

RADIO SERVICE BULLETIN

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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.
Power	= Height (meters) of antenna and intensity of current (meter-amperes) at its base (sample of manner in which published—100/100) or the normal radiated power expressed in meter-amperes (sample of manner in which published—100m amp.).
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.
Accts.	= 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.	= Meter-amperes.
U. S. L.	= Applies only to the list of Commercial and Government Radio Stations of the United States.
	= Equipped with a radio compass (direction finder).

Frequencies for which ship stations are licensed to use are indicated in this publication as specified in the tables (classes L and H) hereunder.

For telegraph communication primarily with coastal telegraph stations: Class L (kilocycles-meters in parentheses, followed by symbol designating type of emission) =

143 (2,100), A-1, primarily for calling.	400 (750), A-1, A-2, working (other than Great Lakes).
152 (1,975), A-1, A-2, working (other than Great Lakes).	410 (730), A-1, A-2, B, working (other than Great Lakes).
153 (1,960), A-1, A-2, working.	410 (730), A-1, A-2, B, calling and distress (Great Lakes only).
154 (1,950), A-1, A-2, working.	425 (705), A-1, A-2, B, working.
155 (1,935), A-1, A-2, working.	454 (660), A-1, A-2, B, working (other than Great Lakes).
156 (1,925), A-1, A-2, working.	468 (640), A-1, A-2, working (other than Great Lakes).
157 (1,910), A-1, A-2, working.	500 (800), A-1, A-2, B, calling and distress (other than Great Lakes).
158 (1,900), A-1, A-2, working (other than Great Lakes).	
160 (1,875), A-1, A-2, working (other than Great Lakes).	
375 (800), A-1, A-2, B, direction finding only.	
394 (760), A-1, A-2, working (Great Lakes only).	

In addition to the frequencies designated hereinabove, this station may transmit on a frequency below 550 kc (545) used by a coastal telegraph station when directed to do so by the coastal telegraph station to which the frequency is assigned, provided that on frequencies below 150 kc (2,000) the emission shall be A-1 only.

Class H (kilocycles-meters in parentheses, on the following frequencies above 3,000 kc with A-1 or A-2 emission) =

3, 105 (96.62)	5, 530 (54.25)	8, 280 (36.32)	12, 360 (24.27)	16, 590 (18.094)
3, 115 (96.31)		*8, 280 (36.23)	12, 375 (24.24)	16, 660 (18.007)
	6, 170 (48.62)	8, 290 (36.19)	12, 390 (24.21)	16, 680 (17.986)
*4, 140 (72.46)	6, 180 (48.54)	8, 300 (36.14)	*12, 420 (24.15)	
4, 145 (72.38)	6, 190 (48.47)	8, 320 (36.06)	12, 435 (24.13)	22, 025 (13.621)
4, 150 (72.29)	6, 200 (48.39)	8, 330 (36.01)	12, 450 (24.11)	22, 050 (13.605)
4, 160 (72.12)	*6, 210 (48.31)			*22, 080 (13.587)
4, 165 (72.03)	6, 220 (48.23)	11, 025 (27.21)	16, 460 (18.226)	22, 100 (13.575)
	6, 230 (48.15)	*11, 040 (27.17)	16, 480 (18.204)	22, 125 (13.559)
5, 515 (54.40)		11, 055 (27.135)	16, 500 (18.182)	22, 150 (13.544)
*5, 520 (54.35)	8, 240 (36.41)	11, 070 (27.10)	16, 520 (18.160)	
5, 525 (54.30)	8, 250 (36.36)	11, 085 (27.065)	*16, 560 (18.116)	

In addition to the frequencies hereinabove designated, this station may transmit on a frequency above 3,000 kc (100) used by a coastal telegraph station when directed to do so by the coastal telegraph station to which the frequency is assigned.

For telephone communications primarily with coastal telephone stations, for telephone or telegraph communication with coastal harbor stations, and for telephone or telegraph communication primarily between ship-harbor stations, the specific frequency or frequencies for which a station is licensed to use will be indicated.

ADDITIONS

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, 1931, and to the International List of Fixed and Land Stations, published by the Berne bureau]

Station	Class	Call signal	Frequency in kilocycles, meters in parentheses	Service	Hours	Licenses
Celba, P. R. ¹	FX	WKK	194 (1,545)	PR	X	Government of Porto Rico, Department of the Interior, Bureau of Insular Telegraph.
Detroit, Mich. (Detroit city airport). ² Excursion Infet., Alaska radio. ³	FA	WARI	2,698 (111.19), 2,998 (102.11), 5,825 (51.5).	P	Y	Aeronautical Radio (Inc.)
	FX	KFK	425 (705), 460 (650), 500 (600).	PG		Pacific American Fisheries.
	FX	KICZ	3,195 (93.89), 3,225 (98.02), 5,720 (52.45), 5,750 (52.17).	PR	X	Mutual Telephone Co.
Las Vegas, Nev. ⁴	FA	KGTN	2,906 (103.24), 3,072.5 (97.64), 3,082.5 (97.32), 3,068 (95.15), 5,510 (54.45), 5,540 (54.15), 5,672.5 (52.89), 5,692.5 (52.71).	P	X	Aeronautical Radio (Inc.).
	FX					
Omaha, Nebr. (municipal airport) ⁵	FA	KGTS	2,316 (129.53), 2,356 (127.33), 3,222.5 (93.09), 3,232.5 (92.8), 3,242.5 (92.52), 3,257.5 (92.09), 3,447.5 (87.02), 3,467.5 (86.77), 3,467.5 (86.52), 3,485 (86.08), 4,115 (72.9), 4,917.5 (61), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26), 6,540 (45.87), 6,550 (45.8), 6,560 (45.73), 8,015 (37.43).	P	N	Do.
	FX					
Seattle, Wash. ⁶ Springfield, Ill. (Lindbergh Field) ⁷	FX	KIDA	1,658 (192.55), 2,316 (129.53), 2,356 (127.33), 3,222.5 (93.09), 3,232.5 (92.8), 3,242.5 (92.52), 3,257.5 (92.09), 3,447.5 (87.02), 3,467.5 (86.77), 3,467.5 (86.52), 3,485 (86.08), 4,115 (72.9), 4,917.5 (61), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26), 6,540 (45.87), 6,550 (45.8), 6,560 (45.73), 8,015 (37.43).	P	X	Seattle fire department. Aeronautical Radio (Inc.).
	FA	WAEJ		P	N	
Vieques, P. R. ⁸	FX	WGS	194 (1,545)	PR	X	Government of Porto Rico, Department of the Interior, Bureau of Insular Telegraph.
Waterfall, Alaska ⁹	FX	KIBX	178 (1,650), 274 (1,095), 268 (1,120), 3,265 (91.88).	PR	X	Nakat Packing Corporation.
Woonsocket, R. I. ¹¹	FX	WPEM	2,470 (1,000)	P	N	City of Woonsocket, police department.

¹ Loc. (approximate) 65° 00' 39" W., 18° 16' 09" N.; type, A2.

² Loc. (approximate) 83° 00' 20" W., 42° 24' 20" N.; type, A1, A3.

³ Loc. (approximate) 135° 29' 10" W., 58° 29' 00" N.; type, A1, A2.

⁴ Loc. (approximate) 157° 37' 30" W., 21° 15' 00" N.; type, A1, A2.

⁵ Loc. (approximate) 115° 00' 00" W., 36° 15' 00" N.; type, A3.

⁶ Loc., 95° 53' 37" W., 41° 17' 44" N.; type, A1, A2, A3.

⁷ Loc., 122° 20' 52" W., 47° 37' 15" N.; type, A3.

⁸ Loc., 89° 41' 33" W., 39° 45' 20" N.; type, A1, A2, A3.

⁹ Loc. (approximate) 65° 26' 33" W., 18° 09' 00" N.; type, A2.

¹⁰ Loc. (approximate) 133° 32' 40" W., 55° 47' 15" N.; type, A1.

¹¹ Loc. (approximate) 71° 30' 00" W., 42° 00' 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, 1931, and to the International List of Ship Stations, published by the Berne bureau]

Name of vessel	Call signal	Rates all services (cents)	Service	Hours	Owners	Message account settled by—
A. E. Williams ¹	WHEJ	.....	P	X	Harbor Tug & Barge Co.....	Owner.
Aldon ²	KDLP	.....	P	X	A. C. Davis and D. L. Primrose.	Do.
Attilio Paladini ³	WHEG	.....	P	X	A. Paladini (Inc.).....	Do.
Baracuda ⁴	WHEK	.....	.....	.....	Rhea Johnson.....	Do.
Catherine Paladini ³	WHEH	.....	P	X	A. Paladini (Inc.).....	Do.
Darlen.....	KULG	.....	.....	.....	Oliver Transportation Co.....	Do.
Doris Hamlin.....	WHEO	.....	P	X	W. B. Vane.....	W. W. Happy.
Eleanor Bolling ¹	WFAT	.....	P	X	W. F. Parker.....	.....
Golden State.....	WHEQ	8	PG	X	Union Fish Co.....	Maritime Enterprises (Inc.).
St. John ⁶	WHEI	8	PG	N	Eastern S. S. Lines (Inc.).....	R. M. C. A.
Sophie Christenson ⁷	WHEM	8	PG	X	John E. Shields.....	Owner.
T. G. Condare ⁸	WHEL	.....	P	X	T. G. Condare S. S. Corporation.	Do.

¹ Type, A3; fy., 2,322 (129.2), 2,350 (127.7), 2,362 (127.01), 2,738 (109.57).

⁶ Type, A2; fy., class L.

² Type, A1; fy., class L and H.

⁷ Power, 22/12 and 2.5.

³ Type, A3; fy., 2,322 (129.2), 2,350 (127.7), 2,362 (127.01), 2,738 (109.57); power, 8/1.

⁸ Type, A1; power, 43/2.

⁴ Type, A1; fy., class H.

Commercial aircraft stations, alphabetically, by names of craft

[Additions to the List of Radio Stations of the United States, edition of June 30, 1931, and to the International List of Aircraft Stations, published by the Berne bureau]

Station	Call signal	Frequency, in kilocycles; meters in parentheses	Service	Hours	Licensee
NC-15-A (Resolute) ¹	KHNDW	3,105 (96.61).....	P	X	Goodyear Tire & Rubber Co. (Inc.).
NC-99-K (X214).....	KHOEV	2,906 (103.23), 3,072.5 (97.63), 3,082.5 (97.32), 3,088 (97.15), 3,105 (96.61), 5,510 (54.45), 5,540 (54.15), 5,672.5 (52.88), 5,692.5 (52.7).	P	X	Western Air Express (Inc.).
NC-121-M (X215).....	KHOFU	.....do.....	P	X	Do.
NC-122-M (X216).....	KHOGT	.....do.....	P	X	Do.
NC-123-M (X217).....	KHOHS	.....do.....	P	X	Do.
NC-126-M (X218).....	KHOIR	.....do.....	P	X	Do.
NC-127-W (No. 14) ¹	KHDLO	.....do.....	P	X	Transcontinental & Western Air (Inc.).
NC-484-Y ¹	KHXWD	3,105 (96.62), 3,222.5 (93.09), 3,232.5 (92.8), 3,242.5 (92.52), 3,257.5 (92.09), 3,447.5 (87.02), 3,457.5 (86.77), 3,467.5 (86.52), 3,484 (86.08), 4,917.5 (61), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26).	P	X	American Airways (Inc.).
NC-8011 (X211).....	KHOJQ	2,906 (103.23), 3,072.5 (97.63), 3,082.5 (97.32), 3,088 (97.15), 3,105 (96.61), 5,510 (54.45), 5,540 (54.15), 5,672.5 (52.88), 5,692.5 (52.7).	P	X	Western Air Express (Inc.).
NC-9724 (X212).....	KHOKP	.....do.....	P	X	Do.
NC-9789 (X213).....	KHOLO	.....do.....	P	X	Do.
NC-10809 ¹	KHXVE	3,105 (96.62), 3,222.5 (93.09), 3,232.5 (92.8), 3,242.5 (92.52), 3,257.5 (92.09), 3,447.5 (87.02), 3,457.5 (86.77), 3,467.5 (86.52), 3,485 (86.08), 4,917.5 (61), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26).	P	X	American Airways (Inc.).
NC-11119 ¹	KHXXO	.....do.....	P	X	Do.
NC-11120 ¹	KHXXA	.....do.....	P	X	Do.
NC-11124 ¹	KHXYB	.....do.....	P	X	Do.
NC-11167 ¹	KHRHS	.....do.....	P	X	Do.
NC-11170 ¹	KHRDW	.....do.....	P	X	Do.

¹ Type, A3.

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, 1931, 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
Charlotte, N. C. (sixth district U. S. N. R.). <i>Portable</i>	FX	NEF	-----	O	X	U. S. Navy.
California-----	FX	KIDD	2,464 (121.75)-----	P	X	Department of the Interior, Geological Survey.

Government ship stations, alphabetically, by names of stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1931, 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
North Star-----	WTDU	-----	O	X	Department of the Interior, Alaska Railroad. U. S. Army. Do.
Ockerson-----	WYDU	428 (700)-----	O	X	
Potter-----	WYDT	do-----	O	X	

Commercial and Government land, ship, aircraft, radiobeacon, and direction-finding stations, alphabetically by call signals

Call signal	Name of station	Call signal	Name of station
KDLP	Aldon..... b	KIDD	California (portable)..... fx
KFK	Excursion Inlet, Alaska radio..... fc	KULG	Darien..... b
KGTN	Las Vegas, Nev..... fa,fx	NEF	Charlotte, N. C. (Sixth district U. S. N. R.)..... fx
KGTS	Omaha, Nebr. (municipal airport), fa,fx	WAEI	Detroit, Mich. (Detroit City airport)..... fa,fx
KHDLO	NC-127-W (No. 14)..... a	WAEJ	Springfield, Ill. (Lindbergh Field) fa,fx
KHNDW	NC-15-A (Resolute)..... a	WFAT	Eleanor Boling..... b
KHOEV	NC-99-K (X214)..... a	WGS	Vieques, P. R..... fx
KHOFU	NC-121-M (X215)..... a	WBEG	Attilio Paladini..... b
KHOGT	NC-122-M (X216)..... a	WBEH	Catherine Paladini..... b
KHOHS	NC-123-M (X217)..... a	WHEI	Saint John..... b
KHOIR	NC-126-M (X218)..... a	WHEJ	A. E. Williams..... b
KHOJQ	NC-8011 (X211)..... a	WHEK	Baracuda..... b
KHOKP	NC-9724 (X212)..... a	WHEL	T. G. Condare..... b
KHOLA	NC-9789 (X213)..... a	WBEM	Sophie Christenson..... b
KHRDW	NC-11170..... a	WBEQ	Doris Hamlin..... b
KHRHS	NC-11167..... a	WBEQ	Golden State..... b
KHXVE	NC-10809..... a	WKZ	Celba, P. R..... fa,fx
KHAWD	NC-484-Y..... a	WPBM	Woonsocket, R. I..... fx
KHXXC	NC-11119..... a	WSV	Savannah, Ga..... fc
KHXYS	NC-11124..... a	WTDU	North Star..... b
KHXZA	NC-11120..... a	WYDT	Potter..... b
KIBX	Waterfall, Alaska..... fx	WYDU	Ockerson..... b
KIOZ	Honolulu, Hawaii..... fx		
KIDA	Seattle, Wash..... fx		

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, 1931]

Station	Call signal	Frequency in kilocycles; meters in parentheses	Power (watts)	License and postoffice address
New York: Riverhead	W2XP	25,700 (11.67), 34,800 (8.67), 51,400 (5.83), 60,000 (5) to 400,000 (.75), 401,000 (.74) and above.	250	R. C. A. Communications (Inc.)
Pennsylvania: Philadelphia. <i>Aircraft</i>	W3XS	8,650 (34.68), 17,300 (17.341)	1,500	Philadelphia Storage Battery Co.
NC-8045	W10XM	6,425 (46.69)	7.5	Ford Motor Co.

Broadcasting pick-up stations, alphabetically, by names of stations

[Additions to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1931]

Station	Call signal	Frequency in kilocycles; meters in parentheses	Power (watts)	Owner
<i>Portable</i>				
Washington: Seattle	W7XAX	1,518 (197.63), 2,342 (128.09)	1.5	Seattle Broadcasting Co., Third and University Streets.
Do.	W7KAZ	2,342 (128.09)	27.5	Do.

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, 1931]

Station	Call signal	Frequency, in kilocycles; meters in parentheses	Power (watts)	Owner
Kansas: Manhattan	W9XAK	2,100 (142.9), 2,200 (136.4)	125	Kansas State College of Agriculture and Applied Science.
Pennsylvania: Philadelphia.	W3XE	2,750 (109.1), to 2,850 (105.3), 43,000 (6.98), to 46,000 (6.52), 48,500 (6.19) to 50,300 (5.96), 60,000 (5) to 80,000 (3.75).	1,500	Philadelphia Storage Battery Co.

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

Call signal	District and station	Call signal	District and station
W2XP	Second district: Riverhead, N. Y.	W9XAK	Ninth district: Manhattan, Kans.
W3XE	Third district: Philadelphia, Pa.		<i>Aircraft</i>
W8XS	Do.	W10XM	NC-8045.
W7XAX	Seventh district: Seattle, Wash. (portable).		
W7XAZ	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, 1931, and to the International List of Fixed and Land Stations published by the Berne bureau]

- AUBURN, N. Y.—Loc. (approximate) 76° 34' 00" W., 42° 56' 00" N.
 BOLINAS, CALIF. KEE.—Fy., add 7,835 (38.29).
 BROWNSVILLE, TEX., KGUE.—Fy., 2,316 (129.53), 2,356 (127.33), 3,232.5 (2.98), 3,242.5 (92.8), 3,242.5 (92.52); 3,257.5 (92.09), 3,447.5 (87.02), 3,457.5 (86.77), 3,467.5 (86.52), 3,485 (86.08), 4,115 (72.9), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26), 6,540 (45.87), 6,550 (45.8), 6,560 (45.73), 8,015 (37.43).
 BUFFALO, N. Y., radio.—Fy., add 177 (1,695).
 CEIBA, P. R., radio.—Class, strike out FX; fy., strike out 194 (1,545); service, strike out PR.
 CHICAGO, ILL., radio WGO.—Fy., add 177 (1,695).
 CHICAGO, ILL., WJA.—Fy., add 10,750 (27.91), 14,635 (20.5), 16,255 (18.456), 17,440 (17.202), 18,560 (16.164), 20,800 (14.423).
 CHICAGO, ILL., WRDC.—Loc., changed to Elgin, Ill.; (approximate) 88° 12' 00" W., 42° 00' 00" N.
 DENVER, COLO., KGSP.—Fy., add 5,510 (54.45), 5,540 (54.15).
 DETROIT, MICH., WKDT.—Fy., strike out 1,596 (187.97), add 1,558 (192.55).
 DULUTH, MINN., radio.—Fy., add 177 (1,695).
 EXCURSION INLET, ALASKA, KGIS.—Class, strike out FC; fy., strike out 425 (705), 500 (600); service, strike out PG; licensee, Pacific American Fisheries.
 FRESNO, CALIF., KGZA.—Fy., strike out 2,416 (124.17), add 2,414 (124.27).
 HICKSVILLE, N. Y., WJO.—Fy., add 7,715 (38.88), 7,950 (37.74), 7,960 (37.69), 10,750 (27.91), 13,840 (21.68), 14,635 (20.5), 16,255 (18.456), 17,440 (17.202), 18,560 (16.164), 20,800 (14.423).
 HICKSVILLE, N. Y., WJP.—Fy., add 7,715 (38.88), 6,950 (37.74), 7,960 (37.69), 10,750 (27.91), 13,840 (21.68), 14,635 (20.5), 16,255 (18.456), 17,440 (17.202), 18,560 (16.164), 20,800 (14.423).
 HICKSVILLE, N. Y., WJS.—Fy., see Hicksville, N. Y. WJP (above).
 HILLSBORO, OREG.—Fy., strike out 7,662.5 (39.15), add 7,655 (39.19).
 HONOLULU, HAWAII, KDG.—Fy., add 7,715 (38.88), 7,960 (37.69).
 HONOLULU, HAWAII, KOG.—Fy., strike out 3,195 (93.89), 3,225 (93.02), 5,720 (52.45), 5,750 (52.17).
 KAILUA, HAWAII, KQB.—Fy., strike out 7,655 (39.09), add 7,662.5 (39.15).
 KAILUA, HAWAII, KQN.—Fy., strike out 14,770 (20.31), add 10,820 (27.73).
 MEMPHIS, TENN., WPI.—Fy., add 4,140 (72.46).
 NEEDHAM, MASS., WJK.—Fy., add 8,810 (34.05), 10,010 (29.97), 10,750 (27.91), 14,635 (20.5), 16,255 (18.456), 17,440 (17.202), 18,560 (16.164), 20,800 (14.423).
 NEEDHAM, MASS., WRDJ.—Loc., changed to Hicksville, N. Y., 73° 34' 35" W., 40° 45' 28" N.
 NEW BRUNSWICK, N. J., WEV.—Fy., strike out 6,942.5 (43.212), add 7,730 (38.81).
 NYAC, ALASKA.—Fy., strike out 3,160 (94.9), add 3,265 (91.88).
 PALO ALTO, CALIF., KWA.—Fy., strike out 7,662.5 (39.15), add 7,655 (39.19).
 PALO ALTO, CALIF., KWB.—Fy., strike out 7,737.5 (38.75), add 7,670 (39.11).
 PUEBLO, COLO.—Loc. (approximate) 104° 38' 00" W.; 38° 15' 00" N.; fy., add 5,510 (54.45), 5,540 (54.15).
 ROCKY POINT, N. Y., WEB.—Fy., strike out 6,935 (43.259), add 14,770 (20.31).
 ROCKY POINT, N. Y., WEZ.—Fy., strike out 6,927.5 (43.306), add 8,075 (37.15).
 ROCKY POINT, N. Y., WPE.—Fy., add 15,760 (19.036).
 ROCKY POINT, N. Y., WQM.—Fy., add 143 (2,100); licensee, R. M. C. A.
 ROCKY POINT, N. Y., WQN.—Fy., 5,260 (57.03), 5,501 (54.54), 5,820 (51.55).
 ROGERS CITY, MICH., radio.—Fy., add 177 (1,695).
 SAN FRANCISCO, CALIF., KOP.—Fy., add 7,715 (38.88), 7,950 (37.74), 10,750 (27.91), 14,635 (20.5), 16,255 (18.456), 17,440 (17.202), 18,560 (16.164), 20,800 (14.423).
 SAN FRANCISCO, CALIF., KOQ.—Fy., see San Francisco, Calif. KOP (above).
 SAYVILLE, N. Y., WIB.—Fy., strike out 6,815 (44.02), add 6,942.5 (43.21).
 SAYVILLE, N. Y., WIC.—Fy., strike out 7,670 (39.11), add 7,737.5 (38.77).
 SAYVILLE, N. Y., WID.—Fy., strike out 7,730 (38.81), add 6,935 (43.26).
 SAYVILLE, N. Y., WIH.—Fy., strike out 8,075 (37.15), add 6,927.5 (43.305).
 VIEQUES, P. R., radio.—Class, strike out FX; fy., strike out 194 (1,545); service, strike out PR.

WEST DOVER, OHIO, radio (Cleveland).—Fy., add 177 (1,695).
Strike out all particulars of the following-named stations: Chignik, Alaska;
Warm Springs Bay, Alaska.

Portable

Third, Fourth and Fifth Radio Zones Nos. 29, 30, 31, 32, 33, 34, 35, 36, 37, 38,
39, 40, 41, respectively.—Read United States (throughout) Nos. 29, 30, 31, 32,
33, 34, 35, 36, 37, 38, 39, 40, 41, respectively.

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, 1931, and to the International List of Ship Stations, published
by the Berne bureau]

- A. C. BEDFORD.—Power, 24/10 and 2.
ADLER, ADMIRAL CHASE, AFOGNAK.—Fy., class L.
ALKI.—Fy., strike out 1,596 (187.97), add 1,558 (192.55).
ALL AMERICA, ALPENA, AMERICA KDOWN, AMERICAN, AMERICAN LEGION, ANN
ARBOR No. 5, ANN ARBOR No. 6, ANTIETAM.—Fy., class L.
ANTIGUA.—Type, A1, A2; fy., class L and H.
ARCTIC, ARDMORE, ARLYN, ASTORIA, ASTRAL, ATLANTA CITY, ATLANTIC WBCO,
AURORA, AXTEL J. BYLES, BAKERSFIELD, BANGU, BARRANCA, BAYOU CHICO.—
Fy., class L.
BEACONLIGHT.—Power, 28/12 and 2.
BELFAST.—Fy., class L.
BENJAMIN BREWSTER.—Power, 26/8 and 2.
BETA, BETHORE, BETTY, BOHEMIAN CLUB.—Fy., class L.
BOSTON.—Fy., class L; power, 30/5.
BRADDOCK, BROOKDALE, BYRON D. BENSON, CALORIA, CAMDEN WECD, CANA-
NOVA, CARPLAKA, CARRABULLE.—Fy., class L.
CASCADIAN.—Type, A1, A2, A3; fy., class. H.
CASSIMIR, CAYO MAMBI, CERRO AZUL, CERRO EBANO.—Fy., class L.
CHALENA.—Rates, 8 cents per word.
CHARLES G. BLACK, CHARLES L. O'CONNOR, CHATTANOOGA CITY, CHESTER O.
SWAIN, CHESTER SUN, CHICKASAW, CHILOIL, CHIRIKOF.—Fy., class L.
CHIRIKUI.—Type, A1, A2; fy., class L and H.
CHRISTY PAYNE.—Power, 30/9 and 2.5.
CITIES SERVICE FUEL, CITIES SERVICE KOOLMOTOR, CITIES SERVICE OHIO,
CITY OF COLUMBUS, CITY OF DALHART, CITY OF JOLIET, CITY OF RAYVILLE,
CLARE, COAMO, COLDBROOK, COLUMBINE, COMMERCIAL FLORIDIAN, COM-
MERCIAL QUAKER, COMMONWEALTH, CONNEAUT, CORNELL, CORONADO-
CORRALES, COURAGEOUS.—Fy., class L.
CRUSADER.—Type, A1, A2, and B; fy., class L and H; service, PG; hours, X.
CULBERSON.—Power, 28/8 and 7.
CURLW KOSZ, DANNEDAIKE, DELAROF, DELAWARE SUN, DELFINA KIVS.—Fy.,
class L.
DENALI WHED.—Fy., 2,322 (129.19), 2,350 (127.65), 2,362 (127.01), 2,738
(109.56).
DERBYLINE, DICKENSON, DORA KOKR, DORA WACZ, DOROTHY, DOROTHY
ALEXANDER, DURANGO, EASTERN GLADE, EASTERN GLEN, EASTERN PLANET,
EASTERN TEMPLE, EDITH, EDWARD L. SHEA.—Fy., class L.
EDWIN B. DE GOLIA.—Fy., class L; owner, Hillcone S. S. Co. (Inc.).
ELDNA, ELISHA WALKER, ELIZABETH KELLOGG, ELKHORN.—Fy., class L.
EMERGENCY AID.—Fy., class L; accts., R. M. C. A.
EMIDIO, EMPIRE ARROW, E. T. BEDFORD, EUGENE V. R. THAYER, EVANSVILLE,
EVERETT WJCQ.—Fy., class L.
EXAMELIA.—Fy., class L; hours, strike out N.
EXERMONT, EXILONA, EXIRIA.—Fy., class L.
EXMOOR.—Fy., class L; hours, strike out N.
FLORIDIAN.—Fy., class L.
FOLLY II.—Fy., 2,322 (129.19), 2,350 (127.65), 2,362 (127.01), 2,738 (109.56).
FORDHAM.—Fy., class L.
FORTUNA.—Fy., class L and H.
FRANCES.—Fy., class L.
FRANKLIN.—Name changed to Maine.
FRED W. GREEN.—Accts., John J. Roen.
FRED W. WELLER.—Fy., class L.
GEO. H. JONES.—Power, 24/10 and 2.

- GEORGE G. HENRY, GEORGE W. BARNES, GERTRUDE KELLOGG.—Fy., class L.
 GERTRUDE S.—Type, A3; fy., 2,538 (118.2).
 GLEN WHITE, GOLDEN CROSS.—Fy., class L.
 GOLDEN DRAGON.—Hours, add N.
 GOOD WILL.—Fy., class L and H; accts., M. R. T. Co.
 GOVERNOR DINGLEY, GOVERNOR JOHN LIND, GULFBIRD, GULFGEM, HADNOT,
 HAMPDEN, HARDI BIAOU, HARRY B. WILLIAMS, HARVARD, HARVESTER.—
 Fy., class L.
 HELEN.—Power, 45.5/14.
 H. H. ROGERS, HOLY CROSS, HOMER, HOXBAR, HURON.—Fy., class L.
 HUSSAR KFZV.—Owner, Cox and Stevens; accts., R. M. C. A.; power 35/6.
 I. J. MERRITT, ILLINOIS KUQM, ILLINOIS WCEI, IMLAY, INTERNATIONAL,
 INVINCIBLE WCII, IROQUOIS KGGY, J. A. MOFFETT, Jr., JEZEBEL, J. M.
 DANZIGER, JOHN. D. ARCHBOLD, JOHN W. BOARDMAN, JOSEPH BLOCK.—
 Fy., class L.
 JOSEPH SEEP.—Power, 29/10 and 2.
 KVICHAK.—Fy., class L.
 LAKE ELLITHORPE.—Name changed to Texas Trader.
 LAKE GAITHER.—Name changed to Texas Ranger; power, 22/8.
 LAKE GIDDINGS.—Name changed to Texas Shipper.
 LAKE OSWEYA, LA PLACENTIA, LEBEC, LEHIGH KINM, LEVIATHAN LIFEBOAT
 No. 31, LEVIATHAN LIFEBOAT No. 32, LEWIS K. THURLOW, LIBERATOR,
 LIBERTY WCOO, LIBERTY BELL, LIGHTBURNE, LILLIAN LUCKENBACH, LIVING-
 STON ROE, L. J. DRAKE, LOON.—Fy., class L.
 LOS ALAMOS.—Name changed to R. W. McIlvain.
 MADISON.—Power, 26/6 and 2.5.
 MAJOR WHEELER.—Accts., A. H. Bull and Co. (Inc.).
 MALANG.—Fy., class L.
 MANUKAI.—Accts., Matson Navigation Co.
 MANULANI.—Accts., Matson Navigation Co.
 MELODIE.—Rates, 8 cents per word.
 MELROSE.—Fy., class L.
 MESSENGER.—Rates, 8 cents per word.
 MISSOURIAN, MOHAWK WRCE.—Fy., class L.
 MOSELLA.—Power, 23/10 and 6.
 MUNARGO.—Power, 25/12 and .5.
 MUNORLEANS.—Power, 24/6 and 2.5.
 NATIRAR.—Fy., class L.
 NELLWOOD II.—Rates, Great Lakes service 4 cents per word.
 NEW HAMPSHIRE.—Power, 12/5.
 NEW YORK WECF.—Power, 30/4.5.
 N. F. LEOPOLD.—Fy., class L.
 OLEUM.—Owner, Union Oil Company of Calif.
 OSSINING, PAN AMERICA.—Fy., class L.
 PERSEUS.—Hours, X.
 PLOVER, POINT ANCHA.—Fy., class L.
 PRINCETON WOCY.—Power, 22/8 and 2.2.
 QUAKER CITY, REPUBLIC, ROBERT E. LEE, ROBERT W. WILMOT.—Fy., class L.
 ROSINCO.—Accts., R. H. Morse.
 SAGADAHOC.—Fy., class L.
 SAN JUAN.—Fy., add class H.
 SANTA CLARA.—Power, 28/13, .5 and 2.
 SANTA ELISA.—Fy., class L and H.
 SANTA EULALIA, SANTA ISABEL KDBV.—Fy., class L.
 SANTA ISABEL WNCS.—Owner, Grace S. S. Co. (Inc.).
 SANTA OLIVIA.—Owner, Grace S. S. Co. (Inc.).
 SANTA TERESA.—Fy., class L and H.
 SATOCO.—Fy., class L.
 SAWOKLA.—Accts., R. M. C. A.
 SEAFORTH, SEMINOLE KUGP, SHARON, SINALOA, SOUTHERN CROSS, STEEL IN-
 VENTOR, STEEL TRAVELER, STELLA LYKES, SUN, SUNOIL, SUSAN V. LUCKEN-
 BACH, SWIFTARROW, SWIFTWIND.—Fy., class L.
 TAVERNILLA.—Fy., strike out 700 (430), 800 (375), add 430 (700), 375 (800).
 THOMAS P. BEAL, THOMAS TRACY, WABBLER, WEST CALUMB, WESTERN WORLD,
 WEST IMBODEN, WEST LASHAWAY.—Fy., class L.
 WILLIAM T. ROBERTS.—Name changed to Dow Chemical.
 WM. ROCKEFELLER.—Power, 28/8 and 2.5.

YAPALAGA.—Power, 30/17.

Strike out all particulars of the following-named stations: Ambridge, Artemis, Balsam, Barreado, Eastern Dawn, Federal WDOO, Hermosa, Illyria, Innoko, Jalapa, Kearny, Vittorio, Emmanuele III, Western Wave.

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, 1931, and to the International List of Aircraft Stations, published by the Berne bureau]

NC-12-A (Defender) KHIDW.—Fy., add 5,520 (54.35).

NC-713-Y KHRUF.—Fy., add 3,222.5 (93.09), 3,232.5 (92.8), 3,242.5 (92.52), 3,257.5 (92.09), 3,447.5 (87.02), 3,457.5 (86.77), 3,467.5 (86.52), 3,485 (86.08), 4,917.5 (61), 5,602.5 (53.55), 5,612.5 (53.45), 5,632.5 (53.26).

Strike out all particulars of the following-named stations: NC-191-E (NAT No. 83), NC-304-N, NC-10341.

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, 1931, and to the International List of Fixed and Land Stations, published by the Berne bureau]

SOUTH MANCHESTER, CONN. (Third District U. S. N. R.).—Loc., changed to Rochester, N. Y. (Third District U. S. N. R.).

Strike out all particulars of the following-named station: Savannah, Ga., radio NEV.

STATIONS TRANSMITTING HYDROGRAPHIC REPORTS

[Alterations and corrections to be made to the List of Commercial and Government Radio Stations of the United States, edition of June 30, 1931, and to the International List of Ship Stations, published by the Berne bureau]

SAN FRANCISCO, CALIF.—Hours, change 0330 to 0300.

STATIONS TRANSMITTING WEATHER REPORTS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1931, and to the International List of Aircraft Stations, published by the Berne bureau]

SAN FRANCISCO, CALIF.—Hours for aviation, change 0200 to 0130 and 1400 to 1330.

Strike out all particulars of the following-named station: Savannah, Ga.

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, 1931, and to the International List of Ship Stations, published by the Berne bureau]

RANGER.—Notice of deletion in Radio Service Bulletin for last month should have cited call signal as NUDG.

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, 1931, and to the International List of Stations Performing Special Services, published by the Berne bureau]

MOUNT DESERT LIGHT STATION, ME.—Fy., strike out 305 (985), add 292 (1,025).

PORTLAND LIGHT STATION, ME.—Fy., strike out 284 (1,056), add 292 (1,025).

LAKE HURON LIGHT STATION, MICH.—New method of distance finding: Whenever both the radiobeacon and the sound fog signal are in operation at this station, the radiobeacon transmits a long distinctive dash (3 seconds), the termination of which is coincident with the beginning of a long blast (5 seconds) of the sound signal. This long blast is followed by a 1-second silence and a 1-second blast, to indicate definitely to the observer the particular long blast which is sounded at the termination of the long dash. The number of seconds elapsing between hearing the termination of the long radio dash and the beginning of this long blast of the sound signal, divided by 5, will give the approximate distance of the observer from the light station in statute miles. The distance thus derived should be correct within a limit of error of 10 per cent.

States (throughout) No. 31; KKY, *read* United States (throughout) No. 30; KOFM, *read* Texas Trader; KOJZ, *read* Texas Ranger; KSB, *read* United States (throughout) No. 29; KUCR, *read* Texas Shipper; NDF, *read* Rochester, N. Y. (third district U. S. N. R.); NUDG incorrectly given as WTET in Radio Service Bulletin for last month; WRDC, *read* Elgin, Ill.; WRDJ, *read* Hicks-ville, N. Y.; WSCP, *read* R. W. Mellvain; strike out all particulars following the call signals KDCW, KDJF, KGMA, KHFSH, KHPFU, KHSZ, KICH, KICR, KIJC, KIKQ, KITJ, KNH, KOPR, KUQT, NEV, WDOO, WEDL, WLCM, WQBU.

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, 1931]

CALIFORNIA:

Bolinas W6XL.—Fy., strike out 27,080 (11.078), add 20,780 (14.437).

Oakland W6XG.—Strike out all particulars.

San Francisco W6XM.—Fy., add 400,000 (.75).

MARYLAND: Baltimore W3XAG.—Strike out all particulars.

MISSOURI: Carterville W9XV.—Loc., changed to Shreveport, La.; call signal changed to W5XC.

NEW JERSEY:

New Brunswick W2XBZ.—Loc., changed to Arneys Mount, N. J.; call signal changed to W3XL.

Ocean Gate W2XDO.—Strike out all particulars.

Ocean Township W2XDG, Ocean Township W2XDJ.—Fy., add 7,565 (39.65), 7,610 (39.42), 10,675 (28.1), 10,840 (27.68), 15,355 (19.537), 15,415 (19.461).

NEW YORK:

Garden City W2XBD.—Strike out all particulars.

Garden City W2XBW.—Fy., 1,594 (188.21), 2,398 (125.1), 3,492.5 (85.9), 4,799.5 (62.53), 6,425 (46.69), 8,655 (34.66), 12,862.5 (23.325).

New York W2XBB.—Fy., add 3,492.5 (85.9), 4,797.5 (62.53), 6,425 (46.69), 8,655 (34.66), 12,862.5 (23.325), 17,310 (17.331).

New York W2XCB.—Strike out all particulars.

Rocky Point W2XBJ.—Fy., strike out 6,725 (44.68), 6,935 (43.26), 7,415 (40.46), 9,460 (31.71), 10,620 (28.25), 13,450 (22.3), 13,840 (21.68), 13,900 (21.58), 15,040 (19.947), 15,970 (18.785), 16,015 (18.733), 17,940 (16.722), 18,860 (15.907), 18,980 (15.806), 20,260 (14.808), 21,260 (14.111), add 6,957.5 (43.12), 8,940 (33.56), 9,470 (31.68), 13,855 (21.655), 13,870 (21.63), 13,915 (21.56), 19,020 (15.773).

Schenectady W2XI.—Strike out all particulars.

South Schenectady W2XO.—Fy., add 4,045 (74.16), 4,205 (71.34), 8,090 (37.08), 8,410 (35.67), 12,135 (24.72), 12,615 (23.78), 16,180 (18.541), 16,820 (17.836), 20,225 (14.833), 21,025 (14.268), 24,270 (12.361), 25,230 (11.891).

Portable

ALASKA: Boca de Quadra (also vessel "Kiska") K7XF.—Strike out all particulars.

NEW JERSEY:

New Jersey W2XDH.—Fy., add 7,565 (39.65), 7,610 (39.42), 10,675 (28.1), 10,840 (27.68), 15,355 (19.537), 15,415 (19.461).

New Jersey W2XU; W2XW; W2XY.—Fy., add 60,000 (.5) to 400,000 (.75).

Ocean Township W2XDI.—Fy., add 7,565 (39.65), 7,610 (39.42), 10,675 (28.1), 10,840 (27.68), 15,355 (19.537), 15,415 (19.461).

UTAH: Davis County W6XA.—Strike out all particulars.

WISCONSIN: Milwaukee W9XC.—Strike out all particulars.

Vessel

CASCO W10XAB.—Strike out all particulars.

RELAY BROADCASTING AND BROADCASTING PICK-UP 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, 1931]

ILLINOIS: Chicago W9XAA.—Fy., strike out 11,840 (25.34), add 11,830 (25.36).
NEW YORK: Jamaica (Long Island) W2XE.—Loc., changed to Wayne, N. J. (near); fy., strike out 11,840 (25.34), 15,280 (19.634), add 11,830 (25.36), 15,270 (19.65).

VISUAL BROADCASTING STATIONS BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1931]

CALIFORNIA: Gardena (near) W6XS.—Loc., changed to Los Angeles, Calif.

MISCELLANEOUS

CHANGES IN THE LIST OF VESSELS EQUIPPED WITH A RADIO COMPASS

[Additions to the lists published in Commercial and Government Radio Stations of the United States, edition June 30, 1931, and to the International List of Ships Stations published by the Berne bureau]

Name	Call signal	Owner
COMMERCIAL		
Gulf of Mexico.....	WJCB	Gulf Refining Co.
Ontario.....	WMCZ	Merchants & Miners Transportation Co.
Somerset.....	WFCO	Do.

NEW INTERNATIONAL LIST OF RADIO STATIONS IN ORDER OF FREQUENCIES
AVAILABLE

The International Bureau of the Telegraph Union, Radiotelegraph Service, Berne, Switzerland, now has available for distribution the January, 1932 (third) edition of this list, at 19 Swiss gold francs (\$6.76). All remittances should be forwarded direct to the Berne Bureau, preferably by international money order.

DISTRIBUTION OF WEATHER INFORMATION, FORECASTS, AND WARNINGS BY RADIO
FOR THE BENEFIT OF NAVIGATION ON THE GREAT LAKES

The Weather Bureau, Washington, D. C., now has available for distribution to those concerned circular No. 15—Radio (revised), April 15, 1932, giving the procedure for such transmissions.

VLISSINGEN, HOLLAND, DIRECTION-FINDING STATION OPENED

The particulars of this station are as follows: Call signal, PBV; location, 3° 34' 02" E. 51° 26' 35" N.; frequencies, for calling the station, see explanation hereunder, for the signals required for taking bearings, 375 kc/s. (800 m.) (A1, A2, B), for the transmission of bearings, 425 kc/s. (705 m.) (A1, A2, B).

The four Dutch direction-finding stations Maassluis, Vlissingen, Willemsoord and Ymuiden are equipped with receiving installations only and operate under the guidance of the coastal station Scheveningen radio. Mobile stations desirous to obtain bearings must first call Scheveningen radio. The calling frequency of this station is 500 kc/s. (600 m.)

Sector of bearings: Maassluis 240°-20°; Vlissingen (unavailable at present); Willemsoord, 170°-30°; Ymuiden 220°-360°.

Hours: Continuous day and night.

Rates: A charge of 6 francs is made regardless whether the bearing is to be determined by 1, 2, 3, or 4 stations. To obtain bearings the ship operator should transmit the call signal of his station for 1 minute prolonging the dashes slightly more than usual.

The call signal of Willemsoord has been changed from PAZ to PBW.

DAYLIGHT-SAVING (SUMMER) TIME IN FOREIGN COUNTRIES

For the current year this time is in effect as follows: France, advanced 1 hour, April 2 at 23 o'clock, until October 1 at 24 o'clock; Great Britain, advanced 1 hour, April 17, at 2 o'clock a. m., until October 2 at 2 a. m.; Irish Free State, advanced 1 hour, April 17 at 2 a. m.; Holland, advanced 1 hour, during the night of May 21-22; Portugal, advanced 1 hour, April 2 at 23 o'clock; Belgium, advanced 1 hour, April 3 at 2 a. m.

FREQUENCY MEASUREMENTS OF BROADCASTING STATIONS DURING MARCH

During the month of March the Radio Division of the Department of Commerce measured 519 broadcasting stations of this country. Of those measured 274 deviated less than 50 cycles, 80 less than 100 cycles and 79 stayed within 200 cycles. The remaining 86 went over the 200 cycle mark.

A large number of the low-powered and other stations quite distant from stationary monitoring stations were measured under special broadcasts for the specific purpose of being measured when not many other stations were working. This was done during all hours of the morning after 12 midnight when reception was exceptionally good. As a matter of fact some were measured as early as 5 o'clock in the morning when very few, if any, other broadcasting stations were on the air.

The following table gives the figures for the months of December, 1930, to March, 1932, inclusive.

Month	Number stations measured	Less than 50 cycles	Less than 100 cycles	Less than 200 cycles	Over 200 cycles
December 1930	390		35 (13.5%)	66 (16.5%)	238 (70%)
January 1931	363		54 (15%)	102 (27%)	207 (58%)
February	367		99 (27%)	55 (15%)	213 (58%)
March	337	65 (19.3%)	63 (18.8%)	77 (22.8%)	132 (39.1%)
April	314	72 (22.9%)	54 (17.2%)	92 (29.3%)	96 (30.6%)
May	326	78 (23.9%)	89 (27.3%)	68 (20.9%)	91 (27.9%)
June	330	97 (29.4%)	71 (21.5%)	69 (20.9%)	93 (28.2%)
July	294	94 (32%)	70 (23.8%)	60 (20.4%)	70 (23.8%)
August	304	117 (38.5%)	64 (21%)	67 (22%)	56 (18.5%)
September	328	115 (35%)	72 (22%)	68 (21%)	73 (22%)
October	381	136 (35.7%)	97 (25.4%)	72 (18.9%)	76 (20%)
November	383	153 (40%)	86 (22.5%)	76 (20%)	68 (17.5%)
December	422	190 (45%)	98 (23.2%)	64 (15.2%)	70 (16.6%)
January 1932	449	230 (51.2%)	94 (20.9%)	63 (14%)	62 (13.9%)
February	450	241 (53.5%)	76 (17%)	63 (14%)	70 (15.5%)
March	519	274 (52.8%)	80 (15.4%)	79 (15.2%)	86 (16.6%)

LESS THAN 50 CYCLES

Call signal	Transmitter location, studio location in parentheses	Call signal	Transmitter location, studio location in parentheses
KCRO	Enid, Okla.	KFKX	}Bloomington, Ill. (Chicago).
KDB	Santa Barbara, Calif.	KYW	
KDKA	Saxonburg, Pa. (Pittsburgh).	KFOR	
KELW	Burbank, Calif.	KFPM	
KFAB	Lincoln, Nebr.	KFPY	
KFAC	Los Angeles, Calif.	KFRC	
KFBI	Millford, Kans.	KFSD	
KFBK	Sacramento, Calif.	KFUO	
KFDM	Beaumont, Tex.	KFVD	
KFDY	Brookings, S. Dak.	KFWB	
KFEQ	St. Joseph, Mo.	KFWI	
KFI	Buena Park, Calif. (near Los Angeles).	KFKF	
KFJB	Marshalltown, Iowa.	KFKJ	
KFJI	Klamath Falls, Oreg.	KFYR	
KFJR	Portland, Oreg.	KGBX	
KFKU	Lawrence, Kans.	KGOR	Watertown, S. Dak.

LESS THAN 50 CYCLES—Continued

Call signal	Transmitter location, studio location in parentheses	Call signal	Transmitter location, studio location in parentheses
KGDM	Stockton, Calif.	WBBM	} Glenview, Ill. (Chicago).
KGDY	Huron, S. Dak.	WJBT	
KGER	Long Beach, Calif.	WBRR	Rossville, N. Y. (Brooklyn).
KGEW	Fort Morgan, Colo.	WBEN	Martinsville, N. Y. (Buifalo).
KGFF	Shawnee, Okla.	WBEO	Marquette, Mich.
KGHL	Billings, Mont.	WBIG	Greensboro, N. O.
KGIW	Trinidad, Colo.	WBMS	Hackensack, N. J.
KGIZ	Grant City, Mo.	WBRE	Wilkes-Barre, Pa.
KGKO	Wichita Falls, Tex.	WBSSO	Needham, Mass.
KGKX	Sandpoint, Idaho.	WBT	Charlotte, N. C.
KGKY	Scottsbluff, Nebr.	WBZ	} Millis Township, Mass. (Boston).
KGO	Oakland, Calif. (San Francisco).	WBZA	
KGW	Faloma, Oreg. (Portland).	WCAC	Storrs, Conn.
KHJ	Los Angeles, Calif.	WCAH	Columbus, Ohio.
KHQ	Spokane, Wash.	WCAO	Baltimore, Md.
KIOK	Red Oak, Iowa.	WCAX	Burlington, Vt.
KIT	Yakima, Wash.	WCAZ	Carthage, Ill.
KJBS	San Francisco, Calif.	WCBA	Allentown, Pa.
KJR	Seattle, Wash.	WCBD	Zion, Ill.
KLPM	Minot, N. Dak.	WCBS	Springfield, Ill.
KLRA	Little Rock, Ark.	WCCO	Anoka, Minn. (Minneapolis).
KLX	Oakland, Calif.	WCFL	Chicago, Ill.
KLZ	Denver, Colo.	WCHI	Deerfield, Ill. (Chicago).
KMA	Shenandoah, Iowa.	WCXY	Crescent Springs, Ky. (Covington).
KMJ	Fresno, Calif.	WCLO	Janesville, Wis.
KMO	Tacoma, Wash.	WCRW	Chicago, Ill.
KMOX	St. Louis, Mo.	WCSE	Searboro, Me. (Portland).
KMTR	Los Angeles, Calif.	WDAE	Tampa, Fla.
KNX	Los Angeles, Calif. (Hollywood).	WDAF	Kansas City, Mo.
KOA	Denver, Colo.	WDAY	West Fargo, N. Dak. (Fargo).
KOAC	Corvallis, Oreg.	WDBJ	Roanoke, Va.
KOIL	Council Bluffs, Iowa.	WDGY	Minneapolis, Minn.
KOIN	Portland, Oreg.	WEAF	Bellmore, N. Y. (New York City).
KOL	Seattle, Wash.	WEAI	Ithaca, N. Y.
KOMO	Harbor Island, Wash. (Seattle).	WEAN	Providence, R. I.
KPO	San Francisco, Calif.	WEBQ	Harrisburg, Ill.
KPOF	Denver, Colo.	WEBR	Buffalo, N. Y.
KPPO	Pasadena, Calif.	WEDC	Chicago, Ill.
KQW	San Jose, Calif.	WEEL	Weymouth, Mass. (Boston).
KRE	Berkeley, Calif.	WENR	Downers Grove, Ill. (Chicago).
KRKD	Los Angeles, Calif.	WEVD	Forest Hills, N. Y. (New York City).
KRLD	Dallas, Tex.	WEW	St. Louis, Mo.
KROW	Richmond, Calif. (Oakland).	WFAA	Grapevine, Tex. (Dallas).
KRSC	Seattle, Wash.	WFBL	Collamer, N. Y. (Syracuse).
KSAC	Manhattan, Kans.	WFDF	Flint, Mich.
KSD	St. Louis, Mo.	WFEA	Merrimac, N. H. (Manchester).
KSL	Salt Lake City, Utah.	WFI	Philadelphia, Pa.
KSO	Clarinda, Iowa.	WGAL	Lancaster, Pa.
KSOO	Sioux Falls, S. Dak.	WGBI	Scranton, Pa.
KSTP	Radio Center, Minn. (St. Paul).	WGOM	Mississippi City, Miss. (Gulfport).
KTAB	Oakland, Calif. (San Francisco).	WGES	Chicago, Ill.
KTAR	Phoenix, Ariz.	WGH	Newport News, Va.
KTAT	Birdville, Tex. (Fort Worth).	WGN	} Elgin, Ill. (near Chicago).
KTBR	Portland, Oreg.	WLIB	
KTBS	Hot Springs, Ark.	WGR	Amherst, N. Y. (Buffalo).
KTM	Santa Monica, Calif. (Los Angeles).	WGY	Schenectady, N. Y.
KTRH	Houston, Tex.	WHAM	Rochester, N. Y.
KTSA	San Antonio, Tex.	WHAS	Louisville, Ky.
KUOA	Fayetteville, Ark.	WHAZ	Troy, N. Y.
KVI	Des Moines, Wash. (Tacoma).	WHB	Kansas City, Mo.
KVOO	Tulsa, Okla.	WHBQ	Memphis, Tenn.
KVOR	Colorado Springs, Colo.	WHDH	Gloucester, Mass. (Boston).
KWCR	Cedar Rapids, Iowa.	WHEC	Rochester, N. Y.
KWG	Stockton, Calif.	WHFC	Cicero, Ill.
KWJJ	Portland, Oreg.	WHK	Village of Seven Hills, Ohio (Cleveland).
KWK	Kirkwood, Mo. (St. Louis).	WHN	New York, N. Y.
KWLC	Decorah, Iowa.	WHO	Des Moines, Iowa.
KXL	Portland, Oreg.	WHP	Lemoynne, Pa. (Harrisburg).
KXRO	Aberdeen, Wash.	WIBO	Desplaines, Ill. (Chicago).
KYA	San Francisco, Calif.	WIBW	Topeka, Kans.
WAAF	Chicago, Ill.	WILL	Urbana, Ill. (Champaign).
WAAT	Jersey City, N. J.	WILM	Carrcroft-Edge Moor, Del. (Wilmington).
WAAW	Omaha, Nebr.	WINS	Astoria, N. Y. (New York City).
WABC	} Wayne, N. J. (New York City).	WIP	} Philadelphia, Pa.
WBOQ			
WALR	Zanesville, Ohio.	WFAN	
WAWZ	Zarehpath, N. J.	WISN	Milwaukee, Wis.
WBAA	West Lafayette, Ind.	WJAC	Johnstown, Pa.
WBAI	Glen Morris, Md. (Baltimore).	WJAK	Elkhart, Ind.
WBAP	Grapevine, Tex. (Fort Worth).	WJAR	Providence, R. I.
WBBC	Brooklyn, N. Y.	WJAX	Jacksonville, Fla.
WBBL	Richmond, Va.	WJBC	La Salle, Ill.

LESS THAN 50 CYCLES—Continued

Call signal	Transmitter location, studio location in parentheses	Call signal	Transmitter location, studio location in parentheses
WJBL	Decatur, Ill.	WOW	Omaha, Nebr.
WJBW	New Orleans, La.	WOWO	Fort Wayne, Ind.
WJDX	Jackson, Miss.	WPAD	Paducah, Ky.
WJSV	Mt. Vernon Hills, Va. (Alexandria).	WPAP	Cliffside, N. J. (New York City).
WJZ	Bound Brook, N. J. (New York City).	WQAO	} Chicago, Ill.
WKAR	East Lansing, Mich.	WPCC	
WKAV	Laconia, N. H.	WPCH	Hoboken, N. J. (New York City).
WKBF	Clermont, Ind. (Indianapolis).	WPEN	Philadelphia, Pa.
WKBH	La Crosse, Wis.	WPG	Atlantic City, N. J.
WKBI	Cicero, Ill.	WPRO	} Cranston, R. I. (Providence).
WKBN	Youngstown, Ohio	WPAW	
WKBW	Amherst, N. Y. (Buffalo).	WPTE	Raleigh, N. C.
WKJO	Lancaster, Pa.	WQAN	Scranton, Pa.
WKRO	Cincinnati, Ohio.	WRAX	Philadelphia, Pa.
WKY	Oklahoma City, Okla.	WRC	Washington, D. C.
WLBC	Muncie, Ind.	WRDO	Augusta, Me.
WLBF	Kansas City, Kans.	WRDW	Augusta, Ga.
WLBZ	Bangor, Me.	WREN	Lawrence, Kans.
WLEY	Lexington, Mass.	WRHM	Fridley, Minn. (Minneapolis).
WLIT	Philadelphia, Pa.	WRJN	Racine, Wis.
WLS	Downers Grove, Ill. (Chicago).	WRUF	Gainesville, Fla.
WLTH	Brooklyn, N. Y.	WRVA	Mechanicsville, Va. (Richmond).
WLVA	Lynchburg, Va.	WSAN	Allentown, Pa.
WLW	Mason, Ohio (Cincinnati).	WSAR	Fall River, Mass.
WMAQ	Addison, Ill. (Chicago).	WSAZ	Huntington, W. Va.
WMBI	Do.	WSB	Atlanta, Ga.
WMBQ	Brooklyn, N. Y.	WSEN	Columbus, Ohio.
WMBR	Tampa, Fla.	WSJS	Winston-Salem, N. C.
WMMN	Fairmont, W. Va.	WSM	Nashville, Tenn.
WMT	Waterloo, Iowa.	WSMB	New Orleans, La.
WNAC	} Quincy, Mass. (Boston).	WSPD	Toledo, Ohio.
WBIS		Yankton, S. Dak.	WSUI	Iowa City, Iowa.
WNAX	Binghamton, N. Y.	WSYB	Rutland, Vt.
WNBFB	Fairhaven, Mass. (New Bedford).	WTAG	Worcester, Mass.
WNBB	New York, N. Y.	WTAM	Brecksville Village, Ohio (Cleveland).
WNYC	Selma, Tex. (San Antonio).	WTAR	} Norfolk, Va.
WOAI	Trenton, N. J.	WPOR	
WOAX	Charleston, W. Va.	WTAX	Springfield, Ill.
WOBV	Davenport, Iowa.	WTMJ	Brookfield, Wis. (Milwaukee).
WOC	Paterson, N. J.	WWAE	Hammond, Ind.
WODA	Albany, N. Y.	WWJ	Detroit, Mich.
WOKO	Washington, D. C.	WWRL	Woodside, N. Y.
WOL	Manitowoc, Wis.	WWVA	Wheeling, W. Va.
WOMT	} Auburn, Mass. (Worcester).	WXYZ	Detroit, Mich.
WORC			
WEPB			

LESS THAN 100 CYCLES

KBTM	Paragould, Ark.	WADC	Tallmadge, Ohio (Akron).
KECA	Los Angeles, Calif.	WBBZ	Ponca City, Okla.
KEX	Portland, Oreg.	WBCM	Hampton Township, Mich. (Bay City).
KEFL	Edgewater, Colo.	WBGF	Glens Falls, N. Y.
KFGQ	Boone, Iowa.	WBAP	Asbury Park, N. J.
KFIO	Spokane, Wash.	WCAU	Byberry, Pa. (Philadelphia).
KFNF	Shenandoah, Iowa.	WCDA	Cliffside Park, N. J.
KFOX	Long Beach, Calif.	WDBQ	Orlando, Fla.
KFRU	Columbia, Mo.	WDOD	Brainerd, Tenn. (Chattanooga).
KFXV	Flagstaff, Ariz.	WDRC	Bloomfield, Conn. (Hartford).
KGA	Spokane, Wash.	WDSU	Gretna, La. (New Orleans).
KGAR	Tucson, Ariz.	WDZ	Tuscola, Ill.
KGB	San Diego, Calif.	WEEU	Spring Township, Pa. (Reading).
KGBZ	York, Nebr.	WFBM	Indianapolis, Ind.
KGCA	Decorah, Iowa.	WGAR	Cuyahoga Heights, Ohio (Cleveland).
KGEZ	Kalispell, Mont.	WHAP	Carlstadt, N. J. (New York City).
KGFI	Los Angeles, Calif.	WHBY	West de Pere, Wis. (Green Bay).
KGIX	Las Vegas, Nev.	WHIS	Bluefield, W. Va.
KGMB	Honolulu, Hawaii.	WHOM	Jersey City, N. J.
KLO	Ogden, Utah.	WIBA	Madison, Wis.
KLS	Oakland, Calif.	WIBG	Elkins Park, Pa.
KMBC	Independence, Mo. (Kansas City).	WJAG	Norfolk, Nebr.
KMMJ	Clay Center, Nebr.	WJBO	New Orleans, La.
KMPC	Beverly Hills, Calif.	WJBU	Lewisburg, Pa.
KORE	Eugene, Oreg.	WJJD	Mooseheart, Ill.
KRMD	Shreveport, La.	WJKS	Gary, Ind.
KSCJ	Sioux Falls, Iowa.	WJR	Sylvan Lake Village, Mich. (Detroit).
KTBS	Shreveport, La.	WJTL	Atlanta, Ga. (Oglethorpe University).
KUBD	Vermillion, S. Dak.	WJW	Mansfield, Ohio.
KWKC	Kansas City, Mo.	WKZO	Kalamazoo, Mich.
WAAB	Quincy, Mass. (Boston).	WLBX	Long Island City, N. Y.

LESS THAN 60 CYCLES—Continued

Call signal	Transmitter location, studio location in parentheses	Call signal	Transmitter location, studio location in parentheses
WLOE	Chelsea, Mass. (Boston).	WRBW	Reading, Pa.
WLWL	Kearney, N. J. (New York City).	WRRC	Whitehaven, Tenn. (Memphis).
WMAI	Washington, D. C.	WOAN	Dallas, Tex.
WMPC	Lapeer, Mich.	WRR	Dallas, Tex.
WNBR	} Memphis, Tenn.	WSYR	Syracuse, N. Y.
WGBC		WMAC	Philadelphia, Pa.
WNOX	Knoxville, Tenn.	WTEL	Mt. Avon, Conn. (Hartford).
WODX	Springhill, Ala. (Mobile).	WTIC	Savannah, Ga.
WOI	Ames, Iowa.	WTOC	New Orleans, La.
WQAM	Miami, Fla.	WWL	
WRAK	Williamsport, Pa.		

LESS THAN 200 CYCLES

KBPS	Portland, Oreg.	WCGU	Brooklyn, N. Y.
KDFN	Casper, Wyo.	WCOC	Meridion, Miss.
KDYL	Salt Lake City, Utah.	WDAG	Amarillo, Tex.
KFBB	Great Falls, Mont.	WDAS	Philadelphia, Pa.
KFBL	Everett, Wash.	WDEL	Wilmington, Del.
KFH	Wichita, Kans.	WEBC	Superior, Wis.
KFSG	Los Angeles, Calif.	WELL	Battle Creek, Mich.
KFXD	Nampa, Idaho.	WEXL	Royal Oak, Mich.
KFXM	San Bernardino, Calif.	WFAM	South Bend, Ind.
KGCU	Mandan, N. Dak.	WFBR	Baltimore, Md.
KGFG	Oklahoma City, Okla.	WFOX	Brooklyn, N. Y.
KGGC	San Francisco, Calif.	WGBB	Freeport, N. Y.
KGGF	South Coffeyville, Okla.	WHAT	Philadelphia, Pa.
KGGM	Albuquerque, N. Mex.	WIL	St. Louis, Mo.
KGRS	Amarillo, Tex.	WJAS	Pittsburgh, Pa.
KID	Idaho Falls, Idaho.	WJAY	Cleveland, Ohio.
KIDO	Boise, Idaho.	WKBS	Galesburg, Ill.
KMLB	Monroe, La.	WLAP	Louisville, Ky.
KOOS	Marshfield, Oreg.	WLBG	Ettrick, Va. (Petersburg).
KPCB	Seattle, Wash.	WLCI	Ithaca, N. Y.
KPJM	Prescott, Ariz.	WMAZ	Macon, Ga.
KPRC	Houston, Tex.	WMBD	Peoria Heights, Ill.
KREG	Santa Ana, Calif.	WMBG	Richmond, Va.
KRGV	Harlingen, Tex.	WMC	Bartlett, Tenn. (Memphis).
KSEI	Pocatello, Idaho.	WMCA	Hoboken, N. J. (New York City).
KTFI	Twin Falls, Idaho.	WMSG	New York, N. Y.
KUJ	Walla Walla, Wash.	WNJ	Newark, N. J.
KWSC	Pullman, Wash.	WOQ	Kansas City, Mo.
KXO	El Centro, Calif.	WOR	Kearny, N. J. (Newark).
WABZ	New Orleans, La.	WRBX	Roanoke, Va.
WACO	Waco, Tex.	WBNY	Coytesville, N. J. (New York City).
WAPI	Birmingham, Ala.	WSAI	Mason, Ohio (Cincinnati).
WBAK	Harrisburg, Pa.	WSAJ	Grove City, Pa.
WBNX	New York, N. Y.	WSBC	Chicago, Ill.
WBRC	Birmingham, Ala.	WSFA	Montgomery, Ala.
WBTM	Danville, Va.	WTBO	Cumberland, Md.
WCAE	Pittsburgh, Pa.	WTFI	Athens, Ga.
WCAJ	Lincoln, Nebr.	WWNC	Asheville, N. C.
WCAM	Camden, N. J.	WWSW	Wilksburg, Pa.
WCBM	Baltimore, Md.		

RADIO AIDS TO NAVIGATION—CANADIAN STATIONS

Schedule 1 annexed hereto contains a list of coast radio stations situated on the Atlantic coast, the Gulf and River St. Lawrence, Hudson Bay and Hudson Strait.

Messages to and from any of the coast radio stations pertaining to weather conditions and forecasts, ice reports and reports on aids to navigation will be handled without charge.

Schedule 2 contains a list of radio direction finding stations. No charge is made for D. F. bearings.

Schedule 3 shows the automatic radio beacons located on the Atlantic coast, Gulf and River St. Lawrence, together with map. Certain changes in the frequency used and the timing of clear weather transmissions have been made.

On the Lurcher Lightship these changes will become effective on May 1, 1932, and in the Gulf and River St. Lawrence at the opening of navigation.

Schedule 4 contains a list of coast radio stations which broadcast weather and other reports relating to navigation.

Schedule 5, time signals, Hudson Strait patrol.

Masters of vessels equipped to take advantage of these facilities are invited to report the results obtained from the use of the same to the radio inspector, H. M. C. Dockyard, Halifax, N. S., or to radio inspector, P. O. Box 89, St. John, N. B., or to the radio inspector, Pilotage Building, Champlain Market, Quebec, P. Q., or to the radio inspector, 170 Youville Place, Montreal, P. Q., or directly to the director of radio, Department of Marine, Ottawa, Ontario.

Pilots, masters or others interested also are earnestly requested to send information of dangers, changes in aids to navigation, notice of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the chief engineer, Department of Marine, Ottawa, Canada. Such communications can be mailed free of Canadian postage.

All bearings, unless otherwise noted, are true and are given from seaward in degrees from 0° (North) to 360° , measured clockwise, followed by the magnetic bearing in degrees in brackets; miles are nautical miles, heights are above high water of ordinary spring tides, and all depths are at low water of ordinary spring tides.

SCHEDULE 1.—List of coast stations

Station	Call sig- nal	Calling fre- quency	Position		Hours of service
			Latitude N.	Longitude W.	
<i>Atlantic coast, the gulf and river St. Lawrence up to Montreal</i>					
Red Head (near St. John, N. B.)	VAR	Kc/s (M) 500 (600)	• ' " "	• ' " "	Continuous throughout the year.
Lurcher Lightship	VGA	500 (600)	45 15 03	66 00 47	10 minutes from 20 to 30 minutes past the hour every 3 hours from 6.20 a. m. to 9.20 p. m. E. S. T. throughout the year.
Yarmouth	VAU	500 (600)	43 48 20	66 31 54	Continuous throughout the year.
Sambro Lightship	VGX	500 (600)	43 46 24	66 07 16	10 minutes from 20 to 30 minutes past the hour every 3 hours from 6.20 a. m. to 9.20 p. m. E. S. T. throughout the year.
Chebucto Head	VAV	500 (600)	44 21 43	63 25 50	Continuous throughout the year.
Sable Island	VCT	500 (600)	44 30 01	63 31 20	Do.
Canso	VAX	375 (800)	43 56 20	60 01 40	Do.
Louisbourg	VAS	143 (2,100)	45 19 24	60 58 25	Do.
North Sydney	VCO	500 (600)	46 09 16	59 56 43	Do.
St. Paul	VAT	375 (800)	46 13 10	60 14 50	Do.
Cape Race, Nfld.	VCE	500 (600)	47 12 15	60 08 45	Continuous during season of navigation.
Grindstone Island	VCM	500 (600)	46 39 25	53 04 15	Continuous throughout the year.
Belle Isle, Nfld.	VCM	500 (600)	47 23 14	61 51 40	Continuous during season of navigation.
Point Amour	VGL	500 (600)	51 52 52	65 21 44	Do.
Heath Point Lightship	VGH	500 (600)	51 27 25	56 50 30	Do.
Ferne Point	VCG	500 (600)	49 03 00	61 30 30	10 minutes from 20 to 30 minutes past the hour every 3 hours from 6.20 a. m. to 9.20 p. m. E. S. T. during season of navigation.
Clarke City	VCK	500 (600)	49 06 30	64 36 10	Continuous during season of navigation.
Father Point	VCF	500 (600)	50 11 52	66 37 36	Do.
Quebec	VCC	500 (600)	48 30 49	68 28 20	Do.
Montreal	VCA	500 (600)	46 48 25	71 12 25	Continuous throughout the year.
			45 34 05	73 38 05	Continuous during season of navigation.
<i>Hudson Bay and Hudson Strait</i>					
Port Churchill	VAP	500 (600)	58 46 48	94 09 20	Do.
Nottingham Island	VCB	500 (600)	63 06 48	77 56 18	Do.
Cape Hopes Advance	VAY	500 (600)	61 05 12	69 33 24	Do.
Resolution Island	VAV	500 (600)	61 18 30	64 53 24	Do.
Chesterfield Inlet	VBZ	500 (600)	1 63 19	90 36 00	Do.

1 Position approximate.

1925 OCT 26 4:06

1925 OCT 26 4:06

1925 OCT 26 4:06

SCHEDULE 2.—List of radio direction-finding stations

Station	Call signal	Calling frequency	Position		Hours of service
			Latitude N.	Longitude W.	
<i>Atlantic coast, the gulf and river St. Lawrence up to Montreal</i>					
Red Head, N. B. (near St. John)	VAR	Kc/s (M) 500 (600)	° ' "	° ' "	Continuous throughout the year.
Yarmouth	VAU	500 (600)	45 15 03	66 00 47	Do.
Chebucto Head	VAV	500 (600)	43 46 24	66 07 16	Do.
Canso	VAX	375 (800)	44 30 01	63 31 20	Do.
St. Paul	VAT	375 (800)	45 19 24	60 58 25	Continuous during season of navigation.
Cape Race	VCE	500 (600)	47 12 15	60 06 45	Continuous throughout the year.
Belle Isle	VCM	500 (600)	46 39 25	53 04 15	Continuous during season of navigation.
51 52 52			51 52 52	55 21 44	
<i>Hudson Bay and Hudson Strait</i>					
Resolution Island	VAW	500 (600)	61 18 30	64 53 24	Do.
Cape Hopes Advance	VAY	500 (600)	61 05 12	69 33 24	Do.
Nottingham Island	VCB	500 (600)	63 06 48	77 56 18	Do.
Port Churchill	VAP	500 (600)	58 46 48	94 09 20	Do.

All direction-finding bearings are dealt with on 375 Kc/s (800 m).
Stations standing by on 500 Kc/s (600 m) will change to 375 Kc/s (800 m) after communication has been established.

SCHEDULE 3.—List of radiobeacon stations Atlantic Coast, Gulf and River St. Lawrence

Name	Position		Call signal	Frequency		Transmission characteristics 1 1 1
	Latitude N.	Longitude W.		Kc/s.	(M)	
Lurchar Lightship 4	43 48 20	66 31 54	VGA	310	(968)	.....
Seal Island 4 4	43 28 26	66 00 53	VG Y	310	(968)	.....
Sambro Lightship 4 4	44 21 48	63 25 50	VG X	300	(1000)	.....
Cape Ray	47 37 02	59 18 20	VGB	285	(1050)	.....
Cape Bauld	51 38 41	55 25 03	VGB	285	(1050)	.....
Cape Whittle	50 09 52	60 02 06	VG Z	315	(950)	.....
Heath-point Lightship 4	49 03 00	61 30 30	VGH	315	(950)	.....
Perroquet Island	50 13 15	64 12 27	VG J	300	(1000)	.....
West Point	49 51 50	64 31 30	VG W	300	(1000)	.....
Point des Monts	49 19 01	67 23 08	VG Q	285	(1050)	.....

1 The duration of the dash or dashes is approximately equal in length to the repeated call signal.

2 In clear weather the transmission periods are repeated twice, viz, characteristic for 1 minute and 15 seconds, silence 1 minute and 45 seconds, then characteristic for 1 minute and 15 seconds.

3 Whenever the atmosphere in the vicinity of the station is so obscure as to impede navigation, radiobeacons will be operated continuously in the manner indicated in note 2.

4 An operator will maintain watch on 500 Kc/s (600 m) for 10 minutes from 20 to 30 minutes past the hour every 3 hours from 6.20 a. m. E. S. T. to 9.20 p. m. E. S. T. Ships desiring to communicate with this station may do so during these periods when the radiobeacon will be silent.

5 This station broadcasts weather reports and special messages to fishermen at 7 a. m. and 12.30 p. m. E. S. T. on 690 Kc/s (434.8 m) (radiotelephone). The radiobeacon will be silent irrespective of weather conditions for short periods at these times, also for a short period at 11.30 a. m. E. S. T. for communication with Halifax, N. S.

6 This station also transmits commencing at 30 minutes past the hour in clear weather.

NOTE:

⊕ Clear weather transmissions commence on the hour. In addition Seal Island transmits commencing 30 minutes past the hour.

○ Clear weather transmissions commence at 1/4 minutes past the hour.

SCHEDULE 4.—List of stations transmitting weather and other reports by radiotelegraph

Station		Frequency	Call Signal	Information transmitted	Broadcasting time (E. S. T.)	Origin of information	
Location	Distributed by						
<i>Atlantic Coast, the Gash and River St. Lawrence up to Montreal.</i>		Kc/s 500 (600)	VCA	Weather forecasts.	11 a. m. and p. m.	Canadian Meteorological Service, Toronto Ont.	
Quebec.		500 (600)	VCC	Weather forecasts.	11.10 a. m. and p. m.	do	
Father Point.		500 (600)	VCF	Reports respecting dangers to navigation in the River St. Lawrence.	11.20 a. m. and p. m.	Agent, Department Marine, Quebec, P. Q., and superintendent, Signal Service, Quebec, P. Q. Canadian Meteorological Service Toronto, Ont.	Superintendent Signal Service, Quebec, P. Q.
Fame Point 1.		500 (600)	VCG	Weather forecasts. Ice reports. Reports respecting dangers to navigation in (1) the River St. Lawrence, and (2) Gulf of St. Lawrence.	11.30 a. m. and p. m.	(1) Agent, Department Marine, Quebec, (2) Agent Department Marine, Charlottetown, P. E. I., and Superintendent, Signal Service, Quebec, P. Q. Canadian Meteorological Service, Toronto, Ont.	Do.
Belle Isle 1.		500 (600)	VCM	Weather forecasts. Ice reports. Reports respecting dangers to navigation in (1) the Gulf of St. Lawrence and Straits of Belle Isle.	11.40 a. m. and p. m.	Superintendent Signal Service, Quebec, P. Q. (1) Agent, Department Marine, Quebec, P. Q., Charlottetown, P. E. I., and Halifax, N. S., superintendent, Signal Service, Quebec, P. Q. Canadian Meteorological Service, Toronto, Ont. Officer in Charge, Belle Isle	Do.
Gulf of St. Lawrence— Ice Patrol.		500 (600) 185 (1, 621)	VCCP	Reports respecting ice conditions 1.	8 a. m. and p. m.	Agent Department Marine, Charlottetown, P. E. I., and Halifax, N. S., superintendent Signal Service, Quebec, P. Q. Ice patrol vessel.	Do.
Cape Race.		500 (600)	VOE	Weather reports. Ice reports.	8.30 a. m. and p. m. 11.20 a. m. and p. m.	Canadian Meteorological Service, Toronto, Ont.	Ice patrol vessel.

SCHEDULE 4.—List of stations transmitting weather and other reports by radiotelegraph—Continued

Station		Call Signal	Information transmitted	Broadcasting time (E. S. T.)	Origin of information	
Location	Frequency				Compiled by	Distributed by
Hudson Bay and Strait	500	VAP	Weather forecasts covering area of Hudson Bay, Hudson Strait and that portion of the Northern Atlantic adjacent thereto.	11 a. m.	Canadian Meteorological Service, Toronto, Ont.	
Resolution Island	500	VAW	Weather forecasts covering area of Hudson Bay, Hudson Strait and that portion of the Northern Atlantic adjacent thereto.	11.20 a. m.	do	Officer in charge, radio station, Port Churchill.

NOTE.—Storm warnings issued by the Canadian Meteorological Service, Toronto, will be broadcast on 500 Kc/s (600 m.) immediately upon receipt by the stations in the area involved and repeated on the regular routine transmissions unless cancelled in the interim.

SCHEDULE 5.—List of stations performing other special services

ATLANTIC COAST—TIME SIGNALS

Station	Call signal	Frequency	Broadcasting time (E. S. T.)	Position		Procedure
				Latitude N.	Longitude W.	
Chebuco Head	VAV	Kc/s M 500 (600)	9 a. m. daily except Sunday.	44° 30' 01"	63° 31' 20"	A dot at each second beginning 8 ^h 58' 00" up to and including 8 ^h 58' 57". A dot at 8 ^h 59' 00". A dot at each second beginning 8 ^h 59' 03" up to and including 8 ^h 59' 50". A dot at 9 ^h 00' 00" E. S. T.

For the purpose of these signals the observatory at St. John, N. B., is connected by land telegraph line to the Chebuco Head (VAV) station.

HUDSON STRAIT--PATROL

Station	Call sig- nal	Frequency	Hours of service	Remarks
O. G. S. N. B. McLean.....	CGSN	Kc/s <i>M</i> 500 (600)	Continuous during season of navigation...	This vessel patrols the Hudson Strait during the season of navigation. Informa- tion in regard to her position may be obtained from any radio station in the Strait.

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