

RADIO SERVICE BULLETIN

ISSUED MONTHLY BY BUREAU OF NAVIGATION, DEPARTMENT OF COMMERCE

Washington, June 1, 1920—No. 38

CONTENTS.

New stations:	Page.	Alterations and corrections—Continued.	Page.
Commercial land stations, by names.....	2	Government land and ship stations, by call signals.....	7
Commercial ship stations, by names.....	2	Special land stations, by names.....	7
Commercial land and ship stations, by call signals.....	3	Miscellaneous:	
Government ship stations, by names.....	3	Rate change.....	7
Government land and ship stations, by call signals.....	4	Land station closed.....	7
Abbreviations.....	4	Transmitting test in examinations.....	7
Alterations and corrections:		Key of radio room.....	7
Commercial land stations, by names.....	4	Change in radio inspection districts.....	8
Commercial ship stations, by names.....	4	Broadcasting hydrographic and weather reports.....	8
Commercial land and ship stations, by call signals.....	6	Radio compass stations.....	8
Government land stations, by names.....	6	Accuracy of radio bearings.....	10
Government ship stations, by names.....	7	Wireless meteorological information.....	10

DEPARTMENT OF COMMERCE,
BUREAU OF NAVIGATION,
Washington, August 1, 1919.

To collectors of customs, radio inspectors, and others concerned:

This publication, which was discontinued during the war, is issued monthly by the Bureau of Navigation, Department of Commerce, and distributed to the United States officers engaged in or concerned with the enforcement of the radio laws for their guidance and instruction, and to those concerned with the operation of Government and commercial radio stations for their information.

The Radio Service Bulletin supersedes the quarterly supplements to the List of Radio Stations of the United States and contains information concerning Government, commercial, and special stations only.

The Bulletin contains tables of new stations, alterations, and corrections under headings, so that the List of Radio Stations of the United States and the List of Radiotelegraph Stations published by the international bureau at Bern, may be brought up to date. Additions, alterations, and corrections should be entered in these two publications promptly on receipt of the Bulletin.

Amendments to or changes in the Radio Laws and Regulations of the United States (edition of Aug. 15, 1919) are printed in this Bulletin in such a manner that they may be clipped and pasted in their proper places in that publication.

Items of general interest concerning the enforcement of the radio laws are printed in the Bulletin from time to time, as occasion warrants.

E. T. CHAMBERLAIN,
Commissioner of Navigation.

Approved:
WILLIAM C. REDFIELD,
Secretary of Commerce.

NEW STATIONS.

HE 8677
A3

COMMERCIAL LAND STATIONS, ALPHABETICALLY BY NAMES OF STATIONS.

[Additions to the List of Radio Stations of the United States, edition of June 15, 1919, and to the International List of Radiotelegraph Stations published by the Berne bureau.]

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Babylon, N. Y. (see New York, N. Y.)	WSE				
New York, N. Y. ¹	WSE	300, 450, 600	PG	N	Independent Wireless Telegraph Co. Radio Corporation of America.
Tuckerton, N. J.	WGG	8000	PG	N	

¹ Rates, ship service, 6 cents per word.

COMMERCIAL SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS.

[Additions to the List of Radio Stations of the United States, edition of June 15, 1919, and to the International List of Radiotelegraph Stations published by the Berne bureau.]

Name of vessel.	Call signal.	Rates.		Service.	Hours.	Owner of vessel.	Station controlled by—
		North and South American service.	Trans-oceanic service.				
		Cents.	Cents.				
Adria	KUSZ	4	4	PG	X	U. S. Shipping Board.	
Anna E. Morse	KUTD	4	4	PG	X	do.	
Aquarius	KUSN			PG		Naira Co.	
Baccarat	KUSX			PG	X	Independent S. S. Co.	
Birmingham City	KUTT	4	4	PG		U. S. Steel Products Co.	R. C. of A.
Brookline	KURT	4	4	PG	N	U. S. Shipping Board.	S. O. R. S.
Canco	KUTP			P	X	American Can Co.	Owner of vessel.
Capital of Nebraska	KUSF	4	4	PG	X	U. S. Shipping Board.	
Christabel	KUTN			PG	X	Savannah Bar Pilots.	
City of Lordsburg	KUTK	4	4	PG	X	U. S. Shipping Board.	
City of Reno	KUSK	4	4	PG		do.	S. O. R. S.
Crown City	KUSP	4	4	PG	X	do.	
Delrosa	KUTG	4	4	PG		do.	
Eastern Admiral	KURM	4	4	PG		do.	I. W. T. Co.
Eastern Cloud	KCSQ	4	4	PG		do.	S. O. R. S.
Eastern Coast	KURX	4	4	PG		do.	Do.
Eastern Glen	KUVB	4	4	PG		do.	
Eastern Maid	KUTF	4	4	PG		do.	
E. G. Crosby ¹	KURS			PG	N	Chicago, Racine & Milwaukee S. S. Co.	R. C. of A.
Haxtum	KUTB	4	4	PG		U. S. Shipping Board.	
Henry Steers	KURR	4	4	PG	N	do.	S. O. R. S.
Huron	KUSD	4	4	PG		do.	
Iroquois	KUTQ	4	4	PG	X	Puget Sound Navigation Co.	R. C. of A.
John F. Hylan	KUSM			PG		City of New York Police Dept.	
John Gibbons	KURL	4	4	PG		do.	Do.
John P. Reiss ¹	KUTM			PG	X	North American S. S. Co.	Do.
Lake Furnas	KUTV	4	4	PG	X	U. S. Shipping Board.	
Lakeland ¹	WDL			PG	X	Tri-State S. S. Co.	Do.
Manatee	KURN	4	4	PG		U. S. Shipping Board.	
Mattolo	KUSV	4	4	PG	N	do.	
Medrie	KURQ			PG	X	East Coast Fisheries Co.	Owner of vessel.
Nanshon	KUTL	4	4	PG	X	U. S. Shipping Board.	
Nemaha	KUSR	4	4	PG		do.	
Occidental	KUSJ	4	4	PG	X	Texas S. S. Co.	
Ohonkara	KURV					Carl Tucker	
Pallas	KUTJ	4	4	PG		U. S. Shipping Board.	
Pioneer	KUSI					Mutual Packing Co.	
Richconcal	KUTX	4	4	PG		U. S. Shipping Board.	

¹ Rates, Great Lakes service, 2 cents per word.

COMMERCIAL SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS—continued.

Name of vessel.	Call signal.	Rates.		Service.	Hours.	Owner of vessel.	Station controlled by—
		North and South American service.	Trans-oceanic service.				
		Cents.	Cents.				
Rochester.....	KUTZ			PG	X	Vacuum Oil Co.....	
Salsam.....	KURP	4	4	PG	X	U. S. Shipping Board.	
Springfield.....	KUTR	4	4	PG	X	do.....	
Subotco.....	KURZ			PG	X	Submarine Boat Corpn	
Suedco.....	KUSB			PG	X	do.....	
Sunelseco.....	KUSC			PG	X	do.....	
Theodore Roosevelt	WCT			PG			
Vacuum.....	KUTS	4	4	PG		Vacuum Oil Co.....	R. C. of A.
West Camak.....	KUST	4	4	PG		U. S. Shipping Board.	
West Mahwah.....	KUTC	4	4	PG		do.....	I. W. T. Co.
West Nomentum.....	KUSG	4	4	PG	X	do.....	
William A. Whitney..	KUSS			PG	X	Whitney Brothers Co.	R. C. of A.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

[b—ship station; c—land station.]

Call signal.	Name.	Call signal.	Name.		
KURM	Eastern Admiral.....	b	KUSX	Baccarat.....	b
KURN	Manatee.....	b	KUSZ	Adria.....	b
KURP	Salsam.....	b	KUTB	Haxtum.....	b
KURQ	Medric.....	b	KUTC	West Mahwah.....	b
KURR	Henry Steers.....	b	KUTD	Anna E. Morse.....	b
KURS	E. G. Crosby.....	b	KUTF	Eastern Maid.....	b
KURT	Brookline.....	b	KUTG	Delrosa.....	b
KURV	Ohonkara.....	b	KUTJ	Pallas.....	b
KURX	Eastern Coast.....	b	KUTK	City of Lordsburg.....	b
KURZ	Subotco.....	b	KUTL	Nanshon.....	b
KUSB	Suedco.....	b	KUTM	John P. Reiss.....	b
KUSC	Sunelseco.....	b	KUTN	Christabel.....	b
KUSD	Huron.....	b	KUTP	Canco.....	b
KUSF	Capital of Nebraska.....	b	KUTQ	Iroquois.....	b
KUSG	West Nomentum.....	b	KUTR	Springfield.....	b
KUSJ	Occidental.....	b	KUTS	Vacuum.....	b
KUSK	City of Reno.....	b	KUTT	Birmingham City.....	b
KUSL	Pioneer.....	b	KUTV	Lake Furnas.....	b
KUSM	John F. Hylan.....	b	KUTX	Richconcal.....	b
KUSN	Aquarius.....	b	KUTZ	Rochester.....	b
KUSP	Crown City.....	b	KUVB	Eastern Glen.....	b
KUSQ	Eastern Cloud.....	b	WCT	Theodore Roosevelt.....	b
KUSR	Nemaha.....	b	WDL	Lakeland.....	b
KUSS	William A. Whitney.....	b	WGG	New York, N. Y.....	c
KUST	West Camak.....	b	WSE	New York, N. Y. (Babylon).....	c
KUSV	Mattole.....	b			

GOVERNMENT SHIP STATIONS, ALPHABETICALLY BY NAMES OF STATIONS.

[Additions to the List of Radio Stations of the United States, edition of June 15, 1919.]

Name of ship.	Call signal.	Name of ship.	Call signal.
Aramis.....	NARP	Paducah.....	NOG
Jed.....	NUQF		

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

[b= ship station; c= land station.]

Call signal.	Name of station.	Call signal.	Name of station.
NOG	Paducah.....b	NUQF	Goff.....b
NARP	Aramis.....b		

ABBREVIATIONS.

The necessary corrections to the List of Radio Stations of the United States and to the International List of Radiotelegraph Stations, appearing in this Bulletin under the heading "Alterations and corrections," are published after the stations affected in the following order:

- Name =Name of station.
 G. loc. =Geographical location: O=west longitude, N=north latitude, S=south latitude.
 Call =Call letters assigned.
 System =Radio system used and sparks per second.
 Range =Normal range in nautical miles.
 W. L. =Wave lengths assigned: Normal wave lengths in italics.
 Service =Nature of service maintained:
 PG=General public.
 PR=Limited public.
 P =Private.
 O =Government business exclusively.
 Hours =Hours of operation:
 N =Continuous service.
 X =No regular hours.
 m =a. m. (12m=midday).
 s =p. m. (12s=midnight).
 Rates =Ship or coast charges, in cents: c=cents. (The rates in the international list are given in francs and centimes. For approximate purposes, 1 franc equals 20 cents and 5 centimes equal 1 cent.)
 I. W. T. Co.=Independent Wireless Telegraph Co.
 R. C. of A. =Radio Corporation of America.
 S. O. R. S. =Ship Owners Radio Service.
 Co. =Company.
 Corpn. =Corporation.
 & =And.

ALTERATIONS AND CORRECTIONS.

COMMERCIAL LAND 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 15, 1919, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

Richmond Hill, Jamaica, N. Y., strike out all particulars.

COMMERCIAL SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS.

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 15, 1919, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

ARCTURUS.—U. S. Shipping Board, owner of vessel.

BERLIN.—Station operated and controlled by owner of vessel.

BORETA.—Petroleum Transport Service Corpn., owner of vessel.

CAPE LOOKOUT.—Name changed to *Kosciuszko*; station operated and controlled by R. C. of A.

- CAUTO.—Rates, 8 c. per word for all services; New York & Cuba Mail S. S. Co., owner of vessel; station operated and controlled by I. W. T. Co.
 CHARLES BRALEY.—Cuba Distilling Co., owner of vessel.
 CLAUSEUS.—Green Star S. S. Corpn., owner of vessel.
 COLOMBIA.—Station operated and controlled by Federal Telegraph Co.
 DAKOTAN.—Station operated and controlled by owner of vessel.
 EL ALBA.—Station operated and controlled by owner of vessel.
 GARFIELD.—Grace S. S. Co., owner of vessel.
 HOMER.—D. J. Hanlon, owner of vessel.
 J. F. PENROSE.—National Oil Transport Co., owner of vessel.
 JOHN P. REISS.—Call letters changed to K U T M.
 LAKE HARNEY.—International Coal Transportation Corpn., owner of vessel.
 LAKE JESSUP.—International Coal Transportation Corpn., owner of vessel.
 LAKE OTISCO.—International Coal Transportation Corpn., owner of vessel.
 LEVI G. BURGESS.—Station operated and controlled by owner of vessel.
 MINNESOTAN.—Station operated and controlled by owner of vessel.
 OCONEE.—E. H. Greene & Co., owner of vessel.
 PANUCO (KWM).—Rates, 8 c. per word for all services; New York & Cuba Mail S. S. Co., owner of vessel; station operated and controlled by I. W. T. Co.
 PLEIADES.—Luckenbach S. S. Co., owner of vessel.
 SACHEM.—Name changed to *Cuba*.
 SANTA ELISA.—Grace S. S. Co., owner of vessel.
 SOL NAVIS.—Name changed to *Hurry Luckenbach*; Luckenbach S. S. Co., owner of vessel.
 STANWOOD.—W. R. Chamberlin, owner of vessel.
 STRATHNAVER.—Name changed to *American Star*.
 THRASHER.—Name changed to *Kamchatka*; C. L. Hibbard, owner of vessel.
 WACOUTA.—Rates, 8 c. per word for all services; New York & Cuba Mail S. S. Co., owner of vessel.
 WEST CALERA.—U. S. Shipping Board, owner of vessel.
 WEST CATANACE.—Elder Steel S. S. Co., owner of vessel.
 WISCONSIN BRIDGE.—Name changed to *Sophie Frankel*.

THE STATIONS OF THE FOLLOWING-NAMED VESSELS ARE OPERATED AND CONTROLLED BY THE RADIO CORPORATION OF AMERICA.

Ario.	Keresaspa.	S. B. Hunt.
Ashburn.	Kerkenna.	Seminole.
Basford.	Kermanshah.	Sewalls Point.
Caldas.	Kermoor.	Socony 89.
Canibas.	Lancaster.	Socony 90.
City of Puebla.	Lydia.	Steel Ago.
Clincho.	Mangore.	Steelmaker.
Communipaw.	Mexoil.	Sunbeam.
Conehatta.	Mineola.	Sunoil.
Corvus.	Nawitka.	Sunshine.
Cowardin.	New Britain.	Tancarville.
Coyote.	Northern Star.	Thala.
Cubore.	North Pines.	Trontolite.
Favorite (WCF).	Oran.	Vigo.
Fire Island.	Orient.	Vinita.
Fred W. Weller.	Orleans.	Warszawa.
Geo. H. Jones.	Pere Marquette 8.	West Cavanal.
Glendola.	Rajah.	West Irmo.
Gold Shell.	Red Cloud.	Westoil.
Herbert L. Pratt.	Richmond Boro.	William N. Page.
Herman Winter.	Roman.	Willpolo.
Horado.	Sagadahoc.	Winding Gulf.
Itompa.	Santa Tecla.	Wisla.
J. E. O'Neil.	Santa Teresa.	W. M. Burton.
Keresan.	Saxon.	

THE STATIONS OF THE FOLLOWING-NAMED VESSELS ARE OPERATED AND CONTROLLED BY THE SHIP OWNERS RADIO SERVICE (INC.)

Alabama (WRAE).	Essex.	Kuwa.
Armenia.	Evelyn.	Lightburne.
Artigas.	Evergreen City.	Mazama.
Buckhannon.	G. A. Flagg.	Meriden.
Carolyn.	Hatteras.	Mystic.
City of Everett.	Hilton.	Rayo.
Conness Peak.	Holyoke Bridge.	Salinas.
Director.	Jean.	Solitaire.
Dirigo.	Jeannette Skinner.	Unicoi.
E. A. Morse.	Jennie R. Morse.	Zarembo.

THE STATIONS OF THE FOLLOWING-NAMED VESSELS ARE OPERATED AND CONTROLLED BY THE INDEPENDENT WIRELESS TELEGRAPH CO.

Cartona.	Hinckley.	Virginia Bridge.
Darden.	Lake Flatonia.	Western Front.
East Chicago.	Latham.	
Fort Armstrong.	Merry Mount.	

EFFECTIVE JUNE 1, 1920, THE RATE FOR ALL CLASSES OF SERVICE OF THE FOLLOWING-NAMED VESSELS IS 8 CENTS PER WORD.

Agwidale.	Corozal.	Monterey.
Alamo.	Esperanza.	Montoso.
Algonquin.	Guantanamo.	Morro Castle.
Antilla.	Henry R. Mallory.	Nueces.
Apache (KVA).	Huron.	Ponce.
Arapahoe.	Iroquois.	Rio Grande.
Brazos.	Isabela.	Sabine.
Camaguey.	Lampasas.	San Jacinto.
Cherokee.	Lenape.	San Juan (KGJ).
Coamo.	Matanzas.	San Marcos.
Comal.	Medina.	Santiago.
Comanche.	Mexico.	Santurce.
Concho.	Mohawk.	

Strike out all particulars of the following-named vessels:

Esperanca.	Lake Calvenia.	Long Island.
Gray Cloud.	Lake Champlain.	Piqua.
John F. Penrose (KUKZ).	Lake Grafton.	Polias.
Kenwood Bridge.	Lake Michigan.	Rock Island.
Knights Island.	Lake Stobi.	William O'Brien.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

KIBM, *read* Sophie Frankel; KIGS, *read* Harry Luchenbach; KIPP, *read* American Star; KJUG, *read* Kamchatka; KZUE, *read* Kosciuszko; WNY, *read* New York, N. Y.; and WQU, *read* Cuba. Strike out all particulars following the call signals, KBIU, KBOA, KEZV, KIND, KISZ, KIVL, KMEE, KODM, KOGG, KUFV, KUKZ, KPN, WIO, WSK, WTUA, and WXOU.

GOVERNMENT LAND 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 15, 1919.]

East San Pedro, Calif.—*Read* San Pedro, Calif.
 Fishermans Island, Va.—Strike out all particulars.
 Hillcrest, Calif.—*Read* NPG.
 San Francisco Beach, Calif.—*Read* NPG.
 Tuckerton, N. J.—Strike out all particulars.

GOVERNMENT SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS.

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 15, 1919.]

Strike out all particulars of the following-named vessels:

Nahant.	S. C. 207.	S. C. 407.
S. C. 1.	S. C. 292.	S. C. 434.
S. C. 90.	S. C. 293.	S. C. 436.
S. C. 99.	S. C. 300.	Sialia (NNV).

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

NPG, *read* San Francisco Beach, Calif., and Hillcrest, Calif., NPX, *read* San Pedro, Calif. Strike out all particulars following the call signals, NBF, NQE, NNV, NWW, NIQN, NIQQ, NOBB, NOFS, NOGG, NONK, NOSX, NOSZ, NOTK, NOZB.

SPECIAL LAND STATIONS BY NAMES OF STATIONS.

Waco, Tex. (5ZJ).—Strike out all particulars.

MISCELLANEOUS.

RATE CHANGE.

Effective June 1, 1920, the vessels owned by the Clyde S. S. Co., Mallory S. S. Co., New York & Cuba Mail S. S. Co., and the New York & Porto Rico S. S. Co., the stations of which are operated and controlled by the Independent Wireless Telegraph Co., are authorized to charge 8 cents per word for all classes of service. The old rate was 4 cents per word for North and South American service and 8 cents per word for transoceanic service. The names of these vessels are shown in this publication under "Alterations and Corrections."

LAND STATION CLOSED.

The Richmond Hill (Jamaica), N. Y., station of E. J. Simon has been closed.

TRANSMITTING TEST IN EXAMINATIONS.

Beginning June 1, this year, in addition to the receiving test given in the examination for radio operator a test in transmitting will be given at the same rate of speed as required now for receiving. An applicant is required to transmit correctly 100 consecutive characters for the commercial first-grade license, 60 consecutive characters for the commercial second grade, and 50 consecutive characters for the amateur first grade.

KEY OF RADIO ROOM ON BOARD AT ALL TIMES.

The Bureau's attention has been called to the fact that operators are neglecting to leave on board the key to the radio room in charge of the proper officer, when a vessel is in port as required by Regulation 17. It is suggested that a duplicate key be obtained for the radio room so that one may be on board at all times. Failure to comply with the regulation may result in action being taken by the

department against the operator, in view of the fact that the radio inspector can not inspect the apparatus unless he can enter the radio room.

CHANGE IN RADIO INSPECTION DISTRICTS.

The headquarters of the eighth district has been transferred from Cleveland, Ohio, to Detroit, Mich. The office of the inspector is in the Federal Building.

The office of the fourth district at Savannah, Ga., has been closed. The work of this district is being handled by the inspector of the third district, Customhouse, Baltimore, Md.

BROADCASTING HYDROGRAPHIC AND WEATHER REPORTS.

Hydrographic and weather reports are broadcasted (this service begun May 1, 1920) from the United States naval radio stations on the Pacific coast of the United States on the following schedules and wave lengths:

Radio station.	Time.	Wave lengths.
		<i>Meters.</i>
Point Arguello, Calif.....	8 a. m.....	952
	Noon.....	600
	4 p. m.....	952
	10 p. m.....	600
San Diego, Calif.....	8 a. m.....	600
San Francisco, Calif.....	Noon.....	952
	4 p. m.....	600
	10 p. m.....	952

UNITED STATES RADIO COMPASS STATIONS.

The following United States naval shore radio compass stations are now in operation for the purpose of furnishing bearings in the western Atlantic. For the present there will be no charge for bearings furnished.

Radio compass station.	Radio call.	Position.	
Bar Harbor, Me.....	NBD	Lat. 44° 18' 36" N	Lon. 68° 11' 27" W.
Gloucester, Mass.....	NAD	Lat. 42° 35' 19" N	Lon. 70° 41' 06" W.
Deer Island, Mass.....	NAD	Lat. 42° 21' 15" N	Lon. 70° 57' 30" W.
Fourth Cliff, Mass.....	NAD	Lat. 42° 09' 40" N	Lon. 70° 42' 22" W.
Cape Cod, Mass.....	NAE	Lat. 42° 02' 58" N	Lon. 70° 04' 32" W.
Surfside, Nantucket, Mass.....	NBS	Lat. 41° 14' 42" N	Lon. 70° 05' 58" W.
Price's Neck, R. I.....	NAF	Lat. 41° 27' 06" N	Lon. 71° 20' 15" W.
Watch Hill, R. I.....	NAF	Lat. 41° 18' 21" N	Lon. 71° 51' 29" W.
Montauk, L. I.....	NAH	Lat. 41° 03' 09" N	Lon. 71° 57' 27" W.
Fire Island, N. Y.....	NAH	Lat. 40° 38' 07" N	Lon. 73° 12' 32" W.
Rockaway Beach, N. Y.....	NAH	Lat. 40° 33' 52" N	Lon. 73° 52' 40" W.
Sandy Hook, N. J.....	NAH	Lat. 40° 28' 12" N	Lon. 74° 01' 06" W.
Mantoloking, N. J.....	NAH	Lat. 40° 01' 30" N	Lon. 74° 03' 10" W.
Cape May, N. J.....	NSD	Lat. 38° 58' 41" N	Lon. 74° 53' 10" W.
Cape Henlopen, Del.....	N8D	Lat. 38° 47' 33" N	Lon. 75° 05' 27" W.
Bethany Beach, Del.....	NSD	Lat. 38° 32' 45" N	Lon. 75° 03' 21" W.
Hog Island, Va.....	NCZ	Lat. 37° 22' 36" N	Lon. 75° 42' 37" W.
Cape Henry, Va.....	NCZ	Lat. 36° 55' 16" N	Lon. 75° 59' 51" W.
Cape Hatteras, N. C.....	NDW	Lat. 35° 14' 22" N	Lon. 75° 31' 42" W.
Cape Lookout, N. C.....	NAN	Lat. 34° 36' 13" N	Lon. 76° 32' 15" W.
North Island, S. C.....	NZW	Lat. 33° 13' 21" N	Lon. 79° 11' 06" W.
Morris Island, S. C.....	NAO	Lat. 32° 41' 36" N	Lon. 79° 53' 17" W.

NOTE.—The following radio compass stations are temporarily out of commission: Bar Harbor, Me.; Fourth Cliff, Mass.; Cape Cod, Mass.; Price's Neck, R. I.; Watch Hill, R. I.; Rockaway Beach, N. Y.; and Cape Henlopen, Del.

Where two or more of the foregoing compass stations have the same radio call it indicates that they are connected by wire telegraph to and under the control of a central control station, the radio call being the call of the central control station. When a request for bearings is made the central control station invariably answers with a bearing from each of the compass stations under its control.

The following signals have been authorized and will be used until further notice:

SIGNAL.	MEANING.
QTE ?	What is my true bearing ?
QTE	Your true bearing is degrees from Radio Compass Station.

To obtain bearings the compass station should be called in the usual manner, using the 800 meter wave length, the call to be followed by the signal "QTE ?," meaning "What is my true bearing?" When told by the compass station to "K" (go ahead) the ship's radio operator should follow the procedure outlined below:

- (a) Transmit the ship's radio call for 30 seconds.
- (b) Make dashes, each dash 5 seconds long, for 1 minute, with the ship's radio call after each dash.
- (c) Terminate with the signal "K" (go ahead).

If satisfactory bearings are obtained the operator at the compass station will call the vessel in the usual manner and reply "QTE," followed by the true bearing in degrees (0 to 359) spelled out in words, and the name of the radio compass station from which the bearing was obtained; otherwise a repetition of the test will be requested.

The ship's operator should acknowledge receipt of the bearings by answering the compass station in the usual manner and repeat, in numerals, the bearings received. This procedure enables all stations concerned to check the bearings.

All U. S. naval shore radio compass stations keep watch and transmit on 800 meters for merchant vessels, and this wave length must be used for calling and answering and carrying on all communication with these stations.

Attention is invited to the fact that when a single bearing is furnished there is a possibility of an error of 180° , as the operator at the compass station can not always determine on which side of his station the vessel lies; in such cases the decision is left to the commander of the vessel.

Subject to the foregoing, bearings should be accurate within 2° of an arc. When bearings from three or more compass stations are not over 2° of arc in error, but do not meet at a fixed point, the geometrical center of the triangle formed by the bearings can generally be taken as the approximate position of the vessel.

The primary object of these stations is to assist in the navigation of vessels during atmosphere of low visibility.

In order that the operation of shore radio compass stations may be checked up, it is requested that a brief report be forwarded to the Director Naval Communications, Navy Department, Washington, D. C., containing the following particulars:

1. Name of ship.
2. Name of radio compass station.

3. Date and G. M. T. at which radio bearing was taken.
4. Bearing given by radio compass station.
5. Estimated position of ship at above time and dates by methods other than radio.
6. The probable degree of accuracy of the estimated position.
7. Weather conditions at above time.
8. Remarks, if any.
9. Signature of master or responsible navigating officer.

ACCURACY OF RADIO BEARINGS.

The following information was furnished by the Director of the U. S. Naval Communication Service under date of October 10, 1919:

"The reliance that can be placed in bearings furnished by shore radio compass stations will be governed by the following conditions:

- "(a) When two sets of bearings are received which do not agree, a third set should immediately be requested.
- "(b) In thick weather bearings should be requested at least every half hour.
- "(c) Bearings that pass over intervening land or that are tangent to the shore line are not as reliable as those that have a clear sweep over the sea.
- "(d) Navigators receiving a set of bearings should immediately investigate the approximate fix indicated and determine whether or not they are being furnished with bearings from the stations that should be most reliable.
- "(e) When the position of the ship as indicated by the radio bearing differs materially from the position by dead reckoning, a second set of radio bearings should be requested in order to check the first radio position."

The following notice received from London under date of March 17, 1920, is published for the information of radio operators and masters of vessels.

ADMIRALTY NOTICE TO MARINERS.

[No. 478 of the year 1920.]

WIRELESS METEOROLOGICAL INFORMATION TO AND FROM SHIPS AT SEA.

General remarks.

Former Notice.—No. 8 of 1920; hereby canceled.

1. It is earnestly hoped that all concerned will assist in making the wireless meteorological service a success. Negotiations are now in hand to extend and unify the system of collecting weather data by wireless from ships at sea all over the world, and at the same time to organize the free transmission of weather bulletins from a sufficient number of wireless stations to admit of ships being constantly supplied with reliable weather reports and forecasts wherever they may be.

2. It should be borne in mind that the needs of ships at sea in regard to information regarding the weather will march hand in hand with the requirements of aircraft. The importance of this service will therefore be constantly increasing, and its success or failure will largely depend upon the cooperation of ships at sea in providing the data without which accurate forecasting is impossible. The matter does not depend solely upon the efforts of the ships selected to furnish the data. The essence of success lies in rapidity in passing such data by wireless from the ship to the coast station, and thence to the central meteorological office. It follows, therefore, that all ships not taking an active part in supplying data should use the greatest care not to interfere with the transmission of the wireless messages to the shore.

3. The following particulars refer to the scheme now being undertaken by the British Meteorological Office. This notice will, however, be subject to revision from time to time, and endeavors will be made to include in each revision all information available to date of the weather bulletins issued by the wireless stations of the world. Earnest endeavors are being made to obtain international agreement as to the form of these weather bulletins and to the methods and times of transmissions. It is hoped that the messages will eventually all be made in an international code at fixed times, so arranged that a ship with only one wireless operator will be able to read them. A similar scheme for time signals is being evolved.

Collection of weather data from ships.

4. Certain ships are being asked to supply data regularly three times a day _____ and in addition to the regular observations, which are taken at 0100, 0700, and 1300 Greenwich time and sent as soon as possible to Malin head (GMH) or Valentia (GCK) coast stations, these ships may, on request from either of these coast stations, send special data messages at other times.

5. Precise instructions as to the procedure for ships which intend to send a data message, together with the necessary code, will be issued at an early date.

Issue of weather bulletins to ships.

6. A wireless weather bulletin may contain both or either of the following:

(a) A weather report, which is an official statement of existing weather conditions; and/or

(b) A weather forecast, which is an official opinion of probable future weather conditions.

7. The accompanying schedule of wireless weather bulletins is intended to provide, in a form suitable to give all information required by the wireless operator, a complete and up-to-date list of all weather bulletins transmitted at fixed times by wireless stations throughout the world. The same information will be found in detail in the Sailing Directions and in the International List of Radiotelegraph Stations (the Berne List).

8. The times given in the third column of the schedule are expressed in the 4-figure notation employed for signaling during the war. The term "G. M. T." here means the civil mean time of the meridian of Greenwich, with the day commencing at midnight and the hours reckoned from 00 to 23.

9. Operators are reminded that article 45 of the International Service Regulations imposes the general obligation of not interfering with reception of weather bulletins by other ships.

10. Certain other stations not shown in the schedule supply weather bulletins on demand, generally at reduced charges. Particulars will be found in the Berne List.

Schedule of wireless weather bulletins.

Wireless station. (1.)	Call letters. (2.)	Time (G. M. T.). (3.)	Wave (meters). (4.)
Australasia:			
Adelaide radio.....	VIA	0900, 1030	600
Brisbane radio.....	VIB	1230, 1300	600
Hobart radio.....	VIH	1200	600
Melbourne radio.....	VIM	0930, 1100	600
Sydney radio (Pennant Hills).....	VIS		600
Awarua radio.....	VLA	} (1)	} (1)
Awarua radio.....	VLB		
Wellington radio.....	VLW		
Chatham Island.....	VLC		
Macquarie Island radio.....	VIQ		
Brazil:			
Ilha do Governador.....	SOH	* 0000	1800
China:			
Shanghai—Zikawei.....	FFZ	* 0300, 0900	600
France:			
Eiffel Tower.....	FL	* 0945, * 2330	2500

1 No details.

* Weather bulletin follows a time signal.

* Weather bulletin is followed by time signal.

Schedule of wireless weather bulletins—Continued.

Wireless station. (1.)	Call letters. (2.)	Time (G. M. T.). (3.)	Wave (meters). (4.)
French Oceania:			
Papeete, Ile Tahiti.....	FOP	1100, 2300	600
Germany:			
Norddeich.....	KAV	¹ 1200, 2200	1650
Great Britain:			
Poldhu.....	MPD	0930, 2130	2700
Cleethorpes.....	BYB	0500, 1700	3000
Cleethorpes "Northern".....	BYB	0600	3000
Cleethorpes "Scandinavia".....	BYB	1300	3000
Hawaiian Islands:			
Pearl Harbor.....	NPM	{ 0230, 0630 1830, 2230 }	600
Holland:			
Scheveningen.....	PCII	1115, 2315	1800
India:			
Calcutta radio.....	VWC	¹ 0730, 1910	2000
Karachi radio.....	VWK	} 0730, 1910	2000
Rangoon radio.....	VTR		1200
Bombay radio.....	VMB	} 0740, 1920	2000
Madras radio.....	VWM		2000
Port Blair.....	VTP		1200
Japan:			
Choshi.....	JCS	¹ 1200	600
Dairenwan.....	JDA	1200	600
Fukukaku.....	JKF	1130	600
Mediterranean:			
Rinella.....	BYZ	2100	2700
Mexico:			
Campeche.....	XAB	} ¹ 1837	600
Guayamas.....	XAH		
Mazatlan de Sinaloa.....	XAE		
Payo Obispo.....	XAC		
Vera Cruz.....	XAA		
Samoa:			
Tutuila.....	NPU	{ 0330, 0730 1930, 2330 }	600
South Africa:			
Capetown radio.....	MNC	1115	600
Durban radio.....	VND	1115	600
Spain:			
Madrid.....	EGC	1330	2000
United States:			
Washington (Arlington).....	NAA	¹ 0300 and ¹ 1700	2500
Annapolis.....	NBR	0130, 1330	1700
Key West.....	NAR	¹ 0300	1500
San Francisco.....	NPH	¹ 0600	600 and 950
North Head.....	NPE	0600	600 and 950
San Diego.....	NPL	0600	600 and 950

¹ Weather bulletin follows a time signal.

NOTE.—This Notice will be subject to revision from time to time.

(Notice No. 478 of 1920.)

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
5 CENTS PER COPY
SUBSCRIPTION PRICE, 25 CENTS PER YEAR

