

RADIO SERVICE BULLETIN

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ABBREVIATIONS.

The necessary corrections to the List of 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: O=west longitude, N=north latitude, S=south latitude.
 Call = Call letters assigned.
 System = Radio system used and sparks per second.
 Range = Normal range in nautical miles.
 W. L. = Wave lengths assigned: Normal wave lengths in italics.
 Service = Nature of service maintained:
 PG=General public.
 PR=Limited public.
 P=Private.
 O=Government business exclusively.
 Hours = Hours of operation.
 N=Continuous service.
 X=No regular hours.
 m=a, m. (12 m=midday).
 e=p. m. (12e=midnight).
 Rates = Ship or coast charges in cents: c=cents. (The rates in the international list are given in francs and centimes.)
 I. W. T. Co. = Independent Wireless Telegraph Co.
 R. C. of A. = Radio Corporation of America.
 S. O. R. S. = Ship Owners' Radio Service.
 Co. = Company.
 Corp. = Corporation.
 & = And.
 Do. = Ditto.
 C. w. = Continuous wave.
 I. c. w. = Interrupted continuous wave.
 V. t. = Vacuum tube.
 F.X. = Fixed station.

CERTIFICATE: By direction of the Secretary of Commerce this publication is issued as an administration report and is required for the proper transmission of the public business.

NEW STATIONS.

Commercial land stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations published by the Bureau.]

NOTE.—Stations having a wave length of 300 meters transmit news, concerts, etc., and those having a wave length of 485 meters transmit market and weather reports.

Station.	Call signal.	Wave length.	Service.	Hours.	Station controlled by—
Amarillo, Tex. ¹	WDAG	350	PR(FX)	X	J. Lawrence Martin, 605 East Fourth Street.
Atlanta, Ga. ²	WDAW	350, 455	PR(FX)	X	Georgia Railway & Power Co.
Atwood, Kans. ³	WEAD	300	PR(FX)	X	Northwest Kansas Radio Supply Co.
Bakersfield, Calif. ⁴	KDZB	300	PR(FX)	X	Frank E. Siefert, 1402 Twentieth Street.
Du. ⁵	KYI	300	PR(FX)	X	Aldred Harrell, 1925 I Street.
Baltimore, Md. ⁶	WCAO	300	PR(FX)	X	Sanders & Stayman Co., 319 North Charles Street.
Bellingham, Wash. ⁷	KI2R	300	PR(FX)	X	Bellingham Publishing Co.
Berkeley, Calif. ⁸	KQI	300	PR(FX)	X	University of California.
Blacksburg, Va. ⁹	WBAE	300	PR(FX)	X	Virginia Polytechnic Institute.
Brownsville, Pa. ¹⁰	WDAQ	300	PR(FX)	X	Hartman-Riker Electric & Machine Co., 312 Market Street.
Burlington, Vt. ¹¹	WCAV	300	PR(FX)	X	University of Vermont.
Canton, Ohio ¹²	WCAO	300	PR(FX)	X	St. Lawrence University.
Centerville, Iowa ¹³	WDAX	300	PR(FX)	X	First National Bank, 101 East Van Buren Street.
Centralia, Wash. ¹⁴	KI2M	300	PR(FX)	X	E. A. Hollingsworth, 200 North Tower Avenue.
Chicago, Ill. ¹⁵	WDAP	300	PR(FX)	X	Mid West Radio Central (Inc.), Wrigley Building.
Cincinnati, Ohio ¹⁶	WAAD	300	PR(FX)	X	Ohio Mechanics Institute.
Olenwater, Calif. ¹⁷	KOK	337.5, 430, 530	PR(FX)	X	Federal Telegraph Co.
College Park, Ga. ¹⁸	WDAJ	300	PR(FX)	X	Atlanta & West Point R. R. Co.
Columbus, Ohio ¹⁹	WCAH	300	PR(FX)	X	Entrekin Electric Co.
Dallas, Tex. ²⁰	WDAO	300	PR(FX)	X	Automotive Electric Co., Ervay and Chisholm Streets.
Decatur, Ill. ²¹	WCAP	300	PR(FX)	X	Central Radio Service, 211 Main Street.
Defiance, Ohio ²²	WCAQ	300	PR(FX)	X	Ty-State Radio Manufacturing & Supply Co., 308 Clinton Street.
Denver, Colo. ²³	KDYY	300	PR(FX)	X	Rocky Mountain Radio Corp., 1512 Broadway.
Do. ²⁴	KDZQ	300	PR(FX)	X	Motor Generator Co., 429 South Sherman Street.
Detroit, Mich. ²⁵	WCX	300, 455	PR(FX)	X	Detroit Free Press.
Edgewood, R. I. ²⁶	WEAG	300	PR(FX)	X	Nichols-Hendricks-Bassett Laboratory, 94 Armington Street.
El Paso, Tex. ²⁷	WDAH	300	PR(FX)	X	Mine & Smelter Supply Co., 412 San Francisco Street.
Eugene, Oreg. ²⁸	KDZJ	300	PR(FX)	X	Excelsior Radio Co., Box 33.
Fargo, N. Dak. ²⁹	WDAY	300, 485	PR(FX)	X	Kenneth M. Hanson, 117 Broadway.
Flint, Mich. ³⁰	WEAA	300	PR(FX)	X	Pallain & Lathrop, 104 Walsh Building.

¹ Range, 50; system, composite (v. t. telephone).² Range, 100; system, composite (v. t. telephone).³ Loc. 0.161° 03' 10", N. 39° 48' 21"; range, 150; system, composite (v. t. telephone).⁴ Range, 35; system, composite (v. t. telephone).⁵ Loc. 0.121° 30' 00", N. 45° 00' 15"; range, 50; system, composite (v. t. telephone).⁶ Loc. 0.122° 18' 41", N. 37° 52' 23"; system, composite (v. t. telephone).⁷ Loc. 0.75° 32' 48", N. 02° 01' 20"; range, 25; system, composite (v. t. telephone).⁸ Loc. (approximately) 0.73° 12' 00", N. 14° 28' 00"; range, 100; system, composite (v. t. telephone).⁹ Loc. 0.32° 55' 27", N. 40° 55' 55"; range, 50; system, R. C. of A. (v. t. telephone).¹⁰ Loc. (approximately) 0.122° 55' 00", N. 46° 35' 00"; range, 50; system, composite (v. t. telephone).¹¹ Loc. 0.57° 37' 30", N. 41° 33' 25"; range, 100; system, composite (v. t. telephone).¹² Loc. (approximately) 0.84° 30' 00", N. 38° 05' 00"; range, 100; system, composite (v. t. telephone).¹³ Loc. 0.118° 09' 40", N. 33° 53' 45"; range, 1000; system, Federal arc; hours, 7 a. m.—11 p. m.¹⁴ Loc. (approximately) 0.84° 27' 00", N. 33° 41' 00"; range, 100; system, composite (v. t. telephone).¹⁵ Loc. (approximately) 0.90° 40' 00", N. 32° 30' 00"; range, 50; system, composite (v. t. telephone).¹⁶ Range, 20; system, composite (v. t. telephone).¹⁷ Range, 350; system, composite (v. t. telephone).¹⁸ Loc. (approximately) 0.165° 00' 01", N. 40° 00' 00"; range, 100; system, composite (v. t. telephone).¹⁹ Loc. (approximately) 0.405° 00' 00", N. 39° 45' 00"; range, 50; system, composite (v. t. telephone).²⁰ Loc. 0.55° 45' 00", N. 42° 10' 40"; range, 200; system, Western Electric Co. (v. t. telephone).²¹ Loc. (approximately) 0.71° 28' 00", N. 4° 50' 00"; range, 50; system, composite (v. t. telephone).²² Range, 100; system, composite (v. t. telephone).²³ Loc. 0.125° 30' 47", N. 41° 42' 47"; range, 100; system, composite (v. t. telephone).²⁴ Loc. (approximately) 0.90° 45' 00", N. 48° 52' 40"; range, 100; system, composite (v. t. telephone).²⁵ Loc. (approximately) 0.82° 37' 00", N. 49° 00' 00"; range, 60; system, composite (v. t. telephone).

Commercial land stations, alphabetically by names of stations—Continued.

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Fort Dodge, Iowa ¹	WEAB	360.....	PR(FX)	X	Standard Radio Equipment Co., 519 Carver Building.
Fort Smith, Ark. ²	WCAC	360.....	PR(FX)	X	John Fink Jewelry Co., 701 Garrison Avenue.
Fresno, Calif. ³	KDZH	360.....	PR(FX)	X	Fresno Evening Herald.
Great Falls, Mont. ⁴	KDVF	360.....	PR(FX)	X	The Tribune.
Hartford, Conn. ⁵	WDAX	360.....	PR(FX)	X	The Courant.
Honolulu, Hawaii ⁶	KDYN	360.....	PR(FX)	X	Star Bulletin.
Houston, Tex. ⁷	WCAK	360.....	PR(FX)	X	Alfred P. Daniel, 2504 Bagby Street.
Ithaca, N. Y. ⁸	WEAL	360.....	PR(FX)	X	Cornell University.
Jacksonville, Fla. ⁹	WCAN	360.....	PR(FX)	X	Southeastern Radio Telephone Co.
Do. ¹⁰	WDAL	360, 485.....	PR(FX)	X	Florida Times-Union.
Kansas City, Mo. ¹¹	WDAF	360.....	PR(FX)	X	Kansas City Star.
Do. ¹²	WIBB	360, 485.....	PR(FX)	X	Sweeney School Co., Sweeney Building.
Klamath Falls, Oreg. ¹³	KDYU	360.....	PR(FX)	X	Horak Publishing Co.
Lewistown, Ill. ¹⁴	WIB	1625.....	PR(FX)	X	Indian Pipe Line Corp.
Lindsburg, Kans. ¹⁵	WDAD	360.....	PR(FX)	X	William L. Harrison, 122 East Lincoln Street.
Little Rock, Ark. ¹⁶	WCAV	360.....	PR(FX)	X	J. C. Dinn Electric Co., 113 West Capitol Avenue.
Los Angeles, Calif. ¹⁷	KDZD	360.....	PR(FX)	X	W. R. Mitchell, 729 South Broadway.
Do. ¹⁸	KDZF	360.....	PR(FX)	X	Automobile Club of Southern California, 260 Figueroa Street.
Do. ¹⁹	KDZP	360.....	PR(FX)	X	Newbery Electric Corp., 724 South Olive Street.
Do. ²⁰	KNX	360.....	PR(FX)	X	Electric Lighting Supply Co., 216 West Third Street.
Milwaukee, Wis. ²¹	WCAY	360.....	PR(FX)	X	Kreselman O'Driscoll Co., 517-519 Grand Avenue.
Minneapolis, Minn. ²²	WCAS	360.....	PR(FX)	X	William Hood Dunwoody Industrial Institute, 618 Superior Boulevard.
Muskogee, Okla. ²³	WDAV	360.....	PR(FX)	X	McKagge Daily Phoenix.
Nashville, Tenn. ²⁴	WDAA	360.....	PR(FX)	X	Ward-Belmont School, Belmont Heights.
New Bedford, Mass. ²⁵	WDAU	360.....	PR(FX)	X	Shoem & Kilburn, 23 North Water Street.
Newburgh, N. Y. ²⁶	WCAB	360.....	PR(FX)	X	Newburgh News Printing & Publishing Co., 40 Grand Street.
New Orleans, La. ²⁷	WCAG	360.....	PR(FX)	X	Daily States Publishing Co., 606 Canal Street.
New York, N. Y. ²⁸	WEAF	360.....	PR(FX)	X	Western Electric Co., 463 West Street.
Northfield, Minn. ²⁹	WCAL	360.....	PR(FX)	X	St. Olaf College.
North Plainfield, N. J. ³⁰	WEAM	360.....	PR(FX)	X	Borough of North Plainfield.
Oakland, Calif. ³¹	KLX	360.....	PR(FX)	X	Tribune Publishing Co.
Orden, Utah ³²	KDZL	360.....	PR(FX)	X	Rocky Mountain Radio Corp., 211 Washington Avenue.

¹ Range, 50; system, composite (v. t. telephone).
² Range, 25; system, composite (v. t. telephone).
³ Loc. 0.94° 58' 35" N., 122° 24' 30" W.; range, 150; system, composite (v. t. telephone).
⁴ Loc. 0.94° 25' 00" N., 105° 22' 53" W.; range, 25; system, composite (v. t. telephone).
⁵ Loc. 0.111° 15' 25" N., 47° 31' 00" W.; range, 100; system, composite (v. t. telephone).
⁶ Loc. 0.72° 40' 23" N., 155° 44' 58" W.; range, 150; system, composite (v. t. telephone).
⁷ Range, 300; system, composite (v. t. telephone).
⁸ Loc. (approximately) 0.91° 38' 00" N., 76° 20' 00" W.; range, 200; system, composite (v. t. telephone).
⁹ Loc. (approximately) 0.94° 38' 18" N., 78° 00' 00" W.; range, 200; system, Western Electric Co. (v. t. telephone).
¹⁰ Range, 300; system, Western Electric (v. t. telephone).
¹¹ Loc. 0.121° 33' 40" N., 92° 13' 19" W.; system, composite (v. t. telephone).
¹² Loc. 0.87° 41' 15" N., 94° 42' 37" W.; range, 300; system, DeForest (v. t. telephone and telegraph); rates, 1000.
¹³ Loc. (approximately) 0.97° 49' 00" N., 122° 33' 00" W.; range, 25; system, Westinghouse (v. t. telephone).
¹⁴ Loc. (approximately) 0.118° 00' 00" N., 84° 00' 00" W.; range, 100; system, composite (v. t. telephone).
¹⁵ Loc. (approximately) 0.118° 15' 00" N., 84° 08' 00" W.; range, 150; system, composite (v. t. telephone).
¹⁶ Loc. 0.51° 50' 00" N., 43° 03' 50" W.; range, 25; system, composite (v. t. telephone).
¹⁷ Loc. 0.83° 25' 00" N., 118° 58' 20" W.; range, 100; system, composite (v. t. telephone).
¹⁸ Loc. (approximately) 0.86° 47' 00" N., 122° 10' 40" W.; range, 25; system, composite (v. t. telephone).
¹⁹ Loc. (approximately) 0.70° 53' 00" N., 118° 35' 00" W.; range, 50; system, composite (v. t. telephone).
²⁰ Loc. 0.74° 00' 35" N., 118° 30' 00" W.; range, 50; system, composite (v. t. telephone).
²¹ Loc. (approximately) 0.90° 00' 00" N., 89° 00' 00" W.; range, 50; system, composite (v. t. telephone).
²² Loc. (approximately) 0.78° 43' 00" N., 93° 30' 00" W.; range, 100; system, Western Electric Co. (v. t. telephone).
²³ Loc. 0.83° 00' 14" N., 112° 27' 41" W.; range, 200; system, composite (v. t. telephone).
²⁴ Loc. 0.74° 30' 20" N., 102° 37' 33" W.; system, composite (v. t. telephone).
²⁵ Loc. 0.122° 51' 43" N., 70° 47' 29" W.; range, 150; system, composite (v. t. telephone).
²⁶ Loc. (approximately) 0.111° 59' 00" N., 74° 13' 00" W.; system, Westinghouse (v. t. telephone).

Commercial land stations, alphabetically by names of stations—Continued.

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Owensboro, Ky. ¹	WIG	1625	PR(FX)	X	Indian Pipe Line COB.
Pasadena, Calif. ¹	KDYR	360	PR(FX)	X	Pasadena Star-News Publishing Co.
Philadelphia, Pa. ¹	WCAU	360	PR(FX)	X	Philadelphia Radiophone Co., 1630 Market Street.
Do. ¹	WDAB	360	PR(FX)	X	Lit. Brothers, Eighth and Market Streets.
Phoenix, Ariz. ¹	KDYW	360	PR(FX)	X	Smith, Hughes & Co., Third Avenue and Jefferson Street.
Pittsburgh, Pa. ¹	WCAE	300	PR(FX)	X	Kaufman & Haer Co., Sixth and Smithfield Streets.
Point Reyes, Calif. (Bo-Inast.) ¹	KDU	12, 100	PR(FX)	N	R. C. of A.
Portland, Oreg. ¹	KDYQ	485	PR(FX)	X	Oregon Institute of Technology.
Portsmouth, Ohio ¹	WDAD	360	PR(FX)	X	H. C. Summers & Son, 906 Galia Street.
Quincy, Ill. ¹	WCAW	360	PR(FX)	X	Quincy Herald and Quincy Electric Supply Co.
Do. ¹	WCAZ	360	PR(FX)	X	Robert E. Compton & Quincy Whig-General.
Rapid City, S. Dak. ¹	WCAT	485	PR(FX)	X	South Dakota State School of Mines.
Redwood City, Calif. ¹	KDYN	360	PR(FX)	X	Great Western Radio Corp.
Reno, Nev. ¹	KDZK	360	PR(FX)	X	Nevada Machinery & Electric Co.
Rogers, Mich. ¹	WCAF	300, 450, 600	PR(FX)	X	Michigan Limestone & Chemical Co.
Salt Lake City, Utah ¹	KDYI	360	PR(FX)	X	Telegram Publishing Co.
Do. ¹	KDYV	360	PR(FX)	X	Cope & Cornwell Co., 1145 Michigan Avenue.
San Antonio, Tex. ¹	WCAB	360	PR(FX)	X	Alamo Radio Electric Co., 608 West Evergreen Street.
San Diego, Calif. ¹	KDYM	360	PR(FX)	X	Rayon Thayer, 236 C Street.
Do. ¹	KDYO	360	PR(FX)	X	Carlson & Simpson, Union and C Streets.
San Francisco, Calif. ¹	KDZG	360	PR(FX)	X	Cyrus Peirce & Co., 435 California Street.
Seattle, Wash. ¹	KDZE	300	PR(FX)	X	The Rhodes Co., 1321 Second Avenue.
Shreveport, La. ¹	WDAN	360	PR(FX)	X	Glenwood Radio Corp., Centenary College.
Springfield, Ill. ¹	WDAC	485	PR(FX)	X	Illinois Watch Co., Ninth and North Grand Avenue.
St. Joseph, Mo. ¹	WEAK	360	PR(FX)	X	Julius B. Abernombie, 819 North Twenty-third Street.
Syracuse, N. Y. ¹	WDAI	360	PR(FX)	X	Hughes Electric Corp., 411 South Clinton Street.
Tampa, Fla. ¹	WDAF	360, 485	PR(FX)	X	Tampa Daily Times.
Terre Haute, Ind. ¹	WEAC	360	PR(FX)	X	Barnes Electric Service Co., 24 South Eighth Street.
Trulen, W. Va. ¹	WCAA	525	PR(FX)	X	Meads Prochabants Coal Co.
Tucson, Ariz. ¹	KDZA	360	PR(FX)	X	Arizona Daily Star.
University Place, Neb. ¹	WCAJ	360, 485	PR(FX)	X	Nebraska Wesleyan University.

¹ Range, 50; system, composite (v. t. telephone).

² Range, 25; system, composite (v. t. telephone).

³ Range, 100; system, composite (v. t. telephone).

⁴ Loc. 0.91° 04' 15", N. 31° 49' 47"; range, 300; system, DeForest (v. t. telephone and telegraph); rates, none.

⁵ System, composite (v. t. telephone).

⁶ Loc. 0.75° 03' 44", N. 31° 37' 05"; range, 25; system, composite (v. t. telephone).

⁷ Loc. (approximately) 0.50° 00' 00", N. 42° 00' 00"; range, 50; system, composite (v. t. telephone).

⁸ Loc. 0.122° 46' 45", N. 37° 34' 30"; range, 4,000; system, Alexanderson alternator; rates, to Japan 72 c per word and 46 Hawaii 25 c per word.

⁹ Loc. 0.122° 40' 43", N. 45° 31' 06"; range, 300; system, composite (v. t. telephone).

¹⁰ Loc. (approximately) 0.91° 23' 00", N. 32° 58' 00"; range, 100; system, composite (v. t. telephone).

¹¹ Loc. (approximately) 0.91° 23' 00", N. 32° 58' 00"; range, 100; system, composite (v. t. telephone).

¹² Range, 50; system, composite (v. t. telephone).

¹³ Range, 150; system, composite (v. t. telephone).

¹⁴ Loc. 0.119° 53' 54", N. 30° 30' 33"; range, 25; system, composite (v. t. telephone).

¹⁵ Loc. (approximately) 0.83° 29' 00", N. 45° 25' 00"; range, 300; system, U. S. Navy, 1,000; rates, none.

¹⁶ Loc. (approximately) 0.90° 28' 00", N. 29° 27' 00"; range, 75; system, composite (v. t. telephone).

¹⁷ System, composite (v. t. telephone).

¹⁸ Loc. (approximately) 0.117° 10' 00", N. 32° 43' 00"; range, 100; system, composite (v. t. telephone).

¹⁹ Loc. 0.122° 22' 15", N. 47° 28' 25"; range, 50; system, composite (v. t. telephone).

²⁰ Loc. 0.82° 53' 34", N. 30° 49' 00"; range, 450; system, composite (v. t. telephone).

²¹ Loc. (approximately) 0.91° 31' 00", N. 30° 49' 00"; range, 50; system, composite (v. t. telephone).

²² Range, 100; system, R. C. of A. (v. t. telephone).

²³ Loc. (approximately) 0.88° 39' 00", N. 32° 58' 00"; range, 100; system, composite (v. t. telephone).

²⁴ Loc. (approximately) 0.91° 24' 00", N. 37° 34' 00"; range, 150; system, composite (v. t. telephone); rates, none.

²⁵ Loc. 0.95° 42' 30", N. 40° 49' 00"; range, 50; system, DeForest (v. t. telephone).

Commercial land stations, alphabetically by names of stations—Continued.

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Vermillion, S. Dak.	WEAJ	360.....	PR(FX)	X	University of South Dakota.
Villanova, Pa. ¹³	WGAM	350.....	PR(FX)	X	Villanova College.
Wenatchee, Wash. ¹⁴	KDZI	360.....	PR(FX)	X	Electric Supply Co.
Do. ¹⁴	KZV	360.....	PR(FX)	X	Wenatchee Battery & Motor Co.
Wichita, Kans. ¹⁵	WEAH	360, 453.....	PR(FX)	X	Wichita Board of Trade and Lander Radio Co.
Worcester, Mass. ¹⁶	WDAS	360.....	PR(FX)	X	Samuel A. Waite, 49 Benefit Street.
Do. ¹⁷	WDAT	360.....	PR(FX)	X	Delta Electric Co., 633 Main Street.

¹³ Loc. 0.75° 20' 03", N. 46° 02' 30"; range, 150; system, composite (v. t. telephone).
¹⁴ Loc. 0.120° 19' 00", N. 47° 28' 12"; range, 100; system, composite (v. t. telephone).
¹⁵ Loc. 0.120° 18' 23", N. 47° 25' 30"; range, 50; system, composite (v. t. telephone).
¹⁶ System, composite (v. t. telephone).
¹⁷ Loc. (approximate) 0.71° 49' 00", N. 42° 16' 00"; range, 50; system, composite (v. t. telephone).
¹⁸ Loc. (approximate) 0.71° 49' 00", N. 42° 15' 00"; range, 200; system, composite (v. t. telephone).

Commercial ship stations, alphabetically by names of vessels.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations published by the Bureau.]

Name of vessel.	Call signal.	Rates.		Serv. ke.	Hours.	Owner of vessel.	Station controlled by—
		North and South American service.	Trans-oceanic service.				
Anvil ¹	KPYP	6	4	PG	X	Howard N. Findlay...	Owner of vessel.
Astoria	KDYT			PG	X	Richard T. Green Co.	Do.
Calista ²	EDZN			PG	X	Caliste Transportation Co.	
Dolphin	KDYZ			PG	X	Mortimer L. Schiff...	
H. F. Alexander	KDYK			PG	N	Pacific S. S. Co.	
Humboldt	WHX	8	8	PG	X	Fred Linderman	Owner of vessel.
Matara	KDZO			PG	X	Guaranty Trust Co. of N. Y.	
Meteor ³	KDYJ	8	8	PG	X	Meteor S. S. Co.	E. C. of A.
Multnomah	WMA	8	8	PG	X	Multnomah S. S. Co.	Owner of vessel.
Tavoralla ⁴	KBMT					Panama Canal	
Theodore H. Wick- wire. ⁵	KDZC			PG	X	American S. S. Co.	

¹ Range, 150; system, Kilbourne & Clark, 1,000; w. l., 300, 425, 600.
² Range, 150; system, Navy-Wireless Specialty Apparatus Co., 1,000; w. l., 300, 450, 600; rates, Great Lakes Service, 2 c. per word.
³ Range, 150; system, R. C. of A., 1,000; w. l., 300, 600.
⁴ Range, 300; system, Navy etc.
⁵ Range, 150; system, Wireless Specialty Apparatus Co., 1,000; w. l., 300, 600; rates, Great Lakes Service, 2 c. per word.

Commercial land and ship stations, alphabetically by call signals.

[b—ship station; c—land station.]

Call signal.	Name.	Call signal.	Name.
KDU	Point Reyes, Calif.	WCAN	Jacksonville, Fla.
KDYI	Metcof	WCAO	Baltimore, Md.
KDYK	H. F. Alexander	WCAP	Decatur, Ill.
KDYL	Salt Lake City, Utah	WCAQ	Defiance, Ohio
KDYM	San Diego, Calif.	WCAR	San Antonio, Tex.
KDYN	Redwood City, Calif.	WCAS	Minneapolis, Minn.
KDYQ	San Diego, Calif.	WCAT	Rapid City, S. Dak.
KDYP	Anvil	WCAU	Philadelphia, Pa.
KDYR	Portland, Oreg.	WCAV	Little Rock, Ark.
KDYR	Pasadena, Calif.	WCAW	Quincy, Ill.
KDYS	Great Falls, Mont.	WCAZ	Hurlington, Va.
KDYT	Astoria	WCAX	Milwaukee, Wis.
KDYU	Klamath Falls, Oreg.	WCAY	Quincy, Ill.
KDYV	Salt Lake City, Utah	WDA	Nashville, Tenn.
KDYW	Phoenix, Ariz.	WDAB	Portsmouth, Ohio
KDYX	Honolulu, Hawaii	WDAC	Springfield, Ill.
KDYZ	Denver, Colo.	WDAD	Lindsborg, Kans.
KDZA	Dolphin	WDAE	Tampa, Fla.
KDZB	Tucson, Ariz.	WDAF	Kansas City, Mo.
KDZC	Bakersfield, Calif.	WDAG	Amarillo, Tex.
KDZD	Theodore H. Workwine	WDAH	El Paso, Tex.
KDZE	Los Angeles, Calif.	WDAL	Syracuse, N. Y.
KDZF	Seattle, Wash.	WDAM	College Park, Ga.
KDZG	Los Angeles, Calif.	WDAK	Hartford, Conn.
KDZH	San Francisco, Calif.	WDAL	Jacksonville, Fla.
KDZI	Fresno, Calif.	WDAN	Shreveport, La.
KDZJ	Wenatchee, Wash.	WDAO	Dallas, Tex.
KDZK	Eugene, Oreg.	WDAP	Chicago, Ill.
KDZL	Redo, Nev.	WDAD	Brownsville, Pa.
KDZM	Golden, Utah	WDAR	Philadelphia, Pa.
KDZN	Centralls, Wash.	WDAS	Worcester, Mass.
KDZO	Calcutt	WDAT	Worcester, Mass.
KDZP	Maroon	WDAU	New Bedford, Mass.
KDZQ	Los Angeles, Calif.	WDAY	Muskogee, Okla.
KDZR	Denver, Colo.	WDAW	Atlanta, Ga.
KDZS	Bellingham, Wash.	WDAX	Centerville, Iowa
KDZT	Tavernilla	WDAY	Fargo, N. Dak.
KDZU	Oakland, Calif.	WDAA	Flint, Mich.
KDZX	Los Angeles, Calif.	WEAB	Fort Dodge, Iowa
KDZY	Georgetown, Calif.	WEAC	Terre Haute, Ind.
KDZZ	Bakersfield, Calif.	WEAD	Atwood, Kans.
KDZZ	Bakersfield, Calif.	WEAE	Blackburg, Va.
KDZZ	Wenatchee, Wash.	WEAF	New York, N. Y.
WAAD	Cincinnati, Ohio	WEAG	Edgewood, R. I.
WAAB	Trales, W. Va.	WEAH	Wichita, Kans.
WAAC	Newburgh, N. Y.	WEAI	Ithaca, N. Y.
WAAD	Fort Smith, Ark.	WEAJ	Vermillion, S. Dak.
WAAE	Canlon, N. Y.	WEAK	St. Joseph, Mo.
WAAF	Pittsburgh, Pa.	WEAM	North Plainfield, N. J.
WAAG	Rogers, Mich.	WCX	Detroit, Mich.
WAAH	New Orleans, La.	WHR	Kansas City, Mo.
WAAI	Columbus, Ohio	WHX	Humboldt
WAAL	University Place, Nebr.	WIB	Lawrenceville, Ill.
WAAM	Houston, Tex.	WIC	Owensboro, Ky.
WAAN	Northfield, Minn.	WMA	St. Louis, Mo.
WAAO	Villanova, Pa.		

Government ship stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations published by the Herne bureau.]

Station.	Call signal.	Station controlled by—
Morgan-Lewis ¹	WXQ	War Department, Quartermaster Corps.

¹ Range, 200; system, U. S. Army, 1000; w. l., 300,000, 1100; services, 0; hours, X.

Special land stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921.]

Station	Call signal.	Wave lengths.	Station controlled by—
Athol, Mass.	1XP	Variable 160-40	Leon W. Bishop, 160 Cottage Street.
Cleveland, Ohio	8XT	Variable	Cleveland Electric Illuminating Co., Illuminating Building.
Conway, Ark.	5XAC	300, 375	Conway Radio Laboratories.
Dallas, Tex.	5ZAW	300, 375	Kendall Bldg., 3301 Wallborn Street.
Detroit, Mich.	4XG	160	Detroit News, 615 Lafayette Boulevard.
East Palestine, Ohio	5ZJ	300, 375	R. D. McComan, 268 North Market Street.
Fort Wayne, Ind.	9XH	Variable	City of Fort Wayne, Department of Public Safety.
Grand Coteau, La.	5XZ	300, 250, 375	St. Charles College.
Grand Rapids, Mich.	8ZAG	300, 375	Charles E. Holmes, 310 West Brown Street.
Houston, Tex.	6XAA	Variable	Hurburt-Still Electric Co., 1201 McKinney Avenue.
Little Rock, Ark.	5XAB	do.	Dr. L. M. Hunter and G. L. Carrington, 2420 Izard Street.
Milwaukee, Wis.	9YZ	300, 375	Marquette University, 1115 Grand Avenue.
Minneapolis, Minn.	9YX	300, 375	Wm. Hood Dunwoody Industrial Institute, 814 Superior Boulevard.
Montgomery, W. Va.	6YE	200, 375	University of West Virginia, Department of Electrical Engineering.
Newark, N. J.	2XAK	Variable	I. R. Nelson Co., Bond Street.
Newton, Mass.	1XK	do.	Boston College.
New York, N. Y.	2XAL	425, 3000	International News Service, 21 Spruce Street.
Oakland, Calif.	6XAR	300, 400	Great Western Radio Corporation, 19 Mason Street, 860 Francisco, Calif.
Oklahoma City, Okla.	5ZAV	300, 375	Le Roy Moffett, Jr., 312 1/2 North Broadway.
Philadelphia, Pa.	3XB	250, 275	Philadelphia Electric Co., 1000 Chestnut Street.
Do.	3XK	275, 1300	Frederick Strattoner, 1638 North Radfield Street.
San Antonio, Tex.	5XY	Variable 300 to 375	Alamo Radio Electric Co., 608 West Evergreen Street.
San Francisco, Calif.	6XX	Variable	R. C. of A., 310 Insurance Exchange Building.
South Pasadena, Calif.	6XAS	do.	Brooks E. Sawyer, 438 South Spring Street, Los Angeles, Calif.
St. Paul, Minn.	9ZAH	300, 375	Boy Scouts of America.
Tampa, Fla.	4XG	Variable	Pierce Electric Co.
Washington, D. C.	3YS	300, 375	George Washington University, 2023 G Street N.W.

Special land stations, grouped by districts.

Call signal.	District and station.	Call signal.	District and station.
1XK	First district:	6XAR	Sixth district:
1XP	Newton, Mass.	6XAS	Oakland, Calif.
	Athol, Mass.	6XX	South Pasadena, Calif.
2XAK	Second district:		San Francisco, Calif.
2XAL	Newark, N. J.	8XG	Eighth district:
	New York, N. Y.	8XT	Detroit, Mich.
3XH	Third district:	8YE	Cleveland, Ohio.
3XE	Philadelphia, Pa.	8ZAG	Montgomery, W. Va.
3YS	Do.	5ZJ	Grand Rapids, Mich.
4XG	Washington, D. C.		East Palestine, Ohio.
	Fourth district: Tampa, Fla.	9XH	Ninth district:
5XAA	Fifth district:	9YX	Fort Wayne, Ind.
5XAB	Houston, Tex.	9YZ	Minneapolis, Minn.
5XAC	Little Rock, Ark.		Milwaukee, Wis.
5XY	Conway, Ark.	9ZAH	St. Paul, Minn.
5XZ	San Antonio, Tex.		
5ZAV	Grand Coteau, La.		
5ZAW	Oklahoma City, Okla.		
	Dallas, Tex.		

ALTERATIONS AND CORRECTIONS.

COMMERCIAL LAND STATIONS.

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations, published by the Heine bureau.]

- ATLANTA, GA. (WGM).—Strike out all particulars.
- BIRMINGHAM, ALA.—Hours, X.
- CAMP 60, CALIF.—System, De Forest (v. t. telephone and c. w. telegraph).
- CAMP 61, CALIF.—System, De Forest (v. t. telephone and c. w. telegraph); w. l., 527.
- CASCADA, CALIF.—System, De Forest (v. t. telephone and c. w. telegraph); w. l., 527, 1650.
- CHATHAM, MASS. (WCC).—Call signal changed to WIM; system, General Electric Co., c. w. and i. c. w.
- CHICAGO, ILL. (WBU).—System, De Forest (v. t. telephone and telegraph).
- CINCINNATI, OHIO (WLW).—W. l., 360, 485.
- CINCINNATI, OHIO (WMI).—Loc. (approximately) $0.84^{\circ} 30' 00''$, N. $39^{\circ} 06' 00''$; range, 150.
- COLUMBUS, OHIO.—Range, 200.
- DEARBORN, Mich. (KDEN).—System, De Forest (v. t. telephone).
- DENVER, COLO. (KLZ).—Range, 150.
- DETROIT, MICH. (KDPII).—Range, 150; system, R. C. of A. (v. t. telephone and telegraph).
- DETROIT, MICH. (WWJ).—Range, 200; system, Western Electric Co. (v. t. telephone).
- EAST LANSING, MICH.—Range, 50.
- EAST MORICHES, N. Y.—Range, 1000–1600; system, I. W. T. Co. arc and Cutting & Washington spark, 3000; w. l., 300, 500, 1300, 2800; service PG and PR-PR service with St. Martins, Curacao, Caracas, Maracai, and Puerto Cabello.
- FLAT ROCK, MICH.—System, composite (v. t. telephone).
- FORT WORTH, TEX. (WPA).—W. l., 300, 485.
- FORT WORTH, TEX. (WRAP).—Loc. $0.97^{\circ} 15' 00''$, N. $32^{\circ} 43' 00''$.
- GALVESTON, TEX.—System, De Forest (v. t. telephone).
- HAMILTON, OHIO (WBAU).—Range, 200.
- HARTFORD, CONN.—System, composite (v. t. telephone).
- HILLSBORO, OREG.—W. l., 300, 600, 4100, 6200, 8500.
- KANSAS CITY, MO. (WQQ).—Range, 150.
- KENAI, ALASKA.—Strike out all particulars.
- LARAMIE, WYO.—System, De Forest (v. t. telephone).
- LATOGUHE, ALASKA.—Range, 300.
- LIMA, OHIO.—System, De Forest (v. t. telephone).
- LONG BEACH, CALIF. (KUNT).—System, Western Electric Co. (v. t. telephone).
- LOS ANGELES, CALIF. (KFI).—Hours, X; station operated and controlled by Earle C. Anthony (Inc.).
- MARTINSVILLE, ILL.—System, De Forest (v. t. telephone).
- MILWAUKEE, WIS.—Hours, X.
- MONTEREY, CALIF.—*Read* Del Monte, Calif.
- NEOLEX, OHIO.—System, De Forest (v. t. telephone).
- NEW YORK, N. Y. (WDT).—Range, 100.
- NEW YORK, N. Y. (WNY).—Range 200–300; system, R. C. of A. (c. w.) and R. C. of A. Spark, 1000.
- NORTHVILLE, MICH.—System, De Forest (v. t. telephone).
- PALO ALTO, CALIF.—W. l., 300, 600, 3100, 3700, 4300, 4650, 5850, 7775.
- PEDROCIPIAS, CALIF. (Santa Catalina Island).—System, Western Electric Co. (v. t. telephone).

PHILADELPHIA, PA. (WGL).—Range, v. t. telephone 50; spark, 300.
 PITTSBURGH, PA. (WFB).—Strike out all particulars.
 PORT HURON, MICH.—System, De Forest (v. t. telephone).
 PORT MOLLER, ALASKA.—Hours, X.
 RENO, NEV.—Range, 150.
 ROCK ISLAND, ILL.—*Read* Davenport, Iowa: loc. (approximately) 0.90° $33' 00''$,
 N. 41° $30' 00''$; station operated and controlled by Palmer School of Chiropractic.
 ROSWELL, N. MEX.—W. I., 360, 485.
 RUBY.—System, Halcutt, 120.
 SAN FRANCISCO, CALIF. (KFO).—W. I., 360, 455.
 SAVANNAH, GA.—W. I., 300, 450, 600.
 SEATTLE, WASH. (KHQ).—Range, 50.
 SEATTLE, WASH. (KVV).—System, composite (c. w. telephone and telegraph).
 SKAGIT POWER SITE, WASH.—System, composite (c. w. telephone and telegraph).
 SPRINGWELLS, MICH.—System, composite (v. t. telephone).
 SUGARLAND, TEX.—System, De Forest (v. t. telephone).
 SUPERIOR, MICH.—System, General Electric Co. (v. t. telephone).
 TOLEDO, OHIO (WJK).—Range, 300.
 TULSA, OKLA.—Strike out all particulars.
 UNGA ISLAND, ALASKA.—*Read* Unga, Alaska; range, 300; w. I., 300, 600, 1800.
 WASHINGTON, D. C. (WDW).—Strike out all particulars.

COMMERCIAL SHIP 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, 1921, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

ALABAMA.—Strike out all particulars.
 ALAMEDA.—Range, 300; w. I., 300, 450, 600.
 AMERICA.—System, Navy-Liberty spark, 1000 and R. C. of A. (v. t. telephone); w. I., 300, 450, 600, 1800.
 ANOKA.—Strike out all particulars.
 APALACHEE.—Strike out all particulars.
 ARTIGAS.—W. I., 300, 450, 600.
 BALDROCK.—United States & Bermuda Towing Co. owner of vessel.
 BANARAN.—Strike out all particulars.
 BANTU.—System, R. C. of A., 120.
 BATANES.—Strike out all particulars.
 BEAUMONT.—Strike out all particulars.
 BELLOTA.—Strike out all particulars.
 BENNICIA.—Range, 150; system, Navy-Simon, 1000; w. I., 300, 465, 600; rates, North and South America and transoceanic services 8 c. per word; station operated and controlled by owner of vessel.
 BILOXI.—Strike out all particulars.
 BLUE HEN STATE.—Name changed to President Garfield.
 BROOKDALE.—Rates, North and South America and transoceanic services 6 c. per word.
 BROXTON.—Strike out all particulars.
 BUCKEYE STATE.—Name changed to President Roosevelt.
 CAPINES.—Strike out all particulars.
 CARIBBEAN.—Range, 300; system, Navy, 1000; Panama Canal, owner of vessel.
 CASTLE TOWN.—System, Navy-R. C. of A., 1000; w. I., 300, 450, 600.
 CATHLAMET.—Station operated and controlled by S. O. R. S.
 CELESTIAL.—Name changed to Margaret Dollar.

- CHESTER SUN.**—W. L., 300, 450, 600.
- CITY OF SEATTLE.**—System, R. C. of A., 1000.
- CITY OF SYDNEY.**—Range, 200; system, Halcun, 120; w. l., 300, 450, 600; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by owner of vessel.
- CLONTARF.**—Range, 300; system, Navy-W. S. A. Co., 1000; w. l., 300, 450, 600.
- COHASSET.**—Station operated and controlled by I. W. T. Co.
- COLUMBIA (WIR).**—Strike out all particulars.
- CRAUTREE.**—Name changed to W. J. Crosby.
- CREOLE STATE.**—Name changed to President Hayes.
- CROFTON HALL.**—Range, 300.
- CUBRIR.**—Range, 300.
- DAHLEN.**—Range, 200; system, Navy-Simon, 1000; Panama Canal owner of vessel.
- DE BARDELEBEN.**—Range 200; system, Navy-Simon, 1000; w. l., 300, 450, 600.
- EASTERN SOLDIER.**—Name changed to Lena Luckenbach; Luckenbach S. S. Co. owner of vessel.
- EASTERN SWORD.**—System, Navy-Marconi, 1000.
- EGGENS.**—Range, 200.
- FAVORITE (KDNV).**—Range, 300; system, Navy arc; Panama Canal owner of vessel.
- FORT LOGAN.**—Strike out all particulars.
- FREEMONT SULPHUR No. 2.**—System, R. C. of A., 1000; w. l., 300, 450, 600.
- GEORGE B. MACKENZIE.**—Range, 300; system, R. C. of A., 1000; w. l., 300, 450, 600.
- GORGONA.**—Range, 200; system, Navy-Simon, 1000; Panama Canal owner of vessel.
- GRANITE STATE.**—Name changed to President Polk.
- GULFSTAR.**—W. L., 300, 450, 600.
- HALEAKALA.**—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600.
- HAWAIIAN.**—W. L., 300, 450, 600; rates, North and South American and transoceanic services, 8 c. per word.
- HEFFRON.**—Station operated and controlled by R. C. of A.
- HOOSAC.**—Strike out all particulars.
- HOOSIER STATE.**—Name changed to President Lincoln.
- HUDSON.**—Name changed to President Fillmore.
- HUMBOLDT.**—Strike out all particulars.
- HURON (KUSD).**—Name changed to City of Honolulu.
- INDIA ARROW.**—W. L., 300, 450, 600.
- ISAAC L. RICE.**—Strike out all particulars.
- J. C. DONNELL.**—W. L., 300, 450, 600.
- KAMESIT.**—W. L., 300, 450, 600.
- KEOTA.**—Strike out all particulars.
- KROONLAND.**—W. L., 300, 450, 600; rates, North and South American and transoceanic services, 8 c. per word.
- LAKE ARTHUR.**—Richmond-New York S. S. Co. owner of vessel.
- LAKE FLORIAN.**—System, Navy, 1000.
- LAKE STIRLING.**—Richmond-New York S. S. Co. owner of vessel.
- LEVANT ARROW.**—W. L., 300, 450, 600.
- LIBERTY GLO.**—Range, 300; system, Navy-W. S. A. Co., 1000; w. l., 300, 450, 600.
- MARACAY.**—Strike out all particulars.
- MARGARET (KZO).**—W. L., 300, 450, 600.
- METEOR.**—Station operated and controlled by R. C. of A.
- MOJAVE.**—Strike out all particulars.
- MOOSABEE.**—Strike out all particulars.
- MOSS POINT.**—Strike out all particulars.

- MOUNT CLINTON.—System, Telefunken, 1000; w. l., 300, 450, 600, 1800.
- NEW YORK (KSN).—United Transatlantic Lines (Inc.) owner of vessel.
- NORLINA.—Range, 300.
- OLD NORTH STATE.—Name changed to President Van Buren.
- OSAKIS.—Name changed to Manhattan Island.
- OTAKA.—Strike out all particulars.
- PANHANDLE STATE.—Name changed to President Monroe.
- PARISMINA.—Range, 250.
- PENOBSCOT.—Penobscot S. S. Co. owner of vessel.
- PONTCHARTRAIN.—Strike out all particulars.
- PRESIDENT POLK.—System, Navy-R. C. of A., 1000.
- PRINCESS MATOIKA.—Name changed to President Arthur.
- RANSOM B. FULLER.—System, R. C. of A., 1000.
- RELIANCE.—Range, 200; system, Telefunken, 1000; w. l., 300, 450, 600, 1800; rates, North and South American and transoceanic services, 8 c. per word; station operated and controlled by owner of vessel, care of United American Lines, 39 Broadway, New York, N. Y.
- RESOLUTE (KDYA).—Range, 200; system, Telefunken, 1000; w. l., 300, 600, 1800; rates, North and South American and transoceanic services, 8 c. per word; station operated and controlled by owner of vessel, care of United American Lines, 39 Broadway, New York, N. Y.
- ROBIN ADAIR.—W. l., 300, 450, 600.
- RUTH ALEXANDER.—Call signal changed to WDR.
- SANTA FLAVIA.—W. l., 300, 450, 625, 600; International Packing Co. owner of vessel.
- SANTA OLIVIA.—W. l., 300, 450, 600.
- SEACONNET.—Seaconnet S. S. Co. owner of vessel.
- SEATTLE SPIRIT.—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600.
- SEAGWAY.—Station operated and controlled by S. O. R. S.
- St. CHARLES.—Strike out all particulars.
- St. NICHOLAS.—Range, 300; w. l., 300, 600.
- St. PAUL.—Range, 300; system, Navy, 1000; w. l., 300, 450, 600; rates, North and South American and transoceanic services, 10 c. per word.
- SUNLISECO.—System, Navy-Lowenstein, 1000; rates, North and South American and transoceanic services, 5 c. per word.
- THEODORE H. WIDWIRE, JR.—Rates, Great Lakes service, 2 c. per word.
- TUSCAN.—W. l., 300, 450, 600; Merchant & Miners Transportation Co. owner of vessel.
- UTOKA.—Strike out all particulars.
- VEZAYA.—Range, 500; system, composite, 1000; w. l., 300, 600; service, PG; hours, X; Ynchausti S. S. Co. owner of vessel.
- WABASH.—Range, 300; system, R. C. of A., 1000; w. l., 300, 450, 600.
- WALTER A. LÜCKENBACH.—System, Kilbourne & Clark, spark, 1000; and Federal etc; w. l., 300, 450, 600, 1800.
- WALTER JENNINGS.—System, R. C. of A., 1000.
- WENATCHEE.—Name changed to President Jefferson.
- WEST CATANACK.—Station operated and controlled by I. W. T. Co.
- WEST CHESWALD.—W. l., 300, 450, 600.
- WESTERN WORLD.—Station operated and controlled by S. O. R. S.
- WHITTIER.—Strike out all particulars.
- WM. ROCKEFELLER.—System, R. C. of A. (v. t. telephone and telegraph) and R. C. of A., spark, 1000.
- YOSEMITE (KDWE).—Station operated and controlled by owner of vessel.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

KDAR, *read* President Monroe; KDCI, *read* President Fillmore; KDED, *read* Lena Luckenbach; KDHF, *read* President Van Buren; KDLE, *read* President Hayes; KDOT, *read* President Jefferson; KDOZ, *read* President Polk; KDRW, *read* President Roosevelt; KDTC, *read* President Garfield; KDUV, *read* Margaret Dollar; KDUY, *read* President Lincoln; KLN, *read* Del Monte, Calif.; KUSD, *read* City of Honolulu; KVI, *read* Unga, Alaska; WDR, *read* Ruth Alexander; WFOI, *read* Manhattan Island; WIM, *read* Chatham, Mass.; WLS, *read* President Arthur; WOC, *read* Davenport, Iowa; WKOE, *read* W. J. Crosby; strike out all particulars following the call signals, KDAI, KDKO, KEKX, KELX, KENZ, KERK, KETJ, KIKP, KIMP, KIQJ, KOK, KPAI, KQEE, KSAI, KVEA, KZZ, WDW, WEH, WGM, WHT, WHX, WIR, WJEA, WKE, WPB, WQAU, WSAE, WSAO, WXAU, and WXUA.

GOVERNMENT LAND STATIONS BY NAMES OF VESSELS.

Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations, published by the Bernese bureau.]

CIRCLE CITY, ALASKA.—*Read* Circle, Alaska; w. l., 1350; service, PG.
 FAIRBANKS, ALASKA.—Service, PG.
 FORT EGBERT, ALASKA.—Service, PG.
 FORT GIBBON, ALASKA.—Service, PG.
 FORT ST. MICHAEL, ALASKA.—Service, PG.
 FORT YUKON, ALASKA.—Service, PG.
 HOLY CROSS, ALASKA.—Service, PG.
 IDITAROD, ALASKA.—Service, PG.
 KOTLIK, ALASKA.—Service, PG.
 LIVENGOOD, ALASKA.—Service, PG.
 McGRATH, ALASKA.—Service, PG.
 NOME, ALASKA.—Service, PG.
 NULATO, ALASKA.—Service, PG.
 WRANGELL, ALASKA.—Service, PG.

GOVERNMENT SHIP 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, 1921, and to the International List of Radiotelegraph Stations, published by the Bernese bureau.]

MISSOURI.—Strike out all particulars.
 SLOOTUM.—Call signal changed to WXS.

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

NKF, strike out all particulars; WVA, *read* Circle, Alaska, and WWY, *read* WXS.

SPECIAL LAND STATIONS, BY NAMES OF STATIONS.

ATLANTA, GA. (4XH).—Address 76 East Fifth Street.
 AUSTIN, TEX. (5ZAG).—Address 711 West Twenty-third Street.
 BALTIMORE, MD. (3XD).—Strike out all particulars.
 BATON ROUGE, LA. (5ZAC).—Address 918 Convention Street.
 BEDFORD, IOWA (9XAF).—Strike out all particulars.
 BERKELEY, CALIF. (6XK).—Address 2436 Stuart Street.
 BIRMINGHAM, ALA. (5XC).—Address Brown-Marx Building.
 BOSTON, MASS. (1YS).—Station controlled by Massachusetts Radio and Telegraph School, 18 Boylston Street.
 BROOKLINE, MASS. (1XA).—W. l., variable 75-350.

BUENA VISTA, VA. (3ZAA).—Address Walnut Street.
 CAMBRIDGE, MASS. (1XAB).—Address 139 Main Street.
 CAMBRIDGE, MASS. (1XM).—W. l., variable.
 CASPER, WYO. (7ZO).—Address 1022 South Ash Street.
 CHICAGO, ILL. (9XAN).—Strike out all particulars.
 CHICAGO, ILL. (9XB).—W. l., 350-450.
 CHICAGO, ILL. (9YL).—Address Thirty-third and Federal Streets.
 CINCINNATI, OHIO (8XAH).—W. l., variable 150-550.
 CLIFFWOOD, N. J. (2XF).—Address 463 West Street, New York, N. Y.
 COLLEGE STATION, TEX. (5XB).—W. l., 200, 375, variable.
 DAVENPORT, IOWA (9XE).—W. l., variable.
 DEAL BEACH, N. J. (2XJ).—Address 463 West Street, New York, N. Y.
 GREEN HARBOR, MASS. (1XD).—Address 463 West Street, New York, N. Y.
 HOUMA, LA. (5ZAB).—Station operated by Pullen Brothers, 503 Rouseau Street.
 ITHACA, N. Y. (8XU).—W. l., variable.
 JULIFF, TEX. (5ZW).—Station operated by Elm Grove Plantation.
 LANSING, MICH. (8ZF).—Strike out all particulars.
 LAREDO, TEX. (5ZAN).—Address Fort McIntosh, Tex.
 LOS ANGELES, CALIF. (6XAK).—W. l., variable; address 950 South Flower Street.
 OAKLAND, CALIF. (6XW).—Address 2830 Eleventh Avenue.
 PORTLAND, OREG. (7XF).—Address 1556 East Taylor Street.
 ROCK ISLAND, ILL. (9XAC).—Station controlled by Karlowa Radio Corp., 606 Best Building.
 SAN ANTONIO, TEX. (5ZAK).—Address Kelly Field, Tex.
 SAN ANTONIO, TEX. (5ZR).—Strike out all particulars.
 SAN FRANCISCO, CALIF. (6ZAH).—Strike out all particulars.
 SAN GABRIEL, CALIF. (6XS).—W. l., variable; address Ross Road and Mission Drive.
 VERNON, CALIF. (6XT).—Strike out all particulars.
 Woodside, N. Y. (2XAC).—W. l., variable 200-400.

MISCELLANEOUS.

NEW INSTRUCTIONS FOR HANDLING RADIO TRAFFIC ACCOUNTS

The following instructions shall govern transactions under paragraph 4 of licenses for ship radio stations:

Accounts in respect of all charges due or payable under the International Radiotelegraph Convention in respect of messages exchanged between the station hereby licensed and other stations shall be recorded monthly as follows:

(a) *Accounts for traffic through coastal stations.*—The licensee shall maintain a monthly abstract of all traffic transmitted or received, which shall show separate accounts for each controlling agency with which traffic is exchanged. Such abstract must show, by columnar arrangement or recapitulation, the origin, address, routing, and check of all messages handled, and, in addition, debit or credit entries of tolls to the controlling foreign administration for traffic routed via foreign coastal stations and similar entries to the controlling Government departments or commercial companies for traffic routed via United States coastal stations.

(b) *Accounts for traffic from ship to ship.*—The licensee shall maintain an abstract as under (a) above, except that controlling or operating companies will be substituted for foreign administrations.

CLASSIFICATION OF ACCOUNTS COVERED BY SUBPARAGRAPH (A).

The accounts under subparagraph (a) are based upon the traffic returns or abstracts of coastal stations and are divided into two classes: First, international or foreign accounts; and, second, domestic or United States accounts.

Accounts for messages of first class.—Accounts of the foreign or international class will be received by the licensee from the Secretary of Commerce or from such other Government agency as may be designated by the Secretary of Commerce to clear and liquidate foreign accounts as required by the International Radiotelegraph Convention. Payment of such accounts must be made in full as rendered within 90 days of receipt of itemized invoices, the payment to be made by the licensee or his duly authorized agent to the

office from which the accounts are received. Any protests or claim for refunds or reimbursements of any nature whatsoever shall accompany the settlement for the account which includes the messages upon which protests or claims are based.

Accounts for messages of second class.—Accounts of the domestic or United States shore stations will be handled in exactly the same manner as those for messages of the foreign or international class, except the licensee will receive the domestic accounts from the Government department or commercial company which controls the coastal station. Payment of such accounts must be made by the licensee to the department or company from which received and in the same manner as prescribed for foreign or international accounts, except that the licensee is authorized to enter into any special agreement with the controlling departments or companies with relation to settlement of accounts. Protests or claims may be handled as mutually agreed upon between the licensee and controlling department or company.

Accounts covered by subparagraph (b).—The accounts covered by subparagraph (b) will be exchanged directly between the licensees of the ships concerned and in such manner as may be mutually agreed upon by both parties.

Prepayment of tolls.—The International Radiotelegraph Convention requires that the charges on messages filed on shipboard shall be paid by the sender. The licensee shall, therefore, require prepayment for all tolls due on messages, including those covering ships' business (the tolls so collected not to include special delivery charges).

Submission of reports and amount collected to licensee.—The International Radiotelegraph Convention requires that all documents and originals shall be forwarded by the shipboard station to the radio management at least once a month. The licensee shall require shipboard stations to transmit to him or his authorized agent all abstracts, original message copies, and toll money collected.

Forwarding charges or tolls.—Upon receipt of the records and remittances from the shipboard station the licensee shall set aside or deposit in a special deposit account all message tolls which are due other radio stations and conducting telegraph or cable lines for the transmission of such messages to their destination, and the amounts so set aside or deposited shall not be available for any other purpose than that for which the original payment was made; that is to say, for the transmission beyond office of origin to destination. It is further required that message tolls so set aside or deposited shall be held for a period of not less than two years, at the expiration of which time the licensee, provided claims have not been entered covering such deposits, may withdraw any such unobligated amounts for other purposes, with the approval of the Secretary of Commerce or such other Government agency as the Secretary of Commerce may designate.

Preservation of records.—The licensee shall retain all original documents for a period of not less than two years.

Procedure on termination of ship license. Upon the termination of the station or cancellation of a ship station license the licensee shall forward all unclaimed funds and records pertaining thereto to the Secretary of Commerce, or to such other Government agency as the Secretary of Commerce may designate. The department designated will, upon receipt, clear proper outstanding claims presented within the two-year period required for the retention of records, and in event any funds remain unobligated the remaining funds will be returned to the former licensee.

Inspection of radio documents and accounts.—The radio records and accounts referred to in the preceding paragraphs of these instructions shall be held available for such inspection as the Secretary of Commerce may deem necessary or direct within the two-year period hereinbefore mentioned.

Approved.

D. H. CARSON,
Commissioner of Navigation.

HENRY ROOPER,
Secretary of Commerce.

LOST COMMERCIAL RADIO OPERATORS' LICENSES.

Printed below is a list of radio operators' licenses which have been reported to this bureau as having been lost. Should any of them be found, they should be returned to the bureau for cancellation. Inspectors and others concerned should see that lost licenses are not being used by unauthorized persons.

Name.	Grade.	Number.	Date issued.	Port issued.
Bromley, A. C.	First.	20126	Dec. 1, 1919	Seattle.
Drucker, David	Second.	17267	July 19, 1920	Baltimore.
Engel, George C.	First.	17384	June 18, 1921	New York.
Ferguson, R.	do.	2244	Sept. 8, 1921	Seattle.
Hart, Rexford E.	do.	12264	Dec. 3, 1920	New York.
Lauderman, W. W.	do.	20881	Feb. 10, 1921	Do.
Lippin, Bernard H.	do.	21471	Mar. 11, 1920	Boston.
Mozatz, John C.	Second.	15255	Aug. 13, 1920	Chicago.
Salim, Salim	First.	915	Nov. 7, 1921	New York.
Shulzinger, Max	do.	618	Aug. 3, 1921	Do.
Shumate, John R., Jr.	do.	658	July 20, 1921	Do.
Smith, Roy A.	do.	3241	Jan. 11, 1922	San Francisco.

HYDROGRAPHIC INFORMATION ON PACIFIC COAST.

Under date of May 17 the Navy Department advised as follows:

SAN FRANCISCO, CALIF. (NPG).—Time, 12 noon (c. w. 4650 meters) following weather bulletin; time, 10.30 p. m. (spark 1908 meters) following weather bulletin.

NORTH HEAD, WASH. (NPE).—Time, 4.30 p. m. (spark 2700 meters) following weather bulletin; time, 11.30 p. m. (spark 2700 meters) following weather bulletin.

SEATTLE, WASH. (NVL).—Time, 4.00 p. m. (spark 1988 meters); time, 9.00 p. m. (spark 1988 meters).

All times are, seventy-fifth meridian.

INFORMATION FROM THE BERNE BUREAU.

Greece.—The coast station Athens No. 2 (SXB), open to general public correspondence, exchanges a large number of official messages. The state of war which existed in Greece has resulted in an increase of the number of these messages to such an extent that it is overburdened with work and is unable to assure public correspondence other than that under normal conditions.

In order to remedy this state of affairs, the Radio Telegraph Direction Service of the Hellenian Royal Navy has decided to build a new station (SXG), 60 kilowatts, to which would fall the exchange of official messages of the State. The station SXB can then devote itself to general public correspondence. In spite of the fact that the Hellenian office has done everything to complete this, for purely technical reasons, they have not yet permitted the placing in operation of the station SXG.

Desiring to improve to a high degree as possible the public service with ships this office will open in a short time near Athens a station exclusively for public radiotelegraph correspondence.

British Indies.—The number of three-letter call signals reserved for the British Indies not being sufficient, they also will employ combinations of four letters.

CHANGE IN HOURS.

The legal time is advanced one hour in Belgium, beginning March 26; in France, from March 25 to October 7; in Great Britain, from March 26 to October 8; and in the Netherlands, from March 26 to October 3.

Cyrenaica.—The coast station Tobrukh is open from 6 a. m. to 8 p. m. (Greenwich mean time).

Portugal.—The coast station Porto has been dismantled.

Australia.—Coast station Willis Islet is closed.

Denmark.—Coast station of Blaavand sends, when necessary, at 12.30 and 22.20 (Danish time), reports upon the presence of icebergs in Danish territorial waters.

France.—The coast station Lorient-Pan-Mano is open to general public service.

Great Britain.—Long-distance service of Foldhu will hereafter be transmitted by Clifden radio station.

Mauritius.—The coast station Mauritius is open to PG service from 4 to 8 a. m. and from 12 noon to 4 p. m. (Greenwich mean time). The rate per word is 60 centimes, without minimum.

Italy.—Every bearing transmitted by an Italian radio compass station at the request of a ship station charges a fixed rate of 6 francs. The radio compass stations record all bearings which they may give to a ship station on a radiogram blank. These radiograms are handled, in regard to the liquidation of accounts, as ordinary radiograms, originating from ships and destined for Italy.

DISTRIBUTION OF PUBLICATIONS OF BUREAU OF NAVIGATION.

All orders and inquiries concerning the publications named below should be forwarded to the Superintendent of Documents, Government Printing Office, Washington, D. C. Do not make remittances to the Bureau of Navigation or to other agencies of this bureau.

- List of Merchant Vessels of the United States (annual), \$1.25.
- Code List of Seagoing Vessels With Names of Owners (annual), 25 cents.
- American Documented Seagoing Merchant Vessels of 500 Gross Tons and Over (monthly), annual subscription, 75 cents.
- Navigation Laws of the United States (quadrennial), \$1.
- Amendments to Navigation Laws (occasional), 10 cents.
- List of Commercial, Government, and Special Radio Stations (annual), 15 cents.
- List of Amateur Radio Stations (annual), 15 cents.
- Radio Service Bulletin (monthly), annual subscription, 25 cents; single copies, 5 cents.
- Radio Communication Laws of the United States (occasional), 15 cents.
- Measurement of Vessels (occasional), 15 cents.

CREDIT ALLOWED GRADUATES OF RADIO CORRESPONDENCE SCHOOLS.

Radio inspectors and others interested are advised that graduates of radio correspondence schools are advised that 5 per cent for experience is the maximum credit allowed in examination for radio operator's license.

ALASKAN STATIONS OPENED.

The stations named below opened for the season, as follows:

- | | |
|---------------------------|-------------------------------|
| Alitak (KYL), May 7. | Naknek (KMK), May 16. |
| Akutan (KMW), May 8. | Chisik Island (KUCP), May 19. |
| Libbyville (KMT), May 12. | Saug Point (KHP), May 22. |
| Funter (KXX), May 11. | Koggiung (KVV), May 23. |

OPERATOR'S LICENSE SUSPENDED.

First-class license No. 21062, issued at New York May 18, 1921, has been suspended for a period of three months on account of the holder of the license violating article 6 of the International Convention Service Regulations, in that he transmitted superfluous signals.

INFORMATION REGARDING RADIO ACTIVITIES IN FOREIGN COUNTRIES.

A new record has been attained by the wireless service of the "Drahtlose Uebersee-Verkehr, A. G." (Overseas Wireless Company). On March 16, last, a total of 50,000 words were exchanged via radio at the wireless stations of this company at Nauens and Kilsto. Since the reconstruction of commercial relations the traffic through these wireless stations has been steadily increasing. In August, 1919, the entire business for the month only amounted to about 100,000 words. It increased to 550,000 words in June, 1921, and in February, 1922, rose to 1,000,000 words.

A radio station has just been established at Kaisariye, Anatolia, and the first message was sent to Moscow. The Angora Government announced that another radio station would be opened at Mersina for use in communicating with European capitals.

It is officially announced that experimental transmissions have begun between Leafeld, England, and Cairo wireless stations, and as soon as the preliminary trials are complete a public service will be inaugurated.

INCREASE IN RATES FOR SHIP STATIONS OPERATED AND CONTROLLED BY SHIP OWNERS
RADIO SERVICE.

The following named ship radio stations which are operated and controlled by the Ship Owners Radio Service will increase the ship rate from 4 cents to 8 cents per word for all classes of ship service, beginning July 1 next: *Abner Coburn*, *Atlagush*,¹ *Achilles*,¹ *Andrew P. Luckenbach*, *Anniston City*, *Atlanta City*, *Ausable*,¹ *Benjamin F. Packard*, *Colon*,¹ *Darien*,¹ *Deerfeld*, *F. J. Luckenbach*, *Florence Luckenbach*, *Fred'k Luckenbach*, *General O. W. Goethals*,¹ *General O. H. Ernst*,¹ *Harry Luckenbach*, *Hattie Luckenbach*, *Jacob Luckenbach*, *Julia Luckenbach*, *Katrina Luckenbach*, *K. I. Luckenbach*, *Lena Luckenbach*, *Louis Luckenbach*, *Libby Maine*, *Manitouac*,¹ *Muskegon*,¹ *Oneonta*, *Pleiades*, *Poznam*, *Robin Adair*, *Robin Goodfellow*, *Robin Gray*, *Robin Hood*, *San Juan*, *Sperjacks*, *Starr*, *Steel Voyager*, *Ulysses*,¹ *Wallula*, *Walter A. Luckenbach*, *Winnabago*,¹ *Winneconne*.¹

The radio ship stations owned by the Alaska Steamship Co. which are operated by the Ship Owners Radio Service will not increase the present rate of 4 cents per word.

NEW RADIO PUBLICATIONS.

Members of the staff of the radio laboratory of the Bureau of Standards have recently published three papers describing certain apparatus used in investigations in the radio laboratory. These papers have been published in the May (1922) issue of the "Journal of the Optical Society of America and Review of Scientific Instruments."

A paper by E. T. Cox, entitled "Standard Radio Wavemeter, Bureau of Standards Type R70B," describes a standard wavemeter constructed at the Bureau of Standards and used in the standardization of radio apparatus. This instrument has previously been described in this bulletin.

A paper by H. A. Snow, entitled "An Electron Tube Amplifier for Amplifying Direct Current," describes an amplifier of the type indicated by the title which has been developed at the bureau for particular applications in electric signaling work. This amplifier can be used in place of a polarized relay and also for various other purposes, including the recording of telegraphic and radio signals.

A paper by E. L. Hall and J. L. Preston, entitled "High-Voltage Storage Battery for Use With Electron Tube Generators of Radio-Frequency Currents," describes a special type of storage battery developed at the bureau employing a considerable number of small storage cells contained in small glass jars about 1½ inches square and about 4 inches high. These cells are assembled very compactly in trays which can supply 100 volts, and storage batteries of this kind for supplying small currents required for some kinds of electron tube sets may be conveniently assembled to occupy a very small space.—*Submitted by Bureau of Standards.*

CONFERENCE ON RADIO DIRECTION FINDER FOR MARINE USE.

In response to invitations sent by the Bureau of Standards representatives of nine companies interested in the manufacture of radio direction finders met on Friday, May 12, 1922, to confer with the Assistant Secretary of Commerce, the Bureau of Lighthouses, and the Bureau of Standards regarding the production, cost, installation, calibration, and maintenance of radio direction finders on shipboard.

It was announced that the Department of Commerce has decided to install additional radio beacon stations, as follows: Boston, Nantucket, Cape Charles, Columbia River, Puget Sound, and, if funds are still available, Delaware Bay, Los Angeles, and Blunts Reef. These are in addition to the two new radio beacons at Diamond Shoal (off Cape Hatteras) and San Francisco light vessel. Three other radio beacons have

¹ Not reported before as operated by Ship Owners Radio Service.

been in operation in the vicinity of New York harbor for over a year at Ambrose, Fire Island, and Sea Girt.

A considerable number of foreign ships have been equipped with radio direction finders and are calling for radio beacon service as they approach American shores. American shipping companies appreciate the importance of using the radio direction finder on shipboard in order to determine their locations in time of fog and in order to aid in various ways in time of distress at sea.

As a result of the conference arrangements will be made through the Bureau of Lighthouses, between the manufacturers of radio direction finders, and the operators of steamships for the trial and demonstration of radio direction finding equipment under conditions of practice. It is anticipated that with the installation of the additional radio beacon stations and the activity of the manufacturers in the production of direction finders for use on shipboard this method will be adopted very generally as an aid to navigation.—*Submitted by Bureau of Standards.*

INTERNATIONAL UNION OF SCIENTIFIC RADIO TELEGRAPHY.

The International Union of Scientific Radio Telegraphy was organized two years ago for the purpose of furthering, through international cooperation, the systematic study of the fundamental problems of radio communication. Separate sections have been formed for a number of different countries, and the work of the American section has been in progress for over a year.

Recently systematic measurements have been made at receiving stations in the United States of the intensity of signals received from various French stations, and by a continuance of these measurements it is expected that more comprehensive knowledge will be obtained of the phenomena of radio transmission.

A meeting of the American section was held very recently, at which various committees reported, including the committees on the study of radio wave intensity, atmospheric disturbances, variations of radio wave direction, measurements of radiations which cause interference, and electron tubes. Particularly in the case of measurements of the intensity of radio waves, it is important that international cooperation be promoted, since it is only by frequent simultaneous measurements made cooperatively by widely separated sending and receiving stations that accurate results may be obtained.—*Submitted by Bureau of Standards.*

IMPORTANT RADIO PUBLICATIONS.

The following publications are now available at the office of Superintendent of Documents, Government Printing Office, Washington, D. C.:

Amateur radio stations of United States, edition of June 30, 1921. 203 pages. 15 c. (C 11.7/6:921/2).

Antenna resistance. 1912. (Standards Reprint 189.) 5 c. (C 13.3/a:189).

Commercial and Government radio stations of United States, edition of June 30, 1921. 102 pages. 15 c. (C 11.7/6:921/1).

Commercial traffic regulations. 1918. 214 pages, illus., map. Cloth, \$1. (N 22.2:C73/2).

Construction and operation of a simple homemade radio receiving outfit. 1922. 16 pages, illus. (Standards Circular 120.) 5 c. (C 13.4:120).

Elementary electricity. 1921. 52 pages, illus. (Signal Office, Training Pamphlet 1.) 15 c. (W 42.31:1/3).

Elementary principles of radio telegraphy and telephony. 1922. 79 pages, illus. (Radio Communication Pamphlet 1.) 10 c. (W 42.26:1/5).

High-frequency ammeters. 1913. (Standards Reprint 206.) 10 c. (C 13.3/a:206).

Note on resistance of radiotelegraphic antennas. 1915. (Scientific Papers 257.) 5 c. (C 13.3/a:257).

Operation of the modulator tube in radio telephone sets. (Standards Scientific Papers 423.) 10 c. (C 13.3/a:423).

Principles of radio transmission and reception with antenna and coil aeriads. (Scientific Papers 354.) 10 c. (C 13.3/a:354).

Principles underlying radio communication. 1922. 619 pages, illus. (Radio Communication Pamphlet 40.) \$1. (W 42.29:40).

Quantitative experiments in radiotelegraphic transmission. 1914. (Scientific Papers 226.) 5 c. (C 13.3/a:226).

Radio Communication laws of United States and the international radiotelegraphic convention, regulations governing radio operators and the use of radio apparatus on ships and on land. Edition of August 15, 1919. 102 pages. 15 c. (C 11.7/5:919).

Radio direction finder and its application to navigation. (Standards Scientific Papers 428.) 15 c. (C 13.3/a:428).

Radio instruments and measurements. (Standards Circular 74.) 60 c. (C 13.4:74).

Some quantitative experiments in long distance radiotelegraphy. 1911. (Standards Reprint 159.) 10 c. (C 13.3/a:159).

Radio Service Bulletin. Monthly. 5 c. a single copy; 25 c. a year; foreign subscription, 40 c. a year. Supplementary to Radio Stations of United States which is published once a year. (C 11.7:3).

Remittances should be made to the Superintendent of Documents, Government Printing Office, Washington, D. C., by coupons, postal money order, express order, or New York draft. If currency is sent it will be at sender's risk. Foreign orders should be accompanied by international money order or New York draft.

DISTRIBUTION OF WEATHER INFORMATION, ETC., BY NAVAL RADIO STATIONS.

The Weather Bureau, Department of Agriculture, recently published pamphlets explaining the method of transmitting weather reports, forecasts, and warnings by naval radio stations for the benefit of marine interests. These publications may be obtained from the above-named bureau upon application.

List of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters.

Call signal.	Owner of station.	Location of station.	Wave lengths.
KDKA	Westinghouse Electric & Manufacturing Co.	East Pittsburgh, Pa.	360
KDN	Leo J. Meyberg Co.	San Francisco, Calif., California and Mason Streets.	360, 485
KDPT	Southern Electrical Co.	San Diego, Calif., Third and E Streets.	360
KDYL	Telegram Publishing Co.	Salt Lake City, Utah.	360
KDYM	Savoy Theater.	San Diego, Calif., 225 C Street.	360
KDYN	Great Western Radio Corp.	Redwood City, Calif.	360
KDYU	Carlson & Simpson	San Diego, Calif., Union and C Streets.	360
KDYV	Oregon Institute of Technology	Portland, Oreg.	485
KDYR	Pasadena Star-News Publishing Co.	Pasadena, Calif.	360
KDYS	The Tribune	Great Falls, Mont.	360
KDYU	Herald Publishing Co.	Klamath Falls, Oreg.	360
KDYV	Cope & Hornwell Co.	Salt Lake City, Utah, 1135 Michigan Avenue	360
KDYW	Smith, Hughes & Co.	Phoenix, Ariz., Third Avenue and Jefferson	360
KDYX	Star Bulletin	Hawaii.	360
KDYY	Rocky Mountain Radio Corp.	Denver, Colo., 1512 Broadway.	360
KDZA	Arizona Daily Star	Phoenix, Ariz.	360
KDZB	Frank E. Siefert	San Diego, Calif., 1492 Twentieth Street.	360
KDZC	W. K. Mitchell	San Diego, Calif., 722 South Broadway.	360
KDZE	The Rhodes Co.	San Diego, Calif., 1321 Second Avenue.	360
KDZF	Automobile Club of Southern California	San Diego, Calif., 260 Figueroa.	360
KDZG	Cyrus Palmer & Co.	San Diego, Calif., 433 California Street.	360
KDZH	Fresno Evening Herald	Fresno, Calif.	360
KDZI	Electric Supply Co.	Washington, Wash.	360
KDZJ	Excelsior Radio Co.	Washington, Wash., Box 33.	360
KDZK	Nevada Machinery & Electric Co.	Las Vegas, Nev.	360

List of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters—Continued.

Call signal.	Owner of station.	Location of station.	Wave lengths:
KDZL	Rocky Mountain Radio Corp.	Ugden, Utah, 2311 Washington Avenue.	360
KDZM	E. A. Hollingworth.	Centralia, Wash., 273 North Tower Avenue.	360
KDZF	Newbery Electric Corp.	Los Angeles, Calif., 724 South Olive Street.	360
KDZQ	Motor Generator Co.	Denver, Colo., 429 South Sherman Street.	360
KDZR	Bellingham Publishing Co.	Bellingham, Wash.	360
KFC	Northern Radio & Electric Co.	Seattle, Wash., 415 Union Street.	360
KFI	Earle C. Anthony (Inc.)	Los Angeles, Calif., Tonchard Hope Streets.	360
KFU	The Precision Shop.	Gridley, Calif., Steamore Street.	360
KFV	Poster-Bradbury Radio Store.	Yakima, Wash., Herald Block.	360
KFZ	Doerr-Mitchell Electric Co.	Spokane, Wash., 124-126 Lincoln Street.	360
KGB	Wm. A. Matins Electric Co.	Tucson, Wash., 1130 Broadway.	360
KGC	Electric Lighting Supply Co.	Hollywood, Calif., 3104 Harold Way.	360
KGF	Pomona Fixture & Wiring Co.	Pomona, Calif., 310 West Second Street.	360
KGG	Hillock & Watson Radio Service.	Portland, Oreg., 162 Park Street.	360
KGN	Northwestern Radio Manufacturing Co.	Portland, Oreg., 1556 East Taylor Street.	360
KGO	Alta Lens Radio Laboratory.	Altadena, Calif., 2940 Maiden Lane.	360
KGU	Mattson A. Mattson.	Honolulu, Hawaii, Waikiki Beach.	360
KGW	Circulation Publishing Co.	Portland, Oreg., Sixth and Alder Streets.	360
KGY	St. Martin's College (Rev. S. Rish).	Levy, Wash.	360
KHD	C. E. Aldrich Marls & Granite Co.	Colorado Springs, Colo., P. O. Box 285.	485
KHI	C. R. Kierulff & Co.	Los Angeles, Calif., 737 South Los Angeles Street.	360
KHQ	Louis Wassner.	Seattle, Wash., 419 Thirteenth Avenue.	360
KRC	Standard Radio Co.	Los Angeles, Calif., 1648 South Olive Street.	360
KRI	The Radio Shop.	San Jose, Calif., 225 Sunnyvale Avenue.	360
KRIQ	C. O. Gauld.	Stockton, Calif., 415 East Main Street.	360
KIR	Vincent J. Kraft.	Seattle, Wash., 6308 Northwest Avenue NE.	360, 485
KIS	Bible Institute of Los Angeles.	Los Angeles, Calif., 336 South Hope Street.	360
RLB	J. J. Duran & Co.	Pasadena, Calif., 124 East Villa Street.	360
KLN	Noggle Electric Works.	Del Mar, Calif.	360
KLF	Colin B. Kennedy Co.	Los Altos, Calif., 10 Keefe Avenue.	360
KLS	Warner Bros.	Oakland, Calif., 2301 Telegraph Avenue.	360
KLX	Tribune Publishing Co.	Oakland, Calif., Thirteenth and Franklin Streets.	360
KLZ	Reynolds Radio Co.	Denver, Colo., 1534 Glenarm Place.	360, 485
KMC	Lindsay Weatherill & Co.	Roswell, Calif.	360
KMI	San Joaquin Light & Power Corp.	Yreka, Calif., H and Tulare Streets.	360
KMO	Low Electric Co.	Tacoma, Wash., 132 Pacific Avenue.	360
KNI	T. W. Smith.	Eureka, Calif., Humboldt National Bank Building.	360
KNI	Roswell Public Service Co.	Roswell, N. Mex., 112 West Third Street.	360, 485
KNN	Hillock's.	Los Angeles, Calif., Seventh and Broadway.	360
KNP	Beacon Light Co.	Los Angeles, Calif., 636 South Hill Street.	360
KNT	North Coast Products Co.	Albion, Wash., 913 West Home Street.	360
KNV	Radio Supply Co.	Los Angeles, Calif., 515 West Main Street.	360
KNX	Electric Lighting Supply Co.	Los Angeles, Calif., 216 West Third Street.	360
KOA	Young Men's Christian Association.	Denver, Colo., Lincoln Street and Sixteenth Avenue.	485
KOB	New Mexico College of Agriculture and Mechanic Arts.	State College, N. Mex.	360, 485
KOE	Spokane Chronicle.	Spokane, Wash.	360
KOO	Western Radio Electric Co.	Los Angeles, Calif., Seventh and Grand Streets.	360
KOJ	University of Nevada.	Reno, Nev.	360
KON	Holmwood (Inc.)	San Diego, Calif., Fifth and Broadway.	360
KOP	Detroit Police Department.	Detroit, Mich.	360
KOQ	Modesto Evening News.	Modesto, Calif.	360
KPQ	Hale Bros.	San Francisco, Calif., Fifth and Market Streets.	360
KQI	University of California.	Berkeley, Calif.	360
KQJ	Arno A. Klinge.	Los Angeles, Calif., 1645 South Dixie Street.	360
KQP	Blue Diamond Electric Co.	Good River, Oreg., 308 Cascade Avenue.	360, 485
KQT	Electric Power & Appliance Co.	Yakima, Wash., 17 North Second Street.	360
KQV	Dunbladen-Hill Electric Co.	Pittsburgh, Pa., 719 Liberty Avenue.	360
KQW	Charles D. Herrod.	San Jose, Calif., 467 First Street.	360
KQY	Stubbs Electric Co.	Portland, Oreg., 75 2 1/2th Street.	360
KRE	Maxwell Electric Co.	San Francisco, Calif., 3108 Adeline Street.	360
KSC	O. A. Hebe & Co.	San Francisco, Calif.	360
KSD	Post Dispatch.	San Francisco, Calif.	360
KSL	The Emporium.	San Francisco, Calif.	360
KSS	Frest & Deam Radio Research Corp.	San Francisco, Calif., 18 Elm Avenue.	360
KTW	First Presbyterian Church.	Seattle, Wash., Seventh Avenue and Spring Street.	360
KUP	Examiner Printing Co.	San Francisco, Calif.	360, 485
KUS	City Dry Wages & Laundry Co.	San Francisco, Calif., 3000 Central Avenue.	360
KUY	Coast Radio Co.	San Francisco, Calif.	360
KVQ	J. C. Hobbs (Inc.)	San Francisco, Calif., 811 Seventh Street.	360
KWG	Portable Wireless Telephone Co.	San Francisco, Calif., 530 East Market Street.	360

List of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (550 meters), alphabetically by call letters—Continued.

Call signal.	Owner of station.	Location of station.	Wave lengths.
KWII	Los Angeles Examiner	Los Angeles, Calif.	360
KXO	Herald Publishing Co.	Modesto, Calif., City Hall	360
KXS	Brain Corp.	Los Angeles, Calif., 863 New High Street	360
KYF	Thearle Music Co.	San Diego, Calif., 540 Broadway	360
KYO	Willard P. Hawley, Jr.	Portland, Oreg., 409 East Twenty-second Street North	360
KYI	Alfred Harrell	Hawthorne, Calif., 1522 I Street	360
KYJ	Leo J. Meyberg Co.	Los Angeles, Calif., Eighth Street and Broadway	360, 485
KYW	Westinghouse Electric & Manufacturing Co.	Chicago, Ill., 72 West Adams Street	360, 485
KYY	The Radio Telephone Shop	San Francisco, Calif., 175 Stewart Street	360
KZO	Public Market & Market Stores Co.	Seattle, Wash., 1420 First Avenue	360
KZI	Irring S. Cooper	Los Angeles, Calif., 294 Arroyo Avenue	360
KZM	Fredson D. Allen	Oakland, Calif., Thirteenth and Harrison Streets	360
KZN	The Desert News	Salt Lake City, Utah	360, 485
KZY	Wetachee Battery & Motor Co.	Wetachee, Wash.	360
KZY	Atlantic-Pacific Radio Supplies Co.	Oakland, Calif., 6023 Ocean View Drive	360
W.			
WAAB	Times-Picayune	New Orleans, La.	360
WAAC	Tulane University	do	360
WAAD	Ohio Mechanics Institute	Cincinnati, Ohio	360
WAAE	St. Louis Chamber of Commerce	St. Louis, Mo.	360
WAAP	Union Stock Yards & Transit Co.	Chicago, Ill.	360, 485
WAAG	Edgett Electric Co.	Shreveport, La., 517 Spring Street	360
WAAH	Commonwealth Electric Co.	St. Paul, Minn., 182 East Sixth Street	360
WAAL	Eastern Radio Institute	Boston, Mass., 999 Boylston Street	360
WAAM	Gimbel Bros.	Milwaukee, Wis.	360
WAAN	Minnesota Telephone Co. & American-Bronson Co.	Minneapolis, Minn., 54 South Fourth Street	360
WAAP	I. R. Nelson Co.	Newark, N. J., Bond Street	360
WAAR	University of Missouri	Columbia, Mo.	360
WAAS	Radio Service Co.	Charlestown, W. Va., 1018 Quarrier Street	360
WAAT	Otto W. Taylor	Wichita, Kans., 447 North Roosevelt Avenue	360
WAAY	New England Motor Sales Co.	Greenwich, Conn., 22 West Putnam Avenue	360
WAAZ	Graves-Thornton Hardware Co.	Huntington, W. Va., 521 Fourth Avenue	360
WAAB	Georgia Radio Co.	Decatur, Ga., 36 Peachtree Street	360
WAAC	Arkans Radio Co.	Arkans, Ohio, Box 282	360
WAAD	Omaha Grain Exchange	Omaha, Neb.	360
WAAE	Radio Service Corp.	Chillicothe, Pa., 35 Hallane Street	360
WAAF	Yuhrling-Rayner Piano Co.	Yakusstown, Ohio, 254 West Federal Street	360
WAAG	Holstetter-Miller Motor Co.	Emporia, Kans., 14 East Sixth Avenue	360
WAAH	Midland Refining Co.	El Dorado, Kans., 300 South Main Street	360, 485
WAAL	Purdue University	West Lafayette, Ind.	360
WAAM	Andrew J. Pecker	Syracuse, N. Y., 213 Westminster Street	360
WAAN	Sterling Records Co. and Journal Printing Co.	Minneapolis, Minn., 31 South Fifth Street	360
WAAP	Bradley Polytechnic Institute	Peoria, Ill.	360, 485
WAAR	Fred M. Middleton	Mariontown, N. J., 317 Chester Avenue	360
WAAS	Diamond State Fabrics Co.	Bridgesport, Pa., Ford Street	360, 485
WAAT	The Dayton Co.	Minneapolis, Minn., Seventh Street and Nicollet Avenue	360
WAAY	Marshall-Cerker Co.	Toledo, Ohio, 27 Ontario Street	360
WAAZ	I. H. Reynolds	New Orleans, La., 1432 Verne Street	360
WAB	Wireless Phone Corporation	Petersburg, N. J., 193 Edison Street	360
WAB	James Millikin University	Decatur, Ill.	360
WAB	Wortham-Carter Publishing Co. (Star-Telegram)	Fort Worth, Tex., 409 West Seventh Street	360, 485
WAB	Myron L. Harmon	South Bend, Ind., Room 364, Y. M. C. A.	360
WAB	Republican Publishing Co.	Hamilton, Ohio, Third and Market Streets	360
WAB	Ernet & Hopkins Co.	Columbus, Ohio, 146 North Third Street	360
WAB	Marietta College	Marietta, Ohio	360
WAB	John H. Strager, Jr.	Wilkes-Barre, Pa., 65 Gillespie Street	360
WAB	American Telephone & Telegraph Co.	New York, N. Y., 24 Waller Street	360
WAB	Times-Sunpatch Publishing Co.	Richmond, Va.	360
WAB	T & H Radio Co.	Anthony, Kans., 401 South Anthony Street	360
WAB	D. W. May (Inc.)	Newark, N. J., 178 Central Avenue	360
WAB	Southern Radio Corp.	Charlotte, N. C., 903 Realty Building	360, 485
WAB	City of Chicago	Chicago, Ill.	360
WAB	Westinghouse Electric & Manufacturing Co.	Springfield, Mass.	360
WAB	Newburgh News Printing & Publishing Co.	Newburgh, N. Y., 40 Grand Street	360
WAB	John Fisk Jewelry Co.	Fort Smith, Ark., 701 Garrison Avenue	360
WAB	St. Lawrence University	Canton, Ohio	360
WAB	Kaufman & Hiser Co.	Pittsburgh, Pa., Sixth and Smithfield Streets	360
WAB	Italy States Publishing Co.	New Orleans, La., 601 Canal Street	360

List of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters—Continued.

Call signal.	Owner or station.	Location of station.	Wave length.
WCAH	Entrekin Electric Co.	Columbus, Ohio.	360
WCAJ	Nebraska Wesleyan University.	University Place, Nebr.	360, 485
WCAK	Alfred P. Daniel.	Houston, Tex., 2304 Bagby Street.	360
WCAL	St. Olaf College.	Northfield, Minn.	360
WCAM	Villanova College.	Villanova, Pa.	360
WCAN	Southeastern Radio Telephone Co.	Atlantic National Bank Building	360
WCAO	Sander & Stagner Co.	Baltimore, Md., 319 North Charles Street.	360
WCA P	Central Radio Service.	Decatur, Ill., 211 Main Street.	360
WCAQ	Tri-State Radio Manufacturing & Supply Co.	Delaware, Ohio, 308 Clinton Street.	360
WCAR	Alama Radio Electric Co.	San Antonio, Tex., 608 West Evergreen Street.	360
WCAS	Wm. Hood Dunwoody Industrial Institute.	Minneapolis, Minn., 418 Superior Boulevard.	360
WCAT	South Dakota School of Mines.	Rapid City, S. Dak.	485
WCAU	Philadelphia Radio Phone Co.	Philadelphia, Pa., 1928 Market Street.	360
WCAV	I. C. Dice Electric Co.	Little Rock, Ark., 112 West Capitol Avenue.	360
WCAW	Quincy Herald & Quincy Electric Supply Co.	Quincy, Ill.	360
WCAX	University of Vermont.	Burlington, Vt.	360
WCAY	Kezelman O'Driscoll Co.	Milwaukee, Wis., 517 Grand Avenue.	360
WCAZ	Hobt. E. Campion & Quincy Whig-General.	Quincy, Ill.	360
WCE	Hudley Electric Co.	Minneapolis, Minn., 212 South Fifth Street.	360
WCF	A. C. Gilbert Co.	New Haven, Conn., 493 Hattley Avenue.	360
WCK	Stix-Raer-Fuller.	St. Louis, Mo., Washington Street.	360
WCM	University of Texas.	Austin, Tex.	360, 485
WCN	Clark University.	Worcester, Mass.	360, 485
WCX	Detroit Free Press.	Detroit, Mich.	360, 485
WDA A	Ward-Belmont School.	Nashville, Tenn., Belmont Heights.	360
WDA B	H. C. Summers & Son.	Portsmouth, Ohio, 900 India Street.	360
WDA C	Illinois Watch Co.	Springfield, Ill., Ninth and Grand Avenue.	485
WDA D	Wm. L. Harrison.	Lindsburg, Kans., 122 East Lincoln Street.	360
WDA E	Tampa Daily Times.	Tampa, Fla.	360, 485
WDA F	Kansas City Star.	Kansas City, Mo.	360
WDA G	J. Laurance MacIin.	Amarillo, Tex., 265 East Fourth Street.	360
WDA H	Mile & Smither Supply Co.	El Paso, Tex., 412 East Franklin Street.	360
WDA I	Hughes Electrical Corp.	Syracuse, N. Y., 411 South Clinton Street.	360
WDA J	Acadia & West Point R. R. Co.	College Park, Ga.	360
WDA K	The Courier.	Hartford, Conn.	360
WDA L	Florida Times-Union.	Jacksonville, Fla.	360, 485
WDA N	Glenwood Radio Corp.	Shreveport, La., Centenary College.	360
WDA O	Automotive Electric Co.	Dallas, Tex., Ervey & Coscanau Street.	360
WDA P	Mid West Radio Central Inc.	Chicago, Ill., Wrigley Building.	360
WDA Q	Hartmann-Riker Electric and Machine Co.	Greensville, Pa., 312 Market Street.	360
WDAR	Lie Brue.	Philadelphia, Pa.	360
WDAS	Samuel A. White.	Worcester, Mass., 49 Benefit Street.	360
WDAT	Delta Electric Co.	Worcester, Mass., 428 Main Street.	360
WDAU	Stearns & Kilburn.	New Bedford, Mass., 23 North Water Street.	360
WDA V	Muskogee Daily Phoenix.	Muskogee, Okla.	360
WDA W	Georgia Railway & Power Co.	Atlanta, Ga.	360, 485
WDA X	First National Bank.	Centerville, Iowa.	360
WDA Y	Kenneth M. Hancock.	Fargo, N. Dak., 117 Broadway.	360, 485
WDM	Church of the Covenant.	Washington, D. C., Eighteenth & N Streets NW.	360
WDT	Ship Owners Radio Service.	New York, N. Y., 50 Washington Street.	360
WDV	John O. Yester, Jr.	Omaha, Nebr., 5022 Cass Street.	360
WDY	Radio Corporation of America.	Roselle Park, N. J.	360
WDZ	James L. Bush.	Tuscola, Ill., Star Store Building.	360
WEAA	Fulton & Lathrop.	Flint, Mich., 104 Walsh Building.	360
WEAB	Standard Radio Equipment Co.	Fort Dodge, Iowa, 619 Carver Building.	360
WEAC	Deans Electric Service Co.	Terre Haute, Ind., 24 South Eighth Street.	360
WEAD	Northwest Kansas Radio Supply Co.	Atwood, Kans.	360
WEAE	Virginia Polytechnic Institute.	Blacksburg, Va.	360
WEAF	Western Electric Co.	New York, N. Y., 483 West Street.	360
WEAG	Nichols-Hindline-Bassett Laboratory.	Edgewood, R. I., 64 Armington Street.	360
WEAH	Wichita Board of Trade & Lander Radio Co.	Wichita, Kans.	360, 485
WEAI	Cornell University.	Ithaca, N. Y.	360
WEAJ	University of South Dakota.	Vermillion, S. Dak.	360
WEAK	Julius B. Abercrombie.	St. Joseph, Mo., 919 North Twenty-third Street.	360
WEAM	Branch of North Plainfield.	North Plainfield, N. J.	360
WEAW	Arrow Radio Laboratories.	Anderson, Ind., Box 140.	360
WEB	Benwood Co.	St. Louis, Mo., 1110 Olive Street.	360
WEV	Hurlburt-Sill Electric Co.	Houston, Tex., McKinney Avenue and San Jacinto Street.	360, 485
WEW	St. Louis University.	St. Louis, Mo.	360, 485

List of stations broadcasting market or weather reports (425 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters—Continued.

Call signal	Owner of station.	Location of station.	Wave length.
WEY	Cosradio Co.	Wichita, Kans., 1725 Fairmont Avenue.	360, 485
WFI	Strawbridge & Clothier.	Philadelphia, Pa., Eighth and Market Streets.	360
WFO	Elke-Kumler Co.	Dayton, Ohio, Main and Second Streets.	360, 485
WGP	The Register & Tribune.	Des Moines, Iowa.	360
WGH	Montgomery Light & Power Co.	Montgomery, Ala.	360, 485
WGI	American Radio Research Corp.	Medford Hillside, Mass.	360
WGL	Thomas E. J. Howlett.	Philadelphia, Pa., 238 North Broad Street.	360
WGR	Federal Telephone & Telegraph Co.	Buffalo, N. Y., 1738 Elmwood Avenue.	360, 485
WGU	The Nat.	Chicago, Ill.	560
WGV	Interstate Electric Co.	New Orleans, La., 350 Barrons Street.	360
WGY	General Electric Co.	Schenectady, N. Y.	360
WHA	University of Wisconsin.	Madison, Wis.	360, 485
WHB	Stevenson School Co.	Kansas City, Mo., Swamey Building.	360, 485
WHD	West Virginia University.	Morgantown, W. Va.	360
WHE	Warren R. Cox.	Cleveland, Ohio, 1865 East Sixty-sixth Street.	360
WHN	Ridgewood Times Printing & Publishing Co.	Ridgewood, N. Y., Chamber of Commerce Building.	360
WHQ	Rochester Times Union.	Rochester, N. Y.	360, 485
WHU	Wm. B. Duck Co.	Toledo, Ohio, 224 Superior Street.	360
WHW	Stuart W. Seeley.	East Lansing, Mich., local office U. S. Weather Bureau.	485
WIK	K. & L. Electric Co.	McKeesport, Pa., 47 Olive Street.	360
WIL	Continental Electrical Supply Co.	Washington, D. C., 88 North Street NW.	360
WIP	Gimbel Bros.	Philadelphia, Pa., Ninth and Market Streets.	360
WIZ	Cino Radio Manufacturing Co.	Cincinnati, Ohio, 218 West Twelfth Street.	360, 485
WJD	Richard H. Howe.	Granville, Ohio.	360
WJH	White & Beyer Co.	Washington, D. C., 812 Thirtieth Street NW.	360
WJK	Service Radio Equipment Co.	Toledo, Ohio, 225 Superior Street.	360
WJT	Electric Equipment Co.	Erie, Pa., 703 State Street.	360
WJX	The Forest Radio Telephone & Telegraph Co.	New York, N. Y., 1321 Sedgwick Avenue.	360
WJZ	Westchester Electric & Manufacturing Co.	Newark, N. J., 95 Orange Street.	360
WKC	Joseph M. Zamaiski Co.	Baltimore, Md., 2427 Madison Avenue.	360
WKN	Richard Crosby Co.	Memphis, Tenn., 223 South Front Street.	360, 485
WKY	Oklahoma Radio Shop.	Oklahoma City, Okla., 121 West Ash Street.	360, 485
WLB	University of Minnesota.	Minneapolis, Minn.	360, 485
WLE	Hamilton Manufacturing Co.	Indianapolis, Ind., 2011 Alabama Street, North.	360, 485
WLW	Crosley Manufacturing Co.	Cincinnati, Ohio, B. & O. R. R. and Blue Hook Street.	360, 485
WMB	Autumn Electrical Co.	Aburn, Me., 57 Court Street.	360
WMC	Columbia Radio Co.	Youngstown, Ohio, South Avenue and Indiana Street.	360
WMH	Precision Equipment Co.	Cincinnati, Ohio, 2437 Gilbert Avenue.	360, 485
WMT	Domitrap-Hill Electric Co.	Washington, D. C., 715 Twelfth Street north-west.	360
WNI	Shotton Radio Manufacturing Co.	Albany, N. Y., 8 Market Street.	360
WNO	Wireless Telephons Co. of Hudson County, N. J.	Jersey City, N. J., 967 Bergen Avenue.	360
WOC	Falmer School of Chiropractic.	Davenport, Iowa, 1002 Brady Street.	360, 485
WOE	Buckeye Radio Service Co.	Akron, Ohio, 529 South Main Street.	360
WOH	Hatheld Electric Co.	Indianapolis, Ind., 531 North Meridian Street.	360
WOI	Iowa State College.	Ames, Iowa.	360, 485
WOK	Fine Bluff Co.	Pine Bluff, Ark.	360
WOO	John Wanamaker.	Philadelphia, Pa., Thirteenth and Market Streets.	360
WOQ	Western Radio Co.	Kansas City, Mo.	360, 485
WOR	L. Bamberger & Co.	Newark, N. J., 131 Market Street.	360
WOS	Missouri State Marketing Bureau.	Jefferson City, Mo.	485
WOY	Metropolitan Utilities District.	Omaha, Neb., 1802 and 3405 Farnam Street.	360, 485
WOZ	Palladium Printing Co.	Richmond, Ind.	360, 485
WPA	Fort Worth Record.	Fort Worth, Tex., Fifth and Throckmorton Streets.	360, 485
WPE	Central Radio Co.	Kansas City, Mo., 575 Grand Avenue.	360
WPG	Nashaw Poultry Farm.	New Lebanon, Ohio, R. R. No. 2.	360
WPI	Electric Supply Co.	Clearfield, Pa., 123 Market Street.	360
WPI	St. Joseph's College.	Philadelphia, Pa., Eighteenth and Thompson Streets.	360
WPL	Fergus Electric Co.	Zanesville, Ohio, 521 Main Street.	360
WPM	Thomas J. Williams.	Washington, D. C., 1124 New York Avenue NW.	360
WPO	United Equipment Co.	Memphis, Tenn., 609 Monroe Avenue.	360
WRK	Doron Bros. Electric Co.	Hamilton, Ohio, 329 North C Street.	360
WRL	Union College.	Schenectady, N. Y.	360
WRM	University of Illinois.	Urbana, Ill.	360
WRP	Federal Institute of Radio Telegraphy.	Camden, N. J., Second and Federal Streets.	360

List of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters—Continued.

Call signal.	Owner of station.	Location of station.	Wave lengths.
WRB	City of Dallas, Police and Fire Signal Department.	Dallas, Tex.	360, 485
WRW	Tarrytown Radio Research Laboratory	Tarrytown, N. Y., 21 North Broadway	360
WRS	Atlanta Journal	Atlanta, Ga.	360, 485
WRT	F. & M. Electric Co.	Orissa, N. Y., 29 Bank Place	360
WSN	Shirley Owners Radio Service	Norfolk, Va., 212 Granby Street	360
WSV	L. M. Hunter and G. L. Carlington	Larkle Rock, Ark., 2420 Island Street	360
WSX	Erie Radio Co.	Erie, Pa., 117 West Ninth Street	360
WSY	Alabama Power Co.	Birmingham, Ala., Brown-Mark Building	360
WTG	Kansas State Agricultural College	Manhattan, Kans.	485
WTK	Paris Radio Institute Co.	Paris, Tex., 42 South Main Street	360
WTF	George M. McReid	Bar City, Mich., 611 McLeod Street	360
WWB	Daily News Printing Co.	Canton, Ohio, 402 Second Street NW	360
WWI	Ford Motor Co.	Dearborn, Mich.	360
WWJ	Detroit News	Detroit, Mich.	360, 485
WWL	Loyola University	New Orleans, La.	360
WWT	McCarthy Bros. & Ford	Pittsford, N. Y., 75 West Mohawk Street	360
WWZ	John Wauwauker	New York, N. Y., Eighth Street and Broadway	360

SUPPLEMENTAL LIST FROM JUNE 1 TO JUNE 15, INCLUSIVE.

KDZU	Western Radio Corp.	Denver, Colo., 337 Lincoln Street	360
KDZW	Claude W. Gordon	San Francisco, Calif., 2498 O'Farrell Street	360
KDZX	Glad Tidings Tavernacle	San Francisco, Calif., 1408 Ellis Street	360
KDZZ	Kirby Bros. & Murrell	Essex, Wash., 1306 Hewitt Avenue	360
KFAB	Pacific Railroads Co.	Portland, Oreg., 108 North Broadway	360
WEAN	Shepard Co.	Providence, R. I.	360
WEAO	Ohio State University	Columbus, Ohio	360, 485
WEAP	Mobile Radio Co.	Mobile, Ala., O'Dwain Building	360
WEAQ	Young Men's Christian Association	Berlin, N. H.	360
WEAR	Baltimore American & News Publishing Co.	Baltimore, Md.	360
WEAS	Hecht Co.	Washington, D. C., Seventh and F Streets NW	360
WEAT	John J. Fogarty	Tampa, Fla., 507 Azalea Street	360
WEAU	Davidson Bros. Co.	Sacra City, Iowa	360
WEAV	Kheridan Electric Service Co.	Richville, Nears	360
WEAX	T. J. M. Daly	Little Rock, Ark., P. O. Box 61	360, 485
WEAY	W. H. Horwitz, Jr.	Waxton, Tex., 612 Travis Street	360
WEAZ	Donald Richmond	Waterloo, Iowa, 1727 Beruch Avenue	360
WFAB	A. H. Belo & Co.	Dallas, Tex.	360, 485
WFAC	Carl P. Woese	Sarasota, N. Y., 204 McBride Street	360
WFAD	Superior Radio Co.	Superior, Wis., 236 John Avenue	360
WFAP	Watson-Weldon Motor Supply Co.	Sarasota, Kans., 217 North Santa Fe Street	360
WFAP	H. C. Sprattley Co.	Poughkeepsie, N. Y., 347 Main Street	360
WFAQ	Radio Engineering Laboratory	Watertown, N. Y., Sixth and Broad Streets	360
WFBI	Electric Supply Co.	Fort Arthur, Tex., 337 Dexter Street	360
WFAT	14-Grade Wireless Instrument Co.	Ashville, N. C., 47 Zillic Street	360
WFAL	Domestic Electric Co.	Houston, Tex., 415 Pine Street	360
WFAL	Houston Chronicle Publishing Co.	Houston, Tex.	360, 485
WFAM	Times Publishing Co.	St. Cloud, Minn.	360
WFAN	Hutchinson Electric Service Co.	Hutchinson, Minn.	360, 485
WFAP	Brown's Business College	Peoria, Ill.	360
WFAQ	Missouri Wesleyan College and American Radio Co.	Cameron, Mo.	360
WFAR	Hall & Scribbs	Sarford, Me., 1 Bennett Street	360
WFAS	United Radio Corp.	Fort Wayne, Ind., 107 East Main Street	360
WFAT	Daily Argus-Lender	Stony Falls, S. Dak.	360
WQAB	QBY Radio Co.	Houston, Tex., 1213 Prairie Avenue	360

Hereafter the only list of broadcasting stations to appear in this publication will be that for those stations that are newly licensed during the month previous to the date of the Bulletin in which the list appears.

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