

**U. S. DEPARTMENT OF COMMERCE  
RADIO DIVISION**

# RADIO SERVICE BULLETIN

ISSUED MONTHLY

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## ABBREVIATIONS AND SYMBOLS

The necessary corrections to the List of Commercial and Government Radio Stations of the United States and to the International Lists of Radio 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 locat on. W=west longitude. N=north latitude. S=south latitude. E=east longitude.
- Call = Call signal (letters) assigned.
- Type = Type of wave classified as follows: A1=continuous wave (tube), A arc=continuous wave, A2=interrupted continuous wave, A3=phone, B=spark.
- Fy. = Frequency in kilocycles; normal frequency in italics; wave length in meters in parentheses.
- Service = Nature of service maintained: PG=general public (ship to shore), PR=limited public (limited to public correspondence between fixed stations), P=private (limited commercial and special), O=Government business exclusively.
- Class = FX=fixed station (point-to-point service), RG=radio-compass station, FA=aeronautical station, AB=aviation beacon, RF=circular radiobeacon, B=ship station, FC=coast station, A=aircraft.
- Hours = Hours of operation: N=continuous service, X=no regular hour, Y=sunrise to sunset.
- Accounts = Message accounts settled by.
- 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.
- C. w. = Continuous wave.
- I. c. w. = Interrupted continuous wave.
- A. C. = Alternating current.
- V. t. = Vacuum tube.
- M. a. = Meters-amperes.
- 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, 1930, and to the International List of Fixed and Land Stations, published by the Berne bureau]

Station	Class	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Licenses
Akron, Ohio <sup>1</sup> .....	FX	WPDO	2,458 (122.05).....	P	N	City of Akron.
El Paso, Tex. <sup>2</sup> .....	FX	KGPF	2,416 (124.17).....	P	N	City of El Paso, police department.
New York, N. Y. (North Beach). <sup>3</sup>	FA, FX	WOA	278 (1,080), 2,262 (132.63), 3,070 (97.7), 5,680 (52.72), 8,015 (37.43), 12,210 (24.57).	P	X	Pan American Airways (Inc.)
Oklahoma City, Okla. <sup>4</sup>	FA, FX	KGSC	278 (1,080), 3,070 (97.7), 3,460 (86.7), 6,350 (47.24), 8,015 (37.43), 12,180 (24.63).	P	X	Aeronautical Radio (Inc.).
Tulsa, Okla. <sup>4</sup> .....	FA, FX	KGSF	do.....	P	X	Do.
Wichita Falls, Tex. <sup>4</sup>	FA, FX	KGSV	do.....	P	X	Do.

<sup>1</sup> Type, A3.

<sup>2</sup> Loc. 106° 30' 14" W., 31° 37' 54" N.; type, A3.

<sup>3</sup> Loc. 73° 30' 30" W., 40° 30' 32" N.; type, A1, A2.

<sup>4</sup> Type, A1, A2, A3.

## 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, 1930, and to the International List of Ship Stations, published by the Berne bureau]

Name of vessel	Call signal	Rates, all services (cents)	Service	Hours	Owner	Message accounts settled by—
Frango.....	KGRB				American Whaling Co.	
Hepatocong <sup>1</sup> .....	KDKC	\$	PG	X	Jersey-American Steamship Co.	M. R. T. Co.
Indiana.....	KGRJ				Charles Ward Engineering Works.	
Janidore.....	KGEO				I. Zellerbach	
Louisiana.....	KGRK				Charles Ward Engineering Works.	
Nomolas.....	KGRN				Louis G. Salomon	
Northwestern <sup>1</sup> .....	KGRL		PG	X	Northwestern Tuna Co.	
Santoamaro.....	KGRP		P		Cohn-Hopkins Co.	
St. Veronica.....	KGRM				John G. Cardosa	
Thalia.....	KGRQ				Thomas M. Howell	

<sup>1</sup> Type, B; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 22/15.

<sup>2</sup> Type, A1, A2; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 15/4.5.

## Commercial aircraft stations, alphabetically, by names of craft

[Additions to the List of Radio Stations of the United States, edition of June 30, 1930, and to the International List of Aircraft Stations published by the Berne bureau]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Licenses
AF-32.....	KHNGT		P	X	Fokker Aircraft Corporation.
Naugatuck <sup>1</sup> .....	KHNNM	3,106 (96.58), 3,484 (86.10), 5,600 (53.57).	P	X	Colonial Air Transport (Inc.).
NC-7120.....	KHNHS		P	X	Stout Air Service (Inc.).
NC-8486 <sup>1</sup> .....	KHNMN	3,106 (96.58), 3,484 (86.10), 5,600 (53.57).	P	X	Colonial Air Transport (Inc.).
NC-9677 <sup>1</sup> .....	KHNOL	do.....	P	X	Do.
NC-9681 <sup>1</sup> .....	KHNPK	do.....	P	X	Do.
No. 54.....	KHCWD		P	X	Western Air Express (Inc.).
No. 55.....	KHCXC		P	X	Do.
No. 502, W. A. E.....	KHCYB		P	X	Do.
No. 503, W. A. E.....	KHCZA		P	X	Do.
No. 504, W. A. E.....	KHOAZ		P	X	Do.
Sitka.....	KHNIR		P	X	Alaska Washington Airways (Inc.).

<sup>1</sup> Type, A3.



*Experimental stations, alphabetically, by names of stations*

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1930]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Power (watts)	Licensee
Massachusetts: East Springfield.	W1XAK	1,604 (187.03), 2,398 (125.1), 3,256 (92.5), 4,795 (62.57), 6,425 (46.7), 8,650 (34.68), 12,850 (23.35), 17,300 (17.341).	50	Westinghouse Electric & Manufacturing Co.
<i>Aircraft</i>				
NC-9138.....	W10XAK	1,604 (187.03), 2,398 (125.1), 3,256 (92.5), 4,795 (62.57), 6,425 (46.7).	100	Colonial Air <sup>+</sup> Transport (Inc.).
Neekah.....	W10XAI	do.....	100	Do.

**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, 1930, and to the International List of Fixed and Land Stations, published by the Berne bureau]

- ABILENE, TEX.**—Fy., strike out 3,088 (97.15), add 3,070 (97.7).  
**ALBUQUERQUE, N. MEX. (KGS D).**—Type, add A2; class of service, add FA.  
**ALTOONA, PA.**—Fy., strike out 250 (1,200), add 257 (1,165).  
**AMARILLO, TEX.**—Type, add A2; class of service, add FA.  
**BALANGIGA, P. I., Radio (Samar).**—Type, strike out A2; fy., strike out 316 (950), add 333 (900).  
**BASCO, P. I., radio (Batanes).**—Ship service, strike out fortieth to the fiftieth minutes of each hour, add fiftieth to the sixtieth minutes of each hour.  
**BATANGAS, P. I., Radio (Batangas).**—Ship service, strike out fortieth to the fiftieth minutes of each hour, add 00 to the tenth minutes of each hour.  
**BORONGAN, P. I., Radio (Samar).**—Type, strike out A2; fy., strike out 316 (950).  
**CATBOLOGAN, P. I., Radio (Samar).**—Type, strike out A2.  
**CHEYENNE, WYO. (Municipal Airport).**—Licensee, Aeronautical Radio (Inc.).  
**CHICAGO, ILL. (WJC).**—Hours, X.  
**DALLAS, TEX. (KGSQ).**—Fy., strike out 3,088 (97.15), add 3,070 (97.7).  
**ELKO, NEV. (Municipal Airport).**—Licensee, Aeronautical Radio (Inc.).  
**EL PASO, TEX. (KGS M).**—Type, add A2; fy., strike out 3,088 (97.15), add 3,070 (97.7).  
**ILOILO, P. I., Radio (KPM).**—Ship service, strike out fortieth to the fiftieth minutes of each hour, add 00 to the tenth minutes of each hour.  
**ILOILO, P. I. (KTJ).**—Service, PR.  
**LEGASPI, P. I., Radio.**—Ship service, strike out fortieth to the fiftieth minutes of each hour, add fiftieth to the sixtieth minutes of each hour.  
**LINCOLN, NEBR. (Municipal Airport).**—Licensee, Aeronautical Radio (Inc.).  
**LOS ANGELES, CALIF. (KQT).**—Loc., 118° 14' 48" W., 34° 03' 08" N.  
**LOUISVILLE, KY.**—Fy., strike out 2,416 (124.17), add 2,440 (123).  
**MANILA, P. I. (KUH).**—Read Manila, P. I. radio: loc. 121° 02' 09" E., 10° 36' 28" N.; type, strike out A1, add A2; fy, strike out 6,818 (44), add 11,110 (26.98), 16,665 (17.99); service, strike out P, add PG; hours, strike out X, add N; owner, Robert Dollar Co.  
**MANILA, P. I., Radio (KUZ).**—Loc. 121° 02' 09" E., 10° 36' 28" N.; type, strike out A1; fy, strike out 432 (694), 5,555 (53.97), 11,110 (26.98), 16,665 (17.99), add 7,475 (40.13), 9,820 (30.55), 14,950 (20.07), 18,460 (16.251).  
**MEDFORD, OREG. (Municipal Airport).**—Power M/amp. 21.5/9.  
**MIAMI, FLA. (Dinner Key—WGF).**—Fy., strike out 278 (1,080), add 6,200 (48.39), 12,180 (24.51).  
**MIDLAND, TEX.**—Fy., strike out 3,088 (97.15), add 3,070 (97.7).  
**MOBILE, ALA. (WPP).**—Fy., 438 (6850) should read 438 (685).  
**NELLIE JUAN, ALASKA.**—Type, add A1; power, M/amp. 20/3; hours, 8 to 12 a. m., and 1 to 6 p. m.  
**NEW YORK, N. Y. (WCF).**—Power, M/amp. 30/8.  
**NORTH PLATTE, Nebr. (Municipal Airport).**—Licensee, Aeronautical Radio (Inc).  
**PUEBLO, COLO.**—Type, add A2.

- ROCK SPRINGS, WYO. (Municipal Airport).—Licensee, Aeronautical Radio (Inc.).
- SACRAMENTO, CALIF. (Mather Field, KFM).—Fy., strike out 3.142 (95.48), add 3,172 (94.57); power, M/amp. 17/3.
- SALT LAKE CITY, UTAH (Municipal Airport, KQD).—Licensee, Aeronautical Radio (Inc.).
- SAN FRANCISCO, CALIF. (KQO).—Hours, X.
- SAN FRANCISCO, CALIF. (KUP).—Loc., 122° 24' 03'' W., 37° 46' 38'' N.; power, M/amp. 34/4.
- SAN JUAN, P. R. (WGD).—Fy., add 6,200 (48.39), 12,180 (24.63).
- SEATTLE, WASH. (KGPA).—Loc., 122° 20' 52'' W., 47° 37' 15'' N.; fy., strike out 2,416 (124.17), add 2,452 (122.34).
- ST. LOUIS, MO.—Licensee, City of St. Louis, police department.
- ZAMBOANGA, P. I., Radio (Mindanao Island).—Ship service, strike out fortieth to the fiftieth minutes of each hour, add 00 to the tenth minutes of each hour.

## 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, 1930, and to the International List of Ship Stations, published by the Berne bureau]

- ACME.—Power, M/amp. 30/8.
- ADLER.—Type, add A1; fy., add 468 (640); power, M/amp. 15/6.
- ADMIRAL DEWEY.—Owner, Pacific Motorship Co. (Inc.).
- ADMIRAL FISKE.—Owner, Pacific Motorship Co. (Inc.).
- ADMIRAL NULTON.—Power, M/amp. 18/14.
- ADMIRAL RODMAN.—Owner, Pacific Motorship Co. (Inc.).
- ADMIRAL SCHLEY.—Owner, Pacific Motorship Co. (Inc.).
- A. E. R. SCHNEIDER.—Power, M/amp. 13/6.
- AKUTAN.—Power, M/amp. 24/5.
- ALBATROSS (KELD).—Fy., strike out 468 (640).
- ALBERT E. WATTS.—Fy., strike out 410 (730); power M/amp. 28/10.
- ALBERT HILL.—Type, add A2; power, M/amp. 19.8/6.
- ALDEN A. MILLS.—Fy., add 400 (750).
- ALEUTIAN.—Type, strike out B, add A2; fy., strike out 410 (730), 454 (660), add 400(750), 460 (650), 468 (640); power, M/amp. 34/12.
- ALGONQUIN (KDKH).—Power, M/amp. 28/10.
- ALICE COOKE.—Fy., strike out 400 (750), 410 (730), 454 (660), 468( 640), add 460 (650).
- A. L. KENT.—Type, strike out A1; fy., strike out 131 (2,290), 133 (2,255), 135 (2,220), 137 (2,190), 139 (2,160), 141 (2,130), 143 (2,100), 145 (2,070), 147 (2,040), 149 (2,015), 151 (1,985), 160(1,875); power, M/amp. 30/10.
- AMELIA.—Owner, N. Geraci and Co.
- AMERICA (KGQF).—Type, A1, A2, A3; fy., 375 (800), 425 (705), 454 (660), 500 (600), 2,320 (129.3); power, M/amp. 12/1; service, P; hours, X; accounts Ocean Pilot and Tugboat Co.
- ANACORTES.—Fy., strike out 410 (730), 454 (660); power, M/amp. 27/13.
- ANTARES.—Type, A1, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600), 5,525 (54.3), 8,290 (36.19), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66), 16,580 (18.094), 16,860 (17.794); power, M/amp. 24/4; accounts R. M. C. A.
- ARGON.—Power, M/amp. 28/10.
- ARIZONAN.—Power, M/amp. 24/15; accounts, William S. S. Corporation.
- ARTEMIS.—Power, M/amp. 29/17.
- ATLAS.—Power, M/amp. 28/10.
- AZTEC.—Fy., strike out 157 (1,910); power, M/amp. 30/10.
- BALDBUTTE.—Power, M/amp. 28/14.
- BALDHILL.—Power, M/amp. 22/14.
- BARBARA CATES.—Power, M/amp. 20/12.
- BEACON.—Owner, Standard Shipping Co.
- BEACONHILL.—Type, strike out B, add A1, A2; fy., add 143 (2,100), 151 (1,985), 157 (1,910), 160 (1,875), 400 (750), 468 (640); power, M/amp. 30/8; owner, Standard Shipping Co.
- BEACONLIGHT.—Owner, Standard Shipping Co.
- BEACONOIL.—Owner, Standard Shipping Co.
- BEACONSTAR.—Owner, Standard Shipping Co.
- BEATRICE.—Power, M/amp. 24.24/10; accounts, A. H. Bull S. S. Co.
- BELLINGHAM.—Fy., add 410 (730).

- BERWINDGLEN.—Power, M/amp. 30/10.  
 BESSEMER CITY.—Owner, Isthmian S. S. Co.  
 BIRMINGHAM CITY.—Owner, Isthmian S. S. Co.  
 BLACK DOUGLASS.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 35/9; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
 BLACK POINT.—Power, M/amp. 30/7.  
 BOWDOIN.—Fy., strike out 425 (705), 500 (600), 11,050 (27.15), 11,110 (27), add 5,555 (54); power, M/amp. 15.38/5; accounts, MacMillan Arctic Assn.  
 BUCCANEER.—Power, M/amp. 8/1.5; rates, 4 cents per word.  
 CALIFORNIA (KUKV).—Type, strike out A1, add B.  
 CALIFORNIA STANDARD.—Power, M/amp. 23/10.  
 CAMBRIONA.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 157 (1,910), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 15/10; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
 CANADOTA.—Correct orthography is Canadohta.  
 CAROLYN.—Power, M/amp. 19.69/7.  
 CATHERINE.—Power, M/amp. 15.44/4.  
 CATHLAMET.—Hours, add N.  
 CHICKEN OF THE SEA.—Type, A1, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 12/7.  
 CHILKAT.—Power, M/amp. 10/3.  
 CITIES SERVICE TOLEDO.—Power, M/amp. 20/16.  
 CITY OF CHATTANOOGA.—Fy., strike out 410 (730), add 400 (750); power, M/amp. 27/10 and 5.  
 CITY OF ELWOOD.—Accounts, R. M. C. A. (U. S. L.).  
 CITY OF WEATHERFORD.—Power, M/amp. 18/10.  
 CLAVARACK.—Power, M/amp. 21.54/13.  
 CODY.—Owner, Tampa Inter-Ocean S. S. Co.  
 COLDWATER.—Power, M/amp. 30/12.  
 CONTOY.—Fy., strike out 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 400 (750), 454 (660), 468 (640); power, M/amp. 25/10.  
 CORSAIR.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 157 (1,910), 159 (1,885), 160 (1,875), 400 (750), 425 (705), 468 (640), 500 (600), 5,525 (54.3), 8,290 (36.19), 8,450 (35.50), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66); power, M/amp. 28/10; hours, N; rates, 8 cents per word; accounts, R. M. C. A.  
 CRESSIDA.—Type, strike out A1; fy., strike out 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 400 (750), 410 (730), 454 (660), 8,330 (36.01); power, M/amp. 15/5.  
 CRISTOBAL.—Fy., strike out 155 (1,935), 410 (730), 454 (660); power, M/amp. 30/12; rates, strike out 4 cents.  
 CYPRUS.—Fy., strike out 159 (1,885); power, M/amp. 18/10.  
 DAKOTAN.—Type, strike out B, add A2; fy., add 454 (660); power, M/amp. 21/2.  
 D. E. CALLENDER.—Power, M/amp. 13/6.  
 DIXIANO.—Power, M/amp. 28/10.  
 DONNA LANE.—Fy., strike out 8,430 (35.59); power, M/amp. 35/2; service, strike out P.  
 DOROTHY BRADFORD.—Power, M/amp. 24/3.  
 DWIGHT F. DAVIS.—Fy., add 375 (800); power, M/amp. 35/8.  
 EASTERLING.—Power, M/amp. 29/15.  
 EASTERN DAWN.—Fy., strike out 131 (2,290), 137 (2,190), 141 (2,130), 149 (2,015); power, M/amp. 27/10.  
 EASTERN GUIDE.—Power, M/amp. 27/6.5.  
 EASTERN SUN.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 22/15.  
 EDGEHILL.—Accounts, R. M. C. A. (U. S. L.).  
 EDITOR.—Accounts, R. M. C. A. (U. S. L.).  
 EFFNA.—Accounts, R. M. C. A. (U. S. L.).  
 EGLANTINE.—Fy., strike out 157 (1,910), 159 (1,885); power, M/amp. 20/15.  
 E. G. MATHIOTT.—Power, M/amp. 20/6.5.  
 EL CID.—Power, M/amp. 28/8.  
 ELDA.—Type, A2; fy., 375 (800), 410 (730), 425 (705), 500 (600); service, PG; hours, X; rates, Great Lakes service 4 cents per word; oceanic service 8 cents per word; accounts, R. C. A.  
 ELKHORN.—Accounts, R. M. C. A. (U. S. L.).

- ELMORE.—Power, M/amp. 9/3.5.  
 ELTON HOYT.—Power, M/amp. 18/4.  
 ELWYN C. HALE.—Fy., add 460 (650); power, M/amp. 30/5.  
 E. P. C. No. 4.—Service, strike out P, add PG; rates, 8 cents per word.  
 ERNEST H. MEYER.—Fy., strike out 410 (730); power, M/amp. 20/8.  
 ETAK.—Type, A2; fy., 375 (800), 425 (705), 468 (640), 500 (600), 5,525 (54.3), 8,290 (36.19), 8,450 (35.50), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66); power, M/amp. 22/5; service, PG; hours, X, rates, 8 cents per word; accounts, R. M. C. A.  
 EVELYN.—Power, M/amp. 20.99/10.  
 F. A. BAILEY.—Fy., add 157 (1,910).  
 FISH HAWK.—Type, add A1; fy., add 468 (640); power, M/amp. 20/5.  
 F. P. C. No. 1.—Type, A1; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 10/15; service, PG; hours, X; rates, 8 cents per word; accounts, Fishermen's Packing Corporation.  
 FRANCIS E. POWELL.—Power, M/amp. 19.8/11.  
 FRANK G. DRUM.—Power, M/amp. 30/7.  
 FRED W. GREEN.—Fy., strike out 375 (800); power, M/amp. 25/4 and 5.  
 GALVESTON.—Fy., strike out 155 (1,935), 159 (1,885); power, M/amp. 31/12.  
 GENERAL MARKAHL.—Power, M/amp. 21/4.  
 GEORGE PEIRCE.—Fy., strike out 155 (1,935), 157 (1,910); power, M/amp. 20/10.  
 GLADYS H.—Type, A1; fy., 5,525 (54.3), 5,555 (54), 8,290 (36.19); power, M/amp. 10/05; service, PG; hours, X; rates, 8 cents per word.  
 GOLIAH (KFDI)—Fy., strike out 400 (750), 468 (640); power, M/amp. 4/15.  
 HAIDA.—Fy., strike out 159 (1,885), 8,290 (36.19), 8,330 (36.01), 8,450 (35.5).  
 HAMILTON.—Power, M/amp. 24/4.  
 HARRY BOWEN.—Power, M/amp. 25/10.  
 HARTWELSON.—Type, strike out B, add A2; fy., add 400 (750), 468 (640); power M/amp. 25/5.  
 HUMACONNA.—Power, M/amp. 15.38/10.  
 HYBERT.—Accounts, R. M. C. A. (U. S. L.).  
 I. C. WHITE.—Power, M/amp. 34.2/8.  
 INFANTA.—Type, A1, A2; fy., 5,525 (54.3), 8,290 (36.19), 8,450 (35.50), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66), 16,580 (18.094); power, M/amp. 12.5/5.  
 INTREPID.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 30/10.  
 INVINCIBLE (KGRB)—Type, A1; fy., 425 (705), 500 (600), 2,560 (117.2); power, M/amp. 10/1.  
 JACOB LUCKENBACH.—Accounts, R. M. C. A. (U. S. L.).  
 JALAPA.—Accounts, R. M. C. A. (U. S. L.).  
 JAMES W. GOOD.—Type, A1; A2, fy., 274 (1,095), 375 (800), 3,420 (87.7), 6,515 (46.05); power, M/amp. 12.31/12; service, P; hours, X.  
 JEAN.—Fy., strike out 410 (730), 454 (660); power, M/amp. 27.2/13.  
 JEANNETTE SKINNER.—Power, M/amp. 27/14.  
 J. E. SAVAGE.—Power, M/amp. 13/6.  
 JOHN ANDERSON.—Power, M/amp. 21/7.  
 JOHN C. KIRKPATRICK.—Power, M/amp. 20/8.  
 JOHN F. CUSHING.—Fy., strike out 394 (760).  
 JOHN MCCARTNEY KENNEDY.—Power, M/amp. 13/6.  
 JOSEPH M. CUDAHY.—Fy., add 400 (750); power, M/amp. 30/10.  
 J. R. SENSIBAR.—Type, A2; fy., 375 (800), 410 (730), 425 (705).  
 KARADOR.—Fy., add 425 (705); power, M/amp. 6.15/2; service, strike out PG, add P.  
 KEARNY.—Power, M/amp. 30/14; hours, strike out N.  
 KEWANEE.—Power, M/amp. 20/6.  
 LA BREA.—Fy., strike out 400 (750), 410 (730), 454 (660); power, M/amp. 20/8 and 5.  
 LAKE HEMLOCK.—Fy., strike out 2,452 (122.35), add 2,524 (118.86); power, M/amp. 10/125.  
 LAKE KYTTLE.—Fy., strike out 2,452 (122.35), add 2,524 (118.86); power, M/amp. 10/125.  
 LAKE MIRAFLORES.—Power, M/amp. 14/8.  
 LAMORA.—Type, A2; fy., 375 (800), 425 (705), 468 (640), 500 (600); power, M/amp. 10/1.6; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
 LA PURISIMA.—Power, M/amp. 25/8 and 5.  
 LEMUEL BURROWS.—Power, M/amp. 30/10.

- LEVIATHAN.—Type, strike out A3, add B; fy., strike out 155 (1,935), 400 (750), 5,555 (54), 3,127.5 (95.9), 4,177.5 (71.8), 8,830 (33.98), 13,260 (22.62), 17,640 (17.007), add 468 (640), 13,240 (22.66); power, M/amp. 35/18.
- LEWIS K. THURLOW.—Power, M/amp. 25/6.
- LIO.—Fy., strike out 400 (750), 410 (730), 454 (660), 468 (640), add 143 (2,100), 159 (1,885); power, M/amp. 20/9 and 5.
- LONE STAR.—Fy., strike out 155 (1,935), 159 (1,885), 410 (730), 454 (660); power, M/amp. 10/15.
- LOTOSLAND.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 19.8/13.6.
- LOUIS M. WINSLOW.—Type, strike out A1; fy., add 400 (750); power, M/amp. 20/4.
- LUBRICO.—Power, M/amp. 18/8 and 5.
- MAKIKI.—Type, strike out A1; fy., strike out 400 (750), 468 (640); power, M/amp. 18/12.
- MALA.—Power, M/amp. 12/15.
- MALAMA.—Power, M/amp. 12/18.
- MALIKO.—Power, M/amp. 19/18.
- MALOLO.—Type, add A3.
- MANA.—Power, M/amp. 12/12.
- MANGORE.—Power, M/amp. 30/12.
- MARGO.—Type, add A1; fy., strike out 155 (1,935), 394 (760), 410 (730), add 160 (1,875), 400 (750), 468 (640), 500 (600); power, M/amp. 20/10.
- MARTHA FOSS.—Power, M/amp. 7.3/2.
- MARY.—Power, M/amp. 15.44/3.
- MARY D.—Power, M/amp. 31/8.
- MATHEW LUCKENBACH.—Fy., add 454 (660); power, M/amp. 23/14.
- MEANTICUT.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015); power, M/amp. 26/10 and 8.
- MEMORY III.—Power, M/amp. 20/6.
- MERICOS H. WHITTIER.—Power, M/amp. 15/12.
- MICHABO.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 157 (1,910), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 20/10.
- MICHIGAN (KEGS).—Type, A2; fy., add 410 (730), 5,525 (54.3), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007).
- MIKIMIKI.—Fy., strike out 400 (750), 410 (730), 454 (660), 468 (640), 2,320 (129.3), add 2,596 (115.56); power, M/amp. 15/2; service, strike out P, add PG.
- MIST.—Power, M/amp. 20/8.
- MIZPAH.—Fy., strike out 5,555 (54), 11,110 (27), add 11,230 (26.71), 13,240 (22.66).
- MOBILE CITY.—Power, M/amp. 30/13.
- MORRO CASTLE.—Type, A1, A2 and B; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 410 (730), 425 (705), 454 (660), 468 (640), 500 (600).
- MOSELLA.—Type, add B; fy., strike out 155 (1,935), 157 (1,910), 159 (1,885); power, M/amp. 20/10.
- MOUNT HOPE.—Fy., add 425 (705); power, M/amp. 20/3.
- MUNAMI.—Power, M/amp. 20/3.
- MUNERIC.—Type, strike out B, add A2; power, M/amp. 20/8.
- MUNLEON.—Power, M/amp. 20/3.
- NANUK.—Power, M/amp. 27/2.
- NARBO.—Type, strike out A2, add A arc and B; fy., strike out 155 (1,935), 157 (1,910), 159 (1,885), add 153 (1,960); power, M/amp. 20/5; accounts, R. M. C. A. (U. S. L.).
- NASHABA.—Accounts, R. M. C. A. (U. S. L.).
- NEVADA (WTUO).—Fy., add 454 (660); power, M/amp. 22/20.
- NEW ORLEANS.—Type, add B; fy., strike out 155 (1,935), 454 (660); power, M/amp. 30/10.
- NEWTON.—Power, M/amp. 25/5.
- NEW YORK (KOSL).—Fy., add 410 (730); power, M/amp. 22/8.
- NILIRAGA.—Type, strike out A1; fy., strike out 400 (750), 410 (730), 454 (660), 468 (640); power, M/amp. 10/8.
- NORTHLAND.—Power, M/amp. 25/5.
- O. S. MCFARLAND.—Power, M/amp. 21/6.
- PAPOOSE.—Power, M/amp. 29/6.

- PATRICK J. HURLEY.—Type, A1, A2; fy., 274 (1,095), 375 (800), 500 (600), 3,420 (87.7), 6,515 (46.04); service, P; hours, X.
- PAUL H. HARWOOD.—Power, M/amp. 26/7.
- PAUL SHOUP.—Fy., strike out 454 (660); power, M/amp. 20/10.
- PETER HELMS.—Power, M/amp. 20/10.
- PLACIDA.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 25/10.
- PLYMOUTH (WCCL).—Power, M/amp. 20/3.5.
- POINT ARENA.—Fy., strike out 410 (730); power, M/amp. 23/13.
- POINT BONITA.—Fy., add 454 (660); power, M/amp. 24/12.
- POINT SAN PABLO.—Fy., add 454 (660); power, M/amp. 24/12.
- PONTIAC.—Type, strike out B, add A1, A2; fy., add 143 (2,100), 157 (1,910); power, M/amp. 19/7.
- PRESIDENT FILLMORE.—Type, strike out B; fy., strike out 153 (1,960), 155 (1,935), 410 (730), 454 (660), 22,100 (13.575), add 8,430 (35.59).
- PRESIDENT HAYES.—Type add A1, A2; fy., add 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 13/3 and 14.
- PRESIDENT JACKSON.—Type, add A1, A2; fy., add 454 (660), 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 17/3 and 12.
- PRESIDENT LINCOLN.—Type, add A1, A2; fy., add 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 17/3 and 11.
- PRESIDENT MADISON.—Type, add A1, A2; fy., add 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 410 (730), 454 (660), 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 17/3 and 14.
- PRESIDENT MONROE.—Type, add A1, A2; fy., add 410 (730), 454 (660), 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 13/3.
- PRESIDENT VAN BUREN.—Type, add A1, A2; fy., add 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 13/3.
- PRESIDENT GARFIELD.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 26.3/5; hours, strike out X, add N.
- PRESIDENT WILSON.—Type, A1, A2; fy., add 5,525 (54.3), 5,555 (54), 6,590 (45.52), 8,330 (36.01), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007), 22,100 (13.575); power, M/amp. 17/3, 15 and 5.
- PRUSA.—M/amp. 19/18. Power.
- RAMONA.—Power, M/amp. 10/6.
- RAWLEIGH WARNER.—Fy., strike out 400 (750), 468 (640); power, M/amp. 20/6.
- RICHMOND.—Power, M/amp. 12.31/8.
- SABINE.—Type, strike out B, add A1, A2; fy., add 400 (750), 468 (640); power, M/amp. 17/8; accounts, R. M. C. A. (U. S. L.).
- SAMOA.—Power, M/amp. 15/7.
- SANDORCRAFT.—Type, A2.
- SANTA CRUZ.—Name changed to Barbara; owner, A. H. Bull S. S. Co.
- SANTA INEZ (WEDU).—Power, M/amp. 15/8.
- SANTA MARIA (WPBW).—Type, strike out A1; fy., strike out 155 (1,935); power, M/amp. 31/10.
- SANTA MARIA (KFTI).—Power, M/amp. 25/8 and 5.
- SARAMAR III.—Type, A1, A2; fy., 375 (800), 410 (730), 425 (705); service, PG; hours, X; rates, Great Lakes service 4 cents per word, oceanic service 8 cents per word; accounts, R. C. A.
- S. B. HUNT.—Power, M/amp. 30/7.
- S. B. WAY.—Power, M/amp. 10/6; accounts, R. C. A.
- SCANTIC.—Power, M/amp. 27/14.
- SCHODACK.—Power, M/amp. 30/14.
- SEATTLE, Spirit.—Power, M/amp. 26/8.
- SEVERANCE.—Power, M/amp. 25/6.
- SEYELYN.—Type, add A1; power, M/amp. 9/1.
- SHICKSHINNY.—Power, M/amp. 30/12.
- SIALIA.—Fy., add 500 (600); power, M/amp. 20/8; owner, A. N. Andrews Investment Corporation.
- SIERRA (WKCM).—Fy., add 460 (650); power, M/amp. 20/7.
- SOBRE LAS OLAS.—Power, M/amp. 15/7.

- S. O. Co. No. 3.—Type, add A2; fy., add 143 (2,100), 157 (1,910).  
 SOLANA.—Power, M/amp. 25/8 and 5.  
 SONORA.—Power, M/amp. 21/4.  
 SOUTHERN CROSS.—Fy., strike out 5,555 (54); power, M/amp. 28/10 and 14.  
 SOUTHLAND.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 12/5.5; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
 STANLEY.—Power, M/amp. 28/10.  
 STAR OF ENGLAND.—Power, M/amp. 33/4.  
 STAR OF LAPLAND.—Power, M/amp. 33/4.  
 STAR OF ZEALAND.—Power, M/amp. 33/4.  
 STELLARIS.—Type, add A1; power, M/amp. 20/5.  
 SWITZURE.—Fy., strike out 153 (1,960), 157 (1,910), 159 (1,885), 400 (750), 468 (640), add 151 (1,985).  
 SYLVIA.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 25/10.  
 TALAYHA, Fy., add 5,555 (54); power, M/amp. 30/8.  
 THEO.—Type, add A1; fy., strike out 394 (760), 400 (750), 454 (660), 468 (640).  
 THEODORE ROOSEVELT.—Fy., strike out 394 (760); power, M/amp. 10/5.  
 THOMAS BRITT.—Power, M/amp. 17/6.  
 THOMAS P. BEAL.—Power, M/amp. 24.2/8.  
 TIDEWATER (KGRE).—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 22.86/15.  
 TIDEWATER ASSOCIATED.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 28.86/15.  
 TILLAMOOK.—Power, M/amp. 15/5.  
 TRIPP.—Accounts, R. M. C. A. (U. S. L.).  
 UNICOL.—Fy., add 159 (1,885); power, M/amp. 24/10; hours, add N.  
 VANDA.—Fy., strike out 125 (2,400), 127 (2,360), 129 (2,325), 131 (2,290), 133 (2,256), 135 (2,220), 137 (2,190), 139 (2,160), 141 (2,130), 145 (2,070), 147 (2,040), 149 (2,015); power, M/amp. 25/10.  
 VEEDOL No. 2.—Type, A1, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 12.2/8; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
 VELERO II.—Power, M/amp. 15/4.  
 VERMAR.—Power, M/amp. 23/10.  
 VIKING.—Power, M/amp. 20/9.  
 VIOLA RAY.—Fy., strike out 468 (640), add 425 (705); power, M/amp. 20/7.  
 VITTORIO Emanuel III.—Power, M/amp. 25/16.  
 VOLADOR.—Power, M/amp. 26/3.5.  
 VOLUNTEER.—Accounts, R. M. C. A. (U. S. L.).  
 WAIMEA.—Power, M/amp. 15/4; hours, strike out N, add X.  
 WALTER D. NOYES.—Power, M/amp. 25/5.  
 WARRIOR (KFSX).—Fy., add 5,525 (54.3), 8,290 (36.19), 8,450 (35.50), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66), 16,580 (18.094); hours, add N.  
 WARWICK.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015), add 153 (1,960), 454 (660); power, M/amp. 20/9.  
 W. E. FITZGERALD.—Power, M/amp. 15/5.  
 WEST DURFEE.—Accounts, R. M. C. A. (U. S. L.).  
 WESTERN SUN.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 22.86/15.  
 WEST JAFFREY.—Type, B; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 20/10.  
 WEST QUECHEE.—Accounts, R. M. C. A. (U. S. L.).  
 WICHITA.—Type, strike out A1, A2; add A arc and B; fy., strike out 155 (1,935), 410 (730), 454 (660); power, M/amp. 30/10.  
 WILLIAM C. ATWATER (WTOU).—Power, M/amp. 20/5.  
 WILLIAM NELSON.—Power, M/amp. 13/6.  
 W. R. CHAMBERLIN, JR.—Power, M/amp. 20/5.  
 WYTHEVILLE.—Accounts, R. M. C. A. (U. S. L.).  
 YAKA.—Power, M/amp. 30/15.  
 YANKEE.—Type, strike out A1.  
 YAPALAGA.—Power, M/amp. 28/10.  
 YOMACHICHI.—Accounts, R. M. C. A. (U. S. L.).

ZACA.—Type, A1, A2; fy., 375 (800), 425 (705), 468 (640), 500 (600), 5,525 (54.3), 8,290 (36.19), 8,450 (35.50), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66), 16,580 (18.094), 16,660 (18.007); power, M/amp. 39/2; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.  
Strike out all particulars of the following-named vessels: Arcturus (KIKZ), Commercial Courier, Helena, Nippekontu, Richfield.

COMMERCIAL AIRCRAFT STATIONS, ALPHABETICALLY, BY NAMES OF CRAFT

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1930, and to the International List of Aircraft Stations, published by the Berne bureau]

C-7471.—Type, A3; fy., 3,106 (96.58), 3,172 (94.57), 5,660 (53); service, P; hours, X.  
NC-8411.—Type, A3; fy., 393 (765), 414 (725), 457 (655), 2,344 (127.98), 3,106 (96.58), 3,468, (86.50).  
SITKA.—Name changed to NC-200E; licensee, Northwest Air Service (Inc.).

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, 1930, and to the International List of Fixed and Land Stations, published by the Berne bureau]

NORFOLK, VA., Radio (NAM).—Type, A1.  
Strike out all particulars of the following-named station: Fortuna Ledge, Alaska.

*The following changes have been incorporated in the June 30, 1930, edition of the Annual List of Commercial and Government Radio Stations of the United States.*

CHICAGO, ILL.—Fy., add 232 (1,280).  
FORT CROCKETT, TEX. (Galveston).—Fy., add 4,090 (73.35).  
FORT HOWARD, MD. (Baltimore).—Fy., add 6,990 (42.92).  
GOVERNORS ISLAND, N. Y.—Fy., strike out 222 (1,345), add 223 (1,345).  
HAINES, ALASKA.—Fy., strike out 284 (1,055), add 227 (1,320).  
MIDLAND, TEX.—Fy., add 6,990 (42.92).  
NOME, ALASKA.—Fy., strike out 280 (1,070), add 236 (1,270).  
PETERSBURG, ALASKA.—Fy., strike out 266 (1,125), add 207 (1,450).  
WASHINGTON, D. C. (WAR).—Fy., add 13,095 (22.91).  
WRANGELL, ALASKA.—Fy., add 197 (1,525), 207 (1,450).

GOVERNMENT SHIP 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, 1930, and to the International List of Ship Stations, published by the Berne bureau]

Strike out all particulars of the following-named vessels: Chase, Corry, Farragut, Gamma, Henshaw, Hull, John Francis Burnes, Kidder, La Velle, McCawley, Missoula, O-12, Piscataqua, Shirk, Solace, Thompson, William Jones, Wood.

MARINE RADIOBEACON STATIONS

[Alterations and corrections to be made to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1930, and to the International List of Stations Performing Special Services, published by the Berne bureau]

BOSTON LIGHT VESSEL AND CAPE COD LIGHTHOUSE, MASS.—Fy., changed to 284 (1,056); hours, during clear weather transmits the third 15 minutes of each hour. These two signals will be so synchronized that one will send during the silent intervals of the other.  
FIRE ISLAND LIGHT VESSEL, N. Y.—Hours changed to the second 15 minutes of each hour.  
BARNEGAT LIGHT VESSEL, N. J.—Hours changed to the second 15 minutes of each hour.  
FIVE FATHOM BANK LIGHT VESSEL, N. J.—Hours changed to the second 15 minutes of each hour.  
SAN FRANCISCO LIGHTSHIP, CALIF.—Fy., changed to 290 (1,034).

*Commercial and Government land, ship, aircraft, radiobeacon and radio-compass stations, alphabetically, by call signals*

KGOA, read Canadohta; KHIUF, read NC-200E; KUH, read Manila, P. I. radio; WMCF, read Barbara; strike out all particulars following the call signals KIKZ, NAQC, NARR, NAZC, NEKR, NETL, NIDT, NIGQ, NIQR, NUJQ, NUJT, NUJV, NUJX, NULS, NUNF, NUMK, NUQT, NUQZ, WHDX, WKCQ, WLCP, WOBV, WXN, WYCE.

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, 1930, and the International List of Broadcasting Stations published by the Berne bureau]

KDKA (East Pittsburgh, Pa.).—Transmitter location changed to Saxonburg, Pa.; studio at Pittsburgh.  
 KGBX (St. Joseph, Mo.).—Licensee, KGBX (Inc.).  
 KGCJ (San Antonio, Tex.).—Licensee, W. W. McAllister.  
 KOOS (Marshfield, Oreg.).—Licensee, H. H. Hanseth (Inc.).  
 KTAT (Birdville, Tex.).—Licensee, S. A. T. Broadcast Co.  
 KTUE (Houston, Tex.).—Call changed to KXYZ; owner, Harris County Broadcast Co.  
 WCLO (Kenosha, Wis.).—Loc. changed to Janesville, Wis.  
 WDOD (Brainerd Community, Tenn.).—Licensee, WDOD Broadcasting Corporation.  
 WELK (Philadelphia, Pa.).—Licensee, WELK Broadcasting Station (Inc.).  
 WEMC (Berrien Springs, Mich.).—Call changed to WKZO.  
 WILM (Wilmington, Del.).—Transmitter location changed to Edge Moor, Del. (Carrcroft); studio at Wilmington, Del.  
 WISJ (Beloit, Wis.).—Licensee, Wisconsin State Journal Broadcasting Co.  
 WJBC (La Salle, Ill.).—Licensee, Kaskaskia Broadcasting Co.  
 WQDV (Tupelo, Miss.).—Call changed to WDIX.  
 WRAW (Reading, Pa.).—Licensee, Reading Broadcasting Co.

EXPERIMENTAL STATIONS. ALPHABETICALLY, BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1930]

CALIFORNIA:

Berkeley (W6XBL).—Strike out all particulars.

Galt (W6XBX).—Strike out all particulars.

Oakland (W6XN).—Strike out all particulars.

Palo Alto (W6XAY).—Strike out all particulars.

CONNECTICUT: Hartford (W1XF).—Strike out all particulars.

ILLINOIS: Addison (W9XAL).—Fy., strike out 1,608 (186.57), 3,076 (97.53), 6,155 (48.74), add 1,604 (187.03), 3,256 (92.5), 6,425 (46.7).

MASSACHUSETTS:

Boston (W1XE).—Strike out all particulars.

South Dartmouth (W1XP).—Fy., add 8,650 (34.68), 12,850 (23.35), 17,300 (17.341), 24,100 (12.448), 26,100 (11.494).

MICHIGAN: Utica (W8XB).—Strike out all particulars.

NEW YORK: South Schenectady (W2XK).—Strike out all particulars.

OHIO: Cleveland (W8XO).—Strike out all particulars.

PENNSYLVANIA: Philadelphia (W3XS).—Strike out all particulars.

*Aircraft*

NC-9677 (W1OXS).—Strike out all particulars.

NC-9681 (W1OXAD).—Strike out all particulars.

RELAY BROADCASTING STATION, ALPHABETICALLY, BY NAMES OF STATION

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1930]

NEW JERSEY: Ampere (W2XCU).—Read Newark, N. J. (experimental only); fy., strike out 3,500 (8.57).

VISUAL BROADCASTING STATIONS BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1930]

Portable

NEW JERSEY: Bound Brook (W3XAK).—Licensee, National Broadcasting Co. (Inc.).

NEW YORK: New York (W2XBS).—Fy., strike out 2,000 (150) to 2,100 (142.9), add 2,100 (142.9) to 2,200 (136.4); Licensee, National Broadcasting Co. (Inc.).

MISCELLANEOUS

LIST OF VESSELS EQUIPPED WITH A RADIO COMPASS

The following-named vessels are additions to the lists published in Commercial and Government Radio Stations of the United States, edition June 30, 1929, and the International List of Ships Stations published by the Berne bureau:

Name	Call signal	Owner
<b>COMMERCIAL</b>		
Aleutian.....	WCCR	Alaska S. S. Co.
Antares.....	WODK	Edwin M. Chance.
Morro Castle.....	KGOV	Agwi Navigation Co.
Warrior.....	KFSX	Harrison Williams.

The radio compass has been removed from the vessels: Commercial—Galveston; Government—John Francis Burnes, Chase, Corry, Farragut, Henshaw, Hull, Jones, William, Kidder, La Vallette, McCawley, Shirk, Thompson, Wood.

RATIFICATION OF THE INTERNATIONAL RADIO CONVENTION

The instrument of ratification of the convention of 1927 by Guatemala was deposited in the archives of the Department of State on August 8, 1930.

MEETING OF INTERNATIONAL TECHNICAL CONSULTATIVE COMMITTEE ON RADIO COMMUNICATION

The Danish Government has called this committee to meet at Christiansborg Palace, Copenhagen, May 26 to June 6, 1931.

LISTS OF AIRCRAFT AND BROADCASTING STATIONS OF THE WORLD AVAILABLE

The International Bureau of the Telegraph Union, radiotelegraph service, Berne, Switzerland, now has available for distribution the second editions (1930) of these lists. The price of the first-named list is 6 francs, Swiss gold (\$1.16), and the broadcasting list sells for 7 francs (\$1.36). These prices include the cost of all supplements appearing until the next edition is issued and postage. Remittances should be forwarded direct to the Berne bureau, preferably by international money order.

BRANCH OFFICE OF THIS DIVISION OPENED IN PORTLAND, OREG.

A branch office of the Seattle office (seventh radio district) has been opened at 227 New Post Office Building, Portland. Individuals or companies residing or located nearer to Portland than to Seattle should apply to the radio inspector at Portland for information pertaining to operators licenses, station licenses, and other matters properly pertaining to the work of this division.

CAPE RACE RADIO (VCE) CLOSED, WORK TO BE PERFORMED BY VAZ

All services heretofore performed by the general public station (VCE) at Cape Race will be carried on by the compass station (VAZ). The compass station will continue to give bearings on 375 kc/s (800 m.). Type of emission, A2 and B. The frequency 500 kc/s (600 m.) is used for listening in.

## WEATHER FORECAST FOR THE BANKS OF NEWFOUNDLAND

The French dispatch boat *Ville d'Ys* (FBVY), when cruising off the Great Bank of Newfoundland, will transmit a general call to all ships at 1,000, requesting observations. At 2,200, the boat will broadcast on 375 kc/s (800 m.), type B, a weather forecast for the banks of Newfoundland.

## USE OF TRANSMITTING APPARATUS ON MERCHANT SHIPS IN HARBORS OF THE UNITED KINGDOM

The use of transmitting apparatus on ships is permitted in all harbors and estuaries in Great Britain except:

(a) The naval harbors of Portsmouth, Plymouth, Chatham, Sheerness, and Rosyth.

(b) The port of London above Cross Ness, i. e., the lower extremity of Barking Reach.

This permission is subject to the following conditions:

1. That the use of the apparatus is restricted to urgent communications between the captains of ships and owners, agents, or dock officials concerning the berthing or departure of a vessel and the handling of her cargo.

2. That such communication shall be exchanged only with the nearest post office coast station, the charges to be at the usual rates.

3. That no interference with other traffic is caused, and that in particular the minimum power necessary for establishing communication is used.

4. That the communication is at once discontinued on receipt of a request to that effect from a government or commercial station.

5. That the permission may be withdrawn at any time at the discretion of the postmaster general.

Merchant ships may use their radio installation in the ports specified in (a) and (b) for the transmission of urgent ships' service messages when they are unable to communicate with the shore by other means owing to stress of weather or other causes, subject to conditions (2), (3), (4), and (5) above.

## "CLOSING DOWN" NOTICES TO BRITISH LAND STATIONS

C. W. ships must advise low and high frequency stations when they are about to cease operations on entering either an intermediate port of call or the final port.

Such ships should also advise the nearest spark or I. C. W. station.

Operators on ships equipped with spark or I. C. W. installations must advise the nearest coast station during their last wireless watch before docking that they expect to enter port before the next watch-keeping period begins, irrespective of whether the period of nonwatch-keeping extends to 2 hours only or to 10 hours as in the case of the break between 2200 and 0800 G. M. T. next day.

Failure to notify the appropriate station or stations may lead to unnecessary land-line inquiries with consequent delay on traffic.

## MEDICAL ADVICE AND MEDICAL ASSISTANCE FURNISHED BY BRITISH STATIONS

**MEDICAL ADVICE.**—Medical advice can be obtained from any coast station in the British Isles by addressing a radiotelegram to the station concerned. The coast station will communicate the message to the appropriate medical authority, whose reply will be signalled to the ship.

**MEDICAL ASSISTANCE.**—If a doctor from shore is wanted, the request for such assistance should be addressed as a radiotelegram to the medical officer of the most convenient port.

In both cases the cost of the messages exchanged will be debited to the ship. The use of the "urgency signal" (XXX) is proper to be used in such cases.

## USE OF S O S SIGNAL

Phrases such as "Who said S O S?" "Did you hear S O S?" "Did..... send S O S?" "S O S with..... now clear" or similar words are used by ship stations.

Attention is drawn to the fact that S O S used in an inquiry or remark may cause confusion, and that as a general rule it is better to use the words "Distress signal" instead of the signal "S O S" in such cases.

Ship stations not taking part in distress working should refrain from making use of the S O S signal.

## LIZARD (BRITISH) RADIO-COMPASS STATION RECALIBRATED

This station has been recalibrated. Bearings taken in sectors, 320-010°, 262-270°, and 295-305° are to be considered unreliable.

Position 49° 59' 06'' N., 5° 12' 24'' W.

NEW TYPE OF AUTOMATIC RADIOBEACON ESTABLISHED AT JUAN DE FUCA STRAIT,  
BRITISH COLUMBIA, CANADA

Call signal changed to VGT; frequency, 300 kilocycles (1,000 meters); type of emission, I. C. W. (1,000 cycle note).

**CHARACTERISTIC.**—Call signal VGT twice, followed by one long dash, the duration of the dash being equal to that of the call signal repeated twice.

**HOURS.**—The transmission period consists of the repetition of the above characteristic for 1 minute and 15 seconds, followed by a silent interval of 1 minute and 45 seconds, thus:

••• — — — • — — — ••• — — — • — — —

Repeated for 1 minute and 15 seconds

Silent

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1 minute and 45 seconds

**SCHEDULE OF OPERATION.**—(a) In clear weather; half hourly, commencing on the hour and at 30 minutes after the hour; transmission period as described, i. e., 1 minute and 15 seconds, followed by a silent interval of 1 minute and 45 seconds, followed by a full transmission period of 1 minute and 15 seconds, ending at 4 minutes and 15 seconds and 34 minutes and 15 seconds after the hour, respectively.

(b) In foggy weather; whenever the atmosphere in the vicinity of the station is so obscure as to impede navigation, the transmission period of 1 minute and 15 seconds with the silent interval of 1 minute and 45 seconds will be repeated every 3 minutes.

**NOTE.**—Masters of vessels equipped to receive these signals are requested to listen in when in the vicinity of the station and report results of such reception to the division superintendent, British Columbia Radio Service, Old Post Office Building, Victoria, B. C.

## COLLECTION OF WEATHER AND ICE REPORTS FOR LAKE SUPERIOR AND LAKE HURON

As an aid to shipping, masters of ships on Lake Superior and Lake Huron are requested to cooperate with the Canadian radio service of the Department of Marine, in the collection of weather and ice reports.

Any ship on Lake Superior within a range of 100-200 miles of Sault Ste. Marie is requested to call the Sault Ste. Marie radio station (VBB) at 7.10 a. m. and 7.10 p. m., eastern standard time, and forward the following information in brief form; vessel's position at time of report, sea conditions, direction and velocity of wind, visibility, general weather conditions, ice conditions (if any).

Similarly, ships on Lake Huron within the above specified range of VBB are requested to forward their observations to that station at 7.15 a. m. and 7.15 p. m., eastern standard time.

If more than one ship on either lake calls station VBB for the purpose indicated, that station will determine the number of ships from which it shall receive such messages.

Sault Ste. Marie will forward a summary of the messages received by telegraph to the United States Weather Bureau at Sault Ste. Marie, Mich., and to the lock office at Sault Ste. Marie, Ontario.

No ship or coast charges will apply to these messages, and where delivery charges apply the messages will be forwarded "collect."

A PRECISE AND RAPID METHOD OF MEASURING FREQUENCIES FROM 5 TO 200 CYCLES  
PER SECOND

In a paper of the above title, by N. P. Case, Research Paper No. 195, Bureau of Standards Journal of Research, August, 1930, a brief resumé is given of some of the methods in common use for measuring electrical frequencies from 5 to 200 cycles per second. One method described combines a high degree of accuracy with ease and rapidity of use. The unknown frequency is made to control the

frequency of discharge of a condenser, and the resultant average voltage drop across the discharging resistor is balanced against a known voltage. Means are provided to make the instrument read frequency directly. A discussion of the sources of error, and experimental determination of the error actually present, lead to the conclusion that, in the range from 5 to 200 cycles per second, the accuracy is always better than one-tenth cycle.

Reprint copies of this paper will be available within a few weeks and may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. The price will be quoted by that office on application.

#### CLASSIFICATION OF RADIO SUBJECTS; AN EXTENSION OF THE DEWEY DECIMAL SYSTEM

A paper entitled "Classification of Radio Subjects; An Extension of the Dewey Decimal System" was published in the August issue of the Proceedings of the Institute of Radio Engineers. This is a second edition of a circular of the Bureau of Standards published in 1923. This revised edition brings the classification up to date and makes a few changes which use has shown to be necessary. The paper gives a systematic scheme of classification of subjects in radio science and engineering for use in classifying references to current radio publications and also for classifying all sorts of other radio material, such as reports, reprints, drawings, books, apparatus, etc.

Since the publication of the first edition in 1923, this subject classification has been used extensively by radio research workers and engineers throughout the world.

The paper will also appear as a forthcoming circular of the Bureau of Standards.