

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

# RADIO SERVICE BULLETIN

ISSUED MONTHLY

Washington, July 31, 1930—No. 160

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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 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, 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).

This edition is the first supplement to the Annual List of Commercial and Government Radio Stations of the United States, edition June 30, 1930.

## 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	Owner
Brooklyn, N. Y. <sup>1</sup>	FC	WRDU	1,596 (187.97)	P	X	City of New York, fire department.
Hook Bay, P. I., radio (Polifilo). <sup>2</sup>	FC	KZGB	4,655 (64.44)	PG		Pacific Lumber Development Co. (operated as Philippine Insular Government station).
Kenai, Alaska radio	FC FX	KDZ	212 (1,415), 217 (1,380), 219 (1,370).	PG, PR PG	X	Charles A. Moore.
Perez, P. I., radio (Tayabas). <sup>3</sup>	FC	KAP	300 (1,000) to 1,000 (300).	PG		Philippine Insular Government.
Sumagui, P. I. (Mindoro). <sup>4</sup>	FC	KZFV	5,792 (51.79)	P		Sumagui Timber Co.
Washington, D. C. <sup>5</sup>	FX	WPGW	2,410 (124.5)	P	N	Metropolitan police department.

<sup>1</sup> Loc. (approximate) 73° 57' 00" W., 40° 40' 00" N.; type, A3.

<sup>2</sup> Loc. 121° 50' 10" E., 14° 56' 30" N.; type, A1; power, M/amp. 10/08.

<sup>3</sup> Loc. 151° 16' 09" W., 60° 33' 04" N.; type, A1; rates, 10 cents (52 centimes) per word.

<sup>4</sup> Loc. 121° 55' 18" E., 14° 11' 20" N.; type, A1; power, M/amp. 10/7; hours, 8 to 12 a. m., 2 to 5.30 p. m. daily; 9 to 11 a. m., 2 to 3.30 p. m. Sundays and holidays; ship schedule 0-10 minutes of every hour; rates, 6 cents (30 centimes) per word.

<sup>5</sup> Loc. 121° 27' 45" E., 12° 47' 50" N.; type, A1; power, M/amp. 10/08.

<sup>6</sup> Loc. (approximate) 77° 00' 40" W., 38° 56' 29" 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, 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—
Bohol <sup>1</sup>	KZAH	4	PG		Compania Maritima	Owner.
F. P. C. No. 1	WRDV				Fishermen's Packing Corporation.	
Gladys II	WSBD				Francis W. Payne	Do.
Invincible	KGRB	6	PG	X	Spiro Babich	Peril Straits Packing Co.
J. R. Sensibar <sup>2</sup>	KGRG		PG	X	Construction Materials Corporation.	Owner.
Kihna	WRDX				Fuller Feder	Marconi International Marine Communication Co.
Kolambugan <sup>3</sup>	KZCN	4	PG		La Naviera Filipina (Inc.)	Owner.
Ohio	KGRA				Dravo Contracting Co.	
Sandcraft <sup>4</sup>	KLEO		PG	X	Construction Materials Co.	
Tidewater	KGRE	8	PG	X	Tidewater Oil Co.	R. M. C. A.
Tidewater Associated.	KGRF	8	PG	X	do	Do.
Tennessee	KGRD				Dravo Contracting Co.	

<sup>1</sup> Fy., 400 (750), 500 (600); hours, 8 to 12 a. m., 2 to 5 and 7 to 10.30 p. m.

<sup>2</sup> Rates, Great Lakes service, 4 cents per word.

<sup>3</sup> Fy., 441 (680), 500 (600); hours, 7.30 to 12 a. m., 1 to 1.30, 3 to 5, and 7.30 to 10.30 p. m.

<sup>4</sup> Fy., 375 (800), 410 (730), 425 (705); rates, Great Lakes service, 4 cents per word.

*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	Owner
C-7471.....	KHJYB	457 (655), 500 (600), 5,255 (54.3), 8,290 (36.19).	P	X	Boeing Air Transport (Inc.). Emsco Aircraft Corporation.
Emsco 1.....	KHNLO		P	X	
Greater St. Louis 2.....	KHNFU	2,476 (121.16), 3,106 (96.6)	P	X	Elmer F. Koehler, 9032 Windom Avenue, St. Louis, Mo.
NC-311N 3.....	KHIVE	3,106 (96.58), 3,256 (92.13), 4,795 (62.56), 6,425 (46.69).	P	X	National Air Transport (Inc.).
NC-369N 3.....	KHNAZ	do.....	P	X	Do.
NC-411H.....	KHIZA	do.....	P	X	New York Airways (Inc.).
NC-841L.....	KHMGT	do.....	P	X	TAT-Maddux Air Lines (Inc.).
NC-985H 3.....	KHIXC	3,106 (96.58), 3,256 (92.13), 4,795 (62.56), 6,425 (46.69).	P	X	National Air Transport (Inc.).
NC-7570 3.....	KHIYB	3,106 (96.58).....	P	X	Hancock Foundation College of Aeronautics, Hancock Field, Santa Maria, Calif.
NR-971W 4.....	KHNBY	2,368 (126.69).....	P	X	New York & New Jersey Endurance Flight (Inc.).
NR-972W 4.....	KHNCX	do.....	P	X	Do.
NR-973W 4.....	KHNDW	do.....	P	X	Do.
Pacific Era 5.....	KHNEV	8,290 (36.19)	P	X	C. R. Maybin.
Sitka 1.....	KHIUF	375 (800), 500 (600), 3,106 (96.58).	P	X	Alaska Washington Airways (Inc.).

1 Type, A2. 2 Type, A3. 3 Type, A1, A3. 4 Temporary—60 days from July 18, 1930. 5 Type, A1.

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

[Addition 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	Owner
Fort Winfield Scott, Presidio of San Francisco, Calif.1	FX	WZAD	250 (1,200).....	O	X	U. S. Army.
Fort Worden, Wash.1.....	FX	WZAE	220 (1,365).....	O	X	Do.
Kanatak, Alaska.....	FX	WZAC	do.....	O	-----	Do.
Mautou Island, Mich.1.....	FX	WWAJ	3,410 (88).....	O	X	Department of Commerce, Bureau of Lighthouses.
Passage Island, Mich.4.....	FX	WWAL	do.....	O	X	Do.
Rock of Ages, Mich.1.....	FX	WWAM	do.....	O	X	Do.
Savannah, Ga.5.....	FC	WWAN	375 (800), 410 (730), 500 (600).	O	-----	Do.

1 Loc. (approximate) 122° 28' 00" W., 37° 48' 00" N.  
 2 Loc. 122° 45' 42" W., 48° 08' 08" N.; hours, 9 to 12 a. m.  
 3 Loc. 87° 35' 13" W., 47° 25' 11" N.; type, A3.  
 4 Loc. 88° 21' 55" W., 48° 13' 28" N.; type, A3.  
 5 Loc. 89° 18' 52" W., 47° 52' 00" N.; type, A3.  
 6 Loc. 80° 39' 50" W., 31° 56' 40" N.; type, A2; hours, first 15 minutes every hour between 8 a. m. and 9.15 p. m.

## Marine radiobeacon 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 Stations Performing Special Services published by the Berne bureau]

SANDY POINT LIGHT STATION, MD.—Loc. 76° 23' 05" W., 39° 00' 57" N.; transmits every 180 seconds, groups of 1 dot 1 dash and 1 dot for 60 seconds, silent 120 seconds, thus:

. — . . — . etc.	Silent
60 seconds	120 seconds

Fy., 305 (984); hours, continuously during thick or foggy weather and daily in clear weather from 1.30 to 2 and 7.30 to 8 a. m. and p. m. (75th meridian time).

SAVANNAH LIGHTSHIP, GA.—Loc. 80° 39' 50" W., 31° 56' 40" N.; transmits every 180 seconds, groups of 2 dots and 2 dashes for 60 seconds, silent 120 seconds, thus

. . — — . . — — etc.	Silent
60 seconds	120 seconds

Fy., 300 (1,000); hours, continuously during thick or foggy weather and daily in clear weather from 1 to 1.30 and 7 to 7.30 a. m. and p. m. (75th meridian time).

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

Call signal	Name of station	Call signal	Name of station
KAP	Perez, P. I., radio (Tayabas).....fc	KHNFU	Greater St. Louis.....a
KDZ	Kenai, Alaska.....fc, fx	KHNLO	Emsco.....a
KGRA	Ohio.....b	KLEO	Sandcraft.....b
KGRB	Invincible.....b	KZAH	Bohol.....b
KGRD	Tennessee.....b	KZFV	Sumagul, P. I. (Mindoro).....fc
KGRE	Tidewater.....b	KZGB	Hook Bay, P. I., radio (Polillo).....fc
KGRF	Tidewater Associated.....b	KZCN	Kolambugan.....b
KGRG	J. R. Sensibar.....b	WPDW	Washington, D. C.....fx
KGSV	Wichita Falls, Tex.....fa, fx	WRDU	Brooklyn, N. Y.....fx
KHIUF	Sitka.....a	WRDV	F. P. C. No. 1.....b
KHIVE	NC-311N.....a	WRDX	Kihna.....b
KHIXO	NC-985H.....a	WSBD	Gladys II.....b
KHIYB	NC-7570.....a	WWAJ	Manitou Island, Mich.....fx
KHIZA	NC-411H.....a	WWAL	Passage Island, Mich.....fx
KHJYB	C-7471.....a	WWAM	Rock of Ages, Mich.....fx
KHMGT	NC-8411.....a	WWAN	Savannah, Ga.....fc
KHNAZ	NC-396N.....a	WZAC	Kanatak, Alaska.....fx
KHNBY	NR-971W.....a	WZAD	Fort Winfield Scott, Presidio of San Francisco, Calif.....fx
KHNXC	NR-972W.....a	WZAE	Fort Worden, Wash.....fx
KHNDW	NR-973W.....a		
KHNEV	Pacific Era.....a		

*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)	Owner
<i>Portable</i>				
New York: Riverhead.	W2XDC	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), 34,600 (8.67), 51,900 (5.78), 60,000 (5) to 400,000 (.75).	15	R. C. A. Communications (Inc.).
Virginia: Princess Ann County	W3XAC	780 (385).....	50	WTAR Radio Corporation, 1001 Bank of Commerce Building, Norfolk, Va.
United States, through- out.	W10XAH	1,604 (187.03), 2,398 (125.1), 3,256 (92.5).	5	Humble Oil & Refining Co.

## 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]

- BRADENTON, FLA.—Power, M/amp. 7.6/2.5.  
 CLEVELAND, OHIO, Radio (WTK).—Power, M/amp. 180/4.  
 COLUMBUS, OHIO (WCL).—Type, add A1; power, M/amp. 60/10.  
 DAYTONA BEACH, FLA.—Power, M/amp. 7.6/2.5.  
 DEARBORN, MICH.—Loc., 83° 13' 00" W., 42° 17' 48" N.; power, M/amp. 20/9.  
 FORT PIERCE, FLA.—Type, strike out A3; power, M/amp. 13/2.5.  
 FRANKFORT, MICH., Radio.—Power, M/amp. 36.5/5.  
 LAKE CITY, FLA.—Power, M/amp. 7.6/2.5.  
 LAKELAND, FLA.—Power, M/amp. 13/2.5.  
 LAWRENCEVILLE, N. J. (WND).—Power, M/amp. 49/100.  
 MANISTIQUE, MICH., Radio.—Power, M/amp. 27.5/5.  
 MANITOWOC, Wis., Radio.—Power, M/amp. 55/5.  
 MIAMI, FLA. (WNH).—Power, M/amp. .6/2.5.  
 MOBILE, ALA., Radio (WNN).—Power, M/amp. 31/8 and 12.  
 NAKNEK, ALASKA, Radio.—Power, M/amp. 35/6.  
 NEW YORK, N. Y. (WPY).—Type, add A1; power, M/amp. 10/5.  
 PALATKA, FLA.—Power, M/amp. 7.6/2.5.  
 PUNTA GORDA, FLA.—Power, M/amp. 7.6/2.5.  
 ROCKY POINT, N. Y. (WQH).—Type, add A2, A3.  
 ST. AUGUSTINE, FLA.—Power, M/amp. .1/2.5.  
 SANFORD, FLA.—Power, M/amp. 7.6/2.5.  
 SAYVILLE, N. Y. (WKI).—Type, add A2.  
 WEST PALM BEACH, FLA. (WNG).—Power, M/amp. 13/2.5.  
 WYANDOTTE, MICH.—Power, M/amp. 46.5/10.  
 Strike out all particulars of the following-named station: DODGE CITY, KANS.

*Portable*

- No. 1 (KJO).—Type, strike out A1, add A2, A3.  
 No. 2 (KJN).—Type, strike out A1, add A2, A3.  
 No. 3 (KJT).—Type, strike out A1, add A2, A3.  
 No. 4 (KJW).—Type, strike out A1, add A2, A3.  
 No. 5 (KJY).—Type, strike out A1, add A2, A3.

*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.*

- ABILENE, TEX.—Owner, Aeronautical Radio (Inc.).  
 ALBUQUERQUE, N. MEX. (KGSB).—Owner, Aeronautical Radio (Inc.).  
 ALBUQUERQUE, N. MEX. (KSI).—Loc., 106° 37' 30" W., 35° 04' 16" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.  
 AMARILLO, TEX.—Owner, Aeronautical Radio (Inc.).  
 AURORA, ILL.—Fy., add 278 (1,080); power, M/amp. 12.31/1.75.  
 AVALON, CALIF. (Catalina Island).—Owner, Aeronautical Radio (Inc.).  
 BAKERSFIELD, CALIF. (Kern County Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57).  
 BOLINAS, CALIF., Radio (KPH).—Fy., strike out 6,440 (46.58), 8,350 (35.93), 12,520 (23.96), add 6,500 (46.15), 8,390 (35.76), 12,730 (23.57), 16,700 (17.964).  
 CHEYENNE, WYO. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 16/2.5.  
 CLEVELAND, OHIO (WTL).—Type, add A1; fy., strike out 4,116 (72.9), 8,630 (34.76); power, M/amp. 92/10.  
 CLOVIS, N. MEX.—Loc., 105° 16' 30" W., 34° 01' 55" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.  
 COLUMBUS, OHIO (WHG).—Loc., 82° 52' 19" W., 40° 00' 30" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.  
 DALLAS, TEX. (KGSQ).—Owner, Aeronautical Radio (Inc.).  
 DALLAS, TEX. (Love Field) (KGUF).—Owner, Aeronautical Radio (Inc.).  
 DALY, ALASKA.—*Read* Daly, Alaska radio; loc., 157° 12' 00" W., 58° 49' 50" N.; type, strike out B, add A1, A2; fy., strike out 283 (1,060), add 222 (1,350), 272 (1,105), 460 (650), 500 (600); service, add PG; rates, 6 cents per word; owner, R. M. C. A.

- DENVER, COLO.—Owner, Aeronautical Radio (Inc.).
- DES MOINES, IOWA (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 21.5/9.
- DETROIT, MICH. (WKDT).—Type, add A2; owner, City of Detroit.
- DODGE CITY, KANS.—Owner, Aeronautical Radio (Inc.).
- DOUGLAS, ARIZ.—Owner, Aeronautical Radio (Inc.).
- EL CENTRO, CALIF.—Owner, Aeronautical Radio (Inc.).
- ELKO, NEV. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 12/3.
- EL PASO, TEX. (KGSB).—Owner, Aeronautical Radio (Inc.).
- EL PASO, TEX. (Municipal Airport)—(KGUA).—Owner, Aeronautical Radio (Inc.).
- FLAGSTAFF, ARIZ.—Owner, Aeronautical Radio (Inc.).
- FORT WORTH, TEX. (Meacham Field).—Owner, Aeronautical Radio (Inc.).
- FRAMINGHAM, MASS.—Fy., strike out 1,712 (175.23), add 1,662 (180.51).
- FRANKFORT, MICH., Radio.—Owner, Wabash Radio Corp.
- FRESNO, CALIF. (Aviation Field—KGT).—Fy., strike out 3,142 (95.48), add 3,172 (94.57).
- GUAM, Guam Radio.—Type, add A3; fy., add 7,445 (40.30), 14,890 (20.15), 18,820 (15.94), 22,660 (13.239); owner, Globe Wireless (Ltd.).
- HOLBROOK, ARIZ.—Owner, Aeronautical Radio (Inc.).
- HONOLULU, HAWAII Radio (KYG).—Fy., add 460 (650); owner, Globe Wireless (Ltd.).
- HOUSTON, TEX. (Municipal Airport).—Owner, Aeronautical Radio (Inc.).
- INDIANAPOLIS, IND. (WHM).—Loc., 86° 15' 06" W., 39° 44' 15" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.
- IOWA CITY, IOWA (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 15.3/9.
- ISLAND OF OAHU, HAWAII.—Read Island of Oahu, Hawaii radio; service, PG, PR.
- KANSAS CITY, MO. (KGTG).—Owner, Aeronautical Radio (Inc.).
- KETCHIKAN, ALASKA.—Read Ketchikan, Alaska Radio; power, M/amp. 16/2.5; service, add PG.
- KINGMAN, ARIZ. (KGTL).—Owner, Aeronautical Radio (Inc.).
- KINGMAN, ARIZ. (T. A. T. Airport—KSX).—Loc., 113° 56' 10" W., 35° 11' 40" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.
- LANSING, ILL. (WCQ).—Fy., strike out 333 (900); power, M/amp. 20/9.
- LAS VEGAS, NEV.—Owner, Aeronautical Radio (Inc.).
- LINCOLN, NEBR. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 20/9.
- LOS ANGELES, CALIF. (KEU).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 21.5/9.
- LOS ANGELES, CALIF. (Alhambra Airport—KGTI).—Owner, Aeronautical Radio (Inc.).
- LOS ANGELES, CALIF. (KGGX).—Owner, Globe Wireless (Ltd.).
- LUDINGTON, MICH., Radio.—Fy., add 375 (800); power, M/amp. 60/5; owner, Pere Marquette Radio Corp.
- MACKINAC ISLAND, MICH., Radio.—Fy., add 454 (660); power, M/amp. 30.77/8.
- MANISTIQUE, MICH., Radio.—Owner, Wabash Radio Corp.
- MANITOWOC, WIS., Radio.—Owner, Wabash Radio Corp.
- MARION, MASS., Radio (WCC).—Fy., strike out 16,700 (17.964), add 16,740 (17.921).
- MAUNA LOA, HAWAII (ISLAND OF MOLOKAI).—Read Mauna Loa, Hawaii Radio (Island of Molokai); service, PG, PR.
- MENOMINEE, MICH., Radio.—Power, M/amp. 22.8/5; hours, 7 to 11.30 a. m. and 2 to 5.30 p. m.; owner, Wabash Radio Corp.
- MIDLAND, TEX.—Owner, Aeronautical Radio (Inc.).
- MONTAGUE, CALIF.—Owner, Aeronautical Radio (Inc.).
- NEW ORLEANS, LA. (Menefee Airport).—Owner, Aeronautical Radio (Inc.).
- NEW YORK, N. Y. (WGE).—Fy., add 278 (1,080), 6,200 (48.39), 12,180 (24.63); power, M/amp. 20/2.
- NORTH PLATTE, NEBR. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 11/1.5.
- OAKLAND, CALIF. (KGSB).—Owner, Aeronautical Radio (Inc.).
- OAKLAND, CALIF. (Oakland Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 14/3.
- OMAHA, NEBR. (Fort Crook Air Mail Field).—Fy., strike out 3,142 (95.48), add 3,172 (94.57).
- PHOENIX, ARIZ. (KGSJ).—Owner, Aeronautical Radio (Inc.).

- PLAINFIELD, ILL.—Fy., add 8,810 (34.05); hours, X.  
 PORTLAND, OREG. (KGSW).—Owner, Aeronautical Radio (Inc.).  
 PORTLAND, OREG. (Swan Island Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); owner, Aeronautical Radio (Inc.).  
 PUEBLO, COLO.—Owner, Aeronautical Radio (Inc.).  
 REDDING, CALIF. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57).  
 RENO, NEV. (Hubbard Field).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 11/3.  
 ROCK SPRINGS, WYO. (Municipal Airport).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 12.31/3.  
 ROCKY POINT, N. Y. (WDA).—Fy., strike out 10,630 (28.22), add 9,480 (31.65).  
 ROCKY POINT, N. Y. (WDB).—Fy., strike out 6,710 (44.71), add 6,717.5 (44.65).  
 SALT LAKE CITY, UTAH (KGTH).—Owner, Aeronautical Radio (Inc.).  
 SALT LAKE CITY, UTAH (Municipal Airport—KQD).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); power, M/amp. 10/3.  
 SAN ANTONIO, TEX. (Winburn Field).—Owner, Aeronautical Radio (Inc.).  
 SAN DIEGO, CALIF. (KGSX).—Owner, Aeronautical Radio (Inc.).  
 SAYVILLE, N. Y., radio.—Fy., add 120 (2,500), 11,380 (26.36).  
 SCOBEEVILLE, N. J.—Fy., add 10,010 (29.97); hours, X.  
 SEATTLE, WASH. (Boeing Field).—Fy., strike out 3,142 (95.48), add 3,172 (94.57); owner, Aeronautical Radio (Inc.).  
 SEATTLE, WASH. (KGR).—Loc., changed to Edmonds, Wash.; owner, Globe Wireless (Ltd.).  
 SEATTLE, WASH. (KGSS).—Owner, Aeronautical Radio (Inc.).  
 TUCKERTON, N. J., Radio (WSC).—Fy., strike out 6,500 (46.15), 12,730 (23.57), 16,740 (17.921), add 8,350 (35.93), 12,520 (23.96).  
 WACO, TEX. (Municipal Airport).—Owner, Aeronautical Radio (Inc.).  
 WARREN, ALASKA.—Read Warren, Alaska radio; loc., 158° 26' 21" W., 59° 02' 22" N.; type, strike out B, add A1, A2; fy., strike out 186 (1,610), 283 (1,060), add 222 (1,350), 272 (1,105), 460 (650), 500 (600); service, add PG; rates, 6 cents per word; owner, R. M. C. A.  
 WAYNOKA, OKLA.—Loc., 98° 52' 24" W., 36° 36' 58" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.  
 WICHITA, KANS.—Owner, Aeronautical Radio (Inc.).  
 WINSLOW, ARIZ.—Loc., 110° 42' 45" W., 35° 02' 15" N.; fy., strike out 235 (1,275), 333 (900); power, M/amp. 39/18.  
 YAKUTAT, ALASKA, Radio.—Fy., strike out 272 (1,105), add 274 (1,095).

### Portable

- No. 1 (KMZ).—Read Texas and Louisiana No. 1; type, strike out A2, add A1.  
 No. 5 (KMI).—Read Texas and Louisiana No. 5; type, strike out A2, add A1.  
 No. 6 (KMD).—Read Texas and Louisiana No. 6; type, strike out A2, add A1.  
 No. 7 (KLY).—Read Texas and Louisiana No. 7; type, strike out A2, add A1.  
 No. 8 (KLI).—Read Texas and Louisiana No. 8; type, strike out A2, add A1.  
 No. 9 (KLG).—Read Texas and Louisiana No. 9; type, strike out A2; add A1.  
 No. 12 (KLA).—Read Texas and Louisiana No. 12; type, strike out A2, add A1.  
 No. 13 (KFF).—Read Texas and Louisiana No. 13; type, strike out A2, add A1.  
 No. 15 (KFF).—Read Texas and Louisiana No. 15; type, strike out A2; add A1.  
 No. 16 (KGZ).—Read Texas and Louisiana No. 16; type, strike out A2; add A1.  
 No. 17 (KJA).—Read Texas and Louisiana No. 17; type, strike out A2; add A1.  
 No. 18 (KJD).—Read Texas and Louisiana No. 18; type, strike out A2; add A1.  
 Third Radio Zone (WCU).—Read Third Radio Zone No. 2; type, strike out A2.  
 Western States.—Fy., strike out 1,664 (180.29).

### 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]

*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.*

- BEACON.—Owner, Colonial Beacon Oil Co. (Inc.).  
 BEACONHILL.—Owner, Colonial Beacon Oil Co. (Inc.).  
 BERWINDVALE.—Correct orthography owner is Wilmore S. S. Co.  
 CRESSIDA.—Owner, Albert E. Peirce.  
 DREAM GIRL.—Owner, Reamy E. Fields.

EASTERN TEMPLE.—Owner, High Seas Transportation (Inc.).

JEAN.—Fy., strike out 425 (715), add 425 (705).

MORRO CASTLE.—Hours, N; owner, Agwi Navigation Co.

RADNOR.—Name changed to Jacob Luckenbach; owner, Luckenbach S. S. Co.

ROBERT J. PAISLEY.—Name changed to Pam Schneider.

RUTH.—Name changed to Meddo.

SOBRE LAS OLAS.—Owner, John B. Miller.

STEEL INVENTOR.—Owner, Isthmian S. S. Co. (Inc.).

STEEL SCIENTIST.—Owner, Isthmian S. S. Co. (Inc.).

STEEL TRADER.—Owner, Isthmian S. S. Co. (Inc.).

STEEL VOYAGER.—Owner, Isthmian S. S. Co. (Inc.).

Strike out all particulars of the following-named vessels: Costa Rica, Cottonova, Enterprise, Florence Olson, Gar Sr. II, Gladys, Gypsy, Kadiak, Karluk, N. & K. No. 2, Phantom III, San Antonio, Sayonara (KFVA), Trinidad, Vigilant.

#### 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]

*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:*

CITY OF TACOMA.—Type, A1; fy., 8,290 (36.19).

NC-231E.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59); add 8,015 (37.43).

NC-232M.—Type, A3; fy., 3,106 (96.58), 3,172 (94.57), 5,660 (53).

NC-395E.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-396E.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-454E.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-1612.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-3314.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-5192.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-7117.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128).

NC-7119.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128).

NC-7582.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128).

NC-8000.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-8020.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-8044.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-8413.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128); service, P; hours, X.

NC-9107.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-9151.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-9637.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-9638.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128); service, P; hours, X.

NC-9639.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128); service, P; hours, X.

NC-9640.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128); service, P; hours, X.

NC-9641.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128).

NC-9664.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).

NC-9673.—Type, A1; fy., 414 (725), 500 (600), 3,106 (96.58), 2,662 (112.7), 3,070 (97.71), 5,690 (52.72); operated by New York Airways (Inc.).

NC-9685.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).



- NC-9686.—Type, A3; fy., 375 (800), 393 (763), 414 (725), 2,344 (128); service, P hours, X.
- NC-9701.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662; (112.7), 3,106 (96.29), add 8,015 (37.43).
- NC-9775.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).
- NC-9776.—Type, strike out A2, A3; fy., strike out 375 (800), 457 (655), 2,662 (112.7), 3,106 (96.59), add 8,015 (37.43).
- NC-9779.—Type, strike out A3; fy., strike out 333 (900), 414 (725), 457 (655), 2,506 (119.7), 4,036 (74.33); hours, X.
- PORTO RICO.—Type, A1; fy., 333 (900), 375 (800), 500 (600), 2,662 (112.7), 3,070 (97.71), 5,690 (52.72).
- X-855E.—*Read The Blue Streak*; fy., strike out 1,608 (186.57), 2,302 (130.32), 5,510 (54.45), 6,155 (48.74), add 3,106 (96.58), 5,525 (54.3).
- Strike out all particulars of the following-named stations: Bahia, Buenos Aires, Fairchild plane, Floyd Bennett, Fokker plane, Mendoza, Montevideo, Pernambuco, Porto Alegre, Rio de Janeiro, Salta, Santiago, Tampa, 307H, 514E.

#### 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]

*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.*

- ANCHORAGE, ALASKA.—Fy., 43.10 (69.61), read 4,310 (69.61).
- BOISE, IDAHO.—Fy., strike out 196 (1,530), add 240 (1,250).
- CAMDEN, N. J. (fourth district U. S. N. R.).—Hours, X.
- CAPE MAY, N. J. (Section Base 9).—*Read Cape May, N. J.*
- CAVITE, P. I. (Los Banos).—Class, add FC.
- CAVITE, P. I.—Class, add FC.
- CHEYENNE, WYO.—Fy., strike out 196 (1,530), add 240 (1,250).
- ELKO, NEV.—Fy., strike out 196 (1,530), add 240 (1,250).
- FORT WORTH, TEX.—Fy., strike out 196 (1,530), add 240 (1,250).
- HAMPTON ROADS, VA. (naval operating base).—Class, FX.
- KANSAS CITY, MO.—Fy., strike out 196 (1,530), add 240 (1,250).
- NEWPORT, R. I. (Torpedo Station).—Class, FX.
- PENSACOLA, FLA. (NAS).—Fy., add 500 (600).
- PLEASANT VALLEY, NEV.—Fy., strike out 196 (1,530), add 240 (1,250); hours, operates only during scheduled flights over sector in which station is located.
- RENO, NEV.—Fy., strike out 196 (1,530), add 240 (1,250); 5,940 (50.68), read 5,940 (50.51).
- ROCK SPRINGS, WYO.—Fy., strike out 196 (1,530), add 240 (1,250).
- ST. LOUIS, MO. (KCQ).—Fy., strike out 196 (1,530), add 240 (1,250).
- SACRAMENTO, CALIF. (Mather Field).—Fy., strike out 230 (1,304), add 230 (1,305).
- SALT LAKE CITY, UTAH.—Fy., strike out 196 (1,530), add 240 (1,250).
- SCHOFIELD BARRACKS, HAWAII.—Fy., 185 (1,625), read 185 (1,621).
- STREVELL, IDAHO.—Fy., strike out 196 (1,530), add 240 (1,250); hours, operates only during scheduled flights over sector in which station is located.
- TULSA, OKLA.—Fy., strike out 196 (1,530), add 240 (1,250).
- WASHINGTON, D. C. (Navy Yard).—Class, FX.
- WICHITA, KANS.—Fy., strike out 196 (1,530), add 240 (1,250).
- Strike out all particulars of the following-named stations: Brunswick Lightship, Ga.; Redding, Calif.

#### 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]

*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.*

- Strike out all particulars of the following-named vessels: Charlotte, Doyen, Farenholt, MacDonough, Paul Hamilton, Reno (NAMD), Robert Smith, Zeilin.

## 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]

OVERFALLS LIGHTSHIP, DEL.—Characteristic, *read* transmits groups of 1 dot, 1 dash, and 1 dot for 60 seconds, silent 120 seconds, thus:

$\frac{\text{---} \cdot \text{---} \cdot \text{---}}{60 \text{ seconds}}$	$\frac{\text{Silent}}{120 \text{ seconds}}$
---	---

Cristobal Mole, Canal Zone (Colon).—Hours, transmits each hour from 0 to 10 and from 30 to 40 minutes after each hour and at no other time.

Strike out all particulars of the following-named station: Frying Pan Shoals Lightship, N. C.

*Commercial and Government land, ship, aircraft, radiobeacon and radiocompass stations, alphabetically by call signals*

KDJ, *read* Daly, Alaska radio; KFF, *read* Texas and Louisiana No. 13 (portable); KFNT, *read* Pam Schneider; KFY, *read* Texas and Louisiana No. 15 (portable); KGOS, *read* Island of Oahu, Hawaii radio; KGOT, *read* Mauna Loa, Hawaii radio (Island of Molokai); KGR, *read* Edmonds, Wash.; KGZ, *read* Texas and Louisiana No. 16 (portable); KHEHS, *read* The Blue Streak; KHU, *read* Warren, Alaska radio; KJA, *read* Texas and Louisiana No. 17 (portable); KJD, *read* Texas and Louisiana No. 18 (portable); KJUE, *read* Jacob Luckenbach; KLA, *read* Texas and Louisiana No. 12 (portable); KLG, *read* Texas and Louisiana No. 9 (portable); KLI, *read* Texas and Louisiana No. 8 (portable); KLY, *read* Texas and Louisiana No. 7 (portable); KMD, *read* Texas and Louisiana No. 6 (portable); KMI, *read* Texas and Louisiana No. 5 (portable); KMZ, *read* Texas and Louisiana No. 1 (portable); NOV, *read* Cape May, N. J.; WCU, *read* Third Radio Zone No. 2 (portable); WIA, *read* New Brunswick, N. J.; WKCJ, *read* Meddo; strike out all particulars following the call signals KCW, KFSC, KFVA, KGDN, KGDS, KGSH, KHEKP, KHEOL, KHEUF, KHEVE, KHEWD, KHEXC, KHKAZ, KHKCX, KHKDW, KHKEV, KHKJQ, KHKKP, KUCM, NAMD, NAQN, NEMQ, NEPK, NUJS, NUKB, NUMB, NUQR, WEDJ, WEDQ, WFB, WFC, WFF, WGDK, WMCB, WOBN, WOBX, WODG, WQBP, WSBD, WSD, class strike out rf, WSJ, WTBJ.

## 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]

*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.*

KELW (Burbank, Calif.).—Owner, Union Bank & Trust Co. of Los Angeles, guardian, Earl L. White.

KGGC (San Francisco, Calif.).—Power, 100.

KGY (Lacey, Wash.).—Power, 10.

KLO (Ogden, Utah).—Fy., 1,400 (214.3); power, 500.

KMOX (Kirkwood, Mo.).—Strike out call KFQA.

KRGV (Harlingen, Tex.).—Owner, KRGV (Inc.).

KTAR (Phoenix, Ariz.).—Owner, KTAR Broadcasting Co.

WALR (Cambridge, Ohio).—Loc., changed to Zanesville, Ohio, 82° 01' 00'' W., 39° 57' 00'' N.

WBAK (Harrisburg, Pa.).—Power, 500 night, 1,000 day.

WFIW (Hopkinsville, Ky.).—Owner, WFIW (Inc.).

WHBL (Sheboygan, Wis.).—Owner, Press Publishing Co.

WHDL (Tupper Lake, N. Y.).—Owner, Tupper Lake Broadcasting Co. (Inc.).

WKBW (Amherst, N. Y.).—Owner, WKBW (Inc.).

WOAX (Trenton, N. J.).—Owner, WOAX (Inc.).

WOS (Jefferson City, Mo.).—Power, 500.

WRAW (Reading, Pa.).—Power, 50.

WTAM (Brecksville, village, Ohio).—Owner, WTAM (Inc.).

Strike out all particulars of the following-named station: WBBY (Charleston, S. C.).

## 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:** San Mateo County (W6XAQ).—Fy., 2,400 (12.50); read 24,000 (12.50).

**DISTRICT OF COLUMBIA:** Washington (W3XZ).—Fy., add 1,604 (187.03), 2,398 (125.1), 3,256 (92.5), 6,425 (46.7).

**HAWAII:** Fort Shafter (K6XK).—Strike out all particulars.

**MAINE:** Bradley (W1XQ).—Fy., 50 (6,000) to 75 (4,000) with the exception of the following frequencies in kilocycles, 51, 54, 56, 58, 64, 66, 68, 72, 75.

**MASSACHUSETTS:**

Cambridge (W1XM).—Fy., add 24,100 (12.448), 26,100 (11.494).

Dartmouth (W1XV).—Fy., strike out 23,060 (13.01), and above, add 6,425 (46.7), 8,650 (34.60), 12,850 (23.35), 17,300 (17.341), 24,100 (12.448), 26,100 (11.494).

**NEW JERSEY:**

Boonton (W3XW).—Fy., strike out 3,076 (97.5), 6,155 (48.74), add 3,256 (92.13), 6,425 (46.69).

Cliffwood (W2XF).—Strike out all particulars.

Deal (W2XJ).—Fy., strike out 4,116 (72.89), 6,755 (44.41), 8,630 (34.76), 9,170 (32.72), 9,750 (30.77), 9,870 (30.40), 10,550 (28.44), 13,390 (22.40), 14,470 (20.73), 14,590 (20.56), 16,270 (18.439), 18,340 (16.358), 19,220 (15.609), 19,820 (15.136), 21,060 (14.245), 21,420 (14.006), add 23,100 (12.987).

Ocean (W2XG).—Fy., 1,604 (187.03), 2,398 (125.10), 3,256 (92.5), 4,795 (62.57), 6,425 (46.7), 8,650 (34.68), 12,850 (23.35), 17,300 (17.341).

Whippany (W3XN).—Fy., strike out 327 (9,170), 194 (1,545) to 6,000 (50), add 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).

**NEW YORK:**

Jackson Heights (W2XAU).—Strike out all particulars.

New York (W2XB).—Fy., strike out 710 (423), 860 (349), 1,220 (245).

Rocky Point (W2XBP).—Fy., strike out 25,700 (11.673), add 25,100 (11.952).

Rocky Point (W2XBM).—Fy., add 25,100 (11.952).

Schenectady (airport) (W2XCH).—Fy., strike out 2,302 (130.32), 3,076 (97.5), add 2,398 (125.1), 3,256 (92.5).

South Schenectady (W2XAW).—Fy., strike out variable from and above 23,000 (13.043), add 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), 23,100 (12.987), 24,100 (12.448), 26,100 (11.494), 35,100 (8.55), 50,100 (5.98).

*Portables*

**MASSACHUSETTS:** Dartmouth (W1XAN).—Fy., 1,604 (187.03), 2,398 (125.1), 3,256 (92.5), 4,795 (62.57), 6,425 (46.7).

**NEW JERSEY:** Ocean (W2XAV).—Fy., strike out 1,556 (1928) to 1,652 (1816), 4,116 (72.89), 6,755 (44.41), 8,630 (34.76), 9,170 (32.72), 9,750 (30.77), 9,870 (30.40), 10,550 (28.44), 13,390 (22.40), 14,470 (20.73), 14,590 (20.56), 16,270 (18.439), 18,340 (16.358), 19,220 (15.609), 19,820 (15.136), 21,060 (14.245), 21,420 (14.006), add 1,604 (187.03), 23,100 (12.987).

**NEW YORK:** New York (W2XAA).—Fy., strike out 4,116 (72.89), 6,755 (44.41), 8,630 (34.76), 9,170 (32.72), 9,750 (30.77), 9,870 (30.40), 10,550 (28.44), 13,390 (22.40), 14,470 (20.73), 14,590 (20.56), 16,270 (18.439), 18,340 (16.358), 19,220 (15.609), 19,820 (15.136), 21,060 (14.245), 21,420 (14.006), add 23,100 (12.987).

*Aircraft*

Ford Motor Co. Planes (W8XA).—Read No. 8419; fy., strike out 2,302 (130.32), 4,108 (73.028), add 2,398 (125.10), 4,795 (62.56).

NC-417H (W10XAA).—Fy., add 1,604 (187.03), 2,398 (125.1), 3,256 (92.13), 4,795 (62.57), 6,425 (46.7), 8,650 (34.68).

NC-4616 (W2XBX).—Fy., add 1,604 (187.03), 2,398 (125.1), 3,106 (96.58), 3,256 (92.13), 4,795 (62.57), 6,425 (46.7), 8,650 (34.68).

NR-487H (W2XBQ).—Owner, Pilot Laboratories (Inc.).

No. 33 (W10XJ).—Strike out all particulars.

## RELAY BROADCASTING 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]

MASSACHUSETTS: East Springfield (W1XAZ).—Fy., add 2,398 (125.1).  
 NEW JERSEY: Bound Brook (W3XAL).—Fy., strike out 9,570 (31.35), 11,720 (25.6), 15,130 (19.828), 17,780 (16.873), 21,500 (13.953).

*Portable*

United States (throughout) (W10XAL).—Strike out all particulars.

United States (throughout) (W10XAO).—Strike out all particulars.

## VISUAL BROADCASTING STATION BY NAME OF STATION

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

NEW YORK: Brooklyn (W2XCL).—Loc., and call letters changed to Lawrence, Mass., W1XY; owner, Pilot Laboratories (Inc.).

*Portable*

NEW YORK: New York (W2XBV).—Loc., and call letters changed to Camden, N. J., W3XAD; fy., 2,850 (105.3) to 2,950 (101.7).

## MISCELLANEOUS

## GENERAL ORDER OF THE FEDERAL RADIO COMMISSION

Broadcasting stations classified according to values (units) for allocation equality between the five radio zones (General Order No. 92, June 17, 1930).—A typographical error occurred in the text of this order published in the Radio Service Bulletin for last month in that the value of units for full-time stations of a power of 5 kw. or more, one station only operating on the channel at night should have read "5" in lieu of 4, and stations of a power of 5 kw. or more, two stations operating simultaneously on a common frequency and separated by 2,000 miles or more should have read "4" in lieu of 5. See page 25, under subtitle "Classes of stations," paragraph A, 1 and 2.

## RATIFICATIONS OF THE INTERNATIONAL RADIO CONVENTION

The Department of State was notified on July 7, 1930, that Newfoundland and Southern Rhodesia have ratified the convention.

The instrument of ratification of the Republic of China dated June 7, 1930, was received June 23.

## CHANGE IN DURATION OF TIME SIGNALS BY UNITED STATES NAVAL STATIONS

The duration of the period for sending time signals which heretofore has been 5 minutes has been reduced to 3 minutes before the hour at all stations dependent upon commercially controlled telegraph wires. This change does not alter the existing time signal code since the last 3 minutes of the code are still used.

## SIGNALS FOR BEARINGS TRANSMITTED BY CHILEAN STATIONS

Vessels equipped with radio compasses may obtain signals for the determination of bearings, on request.

## NAVIGATIONAL WARNINGS TRANSMITTED BY ANTOFAGASTA, CHILE

This station transmits navigational warnings. Call signal CCF, type of emission, c. w.

## METEOROLOGICAL DATA TRANSMITTED BY BARBADOS, WINDWARD ISLANDS

The following information received from the Codrington meteorological station, when unsettled weather conditions prevail or indications of stormy weather are observed: Barometric pressure, barometric tendency, wind direction, wind force (Beaufort scale or velocity in miles per hour), state of the weather, and G. M. T. of the observations.

When necessary, the approximate position of the center of a reported tropical cyclonic disturbance will also be broadcast.

NEW PROCEDURE FOR HANDLING TRAFFIC BY PORTISHEAD (BRITISH) STATION

In order to reduce signalling and expedite working the following-cited letters will be used by this coast station to indicate the order of frequencies employed for sending and receiving:

- W meaning send and receive on 149 kc/s (2,013 m.).
  - X meaning send on 139.5 kc/s (2,150 m.), receive on 143 kc/s (2,098 m.).
  - Y meaning send on 139.5 kc/s (2,150 m.), receive on 133 kc/s (2,258 m.).
  - Z meaning send on 125 kc/s (2,400 m.), receive on 121 kc/s (2,479 m.).
- Turns will be indicated as heretofore.

NOTICE OF CHANGE OF TIME-SIGNAL CODE BY CAVITE, P. I.

Commencing June 15, 1930, the code used by the Manila Observatory for sending time signals over the telegraph wires and over the Cavite wireless will be slightly changed. This change is being made so as to have the code conform with the new one adopted by the United States naval radio.

The new code is practically the same as the old code. The change consists in the incorporation of a feature which will make possible the identification of each minute of the 5-minute period. The tick for the twenty-ninth second of each minute will be omitted. The omissions otherwise are all at the end of each minute and may be represented by diagram as follows, the omission of a dash in the diagram indicating the omission of a signal tick in the code sent out:

Minute	Second										
	50	51	52	53	54	55	56	57	58	59	60
55.....	—		—			—					—
56.....	—	—		—	—	—					—
57.....	—	—	—		—	—					—
58.....	—	—	—	—		—					—
59.....	—										—

The above code retains all the familiar features of the code now in use and merely injects an identification of each minute by omitting the fifty-first second of the first minute of the signals followed by four ticks showing there are four minutes to go, and so on, the last minute being a marked departure, dropping as it does the fifty-first on through the fifty-ninth second, and prolonging the last signal.

The clock which sends out the old type of signals will be kept in readiness, so that if the new clock and mechanism should fail for any reason, the signals will be sent out under the old code, which, it will be remembered, drops the twenty-eighth and twenty-ninth, fifty-fourth, fifth-fifth, fifty-sixth, fifty-seventh, fifty-eighth, and fifty-ninth seconds of each minute.

ALASKAN STATIONS CLOSING FOR THE FISHING SEASON

A large number of Alaskan stations are now closing due to the unusually short fishing season this year. Many of these radio stations, operated by the cannery companies, have been open from April to October in former years.

ERRATUM

The notice on the cover page of the June edition of this BULLETIN erroneously stated that it was the last supplement to the June 30, 1930, edition of the annual list of Commercial and Government Radio Stations of the United States. The date should have read June 30, 1929.