

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

RADIO SERVICE BULLETIN

ISSUED MONTHLY

Washington, May 31, 1930—No. 158

CONTENTS

	Page		Page
New stations.....	2	Miscellaneous—Continued.	
Alterations and corrections.....	7	Changes in time signals transmitted by German stations.....	24
Miscellaneous:		Change in time of transmission of gale warnings, etc., by British telephone stations.....	25
List of vessels equipped with a radio compass.....	22	Aircraft radio research.....	25
General orders of the Federal Radio Commission.....	23	Radio signal transmission of standard frequency July to December, 1930.....	25
Cape Race, Newfoundland (VCE), to be closed, work to be handled by radio-compass station (VAZ).....	24		
New automatic radiobeacon established at Cape Race, Newfoundland.....	24		

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 location. 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.
House	= Hours of operation: N=continuous service, X=no regular hour, Y=sunrise to sunset.
Accounts	= Message accounts settled by.
I. R. T. Co.	= Intercity Radio Telegraph Co.
M. R. T. Co.	= Mackay Radio & Telegraph Co.
R. C. A.	= Radio Corporation of America.
R. M. C. A.	= Radiomarine Corporation of America.
T. R. T. Co.	= Tropical Radio Telegraph Co.
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, 1929, 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	Owner
Atlantic City, N. J. ¹ (Municipal Airport).	FA, FX	WGDW	278 (1,080), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).	P	X	Pan American Airways (Inc.).
Burnett Inlet, Alaska. ²	FC, FX	KHD	227 (1,320), 252 (1,190), 274 (1,095), 425 (705), 500 (600), 2,428 (123.55), 3,180 (94.93).	PG, PR	X	Alaska Pacific Fisheries.
Chatham, Mass. ³	FC	WCM	406 (740), 500 (600)	PG	N	R. M. C. A.
Evans Bay, Alaska ⁴	FX	KUR	193 (1,550), 425 (705), 500 (600).	PG	X	Shepard Point Packing Co.
Grosse Pointe Village, Mich. ⁵	FX	WRDR	2,410 (124.5)	P	X	Township of Grosse Pointe.
Ingham, Mich. ⁶	FX	WRDS	1,662 (180.51)	P	X	State of Michigan, Department Public Safety.
Island of Oahu, Hawaii. ⁷	FC, FX	KGOS	2,596 (115.55), 2,854 (105.12)	P	X	Libby Communications (Inc.).
Ketchikan, Alaska ⁸	FC, FX	KGM	2,320 (129.3)	P	X	Alaska Pacific Salm Corporation.
Mauna Loa (island of Molokai), Hawaii. ⁹	FC, FX	KGOT	2,596 (115.55), 2,854 (105.12)	P	X	Libby Communications (Inc.).
New Brunswick, N. J. ¹⁰	FX	WAB	9,490 (31.61), 14,800 (20.27)	PR	N	R. C. A. Communications (Inc.).
Do. ¹¹	FX	WAC	9,470 (31.68), 13,900 (21.58)	PR	N	Do.
Do. ¹²	FX	WAD	8,930 (33.59), 13,870 (21.63)	PR	N	Do.
Do. ¹³	FX	WAE	6,950 (43.17), 13,840 (21.68)	PR	N	Do.
Do. ¹⁴	FX	WAF	9,450 (31.75), 16,030 (18.715)	PR	N	Do.
New York, N. Y. ¹⁵	FC	WCF	1,596 (187.97)	P	X	Fire Department, City of New York.
Norfolk, Va. ¹⁶	FA, FX	WRDN	278 (1,080), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).	P	X	Pan American Airways (Inc.).
St. Thomas, V. I. ¹⁷	FA	WBY	278 (1,080), 3,070 (97.71), 5,690 (52.72), 8,015 (37.43), 12,210 (24.57).	P	X	New York, Rio & Buenos Aires Line (Inc.).
San Antonio, Tex. ¹⁸	FX	KGOH	3,184 (94.22)	P	X	San Antonio Public Service Co.
Toledo, Ohio ¹⁹	FX	WRDQ	2,470 (121.5)	P	X	City of Toledo.
Washington, D. C. (Hoover Field). ²⁰	FA, FX	WRDM	278 (1,080), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).	P	X	Pan American Airways (Inc.).
<i>Portable</i>						
San Antonio, Tex. ¹⁸	FX	KGOL	3,184 (94.22)	P	X	San Antonio Public Service Co.

¹ Type, A1.² Type, A1, A3.³ Loc. (approximate), 70° 00' 00" W., 41° 42' 00" N.; type, A1, A2; rates, 10 cents (52 centimes) per word; this is not a new station—it merely represents the assignment of an additional call signal for the intermediate-frequency transmitter which remained at Chatham when the high-frequency transmitter was moved to Marlon, Mass.⁴ Loc., 148° 03' 38" W., 60° 03' 18" N.; type, B.⁵ Type, A1, A2, A3.⁶ Type, A2, A3.⁷ Loc. 157° 53' 00" W., 21° 19' 30" N.; type, A3.⁸ Type, A3.⁹ Loc. 157° 13' 00" W., 21° 08' 20" N.; type, A3.¹⁰ Loc. (approximate), 74° 01' 00" W., 40° 42' 00" N.; type, A3.¹¹ Loc. (approximate), 83° 34' 00" W.; 41° 40' 00" N.; type, 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, 1929, 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—
America.....	KGQF				M. W. Keating.....	
Arthur J. Baldwin ¹	KETZ	8	PG	X	Arctic Transport Co.....	R. M. C. A.
Chicken of the Sea	KGQH	8	PG	X	H. E. Morgan.....	Do.
Corsair.....	WQDZ		PG		J. Pierpont Morgan.....	Owner.
David B. ²	KGOR		P	X	Libby, McNeill & Libby.....	R. M. C. A.
Eastern Sun.....	KGQB	8	PG	X	Sun Oil Co.....	Owner.
Einar Beyer.....	KGQE		P	X	Alaska Pacific Fisheries Co.....	Do.
Houston ³	KGQJ	8	PG	N	Newport News Shipbuilding & Drydock Co.....	R. M. C. A.
Infanta.....	KGOU	8	PG	X	John Barrymore.....	Do.
Intrepid.....	KDHI	8	PG	X	Transportation Products Co.....	Do.
Lamora.....	KGQI				Hunter L. Gary.....	
Placida.....	KGQA	8	PG	X	Harry G. Haskell.....	Do.
President Warfield.....	KGQC	8	PG	X	Baltimore Steam Packet Co.....	Do.
Sylvia.....	KGQD	8	PG	X	Logan G. Thomson.....	Do.

¹ Fy., 425 (705), 500 (600).

² Type, A3; fy., 1,540 (194.8); power, M/amp. 10/1.5.

³ Type, A1; fy., 175 (1,715), 195 (1,540), 215 (1,395), 245 (1,225), 275 (1,060), 355 (845), 375 (800), 425 (705), 445 (675), 500 (600), 545 (550); power, M/amp. 45/32.

Commercial land and ship stations, alphabetically, by call signals

Call signal	Name of station	Call signal	Name of station
KDHI	Intrepid.....	KGQJ	Houston.....
KETZ	Arthur J. Baldwin.....	KUR	Evans Bay, Alaska.....
KGM	Ketchikan, Alaska.....	WAB	New Brunswick, N. J.....
KGOR	David B.....	WAC	Do.....
KGOS	Island of Oahu, Hawaii.....	WAD	Do.....
KGOT	Mauna Loa (island of Molokai), Hawaii.....	WAE	Do.....
KGOU	Infanta.....	WAF	Do.....
KHD	Burnett Inlet, Alaska.....	WBY	St. Thomas, V. I.....
KGOH	San Antonio, Tex.....	WCF	New York, N. Y.....
KGOL	San Antonio, Tex. (portable).....	WCM	Chatham, Mass.....
KGQA	Placida.....	WGDW	Atlantic City, N. J. (Municipal Airport).....
KGQB	Eastern Sun.....	WQDZ	Corsair.....
KGQC	President Warfield.....	WRDN	Norfolk, Va.....
KGQD	Sylvia.....	WRDM	Washington, D. C. (Hoover Field).....
KGQE	Einar Beyer.....	WRDQ	Toledo, Ohio.....
KGQF	America.....	WRDR	Grosse Pointe Village, Mich.....
KGQH	Chicken of the Sea.....	WRDS	Township of Ingham, Mich.....
KGQI	Lamora.....		

Commercial aircraft stations, alphabetically, by names of craft

[Additions to the List of Radio Stations of the United States, edition of June 30, 1929, and to the International List of Aircraft Stations published by the Berne bureau]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Owner
Argentina	KHKQJ		P	X	New York, Rio & Buenos Aires Line.
Fleetster No. 3	KHKRI		P	X	Do.
NC-23V	KHINM		P	X	Southern Radio Corporation.
NC-86K ¹	KHGJQ	333 (900), 375 (800), 500 (600), 3,106 (96.58).	P	X	Curtiss Wright Flying Service.
NC-185H	KHMDW		P	X	Transcontinental Air Transport (Inc.).
NC-229M	KHJWD		P	X	Boeing Air Transport (Inc.).
NC-230M ²	KHJVE	3,106 (96.58), 3,172 (94.57), 5,660 (53).	P	X	Do.
NC-342N ²	KHIOL	3,106 (96.58)	P	X	Fokker Aircraft Corporation of America.
NC-725K	KHMEV		P	X	Transcontinental Air Transport (Inc.).
NC-726K	KHMFU		P	X	Do.
NC-5999 ³	KHIQJ	3,106 (96.58)	P	X	Thompson Aeronautical Corporation.
NC-9144 ¹	KHGIR	333 (900), 375 (800), 500 (600), 3,106 (96.58).	P	X	Curtiss Wright Flying Service.
NC-9673	KHFXC		P	X	Pan American Airways (Inc.).
NR-496M ⁴	KHILO	333 (900), 375 (800), 393 (765), 500 (600), 400 (750), 414 (725), 420 (715), 457 (655).	P	X	William S. Brock, 16,826 Lilac St., Detroit, Mich.
NR-500V	KHIMN	8,650 (34.68)	P	X	John Henry Mears.
NR-9696	KHIRI		P	X	New Haven-Buenos Aires Flight (Inc.).
111N ²	KHIPK	3,106 (96.58)	P	X	Thorne Donnelly.
Porto Rico	KHKUF		P	X	New York, Rio & Buenos Aires Line.
Yankee Doodle ³	KHKTG	8,650 (34.68)	P	X	Willard F. Hellman-Arthur C. Goebel.

¹ Type, A1, A2.² Type, A3.³ Type, A1.⁴ Type, A1, A2, A3.

Commercial aircraft stations, alphabetically, by call signals

Call signal	Name of station	Call signal	Name of station
KHFXC	NC-9673.	KHJVE	NC-230M.
KHGIR	NC-9144.	KHJWD	NC-229M.
KHGJQ	NC-86K.	KHKQJ	Argentina.
KHILO	NR-496M.	KHKRI	Fleetster No. 3.
KHIMN	NR-500V.	KHKTG	Yankee Doodle.
KHINM	NC-23V.	KHKUF	Porto Rico.
KHIOL	NC-342N.	KHMDW	NC-185H.
KHIPK	111N.	KHMEV	NC-725K.
KHIQJ	NC-5999.	KHMFU	NC-726K.
KHIRI	NR-9696.		

Broadcasting stations, alphabetically, by names of States and cities

[Additions to the List of Radio Stations of the United States, edition of June 30, 1929]

State and city	Call signal	Frequency in kilocycles, meters in parentheses	Power (watts)
Georgia: Augusta	WRDW	1,500 (200)	100
Louisiana: Monroe	KMLB	1,200 (250)	50
Maine: Augusta	WRDO	1,370 (219)	100

Broadcasting stations, alphabetically, by call signals

Call signal	Location of transmitter (mail address)	Owner	Frequency in kilocycles, meters in parentheses	Power (watts)
KMLB	Monroe, La., 512 South Grand Street.	J. C. Liner.....	1,200 (250).....	50
WRDO	Augusta, Me., 70 Chapel Street.	Albert S. Woodman.....	1,370 (219).....	100
WRDW	Augusta, Ga., 309 Eighth Street.	Warren C. Davenport's Musicove (Inc.).	1,500 (200).....	100

Government land stations, alphabetically, by name of station

[Addition to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929, 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	Owner
Grand Island, Nebr. ¹	FX	WWA	.....	O	X	Department of Commerce, Radio Division. U. S. Army.
Midland, Tex. ²	FA	WZAB	6,990 (42.92).....	O	.....

¹ Type, A1 (beam).

² Loc. (approximate), 102° 04' 00" W., 32° 00' 00" N.; type, A1; hours, 6.45 a. m. to 5 p. m., central standard time.

Government ship station, by name of station

[Addition to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929, and to the International List of Fixed and Land Stations published by the Berne bureau]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Owner
Henry County.....	NJJB	.....	.....	.....	U. S. Navy.

Government land radiobeacon, radio compass, and ship stations, alphabetically, by call signals

Call signal	Name of station	Call signal	Name of station
NJJB	Henry County.....	WWA	Grand Island, Nebr.....
WTDH	Penguin.....	WZAB	Midland, Tex.....

Government aircraft stations, alphabetically, by names of craft

[Additions to the List of Radio Stations of the United States, edition of June 30, 1929, and to the International List of Aircraft Stations published by the Berne bureau]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Owner
Akron (rigid airship).....	NZRLB	.....	O	.....	U. S. Navy.

Government aircraft stations, alphabetically, by call signals

Call signal	Name of station	Call signal	Name of station
NZRLB	Akron (rigid airship).....	.....	.....

Relay broadcasting stations, alphabetically, by names of stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Power (watts)	Owner
<i>Portable</i>				
United States.....	W10XAL	2,392 (125.41).....	50	National Broadcasting Co., 711 Fifth Avenue, New York, N. Y. Do.
Do.....	W10XAO	1,584 (189.39).....	50	

Visual broadcasting stations, alphabetically, by names of stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Power (watts)	Owner
Indiana: West Lafayette.....	W9XG	2,000 (150) to 2,100 (142.9).....	1,500	Purdue University. De Forest Radio Co.
New Jersey: Passaic.....	W2XCD	.....do.....	5,000	

Experimental, relay broadcasting, and visual broadcasting stations grouped by districts, alphabetically, by call signals

Call signal	District and station	Call signal	District and station
W1XAI	First district: Medford, Mass. Second district: Passaic, N. J. Fourth district: San Juan, P. R. (P. A. A. airport). Miami, Fla. (West Thirty-sixth Street airport). Fifth district: Brownsville, Tex. (Municipal airport).	W6XQ	Sixth district: Sixth radio district (portable). Ninth district: West Lafayette, Ind.
W2XCD		W9XG	
K4XC			<i>Aircraft and portable</i>
W4XB			
W5XC		W10XAD	NC-9681.
		W10XAE	NC-9675.
		W10XAL	United States (throughout).
		W10XAO	Do.

Marine radiobeacon stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929, and to the International List of Stations Performing Special Services published by the Berne bureau]

OVERFALLS LIGHTSHIP, DEL.—Loc. 75° 01' 24" W., 38° 47' 57" N.; transmits every 180 seconds, groups of 2 dashes and 1 dot for 60 seconds, silent 120 seconds, thus:

— . — . etc.
60 seconds

Silent
120 seconds

Fy., 290 (1,034) hours, continuously during thick or foggy weather and daily in clear weather during the second 15 minutes of each hour, 75th meridian time.

KILAUEA POINT LIGHT STATION, HAWAII.—Loc. 159° 24' 18" W., 22° 13' 55" N.; transmits every 180 seconds groups of 2 dashes for 60 seconds, silent 120 seconds, thus:

— — — etc.
60 seconds

Silent
120 seconds

Fy., 300 (1,000); hours, daily during the second 15 minutes of each hour.

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, 1929]

Station	Call signal	Frequency in kilocycles, meters in parentheses	Power (watts)	Owner
Florida: Miami (West Thirty-sixth Street airport).	W4XB	6,245 (46.695), 8,650 (34.68), 12,850 (23.35), 17,300 (17.341), 23,100 (12.987), 23,500 (12.766).	200	Pan American Airways (Inc.).
Porto Rico: San Juan (P. A. A. airport).	K4XC	do	200	Do.
Texas: Brownsville (Municipal Airport).	W5XC	do	200	Do.
<i>Portable</i>				
Massachusetts: Medford.	W1XAI	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).	1,000	Tufts College (Trustees).
Sixth radio district...	W6XQ	278 (1,080), 457 (655), 3,070 (97.71), 3,088 (97.15), 3,460 (86.70), 5,510 (54.44), 6,350 (47.24), 8,015 (37.43), 12,180 (24.63).	2,000	Herbert Hoover, jr., 117 West Ninth Street, Los Angeles, Calif.
<i>Aircraft</i>				
NC-9675.....	W10XAE	1,604 (187.03), 2,398 (125.1), 3,256 (92.5), 4,795 (62.57), 6,425 (46.7).	100	Colonial Air Transport (Inc.) 270 Madison Avenue, New York, N. Y.
NC-9681.....	W10XAD	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, 1929, and to the International List of Fixed and Land Stations, published by the Berne bureau]

- ALPENA, MICH. (WNO).—Fy., add 143 (2,100), 410 (730), 425 (705), 454 (660); power, M/amp. 39.6/13; owner, Michigan Wireless Telegraph Co.
- BAR HARBOR, ME.—Fy., add 121 (2,480).
- BOLINAS, CALIF., Radio (KPH).—Fy., strike out 16,575 (18.10).
- BROWNSVILLE, TEX. (Municipal Airport).—Fy., add 6,350 (47.24).
- CHICAGO, ILL., Radio (WFL).—Power, M/amp. 20/3.
- DARLINGTON, MD. (near).—Type, A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).
- DETROIT, MICH. (WBM).—Type, strike out A2, A3; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).
- EVANS BAY, ALASKA.—Owner, Shepard Point Packing Co.
- EVERETT, WASH., Radio.—Type, strike out A1 and B, add A2; owner, Pacific Communication Co.
- LAS VEGAS, NEV.—Service, add FA.
- LATOUCHE, ALASKA, Radio.—Type, A2; fy., 187 (1,605), 219 (1,370), 425 (705), 500 (600); hours, X.
- LOS ANGELES, CALIF. (KGTI).—Read Los Angeles (Alhambra Airport), Calif; service, add FA.
- LOS ANGELES, CALIF., Radio (KSM).—Fy., 4,116 (72.886), 5,525 (54.3), 6,515 (46.05), 8,630 (34.76), 11,020 (27.22), 11,050 (27.15), 11,080 (27.08), 11,140 (26.93), 11,200 (26.79), 16,580 (18.094), 16,900 (17.751), 22,100 (13.575), 22,160 (13.538); owner, Globe Wireless, Ltd.
- MARION, MASS., Radio (WCC).—Fy., strike out 16,575 (18.10), add 16,580 (18.094).
- MARION, MASS., Radio (WIM).—Fy., strike out 5,525 (54.3), 6,455 (46.47), 6,470 (46.37), 8,350 (35.93), 11,050 (27.15), 12,640 (23.73), 12,580 (23.85), 16,700 (17.964), 21,860 (13.724), 21,900 (13.699), 22,100 (13.575).
- MARYSVILLE, MICH.—Type, strike out A2, A3; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (96.65), 3,244 (92.5).
- MEMPHIS, TENN.—Fy., add 3,420 (87.7).
- MIAMI, FLA. (WKDL).—Fy., add 6,350 (47.24).

- MIAMI, FLA. (WNDA).—Fy., strike out 1,712 (175.23); add 2,440 (123).
- MINNEAPOLIS, MINN. (KGPB).—Fy., strike out 2,452 (122.34); add 2,416 (124.17).
- MINNEAPOLIS, MINN. (KQP).—Loc. (approximate) 93° 15' 00" W., 45° 00' 00" N.
- MINNEAPOLIS, MINN. (WLP).—Fy., strike out 3,160 (94.9); 3,166 (94.8); 3,172 (94.6); 3,178 (94.4); 3,238 (92.65); 3,244 (92.5); power, M/amp. 11/5.
- NEW BRUNSWICK, N. J. (WAZ).—Fy., add 7,415 (40.46), 17,860 (16.797).
- NEW LONDON, CONN., Radio.—Fy., add 476 (630).
- NEW YORK, N. Y., Radio (Borough of Brooklyn) WNY.—Type, add A2; fy., add 135 (2,220), 143 (2,100), 442 (680), 500 (600).
- PALO ALTO, CALIF. (KWT).—Fy., add 13,750 (21.82).
- PHILADELPHIA, PA. (WJV).—Type, A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).
- PHILADELPHIA, PA. (WPDP).—Fy., strike out 1,712 (175.23), add 2,440 (123).
- PLAINFIELD, ILL.—Loc. 88° 11' 42" W., 41° 39' 14" N.
- PORTLAND, OREG., Radio (KKB).—Loc. changed to Sherwood, Oreg., Radio; fy., 4,116 (72.886), 5,525 (54.3), 6,515 (46.05), 8,630 (34.76), 11,020 (27.22), 11,050 (27.15), 11,080 (27.08), 11,140 (26.93), 11,200 (26.79), 16,580 (18.094), 16,900 (17.751), 22,100 (13.575), 22,160 (13.538); owner, Globe Wireless (Ltd.).
- PORTLAND, OREG. (KLB).—Type, A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5); hours, X.
- PORTLAND, OREG., Radio (KPK).—Owner, R. M. C. A.
- QUINCY, MASS.—Fy., strike out 1,592 (188.44), 6,515 (46.05).
- RED BLUFF BAY, ALASKA, Radio.—Fy., 400 (750), 425 (705), 500 (600); power, M/amp. 75/6.
- ROCKY POINT, N. Y. (WEG).—Type, add A3.
- ROCKY POINT, N. Y. (WEN).—Loc. changed to New Brunswick, N. J.; call signal WIA assigned in addition to present call; the following frequencies to be identified with WIA: 6,710 (44.71), 6,717.5 (44.65), 6,725 (44.61), 6,732.5 (44.55), 6,740 (44.51), 6,845 (43.83), 6,852.5 (43.77), 6,860 (43.73), 6,920 (43.35), 6,927.5 (43.30), 6,935 (43.26), 6,942.5 (43.21), 6,950 (43.17), 6,957.5 (43.11), 7,400 (40.54), 7,407.5 (40.49), 7,415 (40.46), 7,520 (39.89), 7,715 (38.885), 8,930 (33.59), 8,940 (33.56), 8,950 (33.52), 9,010 (33.30), 9,450 (31.75), 9,460 (31.71), 9,470 (31.68), 9,480 (31.65), 9,490 (31.61), 10,390 (28.87), 10,400 (28.85), 10,410 (28.82), 10,610 (28.28), 10,620 (28.25), 10,630 (28.22), 11,680 (25.68), 11,950 (25.10), 13,420 (22.35), 13,435 (22.33), 13,450 (22.30), 13,465 (22.28), 13,480 (22.26), 13,690 (21.91), 13,705 (21.89), 13,720 (21.87), 13,780 (21.77), 13,840 (21.68), 13,855 (21.655), 13,870 (21.63), 13,885 (21.605), 13,900 (21.58), 13,915 (21.56), 13,930 (21.54), 14,800 (20.27), 14,815 (20.25), 14,830 (20.23), 14,920 (20.11), 15,040 (19.947), 15,430 (19.443), 15,445 (19.423), 15,460 (19.405), 15,475 (19.386), 15,490 (19.367), 15,970 (18.785), 16,000 (18.750), 16,015 (18.732), 16,030 (18.715), 17,860 (16.797), 17,880 (16.779), 17,900 (16.760), 17,920 (16.741), 17,940 (16.722), 17,980 (16.685), 18,000 (16.667), 18,020 (16.648), 18,040 (16.630), 18,060 (16.611), 18,860 (15.907), 18,880 (15.890), 18,900 (15.873), 18,920 (15.856), 18,940 (15.839), 18,960 (15.823), 18,980 (15.806), 20,100 (14.925), 20,180 (14.866), 20,260 (14.808), 20,780 (14.437), 20,820 (14.409), 21,220 (14.138), 21,240 (14.124), 21,260 (14.111), 21,300 (14.085).
- ROCKY POINT, N. Y. (WEO).—Type, add A3.
- ROCKY POINT, N. Y. (WKD).—Type, add A3.
- ROCKY POINT, N. Y. (WKQ).—Owner, R. C. A. Communications (Inc.).
- ROCKY POINT, N. Y. (WKU).—Type, A3.
- ROCKY POINT, N. Y. (WKW).—Type, A3.
- ROCKY POINT, N. Y. (WQW).—Type, A3.
- ST. CROIX FALLS, WIS.—Type, A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5); power, M/amp. 15.5/1.5.
- ST. LOUIS, MO.—Fy., strike out 2,452 (122.34), add 1,712 (175.23).
- SALT LAKE CITY, UTAH (KGTH).—Service, add FA.
- SAN JUAN, P. R. (Pan American Airport) WMDU.—Fy., add 6,350 (47.24).
- SAN JUAN, P. R. (WQZ).—Fy., add 15,985 (18.768).
- SCOBYSVILLE, N. J.—Loc. 74° 08' 30" W., 40° 17' 35" N.
- SEATTLE, WASH., Radio (KSA).—Loc. changed to Edmonds, Wash. Radio; fy., 4,116 (72.886), 5,525 (54.3), 6,515 (46.05), 8,630 (34.76), 1,120 (27.22), 11,050 (27.15), 11,080 (27.08), 11,140 (26.93), 11,200 (26.79), 16,580 (18.094), 16,900 (17.751), 22,100 (13.575), 22,160 (13.538); owner, Globe Wireless, Ltd.

- STEAMBOAT BAY, ALASKA (Noyes Island).—Type, A1, A3; fy., 256 (1,170), 268 (1,120), 274 (1,095), 425 (705), 500 (600), 2,428 (123.55), 3,160 (94.93); service, PG and PR; hours, X; owner, R. R. Farish.
- SUPERIOR, MICH.—Type, A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (96.65), 3,244 (92.5).
- TUCKERTON, N. J., Radio (WSC).—Fy., strike out 16,575 (18.10), add 8,390 (35.76), 16,580 (18.094).
- UGANIK, ALASKA (KLP).—Type, strike out B, add A1, A2; fy., 217 (1,380), 219 (1,370), 227 (1,320), 252 (1,190), 268 (1,120), 425 (705), 460 (650), 500 (600); service, PG and PR; hours, 7 a. m. to 7 p. m.; rates, 6 cents per word; owner, R. M. C. A.
- UNDERWOOD, WASH. (near).—Type, strike out A3, add A1; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).
- WASHINGTON, D. C. (WJH).—Type, strike out A2, A3; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).
- WASHINGTON, D. C. (WJX).—Type, strike out A2, A3; fy., strike out 3,160 (94.9), 3,166 (94.8), 3,172 (94.6), 3,178 (94.4), 3,238 (92.65), 3,244 (92.5).

Portable

- CALIFORNIA (KGKN).—Fy., strike out 4,244 (70.68), 8,810 (34.05), add 4,116 (72.886), 8,630 (34.76).
- CALIFORNIA (KGKP).—Fy., strike out 4, 244 (70.68), 8,810 (34.05), add 4,116 (72.886), 8,630 (34.76).
- TEXAS, LOUISIANA AND NEW MEXICO (KOZ).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KPF).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KPL).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KPT).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KPU).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRR).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRS).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRT).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRV).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRW).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (KRZ).—Read Texas and Louisiana.
- TEXAS, LOUISIANA AND NEW MEXICO (WCS).—Read Texas and Louisiana.
- Strike out all particulars of the following-named stations: ALPENA, MICH., Radio (WGI); HARRISON, OHIO; MIAMI, BEACH, FLA.; SEATTLE, WASH. (KYF).

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, 1929, and to the International List of Ship Stations, published by the Berne bureau]

- ADLER.—Power, M/amp. 15/2.5.
- ADMIRAL DEWEY.—Fy., strike out 125 (2,400), 137 (2,190); power, M/amp. 14/7 and 3.
- ADMIRAL FISKE.—Fy., strike out 400 (750), 410 (730), 454 (660), 468 (640); power, M/amp. 16/7 and 4.
- ADMIRAL HALSTEAD.—Power, M/amp. 20/12.
- ADMIRAL NULTON.—Power, M/amp. 20/12.
- ADMIRAL PEARY.—Fy., strike out 125 (2,400); power, M/amp. 14/7 and 3.
- ADMIRAL WILEY.—Power, M/amp. 25/6.
- AFOGNAK.—Type, A2; fy., 375 (800), 425 (705), 454 (660), 460 (650), 500 (600); power, M/amp. 12/1.5; service, PG; hours, X; rates, 8 cents per word.
- AGWIDALE.—Fy., strike out 410 (730), 454 (660); power, M/amp. 24/13.
- ALAMAR.—Type, strike out A1.
- ALBATROSS (KELD).—Type, add A1; fy., add 468 (640); power, M/amp. 20/5.
- ALDEN A. MILLS.—Power, M/amp. 20/4.
- ALITAK.—Type, A2; fy., 375 (800), 425 (705), 454 (660), 500 (600); power, M/amp. 12/1.5; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.
- ALKI.—Fy., strike out 2,350 (127.7), add 1,596 (187.97); power, M/amp. 4.92/5.
- ALPENA.—Power, M/amp. 20.5/4.
- ALTAIR.—Type, A2; fy., add 400 (750), 468 (640); power, M/amp. 22/12.
- AMBRIDGE.—Power, M/amp. 30/16.
- AMELIA.—Power, M/amp. 19.8/4.

- AMERICA.—Fy., strike out 155 (1,935); power, M/amp. 33/28.
- AMERICAN.—Power, M/amp. 23/6.
- AMHERST.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 20/5.
- ANACONDA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 24/14.
- ANCON.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600).
- ANNAPOLIS.—Fy., add 375 (800).
- ANN ARBOR No. 5.—Power, M/amp. 22/4.
- ANN ARBOR No. 6.—Power, M/amp. 20.15/4.
- ANNISTON CITY.—Owner, Isthmian S. S. Co. (Inc.).
- ANSONIA.—Type, strike out A3, add A1; fy., strike out 2,268 (132.4), 5,600 (53.57), add 2,320 (129.3), 5,525 (54.3), 5,615 (53.42); power, M/amp. 15/2.
- ARA.—Fy., add 153 (1,960), 155 (1,935), 410 (730), 454 (660), 5,525 (54.3), 5,555 (54), 8,290 (36.19), 11,050 (27.15), 11,110 (27), 11,230 (26.71).
- ARAS.—Fy., strike out 5,555 (54), 8,330 (36), add 8,290 (36.19), 8,450 (35.5); power, M/amp. 15/10.
- ARCTIC.—Power, M/amp. 31/12.
- ASTORIA.—Power, M/amp. 16/4.
- ATLANTA CITY.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 157 (1,910), add 153 (1,960), 410 (730); power, M/amp. 24/12.
- ATLANTIC (WQBG).—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015), 153 (1,960); power, M/amp. 15/8.
- AXTEL J. BYLES.—Correct orthography of name Axtell J. Byles; fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 20/15.
- BALSAM.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26.3/18.
- BARREDO.—Type, add A2; fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015); power, M/amp. 27/10.
- BARRENFORK.—Fy., add 375 (800); power, M/amp. 18/5; service, strike out PG, add P; no rates.
- BARRON F.—Type, add A1; power, M/amp. 13/2.
- BEACON.—Type A1, A2; fy., strike out 410 (730), 454 (660), add 143 (2,100), 157 (1,910), 159 (1,885), 160 (1,875), 400 (750), 468 (640); power, M/amp. 28/12.
- BEACONSTAR.—Type A1, A2; fy., add 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 400 (750), 410 (730), 454 (660), 468 (640); power, M/amp. 27/12.
- BELHAVEN.—Hours, N (first class), X (third class).
- BERING.—Power, M/amp. 33/14; hours, add N.
- BERWINDVALE.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); hours, X; rates, 8 cents per word.
- BERYLE E.—Power, M/amp. 13/2.
- BESSEMER.—Power, M/amp. 28/7.
- BETA.—Power, M/amp. 24/10.
- BETTERTON.—Fy., strike out 410 (730); power, M/amp. 20/12.
- BETTY R.—Fy., add 3,420 (87.7).
- BONNIE BROOK.—Power, M/amp. 27/16.
- BOSTON COLLEGE.—Type, add A1; power, M/amp. 20/8.
- BRANDYWINE.—Type, B; fy., 375 (800), 425 (705), 500 (600).
- BRANT (KGNT).—Type, A2; fy., 375 (800), 425 (705), 454 (660), 500 (600); power, M/amp. 15/2; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.
- BRAZOS.—Power, M/amp. 28/5.
- BROOKS-SCANLON.—Fy., 375 (800), 425 (705), 500 (600).
- BRUSH.—Power, M/amp. 22.2/20.
- BUFFALO BRIDGE.—Power, M/amp. 21/10.
- BYRON D. BENSON.—Power, M/amp. 27/10.
- CALIFORNIA (KUKV).—Type, A1, A2; fy., add 5,525 (54.3), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 16,580 (18.094), 16,660 (18.007); power, M/amp. 24/16.
- CALIFORNIA (WMCM).—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 8,390 (35.76), 11,170 (26.86), 11,260 (26.64), 12,550 (23.90), 12,490 (24.02), add 410 (730), 454 (660), 8,330 (36.01), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66); power, M/amp. 30/10.

- CANAHODTA.—Type, A3; fy., 2,524 (118.85), 2,560 (117.18), 2,584 (116.09); power, M/amp. 7/1.5; service, P; hours, X.
- CANANOVA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 25/4.
- CAPILLO.—Power, M/amp. 24/14.
- CAPT. JOHN W. MCKIE.—Fy., strike out 273 (1,100), add 274 (1,095), 875 (800), 500 (600); power, M/amp. 10.77/3.
- CARACAS.—Fy., strike out 137 (2,190), 141 (2,130); power, M/amp. 28/11.
- CAROLINE.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), 400 (750), add 153 (1,960), 159 (1,885), 410 (730); power, M/amp. 14/10.
- CARPLAKA.—Power, M/amp. 24/14.
- CASIANA.—Power, M/amp. 16/10.
- CASTLE TOWN.—Power, M/amp. 21/10.
- CATALINA.—Type, add B.
- CERRO AZUL.—Power, M/amp. 26/10.
- CHARLES G. BLACK.—Fy., strike out 137 (2,190), 141 (2,130), 153 (1,960), add 157 (1,910), 159 (1,885); power, M/amp. 26/10.
- CHARLES L. O'CONNOR.—Power, M/amp. 20/8.
- CHARLES R. McCORMICK.—Power, M/amp. 23/9.
- CHARLES R. WILSON.—Type, A1, A2; fy., 375 (800), 468 (640), 500 (600); power, M/amp. 30/2; service, PG; hours, X; rates, 8 cents per word; accounts, owner.
- CHEROKEE.—Type, strike out B, add A2; fy., strike out 137 (2,190), 141 (2,130); power, M/amp. 26/8.
- CHESTER O. SWAIN.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015), 153 (1,960); power, M/amp. 26/10.
- CHETOFA.—Power, M/amp. 21/10.
- CHICKASAW.—Power, M/amp. 26/14; accounts, R. M. C. A.
- CHILBAR.—Fy., strike out 410 (730); power, M/amp. 25/14.
- CHINA ARROW.—Power, M/amp. 27/8.
- CHIRIKOF.—Fy., strike out 410 (730), 454 (660); power, M/amp. 34/6; hours, add N.
- CITIES SERVICE BOSTON.—Power, M/amp. 23/7.
- CITIES SERVICE KANSAS.—Power, M/amp. 24/14.
- CITIES SERVICE KOOLMOTOR.—Fy., strike out 125 (2,400), 159 (1,885), add 153 (1,960), 160 (1,875); power, M/amp. 20/16.
- CITIES SERVICE MISSOURI.—Power, M/amp. 24/12.
- CITIES SERVICE OHIO.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 27/8.
- CITIES SERVICE OKLAHOMA.—Type, A2; fy., strike out 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875); power, M/amp. 28/13.
- CITY OF LOS ANGELES.—Fy., strike out 125 (2,400), add 157 (1,910), 160 (1,875), 454 (660); power, M/amp. 30/8 and 15; hours, N.
- CITY OF DETROIT III.—Power, M/amp. 16/5; accounts, R. C. A.
- CITY OF RAYVILLE.—Fy., strike out 137 (2,190), 141 (2,130), 149 (2,015), 151 (1,985), add 157 (1,910), 159 (1,885); power, M/amp. 26/10; hours, add N.
- CITY OF ST. LOUIS.—Fy., strike out 410 (730), 454 (660); power, M/amp. 28/12.
- CITY OF SAVANNAH.—Fy., strike out 410 (730), 454 (660); power, M/amp. 28/10.
- CLARE.—Type, strike out A1; fy., strike out 400 (750), 468 (640).
- CLIFFORD F. MOLL.—Fy., add 500 (600); power, M/amp. 25/6.
- CLIFFWOOD.—Power, M/amp. 21/18.
- COLUMBINE.—Fy., strike out 410 (730), 454 (660); power, M/amp. 16.3/5.
- COMMACK.—Power, M/amp. 27/16.
- COMMERCIAL MARINER.—Owner, Mooremack Gulf Lines (Inc.).
- COMMERCIAL NAVIGATOR.—Power, M/amp. 22/16; accounts, M. R. T. Co.
- COMMERCIAL PIONEER.—Power, M/amp. 28/8.
- COMMERCIAL QUAKER.—Fy., add 400 (750); power, M/amp. 18.4/7.
- COMMONWEALTH.—Fy., add 375 (800); power, M/amp. 15/6.
- CONNEAUT.—Power, M/amp. 20.5/4.
- CONSTANCE CHANDLER.—Type, B; fy., 375 (800), 425 (705), 500 (600); hours, X.
- COOT.—Fy., strike out 400 (750), add 468 (640); power, M/amp. 15/5.
- COQUINA.—Power, M/amp. 20/5.
- CORMORANT.—Power, M/amp. 20/5.
- CORNELL.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 20/5.
- CORRALES.—Type, B; fy., strike out 400 (750), 468 (640); power, M/amp. 20/5.
- COVENA.—Power, M/amp. 14/8.

- CRESSIDA.**—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015), 159 (1,885), add 5,525 (54.3), 8,290 (36.19), 8,330 (36.01), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66); power, M/amp. 15/10.
CROFTON HALL.—Owner, Isthmian S. S. Co. (Inc.).
CROWN CITY.—Fy., add 159 (1,885), 355 (845); power, M/amp. 21/9; hours, add N.
CURLEW (WRBV).—Fy., 3,112 (96.40), 5,525 (54.3), 5,615 (53.42); power, M/amp. 6/7.5.
CYPRUS.—Owner, International Exploration Corporation.
DAVID P. THOMPSON.—Power, M/amp. 18/10; accounts, owner.
DEAN EMERY.—Power, M/amp. 27.2/10.
DELPHINE.—Power, M/amp. 10/6.
DEMOPOLIS.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 35/8.
DORCHESTER (KGBG).—Fy., strike out 137 (2,190), 141 (2,130), 410 (730); power, M/amp. 30/13.
DORIS E.—Type, A3; fy., 2,320 (129.31), 2,428 (123.55); power, M/amp. 21.5/2.
DOROTHY ALEXANDER.—Fy., strike out 410 (730), 454 (660); power, M/amp. 22/8 and 4.
DURANGO.—Type, strike out B, add A2; fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), add 468 (640); power, M/amp. 28/10.
EASTERN GLADE.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 26/8.
EASTERN STATES.—Power, M/amp. 16/5.
EAST SIDE.—Power, M/amp. 26.3/18.
ECUADOR.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), add 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), 16,660 (18.007); power, M/amp. 23/10.
EDGAR F. LUCKENBACH.—Fy., strike out 410 (730), 454 (660); power, M/amp. 30/16.
EDWARD L. DOHENY.—Power, M/amp. 28/7.
EDWARD L. SHEA.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), add 153 (1,960), 410 (730), 454 (660); power, M/amp. 28/11.
ELEANOR CHRISTENSON.—Power, M/amp. 23/8.
ELISHA WALKER.—Power, M/amp. 24/10.
ELIZABETH.—Power, M/amp. 15.3/7.
ELIZABETH KELLOGG.—Owner, New York and Philippine S. S. Corporation.
EMIDIO.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), 157 (1,910), add 468 (640); power, M/amp. 23/8.
EMPIRE ARROW.—Power, M/amp. 27/10.
ENSLEY CITY.—Power, M/amp. 20/10.
E. T. BEDFORD.—Fy., add 143 (2,100), 151 (1,985), 157 (1,910), 160 (1,875); power, M/amp. 27/10.
ETHAN ALLEN.—Fy., strike out 125 (2,400), 131 (2,290), 137 (2,190), 141 (2,130), 149 (2,015), add 153 (1,960), 410 (730), 454 (660); power, M/amp. 30/11.
EUGENE V. R. THAYER.—Power, M/amp. 25/8.
EUREKA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 23/9.
EVERETT (WJCQ).—Power, M/amp. 25/6.
EXAMELIA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 24/16; hours, add N.
EXCELLO.—Power, M/amp. 30/12.
EXERMONT.—Fy., strike out 410 (730), 454 (660); power, M/amp. 25/17.
EXILONA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 28/15; hours, add N.
EXMOOR.—Fy., add 410 (730), 454 (660); power, M/amp. 25/14; hours, N.
FALCON.—Power, M/amp. 24/10.
F. C. LATROBE.—Fy., add 375 (800).
FELTORE.—Power, M/amp. 27.2/5.7.
FIRE BOAT No. 31.—Power, M/amp. 11/5.
FIRMORE.—Fy., strike out 750 (400), add 400 (750); power, M/amp. 24.2/8.
FISHER.—Type, strike out B, add A2; fy., add 400 (750); power, M/amp. 15/6.
FLORIDIAN.—Power, M/amp. 30/12.
FOAM.—Power, M/amp. 20/8.
FORT ARMSTRONG.—Power, M/amp. 21/10.
F. P. C. No. 2.—Type, A1, A2; fy., 375 (800), 425 (705), 500 (600), 5,525 (54.3), 5,555 (54); power, M/amp. 27/2; service, PG; hours, X; rates, 8 cents per word.

- FRANK LYNCH.—Power, M/amp. 32/5.
 FREDERIC EWING.—Power, M/amp. 26/11.
 FREDERICK C.—Type, add A1; power, M/amp. 13/2.
 FRED W. WELLER.—Power, M/amp. 28/11.
 FREEMAN.—Fy., add 410 (730), 454 (660); power, M/amp. 16/7.
 FREEPORT SULPHUR No. 5.—Correct call is KUMK.
 GALVESTON.—Fy., add 155 (1,935), 159 (1,885); hours, add N.
 GENE CRAWLEY.—Power, M/amp. 18/7.
 GENERAL ASHBURN.—Fy., strike out 273 (1,100), 8,060 (37.22), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 12.31/11.
 GEORGE G. HENRY.—Power, M/amp. 30/10.
 GEORGE F. RAND.—Power, M/amp. 25/6.5.
 GEORGE WASHINGTON (WECJ).—Fy., strike out 137 (2,190), 141 (2,130), 160 (1,875); power M/amp. 30/10 and 6.
 GEORGE W. BARNES.—Power, M/amp. 25/10.
 GEORGE W. MEAD.—Power, M/amp. 13/5.
 GLEN WHITE.—Power, M/amp. 25/10.
 GLOUCESTER.—Fy., strike out 410 (730), 454 (660); power, M/amp. 28/7.
 G. N. WILSON.—Power, M/amp. 25/6.5.
 GOLDEN CROSS.—Power, M/amp. 14/10.
 GOLDEN SUN.—Fy., strike out 125 (2,400), 137 (2,190), add 159 (1,885); power, M/amp. 20/7.
 GREATER BUFFALO.—Power, M/amp. 25/5; hours, N.
 GREATER DETROIT.—Power, M/amp. 25/5; service, PG; hour's N.
 GREYLOCK.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 454 (660), add 425 (705); power, M/amp. 29/8.
 GUATEMALA.—Fy., add 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), 16,660 (18.007).
 GUAYAQUIL.—Fy., strike out 410 (730), 454 (660).
 GULFBREEZE.—Type, A2; fy., add 400 (750), 468 (640); power, M/amp. 26/6.
 GULFGEM.—Power, M/amp. 28/6.
 GULFWAX.—Type, strike out B, add A2; fy., strike out 410 (730), 454 (660), add 400 (750), 468 (640); power, M/amp. 30/6.
 HALIGONIAN.—Fy., strike out 4,188 (71.66), 8,670 (34.6), add 5,525 (54.3), 5,555 (54), 8,450 (35.5); power, M/amp. 15.4/7.
 HALO.—Fy., strike out 125 (2,400), 131 (2,290), 135 (2,220), 137 (2,190), 141 (2,130), 149 (2,015), 151 (1,985), 425 (705), 468 (640), add 157 (1,910), 159 (1,885); power, M/amp. 28/10.
 HAMPDEN.—Type, B; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 25/4.
 HANOVER.—Power, M/amp. 22/12.
 HAPPY DAYS.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 25/11.
 HARVARD (WTBY).—Fy., add 468 (640); power, M/amp. 20/8.
 HAWAIIAN.—Fy., strike out 410 (730), 454 (660); power, M/amp. 22/13.
 HAZEL ROBB.—Type, add A1; power, M/amp. 13/2.
 H. C. CADMUS.—Power, M/amp. 10/6.
 HENRY P. WERNER.—Power, M/amp. 25/6.
 HERBERT F. BLACK.—Type, A2; fy., add 143 (2,100), 160 (1,875), 375 (800); power, M/amp. 65/6.
 HEREDIA.—Fy., strike out 137 (2,190), 141 (2,130), 3, 428 (87.51), 5,525 (54.3), 8,490 (35.34), 11,230 (26.71); power, M/amp. 30/11.
 HERON.—Type, A2; fy., add 468 (640); power, M/amp. 15/5.
 H. F. ALEXANDER.—Fy., strike out 125 (2,400); power, M/amp. 25/9 and 5.
 H. H. ROGERS.—Fy., strike out 410 (730), 454 (660); power, M/amp. 27/8.
 HI-ESMARO.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); service, PG; hours, X; rates, 8 cents per word; accounts, HILDA.—Power, M/amp. 12/12.
 HILTON.—Fy., strike out 410 (730), 454 (660); power, M/amp. 24.2/3.5.
 H. M. FLAGLER.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 25/12.
 HOLY CROSS.—Power, M/amp. 20/8.
 HOMER.—Fy., strike out 400 (750), 410 (730), 454 (660); power M/amp. 19/2.
 HOXBAR.—Type, strike out B, add A2; fy., add 468 (640); power, M/amp. 24/12.
 HURON (WADQ).—Fy., strike out 410 (730), 454 (660); power, M/amp. 26/12.
 HURON (WBCC).—Power, M/amp. 20.5/4.
 HYADES.—Power, M/amp. 25/5; hours, N.

- ILLINOIS (KFMC).—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/11.
- ILLINOIS (KUQM).—Power, M/amp. 24/20.
- IMLAY.—Type, strike out B, add A2; fy., add 400 (750), 468 (640); power, M/amp. 26/13.
- IOWA (KFLT).—Type, add A2; fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/6 and 15.
- IRENE L.—Type, strike out A3, add A1; fy., strike out 2,265 (132.4), 5,600 (53.57), add 2,320 (129.3), 5,525 (54.3), 5,615 (53.42); power, M/amp. 15/2.
- IROQUOIS (KGF D).—Fy., strike out 137 (2,190), 141 (2,130), 151 (1,985), add 157 (1,910), 159 (1,885); power, M/amp. 29/6.
- JALAPA.—Fy., strike out 125 (2,400), 131 (2,290), 137 (2,190), 141 (2,130), 149 (2,015), add 153 (1,960); power, M/amp. 35/10.
- JAMES ELLWOOD JONES.—Fy., strike out 410 (730), 454 (660), add 400 (750), 468 (640); power, M/amp. 27/8.
- J. C. DONNELL.—Power, M/amp. 27/8.
- JEFF DAVIS.—Type, add B; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 160 (1,875), 375 (800), 425 (705), 500 (600); hours, add N.
- JEZEBEL.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130); power, M/amp. 22/12.
- J. M. DANZIGER.—Power, M/amp. 28/11.
- JOHN A. TOPPING.—Power, M/amp. 16/5.
- JOHN D. ARCHBOLD.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), add 153 (1,960); power, M/amp. 28/12.
- JOHN PURROY MITCHELL.—Type, A3; fy., 1,596 (187.97); power, M/amp. 10/2.
- JOHN S. MANUEL.—Power, M/amp. 16/11; accounts, owner.
- JOHN W. BOARDMAN.—Type, add A1; power, M/amp. 20.5/4.
- JOLEE.—Power, M/amp. 20/14.
- JONANCY.—Fy., add 410 (730), 454 (660); power, M/amp. 20/5.
- JOSEPH H. FRANTZ.—Power, M/amp. 16/5.
- JULIA LUCKENBACH.—Power, M/amp. 30/16.
- JUPITER.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 5/6.
- KATHERINE.—Type, strike out A2, A3; fy., strike out 400 (750), 410 (730), 454 (660), 468 (640), add 2,428 (123.55); power, M/amp. 5/3.
- KENTUCKIAN.—Fy., strike out 410 (730), 454 (660).
- KINGFISHER.—Fy., strike out 400 (750), add 468 (640); power, M/amp. 15/5.
- LABETTE.—Power, M/amp. 19/12.
- LAKE FAIRPORT.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26/10.
- LAKE FOLCROFT.—Type, A3; fy., 2,524 (118.85).
- LAKE FREELAND.—Correct call is WDUU; type, A3; fy., 2,524 (118.85).
- LAKE FRUGLITY.—Type, A3; fy., 2,524 (118.85).
- LAKE ORMOC.—Fy., strike out 8,330 (36.01), 11,110 (27), 16,660 (18.007); power, M/amp. 13/10.
- LA MERCED.—Fy., strike out 137 (2,190), add 160 (1,875).
- LA PLACENTIA.—Power, M/amp. 22/10.
- LARRY DOHENY.—Fy., strike out 468 (640), add 454 (660); power, M/amp. 28/8.
- LEBEC.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 160 (1,875), add 425 (705); power, M/amp. 21/7.
- LEONINE.—Power, M/amp. 15/2.
- LEVIATHAN.—Fy., strike out 3,428 (87.51), 4,392 (68.30), 6,635 (45.21), 8,750 (33.9), add 3,127.5 (95.9), 4,177.5 (71.8).
- LIEBRE.—Power, M/amp. 28/10.
- LIEUT. COL. ROBERT G. GILDART.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 35/3.
- LIGHTBURNE.—Power, M/amp. 40/12.
- LISTO.—Type, A3; fy., 2,524 (118.85), 2,560 (117.18), 2,584 (116.09); power, M/amp. 7/1.5; service, P; hours, X.
- LIVINGSTON ROE.—Power, M/amp. 29/7.
- L. J. DRAKE.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015); power, M/amp. 22/9.
- LOON.—Fy., strike out 400 (750), add 468 (640); power, M/amp. 15/4.
- LOSMAR.—Type, strike out A1; power, M/amp. 23/12.
- LOUIS R. DAVIDSON.—Power, M/amp. 25/6.
- MALIBU.—Fy., strike out 454 (660); power, M/amp. 8/5.
- MALTRAN.—Type, strike out B, add A2; fy., add 400 (750), 468 (640); power, M/amp. 28/9.

- MALVERN.—Power, M/amp. 12/2.5.
- MANINI.—Power, M/amp. 18/10.
- MARACAIBO.—Fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); hours, X; accounts, owner.
- MARGARET LYKES.—Type, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 410 (730), 425 (705), 454 (660), 468 (640), 500 (600); hours, N; accounts, R. M. C. A.
- MARIAN OTIS CHANDLER.—Fy., strike out 410 (730), 454 (660); power, M/amp. 22/8.
- MARQUETTE & BESSEMER No. 2.—Fy., strike out 394 (760); power, M/amp. 13/5.
- MARYLAND.—Power, M/amp. 16/15.
- MARSODAK.—Power, M/amp. 21/10.
- MASSMAR.—Power, M/amp. 23/12.
- MATHEW LUCKENBACH.—Type, B; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 21/10; accounts, owner.
- MATNICOCK.—Type, add A2; fy., add 143 (2,100), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 468 (640); power, M/amp. 28/8.
- MELROSE.—Power, M/amp. 25/5.
- MELVILLE DOLLAR.—Type, B; fy., 375 (800), 410 (730), 425 (705), 454 (660), 500 (600).
- MEMPHIS.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/11.
- MEXICAN.—Fy., add 454 (660); power, M/amp. 26/15.
- MEXICO.—Name changed to Aleutian.
- MIDDLESEX.—Type, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 35/8.
- MINNEKAHDA.—Fy., strike out 137 (2,190), 139 (2,155), 141 (2,130), 149 (2,015), 151 (1,985), add 157 (1,910), 159 (1,885), 468 (640); power, M/amp. 28/20.
- MINNESOTA.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/15.
- MISSOURIAN.—Power, M/amp. 23/11.
- MITCHELL.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26/14.
- MOBILE.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 35/8.
- MOBILE CITY.—Owner, Isthmian S. S. Co. (Inc.).
- MOHAWK (KFYU).—Type, A, arc and A2; fy., strike out 137 (2,190), 141 (2,130), 151 (1,985), add 157 (1,910), 159 (1,885), 400 (750), 468 (640); power, M/amp. 26/10 and 6.
- MOHAWK (WRCE).—Power, M/amp. 25/6.
- MOJAVE.—Fy., strike out 160 (1,875); power, M/amp. 25/7.
- MONTANAN.—Power, M/amp. 20/4.
- MONTAUK.—Type, add A1, A2; fy., strike out 410 (730), 454 (660), add 400 (750), 468 (640); power, M/amp. 22/12.
- MONTGOMERY.—Type, B; fy., 274 (1,095), 375 (800), 425 (705), 500 (600); power, M/amp. 12.31/8.
- MUNDELTA.—Type, strike out B, add A2; fy., add 468 (640); power, M/amp., 26/5.
- MUNDOLPHIN.—Fy., strike out 410 (730), 454 (660); power, M/amp. 29/10.
- MUNINDIES.—Fy., strike out 410 (730), 454 (660); power, M/amp. 20/13.
- MUNLISTO.—Type, strike out B, add A2; fy., add 468 (640).
- MUNMYSTIC.—Fy., strike out 410 (730), add 500 (600); power, M/amp. 22/11.
- MUNORLEANS.—Type, strike out B, add A2; power, M/amp. 24/6.
- MUNPLACE.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26/6; hours, strike out N, add X.
- MUNRIO.—Type, strike out B, add A2; fy., add 468 (640).
- MUNTROPIC.—Type, B; fy., 375 (800), 425 (705), 500 (600).
- MUSKOGEE.—Type, strike out B, add A2; power, M/amp. 28/5.
- NAKEEN.—Type, add A1; power, M/amp. 10/2.
- NAKHODA.—Type, A1, A2; fy., 143 (2,100), 151 (1,985), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 12/14; hours, X; rates, 8 cents per word.
- NARCISSE.—Fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 425 (705), 500 (600).
- NATCHEZ.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/11.

- NATIRAR.—Fy., strike out 155 (1,935), add 400 (750), 468 (640), 500 (600); power, M/amp. 19.8/9.
- NEBRASKAN.—Power, M/amp. 22/10.
- NEW HAMPSHIRE.—Power, M/amp. 12/4.
- NISHMAHA.—Fy., strike out 410 (730), 454 (660); power, M/amp. 18/10.
- NORSEMAN.—Type, A2; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 30/2.
- NORTHERN LIGHT.—Fy., add 410 (730), 454 (660); power, M/amp. 35/6.
- NORTHLAND.—Type, A1, A2; 375 (800), 400 (750), 425 (705), 468 (640), 500 (600); power, M/amp. 22/8; service, PG; hours, N; rates, 8 cents per word; accounts, R. M. C. A.
- NOURMAHAL.—Fy., strike out 137 (2,190), 141 (2,130); power, M/amp. 15/10.
- OAKWOOD.—Power, M/amp. 23/16.
- OCCIDENTAL.—Power, M/amp. 26/5.
- ONTARIO (WSBP).—Power, M/amp. 10/9.
- OSSINING.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26.3/12.
- OTHO.—Power, M/amp. 28/17.
- PAT DOHENY.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 454 (660); add 159 (1,885), 410 (730), 468 (640); power, M/amp. 28/14.
- PATRICK J. O'HARA.—Type, A1, A2; fy., 375 (800), 400 (750), 425 (705), 468 (640), 500 (600).
- PEACOCK.—Fy., add 454 (660); power, M/amp. 18/9.
- PENGUIN (KOMJ).—Fy., add 454 (660); power, M/amp. 15/8.
- PENGUIN (WHDS).—Fy., strike out 2,740 (109.5), add 2,596 (115.96); power, M/amp. 5.8/1.5.
- PERE MARQUETTE 15.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 17.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 18.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 19.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 20.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 21.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PERE MARQUETTE 22.—Fy., strike out 394 (760); power, M/amp. 25/4.5.
- PETREL (KFDG).—Power, M/amp. 15/5.
- PETREL (WRBS).—Type, add A1; power, M/amp. 13/2.
- PHOENIX.—Power, M/amp. 29/14.
- PIPESTONE COUNTY.—Fy., strike out 410 (730), 454 (660).
- PLOVER.—Power, M/amp. 15/4.
- PLOW CITY.—Fy., add 454 (660); power, M/amp. 21/10.
- POINT FERMIN.—Power, M/amp. 23/12.
- POINT GORDA.—Fy., strike out 410 (730); power, M/amp. 23/10.
- POINT MONTARA.—Fy., add 454 (660); power, M/amp. 23/14.
- POINT SAN PEDRO.—Fy., add 454 (660); power, M/amp. 23/14.
- POINT SUR.—Fy., add 454 (660); power, M/amp. 23/14.
- POLARINE.—Power, M/amp. 30/11.
- PONCE.—Fy., strike out 410 (730), 454 (660); power, M/amp. 28/14; hours, strike out X.
- PORTMAR.—Power, M/amp. 26/12.
- POTTER.—Type, A, arc and B; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 425 (705), 500 (600); service, PG; hours, N (first class), X (third class).
- PRESIDENT ADAMS.—Type, add A1, A2; fy., strike out 400 (750), 468 (640), 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, 7 and 15.
- PRESIDENT CLEVELAND.—Type, add A1, A2; fy., add 153 (1,960), 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. 17/4, 18 and 9.
- PRESIDENT FILLMORE.—Type, add A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 410 (730), 425 (705), 454 (660); 500 (600), 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. 12/3 and 11.
- PRESIDENT HARDING.—Fy., strike out 155 (1,935), add 159 (1,885); power, M/amp. 28/14.

- PRESIDENT HARRISON.**—Type, add A1, A2; fy., add 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 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 and 16.
- PRESIDENT JEFFERSON.**—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).
- PRESIDENT JOHNSON.**—Type, strike out A2; fy., strike out 410 (730), 454 (660), 5,525 (54.3), 5,555 (54), 8,450 (35.5), 11,050 (27.15), 11,110 (27), 16,575 (19), 16,660 (18.007); power, M/amp. 11.1/17; owner, Dollar S. S. Line.
- PRESIDENT LINCOLN.**—Fy., strike out 137 (2,190), add 153 (1,960), 155 (1,935), 159 (1,885), 160 (1,875), 410 (730), 454 (660); power, M/amp. 17/11.
- PRESIDENT PIERCE.**—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. 17/3.5, 11 and 7.
- PRESIDENT POLK.**—Type, add A1, A2; fy., 143 (2,100), 151 (1,985), 153 (1,960), 155 (1,935), 157 (1,910), 159 (1,885), 160 (1,875), 375 (800), 410 (730), 425 (705), 454 (660), 500 (600), 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, 9 and 10.
- PRESIDENT TAFT.**—Fy., strike out 5,615 (53.42), 6,605 (45.42), 6,620 (45.32), 8,290 (36.19), 11,110 (27), 13,240 (22.66), 16,860 (17.794), 22,220 (13.501), 22,460 (13.357), add 454 (660), 6,590 (45.52).
- PRESIDENT VAN BUREN.**—Fy., add 410 (730), 454 (660); power, M/amp. 13/14.
- PRESIDENT WILSON.**—Fy., strike out 125 (2,400), 131 (2,290), 137 (2,190), 141 (2,130), add 155 (1,935), 157 (1,910), 159 (1,885), 410 (730), 454 (660); power, M/amp. 17/15.
- PRISCILLA.**—Power, M/amp. 12/5.
- QUAKER CITY.**—Power, M/amp. 28/16.
- QUEEN OF SCOTS.**—Accounts, Marconi I. M. C. CO.
- QUICK SILVER II.**—Type, A2; fy., 375 (800), 425 (705), 500 (600); power, M/amp. 5/2.5; service, PG, hours, X; rates, 8 cents per word.
- RAVEN.**—Type, A1, A3; fy., 375 (800), 425 (705), 2,320 (129.3), 2,560 (117.2); power, M/amp. 17/3; rates, 6 cents per word.
- REDWOOD.**—Power, M/amp. 25/8.
- RELAY.**—Fy., strike out 410 (730); power, M/amp. 22/7; service, P.
- RELIEF.**—Fy., strike out 137 (2,190), 141 (2,130); power, M/amp. 12/8.
- RENE.**—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. 12/13; service, PG; hours, X; rates, 8 cents per word; accounts, R. M. C. A.
- REPUBLIC (KUBJ).**—Power, M/amp. 28/8.
- REPUBLIC LIFEBOAT No. 2.**—Power, M/amp. 4/2.
- RESOLUTE.**—Power, M/amp. 16/6.
- RIPPLE (KFLF).**—Power, M/amp. 15/5.
- ROMULUS.**—Power, M/amp. 26/10.
- RUDOLPH N.**—Type, add A1; power, M/amp. 13/2.
- RUTH.**—Fy., strike out 410 (730), 454 (660); power, M/amp. 27.2/3; owner, Meddo S. S. Corporation.
- RUTH KELLOGG.**—Power, M/amp. 26/16; owner, New York and Philippine S. S. Corporation.
- SACCO.**—Type, add A1; power, M/amp. 13/2.
- SALLY S.**—Power, M/amp. 12/2.25.
- SALMON KING.**—Type, add A3; fy., add 2,320 (129.3); power, M/amp. 20/3; accounts, owner.
- SAMUEL MITCHELL.**—Type, add A 1; power, M/amp. 20.5/4.
- SAN JOSE.**—Fy., add 410 (730).
- SANTA CLARA.**—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. 34/12; hours, N.
- SANTA EULALIA.**—Power, M/amp. 25/6.
- SANTA ISABEL.**—Power, M/amp. 27/6.
- SATARTIA.**—Power, M/amp. 25/14.
- SAUCON.**—Power, M/amp. 12/12.
- SAWOLKA.**—Fy., strike out 125 (2,400), 131 (2,290), 137 (2,190), 141 (2,130), 149 (2,015), add 153 (1,960); power, M/amp. 28/6.

- SEAGULL.—Type, strike out B, add A2; fy., add 400 (750), 468 (640); power, M/amp. 15/7.
- SEA HAWK.—Fy., add 410 (730), 454 (660); power, M/amp. 12/7.
- SHADOW-K.—Fy., strike out 4,188 (71.63), 8,670 (34.60), add 5,525 (54.3), 5,555 (54), 8,450 (35.5); power, M/amp. 12/5.
- SHENANGO (WGDP).—Power, M/amp. 10/8.
- SHENANGO (WJDB).—Fy., strike out 394 (760); power, M/amp. 16/5.
- SISTER.—Type A3; fy., 2,524 (118.85), 2,560 (117.18), 2,584 (116.099); power, M/amp. 7/1.5; service, P; hours, X.
- S. M. SPALDING.—Fy., strike out 400 (750), add 410 (730), 454 (660); power, M/amp. 26/6.
- SOCONY 82.—Power, M/amp. 24/5.
- SPRAY III.—Type, strike out A2; fy., strike out 2,740 (109.5), add 2,596 (115.56); power, M/amp. 4.8/5.
- STANDARD.—Power, M/amp. 30/10.
- STAR OF ALASKA.—Power, M/amp. 33/4.
- S. T. CRAPO.—Fy., strike out 155 (1,935), add 157 (1,910); power, M/amp. 20.5/9.
- STEEL AGE.—Power, M/amp. 26/14.
- STEEL EXPORTER.—Owner, Isthmian S. S. Co. (Inc.).
- STEEL INVENTOR.—Fy., strike out 410 (730), 454 (660); power, M/amp. 30/15.
- STEEL NAVIGATOR.—Type, strike out A2; fy., strike out 5,525 (54.3), 5,555 (54), 8,290 (36.19), 8,450 (35.5), 11,050 (27.5), 11,110 (27), 13,240 (22.66), 13,270 (22.61); power, M/amp. 25/15.
- STELORE.—Power, M/amp. 27/12.
- STEELTON.—Power, M/amp. 16/14.
- STEEL TRAVELER.—Fy., strike out 410 (730), 454 (660); power, M/amp. 30/16.
- STEEL WORKER.—Fy., strike out 410 (730), 454 (660); power, M/amp. 29/14.
- STELLA LYKES.—Power, M/amp. 29/8.
- STEPHEN R. JONES.—Type, strike out B, add A1, A2; fy., add 400 (750), 468 (640).
- SUFFOLK.—Type, Bfy., 375 (800), 425 (705), 500 (600); power, M/amp. 25/15.
- SULTANA.—Power, M/amp. 7/5.
- SUMAR.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), add 153 (1,960), 159 (1,885), 410 (730), 454 (660); power, M/amp. 12/10.
- SUNOIL.—Power, M/amp. 25/10.
- SUSAN A. MORAN.—Power, M/amp. 10/8.
- SUSAN V. LUCKENBACH.—Fy., 375 (800), 425 (705), 500 (600); power, M/amp. 25/15; accounts, owner.
- SWELL.—Power, M/amp. 20/8.
- SWIFTLIGHT.—Type, strike out B, add A, arc and A2; fy., strike out 410 (730), 454 (660), add 143 (2,100), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 468 (640); power, M/amp. 27/12.
- SWIFT SCOUT.—Fy., strike out 400 (750), add 143 (2,100), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 468 (640); power, M/amp. 25/10 and 2.5.
- SWIFTSURE.—Type, add A, arc; fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), 151 (1,985), add 157 (1,910), 160 (1,875), 400 (750); power, M/amp. 28/5.
- TAMPA.—Fy., strike out 155 (1,935); power, M/amp. 30/12 and 14; hours, add N.
- TEAL.—Type, strike out B, add A2; fy., add 468 (640); power, M/amp. 15/6.
- TEJON.—Power, M/amp. 27/12.
- THRASHER.—Type, A1; fy., 2,320 (129.3), 5,525 (54.3), 5,555 (54); power, M/amp. 15/2; service, strike out PG, add P.
- TIDE.—Power, M/amp. 20/10.
- TRIUMPH.—Fy., strike out 400 (750), 410 (730), 454 (660), 468 (640); power, M/amp. 28.7/8.
- TUSCALOOSA.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 35/8.
- TUSITALA.—Power, M/amp. 26/14.
- TYEE (KFXP).—Power, M/amp. 30/4; service, PG; rates, 8 cents per word.
- UNGAVA.—Name changed to Ivaneo; owner, Leo A. Bourke.
- UTOWANA.—Fy., add 410 (730), 454 (660); power, M/amp. 20/7.
- VACUUM.—Power, M/amp. 26/10.
- VEGA.—Accounts, Marconi I. M. C. Co.
- VENEZUELA.—Fy., strike out 125 (2,400), 137 (2,190), 141 (2,130), add 8,290 (36.19), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66), 16,580 (18.094); power, M/amp. 23/10.
- VERMAR.—Power, M/amp. 26/11.

- VESTA.**—Power, M/amp. 29/10.
VICKSBURG.—Fy., strike out 273 (1,100), add 274 (1,095), 375 (800), 500 (600); power, M/amp. 13.85/11.
VINCENT.—Fy., strike out 410 (730), 454 (660); power, M/amp. 26/16.
VIRGINIA (WSBW).—Fy., strike out 137 (2,190), 141 (2,130), add 5,525 (54.3), 8,290 (36.19), 8,330 (36.01), 8,450 (35.5), 11,050 (27.15), 11,230 (26.71), 13,240 (22.66); power, M/amp. 32/12.
VIRGINIA E.—Power, M/amp. 14/1.5.
VIVO.—Type, A3; fy., 2,524 (118.85), 2,560 (117.18), 2,584 (116.099); power, M/amp. 7/1.5; service, P; hours, X.
WABASH.—Fy., strike out 454 (660), add 394 (760), 425 (705); power, M/amp. 20.43/4.
WAPAMA.—Fy., strike out 410 (730), 454 (660); hours, N.
WARRIOR (KFSX).—Fy., strike out 137 (2,190), 141 (2,130), add 157 (1,910), 159 (1,885), 410 (730), 454 (660); power, M/amp. 15/10; hours, strike out N.
WATERTOWN.—Power, M/amp. 20/10.
WATSONVILLE.—Type, A1, A2; fy., 375 (800), 400 (750), 410 (730), 425 (705), 454 (660), 468 (640), 500 (600); power, M/amp. 22/7.
WAUKEGAN.—Fy., strike out 410 (730), 454 (660); power, M/amp. 27.2/12.
W. E. HUTTON.—Power, M/amp. 29/16.
WEST CAMPGAW.—Power, M/amp. 53.3/14.
WEST CAWTHON.—Power, M/amp. 26.3/20.
WESTERN SUN.—Owner, Motor Tankship Corporation.
WESTERN WAVE.—Type, strike out B, add A1, A2; fy., strike out 454 (660), add 143 (2,100), 151 (1,985), 157 (1,910), 159 (1,885), 160 (1,875), 400 (750), 468 (640); power, M/amp. 28/8; hours, strike out X, add N.
WESTERN WORLD.—Fy., strike out 137 (2,190), 141 (2,130), add 157 (1,910), 159 (1,885); power, M/amp. 30/10.
WEST GAMBO.—Power, M/amp. 23/15.
WEST HOBOMAC.—Power, M/amp. 27/12.
WEST HONAKER.—Fy., add 355 (845).
WEST ISLETA.—Power, M/amp. 28/12.
WEST KEBAR.—Fy. strike out 125 (2,400), 137 (2,190), 141 (2,130), 145 (2,070), 149 (2,015); power, M/amp. 25/5.
WEST KEDRON.—Power, M/amp. 26/10.
WEST MAHOMET.—Power, M/amp. 20/15.
WEST MAHWAH.—Fy., add 454 (660); power, M/amp. 23/16.
WEST NOSSKA.—Power, M/amp. 27/16; hours, strike out N.
WEST WAUNA.—Power, M/amp. 21/15.
W. F. BURDELL.—Power, M/amp. 27/15.
WILLET.—Power, M/amp. 15/5.
WILLIAM ISOM.—Owner, Edwin B. DeColia.
WILLIAM PENN.—Fy., add 143 (2,100); power, M/amp. 28/10.
WILLKENO.—Fy., strike out 410 (730), 454 (660).
WILLZIPO.—Fy., strike out 410 (730), 454 (660).
WILCOX.—Type, add A, arc; fy., 143 (2,100), 151 (1,985), 153 (1,960), 157 (1,910), 159 (1,885), 160 (1,875), 355 (845); power, M/amp. 30/8 and 13.
W. M. BURTON.—Power, M/amp. 29/9.
W. M. IRISH.—Power, M/amp. 19.8/7.2.
WYANDOTTE.—Power, M/amp. 20.5/4.
WYOMING.—Power, M/amp. 26/8.
WYTHEVILLE.—Fy., strike out 410 (730), 454 (660); power, M/amp. 25/14.
YES BAY.—Fy., 2,320 (129.31); power, M/amp. 23.5/2.
YORK.—Type, B; fy., 375 (800), 425 (705), 500 (600); hours, X.
ZAREMBO.—Power, M/amp. 24/10; accounts, R. M. C. A.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY, BY CALL SIGNALS

KDIQ, read Doris Kellogg, notice in Bulletin for April gave call as KDIO; **KGBB**, read Ivaneo; **KGTT**, read Los Angeles (Alhambra Airport), Calif.; **KKB**, read Sherwood, Oreg., Radio; **KMF**, read Egegik, Alaska, Radio, notice in Bulletin No. 156 incorrectly gave call as KNF; **KOZ**, read Texas and Louisiana (portable); **KPF**, read Texas and Louisiana (portable); **KPL**, read Texas and Louisiana (portable); **KPT**, read Texas and Louisiana (portable); **KPU**, read Texas and Louisiana (portable); **KRR**, read Texas and Louisiana (portable); **KRS**, read Texas and Louisiana (portable); **KRT**, read Texas and Louisiana (portable); **KRV**, read Texas and Louisiana (portable); **KRW**, read Texas and Louisiana

Louisiana (portable); KRZ, read Texas and Louisiana (portable); KSA, read Edmonds, Wash., Radio; WCS, read Texas and Louisiana (portable); WECV, read Aleutian; WIA, read Rocky Point, N. Y. (addition); strike out all particulars following the call signals KYF, WDJ, WFU, WGI.

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, 1929, and to the International List of Aircraft Stations, published by the Berne bureau]

C-191E.—Fy., strike out 3,142 (95.48), add 3,172 (94.57).

FLEETSTER No. 2.—Type, A2; fy., 375 (800), 500 (600), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).

NC-74K.—Name changed to Three Johns; call changed to KHELO; type, A1, A3; fy., 333 (900), 375 (800), 414 (725), 500 (600).

NC-842M.—Type, A3; fy., 3,106 (96.58), 3,172 (94.57), 5,660 (53).

NC-945M.—Type, A1; fy., 333 (900), 414 (725), 500 (600), 2,662 (112.70), 3,070 (97.71), 5,690 (52.72), 12,210 (24.57).

NC-9157.—Owner, Curtiss Wright Flying Service.

NEW YORK.—Type, A2; fy., 333 (900), 375 (800), 500 (600), 3,106 (96.58).

PORT OF SPAIN.—Type, A2; fy., 333 (900), 375 (800), 500 (600), 3,106 (96.58).

SANTOS.—Type, A2; fy., 375 (800), 500 (600), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).

URUGUAY.—Type, A2; fy., 375 (800), 500 (600), 2,662 (112.69), 3,070 (97.71), 5,690 (52.72).

COMMERCIAL AIRCRAFT STATIONS, ALPHABETICALLY, BY CALL SIGNALS

KHEL, call changed to KHELO, name changed to Three Johns.

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, 1929, and the International List of Broadcasting Stations published by the Berne bureau]

KFJY (Fort Dodge, Iowa).—Loc., changed to Riverdale, Iowa.

KFKX (Addison, Ill., near).—Loc., changed to Bloomingdale, Ill., 88° 04' 00" W., 41° 52' 31" N.

KFYR (Bismarck, N. Dak.).—Owner, Meyer Broadcasting Co.

KGCI (San Antonio, Tex.).—Call changed to KMAC.

KGDA (Dell Rapids, S. Dak.).—Loc., changed to Mitchell, S. Dak., 98° 01' 33" W.; 43° 44' 42" N.; power, 100.

KGDE (Fergus Falls, Minn.).—Power, 100 night, 250 day.

KLPM (Minot, N. Dak.).—Owner, John B. Cooley.

KSCJ (Sioux City, Iowa).—Power, 1,000 night, 2,500 day.

KTBS (Shreveport, La.).—Owner, Tri State Broadcasting System (Inc.).

KTLC (Houston, Tex.).—Fy., 1,310 (229).

KYW (Addison, Ill., near).—Loc., changed to Bloomingdale, Ill., 88° 04' 00" W., 41° 52' 31" N.

WBAP (Fort Worth, Tex.).—Power, 10,000.

WBIS (Quincy, Mass.).—Owner, Shepard Broadcasting Service (Inc.).

WCOC (Meridian, Miss.).—Owner, Mississippi Broadcasting Co. (Inc.).

WCSH (Portland, Me.).—Loc., changed to Scarborough, Me., 79° 19' 29" W., 43° 36' 01" N.; power, 1,000.

WEAN (Providence, R. I.).—Owner, Shepard Broadcasting Service (Inc.).

WEBW (Beloit, Wis.).—Call changed to WISJ.

WELK (Philadelphia, Pa.).—Power, 100 night, 250 day.

WEPS (Gloucester, Mass.).—Loc., changed to Auburn, Mass.; consolidated with WORC—both calls to be used.

WFAA (Grapevine, Tex.).—Power, 25,000 normally, 50,000 experimentally.

WFBE (Cincinnati, Ohio).—Power, 100 night, 250 day.

WGAL (Lancaster, Pa.).—Power, 100.

WGH (Newport News, Va.).—Owner, Hampton Roads Broadcasting Corporation.

WGHP (Detroit, Mich.).—Owner, Kunsky-Trendle Broadcasting Corporation.

WGMS (Minneapolis, Minn.).—Loc., changed to St. Paul, Minn., power, 1,000.

WHB (Kansas City, Mo.).—Loc., changed to North Kansas City, Mo., 94° 33' 49" W., 39° 07' 54" N.

WICC (Easton, Conn.).—Fy., 1,190 (252.1); power, 500, daytime only.

- WJBY (Gadsden, Ala.).—Loc., changed to Anniston Highway, Gadsden, Ala., 85° 44' 06'' W., 33° 59' 00'' N.
 WLB (Minneapolis, Minn.).—Loc., changed to St. Paul, Minn.; power, 1,000.
 WLEY (Lexington, Mass.).—Power, 100 night, 250 day.
 WNAC (Quincy, Mass.).—Owner, Shepard Broadcasting Service (Inc.).
 WOBU (Charleston, W. Va.).—Owner, WOBU (Inc.).
 WPG (Atlantic City, N. J.).—Owner, WPG Broadcasting Corporation.
 WSDA (Brooklyn, N. Y.).—Owner, Paramount Broadcasting Corporation.
 WSGH (Brooklyn, N. Y.).—Owner, Paramount Broadcasting Corporation.
 Strike out all particulars of the following-named stations: KFKZ (Kirksville, Mo.); KGHG (McGehee, Ark.); KUOM (Missoula, Mont.); KVEP (Portland, Oreg.); KYWA (Chicago, Ill.); WMBL (Lakeland, Fla.).

GOVERNMENT LAND STATIONS, ALPHABETICALLY, BY NAMES OF STATIONS

[Alteration and correction to be made to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929, and to the International List of Fixed and Land Stations, published by the Berne bureau]

- ANACORTES, WASH. (section base 12).—Call changed to NOK.
 BARATARIA, LA. (Grand Isle).—Call changed to NOC.
 BILOXI, MISS. (section base 15).—Call changed to NOI.
 BUFFALO, N. Y.—Call changed to NOB.
 CAPE HENRY, Va. (section base 8).—Call changed to NMN; loc., changed to Cape Henry, Va.
 CAPE MAY, N. J. (section base 9).—Call changed to NOV.
 CURTIS BAY, MD.—Call changed to NOD.
 FERNANDINA, FLA. (section base 20).—Call changed to NOQ.
 FORT LAUDERDALE, FLA. (section base 6).—Call changed to NMV; loc., changed to Fort Lauderdale, Fla.
 GLOUCESTER, MASS. (section base 7).—Call changed to NOG.
 MOBILE, ALA.—Call changed to NMG.
 NAHANT, MASS.—Call changed to NMF.
 NEW LONDON, CONN. (C. G. Academy).—Call changed to NON.
 NEW LONDON, CONN. (NLO).—Call changed to NOU.
 NEW ORLEANS, LA. (eighth district U. S. N. R.).—Loc., changed to Oklahoma City, Okla. (8th district U. S. N. R.).
 NEW SHOREHAM STATION, BLOCK ISLAND, R. I.—Call changed to NMD; loc., changed to Block Island, R. I.
 POINT BONITA, CALIF.—Call changed to NMC.
 PORT ANGELES, WASH. (section base 13).—Call changed to NOL.
 PORT TOWNSEND, WASH. (section base 10).—Call changed to NMW; loc., changed to Port Townsend, Wash.
 ROCKAWAY BEACH, N. Y.—Call changed to NMY.
 ST. PETERSBURG, FLA. (section base 21).—Call changed to NOF.
 SAN PEDRO, CALIF. (section base 17).—Call changed to NOJ.
 STATEN ISLAND, N. Y. (section base 2).—Call changed to NOA.
 UNALASKA, ALASKA.—Call changed to NOY.
 WASHINGTON, D. C.—Call changed to NMH.
 WOOD'S HOLE, MASS. (section base 18).—Call changed to NOP.
 Strike out all particulars of the following-named stations: OAKLAND, CALIF. (Government Island—NEG); SAN FRANCISCO, CALIF. (NGC); SEATTLE, WASH. (NGT); RADIO TEST CAR No. 1 (portable).
NOTE.—ALL THE ABOVE-CITED CHANGES IN CALL SIGNALS ARE EFFECTIVE MIDNIGHT JUNE 30, 1930.

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, 1929, and to the International List of Ship Stations, published by the Berne bureau]

- J. D. LONG.—*Read Long.*
 PENGUIN.—Type, A1, A2; fy., 315 (952), 375 (800), 425 (705), 500 (600).
 Strike out all particulars of the following-named vessels: CG-113, Eagle 49, O-11, O-13, O-14, O-15, O-16, R-21, R-22, R-23, R-24, R-25, R-26, R-27, Triton, Yantic.

GOVERNMENT, LAND, SHIP RADIOBEACON AND RADIO-COMPASS STATIONS, ALPHABETICALLY BY CALL SIGNALS

NDZ, read Oklahoma City, Okla. (eighth district U. S. N. R.); NEPD, read Long; the following changes in call signals are effective midnight June 30, 1930: NAG, read NMW, NBH, read NOA; NBI, read NMV, NCB, read NOB; NCG, read NMY, NCK, read NMG; NCP, read NMF, NCV, read NOV; NFB, read NOQ; NFG, read NOK; NGA, read NMH; NGB, read NMD; NGD, read NMC; NGF, read NOP; NGH, read NON; NGK, read NOF; NGL, read NOG; NGM, read NOD; NGQ, read NOJ; NHG, read NMN, loc., read Cape Henry, Va.; NIG, read NOL; NLO, read NOU; NSG, read NOI; NVG, read NOC; NXG, read NOY; strike out all particulars following the call signals NALB, NASM, NAXS, NEDC, NEG, NETK, NEVD, NEZN, NGC, NGT, NIBX, NILV, NILX, NILZ, NIMB, NIMC, NIMD, NIMF, NIQD, WWA (Radio Test Car—portable).

MARINE RADIOBEACON STATIONS BY GEOGRAPHICAL LOCATION

Alterations and corrections to be made to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1929, and to the International List of Stations Performing Special Services, published by the Berne bureau]

ST. JOHNS RIVER LIGHT STATION, FLA.—Loc. 81° 18' 00" W., 30° 23' 00" N.
 GREAT LAKES.—Hours, the schedule of daily operating periods of all United States radiobeacons on the Great Lakes has been changed so that each radiobeacon operates during the last 15 minutes of each hour of the day regardless of weather conditions.
 CRISTOBAL MOLE (COLON), CANAL ZONE.—Hours, transmits each hour from 0 to 10 and from 40 to 50 minutes after each hour and at no other time; seventy-fifth meridian time. The characteristic signal, single dashes, is sent continuously during the 10-minute interval.
 CAPE MALA, LIGHT STATION, PANAMA.—Hours, transmits each hour from 15 to 25 and from 45 to 55 minutes past the hour and at no other time; seventy-fifth meridian time. The characteristic signal, 2 dashes, is sent continuously during the 10-minute interval.
 UMATILLA REEF LIGHTSHIP, WASH.—Loc., 124° 50' 00" W., 48° 10' 00" N.

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, 1929]

NEW YORK: Long Island City (W2XR).—Call changed to W2XAR.
 WASHINGTON: Cashmere (W7XAT).—Loc., changed to East Wenatchee, Wash.

Aircraft

NC-417H (W10XAA).—Fy., add 3,076 (97.53), 3,106 (96.58).
 NC-4616 (W2XBX).—Fy., add 3,076 (97.5).

VISUAL BROADCASTING STATIONS, BY NAME OF STATIONS

NEW JERSEY: Jersey City (W2XAP).—Read Jersey City, N. J. (portable).

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
COMMERCIAL		
Beacon.....	KDPO	Beacon Oil Co.
Byron D. Benson.....	KDWN	Tidewater Oil Co.
Galveston.....	KDQE	U. S. Shipping Board.
G. N. Wilson.....	KDVS	American S. S. Co.
Isaac T. Mann.....	WBCJ	Poehontas S. S. Co.
Katrina Luckenbach.....	WLCF	Luckenbach S. S. Co.
President Polk.....	KDOZ	Dollar S. S. Line.
Robert Luckenbach.....	KUKS	Luckenbach S. S. Co.
Santa Clara.....	WMDB	Grace S. S. Co.
Wabash.....	WDCL	Wabash Railway Co.

GENERAL ORDERS OF THE FEDERAL RADIO COMMISSION

Station and operators' licenses required to be posted (General Order No. 90, May 19, 1930).

It is ordered: That every station license shall be posted by the licensee in a conspicuous place in the room in which the transmitter is located, and the license of every station operator shall be posted in a conspicuous place in the room occupied by said station operator while on duty.

General order specifying and limiting the maximum rated power of broadcast transmitters which may be installed hereafter, and specifying methods for determining the operating power of broadcast transmitters of various types. General Order No. 91, May 23, 1930.

It is ordered: SECTION 1. That the maximum rated carrier power of all broadcast transmitters to be installed after this date shall be determined by the authorized power as given in Table I of this section. The maximum carrier power rating shall be determined as provided in section 2 of this general order.

TABLE I

	Maximum carrier power allowed to be installed
Authorized power:	
(a) 5 to 100 watts.....	100 watts.
250 watts day.....	250 watts.
(b) 250 to 1,000 watts.....	1,000 watts.
2,500 to 5,000 watts.....	5,000 watts.

(c) The maximum power to be installed in stations with an authorized power of over 5,000 watts shall be the same as the authorized power. Applicants requesting power from 5 to 50 watts, or from 250 to 500 watts, inclusive, may be allowed to install transmitters of the same maximum carrier power as the authorized power.

Sec. 2. The maximum power of all broadcasting transmitters shall be determined by the installed vacuum tube capacity of the oscillator or radio-frequency power amplifier which supplies power to the antenna.

Transmitters employing high-level modulation shall be rated as the same maximum carrier power as the total installed tube power capacity of the stage which supplies power to the antenna. The maximum carrier power of transmitters employing low-level modulation shall be rated as one-fourth the installed tube power capacity of the stage which supplies power to the antenna. (If this does not give an even number, the nearest even figure will be used.)

The power capacity of all standard tubes commonly used in broadcasting transmitters with a power of 50 watts or above as oscillators, or class 3 or class C amplifiers, is fixed and approved as set out in Table II, hereafter set out in this section. Any tube of a power rating or type number not listed in Table II may be specified on an application to the commission, provided the manufacturer's maximum rating and operating constants as oscillator or class C amplifier are definitely shown in such application, subject to approval by the commission.

TABLE II

Power rating (watts)	De Forest	RCA Radiotron	Western Electric
50.....	503-A-511-545.....	UV203-A-UV-211-UV845.....	211-A to E 242-A 243-A.
75.....	552-560.....	UX852-UX860.....	
250.....	504-A.....	UV204-A.....	212-A to E, 241-A.
350.....		UV849.....	
500.....	500-561.....	UV861.....	
1,000.....		UV851-UV206.....	
2,000.....			243-A.
5,000.....	520-B.....		228-A.
10,000.....		UV207-UV848-UV863-UV854.....	220-B 240-A.
15,000.....			236-A.
35,000.....			232-A.
100,000.....		UV862.....	

Sec. 3. No licensee shall increase the number of vacuum tubes or change to vacuum tubes of higher rating in the oscillator or radio-frequency power amplifier which supplies power to the antenna, or change the system of modulation without the authority of the commission therefor.

Sec. 4. The operating carrier power of broadcasting transmitters shall be determined by the antenna input power either by (a) direct measurement or (b) by indirect measurement by means of the plate input power of the oscillator or last stage radio power amplifier which supplies power to the antenna.

(a) The antenna input power by direct measurement is the square of the antenna current times the antenna resistance at the place where the current is measured and at the operating frequency. The direct measurement of the antenna input power will be accepted as operating power provided the data on the antenna resistance measurements are submitted under oath, giving detailed description of the method used and data taken. The antenna current, shall be measured by an ammeter of accepted accuracy, and subject to such verification as the commission may determine. Any licensee from whom the commission accepts antenna input power by direct measurement as the operating power, shall not make any changes in the antenna system without the authority of the commission.

(b) The antenna input power shall be determined by indirect measurement from the plate input power by multiplying plate voltage by the plate current of the oscillator or last stage radio power amplifier which supplies power to the antenna and by the proper percentage given in Table III or IV in accordance with the power and system of modulation used.

The operating power of transmitters employing high-level modulation shall be determined from the plate input in accordance with Table III.

TABLE III

Maximum carrier power of transmitter:	Power output shall be considered to be this percentage of plate input
5 to 100 watts.....	50
250 to 1,000 watts.....	60
2,500 to 50,000 watts.....	65

The operating power of transmitters employing low-level modulation in terms of plate input and maximum percentage of modulation of the antenna current without over five per cent second and third harmonics shall be determined in accordance with Table IV. No distinction will be recognized between transmitters of different power, or between transmitters of greater maximum carrier power than the operating power.

TABLE IV

Maximum percentage of modulation:	Exact output shall be this per cent of the plate input
100 to 80 per cent.....	33
75 to 50 per cent.....	40

SEC. 5. Operating power rating based on field intensity measurements may be accepted in lieu of antenna input power, provided a sufficient number of measurements are taken to insure accuracy and a theoretical analysis of the antenna is submitted, indicating horizontal and vertical distribution of the radiation. This data must be submitted to the commission for such verification as it may consider necessary. Any licensee from whom the commission accepts operating power based on field intensity measurements shall not make any changes in the antenna system without the authority of the commission therefor.

SEC. 6. All transmitters shall be equipped with indicating instruments of accepted accuracy which will give the values of the antenna current voltage supplied to the plate circuit of the oscillator or power amplifier stage which supplies power to the antenna, and the total direct current flowing in the plate circuit of the oscillator or power amplifier stage which supplies power to the antenna.

CAPE RACE, NEWFOUNDLAND (VCE) TO BE CLOSED, WORK TO BE HANDLED BY RADIO-COMPASS STATION (VAZ)

Cape Race coast station VCE will be closed at midnight July 31, 1930. Commercial traffic and the broadcasting of the daily weather forecasts, etc., at 11.20 a. m. and p. m., E. S. T. hitherto dealt with by this station will be handled by the Cape Race radio compass station VAZ which will maintain watch on 500 k/cs. (600 m.). Compass bearings, however, will be transmitted on 375 k/cs. (800 m.) as at present, after communication has first been established on 500 k/cs. (600 m.).

NEW AUTOMATIC RADIOBEACON ESTABLISHED AT CAPE RAY, NEWFOUNDLAND

The following changes have been made in this station: Call signal to VGR, frequency to 290 k/cs. (1,034 m.), type of emission to i. c. w. Transmission characteristic: Call signal VGR twice, followed by one long dash, the duration of the dash being equal to that of the call signal repeated twice; transmission period consists of the repetition of the above characteristic for 1 minute 15 seconds, followed by a silent interval of 1 minute and 45 seconds, thus:

..... etc.	Silent
1 min. 15 sec.	1 min. 45 sec.

Schedule of operation: In clear weather hourly commencing at 4 minutes and 30 seconds after the hour in the manner above described followed by a further transmission period of 1 minute and 15 seconds, ending at 8 minutes and 45 seconds after the hour; during foggy weather whenever the atmosphere in the vicinity of the station is obscured so as to impede navigation, the transmission period will be repeated every 3 minutes.

Masters of vessels equipped with radio apparatus to receive these signals are requested to listen in when in the vicinity of this station and report the results to the Director of Radio, Department of Marine, Ottawa, Canada.

CHANGES IN TIME SIGNALS TRANSMITTED BY GERMAN STATIONS

The following frequency changes have been made: Norddeich, 183.5 k/cs. (1,635 m.); Königswusterhausen, 183.5 k/cs. (1,635 m.); Nauen, 16.55 k/cs. (18,130 m.). Königswusterhausen relays the Nauen time signals from 1155 to 1200, G. M. T., corresponding to 1255 to 1300, S. T.

CHANGE IN TIME OF TRANSMISSION OF GALE WARNINGS, ETC., BY BRITISH TELEPHONE STATIONS

During the period of summer time the stations of the British Broadcasting Corporation will transmit gale warnings, shipping forecasts and time signals one hour earlier, viz, a transmission at 1030 G. M. T. will be given at 1030 summer time (0930 G. M. T.).

AIRCRAFT RADIO RESEARCH

The Bureau of Standards is conducting experiments on improvements in methods of adjusting the directions of the courses produced by range beacon transmitters to fit airways intersecting at any angles. The aim is to change from the simple 90° or 180° adjustments to other angles without material loss of distance range. This aim is apparently attainable through the use of a short vertical antenna on the central supporting mast of the loop antennas. In order to avoid loss of sharpness of course indication, careful attention has to be given to the coupling arrangement to this antenna, its position on the mast, the phases of currents in it and in the loop antennas, and the presence and location of metal parts or electric light wires on the mast.

Further development of the radio system for blind landing has been in progress for the past two months. The bureau has been working on various combinations of the three elements making up the blind landing system, at College Park, Md. A runway localizing beacon and a high-frequency landing beam transmitter have been placed at one end of the flying field with the localizing beacon course and the landing beam directed along the major runway of the field. A marker beacon is installed at the other end of the field. The angle and transmitted power of the high-frequency landing beam has been adjusted so that an airplane may be guided along the proper gliding path to the field and may land at the proper point on the runway. Experimental work is now being directed to the runway localizing beacon and the marker beacon.

The use of the runway localizing beacon has previously proved difficult owing to the necessity for adjusting the receiving set volume control as the airplane is approaching the beacon transmitter. Experiments on facilitating the use of the runway localizing beacon through the development of a suitable device for automatically controlling the intensity of the receiving set output signals are in progress. A device of this type would permit the pilot to use the localizing beacon all the way to the point of landing instead of having to abandon it when within one-half to one mile of the point of landing (the volume adjustment then becoming too critical) and having to maintain the course (along which the localizing beacon has oriented him) by other means.

The experimental work on the marker beacon is to determine whether an aural or visual type best meets the requirements. Present results indicate that the aural type of marker beacon is preferable for this particular purpose, since this relieves the pilot of watching an additional instrument.

RADIO SIGNAL TRANSMISSIONS OF STANDARD FREQUENCY, JULY TO DECEMBER, 1930

The Bureau of Standards announces a new schedule of radio signals of standard frequencies, for use by the public in calibrating frequency standards and transmitting and receiving apparatus. The signals are transmitted from the bureau's station WWV, Washington, D. C. They can be heard and utilized by stations equipped for continuous-wave reception at distances up to about 1,000 miles from Washington.

The transmissions are by continuous-wave radiotelegraphy. A complete frequency transmission includes a "general call," "standard frequency signal," and "announcements." The general call is given at the beginning of each 12-minute period and continues for about 2 minutes. This includes a statement of the frequency. The standard frequency signal is a series of very long dashes with the call letter (WWV) intervening; this signal continues for about 4 minutes. The announcements follow, and contain a statement of the frequency being transmitted and of the next frequency to be transmitted. There is then a 4-minute interval while the transmitting set is adjusted for the next frequency.

Information on how to receive and utilize the signals is given in Bureau of Standards Letter Circular No. 280, which may be obtained by applying to the Bureau of Standards, Washington, D. C. Even though only a few frequencies are received (or even only a single one), persons can obtain as complete a fre-

frequency meter calibration as desired by the method of generator harmonics, information on which is given in the letter circular. The schedule of standard frequency signals is as follows:

Eastern standard time	July 21	Aug. 20	Sept. 22	Oct. 20	Nov. 20	Dec. 22
10 p. m.-----	1,600	4,000	550	1,600	4,000	550
10.12 p. m.-----	1,800	4,400	600	1,800	4,400	600
10.24 p. m.-----	2,000	4,800	700	2,000	4,800	700
10.36 p. m.-----	2,400	5,200	800	2,400	5,200	800
10.48 p. m.-----	2,800	5,800	1,000	2,800	5,800	1,000
11 p. m.-----	3,200	6,400	1,200	3,200	6,400	1,200
11.12 p. m.-----	3,600	7,000	1,400	3,600	7,000	1,400
11.24 p. m.-----	4,000	7,600	1,500	4,000	7,600	1,500