>
680	Clear	TBD	5	KPO, San Francisco	710	KFEQ, St. Joseph, MO (4) WPTF, Raleigh (3)
690	Clear		Canada	CFRB, Toronto		CJ CJ, Calgary
700	Clear	TBD	2	WLW, Cincinnati	700	<i>none</i>
710	Clear	TBD	1	WOR, New York	710	KMPC, Los Angeles (5)
720	Clear	TBD	4	WGN/(WLIB), Chicago	720	<i>none</i>
730	Clear		Canada	CKAC, Montreal		CKWX, Vancouver
740	Clear	TBD	3	WSB, Atlanta	630	KMMJ, Clay Center, NE (4)
750	Clear	TBD	2	WJR, Detroit	680	<i>none</i>
760	Regional	1000	—	WJZ, New York	660	WEW, St. Louis KVI, Tacoma
770	Clear	TBD	4	WBBM/(WJBT), Chicago	770	<i>none</i>
				KFAB, Lincoln, NB	940	
780	Regional	1000	—	—	—	6 U.S. stations 3 Canadian stations
790	Clear	TBD	5	WGY, Schenectady (1)	790	KGO, San Francisco (Oakland) (5)
800	Clear	TBD	3	WFAA, Dallas	550	<i>none</i>
				WBAP, Ft. Worth	600	
810	Clear	TBD	4	WCCO, Minneapolis-St. Paul	740	WPCH, New York (1)
820	Clear	TBD	2	WHAS, Louisville	930	<i>none</i>
830	Clear	TBD	5	KOA, Denver	920	WRUF, Gainesville, FL (3) WHDH, Boston (1)

840	Clear		Canada	CFCA/CNRT, Toronto		
850	Clear	TBD	3	WWL, New Orleans	1220	<i>none</i>
				KWKH, Shreveport	760	
860	Clear	TBD	1	WABC/(WBOQ), New York	970	WHB, Kansas City (4) KMO, Tacoma (5)
870	Clear	TBD	4	WLS, Chicago	870	<i>none</i>
				WENR/(WBCN), Chicago	1040	
880	Regional	1000	—	—	—	7 U.S. stations 7 Canadian stations
890	Regional	1000	—	—	—	9 U.S. stations
900	Regional	1000	—	—	—	7 U.S. stations
910	Clear		Canada	CFCF/CHYC, Montreal		CKY, Winnipeg CJAT, Trail, BC
920	Regional	1000	—	—	—	6 U.S. stations
930	Regional	1000	—	—	—	8 U.S. stations 5 Canadian stations
940	Regional	1000	—	—	—	6 U.S. stations
950	Regional	1000	—	—	—	4 U.S. stations
960	Clear	—	Canada	CFRB, Toronto		CFRN, Edmonton
970	Clear	TBD	5	KJR, Seattle	970	WCFL, Chicago (4)
980	Clear	TBD	2	KDKA, Pittsburgh	960	<i>none</i>
990	Clear	TBD	1	WBZ, Springfield, MA / WBZA, Boston	910	<i>none</i>
1000	Clear	TBD	4	WHO, Des Moines	560	KFVD, Los Angeles (5)
				WOC, Davenport	800	
1010	Regional	1000	—	—	—	7 U.S. stations 2 Canadian stations
1020	Clear	TBD	2	KYW/(KFKX), Chicago (4)	570	WRAX, Philadelphia (2)
1030	Clear		Canada	CFCF, Montreal		CNRV, Vancouver
1040	Clear	TBD	3	KRLD, Dallas	650	KTHS, Hot Springs, AR (3) WKAR, East Lansing, MI (2) WMAK, Buffalo (1)
1050	Clear	TBD	5	KNX, Los Angeles	890	KFKB, Milford, KS (4)
1060	Clear	TBD	1	WBAL, Baltimore	1050	WJAG, Norfolk, NB (3) KWJJ, Portland, OR (5)
				WTIC, Hartford	560	
1070	Clear	TBD	2	WTAM/(WEAR), Cleveland	750	KJBS, San Francisco (5) WCAZ, Carthage, IL/ WDZ, Tuscola, IL (4)
1080	Clear	TBD	3	WBT, Charlotte	1160	WMBI / WCBD, Chicago (4)
1090	Clear	TBD	4	KMOX, St. Louis	1000	<i>none</i>
1100	Clear	TBD	1	WLWL, New York	810	KGDM, Stockton, CA (5)
				WPG, Atlantic City, NJ	1100	
1110	Clear	TBD	2	WRVA, Richmond	1180	KSOO, Sioux Falls, SD (4)

1120	Regional	1000	—	—	—	10 U.S. stations 4 Canadian stations
1130	Clear	TBD	5	KSL, Salt Lake City	990	WJJD, Chicago (4) WOV, New York (1)
1140	Clear	TBD	3	WAPI, Birmingham	880	<i>none</i>
				KVOO, Tulsa	860	
1150	Clear	TBD	1	WHAM, Rochester	1070	<i>none</i>
1160	Clear	TBD	4	WOWO, Ft. Wayne	1310	<i>none</i>
				WWVA, Wheeling, WV (2)	580	
1170	Clear	TBD	2	WCAU, Philadelphia	1150	KTNT, Muscatine, IA (4)
1180	Clear	TBD	5	KEX, Portland, OR	1080	WDGY/WHDI, Minneapolis
				KOB, Albuquerque	760	
1190	Clear	TBD	3	WOAI, San Antonio	1070	WICC, Bridgeport, CT (1)
1200	Local	100	—	—	—	48 U.S. stations
1210	Local	100	—	—	—	44 U.S. stations 5 Canadian stations
1220	Regional	1000	—	—	—	6 U.S. stations
1230	Regional	1000	—	—	—	8 U.S. stations
1240	Regional	1000	—	—	—	3 U.S. stations
1250	Regional	1000	—	—	—	12 U.S. stations
1260	Regional	1000	—	—	—	6 U.S. stations
1270	Regional	1000	—	—	—	10 U.S. stations
1280	Regional	1000	—	—	—	6 U.S. stations
1290	Regional	1000	—	—	—	7 U.S. stations
1300	Regional	1000	—	—	—	12 U.S. stations
1310	Local	100	—	—	—	53 U.S. stations
1320	Regional	1000	—	—	—	6 U.S. stations
1330	Regional	1000	—	—	—	5 U.S. stations
1340	Regional	1000	—	—	—	4 U.S. stations
1350	Regional	1000	—	—	—	5 U.S. stations
1360	Regional	1000	—	—	—	8 U.S. stations
1370	Local	100	—	—	—	42 U.S. stations
1380	Regional	1000	—	—	—	4 U.S. stations
1390	Regional	1000	—	—	—	4 U.S. stations
1400	Regional	1000	—	—	—	9 U.S. stations
1410	Regional	1000	—	—	—	11 U.S. stations
1420	Local	100	—	—	—	38 U.S. stations
1430	Regional	1000	—	—	—	7 U.S. stations
1440	Regional	1000	—	—	—	9 U.S. stations
1450	Regional	1000	—	—	—	9 U.S. stations

1460	Super Regional	5000	2	WJSV, Washington, DC	1480	<i>none</i>
			4	KSTP, St. Paul	1360	
1470	Super Regional	5000	3	WLAC/WTNT, Nashville	1330	<i>none</i>
			5	KGA, Spokane	1150	
1480	Super Regional	5000	1	WKBW, Buffalo	1380	<i>none</i>
			3	KFJF, Oklahoma City	1100	
1490	Super Regional	5000	1	WFBL, Syracuse NY	1160	<i>none</i>
			2	WCKY, Cincinnati (Covington, KY)	<i>none</i>	
			4	WHT/WORD/WJAZ, Chicago	var.	
1500	Local	100	—	—	—	31 U.S. stations

General Order resulted in several instances in which two stations were forced to share the same frequency:

- WFAA in Dallas and WBAP in Fort Worth were forced to share a clear channel frequency at 800 kHz. Eventually, both stations also obtained a regional frequency which they also shared. As a result, these two stations operated alternately on two different frequencies for many years.
- WLS and WENR, both Chicago, also had to share a frequency at 870 kHz. This continued until 1959 when ABC purchased both stations.
- WHO in Des Moines and WOC in Davenport were forced to share the single clear channel frequency at 1000 kHz which was allocated for the state of Iowa. Both stations fought the shared allocation and lost. Eventually WHO bought out WOC and consolidated operations in Des Moines.
- KFAB in Lincoln, Nebraska shared the 770 frequency with WBBM in Chicago. To avoid interference KFAB was forced to carry the same network programming as WBBM at night and to synchronize its transmissions.
- WBAL in Baltimore and WTIC in Hartford shared the 1070 frequency.
- WOWO in Fort Wayne and WWVA in Wheeling shared the frequency at 1160 kHz.
- At 850 kHz KWKH in Shreveport and WWL in New Orleans shared the single frequency allocated to Louisiana.

The 790 kHz clear channel frequency was allocated to zone 5, and General Electric's KGO in Oakland received the assignment for this frequency, but GE was also able to use the frequency for its stronger station WGY in Schenectady. The 1020 kHz frequency was assigned to zone 2, but the strongest station licensed on the frequency was KYW in Chicago, not WRAX in Philadelphia; this was resolved when KYW moved to Philadelphia in 1934, forcing WRAX to move to the regional frequency of 920 kHz, sharing time with WPEN which was already there.

## See also

- North American Radio Broadcasting Agreement
- Federal Radio Commission

## External links

- **Actual text of General Order 40 contained in Radio Service Bulletin No. 137, pp. 9–10, August 31, 1928** ([http://www.fcc.gov/ftp/Bureaus/Mass\\_Media/Databases/documents\\_collection/radio\\_service\\_bulletins/280831.pdf](http://www.fcc.gov/ftp/Bureaus/Mass_Media/Databases/documents_collection/radio_service_bulletins/280831.pdf))
- *Behind the Clear Channel Matter*, a series of six articles about the history of clear-channel AM radio stations, by Mark Durenberger (<http://www.olderadio.com/archives/general/clears.htm>)

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Categories: Radio stations in the United States | United States communications regulation

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General Order 40 issued 8/30/28

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REPORT OF THE FEDERAL RADIO COMMISSION

~~not an absolute standard when applied to broadcasting stations.~~ Since the number of channels is limited and the number of persons desiring to broadcast is far greater than can be accommodated, the commission must determine from among the applicants before it which of them will, if licensed, best serve the public. In a measure, perhaps, all of them give more or less service. Those who give the least, however, must be sacrificed for those who give the most. The emphasis must be first and foremost on the interest, the convenience, and the necessity of the listening public, and not on the interest, convenience, or necessity of the individual broadcaster or the advertiser.

APPENDIX G (1)

List of radio broadcasting stations, arranged by States, showing assignment made September 10, 1928, and under new allocation effective November 11, 1928. (Revised by appended statements marked G-1a and G-1b)

FEDERAL RADIO COMMISSION,  
Washington, D. C., September 10, 1928.

List of radio broadcasting stations, arranged according to States, showing their power and frequencies as of September 1, 1928, and the new allocation so that comparisons can be made easily. This new allocation is to be effective at 7 a. m., eastern standard time, on November 11, 1928.

List of radio broadcasting stations, arranged by States, etc.

REPORT OF THE FEDERAL RADIO COMMISSION 171

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>ALABAMA</b>								
WAPI	Auburn	Alabama Polytechnic Institute	WIAX	1,000	800	WIAX	1,000	1,140
WBRC	Birmingham	Birmingham Broadcasting Co.		350	990		600	930
WKBC	do	H. L. Ansley		10	1,370		10	1,310
WJBY	Gadsden	Electric Construction Co.		80	1,280		80	1,310
WIBZ	Montgomery	Alexander D. Trum		15	1,300		15	1,500
<b>ALASKA</b>								
KFOU	Anchorage	Anchorage Radio Club		100	870		100	900
KFIU	Juneau	Alaska Electric Light & Power Co.		10	1,380		10	1,310
KGBU	Ketchikan	Alaska Radio Service Co. (Inc.)		500	780		500	610
<b>ARIZONA</b>								
KPKY	Flagstaff	Mary M. Costigan		100	1,400		100	1,420
KPAD	Phoenix	Electrical Equipment Co.		500	920		500	920
KPOB	do	Nielsen Radio Supply Co.		120	1,230		100	1,310
KOAR	Tucson	Citizen Publishing Co.		100	1,290		100	1,370
KPJM	Prescott	Frank Willborn		15	1,400		15	1,380
<b>ARKANSAS</b>								
KLCN	Blytheville	Daily Courier News		50	1,050		50	1,280
KUOA	Fayetteville	University of Arkansas		1,000	1,010	KLRA	1,000	1,260
KTHS	Hot Springs	Arlington Hotel Co.	WBAP	1,000	600	WBAP	1,000	800
KLRA	Little Rock	Arkansas Broadcasting Co.		50	1,470	KUOA	1,000	1,230
KGHI	do	Baran Bible Class		15	1,150		15	1,500
KGIF	do	First Church of the Nazarens		200	1,080		100	1,370
KGHG	McGehee	Charles W. McCollum		80	1,340		80	1,370
KFPW	Sulphur Springs	Rev. Lennie W. Stewart		50	1,140		50	1,040

1 Construction permit for 5,000 watts issued.  
 2 Construction permit for 100 watts, daytime only, issued.  
 3 Daytime.



List of radio broadcasting stations, arranged by States, etc.—Continued

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REPORT OF THE FEDERAL RADIO COMMISSION

Station	Location	Owner	Assignments							
			Former			New				
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles		
CALIFORNIA										
KFWO	Avalon	Lawrence Mett		Watts	1,000	KWTC	100	1,000		
KBE	Berkeley	First Congregational Church of Berkeley	KEM	100	1,000	KFQU-KGTT	100	1,000		
KBJK	Beverly Hills	R. S. MacMillan (L44)	KFSO	200	1,100	KFON	500	1,200		
KBLW	Burbank	Earl L. Waite		500	1,310	KNRC	500	1,200		
KBYD	Culver City	W. F. & O. I. McWhinnie	KGER	200	1,300		100	1,200		
KCBN	El Centro	Irey & Bowles		100	1,330		100	1,300		
KCMJ	Fresno	The Fresno Bee		50	820		100	1,000		
KGFH	Glendale	Fred Robinson	KGEF	200	1,140		200	1,000		
KEM	Hayward	Leon P. Fanny	KRE	100	1,200	KJBS	100	1,000		
KFQZ	Hollywood	Taft Radio & Broadcasting Co.		200	1,200		500	1,000		
KFWB	do	Warner Bros. Broadcasting Corporation		1,000	800	KPSN	1,000	1,000		
KNX	do	Western Broadcasting Co.		500	800		5,000	1,000		
KMTR	do	KMTR Radio Corporation		600	800	KPLA	1,000	1,000		
KFQU	Holy City	W. H. Riker	KGTT	100	1,300	KRE-KGTT	100	1,000		
KMIC	Inglewood	James E. Fouch		200	1,340	KFBG	100	1,100		
KGER	Long Beach	C. Marvin Debyn	KPYD	100	1,200		100	1,200		
KFON	do	Nichols & Warner (Inc.)		1,000	1,200	KKJK	1,000	1,000		
KFI	Los Angeles	Earle C. Anthony (Inc.)		1,500	600		500	1,000		
KFSO	Los Angeles	Echo Park Evangelical Association	KKJK	500	1,100	KMIC	500	1,100		
KGEF	do	Trinity Methodist Church	KGFH	1,000	1,100	KTHI	1,000	1,000		
KGFI	do	Ben G. McElshian		100	1,410		100	1,000		
KHI	do	Don Lee (Inc.)		1,000	750		1,000	1,000		
KTHI	do	Bible Institute of Los Angeles	KPBE	1,000	1,000	EGEF	1,000	1,000		
KPLA	do	Pacific Development Radio Co.		500	1,040	KMTR	1,000	1,000		
KLX	Oakland	Tribune Publishing Co.		500	800	KTAB	500	1,200		
KGO	do	General Electric Co.		75,000	780		10,000	700		
KTAB	do	Associated Broadcasters		500	1,070	KLX	500	1,200		
KFWM	do	Oakland Educational Society		500	1,270	KFWL	500	1,000		
KIA	do	Warner Brothers	KJBS	250	1,220	KWG	100	1,000		
KFWO	Ontario	James E. Fouch	EGB	100	1,710	KPPC	100	1,000		
KPPC	Pasadena	Pasadena Presbyterian Church	KPSN	50	900	KFWC	50	1,000		
KPSN	do	Pasadena Star-News Publishing Co.	KPPC	1,000	950	KFWB	1,000	500		
KFSD	San Diego	African Radio Corporation		500	800		500	800		

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KGB	do	Southwestern Broadcasting Corporation	KFWO	1,200	1,200		200	1,200	
KFRC	San Francisco	Don Lee (Inc.)		1,000	800		1,000	800	
KGTT	do	Glad Tidings Temple and Bible Insti- tute	KFQU	50	1,300	KFQU-KRE	50	1,500	
KFWI	do	Radio Entertainments (Inc.)		500	1,120	KFWM	500	900	
KJBS	do	J. Brunton & Sons Co.	KLS	100	1,200	KZM	100	1,070	
KPO	do	Hale Bros. & Chronicle		1,000	710		5,000	900	
KYA	do	Pacific Broadcasting Corporation		1,000	850		1,000	1,120	
KYBK	Sacramento	Kimball-Upton Co.	KTBI	100	1,080		100	1,110	
KQW	San Jose	First Baptist Church		500	1,010		500	1,010	
KWTO	Santa Ana	Pacific Broadcasting Federation I.	KSHB	100	1,100	KFWO	100	1,500	
KPCR	Santa Barbara	Santa Barbara Broadcasting Co.		100	1,420		100	1,500	
KSMR	Santa Maria	Santa Maria Valley B. E. Co.	KWTC	100	1,100		100	1,200	
KNRC	Santa Monica	Pickwick Broadcasting Corporation		500	300	KELW	500	700	
KWG	Stockton	Portable Wireless Tel. Co.		100	370	KLS	100	1,400	
KCDM	do	E. F. Puffer		10	1,300		50	1,100	
COLORADO									
KFUM	Colorado Springs	W. D. Corley	KFBU	1,000	600	KOW	1,000	1,200	
KPOF	Denver	Pillar of Fire (Inc.)		500	1,400	KFA	500	1,000	
KOW	do	Associated Industries (Inc.) Broadcas- ting	KGEW	200	1,570	KFUM	500	1,200	
KPOP	do	Fitzsimons General Hospital	KFEL	100	1,400	KFXJ	100	1,500	
KFEL	do	E. P. O'Fallon (Inc.)	KPUP	200	1,120	KFXF	200	1,000	
KFXJ	Edgewater	R. G. Howell	KGHF	50	1,400	KPOP	50	1,000	
KGEW	Fort Morgan	City of Fort Morgan	KOW	100	1,570	KGEK	100	1,000	
KFA	Greeley	Colorado State Teachers' College	KFA	50	1,200	KPOF	500	1,010	
KFA	Gunnison	Western State College of Colorado	KFA	50	1,200		50	1,120	
KFXF	Denver	Pikes Peak Broadcasting Co.		200	1,000	KFEL	200	1,120	
KOA	do	General Electric Co.		5,000	220		12,500	900	
KLZ	DuPont	Reynolds Radio Co.		1,000	500		1,000	900	
KGDF	Pueblo	Boy Scouts of America (Pueblo Council)		10	1,300		10	1,100	
KGHF	do	Ritche & Fitch	KFXJ	200	1,400		200	1,100	
KGEK	Yuma	Becker Electrical Equipment Co.		200	1,100	KGEW	200	1,100	
CONNECTICUT									
WTIC	Easton	Bridgeport Broadcasting Station (Inc.)		500	1,100	WBAL	500	900	
WTIC	Hartford	Travelers Insurance Co.	WCAO	500	800	WBAL	500	1,100	
WDRG	New Haven	Deeble Radio Corporation		500	1,000	WCAC	500	900	
WCAC	Mansfield	Connecticut Agricultural College	WTIC	500	800	WDRG	500	900	
DELAWARE									
WDEL	Wilmington	WDEL (Inc.)		200	1,010	WMAL	200	900	

1 Construction permit for 5,000 watts issued.  
 2 Daytime.  
 3 Limited time.  
 4 Limited to 12 p. m.

5 Construction permit for 50,000 watts issued.  
 6 Construction permit for 10,000 watts issued.  
 7 1,000 watts in daytime only.  
 8 200 watts in daytime only.

18591-28-12

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List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignment						
			Former			New			
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles	
DISTRICT OF COLUMBIA									
WRBF	Washington	American Broadcasting Co.		150	930			1,270	930
WMAL	do	M. A. Leno Co.		600	1,240	WDEL		930	930
WRC	do	Radio Corporation of America		600	930			930	930
FLORIDA									
WFLA-YSUN	Clearwater	Clearwater Chamber of Commerce and St. Petersburg Chamber of Commerce		750	880			1,080	880
WRUF	Gainesville	University of Florida (construction permit only)	WTPF	5,000	1,430	KFIP		3,040	1,430
WTAX	Jacksonville	City of Jacksonville	WAPI	1,000	880	WAPI		1,000	1,140
WMBL	Lakeland	Bonford's Radio Studio		100	1,310			100	1,310
WQAM	Miami	Electrical Equipment Co.	WMBF	750	780	WIOD		750	1,240
WMBF	Miami Beach	Fleetwood Hotel Corporation	WQAM	600	780			600	880
WIOD	do	Isle of Dreams Broadcasting Co.		1,000	1,310	WQAM		1,000	1,240
WDBO	Orlando	Kollins College (Inc.)		1,300	1,040	WDAE		1,000	830
WCOA	Panama	City of Panama		500	1,200			500	1,130
WJBB	Barasota	Financial Journal (Inc.)		250	1,280			300	1,370
WDAE	Tampa	Tampa Publishing Co.		500	1,130	WDBO		1,000	830
WMBH	do	F. J. Reynolds		100	1,190			300	1,310
GEORGIA									
WGST	Atlanta	Georgia School of Technology	WMAZ	500	1,110	WMAZ		500	880
WEB	do	Atlanta Journal Co.		1,000	830			1,000	740
WTHS	do	Atlanta Technical High School		200	1,330	WRBL		100	1,310
WMAZ	Macon	Mercer University	WGST	800	1,140	WGST		500	880
WRBL	Columbus	Roy E. Martin		50	1,170			50	1,200
WRBL	Tifton	Kent's furniture and music store		20	1,350	WTHS		30	1,310
WTFI	Toccoa	Toccoa Falls Institute		600	1,430			500	1,450
HAWAII									
KGU	Honolulu	Merion A. Mulrony		500	1,110			500	840
KOHB	do	Radio Sales Co.		300	1,330			300	1,320

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Call Letters	City	Station Name	Power	Frequency	Call Letters	Power	Frequency
KFAU	Boise City	Independent school district of Boise City	2,000	1,060	KDYL	1,000	1,280
KFXD	Jerome	Service Radio Co.	11 1/2	1,470		50	1,420
KPEY	Kellogg	Unioo High School	10	1,200		10	1,870
KBEI	Pocatello	KBEI Broadcasting Association	250	900		250	1,220
ILLINOIS							
WMAQ	Chicago	Chicago Daily News (Inc.)	5,000	670		5,000	670
WMBI	do	Moody Bible Institute	5,000	1,140	WOWO-KTNT-WCBD	5,000	1,140
WORD	Bethvale	Peoples Pulpit Association	4,000	1,100	WIAZ-WBT-WIBO	1,000	1,450
WCAZ	Carthage	Carthage College	50	1,200	WDZ	100	1,070
KPKX-KYW	Chicago	Washington Electric & Manufacturing Co.	2,500	570		5,000	1,000
WAAP	do	Drivers Journal Publishing Co.	500	770	WJJD-WRM	1,000	940
WCFL	do	Chicago Federation of Labor	1,500	620	WCBW-WBSC	100	1,210
WEDC	do	Emil Denmark (Inc.)	100	1,240	WLS	5,000	870
WENR-WBCN	do	Great Lakes Radio Broadcasting Co.	5,000	5,040	WJKB-WPCC	500	1,200
WOES	do	Oak Leaves Broadcasting Corporation	500	1,240	WEHR-WCLS-WKBB-WEBI	100	1,200
WHFC	do	Goodson & Wilson (Inc.)	100	1,200			
WJBT	See WBBM-WJBT				WEHS-WCLS-WEBB-WHFC	50	1,210
WKBI	Chicago	Fred Sobosowell			WCRW	500	1,240
WPCC	do	North Shore Congregational Church	500	1,240	WJES	100	1,210
WBSC	do	World Battery Co.	100	1,200	WCBD	5,000	570
WLS	Crete	Sears, Roebuck & Co.	100	1,130		100	1,120
WBAO	Deerzot	Jes. Milklin University	250	1,410	WJBC	100	1,200
WJBL	do	Gushard Dry Goods Co.	5,000	950	WIAZ-WHT-WORD	5,000	1,450
WIBO	Desplains	WIBO Broadcasting (Inc.)	15,000	720	WEDC-WBSC	100	1,210
WGN-WTAS-WLH	Chicago	Tribune Co.	100	1,240	WHFC-WCLS-WKBB-WEBI	100	1,210
WCRW	do	Clinton R. White	100	1,200	WLBO	100	1,210
WEHS	Evanson	Victor C. Carlson	100	1,200	WES	100	1,210
WKBB	Galesburg	Fernand N. Nelson	100	1,200	KFAB	10,000	770
WLBO	do	Fred A. Trebbe, Jr.	100	1,200	WJVS	50	1,210
WBBM-WJBT	Chicago	Atlas Investment Co.	4,000	770	WEHS-WKBB-WEBI-WHFC	100	1,210
WEBQ	Harrisburg	Tate Radio Co.	15	1,340	WEHS-WCLS-WEBI-WHFC	100	1,210
WCLS	Joliet	WCLS (Inc.)	100	1,200	WJBL	100	1,200
WKBB	do	Sanders Bros. (Inc.)	100	1,200	WFL-WRM	1,000	620
WJBC	La Salle	Husmer Furniture Co.	100	1,200			
WJJD	Monmouth	Supreme Lodge of World, Loyal Order of Moose	1,000 15,000	530			

1 Construction permit for 5,000 watts issued. Daytime.

2 Construction permit for 25,000 watts issued. 1,000 watts in daytime only.

3 4,000 watts in daytime only. 100 watts in daytime only.

4 One-fourth time only.

List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>ILLINOIS—continued</b>								
WIAZ	Mount Prospect	Zenith Radio Corporation	WMBI	5,000	1,160	WORD-WIBO-WHT	5,000	1,400
WMBD	Peoria Heights	Peoria Heights Radio Laboratory		250	1,400	WTAD	500	1,440
WTAD	Quincy	Illinois Stock Medicine Broadcasting Corporation		250	1,370	WMBD	500	1,440
				500		WHDI-WDGY-KFEQ	500	1,410
KFLV	Rockford	Swedish Evangelical Mission Church		100	1,190		100	1,210
WHBF	Rock Island	Beardsley Specialty Co.		100	1,350		100	1,210
WCBS	Springfield	Dewing & Mosher		100	1,480	WTAX	100	1,210
				250		WCBS	50	1,210
WTAX	Streator	Williams Hardware Co.		50	1,210	WJAZ-WORD-WIBO	5,000	1,480
WHT	Dearfield	Radiohone Broadcasting Corporation	WIBO	5,000	680	WCAZ	100	1,070
WDZ	Tuscola	James L. Bush		100	1,080			
WRM	Urbana	University of Illinois	WBAA	500	1,100	WJFD-WOFL	500	680
WCBD	Zion	Wilbur Glenn Voliva	WLS	5,000	670	WOWO-KTNT-WMBI	5,000	1,160
<b>INDIANA</b>								
WHBU	Anderson	Citizens Bank		15	1,300		100	1,210
WOMA	Culver	Culver Military Academy	WOOD	500	1,150	WBAA-WBBF	500	1,400
WQBF	Evansville	Evansville on the Air (Inc.)		250	1,370	WOS-KFRU	500	680
WCWK	Fort Wayne	Chester W. Koon		100	1,400		500	1,320
WOWO	do	Matt Auto Supply Co.		2,500	1,310	KTNT-WOBD-WMBI	5,000	1,160
				25,000		WRS-WPCO	500	1,300
WJKB	Gary	Johnson Kennedy Radio Corporation	WBBC	500	1,200	WEAF	100	1,300
WWAE	Hammond	Dr. George F. Courrier	WCLO-WIBC	500	1,200			
				OP		WSBT	1,000	500
WPRM	Indianapolis	Indianapolis Power & Light Co.	WTAS	1,000	1,000	WBAA-WCMA	500	1,400
WBBF	do	Nobis Butler Watson		250	1,180	WLBC	50	1,210
WJAK	Kokomo	J. A. Kautz (Kokomo Tribune)		50	1,300	WCMA-WBBF	500	1,300
WBAA	Lafayette	Purdue University	WRM	500	1,180	WWAE	100	1,300
WRAF	La Porte	Radio Club (Inc.)		100	1,440	WJAK	50	1,210
WLBC	Muncie	Donald A. Burton		50	1,470	WFBM	500	680
WSBT	South Bend	South Bend Tribune	WEAR-WTAM	500	780			

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WHOW	Terre Haute	Banks of Wabash Broadcasting Association	100	1,440		100	1,440
WRBO	Vandalia	Immanuel Lutheran Church	200	1,300		200	1,300
WKBY	Brookville	Knorr Battery & Electric Co.	100	1,370		100	1,300
IOWA							
WOL	Ames	Iowa State College	2,000	1,120	WHO <sup>4</sup>	5,000	1,025
KFQQ	Boone	Boone Biblical College	10	1,430		10	1,310
KWOR	Cedar Rapids	Harry F. Paar	300	1,300	WJAM	100	1,310
KBO	Clarinda	Berry Seed Co.	300	1,330		1,000	1,350
KOIL	Council Bluffs	Mons. Motor Oil Co.	5,000	940	KFAB	1,000	1,380
WOC	Davenport	Palmer School of Chiropractic	5,000	800		4,000	970
KGCA	Decorah	Charles W. Greenlay	10	1,210	KWLC	50	1,370
KWLC	do	Luther College	50	1,210	KGCA <sup>1</sup>	50	1,370
WHO	Des Moines	Bankers Life Co.	5,000	500	WOI <sup>1</sup>	5,000	1,650
KFIY	Fort Dodge	C. S. Tunwall	100	1,290	KWCR	100	1,310
WSUL	Iowa City	State University of Iowa	2,000	1,600	WOC <sup>1</sup>	500	970
KFJB	Marshalltown	Marshall Electric Co.	100	1,210	WJAM	100	1,300
KTNT	Muscataine	Norman Baker	2,000	1,170	WOWO-WCBD-WMBL	5,000	1,100
WIAS	Ottumwa	Poling Electric Co.	100	1,030	KICK <sup>1</sup>	100	500
KLOK	Red Oak	Atlantic Automobile Co., Red Oak Radio Corporation (Successor)	100	1,030	WIAS	100	500
KFNZ	Shenandoah	Henry Field Seed Co.	2,000	1,080	WNAX-KUSD	500	800
KMA	do	May Seed & Nursery Co.	1,000	700	KGBZ	500	800
KBOJ	Sioux City	Parkins Bros. Co.	1,000	1,230	WTAQ	1,000	1,230
WJAM	Waterloo	Waterloo Broadcasting Co.	250	1,300	KFJB	100	1,300
KANSAS							
KGON	Concordia	Concordia Broadcasting Co.	50	1,440		50	1,420
WLBZ	Kansas City	Everett L. Dillard	50	1,430		50	1,300
KFKU	Lawrence	University of Kansas	500	1,180	WRBN	500	1,070
WRBN	do	Jenny Wren Co.	750	1,180	KFKU	500	1,070
KBAC	Manhattan	Kansas State Agriculture College	500	600	KFKU-WREN	500	1,070
KFKB	Milford	John H. Brinkley, M. D.	1,500	1,200		5,000	1,180
WHDW	Topeka	G. L. Carroll	250	1,470	KFH	1,000	1,300
KFH	Wichita	Hotel Lessen	500	1,230	WHDW	500	1,300
KENTUCKY							
WFIW	Hopkinsville	Arms Mills (Inc.)	1,000	1,150		1,000	900
WHAS	Louisville	Courier-Journal and the Louisville Times Co.	1,000	900	WWVA	2,000	1,000
WLAP	Ottawa	American Broadcasting Corporation of Kentucky	20	1,170		20	1,300

<sup>1</sup> Construction permit for 5,000 watts issued.  
<sup>2</sup> Daytime.  
<sup>3</sup> Limited time.

<sup>1</sup> Construction permit for 10,000 watts issued.  
<sup>2</sup> 1,000 watts daytime only.  
<sup>3</sup> Construction permit for 500 watts issued; 100 watts daytime only.

List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>LOUISIANA</b>								
EGGH	Cedar Grove	Bates Radio & Electric Co.	KWEA	50	1,410	KWEA	50	1,370
KWEH	Keatonwood	W. E. Henderson	KMA	2,500	700	WVL	5,000	550
WDSU	New Orleans	Jos. E. Ubalt		250	1,320		1,000	1,370
WABZ	do	Coliseum Plaza Baptist Church	WJBW	60	1,200	WJBW	50	1,200
WFO	do	Valdemer Jensen		100	1,140		100	1,370
WJRW	do	Chas. C. Carlson, jr.	WABZ	30	1,300	WABZ	30	1,300
WGBT	do	First Baptist Church		60	1,100		30	1,430
WSMB	do	Saenger Theatres (Inc.), Maison Blanche Co.		750	1,010		750	1,430
WVL	do	Loyola University		500	1,230	KWEH	1,500	330
KFDX	Shreveport	First Baptist Church		250	1,270	KRMD	100	1,000
KRMD	do	Robt. M. Deau		50	1,300	KFDX	50	1,200
KWEA	do	William B. Antony	EGGH	250	1,410	KGGH	100	1,370
KSBA	do	W. G. Patterson		1,000	1,130		1,000	1,470
<b>MAINE</b>								
WABI	Bangor	First Universalist Church (Sunday)		100	770		100	1,300
WLBS	Dover-Foxcroft	Thompson L. Guarnsey		250	1,440		250	570
WCRH	Portland	Congress Square Hotel Co.		500	1,400		500	95
<b>MARYLAND</b>								
WCAO	Baltimore	Monumental Radio (Inc.)	WFBB	250	1,230		250	300
WCBM	do	Hotel Chateau		100	1,330		100	1,370
WFBB	do	Baltimore Radio Show (Inc.)	WCAO	250	1,230		250	1,120
WBAL	do	Consolidated Gas Electric Light & Power Co.		5,000	1,050	WTIC	5,000	1,000
WBMD	Salisbury	Tom F. Little		100	1,130		100	1,310
<b>MASSACHUSETTS</b>								
WBZA	Boston	Westinghouse Electric & Manufacturing Co.		500	600	WBZ	500	300

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WBLS-WNAO	do	The Shepard Store		400	600		500	1,200	
WEEL	do	Edison Electric Illuminating Co.		500	600		500	1,500	
WMES	do	Massachusetts Educational Society	WLOE	50	1,420		50	1,500	
WSSH	do	Tramont Temple Baptist Church	WBET	100	1,040		100	1,420	
WLOE	Chelsea	William S. Pote	WMES	100	1,420		100	1,500	
WMAF	South Dartmouth	Round Hills Radio Corporation		500	700		500	1,320	
WSAR	Fall River	Doughty & Welch Electric Co. (Inc.)		250	1,410		250	1,450	
WPS	Gloucester	Matheson Radio Co. (Inc.)		100	1,010		100	1,200	
WLKX	Lexington	Lexington Air Station		15	1,250		50	1,420	
WBET	Boston	Boston Transcript Co.	WSSH	500	1,040		500	1,320	
WNBH	New Bedford	New Bedford Broadcasting Co.		250	1,150		250	1,450	
WBZ	East Springfield	Westinghouse Electric & Manufacturing Co.		15,000	800		15,000	900	
WBDE	Webster	K & B. Electric Co.		100	1,310	WPS	100	1,200	
WBSO	Wellesley Hills	Babson's Statistical Organization (Inc.)		100	700		100	700	
WTAG	Worcester	Worcester Telegram Publishing Co. (Inc.)		250	580		250	500	
MICHIGAN									
WKBP	Battle Creek	Enquirer-News Co.		50	1,410		50	1,400	
WBEC	Bay City	World's Star Knitting Co.	WFDF	250	1,100		500	1,410	
WEMO	Berrian Springs	Emmanuel Missionary Colony	WCFL	1,000	620		1,000	600	
WJL	Detroit	Detroit News		1,000	850		1,000	820	
WMBC	do	Michigan Broadcasting Co. (Inc.)		100	1,320	WAFD	100	1,450	
WBMH	do	Braun's Music House		100	1,420	WAGM	100	1,310	
WAFD	do	Albert B. Parfit Co.		100	1,300	WMHC	100	1,450	
WKAR	East Lansing	Michigan State College	WGHP	500	1,050		500	1,040	
WFDF	Flint	Frank D. Fallain	WBKC	100	1,100	WMPC	100	1,510	
WGHP	Fraser	George Harrison Phelps (Inc.)	WKAR	750	1,050		750	1,220	
WOOD	Grand Rapids	Walter B. Stiles (Inc.)	WCMA	500	1,150	WASH	500	1,270	
WASH	do	Baxter Laundries (Inc.)		250	1,170	WOOD	250	1,270	
WIBM	Jackson	C. L. Carrell		100	1,400		100	1,370	
WMPC	Lapeer	First Methodist Episcopal Church		30	1,280	WFDF	30	1,110	
WBZ	Ludington	K. L. Ashbacher		15	1,300		50	1,500	
WJR-WCX	Pontiac	WJR (Inc.)		4,000	680	WBMH	50	1,310	
WAGM	Royal Oak	Robert L. Miller		50	1,330		50	1,370	
WJBE	Ypsilanti	Ernest F. Goodwin		15	1,500		50	1,370	
MINNESOTA									
KGDE	Barrett	Jared Drug Co.		50	1,460		50	1,200	
WYBJ	Collegeville	St. John's University		100	1,100		100	1,420	
WRHM	Fridley	Rosedale Hospital Co. (Inc.)		1,000	1,150	WCAL-KFMX-WLB	1,000	1,200	
KOPK	Hallock	Kittson County Enterprise		50	1,240		50	1,200	
WDQY	Minneapolis	Dr. George W. Young	WCAL	500	1,050	WBDI-KFLV-KFEQ	500	1,410	
WBDI	do	W. Dunwoody Industrial Institute	WLB	500	1,220	WDQY-KFEQ-KFLV	500	1,410	
WLB-WGMB	do	University of Minnesota	WBDI	500	1,220	WCAL-KFMX-WBHM	1,000	1,400	
WCCO	do	Westburn-Crosby Co.		15,000	740		10,000	810	

1 Construction permit for 5,000 watts issued.  
 2 Daytime.  
 3 Limited time.  
 4 1,000 watts in daytime only.

5 500 watts in daytime only.  
 6 Summer.  
 7 7,000 watts in daytime only.



List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>MINNESOTA—contd.</b>								
KFMX	Northfield	Carlton College		Watts	1,370	WCAL-WRHM-WLB	1,000	1,360
WCAL	do	St. Olaf College	WDGY	800	1,000	KFMX-WRHM-WLB	1,000	1,100
KSTP	Westcott	National Battery Broadcasting Co.		5,000	1,800		10,000	1,100
<b>MISSISSIPPI</b>								
WCOO	Columbus	Crystal Oil Co.		800	1,300		800	800
WRBQ	Oreaville	J. Paul Scully		100	1,000		100	1,100
WCOM	Gulfport	Gulf Coast Music Co.		15	1,250		15	1,100
WRBJ	Hattiesburg	Woodruff Furniture Co.		10	1,300		10	1,100
WQRC	Utica	Utica Chamber of Commerce (Inc.)		225	1,800		100	1,100
<b>MISSOURI</b>								
KFVS	Cape Girardeau	Hirsch Battery & Radio Co.		50	1,840	WERQ	50	1,200
KFRU	Columbia	Stephens College		800	1,300	WOS-WGBF	800	1,200
KMBC-KLDS	Independence	Midland Broadcasting Co.		1,600	1,110	WHB	1,000	1,200
WOB	Jefferson City	State Marketing Bureau		800	710	KFRU-WGBF	800	1,100
WMBH	Joplin	Edwin D. Aber		100	1,470		100	1,100
KWEC	Kansas City	Wilson Duncan Broadcasting Co.		100	1,250		100	1,100
WDAF	do	Kansas City Star Co.		1,000	810	WQQ	1,000	1,100
WHB	do	Sweeney Automobile School Co.	WQQ	800	800	EMBC-KLDS	1,000	1,100
WQQ	do	Unity School of Christianity	WHB	500	800	WDAF	1,000	1,100
KFKZ	Kirksville	Northeast Missouri State Teachers College		15	1,300		5	1,200
KFEQ	St. Joseph	Scroggin & Co. Bank		1,000	1,300	WHDI-WDGY-KPLV	500	1,400
KFUO	St. Louis	Concordia Theological Seminary	KSD	1,000	500	KSD	500	1,100
KOBX	St. Joseph	Foster-Hall Tire Co.		100	1,040		100	1,100
KMOX	St. Louis	Voice of St. Louis (Inc.)		5,000	1,800		5,000	1,200
KWK	do	Greater St. Louis Broadcasting Corporation	WMAY	1,000	1,200	WIL	1,000	1,200
KWFF	do	St. Louis Truth Center (Inc.)		100	1,400	WMAY	100	1,300
KSD	do	Fulton Publishing Co.	KFUO	800	800	KFUO	800	1,100
WVW	do	St. Louis University		1,800	800		1,000	1,100

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Call Letters	City	Station Name	Power (Watts)	Class	Frequency	Notes
WL	do	Missouri Broadcasting Co.	300	1,125	KWK	
WMAY	do	Kingdhighway Presbyterian Church	100	1,285	KFWF	
<b>MONTANA</b>						
KOHL	Billings	Northwestern Auto Supply Co. (Inc.)	250	1,350		
KFBB	Butte	F. A. Buttrey Co.	50	1,000		
KOBS	Kalnepall	Flathead Broadcasting Association	100	1,020		
KUOM	Missoula	State University of Montana	500	680	KHQ	
KGHD	do	Elmore-Nash Broadcasting Corporation	15	1,280		
KGOX	Vida	First State Bank of Vida	10	1,280		
<b>NEBRASKA</b>						
KMMJ	Clay Center	M. M. Johnson Co.	250	1,050	WJAG	
KFOR	Lincoln	Howard A. Shuman	100	1,380		
KFAB	do	Nebraska Buick Auto Co.	6,000	940	KOIL	
WCAJ	do	Nebraska Wesleyan University	1,500	1,700		
WJAG	Norfolk	Norfolk Daily News	1,250	1,050	KMMJ	
WAAW	Omaha	Omaha Grain Exchange	1,500	680		
WOW	do	WOW Life Insurance Association	1,000	1,010		
KGFV	Ravenna	Otto F. Sothman	10	1,010		
KGBZ*	York	Federal Live Stock Remedy Co.	100	1,410		
<b>NEW HAMPSHIRE</b>						
WEAV	Laconia	Laconia Radio Club	50	1,340		
WBRL	Tilton	Booth Radio Laboratories	300	1,200	WICC	
<b>NEW JERSEY</b>						
WCAP	Asbury Park	Radio Industries Broadcasting Co.	1,500	1,250	WCAM-WOAX	
WPG	Atlantic City	Municipality of Atlantic City	5,000	1,100	WLWL	
WCAM	Camden	City of Camden	500	1,340	WCAP-WOAX	
WHAP	Carlstadt	See New York.				
WCDA	Cliffside Park	See New York.				
WPAP-WQAO	do	See New York.				
WBNY	Coytesville	See New York.				
WIBS	Elizabeth	New Jersey Broadcasting Corporation	250	1,470	WNJ - WBMS - WAAT - WKBO	
WHPP	Englewood Cliffs	See New York.				
WMCA	Hoboken	See New York.				
WPCH	do	See New York.				
WAAT	Jersey City	Bremser Broadcasting Corporation	300	1,220	WBMS - WIBS - WKBO - WNJ	
WKBO	do	Camith Corporation	250	1,270	WBMS - WAAT - WIBS - WNJ	

\* Daytime.  
 † Limited time.  
 ‡ 1,000 watts in anytime only.  
 § 250 watts in daytime only.  
 ¶ Week days.

\*\* 1,000 watts in daytime only.  
 †† 1,500 watts in daytime only.  
 ‡‡ Stations KGBS, KGBY, KGCN, KGOO, KGDW to combine as KGBZ.  
 §§ Construction permit for 100 watts issued.

List of radio broadcasting stations, arranged by States, etc.—Continued

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Station	Location	Owner	Assignments						
			Former			New			
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles	
NEW JERSEY—contd.									
WLWL	Kearny	See New York.		Watts			Watts		
WOB	Newark	L. Bamberger & Co.		5,000	710		5,000	710	
WAAM	do	WAAM (Inc.)	WGCP-WNJ	250	1,130	WGCP-WODA	500	1,250	
WGCP	do	May Radio Broadcasting Corporation	WAAM-WNJ	250	1,130	WODA-WAAM	250	1,250	
WNJ	do	Harman Lubinsky	WGCP-WAAM	250	1,130	WAAT-WIBS-WKBO-WBMS	250	1,430	
WODA	Paterson	Richard E. O'Dea	WOV	1,000	1,020	WGCP-WAAM	1,000	1,250	
WJBI	Red Bank	Robert S. Johnson	WEAM	100	1,140	WGBB-WINR-WCOH	100	1,210	
WOV	Secaucus	See New York.							
WGAX	Trenton	Franklyn J. Wolff	WCAP	500	1,250	WCAM-WCAP	500	1,250	
WBMS	Union City	WBMS Broadcasting Corporation	WWRL-WCLB	100	1,500	WAAT-WIBS-WKBO-WNJ	100	1,430	
NEW MEXICO									
KOB	State College	New Mexico College of Agriculture	KWSC-KTW	5,000	760	KEX	5,000	1,180	
KGFL	Raton	N. L. Cotter		50	1,350		50	1,210	
KGGM	Albuquerque	Jay Peters		100	1,470		100	1,430	
NEW YORK									
WEBW	Buffalo	Churchill Evangelic Association		5,000	1,390	WKEN	5,000	1,470	
WGBB	Astoria	Gimbal Bros. (Inc.)	WIP-WOO	100	890		100	1,180	
WMBO	Auburn	Radio Service Laboratories		100	1,390		100	1,370	
WINR	Bay Shore	Radiotel Manufacturing Co. (Inc.)	WCDA-WCOH	150	1,420	WJBI-WGBB-WCOH	100	1,210	
WEAF	Baltimore	National Broadcasting Co. (Inc.)		50,000	610		50,000	660	
WBBC	Brooklyn	Brooklyn Broadcasting Corporation	WSOH-WBDA	500	1,230	WCGU-WLTH-WSOH-WBDA	500	1,400	
WLTH	do	Voices of Brooklyn (Inc.)	WBRR-WEBJ	250	1,170	WCGU-WBHC-WBGR-WBDA	250	1,400	
WMBQ	do	Paul J. Gollhofer	WINS-WLBX	100	1,470	WLBX-WCLB-WWRL	100	1,530	
WSOH-WBDA	do	Amateur Radio Specialty Co.	WBBC	500	1,330	WCGU-WLTH-WBBC	500	1,400	
WEER	Buffalo	H. H. Howell		200	1,240		100	1,310	
WGR	do	Federal Radio Corporation		750	900	WSYR	750	550	

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WKEN	do	WKEN (Inc.)	WBVS	750	1,470	WEBW	750	1,470
WBVS	do	Seneca Vocational School	WKEN	50	1,470		50	1,470
WCAD	Canton	St. Lawrence University		500	1,230		500	1,230
WMAC	Cazenovia	Clive B. Meredith		500	1,130	WHEC-WABQ-WOKO	500	1,440
WOGU	Cuney Island	United States Broadcast Corporation	WKBO-WKBQ	500	1,370	WBGH-WSDA-WLTH-WBBC	500	1,420
WNBF	Endicott	Howitt-Wood Radio Co.		50	1,460		50	1,500
WLH	Farmingdale	Joseph J. Lombardi		30	1,200	WHPP-WMRJ	30	1,420
WQBB	Freeport	Harry H. Cartman	WAAT-WEVD	150	1,220	WJBI-WINR-WCOH	100	1,210
WCOH	Greenville	Westchester Broadcasting Corporation	WINR-WCDA	250	1,420	WJBI-WQBB-WINR	100	1,210
WLCI	Ithaca	Lutheran Association of Ithaca		50	1,210		50	1,210
WMRJ	Jamaica	Peter J. Prinz	WHPP	10	1,440	WLBR-WHPP	10	1,420
WOCL	Jamestown	A. E. Newton		25	1,540		25	1,210
WCLB	Long Beach	Arthur Faske	WBMS-WWRL	100	1,500	WMBQ-WLBX-WWRL	100	1,500
WLBX	Long Island City	John N. Bruhy	WIBS-WMBQ	250	1,470	WMBQ-WCLB-WWRL	100	1,500
WMAK	Martinsville	WMAK Broadcasting System (Inc.)		750	530	WFHL	750	900
WQEO	Peekskill	Harold R. Smith		500	1,300	WHEC-WABQ-WMAC	500	1,440
WBNY	New York	Barnchroms Corporation	WMSG-WIAP	500	1,270	WMSG-WCDA-WKBQ	250	1,300
WHN	do	George Schabel	WQAO-WPAP	500	700	WQAO-WPAP-WRNY	250	1,060
WKBQ	do	Standard Cahill Co. (Inc.)	WKBO-WCGU	250	1,570	WBNY-WMSG-WCDA	250	1,300
WNYC	do	Department of Plant and Structures		500	570	WMCA	500	570
WMSG	do	Madison Square Garden Broadcasting Corporation	WHAP-WBNY	500	1,270	WBNY-WCDA-WKBQ	250	1,380
WABC-WBOQ	do	Atlantic Broadcasting Corporation (old assignment for WBOQ, 500 watts and 970 kilocycles shared with WABC)	WBOQ	2,500	670		5,000	800
WHEC-WABO	Rochester	Hickson Electric Co.		250	1,180	WMAC-WOKO	250	1,440
WNBQ	do	Gordon P. Brown		15	1,460		15	1,500
WBBR	Rossville	Peoples Pulpit Association	WEBJ-WLTH	1,000	1,170	WHAP-WEVD-WHAZ	1,000	1,300
WNBZ	Saranac Lake	Smith & Mace		10	1,200		10	1,300
WGY	Schenectady	General Electric Co.		50,000	700		50,000	700
WFBL	Syracuse	Onondaga Co. (Inc.)		750	1,160	WMAK	750	900
WBYR	do	Clive B. Meredith		500	1,020	WGR	500	550
WHAZ	Troy	Rensselaer Polytechnic Institute		500	580	WBBR-WHAP-WEVD	500	1,300
WIBX	Utica	WIBX (Inc.)		150	1,200		500	1,380
WHAM	Rochester	Stromberg-Carlson Telephone manufacturing Co.		5,000	1,070		5,000	1,150
WEVD	Woodhaven	Debs Memorial Radio Fund	WATT-WQBB	500	1,220	WBBR-WHAP-WHAZ	500	1,300
WWRL	Woodside	William H. Rauman	WCLB-WBMS	100	1,500	WMBQ-WLBX-WCLB	100	1,500

1 Daytime.  
 2 Limited time.  
 3 1,000 watts daily.  
 4 1,000 watts in daytime only.  
 5 500 watts in daytime only.

11 10,000 watts in daytime only.  
 12 See General Order No. 42.  
 13 Construction permit for 5,000 watts issued; 5,000 watts daytime only.  
 14 Mondays and Tuesdays.  
 15 300 watts in daytime only.

List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>NEW YORK—contd.</b>								
WCDA*	New York	Italian Educational Broadcasting Co.	WINE-WCOH	250	1,410	WBNY-WMSG-WEBQ	250	1,450
WHAP*	do	Defenders of Truth Society (Inc.)	WBNY-WMSG	1,000	1,370	WBBR-WEVD-WHAZ	1,000	1,300
WPAP-WQAO*	do	Calvary Baptist Church	WHN	500	700	WRNY-WHN	250	1,010
WRNY*	do	Experimenter Publishing Co.	WPCH	500	920	WQAO-WPAP-WHN	250	1,030
WHPP*	do	Bronx Broadcasting Co.	WMRJ-WTEL	10	1,450	WLBH-WMRJ	10	1,450
WPCH*	do	Concourse Radio Corporation	WRNY	500	920		500	1,350
WLWL*	do	Missionary Society of St. Paul, the Apostle	WMCA	5,000	810	WPG	4,000	1,300
WOY*	do	International Broadcasting Corporation	WODA	1,000	1,020		1,000	1,150
WJZ*	do	Radio Corporation of America		20,000	600		20,000	850
WMCA*	do	Grealey Square Hotel Co.	WLWL	500	810	WNYC	500	850
<b>NORTH CAROLINA</b>								
WWNC	Asheville	Chamber of Commerce		1,000	1,010		1,000	870
WBT	Charlotte	O. C. Coddington		1,000	1,140	WPTF	5,000	1,080
WBHU	Gastonia	A. J. Kirby Music Co.		50			50	1,320
WNRC	Greensboro	Wayne M. Nelson		500	1,340		500	1,440
WPTF	Raleigh	Durham Life Insurance Co.		1,000	550	WBT	5,000	1,000
WRBT	Wilmington	Wilmington Radio Association		50	1,320		50	1,370
<b>NORTH DAKOTA</b>								
KFYR	Bismarck	Hoskins-Meyer		250	1,200	KFDY-KFJM	500	880
KDLR	Devils Lake	Radio-Electric Co.		15	1,300		100	1,210
WDAY	Fargo	WDAY (Inc.)	KFDY	200	550	WEBC	1,000	1,350
KFJM	Grand Forks	University of North Dakota		100	600	KFDY-KFYR	500	550
KOCU	Mandan	Mandan Radio Association		100	1,200		100	1,200
<b>OHIO</b>								
WADC	Akron	Allen T. Simmons		1,000	1,200	WFJC	1,000	1,340
WFJC	do	W. F. Jones Broadcasting Co. (Inc.)	WJAY	500	1,520	WADC	500	1,340

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WHHD	Bellefonte	First Presbyterian Church	10	1,210		10	1,210
WEBE	Cambridge	Roy W. Walker	10	1,210		10	1,210
WHBO	Canton	St. John's Catholic Church	25	1,200		25	1,270
WAAD	Cincinnati	Ohio Mechanics Institute	500	1,200	WFBE	500	1,200
WKRC	do	Kodak Radio Corporation	200	1,200	WKRC	200	1,200
WFBE	do	Park View Hotel	500	1,200	WFJC	500	1,200
WJAY	Cleveland	Cleveland Radio Broadcasting Corporation	500	1,100			
WHK	do	Radio Air Service Corporation	2,500	750	WJAY	500	1,300
WTAM	do	WTAM & WEAR (Inc.)	1,000	750	WEAR	3,500	1,070
WEAR	do	do	5,000	1,000	WTAM	5,000	1,070
WAID	Columbus	American Insurance Union	250	1,200	WEAO	250	1,450
WCAH	do	Coastal Radio Service Co	750	1,000	WSPD	1,700	1,450
WEAO	do	Ohio State University	50	1,200	WAIU	50	1,210
WMAN	do	W. E. Heakitt	200	1,010			
WSMK	Dayton	Stanley M. Krohn, Jr	100	1,450			
WK	Hamilton	Dorot & Blode	5,000	700	WSAI	5,000	1,450
WLW	Harrison	Crosley Radio Corporation	50	1,450	WLW	100	1,210
WLBV	Mansfield	Mansfield Broadcasting Association	5,000	350			
WSAI	Mass	Crosley Radio Corporation (buses)	100	1,270			
WSRO	Middletown	Harry W. Fairlander	500	1,170	KQV	500	1,200
WOSO	Springfield	Wittenburg College	50	1,200			
WIBR	Steubenville	Thurman A. Owings	250	1,200	WCAH	250	1,450
WSPD	Toledo	Toledo Broadcasting Co.	50	1,400	WMBB	500	1,450
WKBN	Youngstown	W. P. Williamson, Jr					
OKLAHOMA							
KOFF	Alva	Earl L. Hampshire	25	1,400			
KOCW	Chickasha	Oklahoma College for Women	250	1,100			
KGCB	Hudd	Wallace Radio Institute	50	1,200	KGFG	50	1,210
WNAD	Norman	University of Oklahoma	500	1,250	KGGF	500	1,200
KJFF	Oklahoma City	National Radio Manufacturing Co	1,000	1,100	WRUF	5,000	1,470
KFXR	do	Exchange Avenue Baptist Church	50	1,200			
KGFG	do	Faß Gospel Church	50	1,200	KGCB	50	1,270
WKY	do	WKY Radiophone Co	150	1,040			
KGGF	Pleasant	D. L. Connell, M. D.	100	1,450	WNAD	500	1,200
WBBZ	Ponca City	C. L. Carroll	100	1,470			
KVGO	Tulsa	Southwestern Sales Corporation	1,000	500	WNOX	1,000	500
OREGON							
KFJI	Astoria	George Kincaid	50	1,200	KFEC	50	1,270
KOAC	Corvallis	Oregon State Agricultural College	500	1,110	KXL	1,000	1,250
KORE	Eugene	Eugene Broadcast Station	50	1,000			
KMED	Medford	W. J. Virgin	50	1,110	KUI-KWBS	50	1,450
KEX	Portland	Western Broadcasting Co.	2,500	1,000	KOAC	5,000	1,100

\* Station transferred from New Jersey to conform to the amendment to the radio act. † Construction permit for 5,000 watts issued. ‡ Daytime. § Limited time. ¶ Construction permit for 10,000 watts issued. †† 1,000 watts in daytime only. ††† 500 watts in daytime only. †††† See General Order No. 42. ††††† Construction permit for 1,000 watts issued.

List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
OREGON—contd.								
KFEC	Portland	Meter & Frank Co.		Watts				
KFIF	do	Benson Polytechnic School	KTBR	50	1,400	KFJL	100	
KFJR	do	Ashley C. Dixon & Son		50	1,310		50	
KTBR	do	M. E. Brown		500	1,250	KTBR	500	
EGW	do	Gregorian Publishing Co.	KFLV	500	1,810	KFJR	500	
KWBS	do	Schaefer Radio Co.		1,000	619		1,000	
KWJJ	do	Wilbur Jerman	KORE-KUJ	15	1,500		15	
KXL	do	KXL Broadcasters (Inc.)	KFJL	50	1,200		50	
KOIN	do	KOIN (Inc.)		250	1,360	KOAC	500	
				1,000	940		1,000	
PENNSYLVANIA								
WCBA	Allentown	B. Bryan Musselman	WSAN	100	1,850	WSAN	100	
WSAN	do	Allentown Call Publishing Co. (Inc.)	WCBA	100	1,850	WCBA	100	
WFBG	Altoona	Wm. F. Gable Co.		100	1,120	WHDP	100	
WNBW	Carbondale	Home Out Glass & China Co.		5	1,500		5	
WIBG	Elkins Park	St. Pauls Protestant Episcopal Church		50	690		50	
WEDH	Erie	Erie Dispatch Cummins Herald Broadcasting Corp.		30	1,440		30	
	do	C. R. Cuzmins		30	1,370		30	
WRAK	Frankford	Foolkrod Radio Engineering Co.	WABY	50	1,210		50	
WFAJ	Groves City	Groves City College		250	1,340		100	
WBAK	Harrisburg	Pennsylvania State Police (Ltd.)	WPSC	500	1,000		500	
WPRO	do	Wilson Printing & Radio Co.		100	1,430		100	
WHBP	Johnstown	Johnstown Automobile Co.		14	250	WFBG	100	
WABF	Kingston	Markle Broadcasting Corporation		250	1,310	WRAK	250	
WGAL	Lancaster	Lancaster Electrical Supply & Construction Co.	WEJC	15	1,190	WRAW-WEJC	15	
	do	Kirk-Johnson Co.		50	1,100	WRAW-WGAL	50	
WEJC	Larnoyne	Mack's Battery Co.	WGAL	250	1,260	WKBN	250	
WMRS	Lewisburg	Buehnell University		100	1,400		100	
WJBC	Oil City	Petroleum Telephone Co.		500	1,020		500	
WLBW	Philadelphia	Keystone Broadcasting Co. (Inc.)	WCAM	500	1,340	WIP	500	
WFAN							610	

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WABY.....	do.....	John Magaldi, jr.....	WFKD.....	80	1,210	WIAD-WNAT.....	80	1,210
WFL.....	do.....	Strawbridge & Clothier.....	WLIT.....	500	740	WLIT.....	500	500
WCAU.....	do.....	University Broadcasting Co.....		1,000	1,180		5,000	2,170
WHBW.....	do.....	Dr. R. Klansie.....		100	1,300	WALK-WOO-WPSW.....	100	1,500
WIAD.....	do.....	Howard R. Miller.....	WNAT.....	100	1,040	WABY-WNAT.....	100	1,310
WLP.....	do.....	Gimbel Bros. (Inc.).....	WOO-WQBS.....	500	840	WFAN.....	500	610
WLIT.....	do.....	Lit Brothers.....	WFL.....	500	740	WFI.....	500	560
WNAT.....	do.....	Lennig Bros. Co.....	WIAD.....	100	1,040	WIAD-WABY.....	100	1,310
WOO.....	do.....	John Wasmaker.....	WIP-WGBR.....	800	850	WPSW-WHBW-WALK.....	100	1,600
WRAX.....	do.....	Berechah Church (Inc.).....		350	1,410	WABF.....	250	1,430
KQV.....	Pittsburgh.....	Doubleday Hill Electric.....	WJAB.....	500	1,110	WCBO.....	500	1,380
WCAE.....	do.....	Kaufmann & Beer Co.....		500	630		500	1,240
WJAB.....	do.....	Pittsburgh Radio Supply.....	EQV.....	500	1,110		500	1,200
KDKA.....	do.....	Westinghouse Electric & Manufactur- ing Co.....		50,000	950		50,000	980
WRAW.....	Reading.....	Avenue Radio and Electric Shop.....		100	1,200	WGAL-WKJC.....	100	1,310
WQBI.....	Scranton.....	Scranton Broadcasters (Inc.).....	WQAN.....	250	1,300	WQAN.....	250	880
WQAN.....	do.....	The Scranton Times.....	WQBI.....	250	1,300	WQBI.....	250	880
WPSW.....	Philadelphia.....	Philadelphia School Wireless Tele- graphy.....		50	1,450	WALK-WHBW-WOO.....	50	1,600
WPSC.....	State College.....	Pennsylvania State College.....	WBAK.....	500	1,000		500	1,200
WNBO.....	Washington.....	John Brownlee Springs.....		15	1,420		15	1,200
WBAX.....	Wilkes-Barre.....	John H. Stenger, jr.....	WBRE.....	100	1,200		100	1,210
WALK.....	Willow Grove.....	Albert A. Walker.....		50	1,400	WHBW-WOO-WPSW.....	50	1,600
WBRE.....	Wilkes-Barre.....	Louis G. Baltimore.....	WBAX.....	100	1,200		100	1,310
	PORTO RICO							
WKAQ.....	San Juan.....	Radio Corporation of Porto Rico.....		500	930		500	680
	RHODE ISLAND							
WDWF-WLSL.....	Cranston.....	D. W. Flint and Lincoln Studios.....		250	1,210	WFCI.....	100	1,370
WMHA.....	Newport.....	Leroy J. Beebe.....		100	1,470		100	1,500
WFCI.....	Pawtucket.....	Frank Brook (Inc.).....	WNBX.....	100	1,240	WDWF-WLSL.....	100	1,370
WEAN.....	Providence.....	Shepard Co.....		500	1,090		500	1,100
WJAR.....	do.....	The Outlet Co.....		500	620		250	880
	SOUTH CAROLINA							
WBBY.....	Charleston.....	Washington Light Industry.....		75	1,200		75	1,200
WRBW.....	Columbia.....	Paul S. Pearce.....		15			15	1,310
	SOUTH DAKOTA							
KFDY.....	Brookings.....	South Dakota State College.....	WDAY.....	500	550	KFYR-KFJM.....	500	500
KGCR.....	do.....	Cutler's Radio Broadcasting Service.....		15	1,440		100	1,210
KGDA.....	Dell Rapids.....	Home Auto Co.....		15	1,180		15	1,210
KGDY.....	Oldham.....	J. Albert Loesch.....		15	1,480		15	1,200

1 Daytime.  
2 Limited time.

3 400 watts in daytime only.  
4 See General Order No. 42

5 Daytime (Sunday only).  
6 Construction permit only.



List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with—	Power	Kilo-cycles	Shared with—	Power	Kilo-cycles
<b>SOUTH DAKOTA—CON.</b>				Watts			Watts	
KGFX	Pierre	Dana McNeil		300	1,180		300	880
KBOO	Sioux Falls	Sioux Falls Broadcasting Association		350	1,480	WNAX-KPNF	1,000	880
KUSD	Vermillion	University of South Dakota		250	450		500	880
WCAT	Rapid City	South Dakota State School of Mines		300	1,310	KUSD-KPNF	500	880
WNAX	Yankton	Gurney Seed & Nursery Co. and Dakota Radio Apparatus Co.		1,000	690			
<b>TENNESSEE</b>								
WFBC	Knoxville	First Baptist Church		80	1,280		80	1,300
WNEJ	do	Lonsdale Baptist Church		25	1,480		50	1,310
WNOX	do	Storchi Bros.		1,600	1,130	KVCO	1,000	540
WOAN	Lawrenceburg	Church of Nazarene and Vaughan School of Music	WBAW	600	1,250	WREC	800	880
WGBC	Memphis	First Baptist Church	WNBR	15	1,310	WNBR	500	1,430
WHBQ	do	Broadcasting Station WHBQ (Inc.)		100	1,380		100	1,370
WMBM	do	Seventh Day Adventist Church		10	1,480		10	1,500
WMC	do	Memphis Commercial Appeal (Inc.)		1,880	880		500	780
WNBR	do	John Ulrich	WGBC	100	1,310	WGBC	500	1,430
WBAW	Nashville	Waldron Drug Co.	WOAN	5,000	1,250	WLAC	5,000	1,480
WLAC	do	Life & Casualty Insurance Co.		1,000	1,380	WBAW	3,000	1,480
WSM	do	National Life & Accident Insurance		6,000	880		4,000	1,480
WSIX	Springfield	Six-thirty-eight Tire & Vulcanizing Co.	WREC	150	1,300	WREC	100	1,310
WOBT	Union City	Titworth's Radio and Music Shop		15	1,400		15	1,310
WREC	Whitehaven	WREC (Inc.)	WSIX	500	1,300	WOAN	800	1,380
WDOD	Chattanooga	Chattanooga Radio Co. (Inc.)		800	1,230		1,000	1,380
<b>TEXAS</b>								
KQRB	Amarillo	Gleb Radio Service		1,200	1,230	WDAG	1,000	1,410
WDAG	do	J. Laurence Martin		250	1,140	KQRB	1,000	1,410
KUT	Austin	University of Texas		600	1,300	WTAW	500	1,130
KFDM	Beaumont	Magnolia Petroleum Co.	WTAW	300	880	KPRO	880	880

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KFTO	Brockridge	Kirby Bros. Battery & Electric Co.	100	1,480			500	1,010
KWVG	Brownsville	Chamber of Commerce	500	1,080	KRGV		500	1,010
WTAW	Collins Station	Agricultural and Mechanical College of Texas	500	630	KUT		500	1,120
KRLD	Dallas	KRLD (Inc.)	500	650	WFAA	1	5,000	1,040
WFAA	do	Dallas Morning News	500	550	KRLD	1	45,000	1,040
WRB	do	City of Dallas	500	650	WOAI	(2)	15	1,190
KFPL	Dublin	C. C. Bartor	15	1,080			100	1,370
WDAH	El Paso	Trinity Methodist Church	100	1,280			100	1,310
KFJZ	Fort Worth	Henry C. Allison	50	1,200	KTHS	1	5,000	1,370
WRAP	do	Carter Publications (Inc.)	5,000	970	WJAD	1	1,000	800
KFQB	do	W. B. Fishburn (Inc.)	1,000	900			100	1,340
KFLY	Galveston	George Roy Clough	100	1,110			100	1,210
KFUL	do	Will H. Ford	500	1,180	KTSA		500	1,290
KGKL	Georgetown	M. L. Cates	100	1,200			100	1,370
KGKB	Goldthwaite	Eagle Publishing Co.	50	1,070			100	1,500
KPPM	Greenville	New Furniture Co.	15	1,300			15	1,510
KRGV	Hartlingen	Hartlingen Music Co.	100	1,370	KWWG		500	1,010
KPRC	Houston	Houston Printing Co.	500	1,020	KFDM	1	1,000	650
KTUE	do	Uhart Electric	5	1,410			5	1,370
KGHX	Richmond	Fort Bend County School Board	50	1,300			50	1,500
KQFI	San Angelo	San Angelo Broadcasting Co.	15	1,300			15	1,310
KGCI	San Antonio	Liberto Radio Sales	250	1,300	KGRC		100	1,370
KQDR	do	Joe B. McShane	15	1,450			100	1,500
KQBC	do	Eugene J. Roth	100	1,380	KGCI		100	1,310
KTBA	do	Alamo Broadcast Co.	2,000	1,190			100	1,200
KTAP	do	Robert B. Bridges	120	1,310	KFUL	1	1,000	1,270
WOAI	do	Southern Equipment Co.	5,000	1,070	WRB		6,000	1,100
WJAD	Waco	Frank P. Jackson	500	980	KFQB		1,000	1,340
KGKO	Wichita Falls	Highland Heights Christian Church	250	1,350			100	1,370
	UTAH							
KPUR	Ogden	Perry Building Co.	50	1,330			50	1,310
KDYL	Salt Lake City	Intermountain Broadcasting Corporation	100	1,280	KFAU		1,000	1,280
KBL	do	Radio Service Corporation of Utah	1,000	900			1,120	1,120
	VERMONT							
WCAX	Burlington	University of Vermont	100	1,180	WNBX		100	1,200
WNBX	Springfield	First Congregational Church Corporation	10	1,240	WCAX		10	1,200

1 Construction permit for 5,000 watts issued.  
 2 Daytime.  
 3 Limited time.  
 4 Construction permit for 50,000 watts issued.  
 5 Construction permit for 10,000 watts issued.  
 6 500 watts in daytime only.  
 7 See General Order No. 42.

\* Construction permit for 1,000 watts issued.  
 \*\* Construction permit only.  
 \*\*\* Sunday only.  
 100 watts in daytime only.  
 11 Construction permit for 250 watts issued.  
 12 Construction permit for 500 watts issued.

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List of radio broadcasting stations, arranged by States, etc.—Continued

Station	Location	Owner	Assignments					
			Former			New		
			Shared with--	Power	Kilo-cycles	Shared with--	Power	Kilo-cycles
VIRGINIA								
WTAZ.....	Richmond.....	W. Reynolds, jr., and Thomas J. McQuire.	WMBG.....	Watts 15	1,360	WMBG.....	Watts 15	1,210
WNEW.....	Newport News.....	Virginia Broadcasting Co. (Inc.)		100	1,430		100	1,210
WTFF.....	Mount Vernon Hills.....	Independant Publishing Co.	WRUP.....	10,000	1,480		10,000	1,480
WTAR-WPOR.....	Norfolk.....	Reliance Electric Co. (Inc.)	WBBW.....	500	1,270	WSEA.....	500	780
WBBW.....	do.....	Zummer Junior High School	WTAR-WPOR.....	100	1,270		100	1,200
WLBO.....	Petersburg.....	Robert Allen Gamble.		100	1,400		100	1,200
WRVA.....	Richmond.....	Laroc & Bro. Co. (Inc.)		1,000	1,180		1,000	1,110
WMBG.....	do.....	Havens & Martin (Inc.)	WTAZ.....	15	1,360	WTAZ.....	100	1,210
WBBL.....	do.....	Grass Covenant Presbyterian Church		100	1,260		100	1,370
WRBX.....	Roanoke.....	Richmond Development Corporation		250		WDBJ.....	250	930
WDBJ.....	do.....	Richardson-Wayland Electric Co		250	1,300	WRBK.....	250	930
WSEA.....	Portsmouth.....	Virginia Broadcasting Co. (Inc.)		500	1,140	WTAR-WPOR.....	500	780
WASHINGTON								
KXRO.....	Aberdeen.....	KXRO (Inc.)	KFBL.....	50	1,340		50	1,210
KVOS.....	Bellingham.....	L. Kessler.		250	1,430	KWSC-KXA.....	250	670
KFBL.....	Everett.....	Laess Bros.	KXRO.....	50	1,340	KUJ-KVL.....	50	1,500
KGY.....	Lacey.....	St. Martin's College	KFPY-KFRO.....	50	1,220	KEP-KFQW.....	50	1,430
KUJ.....	Longview.....	Fred. W. Lovejoy and R. W. Kartnot.	KORE-KWBS.....	10	1,500	KFBL-KVL.....	10	1,580
KWSC.....	Pullman.....	State College of Washington	KTW-KOB.....	500	760	KXA-KVOS.....	500	670
KFOA.....	Seattle.....	Rhodes Department Store		1,000	670	KTW.....	1,000	1,960
KFQW.....	do.....	KFQW (Inc.)		100	1,380	KOY-KEP.....	100	1,420
KPQ.....	do.....	Archie Taft and Louis Wasmer	KPCB.....	100	1,300	KPCB.....	100	1,210
KVL.....	do.....	Arthur C. Dalley	KEP-KRSC.....	100	1,100	KFBL-KUJ.....	100	1,500
KJR.....	do.....	Northwestern Radio Service Co.		2,000	860		5,000	970
KEP.....	do.....	City of Seattle (harbor department)	KRSC-KVL.....	15	1,100	KGY-KFQW.....	15	1,430
KOMO.....	do.....	Fisher's Blend Station (Inc.)		1,000	970		1,000	970
KPCB.....	do.....	Pacific Coast Biscuit Co.	EPQ.....	100	1,300	KPQ.....	100	1,210
KRSC.....	do.....	Radio Sales Corporation	KVL-KEP.....	50	1,150		50	1,130
KTW.....	do.....	First Presbyterian Church	KWSC-KOB.....	1,000	760	KFOA.....	1,000	1,280

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KXA	do	American Radio Telephone Co.	600	500	KWBC-KVOS	500	570
KPFIO	Spokane	North Central High School	100	1,230	KPFY-KGY	100	1,230
KFPY	do	Symons Investment Co.	250	1,230	KGY-KFIO	100	1,210
KGA	do	Northwestern Radio Service Co.	2,000	1,150		5,000	1,470
KMO	Tacoma	KMO (Inc.)	500	1,180	KVI	500	1,440
KVI	do	Puget Sound Radio Broadcasting Co. (Ltd.)	250	1,060	KMO	1,000	1,340
KHQ	Spokane	Louis Waszner (Inc.)	1,000	810	KUOM	1,000	820
WEST VIRGINIA							
WQBU	Charleston	Charleston Radio Broadcasting Co.	250	1,120	WSAZ	250	580
WQBJ	Clarksburg	John Raikes	<sup>1</sup> 55	1,260		<sup>1</sup> 65	1,200
WQBZ	Welton	J. H. Thompson	50	1,200		60	1,200
WSAZ	Huntington	McKellar Electric Co.	100	1,200	WQBU	250	580
WVVA	Wheeling	West Virginia Broadcasting Corporation	250	880	WHAB	1250	1,020
WISCONSIN							
WEBW	Beloit	Beloit College	500	1,160		1250	600
WTMJ	Brookfield	Milwaukee Journal	1,000	1,020	WHA	1,000	570
WTAQ	Eau Claire	Clyde B. Van Gorden	500	1,180	KSCJ	1,000	1,320
KFIZ	Fond du Lac	Fond du Lac Commonwealth Reporter	100	1,120		100	1,450
WCLO	Kenosha	C. E. Whitmore	100	1,320	WRJN	100	1,200
WKBH	La Crosse	Callaway Music Co.	500	1,300	KSO-WEBL	1,000	1,380
WIBA	Madison	Capital Times Strand Theater Station	100	1,260		100	1,210
WHA	do	University of Wisconsin	750	900	WTMJ	750	670
WOMT	Manitowoc	Mikadow Theater	100	1,230		100	1,210
WHAD	Milwaukee	Marquette University	500	1,110	WISN	250	1,120
WISN	do	Evening Wisconsin Co.	250	1,110	WHAD	250	1,120
WIBU	Poyntette	The Electric Farm	20	1,280		100	1,210
WRJN	Racine	Racine Broadcasting Corporation	50	1,210	WCLO	100	1,200
WBBL	Sheboygan	Press Publishing Co. and C. L. Carrell	<sup>1</sup> 250	1,470	WKBH-KSO	1,000	1,380
WEBC	Superior	Head of Lakes Broadcasting Co.	<sup>1</sup> 250	1,240	WDAY	1,000	1,280
WLBL	Stevens Point	Wisconsin Department of Markets	<sup>10</sup> 1,000	900		1,000	900
WRBY	West De Pere	St. Norbert's College	60	1,200		50	1,200
WYOMING							
KFBY	Laramie	Bishop N. S. Thomas	500	620	KFUM	500	600

<sup>1</sup> Construction permit for 5,000 watts issued.  
<sup>2</sup> Daytime.  
<sup>3</sup> 1,000 watts in daytime only.  
<sup>4</sup> 500 watts in daytime only.

<sup>5</sup> 2,000 watts in daytime only.  
<sup>6</sup> Construction permit only.  
<sup>7</sup> Construction permit for 500 watts issued.