RADIO NAVIGATIONAL AIDS

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WARNING ON USE OF FLOATING AIDS TO NAVIGATION TO FIX A NAVIGATIONAL POSITION

The aids to navigation depicted on charts comprise a system consisting of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid.

The buoy symbol is used to indicate the approximate position of the buoy body and the sinker which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain, and the fact that buoy and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits which often occur more than a year apart. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of ice or other natural causes, collisions, or other accidents.

For the foregoing reasons, a prudent mariner must not rely completely upon the position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

PREFACE

The 2014 edition of Pub. 117, Radio Navigational Aids, is a list of selected worldwide stations which provide electronic services to the mariner. This edition cancels all previous editions of Pub. 117. The listing is divided into chapters according to the nature of the service performed by the stations. The first numeral (hundreds digit) of section numbers of text and the first numeral (thousands digit) of station numbers correspond to the chapter number.

Radiobeacons, the only category of radio navigational aids not listed in this book, are grouped geographically and carried in the NGA Lists of Lights, Pub. 110 - 116.

Times quoted herein are, unless otherwise stated, in Coordinated Universal Time (UTC) and hours are reckoned from 0000 to 2359.

All bearings are true and are measured in degrees clockwise from 000° (true north) to 359°. The sectors of radio direction finder stations are given as looking from the station to seaward in accordance with international practice; it should be noted that this is the reverse of the method used in the light lists for expressing the sectors of lights.

Distances are reckoned in nautical miles unless otherwise stated.

When the term "plain language" is used in the description of the services rendered by a station, it signifies that the service is in the language of the country controlling the station, unless stated to be otherwise.

The hertz is the unit for the operating frequencies of communications-electronics equipment. Frequencies will normally be expressed as follows:

(1) In kilohertz (kHz) up to and including 300 kHz.
(2) In megahertz (MHz) up to and including 300 MHz.
(3) In gigahertz (GHz) up to and including 300 GHz.
Note: In practice, kilohertz may be used up to 30,000 kHz.

Nothing in the manner of presentation or arrangement of information in this publication implies endorsement or acceptance by NGA in matters affecting the status and boundaries of states and territories.

This edition contains information available to the National Geospatial-Intelligence Agency up to 13 December 2014, including Notice to Mariners No. 50 of 2014. Important information to amend material in this publication is available as a Publication Data Update (PDU) from the NGA Maritime Safety Information web site.

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CAUTION

Plans for air defense of the United States may require temporary suspension of the operations of certain electronic aids to navigation with little or no advance notice.

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THE NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY MARITIME SAFETY WEBSITE

The National Geospatial-Intelligence Agency (NGA) Maritime Safety Website provides worldwide remote query access to extensive menus of maritime safety information 24 hours a day.

Databases made available for access, query and download include Chart Corrections, Publication Corrections, NGA/DLIS Catalog Corrections, Chart and Publication Reference Data (current edition number, dates, title, scale), NGA List of Lights, USCG Light Lists, WorldWide Navigational Warning Service (WWNWS) Broadcast Warnings, Maritime Administration (MARAD) Advisories, Department of State Special Warnings, Mobile Offshore Drilling Units (MODUs), Anti-Shipping Activity Messages (ASAMs), World Port Index, and Radio Navigational Aids. Publications that are also made available as PDF files include the U.S. Notice to Mariners, U.S. Chart No. 1, The American Practical Navigator (Bowditch), International Code of Signals, Radio Navigational Aids, World Port Index, Distances Between Ports, Sight Reduction Tables for Marine and Air Navigation, and the Radar Navigation and Maneuvering Board Manual.

The Maritime Safety Website can be accessed via the NGA Homepage (http://www.nga.mil) or directly at http://www.msi.nga.mil/NGAPortal/MSI.portal. Any questions concerning the Maritime Safety Website should be directed to:

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TABLE OF SYMBOLS

LEGEND

Example:	A	1	A
	(1)	(2)	(3)

(1) Type of modulation of the main carrier:

A	Double sideband
F	Frequency modulation
G	Phase modulation
H	Single sideband (full carrier)
J	Single sideband (suppressed carrier)
N	Emission of unmodulated carrier
R	Single sideband (reduced or variable level carrier)

(2) Nature of signal(s) modulating the main carrier:

0	No modulating signal
1	Single channel containing quantized/digital information without modulating subcarrier, excluding time division multiplex
2	Single channel containing quantized/digital information with modulating subcarrier, excluding time division multiplex
3	Single channel containing analog information
9	Multiple channels, separately containing quantized/digital information and analog information

(3) Type of information to be transmitted. “Information” does not include information of a constant, unvarying nature, such as provided by standard frequency emissions, continuous wave and pulse radars, etc.:

A	Telegraphy (aural reception)
B	Telegraphy (automatic reception)
C	Facsimile
D	Data transmission, telemetry, telecommand Note: With 6 kHz, EDW operation in the bands below 30 MHz allocated exclusively for maritime mobile service (FC, MO)
E	Telephony (including sound broadcasting)
N	No information transmitted
W	Telegraphy and telephony

AMPLITUDE MODULATION

A1A	Continuous wave telegraphy, Morse code
A2A	Telegraphy by on/off keying of tone-modulated carrier, Morse code: double sideband
A3E	Radiotelephony using amplitude modulation: double sideband
A3C	Facsimile
A9W	Composite emission of telegraphy and telephony: double sideband
G1D	Data transmission
G3E	Radiotelephony
H2A	Telegraphy by on/off keying of tone-modulated carrier
H2B	Selective calling using sequential single frequency code
H3E	Radiotelephony: single sideband, full carrier
J2D	Data transmission: single sideband, suppressed carrier
J3C	Facsimile: single sideband, suppressed carrier
J3E	Radiotelephony using amplitude modulation: single sideband, suppressed carrier
N0N	Unmodulated continuous wave emission
R3E	Radiotelephony

FREQUENCY (or PHASE) MODULATION:

F1B	Narrow band direct printing (NBDP); Radioteletype
F2A	Telegraphy by on/off keying of tone-modulated carrier
F3C	Facsimile
F3E	Radiotelephony using frequency modulation

Pulse Modulation:
kHz = kilohertz
MHz = megahertz
GHz = gigahertz

TERMS AND ABBREVIATIONS

AOR-E	Atlantic Ocean Region-East
AOR-W	Atlantic Ocean Region-West
CES	Coast Earth Station
DSC	Digital Selective Calling
EPIRB	Emergency position-indicating radio beacon
GEOLUT	Local user terminal in a GEOSAR system
GEOSAR	Geostationary satellite system for SAR
HF	High Frequency
IOR	Indian Ocean Region
LEOLUT	Local user terminal in a LEOSAR system
LEOSAR	Low Earth Orbit satellite system for SAR
LUT	COSPAS-SARSAT Local User Terminal
MCC	COSPAS-SARSAT Mission Control Center
MF	Medium Frequency
MRCC	Maritime Rescue Co-ordination Center
MRSC	Maritime Rescue Sub-Center
NBDP	Narrow band direct printing
NCS	Network Coordinating Station
N.I.	No Information
NM	Nautical Miles
POR	Pacific Ocean Region
RCC	Rescue Coordination Center
Rx	Receiver
SAR	Search and rescue
Tx	Transmitter
UTC	Coordinated Universal Time

CHAPTER 1

RADIO DIRECTION FINDER AND RADAR STATIONS

PART I RADIO DIRECTION FINDER STATIONS

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CHAPTER 1

RADIO DIRECTION FINDER AND RADAR STATIONS

PART I RADIO DIRECTION FINDER STATIONS

100A. General

Radio bearings may be employed for fixing a ship's position in the same manner as other lines of position if due regard is given to the facts that they, like other lines of position, may not be absolutely accurate, and that the bearings are portions of great circles, not rhumb lines.

Radio bearings are obtained using radio direction finder sets installed on either shore stations or ships, and also by certain special radiobeacons.

Radio direction finder (RDF) stations are equipped with apparatus for determining the direction of radio signals transmitted by ships and other stations.

100B. Accuracy of Bearings Furnished by Direction Finding Stations

The bearings obtained by RDF stations and reported to ships are corrected for all determinable errors except the difference between a great circle and a rhumb line (See sec. 100F.) and are normally accurate within 2° for distances under 150 miles. However, this error may be increased by various circumstances, some of which are:

SECTOR OF CALIBRATION: The sector of calibration of a direction finder station is the sector around the receiving coil in which the deviation of radio bearings is known. In this book, the sectors are measured clockwise from 000° (true north) to 359° and are given from the station to seaward. Bearings which do not fall within the sector of calibration of the station should be considered unreliable.

STRENGTH OF SIGNALS: The most accurate bearings result from ships whose signals are steady, clear, and strong. If the signals are too weak, accurate bearings cannot be obtained.

TRANSMITTER ADJUSTMENT: The transmitter of the ship requesting bearings should be tuned carefully to the frequency of the station. If the tuning is off, it will be difficult for the station to obtain bearings sufficiently accurate for navigational purposes.

COASTAL REFRACTION (LAND EFFECT): Bearings which cut an intervening coastline at an oblique angle, or cross high intervening land, may produce errors of 4° to 5°. RDF stations normally know the sectors in which such refraction may be expected. Such sectors may not be included in the published sectors of calibration or may be marked "sectors of uncertain calibration."

SUNRISE, SUNSET, OR NIGHT EFFECTS: Bearings obtained from about half an hour before sunset to about half an hour after sunrise are occasionally unreliable because of the polarization error introduced. Changes in the intensity of the signals received occur at sunset and sunrise.

CAUTION: When RDF stations use such words as doubtful, approximate, second-class, or the equivalents in foreign languages, the bearings reported must be treated with suspicion as considerable error may exist.

DANGER FROM RECIPROCAL BEARINGS: When a single station furnishes a bearing, there is a possibility of an error of approximately 180°, as the operator at the station cannot always determine on which side of the station the ship lies. Certain direction finder stations, particularly those on islands or extended capes, are equipped to furnish two corrected true bearings for any observation. Such bearings may differ by approximately 180° and whichever bearing is suitable should be used.

CAUTION: Mariners receiving bearings which are evidently the approximate reciprocal of the correct bearings should never attempt to correct these bearings by applying a correction of 180°, as such a correction would not include the proper correction for deviation at the direction finder station. An error as large as 30° may be introduced by an arbitrary correction of 180°. Ships receiving bearings requiring an approximate 180° correction should request both bearings from the direction finder station.

100C. Obligations of Administrations Operating Direction Finding Stations

The obligations of RDF station operators are given in Article 35 of the manual for use by the Maritime Mobile Satellite Services of the International Telecommunications Union (1992). They include the following:

- Effective and regular service should be maintained, but no responsibility is accepted for these services.
- Serviced stations shall be advised of doubtful or unreliable observations.
- RDF station operators shall make daily notification of any temporary modifications or irregularities in service. Permanent modifications shall be published as soon as possible in the relevant notices to mariners.
- All RDF stations shall be able to take bearings on 410 kHz and 500 kHz.
- When RDF service is provided in authorized bands between 1605 kHz and 2850 kHz, RDF stations

providing that service should be able to take bearings on 2182 kHz.
– When RDF service is provided in the bands between 156 MHz and 174 MHz, the RDF station should be able to take bearings on VHF 156.8 MHz and VHF digital selective calling frequency 156.525 MHz.

100D. Procedure to Obtain Radio Direction Finder Bearings and Positions

TO OBTAIN A BEARING: The vessel should call the RDF station or the RDF control station on the designated watch frequency. Depending on the type of information wanted, the vessel should transmit the appropriate service abbreviation(s):

– QTE: What is the true bearing from you (or designated vessel)?
– QTH: Follows the above abbreviation when the request is made to a mobile RDF station.

The vessel should also indicate the frequency it will use to enable its bearing to be taken.

The RDF station called should request the vessel to transmit for the bearing by means of the service abbreviation QTG (Will you send two dashes of ten seconds each (or carrier) followed by your call sign (repeated __ times) on ___ kHz (or MHz)?).

After shifting, if necessary, to the new transmitting frequency, the vessel should transmit as instructed by the RDF station.

The RDF station should determine the direction, sense (if possible), and classification of the bearing and transmit to the vessel in the following order:

– QTE.
– Three digits indicating true bearing in degrees from the RDF station.
– Class of bearing.
– Time of observation.
– If the RDF station is mobile, its own position preceded by QTH.

When the vessel has received this information, it should repeat it back, if considered necessary for confirmation. The RDF station should confirm or correct the information. When the RDF station is sure the information has been correctly received, it will transmit AR (end of transmission). The vessel will respond with AR.

Unless otherwise indicated, the vessel may assume that the sense of the bearing was indicated. If not, the RDF station should indicate this or report the bearing and its reciprocal.

CLASSSIFICATION OF BEARINGS: To estimate the accuracy and determine the corresponding class of a bearing:

– An operator should generally, and particularly in the maritime mobile RDF service on frequencies below 3000 kHz, give the observational characteristics of bearings shown in the table below.
– The RDF station, when facilities and time permit, may take into account the probability of error in the bearing. A bearing is considered as belonging to a particular class if there is a probability of less than 1 in 20 that the bearing error would exceed the numerical values specified for that class in the table below. This probability should be determined from an analysis of the five components that make up the total variance of the bearing (instrumental, site, propagation, random sampling and observational components).

TO OBTAIN A POSITION (DETERMINED BY TWO OR MORE RDF STATIONS ORGANIZED AS A GROUP): The vessel should call the RDF control station and transmit QTF (Will you give me my position according to the bearings taken by the RDF stations you control?).

The control station shall reply and, when the RDF stations are ready, request that the vessel transmit using the service abbreviation QTG.

Classification of Bearings

Class	Bearing Error (Degrees)	Observational Characteristics					
		Signal Strength	Bearing Indication	Fading	Interference	Bearing Swing (Degrees)	Duration of Observation
A	±2°	very good or good	definite (sharp null)	negligible	negligible	less than 3°	adequate
B	±5°	fairly good	blurred	slight	slight	more than 3° less than 5°	short
C	±10°	weak	severely blurred	severe	strong	more than 5° less than 10°	very short
D	more than ±10°	scarcely perceptible	ill-defined	very severe	very strong	more than 10°	inadequate

When the position has been determined, the control station should transmit to the vessel:
– QTF.
– The position in latitude and longitude, or in relation to a known geographic point.
– Class of position.
– Time of observation.

According to its estimate of the accuracy of the observations, the control station shall classify the position in one of the four following classes:
– Class A - positions which the operator may reasonably expect to be accurate to within 5 nautical miles.
– Class B - positions which the operator may reasonably expect to be accurate to within 20 nautical miles.
– Class C - positions which the operator may reasonably expect to be accurate to within 50 nautical miles.
– Class D - positions which the operator may not expect to be accurate to within 50 nautical miles.

For frequencies above 3000 kHz, where the distance limits specified in the preceding subparagraph may not be appropriate, the control station may classify the position in accordance with current International Telecommunications Union-Radiocommunications Sector (ITU-R) recommendations.

TO OBTAIN SIMULTANEOUS BEARINGS FROM TWO OR MORE RDF STATIONS ORGANIZED AS A GROUP: On a request for bearings, the control station of a group of RDF stations shall proceed as indicated above. It then should transmit the bearings observed by each station of the group, each bearing being preceded by the call sign of the station which observed it.

100E. Plotting Radio Bearings

A fix by radio bearings is defined as follows:
– Three or more bearings taken simultaneously.
– Two bearings and a sounding.
– Two bearings and an LOP from a celestial body.
– Two bearings and a synchronized air or submarine signal.
– Two bearings on the same station and the measure of distance run (solve as if doubling the angle on the bow) between bearings.

Radio bearings are great circle azimuths (the bearing is the angle between the meridian of the ship or station taking the bearing and the great circle, not the rhumb line). They can be plotted directly upon gnomonic charts, but they cannot be plotted on a Mercator chart without first being corrected as described in sec. 100F.

WEIGHT TO BE GIVEN TO RADIO BEARINGS: Before using a radio bearing for navigational purposes, the mariner should consider the conditions under which it was taken and should compare the conditions with those given in sec. 100B on accuracy.

Land-based marine radiobeacon signals received by ships may only provide a bearing accuracy relative to vessel heading of ±3° - 10°. This is not satisfactory for navigation in restricted channels or harbors.

TRANSMITTERS AND RECEIVERS: Bearings reported by a direction finding station ashore must be plotted from the geographical position of the receiving antenna of the station. Bearings taken by a ship on a shore station must be plotted from the geographical position of the station's transmitting antenna.

CAUTION: These two positions are not the same for all stations.

SHIP'S PROBABLE POSITION: As radio bearings are not absolutely accurate, lines should be drawn on both sides of each radio bearing at an angular distance from the bearing equal to the estimated probable error. In the case of intersecting radio bearings, the ship's most probable position is the area enclosed by these outer lines.

In figure 1 the broken lines are radio bearings obtained on a ship by three radio stations. The solid lines are drawn at angles of 2° from the bearings (it is assumed that all the bearings are probably accurate within 2°). The black triangle in the illustration lies within the 2° error of all three bearings and is the most probable position of the ship. However, with the possibility that one of the bearings may be off by more than 2°, the areas shaded with parallel lines give other possible positions. If one of the bearings is suspected to be less accurate, the outer lines should be offset from this bearing the same number of degrees as the estimated error, and the area or areas partially enclosed by these lines should be given less weight than the other areas.

In figure 2, a ship on course 000° obtains bearings of 031° and 065° on a radio station. The lines drawn as long dashes show the bearings and the continuous lines are their limits of accuracy. It is assumed that the bearings are both accurate within 2°. The lines AB drawn with dashes and dots are equal to the distance run between bearings. The distance run is fitted to the lines showing the limits of accuracy of the bearings. This can be done easily by means of parallel rulers and dividers. The shaded quadrilateral shows the ship's probable position at the time of the second bearings, if both bearings are accurate within 2°.

Information on various kinds of land-based radiobeacons, their accuracy, and use may be found in the NGA Lists of Lights (Pub. 110 - 116) and "The American Practical Navigator" (Bowditch) (Pub. 9).

100F. Radio Bearing Conversion

The table on pg. 1-7 may be used to convert radio or great circle bearings into Mercator bearings for plotting on a Mercator chart. The table should be used when the distance between the ship and station is over 50 miles. The arguments used to find the correction are the middle latitude (Lm) and the difference of longitude (DLo) between the position of the radio station and the dead reckoning (DR) position of the vessel.

EXAMPLE: A vessel in DR position 56°04'N, 142°43'W takes a bearing on the radiobeacon at Cape Spencer Light Station at 58°12.0'N, 136°38.3'W. The bearing observed is 057.5°. Find the Mercator bearing.

Lm (to nearest whole degree) = 57°
DLo (to nearest half degree) = 6°

With Lm 57° and the DLo 6° enter the conversion table and extract the correction 2.5°. The receiver (ship) is in N latitude; the transmitter (radiobeacon) is eastward. Following the rule given at the bottom of the table, the correction is to be added:

Great circle bearing . . . . . 057.5°
Correction . . . . . +2.5°
Mercator bearing . . . . . 060.0°

To plot the bearing, add 180° to Mercator bearing, giving 240°, the rhumb line bearing of the ship from the radiobeacon.

EXAMPLE: A vessel in DR position 42°20'N, 66°14'W requests a bearing from a direction finder station at 42°08'N, 70°42'W. The bearing given is 081°. Find the Mercator bearing.

Lm (to nearest whole degree) = 42°
DLo (to nearest half degree) = 4.5°

With Lm 42° and DLo 4.5°, enter the conversion table and extract the correction 1.5°. The receiver (RDF station) is in N latitude; the transmitter (ship) is eastward. Following the rule given at the bottom of the table, the correction is to be added:

Great circle bearing . . . . . .081.0°
Correction. . . . . +1.5°
Mercator bearing . . . . . .082.5°

100G. Direction Finding Station List

The station list starting on pg. 1-8 shows the names, positions, and characteristics of radio direction finding stations.The frequencies used are broken down as follows:

A–Frequency on which station (or control station) keeps watch.
B–Frequency for transmission of signals on which bearings are observed.
C– Frequency on which results are transmitted.

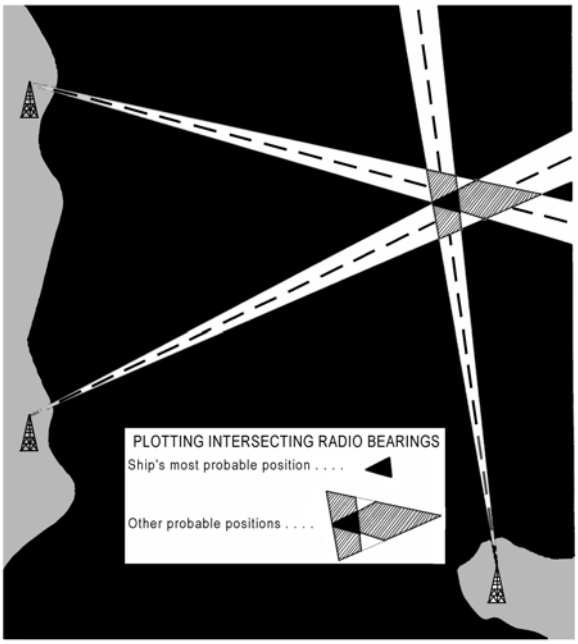

Figure 1.

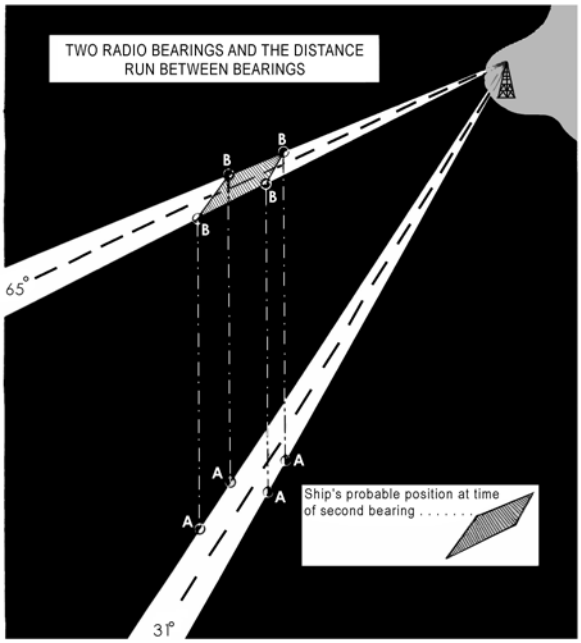

Figure 2.

Radio Bearing Conversion Table

Correction to be applied to radio bearing to convert to Mercator bearing

Difference of Longitude

Mid Lat.	0.5°	1°	1.5°	2°	2.5°	3°	3.5°	4°	4.5°	5°	5.5°	6°	6.5°	7°	7.5°	Mid Lat.
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
4					0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	4
5		0.1	0.1	0.1	.1	.1	.2	.2	.2	.2	.2	.3	.3	.3	.3	5
6		.1	.1	.1	.1	.2	.2	.2	.2	.3	.3	.3	.3	.4	.4	6
7		.1	.1	.1	.2	.2	.2	.3	.3	.3	.3	.4	.4	.4	.5	7
8		.1	.1	.1	.2	.2	.2	.3	.3	.4	.4	.4	.5	.5	.5	8
9		.1	.1	.1	.2	.2	.2	.3	.3	.4	.4	.5	.5	.6	.6	9
10		.1	.1	.1	.2	.2	.3	.4	.4	.4	.5	.5	.6	.6	.6	10
11		.1	.1	.2	.2	.3	.3	.4	.4	.5	.5	.6	.6	.7	.7	11
12	0.1	.1	.1	.2	.3	.3	.4	.4	.5	.5	.6	.6	.7	.7	.8	12
13	.1	.1	.2	.2	.3	.3	.4	.4	.5	.6	.6	.7	.7	.8	.8	13
14	.1	.1	.2	.2	.3	.4	.4	.5	.6	.6	.7	.7	.8	.8	.9	14
15	.1	.1	.2	.3	.3	.4	.4	.5	.6	.6	.7	.8	.8	.9	1.0	15
16	.1	.1	.2	.3	.4	.4	.5	.6	.6	.7	.8	.8	.9	1.0	1.0	16
17	.1	.2	.2	.3	.4	.4	.5	.6	.6	.7	.8	.9	1.0	1.0	1.1	17
18	.1	.2	.2	.3	.4	.5	.5	.6	.7	.8	.8	.9	1.0	1.1	1.2	18
19	.1	.2	.2	.3	.4	.5	.6	.6	.7	.8	.9	1.0	1.1	1.1	1.2	19
20	.1	.2	.2	.3	.4	.5	.6	.7	.8	.8	.9	1.0	1.1	1.2	1.3	20
21	.1	.2	.3	.4	.5	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.2	1.4	21
22	.1	.2	.3	.4	.5	.6	.6	.8	.8	.9	1.0	1.1	1.2	1.3	1.4	22
23	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	23
24	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	24
25	.1	.2	.3	.4	.5	.6	.7	.8	1.0	1.1	1.2	1.3	1.4	1.5	1.6	25
26	.1	.2	.3	.4	.6	.6	.8	.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	26
27	.1	.2	.3	.4	.6	.7	.8	.9	1.0	1.1	1.2	1.4	1.5	1.6	1.7	27
28	.1	.2	.4	.5	.6	.7	.8	.9	1.1	1.2	1.3	1.4	1.5	1.6	1.8	28
29	.1	.2	.4	.5	.6	.7	.8	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.8	29
30	.1	.2	.4	.5	.6	.8	.9	1.0	1.1	1.2	1.4	1.5	1.6	1.8	1.9	30
31	.1	.2	.4	.5	.6	.8	.9	1.0	1.2	1.3	1.4	1.6	1.7	1.8	1.9	31
32	.1	.3	.4	.5	.7	.8	.9	1.1	1.2	1.3	1.4	1.6	1.7	1.8	2.0	32
33	.1	.3	.4	.6	.7	.8	1.0	1.1	1.2	1.4	1.5	1.6	1.8	1.9	2.0	33
34	.1	.3	.4	.6	.7	.8	1.0	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.1	34
35	.1	.3	.4	.6	.7	.9	1.0	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.2	35
36	.1	.3	.4	.6	.7	.9	1.0	1.2	1.3	1.5	1.6	1.8	1.9	2.1	2.2	36
37	.2	.3	.4	.6	.8	.9	1.1	1.2	1.4	1.5	1.6	1.8	2.0	2.1	2.2	37
38	.2	.3	.5	.6	.8	.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.2	2.3	38
39	.2	.3	.5	.6	.8	1.0	1.1	1.2	1.4	1.6	1.7	1.9	2.1	2.2	2.4	39
40	.2	.3	.5	.6	.8	1.0	1.1	1.3	1.4	1.6	1.8	1.9	2.1	2.2	2.4	40
41	.2	.3	.5	.6	.8	1.0	1.2	1.3	1.5	1.6	1.8	2.0	2.1	2.3	2.5	41
42	.2	.3	.5	.7	.8	1.0	1.2	1.3	1.5	1.7	1.8	2.0	2.2	2.3	2.5	42
43	.2	.3	.5	.7	.8	1.0	1.2	1.4	1.5	1.7	1.9	2.1	2.2	2.4	2.6	43
44	.2	.4	.5	.7	.9	1.1	1.2	1.4	1.6	1.7	1.9	2.1	2.2	2.4	2.6	44
45	.2	.4	.5	.7	.9	1.1	1.2	1.4	1.6	1.8	2.0	2.1	2.3	2.5	2.6	45
46	.2	.4	.5	.7	.9	1.1	1.3	1.4	1.6	1.8	2.0	2.2	2.3	2.5	2.7	46
47	.2	.4	.6	.7	.9	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6	2.8	47
48	.2	.4	.6	.8	.9	1.1	1.3	1.5	1.7	1.8	2.1	2.2	2.4	2.6	2.8	48
49	.2	.4	.6	.8	1.0	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.6	2.8	49
50	.2	.4	.6	.8	1.0	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	50
51	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.1	2.3	2.5	2.7	2.9	51
52	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	52
53	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	53
54	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	54
55	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.1	2.2	2.4	2.7	2.9	3.1	55
56	.2	.4	.6	.8	1.0	1.2	1.4	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	56
57	.2	.4	.6	.8	1.1	1.2	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.2	57
58	.2	.4	.6	.8	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.6	2.8	3.0	3.2	58
59	.2	.4	.6	.8	1.1	1.3	1.5	1.7	1.9	2.2	2.4	2.6	2.8	3.0	3.2	59
60	.2	.4	.6	.9	1.1	1.3	1.5	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.2	60
	0.5°	1°	1.5°	2°	2.5°	3°	3.5°	4°	4.5°	5°	5.5°	6°	6.5°	7°	7.5°	

Receiver (latitude)	Transmitter (direction from receiver)	Correction Sign	Receiver (latitude)	Transmitter (direction from receiver)	Correction Sign
North	Eastward	+	South	Eastward	—
North	Westward	—	South	Westward	+

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					CANADA			
	The VHF direction finding stations of Canada are for emergency use only. All stations are remotely controlled by a Marine Communications and Traffic Services Center (MCTS). The following details of operation are common to all of these stations:							
					A. Ch.16. B. Ch.16 (distress only). C. Ch.16 (distress only).			
1001	**Cap-aux-Meules.**	RDF	47 23 14 N 61 51 40 W					MCTS Riviere-au-Renard (VCG).
1001.1	**Cape Blomidon.**	RDF	45 13 55 N 64 24 05 W					MCTS Saint John (VAR).
1001.13	**Cape Egmont.**	RDF	46 24 08 N 64 08 02 W					MCTS Sydney (VCO).
1001.15	**Cape North.**	RDF	47 00 38 N 60 25 41 W					MCTS Sydney (VCO).
1001.17	**Chebogue.**	RDF	43 44 39 N 66 07 21 W					MCTS Saint John (VAR).
1001.2	**Ecum Secum.**	RDF	44 57 53 N 62 08 56 W					MCTS Halifax (VCS).
1001.3 *2-4326*	**Fortune Head.**	RDF	47 04 02 N 55 50 52 W					MCTS Placentia (VCP).
1001.31	**Fox Island.**	RDF	45 19 47 N 61 04 46 W					MCTS Halifax (VCS).
1001.35 *2-4326*	**Grosses-Roches.**	RDF	48 54 51 N 67 06 38 W					MCTS Les Escoumins (VCF).
1001.45 *2-4326*	**Havre St.-Pierre.**	RDF	50 16 15 N 63 40 44 W					MCTS Riviere-au-Renard (VCG).
1001.5	**Kingsburg.**	RDF	44 16 32 N 64 17 15 W					MCTS Halifax (VCS).
1001.6 *2-4326*	**Lac D'aigle (Sept Iles).**	RDF	50 17 21 N 66 18 43 W					MCTS Les Escoumins (VCF).
1001.7	**Lockeport.**	RDF	43 39 49 N 65 07 47 W					MCTS Saint John (VAR).
1001.85 *2-4326*	**Mont-Louis.**	RDF	49 12 48 N 65 46 27 W					MCTS Les Escoumins (VCF).
1001.87	**Montague.**	RDF	46 11 40 N 62 39 35 W					MCTS Sydney (VCO).
1001.9 *2-4326*	**Montmagny.**	RDF	46 55 42 N 70 30 45 W					MCTS Quebec (VCC).
1001.95 *2-4326*	**Natashquan.**	RDF	50 08 40 N 61 48 00 W					MCTS Riviere-au-Renard (VCG).
1002 *2-4326*	**Newport.**	RDF	48 13 37 N 64 47 33 W					MCTS Riviere-au-Renard (VCG).
1002.1	**North Cape.**	RDF	47 03 27 N 63 59 55 W					MCTS Sydney (VCO).
1002.11 *2-4326*	**Pointe Heath.**	RDF	49 05 05 N 61 42 09 W					MCTS Riviere-au-Renard (VCG).
1002.12	**Port Caledonia.**	RDF	46 11 14 N 59 53 59 W					MCTS Sydney (VCO).
1002.13	**Redhead.**	RDF	45 14 01 N 65 59 05 W					MCTS Saint John (VAR).
1002.15 *2-4326*	**Riviere-au-Renard.**	RDF	49 00 29 N 64 24 00 W					MCTS Riviere-au-Renard (VCG).

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
1002.2 *2-4326*	**Riviere du Loup.**	RDF	47 45 26 N	69 36 14 W				MCTS Quebec (VCC).
1002.25	**Sambro.**	RDF	44 28 21 N	63 37 13 W				MCTS Halifax (VCS).
1002.3	**Tiverton.**	RDF	44 23 40 N	66 13 36 W				MCTS Saint John (VAR).
1002.35 *2-4326*	**Twillingate.**	RDF	49 41 10 N	54 48 00 W				MCTS St. Anthony (VCM).
1002.36	**Banks.**	RDF	44 28 30 N	80 20 56 W				MCTS Thunder Bay (VBA).
	Seasonal operation: April 1-December 31.							
1002.37	**Brougham.**	RDF	43 55 13 N	79 06 51 W				MCTS Prescott (VBR).
	Seasonal operation: April 1-December 31.							
1002.38	**Cape Croker.**	RDF	44 57 30 N	80 57 53 W				MCTS Thunder Bay (VBA).
	Seasonal operation: April 1-December 31.							
1002.4	**Cobourg.**	RDF	44 04 02 N	78 12 38 W				MCTS Prescott (VBR).
	Seasonal operation: April 1-December 31.							
1002.45	**Pointe au Baril.**	RDF	45 33 50 N	80 19 18 W				MCTS Thunder Bay (VBA).
	Seasonal operation: April 1-December 31.							
1002.5	**Tobermory.**	RDF	45 09 42 N	81 29 55 W				MCTS Thunder Bay (VBA).
	Seasonal operation: April 1-December 31.							
1002.55	**Trafalgar.**	RDF	43 29 41 N	79 43 47 W				MCTS Prescott (VBR).
	Seasonal operation: April 1-December 31.							
1002.6 *2-3510*	**Barry Inlet.**	RDF	52 34 30 N	131 45 13 W				MCTS Prince Rupert (VAJ).
1002.65 *2-3510*	**Calvert Island.**	RDF	51 35 21 N	128 00 43 W				MCTS Prince Rupert (VAJ).
1002.7 *2-3510*	**Cumshewa.**	RDF	53 09 33 N	131 59 47 W				MCTS Prince Rupert (VAJ).
1002.75 *2-3510*	**Dundas Island.**	RDF	54 31 16 N	130 54 55 W				MCTS Prince Rupert (VAJ).
1002.8 *2-3510*	**Klemtu.**	RDF	52 34 45 N	128 33 45 W				MCTS Prince Rupert (VAJ).
1002.85 *2-3510*	**Mount Gil.**	RDF	53 15 46 N	129 11 42 W				MCTS Prince Rupert (VAJ).
1002.9 *2-3510*	**Mount Hays.**	RDF	54 17 12 N	130 18 49 W				MCTS Prince Rupert (VAJ).
1002.95 *2-3510*	**Naden Harbor.**	RDF	53 57 18 N	132 56 30 W				MCTS Prince Rupert (VAJ).
1003 *2-3510*	**Van Inlet.**	RDF	53 15 08 N	132 32 31 W				MCTS Prince Rupert (VAJ).

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					UNITED KINGDOM			
					A. Ch.16. B. Ch.16 (distress only). Ch.67. Ch.82 (Jersey only). C. Ch.16 (distress only). Ch.67. Ch.82 (Jersey only).			
1055	**Barra.** *2-0001*							MRCC Stornoway.
1060	**Bawdsey.** *2-0001*	RDF	51 59 33 N 1 24 35 E					MRCC Thames.
1065	**Berry Head.** *2-0001*	RDF	50 23 58 N 3 29 03 W					MRCC Brixham.
1066	**Boniface.** *2-0001*	RDF	50 36 13 N 1 12 02 W					MRCC Solent.
1070	**Compass Head.** *2-0001*	RDF	59 52 03 N 1 16 18 W					MRCC Shetland.
1072	**Cross Law.** *2-0001*	RDF	55 54 29 N 2 12 19 W					MRCC Forth.
1073	**Cullercoats.** *2-0001*	RDF	55 04 00 N 1 28 00 W					MRCC Humber.
1075	**Dunnet Head.** *2-0001*	RDF	58 40 17 N 3 22 35 W					MRCC Aberdeen.
1080	**Easington.** *2-0001*	RDF	53 39 08 N 0 05 54 E					MRCC Humber.
1082	**East Prawle.** *2-0001*	RDF	50 13 06 N 3 42 30 W					MRCC Brixham.
1086	**Fairlight.** *2-0001*	RDF	50 52 11 N 0 38 44 E					MRCC Dover.
1087	**Fife Ness.** *2-0001*	RDF	56 16 42 N 2 35 18 W					MRCC Forth.
1088	**Flamborough.** *2-0001*	RDF	54 07 05 N 0 05 13 W					MRCC Humber.
1089	**Great Ormes Head.** *2-0001*	RDF	53 19 58 N 3 51 15 W					MRCC Holyhead.
1090	**Grove Point.** *2-0001*	RDF	50 32 56 N 2 25 12 W					MRCC Portland.
1090.5	**Guernsey.** *2-0155*	RDF	49 26 12 N 2 35 50 W					
1091	**Hartland.** *2-0001*	RDF	51 01 13 N 4 31 24 W					MRCC Swansea.
1091.2	**Hartlepool.** *2-0001*	RDF	54 41 47 N 1 10 34 W					MRCC Humber.
1092	**Hengistbury Head.** *2-0001*	RDF	50 42 57 N 1 45 38 W					MRCC Portland.
1093	**Inverbervie.** *2-0001*	RDF	56 51 06 N 2 15 39 W					MRCC Forth.
1093.5	**Jersey.** *2-0165*	RDF	49 10 51 N 2 14 18 W					
1094	**Kilchiaran.** *2-0001*	RDF	55 45 54 N 6 27 11 W					MRCC Clyde.
1094.1	**Land's End.** *2-0001*	RDF	50 08 08 N 5 38 11 W					MRCC Falmouth.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
1094.2 *2-0001*	**Langdon Battery.**	RDF	51 07 58 N 1 20 35 E					MRCC Dover.
1094.5 *2-0001*	**Law Hill.**	RDF	55 41 46 N 4 50 28 W					MRCC Clyde.
1095 *2-0001*	**Lizard.**	RDF	49 57 36 N 5 12 04 W					MRCC Falmouth.
1095.5 *2-0001*	**Lowestoft.**	RDF	52 28 36 N 1 42 12 E					MRCC Yarmouth.
1096 *2-0001*	**Newhaven.**	RDF	50 46 56 N 0 03 01 E					MRCC Solent.
1097 *2-0001*	**Newton.**	RDF	55 31 01 N 1 37 06 W					MRCC Humber.
1098 *2-0001*	**North Foreland.**	RDF	51 22 32 N 1 26 43 E					MRCC Dover.
1098.2 *2-0001*	**Noss Head.**	RDF	58 28 45 N 3 03 00 W					MRCC Aberdeen.
1098.3 *2-0001*	**Portnaguran.**	RDF	58 14 48 N 6 09 49 W					MRCC Stornoway.
1098.5 *2-0175*	**Orlock Head.**	RDF	54 40 25 N 5 34 58 W					MRCC Belfast.
1105 *2-0001*	**Rame Head.**	RDF	50 19 02 N 4 13 12 W					MRCC Brixham.
1105.2 *2-0001*	**Rhiw.**	RDF	52 50 00 N 4 37 49 W					MRCC Holyhead.
1106 *2-0001*	**Rodel.**	RDF	57 44 54 N 6 57 25 W					MRCC Stornoway.
1108 *2-0001*	**St. Ann's Head.**	RDF	51 40 58 N 5 10 31 W					MRCC Milford Haven.
1109 *2-0001*	**St. Mary's, Isles of Scilly.**	RDF	49 55 44 N 6 18 15 W					MRCC Falmouth.
1115 *2-0001*	**Selsey.**	RDF	50 43 48 N 0 48 13 W					MRCC Solent.
1116 *2-0001*	**Shoeburyness.**	RDF	51 31 23 N 0 46 30 E					MRCC Thames.
1117 *2-0001*	**Skegness.**	RDF	53 09 00 N 0 21 00 E					MRCC Yarmouth.
1120 *2-0001*	**Snaefell.**	RDF	54 15 50 N 4 27 40 W					MRCC Liverpool.
1150 *2-0001*	**Tiree.**	RDF	56 30 37 N 6 57 41 W					MRCC Clyde.
1155 *2-0001*	**Trevose Head.**	RDF	50 32 55 N 5 01 59 W					MRCC Falmouth.
1160 *2-0001*	**Trimingham.**	RDF	52 54 34 N 1 20 36 E					MRCC Yarmouth.
1171 *2-0175*	**West Torr.**	RDF	55 11 54 N 6 05 41 W					MRCC Belfast.
1175 *2-0001*	**Wideford Hill.**	RDF	58 59 17 N 3 01 24 W					MRCC Shetland.
1180 *2-0001*	**Windyheads Hill.**	RDF	57 38 54 N 2 14 42 W					MRCC Aberdeen.
			BULGARIA					
1187.61 *2-1282*	**Nos Galata Lt.**	RDF		43 10 17 N 27 56 49 E	297.5 kHz, A2A.	5	On request to Hydrographic Service, Varna.	Transmits **DG**.

(1) No.	(2) Name	(3) Type	(4) Position Rx	(4) Position Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					PAKISTAN			
1188	**Karachi (ASK).** *2-2147*	RDF	24 52 44 N 67 09 50 E	24 51 05 N 67 02 32 E	A. 410, 500 kHz, A1A. B. 410, 500 kHz, A1A. C. 410, 500 kHz, A1A, A2A, 1.5 kW.			CALIBRATED SECTOR: 360°.

PART II RADAR STATIONS

100H. Coast and Port Radar Station List

Details concerning shore-based radar stations rendering navigational assistance to ships on request are given in the listings which follow. These stations are indicated on charts by the abridged description: Ra.

These stations provide information of interest to the mariner. They have a limited range of transmission and usually broadcast traffic, navigational, weather and other information concerning only their port limits and approaches. The provision of such information does not relieve the Master of his responsibility for the safe navigation of his ship.

Mariners are warned that port radar stations may suspend operation without notice for varying periods because of minor defects, maintenance work, etc.

Many of these stations provide radar information in conjunction with Vessel Traffic Service (VTS) operations. In many ports participation in VTS may be compulsory for certain classes of vessels. For further information on VTS in specific ports, refer to National Ocean Service Coast Pilots (NOSPBCP1 - 9), NGA Sailing Directions (Pub. 120 - 200) and other applicable guides.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					RUSSIA			
1190	**Sankt-Peterburg.**	RA			Ch.12.		Call Sankt-Peterburg Radio-12.	Vessels can obtain assistance between sea buoy and heads of Severnaya and Yuzhnaya Dambas.
1192	**Novorossiysk.**	RA			Ch.09,95.		Call Novorossiysk 17.	Continuous radar guidance is compulsory for vessels over 200 GRT. Covers area N of 44-37.7N, between 37-48.0E 37-52.9E.
1194	**Nakhodka.**	RA			Ch.12,16.		Call Traffic Control Center (Kamenskiy 17).	Mandatory radar control of vessels N of line joining 42-44.0N 132-51.6E and 42-42.9N 132-59.9E.
1196	**Murmansk.**	RA			Ch.12,18,67.		Call Coast Radar Station (Murmansk Radio 9).	When visibility is less than 0.5M, navigation will only be conducted under radar control. Covers area S of 60-02.7N and should be requested 2 hrs. in advance.
					LATVIA			
1198	**Ventspils.**	RA			Ch.14,16.		Call Radio 9.	Compulsory when visibility is less than 2M or vessel is over 150m in length or 12000 DWT.
					LITHUANIA			
1199	**Klaipeda.**	RA			Ch.09.		Call Radio 17.	Compulsory when visibility is less than 0.5M or for ferries, tankers, vessels with dangerous cargos and vessels constrained by their draft.
					POLAND			
1200	**Leba.**	RA			Ch.12,16.		Call Leba Port Radar.	Covers area of port and roads.
1201	**Darlowo.**	RA			Ch.12,16; or Witowo Radio (SPS) 2182kHz.		Call Darlowo Port Radar Station.	
1202	**Kolobrzeg.**	RA			Ch.12,16.		Call Kolobrzeg Port Radar Station.	Covers area of port and roads.
					SWEDEN			
1203	**Goteborg.**	RA			Ch.09,13,16.		Call Goteborg Trafik.	Available on request for large tankers and other vessels with defective radar in poor visibility. Covers the area seaward of Alvsborgsbron (57-41.5N 11-54.2E).
					NORWAY			
1204	**Fedje.**	RA			Ch.16,80.			Compulsory for all vessels over 200 GRT or 24m. in length (including tows) or carrying dangerous cargos. Permission to navigate within the VTS area should be obtained at least 1 hr. before entering the area. Covers the approaches of the Sture and Mongstad oil terminals.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					GERMANY			
1205	**Die Elbe.**	RA			Cuxhaven Control: Elbe Approach West Ch.65. Elbe Approach East Ch.19. Scharhorn Ch.18. Neuwerk Ch.05. Cuxhaven Ch.21. Belum Ch.03. Brunsbuttel Control: Brunsbuttel I Ch.04. II Ch.67. S. Margarethen Ch.18. Freiburg Ch.22 Rhinplatte Ch.05 Pagensand Ch.66 Hetlingen Ch.21 Wedel Ch.60.		Call Cuxhaven Elbe Traffic on Ch.71,16; Brunsbuttel Elbe Traffic on Ch.68,16; or the appropriate Control Area.	Radar information provided on request. Vessels exempt from compulsory pilotage should use this service when visibility is less than 2000m (on the Lower Elbe, W of Seemannshoft, less than 3000m).
1210	**Hamburg.**	RA			Light buoy No.123 to 129 Ch.19. Light buoy No.129 to Seemannshoft Ch.03. Seemannshoft to Vorhafen Ch.63. Parkhafen to Kuhwerder Vorhafen Ch.07. Kuhwerder Vorhafen to Norderelbbrucke Ch.05. Kohlbrand to Harburger harbors Ch.80.		Call Cuxhaven Elbe Traffic on Ch.71; Brunsbuttel Elbe Traffic on Ch.68; or Hamburg Radar.	Radar service provided on request. Vessels exempt from compulsory pilotage should use this service when visibility is less than 2000m (W of Seemannshoft, less than 3000m).
1215	**Die Weser.**	RA			Alte Weser Ch.22. Hohe Weg I,II Ch.02. Robbenplate I,II Ch.04. Blexen Ch.07. Luneplate I Ch.05. II Ch.82. Dedesdorf Ch.82. Sandstedt Ch.21. Harriersand I Ch.21. II Ch.19. Elsflether Ch.19. Ronnebeck, Ritzenbutteler, Schonebecker Ch.78. Ochtumer, Seehausen, Lankenau Ch.81. All stations Ch.16.		Call Bremerhaven Weser Radar or Bremen Weser Radar on Ch.16.	Radar information is provided on request or if instructed by the VTS Center (in German and English). Radar service is provided when visibility is less than 3000m (Bremerhaven Weser) or 2000m (Bremen Weser); when pilot vessel is in a sheltered position; when light buoys are withdrawn due to ice; when required by traffic situation or when requested by a vessel. VTS compulsory for all vessels over 50m in length and all vessels carrying dangerous cargo.
1216	**Die Jade.**	RA			Jade I,II: Light buoy 1b/Jade 1 to 33 Ch.63. Light buoy 33 to 60 Ch.20.		Call Jade Radar Ch.16.	Radar information provided when visibility is less than 3000m; when pilot vessel is in a sheltered position; when light buoys are withdrawn due to ice; when required by traffic situation or when requested by a vessel. VTS compulsory for vessels (including tows) over 50m in length and all vessels carrying dangerous cargo.
1217	**Die Ems.**	RA			Borkum: Light buoy No.1 to 35 Ch.18. Knock: Light buoy No.35 to 57 Ch.20. Wybelsum: Light buoy No.57 to Emden harbor entrance Ch.21.		Call Ems Traffic.	Radar information is provided on request or if instructed by the VTS Center (in German and English). Radar service is provided when visibility is less than 2000m; when pilot vessel is in a sheltered position; when light buoys are withdrawn due to ice; when required by traffic situation or when requested by a vessel. VTS compulsory for all vessels over 40m in length and all vessels carrying dangerous cargo.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					NETHERLANDS			
1218	**Eemshaven.**	RA			Ch.19.		Available on request of the pilot 1 hr. in advance to Verkeersdienst Eemsmonding on Ch.14 or Delfzijl Pilot Vessel on Ch.06,16. Call Eemshaven Radar.	Covers Lt buoy 31 or 35 to Eemshaven.
1218.5	**Delfzijl.**	RA			Ch.19.		Requests should be made by the master of any sea going or inland vessel through the VHF Channel appropriate for the port. Call Delfzijl Radar.	When visibility falls below 2000m within the jurisdiction of the Delfzijl VTS area. Under special circumstances assistance can be given when visibility is good, for example if navigational aids are not working correctly.
1219	**Den Helder.**	RA			Ch.07,62.		Call Den Helder.	Vessels equipped with VHF are requested to participate. Vessels should make notification when navigating in area or passing Moormanbrug.
1220	**Ijmuiden.**	RA			West of Ijmuiden light buoy Ch.07. Ijmuiden light buoy to North Sea Locks Ch.61.		Call Traffic Center Ijmuiden west of Ijmuiden light buoy; call Ijmuiden Port Control from Ijmuiden light buoy to North Sea Locks.	Radar information provided to vessels within 13M of Ijmuiden light buoy (52-28.7N 04-23.9E) which do not have a pilot aboard.
1225	**Scheveningen.**	RA			Ch.21.	9.5	Call Radar Scheveningen.	In reduced visibility vessels may request information on their position and traffic.
1226	**Dordrecht.**	RA			Ch.79.		Call Sector Dordrecht.	
	Nieuwe (Rotterdamsche) Waterweg is covered by the following five Radar Stations. The Traffic Management and Information Service is compulsory for all vessels navigating in the area. Inbound vessels with draft 20.7m and over should make notification to HCC Rotterdam through Scheveningen (PCH) 24 hrs. in advance. Vessels with draft 17.4m and over navigating Nieuwe Waterweg should make notification to Traffic Center Hook through Scheveningen 6 hrs. in advance; vessels 250m and over 4 hrs. in advance. Inbound vessels with dangerous cargo should report to Central Traffic Control (HCC) 24 hrs. in advance (1 hr. in advance of unberthing). All other vessels should make notification to Hoek van Holland 3 hrs. in advance of arrival and notify their area Radar Station 1 hr. in advance of unberthing.							
1230	**Hoek van Holland (VCH).**	RA			Ch.01,02,03,11,65,66; 2182kHz.		Call Traffic Center Hoek van Holland.	Covers Maas Traffic Separation Schemes, Europoort and Nieuwe Waterweg to Kilometer Post 1023.
1231	**Botlek (VCB).**	RA			Ch.11,60,63.		Call Sector Botlek.	Covers Nieuwe Waterweg to Kilometer Post 1011 Nieuwe Maas, 1005 Oude Maas.
1232	**Hartel (VPH).**	RA			Ch.62.		Call Sector Oude Maas.	Covers Oude Maas to Buoy O12 and Hartelkanal.
1233	**Rotterdam (VCR).**	RA			Ch.11,60,61,63,80.		Call Traffic Center Rotterdam.	Covers Nieuwe Maas to Kilometer Post 998.
1234	**Maasboulevard (VPM).**	RA			Ch.21,81.		Call Traffic Center Maasboulevard.	Covers Nieuwe Maas to Kilometer Post 993.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					UNITED KINGDOM			
1237	**Lerwick.**	RA			Ch.12.		Call Lerwick Harbour Radio.	Vessels should report at N and S Entrances. Covers N Entrance, S Entrance and Inner Harbour.
1240	**Sullom Voe Harbour.**	RA			Ch.09,10.		Call Sullom Voe VTS.	Vessels arriving should make notification 24 hrs. in advance. Covers Yell Sound and Sullom Voe. VHF reception is poor W and N of Yell Sound.
1245	**Tees.**	RA			Ch.14,22.	12	Call Tees Harbour Radio.	All vessels navigating when "Channel Closed" signals are displayed or when visibility is less than 1000m must obtain prior permission from Harbour Master; all vessels with dangerous cargo must make 24 hr. advance notification; all vessels over 20m must make 6 hrs. advance notification. Covers Tees Bay, Tees River to tidal limits and Hartlepool.
1250	**Medway.**	RA			Ch.74.		Call Medway Radio.	All inbound vessels should contact Medway Navigation Service 24 hrs. in advance; outbound vessels should make 1 hr. advance notification.
1254	**Gravesend Radio.**	RA			Thames seaward approaches to Sea Reach No.4 light buoy Ch.13. Sea Reach No.4 light buoy to Crayford Ness Ch.12. Secondary Ch.09,16, 18,20.		Call Port Control London or Gravesend Radio.	Inbound and outbound vessels should make notification 24 hrs. in advance. Covers Thames R. from Erith to seaward limits of the Port of London.
1255	**Woolwich Radio.**	RA			Ch.14,16,22.			Inbound and outbound vessels should make notification 24 hrs. in advance. Covers Thames R. from Crayford Ness to Greenwich.
1262	**Harwich.**	RA			Ch.71.		Call Harwich VTS.	Inbound vessels should make notification 24 hrs. in advance. Outbound vessels should make notification 2 hrs. in advance.
1265	**Southampton Vessel Traffic Services Centre.**	RA			Ch.09,12.		Call Southampton VTS.	Compulsory for vessels 20m or over. Inbound vessels make notification 12 hrs. in advance. Outbound vessels should make notification 3 hrs. in advance.
1270	**Liverpool.**	RA			Ch.12. Ch.19(tankers to or from Tranmere).		Call Mersey Radio.	Vessels over 50 GRT carrying dangerous cargo should make notification 48 hrs. in advance of arrival/departure. All other vessels over 50 GRT should make notification 24 hrs. in advance of arrival and 1 hr. in advance of departure. Covers River Mersey including Liverpool, Birkenhead, Eastham and Garston.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					FRANCE			
1273	**Dunkerque.**	RA			Dunkerque Pilots: Ch.16 (calling). Ch.72 (working). Dunkerque Port: Ch.73.	45	Call Dunkerque VTS.	Radar coverage of the pilot embarkation zone at the entrance to the Passe de l'Ouest is provided by the Pilot Station (50-59.2N 01-58.0E). Radar coverage of the access channels is provided by the port.
1274	**Gris-Nez (CROSS).**	RA			Ch.13,79.		Call Gris-Nez Traffic.	Radar assistance provided on request. Two radar stations at Gris-Nez (50-52.2N 01-35.1E) and Saint-Frieux (50-36.6N 01-36.6E) provide coverage extending approximately SW up to 00-30E and NE up to 30 miles from Gris-Nez.
1275	**Le Havre.**	RA			Ch.22.	22	Call Baie de Sein Traffic.	Radar assistance provided on request in poor visibility for Le Havre or Antifer. The area of radar coverage is a circular zone 12.5 miles radius centered on 49-39.0N 00-08.0W (approx.). Inbound vessels should make notification 48 hrs. in advance. Outbound vessels should make notification 24 hrs. in advance.
1280	**La Seine.**	RA			Ch.13,73.		Call Rouen Port Control.	Radar assistance provided in poor visibility and on request. The area of radar coverage extends to 20 miles W of Radar Honfleur (49-25.7N 00-14.1E) up to 00-36.2E.
1285	**Rouen.**	RA			Ch.13,73.		Call Rouen Port Control.	Radar assistance provided in poor visibility and on request. Coverage area extends to 20 miles W of Radar Honfleur (49-25.7N 00-14.1E) up to 00-36.2E.
1287	**Corsen (CROSS).**	RA			Ch.13,79.	40	Call Ouessant Traffic.	Coverage area is a circular zone up to 40 miles from Le Stiff Radar Tower (48-28.6N 05-03.1W).
1288	**La Loire.**	RA			Ch.12.		Call Saint-Nazaire Port.	Radar assistance provided on request. Coverage area from the pilot boarding point (47-07.5N 02-21.5W) to Saint-Nazaire Roads.
1290	**La Gironde.**	RA			Ch.16 (calling). Ch.12,14 (working).		Call Radar Verdon 3 hrs. in advance of ETA on Ch. 12.	Covers La Gironde and approaches (a circular zone 34 miles radius centered on (45-39.8N 01-07.2W). Radar information is supplied on Ch. 12 or 14 for the area between BXA lightbuoy and Le Verdon's roads. Notification of arrival should be made 48 hrs. in advance to Bordeaux Traffic through agent, 24 hrs. and 12 hrs. in advance direct to Bordeaux Traffic.
					PORTUGAL			
1295	**Aveiro.**	RA			Ch.14,16.		Call Pilotosaveiro.	In bad weather pilot vessel assists vessel's approach to harbor entrance. Arrival notification should be made 6 hrs. in advance.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					SPAIN			
1300	**Strait of Gibraltar.**	RA			Ch.10,16.	19	Call Tarifa Traffic.	Tarifa Vessel Traffic Service is compulsory for VHF-equipped vessels which are Spanish flag, intend to enter Spanish territorial seas, have dangerous cargo or limitations to maneuverability or navigation. Vessels should call when within 21M of Tarifa (36-01.1N 05-34.8W) or on leaving a port within that area.
					UKRAINE			
1305	**Odessa.**	RA			Ch.14,16.		Call Odessa Port Control.	
1310	**Yuzhnyy.**	RA			Ch.16,74.		Call Yuzhnyy Radio 5.	
1315	**Mariupol (Zhdanov).**	RA			Ch.14,16.		Call Zhdanov Radio 1.	Provides radar assistance in restricted visibility and in the absence of navigational aids. Covers from approach channel buoys 15 and 16 to berths in Port Zhdanov.
					MOROCCO			
1320	**Casablanca.**	RA			Ch.12.		Call CNP2.	Vessels should send notification of arrival to the Port Captain through Casablanca (CNP) 24 hrs. in advance.
					THAILAND			
1480	**Laem Chabang.**	RA			500kHz,A1A,A2A;2182 kHz,A3E,H3E;Ch.13, 14,16.			Pilotage is compulsory. ETA should be sent 24 hrs. in advance. Radar-equipped VTS station is located at Laem Krabang Hill.
					REPUBLIC OF KOREA			
1520	**Busan.**	RA			Ch.12,14,16,20,22.		Call Busan Port Control.	Radar assistance is available during limited visibility.
					JAPAN			
1530	**Osaka.**	RA			2182,2130,2150, 2394.5kHz,H3E,J3E; Ch.14,16,22.	8	Call Osaka Harbor Radar.	Information on position, traffic and weather provided for area within 4M of Osaka Central Pier (within 8M for vessels over 1000 GRT).
1540	**Kanmon Kaikyo.**	RA			1651kHz,H3E;Ch.13, 14,16,22.		Call Kanmon MARTIS.	All vessels should report on entering the Radar Service Area. Covers Kanmon Kaikyo, including W and E approaches and area N and E of Mutsure Shima.
1550	**Bisan Seto.**	RA			1651kHz,H3E;Ch.13, 14,16,22.		Call Bisan MARTIS.	All vessels should report on entering the Radar Service Area. Covers all traffic routes between 133-37.5E and 133-55E except Bisan Seto N traffic route W of Takami Shima.
1555	**Nagoya.**	RA			1665kHz,H3E;Ch.14, 16,22.	11	Call Nagoya Harbor Radar.	All vessels should report on entering the Radar Service Area. Covers Nagoya port, including its approaches.

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
1560	**Tokyo Wan.**	RA			1665kHz,H3E;Ch.13, 14,16,22.		Call Tokyo MARTIS.	All vessels over 100 GRT or carrying more than 30 people should report when entering the Radar Service Area. Covers Tokyo Wan N of 35-10N.
1570	**Kushiro.**	RA			2182,2150,2245, 2394.5,2785.9kHz, H3E,J3E;Ch.14,16, 22.	10	Call Kushiro Harbor-Radar.	Radar assistance provided within 2M of 42-58.0N 144-22.6E (within 10M for vessels over 1000 GRT).
					NEW ZEALAND			
1625	**Auckland.**	RA			2182,2012kHz,H3E, J3E; Ch.12,16.	45		Provides vessel's range and bearing from Signal Station (36-51S 174-49E) in restricted visibility. Vessels over 100 NRT should make notification 24 hrs. in advance of arrival.
1630	**Otago Harbour.**	RA			2182,2012,2045,2129, 2162,4125,4417, 6215,6224kHz,H3E, J3E;Ch.12,14,16.	20	Call ZMH32 (Taiaroa Head).	Provides range and bearing from Taiaroa Head Signal Station (0.1M S of lighthouse) in restricted visibility. Vessels over 100 NRT should make notification 72 hrs. in advance of arrival, through Wellington (ZLW) or Awarua (ZLB).
1635	**Wanganui.**	RA			2012,2045,2162,2182, 4125,4417,6215, 6224kHz,H3E,J3E; Ch.09,12,14,16,67, 69.	20	Call Wanganui Harbour Radio (ZMH211).	Provides range and bearing from Pilot Station (39-56.9S 174-59.5E).
1640	**Westport.**	RA			2012,2045,2162,2182, 4125,4417kHz,H3E, J3E;Ch.12,16.	15		Provides range and bearing from Signal Station (41-44.9S 171-35.7E) in restricted visibility. Vessels should make notification 12 hrs. in advance of arrival.
					AUSTRALIA			
1665	**Port Hedland.**	RA			Ch.06,08,09,12,13, 16,67.	64		Provides range and bearing from Control Tower (20-19.0S 118-34.5E). All foreign vessels and Australian vessels over 6500 GRT should make notification 48 hrs. in advance of arrival.
1675	**Port Dampier.**	RA			Ch.11,13,16,68,78, 79. Ch.67(emergency).		Call Dampier Port Control.	Provides range and bearing from Port Control (20-37.2S 116-45.0E). All vessels over 150 GRT should make notification of arrival 72 hrs. in advance (7 days for vessels arriving from overseas).

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
					UNITED STATES			
	United States VTS Vessel Movement Reporting System (VMRS) rules, VTS frequency monitoring requirements and General VTS operating rules are mandatory for power-driven vessels 40 meters or more in length, vessels certificated to carry 50 or more passengers for hire, and towing vessels 8 meters or more in length engaged in towing. VTS frequency monitoring requirements and General VTS operating rules are mandatory for vessels covered by the Vessel Bridge-to-Bridge Radiotelephone Act.							
1720	**New York, NY.**	RA			Ch.11,12,13,14,16.		Call New York Traffic.	Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers the Upper New York Bay E to the Brooklyn Bridge in the East River and N to 40-43.7N and 74-01.6W in the Hudson River, and includes the Kill Van Kull S to the AK Railroad Bridge, Newark Bay N to the Lehigh Valley Draw Bridge, and portions of the Lower New York Bay S to the entrance buoys at Ambrose, Sandy Hook, and Swash Channels.
1730	**Berwick Bay, LA.**	RA			Ch.11,13,16.			Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers various Intracoastal Waterway Routes converging at Berwick and Morgan City.
1735	**LOOP Deepwater Port (Louisiana Offshore Oil Port).**	RA			Ch.10,16,74.		Call LOOP Radar.	Compulsory for all vessels; tankers must report to COTP and Vessel Traffic Supervisor 24 hrs. before arrival. Covers vicinity of port (28-53.2N 90-01.5W), anchorage and safety fairway to SE and S.
	NOTE: LOOP Deepwater Port is not a VTS.							
1740	**Houston-Galveston, TX.**	RA			Ch.11,12,13,16.		Call Houston Traffic.	Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers the Galveston Bay Channels and Houston Ship Channel to the Houston Turning Basin.
1750	**San Francisco, CA.**	RA			Ch.12,13,14,16.		Call San Francisco Traffic.	Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers the waters of San Francisco Bay and its approaches S of 38N, E of 123-07W and N of 37-27N, and its tributaries as far as Stockton and Sacramento.
1760	**Puget Sound, WA.**	RA			Ch.05A,13,14,16.		Call Seattle Traffic.	Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers the Strait of Juan de Fuca E of 124-40W, Rosario Strait, the San Juan Islands, Admiralty Inlet, and Puget Sound.
	NOTE: Puget Sound Vessel Traffic Service is one sector of a Cooperative Vessel Traffic Management System (CVTMS), which is a joint U.S. and Canadian vessel traffic management effort. Canada administers the two remaining sectors of CVTMS.							

(1) No.	(2) Name	(3) Type	(4) Position Rx	Tx	(5) Frequency	(6) Range	(7) Procedure	(8) Remarks
1770	**Prince William Sound, AK.**	RA			Ch.13,16.		Call Valdez Traffic.	Vessels should make notification 15 mins. before navigating within the VTS area and upon entering or getting underway within the VTS area. Covers Prince William Sound North of Cape Hinchinbrook, including Valdez Arm, Valdez Narrows and Port Valdez.
					COLOMBIA			
1850	**Puerto Covenas, Floating Storage Unit.**	RA			Ch.10,13,16.		Call FSU Covenas.	Compulsory for all vessels. Vessels should contact FSU 30M from terminal.
					CHILE			
1895	**Valparaiso.**	RA			2182,2738kHz,H3E, J3E; 4143.6kHz,J3E; Ch.09,14,16.		Call CBV 20 (Port Captain).	Radar assistance provided on request in fog.
1900	**Primera Angostura.**	RA			Ch.11,13,16,68.		Eastbound vessels requiring radar assistance should call Magallanes Zonal Radio (CBM), Ch.16, when abeam Punta Arenas, or call CBM5 (Punta Delgada), Ch.68,11,13, when 20M from Punta Baxa. Westbound vessels should call Magallanes 24 hrs. before arrival at 52-35.0S 68-10.5W, or call CBM71 (Punta Dungeness), Ch.16, or CBM72 (Cabo Espiritu Santo), Ch.16, when 20M from that point.	Covers area between Banco Triton and E approaches to the Strait of Magellan.

CHAPTER 2

RADIO TIME SIGNALS

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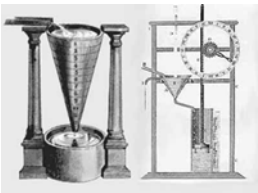
CHAPTER 2

RADIO TIME SIGNALS

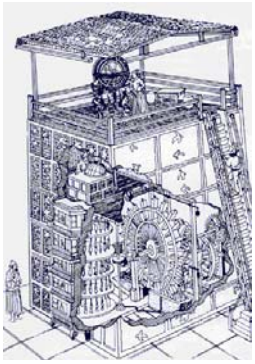
200A. History of Time

Keeping track of time dates as far back as the Ice Age. Over 20,000 years ago hunters scratched lines and made holes in sticks and bones. Scientists believe that they were possibly counting the days between the phases of the moon.



Many civilizations over the years have developed ways to keep track of time but one thing remained the same no matter the location or the century. Time was tracked as equal and constant increments, thus the creation of clocks. Clocks also evolved over time starting with obelisks and the use of complicated water clocks to the atomic clock currently used today.

Obelisks were used in ancient Egypt to tell time and as a result they found the longest and shortest days. The meridian line was also discovered, a line joining north and south by observing the shortest shadow cast by the obelisk that would always point in the same direction regardless of the season. Sundials were created using the obelisk theory, but it was found that these smaller obelisk versions were not as accurate and hard to read.



Sundials only worked on sunny days, so the water clock was created. A container was filled with water and it flowed out at a constant rate and was used to tell time, but it also wasn't very accurate. In 1092, a Chinese monk named Su Sung created a water clock very similar to mechanical clocks known today. This water clock was five stories tall and had a very large water wheel.

The first known mechanical clock invented was in the 13th century very similar to the water clock but used mercury and it controlled the drum at a more constant rate. Galileo Galilei was the first to study the pendulum and Christiaan Huygens used his work to create the first clock using a pendulum. Over time they found that the longer the pendulum, the more accurate the time, so that is why pendulum clocks are a tall rectangular shape. Jost Burgi invented the minute hand in 1577 for an astronomer. In the early 18th century a telecommunications engineer, Warren Marrison, developed a very large, highly accurate clock based on the regular vibrations of a quartz crystal in an electrical circuit, created the first quartz clock.

With the creation of clocks, the problem arose where every city around the world was on their own time, basing noon on when the sun passed over the town. To correct this problem, Great Britain was the first country to standardize time. Greenwich Mean Time (GMT) was the solution. England's Royal Greenwich Observatory located on the zero-degree longitude meridian, became the center of the first time zone and leading the way to the concept of time zones.

In 1884, delegates from 25 countries attended The International Meridian Conference in Washington D.C. where they established time zones one hour apart, referencing solar time (high noon is when the sun reaches the center meridian of that time zone).

The National Institute of Standards and Technology (NIST) in the U.S. built the first atomic clock in 1949. These clocks are the most accurate time and frequency standards known and is based off of atomic physics.

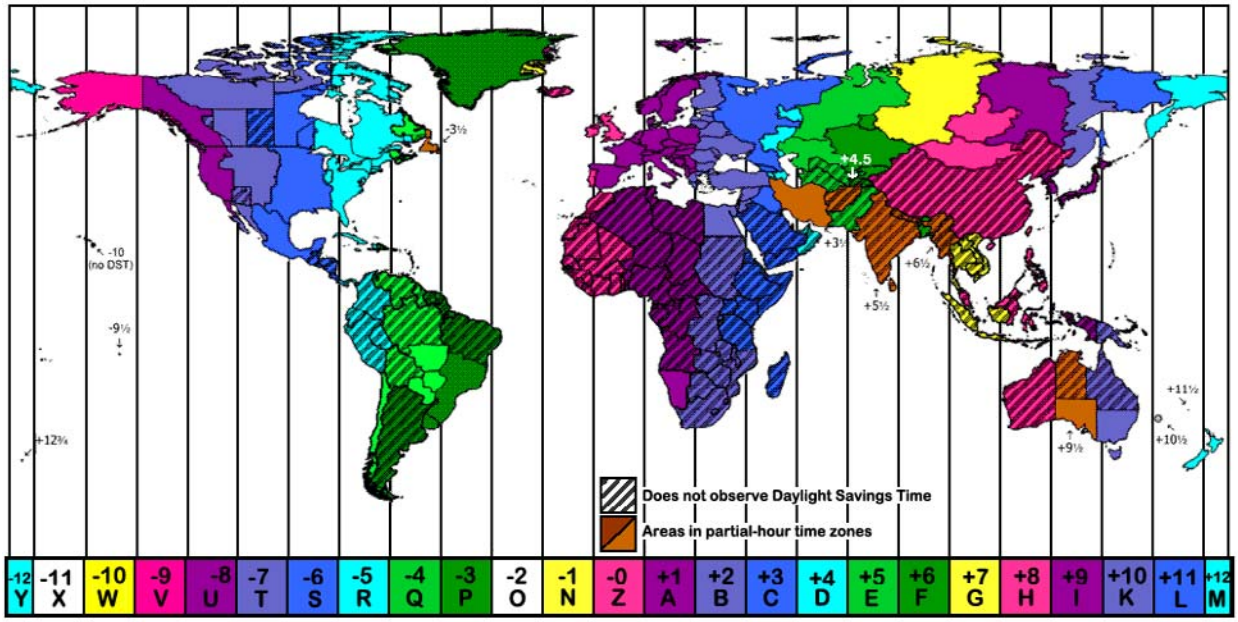
The system of Coordinated Universal Time (UTC) came into use on January 1, 1972. UTC replaced the term GMT but the time remains the same, it differs from your local time by a specific number of hours. The number of hours depends on the number of time zones between your location and the location of the zero meridian (which passes through Greenwich, England). When local time changes from Daylight Saving to Standard Time, or vice versa, UTC does not change. However, the difference between UTC and local time does change-by 1 hour. UTC is a 24-hour clock system. The hours are numbered beginning with 00 hours at midnight through 12 hours at noon to 23 hours and 59 minutes just before the next midnight. *See "The American Practical Navigator" (Bowditch) (Pub. 9) for a full description of UTC.*

200B. Time Zones

Today the world is split up into 25 time zones. The system is centered on zero-degrees longitude in Greenwich, England (See sec. 200A, para 6). The graphic below shows the amount of hours that each area is offset from UTC.

The military uses the phonetic alphabet for time zones; therefore each time zone also has a letter associated with it. The term Zulu is "Z" which is UTC time.

Some countries observe Daylight Savings Time (DST). Each country has its own start/stop days and times.



In the US we have names for our time zones, starting from the east to west they are:

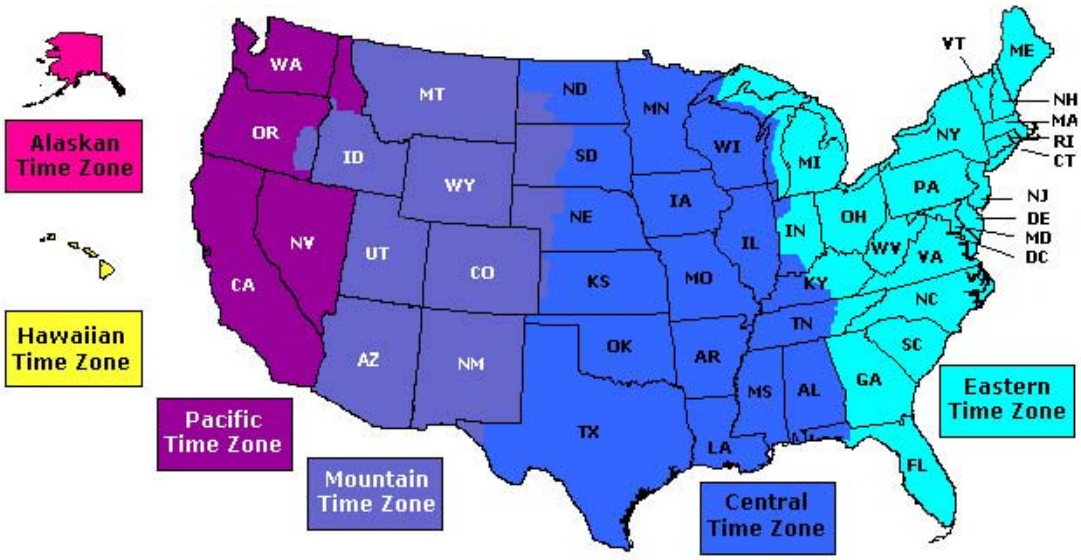
Eastern Standard Time (EST)
Central Standard Time (CST)
Mountain Standard Time (MST)
Pacific Standard Time (PST)
Alaskan Standard Time (AKST)
Hawaii-Aleutian Standard Time (HST)

See graphic below for a map of US time zones.

The US starts daylight savings time at 2am local time on the 2nd Sunday in March and clocks are changed ahead one hour. At 2am on the 1st Sunday in November is when clocks are moved back one hour.

Arizona, Puerto Rico, Hawaii, US Virgin Islands and American Samoa do not observe Daylight Savings Time.

During daylight savings time, the US Time Zones go from "Standard" to "Daylight", for example Eastern Daylight Time (EDT).



200C. The National Institute of Standards and Technology (NIST)-in general

The NIST has two radio stations broadcasting time and frequency information 24-7 for the United States; stations WWV and WWVH. They broadcast time announcements, standard time intervals, standard frequencies, UT1 time corrections (Astronomical time for Universal Time), a BCD (Binary-coded Decimal) time code, geophysical alerts, marine storm warnings, and Global Positioning System (GPS) status reports. They operate in the high frequency (HF) portion of the radio spectrum. Each station radiates 10,000 W on 5, 10, and 15 MHz; and 2500 W on 2.5 and 20 MHz. Each frequency is broadcast from a separate transmitter and carries the same information to ensure one frequency is usable at all times.

200C.1 Time Announcements

Voice announcements are made from WWV and WWVH once every minute. The announced time is "Coordinated Universal Time" (UTC).

200C.2 Standard Time Intervals

The pulses mark the seconds of each minute, except for the 29th and 59th second pulses which are omitted completely.

200C.3 Standard Frequencies

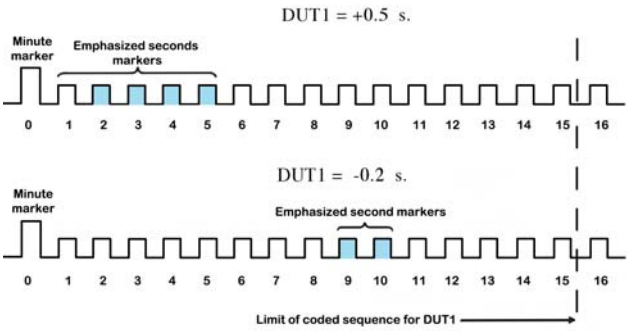
The 440 Hz tone, also known as A440 (A4) is the international standard for musical pitch, musical note A above middle C. The NIST started broadcasting this A440 from WWV in 1936. In 1939 it served as the audio frequency reference for calibration of musical instruments. The 440 Hz tone can be heard on WWV and WWVH stations and is omitted from the first hour of the UTC day.

200C.4 UT1 Time Corrections

UT1 is the Astronomical time for Universal Time (UT). Coordinated Universal Time (UTC) is the mean solar time at zero-degree longitude. UTC time is based on atomic clocks which are more stable than the Earth's rotational rate. The International Earth Rotation and Reference Systems Service (IERS), measures Earth's rotation and publishes the difference between UT1 and UTC. The actual correction is known as a leap second. A leap second is the second (most corrections are tenths of a second) added to UTC in order to keep it synchronized with astronomical time.

200C.5 BCD Time Code

Binary-coded Decimal (BCD) time code is computer time. NIST broadcasts this code on a 100 Hz subcarrier given in a serial fashion at a rate of one pulse per second. The information carried by the time code includes the current minute, hour, and day of year and may be used with the same accuracy as the audio time frequencies. The appropriate seconds markers may be emphasized, for example by lengthening, doubling, splitting or tone modulation of normal seconds markers. Example:



200C.6 Geophysical Alerts

The National Oceanic and Atmospheric Administration (NOAA) broadcasts geophysical alert messages that provide information about solar terrestrial conditions and are updated at 0000, 0300, 0600, 0900, 1200, 1500, 1800, 2100 UTC.

To obtain alerts:
*By phone: (1) 303 497 3235
*Radio station broadcasts: WWV & WWVH
*Space Weather Prediction Center Website: http://www.swpc.noaa.gov
*Tips on viewing the Aurora: http://www.swpc.noaa.gov/Aurora

Definitions:

*A **[A#]** & K indices are measurements of the behavior of the magnetic field in and around the Earth. K ranges from 0-9. A ranges from 0-400. K-index is broadcast at **[K TIME]** 0000, 0300, 0600, 0900, 1200, 1500, 1800, 2100 UTC.

*Geomagnetic storms are disturbances in the geomagnetic field caused by gusts in the solar wind that blows by Earth.

*Radio blackouts are disturbances of the ionosphere caused by X-ray emissions from the Sun.

*Space weather describes the conditions in space that affect Earth and its technological systems. Includes all observed geomagnetic storms, solar radiation storms (proton events) and radio blackouts.

*Solar flux **[#]** is a measurement of the intensity of solar radio emissions with a wavelength of 10.7cm (a frequency of about 2800 Mhz). Range varies from 50 to 300.

*Solar radiation storms are elevated levels of radiation that occur when the numbers of energetic particles increase.

K indices **[K#]**	Geomagnetic Storms	Solar Radiation Storm Level **[S level]**	Radio Blackout Level **[R level]**	Space Weather **[space level]**
K = 9	G5	S5	R5	Extreme
K = 8	G4	S4	R4	Severe
K = 7	G3	S3	R3	Strong
K = 6	G2	S2	R2	Moderate
K = 5	G1	S1	R1	Minor

Message Format:

Sections	Basic Intro	Solar-terrestrial indices for **[DATE]** follow.
1	Current A & K indexes	Solar flux **[#]** and mid-latitude A-index **[A#]**. The mid-latitude K-index at **[K TIME]** on **[DATE]** was **[K#]**.
2	Past 24 hours	Space weather for the past 24 hours has been **[space level]**.
		Solar radiation storms reaching the **[S level]** are **[likely/expected]**.
		Radio blackouts reaching the **[R level]** occurred.
3	Future 24 hours	Space weather for the next 24 hours is predicted to be **[space level]**.
		Solar radiation storms reaching the **[S level]** are **[likely/expected]**.
		Radio blackouts reaching the **[R level]** are **[likely/expected]**.
No observation/Predictions		No space weather storms were observed for the past 24 hours.
		No space weather storms are predicted for the next 24 hours.

Effects of Geomagnetic storms (storm level):

	HF Radio Communications	**Satellite Navigation**	**Low Frequency Radio Navigation**
Extreme **G5**	May be impossible in many areas for 1-2 days	May be degraded for days	Can be out for hours
Severe **G4**	Sporadic	Degraded for hours	Disrupted
Strong **G3**	Intermittent	Intermittent	Problems might occur
Moderate **G2**	Can fade at higher latitudes	No effects	No effects
Minor **G1**	No effects	No effects	No effects

Effects of solar radiation storms (S level):

	HF Radio Communications
S5	Complete blackout and errors possible through the polar regions.
S4	Blackout and errors through the polar regions over several days likely.
S3	Degraded through the polar regions and navigation position errors likely.
S2	Small affects through the polar regions and navigation at polar cap location possibly affected.
S1	Minor impacts in the polar regions.

Effects of radio blackouts (R level):

	HF Radio Communications	Satellite Navigation	Low Frequency Radio Navigation
R5	Complete blackout on the entire sunlit side of the Earth lasting for a number of hours. This results in no HF radio contact with mariners in this sector	Increased errors in positioning for several hours on the sunlit side of Earth, which may spread into the night side	Experience outages on the sunlit side of Earth for many hours, causing loss in positioning
R4	Blackout on most of the sunlit side of Earth for 1-2 hours	Minor disruptions possible on the sunlit side of Earth	Outages of signals cause increased error in positioning for 1-2 hours
R3	Wide area blackout, loss of radio contact for about an hour on sunlit side of Earth	No effects	Signals degraded for about an hour
R2	Limited blackout on sunlit side, loss of radio contact for tens of minutes	No effects	Degradation of signals for tens of minutes
R1	Weak or minor degradation on sunlit side, occasional loss of radio contact	No effects	Degraded for brief intervals

Inquiries regarding these messages should be addressed to Forecasts and Analysis Branch, Space Environment Center, W/NP9, 325 Broadway, Boulder, CO 80305-3328. Phone: (1) 303 497 3171, e-mail: rwc.boulder@noaa.gov

200C.7 Marine Storm Warnings

Marine storm warnings are broadcast for the Atlantic and Pacific oceans and the Gulf of Mexico by the National Weather Service. Atlantic and Pacific highseas warnings are broadcast by WWV, while WWVH broadcast Pacific highseas warnings. Additional segments are used if there are unusually widespread storm conditions. The storm warnings are based on the most recent forecasts and are updated throughout the day. All marine forecasts rely heavily on the Voluntary Observing Ship (VOS) program for obtaining meteorological observations.

To obtain warnings:
*Radio station broadcasts: WWV & WWVH
*National Weather Service Website: http://www.nws.noaa.gov

Example of a typical storm warning:

> North Atlantic weather West of 35 West at 1700 UTC; Hurricane Donna, intensifying, 24 North, 60 West, moving northwest, 20 knots, winds 75 knots; storm, 65 North, 35 West, moving east, 10 knots; winds 50 knots, seas 15 feet.

For more information about marine storm warnings, write to: National Weather Service, NOAA, 1325 East West Highway, Silver Spring, MD 20910.

200C.8 Notice Advisory to NAVSTAR Users (NANU)-GPS status reports

The United States Coast Guard and the GPS Operations Center (located at Schriever Air Force Base, CO) provide information on the general health of individual satellites in the GPS constellation. With the exception of outages, these messages are released 72 hours prior to planned maintenance.

There are 24 satellites, positioned in 6 orbital planes, circling the Earth twice a day at an altitude of 10,900 nautical miles. The orbits are tilted to the Earth's equator by 55 degrees to cover the polar regions. GPS satellites carry atomic clocks to provide accurate time used in positioning.

Definitions:

*Block is the generation of the operational satellites.
*Plane is the satellite's orbit.
*Pseudo Random Noise Code (PRN) is the unique identifying sequence code that each satellite produces. The complex code guarantees that the receiver won't accidentally pick up another satellite signal, so all the satellites can use the same frequency without jamming each other.
*Slot is the position in the plane.

To obtain advisories-Civilian customers:

*By phone: (1) 703 313 5907
*Radio station broadcasts: WWV & WWVH
*INMARSAT-C broadcasts: NAVAREA IV & XII (see Chapter 3)
*US Coast Guard Website Constellation Status: http://navcen.uscg.gov/?Do=constellationStatus
*Contact/subscriptions: US Coast Guard Navigation Center, NAVCEN MS 7310, 7323 Telegraph Road, Alexandria, VA 20598-7310, phone: 703 313 5900.

To obtain advisories-Military customers:

*By phone: (1) 703 313 5907
*Radio station broadcasts: WWV & WWVH
*AMHS broadcasts: NAVAREA IV, HYDROLANT, HYRDOPAC, HYDROARC & NAVAREA XII (see Chapter 3)
*US Coast Guard Website Constellation Status: http://navcen.uscg.gov/?Do=constellationStatus
*Contact/subscriptions: GPS Operations Center, 300 O'Malley Ave, Suite 41, Colorado Springs, CO 80912-3041, phone: 719 567 2541, DSN 560 2541, e-mail: gps_support@schriever.af.mil.

	Constellation Status
Plane	A through F
Slot	Minimum of 4 satellites to run GPS
SVN	The Space Vehicle Number
PRN	The designated number for each complex code the satellite produces
Block Type	Currently on Block II (IIA, IIR-M, IIF, IIR) Frequencies: 1572.42 mHz & 1227.6 mHz (L-band) 2227.5 mHz (S-band)

200D. U.S. Station WWV Broadcasts

Call sign: WWV

Station number: 2000

Location: 40-40-49N 105-02-27W

Broadcast Frequencies: The station radiates 10,000 W on 5, 10, and 15 MHz; and 2500 W on 2.5 and 20 MHz.

Broadcast Time: Constant.

Antennas (Type & Amount): Half-wave vertical antennas that radiate omnidirectional patterns. There are five antennas at the station site, one for each frequency.

The Breakdown: The hourly broadcast schedule:

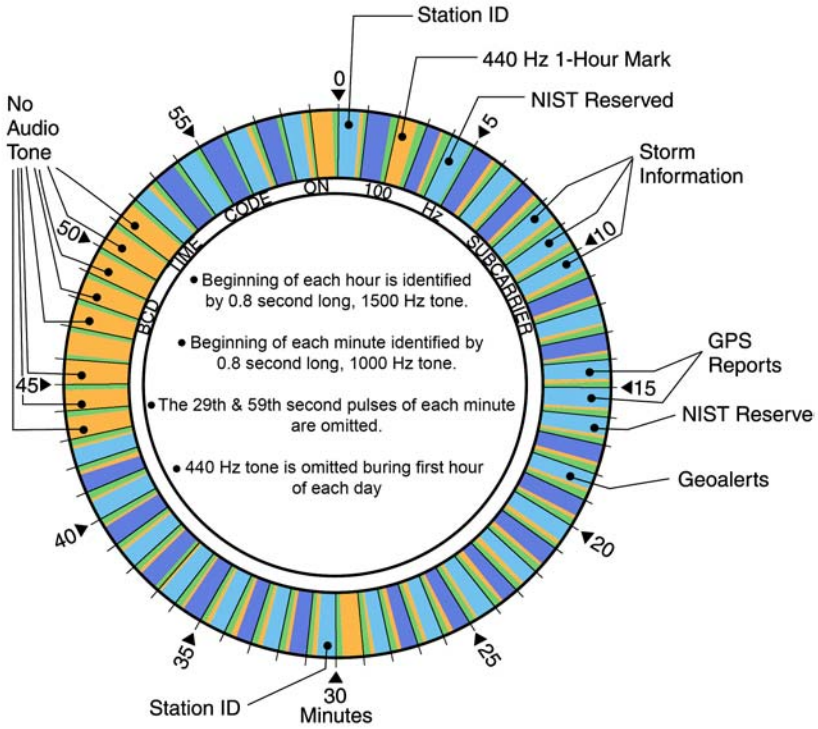
By Phone: (303) 499-7111 (not a toll-free number, 2 min call only) *Delays: using land lines within continental US time announcements are normally delayed by less than 30 ms and the stability (delay variation) is generally < 1 ms. Using mobile phones or voice over IP networks, the delays can be as large as 150 ms. In the very rare instances when the telephone connection is made by satellite, the time is delayed by more than 250 ms.*

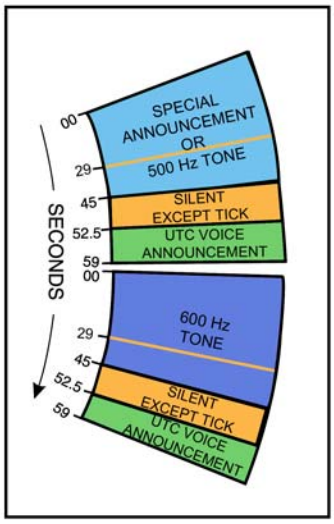
BCD Time Code: Continuously broadcast on a 100 Hz subcarrier.

Storm Warnings: Atlantic 8 & 9 minutes after the hour, Pacific 10 minutes after the hour. The 11th minute mark is for additional time if needed. Forecasts are updated 0500, 1100, 1700, 2300 UTC.

NANU/GPS status: 14 & 15 minutes after the hour. Updated every 3 hours, typically 0000, 0300, 0600, 0900, 1200, 1500, 1800, and 2100 UTC. More frequent updates are made when necessary.

Contact information: Mailing address: NIST Radio Station WWV, 200 East Country Rd 58, Fort Collins, CO 80524. E-mail: nist.radio@boulder.nist.gov.





200E. U.S. Station WWVH Broadcasts

Call sign: WWVH

Station number: 2001

Location: 21-59-17N 159-45-47W

Broadcast Frequencies: The station radiates 10,000 W on 5, 10, and 15 MHz; and 5000 W on 2.5 MHz.

Broadcast Time: Constant.

Antennas (Type & Amount): Half-wave vertical antennas that radiate omnidirectional patterns. There are five antennas at the station site, one for each frequency.

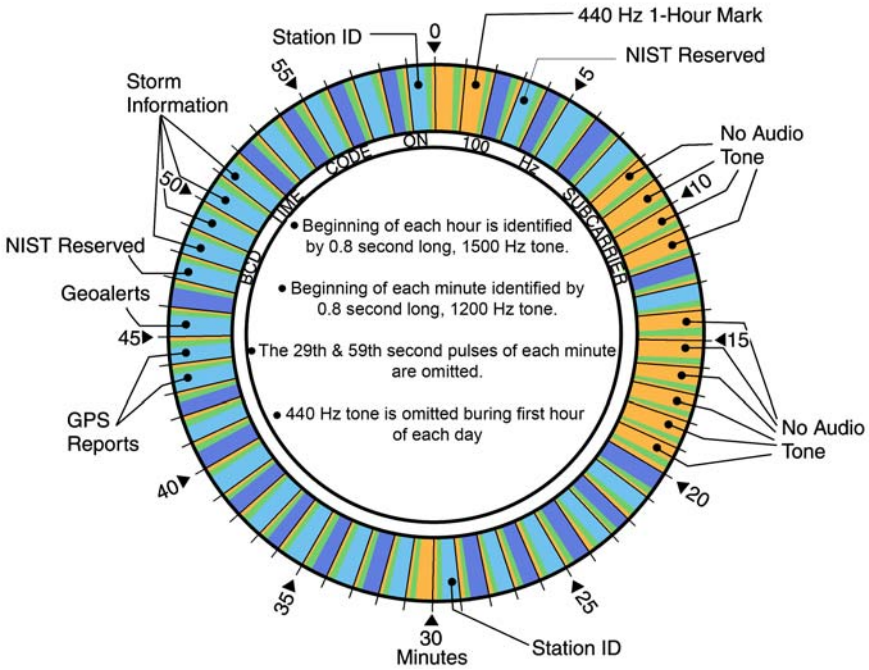
The Breakdown: The hourly broadcast schedule:

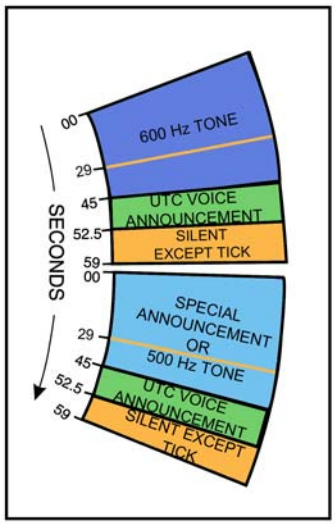
By Phone: (808) 335-4363 (not a toll-free number, 2 min call only) *Delays: using land lines within continental US time announcements are normally delayed by less than 30 ms and the stability (delay variation) is generally < 1 ms. Using mobile phones or voice over IP networks, the delays can be as large as 150 ms. In the very rare instances when the telephone connection is made by satellite, the time is delayed by more than 250 ms.*

BCD Time Code: Continuously broadcast on a 100 Hz subcarrier.

Storm Warnings: Pacific 48 through 51 minutes after the hour. The 52nd minute mark is for additional time if needed. Forecasts are updated 0000, 0600, 1200, 1800 UTC.

NANU/GPS status: 43 & 44 minutes after the hour. Updated every 3 hours, typically 0000, 0300, 0600, 0900, 1200, 1500, 1800, and 2100 UTC. More frequent updates are made when necessary.





200F. Argentina

Station: 2080-Buenos Aires

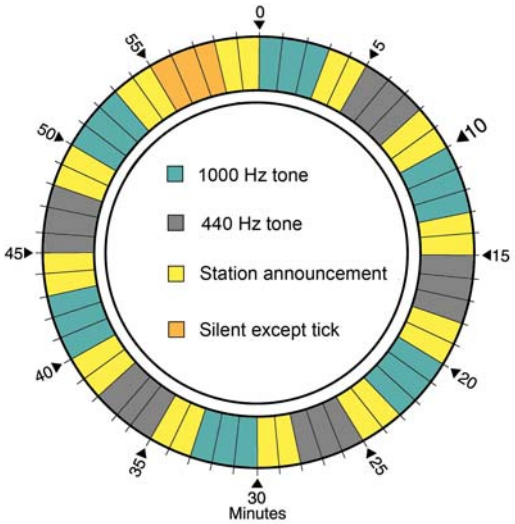
Location: 34-37S 058-21W

Call sign: LOL

Broadcast Frequencies: The station radiates 2 kW on 10,000 kHz.

Broadcast Time: Mon-Fri 1100-1200 local time.

The Breakdown: The hour broadcast schedule is shown below. The station announcement includes station identification with call sign and a voice time announcement.



200G. Belarus

Station: 2150-Molodechno

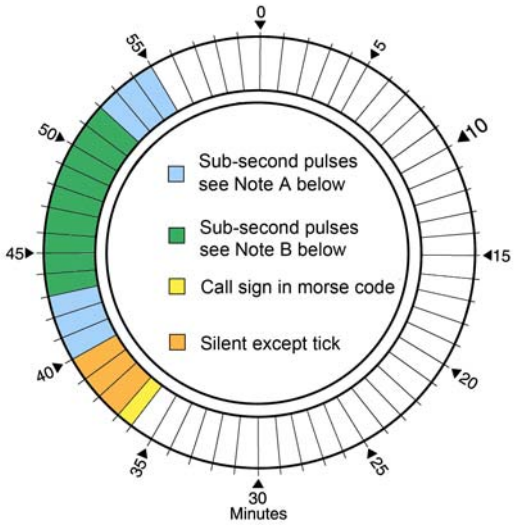
Call sign: RJH69

Location: 54-26N 026-48E

Broadcast Frequencies: The station radiates 25 kHz.

Broadcast Time: 0736-0755 & 1936-1955 local time. Daylight Savings Time (DST) 0836-0855 & 2136-2155 local time. Does not transmit on days 2, 12 and 22 of each month.

The Breakdown:



Note A:

Pulses	Duration
Sub-second pulses every 25ms	12.5ms

Note B:

Pulses	Duration
Sub-second pulses every 100ms	25ms
Second pulses	100ms
10 second pulses	1s
Minute pulses	10s

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
		CANADA		
2020	**Ottawa, Ont. (CHU).**	Continuous.	(See below)	3330 kHz, A2A, H3E, 3 kW; 7335 kHz, A2A, H3E, 10 kW; 14670 kHz, A2A, H3E, 3 kW.

DUT1: Marked seconds indicated by split pulses.
SYSTEM: 00s.: 500ms second marker. From 01s. to 28s.: second markers of 300ms each. 29s.: silence. From 30s. to 50s.: second markers of 300ms each. From 51s. to 59s.: station identification and time (+5R). At the beginning of the hour the first second marker lasts for 1s. and 500ms markers for seconds 01 to 09 are omitted. A binary time code is included in second markers 31-39.
ANTENNAS: CHU broadcasts from 45-17-47N 75-45-22W using vertical antennas designed to give the best possible coverage for Canadian users.

		MEXICO		
2040	**Chapultepec (XDD)(XDP).**	Weekdays: 0155-0200, 1555-1600, 1755-1800; Sun. and holidays: 1755-1800.	U.S.	XDP: 4800 kHz, A1A; XDD: 13043 kHz, A1A.

SYSTEM: From 54m. to 55m.: “VVV DE” station call sign (“XPD” or “XDD”). From 55m. to 60m.: U.S. system, except that the second marker at 28s. is omitted each minute.

2041	**Tacubaya (XBA).**	Weekdays: 0155-0200, 1555-1600, 1755-1800; Sun. and holidays: 1755-1800.	U.S.	6976.74 kHz, A1A; 13953.6 kHz, A1A.

SYSTEM: From 54m. to 55m.: “VVV DE XBA”. From 55m. to 60m.: U.S. system, except that the second marker at 28s. is omitted each minute.

		VENEZUELA		
2043	**Observatorio Naval Caracas (YVTO).**	Continuous.	U.S.	5000 kHz, A9W, 10 kW.

SYSTEM: From 01s. to 29s.: second markers of 100ms each. 30s.: silence. From 31s. to 40s.: second markers of 100ms each. From 40s. to 50s.: station identification, in Spanish. 51s. and 52s.: second markers of 100ms each. From 52s. to 57s.: time announcement, in Spanish. 57s. and 59s.: second markers of 100ms each. 00s.: minute marker of 500ms (800 Hz). Second markers are 1000 Hz tone.

		ECUADOR		
2051	**Guayaquil (HD2IOA).**	Continuous.	(See below)	1510 kHz.
		0000-1200.		3810 kHz, A1A, A3E, 1 kW.

SYSTEM: 00s.: minute marker of 300ms. From 01s. to 28s.: second markers of 100ms each. 29s.: silence. From 30s. to 50s.: second markers of 100ms each. 51s.: silence. From 52s. to 58s.: time announcement in voice. 59s.: silence. Call sign transmitted on 3810 kHz from 59m.-15s. to 59m.-50s. of each hour.

		CZECH REPUBLIC		
2091	**Liblice (OMA).**	Continuous.	(See below)	50 kHz, A1A, 7 kW.

50 kHz FREQUENCY:
SYSTEM: Carrier interruptions of 100ms each second, 500ms each minute.
TRANSMITTER: Backup transmitter, 0.05kW, used 0600-1200 first Wed. each month.

		RUSSIA		
2202	**Moskva (RWM).**	Continuous.	(See below)	4996 kHz, A1A, 5 kW; 9996 kHz, A1A, 5 kW; 14996 kHz, A1A, 8 kW.

DUT1 AND dUT1: Marked seconds indicated by double pulse with 100ms separation, between 10m.-20m. and 40m.-50m.
SYSTEM: From 00m. to 08m.: carrier. From 08m. to 09m.: silence. From 09m. to 10m.: call sign. From 10m. to 20m.: second markers of 100ms each, minute markers of 500ms each. From 20m. to 30m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. From 30m. to 38m.: carrier. From 38m. to 39m.: silence. From 39m. to 40m.: call sign. From 40m. to 50m.: second markers of 100ms each, minute markers of 500ms each. From 50m. to 00m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. Markers omitted between 56s. and 59s. at 14m., 19m., 24m., 29m., 44m., 49m., 54m., 59m.
TRANSMITTERS: 4996 kHz off-air 0500-1300 first Wed. each quarter. 9996 kHz off-air 0500-1300 second Wed. each quarter. 14996 kHz off-air 0500-1300 third Wed. every odd month.

2202.5	**Moskva (RBU).**	January-June: 0252-0313, 0852-0913, 1452-1513, 2052-2113; July-December: 0852-0913, 2052-2113.	(See below)	66.67 kHz, A1A, 10 kW.

DUT1 AND dUT1: Marked seconds indicated by double pulse with 100ms separation, between 00m.-05m.
SYSTEM: From 52m. to 59m.: carrier. From 59m. to 00m.: sub-second markers of 20ms every 100ms, second markers of 40ms, minute markers of 500ms each. From 00m. to 05m.: second markers of 100ms each, minute markers of 500ms each. From 05m. to 06m.: call sign. From 06m. to 13m.: carrier.
TRANSMITTER: Off-air 0500-1300 third Tues. each month.

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
2203	**Gorky (RJH99).**	Daylight savings time in effect: 0736-0755, 1436-1455, 1936-1955; Daylight savings time not in effect: 0536-0555, 1336-1355, 1836-1855. Not transmitted on 8th, 18th, 28th of each month.	(See below)	25 kHz, A1A, 300 kW.

SYSTEM: From 36m. to 37m.: call sign. From 37m. to 40m.: carrier. From 40m. to 43m.: sub-second markers of 12.5ms every 25ms. From 43m. to 52m.: sub-second markers of 25ms every 100ms, second markers of 100ms each, 10-second markers of 1s. each, minute markers of 10s. each. From 52m. to 55m.: sub-second markers of 12.5ms every 25ms.

2204	**Novosibirsk (RTA).**	0000-0530, 1400-2400.	(See below)	10000 kHz, A1A, 5 kW.
		0630-1330.		15000 kHz, A1A, 5 kW.
		Transmission times 1 hr. later on both frequencies when daylight savings time in effect.		

DUT1 AND dUT1: Marked seconds indicated by double pulse with 100ms separation, between 00m.-10m. and 30m.-40m.
SYSTEM: From 00m. to 10m.: second markers of 100ms each, minute markers of 500ms each. From 10m. to 20m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. From 20m. to 28m.: carrier. From 28m. to 29m.: silence. From 29m. to 30m.: call sign. From 30m. to 40m.: second markers of 100ms each, minute markers of 500ms each. From 40m. to 50m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. From 50m. to 58m.: carrier. From 58m. to 59m.: silence. From 59m. to 00m.: call sign. Markers omitted between 56s. and 59s. at 04m., 09m., 14m., 19m., 34m., 39m., 44m., 49m.
TRANSMITTERS: Both frequencies off-air 0000-1000 first and third Thurs. each month.

2205.5	**Irkutsk (RTZ).**	0000-2100, 2200-2400.	(See below)	50 kHz, A1A, 10 kW.

DUT1 AND dUT1: Marked seconds indicated by double pulse with 100ms separation, between 00m.-05m.
SYSTEM: From 00m. to 05m.: second markers of 100ms each, minute markers of 500ms each. From 05m. to 06m.: call sign. From 06m. to 59m.: carrier. From 59m. to 00m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each.
TRANSMITTER: Transmitter off-air 0000-0800 first, third, fourth Mon. each month.

2206	**Khabarovsk (UQC3).**	Daylight savings time in effect: 0236-0255, 0636-0655, 1836-1855; Daylight savings time not in effect: 0036-0055, 0636-0655, 1736-1755. Not transmitted on 10th, 20th, 30th of each month.	(See below)	25 kHz, A1A, 300 kW.

SYSTEM: From 36m. to 37m.: call sign. From 37m. to 40m.: carrier. From 40m. to 43m.: sub-second markers of 12.5ms every 25ms. From 43m. to 52m.: sub-second markers of 25ms every 100ms, second markers of 100ms each, 10-second markers of 1s. each, minute markers of 10s. each. From 52m. to 55m.: sub-second markers of 12.5ms every 25ms.

2209	**Arkhangel'sk (RJH77).**	Daylight savings time in effect: 0936-0955, 1236-1255; Daylight savings time not in effect: 0836-0855, 1136-1155. Not transmitted on 4th, 14th, 24th of each month.	(See below)	25 kHz, A1A, 300 kW.

SYSTEM: From 36m. to 37m.: call sign. From 37m. to 40m.: carrier. From 40m. to 43m.: sub-second markers of 12.5ms every 25ms. From 43m. to 52m.: sub-second markers of 25ms every 100ms, second markers of 100ms each, 10-second markers of 1s. each, minute markers of 10s. each. From 52m. to 55m.: sub-second markers of 12.5ms every 25ms.

KYRGYZSTAN

2211	**Biskek (RJH66).**	Daylight savings time in effect: 0536-0555, 1136-1155, 2336-2355; Daylight savings time not in effect: 0436-0455, 0936-0955, 2136-2155. Not transmitted on 6th, 16th, 26th of each month.	(See below)	25 kHz, A1A, 300 kW.

SYSTEM: From 36m. to 37m.: call sign. From 37m. to 40m.: carrier. From 40m. to 43m.: sub-second markers of 12.5ms every 25ms. From 43m. to 52m.: sub-second markers of 25ms every 100ms, second markers of 100ms each, 10-second markers of 1s. each, minute markers of 10s. each. From 52m. to 55m.: sub-second markers of 12.5ms every 25ms.

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
		UZBEKISTAN		
2212	**Tashkent (ULW4).**	0000-0400, 0500-2400.	(See below)	2500 kHz, A1A, 1 kW.
		0000-0400, 1400-2400.		5000 kHz, A1A, 1 kW.
		0500-1330.		10000 kHz, A1A, 1 kW.
		1 hr. later when daylight savings time in effect.		

DUT1 AND dUT1: Marked seconds indicated by double pulses with 100ms separation, between 00m.-10m. and 30m.-40m.
SYSTEM: From 00m. to 10m.: second markers of 100ms each, minute markers of 500ms each. From 10m. to 20m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. From 20m. to 28m.: carrier. From 28m. to 29m.: silence. From 29m. to 30m.: call sign. From 30m. to 40m.: second markers of 100ms each, minute markers of 500ms each. From 40m. to 50m.: sub-second markers of 20ms every 100ms, second markers of 40ms each, minute markers of 500ms each. From 50m. to 58m.: carrier. From 58m. to 59m.: silence. From 59m. to 00m.: call sign. Markers between 56s. and 59s. omitted at 04m., 09m., 14m., 19m., 34m., 39m., 44m., 49m.
TRANSMITTERS: All off-air 0100-1100 third Mon. each month.

		GERMANY		
2320	**Mainflingen (DCF77).**	Continuous.	(See below)	77.5 kHz, A1A, A3E, 30 kW.

SYSTEM: 00s.: MÑminute marker. From 01s. to 14s.: BBK and Meteo Time information. 15s.: RÑwhen backup antenna is used. 16s.: A1Ñannouncement of time system change. 17s.: Z1Ñtime system (winter). 18s.: Z2Ñtime system (summer). 19s.: A2Ñannouncement of a leap second at the next hour. 20s.: SÑstart of coded time information. From 21s. to 27s.: minute. 28s.: P1 (parity check)Ñsum of 21s. to 27s. From 29s. to 34s.: hour. 35s.: P2 (parity check)Ñsum of 29s. to 34s. From 36s. to 41s.: day of month. From 42s. to 44s.: day of week. From 45s. to 49s.: month. From 50s. to 57s.: year (07, 08, 09 etc.). 58s.: P3 (parity check)Ñsum of 36s. to 57s. 59s.: no modulation.

		UNITED KINGDOM		
2351	**Anthorn (MSF).**	Continuous.	(See below)	60 kHz, A1A, 15 kW.

SYSTEM: National Physical Laboratory (NPL) Computer Time Service via Modem (NPL Truetime). NPL offers a service which allows a computer to set its clock to within 1/50th of a second by direct telephone connection to the National Time Scale at the NPL in Teddington, Middlesex. A call to the service, at any time of the day or night, allows a computer equipped with a suitable modem and software to correct its clock. The service uses a premium-rate telephone number. For further information contact the Time and Frequency Services, NPL at:
NPL Truetime Telephone: 0906 851 6333 (UK only)
Telephone: (011) 44 208 943 6880
Fax: (011) 44 208 943 6458
E-mail: time@npl.co.uk
Internet: http://www.npl.co.uk/npl/ctm/index.html
TRANSMITTER: see the NPL Website at www.npl.co.uk/time/msf/msfoutages.html for outages due to scheduled maintenance.

2360	**BBC-Radio 1.**	Mon.-Fri.: 0700; Sat.: 1300; Sun.: Nil.	(See below)	97.7-99.8 MHz, F3E (97.1 MHz for Channel Islands).
		1 hr. earlier when daylight savings time in effect.		

SYSTEM: The Greenwich Time Signal (GTS) or BBC pips is a time code heard on some BBC Radio stations. The signal consists of 6 pips (short beeps) which occur on the 5 seconds leading up to the hour and on the hour itself. Each pip, or marker, is a 1 kHz tone.
From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 500ms.

2361	**BBC-Radio 2.**	Mon.-Fri.: 0000, 0700, 0800, 1300, 1700; Sat.: 0000, 0700, 0800; Sun.: 0000, 0800, 0900, 1900.	(See below)	88-90.2 MHz, F3E (89.6 MHz for Channel Islands).
		1 hr. earlier when daylight savings time in effect.		

SYSTEM: The Greenwich Time Signal (GTS) or BBC pips is a time code heard on some BBC Radio stations. The signal consists of 6 pips (short beeps) which occur on the 5 seconds leading up to the hour and on the hour itself. Each pip, or marker, is a 1 kHz tone.
From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 500ms.

2362	**BBC-Radio 3.**	Mon.-Fri.: 0700, 0800; Sat.: 0600, 0700. Sun.: Nil.	(See below)	90.2-92.4 MHz, F3E (91.1 MHz for Channel Islands).
		1 hr. earlier when daylight savings time in effect.		

SYSTEM: The Greenwich Time Signal (GTS) or BBC pips is a time code heard on some BBC Radio stations. The signal consists of 6 pips (short beeps) which occur on the 5 seconds leading up to the hour and on the hour itself. Each pip, or marker, is a 1 kHz tone.
From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 500ms.

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
2363	**BBC-Radio 4.**	Mon.-Fri.: 0600, 0700, 0800, 0900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1900, 2200; Sat.: 0700, 0800, 0900, 1000, 1100, 1300, 1400, 1600; Sun.: 0600, 0700, 0800, 0900, 1300, 1700, 2100.	(See Below)	198 kHz, A3E, 50-400 kW; Tyneside: 603 kHz, A3E, 2 kW; London: 720 kHz, A3E, 0.5.kW; N. Ireland: 720 kHz, A3E, 0.25-10 kW; Redruth: 756 kHz, A3E, 2 kW; Plymouth: 774 kHz, A3E, 1 kW; Aberdeen: 1449 kHz, A3E, 2 kW; Carlisle: 1485 kHz, A3E, 1 kW; 92.4-94.6 MHz, F3E (94.8 MHz for Channel Islands).
		1 hr. earlier when daylight savings time in effect.		

SYSTEM: The Greenwich Time Signal (GTS) or BBC pips is a time code heard on some BBC Radio stations. The signal consists of 6 pips (short beeps) which occur on the 5 seconds leading up to the hour and on the hour itself. Each pip, or marker, is a 1 kHz tone.
From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 500ms.

2370	**BBC-World Service.**	0000, 0200, 0300, 0400, 0500.	(See below)	198 kHz.
		0000, 0200, 0300, 0600, 0700, 0800, 0900, 1100, 1200, 1300, 1500, 1600, 1700, 1900, 2000, 2200, 2300.		648 kHz.
		0200, 0300, 0600, 2200, 2300.		1296 kHz.
		0400, 0500, 0600.		3955 kHz.
		0200, 0300, 0400, 0500, 0600, 0700, 1500, 1600, 1700, 1800, 1900, 2000, 2200.		6195 kHz.
		0600, 0700, 0800.		7150 kHz.
		0300, 0400.		7230 kHz.
		0000, 0200, 0300, 0700, 0800, 0900, 2000, 2200, 2300.		7325 kHz.
		0200, 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 1900, 2000, 2200, 2300.		9410 kHz.
		0900, 1100, 1200, 1300, 1500.		9750 kHz.
		0700, 0800, 0900, 1100, 1200, 1300, 1500, 1600.		9760 kHz.
		0000, 0200, 0300, 2200, 2300.		9915 kHz.
		0000, 0200, 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 1900, 2000, 2200, 2300.		12095 kHz.
		0000, 0500, 0600, 0700, 0800, 0900, 1100, 1200, 1300, 1500, 1600, 1700, 1800, 1900, 2000, 2200, 2300.		15070 kHz.
		2200, 2300.		15340 kHz.
		0700, 0800, 0900, 1100, 1200, 1300, 1500.		17640 kHz.
		0800, 0900, 1100, 1200, 1300, 1500, 1600.		17705 kHz.

SYSTEM: SYSTEM: The Greenwich Time Signal (GTS) or BBC pips is a time code heard on some BBC Radio stations. The signal consists of 6 pips (short beeps) which occur on the 5 seconds leading up to the hour and on the hour itself. Each pip, or marker, is a 1 kHz tone.
From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 500ms.
NOTE: Not intended for precise use. Direct transmissions from United Kingdom will normally be received within 0.1s. of UTC, but signals from overseas relay stations may have additional errors of up to 0.25s.

FRANCE

2380	**France Inter (Allouis) (TDF).**	Continuous, except 0100-0500 each Tues.	(See below)	162 kHz, G1D.

SYSTEM: From 00s. to 20s.: second markers of 100ms each. From 21s. to 58s.: time and date announcement. 59s.: emphasized second marker of 100ms. Other second markers are emphasized to indicate the following: 13s. - the day preceding a holiday; 14s. - holiday; 17s. - local time is -2B; 18s. - local time is -1A.

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
		SWITZERLAND		
2400	**Prangins (HBG).**	Continuous.	(See below)	75 kHz, A1A, 20 kW.
	SYSTEM: From 00s. to 15s.: other services information. 16s.: AÑannouncement of time system change. 17s.: EÑset during daylight savings time. 18s.: HÑset during standard time. 19s.: LÑannouncement. 20s.: SÑstart of coded time information. From 21s. to 27s.: minute. 28s.: P1 (parity check)Ñsum of 21s. to 27s. From 29s. to 34s.: hour. 35s.: P2 (parity check)Ñsum of 29s. to 34s. From 36s. to 41s.: day of month. From 42s. to 44s.: day of week. From 45s. to 49s.: month. From 50s. to 57s.: year (07, 08, 09 etc.). 58s.: P3 (parity check)Ñsum of 36s. to 57s. 59s.: no modulation. Note: Carrier interruptions act as markers. Second marker: one 100ms interruption at beginning of each second (except 59s.). Minute marker: two 100ms interruptions at beginning of each minute. Hour marker: three 100ms interruptions at the beginning of each hour. 12-hour marker: four 100ms interruptions at 00h and 12h.			
		ITALY		
2410	**Roma (IAM).**	Mon.-Sat.: 0730-0830, 1030-1130.	(See below)	5000 kHz, A2A, A3E, 1 kW.
		1 hr. earlier when daylight savings time in effect.		
	DUT1: Marked seconds indicated by double pulse. SYSTEM: From 01s. to 59s.: second markers of 5ms each. 00s.: minute marker of 20ms. At 00m., 15m., 30m., 45m.: station identification in morse code and Italian. At 05m., 20m., 35m., 50m.: “IAM IAM IAM”, time in morse code.			
		CHILE		
2445	**Valparaiso Playa Ancha Radiomaritima (CBV).**	0055-0100, 1155-1200, 1555-1600, 1955-2000.	U.S.	4228 kHz, A2A; 8677 kHz, A2A.
		PERU		
2461	**Peru National Radio.**	0300, 1300, 1700, 2300.	U.S.	609.5 kHz, J3E; 850 kHz, J3E; 103.9 MHz, J3E.
	SYSTEM: The hour marker of 1s. commences at 59m.-59s.			
2462	**Radio Victoria.**	0300, 1300, 1700, 2300.	U.S.	780 kHz, J3E.
	SYSTEM: The hour marker of 1s. commences at 59m.-59s.			
		INDIA		
2476	**New Delhi (ATA).**	0330-1430 (except from 0430-0830 on Sundays).	(See below)	10000 kHz, A1A, A3E, 8 kW.
	SYSTEM: 00m.: call sign and time in morse code. From 00m. to 04m.: second markers of 5ms 1000 Hz modulation each, minute markers of 100ms 1000 Hz modulation each. From 04m. to 15m.: second markers of 5ms each, minute markers of 100ms each. 15m.: call sign and time in morse code. From 15m. to 19m.: second markers of 5ms 1000 Hz each, minute markers of 100ms 1000 Hz each. From 19m. to 30m.: second markers of 5ms each, minute markers of 100ms each. 30m.: call sign and time in morse code. From 30m. to 34m.: second markers of 5ms 1000 Hz each, minute markers of 100ms 1000 Hz each. From 34m. to 45m.: second markers of 5ms each, minute markers of 100ms each. 45m.: call sign and time in morse code. From 45m. to 49m.: second pulses of 5ms 1000 Hz each, minute markers of 100ms 1000 Hz each. From 49m. to 00m.: second markers of 5ms each, minute markers of 100ms each. All time signals are sent 50ms in advance of UTC.			
		SRI LANKA		
2480	**Colombo (4PB).**	0555-0600, 1325-1330.	English	482 kHz, A2A, 1 kW; 8473 kHz, A1A, 2.5 kW.
	SYSTEM: From 53m./23m. to 55m./25m.: “CQ DE 4PB TIME SIGNALS AS”. From 55m./25m. to 00m./30m.: second markers of 100ms each, minute markers of 400ms each.			
		CHINA		
2485.1	**Shanghai (XSG).**	0256-0856.	(See below)	458 kHz, A1A, A2A; 4290 kHz, A1A; 6414.5 kHz, A1A; 6454 kHz, A1A; 8487 kHz, A1A; 8502 kHz, A1A; 12871.5 kHz, A1A; 12954 kHz, A1A; 17002.4 kHZ, A1A.
	SYSTEM: From 59m.-55s. to 59m.-59s.: second markers of 100ms each. 00m.-00s.: minute marker of 100ms.			

(1) No.	(2) Name	(3) Hours of Transmission	(4) System	(5) Frequency
2490	**Xian (BPM).**	0730-0100.	(See below)	2500 kHz, A1A, A3E.
		Continuous.		5000 kHz, A1A, A3E.
		Continuous.		10000 kHz, A1A, A3E.
		0100-0900.		15000 kHz, A1A, A3E.

SYSTEM: From 00m. to 10m.: UTC second markers of 10ms each, UTC minute markers of 300ms each. From 10m. to 15m.: carrier. From 15m. to 25m.: UTC second markers of 10ms each, UTC minute markers of 300ms each. From 25m. to 29m.: UT1 second markers of 100ms each, UT1 minute markers of 300ms each. From 29m.-00s. to 29m.-40s.: "BPM" in morse code. From 29m.-40s. to 30m.-00s.: "BPM" and other station identification in Chinese. From 30m. to 40m.: UTC second markers of 10ms each, UTC minute markers of 300ms each. From 40m. to 45m.: carrier. From 45m. to 55m.: UTC second markers of 10ms each, UTC minute markers of 300ms each. From 55m. to 59m.: UT1 second markers of 100ms each, UT1 minute markers of 300ms each. From 59m.-00s. to 59m.-40s.: "BPM" in morse code. From 59m.-40s. to 00m.-00s.: "BPM" and other station identification in Chinese. All UTC signals are broadcast 20ms in advance of UTC.

JAPAN

2501	**Ohtakadoya-Yama (JJY).**	Continuous.	(See below)	40 kHz, A1B, 10 kW.

SYSTEM: 00s.: MÑminute marker of 200ms. From 01s. to 08s.: minutes. 09s.: P1Ñposition marker of 200ms. From 10s. to 11s.: marker of 800ms each. From 12s. to 18s.: hours. 19s.: P2Ñposition marker of 200ms. From 20s. to 21s.: marker of 800ms each. From 22s. to 28s.: days. 29s.: P3Ñposition marker of 200ms. From 30s. to 33s.: days. From 34s. to 35s.: marker of 800ms each. 36s.: PA1Ñparity check. 37s.: PA2Ñparity check. 38s.: SU1Ñspare bit or summer time information. 39s.: P4Ñposition marker of 200ms. 40s.: SU2Ñspare bit or summer time information. From 41s. to 48s.: years. 49s.: P5Ñposition marker of 200ms. From 50s. to 52s.: day of week. 53s.: LS1Ñleap second information. 54s.: LS2Ñleap second information. From 55s. to 58s.: marker of 800ms each. 59s.: P0Ñposition marker of 200ms. Note: every 15m. and 45m. of each hour the call sign in morse (from 40s. to 48s.) and station maintenance information (from 50s. to 55s.) are transmitted.

2502	**Hagane-Yama (JJY).**	Continuous.	(See below)	60 kHz, A1B, 10 kW.

SYSTEM: 00s.: MÑminute marker of 200ms. From 01s. to 08s.: minutes. 09s.: P1Ñposition marker of 200ms. From 10s. to 11s.: marker of 800ms each. From 12s. to 18s.: hours. 19s.: P2Ñposition marker of 200ms. From 20s. to 21s.: marker of 800ms each. From 22s. to 28s.: days. 29s.: P3Ñposition marker of 200ms. From 30s. to 33s.: days. From 34s. to 35s.: marker of 800ms each. 36s.: PA1Ñparity check. 37s.: PA2Ñparity check. 38s.: SU1Ñspare bit or summer time information. 39s.: P4Ñposition marker of 200ms. 40s.: SU2Ñspare bit or summer time information. From 41s. to 48s.: years. 49s.: P5Ñposition marker of 200ms. From 50s. to 52s.: day of week. 53s.: LS1Ñleap second information. 54s.: LS2Ñleap second information. From 55s. to 58s.: marker of 800ms each. 59s.: P0Ñposition marker of 200ms. Note: every 15m. and 45m. of each hour the call sign in morse (from 40s. to 48s.) and station maintenance information (from 50s. to 55s.) are transmitted.

REPUBLIC OF KOREA

2505	**Taejon (HLA).**	Continuous.	(See below)	5000 kHz, 2kW.

DUT1: Marked seconds indicated by double pulse.
SYSTEM: 00s.: minute marker of 800ms 1800 Hz tone. From 01s. to 28s.: second markers of 800ms 1800 Hz tone each. 29s.: silence. From 30s. to 52s.: second markers of 800ms 1800 Hz tone each. From 53s. to 58s.: time announcement by voice. 59s.: silence. 00m.: hour marker of 800ms 1500 Hz tone. A binary time code is transmitted continuously on a 100 kHz subcarrier.

PHILIPPINES

2530	**Manila (DUW21).**	Every even hour +55m. to +60m.	U.S.	3650 kHz, A1A, 0.5 kW.

INDONESIA

2633	**Jakarta (PKI)(PLC).**	0055-0100.	Modified ONOGO	PKI: 8542 kHz, A1A, 1-3 kW; PLC: 11440 kHz, A1A.

CHAPTER 3

RADIO NAVIGATIONAL WARNINGS

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CHAPTER 3

RADIO NAVIGATIONAL WARNINGS

PART I TYPES OF NAVIGATIONAL BROADCASTS

300A. Global Maritime Distress and Safety System (GMDSS)

The GMDSS is a global communications service based upon automated systems, both satellite based and terrestrial, to provide distress alerting and promulgation of Maritime Safety Information (MSI) for mariners. This chapter focuses on MSI broadcasts, for Distress including Search and Rescue see Chapter 4.

Definitions:

–Coast Earth Station (CES) - is a fixed station on land to link satellite transmission to users.

–CAMSLANT- Communications Area Master Station Atlantic. Provides rapid, reliable and secure communications support and services to U.S. Coast Guard operational commanders, other government agencies, military and civilian organizations throughout the world.

–CAMSPAC- Communications Area Master Station Pacific. Delivers record message traffic and voice communications services to U.S. Coast Guard Units world wide. Provides extensive weather warnings and safety information to commercial and recreational vessels and acts as a distress notification center.

–COGARD NAVCEN- The U.S. Coast Guard Navigation Center. Provides maritime navigation and information services that enhance the safety, security, and efficiency of U.S. waters.

–COMPAS-SARSAT- a satellite-based search and rescue distress alert detection and information distribution system.

–Digital Selective Calling (DSC) - equipment that allows mariners to instantly send or receive automatically formatted distress alerts to vessels and coast stations in the area.

–High Frequency Narrow Band Direct Printing (HF NBDP) - an automated direct printing service using High Frequency.

–INMARSAT - International Maritime Satellites. A company that owns and operates mobile voice and data communication satellites all around the world where terrestrial networks are not operational.

– International Hydrographic Organization (IHO) - Coordinates the activities of national hydrographic offices, promotes standards and provides advice to developing countries in the fields of hydrographic surveying and production of nautical charts and publications.

–International Ice Patrol (IIP)- provides the latest information on iceberg positions and computer prediction of the extent of the iceberg danger zone to mariners in the North Atlantic Ocean. Areas of study include iceberg detection, drift and deterioration, surface object drift and currents in the Grand Banks Region.

–International Maritime Organization (IMO)- is the specialized agency of the United Nations responsible for maritime safety and efficiency of navigation.

–Maritime Mobile Service Identity (MMSI)- is a series of nine digits which are sent in digital form over a radio frequency channel that uniquely identifies the user.

–Maritime Safety Information (MSI)- navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships.

–Mobile Earth Station (MES)- an antenna that is not in a fixed location that communicates with a satellite, normally located on a vessel.

–NAVTEX- an automated direct printing service using 424, 490 and/or 518 kHz.

–SafetyNET - an international service using satellites to promulgate urgent and safety related messages to vessels.

–World Meteorological Organization (WMO)- is the specialized agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences. This is the organization responsible for coordinating weather forecasts and alerts to vessels out to sea.

300B. Local Warnings (Sea Area A1)

Sea Area A1, is mainly for local navigational warnings-inland waters extending out to about 30nm (56km)-40nm (74km) from the coast. Vessels are required to only carry VHF radio equipment with continuous DSC alerting available.

-To obtain NOAA WEATHER broadcasts for A1 in U.S. waters:

VHF Channel: 22A (157.1 MHz)

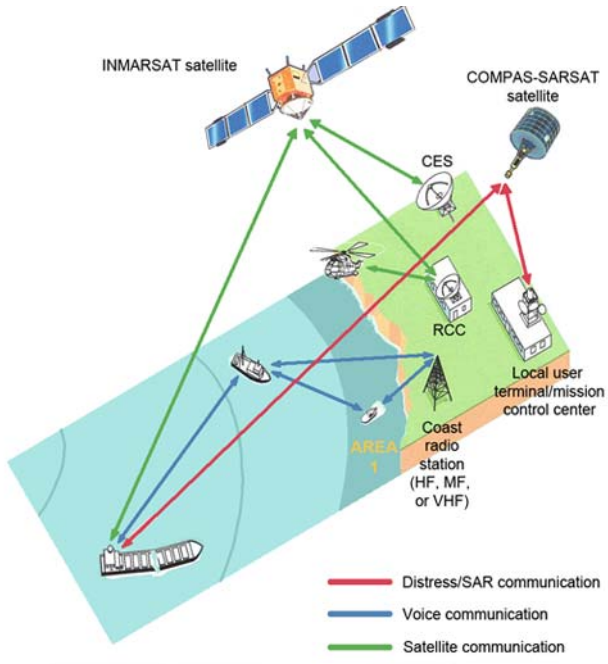
-To obtain USCG NAVIGATIONAL broadcasts for A1 in U.S. waters:

VHF Channel: 22A

MF Channel: 2670 kHz (single side band)

Website: https://homeport.uscg.mil

NOAA Weather Radio is a service providing specialized weather broadcasts for maritime users along the U.S. coastline, Great Lakes, Puerto Rico, the Virgin Islands, Guam and Saipan. It provides continuous broadcasts of the latest weather information directly from National Weather Service (NWS) offices. Taped weather messages are repeated every four to six minutes and are routinely revised every one to three hours, or more frequently if needed.



Sea Area 1

During severe weather, NWS forecasters can interrupt the routine weather broadcasts and substitute special warning messages.

NOAA Weather Radio broadcasts are received on one of seven VHF channels listed below. These channels are generally designated on marine VHF equipment as WX-1 through WX-7. These broadcasts usually can be received within 25 miles of the antenna site.

NOAA Weather Radio VHF Channels	
WX-1	162.550 MHz
WX-2	162.400 MHz
WX-3	162.475 MHz
WX-4	162.425 MHz
WX-5	162.450 MHz
WX-6	162.500 MHz
WX-7	162.525 MHz

A list of broadcast stations and frequencies may be obtained from the NOAA Weather Radio Website at:
http://www.nws.noaa.gov/nwr/

or from the NWS at the following address:

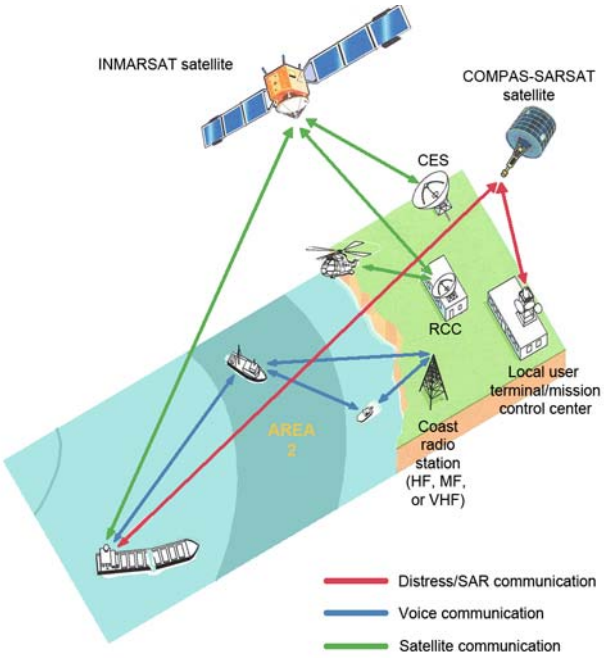
NATIONAL WEATHER SERVICE
ATTN: W/OS21
NOAA
1325 EAST WEST HIGHWAY
SILVER SPRING MD 20910

Marine Product Dissemination Information may be obtained from the NWS Marine Forecasts Homepage at:
http://www.nws.noaa.gov/om/marine/home.htm
Information available includes forecasts and warnings, up-to-date marine weather charts, including those broadcast by the Coast Guard over HF radiofacsimile, and the NOAA Weather Radio Guide.

300C. Coastal Warnings (Sea Area A2)

Sea Area A2 are coastal navigational warnings, such as Navtex, extending out to about 100nm from the coast. Vessels are required to carry the same equipment from A1 as well as MF radio communications (with continuous DSC alerting available).

NAVTEX is an international automated medium frequency direct-printing service informing mariners of navigational and meteorological warnings and forecasts, as well as urgent marine safety information. NAVTEX is part of the GMDSS system, however not all countries use NAVTEX broadcasts to warn mariners of safety information along the coast. NAVAREA V and Australia broadcast their coastal warning via SafeyNet.



NAVTEX messages basic format

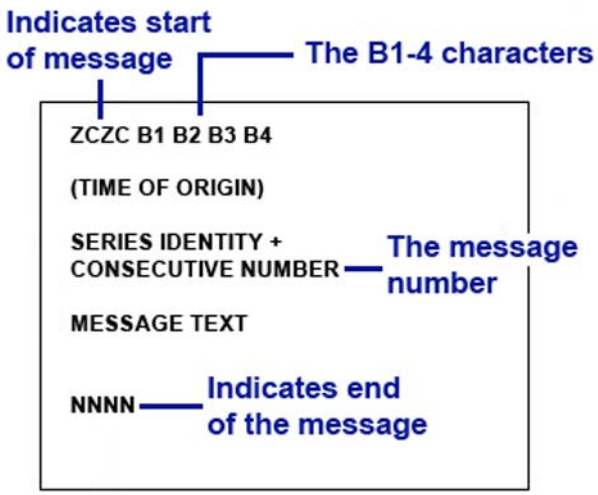
SUBJECT INDICATOR CHARACTERS (B_1): is a single letter allocated to each NAVTEX shore station transmitter. For example, NAVTEX station Miami's B_1 character is A.

SUBJECT INDICATOR CHARACTERS (B_2): is used by the receiver to identify different classes of messages.

A: Navigational warnings[1]
B*: Meteorological warnings[1]
C: Ice reports
D: Search and rescue information, and pirate attack warnings[1]
E: Meteorological forecasts
F*: Pilot service messages
G: AIS
H: LORAN messages
I: Spare
J: SATNAV messages
K: Other electronic navaid messages
L: Navigational warnings (additional to A)[2]
V to Y: Special services (allocation by NAVTEX Panel)
Z: No messages on hand

[1] : Cannot be rejected by the receiver
[2] : Should not be rejected by the receiver
**Normally not used in the United States*

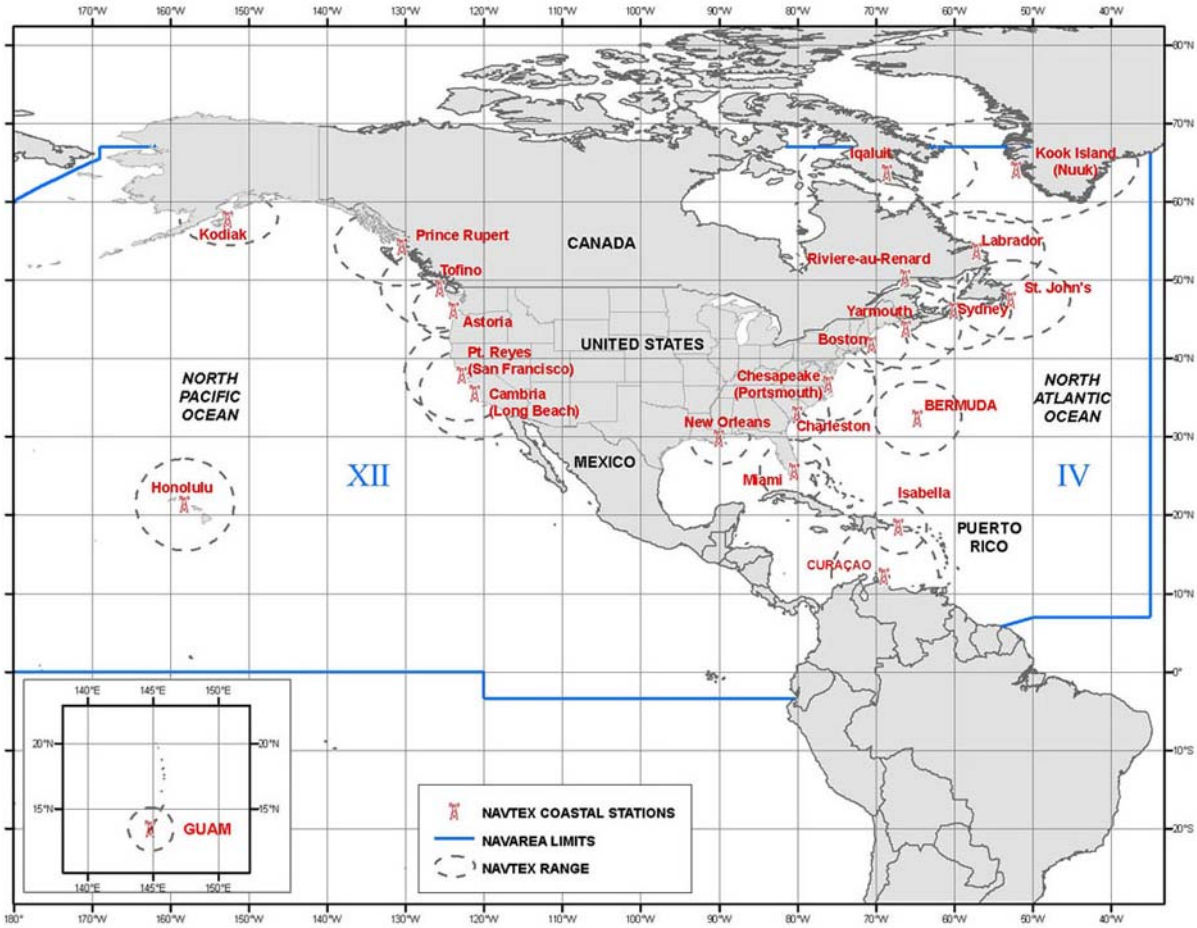
NAVTEX Message Format



SUBJECT INDICATOR CHARACTERS (B_3) and (B_4): each message within each subject group is allocated a two digit sequential serial number, beginning at 01 and ending at 99. The B_3 & B_4 message numbering characters together are often referred to as the "NAVTEX number". The NAVTEX number is solely allocated as a component of the NAVTEX message identity and should not be confused with (and bears no correlation to), the series identity and consecutive number of the coastal warning contained in the message. Messages broadcast using NAVTEX number $B_3B_4 = 00$ cannot be rejected and will automatically override any selection of B_1 transmitter identification characters as well as any B_2 subject indicator characters selected on the NAVTEX receiver.

To obtain NOAA <u>WEATHER</u> and USCG <u>NAVIGATIONAL</u> broadcasts for A2 in U.S. waters:

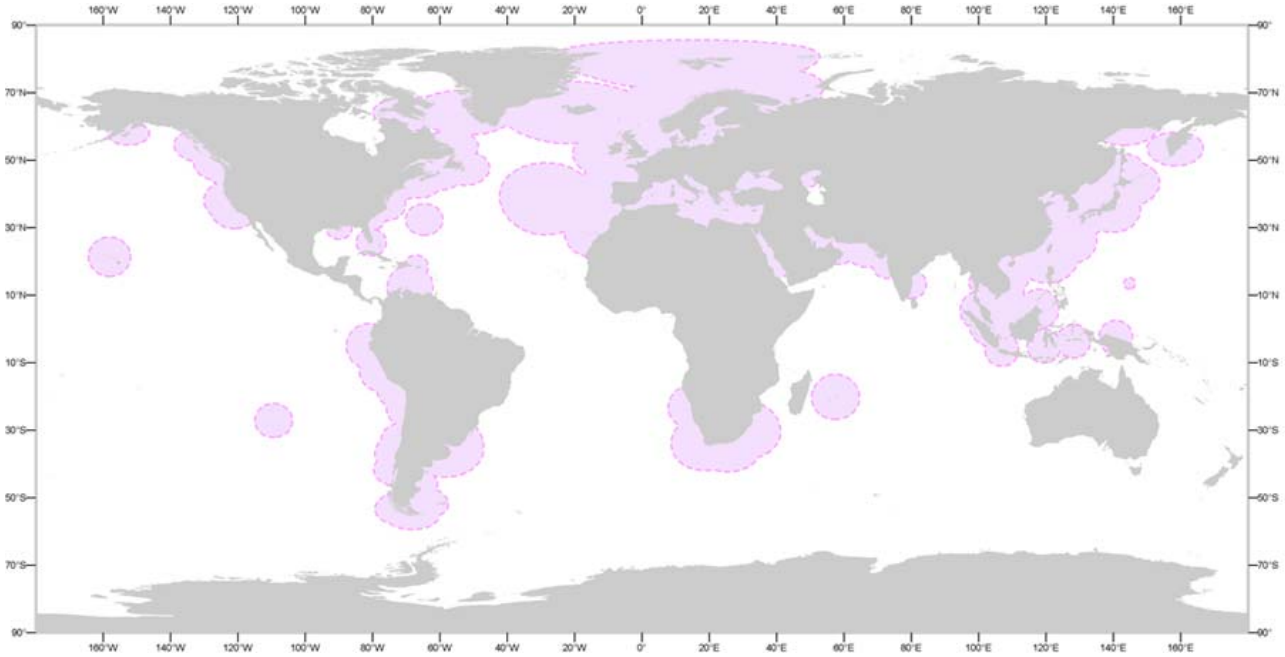
*VHF Channel:*22A
*MF Channel:*2670 kHz (single side band)
*NAVTEX:*518 kHz
*Web site:*http://www.nws.noaa.gov/om/marine/navtex.htm



U.S. NAVTEX Coverage

300C.1 U.S. NAVTEX Stations					
NAVTEX Coast Station (ID)	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Boston (NMF)	41-43N 070-30W	200	518	F	00, 04, 08, 12, 16, 2050
NOTE: Nav Warnings include International Ice Patrol Bulletins (Feb-July)					
Reports to: Coast Guard District 1, Phone: 617 223 8555, Fax: 617 223 8117, E-mail: d01-smb-d1cmdcenter@uscg.mil					
Portsmouth/ CAMSLANT (NMN)	36-43N 076-00W	280	518	N	02, 06, 10, 14, 18, 2210
Reports to: Coast Guard District 5, Phone: 757 398 6231, Fax: 757 398 6392, E-mail: d05-smb-d5cg@uscg.mil					
Charleston (NME)	32-51N 079-59W	200	518	E	00, 04, 08, 12, 16, 2040
Miami (NMA)	25-37N 080-23W	240	518	A	00, 04, 08, 12, 16, 2000
Reports to: Coast Guard District 7, Phone: 305 415 6800, Fax: 305 415 6809, E-mail: rccmiami@uscg.mil					
San Juan (NMR)	18-28N 067-04W	200	518	R	02, 06, 10, 14, 18, 2250
Reports to: Coast Guard San Juan, Phone: 787 289 2041, E-mail: SSJCC@uscg.mil					

300C.1 U.S. NAVTEX Stations					
NAVTEX Coast Station (ID)	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
New Orleans (NMG)	29-53N 089-57W	200	518	G	01, 05, 09, 13, 17, 2100
Reports to: Coast Guard District 8, Phone: 504 589 6225, Fax: 504 589 2148, E-mail: d08-comandcenter@uscg.mil					
Cambria (NMQ)	35-31N 121-03W	350	518	Q	02, 06, 10, 14, 18, 2240
Reports to: Coast Guard District 11, Phone: 510 437 3701, Fax: 510 437 3017, E-mail: rccalameda@uscg.mil					
San Francisco/ CAMSPAC (NMC)	37-55N 122-44W	350	518	C	00, 04, 08, 12, 16, 2020
Reports to: Coast Guard District 11, Phone: 510 437 3701, Fax: 510 437 3017, E-mail: rccalameda@uscg.mil					
Astoria (NMW)	46-10N 123-49W	216	518	W	03, 07, 11, 15, 19, 2340
Reports to: Coast Guard District 13, Phone: 206 220 7001, Fax: 206 220 7009, E-mail: D13cc@uscg.mil					
Kodiak (NOJ) *Areas EAST of Kodiak*	57-46N 152-34W	200	518	J	01, 05, 09, 13, 17, 2130
Kodiak (NOX) *Areas WEST of Kodiak*				X	03, 07, 11, 15, 19, 2350
Reports to: Coast Guard District 17, Phone: 907 463 2000, Fax: 907 463 2023, E-mail: jrccjuneau@uscg.mil					
Honolulu (NMO)	21-22N 158-09W	350	518	O	02, 06, 10, 14, 18, 2220
Reports to: Coast Guard District 14, Phone: 808 535 3333, Fax: 808 535 3338, E-mail: jrcchonolulu@uscg.mil					



Worldwide NAVTEX Coverage

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Algeria	**Bordj-el-Kiffan (7TA)**	36-44N 003-10E	150	490	V (French)	03, 07, 11, 15, 19, 2230
				518	B	00, 04, 08, 12, 16, 2010
Argentina	**Bahia Blanca (L2I)**	38-43S 062-06W	280	490	D (Spanish)	01, 05, 09, 13, 17, 2120
				518	P	02, 06, 10, 14, 18, 2230
	Phone: (54-291) 4573355					
	Buenos Aires (L2B)	34-36S 058-22W	280	490	F (Spanish)	00, 04, 08, 12, 16, 2050
				518	R	02, 06, 10, 14, 18, 2250
	Phone: (54-11) 457 67657, Fax: (54-11) 45767556, E-mail: info@perfecturanaval.gov.ar					
	Comodoro Rivadavia (L2W)	45-51S 067-25W	280	490	C (Spanish)	00, 04, 08, 12, 16, 2020
				518	O	02, 06, 10, 14, 18, 2220
	Phone: (54-297) 4462167, Fax: (54-297) 4473863					
	Mar del Plata (L2P)	38-03S 057-32W	280	490	E (Spanish)	00, 04, 08, 12, 16, 2040
				518	Q	02, 06, 10, 14, 18, 2240
	Phone: (54-223) 4803100, Fax: (54-223) 4803006					
	Rio Gallegos (L3D)	51-31S 065-03W	280	490	B (Spanish)	00, 04, 08, 12, 16, 2010
				518	N	02, 06, 10, 14, 18, 2210
	Phone: (54-2966) 420375					
	Ushuaia (L3K)	54-48S 068-18W	280	490	A (Spanish)	00, 04, 08, 12, 16, 2000
				518	M	02, 06, 10, 14, 18, 2200
	Phone: (54-2901) 422382, Fax: (54-2901) 421425					

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Azores	**Horta (CTH)**	38-32N 028-38W	640	490	J (Portuguese)	01, 05, 09, 13, 17, 2130
				518	F	00, 04, 08, 12, 16, 2050
	Phone: +351 292 20 86 20, Fax: +351 292 20 86 69					
Belgium	**Oostende (OST)**	51-11N 002-48E	55	490	B (Dutch)	00, 04, 08, 12, 16, 2010
			150	518	M (MSI only)	02, 06, 10, 14, 18, 2200
			55	518	T	03, 07, 11, 15, 19, 2310
Bahrain	**Bahrain (A9M)**	26-09N 050-28E	300	518	B	00, 04, 08, 12, 16, 2010
Bermuda	**Bermuda (ZBR)**	32-23N 064-41W	280	518	B	00, 04, 08, 12, 16, 2010
Bulgaria	**Varna (LZW)**	43-04N 027-46E	350	518	J	01, 05, 09, 13, 17, 2130
Canada	**Fundy (VAR-9)**	43-44N 066-07W	300	490	V (French)	03, 07, 11, 15, 19, 2335
				518	U	03, 07, 11, 15, 19, 2320
	Iqaluit (VFF)	63-43N 068-33W	300	490	S (French)	03, 07, 11, 15, 19, 2300
				518	T	03, 07, 11, 15, 19, 2310
	Operates Jun-Dec					
	Labrador (VOK)	53-42N 057-11W	300	518	X (French)	03, 07, 11, 15, 19, 2350
					X (Arctic)	09, 2110
	Operates Jul-Oct					
	Prescott (XMJ 329)	44-56N 081-14W	300	518	H	01, 05, 09, 13, 17, 2110
	Ice included in warnings during ice season					
	Prince Rupert (VAJ)	54-18N 130-25W	300	518	D	00, 04, 08, 12, 16, 2030
	Riviere-au-Renard (VCK)	50-12N 066-07W	300	490	D (French)	00, 04, 08, 12, 16, 2035
				518	C	00, 04, 08, 12, 16, 2020
	Ice included in warnings during ice season					
	St John's (VON)	47-37N 052-40W	300	518	O (summer)	02, 06, 10, 14, 18, 2220
					O (winter)	00, 06, 10, 14, 2220
	Sydney (VCO)	46-11N 059-54W	300	490	J (French)	02, 06, 10, 14, 18, 2255
				518	Q	02, 06, 10, 14, 18, 2240
	Ice included in warnings during ice season					
	Thunder Bay (CAN)	48-34N 088-39W	300	518	P	02, 06, 10, 14, 18, 2230
	Ice included in warnings during ice season					
	Tofino (XLK 835)	48-56N 125-33W	300	518	H	01, 05, 09, 13, 17, 2120
Canary Islands	**Las Palmas (EAL)**	28-25N 016-23W	400	490	A (Spanish)	00, 04, 08, 12, 16, 2000
				518	I	01, 05, 09, 13, 17, 2120
	MMSI: 2240995, Telex: +52 95003 SALPA, Phone: +34 956 68 47 40, Fax: +34 956 68 06 06					

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Cape Verde	**Ribeira de Vinha (D4A)**	16-51N 025-00W	250	490	P (Portuguese)	02, 06, 10, 14, 18, 2230
				518	U	03, 07, 11, 15, 19, 2320
	MMSI: 617000, Phone: +238 23 22 158, Fax: +238 23 22 263, E-mail: s.movelmaritimo@cvtelecom.cv					
Chile	**Antofagasta (CBA)**	23-37S 070-25W	300	518	H (Spanish)	00, 08, 1600
				518	A	04, 12, 2000
	Isla de Pascua (CBY)	27-09S 109-25W	300	518	G	00, 08, 1650
				518	F (Spanish)	04, 12, 2000
	Magallanes (CBM)	53-09S 070-58W	300	518	L (Spanish)	00, 08, 1640
				518	E	04, 12, 2040
	Puerto Montt (CBP)	41-30S 072-58W	300	518	K (Spanish)	00, 08, 1630
				518	D	04, 12, 2030
	Talcahuano (CBT)	36-43S 073-07W	300	518	J (Spanish)	00, 08, 1620
				518	E	04, 12, 2020
	Valparaiso (CBV)	32-48S 071-29W	300	518	I (Spanish)	00, 08, 1610
				518	B	04, 12, 2010
China	**Dalian (XSZ)**	38-51N 121-31E	250	518	R	02, 06, 10, 14, 18, 2250
	Fuzhou (XSL)	26-02N 119-18E	250	518	O	02, 06, 10, 14, 18, 2220
	in English and Chinese					
	Guangzhou (XSQ)	23-09N 113-29E	250	518	N	02, 06, 10, 14, 18, 2210
	Hong Kong (VRX)	22-13N 114-15E	400	518	L	01, 05, 09, 13, 17, 2150
	Sanya (XSI)	18-15N 109-30E	250	518	M	02, 06, 10, 14, 18, 2200
	Shanghai (XSG)	31-07N 121-33E	250	518	Q	02, 06, 10, 14, 18, 2240
Croatia	**Split (9AS)**	43-11N 016-26E	85	518	Q	02, 06, 10, 14, 18, 2240
Cyprus	**Cyprus (5BA)**	35-03N 033-17E	200	518	M	02, 06, 10, 14, 18, 2200
Ecuador	**Ayora (HCY)**	00-45S 090-19W	400	490	A (Spanish)	00, 04, 08, 12, 16, 2000
				518	L	01, 05, 09, 13, 17, 2150
	Guayaquil (HCG)	02-17S 079-52W		518	M	02, 06, 10, 14, 18, 2200
Egypt	**Al Quseir (SUK)**	26-06N 034-17E	400	518	V	03, 07, 11, 15, 19, 2330
	Alexandria (SUH)	31-12N 029-52E	350	518	N	02, 06, 10, 14, 18, 2210
	Ismailia (SUZ)	30-28N 032-22E	400	518	X	03, 07, 11, 15, 19, 2350
Estonia	**Tallinn (ESA)**	59-30N 024-30E	250	518	U	03, 07, 11, 15, 19, 2320
	relayed by MSI Sweden/Stockholm radio					

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Faroe Island	**Torshavn (OXJ)**	62-01N 006-48W		518	D	00, 04, 08, 12, 16, 2030
France	**Corsen (FRC)**	48-28N 005-03W	300	490	E (French)	00, 04, 08, 12, 16, 2040
				518	W	03, 07, 11, 15, 19, 2340
	MMSI: 2275300, Telex: +42 940086 CROCO, Phone: +33 (0)2 98 89 31 31, Fax: +33 (0)2 98 89 65 75, E-mail: corsen.mrcc@equipement.gouv.fr					
	La Garde(FRL)	43-06N 005-59E	250	490	S (French)	03, 07, 11, 15, 19, 2300
Germany	**Haburg (DDH-49)**	53-40N 009-49E	250	490	L (German)	01, 05, 09, 13, 17, 2150
					S	03, 07, 11, 15, 19, 2300
Greece	**Kerkyra (SVK)**	39-37N 019-55E	280	518	K	01, 05, 09, 13, 17, 2140
	Irakleio(SVH)	35-20N 025-07E	280	518	H	01, 05, 09, 13, 17, 2110
	Limnos (SVL)	34-52N 025-04E	280	518	L	01, 05, 09, 13, 17, 2150
Greenland	**Kook Island (OXI)**	64-04N 052-01W	400	518	W	03, 07, 11, 15, 19, 2340
	Simiutaq (OXF)	60-41N 046-36W		518	M	01, 05, 09, 13, 17, 2120
	Upernavik (OYN)	72-47N 056-12W		518	I	01, 05, 09, 13, 17, 2120
Guam	**Guam (NRV)**	13-29N 144-50E	100	518	V	03, 07, 11, 15, 19, 2330
	NOTE: Broadcasts controlled from U.S. Coast Guard CAMSPAC (Point Reyes)					
Iceland	**Grindavik (TFK)**	63-47N 022-31W		490	K (Icelandic)	01, 05, 09, 13, 17, 2140
				518	X	03, 07, 11, 15, 19, 2350
	Saudanes (TFA)	66-11N 001-18W		490	E (Icelandic)	00, 04, 08, 12, 16, 2040
				518	R	02, 06, 10, 14, 18, 2250
India	**Mumbai (Bombay)(VWB)**	19-05N 072-50E	250	518	G	01, 05, 09, 13, 17, 2100
	Chennai (Madras)(VWM)	13-05N 080-17E	250	518	P	02, 06, 10, 14, 18, 2230
Indonesia	**Ambon (PKE)**	03-42S 128-12E	300	518	B	00, 04, 08, 12, 16, 2010
	Jakarta (PKX)	06-06S 106-54E	300	518	E	00, 04, 08, 12, 16, 2040
	Jayapura (PNK)	02-31S 140-43E	300	518	A	00, 04, 08, 12, 16, 2000
	Makassar (PKF)	05-06S 119-26E	300	518	D	00, 04, 08, 12, 16, 2030

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Iran (Islamic Republic of)	**Busherhr (EQM)**	28-59N 050-49E	300	490	D (Farsii)	00, 04, 08, 12, 16, 2030
				518	A	00, 04, 08, 12, 16, 2000
	Abbas Radio (EQI)	27-06N 056-03E	300	490	I (Farsii)	01, 05, 09, 13, 17, 2120
				518	F	00, 04, 08, 12, 16, 2050
	Fereydoonkenar (EQO)	36-42N 052-33E	250	490	J (Farsii)	01, 05, 09, 13, 17, 2130
				518	G	01, 05, 09, 13, 17, 2100
Ireland	**Malin Head (EJM)**	55-22N 007-21W	400	490	A	00, 04, 08, 12, 16, 2000
				518	Q	02, 06, 10, 14, 18, 2240
	490kHz broadcasts inshore water weather forecasts					
	Valentia (EJK)	51-56N 010-21W	400	518	W	03, 07, 11, 15, 19, 2340
Israel	**Haifa (4XO)**	32-49N 035-00E	200	518	P (Weather)	00, 04, 08, 12, 16, 2020
					P (MSI)	02, 06, 10, 14, 18, 2230
Italy	**Augusta (IQA)**	37-14N 015-14E	320	518	V	03, 07, 11, 15, 19, 2230
	Cagliari (IDC)	39-13N 009-14E	320	518	T	03, 07, 11, 15, 19, 2210
	Rome (IAR)	41-37N 012-29E	320	518	R	02, 06, 10, 14, 18, 2250
	Trieste (IQX)	45-41N 013-46E	320	518	U	03, 07, 11, 15, 19, 2320
Japan	**Kushiro (JNX)**	42-57N 144-36E	400	424	K (Japanese)	01, 05, 09, 13, 17, 2108
				518	K	01, 05, 09, 13, 17, 2140
	424 & 518kHz ice broadcasts Jan-Apr: 09, 1330. Tsunami warnings issued when needed.					
	Moji (JNR)	34-01N 130-56E	400	424	H (Japanese)	00, 04, 08, 12, 16, 2017
				518	H	01, 05, 09, 13, 17, 2110
	Ice and tsunami warnings issued when needed.					
	Naha (JNB)	26-05N 127-40E	400	424	G (Japanese)	00, 04, 08, 12, 16, 2000
				518	G	01, 05, 09, 13, 17, 2100
	Ice and tsunami warnings issued when needed.					
	Otaru (JNL)	43-19N 140-27E	400	424	J (Japanese)	00, 04, 08, 12, 16, 2051
				518	J	01, 05, 09, 13, 17, 2130
	Ice and tsunami warnings issued when needed.					
	Yokohama (JGC)	35-14N 139-55E	400	424	I (Japanese)	00, 04, 08, 12, 16, 2034
				518	I	01, 05, 09, 13, 17, 2120
	Ice and tsunami warnings issued when needed.					
Madeira	**Porto Santo (CTQ)**	33-04N 016-21W		490	M (Portuguese)	01, 05, 09, 13, 17, 2100
				518	P	02, 06, 10, 14, 18, 2230
	Phone: +351 212 91 98 01 50, Fax: +351 212 91 98 01 69					

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Malaysia	**Miri (9WR)**	04-25N 114-01E	350	518	T	03, 07, 11, 15, 19, 2310
	Penang (9MG)	05-26N 100-24E	350	518	U	03, 07, 11, 15, 19, 2320
	Sandakan (9WS)	05-54N 118-00E	350	518	S	03, 07, 11, 15, 19, 2300
Malta	**Malta (9HD)**	35-59N 014-32E	350	518	T	03, 07, 11, 15, 19, 2310
Mauritius	**Mauritius (3BM)**	20-11S 057-28E	400	518	C	00, 04, 08, 12, 16, 2020
	Phone: +91 135 2747368, Fax: +91 135 2748373, E-mail: inho@dataone.in, inho_marinesafety@dataone.in					
Morocco	**Casablanca (CNP)**	33-36N 007-38W	180	518	M	02, 06, 10, 14, 18, 2200
Namibia	**Walvis Bay (V5W)**	23-03S 014-38E	378	518	B	00, 04, 08, 12, 16, 2010
Nether-lands	**Den Helder (PBK)**	52-57N 004-47E		518	P	02, 06, 10, 14, 18, 2230
Nether-lands An-tilles	**Curacao (PJC)**	12-10N 068-52W	400	518	H	01, 05, 09, 13, 17, 2110
Nigeria	**Lagos (5OW)**	06-26N 003-19E		518	S	03, 07, 11, 15, 19, 2300
	Port Harcourt (5OZ)	04-23N 007-10E		518	E	00, 04, 08, 12, 16, 2040
North Korea	**Hungnam (HMH)**	39-50N 127-41E		490	E (Korean)	00, 04, 08, 12, 16, 2240
				518	E	00, 04, 08, 12, 18, 2240
	Pyongyang (HMZ)	39-00N 125-43E		490	D (Korean)	00, 04, 08, 12, 16, 2230
				518	D	00, 04, 08, 12, 16, 2230
Norway	**Bodo (LGP)**	67-16N 014-23E	450	518	B	00, 04, 08, 12, 16, 2010
	Phone: +47 75 52 89 25, Fax: +47 75 52 58 96, E-mail: bodo.radio@telenor.com					
	Orlandet (LGD)	63-40N 009-33E	450	518	N	02, 06, 10, 14, 18, 2210
	Rogaland (LGQ)	58-39N 005-36E	450	518	L	01, 05, 09, 13, 17, 2150
	Vardo (LGV)	70-22N 031-06E	450	518	V	03, 07, 11, 15, 19, 2330
	Phone: +47 75 52 89 25, Fax: +47 75 52 58 96, E-mail: bodo.radio@telenor.com					
Oman	**Muscat (A4M)**	23-36N 058-30E	270	518	M	02, 06, 10, 14, 18, 2200
Pakistan	**Karachi (ASK)**	24-51N 067-03E	400	518	P	02, 06, 10, 14, 18, 2230

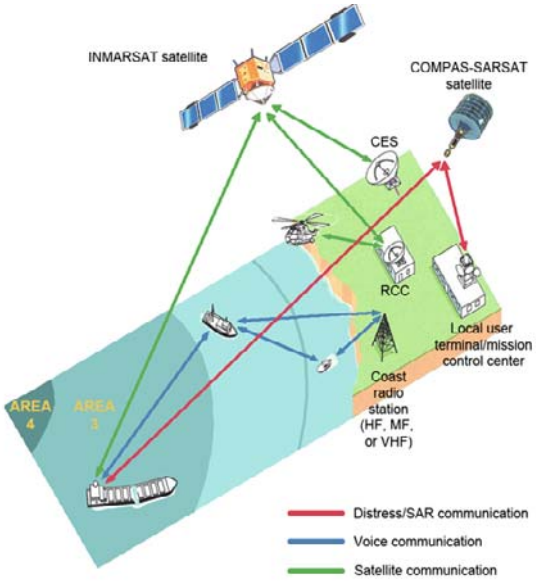
300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Peru	**Callao (OBC-3)**	12-02S 077-07W	400	518	U	03, 07, 11, 15, 19, 2320
	Phone: (01) 420-0177/9999-25383					
	Mollendo (OBF-4)	17-01S 072-01W	400	518	W	03, 07, 11, 15,19, 2340
	Phone: (054) 53-4383/9590-36759					
	Paita (OBY-2)	05-05S 081-07W	400	518	S	03, 07, 11, 15, 19, 2300
	Phone: (073) 21-1670/9695-20961					
Philip-pines	**Davao (DWT)**	07-04N 125-36E	320	518	K	01, 05, 09, 13, 17, 2140
	Manila (DZS)	14-35N 121-03E	320	518	J	01. 05. 09. 13. 17. 2130
	Puerto Princesa (DVS)	09-44N 118-43E	320	518	I	01, 05, 09, 13, 17, 2120
Portugal	**Monsanto (CTV)**	38-44N 009-11W	520	490	G (Portuguese)	01, 05, 09, 13, 17, 2100
				518	R	02, 06, 10, 14, 18, 2250
	Phone: +351 217 78 67 56, Fax: +351 217 78 67 56					
Romania	**Constanza (YQV)**	44-06N 028-37E	400	490	G (Romanian)	01, 05, 09, 13, 17, 2150
Russian Federa-tion	**Archangel (UGE)**	64-33N 040-32E	300	518	L	00, 04, 08, 12, 16, 2050
	Astrakhan (UJB)	46-18N 047-58E	250	518	W	03, 07, 11, 15, 19, 2340
Russian Federa-tion	**Kholmsk (UFO)**	47-02N 142-03E	300	518	B	00, 04, 08, 12, 16, 2010
	Magadan (UIB)	59-41N 150-09E	120	518	D	00, 04, 08, 12, 16, 2030
	Murmansk (UHY)	68-46N 032-58E	300	518	K	00, 04, 08, 12, 16, 2020
	Novorossiysk (UDN)	44-36N 037-58E	300	518	A	03, 07, 11, 15, 19, 2300
	Okhotsk (UCV-2)	59-22N 143-12E	300	518	G	01, 05, 09, 13, 17, 2100
	Petropavlovsk (UBE-2)	53-15N 158-25E	300	518	C	00, 04, 08, 12, 16, 2020
	Vladivostok (UIK)	43-23N 131-54E	230	518	A	00, 04, 08, 12, 16, 2000
Saudi Arabia	**Jeddah (HZH)**	21-23N 039-10E	390	518	H	07, 13, 1905
Senegal	**Dakar (6VA)**	14-46N 017-20W	200	490	M	02, 06, 10 ,14, 18, 2200
				518	C	00, 04, 08, 12, 16, 2020

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Singapore	**Singapore (9VG-49)**	01-21N 103-59E	400	518	C	00, 04, 08, 12, 16, 2020
South Africa	**Cape Town (ZSC)**	33-40S 018-43E	300	518	C	00, 04, 08, 12, 16, 2020
	Durban (ZSD)	29-48S 030-49E	300	518	O	02, 06, 10, 14, 18, 2220
	Port Elizabeth (ZSQ)	34-02S 025-33E	300	518	I	01, 05, 09, 13, 17, 2120
South Korea	**Chukpyon (HL)**	37-03N 129-26E		490	V	03, 07, 11, 15, 19, 2330
				518	V	03, 07, 11, 15, 19, 2330
	Pyonsan (HL)	35-36N 126-29E		490	W	03, 07, 11, 15, 19, 2340
				518	W	03, 07, 11, 15, 19, 2340
Spain	**Cabo de la Nao (EAV)**	38-43N 000-09E	300	490	M (Spanish)	02, 06, 10, 14, 18, 2200
				518	X	03, 07, 11, 15, 19, 2350
	Coruna (EAR)	43-22N 008-27W	400	490	W (Spanish)	03, 07, 11, 15, 19, 2340
				518	D	00, 04, 08, 12, 16, 2030
	MMSI: 2240992, Phone: +34 981 20 95 48, Fax: +34 981 20 95 18					
	Tarifa (EAC)	36-01N 005-35W	400	490	T (Spanish)	03, 07, 11, 15, 19, 2310
				518	G	01, 05, 09, 13, 17, 2100
	MMSI: 2240994, Telex: +34 926 68 47 40, Phone: +34 926 68 47 40, Fax: +34 956 68 06 06					
Svalbard	**Svalbard (LGS)**	78-04N 013-37E		518	A	00, 04, 08, 12, 16, 2000
	Phone: +47 75 52 89 25, Fax: +47 75 52 58 96, E-mail: bodo.radio@telenor.com					
Sweden	**Hanosand (SAH)**	64-28N 021-36E	300	518	H	01, 05, 09, 13, 17, 2110
	Stockholm (SDJ)	55-29N 014-19E	300	518	J	01, 05, 09, 13, 17, 2130
	Varberg (SAS)	57-07N 012-24E	300	518	I	01, 05, 09, 13, 17, 2120
Taiwan	**Chi-Lung (XSX)**	25-09N 121-44E		518	P	06, 14, 2230
	Linyan (XSW)	22-29N 120-25E		518	P	02, 10, 1800
	Broadcasts are remotely controlled from Chi-Lung.					
Thailand	**Bangkok (HAS)**	13-01N 100-01E	200	518	F	00, 04, 08, 12, 16, 2050
Tunisia	**Tunis (3VX)**	36-53N 010-11E		518	V	03, 07, 11, 15, 19, 2330

300C.2 Worldwide NAVTEX Stations						
Country	**NAVTEX Coast Station (ID)**	**Position**	**Range (NM)**	**kHz**	**Transmitter Identification (B_1) Character**	**Broadcast Time (UTC)**
Turkey	**Antalya (TAL)**	36-09N 032-26E		490	D (Turkish)	00, 04, 08, 12, 16, 2030
				518	F	00, 04, 08, 12, 16, 2050
	Istanbul (TAH)	41-04N 028-57E	250-400	490	B (Turkish)	00, 04, 08, 12, 16, 2010
				518	D	00, 04, 08, 12, 16, 2030
	Izmir (TAN)	38-16N 026-16E	250-400	490	C (Turkish)	00, 04, 08, 12, 16, 2020
				518	D	01, 05, 09, 13, 17, 2120
	Samsun (TAF)	41-23N 036-11E	250-400	490	A (Turkish)	00, 04, 08, 12, 16, 2000
				518	E	00, 04, 08, 12, 16, 2040
Ukraine	**Kerch (UUO)**	45-22N 036-29E	120	490	U	03, 07, 11, 15, 19, 2320
				518	G	01, 05, 09, 13, 17, 2100
	Odessa (UUT)	46-29N 030-44E	280	490	X	03, 07, 11, 15, 19, 2350
				518	C	00, 04, 08, 12, 16, 2020
United Kingdom	**Cullercoats (GCC)**	55-02N 001-26W	270	490	U	07, 1920
				518	G	01, 05, 09, 13, 17, 2100
	Niton (GNI)	50-35N 001-18W	270	490	I	05, 1720
					T	03, 07, 11, 15, 19, 2310
				518	E	00, 04, 08, 12, 16, 2040
					K	01, 05, 09, 13, 17, 2140
	Portpatrick (GPK)	54-51N 005-07W	270	490	C	04, 08, 2020
				518	O	02, 06, 10, 14, 18, 2220
Uruguay	**La Paloma (CWM-27)**	34-40S 054-09W	280	490	A (Spanish)	00, 04, 08, 12, 16, 2000
				518	F	00, 04, 08, 12, 16, 2050
	Phone: (598-2) 309 775/3861, Fax: (598-2) 307 1777					
Vietnam	**Da Nang (XVT)**	16-04N 108-13E	400	518	K	01, 05, 09, 13, 17, 2140
	Hai Phong (XVG)	20-44N 106-44E	400	490	W (Vietnamese)	03, 07, 11, 15, 19, 2340
	Ho Chi Minh Ville (XVS)	10-47N 106-40E	400	518	X	03, 07, 11, 15, 19, 2350

300C.3 INMARSAT-C Coastal Warnings			
Country	**Warning Name**	**Coverage**	**Satellite and Times (UTC)**
Australia	AUSCOAST		IOR, POR: 0700, 1900
	Sea Safety		
Brazil	NAVAREA V N		AOR-E: 0730, 1930
	NAVAREA V E		
	NAVAREA V S		
	NAVAREA V I		
New Zealand	Coastal Navigation Warning (CNW)	New Zealand waters	POR: 0900, 2100
	Maritime New Zealand (MNZ)	New Zealand waters	

300D. NAVAREA/METAREA Warnings (Sea Areas A3 and A4)



Sea Area 3 is the area that lies between latitude 76 North and 76 South outside of Sea Areas 1 and 2 and uses satellite equipment for communications. Sea Area 4 is the area outside of areas 1, 2, & 3. In parts of the Arctic north of 75N warnings are broadcast via High Frequency Narrow Band Direct Printing (HF NBDP). NAVAREA and METAREA broadcasts cover these areas for ocean-going mariners. See Sea Area 2-Coastal, for coastal broadcasts including NAVTEX and coastal warnings issued via INMARSAT SafetyNET.

300E. NAVAREA Messages (Sea Areas A3 and A4)

NAVAREA Message Criteria

As per the International Maritime Organization and the International Hydrographic Organization guidance documentation, the following subjects are suitable for broadcast as a NAVAREA warning:

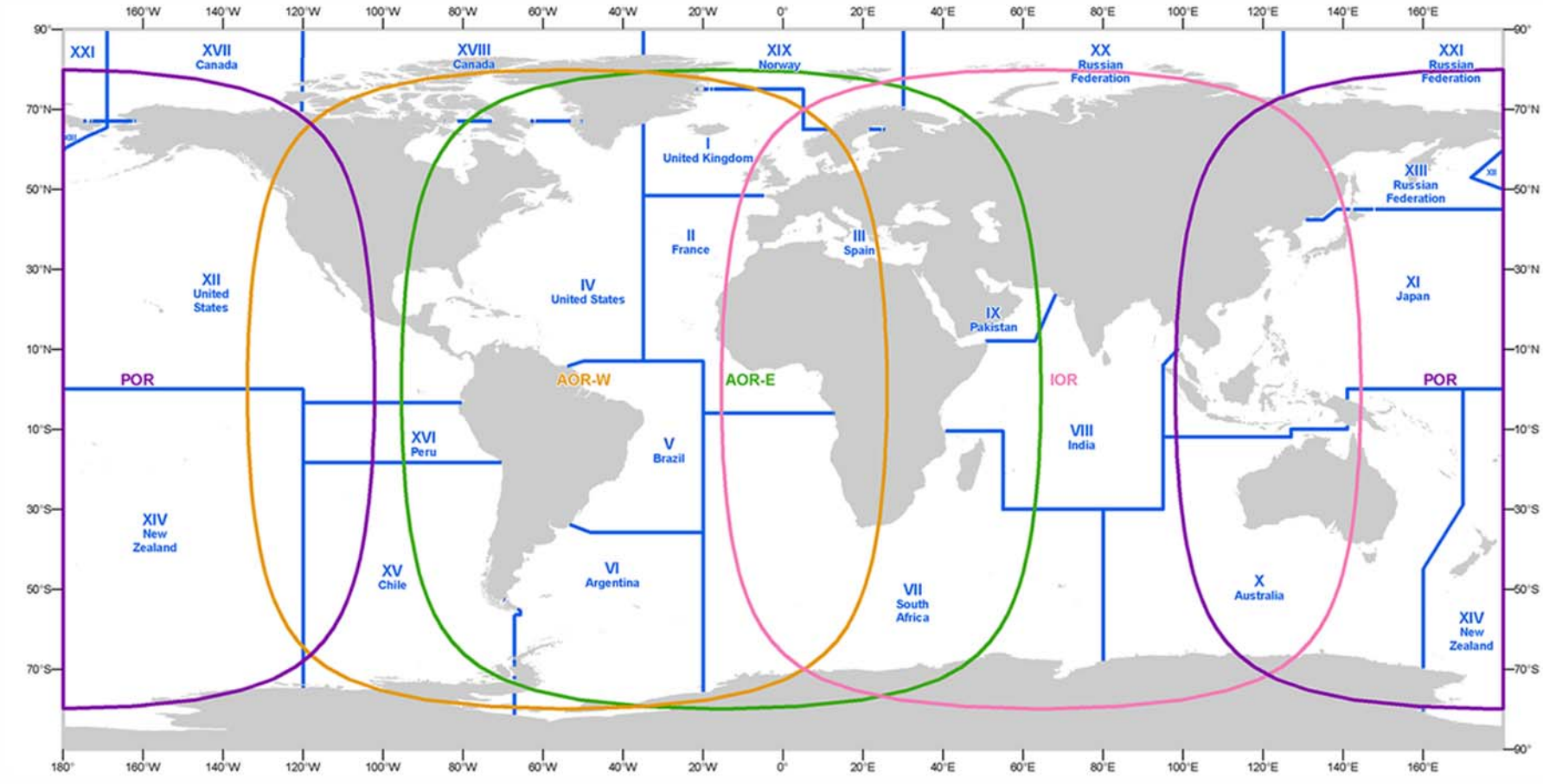
- casualties to lights, fog signals, buoys and other aids to navigation affecting main shipping lanes;
- the presence of dangerous wrecks in or near main shipping lanes and, if relevant, their marking;
- establishment of major new aids to navigation or significant changes to existing ones when such establishment or change, might be misleading to shipping;
- the presence of large unwieldy tows in congested waters;
- drifting hazards (including derelict ships, ice, mines, containers, other large items, etc);
- areas where search and rescue (SAR) and anti pollution operations are being carried out (for avoidance of such areas);
- the presence of newly discovered rocks, shoals, reefs and wrecks likely to constitute a danger to shipping, and, if relevant, their making;
- unexpected alteration or suspension of established routes;
- cable or pipe laying activities, the towing of large submerged objects for research or exploration purposes, the employment of manned or unmanned submersibles, or other underwater operations constituting potential dangers in or near shipping lanes;
- the establishment of research or scientific instruments in or near shipping lanes;
- the establishment of offshore structures in or near shipping lanes;
- significant malfunctioning of radio-navigation services and shore-based maritime safety information radio or satellite services;
- information concerning special operations which might affect the safety of shipping, sometimes over wide areas, e.g. naval exercises, missile firings, space missions, nuclear tests, ordnance dumping zones etc.;
- acts of piracy and armed robbery against ships;
- tsunamis and other natural phenomena such as abnormal changes to sea level;
- World Health Organization (WHO) health advisory information; and
- security related requirements.

It is important that where the degree of hazard is known, this information is included in the relevant warning. Whenever possible such warnings should be originated not less than five days in advance of the scheduled event and reference may be made to relevant national publications in the warning.

Links to NAVAREA web sites can be found at:
http://www.iho-ohi.net/mtg_docs/com_wg/CPRNW/CPRNW_Misc/RNW_on_the_web.htm

Note 1: Some NAVAREAs are not available online
Note 2: The web site for NAVAREA IV & XII is only updated M-F, excluding weekends and Federal Holidays
Note 3: The navigational warnings obtained using websites does not relieve Masters/Captains of the requirement to receive Navigational Warnings via IMO/IHO approved broadcast systems, as websites are not continuously updated and not necessarily monitored for correctness

INMARSAT-C LES Stations					
Satellite	SAC	Name of Station	Location	Operator	LES ID
AOR-E	41	Goonhilly	50-02-53N 005-10-55W	Stratos	102
AOR-E	41	Southbury	41-27-04N 073-17-20W	Vizada	101
AOR-E	41	Station 12 (Burum)	53-17-04N 006-12-55E	Stratos	112
AOR-E	41	Thermopylae	38-49-22N 022-41-10E	Otesat	120
AOR-E	41	Aussaguel	43-25-45N 001-29-52E	Vizada	121
AOR-E	41	Fucino	41-58-44N 013-36-07E	Telecom Italia	105
AOR-E	41	Yamagushi	34-13-00N 131-33-00E	KDDI	103
AOR-E	41	Nudol	56-06-00N 036-31-00E	Morsviazsputnik	117
AOR-E	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	104
AOR-W	41	Goonhilly	50-02-53N 005-10-55W	Stratos	002
AOR-W	41	Southbury	41-27-04N 073-17-20W	Vizada	001
AOR-W	41	Station 12 (Burum)	53-17-04N 006-12-55E	Stratos	012
AOR-W	41	Yamagushi	34-13-00N 131-33-00E	KDDI	003
AOR-W	41	Aussaguel	43-25-45N 001-29-52E	Vizada	021
AOR-W	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	004
IOR	41	Yamagushi	34-13-00N 131-33-00E	KDDI	303
IOR	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	304
IOR	41	Thermopylae	38-49-22N 022-41-10E	Otesat	305
IOR	41	Pune	19-09-03N 073-57-26E	Tata Communications	306
IOR	1241	Station 12 (formerly Perth)	53-17-04N 006-12-55E	Stratos	312
IOR	41	Aussaguel	43-25-45N 001-29-52E	Vizada	321
IOR	41	Sentosa	01-14-51N 103-50-07E	Singapore Telecom	328
IOR	41	Beijing	40-07-00N 116-13-40E	MCN	311
IOR	41	Fucino	41-58-44N 013-36-07E	Telecom Italia	335
IOR	41	Hai Phong	20-48-03N 106-42-38E	Vishipel	330
IOR	41	Nudol	56-06-00N 036-31-00E	Morsviazsputnik	317
IOR	41	Goonhilly	50-02-53N 005-10-55W	Stratos	302
IOR	41	Santa Paula	34-24-06N 119-04-24W	Vizada	301
POR	41	Yamaguchi	34-13-00N 131-33-00E	KDDI	203
POR	41	Santa Paula	34-24-06N 119-04-24W	Vizada	201
POR	41	Sentosa	01-14-51N 103-50-07E	Singaprore Telecom	210
POR	1241	Station 12 (formerly Perth)	53-17-04N 006-12-55E	Stratos	212
POR	41	Auckland	36-44-53S 174-41-45E	Stratos	202
POR	41	Beijing	40-07-00N 116-13-40E	MCN	211
POR	41	Nakhodka	42-51-32N 132-47-25E	Morsviazsputnik	217
POR	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	204
POR	41	Aussaguel	43-25-45N 001-29-52E	Vizada	221



World-Wide Navigational Warning Service NAVAREA Coverage

WWNWS NAVAREA Boundaries and Contact Information				
NAVAREA	**Coverage**	**Co-ordinator**	**Satellite & Times**	**Report MSI (Maritime Safety Information)**
I	North Atlantic Ocean, Greenland coastline along 035W meridian until 48-27N then east to French coastline. 75N 005W south until 65N east to Norwegian coastline (including the North Sea and Baltic Sea sub-area)	United Kingdom	AOR-E: 0530, 1730	**UKHO Radio Navigational Warnings** Phone: +44 (0) 1823 353448 Fax: +44 (0) 1823 322352 E-mail: navwarnings@btconnect.com

WWNWS NAVAREA Boundaries and Contact Information				
NAVAREA	**Coverage**	**Co-ordinator**	**Satellite & Times**	**Report MSI (Maritime Safety Information)**
II	Atlantic waters east of 35W, from 7N to 48-27N, and east of 20W from 7N to 6S, including the Straits of Gibraltar	France	AOR-E, AOR-W, IOR: 1630	**NAVAREA II**, Service hydrographique et oceanographique de la marine (SHOM), 13 rue du Chatellier-B.P. 30316, 29603 Brest Cedex Telex: +42 940861 Phone: +33 (0) 2 98 22 16 67 Fax: +33 (0) 2 98 22 14 32 E-mail: coord.navarea2@shom.fr
III	The Mediterranean and Black Seas, east of the Straits of Gibraltar	Spain	AOR-E: 1200, 2400	**Hazard Notice of Navigation (Office of Notices to Mariners)** Telex: 76,102- MEDCO-E Phone: +34 956 599 409 Fax: +34 956 599 396 E-mail: avisosihm@fn.mde.es
IV	Western North Atlantic Ocean eastwards from the North American coast to 35W, from 7N to 67N, including the Gulf of Mexico and Caribbean Sea	USA	AOR-W: 1000, 2200	**NGA Navsafety** NGA Maritime Safety Office, Attn: WWNWS Mail Stop: N64-SH, 7500 Geoint Dr, Springfield, VA 22150-7500 Phone: 1 571 557 6841, 1 800 362 6289 Fax: 1 571 558 3426 E-mail: navsafety@nga.mil
V	Atlantic waters west of 20W from 35-50S to 7N, narrowing in the coastal strips at the extremities to Uruguay/Brazil frontier in 33-45S and the French Guyane/Brazil frontier in 4-30N	Brazil	AOR-E: 0030, 1230	**NAVAREA V Co-ordinator** E-mail: cartografia@chm.mar.mil.br
VI	South Atlantic & Southern Oceans, south of 35-50S, from 20W to the longitude of Cape Horn, 67-16W	Argentina	AOR-W: 0200, 1400	**Servicio de Hidrografia Naval** Av. Montes de Oca 2124, CP1270ABV Buenos Aires, Rep. Argentina Phone: (54-11) 4301 0061, (54-11) 4301 0067 Fax: (54-11) 4301 2249 E-mail: snautica@hidro.gov.ar
VII	South Atlantic and Southern Oceans south of 6S from 20W to the coast of Africa, thence south to the Cape of Good Hope; the South Indian and Southern Oceans south of 10-30S from the Cape to 55E, thence south of 30S to 80E	South Africa	AOR-W, IOR: 1940	**SA Navy NAVAREA VII Co-ordinator** Hydrographer, Private Bag X1, Tokai 7966, South Africa Telex: 95 527946 (Ans back: NAVY SA) Fax: 021 787 2228 E-mail: ncom.cape@sanavy.co.za
** High Frequency Narrow Band Direct Printing (HF NBDP) is used for areas outside of INMARSAT range*				

WWNWS NAVAREA Boundaries and Contact Information				
NAVAREA	**Coverage**	**Co-ordinator**	**Satellite & Times**	**Report MSI (Maritime Safety Information)**
VIII	The East African coast along10-30S, thence to 55E, to 30S, to 95E, to 6N, thence NE'wards to the Myanmar/Thailand frontier in 10N 98-30E	India	IOR: 1000	**National Hydrographic Office**, Maritime Safety Information Service 107-A, Rajpur Road, Dehradun-248001, India Phone: +91 135 2747360 65 Fax: +91 135 2748373 E-mail: ncdm-inho-navy@nic.in
IX	The Red Sea, Gulf of Aden, Arabian Sea and Persian Gulf, north of Area VIII	Pakistan	IOR: 0800	**Hydrographic Department, NAVAREA IX**, Naval Headquarters 11, Liaquat Barracks, Karachi-75530, Pakistan Phone: 92 021 48506151-4 Fax: 92 021 9201623 or 9203246 E-mail: hydropk@paknavy.gov.pk
X	The South Indian and Southern Oceans east of 80E and south of 30S to 95E, to 12S, to 127E; thence the Timor Sea, South Pacific and Southern Oceans south of 10S to 141E to the equator, to 170E, to 29S, thence SW'wards to 45S in 160E, then the 160E meridian	Australia	IOR, POR: 0700, 1900	**NAVAREA X** AMSA, GPO Box 2181, Canberra City, ACT 2601 Phone: 1800 641 792, +612 6230 6811 E-mail: go to www.amsa.gov.au/contact_us
XI	North Western Pacific: The Indian Ocean, China Sea and North Pacific Ocean northward of Area X and on the equator to longitude 180, eastward of Area VIII and the Asian continent to the North Korean/Russian Federation frontier in 42-30N 130E, thence to 135E, NE'wards to 45N 138E, to 45N 180	Japan	IOR, POR: 0005, 0805, 1205	**NAVAREA XI, Navigational Warnings** Phone: 03 5500 7165 E-mail: tuho@jodc.go.jp
XII	Eastern part of Pacific Ocean, west of the North and South American coast and east of 120W, from 3-24S to the equator, thence to 180 to 50N thence NW'wards to 53N 172E, NE'wards following the marine frontier between United States and Russian Federation waters to 67N	USA	AOR-W, POR: 1030, 2230	**NGA Navsafety** NGA Maritime Safety Office, Attn: WWNWS Mail Stop: N64-SH, 7500 Geoint Dr, Springfield, VA 22150-7500 Phone: 1 571 557 6841, 1 800 362 6289 Fax: 1 571 558 3426 E-mail: navsafety@nga.mil
** High Frequency Narrow Band Direct Printing (HF NBDP) is used for areas outside of INMARSAT range*				

WWNWS NAVAREA Boundaries and Contact Information				
NAVAREA	**Coverage**	**Co-ordinator**	**Satellite & Times**	**Report MSI (Maritime Safety Information)**
XIII	Sea areas enclosed north of area XI and west of Area XII; also all Arctic waters from 170W westwards to 20E	Russian Federation	POR: 0930, 2130	**NAVAREA XIII**, Chief, Notice to Mariners Division Department of Navigation and Oceanography, Ministry of Defense, 8, 11 liniya, B-34, St Petersburg, 199034, Russian Federation Phone/Fax: +7 812 717 59 00 E-mail: navarea13@gunio.ru
XIV	The South Pacific and Southern Oceans, along equator to 170E south to 29S, 45S 160E south to Antarctica; The equator south along 120 W meridian to Antarctica	New Zealand	POR: 0900, 2100	**NAVAREA XIV Co-ordinator** Phone: +64 4 460 0110 Fax: +64 4 460 0161 E-mail: NAVAREAXIV@linz.govt.nz
XV	The South Pacific and Southern Oceans south of 18-21S following the coast of Chile to the longitude of Cape Horn in 67-16W and 120W	Chile	AOR-W: 0210, 1410	**NAVAREA XV** Servicio Hidrografico y Oceanografico de la Armada de Chile, Casilla 324, Valparaiso, Chile Phone: +56 32 226666, 2266520 Fax: +56 32 2266542 E-mail: shoa@shoa.cl
XVI	The South Pacific Ocean between 18-21S and 3-24S bounded by the coast of Peru and 120W	Peru	AOR-W: 0519, 1119, 1719, 2319	**Chief of NAVAREA Office** Phone: (51) 613-6767 Annex 6480 Fax: (51) 613-6759 E-mail: rrojas@dhn.mil.pe
XVII	The Arctic Ocean, 67-00N 168-58W east to Alaskan coast and north to 90-00N; 90N, 120W south to Canadian coastline	Canada	POR: 1130, 2330 HF(NBDP)*: 0330, 1530	**MCTS Iqaluit (Jun-Nov)** PO Box 189, Iqaluit, NV, X0A 0H0 Phone: 867 979 5269 Fax: 867 979 4264 **Northern Canada Vessel Traffic Services Zone (NORDREG)** Telex: 063 15529 Phone: 867 979 5724 Fax: 867 979 4264 E-mail: iqanordreg@innav.gc.ca **MCTS Prescott (off season contact)** Phone: 613 925 4519 Fax: 613 925 4519 E-mail: iqanordreg@innav.gc.ca
XVIII	The Arctic Ocean, 67-00N 168-58W east to Alaskan coast and north to 90-00N; 90N, 120W south to Canadian coastline		AOR-W: 1100, 2300 HF(NBDP)*: 0330, 1530	

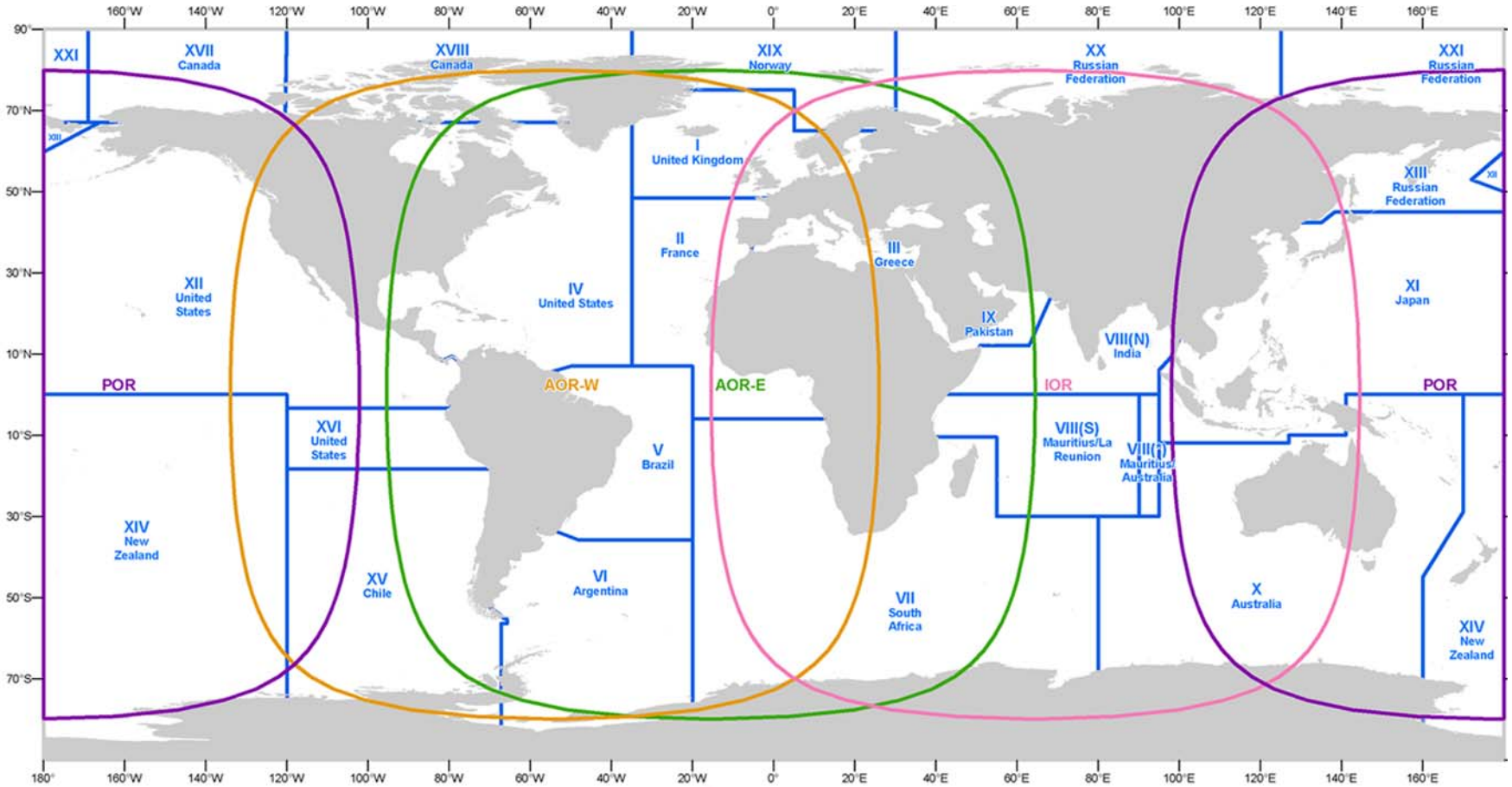
** High Frequency Narrow Band Direct Printing (HF NBDP) is used for areas outside of INMARSAT range*

WWNWS NAVAREA Boundaries and Contact Information				
NAVAREA	**Coverage**	**Co-ordinator**	**Satellite & Times**	**Report MSI (Maritime Safety Information)**
XIX	The Arctic Ocean, boarders XVII at 035W; Norwegian coastline 65N west to 65N 005W, north to 75N, west to Greenland coastline; the border between Norway and Russia to 69-47-68N 030-49-16E, 69-58-48N 031-06-24E, 70-22-00N 031-43-00E, 71-00-00N 030-00-00E north to 90N	Norway	AOR-E: 0630, 1830	**NAVAREA XIX**, Vardoe VTS Center Phone: +47 78 94 30 00 Fax: +47 78 98 98 99 E-mail: navarea19@kystverket.no
XX	The Arctic Ocean, from the border between Norway and Russia to 69-47-68N 030-49-16E, 69-58-48N 031-06-24E, 70-22-00N 031-43-00E, 71-00-00N 030-00-00E north to 90N. 90N south to Russian coastline along 125E meridian	Russian Federation	IOR: 0530, 1730 HF(NBDP)*: 0530, 1730	**NAVAREA XX and NAVAREA XXI** The Russian Federation, Chief of MSI Division, Federal State Unitary Hydrographic Department, Moskovsky pr. 12, St Petersburg, 190031, Russian Phone/Fax: +7 812 570 3466 E-mail: ibm@hydrograph.spb.su
XXI	The Arctic Ocean, from Russian coastline north along 125E meridian to 90N, 90N 168-58W south along 168-58W meridian to 67N, west to Russian coastline		POR: 0630, 1830 HF(NBDP)*: 0630, 1830	
** High Frequency Narrow Band Direct Printing (HF NBDP) is used for areas outside of INMARSAT range*				

IHO Commission on Promulgation of Radio Navigational Warnings—Chairman contact information:

Address:	IHO Commission on Promulgation of Radio Navigational Warnings Chairman, 4 quai Antoine 1er, B.P. 445, MC 98011 MONACO CEDEX, Principality of Monaco
Telex:	479164 MC INHORG
Telephone:	337 93 10 81 00
Facsimile:	337 93 10 81 40
E-mail:	info@ihb.mc
Web site:	http://www.iho.shom.fr

300F. METAREA Messages (Sea Areas A3 and A4)



World-Wide Navigational Warning Service METAREA Coverage

Marine meteorological information is broadcast to ships at sea using the INMARSAT-C SafetyNET service using Enhanced Group Calling (EGC). There are 21 METAREAs and four INMARSAT-C satellites for world-wide coverage.

To obtain METAREA messages other than automatically via GMDSS:

Website: http://weather.gmdss.org

Note 1: some METAREAs are not available online

Note 2: The meteorological warnings obtained using websites does not relieve Masters/Captains of the requirement to receive Navigational Warnings via IMO/IHO approved broadcast systems, as websites are not continuously updated and not necessarily monitored for correctness

WWNWS METAREA Boundaries and Contact Information				
METAREA	**Coverage**	**Co-ordinator**	**Satellite & Times (UTC)**	**Contact**
I	North Atlantic Ocean, Greenland coastline along 035W meridian until 48-27N then east to French coastline. 75N 005W south until 65N east to Norwegian coastline (including the North Sea and Baltic Sea sub-area)	United Kingdom & Northern Ireland	AOR(E): 0930, 2130	**Mr Nick Ashton** Address: Met Office, 127 Clerkenwell Rd, London EC1R 5LP, United Kingdom Phone: +44 1392 885402 Fax: +44-20 720 7479 E-mail: nick.ashton@metoffice.gov.uk
II	Atlantic waters east of 35W, from 7N to 48-27N, and east of 20W from 7N to 6S, including the Straits of Gibraltar	France	AOR(E/W): 0900, 2100	**Mr Henri Savina** Address: Meteo-France Direction de la Prevision Division Marine et Oceanographie, 42 avenue Gaspard Coriolis, 31057 Toulouse, Cedex 1, France Phone: +33-5 61 07 82 91 Fax: +33-5 61 07 82 09 E-mail: henri.saving@metro.fr
III	The Mediterranean and Black Seas, east of the Straits of Gibraltar	Greece	AOR(E): 1000, 2200	**Mr Michael Myrsilidis** Head, Marine Meteorology Section, Hellenic National Meteorological Service, El. Venizelou 14, 16777 Athens, Greece Phone: +30 210 9699013 Fax: +30 210 9628952 E-mail: mmirsi@hnms.gr
IV	Western North Atlantic Ocean eastwards from the North American coast to 35W, from 7N to 67N, including the Gulf of Mexico and Caribbean Sea	USA	AOR(W)[1]: 0430, 1030, 1630, 2230	**Mr Timothy Rulon** Marine & Coastal Weather Services, National Weather Service/NOAA, 1325 East-West Hwy, Silver Spring, MD 20910, USA Phone: +1 301 713 1677 (ext 128) Fax: +1 301 713 1520 E-mail: timothy.rulon@noaa.gov
V	Atlantic waters west of 20W from 35-50S to 7N, narrowing in the coastal strips at the extremities to Uruguay/Brazil frontier in 33-45S and the French Guyane/Brazil frontier in 4-30N	Brazil	AOR(E): 0730, 1930	**Lieutenant Commander Marcelo Fricks Cavalcante** Centro de Hidrografia da Marinha, Divisao de Informacoes Oceanograficas, Rua Barao de Jaceguai S/N, Ponta d'Areia, Niteroi-RJ, CEP 24048-900, Rio de Janeiro, Brazil Phone: (55)(21) 2189 3025 Fax: (55)(21) 2189 3226 E-mail: marcelo@chm.mar.mil.br

[1] *High Seas forecasts containing tropical storm warnings also broadcast over AOR-E. Hurricane & Tropical Storm advisories are sent as required, up to 4 times daily per active tropical storm. Tsunami warnings are sent as required on AOR-W and AOR-E.*

WWNWS METAREA Boundaries and Contact Information				
METAREA	**Coverage**	**Co-ordinator**	**Satellite & Times (UTC)**	**Contact**
VI	South Atlantic & Southern Oceans, south of 35-50S, from 20W to the longitude of Cape Horn, 67-16W	Argentina	AOR(W): 0230, 1730	**Mr Claudio David Castro** Servicio Meteorologico Nacional, 25 de Mayo 658, 1002 BUENOS AIRES, Argentina Phone: +54 11 5167 6711/09 Fax: +54 11 4555 3808 E-mail: aliciagcejas@hotmail.com, susyb@smm.gov.ar
VII	South Atlantic and Southern Oceans south of 6S from 20W to the coast of Africa, thence south to the Cape of Good Hope; the South Indian and Southern Oceans south of 10-30S from the Cape to 55E, thence south of 30S to 80E	South Africa	AOR(E) (west of 20E): 0940, 1940 IOR[2] (east of 20E): 0940, 1940	**Mr Johan Stander** Regional Manager, South African Weather Service, Head Office, Weather Office, PO Box 21, Cape Town International Airport, Cape Town 7525 South Africa Phone: + 27 (21) 934 0450 (office), + 27 (83) 281 0993 (mobile) Fax: + 27 (21) 934 4590 E-mail: johan.stander@weathersa.co.za
VIII(N)	North of the Equator: The area of the Indian Ocean enclosed by lines from the Indo-Pakistan frontier in 23-45N 68E to 12N 63E, thence to Cape Gardafui; the east African coast south to the Equator, thence to 95E, to 6N, thence NE'wards to the Myanmar/Thailand frontier in 10N 98-30E	India	IOR: 0900, 1800	**Mr M.C. Rastogi** India Meteorological Department, Mausam Bhavan, Lodi Road, NEW DELHI 110 003, India Phone: +91-11 246 2 4486 Fax: +91-11 246 9 9216, +91-11 246 2 3220 E-mail: rastogi@imdmail.gov.in
VIII(S)	South of the Equator: The East African coast from the equator south to 10-30S, thence to 55E, to 30S, to 90E, to the Equator, to the east African coast	Mauritius/ La Reunion (via France)	IOR: 0130, 1330	**Mr Mohamudally Beebeejaun**, Divisional Meteorologist Mauritius Meteorological Services, Saint Paul Rd, VACOAS, Mauritius Phone: +230 686 1031 Fax: +230 686 1033 E-mail: mbeebeejaun@mail.gov.mu
VIII(*)	Tropical Cyclone warnings: East of 90E	La Reunion (via France)	IOR (as needed): 0000, 0600, 1200, 1800	**Mr Paul Remois** Meteo France, Paris BP 4, 97491 STE. CLOTILDE, France Phone: +33-2 62 92 11 00 Fax: +33-2 62 93 11 47 E-mail: paul.remois@meteo.fr

[2] *Forecast for area 30S 50E and 50S 80E and tropical cyclone warnings are prepared by La Reunion.*

WWNWS METAREA Boundaries and Contact Information				
METAREA	**Coverage**	**Co-ordinator**	**Satellite & Times (UTC)**	**Contact**
IX	The Red Sea, Gulf of Aden, Arabian Sea and Persian Gulf, north of Area VIII	Pakistan	IOR: 0700	**Mr Sarfaraz Kahn**, Director General Pakistan Meteorological Department, University Road, Karachi-75270, Pakistan Phone: 8 499 252 45 11 Fax: 8 499 795 20 90 E-mail: arifmahmood1984@hotmail.com, sarfarazmet@hotmail.com
X	The South Indian and Southern Oceans east of 80E and south of 30S to 95E, to 12S, to 127E; thence the Timor Sea, South Pacific and Southern Oceans south of 10S to 141E to the equator, to 170E, to 29S, thence SW'wards to 45S in 160E, then the 160E meridian	Australia	IOR: 1030, 2330 POR: 1100, 2300	**Mr Neal Moodie**, National Manager Marine Weather Service, Australian Bureau of Meteorology, 700 Collins St, Docklands, GPO Box 1289, Melbourne, VIC 3001, Australia Phone: +61-3 9 669 4768 Fax: +61-3 9 669 4695 E-mail: N.Moodie@bom.gov.au
XI	North Western Pacific: The Indian Ocean, China Sea and North Pacific Ocean northward of Area X and on the equator to longitude 180, eastward of Area VIII and the Asian continent to the North Korean/Russian Federation frontier in 42-30N 130E, thence to 135E, NE'wards to 45N 138E, to 45N 180	China	IOR: 0330, 1015, 1530, 2215	**Mr Bi Baogui** China Meteorological Administration, Baishiqiaolu No. 46, 100081 Haidian District, Beijing, China Phone: +86-10 6840 7205 Fax: +86-10 6217 2962 E-mail: bibg@cma.gov.cn
		Japan	POR: 0230, 0830, 1430, 2030	**Mr Naoyuki Hasegawa** Head, Office of International Affairs, Japan Meteorological Agency, Tokyo, 1-3-4 Otemachi Chiyoda-ku, 100-8122, Tokyo, Japan Phone: +81-3 3211 4966 Fax: +81-3 3211 2032 E-mail: jao-jma@met.kishou.go.jp
		Australia (south of equator)	POR: 0815, 2015	**Mr Neal Moodie,** National Manager Marine Weather Service, Australian Bureau of Meteorology, 700 Collins St, Docklands, GPO Box 1289, Melbourne, VIC 3001, Australia Phone: +61-3 9 669 4768 Fax: +61-3 9 669 4695 E-mail: N.Moodie@bom.gov.au

WWNWS METAREA Boundaries and Contact Information				
METAREA	**Coverage**	**Co-ordinator**	**Satellite & Times (UTC)**	**Contact**
XII	Eastern part of Pacific Ocean, west of the North and South American coast and east of 120W, from 3-24S to the equator, thence to 180 to 50N thence NW'wards to 53N 172E, NE'wards following the marine frontier between United States and Russian Federation waters to 67N	USA	AOR-W, POR[1] : 0545, 1145, 1745, 2345	**Mr Timothy Rulon** Marine & Coastal Weather Services, National Weather Service/NOAA, 1325 East-West Hwy, Silver Spring, MD 20910, USA Phone: +1 301 713 1677 (ext 128) Fax: +1 301 713 1520 E-mail: timothy.rulon@noaa.gov
XIII	Sea areas enclosed north of NAVAREA XI and west of NAVAREA XII; also all Arctic waters from 170W westwards to 20E	Russian Federation	POR: 0930, 2130	**Mr Valeriy Martyschenko**, Deputy Director Federal Service for Hydrometeorology and Environmental Monitoring, Moscow, Novovagankovsky Per., 12 Moscow, Russian Federation 123995 Phone: 8 499 252 45 11 Fax: 8 499 795 20 90 E-mail: martyschenko@mcc.mecom.ru
XIV	The South Pacific and Southern Oceans, along equator 170E south to 29S, 45S 160E south to Antarctica; The equator south along 120 W meridian to Antarctica	New Zealand	POR: 0130[3], 0330[4], 0930, 1330[3], 1530[4], 2130	**Mr Steve Ready** Meteorological Service of New Zealand, 30 Salamanca Rd, Kelburn, Wellington 6012, New Zealand Phone: +64 4 470 0737 Fax: +64 4 473 5231 E-mail: steve.ready@metservice.com
XV	The South Pacific and Southern Oceans south of 18-21S following the coast of Chile to the longitude of Cape Horn in 67-16W and 120W	Chile	AOR-W:1845	**Captain de Fragata**, Gonzalo Espinosa Doggenweiler Jefe Servicio, Meteorologico de la Armada, Subida Cementerio 300, Playa Ancha, Valparaiso, Chile Phone: +56 32 220 8620 Fax: +56 32 814019
XVI	The South Pacific Ocean between 18-21S and 3-24S bounded by the coast of Peru and 120W	USA	AOR-W: 0515, 1115, 1715, 2315	**Mr Timothy Rulon** Marine and Coastal Weather Services, National Weather Service/National Oceanic and Atmospheric Administration, 1325 East-West Hwy, Silver Spring, MD 20910, USA Phone: +1 301 713 1677 (ext 128) Fax: +1 301 713 1520 E-mail: timothy.rulon@noaa.gov

[1] *High Seas forecasts containing tropical storm warnings also broadcast over AOR-E. Hurricane & Tropical Storm advisories are sent as required, up to 4 times daily per active tropical storm. Tsunami warnings are sent as required on AOR-W and AOR-E.*

[3] *In local time & NZ coast only. The Bass Strait bulletins are Coastal Warnings and Forecasts transmitted on to SafetyNET Coastal Area D in Navarea X.*

[4] *Storm warnings only.*

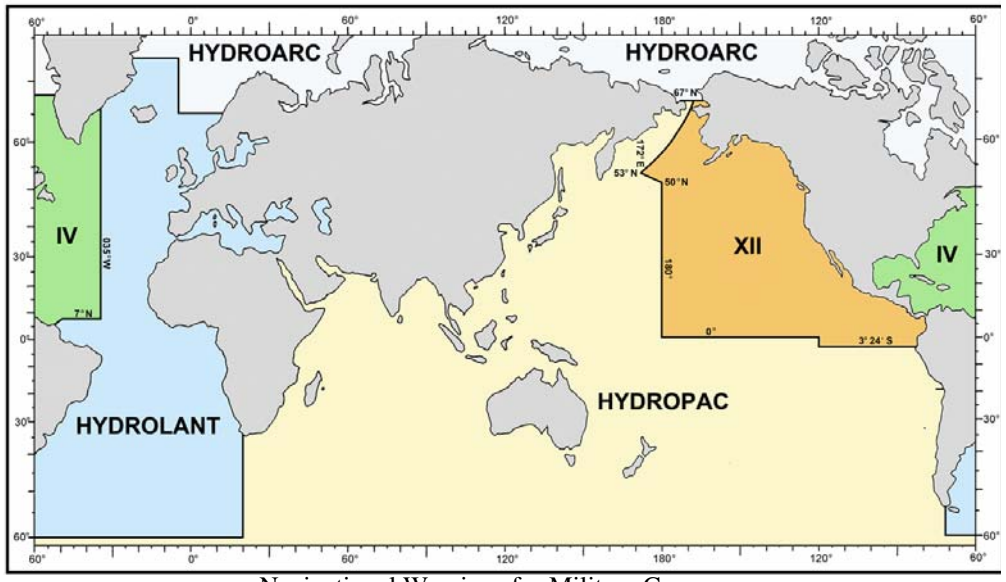
WWNWS METAREA Boundaries and Contact Information				
METAREA	**Coverage**	**Co-ordinator**	**Satellite & Times (UTC)**	**Contact**
XVII	The Arctic Ocean, 67-00N 168-58W east to Alaskan coast and north to 90-00N; 90N, 120W south to Canadian coastline	Canada[5]	POR: 0300, 1500 **8416.5 kHz**[6] : 0330, 1530	**Mr John Parker**, Canadian METAREAs Coordinator Meteorological Service of Canada Environment Canada, 45 Alderney Dr, Dartmouth (Nova Scotia) B2Y 2N6, Canada Phone: +1 902 426 3836 Fax:+1 902 490 0259 E-mail: john.k.parker@ec.gc.ca
XVIII	The Arctic Ocean, 90-00N 120-00W south to Canadian coastline; 90N 035-00W, northern boarder of IV is along 67N	Canada	AOR-W: 0300, 1500 **8416.5 kHz**[7] : 0330, 1530	
XIX	The Arctic Ocean, boarders XVII at 035W; Norwegian coastline 65N west to 65N 005W, north to 75N, west to Greenland coastline; the border between Norway and Russia to 69-47-68N 030-49-16E, 69-58-48N 031-06-24E, 70-22-00N 031-43-00E, 71-00-00N 030-00-00E north to 90N	Norway	AOR-E: 1100, 2300	**Mr Helge Tangen** Norwegian Meteorological Institute, Forecasting Division of Northern Norway, (Vervarslinga for Nord-Norge) P.box 6314, N-9293 Tromso, Norway Phone: +47 77 62 13 00 Fax: +47 77 62 13 01 E-mail: helge.tangen@met.no
XX	The Arctic Ocean, from the border between Norway and Russia to 69-47-68N 030-49-16E, 69-58-48N 031-06-24E, 70-22-00N 031-43-00E, 71-00-00N 030-00-00E north to 90N. 90N south to Russian coastline along 125E meridian	Russian Federation	IOR, POR: 0600, 1800	**Mr Valeriy Martyschenko**, Deputy Director Federal Service for Hydrometeorology and Environmental Monitoring, Moscow, Novovagankovsky Per., 12 Moscow, Russian Federation 123995 Phone: 8 499 252 45 11 Fax: 8 499 795 20 90 E-mail: martyschenko@mcc.mecom.ru
XXI	The Arctic Ocean, from Russian coastline north along 125E meridian to 90N, 90N 168-58W south along 168-58W meridian to 67N, west to Russian coastline			

[5] *The USA issues marine forecasts for its jurisdictional coast and offshore waters north of Alaska.*

[6] *North of 75N and east of 141W (Sea Area A4) are broadcast by Canadian Coast Guard from Iqaluit via High Frequency Narrow Band Direct Printing (HF NBDP) during the operational season.*

[7] *North of 75N (Sea Area A4) are broadcast by Canadian Coast Guard from Iqaluit via High Frequency Narrow Band Direct Printing (HF NBDP) during the operational season.*

300G. Navigational Warnings for the Military



Navigational Warnings for Military Coverage

In support of the Global Maritime Distress and Safety System (GMDSS), Broadcast Warnings are promulgated by the Worldwide Navigational Warning Service (WWNWS) to provide information critical to navigation and safety of life at sea. NGA NAVSAFETY disseminates this information via various message types through the Automated Message Handling System (AMHS) using a Plain Language Address (PLA) to afloat and shore units. There are no specific broadcast times; however, within 30 minutes of receipt of a source message and analysis, it may be broadcast as a NAVAREA IV, HYDROLANT, NAVAREA XII, HYDROPAC and/or HYDROARC warning. Coastal NAVTEX messages and weather forecasts and warnings are not retransmitted via AMHS.

Message Type	Description	To start receiving these messages send (not an email service). Please include the PLA that needs to be added.	
		E-mail to NGA NAVSAFETY at navsafety@nga.mil requesting to be added to	Message to our PLA "NGA NAVSAFETY (UC)" requesting to be added to
HYDROLANT	For vessels traveling in area shown on graphic above. Distress messages within NAVAREA IV are sent as HYDROLANT messages.	AL 4501 or AIG 4501	AL 4501 or AIG 4501
NAVAREA IV	These are the messages broadcasted on the GMDSS, this doesn't include local and coastal warnings from the U.S. Coast Guard and distress messages.		
HYDROPAC	For vessels traveling in area shown on graphic above, including all of Antactica. Distress messages within NAVAREA XII are sent as HYDROPAC messages.	AL 4557 or AIG 4557	AL 4557 or AIG 4557
NAVAREA XII	These are the messages broadcasted on the GMDSS, this doesn't include local and coastal warnings from the U.S. Coast Guard and distress messages.		
HYDROARC	For vessels traveling in the Arctic.	HYDROARC distribution	HYDROARC distribution

300H. Special Warnings and MARAD Advisories

Special Warnings and Maritime Administration (MARAD) Advisories are issued infrequently and contain information about potential hazards caused by the global political climate.

Special Warnings are a limited series of urgent warnings approved by the U.S. Department of State and disseminated by the National Geospatial-Intelligence Agency (NGA), which transmits official U.S. Government proclamations affecting navigation and political or military incidents that could develop into direct threats to the safety of U.S. mariners.

To obtain Special Warnings:	
E-mail to	NGA NAVSAFETY at navsafety@nga.mil requesting to be added to the special warning distribution. Please include the PLA that needs to be added.
Message to	PLA "NGA NAVSAFETY (UC)" requesting to be added to the special warning distribution. Please include the PLA that needs to be added.
World-Wide Web	http://msi.nga.mil/NGAPortal/MSI.portal and select "Broadcast Warnings"

MARAD Advisories rapidly disseminate information on maritime dangers, safety, government policy and other time sensitive matters pertaining to U.S.-flag vessel operation. Maritime Administration Advisories are issued by the Office of Security to vessels masters, ship operators, and other U.S. maritime interests. Advisories are communicated via telex or other message formats, and published on the Maritime Administration's web site and in the National Geospatial-Intelligence Agency's (NGA) broadcast warnings (*see section 300F*) and weekly Notice to Mariners.

To obtain MARAD Advisories:	
Via MARAD Website	http://www.marad.dot.gov.
Via NGA Website	http://msi.nga.mil/NGAPortal/MSI.portal and select "Broadcast Warnings"

300I. North American Ice Service Iceberg Information and Services

The North American Ice Service (NAIS), a partnership comprised of the International Ice Patrol (IIP), the Canadian Ice Service (CIS), and the U.S. National Ice Center (NIC), provides year-round maritime safety information on iceberg and sea ice conditions in the vicinity of the Grand Banks of Newfoundland and the east coast of Labrador, Canada. The daily NAIS Iceberg Limit, valid for 1100 EST the previous day, is distributed as a NAVAREA IV *(see section 300E)* warning in the format of a text Iceberg Bulletin. A Graphic Iceberg Chart is also published daily in accordance with Table 1 below.

The purpose of the NAIS Iceberg Bulletin and Chart is to advise mariners of the estimated iceberg extent within the region. On the Chart, numbers within each grid sector inside the Iceberg Limit are intended to provide mariners an awareness of the relative density of icebergs. For more information on the Iceberg Bulletin and Iceberg Chart visit www.navcen.uscg.gov/iipcharts. NAIS reconnaissance is focused near the Grand Banks of Newfoundland and the east coast of Labrador, ice conditions south of Greenland are not monitored by NAIS. (For iceberg conditions south of Greenland visit http://www.dmi.dk/dmi/en/gronland/iskort.htm). While NAIS strives to be as accurate as possible in reporting the presence of icebergs to mariners, it is not possible to ensure that all icebergs are detected and reported. There is no substitute for due vigilance and prudent seamanship, especially when operating near sea ice and icebergs.

Reports of icebergs in the North Atlantic originate from various sources, including passing ships, reconnaissance flights, and spaceborne reconnaissance. Once position, time, size, and shape of icebergs sighted are received, the data is entered into a computer model that predicts iceberg drift and deterioration. As the time after sighting increases, so does the uncertainty in estimated positions. This uncertainty is taken into account when the Iceberg Limit is determined.

If an iceberg or radar target is detected and reported outside the published NAIS Iceberg Limit, a Notice to Shipping (NOTSHIP) will be sent by the Canadian Coast Guard Marine Communications and Traffic Service (MCTS) and an urgent NAVAREA IV message will be distributed on SafetyNET via the U.S. National Geospatial-Intelligence Agency (NGA) as the NAVAREA IV Coordinator. These warnings will remain in effect for 24 hours. Iceberg products will be revised shortly after notification between 1200Z and 0000Z or by 1400Z if reported between 0000Z and 1200Z.

Ships are encouraged to immediately report sightings of icebergs or stationary radar targets that may likely be icebergs to the nearest Canadian Coast Guard MCTS Station or through INMARSAT using Service Code 42, as there is no charge when using this code. See Table 2 below for MCTS contact information. Vessels participating in a Voluntary Observing Ship (VOS) program should continue to report weather and sea surface temperature (SST) to their respective programs. Vessels interested in providing weather and SST reports to U.S. National Oceanic and Atmospheric Administration's VOS program can contact vos@noaa.gov or visit http://www.vos.noaa.gov for guidance.

When making iceberg reports, please include **SHIP NAME** and **CALL SIGN**, **ZULU TIME**, **SHIP POSITION** (latitude, longitude), **COURSE**, **SPEED**, **VISIBILITY**, **ICEBERG/RADAR TARGETS POSITION** (Specify either the geographic coordinates or range/bearing from ship's position), **ZULU TIME OF SIGHTING**, **METHOD OF DETECTION** (Visual, Radar, or Both), **LENGTH** (in meters) (see Table 4 below), **SHAPE OF ICEBERG** (see Table 3 below), and **VESSEL CONTACT INFORMATION**.

International Ice Patrol in New London, CT

Phone: 860 271 2626
Toll Free Phone: 877 423 7287
Fax: 860 271 2773
E-mail: iipcomms@uscg.mil
Web:
http://www.navcen.uscg.gov/IIP
Office Hours: 1200Z-0000Z

Canadian Ice Service in Ottawa, ON

Phone: 877 789 7733
Fax: 560 451 6010
E-mail: cis-scg.client@ec.gc.ca
Web:
http://www.ice-glaces.ec.gc.ca
Office Hours: 0730-1730 EST

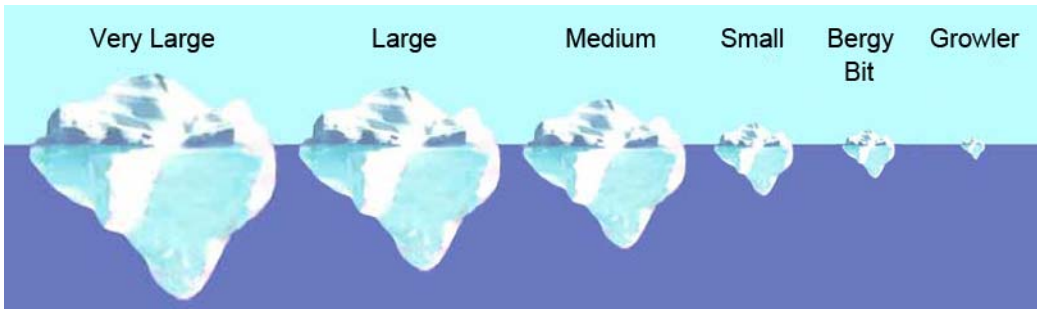
Table 1: NAIS Broadcasts			
Transmission Means	**Broadcast Station**	**Broadcast Times (UTC)**	**Additional Information**
NAIS NAVAREA IV ICEBERG BULLETIN			
SafetyNET Broadcasts as NAVAREA IV messages	AOR-W Satellite	1000, 2200	SafetyNET
		Urgent Broadcasts of targets outside limits sent upon receipt	
NAVTEX Broadcast	Canadian CG Marine Communications and Traffic Service St. John's/VON	1820 (Winter), 2220 (Summer) *Changes with DST	518 Khz F1B
		Urgent Broadcasts of targets outside limits sent upon receipt	
SITO/NBDP Broadcast	USCG Communication Station Boston/NMF	0140-0230	6314, 8416.5, 12579 Khz F1B
		1630-1720	08416.5, 12579, 16806.5 Khz F1B
Internet	International Ice Patrol Website	Updated daily by 2200	http://www.navcen.uscg.gov/iip
	Automated e-mail		https://radioaid.rdc.uscg.gov/mailman/listinfo/iceberg_bulletin
	National Geospatial-Intelligence Agency Website		http://msi.nga.mil/NGAPortal/MSI.portal
NAIS ICEBERG CHART			
Radio Facsimile Broadcast	USCG Communication Station Boston/ NMF	0438, 1039	4235, 6340.5, 9110 Khz F3C
		1600, 2239	6340.5, 9110, 12750 Khz F3C
	Offenbach, Germany via Pinneberg/DDK	0930, 2100	3855, 7880, 13882.5 Khz F1C
	Canadian CG Marine Communications and Traffic Service Sydney/VCO	1741	6915.10 Khz J3C
Internet	International Ice Patrol Website	Updated daily by 2200	http://www.navcen.uscg.gov/iip
	Automated e-mail		https://radioaid.rdc.uscg.gov/mailman/listinfo/iceberg_bulletin
	National Weather Service Website		http://www.weather.noaa.gov/pub/fax/PIEA88.gif
	E-mail on demand*		ftpmail@ftpmail.nws.noaa.gov
	*To prompt e-mail on demand:	Subject line- anything	Body (case sensitive)- open cd fax "get piea88.gif" ----or---- "get piea88.tif" quit
FICN10			
Radio Telephone	Canadian CG Marine Communications and Traffic Service St. Anthony/VCM	0107, 0907, 1907 and as required	2589 Khz J3E
		Continuous	VHF Channel 21B and 83B

Table 2: Report Receiving Stations	
The following Canadian Coast Guard Marine Communications & Traffic Service (MCTS) Centers (Receiving Station) monitor and transmit on VHF 16 & HF 2182 J3E: ***Bold*** *indicates the Coast Guard Radio call name*	
St. Johns NL (VON) Phone: 709 772 2106 E-mail: ecaregsnf@innav.gc.ca	**St. Anthony** NL (VCM) Phone: 709 454 3852 E-mail: ecasny@innav.gc.ca
Labrador NL (VOK) Phone: 709 896 2252 E-mail: ecagoy@innav.gc.ca	**Placentia** NL (VCP) Phone: 709 227 2181 E-mail: ecapla@innav.gc.ca
Port aux Basques NL (VOJ) Phone: 709 695 2167 E-mail: paxtfc@innav.gc.ca	**Sydney** NS (VCO) Phone: 902 564 7751 E-mail: ccgops@elsmail.net
Dartmouth/**Halifax** NS (VCS) Phone: 902 426 9750 E-mail: ccgops@elsmail.net	Saint John/**Fundy** NB (VAR) Phone: 506 636 4696 E-mail: ccgops@elsmail.net
Visit http://www.noaa.gov/vos_resource.shtml for instructions on sending INMARSAT 2-digit access code reports. For all iceberg reports use access code 42.	

Table 3: Iceberg Shapes

Shape	Example	Description	Shape	Example	Description
Tabular		Flat topped iceberg with length-height ratio greater than 5:1	**Non-Tabular**		Does not meet any of the below characteristics
Domed		Rounded top	**Pinnacled**		At least 1 spiral or pyramid on it
Wedged		Steep vertical side on 1 end and sloping on the other	**Dry-dock**		Eroded with U-shaped slot or channel
Blocky		Flat top with vertical sides	**Ice Island**		Very large ice flows

Table 4: Iceberg Size



Description	Height	Length
Growler	< 1m	< 5m
Bergy Bit	1 to < 5m	5 to < 15m
Small Iceberg	5 to 15m	15 to 60m
Medium Iceberg	16 to 45m	61 to 120m
Large Iceberg	46 to 75m	121 to 200m
Very Large Iceberg	> 75m	> 200m

300J. International Ice Warnings

Information About Ice Conditions (Outside of Northwest Atlantic Region)		
Country	**Authority**	**Contact information**
Denmark	Danish Ice Service	Phone: +45 89433412/89433099 Fax: +45 89433427 E-mail: opsstaff@sok.dk Web: http://www.forsvaret.dk/SOK
Estonia	Estonian Meteorological & Hydrological Institute (EMHI)	Phone: +372 6660914 Fax: +372 6660911 E-mail: mere@emhi.ee Web: http://www.emhi.ee
Finland	Ice Service of The Finnish Meteorological Institute	Phone: +358 919293464 Fax: +358 919293413 E-mail: ice@fmi.fi Web: http://www.iceservice.fi
Germany	The Eisdienst (Ice Service) of Bundesamt fur Seeschifffahrt and Hydrographie (BSH)	Phone: +49 3814563780 Fax: +49 3814563949 E-mail: ice@bsh.de Web: http://www.bsh.de/en/Marine_data/Observations/Ice/index.jsp
Latvia	Harbor Master Riga	Phone: +371 67082000/67082035 Fax: +371 67323117 E-mail: captain@rok.bkc.lv
	Icebreaker VARMA	Phone: +371 29341982 Fax: +371 29344270
Lithuania	Harbor Master Klaipeda State Seaport	Phone: +370 46499688 Fax: +370 46499666 E-mail: ukt@port.lt
Netherlands	Inland Water Information Center	Phone: +31 (0)320298888 Fax: +31 (0)320298580 E-mail: infocentrum@rws.nl Web: http://www.infocentrum-binnenwateren.nl
Norway	Norwegian Ice Service	Phone: +47 37019759/37019725 Cell: +47 91741522/90077605 Fax: +47 37019701 E-mail: ismelding@kystverket.no Web: http://www.kystverket.no
Poland	Institute of Meteorology & Water Management (IMGW)	Phone: +48 586201641/586288146 Fax: +48 586201641 E-mail: hydrologia_gdynia@imgw.pl Web: http://www.imgw.pl/www.baltyk.pogodynka.pl
Russia	Port Authority St. Petersburg, Headquarters of Ice Operations	Phone: +7 8123213018/8123213019 Fax: +7 8123236048 E-mail: meteo@meteo.nw.ru Web: http://www.meteo.nw.ru
Sweden	Swedish Ice Service	Phone: +46 114958533 Fax: +46 114958053 E-mail: ice@smhi.se Web: http://www.smhi.se

300K. Baltic Sea Ice Codes

This code is used by the following countries: Denmark, Finland, Germany, Netherlands, Norway, Poland, Sweden, Russia, Estonia, Lithuania, and Latvia.

The general form of the message code is:

ICE: AA1ABSBTBKB 2ABSBTBKB ... AA1ABSBTBKB

Table V		Table I	Table II	Table III	Table IV
AA	1	AB	SB	TB	KB
BB	1	AB	SB	TB	KB
CC etc.	1	AB	SB	TB	KB

Notes:
–When a section is free of ice, the corresponding group may be omitted from the report. It should, however, always be coded as *n*0//KB the first 2 days after it has become ice-free and only omitted the third day if the ice-free conditions continue.
–When all sections within a district are ice-free, the whole district shall be omitted from the report.
–The districts for which ice information is issued by countries using this code are indicated for each country in the following pages.

Table I

AB - Amount and arrangement of sea ice	
0	Ice-free
1	Open water - concentration less than 1/10
2	Very open ice - concentration 1/10 to less than 4/10
3	Open ice - concentration 4/10 to 6/10
4	Close ice - concentration 7/10 to 8/10
5	Very close ice - concentration 9/10 to 9+/10*
6	Compact ice, including consolidated ice - concentration 10/10
7	Fast ice with drift ice outside
8	Fast ice
9	Lead in very close or compact drift ice or along the ice edge
/	Unable to report
*	9+/10 means 10/10 ice concentration with openings
Note: The higher code figure has greater priority in reporting.	

Table II

SB - Stage of ice development	
0	New ice or dark nilas (less than 5 cm thick)
1	Light nilas (5 to 10 cm thick) or ice rind
2	Grey ice (10 to 15 cm thick)
3	Grey-white ice (15 to 30 cm thick)
4	White ice, first stage (30 to 50 cm thick)
5	White ice, second stage (50 to 70 cm thick)
6	Medium first-year ice (70 to 120 cm thick)
7	Ice predominantly thinner than 15 cm with some thicker ice
8	Ice predominantly 15 to 30 cm with some ice thicker than 30 cm
9	Ice predominantly thicker than 30 cm with some thinner ice
/	No information or unable to report
Note: If AB = 0, SB should be reported as /.	

Table III

TB - Topography or form of ice	
0	Pancake ice, ice cakes, brash ice—less than 20 m across
1	Small ice floes - 20 to 100 m across
2	Medium ice floes - 100 to 500 m across
3	Big ice floes - 500 to 2000 m across
4	Vast or giant ice floes - more than 2000 m across, or level ice
5	Rafted ice
6	Compacted slush or shuga, or compacted brash ice
7	Hummocked or ridged ice
8	Thaw holes or many puddles on the ice
9	Rotten ice
/	No information or unable to report
Notes: Figures 0 to 4 only to be used if ice concentration is less than 7/10 with no compacted ice present (TB = 4: vast floes). 4 to 9 to be used if ice concentration is greater 7/10 (TB = 4: level ice). If AB = 0, TB should be reported as /.	

Table IV

KB - Navigation conditions in ice	
0	Navigation unobstructed
1	Navigation difficult or dangerous for wooden vessels without ice sheathing
2	Navigation difficult for unstrengthened or low-powered vessels built of iron or steel; navigation for wooden vessels even with ice sheathing not advisable
3	Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice
4	Navigation proceeds in lead or a broken ice-channel without the assistance of icebreaker
5	Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size
6	Icebreaker assistance can only be given to vessels of special ice class and of special size
7	Icebreaker assistance can only be given to vessels after special permission size
8	Navigation temporarily closed
9	Navigation has ceased
/	Unknown

Table V

Denmark

AA	1	Sea area N of Hammaren	BB	1	Sea area W of Ven	CC	1	Sea area off Møn lighthouse	DD	1	Agersøsund—Stignæs
	2	Fairway to Rønne		2	Sea area E of Ven		2	Sea area S of Gedser		2	Storebælt channel, westernpart
	3	Sea area between Rønne and Falsterbo		3	Sea area off Helsingør		3	Sea area S of Rødby, harbor		3	Storebælt channel, eastern part
	4	Sea area off Falsterbo		4	Sea area off Nakkehoved		4	Sea area SE of Keldsnor		4	Sea area E of Romsø
	5	Fairway through Drogden		5	Sea area S of Hesselø		5	Sea area off Sprodsbjerg		5	Fairway to Kalundborg oil harbor
	6	Fairway to København		6	Fairway to Isefjorden-Kyndbyværket		6	Sea area W of Omø		6	Sea area W of Røsnaes

EE	1	Sea area W of Sjællands rev	FF	1	Southern entrance to Lillebælt, Skjoldnæs	GG	1	Fairway at Fredericia to the bridges	HH	1	Sea area off Fornæs
	2	Sea area W of Hesselø		2	Sea area off Helnæs		2	Sea area N of Æbelø		2	Fairway to Randers
	3	Sea area E of Anholt		3	Fairway to Åbenrå—Enstedværket		3	Fairway to Odense		3	Entrance at Hals Barre
	4	Sea area W of Fladen Lighthouse		4	Sea area off Assens		4	Sea area at Vesborg lighthouse		4	Fairway to Alborg
	5	Sea area NW of Kummelbank		5	Kolding Yderfjord to the bridges		5	Sea area S of Sletterhage		5	Sea area NW of Læsø
	6	Sea area N of Skagen		6	Fairway to Esbjerg		6	Fairway to Åarhus		6	Sea area off Hirsholmene

Estonia

AA	1	Narva-Joesuu - Kunda	BB	1	Pärnu, harbor and bay	CC	1	Muhuväin (Moonsund)
	2	Kunda, harborand bay		2	Pärnu - Irben Strait			
	3	Kunda, harbor - Tallinn		3	Irben Strait			
	4	Muuga, harbor and bay						
	5	Tallinn, harbor and bay						
	6	Tallinn, harbor - Osmussaar						
	7	Osmussaar - Ristna						
	8	Ristna - Irben Strait						

Table V

Finland

AA	1	Röytta - Etukari	BB	1	Oulu harbors - Kattilankalla	CC	1	Raahe harbor - Heikinkari	DD	1	Rahja harbor - Välimatala
	2	Etukari - Ristinmatala		2	Kattilankalla - Oulu 1		2	Heikinkari—Raahe lighthouse		2	Sea area from Välimatala to the line Ulkokalla - Ykskivi
	3	Ajos—Ristinmatala		3	Sea area SW of Oulu 1		3	Raahe lighthouse—Nahkiainen		3	The high sea between latitudes of Ulkokalla and Pietarsaari
	4	Ristinmatala—Kemi 2		4	The high sea N of latitude of Marjaniemi		4	The high sea between latitudes of Marjaniemi and Ulkokalla			
	5	Kemi 2 - Kemi 1									
	6	Sea area SW of Kemi 1									
	7	Kemi 2 - Ulkokrunni - Virpiniemi									
EE	1	Ykspihlaja - Repskär	FF	1	Sea area NE of Nordvalen	GG	1	Kaskinen - Sälgrund	HH	1	From Pori harbors to the line Pori lighthouse - Säppi
	2	Repskär—Kokkola lighthouse		2	Sea area from Nordvalen to W of Norrskär		2	Sea area off Sälgrund		2	Sea area W of the line Pori lighthouse - Säppi
	3	Sea area off Kokkola lighthouse		3	Vaskiluoto - Ensten		3	The high sea N of latitude of Yttergrund		3	The high sea between the latitudes of Yttergrund and Rauma
	4	Pietarsaari - Kallan		4	Ensten - Vaasa lighthouse						
	5	Sea area off Kallan		5	Vaasa lighthouse - Norrskär						
	6	The high sea between latitude of Pietarsaari to ENE of Nordvalen		6	Sea area SW of Norrskär						
II	1	Rauma harbor - Kylmäpihlaja	JJ	1	Uusikaupunki harbor - Kirsta	KK	1	Sea area N of Sälskär	LL	1	Maarianhamina - Marhällan
	2	Kylmäpihlaja - Rauma lighthouse		2	Kirsta - Isokari		2	Sea area N of Märket		2	Sea area off Nyhamn and Marhällan
	3	Sea area W of Rauma lighthouse		3	Isokari - Sandbäck		3	Sea area W of Märket		3	The middle Åland Sea
	4	The high sea S of latitude of Rauma		4	Sea area off Sandbäck		4	Sea area S of Märket		4	Sea area off Lågskär

Table V

Finland (con't)

MM	1	Naantali and Turku - Rajakari
	2	Rajakari—Lövskär

NN	1	Lövskär - Korra
	2	Korra - Isokari
	3	Lövskär - Berghamn
	4	Berghamn - Stora Sottunga
	5	Stora Sottunga - Ledsär
	6	Sea area off Rödhamn

OO	1	Lövskär - Grisselborg
	2	Grisselborg—Norparskär
	3	Sea area at Vidskär
	4	Utö - Suomen Leijona
	5	Sea area S of Suomen Leijona

PP	1	Hanko harbor - Hanko 1
	2	Sea area S of Hanko 1
	3	Hanko - Vitgrund
	4	Vitgrund - Utö

QQ	1	Koverhar - Hästö Busö
	2	Hästö Busö - Ajax
	3	Sea area S of Ajax

RR	1	Inkoo and Kantvik harbor - Sea area at Porkkala
	2	Sea area at Porkkala
	3	Sea area S of Porkkala lighthouse

SS	1	Helsinki harbor - Harmaja
	2	Harmaja—Helsinki lighthouse
	3	Helsinki lighthouse - sea area S of Porkkala lighthouse
	4	Archipelago fairway Helsinki - Porkkala - Rönnskär
	5	Helinski, Vuosaarir - Eestilioto
	6	Eestilioto - Helinski lighthouse

TT	1	Porvoo harbor - Varlax
	2	Varlax - Porvoo lighthouse
	3	Porvoo lighthouse - Kalbådagrund
	4	Sea area Kalbådagrund - Helsinki lighthouse
	5	Valkom harbor - Täktam
	6	Archipelago fairway Boistö - Glosholm
	7	Archipelago fairway Glosholm - Helsinki

UU	1	Kotka - Viikari
	2	Viikari - Orrengrund
	3	Orrengrund - Tiiskeri
	4	Tiiskeri - Kalbådagrund
	5	Hamina - Suurmusta
	6	Suurmusta - Merikari
	7	Merikari—Kaunissaari

Table V

Germany

AA	1	Stralsund - Palmer Ort	BB	1	Wolgast - Peenemünde	CC	1	Rostock -Warnemünde	DD	1	Wismar - Walfisch
	2	Palmer Ort - Freesendorfer Haken		2	Peenemünde - Ruden		2	Rostock, overseas harbors		2	Walfisch -Timmendorf
	3	Osttief					3	Warnemünde, sea channel		3	Timmendorf - approach bouy “Wismar”
	4	Landtiefrinne					4	Warnemünde, sea area		4	Lübeck - Travemünde
	5	Fährhafen Sassnitz, harbor and vicinity					5	Approach buoy “Rostock”, sea N		5	Travemünde, harbor
	6	Fährhafen Sassnitz, sea area					6			6	Travemünde, sea area

EE	1	Holtenau - Laboe	FF	1	Flensburg - Holnis	GG	1	Holtenau, canal apporach	HH	1	Hamburg - Landungsbrücken, Elbe
	2	Bülk, sea area		2	Holnis - Neukirchen		2	Kiel canal, Holtenau - Rendsburg		2	Stadersand, Elbe
	3	Lighthouse “Kiel”, sea area NE		3	Neukirchen - Kalkgrund		3	Kiel canal, Brunsbüttel - Rendsberg		3	Brunsbüttel, Elbe
	4	Westermarkeldorf, sea area		4	Falshöft , sea area		4	Brunsbüttel, canal approach		4	Cuxhaven - Neuwerk
	5	Marienleuchte, sea area								5	Approach bouy “Elbe”
	6	Fehmarnbelt, entrance E									

II	1	Bremen, Weser	KK	1	Wilhelmshaven, harbor entrance	LL	1	Emden, Ems and outer harbor
	2	Brake, Weser		2	Wilhelmshaven, oil jetty(Jade)		2	Emden - Randzelgat
	3	Bremerhaven, Weser		3	Schillig, Jade		3	Borkum, Randzelgat
	4	Lighthouse “Hohe Weg”, channel		4	Wangerooge channel		4	Borkum, Westerems
	5	Alte Weser, channel						
	6	Neue Weser, channel						

Table V

Latvia

AA	1	Port of Riga
	2	Shipping route from the port of Riga to the Cape of Mersrags
	3	Shipping route from the Cape of Mersrags to the Irben Strait
	4	Shipping route in the Irben Strait
BB	1	Port of Ventspils
	2	Shipping route from the Irben Strait to the port of Ventspils
CC	1	Port of Liepaja
	2	Shipping route from Ventspils to the port of Liepaja
	3	Shipping route from the port of Liepaja to the sea border of Lithuania

Lithuania

AA	1	Port of Klaipeda
	2	Shipping route from the port of Klaipeda to the sea border of Latvia
	3	Shipping route from the port of Klaipeda to the sea border of Russia

Netherlands

AA	1	Delfzijl harbor
	2	Eemshaven
	3	Eems: Oterdum - Eemshaven
	4	Eems: Eemshaven - Hubertgat
BB	1	Harlingen harbor
	2	Along Pollendam
	3	Blauwe Slenk
	4	Vliestroom and Stortemelk
CC	1	Den Helder harbor
	2	Texelstroom and Marsdiep
	3	Schulpengat
DD	1	Branch canal G and Zaandam harbors
	2	Amsterdam East harbors
	3	Amsterdam West harbors
	4	Branch canal A (Beverwijk)
	5	North Sea Canal
	6	Ijmuiden locks - fairway buoy

Table V

Netherlands (con't)

EE	1	Nieuwe Maas and harbors	FF	1	Moerdijk harbor	GG	1	Antwerp harbors
	2	Botlek harbors		2	Moerdijk - Dordrecht		2	Schelde: Antwerpen - Hansweert
	3	Europoort		3	Dordrecht harbor		3	Schelde: Hansweert - Flushing roads
	4	New Waterway		4	Oude Maas		4	Sloe harbor
	5	Hoek of Holland - fairway buoy		5	Noord		5	Oostgat
							6	Wielingen
							7	Canal Terneuzen - Gent

Norway

AA	1	Sekken (Halden)	BB	1	Østerelv (Fredrikstad)	CC	1	Oslo - Steilene - Spro beacon	DD	1	Langgrunn (Horten)
	2	Singlefjorden (Halden)		2	Leira (Fredrikstad)		2	Spro beacon - Fagerstrand - Dröbak		2	Gullholmen lighthouse - Mefjordbåen
	3	Svinesund - Halden		3	Vesterelva (Fredrikstad)		3	Drøbak—Filtvet lighthouse		3	Mefjordbåen - Fulehuk lighthouse
	4	Torbjørnskjaer lighthouse		4	Rauøyfjorden		4	Filtvet - Gullholmen lighthouse		4	Fulehuk - Ferder lighthouse
	5	Struten lighthouse		5	Verlebukta - Moss		5	Dramsfjorden		5	West of Færder
	6	Løperen (Fredrikstad)		6	Mossesundet		6	Breiangen (north of Horten)		6	South of Færder

EE	1	Torgersøygapet (Tønsberg)	FF	1	Tjömekjæla	GG	1	Brevikfjorden	HH	1	Kragerofjørden
	2	Husøysund - Tønsberg channel		2	Sandefjord (Sandefjord)		2	Frierfjorden (Porsgrunn, Skien)		2	Grønholmgapet (Risør)
	3	Tønsberg inner harbor		3	Inside Svenner lighthouse		3	Jomfrulandsrenna		3	Stangholmgapet (Risør)
	4	Vestfjord (Tønsberg)		4	Off Svenner lighthouse		4	Off Jomfruland		4	Lyngørfjorden
	5	Leistensløpet		5	Larviksfjorden (Stavern - Larvik)		5	Skåtøysundet (Kragerø)		5	Off Lyngør
	6	Vrengen		6	Langesundsbukta		6	Langårsund (Kragerø)		6	Tvedestrandsfjord

Table V

Norway (con't)

II	1	Tromsøysundet (Arendal)
	2	Galtesund (Arendal)
	3	Inside Torungen light (Arendal)
	4	Off Torungen light (Arendal)
	5	Grimstad
	6	Inside Homborsund light

JJ	1	Off Homborsund light
	2	Lillesand
	3	Kristiansandsfjorden
	4	Off Oksøy light (Kristiansand)

Poland

AA	1	Krynica Morska, sea
	2	Gdansk, maritime harbor
	3	Gdansk, Port Polnocny
	4	Gdansk, sea
	5	Gdynia, harbor
	6	Gdynia, sea
	7	Hel lighthouse, sea to south
	8	Hel lighthouse, sea to east
	9	Hel lighthouse, sea to north

BB	1	Rozewie lighthouse, sea
	2	Ustka, harbor
	3	Ustka, sea
	4	Darlowo, harbor
	5	Darlowo , sea
	6	Kolobrzeg, harbor
	7	Kolobrzeg, sea

CC	1	Zalew Szczecinski
	2	Szczecin, harbor
	3	Passahe Swinoujscie - Szczecin
	4	Swinoujscie, harbor
	5	Swinoujscie, sea

Table V

Russia (Baltic Coast and Gulf of Finland Coast)

AA	1	Sankt Petersburg harbor	BB	1	Vyborg, harborand bay	CC	1	Luga bay	DD	1	Kaliningrad harbor
	2	St. Petersburg - Kotlin (eastern point)		2	Vichrevoj - Sommers		2	Approaches to Luga bay, line Mošènyj - Sepelevskij		2	Kaliningrad to Lithuanian sea border
	3	Kotlin (eastern point) Tolbuhkin lighthouse		3	Berkezund					3	Kaliningrad to Polish sea border
	4	Tolbukhin lighthouse-Sepelevskij lighthouse		4	Bol'šoj Berezovyj (eastern point) - Sepelevskij						
	5	Sepelevskij lighthouse-Seskar									
	6	Seskar - Sommers									
	7	Sommers - Gogland (southern point)									
	8	Gogland (southern point) longitude of Kunda									

Sweden

AA	1	Karlsborg - Malören	BB	1	Haraholmen - Nygrån	CC	1	NE of Nordvalen	DD	1	Fairway to Husum
	2	Sea area off Malören		2	Sea area off Nygrån		2	SW of Nordvalen		2	Örnsköldsvik - Hörnskaten
	3	Luleå - Björnklack		3	Skelleftehamn - Gåsören		3	Western Quark (W of Holmöarne)		3	Hörnskaten - Skagsudde
	4	Björnklack - Farstugrunden		4	Sea area off Gåsören		4	Umeå - Väktaren		4	Sea area off Skagsudde
	5	E and SE of Farstugrunden		5	Sea area off Bjuröklubb		5	SE of Väktaren		5	Fairway W of Ulvöarna
	6	Sandgrönn fairway					6	NE and SE of Sydostbrotten		6	Sea area E of Ulvöarna
	7	Rödkallen - Norströmsgrund									

Table V

Sweden (con't)

EE	1	Ångermanälven north Sandö bridge
	2	Ångermanälven south Sandö bridge
	3	Härnösand - Härnön
	4	Sea area off Härnön
	5	Sundsvall - Draghällan
	6	Draghällan - Åstholmsudde
	7	Off Åstholmsudde and Brämön

FF	1	Hudiksvallsfjärden
	2	Iggesund - Agö
	3	Sea area off Agö
	4	Sandarne—Hällgrund
	5	Sea area off Hällgrund
	6	Ljusnefjärden - Storjungfrun
	7	Sea area off Storjungfrun

GG	1	Gävle - Eggegrund
	2	Sea area off Eggegrund
	3	Sea area off Örskär
	4	Öregrundsgrepen
	5	Passage at Grundkallen

HH	1	Passage at Understen
	2	Sea area off Svartklubben
	3	Hallstavik - Svartklubben
	4	Sea area off Söderarm and Tjärven
	5	Sea area off Svenska Högarna

II	1	Trälhavet - Furusund - Kapellskär
	2	Kappelskär - Söderarm
	3	Stockholm - Trälhavet - Krövholmen
	4	Sea area off Sandhamn
	5	Trollharan - Långgarn
	6	Mysingen
	7	Nynäshamn - Landsort
	8	Sea area S of Landsort

KK	1	Köping - Kvicksund
	2	Västerås - Grönsö
	3	Grönsö - Södertälje
	4	Stockholm - Sodertälje
	5	Sodertälje - Fifong
	6	Fifong - Landsort

LL	1	Norrköping - Hargökalv
	2	Hargökalv - Vinterklasen - N Kränkan
	3	Oxelösund harbor
	4	Järnverket - Lillhammaren - N Kränkan
	5	Sea area off Gustaf Dalen

MM	1	Sea area W of Gotska Sandön
	2	Sea area off Visby
	3	W of Stora Karlsö
	4	Sea area off Hoburgen
	5	Sea area off Magö (Slite)
	6	Sea area off Fårö

NN	1	Västervik - Marsholmen - Idö
	2	Sea area off Idö
	3	Oskarshamn - Furön
	4	Furön - Ölands Norra Udde
	5	Off Ölands Norra Udde

OO	1	Blå Jungfrun - Kalmar
	2	Kalmar - Utgrunden
	3	Utgrunden - Ölands Södra Udde
	4	SE of Ölands Södra Udde

PP	1	Karlskrona - Aspö
	2	Sea area off Aspö
	3	Fairway to Karlshamn
	4	Fairway to Åhus
	5	Sea area off Sandhammaren
	6	Fairway to Trelleborg
	7	Sea area SE of Falsterbo Rev

RR	1	Sea area N of Falsterbo Rev
	2	Drogden passage
	3	Flintrännan
	4	Fairway to Malmö
	5	The Sound, Malmö - Ven
	6	The Sound, E of Ven
	7	The Sound, off Halsingborg
	8	W and S of Kullen

Table V

Sweden (con't)

SS	1	Fairway to Halmstad
	2	Fairway to Valberg
	3	Sea area W of Nidingen
	4	Knippelholmen - Böttö (Göteborg)
	5	Vinga Sand and Danafjord
	6	Buskär - Trubaduren - Vinga
	7	Off Trubaduren and Vinga

TT	1	Uddevalla - Stenungsund
	2	Stenungsund - Hätteberget
	3	Sea area off Hätteberget
	4	Sea area off Måseskär
	5	Brofjorden - Dynabrott
	6	Off Dynabrott and Gäven
	7	Kosterfjorden
	8	Sea area off Nordkoster

UU	1	Göta river
	2	Trollhatte canal - Dalbo bridge
	3	Vänersborgsviken
	4	Fairway through Lurö archipelago
	5	Fairway to Gruvön
	6	Fairway to Karlstad
	7	Fairway to Kristinehamn
	8	Fairway to Otterbäcken
	9	Fairway to Lidköping

300L. Summary

The stations in the following list broadcast navigational, weather and ice warnings including stations listed in Part I above. Broadcasts are in English unless otherwise indicated. For information and schedules of marine weather broadcasts made primarily in English, refer to the Selected Worldwide Marine Weather Broadcasts (WWMARWETHRBC), a joint publication of the National Weather Service (NWS) and Naval Oceanography Command.

Station Name (Call Sign(s))				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational, weather, ice, tsunami warnings	Frequency, channel or satellite to tune into	Time broadcast starts	includes language if not in English and any other specific details the mariner should know about the broadcast.
RT (MF)				
RT (HF)				
Radio-Telex				
Radio-Facsimile				
NAVTEX				
METAREA				
NAVAREA				

300M. Albania

Aulona-Vlore (ZAV3)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 18, 85	0600, 1800	in Albanian, English, Italian and Greek

300N. Algeria

Alger (7TA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 84	0730, 2330	in French and English
RT (MF)	Local navigational warnings and weather	1792 kHz	0903, 1703	in French and English

Annaba (7TB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 24	0703, 2303	in French and English
RT (MF)	Local navigational warnings and weather	1911 kHz	0850, 1850	in French and English

Bejaia (7TG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 26	0733, 2333	in French and English

Bordj-el-Kiffan (7TA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: V Range: 150nm	490 kHz	0330, 0730, 1130, 1530, 1930, 2330	in French
	B1 Character: B Range: 150nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	

Oran (7TO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 24	0703, 2303	in French and English
RT (MF)	Local navigational warnings and weather	2719 kHz	0835, 1835	in French and English

Skikda (7TS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 26	0703, 2303	in French and English

Tenes (7TN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 26	0733, 2333	in French and English

Oran (7TO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 24	0703, 2303	in French and English
RT (MF)	Local navigational warnings and weather	2719 kHz	0835, 1835	in French and English

300O. Angola

Luanda (D3E)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 24	0233, 0633, 1033, 1433, 1833, 2233	in Portuguese

300P. Antarctica (Argentina)

Centro Meteorologico Base Marambio (LLU)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Weather	4807, 10870 kHz	0020, 0320, 0620	
	Weather	10870, 16209.5 kHz	0920, 1220, 1820, 2120	
	Weather	10870, 20732 kHz	1520	
	Ice	10870, 16209.5 kHz	2120 (Tue., Thu.)	

300Q. Antarctica (Chile)

Centro Meteorologico Antartico Presidente Eduardo Frei Montalva (CAN6D)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Weather for Antarctic	5302.5, 11662.5, 15470.5 kHz	0030, 0330, 0630, 0930, 1230, 1530, 1830, 2130	
	Weather for Drake Passage and Bellingshausen Sea	5302.5, 11662.5, 15470.5 kHz	1530, 2130	

Bahia Fildes, King George Island-South Shetland Islands (CBZ22)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Antarctic weather for the Bahia Fildes	Ch. 14	0155, 1355	in Spanish. After prior announcement on 2182 kHz and VHF Ch 16.
RT (MF)	Antarctic weather for the Bahia Fildes	2738 kHz	0150, 1350	in Spanish. After prior announcement on 2182 kHz and VHF Ch 16.

300R. Argentina

Bahia Blanca (L2N)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish
	Water level reports	Ch. 15	Every hour +05m	in Spanish
NAVTEX	B1 Character: D Range: 280nm	490 kHz	0030, 0430, 0830, 1230, 1630, 2030	in Spanish
	B1 Character: P Range: 280nm	518 kHz	0230, 0630, 1030, 1430, 1830, 2230	in Spanish

Buenos Aires (L2C)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish
	Local navigational warnings and weather	Ch. 21	Every hour +00m, +15m, +30m, +45m	in Spanish
	Water level reports	Ch. 15	Every hour +05m	in Spanish
Radio-Telex	Navigational warnings	4210, 8416.5, 12579, 16806.5 kHz	0030, 1530, 2100	in Spanish and English
	Local and coastal navigational warnings	4210, 8416.5, 12579 kHz	1000	in Spanish and English
	Local and coastal navigational warnings including numbers of warnings in force	4210, 8416.5, 12579, 16806.5 kHz	1900	in Spanish and English
	Weather bulletins and wave prognosis	4210, 8416.5, 12579 kHz	0300	in Spanish and English
	Weather bulletins and wave prognosis	4210, 8416.5, 12579, 16806.5 kHz	1400	in Spanish and English

Buenos Aires (L2C)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: F Range: 280nm	490 kHz	0050, 0450, 0850, 1250, 1650, 2050	in Spanish
	B1 Character: R Range: 280nm	518 kHz	0250, 0650, 1050, 1450, 1850, 2250	

Comodoro Rivadavia (L2W)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0350, 0750, 1050, 1650, 2250	in Spanish
RT (MF)	Local and coastal navigational warnings	2065 kHz	0440*, 0740	in Spanish. *Weather only.
RT (HF)	Local navigational warnings and weather	4149 kHz	0440*, 0740, 1740*, 2040**	in Spanish. *Weather only. **Includes in force message.
	Local and coastal navigational warnings	8294 kHz	1740*, 2040**	in Spanish. *Weather only.**Includes in force message.
Radio-Telex	Local and coastal navigational warnings. *Weather bulletins and wave prognosis	4210, 8416.5, 12579 kHz	0530*, 2300	in Spanish and English
	Local and coastal navigational warnings including numbers of warnings in force. *Weather bulletins and wave prognosis	8416.5, 12579, 19680.5 kHz	1300, 1830*	in Spanish and English
NAVTEX	B1 Character: C Range: 280nm	490 kHz	0020, 0420, 0820, 1220, 1620, 2020	in Spanish
	B1 Character: O Range: 280nm	518 kHz	0220, 0620, 1020, 1420, 1820, 2220	

Mar del Plata (L2T, L2U)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0230, 0530, 1130, 1730, 2330	in Spanish
RT (MF)	Weather	2065 kHz	0310	in Spanish
	Local navigational warnings and weather	2065 kHz	0010	in Spanish
RT (HF)	Weather	4149kHz	0310, 1610	in Spanish
	Weather	8294 kHz	1610	in Spanish
	Local and coastal navigational warnings	4149 kHz	0010	in Spanish
	Local and coastal navigational warnings including in force warnings	4149, 8294 kHz	1210	in Spanish
NAVTEX	B1 Character: E Range: 280nm	490 kHz	0040, 0440, 0840, 1240, 1640, 2040	in Spanish
	B1 Character: Q Range: 280nm	518 kHz	0240, 0640, 1040, 1440, 1840, 2240	

Puerto Madryn (L4S)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and water level reports	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish

Quequen (L5B)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish

Rawson				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish

Recalada Rio de la Plata (L3Z)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0040, 0440, 0840, 1240, 1640, 2040	in Spanish
	Water level reports	Ch. 15	Every hour +05m	in Spanish

Rio Gallegos (L3I-VHF, L3D-NAVTEX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish
NAVTEX	B1 Character: B Range: 280nm	490 kHz	0010, 0410, 0810, 1210, 1610, 2010	in Spanish
	B1 Character: N Range: 280nm	518 kHz	0210, 0610, 1010, 1410, 1810, 2210	

San Antonio Oeste				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish

Ushuaia-MRCC (L3P-VHF, L3K-NAVTEX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 15	0010, 0410, 0810, 1210, 1610, 2010	in Spanish

Ushuaia-MRCC (L3P-VHF, L3K-NAVTEX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A Range: 280nm	490 kHz	0000, 0400, 0800, 1200, 1600, 2000	in Spanish
	B1 Character: M Range: 280nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	

METAREA VI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W	0230, 1730	

NAVAREA VI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W	0200, 1400	

300S. Australia

Adelaide				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0357, 0757	for auscoast sea areas D, E, and F

Broome				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local and coastal weather, warnings	Ch. 72	0415, 0815, 2215	After prior announcement on VHF Ch 16.

Cairns				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 81	0145, 0545, 2145, 2345	Warnings after prior announcement on VHF Ch 16. For Australia sea area 2.
RT (HF)	Navigational warnings	8176 kHz	on receipt, 1257, 2357	for auscoast sea areas H, A and B

Carbarvon				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local coastal weather	Ch. 73	0405, 0805, 2205	After prior announcement on VHF Ch 16.

Charleville (VMC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather warnings for coastal waters of Queensland, New South Wales, Victoria, Tasmania and South Australia. Weather warnings for High Seas Areas Northern, North Eastern and South Eastern Australia	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	Every hour +00m	
	Special announcements	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	Every hour +55m	
	Weather forecasts for coastal waters of South Australia and Tasmania	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	0030, 0430, 0830, 1230, 1630, 2030	
	Weather forecasts for coastal waters of Queensland and Northern Territory east of Cape Don	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	0130, 0530, 0930, 1330, 1730, 2130	
	Weather forecasts for High Seas Areas Northern, North Eastern and South Eastern Australia	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	0230, 0630, 1030, 1430, 1830, 2230	
	Weather forecasts for coastal waters of New South Wales and Victoria	2201 kHz (0800-2100UTC), 4426 kHz (2100-0800UTC), 6507 kHz (0800-2100UTC), 8176 kHz, 12365 kHz, 16546 kHz (2100-0800UTC)	0330, 0730, 1130, 1530, 1930, 2330	

Cooktown				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 11	0633, 2033	

Darwin				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather for Darwin Harbor and coastal waters between Daly River and Cape Don	Ch. 67	0833, 2233	
	Local weather	Ch. 28	0903, 2233	Remote site: Gove
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0157, 0957	for auscoast sea areas G, H, A

Esperance				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local coastal weather	Ch. 72	0415, 0815, 2215	After prior announcement on VHF Ch 16.

Geraldton				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local coastal weather	Ch. 73	0415, 0815, 2215	After prior announcement on VHF Ch 16.

Gladstone				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Navigational warnings	8176 kHz	on receipt, 1157, 2257	for auscoast sea areas A, B, and C

Hobart (VMT-232)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather forecasts	Ch. 67, 68, 69	0345, 0633, 0903, 2145	After prior announcement on VHF Ch 16. Warnings sent on receipt.
	Weather forecasts	Ch. 82	0803, 2233	After prior announcement on VHF Ch 16. Warnings sent on receipt.
	Navigational warnings	Ch. 69	2303	After prior announcement on VHF Ch 16.
RT (MF)	Weather forecasts	2524 kHz	0345, 0633, 0903, 2145, 2303*	After prior announcement on RT (MF) 2182 kHz. *Navigational warnings only.
	Weather warnings	2524 kHz	On receipt (2115-0945)	After prior announcement on RT (MF) 2182 kHz.
RT (HF)	Weather forecasts	4146, 6227 kHz	0345, 0903, 2145	After prior announcement on RT (HF) 4125, 6215 kHz.
	Weather forecasts	4535, 4620 kHz	0633	After prior announcement on RT (HF) 4125, 6215 kHz.
	Weather warnings	4146, 6227 kHz	On receipt (2115-0945)	After prior announcement on RT (HF) 4125, 6215 kHz.
	Navigational warnings	4146, 6227 kHz	2303	After prior announcement on RT (HF) 4125, 6215 kHz.

Mackay				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local coastal weather	Ch. 21, 80	0215, 0645, 2015	After prior announcement on VHF Ch 16.

Melbourne				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 67	0448, 2248	Warnings preceded by an announcement on VHF Ch 16. Remote sites at Port Philip and Western Port Bays.
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0257, 2157	for auscoast sea areas C, D and E

Newcastle				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 67	0733, 2133	Warnings sent on receipt.

Perth				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 67	1118, 2318	Remote site: Water Police
	Severe weather warnings	Ch. 67	Every 2 hours	Remote site: Water Police
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0657, 1057	for auscoast sea areas E, F and G

Port Hedland				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0457, 0857	

Port Kembla				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 67	0733, 2133	
	Local severe weather warnings	Ch. 67	On receipt and then every hour	

Rockhampton				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 21	0210, 0705, 2120	
	Weather for Keppel Bay	Ch. 82	0140, 0640, 2040	

Sydney				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 67	0733, 2133	
	Local severe weather warnings	Ch. 67	On receipt and then every hour	
RT (HF)	Navigational warnings	8176 kHz	on receipt, 0057, 1357	for auscoast sea areas B, C and D

Townsville				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 72, 80	0215, 0715, 2215	After prior announcement on VHF Ch 16.

Wiluna (VMW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather warnings for coastal waters of Queensland (Gulf of Carpentaria), Northern Territory, Western Australia and South Australia. Weather warnings for High Seas Areas Northern, Western and South Eastern Australia	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	Every hour +00m	
	Special announcements	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	Every hour +55m	
	Weather forecasts for coastal waters of Western Australia	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	0030, 0430, 0830, 1230, 1630, 2030	
	Weather forecasts for coastal waters of South Australia and Northern Territory	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	0130, 0530, 0930, 1330, 1730, 2130	
	Weather forecasts for High Seas Areas Northern and Western Australia, coastal waters of Queensland (Gulf of Carpentaria)	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	0230, 0630, 1030, 1430, 1830, 2230	
	Weather forecasts for High Seas Areas South Eastern Austrialia	2056 kHz (1000-2300UTC), 4149 kHz (2300-1000UTC), 6230 kHz (1000-2300UTC), 8113 kHz, 12362 kHz, 16528 kHz (2300-1000)	0330, 0730, 1130, 1530, 1930, 2330	

METAREA X				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	IOR	1030, 2330	
		POR	1100, 2300	

METAREA XI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather via China	IOR	0330, 1015, 1530, 2215	
	Weather via Japan	POR	0230, 0830, 1430, 2030	
	Weather via Australia (south of equator)	POR	0815, 2015	

NAVAREA X				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	IOR, POR	0700, 1900	

300T. Azores

Ponta Delgada				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 11	0830, 2000 local time	in Portuguese and English

Horta (CTH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 11	0900, 1000, 1900, 2100 local time	in Portuguese and English
RT (MF)	Coastal navigational warnings and weather	2657 kHz	0935, 2135	in Portuguese and English

Horta (CTH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: J Range: 640nm	490 kHz	0130, 0530, 0930, 1330, 1730, 2130	in Portuguese
	B1 Character: F Range: 640nm	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	

300U. Bahrain

Bahrain (A9M)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: B Range: 300nm	518 kHz	0010, 0410**, 0810, 1210, 1610**, 2010	** nav & weather (when all are not selected)

300V. Barbados

Barbados Coast Guard-MRSC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Storm warnings for Caribbean Sea, Antilles and adjacent Atlantic waters	Ch. 16, 26	on receipt, 0050, 1250, 1650, 2050	

300W. Belgium

Antwerpen (OSA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 24	Every hour +48m, +55m	in Dutch and English. After prior announcement on VHF Ch 16.

Oostende (OSU)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 27	0233, 0633, 1033, 1433, 1833, 2233 after the first hour +03m and +33m	in Dutch and English. After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.
	Weather	Ch. 27	0820, 1720 (0720 local time), warnings on receipt	After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.
	Ice	Ch. 27	0103, 0503, 0903, 1303, 1703, 2103	After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.
RT (MF)	Navigational warnings	2761 kHz	0233, 0633, 1033, 1433, 1833, 2233 after the first hour +03m and +33m	in Dutch and English. After prior announcement on frequencies RT (MF) 2182 and 2484(Dutch) kHz.
	Weather	2761 kHz	0820, 1720 (0720 local time), warnings on receipt	After prior announcement on frequencies RT (MF) 2182 and 2484(Dutch) kHz.
	Ice	2761 kHz	0103, 0503, 0903, 1303, 1703, 2103	After prior announcement on frequencies RT (MF) 2182 and 2484(Dutch) kHz.
NAVTEX	B1 Character: B Range: 55nm	490 kHz	0010, 0410, 0810, 1210, 1610, 2010	in Dutch.
	B1 Character: M Range: 150nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	no weather bulletins.
	B1 Character: T Range: 55nm	518 kHz	0310, 0710**, 1110, 1510, 1910**, 2310	** nav & weather (when all are not selected)

300X. Bermuda

Bermuda Radio (ZBM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather. Tropical weather advisories for 18N to 42N and 50W to 80 W from 01 Jun to 30 Nov	Ch 27	0035, 0435, 0835, 1235, 1635, 2035	After prior announcement on frequencies VHF Ch 16. Latest US National Weather Service High Seas forecast for METAREA IV on request.
	Local navigational warnings and weather. Tropical weather advisories for 18N to 42N and 50W to 80 W from 01 Jun to 30 Nov	162.4 MHz (WX2)	Continuous	Broadcasts are repeated every 4-6 min and recordings are updated at 0000, 0600, 1200, 1800 local time as required.

Bermuda Radio (ZBM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local weather. Tropical weather advisories (01 Jun to 30 Nov) and US National Hurricane Center tropical weather outlook	2582 kHz	0035, 0435, 0835, 1235, 1635, 2035	After prior announcement on frequencies RT (MF) 2182 kHz. Latest US National Weather Service High Seas forecast for METAREA IV on request.
NAVTEX	B1 Character: B Range: 280nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	Tropical weather advisories 01 Jun thru 30 Nov.

300Y. Brazil

Rio de Janeiro Naval (PWZ-33)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Navigational/Coastal warnings and SAR information	4266*, 6448, 8580, 12709, 16974 kHz	0400, 1430, 2130	in Portuguese and English. Local warnings in Portuguese. *4266 kHz on request
	Weather	4266*, 6448, 8580, 12709, 16974 kHz	0230, 0600, 1845	in Portuguese and English. *4266 kHz on request

METAREA V				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-E	0730, 1930	

NAVAREA V				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-E	0030, 1230	

300Z. Bulgaria

Bulgaria				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 26	on receipt, 0733, 1333*, 1933	in Bulgarian and English. *Weather only.
RT (MF)	Local navigational warnings and weather	3740 kHz	on receipt, 0733, 1333*, 1933	in Bulgarian and English. *Weather only.
NAVTEX	B1 Character: J Range: 350nm	518 kHz	0130, 0530**, 0930**, 1330, 1730**, 2130**	** nav & weather (when all are not selected)

Myeik				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 12, 16	on receipt, 0915, 1715	

Yangon (XYR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 12, 16	on receipt, 0915, 1715	

300AA. Canada

Comox, B.C (VAC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	WX1 (162.55 MHz), WX3 (162.475 MHz), Ch. 21B	Continuous (interrupted during live broadcasts at 0420, 1520, 2120)	Continuous marine broadcast information available, Phone: +1 250 3390748, +1 250 9745305. Remote stations: AlertBay, Port Hardy, Cape Lazo, Discovery Mountain, Texada Island.

Fundy (VFF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: V Range: 300nm	490 kHz	0335, 0735, 1135, 1535, 1935, 2335	
	B1 Character: U Range: 300nm	518 kHz	0320, 0720*, 1120*, 1520, 1920*, 2320*	*Weather only

Halifax, N.S (VCS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 21B, 83B	0240, 1110, 1540	Remote stations: Ecum Secum, Fox Island, Sambro.
	Weather	Ch. 21B, 83B	Continuous except during live broadcasts 0240, 1540	Remote stations: Ecum Secum, Fox Island, Sambro.
RT (MF)	Navigational warnings and weather	2749 kHz	0240, 0810*, 1540, 2010*	* Weather only. Remote station: Sambro.

Inuvik, N.W.T. (VFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather and navigational warnings	Ch. 26	0235, 1435	Inuvik and remote station Parson's Lake open during navigation season only, May - Oct. Remote station Cambridge Bay open July - Oct.
	Weather and navigational warnings for NORDREG waters east of 106W and along the Labrador Coast southward to 58N	Ch. 26	0205*, 1240, 1410, 1705*, 2235, 2310	in English and French. Canadian Coast Guard. Station open during navigation season only, Jun. - Dec. Remote stations Coral Harbor and Resolute operational mid Jul to late Oct (approximately). *Ice only.
	Ice reports	Ch. 26	On request	Inuvik and remote station Parson's Lake open during navigation season only, May - Oct. Remote station Cambridge Bay open July - Oct.

Inuvik, N.W.T. (VFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather and navigational warnings for NORDREG waters east of 106W and along the Labrador Coast southward to 58N	2514 kHz	0110, 0205*, 1320, 1410, 1705*, 2235	in English and French. Canadian Coast Guard. Station open during navigation season only, Jun. - Dec. Remote stations Coral Harbor and Resolute operational mid Jul to late Oct (approximately). *Ice only.
	Weather and navigational warnings for NORDREG waters east of 106W and along the Labrador Coast southward to 58N	2582 kHz	0205*, 1240, 1410, 1705*, 2235, 2310	in English and French. Canadian Coast Guard. Station open during navigation season only, Jun. - Dec. Remote stations Coral Harbor and Resolute operational mid Jul to late Oct (approximately). *Ice only.
RT (HF)	Weather and navigational warnings for NORDREG waters east of 106W and along the Labrador Coast southward to 58N	4363 kHz	0205*, 1240, 1410, 1705*, 2235, 2310	in English and French. Canadian Coast Guard. Station open during navigation season only, Jun. - Dec. Remote stations Coral Harbor and Resolute operational mid Jul to late Oct (approximately). *Ice only.
	Weather and navigational warnings for NORDREG waters east of 106W and along the Labrador Coast southward to 58N	6507 kHz	0110, 0205*, 1320, 1410, 1705*, 2235	in English and French. Canadian Coast Guard. Station open during navigation season only, Jun. - Dec. Remote stations Coral Harbor and Resolute operational mid Jul to late Oct (approximately). *Ice only.
	Weather and navigational warnings	4363, 6218.6 kHz	0235, 1435	Inuvik and remote station Parson's Lake open during navigation season only, May - Oct. Remote station Cambridge Bay open July - Oct.
	Ice reports	4363, 6218.6 kHz	On request	Inuvik and remote station Parson's Lake open during navigation season only, May - Oct. Remote station Cambridge Bay open July - Oct.
Radio-Telex	METAREA and NAVAREA XVII and XVIII weather forecasts for arctic waters that are not covered by the INMARSAT SafetyNet service	8416.5 kHz	0330, 1530	Canadian Coast Guard. Station open during navigation season only, Jun - Dec.

Inuvik, N.W.T. (VFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: S Range: 300nm	490 kHz	0300*, 0700*, 1100, 1500*, 1900*, 2300	Operational Jun - Dec. *Weather only.
	B1 Character: T Range: 300nm	518 kHz	0310*, 0710*, 1110, 1510*, 1910*, 2310	Operational Jun - Dec. *Weather only.

Labrador, Labr. (VOK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 83B	Continuous	Remote stations: Cartwright, Goose Bay, Hopedale, and Nain
RT (MF)	Local weather & Ice	2598 kHz	0137, 1007, 1437*, 2037*	Remote stations: Cartwright and Hopedale. * Ice only
	Local navigational warnings	2598 kHz	1107, 2307	Remote stations: Cartwright and Hopedale.
NAVTEX	B1 Character: X Range: 300nm	518 kHz	0350*, 0750*, 1150, 1550*, 1950*, 2350	Operational Jul - Oct. *Weather only.
	B1 Character: X Range: 300nm. Weather only.	518 kHz	0910, 2110	Arctic. Operational Jul - Oct.

Les Escoumins, Que. (VCF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 83B	Continuous	in English and French. Remote stations: Cap a l'Est, Grosses-Roches, Lac Daigle, Mont-Joli, Mont-Louis, Sacre Coeur. Hourly weather observations for specific locations, weather synopsis and MAFOR in English and French.

Montreal, Que. (VFN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 25B, 83B	Continuous	in English and French. Remote station L'Acadie (Ch. 83B) operational May - Oct. Remote station Mont Rigaud operational Mar - Dec. Other remote stations: Mont St. Bruno and Sorel. Hourly weather observations for specific locations, weather synopsis and MAFOR in English and French.

Placentia, Nfld. (VCP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 21B, 23B, 28B, 83B	Continuous	Placentia and Approches, Ferryland Head to Cape St. Mary's on VHF Ch. 23B only.
RT (HF)	Local navigational warnings and weather	2598 kHz	0048, 0737, 1137*, 1607, 1807*, 2137	*Local navigational warnings only. Placentia and Approaches, Ferryland Head to Cape St. Mary's on VHF Ch. 23B only.

Port aux Basques, Nfld. (VOJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 28B, 83B	Continuous	Remote stations: Bonne Bay, Mount Moriah, Pine Tree, Pointe Riche, Ramea Island, Table Mountain.
RT (MF)	Local navigational warnings and weather	2598 kHz	0207, 0807, 1207*, 1507, 1837*, 2107	*Local navigational warnings only. Remote station: Stephenville.
	Ice	2598 kHz	0807, 1837	

Prescott, Ont. (VBR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather, water levels and ice	Ch. 21B, 83B	Continuous	in English. Remote stations: Cardinal (operational Mar - Dec), Kingston, Cobourg, Fonthill, Orillia.
	Local navigational warnings, weather, water levels and ice	Ch. 23B	Continuous	in French. Remote stations: Cardinal (operational Mar - Dec), Kingston.
NAVTEX	B1 Character: H Range: 300nm	518 kHz	0110, 0510*, 0910*, 1310, 1710*, 2110*	Ice included in navigational warnings during ice season. *Weather only.

Prince Rupert, B.C. (VAJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	WX1 (162.55 MHz), WX2 (162.40 MHz), WX3 (162.475 MHz), Ch. 21B	Continuous (interrupted during live broadcasts at 0115, 0715, 1315, 1915)	Continuous marine broadcast information available, Phone: +1 250 6249009. Remote stations: Barry Inlet, Calvert Island, Cumshewa, Dundas Island, Kitimat, Klemtu, Mount Dent, Mount Gil, Mount Hays, Naden Harbour, Rose Inlet, Van Inlet.
RT (MF)	Local navigational warnings and weather	2054 kHz	0115, 0715, 1315, 1915	Continuous marine broadcast information available, Phone: +1 250 6249009. Remote stations: Hunter Point, Prince Rupert.
NAVTEX	B1 Character: D Range: 300nm	518 kHz	0030*, 0430, 0830*, 1230*, 1630, 2030*	*Weather only.

Quebec, Que. (VCC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 83B	Continuous	in English and French. Hourly weather observations for specific locations, weather synopsis and MAFOR in English and French on request. Remote stations: Lauzon, Montmagny, Riviere-du-Loup, Trios-Rivieres.

Riviere-au-Renard, Que. (VCG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 25B, 83B	Continuous	in English and French.* Weather only. Remote stations: Cap-aux-Meules, Carleton, Forillon, Harrington Hr, Havre St-Pierre, Heath Point, La Romaine, Natashquan, Newport. Hourly weather observations for specific locations, weather synopsis and MAFOR in English and French.
RT (MF)	Local navigational warnings and ice	2598, 2749 kHz	0437*, 0847*, 0937, 1407*, 1737, 2317*	in English and French.* Weather only. Remote stations: Cap-aux-Meules, Carleton, Forillon, Harrington Hr, Havre St-Pierre, Heath Point, La Romaine, Natashquan, Newport. Hourly weather observations for specific locations, weather synopsis and MAFOR in English and French.
NAVTEX	B1 Character: D Range: 300nm	490 kHz	0035**, 0435, 0835*, 1235*, 1635, 2035*	*Weather only. **Ice included in weather messages during ice season.
	B1 Character: C Range: 300nm	518 kHz	0020**, 0420, 0820*, 1220*, 1620, 2020*	*Weather only. **Ice included in weather messages during ice season.

Saint John, N.B. (VAR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 21B, 83B	0140, 1240, 1640	in English and French. Remote stations: Cape Blomidon, Lockeport, Yarmouth.
	Weather	Ch. 21B, 83B	Continuous except during live broadcasts 0140, 1640	in English and French. Remote stations: Cape Blomidon, Lockeport, Yarmouth.
RT (MF)	Navigational warnings and weather	2749 kHz	0140, 1040*, 1640, 2040*	in English and French. * Weather only. Remote station: Yarmouth.

Sarnia, Ont. (VBE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather, water levels and ice	Ch. 21B, 83B	Continuous	Remote stations: Kincardine, Sarnia, Leamington, Port Burwell.

St. Anthony, Nfld. (VCM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local weather and ice	Ch. 21B, 83B	Continuous	
RT (MF)	Local navigational warnings and weather	2598 kHz	0107, 0907, 1237*, 1337, 1907*, 1937	*Local navigational warnings only. Remote station: St. Anthony

St. John's, Nfld. (VON)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather and ice	Ch. 21B, 28B, 83B	Continuous	Remote stations: Cape Bonavista, Lumsden, Victoria.
RT (MF)	Local navigational warnings, weather and ice	2598 kHz	0007, 0837, 1307*, 1637, 2007, 2207*	*Local navigational warnings only.
NAVTEX	B1 Character: O Range: 300nm	518 kHz	summer: 0220*, 0620*, 1020, 1420*, 1820*, 2220, winter: 0220*, 0620, 1020*, 1420*, 2220*	*Weather only.

Sydney, N.S. (VCO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 21B, 83B	0040, 1010, 1440	in English and French. Remote stations: Cape Egmont, Cape North, Montague, Point Escuminac, Port Caledonia.
	Weather	Ch. 21B, 83B	Continuous except live broadcasts at 0040, 1440	in English and French. Remote stations: Cape Egmont, Cape North, Montague, Point Escuminac, Port Caledonia.
RT (MF)	Navigational warnings and weather	2749 kHz	0040, 0740*,1440, 2010*	in English and French. *Weather only. Remote station: Port Caledonia.

Sydney, N.S. (VCO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: J Range: 300nm	490 kHz	0255, 0655*, 1055*, 1455, 1855*, 2255*	*Weather only. Ice included during ice season.
	B1 Character: Q Range: 300nm	518 kHz	summer: 0240, 0640*, 1040*, 1440, 1840*, 2240* winter: 2240	*Weather only. Ice included during ice season.

Thunder Bay, Ont. (VBA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings, weather, water levels and ice.	Ch. 21B, 83B	Continuous	Remote stations: Bald Head, Horn, Sault Ste. Marie, Thunder Bay, Killarney, Meaford, Pointe au Brail, Silver Water, Tobermory.
NAVTEX	B1 Character: P Range: 300nm	518 kHz	0230*, 0630, 1030*, 1430*, 1830, 2230*	Ice included during ice season. *Weather only.

Tofino, B.C. (VAE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	WX1 (162.55 MHz), WX2 (162.40 MHz), WX3 (162.475 MHz), Ch. 21B	Continuous (interrupted during live broadcasts at 0050, 0650, 1250, 1850)	Continuous marine broadcast information available, Phone: +1 250 7263415. Remote stations: Eliza Dome, Esperanza, Estevan Point, Holberg, Mount Ozzard, Nottka, Port Alberni.
RT (MF)	Local navigational warnings and weather	2054 KHz	0050, 0650, 1250, 1850	Continuous marine broadcast information available, Phone: +1 250 7263415. Remote station: Amphitrite Point.
NAVTEX	B1 Character: H Range: 300nm	518 kHz	0110*, 0510*, 0910, 1310*, 1710*, 2110	*Weather only.

Vancouver				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	WX1 (162.550 MHz), Ch. 83B	Continuous (except during live broadcasts 0530, 1530, 2130)	Continuous marine broadcast information available, Phone: +1 604 6663655. Remote station: Watts Point.

Victoria, B.C (VAK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	WX3 (162.475 MHz), Ch. 21B	Continuous (interrupted during live broadcasts)	Continuous marine broadcast information available, Phone: +1 250 36365880, +1 250 3636492. Remote stations: Bowen Island, Mounte Parke, Mount Helmcken

METAREA XVII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	POR	0300, 1500	The USA issues marine forecasts for its jurisdictional coast and offshore waters north of Alaska.

METAREA XVIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W	0300, 1500	

NAVAREA XVII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	POR	1130, 2330	

NAVAREA XVIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W	1100, 2300	

300AB. Canary Islands

Las Palmas				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings	1644, 1689 kHz	0803, 1903	After weather bulletin. Remote station: Arrecife.
	Weather	1644, 1689 kHz	0803, 1233, 1903	in Spanish. Remote station: Arrecife.

Las Palmas (EAL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A Range: 400nm	490 kHz	0000, 0400, 0800**, 1200**, 1600**, 2000	in Spanish. MMSI: 2240995. ** Navigational warnings & weather (when all are not selected).
	B1 Character: I Range: 400nm	518 kHz	0120, 0520, 0920**, 1320**, 1720**, 2120	MMSI: 2240995. ** Navigational warnings & weather (when all are not selected).

Tenerife				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 20, 22, 23, 24, 25, 26, 27	0833, 1333*, 2033	in Spanish. *Weather only. Remote stations: Arrecife, Fuerteventura, Gomera, Hierro, La Palma, Las Palmas.

MRCC Tenerife				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 74	On receipt	in Spanish and English.
	Weather	Ch. 74	0015, 0415, 0815, 1215, 1615, 2015	in Spanish and English.

300AC. Cape Verde

Ribeira de Vinha (D4A)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P Range: 250nm	490 kHz	0230, 0630, 1030, 1430, 1830, 2230	in Portuguese.
	B1 Character: U Range: 250nm	518 kHz	0320, 0720, 1120, 1520, 1920, 2320	

300AD. Channel Islands (UK)

Jersey Coast Guard MRCC (GUD)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 82	0433, 0833, 1633, 2033	Broadcasts are made 1 hour later when daylight savings time is observed during broadcasts 0645, 0745, 0845 local time. Warnings after prior announcement on VHF Ch 16.
	Weather	Ch. 82	0307, 0907, 1245, 1507, 1845, 2107, 2245, on request and receipt	Broadcasts are made 1 hour later when daylight savings time is observed during broadcasts 0645, 0745, 0845 local time. Warnings after prior announcement on VHF Ch 16.

Guernsey Coast Guard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather for Guernsey	Ch. 20	On request	

300AE. Chile

Achao (CBP25)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0120, 1320	in Spanish

Antofagasta (CBA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10	0055, 1305	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1250	in Spanish
NAVTEX	B1 Character: H Range: 300nm	518 kHz	0000, 0800, 1600	in Spanish
	B1 Character: A Range: 300nm	518 kHz	0400, 1200, 2000	

MRSC Arica				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0050, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish

Bahia Felix (CBX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0135, 1335	in Spanish
RT (MF)	Weather	2738 kHz	0215, 1415	in Spanish

Cabo Carranza, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0150, 1350	in Spanish
RT (MF)	Weather	2738 kHz	0145, 1345	in Spanish

MRSC Caldera				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0045, 0645, 1245, 1845	in Spanish
RT (MF)	Weather	2738 kHz	0040, 0640, 1240, 1840	in Spanish

MRSC Castro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0105, 1305	in Spanish
RT (MF)	Weather	2738 kHz	0050, 1250	in Spanish
RT (HF)	Weather	4146 kHz	0050, 1250	in Spanish

Chanarlal				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0055, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish

Constitucion				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0255, 1455	in Spanish
RT (MF)	Weather	2738 kHz	0250, 1450	in Spanish

MRSC Coquimbo				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0050, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish

Diego Ramirez				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather for Drake Passage	Ch. 14	0110, 1310	in Spanish
RT (MF)	Weather for Drake Passage	2738 kHz	0120, 1320	in Spanish

Huasco				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0055, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish

MRCC Iquique				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0055, 1305	in Spanish
RT (MF)	Weather	2738 kHz	0050, 1255	in Spanish

Isla Guafo, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather for Isla Guafo	Ch. 14	0350, 0950, 1550, 2150	in Spanish
RT (MF)	Weather for Isla Guafo	2738 kHz	0340, 0940, 1540, 2140	in Spanish

Isla Mocha, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather for Isla Mocha	Ch. 14	0210, 1410	in Spanish
RT (MF)	Weather for Isla Mocha	2738 kHz	0205, 1405	in Spanish

Isla de Pascua-Easter Island (CBY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10, 14	0215, 1415, 1940	in Spanish
RT (MF)	Weather	2738 kHz	0225, 1425, 1950	in Spanish
NAVTEX	B1 Character: G Range: 300nm	518 kHz	0050, 0850, 1650	in Spanish
	B1 Character: F Range: 300nm	518 kHz	0450, 1250, 2050	

Isla Quiriquina, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0155, 1355	in Spanish

Isla San Pedro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0120, 1320	in Spanish
RT (MF)	Weather	2738 kHz	0105, 1305	in Spanish

Islote Fairway, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0155, 1355	in Spanish
RT (MF)	Weather	2738 kHz	0150, 1350	in Spanish

Islotes Evangelistas, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0215, 1415	in Spanish
RT (MF)	Weather	2738 kHz	0205, 1405	in Spanish

Juan Fernandez				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0205, 1405	in Spanish
RT (MF)	Weather	2738 kHz	0220, 1420	in Spanish

Magallanes (CBM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10	0010, 1210	in Spanish
RT (MF)	Weather	2738 kHz	0035, 1235	in Spanish
RT (HF)	Weather	4146 kHz	0035, 1235	in Spanish
NAVTEX	B1 Character: L Range: 300nm	518 kHz	0040, 0840, 1640	in Spanish
	B1 Character: E Range: 300nm	518 kHz	0440, 1240, 2040	

MRSC Puerto Aysen				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0205, 1405	in Spanish
RT (MF)	Weather	2738 kHz	0150, 1350	in Spanish

Puerto Montt (CBP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10	1150, 2345	in Spanish.
RT (MF)	Weather	2738 kHz	1130, 2325	in Spanish.
RT (HF)	Weather	4146 kHz	1130, 2325	in Spanish.
NAVTEX	B1 Character: K Range: 300nm	518 kHz	0030, 0830, 1630	in Spanish.
	B1 Character: D Range: 300nm	518 kHz	0430, 1230, 2030	

Punta Corona, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0050, 0650, 1250, 1850	in Spanish
RT (MF)	Weather	2738 kHz	0045, 0645, 1245, 1845	in Spanish

Punta Delgada				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0155, 1355	in Spanish
RT (MF)	Weather	2738 kHz	0150, 1350	in Spanish

Punta Dungeness, Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0210, 1410	in Spanish
RT (MF)	Weather	2738 kHz	0205, 1405	in Spanish

Quellon (CBP28)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0130, 1330	in Spanish
RT (MF)	Weather	2738 kHz	0115, 1315	in Spanish

MRSC San Antonio				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0055, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish

Talcahuano (CBT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10	0055, 1255	in Spanish
RT (MF)	Weather	2738 kHz	0045, 1245	in Spanish
NAVTEX	B1 Character: J Range: 300nm	518 kHz	0020, 0820, 1620	in Spanish
	B1 Character: C Range: 300nm	518 kHz	0420, 1220, 2020	

Tongoy				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0150, 1350	in Spanish

Valparaiso Playa Ancha (CBV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 10	1215, 2315	in Spanish.
RT (MF)	Weather	2738 kHz	1235, 2335	in Spanish.
RT (HF)	Weather	4357, 12583.5 kHz	1235, 2335	in Spanish.
NAVTEX	B1 Character: Range: 300nm	B1 Character: I Range: 300nm	0010, 0810, 1610	in Spanish.
	B1 Character: Range: 300nm	B1 Character: B Range: 300nm	0410, 1210, 2010	

Wollaston				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	0210, 1410	in Spanish
RT (MF)	Weather	2738 kHz	0205, 1405	in Spanish

METAREA XV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W	1845	

NAVAREA XV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W	0210, 1410	

300AF. China

Dalian (XSZ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: R Range: 250nm	518 kHz	0250*, 0650, 1050*, 1450, 1850, 2250	*Weather only.

Fuzhou (XSL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: O Range: 250nm	518 kHz	0220, 0620, 1020, 1420, 1820, 2220	In English and Chinese. No weather bulletins.

Guangzhou (XSQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Weather	4219, 8431, 12622.5, 16854 kHz	1320	
	Weather	6329, 8431, 12622.5, 16854 kHz	0120	
	Local navigational warnings	6329, 8431, 12622.5, 16854 kHz	0720	
NAVTEX	B1 Character: N Range: 250nm	518 kHz	0210*, 0610, 1010, 1410*, 1810, 2210	*Weather only.

Hong Kong (VRX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: L Range: 400nm	518 kHz	0150, 0550, 0950, 1350, 1750, 2150	

Tianjin (XSV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Ice	4212.5, 8417.5, 12581.5 kHz	0500, 1200, 2300	in Chinese and English
	Local navigational warnings	4212.5, 8417.5, 12581.5 kHz	0500, 1200, 2300	in Chinese.
	Weather	4212.5, 8417.5, 12581.5 kHz	0500, 0700, 1200, 1600, 2000, 2300	
	Local navigational warnings	4212.5, 8417.5, 12581.5 kHz	0700	

Sanya (XSI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M Range: 250nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	no weather bulletins.

Shanghai (XSG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Local navigational warnings	4215, 6326, 8425.5, 12637.5, 16898.5 kHz	0250, 0650, 1350, 2350	in Chinese.
	Local navigational warnings	4215, 6326, 8425.5, 12637.5, 16898.5 kHz	0250, 0850, 1350, 2350	in English.
NAVTEX	B1 Character: Q Range: 250nm	518 kHz	0240*, 0640, 1040*, 1440, 1840, 2240	*Weather only.

300AG. Congo (Brazzaville)

Pointe Noire (TNA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings of Congo	2705 kHz	0610, 0810, 1010, 1410, 1610	in French.

300AH. Cook Islands (New Zealand)

Rarotonga				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Coastal weather for Cook Islands	2207 kHz	0015, 0615, 1815	

300AI. Cote D'Ivore (Ivory Coast)

Abidjan (TUA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings	2586 kHz	0848, 1248, 1948	in French.

300AJ. Croatia

Split (9AS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 07, 21, 23, 28, 81	0545, 1245, 1945	in Croatian and English. Remote stations: Celavac, Hum, Labistica, Sveti Mihovil, Vidova Gora.
NAVTEX	B1 Character: Q Range: 85nm	518 kHz	0240, 0640, 1040, 1440, 1840, 2240	

Dubrovnik (9AD)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 04, 07, 28, 85	0545, 1245, 1945	in Croatian and English. Remote stations: Gorica Sv. Vlaha, Hum, Ilijino Brdo, Uljenje.

Rijeka (9AR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 04, 20, 24, 81	0545, 1245, 1945	in Croatian and English. Remote stations: Kamenjak, Savudrija, Susak, Ucka.

300AK. Cuba

Habana (CLT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational & military exercise warnings	2760 kHz	0205, 0605*, 1405, 1805*	in Spanish. *Military exercise warnings only.

300AL. Curacao

JRCC Curacao				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16, 26, 27	On request	
RT (MF)	Weather	2182 kHz	On request	

300AM. Cyprus

Cyprus (5BA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 16	On receipt	
	Weather	Ch. 16	On request on VHF Ch. 16	
RT (MF)	Local navigational warnings and weather	2700 kHz	On receipt	
	Weather	2700 kHz	On request on RT (MF) 2182 kHz	
NAVTEX	B1 Character: M Range: 200nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	

300AN. Denmark

Lyngby (OXZ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 01-05, 07, 23, 61, 64-66, 83, 85	Forecasts on request, warnings on receipt	in Danish and English. Remote stations: Als, Anholt, Arsballe, Blavand, Bovbjerg, Fornaes, Frejlev, Hanstholm, Hirtshals, Karleby, Kobenhavn/Lynetten, Laeso, Mern, Rosnaes, Skagen, Svendborg, Vejby, Vejle.
	Navigational warnings	Ch. 01-05, 07, 23, 61, 64-66, 83, 85	0133, 0533, 0933, 1333, 1733, 2133	in Danish and English. Remote stations: Als, Anholt, Arsballe, Blavand, Bovbjerg, Fornaes, Frejlev, Hanstholm, Hirtshals, Karleby, Kobenhavn/Lynetten, Laeso, Mern, Rosnaes, Skagen, Svendborg, Vejby, Vejle.
	Ice	Ch. 01-05, 07, 23, 61, 64-66, 83, 85	Every hour +05m while in force, 1305 (Report)	in Danish and English. Remote stations: Als, Anholt, Arsballe, Blavand, Bovbjerg, Fornaes, Frejlev, Hanstholm, Hirtshals, Karleby, Kobenhavn/Lynetten, Laeso, Mern, Rosnaes, Skagen, Svendborg, Vejby, Vejle.
DSC MF	Navigational warnings, ice and weather	2187.5 kHz	On receipt	in Danish and English. Remote stations: Blavand, Skagen.
RT (MF)	Weather	1704, 1734, 1758, 2586 kHz	Forecasts on request, warnings on receipt	in Danish and English. Remote stations: Blavand, Ronne, Skagen, Skamlebaek.
	Navigational warnings	1704, 1734, 1758, 2586 kHz	0133, 0533, 0933, 1333, 1733, 2133	in Danish and English. Remote stations: Blavand, Ronne, Skagen, Skamlebaek.
	Ice	1704, 1734, 1758, 2586 kHz	Every hour +05m while in force, 1305 (Report)	in Danish and English. Remote stations: Blavand, Ronne, Skagen, Skamlebaek.

300AO. Ecuador

Ayora (HCY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 26	1350	

Ayora (HCY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A Range: 400nm	490 kHz	0000, 0400, 0800, 1200, 1600, 2000	Navigational warnings only.
	B1 Character: L Range: 400nm	518 kHz	0150, 0550, 0950, 1350, 1750, 2150	Navigational warnings only.

Guayaquil (HCG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 26	0100, 1300, on request	
NAVTEX	B1 Character: M	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	

300AP. Egypt

Al Quseir				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: V Range: 400nm	518 kHz	0330**, 0730, 1130, 1530**, 1930, 2330	**Navigational warnings & weather (when all are not selected)

Alexandria				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: N Range: 350nm	518 kHz	0210, 0610, 1010**, 1410, 1810, 2210**	**Navigational warnings & weather (when all are not selected)

Ismailia				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: X Range: 400nm	518 kHz	0350, 0750, 1150, 1550, 1950, 2350	Navigational warnings only.

300AQ. Estonia

Tallinn (ESA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 69	on receipt, 0233, 0433, 0633, 1033, 1333, 1433, 1833, 2233	After prior announcement on VHF Ch 16. Remote stations: Aabla, Dirhami, Eisma, Kopu, Merivalja, Orissaare, Ruhnu, Suurupi, Toila, Torgu, Tostamaa, Undva.
RT (MF)	Weather	1650 kHz	0433, 1333	in English and Estonian. After prior announcement on RT (MF) 2182 kHz.
	Weather	3310 kHz	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Estonian. After prior announcement on RT (MF) 2182 kHz.
NAVTEX	B1 Character: U Range: 250nm	518 kHz	0320, 0720**, 1120, 1520, 1920**, 2320	Broadcasts are relayed by MSI Sweden/Stockholm radio ** Navigational warnings & weather (when all are not selected).

300AR. Falkland Islands

Falkland Islands Fisheries Department				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Local navigational warnings and weather	4066.1 kHz	0830 local time	

300AS. Faroe Islands

Torshavn (OXJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 23-26, 60-63	on receipt, every even hour +35m. Forecasts on request	in Faeroese and English. Remote stations: Eioiskollur, Fugloy, Halsurin, Kalsoy, Mykines, Sornfelli, Stoolafjall.
RT (MF)	Local navigational warnings and weather	1641 kHz	on receipt, every even hour +35m. Forecasts on request	in Faeroese and English.
NAVTEX	B1 Character: D	518 kHz	0030, 0430, 0830, 1230, 1630, 2030	

300AT. Fiji

Suva (3DP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Coastal navigational warnings and weather	4372, 8746 kHz	0803, 1203, 1603, 2003 local time	
	Storm warnings	4372, 8746 kHz	Every hour +03m	

300AU. Finland

Turku (OFK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 03-05, 07, 23-26, 28, 84	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	Local navigatinal warnings in Finnish and Swedish. Remote stations: Espoo, Eurajoki, Geta, Hammarland, Hanko, Jarso, Kotka, Kristiinankaupunki, Kruunupyy, Kuivaniemi, Mustasaari, Nauvo, Raahe, Uto, Uusikaupunki, Virolahti.
	Ice	Ch. 01, 03-05, 07, 23-26, 28, 84	0803*, 1033, 1833	*Icebreaker locations only. Remote stations: Espoo, Eurajoki, Geta, Hammarland, Hanko, Jarso, Kotka, Kristiinankaupunki, Kruunupyy, Kuivaniemi, Mustasaari, Nauvo, Raahe, Uto, Uusikaupunki, Virolahti.

MRCC Corsen: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 79	on receipt, 0445, 0503, 0515, 0533, 0545, 0703, 0715, 0733, 0745, 0803, 1103*, 1115*, 1133*, 1145*, 1203*, 1533, 1545, 1603, 1615, 1633, 1903, 1915, 1933, 1945, 2003 local time, every hour +03m	in French. *01 May - 30 Sep. After prior announcement on frequencies VHF Ch 16. Remote stations: Bodic, Cap Frehel, Batz, Stiff, Le Raz.
	Bulletins for Ouessant VTS	Ch. 79	Occasional. Every hour +10m, +40m	in French and English. Fog visibility when poor. After prior announcement on frequencies VHF Ch 16. Remotes stations: Bodic, Cap Frehel, Batz, Stiff, Le Raz.
	Local navigational warnings	Ch. 10	0830, 0845, 0900, 0915, 0930, 1630, 1645, 1700, 1715, 1730 local time	in French.
RT (MF)	Local navigational warnings	1650, 2677 kHz	0735, 1935 local time	in French. After prior announcement on frequencies RT (MF) 2182 kHz.
RT (MF)	Weather	1650, 2677 kHz	on receipt, 0815, 2015 local time, every hour +03m	in French. After prior announcement on frequencies RT (MF) 2182 kHz.
NAVTEX	B1 Character: E Range: 300nm	490 kHz	0040, 0440, 0840, 1240, 1640, 2040	In French.
NAVTEX	B1 Character: A Range: 300nm	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

MRCC Etel: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 10	on receipt, 0830, 0845, 0900, 0915, 1630, 1645, 1700, 1715 local time	in French. After prior announcement on frequencies VHF Ch 16. Remote stations: Beg Meil, Cap Ferret, Les Baleines, Piriac, Beg Melen, Chassiron, Chemoulin, Messanges, Grave, Saint-Julien, Saint-Sauveur, Socoa, Le Talut.
	Weather	Ch. 79	on receipt, every hour +03m, 0703, 0715, 0733, 0745, 0803, 1533, 1545, 1603, 1615, 1633, 1903*, 1915, 1933*, 1945, 2003 local time	in French. After prior announcement on frequencies VHF Ch 16. *Firing practice warnings. Remote stations: Chassiron, Soulac, Cap Ferret, Contis, Biarritz.
	Local navigational warnings and weather	Ch. 80	on receipt, every hour +03m, 0703, 0715, 0733, 0745, 0803, 0815, 1533, 1545, 1603, 1615, 1633, 1645, 1903, 1915, 1933, 1945, 2003, 2015 local time	in French.After prior announcement on frequencies VHF Ch 16. Remote stations: Penmarc'h, Groix, Belle-lle, Saint-Nazaire, Yeu, Les Sables-d'Olonne.

MRCC Gris-Nez: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 79	on receipt, every hour +03m, 0703, 0710, 0720, 1533, 1545, 1603, 1903, 1910, 1920	in French. After prior announcement on frequencies VHF Ch 16. Remote stations: Dunkerque, L'Ailly, Saint-Frieux, St-Valery-en-Caux.
	Special bulletins when visibility falls below 2nm	Ch. 79	Every hour +25m	in French and English. After prior announcement on frequencies VHF Ch 16. Remote stations: Dunkerque, L'Ailly, Saint-Frieux, St-Valery-en-Caux.
	Bulletins for Dover Strait	Ch. 79	Every hour +10m	After prior announcement on frequencies VHF Ch 16. Remote stations: Dunkerque, L'Ailly, Saint-Frieux, St-Valery-en-Caux.
RT (MF)	Local navigational warnings and weather	1650, 2677 kHz	on receipt, every hour +03m, 0833, 2033 local time	in French. After prior announcement on frequencies RT (MF) 2182 kHz.

MRCC Jobourg: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 80	on receipt, every hour +20m, +50m, on request	in French and English. After prior announcement on VHF Ch 16. Remote stations: Antifer, Granville, Port-en-Bessin.
	Weather	Ch. 80	on receipt, 0703, 0715, 0733, 0745, 0803, 1533, 1545, 1603, 1615, 1633, 1903, 1915, 1933, 1945, 2003 local time, every hour +03m	in French. After prior announcement on VHF Ch 16. Remote stations: Antifer, Granville, Port-en-Bessin.
RT (MF)	Local navigational warnings	1650 kHz	0915, 2115 local time	in French. After prior announcement on RT (MF) 2182 kHz.

MRCC La Garde: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 79	on receipt, 0703, 0715, 1518, 1530, 1903, 1915 local time, every hour +03m	in French. After prior announcement on VHF Ch 16. Remote stations: Neoulos/Port Vendres, Agde.
	Weather	Ch. 80	on receipt, 0733, 0745, 0746, 0803, 1548, 1600, 1601, 1618, 1933, 1945, 1946, 2003 local time, every hour +10m	in French. After prior announcement on VHF Ch 16. Remote stations: Planier, Coudon/Toulon, Pic de l'Ours/Cannes.
	Weather	Ch. 16	0733, 0745, 0803, 0815, 0833, 0845, 1518, 1530, 1548, 1600, 1618, 1630, 1933, 1945, 2003, 2015, 2033, 2045 local time.	in French. Remote stations: Bear, Cap Corse, Cepet, Pertusato, Leucate, Porquerolles, Sagro, Alistro, Camarat, Sete, Chiappa, Dramont, Espiguette, Couronne, La Garoupe, Parata, Bec de l'Aigle, Farrat, Ile Rousse.
	Local navigational warnings	Ch. 16	0915, 0930, 0945, 1000, 1015, 1030, 1400, 1415, 1430, 1445, 1500, 1515 local time.	in French. Remote stations: Bear, Cap Corse, Cepet, Pertusato, Leucate, Porquerolles, Sagro, Alistro, Camarat, Sete, Chiappa, Dramont, Espiguette, Couronne, La Garoupe, Parata, Bec de l'Aigle, Farrat, Ile Rousse.

MRCC La Garde: CROSS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	1696, 2677 kHz	1000, 1600, 2200	in French and English. After prior announcement on RT (MF) 2182 kHz.
	Weather	1696, 2677 kHz	on receipt, 0103, 0503, 0903, 1303, 1703, 2103 local time	in French and English. After prior announcement on RT (MF) 2182 kHz.
	Local navigational warnings	1696, 2677 kHz	0833, 1603 local time	in French and English. After prior announcement on RT (MF) 2182 kHz.
NAVTEX	B1 Character: S Range: 250nm	490 kHz	0300, 0700, 1100, 1500, 1900, 2300	
	B1 Character: W Range: 250nm	518 kHz	0300, 0700, 1100, 1500, 1900, 2340	

METAREA II				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-E, AOR-W	0900, 2100	

NAVAREA II				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-E, AOR-W, IOR	1630	

300AW. French Antilles

Cross Antilles- Guyane, MRCC Fort de France				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 64	0900, 1230, 2000, 2200 local time	in French. Remote station: Pic Paradis.
VHF	Weather	Ch. 64	0820, 1150, 1920, 2120 local time	in French. Remote station: Marie-Galante.
VHF	Coastal navigational warnings after weather and Guadeloupe Firing Practice Area warnings	Ch. 64	1150, 1920 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Marie-Galante.
VHF	Coastal navigational warnings after weather	Ch. 64	1230, 2000 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Pic Paradis.
VHF	Weather	Ch. 79	0720, 1050, 1820, 2020 local time	in French. Remote station: Le Marin.
VHF	Weather	Ch. 79	0740, 1110, 1840, 2040 local time	in French. Remote station: Grande Riviere.
VHF	Weather	Ch. 79	0800, 1130, 1900, 2100 local time	in French. Remote station: Basse-Terre.
VHF	Coastal navigational warnings after weather	Ch. 79	1050, 2020 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Le Marin.
VHF	Coastal navigational warnings after weather	Ch. 79	1110, 2040 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Grande Riviere.

Cross Antilles- Guyane, MRCC Fort de France				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings after weather and Guadeloupe Firing Practice Area warnings	Ch. 79	1130, 1900 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Basse-Terre.
VHF	Weather	Ch. 80	0730, 1100, 1830, 2030 local time	in French. Remote station: Bellefontaine.
VHF	Weather	Ch. 80	0750, 1120, 1850, 2050 local time	in French. Remote station: La Caravelle.
VHF	Weather	Ch. 80	0810, 1140, 1910, 2110 local time	in French. Remote station: Basse-Terre.
VHF	Weather	Ch. 80	0830, 1200, 1930, 2130 local time	in French. Remote station: Basse-Terre.
VHF	Coastal navigational warnings after weather	Ch. 80	1100, 2030 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Bellefontaine.
VHF	Coastal navigational warnings after weather	Ch. 80	1120, 2050 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: La Caravelle.
VHF	Coastal navigational warnings after weather and Guadeloupe Firing Practice Area warnings	Ch. 80	1140, 1910 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Basse-Terre.
VHF	Coastal navigational warnings after weather and Guadeloupe Firing Practice Area warnings	Ch. 80	1200, 1930 local time	in French. Warnings after prior announcement on VHF Ch. 16. Scheduled broadcasts may be suspended whilst SAR action is in progress. Remote station: Basse-Terre.
VHF	Tropical storm wanings	Ch. 64, 79, 80	Every hour +30m	in French and English.Remote stations: Le Marin, Bellefontaine, Grande Riviere, La Caravelle, Marie-Galante, Pic Paradis.

Cross Antilles- Guyane, MRCC Fort de France				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
MF (RT)	Tropical storm warnings	2545 kHz	Every hour +00m	in French and English. Warnings after prior announcement on 2182 kHz. Remote station: Martinique.
	Storm warnings	2545 kHz	0933, 1815 local time	in French and English. Warnings after prior announcement on 2182 kHz. Remote station: Martinique

300AX. French Polynesia

MRCC Papeete				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 26, 27	0630, 1200, 1600, 2000 local time	in French. Warnings after prior announcement on VHF Ch. 16.
RT (HF)	Weather	8803 kHz	0730, 1200, 1630, 2030 local time	in French.

300AY. Germany

Haburg (DDH-49)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: L Range: 250nm	490 kHz	0150, 0550, 0950, 1350, 1750, 2150	
	B1 Character: S Range: 250nm	518 kHz	0300, 0700, 1100, 1500, 1900, 2300	

MRCC Bremen				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 16	On receipt, every hour +00m, +30m until canceled	Remote stations: Blumenthal, Borkum, Cuxhaven, Helgoland, Kampen, Norderney, Stade, Wangerooge, Westerhever, Bastorf, Damp, Darssar Ort, Greifswalder Oie, Holnis, Marienleuchte, Rugen, Stralsund, Travemunde, Waterneverstorf.

Offenbach/Pinneberg (DDH, DDK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Weather	147.3, 11039, 14467.3 kHz	on request, 0000, 0300, 0500, 0600, 0900, 0950*, 1200, 1500, 1715*, 1800, 2100	*Local navigational warnings in German and English.
	Weather	4583, 7646, 10100.8 kHz	on request, 0000, 0300, 0515*, 0600, 0900, 1200, 1500, 1715*, 1800, 2100	*Local navigational warnings in German and English.
	Weather	147.3, 11039, 14467.3 kHz	0005, 0020, 0030, 0055, 0125, 0130, 0135, 0200, 0235, 0305, 0320, 0325, 0350, 0425, 0430, 0435, 0505, 0520, 0530, 0535, 0605, 0620, 0630, 0700, 0725, 0730, 0734, 0755, 0820, 0840, 0905, 0920, 0930, 1010, 1025, 1030, 1035, 1100, 1120, 1145, 1205, 1220, 1230, 1300, 1325, 1330, 1420, 1440, 1505, 1520, 1530, 1545, 1610, 1625, 1630, 1635, 1735, 1805, 1820, 1830, 1900, 1925, 1930, 1934, 1955, 2020, 2040, 2105, 2120, 2130, 2155, 2225, 2230, 2235, 2305.	in German.
	Weather	4583, 7646, 10100.8 kHz	0005, 0020, 0030, 0035, 0200, 0305, 0320, 0330, 0355, 0415, 0440, 0535, 0550, 0603, 0604, 0630, 0735, 0815, 0835, 0850, 0905, 0930, 0955, 1015, 1035, 1110, 1115, 1135, 1150, 1205, 1210, 1335, 1435, 1450, 1505, 1530, 1550, 1557, 1610, 1635, 1735, 1750, 1803, 1804, 1830, 1935, 2015, 2035, 2050, 2105, 2130, 2155, 2215, 2235, 2315.	

Offenbach/Pinneberg (DDH, DDK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Facsimile	Weather and ice	3855, 7880, 13882.5 kHz	0430, 0512, 0525, 0546, 0559, 0612, 0625, 0638, 0651, 0704, 0717, 0730, 0743, 0804, 0817, 0830, 0842, 0854, 0906, 0930*, 0945, 1007*, 1029, 1050, 1132, 1145, 1205, 1220, 1520*, 1540*, 1600, 1800, 1821, 1834, 1847, 1900, 1913, 1926, 1939, 2100*, 2115*, 2136, 2200 (Broadcast schedule at 1111)	* Ice only.

Seefiml (Hamburg) (DP07)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 23-27, 28, 60, 61, 66, 83	on receipt, 0745, 0945, 1245, 1645, 1945	in German. Operational Mar - Oct. After prior announcement on VHF Ch 16. Remote stations: Accumersiel, Borkum, Bremen, Elbe-Weser, Nordfriesland, Arkona, Flensburg, Kiel, Lubeck, Rostock.

300AZ. Greece

Corfu (SVK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: K Range: 280nm	518 kHz	0140, 0540, 0940, 1340, 1740, 2140	

Heraklion (SVH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: H Range: 280nm	518 kHz	0110, 0510, 0910, 1310, 1710, 2110	

Limnos (SVL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: L Range: 280 nm	518 kHz	0150, 0550, 0950, 1350, 1750, 2150	

Olympia (SVO, SVU4)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 01,02, 04, 23, 25, 27, 60, 63, 82, 83, 85	0600, 1000, 1600, 2200	in Greek and English. On request on Ch. 16. Remote stations: Astypalaia, Chios, Faistos, Kefallinia, Kerkyra, Knosos, Kythira, Limnos, Moustakos, Mytilini, Parnis, Patrai, Petalidion, Pilion, Rodos, Sfendamion, Siteia, Syros, Thasos.
	Navigational warnings	Ch. 01,02, 04, 23, 25, 27, 60, 63, 82, 83, 85	on receipt, 0500, 1100, 1730, 2330	in Greek and English. On request on Ch. 16. Remote stations: Astypalaia, Chios, Faistos, Kefallinia, Kerkyra, Knosos, Kythira, Limnos, Moustakos, Mytilini, Parnis, Patrai, Petalidion, Pilion, Rodos, Sfendamion, Siteia, Syros, Thasos.
RT (MF)	Weather	2624, 2799, 2730, 2830 kHz	on receipt, 0633, 0903, 1533, 2133	in Greek and English. Remote stations: Irakleio (SVH), Kerkyra (SVK), Limnos (SVL), Rodos (SVR).
	Navigational warnings	2624, 2799 kHz	0703, 1133, 1733, 2333	in Greek and English. Remote stations: Irakleio (SVH), Kerkyra (SVK), Limnos (SVL), Rodos (SVR).
	Navigational warnings and weather	2730, 2830 kHz	0033, 0703, 1033, 1633	in Greek and English. Remote stations: Irakleio (SVH), Kerkyra (SVK), Limnos (SVL), Rodos (SVR).
Radio-Telex	Weather	8424 kHz	0930, 2130	in Greek and English.
Radio- Facsimile	Weather (Mediterranean and Aegean Sea).	4481, 8105 kHz	0845, 0857, 0909, 0921, 0933, 0945, 0957, 1009, 1021, 1033, 1044	Station operational 0845-1055 UTC.

METAREA III				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-E	1000, 2200	

Aasiaat (OYR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 01-04, 23-28, 60, 63	0605, 1105, 1605, 2105 local time	in English, Dutch and Greenlandic. After prior announcement on VHF Ch 16. Remote stations: Angiit, Arsuutaa, Attup Uummannaa, Ikerasassuaq, Ilulissat, Illutalissuaq, Kangaamiut, Kangaarsuk, Maniitsoq, Nanortalik, Narsaq, Narsarsauq, Niaqornaq, Paamiut, Pingu, Qaarsorsuaq, Qaqatoqaq, Qaqortoq, Qingaaq, Quarmii Qaaja, Sermersooq, Simiutaq, Sermiligaaq, Sisimiut, Tinumanersuaq, Top 775, Upernivi up Qaqqaa, Uummannaq, Uunartuarsuup Qaqqaa.
	Ice and weather	Ch. 01-04, 23-28, 60, 63	On request.	
	Navigational warnings	Ch. 01-04, 23-28, 60, 63	0035, 0335, 0635, 0935, 1235, 1535, 1835, 2135, on request	in English and Dutch. After prior announcement on VHF Ch 16. Remote stations: Angiit, Arsuutaa, Attup Uummannaa, Ikerasassuaq, Ilulissat, Illutalissuaq, Kangaamiut, Kangaarsuk, Maniitsoq, Nanortalik, Narsaq, Narsarsauq, Niaqornaq, Paamiut, Pingu, Qaarsorsuaq, Qaqatoqaq, Qaqortoq, Qingaaq, Quarmii Qaaja, Sermersooq, Simiutaq, Sermiligaaq, Sisimiut, Tinumanersuaq, Top 775, Upernivi up Qaqqaa, Uummannaq, Uunartuarsuup Qaqqaa.
RT (MF)	Weather	2116, 2129, 2265, 2400, 2225, 2250, 2304, 3125, 3276, 3280 kHz	0605, 1105, 1605, 2105 local time	in English, Dutch and Greenlandic. After prior announcement on RT (MF) 2182 kHz. Remote stations: Ikerasassuaq, Kook Island, Maniitsoq, Paamiut, Qeqertarsuaq, Simiutaq, Sisimiut, Tasiilaq, Upernavik, Uummannaq
	Ice and weather	2116, 2129, 2265, 2400, 2225, 2250, 2304, 3125, 3276, 3280 kHz	On request.	
	Navigational warnings	2116, 2129, 2265, 2400, 2225, 2250, 2304, 3125, 3276, 3280 kHz	0035, 0335, 0635, 0935, 1235, 1535, 1835, 2135, on request	in English and Dutch. After prior announcement on RT (MF) 2182 kHz. Remote stations: Ikerasassuaq, Kook Island, Maniitsoq, Paamiut, Qeqertarsuaq, Simiutaq, Sisimiut, Tasiilaq, Upernavik, Uummannaq

Aasiaat (OYR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	6522, 4381 kHz	0605, 1105, 1605, 2105 local time	in English, Dutch and Greenlandic.
	Ice and weather	6522, 4381 kHz	0605, 1105, 1605, 2105 local time	in English, Dutch and Greenlandic.
	Navigational warnings	6522, 4381 kHz	0035, 0335, 0635, 0935, 1235, 1535, 1835, 2135, on request	in English and Dutch.

Island Commander Greenland				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 12	On receipt.	in English and Danish. Remote station: Groennedal.

Kook Island (Nuuk) (OXI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: W Range: 400nm	518 kHz	0340, 0740, 1140, 1540, 1940, 2340	

Simiutaq (OXF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

Upernavik (OYN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

300BB. Grenada

Grenada Coast Guard (S. Georges), MRSC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 16, 87	On request	

300BC. Guam (USA)

Guam (NRV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local Notice to Mariners and weather.	Ch. 22A	0900, 2100	U.S. Coast Guard.
RT (MF)	Local Notice to Mariners and weather.	2670 kHz	0705, 2205	U.S. Coast Guard. Remote controlled by CAMSPAC (Point Reyes).
RT (HF)	Maritime Safety Information (MSI), tsunami warnigns and weather.	6501, 13089 kHz	0330, 0930, 1530, 2130	U.S. Coast Guard. Remote controlled by CAMSPAC (Point Reyes).
Radio-Telex	Weather for N Pacific Ocean West of 180 and the Indian Ocean.	12579, 16806.5, 22376 kHz	0230, 0500, 0900, 1500, 1900, 2315	U.S. Coast Guard.
NAVTEX	B1 Character: V Range: 100nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	U.S. Coast Guard.

300BD. Iceland

Grindavik (TFK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: K	518 kHz	0140, 0540, 0940, 1340, 1740, 2140	
	B1 Character: X	518 kHz	0350, 0750, 1150, 1550, 1950, 2350	

Hornafjordur (Coast Guard Radio)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 25	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2305	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Broadcasts remotely controlled from Reykjavik. Remote station: Haoxl.
RT (MF)	Weather	1659 kHz	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2305	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz. Broadcasts remotely controlled from Reykjavik.

Isafjordur (Coast Guard Radio)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Broadcasts remotely controlled from Reykjavik. Remote station: Bolafjall.
RT (MF)	Weather	2724 kHz	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz. Broadcasts remotely controlled from Reykjavik.

Neskaupstadur (Coast Guard Radio)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23, 27	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Broadcasts remotely controlled from Reykjavik. Remote station: Graennipa, Hellisheioi.
RT (MF)	Weather	1761 kHz	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz. Broadcasts remotely controlled from Reykjavik.

Reykjavik (TFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 26, 27	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2305	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Remote station: Haenuvik, Sandur, Thorbjorn.
RT (MF)	Weather	1876 kHz	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2305	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz.

Saudanes (TFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: E	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	
	B1 Character: R	518 kHz	0250, 0650, 1050, 1450, 1850, 2250	

Siglufjordur (Coast Guard Radio)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 24, 26, 27	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2305	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Broadcasts remotely controlled from Reykjavik. Remote station: Grimsey, Skagi, Vioarfjall.
RT (MF)	Weather	1883 kHz	on receipt, 0205, 0505, 0805, 1105, 1405, 1705, 2005, 2304	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz. Broadcasts remotely controlled from Reykjavik.

Vestmannaeyjar (Coast Guard Radio)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 26, 27	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on RT (MF) 2182 kHz. Broadcasts remotely controlled from Reykjavik.
RT (MF)	Weather	1713 kHz	on receipt, 0203, 0503, 0803, 1103, 1403, 1703, 2003, 2303	in Icelandic and English. After prior announcement on frequencies VHF Ch 16 and DSC VHF Ch 70. Broadcasts remotely controlled from Reykjavik. Remote station: Hafell, Klif.

300BE. India

Chennai (Madras) (VWN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P Range: 250nm	518 kHz	0230, 0630, 1030, 1430, 1830, 2230	

Mumbai (Bombay) (VWB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: G Range: 250nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

METAREA VIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	IOR	0900, 1800	Northern part of AOR
			0130, 1330	Southern part of AOR. La Reunion.
	Tropical Storm warnings	IOR	0000, 0600, 1200, 1800, as needed	East of 90E. La Reunion.

NAVAREA VIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	IOR	1000	

300BF. Indonesia

Amboina (PKE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: B Range: 300nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	

Jakarta (PKX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2690 kHz	1100	
Radio-Telex	Weather and navigational warnings	8416.5 kHz	0000, 1130	
	Weather and navigational warnings	16806.5 kHz	0030, 1200	
NAVTEX	B1 Character: E Range: 300nm	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	

Jayapura (PNK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A Range: 300nm	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

Makasar (PKF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: D Range: 300nm	518 kHz	0030, 0430, 0830, 1230, 1630, 2030	

300BG. Iran

Abbas Radio (EQI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I Range: 300nm	490 kHz	0120, 0520, 0920, 1320, 1720, 2120	in Farsii.
	B1 Character: F Range: 300nm	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	

Bandar Khomeyni (EQN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 18	0430*, 0500, 1230*, 1300	in English and Farsi. *Weather only. Broadcasts are made 1 hour later when daylight savings time is observed.

Bandar Raja'I (EQI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 18	0430*, 0500, 1230*, 1300	in English and Farsi. *Weather only. Broadcasts are made 1 hour later when daylight savings time is observed.

Bushehr (EQM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 18	0430*, 0500, 1230*, 1300	in English and Farsi. *Weather only. Broadcasts are made 1 hour later when daylight savings time is observed.
NAVTEX	B1 Character: D Range: 300nm	490 kHz	0030, 0430, 0830, 1230, 1630, 2030	in Farsii.
	B1 Character: A Range: 300nm	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

Chabahar (EQJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 18	0430*, 0500, 1230*, 1300	in English and Farsi. *Weather only. Broadcasts are made 1 hour later when daylight savings time is observed.

Fereydoonkenar (EQO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: J Range: 300nm	490 kHz	0130, 0530, 0930, 1330, 1730, 2130	in Farsii.
	B1 Character: G Range: 300nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

300BH. Ireland

Dublin-Coastguard MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 02, 04, 23, 83	on receipt, 0033, 0433, 0833, 1233, 1633, 2033	After prior announcement on VHF Ch 16. Remote stations: Carlingford, Mine Head, Rosslare, Wicklow Head.
	Weather	Ch. 02, 04, 23, 83	on receipt, 0033*, 0103, 0403, 0633*, 0703, 1003, 1233*, 1303, 1603, 1833*, 1903, 2203 local time	*Weather warnings. After prior announcement on VHF Ch 16. Remote stations: Carlingford, Mine Head, Rosslare, Wicklow Head.

Malin Head-Coastguard MRSC (EJM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 02, 23, 24, 26, 83	0033*, 0103, 0403, 0633*, 0703, 1003, 1233*, 1603, 1833*, 1903, 2203 local time	*Weather warnings. After prior announcement on VHF Ch 16.
	Local navigational warnings	Ch. 02, 23, 24, 26, 83	on receipt, 0033, 0433, 0833, 1233, 1633, 2033	After prior announcement on VHF Ch 16.
RT (MF)	Local navigational warnings	1677 kHz	on receipt, 0033, 0433, 0833, 1233, 1633, 2033	After prior announcement on RT (MF) 2182 kHz.
NAVTEX	B1 Character: A Range: 400nm	490 kHz	0000, 0400, 0800, 1200, 1600, 2000	Inland weather.
	B1 Character: Q Range: 400nm	518 kHz	0240, 0640, 1040, 1440, 1840, 2240	

Valentia-Coastguard MRSC (EJK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 04, 23, 24, 26, 28	on receipt, 0033*, 0103, 0403, 0633*, 0703, 1003, 1233*, 1303, 1603, 1833*, 1903, 2203 local time	*Weather warnings. After prior announcement on VHF Ch 16.
	Local navigational warnings	Ch. 04, 23, 24, 26, 28	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	After prior announcement on VHF Ch 16.
RT (MF)	Local navigational warnings	1752 kHz	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	
	Weather	1752 kHz	on receipt, 0303, 0833, 0903, 1503, 2033, 2103	
NAVTEX	B1 Character: W Range: 400nm	518 kHz	0340, 0740, 1140, 1540, 1940, 2340	

300BI. Israel

Haifa (4XO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P Range: 200nm	518 kHz	0020, 0230, 0420, 0630, 0820, 1030, 1220, 1430, 1620, 1830, 2020, 2230	

Roma (IAR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 01, 02, 04, 05, 07, 19-22, 25-28, 61-65, 79, 81-86	on receipt, 0135, 0735, 1335, 1935	in Italian and English. Remote stations: Abbate Argento, Bari, Monte Sardo, Casa d'Orso, Monte Calvario, Belvedere di Siracusa, Campo Lato Alto, Monte Lauro, Cefalu, Erice, Monte Pellegrino, Ustica, Forte Spuria, Gela, Mazara del Vallo, Monte San Calogero, Pantelleria, Grecale, lampedusa Ponente, Capo Colonna, Capo dell' Armi, Monteparano, Monte Titiolo, Punta Stilo, Monte Mancuso, Capri, Posillipo, Serra del Tuono, Varco del Salice, Silvi, Conconello, Forte Garibaldi, Monte Cero, Monte Conero, Monte Secco, Piancavallo, Ravenna, Badde Urbara, Margine Rosso, Monte Serpeddi, P. Campu Spina, Monte Limbara, Monte Moro, Monte Tului, Osilo, Porto Cervo, Castellaccio, Monte Bignone, Zoagli, Formia, Monte Argentario, Monte Cavo, Monte Paradiso, Gorgona, Monte Nero.
	Navigational warnings	Ch. 01, 02, 05, 19-22, 25-27, 61, 62, 79, 81, 82, 84-86	on receipt, 0333, 0833, 1233, 1633, 2033	in Italian and English. Remote stations: Abbate Argento, Bari, Monte Sardo, Casa d'Orso, Monte Calvario, Belvedere di Siracusa, Campo Lato Alto, Monte Lauro, Cefalu, Erice, Monte Pellegrino, Ustica, Forte Spuria, Gela, Mazara del Vallo, Monte San Calogero, Pantelleria, Grecale, lampedusa Ponente, Capo Colonna, Capo dell' Armi, Monteparano, Monte Titiolo, Punta Stilo, Monte Mancuso, Capri, Posillipo, Serra del Tuono, Varco del Salice.
	Navigational warnings	Ch. 01, 02, 04, 07, 19, 20, 21, 25-28, 61, 62, 64, 65, 82, 83, 85	on receipt, 0403, 0803, 1133, 1603, 2003	in Italian and English. Remote stations: Silvi, Conconello, Forte Garibaldi, Monte Cero, Monte Conero, Monte Secco, Piancavallo, Ravenna, Badde Urbara, Margine Rosso, Monte Serpeddi, P. Campu Spina, Monte Limbara, Monte Moro, Monte Tului, Osilo, Porto Cervo, Castellaccio, Monte Bignone, Zoagli, Formia, Monte Argentario, Monte Cavo, Monte Paradiso, Gorgona, Monte Nero.
NAVTEX	B1 Character: R Range: 320nm	518 kHz	0250, 0650, 1050, 1450, 1850, 2250	

Cagliari (IDC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2680 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.
NAVTEX	B1 Character: T Range: 320nm	518 kHz	0310, 0710, 1110, 1510, 1910, 2310	

Augusta (IQA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2656 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.
NAVTEX	B1 Character: V Range: 320nm	518 kHz	0330, 0730, 1130, 1530, 1930, 2230	

Porto Torres (IZN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2719 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Ancona (IPA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2656 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Genova (ICB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2642 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Livorno (IPL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	1925 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Civitavecchia (IPD)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	1888 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Napoli (IQH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2632 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Messina (IDF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2789 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Palermo (IPP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	1852 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Mazara del Vallo (IQQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2600 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Lampedusa (IQN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	1876 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Crotone (IPC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2663 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Bari (IPB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2579 kHz	0135, 0333*, 0735, 0833*, 1233*, 1335, 1633*, 1935, 2033*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

San Benedetto del Tronto (IQP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	1855 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.

Trieste (IQX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2624 kHz	0135, 0403*, 0735, 0803*, 1203*, 1335, 1603*, 1935, 2003*	in Italian and English. * Navigational warnings only. Remote controlled by Roma Radio.
NAVTEX	B1 Character: U Range: 320nm	518 kHz	0320, 0720, 1120, 1520, 1920, 2320	

300BK. Jamaica

Jamaica Coast Guard (6YX) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 13	0130*, 1330, 1430*, 1830, 1900*	* weather only.
	Hurricane and tropical storm warnings affecting Jamaica	Ch. 13	Every hour +30m	
RT (HF)	Navigational warnings and weather	8291 kHz	1330, 1830	
	Hurricane and tropical storm warnings affecting Jamaica	8291 kHz	Every hour +00m	

300BL. Japan

Hiroshima (JNE) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1015, 1615 local time	in Japanese and English.

Hokkaido (JNL) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1025, 1625 local time	in Japanese and English.

Kagoshima (JNJ) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1020, 1620 local time	in Japanese and English.

Kobe (JGD) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1033, 1633 local time	in Japanese and English.

Kushiro (JNX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: K Range: 400nm	425 kHz	0140, 0540, 0940, 1340, 1740, 2140	In Japanese. Tsunami & ice warnings (Jan-April, 0930 & 1330) are issued when needed.
	B1 Character: K Range: 400nm	518 kHz	0108, 0508, 0908, 1308, 1708, 2108	Ice: Jan-April, 0930 & 1330

Maizuru (JNC) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1020, 1620 local time	in Japanese and English.

Moji (JNR) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1003, 1603 local time	in Japanese and English.
NAVTEX	B1 Character: H Range: 400nm	425 kHz	0017, 0417, 0817, 1217, 1617, 2017	In Japanese. Tsunami & ice warnings are issued when needed.
	B1 Character: H Range: 400nm	518 kHz	0110, 0510, 0910, 1310, 1710, 2110	

Naha (JNB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: G Range: 400nm	425 kHz	0000, 0400, 0800, 1200, 1600, 2000	In Japanese. Tsunami & ice warnings are issued when needed.
	B1 Character: G Range: 400nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

Nagoya (JNT) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1010, 1610 local time	in Japanese and English.

Niigata (JNV) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1015, 1615 local time	in Japanese and English.

Okinawa (JNB) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1010, 1610 local time	in Japanese and English.

Otaru (JLN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: J Range: 400nm	425 kHz	0051, 0451, 0851, 1251, 1651, 2051	In Japanese. Tsunami & ice warnings are issued when needed.
	B1 Character: J Range: 400nm	518 kHz	0130, 0530, 0930, 1330, 1730, 2130	

Shiogama (JNN) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1033, 1633 local time	in Japanese and English.

Yokohama (JGC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and storm warnings	Ch. 16	on receipt, 1020, 1620 local time	in Japanese and English.
NAVTEX	B1 Character: I Range: 400nm	425 kHz	0034, 0434, 0834, 1234, 1634, 2034	In Japanese. Tsunami & ice warnings are issued when needed.
	B1 Character: I Range: 400nm	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

NAVAREA XI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	IOR, POR	0005, 0805, 1205	

300BM. Jordan

Ababa (JYO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 12, 77	On receipt	

300BN. Kiribati

Tarawa				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Local weather	4387 kHz	Every hour +00m	

300BO. Korea (Republic of)

Chukpyon (HL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: V	490 & 518 kHz	0330, 0730, 1130, 1530, 1930, 2330	

Gangneung (HLK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2836 kHz	0903	in Korean and English.

Gunsan (HLN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2507 kHz	0403	in Korean and English.

Incheon (HLC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2284 kHz	0003	in Korean and English.

Jeju (HLE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2299 kHz	0902, 1702	in Korean and English.

Pyonsan (HL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: W	490 & 518 kHz	0340, 0740, 1140, 1540, 1940, 2340	

300BP. Kuwait

Al Kuwayt (9KK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2750 kHz	0530, 1730	

300BQ. Latvia

Riga Rescue Radio (YLQ) MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather warnings	Ch. 71	Every hour +03m and +33m	in English and Latvian.After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.
	Local navigational warnings and weather	Ch. 71	0703, 1503 local time, on request	in English and Latvian.After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.

300BR. Lebanon

Beyrouth				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 16	On request	
RT (MF)	Navigational warnings	2182 kHz	On request	

300BS. Libya

Tarabulus (Tripoli) (5AT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings	2182 kHz	on receipt, 0903, 1903	
	Weather	2197 kHz	0833, 1733	

300BT. Lithuania

Klaipeda (LYL) VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	on request	in Lithuanian, English and Russian. On request.

300BU. Madeira (Portugal)

Centro de Comunicacoes da Madeira (CTQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 11	1030, 1630 local time	in Portuguese and English.
RT (MF)	Local navigational warnings and weather	2657 kHz	0735, 1935	in Portuguese and English.

Porto Santo (CTQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M	490 kHz	0100, 0500, 0900, 1300, 1700, 2100	in Portuguese.
	B1 Character: P	518 kHz	0230, 0630, 1030, 1430, 1830, 2230	

300BV. Malaysia

Miri (9WR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: T Range: 350nm	518 kHz	0310**, 0710, 1110, 1510**, 1910, 2310	** Nav & weather (when all are not selected).

Penang (9MG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings	Ch. 16	0148, 0548, 0948, 1348, 1748, 2148	Remote stations: Kuantan, Port Klang.
NAVTEX	B1 Character: U Range: 350nm	518 kHz	0320**, 0720, 1120, 1520**, 1920, 2320	** Nav & weather (when all are not selected).

Sandakan (9WS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: S Range: 350nm	518 kHz	0300**, 0700, 1100, 1500**, 1900, 2300	** Nav & weather (when all are not selected).

300BW. Malta

RCC Malta				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01-04	0603*, 1003, 1603, 2103	* weather only. Warnings up to 10 days old are broadcast Mon-Sat. All warnings still in force are broadcast on Sun.
RT (MF)	Navigational warnings and weather	2625 kHz	0603*, 1003, 1603, 2103	* weather only. Warnings up to 10 days old are broadcast Mon-Sat. All warnings still in force are broadcast on Sun.
NAVTEX	B1 Character: O	518 kHz	0220, 0620, 1020, 1420, 1820, 2220	

Valletta VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal weather	Ch. 11	0803, 1203, 1803, 2303 local time	After prior announcement on frequencies VHF Ch 12, 14 and 16.

300BX. Mauritius

Mauritius (3BM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 14	on receipt, 0205, 1405	Warnings after prior announcement on VHF Ch 16. Cyclone warnings repeated every 2 hours.
RT (HF)	Weather	4402 kHz	0115, 0730*, 1315, 1930*	*Only when cyclone warning is in force. Cyclone warnings repeated every 2 hours. Warnings after prior announcement on RT (MF) 2182 kHz.
	Local navigational warnings	4402 kHz	0433, 1233, 1603	After prior announcement on RT (MF) 2182 kHz.
NAVTEX	B1 Character: C Range: 400nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

300BY. Mexico

Acapulco (XFA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 25	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	

Chetumal (XFP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	

Ciudad Del Carmen (XFB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	

Coatzacoalcos (XFF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	

Cozumel (XCF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	

Ensenada (XFE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 25	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	

Lazaro Cardenas				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 27	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	

Manzanillo (XFM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 25	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	

Mazatlan (XFL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 25	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	
RT (HF)	Navigational warnings	8514 kHz	0335, 0935, 1535	

Progreso				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	
RT (HF)	Navigational warnings and weather	8514 kHz	0335, 0935, 1535	

Puerto Vallarta				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 27	0335, 0935, 1535	
	Navigational warnings	Ch. 26	0335, 0935, 1535	

Veracruz (XFU)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26	0335, 0935, 1535	

300BZ. Monaco

Monaco (3AC, 3AF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 20, 23-25	Continuous. (Western Mediterranean 0930, 1403, 1903 local time)	in French and English.

Monaco (3AC, 3AF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	4363, 8728, 13146, 17260 kHz	0800, 0930, 1030 (Western Mediterranean 0930, 1403, 1903 local time)	in French and English.

300CA. Montenegro

Bar (4OB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 24	0850, 1420, 2050	in Montenegrin and English. After prior announcement on frequencies VHF Ch 16, DSC VHF Ch 70.
RT (HF)	Navigational warnings and weather	1720.4 kHz	0850, 1420, 2050	in Montenegrin and English. After prior announcement on RT (MF) 2182 kHz, DSC (MF) 2187.5 kHz.

300CB. Morocco

Agadir (CND)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings	1911 kHz	1048, 1628	in French. After prior announcement on RT (MF) 2182 kHz.
	Weather	1911 kHz	on receipt, every hour +33m, 0935, 1615, on request	in French. After prior announcement on RT (MF) 2182 kHz.

Casablanca (CNP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local navigational warnings	2586 kHz	0918, 2028	in French. After prior announcement on RT (MF) 2182 kHz.
	Weather	2586 kHz	Every hour +33m, 0945, 1645	in French. After prior announcement on RT (MF) 2182 kHz.

Casablanca (CNP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M Range: 180nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	

300CC. Namibia

Walvis Bay (V5W)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23, 26, 27	0935, 1235, 1635	Remote station: Luderitz (Ch. 23)
	Local navigational warnings	Ch. 23, 26, 27	0905, 1605	Remote station: Luderitz (Ch. 23)
RT (MF)	Weather	2182 kHz	On receipt.	
RT (HF)	Weather	4357, 8719, 13077 kHz	0935, 1235, 1635	
	Local navigational warnings	4357, 8719, 13077 kHz	0905, 1605	
NAVTEX	B1 Character: B Range: 378nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	

300CD. Netherland Antilles

Curacao (PJC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: H Range: 400nm	518 kHz	0110, 0510, 0910, 1310**, 1710, 2110	** Nav & weather (when all are not selected).

300CE. Netherlands

Den Helder (PBK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P	518 kHz	0230, 0630, 1030, 1430, 1830, 2230	

Netherlands Coast Guard (PBK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23, 83	0805, 1305, 1905, 2305 local time	After prior announcement on VHF Ch 16. Remote stations: Huisduinen, Ijmuiden,Kornwerderzand, Renesse, Schiermonnikoog, Wezep, Woensdrecht, Appingedam, Hoorn, Scheveningen, Schoorl, Westkapelle, West-Terschelling.
	Navigational warnings	Ch. 23, 83	0333, 0733, 1133*, 1533, 1933, 2333	*Includes Ice. After prior announcement on VHF Ch 16. Remote stations: Huisduinen, Ijmuiden,Kornwerderzand, Renesse, Schiermonnikoog, Wezep, Woensdrecht, Appingedam, Hoorn, Scheveningen, Schoorl, Westkapelle, West-Terschelling.
RT (MF)	Navigational warnings and weather	3673 kHz	0333, 0733, 0940*, 1133**, 1533, 1933, 2140*, 2333	*Weather only. ** Navigational warnings, ice and weather. After prior announcement on RT (MF) 2182, 3673 kHz.

300CF. New Caledonia

Noumea (FJP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23-26, 28, 82, 83, 87	0630, 0930, 1515, 1830 local time	in French and in English on request. Remote stations: Fayaoue/Ouvea, Kafeate, La Roche/Mare, Mandjelia, Mont Do, Mou/Lifou, Oungone.
	Local navigational warnings	Ch. 23-26, 28, 82, 83, 87	0415, 0730, 1930, 2230	in French and in English on request. Remote stations: Fayaoue/Ouvea, Kafeate, La Roche/Mare, Mandjelia, Mont Do, Mou/Lifou, Oungone.

Taupo Maritime Radio (ZLM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather for Chatham Islands.	Ch. 60, 62	0603, 1403, 1803, 2203 local time	Local time is 45m ahead of NZ standard time. Remote stations: Chatham Islands, Pitt Island. After prior announcement on VHF Ch 16.
	Weather	Ch. 25, 67-69, 71	0133, 0533, 0733, 1033, 1333, 1733, 2133 local time	After prior announcement on VHF Ch 16.
RT (MF)	Navigational warnings and weather	2207 kHz	0133, 0533, 0803, 1203, 1333, 1733, 2003 local time	
RT (HF)	Navigational warnings and weather	4146, 6224 kHz	0133, 0533, 0803*, 1203*, 1333, 1733, 2003* local time	* weather only.
	Navigational warnings and weather	6224, 12356 kHz	0303, 0903, 1503, 2103 local time	Broadcasts are made 1 hour later when daylight savings time is observed.
	Navigational warnings and weather	8297, 16531 kHz	0333, 0933, 1533, 2133 local time	Broadcasts are made 1 hour later when daylight savings time is observed.

METAREA XIV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	POR	0130*, 0330**, 0930, 1330*, 1530**, 2130	*In local time & NZ coast only. The Bass Strait bulletins are Coastal Warnings and Forecasts transmitted onto SafetyNET Coastal Area D in NAVREA X. ** Storm warnings only.

NAVAREA XIV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	POR	0900, 2100	

300CH. Nigeria

Lagos (5OW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: S	518 kHz	0300, 0700, 1100, 1500, 1900, 2300	

Port Harcourt (5OZ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: E	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	

300CI. North Korea

Hungnam (HMH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: E	490 kHz	0040, 0440, 0840, 1240, 1840, 2240	in Korean.
	B1 Character: E	518 kHz	0040, 0440, 0840, 1240, 1840, 2240	

Pyongyang (HMZ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: D	490 kHz	0030, 0430, 0830, 1230, 1630, 2230	in Korean.
	B1 Character: D	518 kHz	0030, 0430, 0830, 1230, 1630, 2230	

Bodo (LGP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 05, 07, 20-22, 27, 28, 60, 66, 78, 79, 81	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Local weather and Ice on request. Remote stations: Andenes, Ramnan, Bjorndalen, Longyearbyen, Bjornoya, Ronvikfjell, Harstad, Harstadasen, Harstad, Sorollnes, Isfjord (Svalbard), Leirfjord, Horva, Lenvik, Kistefjell, Lodingen, Fenes, Meloy, Mo I Rana, Vattahaugen, Nesna, Raften/Svolvaer, Sorfold, Fornesfjell, Stamnes, Sortland, Steigen, Smatindane, Storheia/Hadsel, Tjeldsundet, Balstadasen, Traenfijord, Hestmannen, Tromso, Rostbakken, Hillesoy, Sandoy, Tonsnes, Tysfjord, Hellandsberg, Vaeroya, Vega, Gulsvagfjell, Veggen/Narvik, Vesteralen, Kraknes, Vestvagoy, Kvalnes, Vevelstad, Vistenfjord.
RT (MF)	Navigational warnings and weather	1770 kHz	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Ice on request.
	Navigational warnings and weather	1659, 1731, 1743, 1710 kHz	on receipt, 0233, 0633, 1033, 1203, 1433, 1833, 2233, 2303	in English and Norwegian. Ice on request. Remote stations: Andenes, Isfjord (Svalbard), Jan Mayen, Sandnessjoen.
RT (HF)	Navigational warnings and weather	4357 kHz	on receipt, 0233, 0633, 1033, 1203, 1433, 1833, 2233, 2303	in English and Norwegian. Ice on request. Remote station: Isfjord (Svalbard).
NAVTEX	B1 Character: B Range: 450nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	

Floro (LGL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 07, 20-22, 27, 28, 66, 78, 79, 81	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Local weather and Ice on request.
RT (MF)	Navigational warnings and weather	1680, 1782 kHz	on receipt, 0233, 0633, 1033, 1215*, 1433, 1833, 2233, 2315*	in English and Norwegian. * Weather only. Ice on request.

Orlandet (LFO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: N Range: 450nm	518 kHz	0210, 0610, 1010, 1410, 1810, 2210	

Rogaland (LGQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 07, 20-22, 27, 28, 60, 66, 78, 79, 81	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Local weather and Ice on request. Remote stations: Bergen, Lindas, Gladihaug, Rundemanen, Bjerkreim, Urdalsnipa, Draupner (Rig), Ekofisk (Rig), Farsund, Frigg (Rig), Haugesund, Steinsfjeld, Heimdal (Rig), I.Hardanger, Grimo, Lifjell, Sandnes, Lindesnes, Skibmannsheia, Lista, Storefjell, Lyngdal, Kalaskniben, Mandal, Husheia, Sand, Prestasen, Sleipner A (Rig), Sotra, Pyttane, Stavanger, Ullandhaug, Stord, Kattnakken, Ula (Rig), Valhall (Rig), Y.Hardanger, Ljonesasen.
RT (MF)	Navigational warnings and weather	1728, 1785 kHz	on receipt, 0233, 0633, 1033, 1215*, 1433, 1833, 2233, 2315*	in English and Norwegian. Ice on request. * Weather only. Remote stations: Bergen, Farsund.
	Navigational warnings and weather	1692 kHz	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Ice on request. Remote station: Vigre.
NAVTEX	B1 Character: L Range: 450nm	518 kHz	0150, 0550, 0950, 1350, 1750, 2150	

Tjome (LGT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 07, 20-22, 27, 66, 79, 81	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Local weather and Ice on request. Remote stations: Arendal, Hisoya, Bangsberget, Mjosa, Drammen, Bukten, Halden, Hoyas, Horten, Kristiansand, Dolsveden, Lillesand, Justoya, Oslo, Tryvann, Porsgrunn, Vealos, Risor, Ranvikheia, Svendsheia, Sogne, Tjome, Tonsberg.
RT (MF)	Navigational warnings and weather	1665 kHz	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Ice on request.

Vardo (LGV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 07, 20-22, 27, 28, 60, 66, 78, 79	on receipt, 0233, 0633, 1033, 1433, 1833, 2233	in English and Norwegian. Local weather and Ice on request. Remote stations: Alta, Helligfjell, Batsfjord, Hamnefjell, Berlevag, Berlevagfjell, Hammerfest, Hammerfjell, Tyven, Hasvik, Fuglen, Havoysund, Havoygavlen, Karlsoy, Torsvag, Kirkenes, Lebesby, Oksen, Mehamn, Trollhetta, Nordkapp, Honningsvag, Skjervoy, Stussnesfjell, Trolltind, Tana, Algasvarre, Varangerfjord, Torsvarde, Vardo, Domen.
RT (MF)	Navigational warnings and weather	1635, 1695, 1713 kHz	on receipt, 0233, 0633, 1033, 1203*, 1433, 1833, 2233, 2303*	in English and Norwegian. Ice on request. * Weather only. Remote stations: Hammerfest, Berlevag.
Radio-Telex	METAREA XIX bulletins for arctic waters that are not covered by INMARSAT SafetyNet service	4210 kHz	0645*, 1115, 1845*, 2315	*includes ice. Remote station: Svalbard.
	METAREA XIX bulletins for arctic waters that are not covered by INMARSAT SafetyNet service	8416.5 kHz	0630*, 1100, 2300*	* includes ice. Remote station: Svalbard.
NAVTEX	B1 Character: V Range: 450nm	518 kHz	0330, 0730, 1130, 1530, 1930, 2330	

METAREA XIX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-E	1100, 2300	

NAVAREA XIX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-E	0630, 1830	

300CK. Oman

Muscat (A4M)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M Range: 270nm	518 kHz	0200, 0600, 1000, 1400, 1800, 2200	

300CL. Pakistan

Karachi (ASK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P Range: 400nm	518 kHz	0230, 0630, 1030, 1430, 1830, 2230	

METAREA IX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	IOR	0700	

NAVAREA IX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	IOR	0800	

300CM. Papia New Guinea

Port Moresby (P2M)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Local navigational warnings and weather	4405, 6510 kHz	On receipt, 0003, 0603. Gale warnings every hour +03m	Operating hours 2100 - 1200 UTC
	Local navigational warnings		0603, 2203. Urgent warnings next even hour +03m	

300CN. Peru

Callao (OBC-3)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: U Range: 400nm	518 kHz	0320, 0720*, 1120, 1520, 1920*, 2320	*Weather only

Paita (OBY-2)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: S Range: 400nm	518 kHz	0300*, 0700, 1100, 1500*, 1900, 2300	*Weather only

Mollendo (OBF-4)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: W Range: 400nm	518 kHz	0340, 0740, 1140*, 1540, 1940, 2340*	*Weather only

NAVAREA XVI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W	0519, 1119, 1719, 2319	

Manila (DZS-4)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather.	Ch. 09, 16, 20	0030, 0330, 0630, 0930, 1230, on request	
RT (HF)	Local navigational warnings and weather.	8776.8 kHz	0030, 0330, 0630, 0930, 1230, on request	
NAVTEX	B1 Character: J Range: 320nm	518 kHz	0130, 0530, 0930, 1330, 1730, 2130	

Puerto Princesa (DVS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I Range: 320nm	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

Davao (DWT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: K Range: 320nm	518 kHz	0140, 0540, 0940, 1340, 1740, 2140	

Monsanto (CTV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: G Range: 520nm	490 kHz	0100, 0500, 0900, 1300, 1700, 2100	in Portuguese
	B1 Character: R Range: 520nm	518 kHz	0250, 0650, 1050, 1450, 1850, 2250	

Witowo (SPS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 24-26	0135, 0735, 1335, 1935, on request	in English and Polish. After prior announcement on VHF Ch 16.
	Coastal Navigational warnings	Ch. 24-26	0133, 0533, 0933, 1333, 1733, 2133, on request	
	Ice	Ch. 24-26	1035, 1335, on request	
RT (MF)	Weather	2720 kHz	0135, 0735, 1335, 1935, on request	
	Coastal Navigational warnings	2720 kHz	0133, 0533, 0933, 1333, 1733, 2133, on request	
	Ice	2720 kHz	1035, 1335, on request	

Slupsk VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 10	0715, 1245, 1845, 2345 local time	in English and Polish. After prior announcement on VHF Ch 16, 71.
	Weather. Ice reports on request	Ch. 12	0705, 1235, 1835, 2335 local time	in Polish. Ice can also be in Baltic Ice Code. After prior announcement on VHF Ch 16, 71.

Zatoka Gdansk VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 66	0005, 0705, 1305, 1905 local time	in Polish. After prior announcement on VHF Ch 16, 71.
			0105, 0805, 1405, 2005 local time	in English. After prior announcement on VHF Ch 16, 71.

Swinoujscie VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 71	0003, 0603, 1203, 1803 local time	in English and Polish. After prior announcement on VHF Ch 12.

Szczecin VTS				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 71	0533, 1133, 1733, 2333 local time	in English and Polish. After prior announcement on VHF Ch 69.

300CQ. Portugal

Alges				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local, Coastal navigational warnings and weather	Ch. 11	0905, 2105	in Portuguese, repeated in English where possible.
RT (MF)		2657 kHz		

Faro				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local, Coastal navigational warnings and weather	Ch. 11	0805, 2005	in Portuguese, repeated in English where possible.

Lisbon				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 11	1100, 1630 local time	in Portuguese.

Leixoes				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local, Coastal navigational warnings and weather	Ch. 11	0705, 1905	in Portuguese, repeated in English where possible.

Setubal				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 11	1100, 1630 local time	in Portuguese.

300CR. Qatar

Doha (A7D)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 24	0500, 1000, 1600	
	Local navigational and weather warnings		On receipt.	
RT (MF)	Weather	2768 kHz	0500, 1000, 1600	
	Local navigational and weather warnings		On receipt.	

300CS. Reunion (France)

La Reunion-COSSRU, MRCC				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 79	0705, 0735, 0805, 0835, 1205, 1235, 1305, 1335, 1805, 1835, 1905, 1935 local time	in French. After prior announcement on VHF Ch 16. Remote stations: Colorado, Le Plate, Manapany, Reservious.
	Tropical Storm warnings		on receipt, every hour +05m, +20m, +35m, +50m	in French. After prior announcement on VHF Ch 16. Remote stations: Colorado, Le Plate, Manapany, Reservious.
	Inshore and local navigational warnings		0715, 0730, 0745, 0800, 0945, 1000, 1015, 1030, 1300, 1315, 1330, 1345, 1500, 1515, 1530, 1545, 1800, 1815, 1830, 1845, 2000, 2015, 2030, 2045 local time	After prior announcement on VHF Ch 16. Remote stations: Colorado, Le Plate, Manapany, Reservious.
RT (MF)	Weather	2600 kHz	0830, 1430, 2030 local time	in French. After prior announcement on RT (MF) 2182 kHz.
	Tropical Storm warnings		on receipt, every hour +30m	After prior announcement on RT (MF) 2182 kHz.
	Inshore and local navigational warnings		0830, 1400, 1630 local time	After prior announcement on RT (MF) 2182 kHz.

300CT. Romania

Constanta (YQI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch.12, 24, 26	0703, 1003*, 1303, 1603*, 1903, 2203*	Weather in Romanian and English. Navigational warnings in English. *Navigational warnings only. After prior announcement on DSC VHF Ch 70.
RT (MF)		2748 kHz	0733, 1033*, 1333, 1633*, 1933	Weather in Romanian and English. Navigational warnings in English. *Navigational warnings only. After prior announcement on DSC (MF) 2187.5 kHz.

Constanta (YQI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: L Range: 400nm	490 kHz	0150, 0550, 0950, 1350, 1750, 2150	

300CU. Russia

Archangel (UGE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: L Range: 300nm	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	

Astrakhan (UJB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: W Range: 250nm	518 kHz	0340, 0740, 1140, 1540, 1940, 2340	

Beringovskiy				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2525, 3730 kHz	Continuous	Station open 15 May - 01 Dec.
Radio-Telex		2182 kHz		

Kaliningrad (UIW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Navigational warnings	4228, 8454, 12877.5, 16927 kHz	1000, 1620	

Kholmsk (UFO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: B Range: 300nm	518 kHz	0010, 0410, 0810, 1210, 1610, 2010	

Magadan (UIB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2400 kHz	0203, 1233	in Russian.
	Local navigational warnings		1303	in Russian.
NAVTEX	B1 Character: D Range: 120nm	518 kHz	0030, 0430, 0830, 1230, 1630, 2030	

Murmansk (UDK, UDK2, UHY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Coastal warnings	13050 kHz	0400, 1730	in Russian. Broadcasts are made 1 hour later when daylight savings time is observed.
	Weather		0420, 1740	in Russian. Broadcasts are made 1 hour later when daylight savings time is observed.
Radio-Facsimile	Weather and ice	6446, 7907 (1900-0600 UTC), 8444 kHz	0700, 0800, 1400, 1430, 2000 (Broadcast schedule at 1850)	
NAVTEX	B1 Character: K Range: 300nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

Novorossiysk (UDN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A Range: 300nm	518 kHz	0300, 0700, 1100, 1500, 1900, 2300	

Okhotsk (UCV-2)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2560 kHz	0000, 0550, 1400, 2200	in Russian.
NAVTEX	B1 Character: G Range: 300nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

Petropavlovsk (UBE-2)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: C Range: 300nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

Petropavlovsk-Kamchatskiy (UFH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Navigational warnings and weather.	4255, 6405, 12825 kHz	0900, 2100	
	Coastal Navigational warnings.	4323, 6360.5, 8451, 12603, 17045 kHz	0000, 0700	

Vladivostok (UFL, UFZ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Telex	Navigational warnings and weather	3165, 8595, 12729 kHz	1100, 2300	
		3165, 8595, 12729 kHz	1130	
		3165, 8595, 12729, 17175.2 kHz	2330	Inforce message on Sundays.
		4241, 6460 kHz	0900, 2300	in Russian.
		12799.5, 17155 kHz	2300	in Russian.
		8643, 12799.5 kHz	0900	in Russian.
		6314, 12579 kHz	0200, 1100	
		16806.5 kHz	0200	
		8416.5 kHz	1100	
NAVTEX	B1 Character: A Range: 230nm	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

Yuzhno-Sakhalinsk				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	4030, 6997 kHz	1900	in Russian.
		4480, 5170 kHz	0130, 0630	in Russian.

METAREA XIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	POR	0930, 2130	

METAREA XX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	IOR	0600, 1800	

METAREA XXI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	POR	0600, 1800	

NAVAREA XIII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	POR	0930, 2130	

NAVAREA XX				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	IOR	0530, 1730	

NAVAREA XXI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	POR	0630, 1830	

300CV. Saudi Arabia

Jiddah (HZH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings	Ch. 25	On request	
	Weather			
RT (MF)	Local navigational warnings	1726 kHz	0333, 0733, 1133, 1533, 1933, 2333	
	Weather		0503, 0533, 1133, 1703, 1733, 2333	
NAVTEX	B1 Character: H Range: 390nm	518 kHz	0705, 1305, 1905	

300CW. Senegal

Dakar (6VA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M Range: 200nm	490 kHz	0200, 0600, 1000, 1400, 1800, 2200	
	B1 Character: C Range: 200nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

300CX. Seychelles

Seychelles				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Coastal weather	8770 kHz	0518, 1548	

300CY. Singapore

Singapore (9VG-49)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: C Range: 400nm	518 kHz	0020**, 0420, 0820, 1220**, 1620, 2020	** Nav & weather (when all are not selected)

300CZ. South Africa

Cape Naval-NAVCOMCEN Cape (ZSJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Facsimile	Weather	4014 (1600-0600 UTC), 7508, 13538, 18238(0600-1600 UTC) kHz	0430, 0500, 0630, 0730, 0800, 1030, 1100, 1530, 2230 (Broadcast schedule at 0430)	Only broadcast between Oct - Mar.

Cape Town (ZSC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 03, 04, 23-28, 83-86	1015, 1333*, 1815	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Albertinia, Alexander Bay, Bluff (Durban), Botha's Hill, Cape St. Lucia, Constantiagberg, Doringbaai, East London, Elandsbaai, Governorskop, Hermanus, Hondeklipbaai, Kareedouw, Knysna, Kosi Bay, Mazeppa Bay, Milnerton, Pearly Beach, Port Edward, Port Nolloth, Port Shepstone, Port St. Johns, Richards Bay, Saldanha Bay, Sodwana, Struisbaai
RT (HF)		4375, 8740, 13146 kHz		*Weather only. After prior announcement on RT (MF) 2182 kHz.
NAVTEX	B1 Character: C Range: 300nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

Durban (ZSD)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: O Range: 300nm	518 kHz	0220, 0620, 1020, 1420, 1820, 2220	

Port Elizabeth (ZSQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I Range: 300nm	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

METAREA VII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W (west of 20E)	0940, 1940	
		IOR (east of 20E)		Forecasts for area 30S 50E and 50S 80E and tropical cyclone warnings are prepared by La Reunion.

NAVAREA VII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W, IOR	1940	

300DA. Spain

MRSC Algeciras				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 74	On request	in Spanish and English.
	Weather		0315, 0515, 0715, 1115, 1515, 1915, 2315	

MRCC Almeria				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 74	Every odd hour +15m	in Spanish and English.

MRCC Barcelona				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	On receipt	in Spanish and English.
	Weather		0700, 1100, 1600, 2100 local time	

MRCC Bilbao				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 24, 26, 27, 60	0840, 1240*, 2010	in Spanish. *Weather only. Remote stations: Cabo Penas, Navia, Pasajes, Santandar
	Weather	Ch. 10, 74	on receipt, 0033, 0233, 0433, 0633, 0833, 1033, 1233, 1433, 1833, 2033, 2233	in Spanish and English.
RT (MF)	Navigational warnings and weather	1677, 1707 kHz	0703, 1303*, 1903	in Spanish. *Weather only. Remote stations: Cabo Penas, Machinchaco

Cabo de la Nao (EAV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: M Range: 300nm	490 kHz	0200, 0600, 1000, 1400, 1800, 2200	in Spanish
	B1 Character: X Range: 300nm	518 kHz	0350, 0750, 1150, 1550, 1950, 2350	

MRSC Cadiz				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 74	on receipt, 0315, 0715, 1115, 1515, 1915, 2315	in Spanish and English.

MRSC Cartagena				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	On receipt	in Spanish and English.
	Weather		0115, 0515, 0915, 1315, 1715, 2115	

MRSC Castellon				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 74	On receipt	in Spanish and English.
	Weather		0603, 0630, 1003, 1030, 1603, 1630, 2103, 2130 local time	

MRSC Coruna (EAR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	0205, 0605, 1005, 1405, 1805, 2205	in Spanish and English.
	Weather		0005, 0405, 0805, 1205, 1605, 2005	
	Navigational warnings and weather	Ch. 02, 21, 22, 26, 65	0840, 1240*, 2010	in Spanish. *Weather only. Remote stations: Cabo Ortegal, Finisterre, La Guardia, Vigo
RT (MF)	Navigational warnings and weather	1698, 1764 kHz	0703, 1303*, 1903	in Spanish. *Weather only. Remote station: Finisterre
NAVTEX	B1 Character: W Range: 400nm	490 kHz	0340, 0740, 1140, 1540, 1940, 2340	in Spanish
	B1 Character: D Range: 400nm	518 kHz	0030, 0430, 0830, 1230, 1630, 2030	

MRCC Finisterre				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 11	0033, 0433, 0833, 1233, 1633, 2033	in Spanish and English.
	Weather		0233, 0633, 1033, 1433, 1833, 2233	

MRCC Gijon				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	Every hour +15m	in Spanish and English.
	Weather		Every even hour +15m	

MRSC Huelva				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	On receipt	in Spanish and English.
	Weather		0415, 0815, 1215, 1615, 2015	

Malaga				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 26, 27, 81	0833, 1133*, 2003	in Spanish. *Weather only. Remote stations: Cabo Gata, Cadiz, Malaga, Tarifa
RT (MF)		1656, 1704 kHz	0733, 1233*, 1933	in Spanish. *Weather only. Remote stations: Chipiona, Tarifa

MRSC Palamos				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 74	On receipt	in Spanish and English. Operational 01 Jul - 30 Sep.
	Weather		0830, 1030, 1130, 1530, 2030 local time	

MRCC Palma				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	On receipt	in Spanish and English.
	Weather		0735, 1035, 1535, 2035	

MRSC Santander				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 74	0045, 0445, 0845, 1245, 1645, 2045	in Spanish and English.
	Weather		0245, 0445, 0645, 0845, 1045, 1445, 1845, 2245	

MRCC Tarifa				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10, 67	On receipt	in Spanish and English.
	Weather including fog (visibility) warnings		Every even hour +15m	
NAVTEX	B1 Character: T Range: 400nm	490 kHz	0310, 0710, 1110, 1510, 1910, 2310	in Spanish
	B1 Character: G Range: 400nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

MRSC Tarragona				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 74	On receipt	in Spanish and English.
	Weather		0533, 0933, 1533, 2033	

MRCC Valencia				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 03, 04, 20, 23, 25, 60, 85	0910, 1410*, 2110	in Spanish. *Weather only. Remote Stations: Alicante, Bagur, Barcelona, Cabo de la Nao, Cartagena, Castellon, Ibiza, Menorca, Palma, Tarragona
		Ch. 10, 11	Every hour +15m	in Spanish.
RT (MF)		1755, 1767 kHz	0750, 1303*, 1950	in Spanish. *Weather only. Remote stations: Palma, Cabo Gata

MRSC Vigo				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 10	0215, 0615, 1015, 1415, 1815, 2215	in Spanish and English.
	Weather		0015, 0415, 0815, 1215, 1815, 2015	

NAVAREA III				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-E	1200, 2400	

300DB. Suriname

Paramaribo				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Weather	2818 kHz	1233, 2133, on request	

300DC. Sudan

Port Sudan				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 20	0810, 2010	
	Navigational warnings		on reciept and every hour	

300DD. Svalbard

Svalbard (LGS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: A	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

300DE. Sweden

Hanosand (SAH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: H Range: 300nm	518 kHz	0110, 0510, 0910, 1310, 1710, 2110	

Stockholm Radio (SDJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 01, 21-28, 62, 64-66, 78, 81, 84	0200, 0600, 1000, 1400*, 1800, 2200	in Swedish and English. * Includes ice. Remote stations: Faro (Gotland), Gavle, Gotska Sandon, Harnosand, Hoburgen (Gotland), Hudiksvall, Kalix, Kalmar, Karlshamn, Karlskrona, Kivik, Kramfors, Lulea, Mjallom, Nacka (Stockholm), Norrkoping, Olands Sodra Udde, Ornskoldsvik, Osthammar, Skelleftea, Sodertalje, Sundsvall, Svenska Hogarna, Toro, Umea, Vaddo, Vasteras, Vastervik, Visby (Gotland).
	Weather	Ch. 01, 21-28, 62, 64-66, 78, 81, 84	0830, 0845, 0900, 0915, 0930, 1630, 1645, 1700, 1715, 1730, 2130, 2145, 2200, 2215, 2230 local time	in Swedish. Operational 01 May - 31 Oct. After prior announcement on VHF Ch 16. Remote stations: Faro (Gotland), Gavle, Gotska Sandon, Harnosand, Hoburgen (Gotland), Hudiksvall, Kalix, Kalmar, Karlshamn, Karlskrona, Kivik, Kramfors, Lulea, Mjallom, Nacka (Stockholm), Norrkoping, Olands Sodra Udde, Ornskoldsvik, Osthammar, Skelleftea, Sodertalje, Sundsvall, Svenska Hogarna, Toro, Umea, Vaddo, Vasteras, Vastervik, Visby (Gotland).
RT (MF)	Navigational warnings and weather	1779, 1797, 1710, 2733, 1674 kHz	0200, 0600, 1000, 1400*, 1800, 2200	in Swedish and English. * Includes ice. Ice on request as well. Remote stations: Bjuroklubb, Gislovshammar, Grimeton, Harnosand, Tingstade.
NAVTEX	B1 Character: J Range: 300nm	518 kHz	0130, 0530, 0930, 1330, 1730, 2130	

Varberg (SAS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I Range: 300nm	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

300DF. Syria

Al Ladhiqiyah (Latakia)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 13	0400, 0800, 1200, 1600, 2000, 2400	
RT (MF)		3624 kHz		

Tartus (Tartous)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings	Ch. 20	0400, 0800, 1200, 1600	
RT (MF)		2662 kHz		

300DG. Taiwan

Chi-Lung (XSX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P	518 kHz	0630, 1430, 2230	

Linyan (XSW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: P	518 kHz	0200, 1000, 1800	broadcasts are remotely controlled from Chi-Lung

300DH. Thailand

Bangkok				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	6765.1, 8743 kHz	0000, 0300, 0600, 0900, 1200, 1500, 1800, 2100	in Thai and English.

Bangkok (HAS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: F Range: 200nm	518 kHz	0050**, 0450, 0850**, 1250, 1650, 2050	** Nav & weather (when all are not selected)

300DI. Tonga

Nuku'alofa				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Local weather	2080 kHz	0133, 0833, 2033	

300DJ. Trinidad & Tobago

North Post (A3A)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather broadcasts	Ch. 14	1250, 1850*, storm warnings on receipt	* Weather only
RT (MF)		2735 kHz	1340*, 2040, storm warnings on receipt	

300DK. Tunisia

La Goulette Port (3VW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2182 kHz	On receipt, 0003, 0403, 0603, 1003, 1303, 1803, 1903, 2103	in French.
	Weather	2182 kHz	On receipt, every hour +03m	
		1743 kHz	0405, 1905	

Tunis (3VT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings	2670 kHz	On receipt, 0803, 1203, 2003. On request	in French.
	Weather		0805, 1705	
NAVTEX	B1 Character: V	518 kHz	0330, 0730, 1130, 1530, 1930, 2330	

300DL. Turkey

Antalya (TAL)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 67	On receipt, 0700, 1900	in English and Turkish. Remote stations: Anamur, Cobandede, Dilektepe, Kazakin, Markiz, Palamut, Yumrutepe.
			0730, 0900, 0930, 1130, 1330, 1530, 1730, 1930	in Turkish. Remote stations: Anamur, Cobandede, Dilektepe, Kazakin, Markiz, Palamut, Yumrutepe.
NAVTEX	B1 Character: D	490 kHz	0030, 0430, 0830, 1230, 1630, 2030	In Turkish
	B1 Character: F	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	

Istanbul (TAH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	4405, 8812, 13128 kHz	1000, 1800	in English and Turkish.
		4560, 8431, 12654 kHz	0800, 2000	
RT (HF)	Weather	4405, 8812, 13128 kHz	1000, 1800	in English and Turkish.
Radio-Telex	Weather	4560, 8431, 12654 kHz	0800, 2000	

Istanbul (TAH)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: D Range: 250-400nm	490 kHz	0010, 0410, 0810, 1210, 1610, 2010	In Turkish
		518 kHz	0030, 0430, 0830, 1230, 1630, 2030	

Izmir (TAN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: C Range: 250-400nm	490 kHz	0020, 0420, 082, 1220, 1620, 2020	In Turkish
	B1 Character: I Range: 250-400nm	518 kHz	0120, 0520, 0920, 1320, 1720, 2120	

Samsun (TAF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 67	On receipt, 0700, 1900	in English and Turkish. Remote stations: Akabat, Kikmen, Dutmen, Inebolu, Inebolu, Pazar, Yildiztepe, Zonguldak
			0730, 0900, 0930, 1130, 1330, 1530, 1730, 1930	in Turkish. Remote stations: Akabat, Kikmen, Dutmen, Inebolu, Inebolu, Pazar, Yildiztepe, Zonguldak
NAVTEX	B1 Character: A Range: 250-400nm	490 kHz	0000, 0400, 0800, 1200, 1600, 2000	In Turkish
	B1 Character: E Range: 250-400nm	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	

300DM. Ukraine

Kerch (UUO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	4143 kHz	0233**, 1033*, 1833	*Navigational warnings and Ice. ** Navigational warnings only.
			0633, 1433*, 2233**	In Russian. *Navigational warnings and Ice. ** Navigational warnings only.
NAVTEX	B1 Character: U Range: 120nm	490 kHz	0320, 0720, 1120, 1520, 1920, 2320	
	B1 Character: G Range: 120nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

Odessa (UTT, UUI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	3310 kHz	0423**, 1223*, 2023	*Navigational warnings and Ice. ** Navigational warnings only.
			0023, 0823**, 1623*	In Russian. *Navigational warnings and Ice. ** Navigational warnings only.
NAVTEX	B1 Character: X Range: 280nm	490 kHz	0350, 0750, 1150, 1550, 1950, 2350	
	B1 Character: C Range: 280nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

300DN. United States

Anchorage, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 22A	On receipt	

Annette, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0050, 1500	Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.
RT (HF)		4125 kHz	0040, 1600	Broadcasts are made 1 hour later when daylight savings time is observed.

Astoria, OR (NMW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0533, 1733	U.S. Coast Guard.
RT (MF)		2670 kHz		
NAVTEX	B1 Character: W Range: 200nm	518 kHz	0340, 0740, 1140, 1540, 1940, 2340	

Atlantic City, NJ (NMK-2)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1103, 2303	U.S. Coast Guard.
RT (MF)		2670 kHz		

Baltimore, MD (NMX)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0130, 1205	U.S. Coast Guard.

Barrow, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 68	0300, 1600, 2100	Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.
RT (HF)		4125 kHz	0400, 1530	Operational 01 Apr - 31 Oct. Broadcasts are made 1 hour later when daylight savings time is observed.

Bethel, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 66	0100, 1630	Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.

Boston, MA (NMF, NIK, NMF-7)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1035, 2235	U.S. Coast Guard. Remotely controlled from CAMSLANT.
RT (MF)		2670 kHz		
Radio-Telex	Ice (seasonal)	6314, 8416.5, 12579 kHz	0030	
		8416.5, 12579, 16806.5 kHz	1218	
	Weather for North Atlantic, West of 35W, including the Caribbean Sea and Gulf of Mexico	6314, 8416.5, 12579 kHz	1630	
		6314, 8416.5, 12579 kHz	0140	
NAVTEX	B1 Character: F Range: 200nm	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	Navigational warnings include International Ice Patrol Bulletins (Feb-Jul)

Buffalo, NY (NMD-47)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0255, 1455	U.S. Coast Guard.

Cambria, CA (NMQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: Q Range: 350nm	518 kHz	0240, 0640, 1040, 1440, 1840, 2240	U.S. Coast Guard.

Cape Hatteras, NC (NMN-13)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0100, 1055	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0133, 1303	

Cape May, NJ				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt	U.S. Coast Guard.

Charleston, SC (NMB, NME)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0420, 1620	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 1200, 2200	
NAVTEX	B1 Character: E Range: 200nm	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	

Chesapeake, VA (NMN) CAMSLANT, Portsmouth				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0230, 1120	*Weather only. U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0203, 1333	
RT (HF)		17314 kHz	1715*, 1730	
		4426 kHz	0330, 0500, 0515*, 0930	
	Navigational warnings	6501 kHz	0330, 0500, 0930, 1130, 1600, 2200, 2330	
		8764 kHz		
		13089 kHz	1130, 1600, 1730, 2200, 2330	
	Weather	6501 kHz	0330, 0515, 0930, 1115, 1530, 2130, 2315	
		8764 kHz		
		13089 kHz	1115, 1530, 1715, 2130, 2315	
NAVTEX	B1 Character: N Range: 280nm	518 kHz	0210, 0610, 1010, 1410, 1810, 2210	

Chincoteague, VA (NMN-70, NMN-71)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0200, 1145	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0233, 1403	

Cold Bay, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0215, 1815	Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.
RT (HF)		4125 kHz	0530, 1930	Broadcasts are made 1 hour later when daylight savings time is observed.

Corpus Christi, TX (NOY-8)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1040, 1240, 1640, 2240	U.S. Coast Guard.
RT (MF)		2670 kHz		

Detroit, MI (NMD-25)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0135, 1335	U.S. Coast Guard.

Fort Macon, NC (NMN-37)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0130, 1030	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0103, 1233	

Galveston, TX (NOY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1050, 1250, 1650, 2250	U.S. Coast Guard.
RT (MF)		2670 kHz		

Grand Haven, MI (NMD-32)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0235, 1435	U.S. Coast Guard.

Honolulu, HI (NMO, NMO-2)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings, tsunami warnings and weather	Ch. 22A	0500, 1700	U.S. Coast Guard. Broadcasts are remotely controlled from CAMSPAC (Point Reyes).
RT (MF)		2670 kHz	0545, 1145, 1745, 2345	
RT (HF)		6501, 8764 kHz	0600, 1200	
		8764, 13089 kHz	0005, 1800	
Radio-Telex	Weather	8416.5, 12579, 22376 kHz	0130, 2030	
		8416.5, 12579 kHz	0730, 1330	
NAVTEX	B1 Character: O Range: 350nm	518 kHz	0220, 0620, 1020, 1420, 1820, 2220	

Humboldt Bay, CA (NMC-11)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1615, 2315	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0303, 1503	

Juneau, AK (NMJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 22A	On receipt	U.S. Coast Guard.

Key West, FL (NOK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1200, 2200	U.S. Coast Guard.

King Salmon, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0115, 1530	Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.
RT (HF)		4125 kHz	0130, 1830	Broadcasts are made 1 hour later when daylight savings time is observed.

Kodiak, AK (NOJ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0200, 1500	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16. U.S. Coast Guard.
RT (HF)	Navigational warnings and weather	6501 kHz	0203, 1645	U.S. Coast Guard.
	Weather	4125 kHz	0400, 1700	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. U.S. Coast Guard.
NAVTEX	B1 Character: J Range: 200nm	518 kHz	0130, 0530, 0930, 1330, 1730, 2130	Areas east of Kodiak. U.S. Coast Guard.
	B1 Character: X Range: 200nm		0350, 0750, 1150, 1550, 1950, 2350	Areas west of Kodiak. U.S. Coast Guard.

Kotzebue, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 68	0030, 1530	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.

Long Beach, CA (NMC, NMQ-9)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0200, 1800	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0503, 1303, 2103	

Long Island Sound, CT (NMY-15)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1120, 2320	U.S. Coast Guard.

Mayport, FL (NMV)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1215, 2215	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0620, 1820	

Miami, FL (NMA, NCF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1230, 2230	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0350, 1550	
NAVTEX	B1 Character: A Range: 240nm	518 kHz	0000, 0400, 0800, 1200, 1600, 2000	

Milwaukee, WI (NMD-9)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0255, 1455	U.S. Coast Guard.

Mobile, AL (NOQ, WLO)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1020, 1220, 1620, 2220	U.S. Coast Guard.
RT (MF)		2670 kHz		
RT (HF)	Weather for Gulf of Mexico, Southwest North Atlantic and Caribbean	4369, 4396, 6519, 8788, 8806, 13110, 13152, 17260, 17362, 22804 kHz	0500, 1100, 1700, 2300	
Radio-Telex	National Weather Service products, not a free service	4213, 6317, 8419, 8421, 8423.5, 12581.5, 12584.5, 16809, 16814, 19685.5, 22383.5 kHz	On request using command "WX+"	

Moriches, NY (NMY-42)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0010, 1210	U.S. Coast Guard.
RT (MF)		2670 kHz		

New Orleans, LA (NMG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	1035, 1235, 1635, 2235	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0550, 1035, 1235, 1635, 2235	
RT (HF)		4316, 8502, 12788 kHz	on receipt, 0330, 0515, 0930, 1115, 1530, 1715, 2130, 2315	U.S. Coast Guard. Broadcasts are remotely controlled from CAMSLANT.
NAVTEX	B1 Character: G Range: 200nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	U.S. Coast Guard.

New York, NY (NMY-3)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1050, 2250	U.S. Coast Guard.

Nome, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0400, 1600	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed.
RT (HF)		4125 kHz	0630, 2030	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.

North Bend, OR (NOE)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0603, 1803	U.S. Coast Guard.
RT (MF)		2670 kHz		

Point Reyes, CA- CAMSPAC/San Francisco (NMC, NMC-17)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	4426 kHz	0430, 1030	U.S. Coast Guard.
		8764, 13089 kHz	0430, 1030, 1630, 2230	
		17314 kHz	1630, 2230	
Radio-Telex		8416.5, 16806.5 kHz	0015, 1730	
NAVTEX	B1 Character: C Range: 350nm	518 kHz	0020, 0420, 0820, 1220, 1620, 2020	

Port Angeles, WA (NOW)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0615, 1815	U.S. Coast Guard.
RT (MF)		2670 kHz		

Portland, ME (NMF-31)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1105, 2305	U.S. Coast Guard.
RT (MF)		2670 kHz		

Portland, OR (NMW-44)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1745	U.S. Coast Guard.

Saint Paul Island, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 06, 09	0200, 1500, 1630, 2300	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.

San Diego, CA				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	On receipt	U.S. Coast Guard.

San Francisco, CA				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1630, 1900, 2130	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0203, 1403	

San Juan (NMR, NMR-1)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	1210, 2210. Urgent warnings on reciept	U.S. Coast Guard.
RT (MF)		2670 kHz	0305, 1505. Urgent warnings on reciept	
NAVTEX	B1 Character: R Range: 200nm	518 kHz	0250, 0650, 1050, 1450, 1850, 2250	

Sault St. Marie, MI (NOG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0005, 1205	U.S. Coast Guard.

Seattle, WA (KLB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 0630, 1830	U.S. Coast Guard.
RT (HF)	Weather	4405, 8731, 13101, 17311 kHz	0800, 1500, 2000	U.S. Coast Guard. Remotely controlled by Mobile (WLO).
Radio-Telex	National Weather Service products, not a free service.	6318, 12590.5 kHz	On request using command "WX+"	U.S. Coast Guard. Remotely controlled by Mobile (WLO).

Southwest Harbor, ME (NMF-44)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1135, 2335	U.S. Coast Guard.
RT (MF)		2670 kHz		

St. Petersburg, FL (NME)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1300, 2300	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0320, 1420	

Woods Hole, MA (NMF-2, NMF-3)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Local navigational warnings and weather	Ch. 22A	on receipt, 1005, 2205	U.S. Coast Guard.
RT (MF)		2670 kHz	on receipt, 0440, 1640	

Yakutat, AK				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 09	0230, 1530	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed. After prior announcement on VHF Ch 16.
RT (HF)		4125 kHz	0430, 1415	Weather Office. Broadcasts are made 1 hour later when daylight savings time is observed.

METAREA IV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W	0430, 1030, 1630, 2230	High Seas forecasts containing tropical storm warnings also broadcast over AOR-E. Hurricane & Tropical Storm advisories are sent as required, up to 4 times daily per active tropical storm. Tsunami warnings are sent as required on AOR-W and AOR-E.

METAREA XII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W POR	0545, 1145, 1745, 2345	High Seas forecasts containing tropical storm warnings also broadcast over AOR-E. Hurricane & Tropical Storm advisories are sent as required, up to 4 times daily per active tropical storm. Tsunami warnings are sent as required on AOR-W and AOR-E.

METAREA XVI				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-W	0515, 1115, 1715, 2315	

NAVAREA IV				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W	1000, 2200	

NAVAREA XII				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-W, POR	1030, 2230	

MRCC Aberdeen- Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 23, 84, 86	0130, 0430, 0730, 1030, 1330, 1630, 1930, 2230 local time	After prior announcement on VHF Ch 16. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
	Coastal navigational warnings (WZ) and weather		On receipt, 0730, 1930 local time	After prior announcement on VHF Ch 16. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
RT (MF)	Weather	2226 kHz	On receipt, 0730, 1930 local time	WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
	Coastal navigational warnings (WZ) and weather		0130, 0730, 1330, 1930 local time	WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Belfast-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. Remote stations: Black Mountain, Limavady, Navar, Orlock Head, Slieve Martin, West Torr. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
MF (HF)		1883 kHz	On receipt, 0810, 0210*, 1410*, 2010 local time	*Weather only. Remote station: Tiree. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Brixham-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 10, 23, 84, 86	0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Berry Head, Dartmouth, East Prawle, Fowey, Rame Head. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Clyde-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 10, 23, 84, 86	On receipt, 0210*, 0510*, 0810, 1110*, 1410*, 1710*, 2010, 2310* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Glengorm, Kilchiaran, Law Hill, Rhu Staffnish, South Knapdale, Tiree, Torosay. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

Cullercoats (GCC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: U Range: 270nm	490 kHz	0720, 1920	
	B1 Character: G Range: 270nm	518 kHz	0100, 0500, 0900, 1300, 1700, 2100	

MRCC Dover-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Fairlight, Langdon Battery. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Falmouth-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Lizard, St. Mary's (Isles of Scilly), Trevose. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
RT (MF)		1880 kHz	On receipt, 0110*, 0710, 1310*, 1910 local time	*Weather only. Remote station: Lizard. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Holyhead-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 86	On receipt, 0150*, 0450*, 0750, 1050*, 1350*, 1650*, 1950, 2250* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Great Orme, South Stack. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Humber-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 86	On receipt, 0150*, 0450*, 0750, 1050*, 1350*, 1650*, 1950, 2250* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Boulby, Cullercoats, Easington, Flamborough, Newton, Ravenscar. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
RT (MF)		1925 kHz	On receipt, 0150*, 0750, 1350*, 1950 local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Flamborough. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Liverpool-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 84, 86	On request, 0130*, 0430*, 0730, 1030*, 1330*, 1630*, 1930, 2230* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Caldbeck, Langthwaite, Moel-y_parc, Snaefell. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Milford Haven-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 84, 86	On receipt, 0150*, 0450*, 0750, 1050*, 1350*, 1650*, 1950, 2250 local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Blaenplwyf, Dinas Head, Monkstone Point, St. Ann's Head. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

Niton (GNI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: I Range: 270nm	490 kHz	0520, 1720	
	B1 Character: T Range: 270nm		0310, 0710, 1110, 1510, 1910, 2310	
	B1 Character: E Range: 270nm	518 kHz	0040, 0440, 0840, 1240, 1640, 2040	
	B1 Character: K Range: 270nm		0140, 0540, 0940, 1340, 1740, 2140	

Northwood (GYA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
Radio-Facsimile	Weather (North Atlantic)	2618.5 (2000-0600 UTC), 4610, 8040, 11085.5 (0600-2000 UTC)	Every 12m (Broadcast schedule at 0100, 1300 for North Atlantic)	WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Portland-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 84, 86	On receipt, 0130*, 0430*, 0730, 1030*, 1330*, 1630*, 1930, 2230* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Beer Head, Grove. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

Portpatrick (GPK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: O Range: 270nm	490 kHz	0220, 0620, 1020, 1420, 1820, 2220	
	B1 Character: C Range: 270nm	518 kHz	0420, 0820, 2020	

MRCC Shetland-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Collafirth, Fitful Head, Lerwick, Saxa Vord, Wideford. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
MF (HF)		1770 kHz	On receipt, 0110*, 0710, 1310*, 1910 local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Lerwick. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Stornoway-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 10, 23, 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Arisaig, Barra, Butt of Lewis, Clettraval, Drumfearn, Forsnaval, Melvaig, Portnaguran, Rodel, Skriag. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.
MF (HF)		1743 kHz	On receipt, 0110*, 0710, 1310*, 1910 local time	*Weather only. After prior announcement on VHF Ch 16. Remote station: Butt of Lewis. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Solent-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 86	On receipt, 0130*, 0430*, 0730, 1030*, 1330*, 1630*, 1930, 2230* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Boniface Down, Needles, Newhaven. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Swansea-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 86	On receipt, 0150*, 0450*, 0750, 1050*, 1350*, 1650*, 1950, 2250 local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Combe Martin, Hartland Point, Mumbles, St. Hilary, Severn Bridge. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Thames-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 84, 86	On receipt, 0110*, 0410*, 0710, 1010*, 1310*, 1610*, 1910, 2210* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Bawdsey, Bradwell, Shoeburyness, Walton on the Naze. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

MRCC Yarmouth-Coastguard				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Coastal navigational warnings (WZ) and weather	Ch. 23, 86	On receipt, 0150*, 0450*, 0750, 1050*, 1650*, 1950, 2250* local time	*Weather only. After prior announcement on VHF Ch 16. Remote stations: Guy's Head, Langham, Lowestoft, Trimingham. WZ: Original reports to Hydrographer of the Navy, Radio Navigational Warnings, Ministry of Defence.

METAREA I				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
METAREA	Weather	AOR-E	0930, 2130	

NAVAREA I				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVAREA	Navigational warnings	AOR-E	0530, 1730	

300DP. Uruguay

Atlantida Radio (CWC 43)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0533, 1333, 1933	

Carmelo Prefectura Radio (CWC 22)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0303, 1503, 2133	

Colonia Prefectura Radio (CWC-23)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0330, 1330, 2100	
RT (MF)		2722.1 kHz		

Fray Bentos Prefectura Radio (CWC 25)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0500, 1100, 1700, 2300	

La Paloma Radio (CWC-30, CWS-27)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0000, 0300, 1200, 1533, 2300	
RT (MF)		2722.1 kHz		
RT (HF)		4146 kHz		
NAVTEX	B1 Character: A Range: 280nm	490 kHz	0000, 0400, 0800, 1200, 1600, 2000	in Spanish.
	B1 Character: F Range: 280nm	518 kHz	0050, 0450, 0850, 1250, 1650, 2050	

Montevideo Centro de Radio Prefectura (CWC-39)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0833, 1603, 2203	

Montevideo Trouville (CWC-39)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2722.1 kHz	0833, 1603, 2203	
RT (HF)		4146 kHz		

Nueva Palmiraa Prefectura Radio (CWC-31)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0000, 0900, 1500, 2100	

Paysandu Prefectura Radio (CWC 32)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0300, 0900, 1500, 2100	

Piriapolis Prefectura Radio (CWC 33)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0703, 1533, 2103	

Puerto Sauce Prefectura Radio (CWC 27)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0133, 1303, 1933	

Punta Carretas (CWF)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (MF)	Navigational warnings and weather	2768.5 kHz	0003, 1403, 2103	in Spanish and English.
RT (HF)		4357.4, 6518.8, 8291.1, 13128.7, 17260.8, 22636.3 kHz		

Punta del Este Prefectura Radio (CWC-34)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0133, 1503, 2133	
RT (MF)		2722.1 kHz		

Rio Branco Prefectura Radio (CWC 36)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0933, 1703, 2333	
RT (MF)		2722.1 kHz		

Salto Prefectura Radio (CWC 37)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Navigational warnings and weather	Ch. 15	0500, 1100, 1700, 2300	

300DQ. Vanuatu

Port-Vila (YJM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	4385.3 kHz	0900, 1600 local time	in French, English and Bislama. Warnings on receipt after announcement on 4125 and 6215 kHz.

300DR. Vietnam

Ben Thuy (XVB)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906 kHz	Every even hour +50m	in Vietnamese and English.
			0050, 1250	in Vietnamese.

Ca Mau (XVA)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906 kHz	Every odd hour +35m	in Vietnamese and English.
			1135, 2335	in Vietnamese.

Cam Ranh				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1150, 2350 and every even hour +50m	in Vietnamese.

Can Tho (XVU)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1120, 2320 and every even hour +20m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +05m	in Vietnamese and English.
			0205, 1405	in Vietnamese.

Cua Ong (XVC)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1105, 2305 and every even hour +05m	in Vietnamese.

Da Nang (XVT)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906, 8294 kHz	Every even hour +35m	in Vietnamese and English.
			0035, 1235	in Vietnamese.
NAVTEX	B1 Character: K Range: 400nm	518 kHz	0140*, 0540, 0940, 1340*, 1740, 2140	* Weather only.

Hai Phong (XVG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906, 8294 kHz	Every even hour +05m	in Vietnamese and English.
			0005, 1205	in Vietnamese.

Hai Phong (XVG)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
NAVTEX	B1 Character: W Range: 400nm	490 kHz	0340, 0740, 1140*, 1540, 1940, 2340*	In Vietnamese. * Weather only.

Ho Chi Minh Ville (XVS)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906, 8294 kHz	Every even hour +05m	in Vietnamese and English.
			0105, 1305	in Vietnamese.
NAVTEX	B1 Character: X Range: 400nm	518 kHz	0350, 0750, 1150, 1550, 1950, 2350	

Hon Gai (XVQ)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1105, 2305 and every even hour +05m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +50m	in Vietnamese and English.
			1050, 2250	in Vietnamese.

Hue (XVD)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1105, 2305 and every even hour +05m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +50m	in Vietnamese and English.
			1050, 2250	in Vietnamese.

Kien Giang (XVK)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1135, 2335 and every even hour +35m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +20m	in Vietnamese and English.
			1020, 2220	in Vietnamese.

Mong Cai (XVM)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906 kHz	Every odd hour +20m	in Vietnamese and English.
			0120, 1320	in Vietnamese.

NHA Trang (XVN)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906 kHz	0005, 1205, every odd hour +05m & +50m	in Vietnamese.

Phan Rang				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1135, 2335 and every even hour +35m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +20m	in Vietnamese and English.
			0150, 1350	in Vietnamese.

Phan Thiet (XVP)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	0120, 2320	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +50m	in Vietnamese and English.
			1105, 2305	in Vietnamese.

Phu Yen (XVY)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1105, 2305 and every even hour +05m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +50m	in Vietnamese and English.
			1105, 2305	in Vietnamese.

Quy Nhon (XVI)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1120, 2320 and every even hour +20m	in Vietnamese.
RT (HF)		7906 kHz	Every even hour +35m	in Vietnamese and English.
			1035, 2235	in Vietnamese.

Thanh HOA				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
VHF	Weather	Ch. 16	1135, 2335 and every even hour +35m	in Vietnamese.

Vung Tau (XVR)				
Type	**Nature of Broadcast**	**Frequency/ Channel**	**Times (UTC)**	**Additional Information**
RT (HF)	Weather	7906 kHz	Every even hour +20m	in Vietnamese and English.
			0020, 1220	in Vietnamese.

CHAPTER 4

DISTRESS, EMERGENCY, AND SAFETY TRAFFIC

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CHAPTER 4

GMDSS, PIRACY AND U.S. NAVY ASSISTANCE FOR EMERGENCY SITUATIONS

PART I GMDSS (DISTRESS)

400A. GMDSS Emergency Equipment Overview

Due to various carriage requirements and equipment manufacturers, this section will describe the basics of each GMDSS emergency equipment. See 47 CFR 80.1123 for the required distress frequencies to be monitored by vessels and 47 CFR 80.1129 for homing signals.

Rescue Coordination Centers are equipped to coordinate and control search and rescue operations within their Area of Responsibility (AOR).

Acronyms:
- CROSS-Regional Operations Monitoring and Rescue Center *(translation)*
- DSC-Digital Selective Calling
- GEOSAR-Geostationary SAR satellite system
- HF-High Frequency
- JRCC-Joint Rescue Coordination Center
- LEOSAR-Low Earth Orbit SAR satellite system
- MF-Medium Frequency
- MRCC-Maritime Rescue Coordination Center
- MRSC-Maritime Rescue Sub-coordination Center
- MSRCC-Main Search and Rescue Coordination Center
- NBDP-Narrow Band Direct Printing
- RCC-Rescue Coordination Center
- RTF-Radiotelephone
- RX-Receive
- SAR-Search and Rescue
- SRR-Search and Rescue Region
- TX-Transmit
- VHF-Very High Frequency
- VTS-Vessel Traffic Service

400B. Emergency Position-Indicating Radio Beacon (EPIRB)

Emergency Position-Indicating Radio Beacons

(EPIRBs) send a distress signal on the 406 MHz distress frequency through the COSPAS-SARSAT polar orbiting satellites to Land Earth Stations (LES) which are then relayed to Rescue Coordination Centers (RCCs).

There are two categories of EPIRB's: CAT I: can be activated either manually or automatically (float free). The automatic activation can be triggered when physically taken from its bracket or via the hydrostatic release (on bracket) when submerged. CAT II: Only has a manual activation. However, some CAT II models are also water activated.

Class A, Class B, and Class S devices are no longer allowed to be manufactured, imported, used or sold within the United States. Reference the U.S. Code of Federal Regulations, Title 47, Part 80, Subpart V.

The International COSPAS-SARSAT System ceased satellite processing of the 121.5 and 243 MHz beacons on 01 Feb 2009. Although some manufacturers have the 121.5 MHz option for a homing signal for search and rescue, the 406 MHz signal is more powerful and has proven to be a significant aid to search and rescue aircraft. The U.S. Coast Guard will no longer act on the 121.5/243 MHz EPIRB alerts without the distress being confirmed by two independent non-satellite sources.

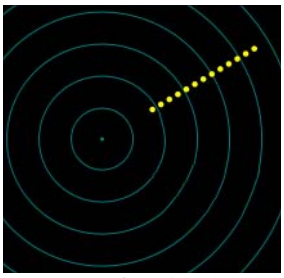
Registered EPIRB signals can also be picked up by the low orbiting GEOSAR system, such as the GOES weather satellites which will forward them to rescue authorities. However, unless the EPIRB is equipped with an integrated GPS receiver, it will not have a location of the distress. Also, the GEOSAR cannot detect 121.5 MHz signals.

It is strongly advised to register your EPIRB via the COSPAS-SARSAT website to expedite search and rescue operations. The website is www.cospas-sarsat.org.

Testing EPIRB's: ONLY test an EPIRB by using the self-test function on the device. Search and rescue authorities take false alerts very seriously all over the world. If the EPIRB has been registered, authorities will contact the vessel via the registration information first, and if accidentally activated, the vessel can avoid serious consequences. The U.S. Coast Guard routinely reports unregistered false alerts to the Federal Communications Commission for investigation.

400C. Search and Rescue Transponder (SART)

When activated a SART will transmit a signal within



an approximate 8nm (15km) radius. Vessels within this range will have a strong 12 blip return on their X-band (3cm) radar screens (see graphic at left), pinpointing the location of the SART. The range of a SART depends on how high above the sea surface it's located. SARTs will not be seen on S-band (10cm) radars.

Some models are designed to be mounted on the liferaft canopy increasing its effectiveness. When the signal is picked up by radar, some models will notify the user by either a special flash, a secondary light, make a sound, or go in standby mode so the vessel in distress can use its VHF to contact the other vessel.

The Automatic Identification System (AIS) is built into some models of SARTs. These units include a GPS and transmit an alert message along with the AIS data on an AIS-equipped vessel's ECDIS display rather than the radar.

400D. List of Maritime Frequencies

U.S. Maritime Very High Frequency (VHF) Channels

Marine VHF mostly uses "simplex" transmission, where communication can only take place in one direction at a time. Duplex is when communication can take place in both directions simultaneously.

Channel Number	Frequency (MHz)	Use (Distress frequencies are in bold)
01A	156.050	Port Operations & Commercial VTS. Available only in New Orleans/Lower Mississippi area.
05A	156.250	Port Operations or VTS in the Houston, New Orleans and Seattle areas.
06	**156.300**	**Used for communication between ship stations and aircraft stations engaged in coordinated SAR operations. It may also be used by aircraft stations to communicate with ship stations for other safety purposes. Ship stations shall avoid harmful interference to such communications on Ch. 06 as well as to communications between aircraft stations, ice-breakers and assisted ships during ice seasons.**
07A	156.350	Commercial use.
08	156.400	Commercial use (Intership only).
09	156.450	Commercial & Non-Commercial hailing, radio checks, etc...
10	156.500	Commercial use.
11	156.550	Commercial use. VTS in selected areas.
12	156.600	Port Operations. VTS in selected areas.
13	156.650	Used on a worldwide basis for bridge-to-bridge communications relating to the safety of navigation. It may also be used for the ship movement and port operations service subject to the national regulations of the administrations concerned.
14	156.700	Port Operations. VTS in selected areas.
15	156.750 (RX only)	Environmental, used by Class C EPIRBs.
16	**156.800**	**International Distress, safety and calling. Vessels and coast stations maintain a listening watch on this channel.**
17	156.850	State & local government maritime control.

Channel Number	Frequency (MHz)	Use (Distress frequencies are in bold)
18A	156.900	Commercial use.
19A	156.950	Commercial use.
20	157(TX) 161.6(RX)	Port Operations (duplex).
20A	157.000	Port Operations.
21A	157.050	U.S. Coast Guard only.
22A	157.100	Coast Guard Liaison & Maritime Safety Information Broadcasts. Broadcasts announced on channel 16.
23A	157.150	U.S. Coast Guard only.
24	157.2(TX) 161.8(RX)	Public Correspondence (Marine Operator).
25	157.25(TX) 161.85(RX)	Public Correspondence (Marine Operator).
26	157.3(TX) 161.9(RX)	Public Correspondence (Marine Operator).
27	157.35(TX) 161.95(RX)	Public Correspondence (Marine Operator).
28	157.4(TX) 162(RX)	Public Correspondence (Marine Operator).
63A	156.175	Port Operations & Commercial VTS. Available only in New Orleans/Lower Mississippi area.
65A	156.275	Port Operations.
66A	156.325	Port Operations.
67	156.375	Commercial. Used for bridge-to-bridge communications in lower Mississippi River. Intership only.
68	156.425	Non-Commercial.
69	156.475	Non-Commercial.
70	**156.525**	**International Digital Selective Calling (voice communications not allowed)**
71	156.575	Non-Commercial.
72	156.625	Non-Commercial (Intership only).
73	156.675	Port Operations.
74	156.725	Port Operations.
77	156.875	Port Operations (Intership only).
78A	156.925	Non-Commercial.
79A	156.975	Commercial. Non-Commercial in Great Lakes only.

Channel Number	Frequency (MHz)	Use (Distress frequencies are in bold)
80A	157.025	Commercial. Non-Commercial in Great Lakes only.
81A	157.075	U.S. Government only-Environmental protection operations.
82A	157.125	U.S. Government only.
83A	157.175	U.S. Coast Guard only.
84	157.225(TX) 161.825(RX)	Public Correspondence (Marine Operator).
85	157.275(TX) 161.875(RX)	Public Correspondence (Marine Operator).
86	157.325(TX) 161.925(RX)	Public Correspondence (Marine Operator).
87	157.375(TX) 161.375(RX)	Public Correspondence (Marine Operator).
88A	157.425	Commercial, Intership only.
AIS 1	161.975	Automatic Identification System (AIS).
AIS 2	162.025	Automatic Identification System (AIS).
WX1	162.550	NOAA Weather Radio.
WX2	162.400	NOAA Weather Radio.
WX3	162.475	NOAA Weather Radio.
WX4	162.425	NOAA Weather Radio.
WX5	162.450	NOAA Weather Radio.
WX6	162.500	NOAA Weather Radio.
WX7	162.525	NOAA Weather Radio.

U.S. Maritime Medium Frequency (MF) Channels

The U.S. Coast Guard has stopped monitoring MF frequencies 2670, 2182 and 2182 kHz.

Frequency (kHz)	Type	Use (Distress frequencies are in bold)
490	MSI	Used only for NAVTEX broadcasts.
518	MSI	Used only for NAVTEX broadcasts.
2174.5	**NBDP**	**Distress and safety communications (traffic) using NBDP telegraphy only.**
2187.5	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**

Maritime High Frequency (HF) Channels

The U.S. Coast Guard has stopped monitoring HF frequencies 4125, 6215, 8291, and 12290 kHz.

Frequency (kHz)	Type	Use (Distress frequencies are in bold)
4177.5	**NBDP**	**Distress and safety communications (traffic) using NBDP telegraphy only.**
4207.5	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**
4209.5	MSI	Used only for NAVTEX broadcasts.
4210	NBDP	HF NBDP MSI broadcasts for Sea Area A4, in a maritime mobile service.
5680	**SAR**	**Used by stations and ships for HF SAR operations.**
6268	**NBDP**	**Distress and safety communications traffic using NBDP telegraphy only.**
6312	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**
6314	MSI	HF NBDP MSI broadcasts, in a maritime mobile service.
8376.5	**NBDP**	**Distress and safety communications traffic using NBDP telegraphy only.**
8414.5	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**
8416.5	MSI	Used only for the transmission of high seas MSI by coast stations to ships, by means of NBDP, in the maritime mobile service.
12520	**NBDP**	**Distress and safety communications traffic using NBDP telegraphy only.**
12577	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**
12579	MSI	Used only for the transmission of high seas MSI by coast stations to ships, by means of NBDP, in the maritime mobile service.
16695	**NBDP**	**Distress and safety communications traffic using NBDP telegraphy only.**
16804.5	**DSC**	**Distress and safety calls using digital selective calling in accordance with the Radio Regulations only.**
16806.5	MSI	HF NBDP MSI broadcasts, in a maritime mobile service.
19680.5	MSI	HF NBDP MSI broadcasts, in a maritime mobile service.
22376	MSI	HF NBDP MSI broadcasts, in a maritime mobile service.
26100.5	MSI	HF NBDP MSI broadcasts, in a maritime mobile service.

Maritime Satellite Channels

Frequency (MHz)	Use (Distress frequencies are in bold)
121.5	**Since February 01, 2009, primary distress frequency is 406 MHz with 121.5 and 243 MHz to be used only in the final stage of short-range homing to casualties. Coast Guard will no longer act on the 121.5/243 MHz EPIRB alerts without the distress being confirmed by two independent non-satellite sources.**
243	
406	**EPIRB use for distress signals.**

400E. VHF, MF & HF Digital Selective Calling (DSC)

DSC allows mariners to instantly send an automatically formatted distress alert by one touch of a button to rescue authorities and vessels anywhere in the world. Digital selective calling also allows mariners to initiate, receive or relay distress calls to or from any similarly equipped vessel or shore station, without requiring either party to be near a radio loudspeaker.

DSC distress channels:

VHF: Channel 70 (156.525 MHz)
MF/HF: Frequencies 4207.5, 6312.0, 8414.5, 12577.0, and 16804.5 kHz

Setup:

The Coast Guard urges vessels to interconnect the GPS with the DSC radio to help expedite response in times of emergency. Before interconnecting your GPS and DSC radio, consult the owner's manuals.

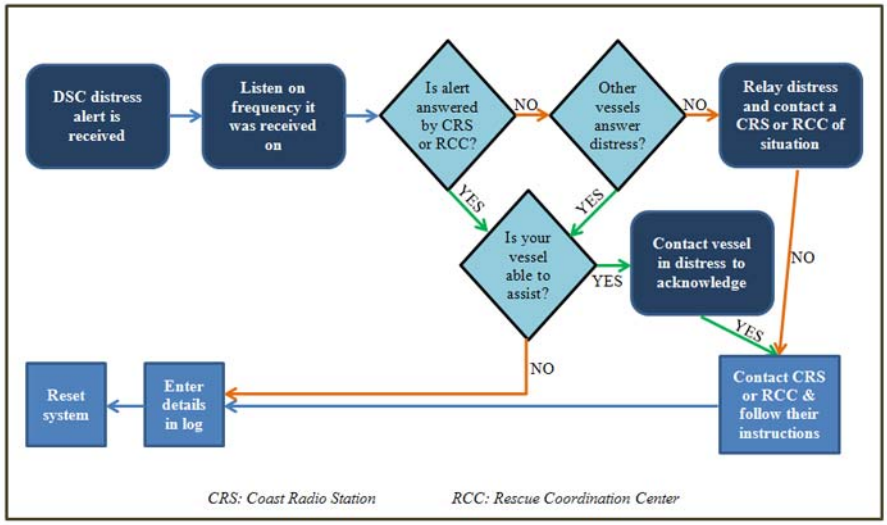
Sending DSC distress:

A DSC distress alert should include the ship's last known position with the time of the position (in UTC). If time permits also include the nature of distress and alternative communication.

A distress alert should be transmitted if, in the opinion of the Master, the ship or a person is in distress and requires immediate assistance.

To minimize possible interference, live testing on DSC distress and safety frequencies with coast stations should be limited to once a week as recommended by the International Maritime Organization.

Receiving and Responding to DSC Distress Alerts Flow Chart



This is only a guide

400F. International Maritime Satellite (INMARSAT)

INMARSAT-A was discontinued on 31 Dec 2007

INMARSAT-B allows vessel to make a voice, data or fax distress calls via the INMARSAT satellites when in Sea Area 3, in which a Land Earth Station (LES) routes the call to the nearest Rescue Coordination Center (RCC).

Consult the owner's manual for instruction on how to place the call using special access codes.

INMARSAT-B will be discontinued on 31 Dec 2014

INMARSAT-E EPIRB was discontinued on 01 Dec 2006.

INMARSAT-C allows mariners to instantly send an automatically formatted distress alert by one touch of a button to rescue authorities and vessels anywhere in the world using the INMARSAT satellites when in Sea Area 3. A Land Earth Station (LES) receives the distress then routes the call to the nearest Rescue Coordination Center (RCC).

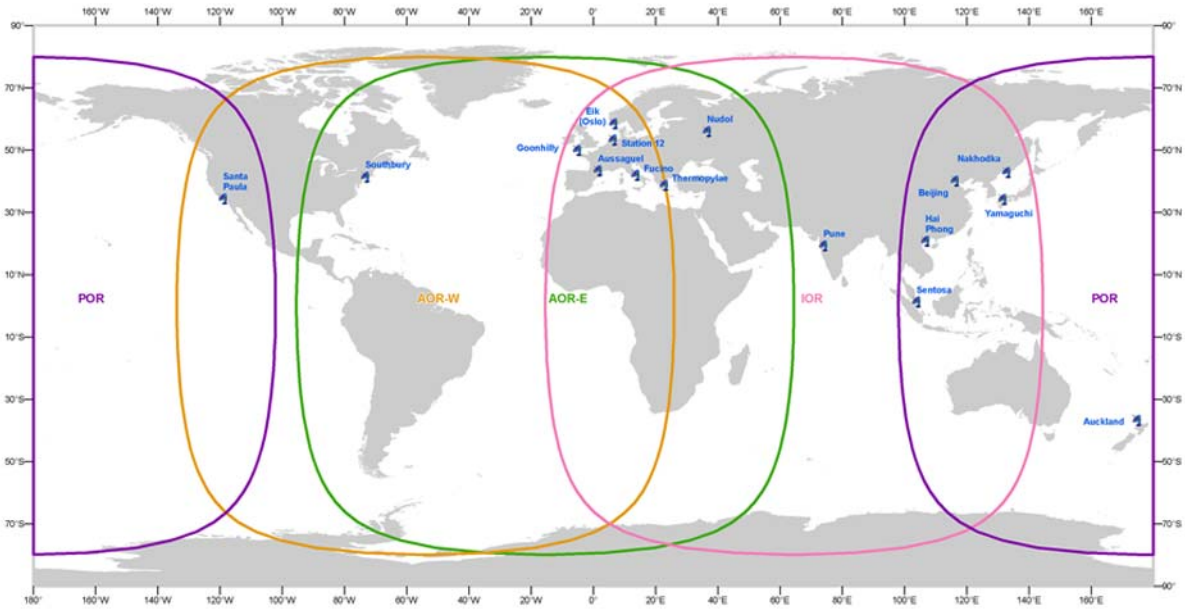
Consult the owner's manual for specific instruction but the following is standard for every Mobile Earth Station (MES):

–If there is no time to program the specifics, just press the distress button, which is pre-programed with the basic vessel information for the required number of seconds (usually 5 seconds). The Coast Guard urges vessels to interconnect the GPS with the MES to help expedite response in times of emergency.

–If there is time to program the specifics, select the distress alert setup on the terminal. Manually enter the current position, course and speed (if connected to the vessel's GPS, this information is automatically populated). Select the nature of distress from the list provided. The default is "unspecified". If possible, select the nearest LES (see table below) to your vessel's position within your satellite ocean region (see graphic below), then push the distress button.

–Wait for an acknowledgment, if there isn't one after five minutes, send distress again.

INMARSAT-C LES Stations-Graphically



INMARSAT-C LES Stations					
Satellite	SAC	Name of Station	Location	Operator	LES ID
AOR-E	41	Goonhilly	50-02-53N 005-10-55W	Stratos	102
AOR-E	41	Southbury	41-27-04N 073-17-20W	Vizada	101
AOR-E	41	Station 12 (Burum)	53-17-04N 006-12-55E	Stratos	112
AOR-E	41	Thermopylae	38-49-22N 022-41-10E	Otesat	120
AOR-E	41	Aussaguel	43-25-45N 001-29-52E	Vizada	121
AOR-E	41	Fucino	41-58-44N 013-36-07E	Telecom Italia	105
AOR-E	41	Yamagushi	34-13-00N 131-33-00E	KDDI	103
AOR-E	41	Nudol	56-06-00N 036-31-00E	Morsviazsputnik	117
AOR-E	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	104
AOR-W	41	Goonhilly	50-02-53N 005-10-55W	Stratos	002
AOR-W	41	Southbury	41-27-04N 073-17-20W	Vizada	001
AOR-W	41	Station 12 (Burum)	53-17-04N 006-12-55E	Stratos	012
AOR-W	41	Yamagushi	34-13-00N 131-33-00E	KDDI	003
AOR-W	41	Aussaguel	43-25-45N 001-29-52E	Vizada	021
AOR-W	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	004
IOR	41	Yamagushi	34-13-00N 131-33-00E	KDDI	303
IOR	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	304
IOR	41	Thermopylae	38-49-22N 022-41-10E	Otesat	305
IOR	41	Pune	19-09-03N 073-57-26E	Tata Communications	306
IOR	1241	Station 12 (formerly Perth)	53-17-04N 006-12-55E	Stratos	312
IOR	41	Aussaguel	43-25-45N 001-29-52E	Vizada	321
IOR	41	Sentosa	01-14-51N 103-50-07E	Singapore Telecom	328
IOR	41	Beijing	40-07-00N 116-13-40E	MCN	311
IOR	41	Fucino	41-58-44N 013-36-07E	Telecom Italia	335
IOR	41	Hai Phong	20-48-03N 106-42-38E	Vishipel	330
IOR	41	Nudol	56-06-00N 036-31-00E	Morsviazsputnik	317
IOR	41	Goonhilly	50-02-53N 005-10-55W	Stratos	302
IOR	41	Santa Paula	34-24-06N 119-04-24W	Vizada	301
POR	41	Yamaguchi	34-13-00N 131-33-00E	KDDI	203
POR	41	Santa Paula	34-24-06N 119-04-24W	Vizada	201
POR	41	Sentosa	01-14-51N 103-50-07E	Singaprore Telecom	210
POR	1241	Station 12 (formerly Perth)	53-17-04N 006-12-55E	Stratos	212
POR	41	Auckland	36-44-53S 174-41-45E	Stratos	202
POR	41	Beijing	40-07-00N 116-13-40E	MCN	211
POR	41	Nakhodka	42-51-32N 132-47-25E	Morsviazsputnik	217
POR	41	Eik (Oslo)	58-32-18N 006-28-03E	Vizada	204
POR	41	Aussaguel	43-25-45N 001-29-52E	Vizada	221

400G. List of COSPAS-SARSAT Control Centers and Terminals

COSPAS-SARSAT MCCs and LEOLUTs:

Below is the list of the world-wide COSPAS-SARSAT Mission Control Centers (MCC) and Local User Terminals (LUT) in the LEOSAR system which are operational.

Country	MCC		LEOLUT	Associated Maritime RCC
	Location	Designator	Location	
Algeria	Algiers	ALMCC	Ouargla	MRCC Alger
			Algiers	
Argentina	El Palomar	ARMCC	Parana	MRCC Puerto Belgrano
			Rio Grande (LEO/GEO)	
Australia	Canberra	AUMCC	Albany	RCC Australia
			Bundaberg	
Brazil	Brasilia	BRMCC	Brasilia (LEO/GEO/MEO)	Salvamar/Salvaero
			Recife (LEO/GEO)	
			Manaus	
Canada	Trenton	CMCC	Churchill	
			Edmonton	
			Goose Bay	
Chile	Santiago	CHMCC	Santiago	MRCC Chile
			Punta Arenas	
			Isla de Pascua	
China	Beijing	CNMCC	Beijing (dual LEOLUT system)	
France	Toulouse	FMCC	Toulouse (dual LEOLUT system)	MRCC Gris Nez
Associate Member of IMO Hong Kong, China	Hong Kong	HKMCC	Hong Kong (dual LEOLUT system)	MRCC Hong Kong
Greece	Athens	GRMCC	Pentelli (LEO/GEO)	JRCC Piraeus
India	Bangalore	INMCC	Bangalore	
			Lucknow	

(Extracted from ANNEX 10 of the IMO GMDSS Master Plan)

Country	MCC		LEOLUT	Associated Maritime RCC
	Location	Designator	Location	
Indonesia	Jakarta	IDMCC	Jakarta	MRCC Jakarta, MRCC Suraybaya, MRCC Ujung Pandang, MRCC Biak
			Makassar	
Italy	Bari	ITMCC	Bari	MRSC Roma
Japan	Tokyo	JAMCC	Gunma	MRCC Otaru, MRCC Shiogama, MRCC Yokohama, MRCC Nagoya, MRCC Kobe, MRCC Hiroshima, MRCC Kitakyushu, MRCC Maizuru, MRCC Niigata, MRCC Kagoshima, MRCC Naha
New Zealand	Canberra, Australia	AUMCC	Wellington	RCC New Zealand
Nigeria	Abuja	NIMCC	Abuja	
Norway	Bodø	NMCC	Tromso	MRCC Bodø
			Spitzbergen	MRCC Stavanger
Peru	Callao	PEMCC	Callao	MRCC Callao
Republic of Korea	Incheon	KOMCC	Incheon	Korea Coast Guard HQ
Russian Federation	Moscow	CMC	Nakhodka	MRCC Vladivostok
Saudi Arabia	Jiddah	SAMCC	Jiddah (dual LEOLUT system)	
Singapore	Singapore	SIMCC	Singapore	Singapore Port Operations Control Center
South Africa	Cape Town	ASMCC	Cape Town	MRCC Cape Town
Spain	Maspalomas	SPMCC	Maspalomas	MRCC Madrid, MRCC Palma, MRCC Las Palmas, Part of MRCC Cape Town
Thailand	Bangkok	THMCC	Bangkok (dual LEOLUT system)	RCC Bangkok
Turkey	Ankara	TRMCC	Ankara (LEO/GEO dual LEOLUT system)	MSRCC Ankara
United Kingdom	Kinloss	UKMCC	Combe Martin	MRCC Falmouth

(Extracted from ANNEX 10 of the IMO GMDSS Master Plan)

Country	MCC		LEOLUT	Associated Maritime RCC
	Location	Designator	Location	
United States	Suitland	USMCC	Alaska (dual LEOLUT system)	U.S. Coast Guard Districts 1, 5, 7, 8, 9, 11, 13, 14, 17, Atlantic & Pacific Area SAR Coordinators
			California (dual LEOLUT system)	
			Guam (dual LEOLUT system)	
			Hawaii (dual LEOLUT system)	
			Florida (dual LEOLUT system)	
Vietnam	Haiphong	VNMCC	Haiphong	MRCC Vietnam (VMRCC)

(Extracted from ANNEX 10 of the IMO GMDSS Master Plan)

COSPAS-SARSAT GEOLUTs:

Below is the list of the world-wide COSPAS-SARSAT Local User Terminals (LUT) in the GEOSAR system which are operational.

Ground Segment Operator	GEOLUT
	Location
Algeria	Algiers
Argentina	El Palomar
Brazil	Brasilia
	Recife
Canada	Edmonton
	Ottawa
Chile	Santiago
France	Toulousse
Greece	Pentelli
India	Bangalore
Functional GEOLUTs have not been commissioned; however, alert data are used operationally	
Italy	Bari
New Zealand	Wellington (dual GEOLUT system)
Norway	Fauske
Spain	Maspalomas (dual GEOLUT system)

(Extracted from ANNEX 10 of the IMO GMDSS Master Plan)

Ground Segment Operator	GEOLUT
	Location
Turkey	Ankara
United Kingdom	Combe Martin
U.S.A.	Maryland (dual GEOLUT system)

(Extracted from ANNEX 10 of the IMO GMDSS Master Plan)

400H. Instructions for Canceling Inadvertent Distress Alerts

A false alert is any distress transmitted for any reason when a real distress situation does not actually exist. Most such alerts are inadvertent and can be traced to equipment problems and human error (caused by improper use of GMDSS equipment). A few, however, are deliberately transmitted as a hoax, made easier by GMDSS equipment that is not properly registered. Many are from non-GMDSS sources, especially in the 121.5 MHz frequency band.

The following instructions, extracted from IMO Resolution A.814(19), are for canceling an inadvertent distress alert:

– DIGITAL SELECTIVE CALLING:
  – VHF:
    – Switch off the transmitter immediately (this applies when the false alert is detected during transmission);
    – Switch equipment on and set to Channel 16;
    – Make broadcast to "All Stations" giving name of vessel, call sign and DSC number, and cancel the false distress alert.

  Example:
  All Stations, All Stations, All Stations
  This is NAME, CALL SIGN, DSC NUMBER, POSITION.
  Cancel my distress alert of DATE, TIME UTC.
  =Master, NAME, CALL SIGN, DSC NUMBER, DATE, TIME UTC

  –MF
    –Switch off the transmitter immediately (this applies when the false alert is detected during transmission);
    –Switch equipment on and tune for radiotelephony transmission on 2182 kHz;
    –Make broadcast to "All Stations" giving name of vessel, call sign and DSC number, and cancel the false distress alert.

  Example:
  All Stations, All Stations, All Stations,
  This is NAME, CALL SIGN, DSC NUMBER, POSITION.
  Cancel my distress alert of DATE, TIME UTC.
  =Master, NAME, CALL SIGN, DSC NUMBER, DATE, TIME UTC

  –HF:
    –As for MF but the alert must be canceled on all the frequency bands in which it was transmitted: the transmitter should be tuned consecutively to the radiotelephony distress frequencies in the 4, 6, 8, 12 and 16 MHz bands, as necessary.

– INMARSAT-C:
  – Notify the appropriate Rescue Coordination Center (RCC) to cancel the alert by sending a distress priority message via the same CES through which the false distress alert was sent.

  Example:
  This is NAME, CALL SIGN, IDENTITY NUMBER, POSITION.
  Cancel my Inmarsat-C distress alert of DATE, TIME UTC.
  =Master +

– EPIRBS:
  – If, for any reason, an EPIRB is activated accidentally, the ship should contact the nearest coast station or an appropriate coast earth station or RCC and cancel the distress alert.

  NOTE: Keep the EPIRB activated until an appropriate RCC can be contacted to cancel the alert. (This reduces incomplete alerts and uncertainty associated with why an EPIRB signal ceased.)

Notwithstanding the above, a ship may use any means available to them to inform the appropriate authorities that a false alert has been transmitted and should be canceled. No action will normally be taken against any ship or mariner for reporting and canceling a false distress alert. However, in view of the serious consequences of false alerts, and the strict ban on their transmission, Governments may prosecute in cases of repeated violation.

The following guidelines, extracted from IMO Resolution A.814(19), are recommended for reducing the chance of a false distress alert aboard ship:

– Ensure that all GMDSS certificated personnel responsible for sending a distress alert have been

instructed about, and are competent to operate, the particular radio equipment on the ship.
– Ensure that the person(s) responsible for communication during distress incidents give the necessary instructions and information to all crew members on how to use GMDSS equipment to send a distress alert.
– Ensure that as part of each abandon ship drill, instruction is given on how emergency equipment should be used to provide GMDSS functions.
– Ensure that GMDSS equipment testing is only undertaken under the supervision of the person responsible for communications during distress incidents.
– Ensure that GMDSS equipment testing or drills are never allowed to cause false distress alerts.
– Ensure that coded identities of satellite EPIRBs, which are used by SAR personnel responding to emergencies, are properly registered in a database accessible 24 hours a day or automatically provided to SAR authorities (Masters should confirm that their EPIRBs have been registered with such a database, to help SAR services identify the ship in the event of distress and rapidly obtain other information which will enable them to respond appropriately.
– Ensure that EPIRB, Inmarsat and DSC registration data is immediately updated if there is any change in information relating to the ship such as owner, name or flag, and that the necessary action is taken to reprogram the ship's new data in the GMDSS equipment concerned.
– Ensure that, for new ships, positions for installing EPIRBs are considered at the earliest stage of ship design and construction.
– Ensure that satellite EPIRBs are carefully installed in accordance with the manufacturers' instructions and using qualified personnel (sometimes satellite EPIRBs are damaged or broken due to improper handling or installation. They must be installed in a location that will enable them to float free and automatically activate if the ship sinks. Care must be taken to ensure that they are not tampered with or accidentally activated. If the coding has to be changed or the batteries serviced, manufacturers' requirements must be strictly followed. There have been cases where EPIRB lanyards were attached to the ship so that the EPIRB could not float free; lanyards are only to be used by survivors for securing the EPIRB to a survival craft or person in the water).
– Ensure that EPIRBs are not activated if assistance is already immediately available (EPIRBs are intended to call for assistance if the ship is unable to obtain help by other means, and to provide position information and homing signals for SAR units).
– Ensure that, if a distress alert has been accidentally transmitted, the ship makes every reasonable attempt to communicate with the RCC by any means to cancel the false distress alert using the instructions given above.
– Ensure that, if possible, after emergency use, the EPIRB is retrieved and deactivated.
– Ensure that when an EPIRB is damaged and needs to be disposed of, if a ship is sold for scrap, or if for any other reason a satellite EPIRB will no longer be used, the satellite EPIRB is made inoperable, either by removing its battery and, if possible, returning it to the manufacturer, or by demolishing it.

NOTE: If the EPIRB is returned to the manufacturer, it should be wrapped in tin foil to prevent transmission of signals during shipment.

400I. Assistance by SAR Aircraft and Helicopters

SAR aircraft may drop rescue equipment to ships in distress. This may include equipment containers connected in series by a buoyant line. The following may be dropped:
– Individual life rafts or pairs linked by a buoyant line.
– Buoyant radiobeacons and/or transceivers.
– Dye and smoke markers and flame floats.
– Parachute flares for illumination.
– Salvage pumps.

A helicopter may be used to supply equipment and/or evacuate persons. In such cases the following information will be of value:
– An orange smoke signal, signal lamp, or heliograph can be used to attract the attention of the helicopter.
– A clear stretch of deck should be made available as a pickup area, if possible, marked out with a large letter H in white. During the night the ship should be illuminated as brightly as possible, particularly any obstructions (masts, funnels, etc.). Care should be taken that illumination will not blind the helicopter pilot.
– The helicopter will approach from abaft the beam and come to a hover over the cleared area.
– The ship should, when possible, maintain a constant speed through the water and keep the wind 30° on the port bow. If these conditions are met, the helicopter can hover and use its hoist in the cleared area. If a vessel is on fire or making smoke it is an advantage to have the wind 30° on the bow. The above procedure may be modified on instructions from the pilot.
– An indication of wind direction is useful. Pennants, flags, or a small amount of smoke from the galley funnel may be helpful.
– The length of the helicopter's winch cable is about 15 meters (50 feet) minimum.
– The lifting device on the end of the winch cable should never be secured to any part of the ship or become entangled in the rigging or fixtures. Ships' personnel should not attempt to grasp the lifting device unless requested to do so by the helicopter. In this case, a metal part of the lifting device should first be allowed to touch the deck in order to avoid possible shock due to static electricity.
– If the above conditions cannot be met, the helicopter may be able to lift a person from a boat or life raft secured on a long painter. Cases have occurred of life rafts being overturned by the downdraft from a helicopter. It is advisable for all persons in a raft to remain in the center of the raft until they are about to be lifted.
– In cases of injured persons a special stretcher may be lowered by the helicopter. The stretcher should be unhooked while the casualty is being strapped in.

400J. Algeria

MRCC Alger	
Location:	Alger (36-46N 003-03E)
AOR:	35-50N 002-06W, 36-15N 001-30W, 38-20N 003-45E, 39-00N 004-40E, 39-00N 007-44E, 38-32N 007-44E, 38-32N 008-10E
Contact:	Telex: +55 211, Phone: +213 (0) 21 71 01 78, Fax: +213 (0) 21 71 41 08, E-mail: mrccalgiers@mdn.dz
DSC Station Alger	
MMSI:	006052110
Station Type:	VHF (Main) range 50nm
	MF (Main) range 200nm
Location:	36-44N 003-10E
Monitor Times:	24-7
DSC Station Cherchell	
MMSI:	006052111
Station Type:	VHF (Monitor) range 50nm
Location:	36-29N 001-23E
Monitor Times:	0800-1800 UTC
DSC Station Tenes	
MMSI:	006052113
Station Type:	VHF (Main) range 50nm
Location:	36-29N 001-23E
Monitor Times:	0800-1800 UTC

CNOSS Jijel	
AOR:	39-00N 004-40E, 39-00N 007-44E, 38-32N 007-44E, 38-32N 008-10E
Contact:	Telex: +84 959, Phone: +213 (0) 21 43 01 78, Fax: +213 (0) 21 43 71 08
DSC Station Annaba	
MMSI:	006053814
Station Type:	VHF (Main) range 50nm
	MF (Main) range 200nm
Location:	36-54N 007-45E
Monitor Times:	24-7
DSC Station Bejaia	
MMSI:	006053815
Station Type:	VHF (Main) range 50nm
Location:	36-45N 005-04E
Monitor Times:	0800-1800 UTC
DSC Station Skikda	
MMSI:	006053816
Station Type:	VHF (Main) range 50nm
Location:	36-52N 006-54E
Monitor Times:	0800-1800 UTC

CNOSS Oran	
AOR:	35-50N 002-06W, 36-15N 001-30W, 38-20N 003-45E
Contact:	Telex: +81 488, Phone/Fax: +213 (0) 41 39 67 01
DSC Station Oran	
MMSI:	006054117
Station Type:	VHF (Main) range 50nm
	MF (Main) range 200nm
Location:	35-42N 000-38W
Monitor Times:	24-7
DSC Station Dellys	
MMSI:	006054112
Station Type:	VHF (Monitor) range 50nm

CNOSS Oran	
Location:	36-55N 003-53E
Monitor Times:	24-7
DSC Station Mostaganem	
MMSI:	006054118
Station Type:	VHF (Monitor) range 50nm
Location:	35-56N 000-06E
Monitor Times:	24-7
DSC Station Ghazaouet	
MMSI:	006054119
Station Type:	VHF (Main) range 50nm
Location:	35-06N 001-51W
Monitor Times:	0800-1800 UTC

400K. Argentina

MRSC Bahia Blanca	
AOR:	38-51S 060-03W (Claromeco Light), 43-00S 057-15W, 42-58S 064-19W (Punta Ninfas Light), 42-53S 064-09W (Morro Nuevo Light), 42-04S 063-47W (Punta Norte Light), 41-04S 062-50W (Rio Negro Light)
Contact:	Phone: +54291-4573124, Fax: +54291-4573355, E-mail: pzonapzan@prefecturanaval.gov.ar
DSC Station San Blas	
MMSI:	007010006
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
Location:	40-33S 062-14W
Monitor Times:	24-7

MRCC Buenos Aires	
AOR:	De la Plata River, Uruguay river (from km.960), Iguazu River (from San Antonio), Paraguay River (from km.373.5), Parana River (from km.1927)
Contact:	Phone: +5411-4317-2300, Fax: +5411-4313-2889, E-mail: cotm@ara.mil.ar
DSC Station Argentina Radio	
MMSI:	007010111
Station Type:	VHF (Main) range 35nm
	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	34-36S 058-28W
Monitor Times:	24-7

MRSC Comodoro Rivadavia	
AOR:	42-58S 064-19W (Punta Ninfas Light), 43-00S 057-15W, 47-10S 059-00W, 47-12S 065-44W (Cabo Blanco Light) and Musters and Colhue Huapi Lakes
Contact:	MMSI: 007010008, Phone: +54297-4476800, Fax: +54297-4473863, E-mail: jecriv@prefecturanaval.gov
DSC Station Comodoro Rivadavia Radio	
MMSI:	007010008
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
	HF on 4,6,8,12,16 MHz
Location:	45-51S 067-25W
Monitor Times:	24-7

MRSC Islas Orcadas del Sur	
AOR:	56-00S 065-44W, 56-00S 010-00W southwards until South Pole, 58-21S 067-16W, 56-23S 065-44W, 56-23S 067-16W, 58-21S 074-00W southwards until South Pole

MRSC Mar del Plata	
AOR:	36-18S 056-46W, 35-38S 055-52W, 37-06S 054-17W, 37-56S 052-36W, 43-00S 057-15W, 38-51S 060-03W
Contact:	MMSI: 007010003, Telex: 39052, Phone: +54223-4800715, +54223-4809051, +54223-4803100, Fax: +54223-4803006, +54223-4803736, E-mail: corgal@prefecturanaval.gov.ar

MRSC Mar del Plata	
DSC Station Mar del Plata	
MMSI:	007010221, 007010003
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
	HF on 4,6,8,12,16 MHz
Location:	38-03S 57-32W
Monitor Times:	24-7

MRCC Puerto Belgrano	
Location:	38-53S 062-06W
AOR:	36-18S 056-46W, 35-38S 055-52W, 37-06S 054-17W, 37-56S 052-36W, 37-56S 010-00W, 50-00S 067-54W, 50-00S 010-00W
Contact:	Inmarsat-C: 470100125 (telex), Phone: +54-2932-487162, +54-2932-489739, +54-11-43172038, Fax: +54-2932-487163, E-mail: coopacsm@ara.mil.ar
DSC Station Puerto Deseado	
MMSI:	007010009
Station Type:	MF (Main) range 150nm
Location:	47-46S 065-54W
Monitor Times:	24-7
DSC Station Mar del Plata	
MMSI:	007010221 (VHF), 007010003 (MF)
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
Location:	38-03S 57-32W
Monitor Times:	0800-1800 UTC

MRSC Puerto Madryn	
AOR:	Maritime area of Nuevo Gulf until the line between: 42-58S 064-19W and 42-53S 064-09W
Contact:	Phone: +542965-451603, Fax: +542965-451263, E-mail: madryn@prefecturanaval.gov.ar

MRSC Punta Arenas	
AOR:	47-12S 065-44W, 47-10S 059-00W, 50-00S 061-30W, 50-00S 067-54W
Contact:	Phone: +54297-4872322, Fax: +54297-4872136

MRSC Rio del la Plata	
AOR:	Río de la Plata between Muelle Anchorena and 96.5 km of Infierno Channel
Contact:	Phone: +5411 4576 7652, Fax: +5411 4576 7651, E-mail: Contrasebaires@prefecturanaval.gov.ar
DSC Station Buenos Aires	
MMSI:	007010001
Station Type:	VHF (Main) range 35nm
Location:	34-36.3S 058-22.0W
Monitor Times:	24-7

MRSC Rio Gallegos	
AOR:	50-00S 067-54W, 50-00S 061-30W, 52-20S 063-45W, 53-50S 060-53W, 53-50S 067-30W
Contact:	MMSI: 007010010, Phone: 02966-420375, Fax: 02966-420103, E-mail: riogallegos@prefecturanaval.gov.ar
DSC Station Rio Gallegos	
MMSI:	007010010
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
Location:	51-37.00S 069-03.29W
Monitor Times:	24-7

MRSC San Antonio Oeste	
AOR:	Maritime area of San Matias Gulf until the line between 41-04S 062-50W
Contact:	Phone: +542934-421202

MRSC Uruguay	
Location:	34-54S 056-13W
AOR:	Uruguay River between km.420 and 40

MRSC Uruguay	
Contact:	Phone: +543442-427304, Fax: +543442-422044, E-mail: pzonapzbu@prefecturanaval.gov.ar
DSC Station Radio Montevideo Armada	
MMSI:	007703870
Station Type:	VHF (Main) range 30nm
Location:	34-56S 056-09W
Monitor Times:	24-7
DSC Station Carmelo Radio	
MMSI:	007703870
Station Type:	VHF (Monitor) range 30nm
Location:	33-59S 058-17W
Monitor Times:	24-7
DSC Station Colonia Radio	
MMSI:	007703870
Station Type:	VHF (Monitor) range 30nm
Location:	34-28S 057-50W
Monitor Times:	24-7
DSC Station Piriapolis Radio	
MMSI:	007703870
Station Type:	VHF (Monitor) range 30nm
Location:	34-28S 054-26W
Monitor Times:	24-7
DSC Station Chafalote Radio	
MMSI:	007703870
Station Type:	VHF (Monitor) range 30nm
Location:	34-28S 054-26W
Monitor Times:	24-7
DSC Station Santa Teresa Radio	
MMSI:	007703870
Station Type:	VHF (Monitor) range 30nm
Location:	34-00S 053-33W
Monitor Times:	24-7

MRCC Ushuaia	
AOR:	50-00.0S 067-54.0W, 50-00.0S 010-00.0W southwards to the South Pole, 56-00.0S 059-15.0W, 56-00.0S 065-43.6W, 55-22.9S 065-43.6W, 55-11.0S 066-04.7W, 55-07.3S 066-21.0W, 56-22.8S 067-16.0W, 58-21.1S 067-16.0W, 58-21.1S 074-00W southward to the South Pole. Argentine waters of the Beagle Channel and Viedma, Argentino and Fagnano Lakes
Contact:	Phone/Fax: +54-2901-431098, E-mail: mrccushuaia@ara.mil.ar
DSC Station I. Orcadas Radio	
Station Type:	MF (Main) range 150nm
Location:	60-45S 044-44W
Monitor Times:	24-7

MRSC Ushuaia	
AOR:	53-50.0S 060-53.0W, 53-50.0S 067-30.0W, 54-40.0S 059-15.0W, 56-00.0S 059-15.0W, 56-00.0S 065-43.6W, 55-11.0S 066-04.7W, 55-07.3S 066-21.0W
Contact:	Phone: 02901-422382, Fax: 02901-421425, E-mail: jeushu@prefecturanaval.gov.ar
DSC Station Ushuaia	
MMSI:	007010011
Station Type:	VHF (Main) range 35nm
	MF (Main) range 150nm
Location:	54-48S 068-18W
Monitor Times:	24-7

400L. Australia

RCC Australia	
AOR:	The coast of the Antarctic continent in longitude 75-00E thence 06-00S 075-00E, 02-00S 078-00E, 02-00S 092-00E, 12-00S 107-00E, 12-00S 123-20E, 09-20S 126-50E, 07-00S 135-00E, 09-50S 139-40E, 09-50S 141-00E, 09-37S 141-02E, 09-08S 143-53E, 09-24S 144-13E, 12-00S 144-00E, 12-00S 155-00E, 14-00S 155-00E, 14-00S 161-15E, 17-40S 163-00E thence to the coast of the Antarctic continent in longitude 163-00E
Location:	Canberra, Australia
Contact:	MMSI: 005030001, Phone: 612 6230 6811, Fax: 612 6230 6868, E-mail: rccaus@amsa.gov.au, Website: http://www.amsa.gov.au/
DSC Station Charleville	
MMSI:	005030001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	26-19.83S 146-15.85E
Monitor Times:	24-7
DSC Station Wiluna	
MMSI:	005030001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	26-20.45S 120-33.40E
Monitor Times:	24-7

400M. Belgium

MRCC Oostende	
Location:	51-14.035N 002-55.740E
AOR:	51-16-09N 002-23-25E, 51-33-28N 002-14-18E, 51-36-47N 002-15-12E, 51-48-18N 002-28-54E, 51-52-34N 002-32-21E, 51-33-06N 003-04-53E
Contact:	MMSI: 002059981, Phone: +32 59 701000 (Emergency), +32 59 701100, Fax: +32 59 703605, E-mail: mrcc@mrcc.be
DSC Station Antwerpen	
MMSI:	002050485
Station Type:	VHF (Main) range 25nm
Location:	51-13N 004-19E
Monitor Times:	24-7
DSC Station Oostende Radio	
MMSI:	002050480
Station Type:	VHF (Main) range 25nm
	MF (Main) range 155nm
Location:	51-20.04N 003-12.00E
Monitor Times:	24-7

400N. Benin

PTT Cotonou	
DSC Station Cotonou Radio	
MMSI:	006100001
Station Type:	VHF (Main) range 29nm
Location:	06-21.21N 002-26.41E
Monitor Times:	0700-1900 UTC
Station Type:	MF (Main) range 150nm
Location:	06-28N 002-20E
Monitor Times:	24-7

400O. Bermuda (UK)

RCC Bermuda	
Location:	St. George's, Bermuda
AOR:	30nm radius from island
Contact:	MMSI: 003100001 (MF and VHF DSC), Inmarsat-C: (581) 431010110/(584) 431010120, Phone: 441 297 1010, Fax: 441 297 1530, E-mail: operations@rccbermuda.bm, dutyofficer@marops.bm (Duty Officer 24 hours)

RCC Bermuda	
DSC Station Bermuda Harbor Radio	
MMSI:	003100001
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	32-23N 064-41W
Monitor Times:	24-7

400P. Brazil

MRCC Brazil	
Location (MRCC Brazil):	Rio de Janeiro (22-54S 043-10W)
Contact (MRCC Brazil):	Inmarsat-C: 471009910, Phone: +55 21 2104 6056, +55 21 2104 6863 Fax: +55 21 2104 6038 E-mail: mrccbrazil@con.mar.mil.br
Location (North):	Belem (01-28S 048-30W)
AOR (North):	Phone: (+55)(91) 32164030, 32164031, 32164123, Fax: (+55)(91) 3241 4700, E-mail: 30msg@4dn.mar.mil.br
Contact (North):	04-30N 051-38W, 08-35N 048-00W, 10-00N 048-00W, 10-00N 036-56W, 03-01S 041-14W
Location (Northeast):	Natal (05-46S 035-12)
AOR (Northeast):	Phone: (+55)(84) 3221 1947, Fax: (+55)(84) 3216 3049, 3216 3057, E-mail: mrccnortheast@3dn.mar.mil.br
Contact (Northeast):	03-01S 041-14W, 10-00N 036-56W, 10-00N 036-00W, 07-40N 035-00W, 06-22S 016-00W, 06-22S 010-00W, 19-43S 010-00W, 10-30S 036-25W
Location (East):	Salvador (12-58S 038-31W)
AOR (East):	Phone: (+55)(71) 3320 3730, 3320 3711, Fax: (+55)(71)33203726, 3320 3772, E-mail: rcceast@2dn.mar.mil.br
Contact (East):	10-30S 036-25W, 19-43S 010-00W, 27-45S 010-00W, 18-21S 039-40W
Location (Southeast):	Rio de Janeiro (22-54S 043-10W)

MRCC Brazil	
AOR (Southeast):	18-21S 039-40W, 27-45S 010-00W, 34-00S 010-00W, 34-00S 036-02W, 25-14S 048-01W, area with radius of 200nm centered on 20-29S 029-19W (Trindade Island)
Contact (Southeast):	Phone: (+55)(21) 2253 6572, 2104 6119, Fax: (+55)(21) 2104 6104, 2104 6196, E-mail: mrccrio@1dn.mar.mil.br
Location (South):	Rio Grande (32-07S 052-06W)
AOR (South):	Phone: (+55)(53) 3233 6130, 6131, 6139, Fax: (+55)(53) 3231 1519, E-mail: rccsouth@5dn.mar.mil.br
Contact (South):	25-14.0S 048-01.0W, 34-00.0S 036-02.0W, 34-00.0S 048-27.0W, 35-50.0S 050-10.0W, 34-00.0S 053-00.0W, 33-44.5S 053-22.5W
DSC Station Rio Radio	
MMSI:	007100001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	22-58S 043-41W
Monitor Times:	24-7
DSC Station Recife Radio	
MMSI:	007100002
Station Type:	HF on 4,6,8,12,16 MHz
Location:	08-04S 034-55W
Monitor Times:	24-7
DSC Station Manaus Radio	
MMSI:	007100003
Station Type:	HF on 4,6,8,12,16 MHz
Location:	03-07S 059-55W
Monitor Times:	24-7

400Q. Bulgaria

MRCC Varna	
Location:	43-11.49N 027-55.25E
AOR:	43-44-20.0N 028-34-51.0E, 43-44-20.0N 031-08-00.0E, 43-20-43.0N 032-00-00.0E, 42-26-24.0N 029-34-20.0E, 41-58-52.8N 028-19-25.8E, 41-59-00.0N 028-02-00.0E
Contact:	Inmarsat-C: 420722210 (AOR-E), Phone: +359 52 603 268, +359 52 633 067, Fax: +359 52 603 265, E-mail: mrcc_vn@marad.bg, mrcc.varna@gmail.com
DSC Station Varna Radio	
MMSI:	002070810
Station Type:	VHF (Main) range 53nm
Location:	43-15.84N 027-57.60E
Station Type:	MF (Main) range 200nm
Location:	43-04.01N 027-47.19E
Monitor Times:	24-7
DSC Station Kaliakra	
MMSI:	002070812
Station Type:	VHF (Monitor) range 30nm
Location:	43-22.79N 028-28.12E
Monitor Times:	24-7
DSC Station Emine	
MMSI:	002070815
Station Type:	VHF (Monitor) range 48nm
Location:	42-43.13N 027-52.81E
Monitor Times:	24-7

MRCC Varna	
DSC Station Bourgas	
MMSI:	002070816
Station Type:	VHF (Monitor) range 23nm
Location:	42-29.36N 027-28.53E
Monitor Times:	24-7
DSC Station Peak Kitka	
MMSI:	002070817
Station Type:	VHF (Monitor) range 44nm
Location:	42-18.46N 027-45.50E
Monitor Times:	24-7

400R. Burma

MRCC Yangon	
DSC Station Myeik Radio	
MMSI:	005060200
Station Type:	VHF (Main) range 25nm
Location:	12-26N 098-36E
Monitor Times:	24-7
DSC Station Yangon Radio	
MMSI:	005060100
Station Type:	VHF (Main) range 25nm
Location:	16-42N 096-17E
Monitor Times:	24-7

400S. Canada

JRCC Halifax	
Location:	Maritime Forces Atlantic Headquarters building, Canadian Forces Base, Halifax Dockyard (44-39N 063-33W)

JRCC Halifax	
AOR:	Bounded on the east at 30 degrees West Longitude, on the west at 70 degrees West Longitude, to the south at approximately 42 degrees North Latitude and to the north at 70 degrees North Latitude. This area comprises all of the Atlantic provinces, the eastern half of the province of Québec, the southern half of Baffin Island and an area of the western North Atlantic extending to 30º west.
Contact:	Inmarsat-C: 493020114 (AOR-E), 493020115 (AOR-W), Phone: 902 427 8200, FAX: 902 427 2114
DSC Station Saint John	
MMSI:	003160015
Station Type:	VHF (Main) range 40nm
Location:	43-15.84N 027-57.60E
Monitor Times:	24-7
DSC Station Cape Blomidon	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	45-14N 064-24W
Monitor Times:	24-7
DSC Station Grand Manan	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	44-36N 066-54W
Monitor Times:	24-7
DSC Station Lockport	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	44-40N 065-08W
Monitor Times:	24-7
DSC Station Scotch Moutntain	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	45-46N 065-48W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Tiverton	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	44-24N 066-14W
Monitor Times:	24-7
DSC Station Yarmouth	
MMSI:	003160015
Station Type:	VHF (Monitor) range 40nm
Location:	43-45N 066-07W
Monitor Times:	24-7
DSC Station Halifax	
MMSI:	003160016
Station Type:	VHF (Main) range 40nm
Location:	44-41N 063-36W
Monitor Times:	24-7
DSC Station Ecum Secum	
MMSI:	003160016
Station Type:	VHF (Monitor) range 40nm
Location:	44-58N 062-09W
Monitor Times:	24-7
DSC Station Fox Island	
MMSI:	003160016
Station Type:	VHF (Monitor) range 40nm
Location:	45-20N 061-05W
Monitor Times:	24-7
DSC Station Ketch Harbor	
MMSI:	003160016
Station Type:	VHF (Monitor) range 40nm
Location:	44-28N 063-37W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Kingsburg	
MMSI:	003160016
Station Type:	VHF (Monitor) range 40nm
Location:	44-17N 064-17W
Monitor Times:	24-7
DSC Station Shannon Hill	
MMSI:	003160016
Station Type:	VHF (Monitor) range 40nm
Location:	44-41N 063-37W
Monitor Times:	24-7

DSC Station Sydney	
MMSI:	003160017
Station Type:	VHF (Main) range 40nm
Location:	46-11N 059-54W
Monitor Times:	24-7
DSC Station Cape Egmont	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	46-24N 064-08W
Monitor Times:	24-7
DSC Station Cape North	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	47-01N 060-26W
Monitor Times:	24-7
DSC Station Cheticamp	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	46-35N 061-00W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Kilkenny Lake	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	46-13N 060-10W
Monitor Times:	24-7
DSC Station Montague	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	46-12N 062-40W
Monitor Times:	24-7
DSC Station North Cape	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	47-03N 064-00W
Monitor Times:	24-7
DSC Station Point Escuminac	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	47-04N 064-48W
Monitor Times:	24-7
DSC Station St. Columba	
MMSI:	003160017
Station Type:	VHF (Monitor) range 40nm
Location:	46-00N 060-51W
Monitor Times:	24-7
DSC Station Port aux Basques	
MMSI:	003160018
Station Type:	VHF (Main) range 40nm
Location:	47-41N 059-16W
Monitor Times:	24-7

JRCC Halifax

DSC Station Bonne Bay	
MMSI:	003160018
Station Type:	VHF (Monitor) range 40nm
Location:	49-36N 057-57W
Monitor Times:	24-7

DSC Station Mount Moriah	
MMSI:	003160018
Station Type:	VHF (Monitor) range 40nm
Location:	48-58N 058-03W
Monitor Times:	24-7

DSC Station Point Riche	
MMSI:	003160018
Station Type:	VHF (Monitor) range 40nm
Location:	50-42N 057-25W
Monitor Times:	24-7

DSC Station Ramea Island	
MMSI:	003160018
Station Type:	VHF (Monitor) range 40nm
Location:	47-31N 057-25W
Monitor Times:	24-7

DSC Station Placentia	
MMSI:	003160019
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7

DSC Station Arnold's Cove	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	47-47N 054-00W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Bay L'Argent	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	47-32N 054-52W
Monitor Times:	24-7
DSC Station Cape Pine	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	46-37N 053-32W
Monitor Times:	24-7
DSC Station Cuslett	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	46-58N 054-09W
Monitor Times:	24-7
DSC Station Fortune Head	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	47-04N 055-51W
Monitor Times:	24-7
DSC Station Freshwater Hill	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	47-16N 053-59W
Monitor Times:	24-7
DSC Station Hermitage	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	47-34N 055-57W
Monitor Times:	24-7

JRCC Halifax	
DSC Station St. Lawrence	
MMSI:	003160019
Station Type:	VHF (Monitor) range 40nm
Location:	46-55N 055-23W
Monitor Times:	24-7
DSC Station St. John's	
MMSI:	003160020
Station Type:	VHF (Main) range 40nm
Location:	47-36N 052-40W
Monitor Times:	24-7
DSC Station Cape Bonavista	
MMSI:	003160020
Station Type:	VHF (Monitor) range 40nm
Location:	48-42N 053-17W
Monitor Times:	24-7
DSC Station Lumsden	
MMSI:	003160020
Station Type:	VHF (Monitor) range 40nm
Location:	49-17N 053-35W
Monitor Times:	24-7
DSC Station Victoria	
MMSI:	003160020
Station Type:	VHF (Monitor) range 40nm
Location:	47-50N 053-18W
Monitor Times:	24-7
DSC Station St. Anthony	
MMSI:	003160021
Station Type:	VHF (Main) range 40nm
Location:	51-30N 055-49W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Comfort Cove	
MMSI:	003160021
Station Type:	VHF (Monitor) range 40nm
Location:	49-20N 054-51W
Monitor Times:	24-7
DSC Station Conche	
MMSI:	003160021
Station Type:	VHF (Monitor) range 40nm
Location:	50-54N 055-53W
Monitor Times:	24-7
DSC Station Fox Harbor	
MMSI:	003160021
Station Type:	VHF (Monitor) range 40nm
Location:	52-22N 055-40W
Monitor Times:	24-7
DSC Station L'Anse aux Meadows	
MMSI:	003160021
Station Type:	VHF (Monitor) range 40nm
Location:	51-34N 055-30W
Monitor Times:	24-7
DSC Station Twillingate	
MMSI:	003160021
Station Type:	VHF (Monitor) range 40nm
Location:	49-41N 054-48W
Monitor Times:	24-7
DSC Station Labrador	
MMSI:	003160022
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7

JRCC Halifax	
DSC Station Cartright	
MMSI:	003160022
Station Type:	VHF (Monitor) range 40nm
Location:	53-42N 057-02W
Monitor Times:	24-7
DSC Station Hopedale	
MMSI:	003160022
Station Type:	VHF (Monitor) range 40nm
Location:	55-27N 060-13W
Monitor Times:	24-7
DSC Station Nain	
MMSI:	003160022
Station Type:	VHF (Monitor) range 40nm
Location:	56-33N 061-43W
Monitor Times:	24-7
DSC Station Iqaluit	
MMSI:	003160023
Station Type:	HF on 4,6,8,12,16 MHz
Location:	63-43N 068-33W
Monitor Times:	24-7, open during navigation season only
DSC Station Riviere au Renard	
MMSI:	003160025
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7
DSC Station Cap-aux-Meules	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	47-23N 061-52W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Carleton	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	48-08N 066-07W
Monitor Times:	24-7
DSC Station Forillon	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	48-50N 064-16W
Monitor Times:	24-7
DSC Station Harrington Harbor	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	50-30N 059-29W
Monitor Times:	24-7
DSC Station Havre St. Pierre	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	50-16N 063-41W
Monitor Times:	24-7
DSC Station Heath Point	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	49-05N 061-42W
Monitor Times:	24-7
DSC Station La Romaine	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	50-13N 060-41W
Monitor Times:	24-7

JRCC Halifax	
DSC Station Natashquan	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	50-09N 061-48W
Monitor Times:	24-7
DSC Station Newport	
MMSI:	003160025
Station Type:	VHF (Monitor) range 40nm
Location:	48-14N 064-48W
Monitor Times:	24-7

JRCC Quebec	
Location:	46-48N 071-12W
AOR:	47-50-00N 065-25-00W, 48-13-14N 064-25-22W, 48-13-14N 063-47-33W, 47-36-21N 063-19-56W, 47-08-23N 062-59-14W, 46-50-24N 062-8-03W, 46-50-24N 061-24-01W, 47-00-35N 061-21-05W, 47-19-46N 060-59-34W, 47-25-24N 060-45-49W, 47-45-40N 060-24-17W, 47-50-00N 060-00-00W, 49-30-00N 060-00-00W, 51-27-00N 056-52-00W
Contact:	Phone: 418 648 3599, Fax: 418 648 3614
DSC Station Les Escoumins	
MMSI:	003160026
Station Type:	VHF (Main) range 40nm
Location:	48-19N 069-25W
Monitor Times:	24-7
DSC Station Cap Est	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	48-23N 070-41W
Monitor Times:	24-7
DSC Station Gosses-Roches	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	48-55N 067-07W

JRCC Quebec	
Monitor Times:	24-7
DSC Station Lac D'aigle	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	50-17N 066-19W
Monitor Times:	24-7
DSC Station Mont-Joli	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	48-37N 068-14W
Monitor Times:	24-7
DSC Station Mont-Louis	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	49-13N 065-46W
Monitor Times:	24-7
DSC Station Sacre-Coeur	
MMSI:	003160026
Station Type:	VHF (Monitor) range 40nm
Location:	48-13N 069-52W
Monitor Times:	24-7
DSC Station Quebec	
MMSI:	003160027
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7
DSC Station Lauzon	
MMSI:	003160027
Station Type:	VHF (Monitor) range 40nm
Location:	46-49N 071-10W
Monitor Times:	24-7

JRCC Quebec	
DSC Station Mont Belair	
MMSI:	003160027
Station Type:	VHF (Monitor) range 40nm
Location:	46-49N 071-30W
Monitor Times:	24-7
DSC Station Montmagny	
MMSI:	003160027
Station Type:	VHF (Monitor) range 40nm
Location:	46-56N 070-31W
Monitor Times:	24-7
DSC Station Riviere du Loup	
MMSI:	003160027
Station Type:	VHF (Monitor) range 40nm
Location:	47-45N 069-36W
Monitor Times:	24-7
DSC Station Trois-Rivieres	
MMSI:	003160027
Station Type:	VHF (Monitor) range 40nm
Location:	46-24N 072-27W
Monitor Times:	24-7
DSC Station Montreal	
MMSI:	003160028
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7
DSC Station L'Acadie	
MMSI:	003160028
Station Type:	VHF (Monitor) range 40nm
Location:	45-19N 073-19W
Monitor Times:	24-7

JRCC Quebec	
DSC Station Mont-St. Bruno	
MMSI:	003160028
Station Type:	VHF (Monitor) range 40nm
Location:	45-33N 073-20W
Monitor Times:	24-7
DSC Station Mont Rigaud	
MMSI:	003160028
Station Type:	VHF (Monitor) range 40nm
Location:	45-27N 074-18W
Monitor Times:	24-7
DSC Station Sorel	
MMSI:	003160028
Station Type:	VHF (Monitor) range 40nm
Location:	46-03N 073-07W
Monitor Times:	24-7

JRCC Trenton	
Location:	Canadian Forces Base Trenton, 44-07N 077-32W
AOR:	All of central Canada from Quebec City in the East, to the Alberta-British Columbia border in the West, and from the U.S. border in the South to the North Pole.
Contact:	Telex: +21 06 62282 RCC RSMS Tren (Rx only), Phone: 613 965 3870, Fax: 613 965 7190
DSC Station Iqaluit	
MMSI:	003160023
Station Type:	HF on 4,6,8,12,16 MHz
Location:	63-43N 068-33W
Monitor Times:	24-7, open during navigation season only
DSC Station Prescott	
MMSI:	003160029
Station Type:	VHF (Main) range 40nm
Monitor Times:	24-7

JRCC Trenton	
DSC Station Cardinal	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	44-47N 075-25W
Monitor Times:	24-7
DSC Station Cobourg	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	44-04N 078-13W
Monitor Times:	24-7
DSC Station Cornwall	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	45-01N 074-44W
Monitor Times:	24-7
DSC Station Fonthill	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	43-03N 079-19W
Monitor Times:	24-7
DSC Station Kingston	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	44-16N 076-41W
Monitor Times:	24-7
DSC Station Orillia	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	44-35N 079-18W
Monitor Times:	24-7

JRCC Trenton	
DSC Station Trafalgar	
MMSI:	003160029
Station Type:	VHF (Monitor) range 40nm
Location:	43-30N 079-44W
Monitor Times:	24-7
DSC Station Sarnia	
MMSI:	003160030
Station Type:	VHF (Main) range 40nm
Location:	43-01N 082-11W
Monitor Times:	24-7
DSC Station Grand Pointe	
MMSI:	003160030
Station Type:	VHF (Monitor) range 40nm
Location:	42-23N 082-24W
Monitor Times:	24-7
DSC Station Kincardine	
MMSI:	003160030
Station Type:	VHF (Monitor) range 40nm
Location:	44-07N 081-42W
Monitor Times:	24-7
DSC Station Leamington	
MMSI:	003160030
Station Type:	VHF (Monitor) range 40nm
Location:	42-04N 082-40W
Monitor Times:	24-7
DSC Station Port Burwell	
MMSI:	003160030
Station Type:	VHF (Monitor) range 40nm
Location:	42-25N 080-36W
Monitor Times:	24-7

JRCC Trenton	
DSC Station Rondeau	
MMSI:	003160030
Station Type:	VHF (Monitor) range 40nm
Location:	42-25N 081-51W
Monitor Times:	24-7
DSC Station Thunder Bay	
MMSI:	003160031
Station Type:	VHF (Main) range 40nm
Location:	48-26N 089-18W
Monitor Times:	24-7
DSC Station Bald Head	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	47-40N 084-48W
Monitor Times:	24-7
DSC Station Horn	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	48-49N 087-21W
Monitor Times:	24-7
DSC Station Killarney	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	45-58N 081-29W
Monitor Times:	24-7
DSC Station Meaford	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	44-31N 080-34W
Monitor Times:	24-7

JRCC Trenton	
DSC Station Pointe au Baril	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	45-34N 080-19W
Monitor Times:	24-7
DSC Station Sault Ste Marie	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	46-32N 084-35W
Monitor Times:	24-7
DSC Station Silver Water	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	45-54N 082-55W
Monitor Times:	24-7
DSC Station Tobermory	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	45-10N 081-30W
Monitor Times:	24-7
DSC Station Wiarton	
MMSI:	003160031
Station Type:	VHF (Monitor) range 40nm
Location:	44-45N 081-07W
Monitor Times:	24-7

JRCC Victoria	
Location:	Canadian Forces Base Esquimalt 48-25.9N 123-26.25W
AOR:	Approximately 920,000 square kilometers of mainly mountainous terrain of Yukon and British Columbia and 560,000 square kilometers of the Pacific Ocean extending to approximately 600 nautical miles offshore.
Contact:	Inmarsat-C: 431699932 (AOR-W telex), 431699933 (POR telex), Phone: 250 363 2333, Fax: 250 363 2944, E-mail: jrccvictoria@sarnet.dnd.ca

JRCC Victoria

DSC Station Vancouver	
MMSI:	003160010
Station Type:	VHF (Monitor) range 40nm
Monitor Times:	24-7

DSC Station Watts Point	
MMSI:	003160010
Station Type:	VHF (Monitor) range 40nm
Location:	49-39N 123-13W
Monitor Times:	24-7
DSC Station Annacis Island	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Location:	49-12N 122-55W
Monitor Times:	24-7
DSC Station Bowen Island	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Location:	49-21N 123-23W
Monitor Times:	24-7
DSC Station Helmcken	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Location:	48-24N 123-34W
Monitor Times:	24-7
DSC Station Mount Newton	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Location:	48-37N 123-27W
Monitor Times:	24-7

JRCC Victoria	
DSC Station Mount Parke	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Location:	48-50N 123-18W
Monitor Times:	24-7
DSC Station Victoria	
MMSI:	003160011
Station Type:	VHF (Monitor) range 40nm
Monitor Times:	24-7
DSC Station Eliza Dome	
MMSI:	003160012
Station Type:	VHF (Monitor) range 40nm
Location:	49-52N 127-07W
Monitor Times:	24-7
DSC Station Holberg	
MMSI:	003160012
Station Type:	VHF (Monitor) range 40nm
Location:	50-38N 128-08W
Monitor Times:	24-7
DSC Station Mount Ozzard	
MMSI:	003160012
Station Type:	VHF (Monitor) range 40nm
Location:	48-58N 125-30W
Monitor Times:	24-7
DSC Station Tofino	
MMSI:	003160012
Station Type:	VHF (Monitor) range 40nm
Monitor Times:	24-7
DSC Station Calvert Island	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm

JRCC Victoria	
Location:	51-35N 128-01W
Monitor Times:	24-7
DSC Station Cumshewa	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	53-10N 132-00W
Monitor Times:	24-7
DSC Station Dundas Island	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	54-31N 130-55W
Monitor Times:	24-7
DSC Station Klemtu	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	52-35N 128-34W
Monitor Times:	24-7
DSC Station Mount Gil	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	53-16N 129-12W
Monitor Times:	24-7
DSC Station Mount Hayes	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	54-17N 130-19W
Monitor Times:	24-7
DSC Station Naden Harbor	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	53-57N 132-57W

JRCC Victoria	
Monitor Times:	24-7
DSC Station Prince Rupert	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Monitor Times:	24-7
DSC Station Rose Inlet	
MMSI:	003160013
Station Type:	VHF (Monitor) range 40nm
Location:	52-13N 131-13W
Monitor Times:	24-7
DSC Station Comox	
MMSI:	003160014
Station Type:	VHF (Monitor) range 40nm
Location:	49-45N 124-57W
Monitor Times:	24-7
DSC Station Discovery	
MMSI:	003160014
Station Type:	VHF (Monitor) range 40nm
Location:	50-19N 125-22W
Monitor Times:	24-7
DSC Station Port Hardy	
MMSI:	003160014
Station Type:	VHF (Monitor) range 40nm
Location:	50-42N 127-42W
Monitor Times:	24-7
DSC Station Texada	
MMSI:	003160014
Station Type:	VHF (Monitor) range 40nm
Location:	49-42N 124-26W
Monitor Times:	24-7

400T. Cape Verde

MRCC CPB (Cape Verde)	
Contact:	Phone: +(238)2324492, +(238)2324144, Fax: +(238)2324271, E-mail: capitaniasv@cvtelecom.cv
Notes:	CPB- Capitania dos Portos de Barlavento *(Captaincy of the Windward Ports)*
DSC Station Sao Vicente Radio	
MMSI:	006170000
Station Type:	VHF (Main) range 70nm
	MF (Main) range 200nm
Location:	16-51.1N 025-00.3W
Monitor Times:	24-7
DSC Station Monte Verde (Sao Vicente Island)	
MMSI:	006170000
Station Type:	VHF (Monitor)
Location:	16-52.11N 024-56.02W
Monitor Times:	24-7
DSC Station Morro Curral (Sal Island)	
MMSI:	006170000
Station Type:	VHF (Monitor)
Location:	16-45.25N 022-56.33W
Monitor Times:	24-7
DSC Station Monte Xota (Santiago Island)	
MMSI:	006170000
Station Type:	VHF (Monitor)
Location:	15-02.13N 023-37.22W
Monitor Times:	24-7

400U. Chile

MRSC Antofagasta	
Contact:	Phone: 56 55 63037, 56 55 630086, Fax: 56 55 224464, E-mail: mrscantofagasta@directemar.cl
Sub-coordination Center of:	MRCC Iquique
DSC Station Tocopilla	
MMSI:	007250030
Station Type:	VHF (Main) range 15nm
Location:	22-05.25S 070-12.15W
Monitor Times:	24-7
DSC Station Mejillones	
MMSI:	007250040
Station Type:	VHF (Main) range 15nm
Location:	23-05.4S 070-27.0W
Monitor Times:	24--7
DSC Station Antofagasta	
MMSI:	007250050
Station Type:	VHF (Main) range 30nm
	MF (Main) range 180nm
	HF on 4 MHz
Location:	23-40.03S 070-24.29W
Monitor Times:	24-7
Additional RCCs supported:	MRCC Iquique
DSC Station Taltal	
MMSI:	007250060
Station Type:	VHF (Main) range 15nm

MRSC Antofagasta	
Location:	25-24.30S 070-29.02W
Monitor Times:	24-7

MRSC Arica	
Contact:	Phone: +56 58 220 6470, +56 58 206 437, Fax: +56 58 220 6496, E-mail: mrscarica@directemar.cl
Sub-coordination Center of:	MRCC Iquique
DSC Station Arica	
MMSI:	007250010
Station Type:	VHF (Main) range 39nm
	MF (Main) range 180nm
Location:	18-29.10S 070-19.16W
Monitor Times:	24-7

MRSC Aysen/ MRSC Puerto Aysen	
Contact:	Phone: 56 67 331461, 567 331486, Fax: 56 67 331496, E-mail: mrscaysen@directemar.cl
Sub-coordination Center of:	MRCC Puerto Montt
DSC Station Tocopilla	
MMSI:	007250300
Station Type:	VHF (Main) range 15nm
	MF (Main) range 180nm
Location:	45-24.29S 072-43.05W
Monitor Times:	24-7
DSC Station Melinka	
MMSI:	007250280
Station Type:	VHF (Main) range 15nm
Location:	43-53.54S 073-44.45W
Monitor Times:	24-7
DSC Station Puerto Aguirre	
MMSI:	007250294
Station Type:	VHF (Main) range 15nm

MRSC Aysen/ MRSC Puerto Aysen	
Location:	45-09.45S 073-31.36W
Monitor Times:	24-7
DSC Station Puerto Chacabuco	
MMSI:	007250298
Station Type:	VHF (Main) range 15nm
Location:	45-26.48S 072-49.18W
Monitor Times:	24-7
DSC Station Cabo Raper	
MMSI:	007250298
Station Type:	VHF (Main) range 22nm
Location:	46-49.08S 075-37.23W
Monitor Times:	24-7

MRSC Caldera	
Contact:	Phone: 56 52 315551, 56 52 315276, Fax: 56 52 315276, E-mail: mrcccaldera@directemar.cl
Sub-coordination Center of:	MRCC Vaparaiso
DSC Station Chanaral	
MMSI:	007250070
Station Type:	VHF (Main) range 15nm
Location:	26-21.0S 070-38.2W
Monitor Times:	24-7
DSC Station Caldera	
MMSI:	007250080
Station Type:	VHF (Main) range 15nm
	MF (Main) range 180nm
Location:	27-03.58S 070-49.23W
Monitor Times:	24-7
DSC Station Huasco	
MMSI:	007250090
Station Type:	VHF (Main) range 15nm
Location:	28-27.4S 071-13.3W

MRSC Caldera	
Monitor Times:	24-7

MRSC Castro	
Contact:	Phone: 56 65 631204, 56 65 631286, Fax: 56 65 631296, E-mail: mrsccasro@directemar.cl
Sub-coordination Center of:	MRCC Puerto Montt
DSC Station Ancud	
MMSI:	007250240
Station Type:	VHF (Main) range 15nm
Location:	41-52.04S 073-50.20W
Monitor Times:	24-7
DSC Station Castro	
MMSI:	007250250
Station Type:	VHF (Main) range 15nm
Location:	42-28.58S 073-46.04W
Monitor Times:	24-7
DSC Station Chaiten	
MMSI:	007250260
Station Type:	VHF (Main) range 15nm
Location:	42-55.00S 072-43.27W
Monitor Times:	24-7
DSC Station Quellon	
MMSI:	007250270
Station Type:	VHF (Main) range 15nm
Location:	43-07.32S 073-37.42W
Monitor Times:	24-7

MRCC Chile	
Location:	33-01S 071-37W
AOR:	Chile coast at 18-21-03S west to 120-00W. 120-00W south to 30-00S. West to 131-00W and also covers Drake Passage and an area which extends to the Antarctic, where weather conditions are generally adverse

MRCC Chile	
Contact:	Phone: 56 32 2208637, 56 32 2208639, Fax: 56 32 2208662, E-mail: mrccchile@directemar.cl

MRSC Chilean Antarctic	
Contact:	Phone: 56 32 2208557, 56 32 2208556, E-mail: mrscantacticachilena@directemar.cl
DSC Station Bahia Fildes	
MMSI:	007250450
Station Type:	VHF (Main) range 15nm
	MF (Main) range 180nm
Location:	62-11.48S 058-55.30W
Monitor Times:	24-7
DSC Station Bahia Pariso	
MMSI:	007250470
Station Type:	VHF (Main) range 15nm
Location:	64-49.23S 062-51.34W
Monitor Times:	24-7

MRSC Coquimbo	
Contact:	Phone: 56 51 558138, 56 51 558100, Fax: 56 51 558196, E-mail: mrsccoquimbo@directemar.cl
Sub-coordination Center of:	MRCC Vaparaiso
DSC Station Coquimbo	
MMSI:	007250110
Station Type:	VHF (Main) range 62nm
	MF (Main) range 180nm
Location:	29-56.3S 071-20.1W
Monitor Times:	24-7
DSC Station Los Vilos	
MMSI:	007250120
Station Type:	VHF (Main) range 15nm
Location:	31-54.15S 071-31.23W
Monitor Times:	24-7

MRSC Hanga ROA	
Location:	Easter Island (27-07S 109-22W)
Contact:	Phone: 56 32 2100222, 56 32 2100469, Fax: 56 32 2100222, E-mail: mrschangatoa@directemar.cl
Sub-coordination Center of:	MRCC Valparaiso

MRCC Iquique	
Location:	20-12S 070-09W
AOR:	Chile's SRR 1st district, North section
Contact:	Phone: 56 57 4019761, Fax: 56 57 401996, E-mail: mrsciquique@directemar.cl
Sub-coordination Center of:	MRCC Chile
DSC Station Iquique	
MMSI:	007250020
Station Type:	VHF (Main) range 64nm
	MF (Main) range 180nm
Location:	20-21.2S 070-06.5W
Monitor Times:	24-7
DSC Station Antofagasta	
MMSI:	007250050
Station Type:	VHF (Main) range 64nm
	MF (Main) range 180nm
	HF on 4 MHz
Location:	23-40.03S 070-24.29W
Monitor Times:	24-7
Additional RCCs supported:	MRSC Antofagasta

MRCC Puerto Montt	
Location:	41-28S 072-57W
AOR:	Chile's SRR 4th district, southern section just North of MRCC Pta Arenas
Contact:	Phone: 56 65 561153, Fax: 56 65 483931, E-mail: mrscpuertomontt@directemar.cl
Sub-coordination Center of:	MRCC Chile

MRCC Puerto Montt	
DSC Station Puerto Montt	
MMSI:	007250230
Station Type:	VHF (Main) range 34nm
	MF (Main) range 180nm
Location:	41-39.15S 073-10.13W
Station Type:	HF on 4 MHz
Location:	41-47S 073-53W
Monitor Times:	24-7
DSC Station Corona	
MMSI:	07250235
Station Type:	VHF (Main) range 26nm
Location:	41-47.04S 073-52.33W
Monitor Times:	24-7
DSC Station Isla Guafo	
MMSI:	007250290
Station Type:	VHF (Main) range 33nm
Location:	43-33.54S 074-49.50W
Monitor Times:	24-7

MRSC Puerto Williams	
Contact:	Phone: 56 61 2621090, Fax: 56 32 2208909, E-mail: mrscpuertowilliams@directemar.cl
Sub-coordination Center of:	MRCC Punta Arenas
DSC Station Puerto Williams	
MMSI:	007250420
Station Type:	VHF (Main) range 22nm
	MF (Main) range 180nm
Location:	54-55.57S 067-36.27W
Monitor Times:	24-7
DSC Station Wollaston	
MMSI:	007250430
Station Type:	VHF (Main) range 28nm

MRSC Puerto Williams	
Location:	55-36.48S 067-25.48W
Monitor Times:	24-7
DSC Station Diego Ramirez	
MMSI:	007250440
Station Type:	VHF (Main) range 28nm
Location:	56-31.24S 068-42.36W
Monitor Times:	24-7

MRCC Punta Arenas	
Location:	53-10S 070-54W
AOR:	Chile's SRR 5th district, most southern section
Contact:	Phone: 56 61 201161, Fax: 56 61 201196, E-mail: mrscpuntaarenas@directemar.cl
Sub-coordination Center of:	MRCC Chile
DSC Station San Pedro	
MMSI:	007250320
Station Type:	VHF (Main) range 18nm
	MF (Main) range 180nm
Location:	47-42.39S 074-53.35W
Monitor Times:	24-7
DSC Station Puerto Eden	
MMSI:	007250330
Station Type:	VHF (Main) range 15nm
Location:	49-08.2S 074-27.1W
Monitor Times:	24-7
DSC Station Puerto Natales	
MMSI:	007250340
Station Type:	VHF (Main) range 15nm
Location:	51-44.54S 072-32.10W
Monitor Times:	24-7
DSC Station Faro Evangelistas	
MMSI:	007250350

MRCC Punta Arenas	
Station Type:	VHF (Main) range 21nm
Location:	52-23.07S 075-05.54W
Monitor Times:	24-7
DSC Station Faro Fairway	
MMSI:	007250360
Station Type:	VHF (Main) range 19nm
Location:	52-43.53S 073-46.42W
Monitor Times:	24-7
DSC Station Bahia Felix	
MMSI:	007250370
Station Type:	VHF (Main) range 19nm
	MF (Main) range 180nm
Location:	52-57.43S 074-04.51W
Monitor Times:	24-7
DSC Station Punta Arenas	
MMSI:	007250380
Station Type:	VHF (Main) range 64nm
	MF (Main) range 180nm
	53-09.12S 071-02.20W
Station Type:	Station Type: HF on 4,8 MHz
Location:	53-10S 070-54W
Monitor Times:	24-7
DSC Station Punta Delgada	
MMSI:	007250390
Station Type:	VHF (Main range 17nm)
	MF (Main) range 180nm
Location:	52-27.12S 069-33.15W
Monitor Times:	24-7
DSC Station Punta Dungeness	
MMSI:	007250400
Station Type:	VHF (Main range 21nm)

MRCC Punta Arenas	
Location:	52-24S 068-26W
Monitor Times:	24-7
DSC Station Espiritu Santo	
MMSI:	007250410
Station Type:	VHF (Main range 24nm)
Location:	52-39.32S 068-36.42W
Monitor Times:	24-7

MRSC San Antonio	
Contact:	Phone: 56 35 584886, 56 35 584800, Fax: 56 35 584896, E-mail: mrscsanantonio@directemar.cl
Sub-coordination Center of:	MRCC Valparaiso
DSC Station San Antonio	
MMSI:	007250140
Station Type:	VHF (Main) range 31nm
	MF (Main) range 180nm
Location:	33-34S 071-37W
Monitor Times:	24-7

MRCC Talcahuano	
Location:	36-41S 073-06W
AOR:	Chile's SRR 3rd district, Middle section
Contact:	Phone: 56 41 2266162, Fax: 56 41 2266196, E-mail: mrcctalcahuano@directemar.cl
Sub-coordination Center of:	MRCC Chile
DSC Station Constitucion	
MMSI:	007250150
Station Type:	VHF (Main) range 15nm
Location:	35-19.10S 072-24.05W
Monitor Times:	24-7
DSC Station Talcahuano	
MMSI:	007250170

MRCC Talcahuano	
Station Type:	VHF (Main) range 32nm
	MF (Main) range 180nm
Location:	36-37.25S 073-04.05W
Station Type:	HF on 4 MHz
Location:	36-42S 073-06W
Monitor Times:	24-7

MRSC Valdivia	
DSC Station Corral	
MMSI:	007250210
Station Type:	VHF (Main) range 15nm
Location:	39-53.01S 073-25.31W
Monitor Times:	24-7
DSC Station Valdivia	
MMSI:	007250220
Station Type:	VHF (Main) range 15nm
Location:	39-48.50S 073-14.51W
Monitor Times:	24-7

MRCC Valparaiso	
Location:	33-01S 071-37W
AOR:	Chile's SRR 2nd district, just south of MRCC Iquique
Contact:	Phone: 56 32 2208913, Fax: 56 32 2208909, E-mail: mrccvalparaiso@directemar.cl
Sub-coordination Center of:	MRCC Chile
DSC Station Isla de Pascua	
MMSI:	007250100
Station Type:	VHF (Main) range 44nm
	MF (Main) range 180nm
	HF on 4 MHz
Location:	27-10.57S 109-25.42W
Monitor Times:	24-7

MRCC Valparaiso	
Additional RCCs supported:	MRSC Isla de Pascua
DSC Station Quintero	
MMSI:	007250125
Station Type:	VHF (Main) range 15nm
Location:	32-46.21S 071-31.28W
Monitor Times:	24-7
DSC Station Juan Fernandez	
MMSI:	007250130
Station Type:	VHF (Main) range 15nm
	MF (Main) range 180nm
Location:	33-37.11S 078-49.39W
Monitor Times:	24-7
DSC Station Valparaiso	
MMSI:	007251860
Station Type:	VHF (Main) range 63nm
	MF (Main) range 180nm
Location:	33-04.42S 071-36.48W
Station Type:	HF on 4,6,8,12,16 MHz
Location	33-01S 071-39W
Monitor Times:	24-7

400V. China

Basuo HAS	
DSC Station Basuo Radio	
MMSI:	004123600
Station Type:	MF (Main) range 100nm
Location:	19-06N 108-37E
Monitor Times:	24-7

Beihai HSA	
DSC Station Beihai Radio	
MMSI:	004123400
Station Type:	MF (Main) range 100nm
Location:	21-29N 109-04E
Monitor Times:	24-7

MRCC China	
Contact:	Telex: +85 222258 SMSAR CN, Phone: 10 65292218, 10 65292221, Fax: 10 65292245, E-mail: cnmrcc@mot.gov.cn

MRCC Fujian	
DSC Station Fuzhou Radio	
MMSI:	004122600
Station Type:	VHF (Main) range 25nm
Location:	26-02N 119-18E
Station Type:	MF (Main) range 100nm
Location:	26-01N 119-18E

MRCC Fujian	
Monitor Times:	24-7

MRCC Guangdong	
Contact:	Phone: 20 34298277, 20 23297696, Fax: 20 34298277, E-mail: gdmail@gdmsa.gov.cn
DSC Station Guangzhou Radio	
MMSI:	004123100
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	23-08N 113-29E
Monitor Times:	24-7

Haikou HSA/MRCC Hainan Province	
Contact:	Phone: 898 68653899, Phone: 898 68666231
DSC Station Haikou Radio	
MMSI:	004123500
Station Type:	VHF (Main) range 25nm
Location:	20-01N 110-17E
Monitor Times:	24-7

MRCC Hebei	
DSC Station Qinhuangdao Radio	
MMSI:	004121200
Station Type:	VHF (Main) range 25nm
Location:	39-53N 119-31E
Monitor Times:	24-7

MRCC Lianyungang	
DSC Station Lianyungang Radio	
MMSI:	004122300
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm

MRCC Lianyungang	
Location:	34-42N 119-18E
Monitor Times:	24-7

MRCC Liaoning	
Contact:	Phone: 411 82635487, Fax: 411 82622230
DSC Station Dalian Radio	
MMSI:	004121300
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	38-50N 121-31E
Monitor Times:	24-7

MRSC Ningbo	
DSC Station Ningbo Radio	
MMSI:	004122400
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	30-01N 121-30E
Monitor Times:	24-7

MRSC Qingdao	
DSC Station Dalian Radio	
MMSI:	004122200
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	36-10N 120-28E
Monitor Times:	24-7

Sanya HAS	
DSC Station Sanya Radio	
MMSI:	004123700

Sanya HAS	
Station Type:	MF (Main) range 100nm
Location:	18-14N 109-30E
Monitor Times:	24-7

MRCC Shanghai	
Contact:	Phone: 21 53911419, Fax: 21 53931420
DSC Station Dalian Radio	
MMSI:	004122100
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	31-06N 121-32E
Monitor Times:	24-7

MRSC Shantou	
Contact:	Phone: 754 88900111, Fax: 754 88900110, E-mail: stmail@gdmsa.gov.cn
DSC Station Wenzhou Radio	
MMSI:	004123200
Station Type:	MF (Main) range 100nm
Location:	23-21N 116-40E
Monitor Times:	24-7

MRCC Tianjin	
DSC Station Tianjin Radio	
MMSI:	004121100
Station Type:	VHF (Main) range 25nm
Location:	39-03N 117-25E
Station Type:	MF (Main) range 100nm
Location:	39-00N 117-25E
Monitor Times:	24-7

Wenzhou HAS	
DSC Station Wenzhou Radio	
MMSI:	004122500
Station Type:	MF (Main) range 100nm
Location:	28-01N 120-38E
Monitor Times:	24-7

MRSC Xiamen	
DSC Station Xiamen Radio	
MMSI:	004122700
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	24-35N 118-06E
Monitor Times:	24-7

MRSC Yantai	
DSC Station Dalian Radio	
MMSI:	004121400
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	37-32N 121-22E
Monitor Times:	24-7

MRSC Zhanjiang	
Contact:	Phone: 759 2222090, Fax: 759 2286084, E-mail: zjmail@gdmsa.gov.cn
DSC Station Zhanjiang Radio	
MMSI:	004123100
Station Type:	VHF (Main) range 25nm
	MF (Main) range 100nm
Location:	21-09N 110-21E
Monitor Times:	24-7

400W. Cote D'Ivoire

MRCC Abidjan	
DSC Station Abidjan Radio	
MMSI:	006191000
Station Type:	VHF (Main) range 50nm
	MF (Main) range 500nm
	HF
Location:	05-19.34N 004-01.02W
Monitor Times:	24-7
DSC Station Kouakro	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	05-15.46N 003-29.26W
Monitor Times:	24-7
DSC Station Grand Lahou	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	05-15.46N 005-00.39W
Monitor Times:	24-7
DSC Station Sassandra	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	04-57.07N 006-05.30W

MRCC Abidjan	
Monitor Times:	24-7
DSC Station San Pedro	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	04-44.2N 006-37.3W
Monitor Times:	24-7
DSC Station Tabou	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	04-24.42N 007-21.44W
Monitor Times:	24-7
DSC Station Marcory	
MMSI:	006191000
Station Type:	VHF (Monitor) range 50nm
	MF (Monitor)
Location:	05-21.42N 003-57.48W
Monitor Times:	24-7

400X. Croatia

MRSC Dubrovnik	
Location:	42-39.5N 018-05.5E
Contact:	Phone: +385 20 418989, Fax: +385 20 419211
Sub-coordination Center of:	MRCC Rijecka

MRSC Dubrovnik	
DSC Station MRSC Dubrovnik	
MMSI:	002387800
Station Type:	VHF (Main) range 15nm
Location:	42-39.5N 018-05.4E
Monitor Times:	24-7

MRSC Ploce	
Location:	43-03.0N 017-26.3E
Contact:	Phone: +385 20 679008, Fax: +385 20 670206
Sub-coordination Center of:	MRCC Rijecka
DSC Station Ploce	
MMSI:	002383350
Station Type:	VHF (Main) range 15nm
Location:	43-03N 017-26E
Monitor Times:	24-7

MRSC Pula	
Location:	44-52.4N 013-50.8E
Contact:	Phone: +385 52 535870, Fax: +385 52 222037, E-mail: pula.pomorskipromet@pomorstvo.hr
Sub-coordination Center of:	MRCC Rijecka

MRCC Rijeka	
Location:	45-19.4N 014-26.7E
AOR:	45-27.3N 013-12.7E, 45-09.8N 013-00.0E, 44-32.0N 013-13.9E, 43-29.9N 014-30.00E, 42-55.3N 015-16.2E, 42-31.1N 016-01.4E, 42-15.0N 016-33.2E, 41-34.5N 018-00.0E, 41-30.0N 018-09.0E
Contact:	Telex: 599-24634, Inmarsat-C: 423816510, Phone: +385 51 312253, +385 51 9155, Fax: +385 51 312 254, E-mail: mrcc@pomorstvo.hr
DSC Station Celavac	
MMSI:	002380100
Station Type:	VHF (Monitor) range 80nm
Location:	44-15.6N 015-47.4E

MRCC Rijeka	
Monitor Times:	24-7
DSC Station Hum (Lastovo Island)	
MMSI:	002380100
Station Type:	VHF (Monitor) range 40nm
Location:	42-45.1N 016-51.9E
Monitor Times:	24-7
DSC Station Hum (Vis Island)	
MMSI:	002380100
Station Type:	VHF (Monitor) range 70nm
Location:	43-01.5N 016-07.0E
Monitor Times:	24-7
DSC Station Kamenjak	
MMSI:	002380100
Station Type:	VHF (Monitor) range 50nm
Location:	44-46N 014-47E
Monitor Times:	24-7
DSC Station Savudrija	
MMSI:	002380100
Station Type:	VHF (Monitor) range 80nm
Location:	43-34N 016-13E
Monitor Times:	24-7
DSC Station Savudrija	
MMSI:	002380100
Station Type:	VHF (Monitor) range 30nm
Location:	45-29.4N 013-29.5E
Monitor Times:	24-7
DSC Station Split Radio	
MMSI:	002380100
Station Type:	VHF (Main) range 70nm
Location:	43-30N 016-28E
Monitor Times:	24-7

MRCC Rijeka	
DSC Station Srd	
MMSI:	002380100
Station Type:	VHF (Monitor) range 50nm
Location:	42-39.01N 018-06.54E
Monitor Times:	24-7
DSC Station Susak	
MMSI:	002380100
Station Type:	VHF (Monitor) range 50nm
Location:	44-31.0N 014-18.2E
Monitor Times:	24-7
DSC Station Ucka	
MMSI:	002380100
Station Type:	VHF (Monitor) range 90nm
Location:	45-17N 014-12E
Monitor Times:	24-7
DSC Station Ugljan	
MMSI:	002380100
Station Type:	VHF (Monitor) range 40nm
Location:	44-04.3N 015-09.8E
Monitor Times:	24-7
DSC Station Uljenje	
MMSI:	002380100
Station Type:	VHF (Monitor) range 70nm
Location:	42-54N 017-29E
Monitor Times:	24-7
DSC Station Vidova Gora	
MMSI:	002380100
Station Type:	VHF (Main) range 50nm
Location:	43-17N 016-37E
Monitor Times:	24-7

MRCC Rijeka	
DSC Station Rijecka Radio	
MMSI:	002380200
Station Type:	VHF (Main) range 30nm
Location:	45-20.0N 014-25.5E
Monitor Times:	24-7
DSC Station Dubrovnik	
MMSI:	002380300
Station Type:	VHF (Main) range 30nm
Location:	42-38.9N 018-04.9E
Monitor Times:	24-7
DSC Station MRCC Rijecka	
MMSI:	002387010, 002387020
Station Type:	VHF (Main) range 15nm
	MF (Main) range 160nm
Location:	45-19N 014-27E
Monitor Times:	24-7

MRSC Senj	
Location:	44-59.2N 014-54.1E
Contact:	Phone: +385 53 881301, Fax: +385 53 884128
Sub-coordination Center of:	MRCC Rijecka

MRSC Sibenik	
Location:	43-44.0N 015-53.7E
Contact:	Phone: +385 22 217214, Fax: +385 22 212626
Sub-coordination Center of:	MRCC Rijecka
DSC Station MRSC Sibenik	
MMSI:	002387500, 002387501
Station Type:	VHF (Main) range 7nm
Location:	43-43.8N 015-53.8E
Monitor Times:	24-7

MRSC Split	
Location:	43-30.4N 016-26.7E
Contact:	Phone: +385 21 362436, Fax: +385 21 346555
Sub-coordination Center of:	MRCC Rijecka
DSC Station MRSC Split	
MMSI:	002387040, 002387030
Station Type:	VHF (Main) range 10nm
Location:	43-30.4N 016-26.6E
Monitor Times:	24-7

MRSC Zadar	
Location:	44-07.2N 015-13.6E
Contact:	Phone: +385 23 254880, Fax: +385 23 254876, E-mail: zadar.pomorskipromet@pomorstvo.hr
Sub-coordination Center of:	MRCC Rijecka
DSC Station MRSC Zadar	
MMSI:	002387400, 002387401
Station Type:	VHF (Main) range 7nm
Location:	44-07.0N 015-13.5E
Monitor Times:	24-7

400Y. Curacao (Netherlands)

JRCC Curacao	
Location:	12-06.0N 068-05.4W
Contact:	Call Sign: PJC, Telex: (0390) 1506, Phone: +599 9 463 7700, Fax: +599 9 463 7950, E-mail: rcc.curacao@gmail.com, rcc.curacao@mindef.nl

JRCC Curacao	
DSC Station Seru Gracia (Curacao)	
MMSI:	003061000
Station Type:	VHF (Main) range 40nm
Location:	12-20N 069-08W
Monitor Times:	24-7
DSC Station Sibu Rincon (Bonaire)	
MMSI:	003061000
Station Type:	VHF (Monitor) range 30nm
Location:	12-14N 068-20W
Monitor Times:	24-7
DSC Station Sint Joris	
MMSI:	003061000
Station Type:	MF (RX-Monitor) range 400nm
Location:	12-08N 068-50W
Monitor Times:	24-7
DSC Station Mt. Scenery (Saba)	
MMSI:	003061000
Station Type:	VHF (Monitor) range 70nm
Location:	17-38N 063-14W
Monitor Times:	24-7
DSC Station Ronde Klip	
MMSI:	003061000
Station Type:	MF (TX-Main) range 400nm
Location:	12-10N 068-52W
Monitor Times:	24-7
DSC Station Jamanota (Aruba)	
MMSI:	003061000
Station Type:	VHF (Monitor) range 35nm
Location:	12-29N 069-56W
Monitor Times:	24-7

400Z. Cyprus

JRCC Larnaca	
Location:	34-52.54N 033-37.33E
AOR:	Eastern Mediterranean Sea, Waters around Cyprus
Contact:	Inmarsat-C: 421099999, Phone: +357 24 30 47 23, +357 24 30 47 37, Fax: +357 24 64 32 64
DSC Station Cyprus Radio	
MMSI:	002091000
Station Type:	VHF (Main)
	MF (Main) range 200nm
	HF on 4,8,16 MHz
Location:	35-02.57N 033-17.04E
Monitor Times:	24-7
DSC Station Kionia	
MMSI:	002091000
Station Type:	VHF (Monitor) range 100nm
Location:	34-55.14N 033-11.32E
Monitor Times:	24-7
DSC Station Olympus	
MMSI:	002091000
Station Type:	VHF (Monitor) range 120nm
Location:	34-56.25N 032-51.38E
Monitor Times:	24-7

JRCC Larnaca	
DSC Station Pissouri	
MMSI:	002091000
Station Type:	VHF (Monitor) range 50nm
Location:	34-39.04N 032-41.44E
Monitor Times:	24-7

400AA. Denmark

MRSC Bornholm	
Contact:	Phone: +45 56942416, +45 80301361, Fax: +45 56910444, E-mail: bhm-orum@mil.dk
Sub-coordination Center of:	JRCC Denmark

JRCC Denmark	
Location:	Danish Fleet Headquarters in the city of Aarhus 56-09.2N 010-12.7E
Contact:	Phone: +45-89-43 32 02, Fax: +45-89-43 32 30, E-mail: jrcc@sok.dk
Notes:	Also known as SOK, Aarhus. JRCC Denmark has no direct radio communication with the vessels in distress, communication is through MRSC Bornholm, MRSC Kattegat, and the Coast Radio Stations which maintain a continuous listening watch on international distress frequencies.
DSC Station Aarsballe	
MMSI:	002191000
Station Type:	VHF (Monitor) range 42nm
Location:	55-08N 014-52E
Monitor Times:	24-7

JRCC Denmark

DSC Station Als	
MMSI:	002191000
Station Type:	VHF (Monitor) range 41nm
Location:	54-57N 009-33E
Monitor Times:	24-7

DSC Station Ånholt	
MMSI:	002191000
Station Type:	VHF (Monitor) range 28nm
Location:	56-42N 011-35E
Monitor Times:	24-7

DSC Station Blaavand	
MMSI:	002191000
Station Type:	VHF (Monitor) range 33nm
	MF (Monitor) range 153nm
Location:	55-33.24N 008-06.80E
Monitor Times:	24-7

DSC Station Bovbjerg	
MMSI:	002191000
Station Type:	VHF (Monitor) range 34nm
Location:	56-31N 008-10E
Monitor Times:	24-7

DSC Station Fornaes	
MMSI:	002191000
Station Type:	VHF (Monitor) range 32nm
Location:	56-26N 010-56E
Monitor Times:	24-7

DSC Station Frejlev	
MMSI:	002191000
Station Type:	VHF (Monitor) range 44nm
Location:	57-00N 009-49E
Monitor Times:	24-7

JRCC Denmark	
DSC Station Hanstholm	
MMSI:	002191000
Station Type:	VHF (Monitor) range 34nm
Location:	57-06N 008-39E
Monitor Times:	24-7
DSC Station Hirtshals	
MMSI:	002191000
Station Type:	VHF (Monitor) range 31nm
Location:	57-31N 009-57E
Monitor Times:	24-7
DSC Station Karleby	
MMSI:	002191000
Station Type:	VHF (Monitor) range 36nm
Location:	54-52N 011-11E
Monitor Times:	24-7
DSC Station Koebenhavn	
MMSI:	002191000
Station Type:	VHF (Monitor) range 29nm
Location:	55-41N 012-36E
Monitor Times:	24-7
DSC Station Laesoe	
MMSI:	002191000
Station Type:	VHF (Monitor) range 34nm
Location:	57-17N 011-03E
Monitor Times:	24-7
DSC Station Lyngby	
MMSI:	002191000
Station Type:	VHF (Main)
	MF (Main)
Monitor Times:	24-7

JRCC Denmark

DSC Station Mern	
MMSI:	002191000
Station Type:	VHF (Monitor) range 45nm
Location:	55-03.12N 011-59.40E
Monitor Times:	24-7

DSC Station Roesnaes	
MMSI:	002191000
Station Type:	VHF (Monitor) range 35nm
Location:	55-44.12N 010-55.28E
Monitor Times:	24-7

DSC Station Skagen	
MMSI:	002191000
Station Type:	VHF (Monitor) range 29nm
	MF (Monitor) range 148nm
Location:	57-44N 010-34E
Monitor Times:	24-7

DSC Station Vejby	
MMSI:	002191000
Station Type:	VHF (Monitor) range 30nm
Location:	56-04N 012-07E
Monitor Times:	24-7

DSC Station Vejle	
MMSI:	002191000
Station Type:	VHF (Monitor) range 42nm
Location:	55-40N 009-30E
Monitor Times:	24-7

MRSC Kattegat

Contact:	Phone: +45 99221520, Fax: +45 99221538, E-mail: kgm-orum@mil.dk
Sub-coordination Center of:	JRCC Denmark

400AB. Ecuador

Guayaquil Coast Guard	
Location:	Coast Guard Operations Center, Guayaquil, Ecuador
AOR:	Coastal limit from 01-28N to 095-23W and 03-23S to 095-23W
Contact:	Phone: +593 4 2483530, +593 4 2480812, +593 4 2480176, E-mail: coguar-operations@digmer.org, coguar-operations@armada.mil.ec
Language:	Spanish & English
DSC Station Guayaquil	
MMSI:	007354750
Station Type:	VHF (Main) range 30nm
Location:	02-11S 079-53W
Monitor Times:	24-7
DSC Station Esmeraldas	
MMSI:	007354752
Station Type:	VHF (Monitor) range 30nm
Location:	00-57N 079-39W
Notes:	remote controlled
Monitor Times:	24-7
DSC Station Bahia	
MMSI:	007354753
Station Type:	VHF (Monitor) range 30nm
Location:	00-35S 080-25W
Notes:	remote controlled
Monitor Times:	24-7

Guayaquil Coast Guard

DSC Station Manta	
MMSI:	007354754
Station Type:	VHF (Monitor) range 30nm
Location:	00-57S 080-43W
Notes:	remote controlled
Monitor Times:	24-7

DSC Station Salinas	
MMSI:	007354755
Station Type:	VHF (Monitor) range 30nm
Location:	02-12S 080-52W
Notes:	remote controlled
Monitor Times:	24-7

DSC Station Puerto Bolivar	
MMSI:	007354756
Station Type:	VHF (Monitor) range 30nm
Location:	03-16S 080-00W
Notes:	remote controlled
Monitor Times:	24-7

DSC Station Ayora Radio	
MMSI:	007354757
Station Type:	VHF (Main) range 30nm
	MF (Main) range 80nm
	HF on 4,6,8,12,16 MHz
Location:	00-44-50.2S 090-18-44.8W
Monitor Times:	24-7

DSC Station Baquerizo Moreno	
MMSI:	007354758
Station Type:	VHF (Monitor) range 30nm
Location:	00-54S 089-37W
Notes:	remote controlled
Monitor Times:	24-7

400AC. Egypt

JRCC Cairo	
Location:	Cairo, Egypt (30-05.30N 031-21.36E)
AOR:	34-00N 024-10E, 34-00N 027-10E, 33-30N 030-00E, 31-50N 033-59E, 31-36N 034-30E, 29-30N 034-55E, 29-30N 035-00E, 28-06N 034-35E, 22-00N 038-00E, 22-00N 025-00E, 31-40N 025-10E
Contact:	Inmarsat-C: 462299910 RCCE (AOR-E), Telex: +9121095 RCCCRUN, Phone: +20224184537, Fax: +20224184531,+20224184537, E-mail: jrcc136@afmic.gov.eg, Website: http://www.saregypt.net.eg
DSC Station Alexandria Radio	
MMSI:	006221111
Station Type:	VHF (Main) range 23nm
	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	31-12N 029-54E
Monitor Times:	24-7
DSC Station Al-Dabaa	
MMSI:	006221111
Station Type:	VHF (Monitor) range 27.5nm
Location:	31-02N 028-26E
Monitor Times:	24-7
DSC Station Al-Almein	
MMSI:	006221111
Station Type:	VHF (Monitor) range 24.8nm
Location:	30-51N 028-56E
Monitor Times:	24-7

JRCC Cairo	
DSC Station Bourg-Rashid	
MMSI:	006221111
Station Type:	VHF (Monitor) range 27nm
Location:	31-27N 030-22E
Monitor Times:	24-7
DSC Station Baltim	
MMSI:	006221111
Station Type:	VHF (Monitor) range 27nm
Location:	31-33N 031-05E
Monitor Times:	24-7
DSC Station Marsa Matrouh	
MMSI:	006221111
Station Type:	VHF (Monitor) range 22.7nm
	MF (Monitor) range 80nm
Location:	31-21N 027-14E
Monitor Times:	24-7
DSC Station Ras-Alhkima	
MMSI:	006221111
Station Type:	VHF (Monitor) range 24.8nm
Location:	31-07N 027-49E
Monitor Times:	24-7
DSC Station Sidi-Kerir	
MMSI:	006221111
Station Type:	VHF (Monitor) range 24.8nm
Location:	31-01N 029-38E
Monitor Times:	24-7
DSC Station Dahab	
MMSI:	006221112
Station Type:	VHF (Monitor) range 22.7nm
Location:	28-29N 034-30E
Monitor Times:	24-7

JRCC Cairo	
DSC Station Hurghada	
MMSI:	006221112
Station Type:	VHF (Monitor) range 28.1nm
Location:	27-15N 033-48E
Monitor Times:	24-7
DSC Station Kosseir Radio	
MMSI:	006221112
Station Type:	VHF (Main) range 28.1nm
	MF (Main) range 200nm
Location:	26-06N 034-17E
Monitor Times:	24-7
DSC Station Ras-Gharib	
MMSI:	006221112
Station Type:	VHF (Monitor) range 28.1nm
Location:	28-22N 033-04E
Monitor Times:	24-7
DSC Station Safaga	
MMSI:	006221112
Station Type:	VHF (Monitor) range 28.1nm
Location:	26-45N 033-56E
Monitor Times:	24-7
DSC Station Sharm-El-Sheikh	
MMSI:	006221112
Station Type:	VHF (Monitor) range 23.8nm
Location:	27-52N 034-18E
Monitor Times:	24-7
DSC Station Zeitiya	
MMSI:	006221112
Station Type:	VHF (Monitor) range 28.6nm
Location:	27-49N 033-34E
Monitor Times:	24-7

JRCC Cairo	
DSC Station Alarish	
MMSI:	006221113
Station Type:	VHF (Monitor) range 27nm
Location:	31-07N 033-48E
Monitor Times:	24-7
DSC Station Beir Al Abd	
MMSI:	006221113
Station Type:	VHF (Monitor) range 27nm
Location:	31-01N 033-00E
Monitor Times:	24-7
DSC Station Ismailia	
MMSI:	006221113
Station Type:	VHF (Monitor) range 24.3nm
Location:	30-36N 032-16E
Monitor Times:	24-7
DSC Station Port Said Radio	
MMSI:	006221113
Station Type:	VHF (Main) range 21.1nm
Location:	31-15N 032-19E
Monitor Times:	24-7
DSC Station Ras El Barr	
MMSI:	006221113
Station Type:	VHF (Monitor) range 27nm
Location:	31-30N 031-50E
Monitor Times:	24-7
DSC Station Suez	
MMSI:	006221113
Station Type:	VHF (Monitor) range 21.6nm
Location:	29-58N 032-33E
Monitor Times:	24-7

JRCC Cairo	
DSC Station Zhafarana	
MMSI:	006221113
Station Type:	VHF (Monitor) range 27nm
Location:	29-07N 032-39E
Monitor Times:	24-7

400AD. Estonia

MRCC Tallinn	
Location:	Tallinn, Estonia 59-24.0N 024-40.0E
AOR:	Coastline of Estonia within sea areas A1 & A2
Contact:	MMSI: 002760100, Phone: +372 112 (emergency call), +372 6 191 224, +372 6 922 500, Fax: +372 6 922 501, E-mail: jrcc@politsei.ee
DSC Station Tallinn North	
MMSI:	002760100
Station Type:	MF (Main) range 150nm
Location:	59-24N 024-40E
Monitor Times:	24-7
DSC Station Kuressaare West	
MMSI:	002760100
Station Type:	MF (Main) range 150nm
Location:	59-24N 024-40E
Monitor Times:	24-7

MRCC Tallinn	
DSC Station Aabla	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	59-35.15N 025-31.28E
Monitor Times:	24-7
DSC Station Dirhami	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	59-12.48N 023-30.33E
Monitor Times:	24-7
DSC Station Eisma	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	59-33.54N 026-17.14E
Monitor Times:	24-7
DSC Station Köpu	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	58-55.12N 022-11.89E
Monitor Times:	24-7
DSC Station Orissaare	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	58-33.57N 023-04.12E
Monitor Times:	24-7
DSC Station Ruhnu	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	57-48.20N 023-15.48E
Monitor Times:	24-7

MRCC Tallinn	
DSC Station Suurupi	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	59-27.68N 024-22.63E
Monitor Times:	24-7
DSC Station Toila	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	59-24.90N 027-31.77E
Monitor Times:	24-7
DSC Station Torgu	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	57-58.67N 022-04.75E
Monitor Times:	24-7
DSC Station Töstamaa	
MMSI:	002761000
Station Type:	VHF (Monitor) range 30nm
Location:	58-18.33N 024-00.00E
Monitor Times:	24-7
DSC Station Undva	
MMSI:	002761001
Station Type:	VHF (Main) range 30nm
Location:	58-30.62N 021-55.65E
Station Type:	MF (Main) range 150nm
Location:	58-30.37N 021-55.39E
Monitor Times:	24-7
DSC Station Tallinn	
MMSI:	002761000
Station Type:	VHF (Main) range 23nm
	MF (Main)

MRCC Tallinn	
Location:	59-29.42N 024-50.33E
Monitor Times:	24-7

MRSC Kuressaare	
Location:	59-24N 024-40E
Contact:	Phone: +372 45 33322, Fax: +372 45 33320, E-mail: kord@laane.pv.ee, merevalvekeskus@pv.ee
Sub-coordination Center of:	MRCC Tallinn

400AE. Faroe Islands (Denmark)

MRCC Torshavn	
Location:	Torshavn (62-00-42N 006-46-03W)
Contact:	Inmarsat-C: 492 888 021, Sat phone: +298 601302, Phone: +298 351300 (Emergency), +298 351302 (Admin), Fax: +298351301, E-mail: mrcc@mrcc.fo, manager@mrcc.fo, Website: http://www.mrcc.fo
DSC Station Fugloy	
MMSI:	002311000
Station Type:	VHF (Monitor) range 68nm
Location:	62-20N 006-19W
Monitor Times:	24-7
DSC Station Mykines	
MMSI:	002311000
Station Type:	VHF (Monitor) range 64nm
Location:	62-06N 007-35W
Monitor Times:	24-7

MRCC Torshavn	
DSC Station Suderoy	
MMSI:	002311000
Station Type:	VHF (Monitor) range 57nm
Location:	61-25N 006-44W
Monitor Times:	24-7
DSC Station Torshavn (Færoes)	
MMSI:	002311000
Station Type:	VHF (Main) range 56nm
	MF (Main) range 225nm
Location:	62-00N 006-47W
Monitor Times:	24-7

400AF. Fiji

RCC Nadi/RCC Suva	
RCC Nadi	
Contact:	Phone: +679 672 5777, Fax: +679 6724600, E-mail: ivanw@afl.com.fj
RCC Suva	
Contact:	Phone: +679 331 5380, +679 330 429639, E-mail: msc@connect.com.fj
RSC Suva	
Contact:	Phone: +679 330 4296
3 DPSuva	
Contact:	Phone: +679 337 1323

RCC Nadi/RCC Suva	
DSC Station RCC Suva	
MMSI:	005201100
Station Type:	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	18-08S 178-26E
Monitor Times:	24-7

400AG. Finland

MRCC Turku	
Location:	60-26N 022-15E
AOR:	60-12.01N 027-17.35E, 60-08.00N 026-33.00E, 59-58.30N 026-06.42E, 59-53.00N 025-52.00E, 59-54.00N 025-20.00E, 59-53.00N 024-51.00E, 59-00.00N 021-00.00E, 59-15.24N 020-32.39E, 59-33.46N 019-58.59E, 60-11.30N 019-07.56E, 60-18.03N 019-07.56E, 61-00.00N 019-19.05E, 61-40.00N 019-30.00E, 63-10.00N 020-10.00E, 63-28.30N 020-40.00E, 63-37.00N 021-30.00E, 64-41.00N 022-55.00E, 65-31.48N 024-08.24E
Contact:	MMSI: 002301000, Inmarsat-C: 423002211 (AOR-E), Telex: 57-62249 MRCC FI, Phone: +358 204 1001 (emergency), +358 204 1000, Fax: +358 718720109, E-mail: mrcc@raja.fi Phone: +358 204 1000, +358 204 1001 Fax: +358 2 250 0950 E-mail: mrcc@raja.fi, Website: http://www.raja.fi, http://www.coastguard.fi
DSC Station Turku	
MMSI:	002300230
Station Type:	VHF (Main)
	MF (Main)
Monitor Times:	24-7
DSC Station Brandö	
MMSI:	002301000

MRCC Turku	
Station Type:	VHF (Monitor) range 25nm
Location:	60-24N 021-03E
Monitor Times:	24-7
DSC Station Geta	
MMSI:	002301000
Station Type:	VHF (Monitor) range 38nm
Location:	60-23.10N 019-50.85E
Monitor Times:	24-7
DSC Station Järsö	
MMSI:	002301000
Station Type:	VHF (Monitor) range 36nm
Location:	60-01.10N 020-00.01E
Monitor Times:	24-7
DSC Station Korppoo	
MMSI:	002301000
Station Type:	VHF (Monitor) range 30nm
Location:	60-10.11N 021-32.82E
Monitor Times:	24-7
DSC Station Mariehamn	
MMSI:	002301000
Station Type:	MF (TX/RX-Monitor) range 185nm
Location:	60-07N 019-57E
Monitor Times:	24-7
DSC Station Naantali	
MMSI:	002301000
Station Type:	VHF (Monitor) range 33nm
Location:	60-27N 022-03E
Monitor Times:	24-7

MRCC Turku	
DSC Station Pori	
MMSI:	002301000
Station Type:	VHF (Monitor) range 16nm
Location:	61-35.97N 021-26.84E
Monitor Times:	24-7
DSC Station Rauma	
MMSI:	002301000
Station Type:	VHF (Monitor) range 28nm
Location:	61-08N 021-33E
Monitor Times:	24-7
DSC Station Utö	
MMSI:	002301000
Station Type:	VHF (Monitor) range 23nm
Location:	59-47N 021-22E
Monitor Times:	24-7
DSC Station Uusikaupunki	
MMSI:	002301000
Station Type:	VHF (Monitor) range 32nm
Location:	60-48N 021-23E
Monitor Times:	24-7

MRSC Helsinki	
Location:	60-09.95N 024-57.86E
Contact:	MMSI: 002302000, Phone: +358 20410 02 (emergency), +358 718 720200, Fax: +358 718 720209, E-mail: mrsc.helsinki@raja.fi, Website: http://www.raja.fi, http://www.coastguard.fi
DSC Station Hanko	
MMSI:	002302000
Station Type:	VHF (Monitor) range 26nm
Location:	59-50N 022-56E
Monitor Times:	24-7

MRSC Helsinki	
DSC Station Helsinki	
MMSI:	002302000
Station Type:	MF (TX-Monitor) range 185nm
Location:	60-09N 025-09E
Monitor Times:	24-7
DSC Station Kotka	
MMSI:	002302000
Station Type:	VHF (Monitor) range 29nm
Location:	60-29.04N 026-53.83E
Monitor Times:	24-7
DSC Station Porkkala	
MMSI:	002302000
Station Type:	VHF (Monitor) range 30nm
Location:	59-59N 024-26E
Monitor Times:	24-7
DSC Station Santahamina/Helsinki	
MMSI:	002302000
Station Type:	VHF (Monitor) range 30nm
Location:	60-09.02N 025-03.04E
Monitor Times:	24-7
DSC Station Sondby	
MMSI:	002302000
Station Type:	VHF (Monitor) range 26nm
	MF (RX-Monitor) range 185nm
Monitor Times:	24-7
DSC Station Virolahti	
MMSI:	002302000
Station Type:	VHF (Monitor) range 33nm
Location:	60-36N 027-50E
Monitor Times:	24-7

MRSC Vaasa	
Contact:	Phone: +358 (0) 2041001
DSC Station Hailuoto	
MMSI:	002303000
Station Type:	VHF (Monitor) range 27nm
Location:	65-02N 024-36E
Station Type:	MF (TX/RX-Monitor) range 185nm
Location:	65-02N 024-35E
Monitor Times:	24-7
DSC Station Kalajoki	
MMSI:	002303000
Station Type:	VHF (Monitor) range 47nm
Location:	64-18N 024-11E
Monitor Times:	24-7
DSC Station Kemi	
MMSI:	002303000
Station Type:	VHF (Monitor) range 30nm
Location:	65-49N 024-32E
Monitor Times:	24-7
DSC Station Kokkola	
MMSI:	002303000
Station Type:	VHF (Monitor) range 34nm
Location:	63-50N 023-10E
Monitor Times:	24-7
DSC Station Kristiinankaupunki	
MMSI:	002303000
Station Type:	VHF (Monitor) range 36nm
Location:	62-16N 021-24E
Monitor Times:	24-7
DSC Station Raippaluoto	
MMSI:	002303000
Station Type:	VHF (Monitor) range 32nm

MRSC Vaasa	
Location:	63-22N 021-19E
Station Type:	MF (TX/RX-Monitor) range 185nm
Location:	63-18N 021-06E
Monitor Times:	24-7

400AH. France

MRCC Etel	
Location:	47-39.73N 003-12.11W
AOR:	West coast of France. 47-47.9N 004-23.0W (Penmarch), 47-47.9N 008-00.0W, 45-00.0N 008-00.0W, 44-20.0N 004-00.0W, 43-22.5N 001-47.5W
Contact:	MMSI: 002275000, Inmarsat-C: 422799025, Telex: 940519, Phone: +33 2 97 55 35 35, Fax: +33 2 97 55 49 34, E-mail: etel@mrccfr.eu
DSC Station Armandeche	
MMSI:	002275000
Station Type:	VHF (Monitor) range 21nm
Location:	46-42N 001-55W
Monitor Times:	24-7
DSC Station Belle Ile	
MMSI:	002275000
Station Type:	VHF (Monitor) range 27nm
Location:	47-19N 003-14W
Monitor Times:	24-7

MRCC Etel	
DSC Station Biarritz	
MMSI:	002275000
Station Type:	VHF (Monitor) range 26nm
Location:	43-31.89N 001-31.99W
Monitor Times:	24-7
DSC Station Cap Ferret	
MMSI:	002275000
Station Type:	VHF (Monitor) range 22nm
Location:	44-37.80N 001-15.02W
Monitor Times:	24-7
DSC Station Chassiron	
MMSI:	002275000
Station Type:	VHF (Monitor) range 22nm
Location:	46-02.81N 001-24.52W
Monitor Times:	24-7
DSC Station Contis	
MMSI:	002275000
Station Type:	VHF (Monitor) range 23nm
Location:	43-48N 001-18W
Monitor Times:	24-7
DSC Station Etel	
MMSI:	002275000
Station Type:	VHF (Main) range 26nm
Location:	47-39.73N 003-12.11W
Monitor Times:	24-7
DSC Station Groix	
MMSI:	002275000
Station Type:	VHF (Main) range 24nm
Location:	47-39.14N 003-30.08W
Monitor Times:	24-7

MRCC Etel	
DSC Station Hourtin	
MMSI:	002275000
Station Type:	VHF (Main) range 23nm
Location:	45-08.54N 001-09.57W
Monitor Times:	24-7
DSC Station Ile D'Yeu	
MMSI:	002275000
Station Type:	VHF (Main) range 24nm
Location:	46-43.03N 002-22.88W
Monitor Times:	24-7
DSC Station Kerrouault	
MMSI:	002275000
Station Type:	VHF (Main) range 33nm
Location:	47-26.99N 002-29.69W
Monitor Times:	24-7
DSC Station Pen March	
MMSI:	002275000
Station Type:	VHF (Main) range 28nm
Location:	47-47.89N 004-22.36W
Monitor Times:	24-7
DSC Station Soulac	
MMSI:	002275000
Station Type:	VHF (Main) range 24nm
Location:	45-32N 001-06W
Monitor Times:	24-7

MRCC Gris Nez	
Location:	50-52N 001-35E
AOR:	51-05.6N 002-32.6E, 51-16.1N 002-23.4E, 51-32.0N 002-11.2E, 51-30.2N 002-07.3E, 51-20.2N 002-02.3E, 51-14.4N 001-57.3E, 51-12.0N 001-53.3E, 51-06.0N 001-43.5E, 51-02.3N 001-32.9E, 50-57.0N 001-21.4E, 50-48.9N 001-16.5E, 50-32.8N 000-57.8E, 49-41.1N 000-09.9E, 50-24.5N 000-00

MRCC Gris Nez	
Contact:	Inmarsat-C: 422799256, Telex:130680, Phone: +33 3 21 87 21 87, Fax: +33 3 21 87 78 55, E-mail: gris-nez@mrccfr.eu
Notes:	Considered as a French SAR single point of contact
DSC Station Dunkerque	
MMSI:	002275100
Station Type:	VHF (Monitor) range 22nm
Location:	51-03N 002-21E
Monitor Times:	24-7
DSC Station Gris Nez	
MMSI:	002275100
Station Type:	VHF (Main) range 23nm
Location:	50-52N 001-35E
Monitor Times:	24-7
DSC Station Saint Frieux	
MMSI:	002275100
Station Type:	VHF (Monitor) range 38nm
Location:	50-36N 001-38E
Monitor Times:	24-7
DSC Station St Valery en Caux	
MMSI:	002275100
Station Type:	VHF (Monitor) range 29nm
Location:	49-52.16N 000-42.66E
Monitor Times:	24-7

MRCC Jobourg	
Location:	49-41N 001-54W
AOR:	Central English Channel. 50-24.5N 000-00, 49-41.1N 000-09.9E, 50-18.3N 000-36.1W, 50-12.1N 001-12.4W, 50-05.9N 001-48.3W, 49-58.9N 002-28.9W, 49-54.4N 002-53.7W, 49-30.0N 004-06.5W, 48-53.0N 002-20.0W, 48-49.0N 001-49.0W, 48-37.4N 001-35.0W
Contact:	MMSI: 002275200, Telex: 130680, Phone: +33 2 33 52 16 16, Fax: +33 2 33 52 71 72, E-mail: jobourg@mrccfr.eu

MRCC Jobourg	
Notes:	Channel Island subregion: A subregion of responsibility for local operations is established around the Channel Islands, extending for a distance of 12 miles from the Islands to the sea, with the exception of the East and South, where it follows the Median line to the French Coast. The subregion is divided into two local action zones separated by a line joining the points 49-00N 003-00W and 49-30N 002-00W, controlled by Guernesey in the North and Jersey in the South. In doubt on area where you are, be advised that the MRCC Gris-nez is considered as a French SAR single point of contact
DSC Station Antifer	
MMSI:	002275200
Station Type:	VHF (Monitor) range 33nm
Location:	49-41.1N 000-10.0E
Monitor Times:	24-7
DSC Station Gatteville	
MMSI:	002275200
Station Type:	VHF (Monitor) range 26nm
Location:	49-41.8N 001-15.9W
Monitor Times:	24-7
DSC Station Granville	
MMSI:	002275200
Station Type:	VHF (Monitor) range 26nm
Location:	48-50.1N 001-36.8W
Monitor Times:	24-7
DSC Station Jobourg	
MMSI:	002275200
Station Type:	VHF (Main) range 42nm
Location:	49-41.0N 001-54.5W
Monitor Times:	24-7
DSC Station Roches Douvres	
MMSI:	002275200
Station Type:	VHF (Monitor) range 25nm
Location:	49-06.4N 002-48.8W
Monitor Times:	24-7

MRCC Jobourg	
DSC Station Villervile	
MMSI:	002275200
Station Type:	VHF (Monitor) range 30nm
Location:	49-23.10N 000-06.29E
Monitor Times:	24-7
DSC Station Ver-sur-Mer	
MMSI:	002275200
Station Type:	VHF (Monitor) range 27nm
Location:	49-20.5N 000-31.1W
Monitor Times:	24-7

MRCC Corsen	
Location:	48-24N 004-47E
AOR:	West English Channel. 48-37.4N 001-35W, 48-49N 001-49W, 48-53N 002-20W, 49-30N 004-06.5W, 48-50N 008-00W, 47-47.9N 008-00W, 47-47.9N 004-23W
Contact:	MMSI: 002295300, Telex: 940086, Phone: +33 2 98 89 31 31, Fax: +33 2 98 89 65 75, E-mail: corsen@mrccfr.eu
Notes:	In doubt of area where you are, be advised that the MRCC Gris-nez is considered as a French SAR single point of contact
DSC Station Batz Island	
MMSI:	002275300
Station Type:	VHF (Monitor) range 27nm
Location:	48-44.78N 004-00.71W
Monitor Times:	24-7
DSC Station Bodic	
MMSI:	002275300
Station Type:	VHF (Monitor) range 25nm
Location:	48-48N 003-05W
Monitor Times:	24-7
DSC Station Cap Frehel	
MMSI:	002275300
Station Type:	VHF (Monitor) range 28nm

MRCC Corsen	
Location:	48-41N 002-19W
Monitor Times:	24-7
DSC Station Corsen	
MMSI:	002275300
Station Type:	VHF (Monitor) range 27nm
	MF (RX-Main) range 140nm
Location:	48-24.84N 004-46.98W
Monitor Times:	24-7
DSC Station Pointe du Raz	
MMSI:	002275300
Station Type:	VHF (Monitor) range 24nm
Location:	48-02.33N 004-43.93W
Monitor Times:	24-7
DSC Station Stiff Ouessant	
MMSI:	002275300
Station Type:	VHF (Monitor) range 33nm
	MF (TX-Main) range 140nm
Location:	48-28N 005-03W
Monitor Times:	24-7

MRCC La Garde	
Location:	3-06.44N 005-59.25E
AOR:	France- Mediterranean Sea. 42-26N 003-10E, 42-00N 004-40E, 39-00N 004-40E, 39-00N 007-44E, 41-20N 007-44E, 41-20N 009-45E, 43-10N 009-45E, 43-30N 009-30E, 43-30N 007-42E, 43-47N 007-32E
Contact:	MMSI: 00275400, Telex: 430024, Phone: +33 4 94 61 71 10, Fax: +33 4 94 27 11 49, E-mail: lagarde@mrccfr.eu
Notes:	In doubt of area where you are, be advised that the MRCC Gris-nez is considered as a French SAR single point of contact

MRCC La Garde	
DSC Station Agde	
MMSI:	002275400
Station Type:	VHF (Monitor) range 31nm
Location:	43-17.0N 003-30.1E
Station Type:	MF (RX-Main) range 200nm
Location:	43-17.92N 003-30.18E
Monitor Times:	24-7
DSC Station Bear	
MMSI:	002275400
Station Type:	VHF (Monitor) range 30nm
Location:	42-31.1N 003-08.5E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Cap Camarat	
MMSI:	002275400
Station Type:	VHF (Monitor) range 30nm
Location:	43-12.06N 006-40.48E
Monitor Times:	24-7
DSC Station Coudon	
MMSI:	002275400
Station Type:	VHF (Monitor) range 60nm
Location:	43-10N 006-10E
Monitor Times:	24-7
DSC Station Espiguetten	
MMSI:	002275400
Station Type:	VHF (Monitor) range 15nm
Location:	43-29N 004-08E
Monitor Times:	24-7

MRCC La Garde	
DSC Station La Garde	
MMSI:	002275400
Station Type:	VHF (Main) range 23nm
	MF (TX-Main) range 200nm
Location:	43-06.29N 005-59.40E
Station Type:	MF (RX-Main) range 200nm
Location:	43-06.32N 005-59.35E
Monitor Times:	24-7
DSC Station La Garoupen	
MMSI:	002275400
Station Type:	VHF (Monitor) range 30nm
Location:	43-33.86N 007-07.96E
Monitor Times:	24-7
DSC Station Pic de l'Ours	
MMSI:	002275400
Station Type:	VHF (Monitor) range 52nm
Location:	43-28N 006-54E
Monitor Times:	24-7
DSC Station Pic Neoulos	
MMSI:	002275400
Station Type:	VHF (Monitor) range 79nm
Location:	42-29N 002-57E
Monitor Times:	24-7
DSC Station Planier	
MMSI:	002275400
Station Type:	VHF (Monitor) range 21nm
Location:	43-11.92N 005-13.85E
Monitor Times:	24-7

MRCC La Garde	
DSC Station Porqurolles	
MMSI:	002275400
Station Type:	TX-MF (Main) range 200nm
Location:	42-59.07N 006-12.40E
Monitor Times:	24-7
DSC Station Aspretto	
MMSI:	002275420
Station Type:	VHF (Main) range 30nm
Location:	41-55.37N 008-45.80E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Conca	
MMSI:	002275420
Station Type:	VHF (Monitor) range 45nm
Location:	41-44.30N 009-23.26E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Ersa	
MMSI:	002275420
Station Type:	VHF (Monitor) range 54nm
Location:	42-58.15N 009-22.79E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Piana	
MMSI:	002275420
Station Type:	VHF (Monitor) range 58nm
Location:	42-14.28N 008-37.30E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse

MRCC La Garde	
DSC Station Punta	
MMSI:	002275420
Station Type:	VHF (Monitor) range 63nm
Location:	41-57.22N 008-41.98E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Serra Di Pigno	
MMSI:	002275420
Station Type:	VHF (Monitor) range 70nm
Location:	42-41.67N 009-23.98E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse
DSC Station Serragia	
MMSI:	002275420
Station Type:	VHF (Monitor) range 48nm
Location:	41-30.90N 008-58.68E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Corse

MRSC Corse	
Notes:	In doubt of area where you are, be advised that the MRCC Gris-nez is considered as a French SAR single point of contact
DSC Station Aspretto	
MMSI:	002275420
Station Type:	VHF (Main) range 30nm
Location:	41-55.37N 008-45.80E
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Conca	
MMSI:	002275420
Station Type:	VHF (Monitor) range 45nm
Location:	41-44.30N 009-23.26E

MRSC Corse	
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Ersa	
MMSI:	002275420
Station Type:	VHF (Monitor) range 54nm
Location:	42-58.15N 009-22.79E
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Piana	
MMSI:	002275420
Station Type:	VHF (Monitor) range 58nm
Location:	42-14.28N 008-37.30E
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Punta	
MMSI:	002275420
Station Type:	VHF (Monitor) range 63nm
Location:	41-57.22N 008-41.98E
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Serra Di Pigno	
MMSI:	002275420
Station Type:	VHF (Monitor) range 70nm
Location:	42-41.67N 009-23.98E
Monitor Times:	24-7
Additional RCCs supported:	MRCC La Garde
DSC Station Serragia	
MMSI:	002275420
Station Type:	VHF (Monitor) range 48nm
Location:	41-30.90N 008-58.68E
Monitor Times:	24-7

MRSC Corse	
Additional RCCs supported:	MRCC La Garde

400AI. Georgia

MRCC Georgia	
Location:	State Maritime Rescue Coordination Center-Batumi
Contact:	MMSI: 002130100, Phone: +995 222 73913, Fax: +995 222 73905, E-mail: mrcc@maradgeorgia.org
DSC Station MRCC Georgia	
MMSI:	002130100
Station Type:	VHF (Main) range 25nm
	MF (Main) range 150nm
Location:	41-38.73N 041-39.05E
Monitor Times:	24-7

RSC Poti	
DSC Station Poti, Harbor Master	
MMSI:	002130300
Station Type:	VHF (Monitor) range 25nm
Location:	42-09.14N 041-39.11E
Monitor Times:	24-7

400AJ. Germany

MRCC Bremen	
Location:	53-04.239N 008-48.437E
AOR:	Germany SAR region within the North Sea and the Baltic Sea. 53-20.0N 007-00.7E, 53-20.0N 006-58.0E, 53-29.0N 006-58.0E, 53-29.0N 006-37.0E, 53-34.0N 006-37.0E, 53-34.0N 006-20.0E, 53-44.0N 006-20.0E, 53-48.9N 006-15.9E, 53-59.9N 006-06.5E, 54-11.2N 006-00.0E, 54-37.2N 005-00.0E, 55-00.0N 005-00.0E, 55-20.0N 004-20.0E, 55-45.9N 003-22.2E, 55-50.1N 003-24.0E, 55-55.2N 003-21.0E, 55-46.4N 004-15.0E, 55-24.3N 004-45.0E, 55-15.0N 005-09.0E, 55-15.0N 005-24.2E, 55-30.7N 005-45.0E, 55-10.1N 007-33.2E, 55-03.8N 008-18.2E, 55-04.2N 008-23.5E, 55-03.3N 008-28.3E, 55-02.8N 008-28.7E, 55-01.6N 008-28.3E, 55-00.0N 008-30.1E, 54-59.8N 008-30.7E, 54-59.6N 008-31.2E, 54-59.6N 008-33.4E, 54-55.3N 008-33.3E, 54-54.7N 008-38.3E
Contact:	Telex: 246466 mrcc d, Phone: +49 (0) 421536 8770, Fax: +49 (0) 4215368714, E-mail: mail@mrcc-bremen.de
Notes:	The German Maritime Search and Rescue Service (DGzRS)
DSC Station Arkona	
MMSI:	002111240
Station Type:	VHF (Monitor) range 31nm
Location:	54-35N 013-37E
Monitor Times:	24-7
DSC Station Bremen Rescue Radio	
MMSI:	002111240
Station Type:	VHF (Main) range 25nm
Location:	53-05N 008-48E
Monitor Times:	24-7
DSC Station Cuxhaven	
MMSI:	002111240
Station Type:	VHF (Monitor) range 24nm
Location:	53-50N 008-39E

MRCC Bremen	
Monitor Times:	24-7
DSC Station Darss	
MMSI:	002111240
Station Type:	VHF (Monitor) range 30nm
Location:	54-24N 012-27E
Monitor Times:	24-7
DSC Station Eiderstedt	
MMSI:	002111240
Station Type:	VHF (Monitor) range 24nm
Location:	54-20N 008-47E
Monitor Times:	24-7
DSC Station Flensburg	
MMSI:	002111240
Station Type:	VHF (Monitor) range 29nm
Location:	54-44N 009-30E
Monitor Times:	24-7
DSC Station Hamburg	
MMSI:	002111240
Station Type:	VHF (Monitor) range 44nm
Location:	53-33N 009-58E
Monitor Times:	24-7
DSC Station Helgoland	
MMSI:	002111240
Station Type:	VHF (Monitor) range 33nm
Location:	54-11N 007-53E
Monitor Times:	24-7
DSC Station Kiel	
MMSI:	002111240
Station Type:	VHF (Monitor) range 37nm
Location:	54-18N 010-07E
Monitor Times:	24-7

MRCC Bremen	
DSC Station Lübeck	
MMSI:	002111240
Station Type:	VHF (Monitor) range 46nm
Location:	54-13N 010-43E
Monitor Times:	24-7
DSC Station Norddeich	
MMSI:	002111240
Station Type:	VHF (Monitor) range 24nm
Location:	53-34N 07-06E
Monitor Times:	24-7
DSC Station Rostock	
MMSI:	002111240
Station Type:	VHF (Monitor) range 33nm
Location:	54-10N 012-06E
Monitor Times:	24-7
DSC Station Rügen	
MMSI:	002111240
Station Type:	VHF (Monitor) range 27nm
Location:	54-21N 013-45E
Monitor Times:	24-7
DSC Station Sylt	
MMSI:	002111240
Station Type:	VHF (Monitor) range 28nm
Location:	54-55N 008-18E
Monitor Times:	24-7

400AK. Ghana

Harbor Master's Office, Accra	
DSC Station Ada Radio	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	05-46.83N 000-37.13E
Monitor Times:	24-7
DSC Station Aflao	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	06-07N 001-11W
Monitor Times:	24-7
DSC Station Axim	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	04-52N 002-14W
Monitor Times:	24-7
DSC Station Cape Coast	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	05-07N 001-15W
Monitor Times:	24-7
DSC Station Half Assini	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	05-03N 002-53W

Harbor Master's Office, Accra	
Monitor Times:	24-7
DSC Station Takoradi	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	04-54N 001-45W
Monitor Times:	24-7
DSC Station Tema Radio	
MMSI:	006270000
Station Type:	VHF (Main) range 60nm
	MF (Main) range 100nm
Location:	05-38N 000-00
Monitor Times:	24-7
DSC Station Winneba	
MMSI:	006270000
Station Type:	VHF (Monitor) range 60nm
Location:	05-21N 000-37W
Monitor Times:	24-7

400AL. Greece

JRCC Piraeus	
Location:	37-58N 023-40E

JRCC Piraeus	
AOR:	JRCC Piraeus is capable of responding to any rescue operation in the Search & Rescue Region (SRR) of Greece, bounded by straight lines joining the following geographical points: 40-25N 019-00E, 36-30N 019-00E, 34-00N 024-10E, 34-00N 027-10E, 33-30N 030-00E, 36-05N 030-00E, The lines determining the seaward Eastern frontier of Greece and the Western frontier of Turkey. The above area is divided to five (05) Subcenters.
Contact:	Telex: 601211588, 601211254, Phone: 30 210 411 2500, 30 210 422 0772, Fax: 30 210 413 2398, 30 210 411 5798, E-mail: jrccpgr@mail.yen.gr
DSC Station Andros	
MMSI:	002371000
Station Type:	VHF (Main) range 55nm
Location:	37-56N 024-46E
Monitor Times:	24-7
DSC Station Astypalea	
MMSI:	002371000
Station Type:	VHF (Main) range 59nm
Location:	36-36N 028-26E
Monitor Times:	24-7
DSC Station Brochas Kritis	
MMSI:	002371000
Station Type:	VHF (Main) range 65nm
Location:	35-19N 025-44E
Monitor Times:	24-7
DSC Station Khios	
MMSI:	002371000
Station Type:	VHF (Monitor) range 78nm
Location:	38-23N 026-03E
Monitor Times:	24-7
DSC Station Faistos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 84nm
Location:	35-00N 025-12E
Monitor Times:	24-7

JRCC Piraeus	
DSC Station Gerania	
MMSI:	002371000
Station Type:	VHF (Monitor) range 98nm
Location:	38-00N 023-20E
Monitor Times:	24-7
DSC Station Iraklion Radio	
MMSI:	002371000
Station Type:	MF (Monitor) range 200nm
Location:	35-20N 025-07E
Monitor Times:	24-7
DSC Station Karpathos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 66nm
Location:	35-28N 027-10E
Monitor Times:	24-7
DSC Station Kefallinia	
MMSI:	002371000
Station Type:	VHF (Monitor) range 107nm
Location:	38-08N 020-40E
Monitor Times:	24-7
DSC Station Kerkyra	
MMSI:	002371000
Station Type:	VHF (Monitor) range 82nm
Location:	39-45N 019-52E
Station Type:	MF (Monitor) range 200nm
Location:	39-37N 019-55E
Monitor Times:	24-7
DSC Station Knossos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 87nm
Location:	35-17N 024-53E

JRCC Piraeus	
Monitor Times:	24-7
DSC Station Kithira	
MMSI:	002371000
Station Type:	VHF (Monitor) range 52nm
Location:	36-09N 022-59E
Monitor Times:	24-7
DSC Station Lichada	
MMSI:	002371000
Station Type:	VHF (Monitor) range 60nm
Location:	38-52N 022-53E
Monitor Times:	24-7
DSC Station Limnos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 59nm
	MF (Monitor) range 200nm
Location:	39-52N 025-04E
Monitor Times:	24-7
DSC Station Milos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 78nm
Location:	36-41N 024-23E
Monitor Times:	24-7
DSC Station Moustakos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 84nm
Location:	35-18N 023-37E
Monitor Times:	24-7
DSC Station Mytilini	
MMSI:	002371000
Station Type:	VHF (Monitor) range 84nm
Location:	39-04N 026-21E

JRCC Piraeus	
Monitor Times:	24-7
DSC Station Olympia Radio	
MMSI:	002371000
Station Type:	VHF (Main)
	MF (Main)
Location:	38-01N 023-50E
Station Type:	HF on 4,6,8,12,16 MHz
Location:	37-36N 021-29E
Monitor Times:	24-7
DSC Station Parnis	
MMSI:	002371000
Station Type:	VHF (Monitor) range 98nm
Location:	38-10N 023-44E
Monitor Times:	24-7
DSC Station Patmos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 46nm
Location:	37-18N 026-32E
Monitor Times:	24-7
DSC Station Petalidi	
MMSI:	002371000
Station Type:	VHF (Monitor) range 83nm
Location:	36-56N 021-52E
Monitor Times:	24-7
DSC Station Pilio	
MMSI:	002371000
Station Type:	VHF (Monitor) range 104nm
Location:	39-22N 022-57E
Monitor Times:	24-7

JRCC Piraeus	
DSC Station Poros/Darditsa	
MMSI:	002371000
Station Type:	VHF (Monitor) range 73nm
Location:	37-30N 023-27E
Monitor Times:	24-7
DSC Station Rodos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 78nm
Location:	36-16N 027-56E
Station Type:	MF (Monitor) range 200nm
Location:	36-26N 028-15E
Monitor Times:	24-7
DSC Station Sfendami	
MMSI:	002371000
Station Type:	VHF (Monitor) range 41nm
Location:	40-25N 022-31E
Monitor Times:	24-7
DSC Station Sitia (Mare)	
MMSI:	002371000
Station Type:	VHF (Monitor) range 75nm
Location:	35-12N 026-06E
Monitor Times:	24-7
DSC Station Skiros	
MMSI:	002371000
Station Type:	VHF (Main) range 68nm
Location:	38-50N 024-30E
Monitor Times:	24-7
DSC Station Syros	
MMSI:	002371000
Station Type:	VHF (Monitor) range 57nm
Location:	37-27N 024-56E

JRCC Piraeus	
Monitor Times:	24-7
DSC Station Thasos	
MMSI:	002371000
Station Type:	VHF (Monitor) range 90nm
Location:	40-47N 024-43E
Monitor Times:	24-7
DSC Station Thira	
MMSI:	002371000
Station Type:	VHF (Main) range 66nm
Location:	36-25N 025-26E
Monitor Times:	24-7
DSC Station Tsoukalas	
MMSI:	002371000
Station Type:	VHF (Monitor) range 68nm
Location:	40-23N 023-28E
Monitor Times:	24-7
DSC Station Aspropirgos Radio	
MMSI:	002391000
Station Type:	MF (Main) range 130nm
	HF on 4,6,8,12,16 MHz
Location:	38-03N 023-35E
Monitor Times:	operates 0500-1200UTC during working days & remains in standby if needed
DSC Station JRCC Piraeus	
MMSI:	002392000
Station Type:	MF (Main) range 100nm
Location:	37-58N 023-40E
Monitor Times:	24-7
Notes:	DSC MF Station operated by Hellenic Coast Guard, ship station MMSI 237673000

JRCC Piraeus	
DSC Station Aspropirgos Radio	
MMSI:	237673000, 237673100
Station Type:	HF on 4,6,8,12,16 MHz
Location:	37-58N 023-40E
Monitor Times:	24-7; Hellenic Coast Guard for reasons of additional safety only, keeps 24 hr watch on HF DSC frequencies using its own station

400AM. Greenland

MRCC Groennedal	
AOR:	From the North Pole to 82-00N 060-00W, 78-00N 075-00W, 76-00N 076-00W, 65-00N 057-45W, 63-00N 055-40W, 58-30N 050-00W, 58-30N 43-00W, 63-30N 039-00W, 70-00N 020-00W, 73-00N 020-00W, 73-00N 00-00 and north to the North Pole
Contact:	Phone: +299 691911, Fax: +299 691949, E-mail: mrcc@glk.gl (working hours), iscomgl@glk.gl (24hrs)
DSC Station Aasiaat	
MMSI:	003313000
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Upernavik	
MMSI:	003313000
Station Type:	MF (Monitor) range 280nm
Location:	72-46.99N 056-08.68W
Monitor Times:	24-7

MRCC Groennedal	
DSC Station Sisimiut	
MMSI:	003313000
Station Type:	MF (Monitor) range 270nm
Location:	66-55.26N 053-39.99W
Monitor Times:	24-7
DSC Station Nuuk	
MMSI:	003313000
Station Type:	MF (Monitor) range 250nm
Location:	64-04.13N 052-00.42W
Monitor Times:	24-7
DSC Station Qeqertarsuaq	
MMSI:	003313000
Station Type:	MF (Monitor) range 280nm
Location:	69-14.68N 053-31.63W
Monitor Times:	24-7
DSC Station Qaqortoq	
MMSI:	003311000
Station Type:	MF (Monitor) range 220nm
Location:	61-59.71N 049-38.51W
Monitor Times:	24-7
DSC Station Paamiut	
MMSI:	003311000
Station Type:	MF (Monitor) range 230nm
Location:	60-41.06N 046-36.24W
Monitor Times:	24-7
DSC Station Ikerasassuaq	
MMSI:	003311000
Station Type:	MF (Monitor) range 220nm
Location:	60-03.42N 043-09.55W
Monitor Times:	24-7

MRCC Groennedal	
DSC Station Angmagssalik	
MMSI:	003314000
Station Type:	MF (Main) range 280nm
Location:	65-36.52N 037-39.39W
Monitor Times:	24-7

400AN. Hong Kong, China (Associate Member of IMO)

MRCC Hong Kong	
Location:	22-17.37N 114-09.17E
AOR:	International waters in South China Sea bounded by Latitude 10N and Longitude 120E
Contact:	Call sign: VRC (Hong Kong Marine Rescue), Telex: 82952 MRCC HX, Phone: +852 2233 7999, Fax: +852 2541 7714, E-mail: khmrcc@mardep.gov.hk
DSC Station Hong Kong Marine Rescue Tai Mo Shan	
MMSI:	004773500
Station Type:	VHF (Main) range 50nm
Location:	22-24.34N 114-07.28E
Station Type:	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	22-12.57N 114-15.03E
Monitor Times:	24-7
DSC Station Hong Kong Marine Rescue Victoria Peak	
MMSI:	004773500
Station Type:	VHF (Monitor) range 50nm
Location:	22-16.27N 114-08.35E

MRCC Hong Kong	
Monitor Times:	24-7

400AO. Iceland

MRCC Reykjavik	
Contact:	Iceland Coast Guard. Inmarsat-C: 581 425101519, 581 492740310, Phone: +354 5113333 (emergency), +354 5452100, Fax: +354 5452001, +354 562 9043, E-mail: sar@icg.is, reyrad@icg.is, vms@icg.is, Website: http://www.icg.is
Language:	Icelandic and English
DSC Station Reykjavik Radio	
MMSI:	002510100
Station Type:	MF (Main) range 216nm
Location:	64-05N 021-51W
Monitor Times:	24-7
DSC Station Isafjordur	
MMSI:	002510100
Station Type:	MF (Monitor) range 227nm
Location:	66-05N 023-02W
Monitor Times:	24-7
DSC Station Siglufjordur	
MMSI:	002510100
Station Type:	MF (Monitor) range 216nm
Location:	66-11N 018-57W
Monitor Times:	24-7

MRCC Reykjavik	
DSC Station Neskaupstadur	
MMSI:	002510100
Station Type:	MF (Monitor) range 194nm
Location:	65-09N 013-42W
Monitor Times:	24-7
DSC Station Hornafjordur	
MMSI:	002510100
Station Type:	MF (Monitor) range 194nm
Location:	64-15N 015-13W
Monitor Times:	24-7
DSC Station Vestmannaejar	
MMSI:	002510100
Station Type:	MF (Monitor) range 194nm
Location:	63-26N 020-16W
Monitor Times:	24-7

400AP. India

MRCC Mumbai	
Contact:	Inmarsat-C: 441907210 BMCG X, Inmarsat mini-M: 762882349(voice) Phone: 762882350, Fax: 762882351(data), E-mail: indsar@vsnl.net, mrcc-west@indiancoastguard.nic.in

MRCC Mumbai	
DSC Station Daman	
MMSI:	004192201
Station Type:	VHF (Main) range 20nm
	MF (Main) range 250nm
	HF
Location:	20-25N 072-52E
Monitor Times:	24-7; HF DSC watch hours: Search and Rescue Region (SRR) and beyond
DSC Station Porbandar	
MMSI:	004192202
Station Type:	VHF (Main) range 25nm
	MF (Main) range 200nm
	HF
Location:	21-38N 069-37E
Monitor Times:	24-7; HF DSC watch hours: Search and Rescue Region (SRR) and beyond
DSC Station Mumbai	
MMSI:	004192203
Station Type:	VHF (Main) range 25nm
	MF (Main)
Location:	18-55N 072-50E
Monitor Times:	24-7
DSC Station New Mangalore	
MMSI:	004192204
Station Type:	VHF (Main) range 25nm
Location:	12-55N 074-48E
Monitor Times:	24-7
DSC Station Kochi	
MMSI:	004192205
Station Type:	VHF (Main) range 20nm
Location:	09-58N 076-16E
Monitor Times:	24-7

MRCC Mumbai	
DSC Station Goa	
MMSI:	004192206
Station Type:	VHF (Main) range 25nm
Location:	15-25N 073-48E
Monitor Times:	24-7
DSC Station Okha	
MMSI:	004192207
Station Type:	VHF (Main) range 20nm
Location:	22-28N 069-05E
Monitor Times:	24-7

MRCC Chennai	
Contact:	Inmarsat-C: 441907510 MSCG X, Fax: 91 442 346 0405, E-mail: isareast@dataone.in, icgmrccchennai@dataone.in
DSC Station Chennai	
MMSI:	004194401
Station Type:	VHF (Main) range 25nm
	MF (Main)
Location:	13-06N 080-18E
Monitor Times:	24-7
DSC Station Vishakhapatnam	
MMSI:	004194402
Station Type:	VHF (Main) range 20nm
Location:	17-41N 083-17E
Monitor Times:	24-7
DSC Station Paradip	
MMSI:	004194403
Station Type:	VHF (Main) range 25nm
Location:	20-16N 086-42E
Monitor Times:	24-7

MRCC Chennai	
DSC Station Haldia	
MMSI:	004194404
Station Type:	VHF (Main) range 25nm
	MF (Main) range 200nm
	HF
Location:	22-02N 088-06E
Monitor Times:	24-7; HF DSC watch hours: Search and Rescue Region (SRR) and beyond
DSC Station Tuticorn	
MMSI:	004194405
Station Type:	VHF (Main) range 20nm
Location:	08-45N 078-12E
Monitor Times:	24-7
DSC Station Mandapam	
MMSI:	004194406
Station Type:	VHF (Main) range 20nm
	MF (Main) range 250nm
	HF
Location:	09-17N 079-05E
Monitor Times:	24-7; HF DSC watch hours: Search and Rescue Region (SRR) and beyond

MRCC Port Blair	
Contact:	Inmarsat-C: 441908010 (IOR), Inmarsat mini-M: 762483765 (IOR), Phone: +91 3192 245530, Fax: 762483766, E-mail: commanderbb@dataone.in, mrcc-ptb@indiancoastguard.nic.in
DSC Station Diglipor	
MMSI:	004194407
Station Type:	VHF (Main) range 25nm
Location:	13-18N 093-04E
Monitor Times:	24-7

MRCC Port Blair	
DSC Station Campbell Bay	
MMSI:	004194408
Station Type:	VHF (Main) range 30nm
Location:	07-00N 093-55E
Monitor Times:	24-7
DSC Station Port Blair	
MMSI:	004194409
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
	HF
Location:	11-41N 092-46E
Monitor Times:	24-7; HF DSC watch hours: Search and Rescue Region (SRR) and beyond

400AQ. Indonesia

MRCC Biak	
DSC Station Jayapura	
MMSI:	005250007
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	02-31.10S 140-43.22E
Monitor Times:	24-7

MRCC Biak

DSC Station Sorong	
MMSI:	005250011
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	00-53.03S 131-16.29E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Sorong

DSC Station Manokwari	
MMSI:	005250023
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	00-51.56S 134-04.37E
Monitor Times:	24-7

DSC Station Biak	
MMSI:	005250031
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	01-11.10S 136-04.36E
Monitor Times:	24-7

MRCC Jakarta

DSC Station Jakarta	
MMSI:	005250000
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	06-07.28S 106-51.16E
Monitor Times:	24-7

MRCC Jakarta	
DSC Station Belawan	
MMSI:	005250003
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	03-43.17N 098-40.08E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Medan
DSC Station Dumai	
MMSI:	005250004
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	01-41.1N 101-27.2E
Monitor Times:	24-7
Additional RCCs supported	MRSC Pekanbaru
DSC Station Cilacap	
MMSI:	005250030
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	07-44.25S 109-02.23E
Monitor Times:	24-7

MRCC Surabaya	
DSC Station Surabaya	
MMSI:	005250001
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	07-11.05S 112-44.08E

MRCC Surabaya	
Monitor Times:	24-7
DSC Station Semarang	
MMSI:	005250008
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	06-58.35S 110-20.50E
Monitor Times:	24-7
DSC Station Balikpapan	
MMSI:	005250009
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	01-16.15S 116-48.30E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Balik Papan

MRCC Ujung Pandang	
DSC Station Makassar	
MMSI:	005250002
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	07-11.05S 112-44.08E
Monitor Times:	24-7
DSC Station Bitung	
MMSI:	005250005
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	01-26.50N 125-10.53E

MRCC Ujung Pandang	
Monitor Times:	24-7
Additional RCCs supported:	MRSC Menado
DSC Station Amboina	
MMSI:	005250006
Station Type:	VHF (Main) range 20nm
	HF on 4,6,8 MHz
Location:	03-41.57S 128-10.40E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Ambon
DSC Station Kupang	
MMSI:	005250010
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	10-12.49S 123-37.24E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Kupang
DSC Station Kendari	
MMSI:	005250019
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	03-58.38S 122-35.55E
Monitor Times:	24-7

MRSC Ambon	
DSC Station Amboina	
MMSI:	005250006
Station Type:	VHF (Main) range 20 nm
	MF (Main) range 100nm
Location:	03-41.57S 128-10.40E
Monitor Times:	24-7

MRSC Ambon	
Additional RCCs supported:	MRCC Ujung Pandang
DSC Station Ternate	
MMSI:	005250020
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	00-47.00N 127-21.52E
Monitor Times:	24-7
DSC Station Sanana	
MMSI:	005250025
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	02-03.03S 125-58.02E
Monitor Times:	24-7

MRSC Balik Papan	
DSC Station Balikpapan	
MMSI:	005250009
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	01-16.15S 116-48.30E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Surabaya
DSC Station Tarakan	
MMSI:	005250017
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	03-17.20N 117-35.25E
Monitor Times:	24-7

MRSC Denpasar	
DSC Station Lembar	
MMSI:	005250022
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	08-43.41S 116-04.23E
Monitor Times:	24-7

MRSC Jayapura	
DSC Station Jayapura	
MMSI:	005250007
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	02-31.10S 140-43.22E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Biak

MRSC Kupang	
DSC Station Kupang	
MMSI:	005250010
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	10-12.49S 123-37.24E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Ujung Pandang

MRSC Medan

DSC Station Belawan	
MMSI:	005250003
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	03-43.17N 098-40.08E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Jakarta

DSC Station Sibolga	
MMSI:	005250028
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	01-43.54N 098-47.00E
Monitor Times:	24-7

MRSC Menado

DSC Station Bitung	
MMSI:	005250005
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	01-26.50N 125-10.53E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Ujung Pandang

MRSC Merauke

DSC Station Merauke	
MMSI:	005250021
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	08-28.47S 140-23.38E

MRSC Merauke	
Station Type:	HF on 8 MHz
Location:	08-37.00S 122-13.08E
Monitor Times:	24-7

MRSC Palembang	
DSC Station Panjang	
MMSI:	005250013
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	05-28.23S 105-19.03E
Monitor Times:	24-7

MRSC Pekanbaru	
DSC Station Dumai	
MMSI:	005250004
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	01-41.1N 101-27.2E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Jakarta

MRSC Pontianak	
DSC Station Pontianak	
MMSI:	005250016
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	00-01.36S 109-17.18E
Monitor Times:	24-7

MRSC Sorong	
DSC Station Sorong	
MMSI:	005250011
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
	HF on 8 MHz
Location:	00-53.03S 131-16.29E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Biak
DSC Station Fak-Fak	
MMSI:	005250026
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	02-56.02S 132-17.56E
Monitor Times:	24-7

MRSC Tanjung Pinang	
DSC Station Batu Ampar	
MMSI:	005250012
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	01-09.50N 104-00.01E
Monitor Times:	24-7
DSC Station Sei Kolak Kijang	
MMSI:	005250029
Station Type:	VHF (Main) range 20nm
	MF (Main) range 100nm
Location:	00-51.04N 104-36.31E
Monitor Times:	24-7

400AR. Iran (Islamic Republic of)

DSC Stations not associated with RCCs	
DSC Station Abadan Radio	
MMSI:	004224102
Station Type:	VHF (Main) range 30nm
Location:	30-19.45N 048-16.55E
Monitor Times:	24-7
DSC Station Abomusa Radio (Persian Gulf)	
MMSI:	004225310
Station Type:	VHF (Main) range 30nm
Location:	25-52.14N 055-00.38E
Monitor Times:	24-7
DSC Station Aftab Radio (Persian Gulf)	
MMSI:	004224311
Station Type:	VHF (Main) range 30nm
Location:	26-43.10N 053-55.31E
Monitor Times:	24-7
DSC Station Bahonar Radio	
MMSI:	004224301
Station Type:	VHF (Main) range 30nm
Location:	27-07.45N 056-12.15E
Monitor Times:	24-7
DSC Station Dayer Radio (Persian Gulf)	
MMSI:	004225203
Station Type:	VHF (Main) range 30nm
Location:	27-50N 051-55E

DSC Stations not associated with RCCs	
Monitor Times:	24-7
DSC Station Deylm Radio (Persian Gulf)	
MMSI:	004225205
Station Type:	VHF (Main) range 30nm
Location:	30-34N 050-09E
Monitor Times:	24-7
DSC Station Genaveh Radio (Persian Gulf)	
MMSI:	004225206
Station Type:	VHF (Main) range 30nm
Location:	29-34N 050-34E
Monitor Times:	24-7
DSC Station Jask Radio (Oman Sea)	
MMSI:	004225308
Station Type:	VHF (Main) range 30nm
Location:	25-38.58N 057-45.49E
Monitor Times:	24-7
DSC Station Khark Radio (Persian Gulf)	
MMSI:	004224201
Station Type:	VHF (Main) range 30nm
Location:	29-13.50N 050-20.22E
Monitor Times:	24-7
DSC Station Khomeini Radio (Persian Gulf)	
MMSI:	004225100
Station Type:	VHF (Main) range 30nm
	MF (Main) range 250nm
	HF on 4,8,12,16 MHz
Location:	30-25N 049-03E
Monitor Times:	24-7
DSC Station Kish Radio (Persian Gulf)	
MMSI:	004225500
Station Type:	VHF (Main) range 30nm

DSC Stations not associated with RCCs	
Location:	26-34.15N 054-00.24E
Monitor Times:	24-7
DSC Station Lavar Radio (Persian Gulf)	
MMSI:	004225204
Station Type:	VHF (Main) range 30nm
Location:	28-15.08N 051-15.14E
Monitor Times:	24-7
DSC Station Lengeh Radio	
MMSI:	004224302
Station Type:	VHF (Main) range 30nm
Location:	26-32.46N 054-53.15E
Monitor Times:	24-7
DSC Station Nowshahr Radio (Caspian Sea)	
MMSI:	004225600
Station Type:	VHF (Main) range 30nm
Location:	36-39.05N 051-30.05E
Monitor Times:	24-7
DSC Station Qeshm Radio (Persian Gulf)	
MMSI:	004224304
Station Type:	VHF (Main) range 30nm
Location:	26-56.50N 056-17.07E
Monitor Times:	24-7

Amir Abad	
Location:	36-50N 053-17E
AOR:	Caspian Sea
Contact:	Telex: 88 215124, Phone: +98 152 5462019, Fax: +98 152 5462019, E-mail: amirabad-radio@iran.ir, amirabad-radio@yahoo.com
DSC Station Amir Abad Radio (Caspian Sea)	
MMSI:	004225601
Station Type:	VHF (Main) range 30nm
	HF on 4,6,8,12,16 MHz

Amir Abad	
Location:	36-51.04N 048-17.00E
Monitor Times:	24-7
DSC Station Neka Radio (Caspian Sea)	
MMSI:	004224602
Station Type:	VHF (Main) range 30nm
Location:	36-50.32N 053-16.17E
Monitor Times:	24-7

Anzali Radio	
DSC Station Kiyashahr (Caspian Sea)	
MMSI:	004225500
Station Type:	VHF (Main) range 30nm
Location:	37-26.38N 049-57.08E
Monitor Times:	24-7
Notes:	remotely controlled from Anzali Radio
Additional RCCs supported:	

RCC Bandar Abbas	
Location:	27-08N 057-04E
AOR:	27-06.0N 053-00.0E, 25-30.0N 053-00.0E, 25-38.0N 054-05.0E, 25-39.0N 054-26.0E, 25-41.0N 054-30.0E, 25-47.0N 054-44.0E, 25-47.0N 054-45.0E, 26-14.0N 055-42.0E, 26-16.0N 055-47.0E, 26-26.0N 056-04.0E, 26-32.0N 056-10.5E, 26-40.0N 056-28.0E, 26-38.5N 056-36.0E, 26-29.5N 056-42.5E, 25-25.5N 056-57.5E, 25-05.0N 057-15.0E, 25-33.0N 058-01.0E, 24-42.0N 058-01.0E
Contact:	Telex: 88 214278, 214287, Phone: +98 761 4514032, 4514035, Fax: +98 761 4514036, E-mail: abbasradio@bpa.ir, bandarabbas-mrcc@bpa.ir
DSC Station Abbas Radio (Persian Gulf)	
MMSI:	004225300, 004225304
Station Type:	VHF (Main) range 30nm
	MF (Main) range 250nm
	HF on 4,8,12,16 MHz
Location:	27-06.06N 056-03.48E
Monitor Times:	24-7

RCC Bandar Abbas	
DSC Station Bushehr Radio (Persian Gulf)	
MMSI:	004225200, 004225302
Station Type:	VHF (Main) range 30nm
Location:	28-59N 050-49E
Monitor Times:	24-7
DSC Station Chabahar Radio (Oman Sea)	
MMSI:	004225400
Station Type:	VHF (Main) range 30nm
Location:	25-18N 060-35E
Monitor Times:	24-7

Bandar Bushehr	
AOR:	28-42.0N 049-42.0E, 30-02.5N 050-10.0E, 27-10.0N 050-54.0E, 27-18.0N 050-45.0E, 27-26.0N 050-37.0E, 27-56.0N 050-17.0E, 28-08.0N 050-06.0E, 28-17.0N 049-56.0E, 28-21.0N 049-50.0E, 28-24.0N 049-47.0E, 28-24.0N 049-42.0E, 28-27.0N 049-42.0E, 28-34.0N 049-39.0E, 28-37.0N 049-36.0E, 28-40.0N 049-33.0E, 28-41.0N 049-34.0E, 27-02.0N 051-05.0E, 27-06.0N 050-57.0E, 27-10.0N 050-54.0E, 27-00.0N 051-23.0E, 26-56.0N 051-44.0E, 26-33.0N 052-12.0E, 26-06.0N 052-42.0E, 25-31.0N 053-02.0E, 27-06.0N 053-00.0E, 25-30.0N 053-00.0E
DSC Station Asaluyeh Radio (Persian Gulf)	
MMSI:	004225202, 004225316
Station Type:	VHF (Main) range 30nm
Location:	27-28.05N 052-36.05E
Monitor Times:	24-7

HQ PSO Tehran	
Contact:	Phone: +0098 (21) 84932175, 84932172, Fax: +0098 (21) 84932190, 88651117, E-mail: tehran-mrcc@ir-pso.com, mir_nejad@yahoo.com
DSC Station Anzali Radio (Caspian Sea)	
MMSI:	004225500, 004225601
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	37-28.06N 049-27.06E

HQ PSO Tehran	
Monitor Times:	24-7

400AS. Ireland

MRCC Dublin	
Location:	Irish Coast Guard, Dublin 53-23N 006-04W
AOR:	55-20N 006-55W, 55-25N 007-20W, 55-20N 008-15W, 54-45N 009-00W, 54-34N 010-00W, 54-00N 015-00W, 51-00N 015-00W, 51-00N 008-00W, 52-20N 005-30W, 53-55N 005-30W, 54-25N 008-10W, 55-20N 006-55W
Contact:	Phone: +353 1 662 0922 (24hr), +353 1 678 2313/2304, Fax: +353 1 6620795, E-mail: mrccdublin@irishcoastguard.ie
DSC Station MRCC Dublin	
MMSI:	002500300
Station Type:	VHF (Main) range 40nm
Location:	53-23N 006-04W
Monitor Times:	24-7
DSC Station Carlingford	
MMSI:	002500300
Station Type:	VHF (Monitor) range 40nm
Location:	54-04.5N 006-19.3W
Monitor Times:	24-7
DSC Station Mine Head	
MMSI:	002500300
Station Type:	VHF (Monitor) range 30nm
Location:	51-59.50N 007-35.17W
Monitor Times:	24-7
DSC Station Rosslare	
MMSI:	002500300

MRCC Dublin	
Station Type:	VHF (Monitor) range 44nm
Location:	52-19N 006-34W
Monitor Times:	24-7
DSC Station Wicklow Head	
MMSI:	002500300
Station Type:	VHF (Monitor) range 30nm
Location:	52-58N 006-00W
Monitor Times:	24-7

MRSC Malin Head	
Location:	Marine Rescue Sub Center, Malin Head, Co Donegal 55-22N 007-21W
Contact:	Phone: +353 74 937 0103 (24hr), +353 74 9370389/0195, Fax: +353 74 937 0221, E-mail: mrscmalin@irishcoastguard.ie
DSC Station MRSC Malin Head	
MMSI:	002500100
Station Type:	VHF (Main) range 49nm
Location:	55-22N 007-16W
Station Type:	MF (Main) range 150nm
Location:	55-21N 007-20W
Monitor Times:	24-7
DSC Station Belmullet	
MMSI:	002500100
Station Type:	VHF (Monitor) range 25nm
Location:	54-16N 010-03W
Monitor Times:	24-7
DSC Station Clifden	
MMSI:	002500100
Station Type:	VHF (Monitor) range 50nm
Location:	53-30N 009-56W
Monitor Times:	24-7
DSC Station Glen Head	
MMSI:	002500100

MRSC Malin Head	
Station Type:	VHF (Monitor) range 47nm
Location:	54-44N 008-40W
Monitor Times:	24-7

MRSC Valentia	
Location:	Marine Rescue Sub Center, Valentia Island, Co Kerry 51-56N 010-21W
Contact:	Phone: +353 066 9476109 (24hr), +353 66 9476297, Fax: +353 66 9476289, E-mail: mrscvalentia@irishcoastguard.ie
DSC Station MRSC Valentia	
MMSI:	002500200
Station Type:	VHF (Main) range 54nm
Location:	51-52N 010-21W
Station Type:	MF (Main) range 150nm
Location:	51-55N 010-20W
Monitor Times:	24-7
DSC Station Bantry	
MMSI:	002500200
Station Type:	VHF (Monitor) range 60nm
Location:	51-38N 010-00W
Monitor Times:	24-7
DSC Station Cork	
MMSI:	002500200
Station Type:	VHF (Monitor) range 40nm
Location:	51-51N 008-29W
Monitor Times:	24-7
DSC Station Shannon	
MMSI:	002500200
Station Type:	VHF (Monitor) range 50nm
Location:	52-31N 009-36W
Monitor Times:	24-7

400AT. Italy

MRCC Roma	
Location:	41-49.8N 012-28.4E
Contact:	Inmarsat-C: 424744220, Telex: 611172 (0043), 614156 (0043), Phone: +39 (0) 6-5923569, +39 (0) 6-5924145, Fax: 390 6592 2737, 390 5908 4793, E-mail: itmrcc@mit.gov.it
DSC Station Roma (Torvajanica)	
MMSI:	002470001
Station Type:	VHF (Main)
	MF (Main) range 200nm
Location:	41-37N 012-29E
Monitor Times:	24-7

MRSC Ancona	
Contact:	Phone: +39 (0) 71-227581, +39 (0) 71-502101, Fax: +39 (0) 71-55393, E-mail: ancona@guardiacostiera.it, mrsc.gcancona@mit.gov.it
DSC Station Ancona (Forte Millo)	
MMSI:	002470001
Station Type:	MF (Monitor) range 200nm
Location:	43-36N 013-28E
Monitor Times:	24-7
DSC Station Forte Garibaldi	
MMSI:	002470001
Station Type:	VHF (Monitor) range 39nm
Location:	43-36N 013-31E
Monitor Times:	24-7

MRSC Ancona	
DSC Station Monte Conero	
MMSI:	002470001
Station Type:	VHF (Monitor) range 64nm
Location:	43-33N 013-26E
Monitor Times:	24-7
DSC Station Monte Secco	
MMSI:	002470001
Station Type:	VHF (Monitor) range 39nm
Location:	42-58N 013-52E
Monitor Times:	24-7
DSC Station Silvi Paese	
MMSI:	002470001
Station Type:	VHF (Monitor) range 44nm
Location:	42-33N 014-05E
Monitor Times:	24-7
DSC Station Monte Calvario	
MMSI:	002470002
Station Type:	VHF (Monitor) range 52nm
Location:	42-04N 014-39E
Monitor Times:	24-7

MRSC Bari	
Contact:	Phone: +39 (0) 80-5281511, +39 (0) 80-5216860, Fax: +39 (0) 80-5211726, E-mail: bari@guardiacostiera.it
DSC Station Abbate Argento	
MMSI:	002470002
Station Type:	VHF (Monitor) range 54nm
Location:	40-52N 017-17E
Monitor Times:	24-7
DSC Station Casa D'orso	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm

MRSC Bari	
Location:	41-49N 015-59E
Monitor Times:	24-7
DSC Station Bari (Monte Parano)	
MMSI:	002470002
Station Type:	VHF (Monitor) range 35nm
	MF (Monitor) range 200nm
Location:	40-26N 017-25E
Monitor Times:	24-7
DSC Station Monte Sardo	
MMSI:	002470002
Station Type:	VHF (Monitor) range 39nm
Location:	39-52N 018-20E
Monitor Times:	24-7

MRSC Cagliari	
Contact:	Phone: +39 (0) 70-659210, +39 (0) 70-659225, Fax: +39 (0) 70-60517218, E-mail: cagliari@guardiacostiera.it
DSC Station Badde Urbara	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	40-09N 008-37E
Monitor Times:	24-7
DSC Station Campu Spina	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	39-22N 008-34E
Monitor Times:	24-7
DSC Station Margine Rosso (Cagliari)	
MMSI:	002470001
Station Type:	VHF (Monitor) range 22nm
	MF (Monitor) range 200nm
Location:	39-13N 009-14E

MRSC Cagliari	
Monitor Times:	24-7
DSC Station Monte Limbara	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	40-51N 009-10E
Monitor Times:	24-7
DSC Station Monte Moro	
MMSI:	002470001
Station Type:	VHF (Monitor) range 57nm
Location:	41-06N 009-30E
Monitor Times:	24-7
DSC Station Monte Serpeddi	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	39-22N 009-17E
Monitor Times:	24-7
DSC Station Monte Tului	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	40-15N 009-35E
Monitor Times:	24-7
DSC Station Osilo	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	40-44N 008-40E
Monitor Times:	24-7
DSC Station Porto Cervo Eliporto	
MMSI:	002470001
Station Type:	VHF (Monitor) range 24nm
Location:	41-08N 009-32E
Monitor Times:	24-7

MRSC Catania	
Contact:	Phone: +39 (0) 95-7474321, +39 (0) 95-7474319, Fax: +39 (0) 95-533962, E-mail: catania@guardiacostiera.it
DSC Station Augusta Campolato Alto	
MMSI:	002470002
Station Type:	VHF (Monitor) range 32nm
Location:	37-16N 015-12E
Monitor Times:	24-7
DSC Station Augusta	
MMSI:	002470002
Station Type:	MF (Monitor) range 200nm
Location:	37-14N 015-14E
Monitor Times:	24-7
DSC Station Forte Spuria	
MMSI:	002470002
Station Type:	VHF (Monitor) range 33nm
Location:	38-16N 015-37E
Monitor Times:	24-7
DSC Station M. Lauro	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm
Location:	37-06N 014-49E
Monitor Times:	24-7
DSC Station Siracusa Belvedere	
MMSI:	002470002
Station Type:	VHF (Monitor) range 42nm
Location:	37-05N 015-12E
Monitor Times:	24-7

MRSC Genova	
Contact:	Phone: +39 (0) 10-2412222, +39 (0) 10-2777387, Fax: +39 (0) 10-2777386, E-mail: mrsc@cpgenova.it
DSC Station Genova (Castellaccio)	
MMSI:	002470001
Station Type:	VHF (Monitor) range 53nm
	MF (Monitor) range 200nm
Location:	44-25N 008-56E
Monitor Times:	24-7
DSC Station Monte Bignone	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	43-52N 007-43E
Monitor Times:	24-7
DSC Station Zoagli	
MMSI:	002470001
Station Type:	VHF (Monitor) range 38nm
Location:	44-19N 009-18E
Monitor Times:	24-7

MRSC Livorno	
Contact:	Phone: +39 (0) 586-894493, +39 (0) 586-826070, Fax: +39 (0) 586-826090, E-mail: livorno@guardiacostiera.it
DSC Station Gorgona	
MMSI:	002470001
Station Type:	VHF (Monitor) range 47nm
Location:	43-25.25N 009-53.83E
Monitor Times:	24-7
DSC Station Monte Argentario	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	42-23N 011-10E
Monitor Times:	24-7

MRSC Livorno	
DSC Station Monte Nero	
MMSI:	002470001
Station Type:	VHF (Monitor) range 51nm
Location:	43-29N 010-21E
Monitor Times:	24-7

MRSC Napoli	
Contact:	Phone: +39 (0) 81-2445308, +39 (0) 81-2445431, Fax: +39 (0) 81-2445435, +39 (0) 81-2445347, E-mail: 4_mrsc@libero.it
DSC Station Capri	
MMSI:	002470002
Station Type:	VHF (Monitor) range 50nm
Location:	40-33N 014-15E
Monitor Times:	24-7
DSC Station Napoli Posillipo	
MMSI:	002470002
Station Type:	VHF (Monitor) range 36nm
Location:	40-48N 014-11E
Monitor Times:	24-7
DSC Station Varco del Salice	
MMSI:	002470002
Station Type:	VHF (Monitor) range 69nm
Location:	40-17N 015-02E
Monitor Times:	24-7

MRSC Palermo	
Contact:	Phone: +39 (0) 91-331538, +39 (0) 91-6043111, Fax: +39 (0) 91-325519 (RX), +39 (0) 91-327213 (TX), E-mail: palermo@guardiacostiera.it, cppalermo@mit.gov.it
DSC Station Palermo (Punta Raisi)	
MMSI:	002470002
Station Type:	VHF (Main)
	MF (Main) range 200nm

MRSC Palermo	
Location:	38-11N 013-06E
Monitor Times:	24-7
DSC Station Cefalu	
MMSI:	002470002
Station Type:	VHF (Monitor) range 55nm
Location:	38-01N 013-57E
Monitor Times:	24-7
DSC Station Gela C.po Soprano	
MMSI:	002470002
Station Type:	VHF (Monitor) range 25nm
Location:	37-04N 014-14E
Monitor Times:	24-7
DSC Station M. San Calogero	
MMSI:	002470002
Station Type:	VHF (Monitor) range 54nm
Location:	37-31N 013-07E
Monitor Times:	24-7
DSC Station M. Pellegrino	
MMSI:	002470002
Station Type:	VHF (Monitor) range 68nm
Location:	38-09N 013-21E
Monitor Times:	24-7
DSC Station Lampedusa	
MMSI:	002470002
Station Type:	VHF (Monitor) range 27nm
Location:	35-31N 012-33E
Monitor Times:	24-7
DSC Station Mazara del'Vallo	
MMSI:	002470002
Station Type:	MF (Monitor) range 200nm
Location:	37-39N 012-36E

MRSC Palermo	
Monitor Times:	24-7
DSC Station Monte Erice	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm
Location:	38-02.14N 012-35.45E
Monitor Times:	24-7
DSC Station Pantelleria	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm
Location:	36-46N 012-01E
Monitor Times:	24-7
DSC Station Ustica	
MMSI:	002470002
Station Type:	VHF (Monitor) range 43nm
Location:	38-42N 013-10E
Monitor Times:	24-7

MRSC Ravenna	
Contact:	Phone: +39 (0) 544-443011, +39 (0) 544-443013, Fax: +39 (0) 544-447498, E-mail: ravenna@guardiacostiera.it
DSC Station Ravenna Bassette	
MMSI:	002470001
Station Type:	VHF (Monitor) range 20nm
Location:	44-24N 012-12E
Monitor Times:	24-7

MRSC Reggio Calabria	
Contact:	Phone: +39 (0) 965-6561, +39 (0) 965-656268, Fax: +39 (0) 965-656333, E-mail: reggiocalabria@guardiacostiera.it
DSC Station Capo Colonna	
MMSI:	002470002
Station Type:	VHF (Monitor) range 37nm

MRSC Reggio Calabria	
Location:	39-01N 017-09E
Monitor Times:	24-7
DSC Station Capo dell'Armi	
MMSI:	002470002
Station Type:	VHF (Monitor) range 30nm
Location:	37-57.35N 015-40.82E
Monitor Times:	24-7
DSC Station M. Titolo	
MMSI:	002470002
Station Type:	VHF (Monitor) range 55nm
Location:	40-00N 016-35E
Monitor Times:	24-7
DSC Station M. Mancuso	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm
Location:	39-00N 016-13E
Monitor Times:	24-7
DSC Station Punta Stilo	
MMSI:	002470002
Station Type:	VHF (Monitor) range 26nm
Location:	38-26.83N 016-34.68E
Monitor Times:	24-7
DSC Station Serra del Tuono	
MMSI:	002470002
Station Type:	VHF (Monitor) range 70nm
Location:	40-02N 015-42E
Monitor Times:	24-7

MRSC Roma	
Contact:	Phone: +39 (0) 6-65617326, +39 (0) 6-65617349, Fax: +39 (0) 6-65617303, +39 (0) 6-65617312, E-mail: roma@guardiacostiera.it
DSC Station Formia Ascatiello	
MMSI:	002470001
Station Type:	VHF (Monitor) range 30nm
Location:	41-15N 013-36E
Monitor Times:	24-7
DSC Station Monte Cavo	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	41-45N 012-42E
Monitor Times:	24-7
DSC Station Monte Paradiso	
MMSI:	002470001
Station Type:	VHF (Monitor) range 52nm
Location:	42-05N 011-51E
Monitor Times:	24-7

MRSC Trieste	
Contact:	Phone: +39 (0) 40-676611, +39 (0) 40-676677, Fax: +39 (0) 40-676665, E-mail: trieste@guardiacostiera.it
DSC Station Conconello	
MMSI:	002470001
Station Type:	VHF (Monitor) range 53nm
Location:	45-40N 013-47E
Monitor Times:	24-7
DSC Station Piancavallo	
MMSI:	002470001
Station Type:	VHF (Monitor) range 70nm
Location:	46-05N 012-32E
Monitor Times:	24-7

MRSC Trieste	
DSC Station Trieste (Monte Radio)	
MMSI:	002470001
Station Type:	MF (Monitor) range 200nm
Location:	45-40N 013-46E
Monitor Times:	24-7

MRSC Venezia	
Contact:	Phone: +39 (0) 41-2405711, Fax: +39 (0) 41-2405711, E-mail: so.cpvenezia@mit.gov.it
DSC Station Monte Cero	
MMSI:	002470001
Station Type:	VHF (Monitor) range 58nm
Location:	45-15N 011-40E
Monitor Times:	24-7

400AU. Japan

MRCC Hiroshima	
Location:	34-21.2N 132-28.1E
Contact:	MMSI: 004310601, Phone: +81-82-251-5115, Fax: +81-82-251-5185, E-mail: op-6@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	Japan Coast Guard
Monitor Times:	24-7
Additional RCCs supported:	MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Hiroshima Coast Guard Radio	
MMSI:	004310601
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Noro	
MMSI:	004310601
Station Type:	MF (Monitor) range 60nm
Location:	34-15N 132-40E
Monitor Times:	24-7

MRCC Kagoshima	
Location:	31-33.3N 130-32.9E
Contact:	MMSI: 004311001, Phone: +81-99-255-4999, Fax: +81-99-252-6878, E-mail: op-10@kaiho.mlit.go.jp

MRCC Kagoshima

DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama

DSC Station Kagoshima Coast Guard Radio	
MMSI:	004311001
Station Type:	MF (Main)
Monitor Times:	24-7

DSC Station Yoko-o	
MMSI:	004311001
Station Type:	MF (Monitor) range 150nm
Location:	31-19N 130-49E
Monitor Times:	24-7

DSC Station Aburatsu	
MMSI:	004311001
Station Type:	MF (Monitor) range 150nm
Location:	31-35N 131-25E
Monitor Times:	24-7

DSC Station Naze	
MMSI:	004311001
Station Type:	MF (Main) range 100nm
Location:	28-23N 129-30E
Monitor Times:	24-7

MRCC Kitakyushu

DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz

MRCC Kitakyushu	
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Moji Coast Guard Radio	
MMSI:	004310701
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Mokkoku	
MMSI:	004310701
Station Type:	MF (Monitor) range 150nm
Location:	34-08N 129-12E
Monitor Times:	24-7

MRCC Kobe	
Location:	34-41.1N 135-11.5E
Contact:	MMSI: 004310501, Phone: +81-78-391-4999, Fax: +81-78-391-6609, E-mail: op-5@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Kobe Coast Guard Radio	
MMSI:	004310501
Station Type:	MF (Main)
Monitor Times:	24-7

MRCC Kobe	
DSC Station Shionomisaki	
MMSI:	004310501
Station Type:	MF (Monitor) range 150nm
Location:	33-26N 135-47E
Monitor Times:	24-7
DSC Station Tosayama	
MMSI:	004310501
Station Type:	MF (Monitor) range 150nm
Location:	33-37N 133-31E
Monitor Times:	24-7
DSC Station Senzan	
MMSI:	004310501
Station Type:	MF (Monitor) range 60nm
Location:	34-22N 134-50E
Monitor Times:	24-7

MRCC Maizuru	
Location:	35-27N 135-19E
Contact:	MMSI: 004310801, Phone: +81-773-75-4999, Fax: +81-773-78-2375, E-mail: op-8@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Maizuru Coast Guard Radio	
MMSI:	004310801
Station Type:	MF (Main)
Monitor Times:	24-7

MRCC Maizuru	
DSC Station Nawa	
MMSI:	004310801
Station Type:	MF (Monitor) range 150nm
Location:	35-31N 133-32E
Monitor Times:	24-7

MRCC Nagoya	
Location:	35-03.6N 139-38.1E
Contact:	MMSI: 004310401, Phone: +81-52-651-4999, Fax: +81-52-661-1640, E-mail: op-4@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Nagoya Coast Guard Radio	
MMSI:	004311401
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Asamagatake	
MMSI:	004311401
Station Type:	MF (Main) range 150nm
Location:	34-27N 136-49E
Monitor Times:	24-7

MRCC Naha	
Location:	26-14.5N 127-40.6E
Contact:	MMSI: 004311101, Phone: +81-98-866-4999, Fax: +81-98-869-1167, E-mail: op-11@kaiho.mlit.go.jp

MRCC Naha	
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Okinawa Coast Guard Radio	
MMSI:	004311101
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Tamagusuku	
MMSI:	004311101
Station Type:	MF (Monitor) range 150nm
Location:	26-09N 127-46E
Monitor Times:	24-7
DSC Station Miyara	
MMSI:	004311101
Station Type:	MF (Monitor) range 150nm
Location:	24-22N 124-12E
Monitor Times:	24-7

MRCC Niigata	
Location:	34-21.2N 132-28.1E
Contact:	MMSI: 004310901, Phone: +81-25-249-4999, Fax: +81-25-244-7458, E-mail: op-9@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7

MRCC Niigata	
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Otaru, MRCC Shiogama, MRCC Yokohama
DSC Station Niigata Coast Guard Radio	
MMSI:	004310901
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Nekogatake	
MMSI:	004310901
Station Type:	MF (Monitor) range 150nm
Location:	37-28N 137-08E
Monitor Times:	24-7

MRCC Otaru	
Location:	43-11.5N 141-00.4E
Contact:	MMSI: 004310101, Phone: +81-134-27-6172, Fax: +81-134-21-2835, E-mail: op-1@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Shiogama, MRCC Yokohama
DSC Station Hokkaido Coast Guard Radio	
MMSI:	004310101
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Shakotan	
MMSI:	004310101
Station Type:	MF (Monitor) range 150nm
Location:	43-20N 140-32E

MRCC Otaru	
Monitor Times:	24-7
DSC Station Hakadateyama	
MMSI:	004310101
Station Type:	MF (Monitor) range 150nm
Location:	41-45N 140-43E
Monitor Times:	24-7
DSC Station Tokotan	
MMSI:	004310101
Station Type:	MF (Monitor) range 150nm
Location:	43-00N 144-53E
Monitor Times:	24-7
DSC Station Souyamisaki	
MMSI:	004310101
Station Type:	MF (Monitor) range 150nm
Location:	45-31N 141-56E
Monitor Times:	24-7

MRCC Shiogama	
Location:	MRCC Shiogama
Contact:	MMSI: 004310201, Phone: +81-22-365-6957, Fax: +81-22-367-9098, E-mail: op-2@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Yokohama
DSC Station Shiogama Coast Guard Radio	
MMSI:	004310201
Station Type:	MF (Main)
Monitor Times:	24-7

MRCC Shiogama	
DSC Station Komagamine	
MMSI:	004310201
Station Type:	MF (Monitor) range 150nm
Location:	38-18N 141-32E
Monitor Times:	24-7
DSC Station Same	
MMSI:	004310201
Station Type:	MF (Monitor) range 150nm
Location:	40-29N 141-37E
Monitor Times:	24-7
DSC Station Kamaishi	
MMSI:	004310201
Station Type:	MF (Monitor) range 150nm
Location:	39-16N 141-54E
Monitor Times:	24-7
DSC Station Nyudozaki	
MMSI:	004310201
Station Type:	MF (Monitor) range 150nm
Location:	40-00N 139-42E
Monitor Times:	24-7

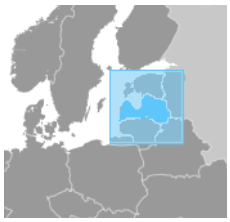
MRCC Yokohama	
Location:	35-27.0N 139-38.1E
Contact:	MMSI: 004310301, Phone: +81-45-211-4999, Fax: +81-45-212-2010, E-mail: op-3@kaiho.mlit.go.jp
DSC Station Japan Coast Guard	
MMSI:	004310001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	35-40N 139-45E
Monitor Times:	24-7
Additional RCCs supported:	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama

MRCC Yokohama	
DSC Station Yokohama Coast Guard Radio	
MMSI:	004310301
Station Type:	MF (Main)
Monitor Times:	24-7
DSC Station Chikura	
MMSI:	004310301
Station Type:	MF (Monitor) range 150nm
Location:	34-56N 139-56E
Monitor Times:	24-7
DSC Station Choshi	
MMSI:	004310301
Station Type:	MF (Monitor) range 150nm
Location:	35-44N 140-52E
Monitor Times:	24-7
DSC Station Shimoda	
MMSI:	004310301
Station Type:	MF (Monitor) range 150nm
Location:	34-40N 138-57E
Monitor Times:	24-7

400AV. Jordan

Harbor Master Aqaba	
DSC Station Aqaba Port Control	
MMSI:	004381234
Station Type:	VHF (Monitor) range 25nm
Location:	29-30N 034-59E
Monitor Times:	24-7

400AW. Latvia



MRCC Riga	
Location:	57-02N 024-05E
Contact:	MMSI: 002750100, Phone: +371 67323103 (emergency), +371 29476101, Fax: +371 67320100, E-mail: sar@mrcc.lv, Website: http://www.mrcc.lv
DSC Station Riga Rescue Radio	
MMSI:	002750100
Station Type:	VHF (Main) range 25nm
	MF (Main) range 150nm
Location:	57-02N 024-05E
Monitor Times:	24-7

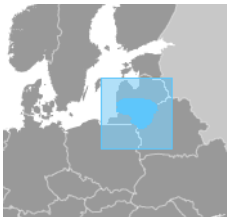
MRCC Riga	
DSC Station Akmenrags	
MMSI:	002750100
Station Type:	VHF (Monitor) range 20nm
	MF (Monitor) range 120nm
Location:	56-50N 021-03E
Monitor Times:	24-7
DSC Station Jaunupe	
MMSI:	002750100
Station Type:	VHF (Monitor) range 20nm
Location:	57-32N 021-41E
Monitor Times:	24-7
DSC Station Jurmalciems	
MMSI:	002750100
Station Type:	VHF (Monitor) range 20nm
Location:	56-31N 021-00E
Monitor Times:	24-7
DSC Station Kolka	
MMSI:	002750100
Station Type:	VHF (Monitor) range 20nm
Location:	57-45N 022-35E
Monitor Times:	24-7
DSC Station Mersrags	
MMSI:	002750100
Station Type:	VHF (Monitor) range 25nm
Location:	57-22N 023-07E
Monitor Times:	24-7
DSC Station Uzava	
MMSI:	002750100
Station Type:	VHF (Monitor) range 20nm
	MF (Monitor) range 120nm
Location:	57-13N 021-26E

MRCC Riga	
Monitor Times:	24-7
DSC Station Vitrupe	
MMSI:	002750100
Station Type:	VHF (Monitor) range 25nm
Location:	57-36N 024-23E
Monitor Times:	24-7

400AX. Lebanon

Lebanese Army	
DSC Station Beirut Radio	
MMSI:	004501000
Station Type:	VHF (Main) range 23nm
Location:	33-50N 035-31E
Monitor Times:	24-7

400AY. Lithuania



MRCC Klaipeda	
Location:	55-43N 021-06E
AOR:	56-04.09N 021-03.52E, 56-04.00N 021-40.00E, 56-20.43N 018-30.23E, 56-05.43N 018-01.07E, 55-17.00N 020-57.00E
Contact:	MMSI: 002770330, Phone: +(370 46) 391257, +(370 46) 499669, Fax: +(370 46) 391259, E-mail: mrcc@mil.lt
DSC Station MRCC Klaipeda	
MMSI:	002770330
Station Type:	VHF (Main) range 18nm
Location:	55-43N 021-06E
Station Type:	MF (Main) range 100nm
Location:	56-01N 021-05E
Monitor Times:	24-7

MRCC Klaipeda	
DSC Station Nida	
MMSI:	002770330
Station Type:	VHF (Monitor) range 24nm
Location:	55-18N 020-59E
Monitor Times:	24-7
DSC Station Sventoji	
MMSI:	002770330
Station Type:	VHF (Monitor) range 20nm
Location:	56-00N 021-05E
Monitor Times:	24-7

400AZ. Malaysia

MRCC Port Klang	
Contact:	Call sign: LIMA KLANG, Telex: LAUT MA 39748, Phone: (603) 31670530/31695100, Fax: (603) 31671334, E-mail: mrcc@marine.gov.my
DSC Station Gunung Jerai	
MMSI:	005330001
Station Type:	VHF (Monitor) range 95nm
Location:	05-47N 100-26E
Monitor Times:	24-7
DSC Station Permatang Pauh	
MMSI:	005330002
Station Type:	MF (Monitor) range 20nm
Location:	05-22N 100-18E
Monitor Times:	24-7
DSC Station Gunung Berinchang	
MMSI:	005330003
Station Type:	VHF (Monitor) range 117nm
Location:	04-31N 101-23E
Monitor Times:	24-7
DSC Station Ulu Kali	
MMSI:	005330004
Station Type:	VHF (Monitor) range 114nm
Location:	03-26N 101-47E
Monitor Times:	24-7
DSC Station Gunung Ledang	
MMSI:	005330005
Station Type:	VHF (Monitor) range 95nm

MRCC Port Klang	
Location:	02-03N 102-34E
Monitor Times:	24-7
DSC Station Tioman	
MMSI:	005330006
Station Type:	VHF (Monitor) range 27nm
Location:	02-48N 104-12E
Monitor Times:	24-7
DSC Station Kuala Rompin	
MMSI:	005330007
Station Type:	VHF (Monitor) range 38nm
Location:	02-48N 103-29E
Monitor Times:	24-7
DSC Station Kemuning	
MMSI:	005330008
Station Type:	VHF (Monitor) range 57nm
Location:	04-19N 103-28E
Monitor Times:	24-7
DSC Station Kuantan	
MMSI:	005330008
Station Type:	MF (Monitor) range 200nm
Location:	04-06N 103-23E
Monitor Times:	24-7
DSC Station Kuala Terengganu	
MMSI:	005330009
Station Type:	VHF (Monitor) range 55nm
Location:	05-18N 103-08E
Monitor Times:	24-7
DSC Station Machang	
MMSI:	005330010
Station Type:	VHF (Monitor) range 70nm
Location:	05-43N 102-17E

MRCC Port Klang	
Monitor Times:	24-7
DSC Station Kuching	
MMSI:	005330011
Station Type:	VHF (Monitor) range 85nm
Location:	01-35N 110-11E
Station Type:	MF (Monitor) range 200nm
Location:	04-49N 109-46E
Monitor Times:	24-7
DSC Station Bintulu	
MMSI:	005330012
Station Type:	VHF (Monitor) range 48nm
Location:	03-13N 113-05E
Monitor Times:	24-7
DSC Station Kota Kinabalu	
MMSI:	005330013
Station Type:	VHF (Monitor) range 75nm
Location:	06-02N 116-12E
Station Type:	MF (Monitor) range 200nm
Location:	05-57N 116-02E
Monitor Times:	24-7
DSC Station Miri	
MMSI:	005330013
Station Type:	MF (Main) range 200nm
Location:	04-28N 114-01E
Monitor Times:	24-7
DSC Station Penang	
MMSI:	005330013
Station Type:	MF (Monitor) range 200nm
Location:	05-22N 100-18E
Monitor Times:	24-7

MRCC Port Klang	
DSC Station Sandakan	
MMSI:	005330013
Station Type:	MF (Monitor) range 200nm
Location:	05-40N 118-06E
Monitor Times:	24-7
DSC Station Labuan	
MMSI:	005330014
Station Type:	VHF (Monitor) range 22nm
Location:	05-17N 115-15E
Monitor Times:	24-7

400BA. Mauritius

MRCC Mauritius	
Contact:	Phone: +00 (230) 208 3935, +00 (230) 208 8317, Fax: +00 (230) 212 2757, E-mail: opsncghg@orange.mu, 3bm.mrs@mauritiustelecom.com
DSC Station Mauritius Radio	
MMSI:	006452700
Station Type:	VHF (Main) range 20nm
	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	20-11S 057-28E
Monitor Times:	24-7
Notes:	Mauritius National Coast Guard

400BB. Mexico

No Associated RCCs	
DSC Station La Paz	
MMSI:	003450410
Station Type:	MF (Monitor) range 150nm
Location:	24-03.43N 110-24.38W
Monitor Times:	24-7

No Associated RCCs	
DSC Station Guaymas	
MMSI:	003450610
Station Type:	VHF (Monitor) range 160nm
Location:	27-54.31N 110-55.05W
Monitor Times:	24-7
DSC Station Mazatlan	
MMSI:	003450810
Station Type:	VHF (Main) range 80nm
	MF (Main) range 150nm
Location:	23-10.03N 106-25.43W
Monitor Times:	24-7
DSC Station Puerto Vallarta	
MMSI:	003451210
Station Type:	VHF (Monitor) range 80nm
Location:	20-45.54N 105-31.53W
Monitor Times:	24-7
DSC Station Manzanillo	
MMSI:	003451410
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	19-01.12N 104-19.11W
Monitor Times:	24-7
DSC Station Lazaro Cardenas	
MMSI:	003451610
Station Type:	VHF (Monitor) range 80nm
Location:	17-57.00N 102-12.27W
Monitor Times:	24-7
DSC Station Acapulco	
MMSI:	003451810
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm

No Associated RCCs	
Location:	16-50.15N 099-56.12W
Monitor Times:	24-7
DSC Station Salina Cruz	
MMSI:	003452010
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	16-10.27N 095-11.00W
Monitor Times:	24-7

MRCC Chetumal	
DSC Station Chetumal	
MMSI:	003451120
Station Type:	VHF (Monitor) range 80nm
Location:	18-30.00N 088-17.08W
Monitor Times:	24-7

MRCC Ensenada	
AOR:	32-30N 117-05W, 32-37N 117-49W, 30-59N 118-45W, 30-32N 121-51W, 25-31N 117-49W, 23-58N 115-41W, 21-38N 113-58W, 22-05N 110-00W, 22-53N 110-00W
Contact:	Phone: (00 52) 646 1 73 48 54, (00 52) 646 1 77 38 12, Fax: (00 52) 646 1 77 38 35, E-mail: m2@semar.gob.mx
DSC Station Ensenada	
MMSI:	003450210
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	31-51.08N 116-37.07W
Monitor Times:	24-7

MRSC Isla Cozumel

DSC Station Cozumel	
MMSI:	003451110
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	20-28.28N 086-58.18W
Monitor Times:	24-7

MRCC Mexico, Mexican Navy

DSC Station Tampico	
MMSI:	003450110
Station Type:	VHF (Main) range 80nm
	MF (Main) range 150nm
Location:	22-12.55N 097-50.45W
Monitor Times:	24-7

DSC Station Cd. Del Carmen	
MMSI:	003450710
Station Type:	VHF (Monitor) range 80nm
Location:	18-39.40N 091-50.23W
Station Type:	MF (Monitor) range 150nm
Location:	18-39.06N 092-07.00W
Monitor Times:	24-7

MRCC Veracruz

DSC Station Veracruz	
MMSI:	003450310
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	19-06.53N 096-08.03W
Monitor Times:	24-7

MRCC Veracruz	
DSC Station Coatzacoalcos	
MMSI:	003450320
Station Type:	VHF (Monitor) range 80nm
Location:	18-09.36N 094-26.51W
Monitor Times:	24-7

MRSC Yukalpeten	
DSC Station Progreso	
MMSI:	003450910
Station Type:	VHF (Monitor) range 80nm
	MF (Monitor) range 150nm
Location:	21-16.08N 089-41.47W
Monitor Times:	24-7

400BC. Montenegro (Republic of)

MRCC Bar	
AOR:	42-23-24N 018-32-25E, 41-36-45N 018-01-53E, 41-30-01N 018-12-36E, 41-39-39N 019-15-58E, 41-50-25N 019-22-13E
Contact:	Inmarsat-C: 426200016, Telex: +200 61445, Phone: +00382 30 313 088, Fax: +00382 30 313 600, E-mail: barradio@msd-ups.org, Website: http://www.pomorstvo.me
DSC Station Bar Radio	
MMSI:	002620001
Station Type:	VHF (Main) range 50nm
	MF (Main) range 150nm
Location:	42-03.15N 019-09.20E
Monitor Times:	24-7
DSC Station Obosnik	
MMSI:	002620002
Station Type:	VHF (Monitor) range 50nm
Location:	42-24.32N 018-36.54E
Monitor Times:	24-7

400BD. Netherlands

JRCC Den Helder	
Location:	52-57.15N 004-47.40E

JRCC Den Helder	
AOR:	51-22.36N 003-21.80E, 51-22.72N 003-21.15E, 51-26.95N 003-17.70E, 51-29.03N 003-12.65E, 51-33.05N 003-04.80E, 51-52.52N 002-32.28E, 51-58.95N 002-37.52E, 52-00.95N 002-39.42E, 52-05.25N 002-42.12E, 52-05.95N 002-42.82E, 52-12.35N 002-50.32E, 52-17.35N 002-55.92E, 52-24.95N 003-03.42E, 52-37.25N 003-10.92E, 52-46.95N 003-12.22E, 52-52.95N 003-10.42E, 53-18.05N 003-03.32E, 53-28.15N 003-00.92E, 53-35.05N 002-59.22E, 53-40.05N 002-57.32E, 53-57.75N 002-51.92E, 54-22.75N 002-45.71E, 54-37.26N 002-53.81E, 55-45.86N 003-22.13E, 55-19.95N 004-19.92E, 54-59.95N 004-59.92E, 54-37.16N 004-59.92E, 54-11.16N 005-59.92E, 53-59.90N 006-06'39E, 53-48.84N 006-15.78E, 53-45.01N 006-19.89E, 53-36.26N 006-24.75E
Contact:	MMSI: 002442000, Inmarsat-C: 424426512 CGHQ X, Telex: (44) 71088 KUSTW NL, Phone: +31 9 000 111 (urgent), +31 223 542 300, Fax: +31 223 658 358, E-mail: ccc@kustwacht.nl
DSC Station Appingedam	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
	MF (TX-Monitor) range 150nm
Location:	53-20.08N 006-51.33E
Monitor Times:	24-7
Notes:	MF station-backup
DSC Station Den Helder	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	52-57.09N 004-47.28E
Monitor Times:	24-7
DSC Station Hoorn	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	52-38.39N 005-05.54E
Monitor Times:	24-7
DSC Station IJmuiden	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	52-27.42N 004-35.00E
Monitor Times:	24-7

JRCC Den Helder	
DSC Station Kornwerderzand	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	53-04.09N 005-20.18E
Monitor Times:	24-7
DSC Station Netherlands Coast Guard	
MMSI:	002442000
Station Type:	VHF (Main)
	MF
Monitor Times:	24-7
DSC Station Noordwijk Radio	
MMSI:	002442000
Station Type:	MF (RX-Monitor) range 150nm
Location:	52-17.35N 004-28.19E
Monitor Times:	24-7
DSC Station Renesse	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	51-44.06N 003-49.18E
Monitor Times:	24-7
DSC Station Scheveningen	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
	MF (TX-Main) range 240nm
Location:	52-05.41N 004-15.27E
Monitor Times:	24-7
DSC Station Schiermonnikoog	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	53-28.32N 006-09.19E
Monitor Times:	24-7

JRCC Den Helder	
DSC Station Schoorl	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	52-43.00N 004-38.42E
Monitor Times:	24-7
DSC Station West Terschelling	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
	MF (RX-Monitor) range 150nm
Location:	53-21.26N 005-12.50E
Monitor Times:	24-7
DSC Station Westkappelle	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	51-31.45N 003-26.50E
Monitor Times:	24-7
DSC Station Wezep	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	52-26.5N 005-59.51E
Monitor Times:	24-7
DSC Station Woensdrecht	
MMSI:	002442000
Station Type:	VHF (Monitor) range 25nm
Location:	51-26.14N 004-20.13E
Monitor Times:	24-7

400BE. New Zealand

RCC New Zealand	
AOR:	Area bounded on the west by meridian 163E, on the east by meridian 131W, extending south to the South Pole and bounded on the north by a line joining 25°S 163°E, 25° S 180°E, 05°S 171°W, 05°S 157°W, 30°S 157°W, 30°S 131°W
Contact:	Phone: +644 577 8030 (24-7), +644 577 8034 (Admin), Fax: +644 577 8038 (24-7), +644 577 8041 (Admin), E-mail: rccnz@maritimenz.govt.nz
DSC Station Taupo Maritime Radio	
MMSI:	005120010
Station Type:	HF on 4,6,8,12,16 MHz
Location:	38-52.16S 176-26.13E
Monitor Times:	24-7

400BF. Norway

JRCC North Norway Bodø	
Location:	Bodø, Norway 67-17N 014-23E
AOR:	Northern Norway
Contact:	Phone: 47 75 55 90 00 (emergency), 47 75 55 93 00, E-mail: operations@jrcc.bodoe.no
Notes:	Office open 0800-1530 (local)

JRCC North Norway Bodø	
DSC Station Svalbard Radio	
MMSI:	002570900
Station Type:	MF (Monitor) range 200nm
Location:	78-02N 013-40E
Monitor Times:	24-7
DSC Station Andenes	
MMSI:	002570700
Station Type:	VHF (Monitor) range 54nm
Location:	69-16.42N 016-00.29E
Station Type:	MF (Monitor) range 200nm
Location:	69-18N 016-04E
Monitor Times:	24-7
DSC Station Bjørnøya	
MMSI:	002570700
Station Type:	VHF (Monitor) range 40nm
Location:	74-30.12N 019-00.60E
Station Type:	MF (Monitor) range 200nm
Location:	74-31N 019-01E
Monitor Times:	24-7
DSC Station Bodø Radio	
MMSI:	002570700
Station Type:	VHF (Main)
	MF (Main) range 200nm
Location:	67-16N 014-23E
Monitor Times:	24-7
DSC Station Fornesfjell	
MMSI:	002570700
Station Type:	VHF (Monitor) range 68nm
Location:	67-25.51N 015-27.18E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Fredvang	
MMSI:	002570700
Station Type:	VHF (Monitor) range 21nm
Location:	68-05.40N 013-10.54E
Monitor Times:	24-7
DSC Station Hagskaret	
MMSI:	002570700
Station Type:	VHF (Monitor) range 36nm
Location:	68-09.39N 013-41.58E
Monitor Times:	24-7
DSC Station Harstad	
MMSI:	002570700
Station Type:	VHF (Monitor) range 36nm
Location:	68-47.54N 016-30.55E
Monitor Times:	24-7
DSC Station Hillesøy	
MMSI:	002570700
Station Type:	VHF (Monitor) range 41nm
Location:	69-38.31N 017-58.24E
Monitor Times:	24-7
DSC Station Horva	
MMSI:	002570700
Station Type:	VHF (Monitor) range 57nm
Location:	66-00.57N 012-49.18E
Monitor Times:	24-7
DSC Station Isfjord (Svalbard)	
MMSI:	002570700
Station Type:	VHF (Monitor) range 23nm
Location:	78-03.42N 013-36.59E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Jan Mayen	
MMSI:	002570700
Station Type:	MF (Monitor) range 200nm
Location:	70-57.0N 008-40.01W
Monitor Times:	24-7
DSC Station Kistefjell	
MMSI:	002570700
Station Type:	VHF (Monitor) range 85nm
Location:	69-17.30N 018-07.56E
Monitor Times:	24-7
DSC Station Kongsvegpasset (Svalbard)	
MMSI:	002570700
Station Type:	VHF (Monitor)
Location:	78-44.37N 013-31.19E
Monitor Times:	24-7
DSC Station Kvalnes	
MMSI:	002570700
Station Type:	VHF (Monitor) range 40nm
Location:	68-21N 013-57E
Monitor Times:	24-7
DSC Station Lødingen	
MMSI:	002570700
Station Type:	VHF (Monitor) range 13nm
Location:	68-24.05N 015-58.13E
Monitor Times:	24-7
DSC Station Bjørndalen (Longyearbyen)	
MMSI:	002570700
Station Type:	VHF (Monitor) range 21nm
Location:	78-14.3N 015-21.1E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Meløy	
MMSI:	002570700
Station Type:	VHF (Monitor) range 50nm
Location:	66-51.14N 013-38.25E
Monitor Times:	24-7
DSC Station Mo I Rana	
MMSI:	002570700
Station Type:	VHF (Monitor) range 71nm
Location:	66-12.32N 013-44.21E
Monitor Times:	24-7
DSC Station Myre, Vesteralen	
MMSI:	002570700
Station Type:	VHF (Monitor) range 30nm
Location:	68-56.36N 015-01.18E
Monitor Times:	24-7
DSC Station Raften/Svolvaer	
MMSI:	002570700
Station Type:	VHF (Monitor) range 18nm
Location:	68-24.10N 015-06.51E
Monitor Times:	24-7
DSC Station Rønvikfjell, Bodø	
MMSI:	002570700
Station Type:	VHF (Monitor) range 41nm
Location:	67-18.08N 014-26.46E
Monitor Times:	24-7
DSC Station Sandnessjoen	
MMSI:	002570700
Station Type:	MF (Monitor) range 200nm
Location:	66-01N 012-37E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Stamnes	
MMSI:	002570700
Station Type:	VHF (Monitor) range 13nm
Location:	68-48.42N 015-28.48E
Monitor Times:	24-7
DSC Station Steigen	
MMSI:	002570700
Station Type:	VHF (Monitor) range 77nm
Location:	67-49.18N 015-02.09E
Monitor Times:	24-7
DSC Station Storheia, Hadsel	
MMSI:	002570700
Station Type:	VHF (Monitor) range 61nm
Location:	68-32.39N 014-52.08E
Monitor Times:	24-7
DSC Station Tønsnes	
MMSI:	002570700
Station Type:	VHF (Monitor) range 47nm
Location:	69-43.06N 019-07.43E
Monitor Times:	24-7
DSC Station Traenfjord	
MMSI:	002570700
Station Type:	VHF (Monitor) range 53nm
Location:	66-31.46N 012-49.14E
Monitor Times:	24-7
DSC Station Tromsø	
MMSI:	002570700
Station Type:	VHF (Monitor) range 36nm
Location:	69-38.49N 018-55.19E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Værøy	
MMSI:	002570700
Station Type:	VHF (Monitor) range 59nm
Location:	67-39.50N 012-37.27E
Monitor Times:	24-7
DSC Station Vega	
MMSI:	002570700
Station Type:	VHF (Monitor) range 75nm
Location:	65-39.00N 011-49.43E
Monitor Times:	24-7
DSC Station Veggen, Narvik	
MMSI:	002570700
Station Type:	VHF (Monitor) range 48nm
Location:	68-27.46N 017-09.58E
Monitor Times:	24-7
DSC Station Baatsfjord, Hamnefjell	
MMSI:	002570800
Station Type:	VHF (Monitor) range 49nm
Location:	70-40.10N 029-42.39E
Monitor Times:	24-7
DSC Station Berlevåg, Berlevågfjell	
MMSI:	002570800
Station Type:	VHF (Monitor) range 40nm
	MF (Monitor) range 200nm
Location:	70-51.47N 029-04.34E
Monitor Times:	24-7
DSC Station Domen (Vardø)	
MMSI:	002570800
Station Type:	VHF (Monitor) range 40nm
Location:	70-20.08N 031-01.57E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Hasvik, Fuglen	
MMSI:	002570800
Station Type:	VHF (Monitor) range 55nm
Location:	70-39.30N 021-57.49E
Monitor Times:	24-7
DSC Station Havøysund, Havøygavlen	
MMSI:	002570800
Station Type:	VHF (Monitor) range 49nm
Location:	71-00.16N 024-35E
Monitor Times:	24-7
DSC Station Alta, Helligfjell	
MMSI:	002570800
Station Type:	VHF (Monitor) range 63nm
Location:	70-06.47N 022-56.02E
Monitor Times:	24-7
DSC Station Nordkapp, Honningsvåg	
MMSI:	002570800
Station Type:	VHF (Monitor) range 56nm
Location:	70-59.05N 025-53.59E
Monitor Times:	24-7
DSC Station Kirkenes	
MMSI:	002570800
Station Type:	VHF (Monitor) range 44nm
Location:	69-45.02N 030-07.54E
Monitor Times:	24-7
DSC Station Mehamn, Trollhetta	
MMSI:	002570800
Station Type:	VHF (Monitor) range 49nm
Location:	71-02.49N 028-06.41E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Lebesby, Oksen	
MMSI:	002570800
Station Type:	VHF (Monitor) range 51nm
Location:	70-57.54N 020-20.59E
Monitor Times:	24-7
DSC Station Skjervøy, Stussnesfjell	
MMSI:	002570800
Station Type:	VHF (Monitor) range 37nm
Location:	70-01.27N 020-58.57E
Monitor Times:	24-7
DSC Station Tana, Algasvarre	
MMSI:	002570800
Station Type:	VHF (Monitor) range 65nm
Location:	70-28.07N 028-14.03E
Monitor Times:	24-7
DSC Station Karlsøy, Torsvåg	
MMSI:	002570800
Station Type:	VHF (Monitor) range 23nm
Location:	70-14.35N 019-29.49E
Monitor Times:	24-7
DSC Station Skjervøy, Trolltind	
MMSI:	002570800
Station Type:	VHF (Monitor) range 78nm
Location:	70-04.34N 020-25.50E
Monitor Times:	24-7
DSC Station Tromsø	
MMSI:	002570800
Station Type:	MF (Monitor) range 200nm
Location:	69-39N 018-57E
Monitor Times:	24-7

JRCC North Norway Bodø	
DSC Station Hammerfest, Tyven	
MMSI:	002570800
Station Type:	VHF (Monitor) range 57nm
Location:	70-38.22N 023-41.47E
Station Type:	MF (Monitor) range 200nm
Location:	70-39.88N 023-40.71E
Monitor Times:	24-7
DSC Station Varangefjord, Torsvarde	
MMSI:	002570800
Station Type:	VHF (Monitor) range 41nm
Location:	70-05.50N 029-49.06E
Monitor Times:	24-7
DSC Station Vardø Radio	
MMSI:	002570800
Station Type:	VHF (Main) range 40nm
	MF (Main) range 200nm
Location:	70-22N 031-06E
Monitor Times:	24-7

JRCC South Norway Stavanger	
Location:	Sola, Norway 65-41N 011-44E
AOR:	Southern Norway
Contact:	Phone: +47 51 51 70 00 (emergency), +47 51 64 60 00, Fax: +47 51 65 23 34, E-mail: operations@jrcc-stavanger.no
Notes:	Office open 0800-1530 local time
DSC Station Hilsøy (Arendal)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 36nm
Location:	58-26.01N 008-44.38E
Monitor Times:	24-7

JRCC South Norway Stavanger	
DSC Station Bukten (Drammen)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 24nm
Location:	59-40.23N 010-26.01E
Monitor Times:	24-7
DSC Station Høyås (Halden)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 53nm
Location:	59-10.31N 011-25.40E
Monitor Times:	24-7
DSC Station Dolvsveden (Kristiansand)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 36nm
Location:	58-08.09N 008-08.01E
Monitor Times:	24-7
DSC Station Mjøsa, Bangsberget	
MMSI:	002570100
Station Type:	VHF (Monitor)
Location:	60-50.46N 010-53.51E
Monitor Times:	24-7
DSC Station Tryvann (Oslo)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 62nm
Location:	59-59.05N 010-40.12E
Monitor Times:	24-7
DSC Station Vealøs (Porsgrunn)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 66nm
Location:	59-14.10N 009-41.56E
Monitor Times:	24-7

JRCC South Norway Stavanger	
DSC Station Ranvikheia (Risør)	
MMSI:	002570100
Station Type:	VHF (Monitor) range 35nm
Location:	58-42.5N 009-12.28E
Monitor Times:	24-7
DSC Station Tjøme Radio	
MMSI:	002570100
Station Type:	VHF (Main) range 28nm
Location:	59-04.49N 010-24.02E
Station Type:	MF (Main) range 200nm
Location:	59-26.11N 010-35.35E
Monitor Times:	24-7
DSC Station Bergen	
MMSI:	002570300
Station Type:	MF (Monitor) range 200nm
Location:	60-42.31N 004-52.42E
Monitor Times:	24-7
DSC Station Bergen, Rundemannen	
MMSI:	002570300
Station Type:	VHF (Monitor) range 65nm
Location:	60-24.46N 005-21.56E
Monitor Times:	24-7
DSC Station Bjerkreim	
MMSI:	002570300
Station Type:	VHF (Monitor) range 66nm
Location:	58-38.00N 005-57.18E
Monitor Times:	24-7
DSC Station Bokn	
MMSI:	002570300
Station Type:	VHF (Monitor) range 50nm
Location:	59-13.13N 005-25.40E

JRCC South Norway Stavanger	
Monitor Times:	24-7
DSC Station Draupner, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	58-11.30N 002-28.30E
Monitor Times:	24-7
DSC Station Ekofisk, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	56-32.56N 003-13.02E
Monitor Times:	24-7
DSC Station Farsund	
MMSI:	002570300
Station Type:	VHF (Monitor) range 29nm
	MF (Monitor) range 200nm
Location:	58-04.21N 006-44.40E
Monitor Times:	24-7
DSC Station I. Hardanger, Grimo	
MMSI:	002570300
Station Type:	VHF (Monitor) range 69nm
Location:	60-24.22N 006-38.10E
Monitor Times:	24-7
DSC Station Haugesund	
MMSI:	002570300
Station Type:	VHF (Monitor) range 47nm
Location:	59-25.22N 005-19.44E
Monitor Times:	24-7
DSC Station Heimdal, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	59-34.39N 002-13.69E

JRCC South Norway Stavanger	
Monitor Times:	24-7
DSC Station Bergen, Lindås	
MMSI:	002570300
Station Type:	VHF (Monitor) range 59nm
Location:	60-34.38N 005-19.44E
Monitor Times:	24-7
DSC Station Lindesnes	
MMSI:	002570300
Station Type:	VHF (Monitor) range 40nm
Location:	58-01.26N 007-03.42E
Monitor Times:	24-7
DSC Station Rogaland Radio	
MMSI:	002570300
Station Type:	VHF (Main)
Location:	58-53.3N 005-37.8E
Station Type:	MF (Main) range 200nm
Location:	58-39N 005-36E
Monitor Times:	24-7
DSC Station Sleipner A, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	58-22.05N 001-54.22E
Monitor Times:	24-7
DSC Station Sotra	
MMSI:	002570300
Station Type:	VHF (Monitor) range 53nm
Location:	60-19.09N 005-06.54E
Monitor Times:	24-7
DSC Station Stavanger, Ullandhaug	
MMSI:	002570300
Station Type:	VHF (Monitor) range 40nm

JRCC South Norway Stavanger	
Location:	58-56.23N 005-42.28E
Monitor Times:	24-7
DSC Station Stord	
MMSI:	002570300
Station Type:	VHF (Monitor) range 74nm
Location:	59-52.26N 005-29.38E
Monitor Times:	24-7
DSC Station Lista, Storefjell	
MMSI:	002570300
Station Type:	VHF (Monitor) range 52nm
Location:	58-09.13N 006-42.40E
Monitor Times:	24-7
DSC Station Ula, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	57-06.66N 002-50.91E
Monitor Times:	24-7
DSC Station Valhall, North Sea	
MMSI:	002570300
Station Type:	VHF (Monitor) range 30nm
Location:	56-16.62N 003-23.58E
Monitor Times:	24-7
DSC Station Ålesund, Aksla	
MMSI:	002570500
Station Type:	VHF (Monitor) range 41nm
Location:	62-28.34N 006-10.45E
Monitor Times:	24-7
DSC Station Åsgård B, North Sea	
MMSI:	002570500
Station Type:	VHF (Monitor) range 30nm
Location:	65-06.61N 006-47.36E

JRCC South Norway Stavanger	
Monitor Times:	24-7
DSC Station Bremanger	
MMSI:	002570500
Station Type:	VHF (Monitor) range 74nm
Location:	61-50.24N 004-59.13E
Monitor Times:	24-7
DSC Station Draugen, North Sea	
MMSI:	002570500
Station Type:	VHF (Monitor) range 30nm
Location:	64-21.15N 007-46.81E
Monitor Times:	24-7
DSC Station Florø Radio	
MMSI:	002570500
Station Type:	VHF (Main)
Location:	61-36.00N 005-02.13E
Station Type:	MF (Main) range 200nm
Location:	61-35N 005-00E
Monitor Times:	24-7
DSC Station Fjaerland	
MMSI:	002570500
Station Type:	VHF (Monitor) range 15nm
Location:	61-25.22N 006-45.31E
Monitor Times:	24-7
DSC Station Stjørdal, Forbordsfjell	
MMSI:	002570500
Station Type:	VHF (Monitor) range 66nm
Location:	63-31.37N 010-53.16E
Monitor Times:	24-7
DSC Station Brattvåg, Gamlemsveten	
MMSI:	002570500
Station Type:	VHF (Monitor) range 80nm

JRCC South Norway Stavanger	
Location:	62-34.31N 006-19.07E
Monitor Times:	24-7
DSC Station Geiranger-2	
MMSI:	002570500
Station Type:	VHF (Monitor) range 57nm
Location:	62-07.22N 007-11.29E
Monitor Times:	24-7
DSC Station Gulen	
MMSI:	002570500
Station Type:	VHF (Monitor) range 73nm
Location:	61-02.04N 005-09.18E
Monitor Times:	24-7
DSC Station Gullfaks, North Sea	
MMSI:	002570500
Station Type:	VHF (Monitor) range 30nm
Location:	61-10.54N 002-11.26E
Monitor Times:	24-7
DSC Station Heidrun, North Sea	
MMSI:	002570500
Station Type:	VHF (Monitor) range 30nm
Location:	65-19.45N 007-18.96E
Monitor Times:	24-7
DSC Station Ljønibba (Hellesylt)	
MMSI:	002570500
Station Type:	VHF (Monitor) range 40nm
Location:	62-05.01N 006-53.29E
Monitor Times:	24-7
DSC Station Hareid, Hjørunganes	
MMSI:	002570500
Station Type:	VHF (Monitor) range 19nm
Location:	62-21.32N 006-07.24E

JRCC South Norway Stavanger	
Monitor Times:	24-7
DSC Station Kinn	
MMSI:	002570500
Station Type:	VHF (Monitor) range 52nm
Location:	61-33.25N 004-45.30E
Monitor Times:	24-7
DSC Station Orland, Kopparen	
MMSI:	002570500
Station Type:	VHF (Monitor) range 64nm
Location:	63-48.24N 009-44.18E
Monitor Times:	24-7
DSC Station Kristiansund, Varden	
MMSI:	002570500
Station Type:	VHF (Monitor) range 34nm
Location:	63-06.57N 007-42.45E
Monitor Times:	24-7
DSC Station Ligtvor	
MMSI:	002570500
Station Type:	VHF (Monitor) range 17nm
Location:	61-10.23N 007-07.09E
Monitor Times:	24-7
DSC Station Litlefonni, Tjelbergodden	
MMSI:	002570500
Station Type:	VHF (Monitor) range 56nm
Location:	63-22.48N 008-42.55E
Monitor Times:	24-7
DSC Station Måløyg, Raudeberg	
MMSI:	002570500
Station Type:	VHF (Monitor) range 38nm
Location:	61-59.14N 005-09.05E
Monitor Times:	24-7

JRCC South Norway Stavanger	
DSC Station Molde	
MMSI:	002570500
Station Type:	VHF (Monitor) range 59nm
Location:	62-45.10N 007-07.58E
Monitor Times:	24-7
DSC Station Mosvik, Skavlen	
MMSI:	002570500
Station Type:	VHF (Monitor) range 55nm
Location:	63-46.19N 010-57.03E
Monitor Times:	24-7
DSC Station Namsos, Spillumsaksla	
MMSI:	002570500
Station Type:	VHF (Monitor) range 58nm
Location:	64-26.32N 011-32.16E
Monitor Times:	24-7
DSC Station Fosnavaag, Nerlandshorn	
MMSI:	002570500
Station Type:	VHF (Monitor) range 59nm
Location:	62-20.57N 005-33.11E
Monitor Times:	24-7
DSC Station Orlandet	
MMSI:	002570500
Station Type:	MF (Monitor) range 200nm
Location:	63-40.59N 009-35.25E
Monitor Times:	24-7
DSC Station Orskogfjellet	
MMSI:	002570500
Station Type:	VHF (Monitor) range 69nm
Location:	62-30.57N 006-52.20E
Monitor Times:	24-7

JRCC South Norway Stavanger	
DSC Station Oseberg	
MMSI:	002570500
Station Type:	VHF (Monitor) range 30nm
Location:	60-29.54N 002-49.63E
Monitor Times:	24-7
DSC Station Tingvoll, Reinsfjell	
MMSI:	002570500
Station Type:	VHF (Monitor) range 84nm
Location:	62-55.51N 007-55.37E
Monitor Times:	24-7
DSC Station Rørvik, Falkhetta	
MMSI:	002570500
Station Type:	VHF (Monitor) range 43nm
Location:	64-52.45N 011-13.32E
Monitor Times:	24-7
DSC Station Sagtennene	
MMSI:	002570500
Station Type:	VHF (Monitor) range 85nm
Location:	61-53.24N 006-06.30E
Monitor Times:	24-7
DSC Station Snorre, North Sea	
MMSI:	002570500
Station Type:	VHF (Monitor) range 31nm
Location:	61-26.75N 002-08.64E
Monitor Times:	24-7
DSC Station Sogndal, Storehogen	
MMSI:	002570500
Station Type:	VHF (Monitor) range 93nm
Location:	61-10.23N 007-07.09E
Monitor Times:	24-7

JRCC South Norway Stavanger	
DSC Station Storåsen	
MMSI:	002570500
Station Type:	VHF (Monitor) range 34nm
Location:	61-35.33N 005-01.35E
Monitor Times:	24-7
DSC Station Buholmråen, Yttervåg	
MMSI:	002570500
Station Type:	VHF (Monitor) range 34nm
Location:	64-17.50N 010-17.54E
Monitor Times:	24-7

400BG. Peru

MRCC Callao	
Contact:	MMSI: 007600125, Phone: +0051-1-4200177, Fax: +0051-1-4299798, E-mail: costera.callao@dicapi.mil.pe
DSC Station Callao	
MMSI:	007600125
Station Type:	VHF (Main) range 50nm
	MF (Main) range 200nm
	HF on 8 MHz
Location:	12-03S 077-09W
Monitor Times:	24-7
DSC Station Iquitos	
MMSI:	007600133
Station Type:	VHF (Main) range 30nm
Location:	03-48S 073-15W
Monitor Times:	24-7

MRCC Chancay	
DSC Station Chancay	
Station Type:	VHF range 30nm
Location:	11-35S 077-16W
Monitor Times:	24-7

MRCC Chimbote	
DSC Station Chimbote	
MMSI:	007600126

MRCC Chimbote	
Station Type:	VHF (Main) range 12nm
Location:	09-08S 078-37W
Monitor Times:	24-7

MRCC Mollendo	
Contact:	MMSI: 007600129, Phone: +0051-154534383, Fax: +0051-154534383, E-mail: costera.mollendo@dicapi.mil.pe
DSC Station Mollendo	
MMSI:	007600129
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
	HF on 8 MHz
Location:	17-01S 072-01W
Monitor Times:	24-7

MRCC Paita	
Contact:	MMSI: 007600121, Phone: +0051-173211670, Fax: +0051-173211670, E-mail: costera.paita@dicapi.mil.pe
DSC Station Paita	
MMSI:	007600121
Station Type:	VHF (Main) range 30nm
	MF (Main)
	HF on 8 MHz
Location:	05-05S 081-07W
Monitor Times:	24-7
DSC Station Puno	
MMSI:	007600134
Station Type:	VHF (Main) range 30nm
Monitor Times:	24-7

MRSC Huacho

DSC Station Huacho	
MMSI:	007600128
Station Type:	VHF (Main) range 30nm
Location:	11-07S 077-37W
Monitor Times:	24-7

MRSC Ilo

DSC Station Ilo	
MMSI:	007600132
Station Type:	VHF (Main) range 53nm
Location:	17-39S 071-21W
Monitor Times:	24-7

MRSC Pimentel

DSC Station Pimentel	
MMSI:	007600123
Station Type:	VHF (Main) range 25nm
Location:	06-50S 079-56W
Monitor Times:	24-7

MRSC Pisco

DSC Station Pisco	
MMSI:	007600130
Station Type:	VHF (Main) range 17nm
Location:	13-43S 076-13W
Monitor Times:	24-7

MRSC Salaverry

DSC Station Salaverry	
MMSI:	007600124
Station Type:	VHF (Main) range 25nm

MRSC Salaverry	
Location:	08-13S 078-59W
Monitor Times:	24-7

MRSC San Juan	
DSC Station San Juan	
MMSI:	007600131
Station Type:	VHF (Main) range 30nm
Location:	15-22S 075-10W
Monitor Times:	24-7

MRSC Supe	
DSC Station Supe	
MMSI:	007600127
Station Type:	VHF (Main) range 14nm
Location:	10-48S 077-44W
Monitor Times:	24-7

MRSC Talara	
DSC Station Talara	
MMSI:	007600122
Station Type:	VHF (Main) range 30nm
Location:	04-35S 081-17W
Monitor Times:	24-7

MRSC Zorritos	
DSC Station Zorritos	
MMSI:	007600120
Station Type:	VHF (Main) range 30nm
Location:	03-40S 080-40W
Monitor Times:	24-7

400BH. Philippines

RCC Manila	
Contact:	Coast Guard Action Center 14-35-00N 120-58-15E
AOR:	Covers the waters within the baselines of the Philippines Archipelago.
Notes:	RCC Manila is divided into ten (10) Maritime Rescue Sub Centers (MRSC) established at the Coast Guard Districts (CGDs). Forming the backbone of the MRSCs are the Coast Guard Stations. In turn, Coast Guard Detachments under the different stations are designated as SAR units (SRUs).
DSC Station Manila	
Station Type:	MF (Main) range 150nm
	HF on 4,6,8,12,16 MHz
Location:	14-30N 121-04E
Monitor Times:	24-7
DSC Station Davao	
Station Type:	MF (Monitor) range 150nm
Location:	07-07N 125-37E
Monitor Times:	24-7

400BI. Poland

MRCC Gdynia	
AOR:	53-55-45N 014-13-41E, 54-55-00N 014-22-00E, within 16nm of airfield in Ronne on Bornholm Island, 54-55-00N 015-08-11E, 54-55-00N 015-52-00E, 55-50-45N 017-33-15E, 54-27-29N 019-38-31E
Contact:	Phone: +48 58 620 55 51, +48 58 621 68 11, Fax: +48 58 660 76 40, E-mail: polratok.1@sar.gov.pl
DSC Station Grzywacz-Polana	
MMSI:	002610110
Station Type:	VHF (Monitor) range 37nm
Location:	53-57N 014-30E
Monitor Times:	24-7
DSC Station Kolobrzeg	
MMSI:	002610110
Station Type:	VHF (Monitor) range 27nm
Location:	54-10N 015-33E
Monitor Times:	24-7
DSC Station Kolowo	
MMSI:	002610110
Station Type:	VHF (Monitor) range 42nm
Location:	53-20N 014-40E
Monitor Times:	24-7
DSC Station Szczecin	
MMSI:	002610110
Station Type:	VHF (Main)
Location:	53-28N 014-35E
Monitor Times:	24-7
Notes:	remote controlled
DSC Station Krynica Morska	
MMSI:	002610210
Station Type:	VHF (Monitor) range 27nm
Location:	54-24N 019-30E
MMSI:	002610310
Station Type:	VHF (Monitor) range 20nm
Location:	54-23N 019-27E

MRCC Gdynia	
Monitor Times:	24-7
DSC Station Rozewie	
MMSI:	002610210
Station Type:	VHF (Monitor) range 26nm
Location:	54-49N 018-20E
MMSI:	002610310
Station Type:	VHF (Monitor) range 25nm
Location:	54-50N 018-20E
Monitor Times:	24-7
DSC Station Barzowice	
MMSI:	002610210
Station Type:	VHF (Monitor) range 31nm
	MF (TX-Monitor)
Location:	54-28N 016-30E
Monitor Times:	24-7
DSC Station Oksywie	
MMSI:	002610210
Station Type:	VHF (Main) range 31nm
Location:	54-32N 018-32E
Monitor Times:	24-7
DSC Station Jaroslawiec	
MMSI:	002610210
Station Type:	VHF (Monitor) range 31nm
	MF (RX-Monitor)
Location:	54-32N 016-31E
Monitor Times:	24-7
DSC Station Rowakol	
MMSI:	002610210
Station Type:	VHF (Monitor) range 35nm
Location:	54-39N 017-13E
Monitor Times:	24-7

MRCC Gdynia	
DSC Station Witowo Radio	
MMSI:	002610210
Station Type:	VHF (Main)
	MF (Main) range 150nm
Location:	54-32.29N 016-32.12E
Monitor Times:	24-7
DSC Station Oksywie/Gdynia	
MMSI:	002610310
Station Type:	VHF (Main) range 30nm
Location:	54-32N 018-32E
Monitor Times:	24-7
Notes:	remote controlled

400BJ. Republic of Korea

RCC Donghae	
Contact:	Phone: +82 32 680 2342, Fax: +82 51 680 2942, E-mail: mrccdonghae@kcg.go.kr
DSC Station East Regional HQs Korea Coast Guard	
MMSI:	004401002
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	37-29N 129-07E
Monitor Times:	24-7

RCC Donghae	
DSC Station Seoul Radio	
MMSI:	004400102
Station Type:	VHF (Monitor) range 25nm
Location:	35-35N 129-24E
MMSI:	004400401
Station Type:	VHF (Monitor) range 25nm
Location:	36-30N 129-26E
MMSI:	004400402
Station Type:	VHF (Monitor) range 25nm
Location:	36-51N 129-24E
MMSI:	004400403
Station Type:	VHF (Monitor) range 25nm
Location:	37-28N 130-53E
MMSI:	004400404
Station Type:	VHF (Monitor) range 25nm
Location:	37-32N 130-52E
MMSI:	004400602
Station Type:	VHF (Monitor) range 25nm
Location:	37-42N 129-00E
MMSI:	004400603
Station Type:	VHF (Monitor) range 25nm
Location:	37-26N 129-10E
MMSI:	004400604
Station Type:	VHF (Monitor) range 25nm
Location:	38-11N 128-35E
Monitor Times:	24-7
DSC Station Ulsan VTS	
MMSI:	004403103
Station Type:	VHF (Main) range 25nm
Location:	35-30N 129-23E
Monitor Times:	24-7

RCC Donghae	
DSC Station Pohang VTS	
MMSI:	004403401
Station Type:	VHF (Main) range 25nm
Location:	36-00N 129-25E
Monitor Times:	24-7
DSC Station Donghae VTS	
MMSI:	004403601
Station Type:	VHF (Main) range 25nm
Location:	37-29N 129-08E
Monitor Times:	24-7

RCC Inchon	
Contact:	Phone: +82 32 680 2342, Fax: +82 51 680 2942, E-mail: inchon@kcg.go.kr
DSC Station Inchon Korea Coast Guard & VTS	
MMSI:	004401001, 004403001 (VTS)
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	37-27N 126-36E
Monitor Times:	24-7
DSC Station Seoul Radio	
MMSI:	004400002
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	37-32N 127-05E
MMSI:	004400003
Station Type:	VHF (Monitor) range 25nm
Location:	37-29N 126-33E
MMSI:	004400004
Station Type:	VHF (Monitor) range 25nm

RCC Inchon	
	MF (Monitor) range 250nm
Location:	37-13N 126-09E
Monitor Times:	24-7

RCC Jeju	
Contact:	Phone: +82 32 680 2342, Fax: +82 51 680 2942, E-mail: mrccjeju@kcg.go.kr
DSC Station Jeju Coast Guard Station, Jeju VTS	
MMSI:	004401005, 004403701 (VTS)
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	33-31N 126-32E
Monitor Times:	24-7
DSC Station Seoul Radio	
MMSI:	004400701
Station Type:	VHF (Monitor) range 25nm
	MF (Monitor) range 250nm
Location:	33-29N 126-29E
MMSI:	004400702
Station Type:	VHF (Monitor) range 25nm
Location:	33-14N 126-33E
Monitor Times:	24-7

RCC Namhae	
DSC Station South Regional HQs Korea Coast Guard	
MMSI:	004401004
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	35-07N 129-03E
Monitor Times:	24-7

RCC Namhae	
DSC Station Seoul Radio	
MMSI:	004400101
Station Type:	VHF (Monitor) range 25nm
	MF (Monitor) range 250nm
Location:	35-05N 129-03E
MMSI:	004400103
Station Type:	VHF (Monitor) range 25nm
Location:	34-48N 128-25E
MMSI:	004400104
Station Type:	VHF (Monitor) range 25nm
Location:	34-59N 127-52E
MMSI:	004400105
Station Type:	VHF (Monitor) range 25nm
Location:	35-08N 129-02E
MMSI:	004400106
Station Type:	VHF (Monitor) range 25nm
Location:	35-09N 128-44E
MMSI:	004400305
Station Type:	VHF (Monitor) range 25nm
Location:	34-45N 127-44E
MMSI:	004400306
Station Type:	VHF (Monitor) range 25nm
Location:	34-26N 127-30E
Monitor Times:	24-7
DSC Station Masan VTS	
MMSI:	004403101
Station Type:	VHF (Main) range 25nm
Location:	35-11N 128-34E
Monitor Times:	24-7

RCC Namhae

DSC Station Busan VTS	
MMSI:	004403102
Station Type:	VHF (Main) range 25nm
Location:	35-04N 129-05E
Monitor Times:	24-7

DSC Station Busan Newport VTS	
MMSI:	004403106
Station Type:	VHF (Main) range 25nm
Location:	35-03N 128-46E
Monitor Times:	24-7

RCC Seohae

DSC Station West Regional HQs Korea Coast Guard	
MMSI:	004401003
Station Type:	VHF (Main) range 25nm
	MF (Main) range 250nm
	HF on 4,6,8,12,16 MHz
Location:	34-47N 126-23E
Monitor Times:	24-7

DSC Station Seoul Radio	
MMSI:	004400201
Station Type:	VHF (Monitor) range 25nm
Location:	36-18N 126-38E
MMSI:	004400307
Station Type:	VHF (Monitor) range 25nm
Location:	35-08N 126-06E
MMSI:	004400308
Station Type:	VHF (Monitor) range 25nm
Location:	34-41N 125-27E
MMSI:	004400309
Station Type:	VHF (Monitor) range 25nm

RCC Seohae	
Location:	34-48N 126-24E
MMSI:	004400310
Station Type:	VHF (Monitor) range 25nm
Location:	34-27N 126-37E
MMSI:	004400501
Station Type:	VHF (Monitor) range 25nm
Location:	35-57N 126-41E
Monitor Times:	24-7
DSC Station Pyeongtaek VTS	
MMSI:	004403002
Station Type:	VHF (Main) range 25nm
Location:	36-57N 126-50E
Monitor Times:	24-7
DSC Station Daesan VTS	
MMSI:	004403201
Station Type:	VHF (Main) range 25nm
Location:	36-58N 126-23E
Monitor Times:	24-7
DSC Station Mokpo VTS	
MMSI:	004403301
Station Type:	VHF (Main) range 25nm
Location:	34-47N 126-21E
Monitor Times:	24-7
DSC Station Wando VTS	
MMSI:	004403304
Station Type:	VHF (Main) range 25nm
Location:	34-18N 126-46E
Monitor Times:	24-7
DSC Station Gunsan VTS	
MMSI:	004403501
Station Type:	VHF (Main) range 25nm

RCC Seohae	
Location:	35-58N 126-33E
Monitor Times:	24-7
DSC Station Yeosu VTS	
MMSI:	004403302, 004400304
Station Type:	VHF (Main) range 25nm
Location:	34-44N 126-07E
Monitor Times:	24-7
Notes:	Seoul Radio (monitor)

400BK. Romania

MRCC Constanta/Constanta Harbor Master	
Location:	44-10-02N 028-39-07E
AOR:	45-13N 029-40E, 45-09N 029-58E, 44-30N 030-16E, 44-15N 030-24E, 43-41N 030-32E, 43-44N 029-02E, 43-40N 029-00E, 43-45N 028-36E
Contact:	Phone: +40 241 615 949, +40 723 634 122, Fax: +40 241 606065, E-mail: mrcc@ma.ro, Website: http://www.ma.ro
DSC Station Constanta, Agigea	
MMSI:	002640570
Station Type:	VHF (Main) range 25nm
	MF (Main) range 400nm
	HF on 4,8,12 MHz
Location:	44-06.18N 028-37.49E
Monitor Times:	24-7
DSC Station Constanta, Enisala	
MMSI:	002640570
Station Type:	VHF (Monitor) range 44nm

MRCC Constanta/Constanta Harbor Master	
Location:	44-51.15N 028-52.00E
Monitor Times:	24-7
DSC Station Constanta, Mahmudia	
MMSI:	002640570
Station Type:	VHF (Monitor) range 43nm
Location:	45-05.17N 029-04.21E
Monitor Times:	24-7
DSC Station Constanta, Sfintu Gheorghe	
MMSI:	002640570
Station Type:	VHF (Monitor) range 24nm
Location:	44-53.57N 029-36.11E
Monitor Times:	24-7

400BL. Russian Federation

MRSC Arkhangelsk	
Location:	64-32N 040-32E
AOR:	White Sea and area of Barents Sea between: 77-00N 040-00E and West Coast line of Novaya Zemlya islands
Contact:	Inmarsat-C: 492509110, Phone: +7 8182 65-15-47, Fax: +7 8182 65-38-16, E-mail: telemed@atnet.ru, rcc@mapa.ru
DSC Station Arkhangelsk	
MMSI:	002734414
Station Type:	VHF (Main) range 25.6nm
Location:	64-32N 040-32E
Station Type:	MF (Main*)
Location:	64-21N 040-37E
Monitor Times:	24-7

MRSC Arkhangelsk	
Notes:	* White Sea basin until latitude 66N in the mouth
DSC Station Mudyug	
MMSI:	002734414
Station Type:	VHF (Monitor) range 24.5nm
Location:	64-51N 040-17E
Monitor Times:	24-7

MRCC Astrakhan	
Location:	46-19N 048-58E
AOR:	Caspian Sea. 46-23.8N 049-04.0E, 45-46.5N 050-18.0E, 45-11.8N 049-33.0E, 44-50.0N 048-46.0E, 44-10.0N 049-03.0E, 42-30.0N 048-54.0E, 41-50.3N 048-35.0E
Contact:	Inmarsat-C: 427 310 985, Telex: 254173 POMOR RU, Phone: +7 8512 58 48 08, Fax: +7 8512 58 59 81, E-mail: odmrcc@ampastr.ru
DSC Station Astrakhan (Caspian Sea)	
MMSI:	002734419
Station Type:	VHF (Main) range 22.5nm
	MF (Main) range 120nm
Location:	46-19N 047-58E
Monitor Times:	24-7
DSC Station Iskusstvennyi	
MMSI:	002734419
Station Type:	VHF (Monitor) range 25nm
	MF (RX-Montitor) range 120nm
Location:	45-23N 047-47E
Monitor Times:	24-7
DSC Station Ninovka	
MMSI:	002734419
Station Type:	MF (TX-Monitor) range 120nm
Location:	45-51N 047-39E
Monitor Times:	24-7

MRCC Astrakhan	
DSC Station Makhachkala (Caspian Sea)	
MMSI:	002734423
Station Type:	VHF (Main) range 23nm
	MF (Main) range 150nm
Location:	42-59N 047-30E
Monitor Times:	24-7
DSC Station Makhachkala	
MMSI:	002734423
Station Type:	MF (TX-Monitor) range 150nm
Location:	43-00N 047-28E
Monitor Times:	24-7
DSC Station Sulak	
MMSI:	002734423
Station Type:	MF (RX-Monitor) range 150nm
Location:	43-15N 047-32E
Monitor Times:	24-7

MRCC Kaliningrad	
Location:	54-42N 020-28E
AOR:	56-05.7N 018-01.1E, 55-22.4N 020-38.6E, 55-16.9N 020-57.4E, 54-27.5N 019-38.5E, 54-36.2N 019-24.4E, 55-51.0N 017-33.0E
Contact:	Inmarsat-C: (581) 427 302 168, Telex: (64)262 193 MRCC RU, Phone: +7 4012 57 94 75, +7 4012 63 24 43, Fax: +7 4012 64 31 99, E-mail: mrcc@mapkld.ru
DSC Station Kaliningrad	
MMSI:	002734417
Station Type:	VHF (Main) range 28.6nm
Location:	54-53N 019-56E
Station Type:	MF (TX-Main) range 125nm
Location:	54-43N 020-44E
Station Type:	MF (RX-Main) range 125nm
Location:	54-45N 020-35E
Monitor Times:	24-7

MRCC Murmansk	
Location:	63-59N 033-04E
AOR:	69-47.8N 030-49.2E, 69-58.8N 031-06.4E, 70-07.3N 031-30.5E, 70-16.7N 032-04.6E, 74-00.0N 032-04.6E, 74-00.0N 035-00.0E, 81-00.0N 032-00.0E, 81-00.0N 032-04.6E, to North Pole along of meridian 032-04.6E, from North Pole to the estuary of a river Lena along of meridian 125-00.0E
Contact:	Telex: 126178 MAPMU RU, Phone: +7 8152 42 83 07, +7 8152 48 02 20, Fax: +7 8152 42 32 56, E-mail: rcc@mapm.ru
DSC Station Krestovy	
MMSI:	002734420
Station Type:	VHF (Monitor) range 45nm
Location:	69-08N 033-32E
Monitor Times:	24-7
DSC Station Murmansk	
MMSI:	002734420
Station Type:	VHF (Main) range 18nm
Location:	68-59N 033-04E
Station Type:	MF (RX-Main*) range 170nm
Location:	68-52N 033-05E
Station Type:	MF (TX)
Location:	68-46N 032-58E
Monitor Times:	24-7
Notes:	* except area south of latitude 69N
DSC Station Set-Navolok	
MMSI:	002734420
Station Type:	VHF (Monitor) range 30nm
Location:	69-24N 033-30E
Monitor Times:	24-7

MRCC Novorossiysk	
Location:	44-41N 037-47E
Contact:	Telex: 3273 25518, Phone: +7-8617 67 64 18, +7-8617 67 64 19, Fax: +7-8617-67-64 20, E-mail: GMSSB3@mapn.morflot.ru

MRCC Novorossiysk	
DSC Station Doob	
MMSI:	002734411
Station Type:	VHF (Monitor) range 51nm
	MF (RX/TX-Monitor) range 173nm
Location:	44-36N 037-58E
Monitor Times:	24-7
DSC Station Novorossiysk	
MMSI:	002734411
Station Type:	VHF (Main) range 26nm
	MF (Main) range 173nm
Location:	44-41N 037-47E
Monitor Times:	24-7
DSC Station Sochi	
MMSI:	002734411
Station Type:	VHF (Main) range 71nm
Location:	43-32N 039-51E
Monitor Times:	24-7
DSC Station Tuapse	
MMSI:	002734413
Station Type:	VHF (Main) range 46.4nm
Location:	44-07N 039-03E
Monitor Times:	24-7

MRSC Petropavlovsk-Kamchatskiy	
Location:	53-00N 158-39E
AOR:	59-40N 150-00E, 45-57N 150-00E, 45-57N 157-50E, 51-25N 167-00E, 64-05N 172-00W, 65-30N 169-00W, 66-00N 169-00W, Dezhnev cape
Contact:	MMSI: 002734418, Telex: 244138 RSC RK RU, Phone: +7 4152 41 28 80, Fax: +7 4152 41 23 97, E-mail: spc@mappk.kamchatka.ru
DSC Station Avacha	
MMSI:	002733737
Station Type:	MF (RX-Main) range 150nm

MRSC Petropavlovsk-Kamchatskiy	
Location:	53-04N 158-32E
Monitor Times:	24-7
DSC Station Petropavlovsk-Kamachatskiy	
MMSI:	002733737
Station Type:	MF (Main) range 150nm
Monitor Times:	24-7
DSC Station Zhelezniy	
MMSI:	002733737
Station Type:	MF (TX-Main) range 150nm
Location:	53-15N 158-25E
Monitor Times:	24-7
DSC Station Chirikov Cape	
MMSI:	002733728
Station Type:	MF (RX-Main) range 62nm
Location:	59-29N 150-31E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Yuzhno-Sakhalinsk
DSC Station Magadan	
MMSI:	002734416
Station Type:	VHF (Main) range 19nm
Location:	59-33N 150-43E
Monitor Times:	24-7

MRCC Saint Petersburg	
Location:	59-53N 030-13E
AOR:	60-32.7N 027-47.8E, 59-56.0N 026-22.0E, 60-10.6N 027-11.3E, 59-46.0N 026-33.0E, 60-05.8N 026-37.0E, 59-37.0N 027-38.0E, 60-04.8N 026-26.0E, 59-28.0N 028-03.8E
Contact:	Inmarsat-C: 492509012, Telex: 262193 MRCC RU, Phone: + 812 495 89 95, +7 812 327 41 45, Fax: +7 812 327 41 46, E-mail: mrcc@mail.pasp.ru
DSC Station Gorki	
MMSI:	002733700
Station Type:	VHF (Monitor) range 35nm

MRCC Saint Petersburg	
	MF (RX-Main) range 150nm
Location:	59-48N 028-30E
Monitor Times:	24-7
DSC Station Gogland	
MMSI:	002733700
Station Type:	VHF (Monitor) range 20nm
Location:	60-01N 027-00E
Monitor Times:	24-7
DSC Station Karavaldayskiy	
MMSI:	002733700
Station Type:	MF (TX-Main) range 150nm
Location:	59-59N 029-07E
Monitor Times:	24-7
DSC Station Primorsk	
MMSI:	002733700
Station Type:	VHF (Monitor) range 30nm
Location:	60-20N 028-43E
Monitor Times:	24-7
DSC Station Saint Petersburg	
MMSI:	002733700
Station Type:	VHF (Main) range 27nm
	MF (Main) range 150nm
Location:	59-52.67N 030-13.01E
Monitor Times:	24-7
DSC Station Vysotsk	
MMSI:	002733700
Station Type:	VHF (Monitor) range 36nm
Location:	60-35N 028-33E
Monitor Times:	24-7

MRSC Taman	
Location:	45-19.8N 037-13.9E
Contact:	Phone: +7 929 846 78 86, +7 928 271 18 86, Fax: +7 928 209 33 00, E-mail: mrsc3@tamanports.ru, mrsc1@tamanports.ru
DSC Station Beglica	
MMSI:	002734487
Station Type:	MF (RX-Monitor) range 86nm
Location:	47-08N 038-30E
Monitor Times:	24-7
DSC Station Taganrog	
MMSI:	002734487
Station Type:	VHF (Main) range 19nm
	MF (Main) range 86nm
Location:	47-12N 038-57E
Monitor Times:	24-7
DSC Station Veselo-Voznesenka	
MMSI:	002734487
Station Type:	MF (TX-Monitor) range 86nm
Location:	47-08N 038-18E
Monitor Times:	24-7
DSC Station Eisk	
MMSI:	002734422
Station Type:	VHF (Main) range 23nm
Location:	46-43N 038-16E
Monitor Times:	24-7
DSC Station Kosa Dolgaya	
MMSI:	002734422
Station Type:	VHF (Monitor) range 25nm
Location:	46-40N 037-45E
Monitor Times:	24-7
DSC Station Temryuk	
MMSI:	002734411
Station Type:	VHF (Main) range 28nm

MRSC Taman	
	MF (Main) range 70nm
Location:	45-19N 037-13E
Monitor Times:	24-7

MRCC Vladivostok	
Location:	43-07N 131-53E
AOR:	42-20.0N 130-40.0E, 40-33.0N 136-00.0E, 42-27.0N 137-28.0E, 45-45.0N 140-00.0E, 45-45.0N 142-00.0E, 44-30.0N 145-40.0E (sea boarder Russia-Japan), 43-10.0N 145-54.0E (sea boarder Russia-Japan), 40-00.0N 149-00.0E, 51-25.0N 167-00.0E, 64-05.0N 172-00.0E, 65-30.0N 168-58.8E, North Pole, 125-00E
Contact:	MMSI: 002734412, Inmarsat-C: 492 500 379, Telex: 213115 MRF RU, Phone: +7 4232 22 77 82, +7 4232 49 74 01, Fax: +7 4232 49 58 95, E-mail: vldvmrcc@vld.pma.ru
DSC Station Nakhodka	
MMSI:	002734412
Station Type:	VHF (Monitor) range 45nm
Location:	42-51N 132-50E
Monitor Times:	24-7
DSC Station Tumannaya (Posiet)	
MMSI:	002734412
Station Type:	VHF (Monitor) range 70nm
Location:	42-34N 131-11E
Monitor Times:	24-7
DSC Station Vladivostok	
MMSI:	002734412
Station Type:	VHF (Main) range 55nm
Location:	43-07N 131-55E
Station Type:	MF (Main*) range 150nm
Location:	42-45N 133-02E
Monitor Times:	24-7
Notes:	* Radius 150 nm from 42-45N 133-02E starting with Korean coast to 42-33N 136-25E, then straight forward to Cape of Olarovskiy

MRSC Yuzhno-Sakhalinsk	
Location:	46-55N 142-50E
Contact:	Inmarsat-C: 427 311 122, Telex: 152068 GMDSS RU, Phone: +7 4242 78 57 04, +7 4242 78 57 24, Fax: +7 4242 72 23 41, E-mail: mspc@sakhalin.ru
DSC Station Chirikov Cape	
MMSI:	002733728
Station Type:	MF (RX-Main) range 62nm
Location:	59-29N 150-31E
Monitor Times:	24-7
Additional RCCs supported:	MRSC Petropavlovsk-Kamchatskiy
DSC Station Cape Svobodniy	
MMSI:	002733733
Station Type:	VHF (Monitor) range 32nm
	MF (RX-Main) range 170nm
Location:	46-50N 144-26E
Monitor Times:	24-7
DSC Station Kholmsk	
MMSI:	002733733
Station Type:	VHF (Monitor) range 31nm
Location:	47-02N 142-03E
Monitor Times:	24-7
DSC Station Korsakov	
MMSI:	002733733
Station Type:	VHF (Monitor) range 42nm
Location:	46-45N 142-27E
Monitor Times:	24-7
DSC Station Mount Vygoda	
MMSI:	002733733
Station Type:	MF (TX)
Location:	46-52N 143-09E
Monitor Times:	24-7

MRSC Yuzhno-Sakhalinsk	
DSC Station Nevelsk	
MMSI:	002733733
Station Type:	VHF (Monitor) range 40nm
Location:	46-38N 141-51E
Station Type:	MF (RX) range 165nm
Location:	46-39N 141-52E
Monitor Times:	24-7
DSC Station Seleznevo	
MMSI:	002733733
Station Type:	MF (TX) range 165nm
Location:	46-37N 141-50E
Monitor Times:	24-7
DSC Station Yuzhno-Sakhalinsk	
MMSI:	002733733
Station Type:	VHF (Main)
	MF (Main) range 165nm
Monitor Times:	24-7
DSC Station Vanino	
MMSI:	002734421
Station Type:	VHF (Main) range 45nm
Location:	48-55N 140-20E
Monitor Times:	24-7

400BM. Saudi Arabia

RCC Riyadh	
Contact:	Phone/Fax: +96614092500

RCC Riyadh	
DSC Station Al Birk	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	18-12N 041-32E
Monitor Times:	24-7
DSC Station Al Jubayl (Jubail)	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	27-00N 049-39E
Monitor Times:	24-7
DSC Station Al Lith	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	20-08N 040-16E
Monitor Times:	24-7
DSC Station Qunfudah	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	19-07N 041-05E
Monitor Times:	24-7
DSC Station Shuqaiq	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	17-43N 042-01E
Monitor Times:	24-7
DSC Station Al Wajh	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	26-14N 036-27E
Monitor Times:	24-7

RCC Riyadh	
DSC Station Dammam	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
	MF (Main) range 200nm
Location:	26-26N 050-06E
Monitor Times:	24-7
DSC Station Duba	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	27-21N 035-42E
Monitor Times:	24-7
DSC Station Half Moon Beach	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	26-15N 050-10E
Monitor Times:	24-7
DSC Station Jeddah Radio	
MMSI:	004030000
Station Type:	VHF (Main) range 30nm
	MF (Main) range 500nm
Location:	21-14.85N 039-09.72E
Monitor Times:	24-7
DSC Station Jizan	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	16-53N 042-32E
Monitor Times:	24-7
DSC Station Khafji	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	28-26N 048-29E

RCC Riyadh	
Monitor Times:	24-7
DSC Station Rabigh	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	22-48N 039-01E
Monitor Times:	24-7
DSC Station Sharm Abhur	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	21-43N 039-06E
Monitor Times:	24-7
DSC Station Shuaiba	
MMSI:	004030000
Station Type:	VHF (Monitor) range 35nm
Location:	20-40N 039-31E
Monitor Times:	24-7
DSC Station Umm Lajj	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	25-01N 037-16E
Monitor Times:	24-7
DSC Station Yanbu	
MMSI:	004030000
Station Type:	VHF (Monitor) range 33nm
Location:	24-05N 038-03E
Monitor Times:	24-7

400BN. Senegal

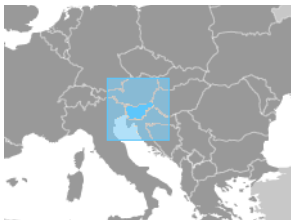
MRCC Dakar	
Contact:	Phone: 22 133 826 5001, Fax: 22 133 826 5000
DSC Station MRCC Dakar	
MMSI:	006630005
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	14-39N 017-28W
Monitor Times:	24-7
DSC Station Saint Louis	
MMSI:	006630002
Station Type:	VHF (Monitor) range 30nm
Location:	16-02.09N 016-30.02W
Monitor Times:	24-7
DSC Station Fass Boye	
MMSI:	00663003
Station Type:	VHF (Monitor) range 30nm
Location:	15-15.09N 016-50.09W
Monitor Times:	24-7
DSC Station Cayar	
MMSI:	006630004
Station Type:	VHF (Monitor) range 30nm
Location:	14-54.07N 017-07.40W
Monitor Times:	24-7
DSC Station Joal	
MMSI:	006630007
Station Type:	VHF (Monitor) range 30nm

MRCC Dakar	
Location:	14-09.20N 016-49.09W
Monitor Times:	24-7

400BO. Singapore

Singapore Port Operations Control Center	
Location:	01-16N 103-50E
AOR:	01-00N 108-54E, 01-00N 108-30E, 02-15N 108-30E, 07-41N 116-00E, 10-00N 118-00E, 12-00N 118-00E, 12-00N the limit of Vietnam territorial waters, thence along the limit of Vietnam and Cambodia territorial waters, 09-30N 104-00E, 07-00N 103-00E, 06-45N 102-40E, 04-50N 103-44E, 03-40N 103-40E, 02-36N 104-45E, 01-20N 104-20E, along the 01-20N westwards to meet Singapore Port Limits, along the Singapore Port limits through the Johor Strait, 01-17N 103-36E, 01-13N 103-30E, 01-39N 102-10E, waters within 100nm radius from the center of Singapore, 00-00 104-46E, 00-00 105-10E, 00-50S 106-00E, 00-00 108-00E, 00-00 109-00E, 00-15N 109-00E
Contact:	Telex: RS 20021, Phone: +65 6226 5539, +65 6325 2493, Fax: +65 6227 3952, E-mail: pocc@mpa.gov.sg
DSC Station Singapore Port Operations Control Center	
MMSI:	005630002
Station Type:	VHF (Main) range 25nm
Location:	01-16.28N 103-50.67E
Monitor Times:	24-7

400BP. Slovenia



MRCC Koper	
Location:	45-32.9N 013-43.5E
AOR:	Slovenian territorial waters
Contact:	MMSI: 002780200, Phone: +386 5 6632108, +386 5 6632106, Fax: +386 5 6632110, E-mail: koper.mrcc@gov.si
DSC Station MRCC Koper	
MMSI:	002780200
Station Type:	VHF (Main) range 85nm
Location:	45-33N 013-44E
Monitor Times:	24-7

400BQ. South Africa

MRCC Cape Town	
Location:	33-41S 018-43E
AOR:	The SRR of South Africa covers the entire South African coastal area; extends down to the South Pole, half way to South America to the West, and half way to Australia in the East. The coastal area is divided into seven sub regions under the control of the NPA, Harbor Masters of Saldahna Bay, Cape Town, Port Elizabeth, East London, Durban, Richards Bay, as well as the Port Captain of Walvis Bay. Within each sub-region the Harbor Master's office acts as a Rescue Sub Center (RSC)
Contact:	Telex: 095 52 1037, Phone: +27 21 938 3300, Fax: +27 21 938 3309, E-mail: mrcc.ct@samsa.org.za

MRCC Cape Town	
DSC Station Cape Town Radio	
MMSI:	006010001
Station Type:	HF on 4,6,8,12,16 MHz
Location:	33-41S 018-43E
Monitor Times:	24-7

400BR. Spain

MRCC Almeria	
Contact:	Phone: +34 950 275477, +34 950 271726, Fax: +34 950 270402
DSC Station Cabo Gata	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	36-45.28N 002-10.14W
Monitor Times:	24-7
DSC Station Cabo de Gata	
MMSI:	002241023
Station Type:	MF (Monitor) range 150nm
Location:	36-43.25N 002-11.32W
Monitor Times:	24-7
DSC Station Melilla	
MMSI:	002241023
Station Type:	VHF (Monitor) range 35nm
Location:	35-19N 002-57W
Monitor Times:	24-7
DSC Station Motril	
MMSI:	002241023

MRCC Almeria	
Station Type:	VHF (Monitor) range 35nm
Location:	36-52.40N 002-48.04W
Monitor Times:	24-7

MRCC Barcelona	
Location:	41-20.1N 002-08.5E
Contact:	Phone: +34 93 2234733, +34 93 2234748, Fax: +34 93 2234613, E-mail: barcelon@sasemar.es, jvalfer1@ea.mde.es
DSC Station Bagur	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
	MF (Monitor)
Location:	41-56.44N 003-13.42E
Monitor Times:	24-7
DSC Station Barcelona	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	41-25.05N 002-06.57E
Monitor Times:	24-7

MRCC Bilbao	
Location:	43-20.784N 003-01.784N
Contact:	Phone: +34 944 839411, Fax: +34 944 839161, E-mail: bilbao@sasemar.es
Notes:	AIS Aid: MMSA 002241021
DSC Station Bilbao CCR	
MMSI:	002241021
Station Type:	VHF (Main) range 35nm
	MF (Main)
Location:	43-16.30N 003-02.12W
Monitor Times:	24-7
DSC Station Cabo Penas	

MRCC Bilbao	
MMSI:	002241021
Station Type:	VHF (Monitor) range 35nm
Location:	43-26.05N 005-35.24W
Monitor Times:	24-7
DSC Station Machichaco	
MMSI:	002241021
Station Type:	MF (Monitor) range 150nm
Location:	43-27.02N 002-45.12W
Monitor Times:	24-7
DSC Station Navia	
MMSI:	002241021
Station Type:	VHF (Monitor) range 35nm
Location:	43-25.22N 006-50.26W
Monitor Times:	24-7
DSC Station Pasajes	
MMSI:	002241021
Station Type:	VHF (Monitor) range 35nm
Location:	43-17.26N 001-55.17W
Monitor Times:	24-7
DSC Station Santander	
MMSI:	002241021
Station Type:	VHF (Monitor) range 35nm
Location:	43-25.28N 003-36.15W
Monitor Times:	24-7

MRSC Cadiz	
Contact:	Phone: +34 956 214253, Fax: +34 956 226091
DSC Station Cadiz	
MMSI:	002241023
Station Type:	VHF (Monitor) range 35nm
Location:	36-21.24N 006-17.07W

MRSC Cadiz	
Monitor Times:	24-7

MRSC Cartagena	
Contact:	Inmarsat-C: 881631720013, Phone/Fax: 057-5-6550316, E-mail: ceguc@fnc.armada.mil.es
DSC Station Cartagena	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	37-34.52N 000-57.53W
Monitor Times:	24-7

MRSC Tarragona	
Contact:	Phone: +34 977 216203, +34 977 216215, Fax: +34 977 216209, E-mail: tarragon@sasemar.es
DSC Station Tarragona	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	41-20.43N 001-32.25E
Monitor Times:	24-7

MRSC Coruna	
Contact:	Phone: +34 981 209541, Fax: +34 981 209518
DSC Station Coruna CCR	
MMSI:	002241022
Station Type:	VHF (Main) range 35nm
Location:	43-10.15N 008-17.33W
Station Type:	MF (Main) range 150nm
Location:	43-21.57N 008-27.10W
Monitor Times:	24-7

MRCC Finisterre	
Location:	42-42N 008-59W

MRCC Finisterre	
Contact:	Inmarsat-C: 422423127, Telex: +5282268, +5286207, Phone: +34 981 767500, 268 462 0671, Fax: +34 981 767740, 268 462 2842, E-mail: finister@sasemar.es
DSC Station Cabo Ortegal	
MMSI:	002241022
Station Type:	VHF (Monitor) range 35nm
Location:	43-35.08N 007-47.29W
Monitor Times:	24-7
DSC Station Finisterre	
MMSI:	002241022
Station Type:	VHF (Monitor) range 35nm
Location:	42-55.28N 009-17.29W
Station Type:	MF (Monitor) range 150nm
Location:	42-53.32N 009-16.28W
Monitor Times:	24-7
DSC Station La Guardia	
MMSI:	002241022
Station Type:	VHF (Monitor) range 35nm
Location:	41-53.17N 008-52.15W
Monitor Times:	24-7

MRCC Gijon	
Contact:	Phone: +34 985 326050, Fax: +34 985 320908
DSC Station Cabo Penas	
MMSI:	002241021
Station Type:	MF (Monitor) range 150nm
Location:	43-39.22N 005-50.53W
Monitor Times:	24-7

MRSC Huelva	
Contact:	Phone: +34 959 243000, Fax: +34 959 242103

MRSC Huelva	
DSC Station Huelva	
MMSI:	002241023
Station Type:	VHF (Monitor) range 35nm
Location:	37-13.20N 007-06.43W
	37-20.48N 006-56.44W
Monitor Times:	24-7

MRCC Las Palmas	
Contact:	Telex: 52 95003, Phone: +34 928 467757, Fax: +34 928 467760, E-mail: laspalma@sasemar.es
DSC Station Arrecife	
MMSI:	002241025
Station Type:	VHF (Monitor) range 35nm
Location:	29-07.46N 013-31.20W
MMSI:	002241026
Station Type:	MF (Monitor) range 150nm
Location:	29-08.00N 013-30.52W
Monitor Times:	24-7
DSC Station Fuerteventura	
MMSI:	002241025
Station Type:	VHF (Monitor) range 35nm
Location:	28-32.69N 013-55.12W
Monitor Times:	24-7
DSC Station Gomera	
MMSI:	002241025
Station Type:	VHF (Monitor) range 35nm
Location:	28-05.40N 017-06.15W
Monitor Times:	24-7
DSC Station Las Palmas CCR	
MMSI:	002241025
Station Type:	VHF (Monitor) range 35nm
Location:	27-57.5N 015-33.3W

MRCC Las Palmas	
MMSI:	002241026
Station Type:	MF (Main) range 150nm
Location:	27-45.23N 015-36.10W
Monitor Times:	24-7

MRCC Madrid	
Contact:	Inmarsat-C: 422423124, Telex: +5241210, +5241224, Phone: +34 91 7559132, Fax: +34 91 5261440, E-mail: cncs@sasemar.es
DSC Station Madrid CCR	
MMSI:	002241078
Station Type:	HF on 8,12 MHz
Location:	40-21.48N 003-17.04W
Monitor Times:	24-7

MRCC Palma	
Contact:	Phone: +34 971 724562, Fax: +34 971 728352, E-mail: palma@sasemar.es
DSC Station Ibiza	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	38-54.33N 001-16.27E
Monitor Times:	24-7
DSC Station Menorca	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	39-59.1N 004-06.5E
Monitor Times:	24-7
DSC Station Palma	
MMSI:	002241024
Station Type:	MF (Monitor) range 150nm
Location:	39-21.12N 002-58.37E
Monitor Times:	24-7

MRCC Palma	
DSC Station Palma de Mallorca	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	39-44.12N 002-42.51E
Monitor Times:	24-7

MRCC Tarifa	
Contact:	Inmarsat-C: 422423126, Phone: +34 956 684740, Fax: +34 956 680606
DSC Station Chipiona	
MMSI:	002241023
Station Type:	MF (Monitor) range 150nm
Location:	36-40.31N 006-24.28W
Monitor Times:	24-7
DSC Station Malaga CCR	
MMSI:	002241023
Station Type:	VHF (Main) range 35nm
	MF (Main)
Location:	36-36.15N 004-35.44W
Monitor Times:	24-7
DSC Station Tarifa	
MMSI:	002241023
Station Type:	VHF (Monitor) range 35nm
Location:	36-03.3N 005-33.0W
Station Type:	MF (Monitor) range 150nm
Location:	36-02.32N 005-33.24W
Monitor Times:	24-7

MRCC Tenerife	
Contact:	Inmarsat-C: 422423125, Phone: +34 922 597551, Fax: +34 922 597331, E-mail: tenerife@sasemar.es
DSC Station Hierro	
MMSI:	002241025

MRCC Tenerife	
Station Type:	VHF (Monitor) range 35nm
Location:	27-48.25N 017-54.55W
Monitor Times:	24-7
DSC Station La Palma	
MMSI:	002241025
Station Type:	VHF (Monitor) range 35nm
Location:	28-38.59N 017-49.43W
Monitor Times:	24-7
DSC Station	
MMSI:	002241025
Station Type:	VHF (Main) range 35nm
Location:	28-26.55N 016-22.42W
Station Type:	MF (Monitor) range 150nm
Location:	28-25.30N 016-19.41W
Monitor Times:	24-7

MRCC Valencia	
Contact:	Phone: +34 96 3679302, Fax: +34 96 3679403, E-mail: valencia@sasemar.es
DSC Station Alicante	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	38-19.39N 000-42.00W
Monitor Times:	24-7
DSC Station Cabo La Nao	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
	MF (Monitor) range 150nm
Location:	38-43.24N 000-09.40E
Monitor Times:	24-7

MRCC Valencia	
DSC Station Castellon	
MMSI:	002241024
Station Type:	VHF (Monitor) range 35nm
Location:	39-52.16N 000-19.27W
Monitor Times:	24-7
DSC Station Valencia	
MMSI:	002241024
Station Type:	VHF (Main)
	MF (Main)
Monitor Times:	24-7

MRSC Vigo	
Contact:	Phone: +34 986 222230, Fax: +34 986 228957
DSC Station Vigo	
MMSI:	002241022
Station Type:	VHF (Monitor) range 35nm
Location:	42-10.30N 008-41.05W
Monitor Times:	24-7

400BS. Sweden

JRCC Sweden	
Location:	57-40.28N 011-51.54E
AOR:	Swedish territorial waters
Contact:	Telex: 326590013, 426590010, Phone: 031-64 80 00, 326590010, Fax: 326590011, E-mail: jrcc@sjofartsverket.se

JRCC Sweden	
DSC Station Bäckefors	
MMSI:	002653000
Station Type:	VHF (Monitor) range 53nm
Location:	58-46.19N 014-15.02E
Monitor Times:	24-7
DSC Station Bjuroklubb	
MMSI:	002653000
Station Type:	MF (Monitor) range 210nm
Location:	64-28N 021-36E
Monitor Times:	24-7
DSC Station Fårö	
MMSI:	002653000
Station Type:	VHF (Monitor) range 30nm
Monitor Times:	24-7
DSC Station Gävle	
MMSI:	002653000
Station Type:	VHF (Monitor) range 43nm
Location:	60-37.50N 017-07.45E
Monitor Times:	24-7
DSC Station Gislovshammar	
MMSI:	002653000
Station Type:	MF (Monitor) range 210nm
Location:	55-28N 014-18E
Monitor Times:	24-7
DSC Station Göteborg	
MMSI:	002653000
Station Type:	VHF (Main) range 42nm
	MF
Location:	57-41.39N 012-03.31E
Monitor Times:	24-7

JRCC Sweden	
DSC Station Grimeton	
MMSI:	002653000
Station Type:	VHF (Monitor) range 42nm
	MF (Monitor) range 150nm
Location:	57-06.31N 012-23.25E
Monitor Times:	24-7
DSC Station Gotska Sandön	
MMSI:	002653000
Station Type:	VHF (Monitor) range 27nm
Location:	58-22.18N 019-14.17E
Monitor Times:	24-7
DSC Station Halmstad	
MMSI:	002653000
Station Type:	VHF (Monitor) range 57nm
Location:	56-47.24N 012-56.17E
Monitor Times:	24-7
DSC Station Härnösand	
MMSI:	002653000
Station Type:	VHF (Monitor) range 42nm
Location:	62-36.40N 017-57.53E
Station Type:	MF (Monitor) range 210nm
Location:	62-42N 018-07E
Monitor Times:	24-7
DSC Station Helsingborg	
MMSI:	002653000
Station Type:	VHF (Monitor) range 32nm
Location:	56-03.12N 012-42.29E
Monitor Times:	24-7
DSC Station Hoburgen	
MMSI:	002653000
Station Type:	VHF (Monitor) range 31nm

JRCC Sweden	
Monitor Times:	24-7
DSC Station Hörby	
MMSI:	002653000
Station Type:	VHF (Monitor) range 54nm
Location:	55-48.22N 013-43.15E
Monitor Times:	24-7
DSC Station Hudiksvall	
MMSI:	002653000
Station Type:	VHF (Monitor) range 60nm
Location:	61-42.25N 016-51.20E
Monitor Times:	24-7
DSC Station Jönköping	
MMSI:	002653000
Station Type:	VHF (Monitor) range 49nm
Location:	57-46.14N 014-14.51E
Monitor Times:	24-7
DSC Station Kalix	
MMSI:	002653000
Station Type:	VHF (Monitor) range 44nm
Location:	65-56.16N 023-30.60E
Monitor Times:	24-7
DSC Station Kalmar	
MMSI:	002653000
Station Type:	VHF (Monitor) range 34nm
Location:	56-40.58N 016-33.52E
Monitor Times:	24-7
DSC Station Karlstad	
MMSI:	002653000
Station Type:	VHF (Monitor) range 37nm
Location:	59-23.31N 013-23.00E
Monitor Times:	24-7

JRCC Sweden	
DSC Station Karlskrona	
MMSI:	002653000
Station Type:	VHF (Monitor) range 98nm
Location:	56-10.27N 015-36.05E
Monitor Times:	24-7
DSC Station Kivik	
MMSI:	002653000
Station Type:	VHF (Monitor) range 44nm
Location:	55-40.05N 014-09.29E
Monitor Times:	24-7
DSC Station Luleå	
MMSI:	002653000
Station Type:	VHF (Monitor) range 31nm
Location:	65-36.19N 022-08.49E
Monitor Times:	24-7
DSC Station Mjällom	
MMSI:	002653000
Station Type:	VHF (Monitor) range 49nm
Location:	62-59.08N 018-23.45E
Monitor Times:	24-7
DSC Station Motala	
MMSI:	002653000
Station Type:	VHF (Monitor) range 45nm
Location:	58-35.19N 015-05.46E
Monitor Times:	24-7
DSC Station Nacka	
MMSI:	002653000
Station Type:	VHF (Monitor) range 50nm
Location:	59-17.52N 018-10.22E
Monitor Times:	24-7

JRCC Sweden	
DSC Station Norrköping	
MMSI:	002653000
Station Type:	VHF (Monitor) range 48nm
Location:	58-40.36N 016-28.02E
Monitor Times:	24-7
DSC Station Ölands Södra udde	
MMSI:	002653000
Station Type:	VHF (Monitor) range 28nm
Monitor Times:	24-7
DSC Station Osthammar	
MMSI:	002653000
Station Type:	VHF (Monitor) range 49nm
Location:	60-15.48N 018-04.21E
Monitor Times:	24-7
DSC Station Skellefteå	
MMSI:	002653000
Station Type:	VHF (Monitor) range 49nm
Location:	64-46.26N 020-57.09E
Monitor Times:	24-7
DSC Station Södertälje	
MMSI:	002653000
Station Type:	VHF (Monitor) range 34nm
Location:	59-13.25N 017-37.14E
Monitor Times:	24-7
DSC Station Strömstad	
MMSI:	002653000
Station Type:	VHF (Monitor) range 30nm
Location:	58-55.38N 011-10.32E
Monitor Times:	24-7

JRCC Sweden	
DSC Station Sundsvall	
MMSI:	002653000
Station Type:	VHF (Monitor) range 41nm
Location:	62-24.07N 017-28.17E
Monitor Times:	24-7
DSC Station Svenska Högarna	
MMSI:	002653000
Station Type:	VHF (Monitor) range 21nm
Location:	59-26.34N 019-30.08E
Monitor Times:	24-7
DSC Station Tingstade	
MMSI:	002653000
Station Type:	MF (Monitor) range 250nm
Location:	57-41N 018-35E
Monitor Times:	24-7
DSC Station Torö	
MMSI:	002653000
Station Type:	VHF (Monitor) range 31nm
Location:	58-49.15N 017-50.39E
Monitor Times:	24-7
DSC Station Trollhättan	
MMSI:	002653000
Station Type:	VHF (Monitor) range 36nm
Location:	58-17.22N 012-16.38E
Monitor Times:	24-7
DSC Station Uddevalla	
MMSI:	002653000
Station Type:	VHF (Monitor) range 51nm
Location:	58-22.27N 011-49.17E
Monitor Times:	24-7

JRCC Sweden	
DSC Station Umeå	
MMSI:	002653000
Station Type:	VHF (Monitor) range 60nm
Location:	63-50.25N 019-49.22E
Monitor Times:	24-7
DSC Station Väddö	
MMSI:	002653000
Station Type:	VHF (Monitor) range 60nm
Location:	59-58.05N 018-50.25E
Monitor Times:	24-7
DSC Station Västerås	
MMSI:	002653000
Station Type:	VHF (Monitor) range 45nm
Location:	59-38.37N 016-24.02E
Monitor Times:	24-7
DSC Station Västervik	
MMSI:	002653000
Station Type:	VHF (Monitor) range 50nm
Location:	57-43.16N 016-25.33E
Monitor Times:	24-7
DSC Station Visby	
MMSI:	002653000
Station Type:	VHF (Monitor) range 44nm
Location:	57-35.33N 018-22.23E
Monitor Times:	24-7

400BT. Syria

DSC Station Lattakia Radio	
Station Type:	VHF (Main) range 50nm
	MF (Main) range 400nm
	HF on 4,6,8,12,16 MHz
Location:	35-32.05N 035-46.00E
Monitor Times:	24-7
DSC Station Tartous Radio	
Station Type:	VHF (Main) range 50nm
Location:	34-54.05N 035-51.05E
Monitor Times:	24-7

400BU. Thailand

RCC Bangkok	
Contact:	Telex: 86 22720, Phone: (66) 2 286 0506, Fax: (66) 2 287 3186
DSC Station Bangkok Radio Sriracha	
MMSI:	005671000
Station Type:	VHF (Monitor) range 27nm
Location:	13-11.39N 100-57.01E
Station Type:	MF (Monitor) range 162nm

RCC Bangkok	
Location:	13-06.209N 100-55.614E
Station Type:	HF on 4,6,8,12 MHz
Location:	13-34N 100-39E
Monitor Times:	24-7
DSC Station Petchaburi	
Station Type:	VHF (Main) range 27nm
Location:	12-59.734N 100-03.318E
Monitor Times:	24-7

400BV. Turkey

MSRCC Ankara	
Location:	39-55.99N 032-50.51E
AOR:	41-31-18.39N 041-32-55.06E, 41-35-43.41N 041-16-40.88E, 41-57-00.00N 040-41-33.00E, 42-01-52.00N 040-26-00.00E, 42-20-15.00N 039-00-13.00E, 42-25-28.00N 038-32-10.00E, 43-10-55.00N 036-50-42.00E, 43-26-04.00N 036-10-57.00E, 43-26-08.00N 035-30-25.00E, 43-11-17.00N 034-13-10.00E, 43-11-50.00N 033-36-56.00E
Contact:	Inmarsat-C: 427122324, Telex: +607 44144, Phone: +90312 2319105, Fax: +90312 2320823, E-mail: trmrcc@denizcilik.gov.tr, Website: http://www.denizcilik.gov.tr
DSC Station Akcakoca	
MMSI:	002711000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	40-58.32N 031-12.25E
Monitor Times:	24-7
DSC Station Akdag	
MMSI:	002711000
Station Type:	VHF (TV-Monitor) range 50-70nm

MSRCC Ankara	
Location:	38-33.00N 026-30.00E
Monitor Times:	24-7
DSC Station Ayvalik	
MMSI:	002711000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	39-18.29N 026-41.26E
Monitor Times:	24-7
DSC Station Bandirma	
MMSI:	002711000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	40-21.11N 027-53.41E
Monitor Times:	24-7
DSC Station Camlica	
MMSI:	002711000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-01.51N 029-04.15E
Monitor Times:	24-7
DSC Station Istanbul	
MMSI:	002711000
Station Type:	VHF (Main) range 50-70nm
	MF (Main) range 400-500nm
	HF on 4,6,8,12,16 MHz
Location:	40-59.00N 025-49.00E
Monitor Times:	24-7
DSC Station Kayalidag	
MMSI:	002711000
Station Type:	VHF (TV-Monitor) range 50-70nm
Location:	39-58.02N 026-38.10E
Monitor Times:	24-7

MSRCC Ankara	
DSC Station Keltepe	
MMSI:	002711000
Station Type:	VHF (Monitor) range 50-70nm
Location:	40-38.36N 030-06.03E
Monitor Times:	24-7
DSC Station Mahyadag	
MMSI:	002711000
Station Type:	VHF (TV-Monitor) range 50-70nm
Location:	41-47.03N 027-37.10E
Monitor Times:	24-7
DSC Station Sarköy	
MMSI:	002711000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	40-41.19N 027-10.41E
Monitor Times:	24-7
DSC Station Akcaabat	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-35.44N 039-27.06E
Monitor Times:	24-7
DSC Station Dikmen	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	38-16.09N 040-55.30E
Monitor Times:	24-7
DSC Station Dütmen	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-26.53N 035-28.53E
Monitor Times:	24-7

MSRCC Ankara

DSC Station Inebolu	
MMSI:	002712000
Station Type:	VHF (Monitor) range 50-70nm
Location:	40-59.00N 025-49.00E
Monitor Times:	24-7

DSC Station Pazar	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-08.56N 040-49.07E
Monitor Times:	24-7

DSC Station Samsun	
MMSI:	002712000
Station Type:	VHF (Main) range 50-70nm
	MF (Main) range 400-500nm
Location:	41-23.11N 036-11.22E
Monitor Times:	24-7

DSC Station Yildiztepe	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-05.47N 037-01.40E
Monitor Times:	24-7

DSC Station Zonguldak	
MMSI:	002712000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	41-23.39N 031-49.56E
Monitor Times:	24-7

DSC Station Anamur	
MMSI:	002713000
Station Type:	VHF (Monitor) range 50-70nm
Location:	36-04.54N 032-49.47E

MSRCC Ankara	
Monitor Times:	24-7
DSC Station Antalya	
MMSI:	002713000
Station Type:	VHF (Main) range 50-70nm
	MF (Main) range 400-500nm
Location:	36-09.10N 032-26.43E
Monitor Times:	24-7
DSC Station Bodrum	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	37-04.06N 027-26.37E
Monitor Times:	24-7
DSC Station Cobandede	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	36-31.11N 036-15.20E
Monitor Times:	24-7
DSC Station Dilektepe	
MMSI:	002713000
Station Type:	VHF (TV-Monitor) range 50-70nm
Location:	37-31.43N 027-15.31E
Monitor Times:	24-7
DSC Station Kazakin	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	36-50.15N 027-05.45E
Monitor Times:	24-7
DSC Station Markiz	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	36-43.00N 030-29.00E

MSRCC Ankara	
Monitor Times:	24-7
DSC Station Oren PTT	
MMSI:	002713000
Station Type:	VHF (Monitor) range 50-70nm
Location:	37-02.21N 027-57.19E
Monitor Times:	24-7
DSC Station Palamut	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	36-45.26N 028-13.00E
Monitor Times:	24-7
DSC Station Yumrutepe	
MMSI:	002713000
Station Type:	VHF (R/L-Monitor) range 50-70nm
Location:	36-15.13N 029-27.28E
Monitor Times:	24-7
DSC Station Izmir	
MMSI:	002715000
Station Type:	MF (Main) range 400-500nm
Location:	38-16.53N 026-16.03E
Monitor Times:	24-7

400BW. Ukraine

MRCC Odessa	
Location:	46-23N 030-45E
AOR:	43-44.20N 003-08.00E, 43-20.45N 032-00.00E, 43-11.50N 033-36.56E, 43-11.17N 034-13.10E, 43-26.08N 035-30.57E, 43-26.04N 036-10.57E
Contact:	Inmarsat-C: 581 492550019, Phone: +380 48 777 6609, Fax: +380 48 777 6610, E-mail: mrcc@morcom.org.ua
DSC Station Mariupol	
MMSI:	002723650
Station Type:	VHF (Main) range 20nm
Location:	47-03N 037-30E
Monitor Times:	24-7
DSC Station Kerch	
MMSI:	002723659
Station Type:	VHF (Main) range 25nm
Location:	45-21N 036-32E
Monitor Times:	24-7
DSC Station Odessa	
MMSI:	002723660
Station Type:	VHF (Main) range 23nm
Location:	46-25.04N 030-45.60E
Station Type:	MF (Main) range 200nm
Location:	46-22.63N 030-45.00E
Monitor Times:	24-7
DSC Station VTS Illichivs'k	
MMSI:	002723661
Station Type:	VHF (Main) range 20nm

MRCC Odessa	
Location:	46-19.25N 030-40.70E
Monitor Times:	24-7
DSC Station Theodosia	
MMSI:	002723663
Station Type:	VHF (Main) range 35nm
Location:	45-01.35N 035-23.00E
Monitor Times:	24-7
DSC Station VTS Ochakiv	
MMSI:	002723665
Station Type:	VHF (Main) range 20nm
Location:	46-36.06N 031-33.10E
Monitor Times:	24-7
DSC Station VTS Rus'ka Beak	
MMSI:	002723666
Station Type:	VHF (Main) range 21nm
Location:	46-44.85N 031-56.20E
Monitor Times:	24-7
DSC Station VTS Mariupol	
MMSI:	002723670
Station Type:	VHF (Main) range 22nm
Location:	47-03.32N 037-30.48E
Monitor Times:	24-7
DSC Station VTS Odessa	
MMSI:	002723671
Station Type:	VHF (Main) range 24nm
Location:	46-29.46N 030-45.51E
Monitor Times:	24-7
DSC Station Berdiansk	
MMSI:	002723672
Station Type:	VHF (Main) range 17nm
Location:	46-45N 036-46E

MRCC Odessa	
Monitor Times:	24-7
DSC Station VTS Striletskiy	
MMSI:	002723673
Station Type:	VHF (Main) range 20nm
Location:	44-36.70N 033-28.56E
Monitor Times:	24-7

400BX. United Kingdom

MRCC Aberdeen	
Location:	57-09N 002-06W
AOR:	Cape Wrath (58-37N 005-00W), Nun Rock (58-52N 005-00W), Pentland Skerries (58-44N 002-57E), Miller Oilfield (58-44N 001-34E), Pierce Oilfield (57-06N 002-24E), to the coast at Inverbervie (56-50N 002-16W)
Contact:	MMSI: 002320004, Phone: +44 (0) 1224 592334, Fax: +44 (0) 1224 575920, E-mail: aberdeencoastguard@mcga.gov.uk
DSC Station Aberdeen	
MMSI:	002320004
Station Type:	VHF (Main)
	MF (Main) range 150nm
Location:	57-39N 002-14W
Monitor Times:	24-7
DSC Station Banff	
MMSI:	002320004
Station Type:	VHF (Monitor) range 33nm
Location:	57-38N 002-31W
Monitor Times:	24-7

MRCC Aberdeen	
DSC Station Ben Tongue	
MMSI:	002320004
Station Type:	VHF (Monitor) range 50nm
Location:	58-30N 004-24W
Monitor Times:	24-7
DSC Station Dunnet Head	
MMSI:	002320004
Station Type:	VHF (Monitor) range 30nm
Location:	58-40.28N 003-22.57W
Monitor Times:	24-7
DSC Station Durness	
MMSI:	002320004
Station Type:	VHF (Monitor) range 26nm
Location:	58-34N 004-44W
Monitor Times:	24-7
DSC Station Foyers	
MMSI:	002320004
Station Type:	VHF (Monitor) range 44nm
Location:	57-14N 004-31W
Monitor Times:	24-7
DSC Station Gregness	
MMSI:	002320004
Station Type:	VHF (Monitor) range 25nm
Location:	57-07.64N 002-03.23W
Monitor Times:	24-7
DSC Station Noss Head	
MMSI:	002320004
Station Type:	VHF (Monitor) range 22nm
Location:	58-28.74N 003-02.98W
Monitor Times:	24-7

MRCC Aberdeen

DSC Station Peterhead	
MMSI:	002320004
Station Type:	VHF (Monitor) range 19nm
Location:	57-30.59N 001-46.46W
Monitor Times:	24-7

DSC Station Rosemarkie	
MMSI:	002320004
Station Type:	VHF (Monitor) range 43nm
Location:	57-38.00N 004-04.41W
Monitor Times:	24-7

DSC Station Thrumster	
MMSI:	002320004
Station Type:	VHF (Monitor) range 39nm
Location:	58-23.66N 003-07.34W
Monitor Times:	24-7

DSC Station Windy Head	
MMSI:	002320004
Station Type:	VHF (Monitor) range 45nm
Location:	57-38.92N 002-14.57W
Monitor Times:	24-7

MRSC Belfast

DSC Station Belfast	
MMSI:	002320021
Station Type:	VHF (Main)
Monitor Times:	24-7

DSC Station Black Mountain	
MMSI:	002320021
Station Type:	VHF (Monitor) range 62nm
Location:	54-35.27N 006-01.14W
Monitor Times:	24-7

MRSC Belfast	
DSC Station Limavady	
MMSI:	002320021
Station Type:	VHF (Monitor) range 53nm
Location:	55-06.54N 006-53.17W
Monitor Times:	24-7
DSC Station Orlock Head	
MMSI:	002320021
Station Type:	VHF (Monitor) range 23nm
Location:	54-40.47N 005-35.04W
Monitor Times:	24-7
DSC Station Slieve Martin	
MMSI:	002320021
Station Type:	VHF (Monitor) range 61nm
Location:	54-06N 006-10W
Monitor Times:	24-7
DSC Station West Torr	
MMSI:	002320021
Station Type:	VHF (Monitor) range 33nm
Location:	55-11.88N 006-05.64W
Monitor Times:	24-7

MRSC Brixham	
AOR:	Topsham (50-38N 003-26W), 49-53N 002-54W, along international SAR boundary, 49-23N 004-31W, to coast at Dodman Point (50-13N 004-48W)
Contact:	MMSI: 002320013, Phone: +44 (0) 1803 882704, Fax: +44 (0) 1803 882780, E-mail: brixhamcoastguard@mcga.gov.uk
DSC Station Berry Head	
MMSI:	002320013
Station Type:	VHF (Monitor) range 27nm
Location:	50-23.97N 003-29.04W
Monitor Times:	24-7

MRSC Brixham	
DSC Station Brixham	
MMSI:	002320013
Station Type:	VHF (Main)
Monitor Times:	24-7
DSC Station Dartmouth	
MMSI:	002320013
Station Type:	VHF (Monitor) range 31nm
Location:	50-21N 003-35W
Monitor Times:	24-7
DSC Station East Prawle	
MMSI:	002320013
Station Type:	VHF (Monitor) range 34nm
Location:	50-13.13N 003-42.53W
Monitor Times:	24-7
DSC Station Rame Head	
MMSI:	002320013
Station Type:	VHF (Monitor) range 30nm
Location:	50-19.02W 004-13.17W
Monitor Times:	24-7

MRCC Clyde	
Location:	55-56N 004-46W
AOR:	Mull of Galloway (54-38N 004-54W), 54-30N 005-00W, Rathlin Island TSS (55-22N 006-05W), 55-28N 006-47W, 56-00N 007-22W, Barra Head (56-46N 007-39W) and North Atlantic in area between 56-42N 61-00N and 013-00W 030-00W
Contact:	MMSI: 002320022, Phone: +44 (0) 1475 729988, Fax: +44 (0) 1475 786955, E-mail: clydecoastguard@mcga.gov.uk
DSC Station Cairn Pat	
MMSI:	002320022
Station Type:	VHF (Monitor) range 35nm
Location:	54-51.12N 005-05.31W
Monitor Times:	24-7

MRCC Clyde

DSC Station Clyde	
MMSI:	002320022
Station Type:	VHF (Main) range 20nm
Location:	55-57.70N 004-47.72W
Monitor Times:	24-7

DSC Station Glengorm	
MMSI:	002320022
Station Type:	VHF (Monitor) range 47nm
Location:	56-38N 006-08W
Monitor Times:	24-7

DSC Station Kilchiaran	
MMSI:	002320022
Station Type:	VHF (Monitor) range 37nm
Location:	55-45.90N 006-27.25W
Monitor Times:	24-7

DSC Station Law Hill	
MMSI:	002320022
Station Type:	VHF (Monitor) range 41nm
Location:	55-41.76N 004-50.52W
Monitor Times:	24-7

DSC Station Pulpitt Hill	
MMSI:	002320022
Station Type:	VHF (Monitor) range 35nm
Location:	56-19N 005-21W
Monitor Times:	24-7

DSC Station Rhu Stafnish	
MMSI:	002320022
Station Type:	VHF (Monitor) range 44nm
Location:	55-22N 005-32W
Monitor Times:	24-7

MRCC Clyde	
DSC Station South Knapdale	
MMSI:	002320022
Station Type:	VHF (Monitor) range 62nm
Location:	55-55N 005-28W
Monitor Times:	24-7
DSC Station Tiree	
MMSI:	002320022
Station Type:	VHF (Monitor) range 35nm
Location:	56-30N 006-57W
Station Type:	MF (Main) range 150nm
Location:	56-32N 006-48W
Monitor Times:	24-7
DSC Station Torosay	
MMSI:	002320022
Station Type:	VHF (Monitor) range 58nm
Location:	56-27N 005-44W
Monitor Times:	24-7

MRCC Dover	
Location:	51-08N 001-21E
AOR:	Reculver (51-23N 001-14E), 51-31N 002-08E, along international SAR boundary, 50-15N 000-06E, to coast at Birling Gap (50-44N 000-12E)
Contact:	MMSI: 002320010, Phone: +44 (0) 1304 210008, Fax: +44 (0) 1304 202137, E-mail: dovercoastguard@mcga.gov.uk
DSC Station Dover	
MMSI:	002320010
Station Type:	VHF (RX-Monitor) range 33nm
Location:	51-08.00N 001-20.62E
Monitor Times:	24-7
DSC Station Fairlight	
MMSI:	002320010
Station Type:	VHF (Monitor) range 34nm

MRCC Dover	
Location:	50-52.23N 000-38.74E
Monitor Times:	24-7
DSC Station North Foreland	
MMSI:	002320010
Station Type:	VHF (Monitor) range 25nm
Location:	51-22.49N 001-26.71E
Monitor Times:	24-7
DSC Station West Hougham	
MMSI:	002320010
Station Type:	VHF (TX-Monitor) range 45nm
Location:	51-06.69N 001-14.86E
Monitor Times:	24-7

MRCC Falmouth	
Location:	50-08N 002-06W
AOR:	Dodman Point (50-13N 004-48W), 49-23N 004-51W, 48-55N 008-00W, 45-00N 030-00W, 57-40N 030-00W, 54-30N 012-10W, 54-00N 015-00W, 51-00N 015-00W, 51-00N 008-00W, the coast at 50-55N 004-32W
Contact:	MMSI: 002320014, Phone: +44 (0) 1326 317575, Fax: +44 (0) 1326 318342, E-mail: falmouthcoastguard@mcga.gov.uk
DSC Station Bude	
MMSI:	002320014
Station Type:	VHF (Monitor) range 20nm
Location:	50-49N 004-33W
Monitor Times:	24-7
DSC Station Falmouth	
MMSI:	002320014
Station Type:	VHF (Main) range 26nm
Location:	50-08N 005-07W
Station Type:	MF (Main) range 150nm
Location:	49-58N 005-12W
Monitor Times:	24-7

MRCC Falmouth	
DSC Station Lands End	
MMSI:	002320014
Station Type:	VHF (Monitor) range 44nm
Location:	50-08.17N 005-38.19W
Monitor Times:	24-7
DSC Station Lizard	
MMSI:	002320014
Station Type:	VHF (Monitor) range 27nm
Location:	49-59N 005-12W
Monitor Times:	24-7
DSC Station Scillies	
MMSI:	002320014
Station Type:	VHF (Monitor) range 26nm
Location:	49-55.96N 006-18.32W
Monitor Times:	24-7
DSC Station St. Ives	
MMSI:	002320014
Station Type:	VHF (Monitor) range 19nm
Location:	50-13.09N 005-28.60W
Monitor Times:	24-7
DSC Station Trevose Head	
MMSI:	002320014
Station Type:	VHF (Monitor) range 30nm
Location:	50-32.91N 005-01.97W
Monitor Times:	24-7

MRSC Forth	
Location:	56-15N 002-37W
AOR:	Inverbervie (56-50N 002-16W), Pierce Oilfield (57-06N 002-24E), 56-06N 003-14E, the coast at Berwick-on-Tweed (55-48N 002-02E)
Contact:	MMSI: 002320005, Phone: +44 (0) 1333 450666, Fax: +44 (0) 1333 450725, E-mail: forthcoastguard@mcga.gov.uk

MRSC Forth	
DSC Station Craigkelly	
MMSI:	002320005
Station Type:	VHF (Monitor) range 49nm
Location:	56-04N 003-14W
Monitor Times:	24-7
DSC Station Forth	
MMSI:	002320005
Station Type:	VHF (Main) range 21nm
Location:	56-16.74N 002-35.24W
Monitor Times:	24-7
DSC Station Inverbervie	
MMSI:	002320005
Station Type:	VHF (Monitor) range 37nm
Location:	56-51.08N 002-15.76W
Monitor Times:	24-7
DSC Station St. Abbs	
MMSI:	002320005
Station Type:	VHF (Monitor) range 42nm
Location:	55-54.48N 002-12.29W
Monitor Times:	24-7

MRCC Holyhead	
Location:	53-18N 004-37W
AOR:	Barmouth (52-42N 004-04W), 52-42N 005-28W, along international SAR boundary, 53-39N 005-16W, 53-32N 003-48W, the coast at Point of Ayr (53-21N 003-20W)
Contact:	MMSI: 002320018, Phone: +44 (0) 1407 762051, Fax: +44 (0) 1407 764373, E-mail: holyheadcoastguard@mcga.gov.uk
DSC Station Great Orme	
MMSI:	002320018
Station Type:	VHF (Monitor) range 43nm
Location:	53-20.00N 003-51.21W
Monitor Times:	24-7

MRCC Holyhead	
DSC Station Holyhead	
MMSI:	002320018
Station Type:	VHF (Main) range 17nm
Location:	53-19N 004-38W
Station Type:	MF (Main) range 150nm
Location:	53-18N 004-41W
Monitor Times:	24-7
DSC Station Rhiw	
MMSI:	002320018
Station Type:	VHF (Monitor) range 51nm
Location:	52-50N 004-38W
Monitor Times:	24-7
DSC Station South Stack	
MMSI:	002320018
Station Type:	VHF (Monitor) range 38nm
Location:	53-18.38N 004-42.00W
Monitor Times:	24-7

MRSC Humber	
Location:	54-05N 000-10E
AOR:	Berwick-on-Tweed (55-48N 002-54E), 56-07N 003-16E, along international SAR boundary, 53-56N 002-54E, to coast at Haile Sand (53-56N 002-54E)
Contact:	MMSI: 002320007, Phone: +44 (0) 1262 672317, Fax: +44 (0) 1262 606915, E-mail: humbercoastguard@mcga.gov.uk
DSC Station Easington	
MMSI:	002320007
Station Type:	VHF (Monitor) range 25nm
Location:	53-39N 000-06E
Monitor Times:	24-7
DSC Station Flamborough	
MMSI:	002320007
Station Type:	VHF (Monitor) range 26nm

MRSC Humber	
Location:	54-07.08N 000-05.10W
Monitor Times:	24-7
DSC Station Humber	
MMSI:	002320007
Station Type:	VHF (Main)
	MF (Main) range 150nm
Location:	54-07N 000-05W
Monitor Times:	24-7
DSC Station Whitby	
MMSI:	002320007
Station Type:	VHF (Monitor) range 30nm
Location:	54-29.38N 000-36.33W
Monitor Times:	24-7

MRSC Liverpool	
Location:	53-30N 003-03W
AOR:	Point of Ayr (53-21N 003-20W), 53-32N 003-48W, 53-39N 005-16W, along international SAR boundary, Mull of Galloway (54-38N 004-54W)
Contact:	MMSI: 002320019, Phone: +44 (0) 151 931 3341, Fax: +44 (0) 151 931 3347, E-mail: liverpoolcoastguard@mcga.gov.uk
DSC Station Blackpool Tower	
MMSI:	002320019
Station Type:	VHF (Monitor) range 37nm
Location:	53-48.96N 003-03.32W
Monitor Times:	24-7
DSC Station Caldbeck	
MMSI:	002320019
Station Type:	VHF (Monitor) range 65nm
Location:	54-44N 003-03W
Monitor Times:	24-7
DSC Station Liverpool	
MMSI:	002320019

MRSC Liverpool	
Station Type:	VHF (Main) range 17nm
Location:	53-29.80N 003-03.42W
Monitor Times:	24-7
DSC Station Snaefell	
MMSI:	002320019
Station Type:	VHF (Monitor) range 70nm
Location:	54-15.83N 004-27.68W
Monitor Times:	24-7
DSC Station Spanish Head	
MMSI:	002320019
Station Type:	VHF (Monitor) range 37nm
Location:	54-04.01N 004-45.85W
Monitor Times:	24-7
DSC Station Walney Lighthouse	
MMSI:	002320019
Station Type:	VHF (Monitor) range 16nm
Location:	54-02.92N 003-10.63W
Monitor Times:	24-7

MRSC Milford Haven	
Location:	51-42N 005-03W
AOR:	River Towy estuary (51-46N 004-22W), 51-30N 004-38W, 51-30N 006-18W, along international SAR boundary, 52-41N 005-28W, to coast at Barmouth (52-42N 004-04W)
Contact:	MMSI: 002320017, Phone: +44 (0) 1646 690909, Fax: +44 (0) 1646 692176, E-mail: milfordhavencoastguard@mcga.gov.uk
DSC Station Blaenplwyf	
MMSI:	002320017
Station Type:	VHF (Monitor) range 50nm
Location:	52-21.58N 004-06.14W
Monitor Times:	24-7
DSC Station Dinas Head	
MMSI:	002320017

MRSC Milford Haven	
Station Type:	VHF (Monitor) range 43nm
Location:	52-00N 004-54W
Monitor Times:	24-7
DSC Station Milford Haven	
MMSI:	002320017
Station Type:	VHF (Main)
	MF (Main) range 150nm
Location:	51-41N 005-10W
Monitor Times:	24-7
DSC Station St. Ann's Head	
MMSI:	002320017
Station Type:	VHF (Monitor) range 33nm
Location:	51-40.87N 005-10.43W
Monitor Times:	24-7
DSC Station Tenby	
MMSI:	002320017
Station Type:	VHF (Monitor) range 29nm
Location:	51-41.66N 004-41.27W
Monitor Times:	24-7

MRSC Portland	
Location:	50-34N 002-24W
AOR:	Highcliffe (50-43N 001-41W), 50-09N 001-50W, along international SAR boundary, 49-53N 002-54W, to the coast at Topsham (50-38N 003-26W)
Contact:	MMSI: 002320012, Phone: +44 (0) 1305 760439, Fax: +44 (0) 1305 760452, E-mail: portlandcoastguard@mcga.gov.uk
DSC Station Beer Head	
MMSI:	002320012
Station Type:	VHF (Monitor) range 35nm
Location:	50-41.17N 003-05.77W
Monitor Times:	24-7

MRSC Portland	
DSC Station Bincleaves	
MMSI:	002320012
Station Type:	VHF (Monitor) range 16nm
Location:	50-36.08N 002-27.09W
Monitor Times:	24-7
DSC Station Grove	
MMSI:	002320012
Station Type:	VHF (Monitor) range 33nm
Location:	50-32.93N 002-25.19W
Monitor Times:	24-7
DSC Station Hengistbury Head	
MMSI:	002320012
Station Type:	VHF (Monitor) range 21nm
Location:	50-43N 001-46W
Monitor Times:	24-7
DSC Station Portland	
MMSI:	002320012
Station Type:	VHF (Main)
Monitor Times:	24-7

MRSC Shetland	
Location:	60-10N 001-11W
AOR:	Nun Rock (58-52N 005-00W), 61-00N 005-00W, 61-00N 004-00W, 62-00N 004-00W, 62-00N 001-24E, Frigg Oilfield (59-53N 002-04E), Miller Oilfield (58-44N 001-34E), west to Nun Rock
Contact:	MMSI: 002320001, Phone: +44 (0) 1595 694600, Fax: +44 (0) 1595 694810, E-mail: shetlandcoastguard@mcga.gov.uk
DSC Station Lerwick	
MMSI:	002320001
Station Type:	MF (Main) range 150nm
Location:	60-09N 001-08W
Monitor Times:	24-7

MRSC Shetland	
DSC Station Collafirth Hill	
MMSI:	002320001
Station Type:	VHF (Monitor) range 46nm
Location:	60-32N 001-23W
Monitor Times:	24-7
DSC Station Compass Head	
MMSI:	002320001
Station Type:	VHF (Monitor) range 33nm
Location:	59-52.00N 001-16.38W
Monitor Times:	24-7
DSC Station Fitful Head	
MMSI:	002320001
Station Type:	VHF (Monitor) range 47nm
Location:	59-54.35N 001-22.99W
Monitor Times:	24-7
DSC Station Saxa Vord	
MMSI:	002320001
Station Type:	VHF (Monitor) range 44nm
Location:	60-50N 000-50W
Monitor Times:	24-7
DSC Station Shetland	
MMSI:	002320001
Station Type:	VHF (Main) range 26nm
Location:	60-08.92N 001-07.97W
Monitor Times:	24-7
DSC Station Wideford Hill	
MMSI:	002320001
Station Type:	VHF (Monitor) range 44nm
Location:	58-59.29N 003-01.30W
Monitor Times:	24-7

MRSC Solent	
Location:	50-47N 001-11W
AOR:	Birling Gap (50-44N 000-12E), 50-15N 000-06E, along international SAR boundary, 50-09N 001-50W, to the coast at Highcliffe (50-43N 001-41W)
Contact:	MMSI: 002320011, Phone: +44 (0) 23 9255 2100, Fax: +44 (0) 23 9255 1763, E-mail: solentcoastguard@mcga.gov.uk
DSC Station Boniface Down	
MMSI:	002320011
Station Type:	VHF (TX-Monitor) range 44nm
Location:	50-36N 001-12W
Monitor Times:	24-7
DSC Station Newhaven	
MMSI:	002320011
Station Type:	VHF (Monitor) range 27nm
Location:	50-46.94N 000-03.02E
Monitor Times:	24-7
DSC Station Selsey Bill	
MMSI:	002320011
Station Type:	VHF (Monitor) range 19nm
Location:	50-43.85N 000-48.13W
Monitor Times:	24-7
DSC Station Solent	
MMSI:	002320011
Station Type:	VHF (Main)
Monitor Times:	24-7
DSC Station Stenbury Down	
MMSI:	002320011
Station Type:	VHF (RX-Monitor) range 44nm
Location:	50-37N 001-14W
Monitor Times:	24-7

MRSC Stornoway	
Location:	Stornoway, Isle of Lewis 58-13N 006-24W

MRSC Stornoway	
AOR:	Ardnamurchan (56-44N 006-13W), Barra Head (56-47N 007-39W), 56-00N 007-23W, 56-42N 013-00W, 61-00N 013-00W, 61-00N 005-00W, to the coast at Cape Wrath (58-37N 005-00W)
Contact:	MMSI: 002320024, Phone: +44 (0) 1851 702013, Fax: +44 (0) 1851 704387, E-mail: stornowaycoastguard@mcga.gov.uk

DSC Station Arisaig	
MMSI:	002320024
Station Type:	VHF (Monitor) range 35nm
Location:	56-55N 005-50W
Monitor Times:	24-7

DSC Station Barra	
MMSI:	002320024
Station Type:	VHF (Monitor) range 30nm
Location:	57-00.75N 007-30.00W
Monitor Times:	24-7

DSC Station Butt of Lewis	
MMSI:	002320024
Station Type:	VHF (Monitor) range 24nm
Location:	58-27.87N 006-14.10W
Monitor Times:	24-7

DSC Station Clettraval	
MMSI:	002320024
Station Type:	VHF (Monitor) range 37nm
Location:	57-37N 007-27W
Monitor Times:	24-7

DSC Station Forsnaval	
MMSI:	002320024
Station Type:	VHF (Monitor) range 44nm
Location:	58-12.81N 007-00.00W
Monitor Times:	24-7

DSC Station Melvaig	
MMSI:	002320024

MRSC Stornoway	
Station Type:	VHF (Monitor) range 48nm
Location:	57-51N 005-47W
Monitor Times:	24-7
DSC Station Port Naguran	
MMSI:	002320024
Station Type:	VHF (Monitor) range 23nm
Location:	58-15N 006-10W
Monitor Times:	24-7
DSC Station Rodel	
MMSI:	002320024
Station Type:	VHF (Monitor) range 29nm
Location:	57-45N 006-57W
Monitor Times:	24-7
DSC Station Scoval	
MMSI:	002320024
Station Type:	VHF (Monitor) range 48nm
Location:	57-27N 006-42W
Monitor Times:	24-7
DSC Station Skriaig	
MMSI:	002320024
Station Type:	VHF (Monitor) range 57nm
Location:	57-23N 006-14W
Monitor Times:	24-7
DSC Station Stornoway	
MMSI:	002320024
Station Type:	VHF (Main)
	MF (Main) range 150nm
Location:	58-28N 006-14W
Monitor Times:	24-7

MRCC Swansea	
Location:	51-33N 003-58W
AOR:	Marsland Mouth (50-55N 004-32W), 50-45N 007-12W, 51-26N 006-34W, 51-30N 004-38W, to the coast at River Towy estuary (51-46N 004-22W)
Contact:	MMSI: 002320016, Phone: +44 (0) 1792 366534, Fax: +44 (0) 1792 369005, E-mail: swanseacoastguard@mcga.gov.uk
DSC Station Combe Martin	
MMSI:	002320016
Station Type:	VHF (Monitor) range 47nm
Location:	51-10N 004-03W
Monitor Times:	24-7
DSC Station Gower	
MMSI:	002320016
Station Type:	VHF (Monitor) range 27nm
Location:	51-34N 004-17W
Monitor Times:	24-7
DSC Station Hartland Point	
MMSI:	002320016
Station Type:	VHF (Monitor) range 35nm
Location:	51-01.21N 004-31.37W
Monitor Times:	24-7
DSC Station Ilfracombe	
MMSI:	002320016
Station Type:	VHF (Monitor) range 27nm
Location:	51-12.95N 004-05.07W
Monitor Times:	24-7
DSC Station Mumbles Hill	
MMSI:	002320016
Station Type:	VHF (Monitor) range 29nm
Location:	51-34N 003-59W
Monitor Times:	24-7
DSC Station Severn Bridge	
MMSI:	002320016

MRCC Swansea	
Station Type:	VHF (Monitor) range 33nm
Location:	51-37N 002-39W
Monitor Times:	24-7
DSC Station St. Hilary	
MMSI:	002320016
Station Type:	VHF (Monitor) range 50nm
Location:	51-27.43N 003-24.15W
Monitor Times:	24-7
DSC Station Swansea	
MMSI:	002320016
Station Type:	VHF (Main)
Monitor Times:	24-7

MRSC Thames	
Location:	51-51N 001-17E
AOR:	Walberswick (52-19N 001-40E), 52-20N 003-00E along international SAR boundary, 51-31N 002-09E, to the coast at Reculver (51-23N 001-14E)
Contact:	MMSI: 002320009, Phone: +44 (0) 1255 675518, Fax: +44 (0) 1255 675249, E-mail: thamescoastguard@mcga.gov.uk
DSC Station Bawdsey	
MMSI:	002320009
Station Type:	VHF (Monitor) range 24nm
Location:	52-00N 001-25E
Monitor Times:	24-7
DSC Station Bradwell	
MMSI:	002320009
Station Type:	VHF (Monitor) range 16nm
Location:	51-44.00N 000-53.04E
Monitor Times:	24-7
DSC Station Shoeburyness	
MMSI:	002320009
Station Type:	VHF (Monitor) range 17nm

MRSC Thames	
Location:	51-31.29N 000-47.13E
Monitor Times:	24-7
DSC Station Thames	
MMSI:	002320009
Station Type:	VHF (Main) range 18nm
Location:	51-52N 001-16E
Monitor Times:	24-7

MRSC Tyne Tees	
DSC Station Hartlepool	
MMSI:	002320006
Station Type:	VHF (Monitor) range 19nm
Location:	54-41.80N 001-10.53W
Monitor Times:	24-7
DSC Station Newton	
MMSI:	002320006
Station Type:	VHF (Monitor) range 24nm
Location:	55-31.05N 001-37.20W
Monitor Times:	24-7
DSC Station Tyne Tees	
MMSI:	002320006
Station Type:	VHF (Main) range 24nm
Location:	55-01.09N 001-24.99W
Monitor Times:	24-7

MRCC Yarmouth	
Location:	Great Yarmouth 52-36N 001-43E
AOR:	The coast at Haile Sand (53-32N 000-02E), 53-56N 002-54E, along international SAR boundary, 52-21N 003-00E, to coast at Southwold (52-19N 001-40E)
Contact:	MMSI: 002320008, Phone.: +44 (0) 1493 851338, Fax: +44 (0) 1493 852307, E-mail: yarmouthcoastguard@mcga.gov.uk

MRCC Yarmouth	
DSC Station Langham	
MMSI:	002320008
Station Type:	VHF (Monitor) range 24nm
Location:	52-57N 000-57E
Monitor Times:	24-7
DSC Station Lowestoft	
MMSI:	002320008
Station Type:	VHF (Monitor) range 19nm
Location:	52-28.99N 001-45.03E
Monitor Times:	24-7
DSC Station Skegness	
MMSI:	002320008
Station Type:	VHF (Monitor) range 18nm
Location:	53-09N 000-21E
Monitor Times:	24-7
DSC Station Trimingham	
MMSI:	002320008
Station Type:	VHF (Monitor) range 30nm
Location:	52-54.56N 001-20.60E
Monitor Times:	24-7
DSC Station Trusthorpe	
MMSI:	002320008
Station Type:	VHF (Monitor) range 23nm
Location:	53-19.79N 000-16.51E
Monitor Times:	24-7
DSC Station Yarmouth	
MMSI:	002320008
Station Type:	VHF (Main) range 20nm
Location:	52-36N 001-42E
Monitor Times:	24-7

400BY. United States

Atlantic Area SAR Coordinator	
Location:	Commander U.S. Coast Guard, Atlantic Area, Portsmouth, Virginia 36-43N 076-12W
AOR:	Overall responsibility for areas covered by RCC Boston, RCC Norfolk, RCC Miami, RSC San Juan, RCC New Orleans and RCC Cleveland plus a portion of the North Atlantic Ocean out to 40 degrees west longitude
Contact:	Phone: 757 398 6700
DSC Station Portsmouth	
MMSI:	003669995
Station Type:	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	36-44N 076-01W
Monitor Times:	24-7

RCC Alameda	
Location:	USCG D11, Alameda, California
AOR:	California and Eastern Pacific Ocean waters assigned by international convention off the Coast of Mexico
Contact:	Telex: 230172343, Phone: 510 437 3700, E-mail: rccalameda@uscg.mil
DSC Station San Francisco	
MMSI:	003669990
Station Type:	HF on 4,6,8,12,16 MHz
Location:	37-56N 122-44W
Monitor Times:	24-7

RCC Boston	
Location:	USCG D1, Boston, Massachusetts
AOR:	New England down to and including a portion of Northern New Jersey plus U.S. waters of Lake Champlain
Contact:	Phone: 617 223 8555, E-mail: rccboston@uscg.mil
DSC Station Boston	
MMSI:	003669991
Station Type:	HF on 4,6,8,12,16 MHz
Location:	41-42N 070-30W
Monitor Times:	24-7

JRCC Honolulu	
Location:	USCG D14, Honolulu, Hawaii 21-18.358N 157-52.400W
AOR:	Hawaii, U.S. Pacific Islands and waters of Central Pacific Ocean assigned by international convention (extending from as far as 6 degrees south to 40 degrees north latitude and as far as 110 west to 130 east longitude)
Contact:	Telex: 392401, Phone: 808 535 3333, Fax: 808 535 3338, E-mail: jrcchonolulu@uscg.mil
DSC Station Honolulu	
MMSI:	003669993
Station Type:	HF on 4,6,8,12,16 MHz
Location:	21-26N 158-09W
Monitor Times:	24-7

JRCC Juneau	
Location:	USCG D17, Juneau, Alaska 58-17.984N 134-24.659W
AOR:	Alaska, U.S. waters in North Pacific Ocean, Bering Sea, and Arctic Ocean
Contact:	Phone: 907 463 2000, Fax: 907 463 2023, E-mail: jrccjuneau@uscg.mil
DSC Station Kodiak	
MMSI:	003669899
Station Type:	HF on 4,6,8,12,16 MHz
Location:	57-46N 152-34W
Monitor Times:	24-7

RCC Miami	
Location:	USCG D7, Miami, Florida 25-37N 080-23W
AOR:	Southeast states from the South Carolina/North Carolina border around to the eastern end of the Florida panhandle plus a large portion of the Caribbean Sea
Contact:	Phone: 305 415 6800, Fax: 305 415 6809, E-mail: rccmiami@uscg.mil
DSC Station Miami	
MMSI:	003669997
Station Type:	MF (Main) range 200nm
	HF on 4,6,8,12,16 MHz
Location:	25-37N 080-23W
Monitor Times:	24-7

JRCC New Orleans	
Location:	29-57N 090-03W
Contact:	Telex: 621 234 50, Phone: 504 589 6225, Fax: 504 589 2148, E-mail: d08-comandcenter@uscg.mil
DSC Station New Orleans	
MMSI:	003669994
Station Type:	HF on 4,6,8,12,16 MHz
Location:	29-53N 089-57W
Monitor Times:	24-7

400BZ. Uruguay

MRCC Uruguay	
Location:	34-54S 056-12W
AOR:	35-38S 055-52W, 37-06S 054-17W, 37-56S 052-36W, 37-56S 010-00W, 34-00S 010-00W, 34-00S 048-27W, 35-48S 050-10W, 34-00S 053-00W
Contact:	Telex: 22557 ARMADA UY, Fax: (5982) 916 13 89, (5982) 916 79 22, E-mail: comflo_radio@armada.gub.uy, jesar@armada.gub.uy
DSC Station Montevideo	
MMSI:	007703870
Station Type:	MF (Main) range 100nm
	HF on 4,6,8,12,16 MHz
Location:	34-52S 056-19W
Monitor Times:	24-7

400CA. Vietnam

MRCC Danang (VMRCC)	
DSC Station Vung Tau/XVR Radio	
MMSI:	005742005
Station Type:	MF (Monitor) range 200nm
Location:	10-20.72N 107-05.67E
Monitor Times:	24-7

MRCC Danang (VMRCC)	
DSC Station Hue/XVD Radio	
MMSI:	005742020
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	16-32.38N 107-38.24E
Monitor Times:	24-7
DSC Station Da Nang/XVT Radio	
MMSI:	005742030
Station Type:	VHF (Main) range 30nm
Location:	16-07.56N 108-15.06E
Station Type:	MF (Main) range 200nm
Location:	16-03.32N 108-12.32E
Station Type:	HF on 6,8 MHz
Location:	16-04N 108-13E
Monitor Times:	24-7
DSC Station Quy Nhon/XVI Radio	
MMSI:	005742060
Station Type:	VHF (Main) range 30nm
Location:	13-47N 109-14E
Monitor Times:	24-7
DSC Station Nha Trang/XVN Radio	
MMSI:	005742080
Station Type:	VHF (Main) range 30nm
Location:	12-29.27N 109-15.50E
Station Type:	MF (Main) range 200nm
Location:	12-16N 109-10E
Monitor Times:	24-7
DSC Station Phan Rang/XVN Radio	
MMSI:	005742100
Station Type:	VHF (Main) range 30nm
Location:	11-33.53N 109-00.23E

MRCC Danang (VMRCC)	
Monitor Times:	24-7
DSC Station Phu Yen/XVY Radio	
MMSI:	005742070, 005742013
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	12-53.40N 109-27.12E
Monitor Times:	24-7

Hon Gai Port Authority	
DSC Station Cua Ong/XVC Radio	
MMSI:	005741020
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	21-01.12N 107-24.01E
Monitor Times:	24-7

MRCC Vungtau (VMRCC)	
DSC Station Ca Mau/XVA Radio	
MMSI:	005743070
Station Type:	VHF (Main) range 31nm
	MF (Main) range 200nm
Location:	09-12.01N 105-10.48E
Monitor Times:	24-7
DSC Station Can Tho/XVU Radio	
MMSI:	005743050
Station Type:	VHF (Main) range 30nm
Location:	10-02N 105-47E
Monitor Times:	24-7
DSC Station Kien Giang/SVK Radio	
MMSI:	005743080

MRCC Vungtau (VMRCC)	
Station Type:	VHF (Main) range 30nm
	MF (Main) range 200nm
Location:	09-22N 104-26E
Monitor Times:	24-7
DSC Station Phan Thiet/XVP Radio	
MMSI:	005743010
Station Type:	VHF (Main) range 30nm
Location:	10-54.55N 108-06.11E
Monitor Times:	24-7
DSC Station Ho Chi Minh-Ville/XVS Radio	
MMSI:	005743030
Station Type:	VHF (Main) range 30nm
Location:	10-21.28N 107-04.15E
Station Type:	MF (Main) range 200nm
	HF on 8 MHz
Location:	10-23.32N 107-08.57E
Monitor Times:	24-7
DSC Station Vung Tau/XVR Radio	
MMSI:	005743020
Station Type:	VHF (Main) range 30nm
Location:	10-21.59N 107-04.01E
Monitor Times:	24-7

400CB. DSC Stations (by DSC name)

DSC Station	Associated RCC	Country
Aabla	MRCC Tallinn	Estonia
Aarsballe	JRCC Denmark/SOK, Aarhus	Denmark
Aasiatt	MRCC Gronnedal	Greenland (Denmark)
Abadan Radio		Iran (Islamic Republic of)
Abbas Radio (Persian Gulf)	RCC Bandar Abbas	Iran (Islamic Republic of)
Abbate Argento	MRSC Bari	Italy

DSC Station	Associated RCC	Country
Aberdeen	MRCC Aberdeen	United Kingdom
Abidjan Radio	MRCC Abidjan	Cote D'Ivoire
Abomusa Radio (Persian Gulf)		Iran (Islamic Republic of)
Aburatsu	MRCC Kagoshima	Japan
Acapulco		Mexico
Ada Radio	Harbor Master's Office, Accra	Ghana
Aflao	Harbor Master's Office, Accra	Ghana
Aftab Radio (Persian Gulf)		Iran (Islamic Republic of)
Agde	MRCC La Garde	France
Akcaabat	MSRCC Ankara	Turkey
Akcakoca	MSRCC Ankara	Turkey
Akdag	MSRCC Ankara	Turkey
Akmenrags	MRCC Riga	Latvia
Al Birk	RCC Riyadh	Saudi Arabia
Al Jubayl (Jubail)	RCC Riyadh	Saudi Arabia
Al Lith	RCC Riyadh	Saudi Arabia
Al Wajh	RCC Riyadh	Saudi Arabia
Al-Almein	JRCC Cairo	Egypt
Alarish	JRCC Cairo	Egypt
Al-Dabaa	JRCC Cairo	Egypt
Ålesund, Aksla	JRCC South Norway Stavanger	Norway
Alexandria Radio	JRCC Cairo	Egypt
Alger	MRCC Alger	Algeria
Alicante	MRCC Valencia	Spain
Als	JRCC Denmark/SOK, Aarhus	Denmark
Alta, Helligfjell	JRCC North Norway Bodø	Norway
Amboina	MRCC Ujung Pandang, MRSC Ambon	Indonesia
Amir Abad Radio (Caspian Sea)	Amir Abad	Iran (Islamic Republic of)
Anamur	MSRCC Ankara	Turkey
Ancona (Forte Millo)	MRSC Ancona	Italy
Ancud	MRSC Castro	Chile

DSC Station	Associated RCC	Country
Andenes	JRCC North Norway Bodø	Norway
Andros	JRCC Piraeus	Greece
Angmagssalik	MRCC Gronnedal	Greenland (Denmark)
Ånholt	JRCC Denmark/SOK, Aarhus	Denmark
Annaba	CNOSS Jijel	Algeria
Annacis Island	JRCC Victoria	Canada
Antalya	MSRCC Ankara	Turkey
Antifer	MRCC Jobourg	France
Antofagasta	MRCC Iquique, MRSC Antofagasta	Chile
Antwerpen	MRCC Oostende	Belgium
Anzali Radio (Caspian Sea)	HQ PSO Tehran	Iran (Islamic Republic of)
Appingedam	JRCC Den Helder	Netherlands
Aqaba Port Control	Harbor Master Aqaba	Jordan
Argentina Radio	MRCC Buenos Aires	Argentina
Arica	MRSC Arica	Chile
Arisaig	MRSC Stornoway	United Kingdom
Arkhangelsk	MRSC Arkhangelsk	Russian Federation
Arkona	MRCC Bremen	Germany
Armandeche	MRCC Etel	France
Arnold’s Cove	JRCC Halifax	Canada
Arrecife	MRCC Las Palmas	Spain
Asaluyeh Radio (Persian Gulf)	Bandar Bushehr	Iran (Islamic Republic of)
Asamagatake	MRCC Nagoya	Japan
Åsgård B, North Sea	JRCC South Norway Stavanger	Norway
Aspretto	MRCC La Garde/ MRSC Cors	France
Aspropirgos Radio	JRCC Piraeus	Greece
Astrakhan (Caspian Sea)	MRCC Astrakhan	Russian Federation
Astypalea	JRCC Piraeus	Greece
Augusta	MRSC Catania	Italy
Augusta Campolato Alto	MRSC Catania	Italy

DSC Station	Associated RCC	Country
Avacha	MRSC Petropavlovsk-Kamchatskiy	Russian Federation
Axim	Harbor Master's Office, Accra	Ghana
Ayora Radio	Guayaquil Coast Guard	Ecuador
Aysen	MRSC Aysen	Chile
Ayvalik	MSRCC Ankara	Turkey
Baatsfjord, Hamnefjell	JRCC North Norway Bodø	Norway
Bäckefors	JRCC Sweden	Sweden
Badde Urbara	MRSC Cagliari	Italy
Bagur	MRCC Barcelona	Spain
Bahia	Guayaquil Coast Guard	Ecuador
Bahia Felix	MRCC Punta Arenas	Chile
Bahia Fildes	MRSC Chilean Antarctic	Chile
Bahia Paraiso (Antarctic)	MRSC Chilean Antarctic	Chile
Bahonar Radio (Persian Gulf)		Iran (Islamic Republic of)
Bald Head	JRCC Trenton	Canada
Balikpapan	MRCC Surabaya, MRSC Balik Papan	Indonesia
Baltim	JRCC Cairo	Egypt
Bandar Abbas Radio	RCC Bandar Abbas	Iran (Islamic Republic of)
Bandirma	MSRCC Ankara	MSRCC Ankara
Banff	MRCC Aberdeen	United Kingdom
Bangkok Radio	RCC Bangkok	Thailand
Bangkok Radio Sriracha	RCC Bangkok	Thailand
Bantry	MRSC Valentia	Ireland
Baquerizo Moreno	Guayaquil Coast Guard	Ecuador
Bar Radio	MRCC Bar	Republic of Montenegro
Barcelona	MRCC Barcelona	Spain
Bari (Monte Parano)	MRSC Bari	Italy
Barra	MRSC Stornoway	United Kingdom
Barzowice	MRCC Gdynia	Poland
Basuo Radio	Basuo HAS	China

DSC Station	Associated RCC	Country
Batu Ampar	MRSC Tanjung Pinang	Indonesia
Batz Island	MRCC Corsen	France
Bawdsey	MRSC Thames	United Kingdom
Bay L'Argent	JRCC Halifax	Canada
Bear	MRCC La Garde	France
Beer Head	MRSC Portland	United Kingdom
Beglica	MRSC Taman'	Russian Federation
Beihai Radio	Beihai HSA	China
Beir Al Abd	JRCC Cairo	Egypt
Beirut Radio	Lebanese Army	Lebanon
Bejaia	CNOSS Jijel	Algeria
Belawan	MRCC Jakarta, MRSC Medan	Indonesia
Belfast	MRSC Belfast	United Kingdom
Belle Ile	MRCC Etel	France
Belmullet	MRSC Malin Head	Ireland
Ben Thuy/SVB Radio	MRCC Haiphong (VMRCC)	Vietnam
Ben Tongue	MRCC Aberdeen	United Kingdom
Berdiansk	MRCC Odessa	Ukraine
Bergen	JRCC South Norway Stavanger	Norway
Bergen, Lindås	JRCC South Norway Stavanger	Norway
Bergen, Rundemannen	JRCC South Norway Stavanger	Norway
Berlevåg, Berlevågfjell	JRCC North Norway Bodø	Norway
Bermuda Harbor Radio	RCC Bermuda	Bermuda (UK)
Berry Head	MRSC Brixham	United Kingdom
Biak	MRCC Biak	Indonesia
Biarritz	MRCC Etel	France
Bilbao CCR	MRCC Bilbao	Spain
Bincleaves	MRSC Portland	United Kingdom
Bintulu	MRCC Port Klang	Malaysia
Bitung	MRCC Ujung Pandang, MRSC Menado	Indonesia
Bjerkreim	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Bjørndalen (Longyearbyen)	JRCC North Norway Bodø	Norway
Bjørnøya	JRCC North Norway Bodø	Norway
Bjuroklubb	JRCC Sweden	Sweden
Blaavand	JRCC Denmark/SOK, Aarhus	Denmark
Black Mountain	MRSC Belfast	United Kingdom
Blackpool Tower	MRSC Liverpool	United Kingdom
Blaenplwyf	MRSC Milford Haven	United Kingdom
Bodic	MRCC Corsen	France
Bodø Radio	JRCC North Norway Bodø	Norway
Bodrum	MSRCC Ankara	Turkey
Bokn	JRCC South Norway Stavanger	Norway
Boniface Down	MRSC Solent	United Kingdom
Bonne Bay	JRCC Halifax	Canada
Boston	RCC Boston	United States
Bourgas	MRCC Varna	Bulgaria
Bourg-Rashid	JRCC Cairo	Egypt
Bovbjerg	JRCC Denmark/SOK, Aarhus	Denmark
Bowen Island	JRCC Victoria	Canada
Bradwell	MRSC Thames	United Kingdom
Brandö	MRCC Turku	Finland
Brattvåg, Gamlemsveten	JRCC South Norway Stavanger	Norway
Bremanger	JRCC South Norway Stavanger	Norway
Bremen Rescue Radio	MRCC Bremen	Germany
Brixham	MRSC Brixham	United Kingdom
Brochas Kritis	JRCC Piraeus	Greece
Bude	MRCC Falmouth	United Kingdom
Buenos Aires	MRSC Rio de la Plata	Argentina
Buholmråen, Yttervåg	JRCC South Norway Stavanger	Norway
Bukten (Drammen)	JRCC South Norway Stavanger	Norway
Busan Newport VTS	RCC Namhae	Republic of Korea
Busan VTS	RCC Namhae	Republic of Korea

DSC Station	Associated RCC	Country
Bushehr Radio (Persian Gulf)	RCC Bandar Abbas	Iran (Islamic Republic of)
Butt of Lewis	MRSC Stornoway	United Kingdom
Ca Mau/XVA Radio	MRCC Vungtau(VMRCC)	Vietnam
Cabo de Gata	MRCC Almeria	Spain
Cabo Gata	MRCC Almeria	Spain
Cabo La Nao	MRCC Valencia	Spain
Cabo Ortegal	MRCC Finisterre	Spain
Cabo Penas	MRCC Bilbao, MRCC Gijon	Spain
Cabo Raper	MRSC Aysen/Puerto Aysen	Chile
Cadiz	MRSC Cadiz	Spain
Cairn Pat	MRCC Clyde	United Kingdom
Caldbeck	MRSC Liverpool	United Kingdom
Caldera	MRSC Caldera	Chile
Callao	MRCC Callao	Peru
Calvert Island	JRCC Victoria	Canada
Camlica	MSRCC Ankara	Turkey
Campbell Bay	MRCC Port Blair	India
Campu Spina	MRSC Cagliari	Italy
Can Tho/XVU Radio	MRCC Vungtau(VMRCC)	Vietnam
Cap Camarat	MRCC La Garde	France
Cap Est	MRSC Quebec	Canada
Cap Ferret	MRCC Etel	France
Cap Frehel	MRCC Corsen	France
Cap-aux-Meules	JRCC Halifax	Canada
Cape Blomidon	JRCC Halifax	Canada
Cape Bonavista	JRCC Halifax	Canada
Cape Coast	Harbor Master’s Office, Accra	Ghana
Cape Egmont	JRCC Halifax	Canada
Cape North	JRCC Halifax	Canada
Cape Pine	JRCC Halifax	Canada
Cape Svobodniy	MRSC Yuzhno-Sakhalinsk	Russian Federation

DSC Station	Associated RCC	Country
Cape Town Radio	MRCC Cape Town	South Africa
Capo Colonna	MRSC Reggio Calabria	Italy
Capo dell'Armi	MRSC Reggio Calabria	Italy
Capri	MRSC Napoli	Italy
Cardinal	JRCC Trenton	Canada
Carleton	JRCC Halifax	Canada
Carlingford	MRCC Dublin	Ireland
Carmelo Radio	MRCC Uruguay	Argentina
Cartagena	MRSC Cartagena	Spain
Cartright	JRCC Halifax	Canada
Casa D'orso	MRSC Bari	Italy
Castellon	MRCC Valencia	Spain
Castro	MRSC Castro	Chile
Cayar	MRCC Dakar	Senegal
Cd. Del Carmen	MRCC Mexico, Mexican Navy	Mexico
Cefalu	MRSC Palermo	Italy
Celavac	MRCC Rijeka	Croatia
Chabahar Radio (Oman Sea)	RCC Bandar Abbas	Iran (Islamic Republic of)
Chafalote Radio	MRCC Uruguay	Argentina
Chaiten	MRSC Castro	Chile
Chanaral	MRSC Caldera	Chile
Chancay	MRCC Chancay	Peru
Charleville	RCC Australia	Australia
Chassiron	MRCC Etel	France
Chennai	MRCC Chennai	India
Cherchell	MRCC Alger	Algeria
Cheticamp	JRCC Halifax	Canada
Chetumal	MRCC Chetumal	Mexico
Chikura	MRCC Yokohama	Japan
Chimbote	MRCC Chimbote	Peru
Chipiona	MRCC Tarifa	Spain

DSC Station	Associated RCC	Country
Chirikov Cape	MRSC Petropavlovsk-Kamchatskiy, MRSC Yuzhno-Sakhalinsk	Russian Federation
Choshi	MRCC Yokohama	Japan
Cilacap	MRCC Jakarta	Indonesia
Clettraval	MRSC Stornoway	United Kingdom
Clifden	MRSC Malin Head	Ireland
Clyde	MRCC Clyde	United Kingdom
Coatzacoalcos	MRCC Veracruz	Mexico
Cobandede	MSRCC Ankara	Turkey
Cobourg	JRCC Trenton	Canada
Collafirth Hill	MRSC Shetland	United Kingdom
Colonia Radio	MRCC Uruguay	Argentina
Combe Martin	MRCC Swansea	United Kingdom
Comfort Cove	JRCC Halifax	Canada
Comodoro Rivadavia Radio	MRSC Comodoro Rivadavia	Argentina
Comox	JRCC Victoria	Canada
Compass Head	MRSC Shetland	United Kingdom
Conca	MRCC La Garde/ MRSC Corse	France
Conche	JRCC Halifax	Canada
Conconello	MRSC Trieste	Italy
Constanta, Agigea	MRCC Constanta/Constanta Harbor Master	Romania
Constanta, Enisala	MRCC Constanta/Constanta Harbor Master	Romania
Constanta, Mahmudia	MRCC Constanta/Constanta Harbor Master	Romania
Constanta, Sfintu Gheorghe	MRCC Constanta/Constanta Harbor Master	Romania
Constitucion	MRSC Talcahuano	Chile
Contis	MRCC Etel	France
Coquimbo	MRSC Coquimbo	Chile
Cork	MRSC Valentia	Ireland
Cornwall	JRCC Trenton	Canada

DSC Station	Associated RCC	Country
Corona	MRCC Puerto Montt	Chile
Corral	MRSC Valdivia	Chile
Corsen	MRCC Corsen	France
Coruna CCR	MRSC Coruna	Spain
Cotonou Radio	PTT Cotonou	Benin
Coudon	MRCC La Garde	France
Cozumel	MRSC Isla Cozumel	Mexico
Craigkelly	MRSC Forth	United Kingdom
Cua Ong/XVC Radio	Hon Gai Port Authority	Vietnam
Cumshewa	JRCC Victoria	Canada
Cuslett	JRCC Halifax	Canada
Cuxhaven	MRCC Bremen	Germany
Cyprus Radio	JRCC Larnaca	Cyprus
Da Nang/XVT Radio	MRCC Danang (VMRCC)	Vietnam
Daesan VTS	RCC Seohae	Republic of Korea
Dahab	JRCC Cairo	Egypt
Dalian Radio	MRCC Liaoning	China
Daman	MRCC Mumbai	India
Dammam	RCC Riyadh	Saudi Arabia
Darss	MRCC Bremen	Germany
Dartmouth	MRSC Brixham	United Kingdom
Dayer Radio (Persian Gulf)		Iran (Islamic Republic of)
Dellys	CNOSS Oran	Algeria
Den Helder	JRCC Den Helder	Netherlands
Deylm Radio (Persian Gulf)		Iran (Islamic Republic of)
Diego Ramirez	MRSC Puerto Williams	Chile
Diglipor	MRCC Port Blair	India
Dikmen	MSRCC Ankara	Turkey
Dilektepe	MSRCC Ankara	Turkey
Dinas Head	MRSC Milford Haven	United Kingdom
Dirhami	MRCC Tallinn	Estonia

DSC Station	Associated RCC	Country
Discovery	JRCC Victoria	Canada
Dolvsveden (Kristiansand)	JRCC South Norway Stavanger	Norway
Domen (Vardø)	JRCC North Norway Bodø	Norway
Donghae VTS	RCC Donghae	Republic of Korea
Doob	MRCC Novorossiysk	Russian Federation
Dover	MRCC Dover	United Kingdom
Draugen, North Sea	JRCC South Norway Stavanger	Norway
Draupner, North Sea	JRCC South Norway Stavanger	Norway
Duba	RCC Riyadh	Saudi Arabia
Dubrovnik	MRCC Rijeka	Croatia
Dumai	MRCC Jakarta, MRSC Pekanbaru	Indonesia
Dundas Island	JRCC Victoria	Canada
Dunkerque	MRCC Gris Nez	France
Dunnet Head	MRCC Aberdeen	United Kingdom
Durness	MRCC Aberdeen	United Kingdom
Dütmen	MSRCC Ankara	Turkey
Easington	MRSC Humber	United Kingdom
East Prawle	MRSC Brixham	United Kingdom
East Regional HQs Korea Coast Guard	RCC Donghae	Republic of Korea
Ecum Secum	JRCC Halifax	Canada
Eiderstedt	MRCC Bremen	Germany
Eisk	MRSC Taman'	Russian Federation
Eisma	MRCC Tallinn	Estonia
Ekofisk, North Sea	JRCC South Norway Stavanger	Norway
Eliza Dome	JRCC Victoria	Canada
Emine	MRCC Varna	Bulgaria
Ensenada	MRCC Ensenada	Mexico
Ersa	MRCC La Garde, MRSC Corse	France
Esmeraldas	Guayaquil Coast Guard	Ecuador
Espiguette	MRCC La Garde	France

DSC Station	Associated RCC	Country
Espiritu Santo	MRCC Punta Arenas	Chile
Etel	MRCC Etel	France
Fairlight	MRCC Dover	United Kingdom
Faistos	JRCC Piraeus	Greece
Fak-Fak	MRSC Sorong	Indonesia
Falmouth	MRCC Falmouth	United Kingdom
Fårö	JRCC Sweden	Sweden
Faro Evangelistas	MRCC Punta Arenas	Chile
Faro Fairway	MRCC Punta Arenas	Chile
Farsund	JRCC South Norway Stavanger	Norway
Fass Boye	MRCC Dakar	Senegal
Finisterre	MRCC Finisterre	Spain
Fitful Head	MRSC Shetland	United Kingdom
Fjaerland	JRCC South Norway Stavanger	Norway
Flamborough	MRSC Humber	United Kingdom
Flensburg	MRCC Bremen	Germany
Florø Radio	JRCC South Norway Stavanger	Norway
Fonthill	JRCC Trenton	Canada
Forillon	JRCC Halifax	Canada
Formia Ascatiello	MRSC Roma	Italy
Fornaes	JRCC Denmark/SOK, Aarhus	Denmark
Fornesfjell	JRCC North Norway Bodø	Norway
Forsnaval	MRSC Stornoway	United Kingdom
Forte Garibaldi	MRSC Ancona	Italy
Forte Spuria	MRSC Catania	Italy
Forth	MRSC Forth	United Kingdom
Fortune Head	JRCC Halifax	Canada
Fosnavaag, Nerlandshorn	JRCC South Norway Stavanger	Norway
Fox Harbor	JRCC Halifax	Canada
Fox Island	JRCC Halifax	Canada
Foyers	MRCC Aberdeen	United Kingdom

DSC Station	Associated RCC	Country
Fredvang	JRCC North Norway Bodø	Norway
Frejlev	JRCC Denmark/SOK, Aarhus	Denmark
Freshwater Hill	JRCC Halifax	Canada
Fuerteventura	MRCC Las Palmas	Spain
Fugloy	MRCC Torshavn	Denmark
Fuzhou Radio	MRCC Fujian	China
Gatteville	MRCC Jobourg	France
Gävle	JRCC Sweden	Sweden
Geiranger-2	JRCC South Norway Stavanger	Norway
Gela C.po Soprano	MRSC Palermo	Italy
Genaveh Radio (Persian Gulf)		Iran (Islamic Republic of)
Genova (Castellaccio)	MRSC Genova	Italy
Gerania	JRCC Piraeus	Greece
Geta	MRCC Turku	Finland
Ghazaouet	CNOSS Oran	Algeria
Gislovshammar	JRCC Sweden	Sweden
Glen Head	MRSC Malin Head	Ireland
Glengorm	MRCC Clyde	United Kingdom
Goa	MRCC Mumbai	India
Gogland	MRCC Saint Petersburg	Russian Federation
Gomera	MRCC Las Palmas	Spain
Gorgona	MRSC Livorno	Italy
Gorki	MRCC Saint Petersburg	Russian Federation
Gosses-Roches	MRSC Quebec	Canada
Göteborg	JRCC Sweden	Sweden
Gotska Sandön	JRCC Sweden	Sweden
Gower	MRCC Swansea	United Kingdom
Grand Lahou	MRCC Abidjan	Cote D'Ivoire
Grand Manan	JRCC Halifax	Canada
Grand Pointe	JRCC Trenton	Canada
Granville	MRCC Jobourg	France

DSC Station	Associated RCC	Country
Great Orme	MRCC Holyhead	United Kingdom
Gregness	MRCC Aberdeen	United Kingdom
Grimeton	JRCC Sweden	Sweden
Gris Nez	MRCC Gris Nez	France
Groix	MRCC Etel	France
Grove	MRSC Portland	United Kingdom
Grzywacz-Polana	MRCC Gdynia	Poland
Guangzhou Radio	MRCC Guangdong	China
Guayaquil	Guayaquil Coast Guard	Ecuador
Guaymas		Mexico
Gulen	JRCC South Norway Stavanger	Norway
Gullfaks, North Sea	JRCC South Norway Stavanger	Norway
Gunsan VTS	RCC Seohae	Republic of Korea
Gunung Berinchang	MRCC Port Klang	Malaysia
Gunung Jerai	MRCC Port Klang	Malaysia
Gunung Ledang	MRCC Port Klang	Malaysia
Hagskaret	JRCC North Norway Bodø	Norway
Hai Phong/XVG Radio	MRCC Haiphong (VMRCC)	Vietnam
Haikou Radio	Haikou HSA/MRCC Hainan Province	China
Hailuoto	MRSC Vaasa	Finland
Hakadateyama	MRCC Otaru	Japan
Haldia	MRCC Chennai	India
Half Assini	Harbor Master's Office, Accra	Ghana
Half Moon Beach	RCC Riyadh	Saudi Arabia
Halifax	JRCC Halifax	Canada
Halmstad	JRCC Sweden	Sweden
Hamburg	MRCC Bremen	Germany
Hammerfest, Tyven	JRCC North Norway Bodø	Norway
Hanko	MRSC Helsinki	Finland
Hanstholm	JRCC Denmark/SOK, Aarhus	Denmark
Hareid, Hjørunganes	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Härnösand	JRCC Sweden	Sweden
Harrington Harbor	JRCC Halifax	Canada
Harstad	JRCC North Norway Bodø	Norway
Hartland Point	MRCC Swansea	United Kingdom
Hartlepool	MRSC Tyne Tees	United Kingdom
Hasvik, Fuglen	JRCC North Norway Bodø	Norway
Haugesund	JRCC South Norway Stavanger	Norway
Havøysund, Havøygavlen	JRCC North Norway Bodø	Norway
Havre St. Pierre	JRCC Halifax	Canada
Heath Point	JRCC Halifax	Canada
Heidrun, North Sea	JRCC South Norway Stavanger	Norway
Heimdal, North Sea	JRCC South Norway Stavanger	Norway
Helgoland	MRCC Bremen	Germany
Helmcken	JRCC Victoria	Canada
Helsingborg	JRCC Sweden	Sweden
Helsinki	MRSC Helsinki	Finland
Hengistbury Head	MRSC Portland	United Kingdom
Hermitage	JRCC Halifax	Canada
Hierro	MRCC Tenerife	Spain
Hillesøy	JRCC North Norway Bodø	Norway
Hilsøy (Arendal)	JRCC South Norway Stavanger	Norway
Hiroshima Coast Guard Radio	MRCC Hiroshima	Japan
Hirtshals	JRCC Denmark/SOK, Aarhus	Denmark
Ho Chi Minh-Ville/XVS Radio	MRCC Vungtau(VMRCC)	Vietnam
Hoburgen	JRCC Sweden	Sweden
Hokkaido Coast Guard Radio	MRCC Otaru	Japan
Holberg	JRCC Victoria	Canada
Holyhead	MRCC Holyhead	United Kingdom
Hon Gai/XVQ Radio (Quang Ninh)	MRCC Haiphong (VMRCC)	Vietnam
Hong Kong Marine Rescue Tai Mo Shan	MRCC Hong Kong	Hong Kong, China (Associate Member of IMO)

DSC Station	Associated RCC	Country
Hong Kong Marine Rescue Tai Mo Shan	MRCC Hong Kong	Hong Kong, China (Associate Member of IMO)
Hong Kong Marine Rescue Victoria Peak	MRCC Hong Kong	Hong Kong, China (Associate Member of IMO)
Honolulu	JRCC Honolulu	United States
Hoorn	JRCC Den Helder	Netherlands
Hopedale	JRCC Halifax	Canada
Hörby	JRCC Sweden	Sweden
Horn	JRCC Trenton	Canada
Hornafjordur	MRCC Reykjavik	Iceland
Horva	JRCC North Norway Bodø	Norway
Hourtin	MRCC Etel	France
Høyås (Halden)	JRCC South Norway Stavanger	Norway
Huacho	MRSC Huacho	Peru
Huasco	MRSC Caldera	Chile
Hudiksvall	JRCC Sweden	Sweden
Hue/XVD Radio	MRCC Danang (VMRCC)	Vietnam
Huelva	MRSC Huelva	Spain
Hum (Lastovo island)	MRCC Rijeka	Croatia
Hum (Vis island)	MRCC Rijeka	Croatia
Humber	MRSC Humber	United Kingdom
Hurghada	JRCC Cairo	Egypt
I. Hardanger, Grimo	JRCC South Norway Stavanger	Norway
I. Orcadas Radio	MRCC Ushuaia	Argentina
Ibiza	MRCC Palma	Spain
IJmuiden	JRCC Den Helder	Netherlands
Ikerasassuaq	MRCC Gronnedal	Greenland (Denmark)
Ile D'Yeu	MRCC Etel	France
Ilfracombe	MRCC Swansea	United Kingdom
Ilo	MRSC Ilo	Peru
Inchon Korea Coast Guard & VTS	RCC Inchon	Republic of Korea
Inebolu	MSRCC Ankara	Turkey

DSC Station	Associated RCC	Country
Inverbervie	MRSC Forth	United Kingdom
Iqaluit	JRCC Halifax, JRCC Trenton	Canada
Iquique	MRCC Iquique	Chile
Iquitos	MRCC Callao	Peru
Iraklion Radio	JRCC Piraeus	Greece
Isafjordur	MRCC Reykjavik	Iceland
Isfjord (Svalbard)	JRCC North Norway Bodø	Norway
Iskusstvennyi	MRCC Astrakhan	Russian Federation
Isla de Pascua	MRCC Valparaiso	Chile
Isla Guafo	MRCC Puerto Montt	Chile
Ismailia	JRCC Cairo	Egypt
Istanbul	MSRCC Ankara	Turkey
Izmir	MSRCC Ankara	Turkey
Jakarta	MRCC Jakarta	Indonesia
Jamanota (Aruba)	JRCC Curacao	Curacao (Netherlands)
Jan Mayen	JRCC North Norway Bodø	Norway
Japan Coast Guard	MRCC Hiroshima, MRCC Kagoshima, MRCC Kitakyushu, MRCC Kobe, MRCC Maizuru, MRCC Nagoya, MRCC Naha, MRCC Niigata, MRCC Otaru, MRCC Shiogama, MRCC Yokohama	Japan
Jaroslawiec	MRCC Gdynia	Poland
Järsö	MRCC Turku	Finland
Jask Radio (Oman Sea)		Iran (Islamic Republic of)
Jaunupe	MRCC Riga	Latvia
Jayapura	MRCC Biak, MRSC Jayapura	Indonesia
Jeddah Radio	RCC Riyadh	Saudi Arabia
Jeju Coast Guard Station, Jeju VTS	RCC Jeju	Republic of Korea
Jizan	RCC Riyadh	Saudi Arabia
Joal	MRCC Dakar	Senegal
Jobourg	MRCC Jobourg	France
Jönköping	JRCC Sweden	Sweden

DSC Station	Associated RCC	Country
JRCC Piraeus	JRCC Piraeus	Greece
Juan Fernandez	MRCC Valparaiso	Chile
Jurmalciems	MRCC Riga	Latvia
Kagoshima Coast Guard Radio	MRCC Kagoshima	Japan
Kalajoki	MRSC Vaasa	Finland
Kaliakra	MRCC Varna	Bulgaria
Kaliningrad	MRCC Kaliningrad	Russian Federation
Kalix	JRCC Sweden	Sweden
Kalmar	JRCC Sweden	Sweden
Kamaishi	MRCC Shiogama	Japan
Kamenjak	MRCC Rijeka	Croatia
Karavaldayskiy	MRCC Saint Petersburg	Russian Federation
Karleby	JRCC Denmark/SOK, Aarhus	Denmark
Karlskrona	JRCC Sweden	Sweden
Karlsøy, Torsvåg	JRCC North Norway Bodø	Norway
Karlstad	JRCC Sweden	Sweden
Karpathos	JRCC Piraeus	Greece
Kayalidag	MSRCC Ankara	Turkey
Kazakin	MSRCC Ankara	Turkey
Kefallinia	JRCC Piraeus	Greece
Keltepe	MSRCC Ankara	Turkey
Kemi	MRSC Vaasa	Finland
Kemuning	MRCC Port Klang	Malaysia
Kendari	MRCC Ujung Pandang	Indonesia
Kerch	MRCC Odessa	Ukraine
Kerkyra	JRCC Piraeus	Greece
Kerrouault	MRCC Etel	France
Ketch Harbor	JRCC Halifax	Canada
Khafji	RCC Riyadh	Saudi Arabia
Khark Radio (Persian Gulf)		Iran (Islamic Republic of)
Khios	JRCC Piraeus	Greece

DSC Station	Associated RCC	Country
Kholmsk	MRSC Yuzhno-Sakhalinsk	Russian Federation
Khomeini Radio (Persian Gulf)		Iran (Islamic Republic of)
Kiel	MRCC Bremen	Germany
Kien Giang/SVK Radio	MRCC Vungtau(VMRCC)	Vietnam
Kilchiaran	MRCC Clyde	United Kingdom
Kilkenny Lake	JRCC Halifax	Canada
Killarney	JRCC Trenton	Canada
Kincardine	JRCC Trenton	Canada
Kingsburg	JRCC Halifax	Canada
Kingston	JRCC Trenton	Canada
Kinn	JRCC South Norway Stavanger	Norway
Kionia	JRCC Larnaca	Cyprus
Kirkenes	JRCC North Norway Bodø	Norway
Kish Radio (Persian Gulf)		Iran (Islamic Republic of)
Kistefjell	JRCC North Norway Bodø	Norway
Kithira	JRCC Piraeus	Greece
Kivik	JRCC Sweden	Sweden
Kiyashahr (Caspian Sea)	Anzali Radio	Iran (Islamic Republic of)
Klemtu	JRCC Victoria	Canada
Knossos	JRCC Piraeus	Greece
Kobe Coast Guard Radio	MRCC Kobe	Japan
Kochi	MRCC Mumbai	India
Kodiak	JRCC Juneau	United States
Koebenhavn	JRCC Denmark/SOK, Aarhus	Denmark
Kokkola	MRSC Vaasa	Finland
Kolka	MRCC Riga	Latvia
Kolobrzeg	MRCC Gdynia	Poland
Kolowo	MRCC Gdynia	Poland
Komagamine	MRCC Shiogama	Japan
Kongsvegpasset (Svalbard)	JRCC North Norway Bodø	Norway
Köpu	MRCC Tallinn	Estonia

DSC Station	Associated RCC	Country
Kornwerderzand	JRCC Den Helder	Netherlands
Korppoo	MRCC Turku	Finland
Korsakov	MRSC Yuzhno-Sakhalinsk	Russian Federation
Kosa Dolgaya	MRSC Taman'	Russian Federation
Kosseir Radio	JRCC Cairo	Egypt
Kota Kinabalu	MRCC Port Klang	Malaysia
Kotka	MRSC Helsinki	Finland
Kouakro	MRCC Abidjan	Cote D'Ivoire
Krestovy	MRCC Murmansk	Russian Federation
Kristiansund, Varden	JRCC South Norway Stavanger	Norway
Kristiinankaupunki	MRSC Vaasa	Finland
Krynica Morska	MRCC Gdynia	Poland
Kuala Rompin	MRCC Port Klang	Malaysia
Kuala Terengganu	MRCC Port Klang	Malaysia
Kuantan	MRCC Port Klang	Malaysia
Kuching	MRCC Port Klang	Malaysia
Kupang	MRCC Ujung Pandang, MRSC Kupang	Indonesia
Kuressaare West	MRCC Tallinn	Estonia
Kvalnes	JRCC North Norway Bodø	Norway
L’Anse aux Meadows	JRCC Halifax	Canada
La Garde	MRCC La Garde	France
La Garoupe	MRCC La Garde	France
La Guardia	MRCC Finisterre	Spain
La Palma	MRCC Tenerife	Spain
La Paz		Mexico
La Romaine	JRCC Halifax	Canada
Labistica	MRCC Rijeka	Croatia
Labrador	JRCC Halifax	Canada
Labuan	MRCC Port Klang	Malaysia
Lac D'aigle	MRSC Quebec	Canada
L'Acadie	MRSC Quebec	Canada

DSC Station	Associated RCC	Country
Laesoe	JRCC Denmark/SOK, Aarhus	Denmark
Lampedusa	MRSC Palermo	Italy
Lands End	MRCC Falmouth	United Kingdom
Langham	MRCC Yarmouth	United Kingdom
Las Palmas CCR	MRCC Las Palmas	Spain
Lattakia Radio		Syria
Lauzon	MRSC Quebec	Canada
Lavar Radio (Persian Gulf)		Iran (Islamic Republic of)
Law Hill	MRCC Clyde	United Kingdom
Lazaro Cardenas		Mexico
Leamington	JRCC Trenton	Canada
Lebesby, Oksen	JRCC North Norway Bodø	Norway
Lembar	MRSC Denpasar	Indonesia
Lengeh Radio		Iran (Islamic Republic of)
Lerwick	MRSC Shetland	United Kingdom
Les Escoumins	MRSC Quebec	Canada
Lianyungang Radio	MRCC Lianyungang	China
Lichada	JRCC Piraeus	Greece
Ligtvor	JRCC South Norway Stavanger	Norway
Limavady	MRSC Belfast	United Kingdom
Limnos	JRCC Piraeus	Greece
Lindesnes	JRCC South Norway Stavanger	Norway
Lista, Storefjell	JRCC South Norway Stavanger	Norway
Litlefonni, Tjelbergodden	JRCC South Norway Stavanger	Norway
Liverpool	MRSC Liverpool	United Kingdom
Lizard	MRCC Falmouth	United Kingdom
Ljønibba (Hellesylt)	JRCC South Norway Stavanger	Norway
Lockport	JRCC Halifax	Canada
Lødingen	JRCC North Norway Bodø	Norway
Los Vilos	MRSC Coquimbo	Chile
Lowestoft	MRCC Yarmouth	United Kingdom

DSC Station	Associated RCC	Country
Lübeck	MRCC Bremen	Germany
Luleå	JRCC Sweden	Sweden
Lumsden	JRCC Halifax	Canada
Lyngby	JRCC Denmark/SOK, Aarhus	Denmark
M. Lauro	MRSC Catania	Italy
M. Mancuso	MRSC Reggio Calabria	Italy
M. Pellegrino	MRSC Palermo	Italy
M. San Calogero	MRSC Palermo	Italy
M. Titolo	MRSC Reggio Calabria	Italy
Machang	MRCC Port Klang	Malaysia
Machichaco	MRCC Bilbao	Spain
Madrid CCR	MRCC Madrid	Spain
Magadan	MRSC Petropavlovsk-Kamchatskiy	Russian Federation
Mahyadag	MSRCC Ankara	Turkey
Maizuru Coast Guard Radio	MRCC Maizuru	Japan
Makassar	MRCC Ujung Pandang	Indonesia
Makhachkala	MRCC Astrakhan	Russian Federation
Makhachkala (Caspian Sea)	MRCC Astrakhan	Russian Federation
Malaga CCR	MRCC Tarifa	Spain
Måløyg, Raudeberg	JRCC South Norway Stavanger	Norway
Manaus Radio	MRCC Brazil	Brazil
Mandapam	MRCC Chennai	India
Manila	RCC Manila	Philippines
Manokwari	MRCC Biak	Indonesia
Manta	Guayaquil Coast Guard	Ecuador
Manzanillo		Mexico
Mar del Plata	MRCC Puerto Belgrano, MRSC Mar del Plata	Argentina
Marcory	MRCC Abidjan	Cote D'Ivoire
Margine Rosso (Cagliari)	MRSC Cagliari	Italy
Mariehamn	MRCC Turku	Finland

DSC Station	Associated RCC	Country
Mariupol	MRCC Odessa	Ukraine
Markiz	MSRCC Ankara	Turkey
Marsa Matrouh	JRCC Cairo	Egypt
Masan VTS	RCC Namhae	Republic of Korea
Mauritius Radio	MRCC Mauritius	Mauritius
Mazara del'Vallo	MRSC Palermo	Italy
Mazatlan		Mexico
Meaford	JRCC Trenton	Canada
Mehamn, Trollhetta	JRCC North Norway Bodø	Norway
Mejillones	MRSC Antofagasta	Chile
Melilla	MRCC Almeria	Spain
Melinka	MRSC Aysen/Puerto Aysen	Chile
Meløy	JRCC North Norway Bodø	Norway
Melvaig	MRSC Stornoway	United Kingdom
Menorca	MRCC Palma	Spain
Merauke	MRSC Merauke	Indonesia
Mern	JRCC Denmark/SOK, Aarhus	Denmark
Mersrags	MRCC Riga	Latvia
Miami	RCC Miami	United States
Milford Haven	MRSC Milford Haven	United Kingdom
Milos	JRCC Piraeus	Greece
Mine Head	MRCC Dublin	Ireland
Miri	MRCC Port Klang	Malaysia
Miyara	MRCC Naha	Japan
Mjällom	JRCC Sweden	Sweden
Mjøsa, Bangsberget	JRCC South Norway Stavanger	Norway
Mo I Rana	JRCC North Norway Bodø	Norway
Moji Coast Guard Radio	MRCC Kitakyushu	Japan
Mokkoku	MRCC Kitakyushu	Japan
Mokpo VTS	RCC Seohae	Republic of Korea
Molde	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Mollendo	MRCC Mollendo	Peru
Mong Cai/XVM Radio	MRCC Haiphong (VMRCC)	Vietnam
Mont Belair	MRSC Quebec	Canada
Mont Rigaud	MRSC Quebec	Canada
Mont- St. Bruno	MRSC Quebec	Canada
Montague	JRCC Halifax	Canada
Monte Argentario	MRSC Livorno	Italy
Monte Bignone	MRSC Genova	Italy
Monte Calvario	MRSC Ancona	Italy
Monte Cavo	MRSC Roma, MRSC Venezia	Italy
Monte Conero	MRSC Ancona	Italy
Monte Erice	MRSC Palermo	Italy
Monte Limbara	MRSC Cagliari	Italy
Monte Moro	MRSC Cagliari	Italy
Monte Nero	MRSC Livorno	Italy
Monte Paradiso	MRSC Roma	Italy
Monte Sardo	MRSC Bari	Italy
Monte Secco	MRSC Ancona	Italy
Monte Serpeddi	MRSC Cagliari	Italy
Monte Tului	MRSC Cagliari	Italy
Monte Verde (Sao Vicente Island)	MRCC CPB	Cape Verde
Monte Xota (Santiago Island)	MRCC CPB	Cape Verde
Montevideo	MRCC Uruguay	Uruguay
Montevideo Armada Radio	MRCC Uruguay	Argentina
Mont-Joli	MRSC Quebec	Canada
Mont-Louis	MRSC Quebec	Canada
Montmagny	MRSC Quebec	Canada
Montreal	MRSC Quebec	Canada
Morro Curral (Sal Island)	MRCC CPB	Cape Verde
Mostaganem	CNOSS Oran	Algeria
Mosvik, Skavlen	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Motala	JRCC Sweden	Sweden
Motril	MRCC Almeria	Spain
Mount Gil	JRCC Victoria	Canada
Mount Hayes	JRCC Victoria	Canada
Mount Moriah	JRCC Halifax	Canada
Mount Newton	JRCC Victoria	Canada
Mount Ozzard	JRCC Victoria	Canada
Mount Parke	JRCC Victoria	Canada
Mount Vygoda	MRSC Yuzhno-Sakhalinsk	Russian Federation
Moustakos	JRCC Piraeus	Greece
MRCC Dakar	MRCC Dakar	Senegal
MRCC Dublin	MRCC Dublin	Ireland
MRCC Georgia	MRCC Georgia	Georgia
MRCC Klaipeda	MRCC Klaipeda	Lithuania
MRCC Koper	MRCC Koper	Slovenia
MRCC Rijecka	MRCC Rijeka	Croatia
MRSC Dubrovnik	MRSC Dubrovnik	Croatia
MRSC Malin Head	MRSC Malin Head	Ireland
MRSC Sibenik	MRSC Sibenik	Croatia
MRSC Split	MRSC Split	Croatia
MRSC Valentia	MRSC Valentia	Ireland
MRSC Zadar	MRSC Zadar	Croatia
Mt. Scenery (Saba)	JRCC Curacao	Curacao (Netherlands)
Mudyug	MRSC Arkhangelsk	Russian Federation
Mumbai	MRCC Mumbai	India
Mumbles Hill	MRCC Swansea	United Kingdom
Murmansk	MRCC Murmansk	Russian Federation
Myeik Radio	MRCC Yangon	Burma
Mykines	MRCC Torshavn	Denmark
Myre, Vesteralen	JRCC North Norway Bodø	Norway
Mytilini	JRCC Piraeus	Greece

DSC Station	Associated RCC	Country
Naantali	MRCC Turku	Finland
Nacka	JRCC Sweden	Sweden
Naden Harbor	JRCC Victoria	Canada
Nagoya Coast Guard Radio	MRCC Nagoya	Japan
Nain	JRCC Halifax	Canada
Nakhodka	MRCC Vladivostok	Russian Federation
Namsos, Spillumsaksla	JRCC South Norway Stavanger	Norway
Napoli Posillipo	MRSC Napoli	Italy
Natashquan	JRCC Halifax	Canada
Navia	MRCC Bilbao	Spain
Nawa	MRCC Maizuru	Japan
Naze	MRCC Kagoshima	Japan
Neka Radio (Caspian Sea)	Amir Abad	Iran (Islamic Republic of)
Nekogatake	MRCC Niigata	Japan
Neskaupstadur	MRCC Reykjavik	Iceland
Netherlands Coast Guard	JRCC Den Helder	Netherlands
Nevelsk	MRSC Yuzhno-Sakhalinsk	Russian Federation
New Mangalore	MRCC Mumbai	India
New Orleans	JRCC New Orleans	United States
Newhaven	MRSC Solent	United Kingdom
Newport	JRCC Halifax	Canada
Newton	MRSC Tyne Tees	United Kingdom
Nha Trang/XVN Radio	MRCC Danang (VMRCC)	Vietnam
Nida	MRCC Klaipeda	Lithuania
Niigata Coast Guard Radio	MRCC Niigata	Japan
Ningbo Radio	MRSC Ningbo	China
Ninovka	MRCC Astrakhan	Russian Federation
Noordwijk Radio	JRCC Den Helder	Netherlands
Norddeich	MRCC Bremen	Germany
Nordkapp, Honningsvåg	JRCC North Norway Bodø	Norway
Noro	MRCC Hiroshima	Japan

DSC Station	Associated RCC	Country
Norrköping	JRCC Sweden	Sweden
North Cape	JRCC Halifax	Canada
North Foreland	MRCC Dover	United Kingdom
Noss Head	MRCC Aberdeen	United Kingdom
Novorossiysk	MRCC Novorossiysk	Russian Federation
Nowshahr Radio (Caspian Sea)		Iran (Islamic Republic of)
Nuuk	MRCC Gronnedal	Greenland (Denmark)
Nyudozaki	MRCC Shiogama	Japan
Obosnik	MRCC Bar	Republic of Montenegro
Odessa	MRCC Odessa	Ukraine
Okha	MRCC Mumbai	India
Okinawa Coast Guard Radio	MRCC Naha	Japan
Oksywie/Gdynia	MRCC Gdynia	Poland
Ölands Södra udde	JRCC Sweden	Sweden
Olympia Radio	JRCC Piraeus	Greece
Olympus	JRCC Larnaca	Cyprus
Oostende Radio	MRCC Oostende	Belgium
Oran	CNOSS Oran	Algeria
Oren	MSRCC Ankara	Turkey
Orillia	JRCC Trenton	Canada
Orissaare	MRCC Tallinn	Estonia
Orland, Kopparen	JRCC South Norway Stavanger	Norway
Orlandet	JRCC South Norway Stavanger	Norway
Orlock Head	MRSC Belfast	United Kingdom
Orskogfjellet	JRCC South Norway Stavanger	Norway
Oseberg	JRCC South Norway Stavanger	Norway
Osilo	MRSC Cagliari	Italy
Osthammar	JRCC Sweden	Sweden
Paamiut	MRCC Gronnedal	Greenland (Denmark)
Paita	MRCC Paita	Peru
Palamut	MSRCC Ankara	Turkey

DSC Station	Associated RCC	Country
Palermo (Punta Raisi)	MRSC Palermo	Italy
Palma	MRCC Palma	Spain
Palma de Mallorca	MRCC Palma	Spain
Panjang	MRSC Palembang	Indonesia
Pantelleria	MRSC Palermo	Italy
Paradip	MRCC Chennai	India
Parnis	JRCC Piraeus	Greece
Pasajes	MRCC Bilbao	Spain
Patmos	JRCC Piraeus	Greece
Pazar	MSRCC Ankara	Turkey
Peak Kitka	MRCC Varna	Bulgaria
Pen March	MRCC Etel	France
Penang	MRCC Port Klang	Malaysia
Permatang Pauh	MRCC Port Klang	Malaysia
Petalidi	JRCC Piraeus	Greece
Petchaburi	RCC Bangkok	Thailand
Peterhead	MRCC Aberdeen	United Kingdom
Petropavlovsk-Kamachatskiy	MRSC Petropavlovsk-Kamchatskiy	Russian Federation
Phan Rang/XVN Radio	MRCC Danang (VMRCC)	Vietnam
Phan Thiet/XVP Radio	MRCC Vungtau(VMRCC)	Vietnam
Phu Yen/XVY Radio	MRCC Danang (VMRCC)	Vietnam
Piana	MRCC La Garde/ MRSC Corse	France
Piancavallo	MRSC Trieste	Italy
Pic de l’Ours	MRCC La Garde	France
Pic Neoulos	MRCC La Garde	France
Pilio	JRCC Piraeus	Greece
Pimentel	MRSC Pimentel	Peru
Pinetree	JRCC Halifax	Canada
Piriapolis Radio	MRCC Uruguay	Argentina
Pisco	MRSC Pisco	Peru
Pissouri	JRCC Larnaca	Cyprus

DSC Station	Associated RCC	Country
Placentia	JRCC Halifax	Canada
Planier	MRCC La Garde	France
Ploce	MRSC Ploce	Croatia
Pohang VTS	RCC Donghae	Republic of Korea
Point Escuminac	JRCC Halifax	Canada
Point Riche	JRCC Halifax	Canada
Pointe au Baril	JRCC Trenton	Canada
Pointe du Raz	MRCC Corsen	France
Pontianak	MRSC Pontianak	Indonesia
Porbandar	MRCC Mumbai	India
Pori	MRCC Turku	Finland
Porkkala	MRSC Helsinki	Finland
Poros/Darditsa	JRCC Piraeus	Greece
Porqurolles	MRCC La Garde	France
Port aux Basques	JRCC Halifax	Canada
Port Blair	MRCC Port Blair	India
Port Burwell	JRCC Trenton	Canada
Port Hardy	JRCC Victoria	Canada
Port Naguran	MRSC Stornoway	United Kingdom
Port Said Radio	JRCC Cairo	Egypt
Portland	MRSC Portland	United Kingdom
Porto Cervo Eliporto	MRSC Cagliari	Italy
Portsmouth	Atlantic Area SAR Coordinator	United States
Poti, Harbor Master	RSC Poti	Georgia
Prescott	JRCC Trenton	Canada
Primorsk	MRCC Saint Petersburg	Russian Federation
Prince Rupert	JRCC Victoria	Canada
Progreso	MRSC Yukalpeten	Mexico
Puerto Aguirre	MRSC Aysen/Puerto Aysen	Chile
Puerto Bolivar	Guayaquil Coast Guard	Ecuador
Puerto Chacabuco	MRSC Aysen/Puerto Aysen	Chile

DSC Station	Associated RCC	Country
Puerto Deseado	MRCC Puerto Belgrano	Argentina
Puerto Eden	MRCC Punta Arenas	Chile
Puerto Montt	MRCC Puerto Montt	Chile
Puerto Natales	MRCC Punta Arenas	Chile
Puerto Vallarta		Mexico
Puerto Williams	MRSC Puerto Williams	Chile
Pulpitt Hill	MRCC Clyde	United Kingdom
Puno	MRSC Paita	Peru
Punta	MRCC La Garde/ MRSC Corse	France
Punta Arenas	MRCC Punta Arenas	Chile
Punta Delgada	MRCC Punta Arenas	Chile
Punta Dungeness	MRCC Punta Arenas	Chile
Punta Stilo	MRSC Reggio Calabria	Italy
Pyeongtaek VTS	RCC Seohae	Republic of Korea
Qaqortoq	MRCC Gronnedal	Greenland (Denmark)
Qeqertarsuaq	MRCC Gronnedal	Greenland (Denmark)
Qeshm Radio (Persian Gulf)		Iran (Islamic Republic of)
Qingdao Radio	MRSC Qingdao	China
Qinhuangdao Radio	MRCC Hebei	China
Quebec	MRSC Quebec	Canada
Quellon	MRSC Castro	Chile
Quintero	MRCC Valparaiso	Chile
Qunfudah	RCC Riyadh	Saudi Arabia
Quy Nhon/XVI Radio	MRCC Danang (VMRCC)	Vietnam
Rabigh	RCC Riyadh	Saudi Arabia
Raften/Svolvaer	JRCC North Norway Bodø	Norway
Raippaluoto	MRSC Vaasa	Finland
Rame Head	MRSC Brixham	United Kingdom
Ramea Island	JRCC Halifax	Canada
Ranvikheia (Risør)	JRCC South Norway Stavanger	Norway
Ras El Barr	JRCC Cairo	Egypt

DSC Station	Associated RCC	Country
Ras-Alhkima	JRCC Cairo	Egypt
Ras-Gharib	JRCC Cairo	Egypt
Rauma	MRCC Turku	Finland
Ravenna Bassette	MRSC Ravenna	Italy
RCC Suva	RCC New Zealand, RCC Funafuti, RCC Nadi, RCC Canberra, RCC Suva	Fiji, New Zealand
Recife Radio	MRCC Brazil	Brazil
Renesse	JRCC Den Helder	Netherlands
Reykjavik Radio	MRCC Reykjavik	Iceland
Rhiw	MRCC Holyhead	United Kingdom
Rhu Stafnish	MRCC Clyde	United Kingdom
Riga Rescue Radio	MRCC Riga	Latvia
Rijecka Radio	MRCC Rijeka	Croatia
Rio Gallegos	MRCC Rio Gallegos	Argentina
Rio Radio	MRCC Brazil	Brazil
Riviere au Renard	JRCC Halifax	Canada
Riviere du Loup	MRSC Quebec	Canada
Roches Douvres	MRCC Jobourg	France
Rodel	MRSC Stornoway	United Kingdom
Rodos	JRCC Piraeus	Greece
Roesnaes	JRCC Denmark/SOK, Aarhus	Denmark
Rogaland Radio	JRCC South Norway Stavanger	Norway
Roma (Torvajanica)	MRCC Roma	Italy
Ronde Klip	JRCC Curacao	Curacao (Netherlands)
Rondeau	JRCC Trenton	Canada
Rønvikfjell, Bodø	JRCC North Norway Bodø	Norway
Rørvik, Falkhetta	JRCC South Norway Stavanger	Norway
Rose Inlet	JRCC Victoria	Canada
Rosemarkie	MRCC Aberdeen	United Kingdom
Rosslare	MRCC Dublin	Ireland
Rostock	MRCC Bremen	Germany

DSC Station	Associated RCC	Country
Rowakol	MRCC Gdynia	Poland
Rozewie	MRCC Gdynia	Poland
Rozewie	MRCC Gdynia	Poland
Rügen	MRCC Bremen	Germany
Ruhnu	MRCC Tallinn	Estonia
Sacre-Coeur	MRSC Quebec	Canada
Safaga	JRCC Cairo	Egypt
Sagtennene	JRCC South Norway Stavanger	Norway
Saint Frieux	MRCC Gris Nez	France
Saint John	JRCC Halifax	Canada
Saint Louis	MRCC Dakar	Senegal
Saint Petersburg	MRCC Saint Petersburg	Russian Federation
Salaverry	MRSC Salaverry	Peru
Salina Cruz		Mexico
Salinas	Guayaquil Coast Guard	Ecuador
Same	MRCC Shiogama	Japan
Samsun	MSRCC Ankara	Turkey
San Antonio	MRSC San Antonio	Chile
San Blas	MRSC Bahia Blanca	Argentina
San Francisco	RCC Alameda	United States
San Juan	MRSC San Juan	Peru
San Pedro	MRCC Punta Arenas, MRCC Abidjan	Chile
Sanana	MRSC Ambon	Indonesia
Sandakan	MRCC Port Klang	Malaysia
Sandnessjoen	JRCC North Norway Bodø	Norway
Santa Teresa Radio	MRCC Uruguay	Argentina
Santahamina/Helsinki	MRSC Helsinki	Finland
Santander	MRCC Bilbao	Spain
Sanya Radio	Sanya HSA	China
Sao Vicente Radio	MRCC CPB	Cape Verde
Sarköy	MSRCC Ankara	Turkey

DSC Station	Associated RCC	Country
Sarnia	JRCC Trenton	Canada
Sassandra	MRCC Abidjan	Cote D'Ivoire
Sault Ste Marie	JRCC Trenton	Canada
Savudrija	MRCC Rijeka	Croatia
Saxa Vord	MRSC Shetland	United Kingdom
Scheveningen	JRCC Den Helder	Netherlands
Schiermonnikoog	JRCC Den Helder	Netherlands
Schoorl	JRCC Den Helder	Netherlands
Scillies	MRCC Falmouth	United Kingdom
Scotch Mountainok	JRCC Halifax	Canada
Scoval	MRSC Stornoway	United Kingdom
Sei Kolak Kijang	MRSC Tanjung Pinang	Indonesia
Seleznevo	MRSC Yuzhno-Sakhalinsk	Russian Federation
Selsey Bill	MRSC Solent	United Kingdom
Semarang	MRCC Surabaya	Indonesia
Senzan	MRCC Kobe	Japan
Seoul Radio	RCC Donghae, RCC Inchon, RCC Jeju, RCC Namhae, RCC Seohae	Republic of Korea
Serra del Tuono	MRSC Reggio Calabria	Italy
Serra Di Pigno	MRCC La Garde/ MRSC Corse	France
Serragia	MRCC La Garde/ MRSC Corse	France
Seru Gracia (Curaçao)	JRCC Curacao	Curacao (Netherlands)
Set-Navolok	MRCC Murmansk	Russian Federation
Severn Bridge	MRCC Swansea	United Kingdom
Sfendami	JRCC Piraeus	Greece
Shakotan	MRCC Otaru	Japan
Shanghai Radio	MRCC Shanghai	China
Shannon	MRSC Valentia	Ireland
Shannon Hill	JRCC Halifax	Canada
Shantou Radio	MRSC Shantou	China
Sharm Abhur	RCC Riyadh	Saudi Arabia

DSC Station	Associated RCC	Country
Sharm-El-Sheikh	JRCC Cairo	Egypt
Shetland	MRSC Shetland	United Kingdom
Shimoda	MRCC Yokohama	Japan
Shiogama Coast Guard Radio	MRCC Shiogama	Japan
Shionomisaki	MRCC Kobe	Japan
Shoeburyness	MRSC Thames	United Kingdom
Shuaiba	RCC Riyadh	Saudi Arabia
Shuqaiq	RCC Riyadh	Saudi Arabia
Sibolga	MRSC Medan	Indonesia
Sibu Rincon (Bonaire)	JRCC Curacao	Curacao (Netherlands)
Sidi-Kerir	JRCC Cairo	Egypt
Siglufjordur	MRCC Reykjavik	Iceland
Silver Water	JRCC Trenton	Canada
Silvi Paese	MRSC Ancona	Italy
Singapore Port Operations Control	Singapore Port Operations Control Center	Singapore
Sint Joris	JRCC Curacao	Curacao (Netherlands)
Siracusa Belvedere	MRSC Catania	Italy
Sisimiut	MRCC Gronnedal	Greenland (Denmark)
Sitia (Mare)	JRCC Piraeus	Greece
Skagen	JRCC Denmark/SOK, Aarhus	Denmark
Skegness	MRCC Yarmouth	United Kingdom
Skellefteå	JRCC Sweden	Sweden
Skikda	CNOSS Jijel	Algeria
Skiros	JRCC Piraeus	Greece
Skjervøy, Stussnesfjell	JRCC North Norway Bodø	Norway
Skjervøy, Trolltind	JRCC North Norway Bodø	Norway
Skriaig	MRSC Stornoway	United Kingdom
Sleipner A, North Sea	JRCC South Norway Stavanger	Norway
Slieve Martin	MRSC Belfast	United Kingdom
Snaefell	MRSC Liverpool	United Kingdom
Snorre, North Sea	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Sochi	MRCC Novorossiysk	Russian Federation
Södertälje	JRCC Sweden	Sweden
Sogndal, Storehogen	JRCC South Norway Stavanger	Norway
Solent	MRSC Solent	United Kingdom
Sondby	MRSC Helsinki	Finland
Sorel	MRSC Quebec	Canada
Sorong	MRCC Biak, MRSC Sorong	Indonesia
Sotra	JRCC South Norway Stavanger	Norway
Soulac	MRCC Etel	France
South Knapdale	MRCC Clyde	United Kingdom
South Regional HQs Korea Coast Guard	RCC Namhae	Republic of Korea
South Stack	MRCC Holyhead	United Kingdom
Souyamisaki	MRCC Otaru	Japan
Spanish Head	MRSC Liverpool	United Kingdom
Split Radio	MRCC Rijeka	Croatia
Srd	MRCC Rijeka	Croatia
St Valery en Caux	MRCC Gris Nez	France
St. Abbs	MRSC Forth	United Kingdom
St. Ann’s Head	MRSC Milford Haven	United Kingdom
St. Anthony	JRCC Halifax	Canada
St. Columba	JRCC Halifax	Canada
St. Hilary	MRCC Swansea	United Kingdom
St. Ives	MRCC Falmouth	United Kingdom
St. John's	JRCC Halifax	Canada
St. Lawrence	JRCC Halifax	Canada
Stamnes	JRCC North Norway Bodø	Norway
Stavanger, Ullandhaug	JRCC South Norway Stavanger	Norway
Steigen	JRCC North Norway Bodø	Norway
Stenbury Down	MRSC Solent	United Kingdom
Stiff Ouessant	MRCC Corsen	France
Stjørdal, Forbordsfjell	JRCC South Norway Stavanger	Norway

DSC Station	Associated RCC	Country
Storåsen	JRCC South Norway Stavanger	Norway
Stord	JRCC South Norway Stavanger	Norway
Storheia, Hadsel	JRCC North Norway Bodø	Norway
Stornoway	MRSC Stornoway	United Kingdom
Strömstad	JRCC Sweden	Sweden
Suderoy	MRCC Torshavn	Denmark
Suez	JRCC Cairo	Egypt
Sulak	MRCC Astrakhan	Russian Federation
Sundsvall	JRCC Sweden	Sweden
Supe	MRSC Supe	Peru
Surabaya	MRCC Surabaya	Indonesia
Susak	MRCC Rijeka	Croatia
Suurupi	MRCC Tallinn	Estonia
Svalbard Radio	MRCC Bodø	Norway
Svenska Högarna	JRCC Sweden	Sweden
Sventoji	MRCC Klaipeda	Lithuania
Swansea	MRCC Swansea	United Kingdom
Sydney	JRCC Halifax	Canada
Sylt	MRCC Bremen	Germany
Syros	JRCC Piraeus	Greece
Szczecin	MRCC Gdynia	Poland
Tabou	MRCC Abidjan	Cote D'Ivoire
Taganrog	MRSC Taman'	Russian Federation
Takoradi	Harbor Master’s Office, Accra	Ghana
Talara	MRSC Talara	Peru
Talcahuano	MRCC Talcahuano	Chile
Tallinn	MRCC Tallinn	Estonia
Tallinn North	MRCC Tallinn	Estonia
Taltal	MRSC Antofagasta	Chile
Tamagusuku	MRCC Naha	Japan
Tampico	MRCC Mexico, Mexican Navy	Mexico

DSC Station	Associated RCC	Country
Tana, Algasvarre	JRCC North Norway Bodø	Norway
Tarakan	MRSC Balik Papan	Indonesia
Tarifa	MRCC Tarifa	Spain
Tarragona	MRSC Tarragona	Spain
Tartous Radio		Syria
Taupo Maritime Radio	RCC New Zealand	New Zealand
Tema Radio	Harbor Master's Office, Accra	Ghana
Temryuk	MRSC Taman'	Russian Federation
Tenby	MRSC Milford Haven	United Kingdom
Tenerife CCR	MRCC Tenerife	Spain
Tenes	MRCC Alger	Algeria
Ternate	MRSC Ambon	Indonesia
Texada	JRCC Victoria	Canada
Thames	MRSC Thames	United Kingdom
Thanh Hoa	MRCC Haiphong (VMRCC)	Vietnam
Thasos	JRCC Piraeus	Greece
Theodosia	MRCC Odessa	Ukraine
Thira	JRCC Piraeus	Greece
Thrumster	MRCC Aberdeen	United Kingdom
Thunder Bay	JRCC Trenton	Canada
Tianjin Radio	MRCC Tianjin	China
Tingstade	JRCC Sweden	Sweden
Tingvoll, Reinsfjell	JRCC South Norway Stavanger	Norway
Tioman	MRCC Port Klang	Malaysia
Tiree	MRCC Clyde	United Kingdom
Tiverton	JRCC Halifax	Canada
Tjøme Radio	JRCC South Norway Stavanger	Norway
Tobermory	JRCC Trenton	Canada
Tocopilla	MRSC Antofagasta	Chile
Tofino	JRCC Victoria	Canada
Toila	MRCC Tallinn	Estonia

DSC Station	Associated RCC	Country
Tokotan	MRCC Otaru	Japan
Tønsnes	JRCC North Norway Bodø	Norway
Torgu	MRCC Tallinn	Estonia
Torö	JRCC Sweden	Sweden
Torosay	MRCC Clyde	United Kingdom
Torshavn (Færoes)	MRCC Torshavn	Denmark
Tosayama	MRCC Kobe	Japan
Töstamaa	MRCC Tallinn	Estonia
Traenfjord	JRCC North Norway Bodø	Norway
Trafalgar	JRCC Trenton	Canada
Trevose Head	MRCC Falmouth	United Kingdom
Trieste (Monte Radio)	MRSC Trieste	Italy
Trimingham	MRCC Yarmouth	United Kingdom
Trois-Rivieres	MRSC Quebec	Canada
Trollhättan	JRCC Sweden	Sweden
Tromsø	JRCC North Norway Bodø	Norway
Trusthorpe	MRCC Yarmouth	United Kingdom
Tryvann (Oslo)	JRCC South Norway Stavanger	Norway
Tsoukalas	JRCC Piraeus	Greece
Tuapse	MRCC Novorossiysk	Russian Federation
Tumannaya (Posiet)	MRCC Vladivostok	Russian Federation
Turku	MRCC Turku	Finland
Tuticorn	MRCC Chennai	India
Twillingate	JRCC Halifax	Canada
Tyne Tees	MRSC Tyne Tees	United Kingdom
Ucka	MRCC Rijeka	Croatia
Uddevalla	JRCC Sweden	Sweden
Ugljan	MRCC Rijeka	Croatia
Ula, North Sea	JRCC South Norway Stavanger	Norway
Uljenje	MRCC Rijeka	Croatia
Ulsan VTS	RCC Donghae	Republic of Korea

DSC Station	Associated RCC	Country
Ulu Kali	MRCC Port Klang	Malaysia
Umeå	JRCC Sweden	Sweden
Umm Lajj	RCC Riyadh	Saudi Arabia
Undva	MRCC Tallinn	Estonia
Upernavik	MRCC Gronnedal	Greenland (Denmark)
Ushuaia	MRSC Ushuaia	Argentina
Ustica	MRSC Palermo	Italy
Utö	MRCC Turku	Finland
Uusikaupunki	MRCC Turku	Finland
Uzava	MRCC Riga	Latvia
Väddö	JRCC Sweden	Sweden
Værøy	JRCC North Norway Bodø	Norway
Valdivia	MRSC Valdivia	Chile
Valencia	MRCC Valencia	Spain
Valhall, North Sea	JRCC South Norway Stavanger	Norway
Valparaiso	MRCC Valparaiso	Chile
Vancouver	JRCC Victoria	Canada
Vanino	MRSC Yuzhno-Sakhalinsk	Russian Federation
Varangefjord, Torsvarde	JRCC North Norway Bodø	Norway
Varco del Salice	MRSC Napoli	Italy
Vardø Radio	JRCC North Norway Bodø	Norway
Varna Radio	MRCC Varna	Bulgaria
Västerås	JRCC Sweden	Sweden
Västervik	JRCC Sweden	Sweden
Vealøs (Porsgrunn)	JRCC South Norway Stavanger	Norway
Vega	JRCC North Norway Bodø	Norway
Veggen, Narvik	JRCC North Norway Bodø	Norway
Vejby	JRCC Denmark/SOK, Aarhus	Denmark
Vejle	JRCC Denmark/SOK, Aarhus	Denmark
Veracruz	MRCC Veracruz	Mexico
Ver-sur-Mer	MRCC Jobourg	France

DSC Station	Associated RCC	Country
Veselo-Voznesenka	MRSC Taman'	Russian Federation
Vestmannaejar	MRCC Reykjavik	Iceland
Victoria	JRCC Halifax, JRCC Victoria	Canada
Vidova Gora	MRCC Rijeka	Croatia
Vigo	MRSC Vigo	Spain
Villervile	MRCC Jobourg	France
Virolahti	MRSC Helsinki	Finland
Visby	JRCC Sweden	Sweden
Vishakhapatnam	MRCC Chennai	India
Vitrupe	MRCC Riga	Latvia
Vladivostok	MRCC Vladivostok	Russian Federation
VTS Illichivs'k	MRCC Odessa	Ukraine
VTS Mariupol	MRCC Odessa	Ukraine
VTS Ochakiv	MRCC Odessa	Ukraine
VTS Odessa	MRCC Odessa	Ukraine
VTS Rus'ka Beak	MRCC Odessa	Ukraine
VTS Striletskiy	MRCC Odessa	Ukraine
Vung Tau/XVR Radio	MRCC Danang (VMRCC), MRCC Vungtau(VMRCC)	Vietnam
Vysotsk	MRCC Saint Petersburg	Russian Federation
Walney Lighthouse	MRSC Liverpool	United Kingdom
Wando VTS	RCC Seohae	Republic of Korea
Watts Point	JRCC Victoria	Canada
Wenzhou Radio	Wenzhou HAS	China
West Hougham	MRCC Dover	United Kingdom
West Regional HQs Korea Coast Guard	RCC Seohae	Republic of Korea
West Terschelling	JRCC Den Helder	Netherlands
West Torr	MRSC Belfast	United Kingdom
Westkappelle	JRCC Den Helder	Netherlands
Wezep	JRCC Den Helder	Netherlands
Whitby	MRSC Humber	United Kingdom

DSC Station	Associated RCC	Country
Wiarton	JRCC Trenton	Canada
Wicklow Head	MRCC Dublin	Ireland
Wideford Hill	MRSC Shetland	United Kingdom
Wiluna	RCC Australia	Australia
Windy Head	MRCC Aberdeen	United Kingdom
Winneba	Harbor Master's Office, Accra	Ghana
Witowo Radio	MRCC Gdynia	Poland
Woensdrecht	JRCC Den Helder	Netherlands
Wollaston	MRSC Puerto Williams	Chile
Xiamen Radio	MRSC Xiamen	China
Yanbu	RCC Riyadh	Saudi Arabia
Yangon Radio	MRCC Yangon	Myanmar
Yantai Radio	MRSC Yantai	China
Yarmouth	JRCC Halifax	Canada
Yarmouth	MRCC Yarmouth	United Kingdom
Yeosu VTS, Seoul Radio (monitor)	RCC Seohae	Republic of Korea
Yildiztepe	MSRCC Ankara	Turkey
Yokohama Coast Guard Radio	MRCC Yokohama	Japan
Yoko-o	MRCC Kagoshima	Japan
Yumrutepe	MSRCC Ankara	Turkey
Yuzhno-Sakhalinsk	MRSC Yuzhno-Sakhalinsk	Russian Federation
Zeitiya	JRCC Cairo	Egypt
Zhafarana	JRCC Cairo	Egypt
Zhanjiang Radio	RSC Zhanjiang	China
Zhelezniy	MRSC Petropavlovsk-Kamchatskiy	Russian Federation
Zoagli	MRSC Genova	Italy
Zonguldak	MSRCC Ankara	Turkey
Zorritos	MRSC Zorritos	Peru

PART III PIRACY

400CC. Anti-Piracy Measures

Merchant ships continue to be attacked by pirates in port and underway on the west coast of Africa, in and near the Strait of Malacca, in the South and East China Seas, in the Caribbean and in Brazilian and Ecuadorian waters. Pirates usually take money, radios, cameras and other property that is portable, valuable and easily sold. In some cases cargo has been raided. In this section "piracy" means all kinds of violent crimes against ships and small craft, including incidents in ports and in territorial and international waters, except incidents that are clearly political terrorism.

The following is a short checklist of prudent measures that ship's officers should consider when operating in regions where piracy has been reported:

–BE VIGILANT and ANTICIPATE TROUBLE
–Provide a security general alarm signal and security Station Bill to alert all crew members. Assign a ship's physical security officer.
–Anti-piracy measures should be included in the ship's security plan. These measures should be designed to keep boarders off the ship. Repelling armed pirates already on deck can be dangerous.
–Piracy countermeasures should be exercised during regular emergency drills when in or approaching dangerous waters.
–Have water hoses under pressure with nozzles ready at likely boarding places when at sea and in port.
–Illuminate sides, the bow and quarters while navigating in threat areas and in dangerous ports.
–Restrict access to vessel, close all ports, strong back doors, and secure spaces.

In port:

–Ensure gangway watch can contact shipboard support if needed, preferably by hand-held radios.
–Ensure gangway watch can contact local security forces for assistance, if available.
–Maintain roving patrol on deck in port and at anchor, and ensure that patrol and gangway watch are in contact.
–Use rat guards on all mooring lines and illuminate the lines.
–Use covers on chain hawse and keep wash-down water running.
–Keep bumboats away and vendors off the ship.

Underway:

–Keep good radar and visual lookout, including lookout aft.
–Have searchlights available to illuminate suspected boarding parties.
–Have signaling equipment, including emergency rockets, rocket pistols, and EPIRBs, available for immediate use.

When suspected boarders are detected:

–Sound the general alarm.
–Establish VHF contact with shore stations and other ships in the vicinity.
–Increase speed and head into seas if practicable. Take evasive action by working rudder hard right and left if navigation permits.
–Fire warning rockets.
–Switch on outside lighting.
–Use searchlights to illuminate and dazzle suspects.
–CONTINUE TO MAINTAIN GOOD ALL-AROUND WATCH.

After pirates have boarded:

–Barricade engine room and bridge, if practicable.
–Barricade the crew in secure areas, if practicable.
–Report the situation by radio and call for help, if available. Use Emergency Call-up Procedures in next section (400CQ).
–DON'T BE HEROIC if the boarders are armed.

400CD. Piracy Attack Alert

The international format for a piracy attack alert includes the following:

–The distressed vessel's name and call sign (and Inmarsat ID, if applicable, with ocean region code).
–Distress signal MAYDAY or SOS (MAYDAY need not be included in the Inmarsat system when distress priority (3) is used).
–The text heading PIRACY ALERT.
–Position and time.
–Nature of event.

This message should be sent to the nearest RCC, national or regional piracy center, or nearest coast radio station.

A follow-up message should be sent when time permits, including the following:

– Reference to the initial Piracy Alert.
– Details of the incident.
– Last observed movements of the pirate vessel.
– Assistance required.
– Preferred methods for future communication.
– Date and time of report.

Vessels should:

– Report piracy incidents and armed robbery at sea to law enforcement agencies.
– Supply investigating teams that respond to acts of piracy and collect evidence for law enforcement agencies.
– Locate vessels that have been seized by pirates and recover stolen cargoes.
– Help bring pirates to justice.
– Assist owners and crews of ships that have been attacked.
– Collate information on piracy in all parts of the world.

A regional Piracy Reporting Center in Kuala Lumpur, Malaysia, has been established by the International Maritime Bureau (IMB) in the Southeast Asia Region. The center maintains watch 24-hours a day and, in close collaboration with law enforcement, acts on reports of suspicious shipping movements, piracy, and armed robbery at sea anywhere in the world. Services are provided free of charge to all vessels irrespective of ownership or flag.

The center broadcasts daily status bulletins by Inmarsat-C (SafetyNET), reporting acts of piracy against shipping in East Africa, the Indian subcontinent, Southeast Asia and the Far East regions.

400CE. International Maritime Bureau Piracy Reporting Center (IMB PRC)

Mariners are advised to be aware of the sea areas and ports affected by piracy and armed robbery. The IMB PRC broadcasts incidents to all ships in the IOR and AOR regions via INMARSAT SafetyNet system for commercial ships. For Navy and Coast Guard units incidents are reported through the Worldwide Navigational Warning Service (WWNWS) of the Maritime Safety Office at the National Geospatial-Intelligence Agency (NGA) using the Plain Language Address (PLA) NGA NAVSAFETY Springfield, VA.

The IMB Piracy Reporting Center has established a dedicated hotline for mariners, port workers, shipping agents, shipyard personnel, brokers, stevedores, and all concerned parties to report any suspicious information that they may have seen, heard, known of, etc., relating to maritime crime and security (including terrorism). All information received will be treated in strict confidence and will be passed on to the relevant authorities for further action. Maritime crime and security concerns all and with your help, the IMB can try to minimize the risks and help save lives and properties.

Live Piracy Map:
http://www.icc-ccs.org/piracy-reporting-centre/live-piracy-map

Contact:
Phone: **+60 3 2031 0014 (24hr anti-piracy hotline)**, +60 3 2031 0287, Fax: +60 3 2078 5769, E-mail: piracy@icc-ccs.org, imbkl@icc-ccs.org

The IMB also publishes a weekly piracy report, which is a summary of the Piracy Reporting Center's daily status bulletins. Each week's report is posted on Tuesday and may be accessed through the IMB Website at:

IMB PRC Live Piracy & Armed Robbery Report:
http://www.icc-ccs.org/piracy-reporting-centre/live-piracy-report

400CF. UKMTO Contact

The United Kingdom Maritime Trade Operations (UKMTO) office in Dubai is part of the contribution by the Royal Navy to ensure that trade can safely transit in the area North of 10 degrees South latitude and West of 78 degrees East longitude. The office acts as a point of contact and liaison with military forces for merchant vessels in the region. Vessels transiting this area should report their position daily using the e-mail listed below:

Phone: +971 50 552 3215, Fax: +971 4 306 5710, E-mail: UKMTO@eim.ae

400CG. MSCHOA Contact

The Maritime Security Center Horn of Africa (MSCHOA) vessel movement registration enables merchant ships to provide naval forces operating off Somalia with a vulnerability profile of the vessel specific to the transit which includes dimensions of the ship, cargo, crew numbers and nationalities, security SPMs, and security personnel armed and/or unarmed. All this information is fed into a risk matrix formula producing a Vulnerable Risk Category for each vessel which is used by Headquarters, warships, and aircraft across the High Risk Area. Vessels register their movement only once upon entering the High Risk Area.

Phone: +44 (0) 1923 958545, Fax: +44 (0) 1923 958520, E-mail: postmaster@mschoa.org

400CH. Anti-Shipping Activity Messages (ASAM)

Piracy and other attacks against merchant shipping continue to be a worldwide problem. Delays in reporting these incidents can result in an ineffective response by the appropriate Government agency and, more importantly, will undermine the benefit to other mariners who may be transiting the affected geographic area.

At the request of a U.S. Government inter-agency working group on piracy and maritime terrorism, the National Geospatial-Intelligence Agency (NGA) developed, in 1985, a system to offer the maritime community the most effective means of filing reports about attacks on shipping, storing the data on a computer and disseminating data to mariners and Government entities via telecommunications links.

The NGA system is the Anti-Shipping Activity Messages (ASAM) database accessed through the Maritime Safety Website. This system allows any user to send and record an ASAM or query the database for reported incidents by date, geographic subregion, victim's name or reference number. The database can be used as a voyage planning tool by providing cautionary information to ship owners and masters concerning security conditions

in and near ports and narrow channels around the world. ASAM's can also be downloaded as KMZ, ArcShape and/or personal Geodatabase zip files.

All piracy, terrorism, attacks, hostile actions, harassments and threats while at sea, anchor or in port, should be reported. The primary means of reporting is through NGA's ASAM system, with acceptable secondary methods by telex/fax, telephone, and mail. An ASAM does not need to be filed if a Ship Hostile Action Report (SHAR) has been issued-one will be generated following a SHAR.

This centralized database capability has been designed to be a major step toward monitoring the escalating problem of maritime crimes against life and property. The central location for filing reports of attacks against shipping is the first step in supporting governmental responses, as well as warning the maritime community that they should avoid (or approach with caution) certain geographic areas.

Many ASAM reports are filed each year; however, the number of reports as compared to worldwide incidents is quite low. The long range goal of the ASAM system is to assist Government officials in the deterrence of such activities. Active participation by mariners is vital to the success of future deterrence. The U.S. Maritime Administration (MARAD) and NGA strongly encourage all mariners to participate and promptly report all incidents, whether against their vessel or observed against other vessels.

For further information pertaining to the ASAM system contact: Maritime Safety Office, Mail Stop N64-SH, National Geospatial-Intelligence Agency, 7500 GEOINT Drive, Springfield, VA 22150-7500, Phone: 1 800 362 6289 (toll free), 571 557 5455 (commercial), 547 5455 (DSN), E-mail: navsafety@nga.mil.

400CI. Office of Naval Intelligence (ONI)

Offer a weekly Piracy Analysis and Warning report as well as the World Wide Threat to Shipping reports on their website http://www.oni.navy.mil/intelligence_community/piracy.htm.

ONI's World Wide Threat to Shipping reports are also available on NGA's Maritime Safety Information website, http://www.msi.nga.mil/NGAPortal/MSI.portal.

400CJ. Ship Hostile Action Report (SHAR)

NGA has established SHAR procedures to disseminate information within the U.S. Government on hostile or potentially hostile actions against U.S. merchant ships. Shipmasters should send a SHAR message to NGA by whatever means available immediately after they have encountered hostile actions or become aware of potential hostile actions which may constitute a danger to U.S. shipping.

The text of a SHAR message should include the acronym SHAR, the location or position of the incident, a brief description of the situation, the Inmarsat identity of the ship transmitting the SHAR, the Inmarsat Ocean Region guarded, and the call sign of the coast radio station being guarded, if any.

If circumstances are such that only minimum essential data can be transmitted, a second SHAR message should be sent as soon afterward as possible containing amplifying information, such as:

– Latitude, longitude, course, and speed.
– Bearing and distance from nearest geographic point.
– Description of event.
– Next port of call and ETA.
– Date and time last message sent regarding this incident.

SHAR delivery may be made by the following methods:
by Mail: Maritime Safety Office, Mail Stop N64-SH, National Geospatial-Intelligence Agency, 7500 GEOINT Drive, Springfield, VA 22150-7500
by Phone: 1 800 362 6289 (toll free), 571 557 5455 (commercial), 547 5455 (DSN)
by E-mail: navsafety@nga.mil
by Message Traffic (PLA): NGA NAVSAFETY WASHINGTON DC

Rapid dissemination of a SHAR is vital so that a radio broadcast warning, if needed, may be promulgated as soon as possible. When a SHAR is received by NGA, it is reviewed and (if appropriate) immediately sent to the Department of State and other relevant government authorities and officials for action. A SHAR can result in the promulgation of NAVAREAs, HYDROLANTs, HYDROPACs, HYDROARCs and SPECIAL WARNINGS (See chap. 3.) to help ensure the safety of any other U.S. flag vessels in the affected area.

A SHAR is not a distress message. U.S. flag and effective U.S. controlled (EUSC) vessels, under attack or threat of attack, may request direct assistance from the U.S. Navy following the procedures that immediately follow in Part IV.

PART IV- U.S NAVY ASSISTANCE REQUESTS

400CK. Requests for U.S. Navy Assistance in Emergency Situations

In view of the current and continuing threat of possible terrorist activity, seizure by hostile military forces, or piracy against U.S. flag and effective U.S. controlled (EUSC) merchant ships on the high seas, the requirement exists for the establishment and promulgation of emergency call-up procedures between U.S. merchant ships and units of the U.S. Navy for protection and assistance.

U.S. Navy Assistance in Emergency Situations
Attacks, threats of attack, or other hostile actions by military forces. Warning shots and/or observation of mining operations in international waters are included.
Harassment by military forces. Threats or attempts of boarding and seizure or hostage taking are included.
Terrorist attack (or threat) or seizure.
Piracy.
Request for rescue in the event of natural disaster if no acknowledgment is received through use of established distress and safety communications procedures.

Communication Procedures
Emergency communications from merchant ships in crisis situations essentially involve the reporting of incidents and requests for U.S. Navy protection or assistance on a real time basis. Requests for assistance will be submitted to Navy Fleet Command Centers by either commercial satellite (Inmarsat) or HF media. Commercial telephone numbers for Fleet Command Centers, Navy Communications Stations, and USCG Communications Stations are listed in Table A.
Inmarsat Equipped Ships: Direct dial the appropriate Navy Fleet Commander Operations Control Center (OPCONCEN) to report the situation and request U. S. Navy assistance. If the direct dial attempt is unsuccessful, place a call via Inmarsat operator to the appropriate Navy Command Center. If the call cannot be completed to the Fleet Commander, dial the appropriate Naval Computer and Telecommunications Area Master Station (NCTAMS) Joint Fleet Telecommunications Operations Center (JFTOC) or Naval Computer and Telecommunications Station (NAVCOMTELSTA) for patching relay to the Fleet Commander OPCONCEN. If direct dial effort is unsuccessful, place call to the communications station via the Inmarsat operator. If contact cannot be made with the area NCTAMS JFTOC or NAVCOMTELSTA, a merchant ship should request the Inmarsat operator to place the call to USCG Area Operations Center (OPCEN) for notification to Fleet Commander. U.S. flag/EUSC ships operating in the North Arabian Sea and Persian Gulf area requiring assistance from U. S. Navy ships of COMUSNAVCENT should call NAVCOMTELSTA Guam for direct patching via FM non-secure voice satellite communications.
HF Equipped Ships: Upon establishing HF voice communications with the HF public coast radio station serving the merchant ship, request that the marine operator place a call to the appropriate Fleet Commander OPCONCEN for assistance, giving information in the prescribed format. If a voice call via the coast station marine operator cannot be completed to the Fleet Commander OPCONCEN, the call should be placed to the closest NCTAMS JFTOC or NAVCOMTELSTA, USAF Communications Station, or USCG Communications Station for relay to the appropriate Navy Command Center. If a merchant ship uses U.S. military HF facilities (Navy, Air Force, or Coast Guard Communications Stations) for a direct emergency voice communication request for assistance, the message will be relayed by the receiving facility to the appropriate Navy OPCONCEN for action. A listing of available HF frequencies by military facility and area is in Table B. Ship to ship communications may be initiated by use of 2182 kHz or one of the Navy HICOM or tactical HF frequencies listed in Table B. However, Fleet Commander OPCONCEN approval is necessary prior to establishment of extended ship to ship communications between merchant ships and U. S. Navy afloat units.
VHF Communications: 156.8 MHz (Ch. 16) is recommended for use by ships at line-of-sight or extended line-of-sight (15-30 miles) communications ranges.

Communication Procedures
Direct Ship to Ship Communications Connectivity: If a Fleet Commander OPCONCEN considers it essential for a merchant ship to establish direct non-secure voice communications with U.S. Navy surface units, the merchant ship will be directed to call the appropriate NCTAMS or NAVCOMTELSTA Guam for a patch to be made between the commercial media (Inmarsat, HF) and the Navy's Fleet Satellite Communications (FLTSATCOM) system to a Navy ship by use of a conference bridge. If direct HF voice connectivity is required, the merchant ship and Navy unit will be assigned an appropriate frequency for coordination purposes.
COMSC Charter Ships: Except in crisis situations, U.S. merchant ships under charter to COMSC would continue to use the procedures stated in the effective edition of MSC Communications Policies and Procedures Manual (CPPM).
Billing: Billing will be in accordance with tariff regulations applicable to Inmarsat and HF public coast radio stations.

NAVY ACTION: Upon receipt of emergency transmission by the Fleet Commander OPCONCEN, the Navy will determine what action will be taken in response, e.g., dispatch of forces, establishing direct communications between the merchant ship and a Navy afloat unit, or providing guidance. Decision factors affecting Navy response are contingent upon U. S. Navy units available, proximity of U. S. Navy units to the merchant ship, and/or rules of engagement applicable to the theater of operations.

CALL-UP PROCEDURES: The following voice call-up procedure should be used by merchant ships if an indefinite call-up address is to be employed:

ANY NAVY/AIR FORCE/COAST GUARD STATION GUARDING THIS NET, THIS IS SS EXAMPLE, EMERGENCY MESSAGE FOLLOWS.

If the merchant ship is calling a specific Navy, Air Force, or Coast Guard station ashore, the voice calls listed in Table B apply. Merchant ships are cautioned that Navy shore stations and/or afloat units guarding HICOM or other tactical HF nets may respond with an alphanumeric daily changing call sign. Merchant mariners are advised to send traffic via the daily call sign.

Procedures for emergency incident reporting and/or requests for U. S. Navy assistance emphasize the use of voice communications between the merchant ship and the commands/facilities ashore and afloat as defined in Table A. Frequencies for HF voice and radiotelex (NBDP) communications are listed in Table B. Inmarsat equipped ships should file voice or telex traffic via appropriate earth stations. Emergency or distress messages received by non-U.S. Navy facilities will be immediately forwarded to the appropriate Navy Command Center.

MESSAGE FORMAT: The following format is recommended to provide for brevity and uniformity in reporting procedure:

– To Fleet Commander, Operations Control Center (as appropriate).
– Name of ship.
– International radio call sign and Inmarsat ID.
– Position (latitude/longitude).
– Date and time (GMT).
– Brief description (military attack, seizure, terrorist attack, mining, piracy, natural disaster).

Example:

TO COMPACFLT OPCONCEN
A. SS NOGALES
B. KCSD/1509999
C. LAT. 05N, LONG. 105E
D. 231800Z JAN 89
E. SHIP UNDER ATTACK BY MACHINE GUN AND RIFLE FIRE BY SMALL PATROL CRAFT AND BEING BOARDED BY PIRATES OR TERRORISTS. PERSONNEL CASUALTIES ON DECK.
F. REQUEST IMMEDIATE ASSISTANCE.

SHAR: The guidance provided above does not eliminate the need for submission of SHARs by merchant ships to NGA. Emergency procedures provide for transmission of a request for assistance to precede the SHAR.

TESTING OF PROCEDURES/FACILITIES: U.S. Navy and Air Force HF voice communications nets are dedicated to command and control of military units and air traffic control. These nets are not to be used for training purposes unless specifically designated by the Services and/or operational commanders for use by merchant ships as part of a scheduled exercise. Commercial communications systems (Inmarsat, HF) aboard ship may be used for personnel training and equipment check-out procedures by merchant ships by placing calls to the Fleet Commander OPCONCEN. Tests should be initiated from the merchant ship by dialing the appropriate Fleet Commander OPCONCEN for the ocean area involved. Shipping line owners are required to fund costs incurred for tests initiated by their ships. The Fleet Commander will determine if the calls should be extended to U. S. Navy afloat units via the FLTSATCOM interface at the NCTAMS or NAVCOMTELSTA Guam. The Fleet Commander may desire to use HF HICOM for exercise and training with COMSC chartered merchant ships as well as U.S. flag merchant ships not under Navy control during Naval Cooperation and Guidance for Shipping (NCAGS) exercises or for test prior to in-chop.

REPORTING ACTS OF TERRORISM: In addition to requesting direct assistance from the U.S. Navy, mariners should report acts of terrorism to the following:

– In the waters and ports of the United States, the FBI and the USCG.
– In areas outside U.S. territorial limits, the nearest U.S. Consulate Office (Regional Security Officer), the U.S. State Department (Operations Center), at (1) 202-647-1512, and NGA.

Table A

Ocean Areas and Command Centers/Communications Facilities	
Ocean Area - Navy Operations Control Centers and Communications Facilities, USCG Command Centers and Communications Facilities	**Telephone Number**
Mediterranean, Baltic, Gulf of Guinea	
UKMTO (United Kingdom Maritime Trade Operations)	971505523215/6007
MARLO (Maritime Liaison Office) Bahrain (24x7)	973-3940-1395
JFTOC NAPLES IT (24x7)	39-081-568-6057
COMLANTAREA COGARD PORTSMOUTH VA	(1) 757-398-6700, Telex 127775
CNE-CNA-CGF Maritime Operations Center (Battle Watch Floor)	39-081-568-4551/4552
Atlantic, Caribbean, Atlantic Approaches to Panama Canal, North Sea	
COMUSFLTFORCOM OPCONCEN NORFOLK VA	(1) 757-836-5397
NCTAMS LANT JFTOC NORFOLK VA	(1) 757-444-2124/4182
COMLANTAREA COGARD PORTSMOUTH VA	(1) 757-398-6231, Telex 127775
COGARD CAMSLANT CHESAPEAKE VA	(1) 757-421-6240/6247
Eastern Pacific, Mexico, Central America	
COMPACFLT OPCONCEN PEARL HARBOR HI	(1) 808-471-3201/5200
NCTAMS PAC JFTOC HONOLULU HI	(1) 808-653-5377/1760/0090
NAVCOMTELSTA SAN DIEGO CA	(1) 619-545-8928
COMPACAREA COGARD ALAMEDA CA	(1) 510-437-3701, Telex 172343
COGARD COMMSTA KODIAK AK	(1) 907-487-5778
COGARD CAMSPAC PT REYES CA	(1) 415-669-2047
Mid Pacific, Northern Pacific, Pacific Approaches to Panama Canal, South America	
COMPACFLT OPCONCEN PEARL HARBOR HI	(1) 808-471-3201/5200
NCTAMS PAC JFTOC HONOLULU HI	(1) 808-653-5377/1760/0090
NAVCOMTELSTA SAN DIEGO CA	(1) 619-545-8928
COMPACAREA COGARD ALAMEDA CA	(1) 510-437-3701, Telex 172343
COGARD COMMSTA KODIAK AK	(1) 907-487-5778
COGARD CAMSPAC PT REYES CA	(1) 415-669-2047
Western Pacific, South Pacific, Southeast Asia, Straits of Malacca, Sea of Japan, Indian Ocean	
COMPACFLT OPCONCEN PEARL HARBOR HI	(1) 808-471-3201/5200
NAVCOMTELSTA GUAM	671-355-5513/5326/5327/5328
NAVCOMTELSTA FAR EAST	81-311-743-7510
COGARD COMMSTA KODIAK AK	(1) 907-487-5778

Table A

Ocean Areas and Command Centers/Communications Facilities	
Ocean Area - Navy Operations Control Centers and Communications Facilities, USCG Command Centers and Communications Facilities	**Telephone Number**
Persian Gulf, Red Sea	
COMUSNAVCENT/BATTLEWATCH CAPTAIN BAHRAIN	973-17-85-3879/4577
NAVCOMTELSTA BAHRAIN	973-17-85-4185
(For Ships in the Persian Gulf)	
NAVCOMTELSTA GUAM	671-355-5513/5326/5327/5328
NAVCOMTELSTA BAHRAIN	973-17-85-4185
(For Ships in the Red Sea)	
JFTOC NAPLES IT	39-081-568-6057
COMLANTAREA COGARD PORTSMOUTH VA	(1) 757-398-6700, Telex 127775
Navy Communications Facilities With FLTSATCOM Interface Capability:	
Upon direction from Fleet Commander OPCONCEN, calls will be placed to the following Navy Communications Stations with conference bridge capability to establish unclassified ship to ship voice connectivity with Navy afloat units via Navy FLTSATCOM:	
NCTAMS LANT NORFOLK VA	(1) 757-445-9988/9989
JFTOC NAPLES IT	39-081-568-6141
NCTAMS PAC HONOLULU HI	(1) 808-653-0321
NAVCOMTELSTA GUAM	671-355-5513/5326/5327/5328

Table B

High Frequencies Guarded by U.S. Air Force				
Area	**Control Station**	**Voice Call**	**SSB (carrier) Frequencies (in kHz)**	**Hours of Watch (GMT)**
Southwest Pacific, Micronesia	ANDERSEN AFB GUAM	ANDERSEN	6738 8967 11176 13201 18002	0200-1200 24 hr. 24 hr. 24 hr. 2200-0700
Northwest Pacific, Sea of Japan	YOKOTA AB JA	YOKOTA	4747 6738 8967 11236 13201 18002	1000-2100 0900-2400 24 hr. 24 hr. 2100-1000 0001-0900

Table B

High Frequencies Guarded by U.S. Air Force				
Area	**Control Station**	**Voice Call**	**SSB (carrier) Frequencies (in kHz)**	**Hours of Watch (GMT)**
Mid Pacific	HICKAM AFB HI	HICKAM	3144 6738 8964 11179 13201 18002	0600-1700 0400-0900 24 hr. 24 hr. 1700-0600 0001-0900
Northern Pacific	ELMENDORF AFB AK	ELMENDORF	6738 8989 11176 13201	24 hr. 24 hr. 24 hr. 24 hr.
Eastern Pacific, West Coast Continental U.S., Mexico	MCCLELLAN AFB CA	MCCLELLAN	4746 6738 8989 11239 15031 18002	0400-1600 0400-1600 24 hr. 24 hr. 1600-0400 1600-0400
Central and South America, (Atlantic and Pacific), Cuba, Hispaniola	ALBROOK AB PM	ALBROOK	5710 6683 8993 11176 15015 18019	0200-1200 0001-1400 24 hr. 24 hr. 1200-0200 0900-2400
Northern Atlantic, East Coast Continental U.S., Canada, Caribbean, Gulf of Mexico	MACDILL AFB FL	MACDILL	Northern North Atlantic	
			5688 8989 11179 13244 18019	0001-1400 24 hr. 0900-2400 0900-2400 0900-2400
			Central North Atlantic	
			4746 6750 11179 11246 13244	0001-0900 0001-0900 0900-2400 24 hr. 0900-2400
			Southern North Atlantic	
			4746 6750 8993 11246 13244	0001-0900 0001-0900 24 hr. 24 hr. 0900-2200
			Gulf of Mexico	
			4746 6750 8993 11246	0001-0900 0002-0900 24 hr. 24 hr.
Northern North Atlantic, Canada, Greenland	THULE AB GREENLAND	THULE	6738 8967 13201	24 hr.

Table B

High Frequencies Guarded by U.S. Air Force				
Area	**Control Station**	**Voice Call**	**SSB (carrier) Frequencies (in kHz)**	**Hours of Watch (GMT)**
Eastern North Atlantic, Iceland, North Sea, Baltic Sea	CROUGHTON AB, UK	CROUGHTON	3076 5703 6750 9011 11176 13214	2300-0500 2100-0800 24 hr. 0500-2300 24 hr. 0800-2100
Eastern North Atlantic, Spain, Western Mediterranean, North Africa	LAJES AB PO (Azores)	LAJES	3081 4746 6750 8967 11226 13244	2100-1000 2100-1000 24 hr. 24 hr. 1000-2100 1000-2100
South Atlantic, Cape of Good Hope, Western Indian Ocean, Red Sea	ASCENSION ISLAND AUXILIARY AB	ASCENSION	6753 8993 11176 13244 15015	2000-0800 24 hr. 1800-1000 1000-1800 0800-2000
Central and Eastern Mediterranean, Strait of Hormuz, Persian Gulf, Northern Red Sea	INCIRLIK AB TU	INCIRLIK	6738 11176 13244 15015	24 hr. 24 hr. 24 hr. 24 hr.

Table C

High Frequencies Guarded by U.S. Navy			
Area	**Control Station**	**Voice Call**	**SSB (carrier) Frequencies (in kHz)**
Mediterranean, Eastern and Northern North Atlantic (COMUSNAVEUR HICOM NET)	NCTAMS EURCENT DET ROTA SP NAVCOMTELSTA SICILY IT Designated afloat units	AOK NSY “ANY NAVY STATION THIS NET”	2200-0600 Carrier Frequency: 6720 Upper Sideband: 6721.5
			0600-2200 Carrier Frequency: 11255 Upper Sideband: 11256.5
Atlantic, Caribbean (COMUSFLTFOR COM)	NCTAMS LANT NORFOLK VA NCTAMS LANT DET KEY WEST FL NAVCOMTELSTA PUERTO RICO PR NAVCOMTELSTA KEFLAVIK IC	NAM NAR NAU NRK	24 hr. Carrier Frequency: 6687 Upper Sideband: 6698.5
HICOM Net	Navy Command Centers Ashore Designated afloat units	“ANY NAVY STATION THIS NET”	24 hr. Carrier Frequency: 23287 Upper Sideband: 23288.5
Indian Ocean Voice Net	NAVCOMTELSTA DIEGO GARCIA Designated afloat units	NKW “ANY NAVY STATION THIS NET”	0200-1300 Carrier Frequency: 23315 Upper Sideband: 23316.5 1300-0200 Carrier Frequency: 11205 Upper Sideband: 11206.5

Table C

High Frequencies Guarded by U.S. Navy			
Area	**Control Station**	**Voice Call**	**SSB (carrier) Frequencies (in kHz)**
Western Pacific HICOM Net	NAVCOMTELSTA GUAM NAVCOMTELSTA FAR EAST Designated afloat units	NPN NDT "ANY NAVY STATION THIS NET"	24 hr. Carrier Frequency: 6720 Upper Sideband: 6721.5 Carrier Frequency: 11205 Upper Sideband: 11206.5 Carrier Frequency: 11255 Upper Sideband: 11256.5 Carrier Frequency: 18009 Upper Sideband: 18010.5
Eastern and Central Pacific HICOM	NCTAMS PAC HONOLULU HI COMTHIRDFLEET NAVCOMTELSTA SAN DIEGO CA	NPM "ANY NAVY STATION THIS NET"	0600-1700 Carrier Frequency: 4415.4 Upper Sideband: 4417.7 24 hr. Carrier Frequency: 8777.4 Upper Sideband: 8779.2 1700-0600 Carrier Frequency: 13156.4 Upper Sideband: 13182.8

RADIOTELEX SERVICES AVAILABLE

COMMAND	EXPLANATION	RESPONSE
OBS+	WEATHER OBSERVATION (message must be in standard format)	MOM11+ MSG+
AMV+	AMVER MESSAGE (message must be in standard format)	MOM01+ MSG+
MED+	MEDICAL EMERGENCIES (signals an alarm at the coast station)	MOM07+ MSG+
URG+	SHIPBOARD DISTRESS/EMERGENCIES (signals an alarm at the coast station)	MOM20+ MSG+
TFC+	MISCELLANEOUS ROUTINE MESSAGES	MOM16+ MSG+
VES+	U.S. FISHERIES, POLLUTION OR OTHER REQUIRED VESSEL REPORT	MOM13+ MSG+
PLD+	PLEAD REQUEST TO PACIFIC MISSILE RANGE PT MUGU	MOM19+MSG+
OPR+	OPERATOR ASSISTANCE	
FREQ+	FREQUENCY GUARD SCHEDULE LIST	
MSG+	DOWNLOADS SHORE-TO-SHIP MESSAGES (limited to government vessels)	
BRK+	BREAK OFF COMMUNICATIONS	
HELP+	LIST OF AVAILABLE COMMANDS	

CHAPTER 5

STATIONS TRANSMITTING MEDICAL ADVICE

500A. General 5-3
500B. Station List 5-5

CHAPTER 5

STATIONS TRANSMITTING MEDICAL ADVICE

500A. General

RCC & Telemedical Assistance Service (TMAS)

Telemedical Assistance Service (TMAS) is a medical service permanently staffed by doctors qualified in conducting remote consultations and well versed in the particular nature of treatment on board ship. RCCs are able to communicate with vessels 24 hours a day to coordinate medical advice and assistance, sometimes through a TMAS as well as coordinate medical evacuations from vessels at sea if warranted. There are many free and paid services that provide medical advice to ships 24 hours a day world-wide. See section 500B for additional information.

Medical Advice Communications

To obtain radio medical advice by reliable voice radio communications urgent calls for assistance may be broadcast using the normal Urgency prowords "PAN PAN" as follows:

"PAN PAN" 3 times
"All Stations" 3 times or specific station if known
"This is (ship name)" 3 times
"Call sign (call sign)"
"In Position (give position)"
"I require medical advice"
"Over"

The INMARSAT systems offer two Special Access Codes (SAC)s which can be used for medical advice or medical assistance at sea.

–SAC 32 is used to obtain medical advice. The Land Earth Station (LES) will provide a direct link with the TMAS when this code is used.

–SAC 38 is used when the condition of an injured or sick person on board a ship justifies medical assistance (evacuation to shore or services of a doctor on board). This allows the call to be routed to the associated RCC.

Once a station acknowledges the call, they will direct the caller to a working frequency and is obliged to seek basic details of the vessel and patient.

New satellite systems are emerging which can support internet based medical communications for examinations such as video conferencing. Pub. 102 International Code of Signals can be referenced to overcome language barriers and communication difficulties between vessel and aircraft crews, survivors and SAR personnel. Good communications are essential for an effective telemedical assistance service. Telemedical communications are considered to be safety or urgency communications and as such should have priority over routine traffic and will normally be free of charge to the mariner.

The International Radio Medical Center (C.I.R.M.)

The International Radio Medical Center (C.I.R.M.) provides round-the-clock **free** Italian radio-medical assistance to patients on ships flying any flag all over the world. C.I.R.M. can also decide and coordinate, wherever possible, the evacuation of a patient from a ship by naval craft or helicopter, cooperating mainly with Rescue Coordination Centers (RCCs) and, if necessary, along with other rescue organizations. They suggest calling before administering any medicines.

Telex: 612068 C.I.R.M. I

Telephone: +39 06 59290263
Mobile GSM Telephone: +39 348 3984229
Fax: +39 06 5923333
E-mail: telesoccorso@cirm.it
Italian Radio Coastal Stations: Ask for C.I.R.M.
Telex: MEDRAD or DH MEDICO to obtain priority of transmission.

When requesting radio medical assistance the following information will be needed:

Ship Information:
–Vessel name and call sign.
–Ship's position, port of departure, destination, ETA.
–Medicine chest available on board.

Patient Information:
–Date of birth, nationality, rank.
–Temperature, blood pressure, pulse and respiratory rates.
–Onset of the symptoms, accurate description of symptoms, location of pain, associated symptoms.
–Other medical problems of the patient, with special reference to drug or other allergies, chronic illness and their eventual treatment.
–In case of accident, where and how it took place.
–Therapy already administered to the patient.

Medical Transports (MEDEVAC)

The term "medical transports", as defined in the 1949 Geneva Conventions and Additional Protocols, refers to any means of transportation by land, water or air, whether military or civilian, permanent or temporary, assigned exclusively to medical transportation and under the control of a competent authority of a party to a conflict, or of neutral States and of other States not parties to an armed conflict, when these ships, craft, and aircraft assist the wounded, the sick and the shipwrecked.

The decision to MEDEVAC a patient is a matter for the ship's Master to decide on the basis of medical advice that is provided by the TMAS. Consideration must be given to other factors, including the environmental conditions (weather, sea state, etc.) that may prevail at the time of possible extraction and the ship's geographical location. The availability and type of recovery platform(s) may also affect the strategy or decision to MEDEVAC. Accordingly, close and ongoing consultation may be required between the ship's Master, the ship's agent, the TMAS, the RCC, the operating agency/crew of the rescue platform and the receiving medical facility.

Medical evacuations are generally undertaken by helicopter, possibly supported by a fixed wing aircraft. The TMAS must take into account that such evacuations can be carried out only when the ship is within helicopter's flying range from land and only when a suitably equipped helicopter is available. It may be possible under conditions of extreme medical urgency for surface and air assets to be used (ship as a staging landing platform plus helicopter), however the availability of such assets cannot be assumed or guaranteed.

Where the ship's Master requires a MEDEVAC, and need of it is supported by the TMAS, the ship's Master may communicate with the RCC directly or through a Maritime Communications Station without further reference to the TMAS. In this event the Maritime Communications Station or the RCC will ascertain information which may include:
–Patient's name and nationality.
–Patient's condition.
–Master's name and nationality.
–Vessel name, flag and IMO number.
–Ship's position.
–Shipowner/operator and country.
–Nearest port and ETA.

500B. Station List

The list below contains additional information by country on how medical advice is handled, when in doubt, contact a Rescue Coordination Center (RCC) using the instructions listed in section 500A. See Chapter 4 for distress communications.

Country	Name (Location)	Contact	Notes
Antigua and Barbuda	Antigua and Barbuda Coast Guard Deepwater Harbour St. John's (Deepwater Harbour, St.John's, Antigua)	Phone: 268 462 0671, Fax: 268 462 2842 Language: English Associated MRCC/JRCC: MRCC Forte De France	Antigua and Barbuda Coast Guard has access to doctors who could relay medical advice through the Coast Guard
Argentina	MRSC Río de la Plata	Phone: +5411 4576 7652, Fax: +5411 4576 7651, E-mail: Contrasebaires@prefecturanaval.gov.ar	
	MRSC Comodoro Rivadavia	MMSI: 007010008, Phone: +54297-4476800, Fax: +54297-4473863, E-mail: jecriv@prefecturanaval.gov	
	MRCC Ushuaia	Phone/Fax: +54-2901-431098, E-mail: mrccushuaia@ara.mil.ar	
Australia	Royal Flying Doctor Service (RFDS) via RCC Australia	MMSI: 005030001, Phone: 612 6230 6811, Fax: 612 6230 6868, E-mail: rccaus@amsa.gov.au	
Belgium	Militair Hospital – Military Hospital, Neder-over-Heembeek (Belgium)	Phone: +2 2644111 (General), +32 2 2644949 (telemedical)	
Brazil	A specific service is not available, but the RCCs are responsible for medical assistance to ships when required		
Bulgaria	A specific service is not available, but MRCC Varna is responsible for medical assistance to ships when required		
Canada	Contact any Canadian Coast Guard CRS or JRCC/MRSC and prefix the message with “Radiomedical” and telemedical advice will be provided		
Cape Verde	MRCC Cape Verde	Phone: +(238)2324492, +(238)2324144, Fax: +(238)2324271, E-mail: capitaniasv@cvtelecom.cv	
Chile	Hospital Naval Almirante NEF-Hospital del Instituto de Seguridad del Trabajo		

Country	Name (Location)	Contact	Notes
Colombia	MRCC Copa	Call Sign: Omitido	
Croatia	Medico Rijeka, contact via MRCC Rijeka or CRSs	MRCC Rijeka-Telex: 599-24634, Inmarsat-C: 423816510, Phone: +385 51 312253, +385 51 9155, Fax: +385 51 312 254, E-mail: mrcc@pomorstvo.hr	
Cyprus	Nicosia General Hospital		
Democratic People's Republic of Korea	Pyongyang Friendship Medical Centre		
Denmark including Greenland	Radio MEDICAL to RCC	see Chapter 4, Part 1, Section 400F	
Ecuador	Guayaquil Naval Hospital		
Egypt	JRCC Cairo	Inmarsat-C: 462299910 RCCE (AOR-E), Telex: +9121095 RCCCRUN, Phone: +20224184537, Fax: +20224184531,+20224184537, E-mail: jrcc136@afmic.gov.eg, Website: http://www.saregypt.net.eg	
Estonia	North Estonian Emergency Centre		
Faroes	Hospital in Torshavn (no specific Maritime Radio Medical arrangement)		
Finland	TMAS contacts via MRCC Turku or MRSC Helsinki	Possible consultation languages: English, Finnish and Swedish	The social and health authorities provide advice
France	French TMAS: CCMM Toulouse		
Georgia	MRCC Georgia	MMSI: 002130100, Phone: +995 222 73913, Fax: +995 222 73905, E-mail: mrcc@maradgeorgia.org	
Germany	Stadtkrankenhaus Cuxhaven		
Greece	Medical Advice Centre of the Hellenic Red Cross, based at HENRU DUNANT General Hospital (Mesogion Av. 107, Athens, Greece)	Phone: 30 210 52 30 880, +30 210 52 37 515, Fax: +30 210 52 28 888	A Link-call (HF, MF, VHF or mobile telephone) can also be established between JRCC Piraeus or Olympia Radio, medical advisor and the ship

Country	Name (Location)	Contact	Notes
Hong Kong, China	Port Health Office through MRCC Hong Kong	Call sign: VRC (Hong Kong Marine Rescue), Telex: 82952 MRCC HX, Phone: +852 2233 7999, Fax: +852 2541 7714, E-mail: khmrcc@mardep.gov.hk	
Iceland	Icelandic Coast Guard SAR helicopter doctors	Iceland Coast Guard. Inmarsat-C: 581 425101519, 581 492740310, Phone: +354 5113333 (emergency), +354 5452100, Fax: +354 5452001, +354 562 9043, E-mail: sar@icg.is, reyrad@icg.is, vms@icg.is, Website: http://www.icg.is	24 hrs
India	No arrangement of telemedical advice available. Medical advice on RT / Inmarsat through service doctors at MRCC/MRSC available	see Chapter 4, Part 1, Section 400F	OPV (Offshore Patrol Vessel) class of vessel having medical officers services available on board
Iran, Islamic Republic of	Call MRCC and request telemedical advice	see Chapter 4, Part 1, Section 400F	A link-call (VHF or mobile telephone) will be established between MRCC, medical advisor and the ship
Ireland	MEDICO Cork		
Italy	CIRM		
Jamaica	Upon request through the Jamaica Defence Force Coast Guard		
Japan	SEMPOS. Medical Rescue can be arranged by Japanese RCCs	see Chapter 4, Part 1, Section 400F	
Latvia	Medical Center of Emergency and Disaster		
Lithuania	Maritime Medical Subdivision of Klaipèda Hospital		
Malta	Available through the Ports Medical Officer		
Mauritius	Mauritius Radio Services (MRS)		

Country	Name (Location)	Contact	Notes
Mexico	Tuxpan Mexican Navy Hospital	Phone: (00 52) 783 8 34 41 43, (00 52) 783 8 35 37 34	Contact any Mexican MRCC
	Ensenada Mexican Navy Hospital	Phone: (00 52) 646 1 77 39 49, (00 52) 646 1 77 38 33, (00 52) 646 1 77 38 30	Contact any Mexican MRCC
	Mexican Navy Hospital	Phone: (00 52) 938 3 82 29 41, (00 52) 938 3 82 57 07	Contact any Mexican MRCC
	Guaymas Mexican Navy Hospital	Phone: (00 52) 622 2 21 64 67, (00 52) 622 2 21 64 57	Contact any Mexican MRCC
	Mujeres Mexican Navy Hospital	Phone: (00 52) 998 8 77 00 01	Contact any Mexican MRCC
	Manzanillo Mexican Navy Hospital	Phone: (00 52) 314 3 33 66 41, 314 3 33 27 40	Contact any Mexican MRCC
	Acapulco Mexican Navy Hospital	Phone: (00 52) 744 484 70 53, (00 52) 744 484 58 46	Contact any Mexican MRCC
Montenegro	No formal arrangements but available upon request through MRCC	Inmarsat-C: 426200016, Telex: +200 61445, Phone: +00382 30 313 088, Fax: +00382 30 313 600, E-mail: barradio@msd-ups.org, Website: http://www.pomorstvo.me	
Morocco	A specific service is not yet available. Contact the MRCC and prefix the message with "Radiomedico" and telemedical advice will be provided		
Namibia	Local Standby Medical Doctor		
Netherlands	Radio Medical Service		
Curacao (Netherlands Antilles)	RCC Curaçao	Call Sign: PJC, Telex: (0390) 1506, Phone: +599 9 463 7700, Fax: +599 9 463 7950, E-mail: rcc.curacao@gmail.com, rcc.curacao@mindef.nl	Local arrangements with medical volunteers
New Zealand	RCC New Zealand	Phone: +644 577 8030 (24-7), +644 577 8034 (Admin), Fax: +644 577 8038 (24-7), +644 577 8041 (Admin), E-mail: rccnz@maritimenz.govt.nz	

Country	Name (Location)	Contact	Notes
Norway	National center for maritime radio medico		
Philippines	Coast Guard Medical Service		
Poland	Academical Centre for Maritime and Tropical Medicine in Gdynia		
Portugal	Medical advice is provided by Centro de Orientação de Doentes Urgente (CODU)-MAR		
Republic of Korea	Incheon Gil hospital		
Romania	Universitary Hospital of Constanta		
Russian Federation	Northern Medical Clinical Center	Language: Russian (only)	
	Sakhalin Territorial Centre of the Medicine and Catastrophe		
	Regional center medicine of accident		
Saudi Arabia	MRCC Jeddah: King Fahad General Hospital		
	MRCC Dammam: Dammam Medical Centre		
Singapore	Singapore General Hospital		
Spain	Centro Radio Médico Madrid		
Sweden	Telemedical Assistance Service (TMAS) is coordinated by JRCC Sweden according to agreement with Sahlgrenska University Hospital Gothenburg	Telex: 326590013, 426590010, Phone: 031-64 80 00, 326590010, Fax: 326590011, E-mail: jrcc@sjofartsverket.se	
Turkey	Ministry of Health General Directorate of Health for Border and Coastal Areas		
	Turkish Tele Health Center	Phone: +90 212 444 83 53	

Country	Name (Location)	Contact	Notes
United Kingdom	Call Aberdeen Coastguard, Brixham Coastguard, Clyde Coastguard, Dover Coastguard, Falmouth Coastguard, Forth Coastguard, Holyhead Coastguard, Humber Coastguard, Liverpool Coastguard, London Coastguard, MRCC Milford Haven, Portland Coastguard, Shetland Coastguard, Solent Coastguard, Stornoway Coastguard, Swansea Coastguard, Thames Coastguard, Yarmouth Coastguard, or general call-sign "UK Coastguard" and request medical advice. A Link-call (MF, VHF or mobile telephone) will be established between MRCC, medical advisor and ship	see Chapter 4, Part 1, Section 400F	
United Kingdom (Bermuda)	King Edward VII Memorial Hospital		
	USCG–Obtained through Sector San Juan Medical Officer		on 24hour duty
United Kingdom (Falkland Islands (Malvinas)	King Edward Memorial Hospital		
United Kingdom (Isle of Man)	HM Coastguard		
United Kingdom (Jersey)	Jersey General Hospital		
United Kingdom (Montserrat)	Glendon Hospital	Phone: 664 4912552	
United Republic of Tanzania	Arrangements are underway to designate a TMAS		
United States	Contact any U.S. JRCC or JRSC	see Chapter 4, Part 1, Section 400F	
Uruguay	MRCC Uruguay	Telex: 22557 ARMADA UY, Fax: (5982) 916 13 89, (5982) 916 79 22, E-mail: comflo_radio@armada.gub.uy, jesar@armada.gub.uy	
Vietnam	Vietnam National Institute of Maritime Medicine through VMRCC	see Chapter 4, Part 1, Section 400F	on 24hour duty

CHAPTER 6

LONG RANGE NAVIGATIONAL AIDS

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Notes: Greater detail on the theory, principles, and operation of long range navigational aids may be found in The American Practical Navigator (Bowditch) (PUB9).

The U.S. Naval Observatory Website provides GPS user information and data at: http://www.usno.navy.mil/USNO/time/gps

The U.S. Coast Guard Navigation Center Website provides GPS, DGPS and general radionavigation user information and status at http://www.navcen.uscg.gov/

GPS status is also broadcast from WWV and WWVH (See sec. 200D and 200E).

CHAPTER 6

LONG RANGE NAVIGATIONAL AIDS

PART I LORAN-C

600A. Acronyms

– eLORAN: enhanced LORAN, the most recent version of LORAN.
–FERNS: Far East Radionavigation Service (the People's Republic of China, Japan, the Republic of Korea and the Russian Federation).
–GPS: Global Positioning System.
–ILA: International Loran Association.
–LORAN-C: LOng RAnge Navigation. The "C" is the version of LORAN.
–RTCM: Radio Technical Commission for Maritime Services.

600B. Definitions

– Baseline: the line between two radio navigation stations operating in conjunction for the determination of a line of position.
– Baseline extension: the extension of the baseline in both directions beyond the transmitters of a pair of radio stations operating in conjunction for determinations of a line of position.
– Centerline: the set of points equidistant from two reference points or lines.
–Coding Delay (CD): the interval of time after reception of the master's transmission that a secondary station waits prior to transmitting its own signal. The Coding Delay assigned to each secondary station allows stations of a chain to transmit sequentially in time and to prevent overlap of the different signal groups anywhere in the system.
–Emission Delay: the interval of time (in microseconds) between the beginning of the first pulse from the master station and the beginning of the first pulse from the secondary station in the same chain (both stations using a common time reference). The emission delay equals the sum of the baseline travel time plus the secondary coding delay.
–Group Repetition Interval (GRI): the time interval between successive pulse groups measured from the third cycle of the first pulse of any one station in the group to the third cycle of the first pulse of the same station in the following pulse group. The GRI is expressed in tens of microseconds and is the identifier for that chain and is called the "rate".
–Time Difference (TD): the interval in time between the receipt of a master station's signal and secondary station's signal from the same rate.
–TD Lines: the lines created when the time from master to secondary has elapsed and converted to distance.

600C. Modern LORAN-C and eLORAN

Today modern LORAN receivers work the same way as a GPS unit. The unit automatically acquires the land based signal, makes the calculations and displays the geographic position (Figure 600C). Some models offer the TD line data to be displayed as well, although the lines are being phased out of standard chart symbology.

Figure 600C

Although in some parts of the world LORAN-C is no longer supported, a new version called eLORAN

(enhanced LORAN) is starting to be implemented in other parts due to the need for a precise positional system as backup to GPS. This updated version increases the accuracy by precise time scales independent of satellite systems. The main difference between eLORAN and traditional Loran-C is the addition of a data channel on the transmitted signal. This sends application-specific corrections, warnings and signal integrity information to the user's receiver. The reasons for these corrections is due to the signals traveling over the surface of the earth and are subject to small propagation delays, which when corrected, make eLORAN more precise. eLORAN also has something that satellite positional equipment cannot provide, an eLORAN compass. When the receiver is used with an H-Field (Magnetic Loop) antenna it can be employed as an automatic direction-finder. It takes bearings on the transmitting stations, and calculates the ship's heading (generally with an accuracy of better than 1° and independent of the ship' movement).

600D. How LORAN-C Works (Basics only)

LORAN-C is based on measuring the time difference of specific pulses between a pair of land based radio transmitters. One station, called a Master Station, sends a unique and constant pulse (in milliseconds) to at least two secondary stations. These stations grouped together are called a Chain. Each Chain has a unique Group Repetition Interval (GRI) which determines the "rate" of each Chain. The secondary stations are given letters W, X, Y, and Z (Figure 600D.1).

Figure 600D.1

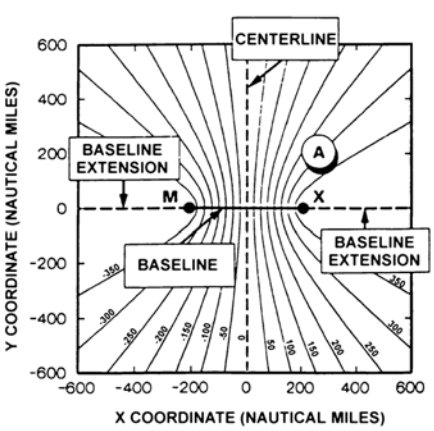


Figure 600D.2

Figure 600D.2 shows how the rates are created and labeled on some older charts. Using complex calculations hyperbolic lines are created for each rate from the Master to each of the secondary stations. Each rate is represented by a different color on the chart and labeled by the nautical miles from the centerline. The LORAN receiver acquires the distance between the vessel and the master station and displays the number on the screen for each rate that is in range.

To obtain an accurate fix, the mariner needs to select a minimum three rates at right angles of each other. The LORAN-C receiver can display these signals, and by using an interpolation card or the linear interpolator graph (Figure 600D.3) located on the side of the chart, along with TD lines on the chart, a fix is obtained.

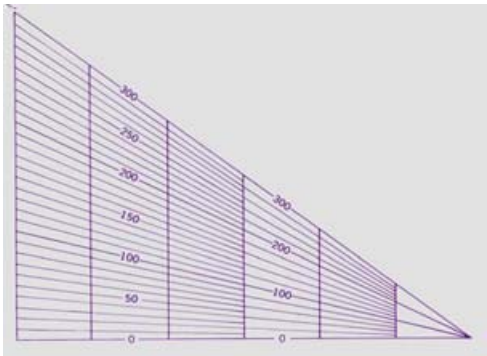
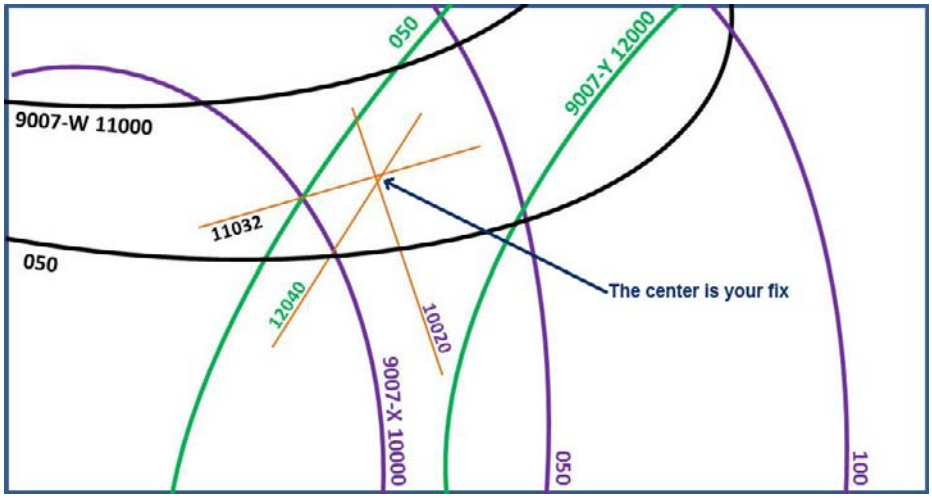


Figure 600D.3

Below is an example how LORAN-C data is used to obtain a fix (just for demonstration). Figure 600D.4 shows how the fix is obtained once measurements are plotted.



Receiver:

TD 1: 11032
TD 2: 12040
TD 3: 10020

Figure 600D.4

See Pub.9 Bowditch, Chapter 12 for more in-depth information on LORAN-C operation.

600E. LORAN-C Station Closures

– U.S. Coast Guard terminated the transmission of all U.S LORAN-C signals on 08 Feb 2010.
– Russian-American Chain terminated on 01 Aug 2010.
– Canadian LORAN-C terminated on 03 Aug 2010.

600F. Worldwide LORAN-C Station List by Chain

Chain	Station	Rate	Location
Saudi Arabian North Chain	Afif	8830-Master	23-49N 042-51E
	Salwa	8830-W	24-50N 050-34E
	Al Khamasin	8830-X	20-28N 044-35E
	Ash Shaykh Humayd	8830-Y	28-09N 034-46E
	Al Muwassam	8830-Z	16-26N 042-48E
South China Sea Chain	Hexian	6780-Master	23-58N 111-43E
	Raoping	6780-X	23-43N 116-54E
	Chongzuo	6780-Y	22-33N 107-13E
East China Sea Chain	Xuancheng	8390-Master	31-04N 118-53E
	Raoping	8390-X	23-43N 116-54E
	Rongcheng	8390-Y	37-04N 122-19E
North China Sea Chain	Rongcheng	7430-Master	37-04N 122-19E
	Xuancheng	7430-X	31-04N 118-53E
	Helong	7430-Y	42-43N 129-06E
Korean Chain[1]	P'ohang	9930-Master	36-11N 129-21E
	Kwangju	9930-W	35-02N 126-32E
	Gesashi	9930-X	26-36N 128-09E
	Nii Shima	9930-Y	34-24N 139-16E
	Ussuriysk	9930-Z	44-32N 131-38E
Northwest Pacific Chain[2]	Nii Shima	8930-Master	34-24N 139-16E
	Gesashi	8930-W	26-36N 128-09E
	Tokachibuto	8930-Y	42-45N 143-43E
	P'ohang	8930-Z	36-11N 129-21E
Russian Chain	Alexandrovsk	7950-Master	51-05N 142-42E
	Petropavlovsk	7950-W	53-08N 157-42E
	Ussuriysk	7950-X	44-32N 131-38E
	Tokachibuto	7950-Y	42-45N 143-43E
	Okhotsk	7950-Z	59-25N 143-05E
Ejde Chain	Ejde	9007-Master	62-18N 007-04W
	Jan Mayen	9007-W	70-55N 008-44W
	Bo	9007-X	68-38N 014-28E
	Vaerlandet	9007-Y	61-18N 004-42E
Bo Chain	Bo	7001-Master	68-38N 014-28E
	Jan Mayen	7001-X	70-55N 008-44W
	Berlevag	7001-Y	70-51N 029-12E
Sylt Chain	Sylt	7499-Master	54-48N 008-18E
	Lessay	7499-X	49-09N 001-30W
	Vaerlandet	7499-Y	61-18N 004-42E
Lessay Chain	Lessay	6731-Master	49-09N 001-30W
	Soustons	6731-X	43-44N 001-23W
	Anthorn	6731-Y	54-55N 003-15W
	Sylt	6731-Z	54-48N 008-18E

Korean Chain[1]: http://www.loran9930.go.kr
Northwest Pacific Chain[2]: Coordinator of Chain Operations (COCO), Tokyo, Japan, Phone: +81 0425 52 2511 ext. 58405

600G. Worldwide LORAN-C Station List by Station

Station	Location	Rate(s) Supported		Contact Information
Afif	23-49N 042-41E	8830-Master		
Al Khamasin	20-28N 044-35E	8830-X		
Al Muwassam	16-26N 042-48E	8830-Z		
Alexandrovsk	51-05N 142-42E	7950-Master		
Anthorn	54-55N 003-15W	6731-Y		
Ash Shaykh Humayd	28-09N 034-46E	8830-Y		
Berlevag	70-51N 029-12E	7001-Y		Country: Norway Phone: 789-81499 Fax: 784-92736 E-mail: post.loranc-berlevaag@mil.no
Bo	68-38N 014-28E	7001-Master	9007-X	Country: Norway Phone: 76 11 24 70 Fax: 76 11 24 80 E-mail: loran-c@vkbb.no
Chongzuo	22-33N 107-13E	6780-Y		
Ejde	62-18N 007-04W	9007-Master		Country: Denmark Phone: 298 42 30 20 Fax: 298 42 34 93 E-mail: loran@frv.dk
Gesashi	26-36N 128-09E	9930-X	8930-W	
Helong	42-43N 129-06E	7430-Y		
Hexian	23-58N 111-43E	6780-Master		
Jan Mayen	70-55N 008-44W	9007-W	7001-X	Country: Norway Phone: 32 17 79 00 Fax: 32 17 79 01 E-mail: elektronikkavdelingen@jan-moyen.no
Kwangju	35-02N 126-32E	9930-W		
Lessay	49-09N 001-30W	6731-Master	7499-X	
Nii Shima	34-24N 139-16E	8930-Master	9930-Y	
Okhotsk	59-25N 143-05E	7950-Z		
P'ohang	36-11N 129-21E	9930-Master	8930-Z	
Petropavlovsk	53-08N 157-42E	7950-W		
Raoping	23-43N 116-54E	6780-X	8390-X	
Rongcheng	37-04N 122-19E	7430-Master	8390-Y	

Station	Location	Rate(s) Supported		Contact Information
Salwa	24-50N 050-34E	8830-W		
Soustons	43-44N 001-23W	6731-X		
Sylt	54-48N 008-18E	7499-Master	6731-Z	Country: Germany Phone: 49 4651 96050 Fax: 49 4651 960555 E-mail: loranc-sylt@wsv.bund.de
Tokachibuto	42-45N 143-43E	8930-Y	7950-Y	
Ussuriysk	44-32N 131-38E	9930-Z	7950-X	
Vaerlandet	61-18N 004-42E	9007-Y	7499-Y	Country: Norway Phone/Fax: 577 31 183 E-mail: lorsta.vaerlandet@enivest.no
Xuancheng	31-04N 118-53E	8390-Master	7430-X	

600H. Obtaining LORAN-C Operation Status

Civilian customers: GMDSS messages are broadcast via NAVTEX & INMARSAT-C systems.

NAVY customers: WWNWS via HYDROPAC, HYDROLANT & HYDROARC warnings (see Chapter 3).

Online: European LORAN-C status via http://www.loran-europe.eu.

Contact station/Chain directly: see section 600G for contact information.

PART II GLOBAL POSITIONING SYSTEM (GPS)

600I. Definitions & Acronyms

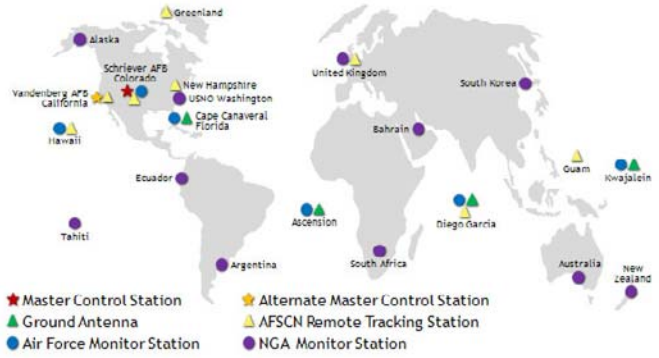
– GPS: **G**lobal **P**ositioning **S**ystem.
– NAVSTAR: **NAV**igation **S**ignal **T**iming **a**nd **R**anging.
– GLONASS: **GL**obal **NA**vigation **S**atellite **S**ystem (Russian System).
– Block: is the generation of the operational satellites.
– Plane: is the satellite's orbit.
– **P**seudo **R**andom **N**oise Code (PRN): is the unique identifying sequence code that each satellite produces. The complex code guarantees that the receiver won't accidentally pick up another satellite signal, so all the satellites can use the same frequency without jamming each other.
– Slot: is the position in the plane.

600J. GPS Basics

The U.S. System is called NAVSTAR Global Positioning System by the U.S. Air Force. This system consists of three segments. The space segment, the control segment, and the user segment.

The space segment consists of the satellites themselves operated by the U.S. Air Force. The GPS satellites fly in medium Earth orbit (MEO) at an altitude of approximately 20,200km. Each satellite circles the Earth twice a day. They are arranged into six equally-spaced orbital planes around the Earth, each containing four slots occupied by baseline satellites. This 24-slot arrangement ensures there are at least four satellites in view from virtually any point on the planet. The 24 satellites is the core amount; however, the Air Force has extra satellites due to predictable and unpredictable reasons. In June 2011, The Air Force expanded the 24 slots by repositioning six satellites allowing three of the extra satellites to become part of the constellation baseline. The now 27-slot constellation improved GPS coverage in most parts of the world.

The control segment consists of a global network of ground facilities that track the GPS satellites, monitor their transmissions, perform analyses and send commands and data to the constellation. The 2nd Space Operations Squadron of the U.S. Air Force is responsible for the 24/7 command and control of the GPS constellation. The Master Control Station at Schriever Air Force Base in Colorado Springs, Colorado, ensures continuous GPS availability and high accuracy to millions of users, both military and civilian. The control segment also consists of an alternate master control station, 12 command and control antennas and 16 monitoring sites.



Accuracy depends on various factors such as atmospheric effects and receiver quality. GPS augmentation systems provide accuracy, integrity, availability, or any other improvement to positioning, navigation, and timing that is not inherently part of GPS itself. There are a wide range of systems for the public, private sectors, and military customers. The most common augmentation system for civilian shipping and survey operations is the Differential GPS System, DGPS. There are two types; the first one is called the Nationwide Differential GPS (NDGPS) and within this system there the maritime component which is operated by the U.S. Coast Guard and the inland component is funded by the Department of Transportation (DOT). The second type of DGPS is the Global Differential GPS System (GDGPS) which have ground receivers worldwide (see section 600L).

The user segment consists of the GPS receiver equipment, which receives the signals from the GPS satellites and uses the transmitted information to calculate the user's three-dimensional position and time.

600K. Status of GPS Constellation Messages

– **Civilian Customers:**

By Phone: (1) 703 313 5907

Radio Station: WWV & WWVH *(see Chapter 2, section 200C)*

NAVTEX broadcasts: B_2 Character *(see Chapter 3, section 300C)*

INMARSAT-C broadcasts: NAVAREA IV & XII *(see Chapter 3, section D & G)*

Web: U.S. Coast Guard Constellation Status website http://navcen.uscg.gov/?Do=constellationStatus

Contact/Subscriptions: U.S. Coast Guard Navigation Center, NAVCEN MS 7310, 7323 Telegraph Road, Alexandria, VA 20598-7310, Phone: 703 313 5900

– **Military Customers:**

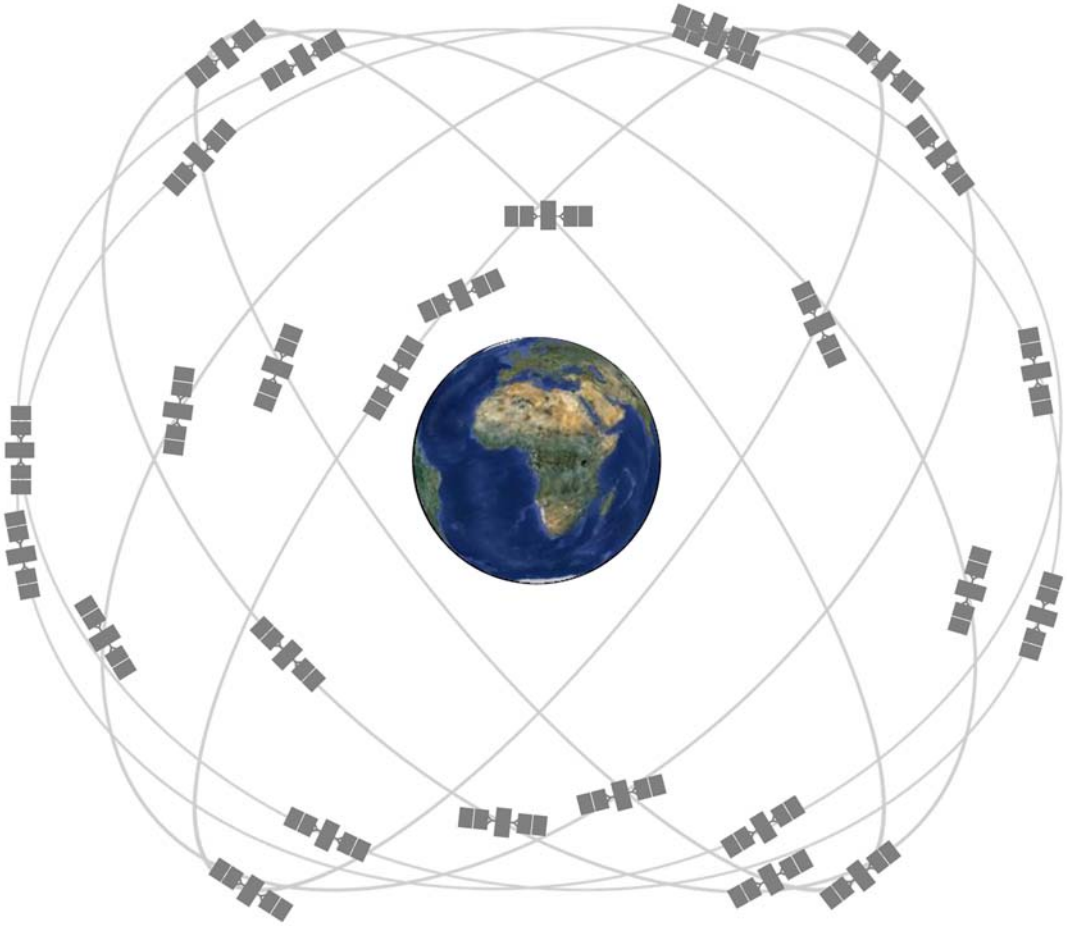
By Phone: (1) 703 313 5907

Radio Station: WWV & WWVH *(see Chapter 2, section 200D & E)*

AMHS broadcasts: NAVAREA IV, NAVAREA XII, HYDROLANT, HYDROPAC, HYDROARC *(see Chapter 3, section D & G)*

Web: U.S. Coast Guard Constellation Status website http://navcen.uscg.gov/?Do=constellationStatus

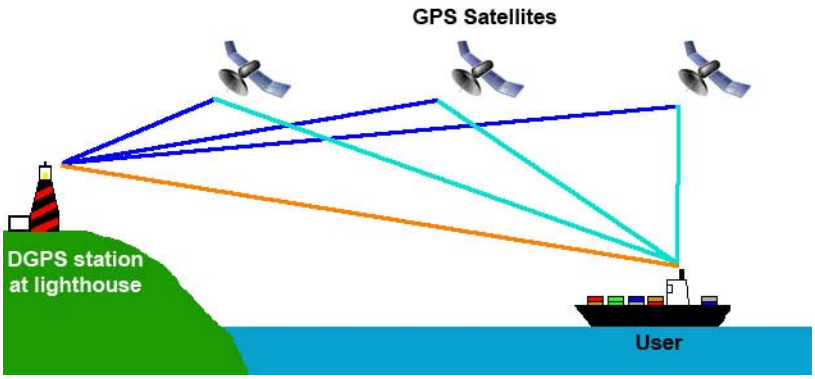
Contact/Subscriptions: GPS Operations Center, 300 O'Malley Ave, Suite 41, Colorado Springs, CO 80912-3041, Phone: 719 567 2541, DSN: 560 2541, E-mail: gps_support@schriever.af.mil



PART III DIFFERENTIAL GLOBAL POSITION SYSTEM (DGPS)

600L. DGPS Basics

Differential Global Position System (DGPS) is a service used to make GPS positions more accurate by using a fixed station as one of the Lines of Positions (LOP) when obtaining that position. When a vessel has a DGPS receiver, it collects all GPS signals in view and the differential corrections from nearby DGPS sites and displays the more accurate position.



Frequency: DGPS transmissions are broadcast in the 285 to 325 KHz band which is allocated for maritime radionavigation (radiobeacons). Marine radiobeacons which are selected for DGPS service will simultaneously broadcast DGPS and radio direction finding (RDF) signals either on the main carrier or dual carrier.

DGPS Message Types:

Type 1: DGPS corrections.

Type 2: Delta DGPS corrections.

Type 3: GPS reference station parameters. Broadcast time is 15 and 45 minutes past the hour.

Type 5: is used to notify the users if a satellite is unusable for DGPS navigation. Broadcast time is 5 minutes past the hour and every 15 minutes thereafter, only when needed.

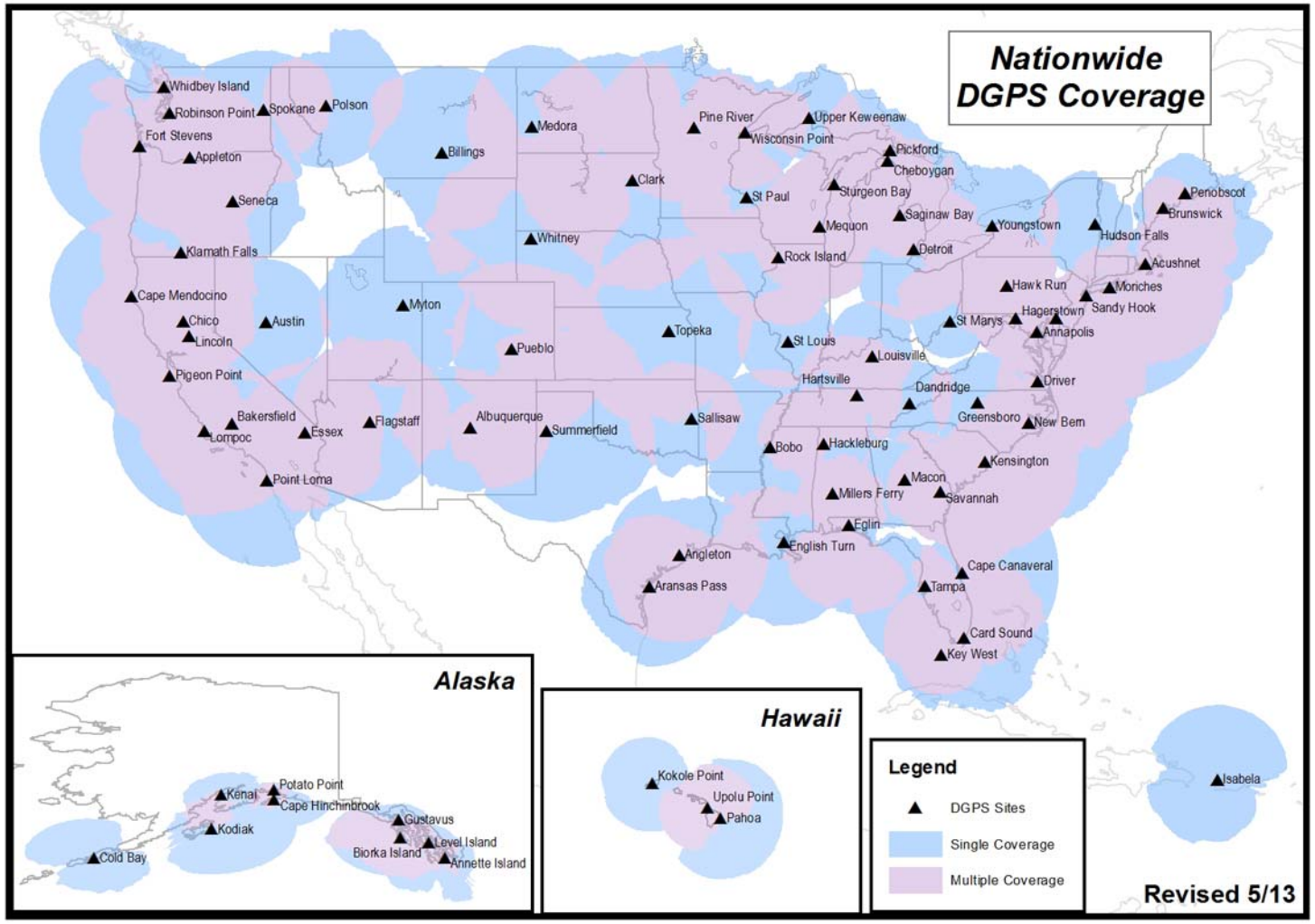
Type 6: if the reference receiver can no longer generate pseudorange corrections, type 6 messages will be broadcast in which the header will be set to indicate an unhealthy condition.

Type 7: is broadcast from a marine radiobeacon and will contain information for two or three adjacent marine radiobeacons which are part of the DGPS Network, in addition to itself. Broadcast time is at 10 minute intervals beginning at 7 minutes past the hour. When a beacon has any changes an update is issued within 2 minutes.

Type 9: serves as the exclusive message type for broadcasting pseudorange corrections. This type of message contains the freshest possible corrections because the corrections contained in each message are computed at different times. Corrections will be broadcast only for satellites at an elevation angle of 7.5 degrees or higher. Broadcasts only when needed but within strict limits. Type 16 messages will not be broadcast for a period of at least 90 seconds preceding or following a type 3, 5, or 7 message and the interval between successive type 16 messages will be no less than 3 minutes.

Type 16: provides information on the status of the local DGPS service which is not provided in other message types. Additionally, the message may provide limited information on service outages in adjacent coverage areas or planned outages for scheduled maintenance at any broadcast site. In order to keep data link loading to a minimum, only crucial information for safety of navigation will be provided.

For the waters of the United States: the U.S. Coast Guard Navigation Center operates the Nationwide Differential GPS (NDGPS) service that consists of one control center and 85 remote broadcast sites. Users can expect better than 10-meter accuracy within the coverage area. Differential corrections are based on the NAD83 (2011) position of the reference station (REFSTA) antenna. Positions obtained using DGPS should be referenced to NAD83 coordinate system only. All sites are broadcasting RTCM Type 9-3 correction messages.



600M. Where to Obtain Station Data

The National Geospatial-Intelligence Agency publishes DGPS station data within the List of Lights publications 110-116 for waters outside of the U.S. When the DGPS station is located at a light, the station data is located within the light section of the publication. A stand-alone DGPS station is listed at the end of the publication under the Differential GPS Stations section. The U.S. Coast Guard Navigation Center (NAVCEN) publishes their DGPS station data in the USCG Light List as well as the NAVCEN website under the DGPS section http://www.navcen.uscg.gov.

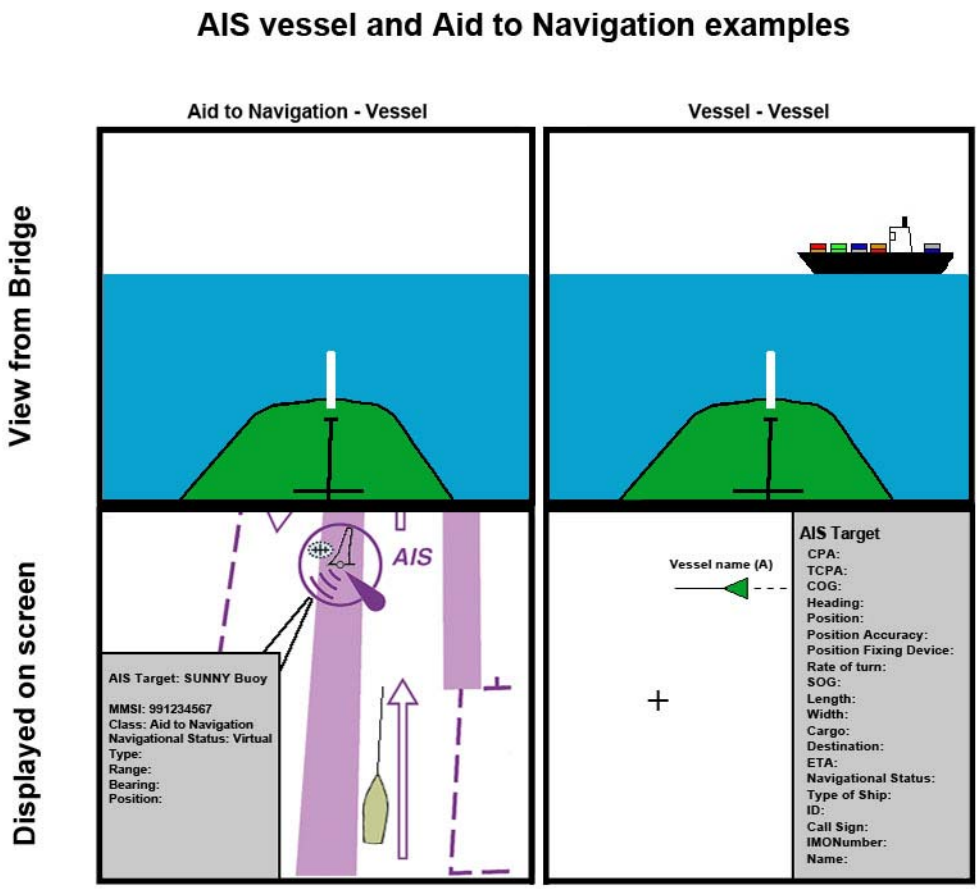
Operational outages are broadcast through the Worldwide Navigational Warning Service via GMDSS MSI broadcasts (civilian) or AMHS (military) systems as described in Chapter 3. U.S. DGPS outage information can also be obtained by Phone: 703 313 5900, E-mail: tis-pf-nisws@uscg.mil, Website: http://www.navcen.uscg.gov.

PART IV AUTOMATIC IDENTIFICATION SYSTEM (AIS)

600N. General

AIS transponders exchange data between vessels, aids to navigation (AtoN), Search and Rescue (SAR) authorities, and Vessel Traffic Services (VTS) via the very hight frequency (VHF) band and display the data on a screen (ECDIS, Radar, etc.).

–AIS on vessels
–AIS on Aids to Navigation
–AIS used for VTS



600O. Automatic Identification System (AIS) on Vessels

Regulation 19 of SOLAS Chapter V requires AIS to be fitted aboard all ships:

–300 gross tonnage and upwards engaged on international voyages
–cargo ships of 500 gross tons and upwards not engaged on international voyages
–all passenger ships irrespective of size

AIS is required to be in operation at all times except where international agreements, rules or standards provide for protection of navigational information. For more information go to http://www.imo.org. The regulation requires that AIS shall:

–Provide information, including the ship's identity, type, position, course, speed, navigational status and other safety-related information, automatically to appropriately equipped shore stations, other ships and aircraft.
–Receive automatically such information from similarly fitted ships, monitor and track ships.
–Exchange data with shore-based facilities.

AIS is now fitted on Emergency Position-Indicating Radio Beacons (EPIRB) and Search And Rescue Transponders (SART) using AIS channels.

600P. Types of AIS on Aids to Navigation (AtoN)

1) Real AIS Aid to Navigation (AtoN): AIS located on a physical AtoN.

–Type 1: Transmit (TX) only.
–Type 2: Receive (RX) & transmit (TX), but the receive part is only for remote configuration.
–Type 3: full receive (RX) & transmit (TX) capabilities.

AIS Chart 1 symbols: S17.1 &17.2

2) Synthetic AIS Aid to Navigation:

–Type 1: Monitored Synthetic AIS AtoN- transmits a message type 21 from AIS station located remotely from AtoN. The AtoN physically exists & there is a com link between the AIS & AtoN.

–Type 2: Predicted Synthetic AIS AtoN- transmits a message type 21 from AIS station located remotely from AtoN. The AtoN exists but there is no monitoring to confirm either location or status (Example/ best used on fixed aids such as lights, beacons, fish farms, platforms).

–Type 3: Virtual AIS AtoN- used in time-critical situations & dynamic areas where navigational conditions change frequently. (Ideal for areas where temporary aids are used).

–Instant, used for situations such as marking a wreck.
–Temporary, used for situations such as marking works in progress.
–Dynamic, used for situations to replace buoys marking complicated channels.
–Seasonal, used for situations to replace ice buoys.
–Permanent, used for situations to replace buoys in areas where environmental or ecological factors are an issue.

Virtual AIS Chart 1 symbols: S18.1 &18.2

CHAPTER 7

PART I AMVER

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CHAPTER 7

AMVER

700A. Acronyms

AMVER:	**A**utomated **M**utual-assistance **VE**ssel **R**escue System
AUSREP:	**AU**stralian **S**hip **REP**orting system
CHILREP:	**CHIL**ean ship **REP**orting system
CFR:	**C**ode of **F**ederal **R**egulations
DR:	**D**eviation **R**eport
EOR:	**E**nd **O**f **R**eport
FR:	**F**inal Arrival **R**eport
GC:	**G**reat **C**ircle
JASREP:	**JA**panese **S**hip **REP**orting system
LES:	**L**and **E**arth **S**tation
MARAD:	**MAR**itime **AD**ministration
MAREP:	**M**ariner **R**eport
NOAA:	**N**ational **O**ceanic and **A**tmospheric **A**dministration
NWS:	**N**ational **W**eather **S**ervice
PA:	**P**hysician **A**ssistant
PR:	**P**osition **R**eport
RCC:	**R**escue **C**oordination **C**enter
RL:	**R**humb **L**ine
SP:	**S**ailing **P**lan
SAR:	**S**earch **A**nd **R**escue
SEAS:	**S**hipboard **E**nvironmental Data **A**cquisition **S**ystem
SOG:	**S**peed **O**ver **G**round
SURPIC:	**SUR**face **PIC**tures
USCG:	**U.S. C**oast **G**uard
VOS:	**V**oluntary **O**bserving **S**hips
WP:	**W**ay **P**oint

700B. Amver Overview

Amver is a worldwide voluntary vessel reporting system operated by the U.S. Coast Guard to promote safety of life and property at sea. Amver's mission is to quickly provide search and rescue (SAR) authorities, on demand, accurate information on the position and characteristics of vessels near a reported distress. Any merchant vessel on a voyage of greater than 24 hours to anywhere on the globe is welcome to participate in Amver. In general, international participation is voluntary regardless of owner's nationality or vessel's flag, voyage origin, or destination. However, there are requirements for certain U.S. flag or U.S. interest vessels which are listed in section 700D below.

Amver's greatest use is in providing Rescue Coordination Centers (RCCs) with either a list of latitude/longitude or a graphical display of vessels near the position of a distress signal. These are called surface pictures (SURPICs). The RCCs use this data to coordinate the efforts of merchant vessels and other resources to provide the best and most timely assistance possible to distressed vessels or persons at sea.

The information provided by vessels is used to create "days on plot" which is the number of days a vessel actively participated in the Amver system. Awards are given for consistent participation.

Amver exchanges information with similar systems such as the Japanese Ship Reporting System (JASREP), the Australian Ship Reporting System (AUSREP), the Chilean Ship Reporting System (CHILREP) and will forward the Amver report when requested.

700C. History

The concept of the Amver system dates back to the RMS Titanic disaster in 1912. One of the lesson's learned was there were ships close by unaware that the Titanic was sinking. The idea of a ship reporting system that could identify other ships in the area of a ship in distress did not come about until after the invention of a computer. On April 15, 1958, the U.S. Coast Guard's Amver system became operational as an experiment in the North Atlantic Ocean with the operations center at the Customs House in New York City. Due to increased technology and international cooperation, by 1963 Amver was plotting vessels on voyages worldwide and continued to evolve over the next few decades saving lives at sea. Today Amver is very successful due to modern technology and vessel participation.

USCG Chief Petty Officer monitors ship traffic at the AMVER center in 1958

700D. U.S. Regulations

In accordance with U.S. Title 47, Code of Federal Regulations (CFR), Ch. 1, Sec 80.905, United States flag vessels which transport more than six passengers for hire and operate more than 200 nautical miles from the nearest land must participate in the Amver system while engaged on a voyage where the vessel is navigated in the open sea for more than 24 hours.

In accordance with U.S. Maritime Administration (MARAD) regulations, United States flag merchant vessels of 1,000 gross tons or more, operating in foreign commerce and, foreign flag vessels of 1,000 gross tons or more, for which an Interim War Risk Insurance Binder has been issued under the provisions of Title XII, Merchant Marine Act, 1936 must report and regularly update their voyage information and positions to the USCG Amver Center (in accordance with the instruction in the Amver manual provided on the U.S. Coast Guard website http://www.amver.com). This is done automatically by typing MAREP in line Y as described in the Format section, 700F.

Information voluntarily provided by vessels to Amver is kept strictly confidential, and is protected by the Coast Guard. It will be released only for safety purposes.

700E. Types of Reports

Sailing Plan (SP)
This report contains the complete routing information and should be sent within a few hours before departure, upon departure, or within a few hours after departure. It must contain enough information to predict the vessel's actual position within 25 nautical miles at any time during the voyage, assuming the Sailing Plan is followed exactly.

Position Report (PR)
This report should be sent within 24 hours of departing port and at least once every 48 hours thereafter. The destination should be included (at least in the first few reports) in case Amver has not received the Sailing Plan information.

Deviation Report (DR)
This report should be sent as soon as any voyage information changes which could affect Amver's ability to accurately predict the vessel's position. Changes in course or speed due to weather, ice, change in destination, diverting to evacuate a sick or injured crewmember, diverting to assist another vessel, or any other deviation from the original Sailing Plan should be reported as soon as possible.

Final Arrival Report (FR)
This report should be sent upon arrival at the port of destination. This report properly terminates the voyage in Amver's computer, ensures that vessel will not appear on an Amver SURPIC until it's next voyage, and allows the number of days on plot to be correctly updated.

700F. Format

Format		Example	Required
AMVER/[report type- 2 letter listed in section above]//		AMVER/PR//	All message types
A/	[Vessel name]/[call sign]//	A/VESSEL NAME/ABCD//	All message types
B/	[(6 digit date & time of position given)Z or UTC (month- 3 letters)]//	B/201200Z APR//	All message types
C/	[Latitude (DDMM N/S)]/[Longitude (DDDMM E/W)]//	C/4200N/17544W//	PR & DR
E/	[vessel's heading at time given- 3 digits]//	E/230//	SP, PR & DR
F/	[estimated SOG for remainder of voyage- 3rd digit in tenths of knots]	F/125// (12.5kts) or F/120// (12.0kts)	SP, PR & DR
G/	[name of port (country optional)]/[Latitude (DDMM N/S)]/[Longitude (DDDMM E/W)]//	G/LIVERPOOL UK/5325N/00300W//	SP
I/	[next port(country optional)]/[Latitude (DDMM N/S)]/[Longitude (DDDMM E/W)]/[ETA (6 digit date & time of position given)Z or UTC (month- 3 letters)]//	I/NEW YORK US/4042N/07401W/051230Z MAR//	SP, PR-advised & DR-if changes
K/	[name of port that you arrived in (country optional)]/[Latitude (DDMM N/S)]/[Longitude (DDDMM E/W)]/[(6 digit date & time of arrival)Z or UTC (month- 3 letters)]//	K/LOS ANGELES/3343N/11817W/031300Z DEC//	FR
L/	All Way Points (WP) in voyage plan, each way point is a new line. RL- Rhumb Line, GC- Great Circle, COASTAL- Coastal		SP & DR-if changes
	[Navigation Method between WPs (RL/GC/COASTAL)]/[Leg speed(Average)- 3rd digit in tenths of knots]/[WP1-Latitude (DDMM N/S)/Longitude (DDDMM E/W)]/[optional- landmark name]/[ETA (6 digit date & time of position given)Z or UTC (month- 3 letters)]//	L/RL/190/3448N/13954E/031300Z APR// L/RL/200/4200N/18000E/240850Z APR// L/RL210/4208N/16000W/280400Z APR// L/RL/202/3422N/12047W/300030Z APR//	
	list all the WPs on new line with format listed above starting with L/		
M/	[Vessel contact information for RCC use in an emergency]//	M/INMARSAT 1501562//	SP & PR (optional)
V/	[medical capability aboard vessel during the voyage. PA- Physician Assistant. NONE for no medically trained personnel aboard.]	V/NONE// V/NURSE// V/PA// V/MD// V/MD/NURSE//	SP (optional)
X/	[optional- comments or remarks to send to Amver only regarding current voyage that isn't urgent, such as changes in vessel data. In English.	X/REDUCED SPEED DUE TO WEATHER//	All message types (optional)
Y/	[request to relay Amver Report to MAREP, JASREP, AUSREP, and/or CHILREP]	Y/JASREP/MAREP//	All message types (optional except for US Flag ships)
Z/	EOR//	Z/EOR//	All message types

700G. Communication Methods for Amver Reports

WARNING: All distress messages must be sent to the nearest RCC, not Amver. Morse Code is discouraged due to the decline of it's usage.

E-mail

If a ship has an inexpensive means of sending electronic mail (e-mail) this is a preferred method. Amver's addresses are:
–amvermsg@amver.org
–amvermsg@amver.com

INMARSAT-C Amver/SEAS messages:

Ships that use INMARSAT-C may send combined Amver/Weather observation messages called SEAS Free of Charge via the Land Earth Stations (LESs) below:

LES name	LES ID	Satellite Region
Southbury	001	Atlantic Ocean Region-West (AOR-W)
Southbury	101	Atlantic Ocean Region-East (AOR-E)
Santa Paula	201	Pacific Ocean Region (POR)
Aussaguel	321	Indian Ocean Region (IOR)

Under a cooperative agreement between NOAA and the USCG, software has been created to assist Voluntary Observing Ships (VOS) and the government pays the transmission costs. Ships may participate in either program, but there are benefits to participating in both. A ship can reduce reporting requirements, since Amver position reports are created from every weather message and automatically forwarded to the USCG.

A typical voyage would require the submission of an Amver Sail Plan before departure, submissions of weather reports four times per day and the submission of an Arrival Report upon arrival. A Deviation Report is only submitted if the ship deviates from its original plan. Sail Plans can be stored in the system and recalled and modified rather than creating new ones. E-mail reports can be used for sending combined VOS and Amver, but INMARSAT-C is preferred method.

For more information see http://www.vos.noaa.gov for specific instructions on setting up your equipment or contact Amver directly.

Contact information
United States Coast Guard Amver Maritime Relations Office USCG Battery Park Building 1 South Street, 2nd Floor New York, New York 10004-1499 Telephone: 212 232 3862 Fax: 212 232 3866 Telex: 127594 AMVERNYK E-mail: amverinfo@d1.uscg.mil Computer Operations Hotline: 304 264 2500

700H. Special Warnings to Mariners

Special Warnings reflect U.S. Government policy on international incidents with political ramifications. The content of such Special Warnings is the responsibility of the Department of State and National Geospatial-Intelligence Agency (NGA). NGA is the disseminating agency for such messages since its Radio Navigational Warning Broadcast System can be received by all U.S. flag merchant ships.

United States flag vessels in an affected area are required to acknowledge receipt of a Special Warning through the use of the Remarks line (X line) in their next regular Amver report. For the purpose of this requirement, all vessels are deemed to be in an affected area if within 500 miles or 1 day's steaming of a reported incident.

PART II LONG RANGE IDENTIFICATION AND TRACKING (LRIT)

700I. Acronyms

AMTS:	**A**bsolute **M**aritime **T**racking **S**ervices, Inc.
ASP:	**A**pplication **S**ervice **P**rovider
BHD:	**B**usiness **H**elp **D**esk
CLS:	**C**ollecte **L**ocalisation **S**atellites
CFR:	**C**ode of **F**ederal **R**egulations
COTP:	**C**aptain **O**f **T**he **P**ort
EU:	**E**uropean **U**nion
EMSA:	**E**uropean **M**aritime **S**afety **A**gency
IDE:	**I**nternational **D**ata **E**xchange
IMO:	**I**nternational **M**aritime **O**rganization
LRIT:	**L**ong **R**ange **I**dentification and **T**racking System
MARAD:	**MAR**itime **AD**ministration
NDC:	**N**ational **D**ata **C**enter
nm:	**n**autical **m**ile
NOAA:	**N**ational **O**ceanic and **A**tmospheric **A**dministration
NWS:	**N**ational **W**eather **S**ervice
RCC:	**R**escue **C**oordination **C**enter
SAR:	**S**earch **A**nd **R**escue
SOLAS:	**S**afety **O**f **L**ife **A**t **S**ea
USCG:	**U.S. C**oast **G**uard

700J. U.S. LRIT Overview

Long Range Identification and Tracking (LRIT) is a satellite-based, real-time system that collects and disseminates position information received from of SOLAS class IMO member state vessels on international voyages bound for a U.S. port or traveling within 1000 nautical miles of the U.S. Coast.

The U.S. National Data Center (NDC) operated by the USCG, monitors foreign and domestic vessels with LRIT for an enhanced level of Maritime Domain Awareness. Business Help Desk (BDH) operators can perform a multitude of operations with a web-based user interface such as view and request vessel status, see vessel information, request vessel positions, and increase or decrease vessel reporting rates. The U.S. is connected with the International Data Exchange (IDE).

700K. U.S. Regulations

As per 33 CFR Part 169.205, LRIT must be used on all IMO member state passenger ships, including high-speed passenger craft, that carry more than 12 passengers; cargo ships, including high speed craft, of 300 gross tonnage or more; and self-propelled mobile offshore drilling units on international voyages and either bound for a U.S. port or traveling within 1000 nautical miles (nm) of the U.S. Coast.

Under 169.210, a U.S. flag ship covered by 169.205 must transmit position reports at all times while engaged on an international voyage.

The transmissions from a foreign ship covered by 169.205 may be received by the U.S. once it has announced its intention to enter a U.S. port or place under U.S. notice of arrival requirements in 33 CFR part 160, subpart C. Furthermore, the USCG is entitled to receive position reports from a foreign ship covered by 169.205 while navigating within 1,000nm of the U.S. baseline.

Refer to 33 CFR part 160 for more information on ship equipment requirements and exemptions.

700L. Non-compliant Vessels Entering U.S. Waters

46 U.S.C. 70115 and 33 U.S.C. 1231 provide statutes for civil and criminal penalties for violation of LRIT regulations. To ensure effective compliance, the USCG has a compliance strategy in the event of a knowing and willful violation. For example, if a ship that is arriving at a U.S. port has submitted an advance notice of arrival but its LRIT information has not been received, the COTP will be notified. Taking this and other information into account, the COTP may exercise various enforcement options including, when and if necessary, holding the ship offshore in U.S. territorial seas until it can be boarded and checked for security concerns.

700M. Non-U.S. LRIT Services

African States: Several African states have formed a LRIT Cooperative Data Centre. South Africa National Data Centre provides services to a number of African states, including Ghana and The Gambia.

Chile: LRIT Application Service Provider (ASP) is Collecte Localisation Satellites (CLS) for all Chilean and Mexican flagged vessels. Connected to the IDE.

Europe: LRIT Application Service Provider (ASP) is EU LRIT Data Centre through the European Maritime Safety Agency (EMSA).

Honduras: LRIT Application Service Provider (ASP) is Fulcrum Maritime Systems.

Liberia: Has a LRIT Data Center using Pole Star Space Applications. Connected to the IDE.

Marshall Islands: Has their own LRIT Data Center using Pole Star Space Applications. Connected to the IDE.

Panama: LRIT Application Service Provider (ASP) is Absolute Maritime Tracking Services, Inc. (AMTS) for all Panama flagged vessels. Connected to the IDE.

Vanuatu: LRIT Application Service Provider (ASP) is Collecte Localisation Satellites (CLS) for all Vanuatu flagged vessels. Connected to the IDE.

Venezuela: LRIT Application Service Provider (ASP) is Fulcrum Maritime Systems for all Venezuelan flagged vessels. Connected to the IDE.

Other Data Centers connected to the IDE as of January 2014:

- Algeria LRIT National Data Centre
- Antigua and Barbuda National LRIT Data Centre
- Argentina National Data Centre
- Australia National LRIT Data Centre
- Azerbaijan National LRIT Data Centre
- Bahamas National LRIT Data Centre
- Bahrain National LRIT Data Centre
- Bangladesh National LRIT Data Centre
- Barbados National LRIT Data Centre
- Bermuda (United Kingdom) National LRIT Data Centre
- Brazil Regional LRIT Data Centre
- Brunei Darussalam National LRIT Data Centre
- Cambodia LRIT National Data Centre
- Canada National LRIT Data Centre
- Cayman Islands (United Kingdom) National LRIT Data Centre
- China National LRIT Data Centre
- Columbia LRIT National Data Centre
- Comoros National LRIT Data Centre
- Democratic People's Republic of Korea National LRIT Data Centre
- Dominica National LRIT Data Centre
- EU Cooperative LRIT Data Centre
- Ecuador National LRIT Data Centre
- Egypt National LRIT Data Centre
- Faroe Islands (Denmark) National LRIT Data Centre
- India National LRIT Data Centre
- Indonesia National LRIT Data Centre
- Islamic Republic of Iran National LRIT Data Centre
- Isle of Man (United Kingdom) National LRIT Data Centre
- Israel National LRIT Data Centre
- Japan National LRIT Data Centre
- Jordan National LRIT Data Centre
- Kenya National LRIT Data Centre
- Liberia National LRIT Data Centre
- Malaysia National LRIT Data Centre
- Mauritius National LRIT Data Centre
- Montenegro National LRIT Data Centre
- Morocco National LRIT Data Centre
- Myanmar National LRIT Data Centre
- Nigeria National LRIT Data Centre
- Pacific Cooperative LRIT Data Centre
- Pakistan National LRIT Data Centre
- Philippines National LRIT Data Centre
- Plurinational State of Bolivia National LRIT Data Centre
- Republic of Korea National LRIT Data Centre
- Russian Federation National LRIT Data Centre
- Saint Kitts and Nevis National LRIT Data Centre
- Saint Vincent and the Grenadines National LRIT Data Centre
- Singapore National LRIT Data Centre
- South Africa National LRIT Data Centre
- Thailand National LRIT Data Centre
- Turkey National LRIT Data Centre
- Ukraine National LRIT Data Centre
- United Republic of Tanzania National LRIT Data Centre
- Vietnam National LRIT Data Centre
- Yemen National LRIT Data Centre

CHAPTER 8

COMMUNICATION INSTRUCTIONS FOR U.S. MERCHANT SHIPS

Chapter 8 sets forth instructions and procedures for U.S. merchant vessels to establish communucations in order to receive and send information to/from the Homeland Defense (HLD) organization, Naval Cooperation and Guidance for Shipping (NCAGS), during normal operations or times of crisis.

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CHAPTER 8

COMMUNICATION INSTRUCTIONS FOR U.S. MERCHANT SHIPS

PART I U.S. NAVAL COOPERATION AND GUIDANCE FOR SHIPPING (NCAGS)

800A. General

The purpose of this section is to provide guidance to ship owners, operators, Masters, and officers on the arrangements for Naval Cooperation and Guidance for Shipping (NCAGS) in order to enhance the safety of merchant ships and to support military operations. It provides information on the provision of NCAGS support.

In periods of crisis, conflict, national emergency or war, naval authorities may direct the movement of merchant ships (including routing and diversion) so that they may be better protected from hostilities and not interfere with possible active Naval and/or Joint Military Operations. The NCAGS organization is the principal U.S. resource to carry out this function. The purpose of NCAGS is to ensure the efficient management and safe passage of merchant ships.

This mission primarily involves:

– the establishment of an organization and framework for communicating directions, advisories, concerns, and/or information among operational forces, merchant shipping, and maritime organizations;
– the deconfliction of merchant vessel sailings/operations, for safety to preclude interference with naval activities;
– and making recommendations to the theater/ operational commander on the extent and type of protection that may be provided to merchant shipping.

800B. History of NCAGS

NCAGS was formerly known as NCAPS (Naval Coordination and Protection of Shipping). NCAPS was originally established to meet a Cold War-era national need to protect merchant shipping against a global open ocean threat. NCAPS policy included escorting and routing of large convoys of merchant shipping.

The threat to merchant shipping has changed and so has the Naval Control of Shipping (NCS) mission. The primary threat to U.S. merchant vessels is no longer considered to be traditional naval vessels under the flag of a known enemy; instead, the threat is terrorism. The NCAGS mission is to provide U.S. military commanders the information necessary to provide Maritime Domain Awareness (MDA). The goal of MDA is to assist in Homeland Defense (HLD) by maintaining as much real-time information as possible regarding merchant shipping, such as positions, destinations, cargo, etc. As a result, the NCAGS organization can provide U.S. and allied merchant vessels the information needed to help prevent terrorist attacks at sea or inport.

800C. NCAGS Organization

NCAGS doctrine has evolved with the changing threat posed both on merchant shipping and by merchant shipping in the context of regional operations and maritime HLD. The NCAGS organization addresses both the traditional protection and control of shipping in a region and the emerging requirement of maritime HLD, where merchant shipping may be either the protagonist, or target, requiring the establishment of communications to increase maritime situational awareness of merchant shipping. NCAGS doctrine applies to maritime HLD, contingency support, and general economic shipping.

Types of contingency support shipping include naval vessels of the Military Sealift Command (MSC), shipping operated or chartered by the U.S. Government to support naval operations or to meet U.S. policy objectives, crisis response shipping, and relief shipping chartered by government agencies.

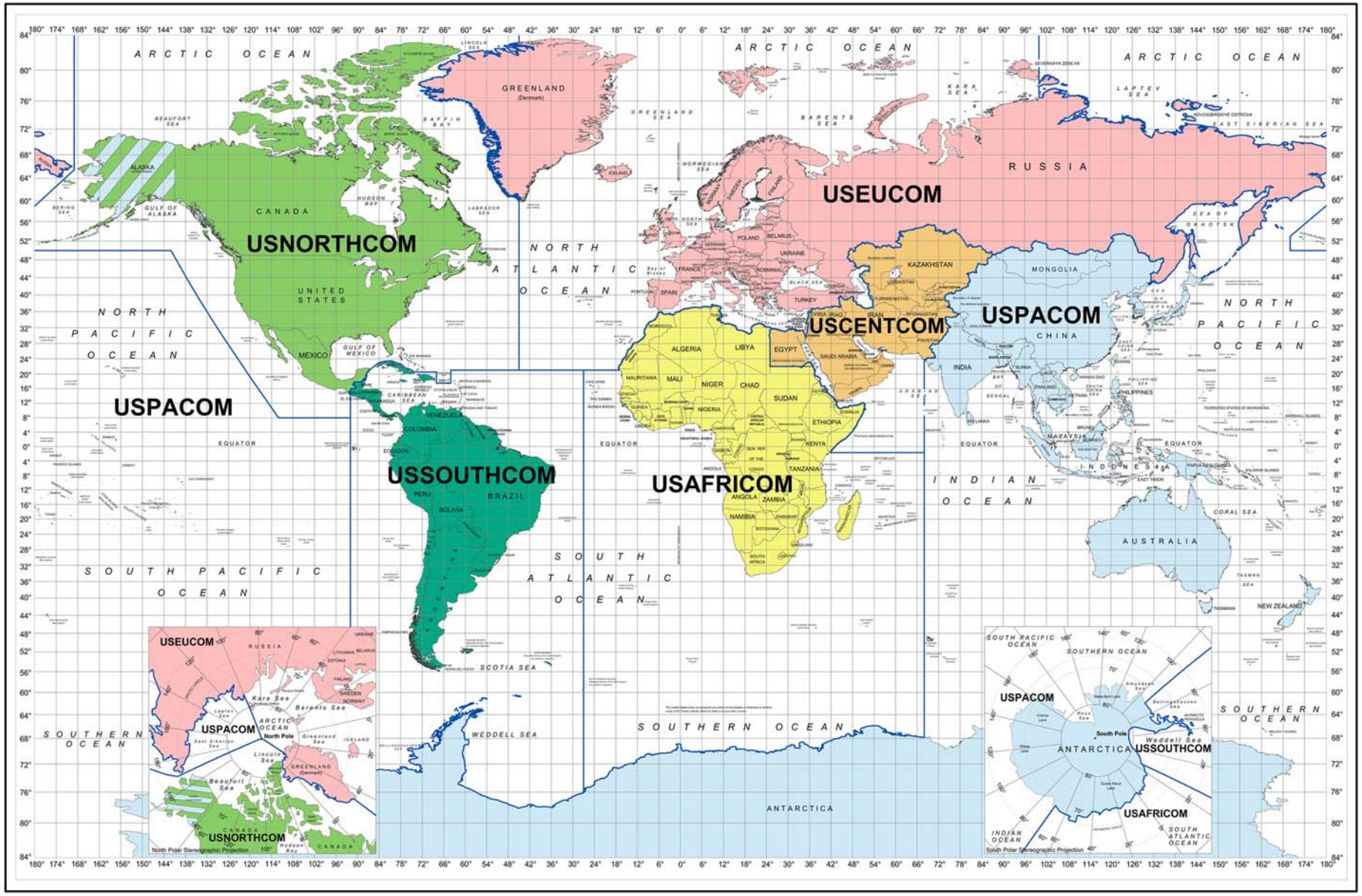
Types of economic shipping include vessels engaged in normal commercial trade worldwide, regardless of flag or ownership, or such other shipping that is not under the control or direction of the U.S. Government.

Specific to maritime HLD operations in the United States Northern Command (USNORTHCOM) Area of Responsibility (AOR), a new organization was developed in an effort to execute the required mission to improve maritime HLD and to support the USCG as the lead federal agency for maritime Homeland Security (HLS). As an element of the Joint Force Maritime Component Commander (JFMCC), the NCAGS organization provides direct support to USNORTHCOM's mission of conducting operations to deter, prevent, and defeat maritime threats and aggression. NCAGS works jointly with the United States Coast Guard (USCG). The NCAGS organization consists of Shipping Coordination Centers (SCCs) geographically positioned to assist in improving merchant shipping coordination and providing positional information of merchant vessels operating in the USNORTHCOM AOR. The SCCs are the first step in creating a global merchant vessel tracking capability for the maritime domain.

800D. Questions and Comments

Ship's Officers, ship owners, and operators are encouraged to submit questions and comments on procedures outlined in this chapter to:

U.S. FLEET FORCES COMMAND
1562 MITSCHER AVENUE SUITE 250
NORFOLK VA 23551-2487



THE WORLD WITH U.S. COMMANDERS' AREAS OF RESPONSIBILITY

PART II COORDINATION WITH NCAGS

800E. General

The primary organization responsible for executing the NCAGS mission is the Shipping Coordination Center (SCC). A SCC bridges the gap between military leaders responsible for HLD and U.S. merchant shipping. NCAGS support provided by the SCC includes military cooperation, guidance, advice, assistance, and supervision to merchant shipping to enhance the safety of U.S. and allied merchant ships and to support military operations by maintaining awareness of merchant shipping positions around the U.S. The purpose of NCAGS is to make use of cooperation between military and civil maritime authorities and agencies and the commercial shipping industry in order to facilitate an uninterrupted flow of maritime commerce in periods of peace and conflict and simultaneously minimize disruption to military operations.

The cooperation and frequent exchange of information achieve this goal. An accurate assessment of the merchant shipping picture is critical to the accomplishment of this goal. Masters will be asked to provide basic information concerning their ship, cargo, and voyage details. In times of increased tension or conflict, additional information may be requested. The response of Masters to information requests is one of the most important aspects of NCAGS. The commercial sensitivity of the information supplied by the merchant shipping community will be respected and protected.

The NCAGS organization will in turn ensure that appropriate military authorities are advised of these details for monitoring during the voyage. If deemed necessary, they will provide the merchant Master with up-to-date information concerning the situation and specific information on the voyage. This information can range from basic situation briefs to the provision of routes, lead through, or escort. Safe passage responsibility remains with the Master.

The principal benefits of NCAGS to merchant shipping include:

– Improved safety and security.
– Minimized disruptions to passages through areas where military operations are being conducted.
– Quicker reaction to terrorism.
– A better understanding of military constraints.
– Minimized disruption to commercial schedules.

The principal benefits of NCAGS to the military commander include:

– A more comprehensive picture of merchant activity and positions of merchant ships.
– Deconfliction of merchant ships in military operations.
– Enhanced safety and security of merchant ships.
– Improved effectiveness of military operations.
– A better understanding of commercial constraints.

800F. Elements of the NCAGS

The NCAGS is flexible in order to meet the needs of the military commander and merchant shipping. It may comprise some or all of the following elements tailored to suit the situation depending on the level of NCAGS support required.

– Shipping Coordination Center (SCC): The SCC is a permanent organization, tasked with establishing and maintaining links with the military, merchant shipping, HLD and HLS agencies, such as the USCG. The SCC will:
  – Provide MDA by maintaining a merchant shipping plot of the assigned AOR.
  – Generate Notice to Mariners (NOTMARs) as necessary regarding acts of terrorism or military operations.
  – Advise civil maritime authorities, via Maritime Administration (MARAD), of general shipping risks in the area.
  – Establish Shipping Risk Areas (SRAs) and recommend routing of shipping.
– Shipping Coordination Team (SCT): The SCT is an expeditionary team that can be deployed to a specific region to gather information on local merchant shipping and naval operations and will provide the means to brief merchant shipping on risks, routing, and organization for protection. The SCT will, depending on the level of an operation, encompass coordination and guidance to local military commanders and merchant Masters. The location of SCTs can be ashore or afloat. The SCT liaises with local and regional authorities including port authorities, shipping agents, and local shipping companies and reports ship movements to local military commanders to help deconflict military operations with merchant shipping.
– NCAGS Liaison Officer (LNO): An officer deployed aboard a merchant ship to provide liaison between the merchant ship Master and military authorities. The LNO is the naval advisor to the merchant Master. His position on board does not affect the Master's responsibilities for the safe navigation and safe handling of the ship. The LNO makes military knowledge available to the Master to allow the Master to understand the naval and military requirements that are applicable.
– Shipping Risk Area (SRA): When necessary, a SRA may be recommended by a SCC or SCT. A SRA is a geographically defined portion of the NCAGS area where an elevated risk to merchant shipping exists. Risks can include potentially hostile acts, navigational restrictions that require an elevated closer management of shipping traffic, or naval forces operations that may conflict with routine safe passage. More than one SRA can be established within an NCAGS area. SRAs are established by the local military commander.

PART III COMMUNICATIONS WITH NCAGS

800G. General

The role of NCAGS in keeping the seas safe and providing the essential framework needed to allow commercial and military shipping to operate together in a crisis is dependent on effective communications with merchant shipping at sea or inport. The SCC or SCT will exchange data at the unclassified level with merchant shipping authorities and with elements of the NCAGS organization. This part provides guidance to Masters who may need to communicate with military forces. Communications with merchant ships by the military are accomplished via the Global Maritime Distress and Safety System (GMDSS) and other commercial means. Under normal circumstances, ships working with NCAGS will maintain their normal peacetime communications. However, if the situation so dictates, they may be required to maintain additional communications methods.

800H. Methods of Communication

GMDSS: Every effort is made by the NCAGS organization to provide communications for merchant vessels to either the SCC or SCT so that ships can communicate easily and regularly with them using Inmarsat-C. Generally telex, fax, email, and voice, when available, are used as the primary means for the NCAGS organization to contact ships either through owners, directly to the ships if this has been made available, or via commercial organizations who specialize in passing messages.

Navigational Warnings (NAVWARNs)/Notice to Mariners (NOTMARs): The military authorities will pass safety information for the NCAGS AOR, promulgated by broadcast methods, via NAVWARNs, NOTMARs, and MARAD Advisories. These warnings will describe possible military operations in an AOR. Notices will include toll free telephone numbers a merchant Master or agent can call to obtain real-time information regarding an ongoing crisis or military operation.

Military Points of Contact: A SCC, SCT, or NCAGS LNO can provide merchant shipping with their main means of communications in an elevated risk situation via GMDSS, NAVWARNs/NOTMARs, or embarked LNO.

Communication Reporting Gate (CRG): In an AOR, there is a good possibility that your ship will be called, or challenged, by naval vessels or military aircraft on the VHF calling frequency. To allow merchant ships to contact naval vessels in the AOR, information will be distributed directly to the Master via LNO, naval vessels in the local area, or local advisory notices by various means including, but not limited to, NOTMARs, e-mail, or websites. However, naval units can normally be contacted through standard calling VHF frequencies.

CRG is established to provide a position/line for merchant ships to call NCAGS in order to establish initial contact or to update previous information. A CRG should be positioned in such a way that a minimum notice period of 36 hours is available to merchant ships to contact their owners/operators for onward passage instructions before reaching the AOR. The CRG will normally be represented as lines of latitude or longitude that encompasses the area concerned.

Ships will be notified of the CRG details for the AOR and the reporting requirements will be promulgated to merchant ships through a variety of means, such as by the SCC, SCT advisory notices, or NAVWARNs. Instructions will normally contain details of the information required, the occasions of reporting, and to whom the report is to be sent. Ships will be asked to forward a Format Alfa before arriving at the CRG.

800I. Forms and Message Formats

(Ref: ATP-2, Vol. II)

Format Alfa: Format Alfa is the principal means by which merchant ship data is collected for use by the NCAGS. The Format Alfa will be requested to be forwarded at least 24 hours prior to entering the area of operations and then, if possible, every 6 hours until exiting the area of operations. The form is divided into four sections:

– Section A covers basic details of the vessel.
– Section B covers details of the current voyage.
– Section C covers details of the ship's operator.
– Section D covers cargo data.

NOTE: Date and Time should be entered either by the date followed by a four digit time (18.Oct 97 21.00 UTC) or a Date-time Group (DTG). The military method of expressing date and time is contained within the DTG and is written in the following manner:

DDHHMMZ MON YY

therefore, the DTG 182100Z JUL 98 describes a time of 21:00 (GMT/UTC) on the 18 July 1998. Military units routinely describe GMT/UTC as time zone "Zulu" abbreviated to "Z."

– Section A - Ship Data:
  (1) Ship's name.
  (2) International callsign.
  (3) Type of vessel.
  (4) Flag of registry.
  (5) IMO number.
  (6) Port of registry.
  (7) Overall length.
  (8) Vessel's width.
  (9) Maximum draft for present voyage.
  (10) Vessel's gross tonnage.
  (11) Speed:
    (a) Service speed.
    (b) Maximum speed.

(c) Minimum speed.
(12) Significant appearance of vessel for optical recognition.
(13) Inmarsat/DSC number.
(14) Name of communication station being copied.
(15) State whether pocket-sized automatic crypto equipment (PACE) and keying material is held.
(16) Fax number.
(17) Email address or telex number.
(18) Other communication means.

– Section B - Voyage Data:
(19) Intended movement - description of passage.
(20) Last port/country of call including actual date and time of departure from last port.
(21) Next port of call, including ETA at next port of call.
(22) Current position.
(23) Date/time and position entering the region.
(a - x) Waypoints of intended track through AOR (date/time - latitudes/longitudes).
(24) Position and date/time of departing the region.

– Section C - Operator Data:
(25) Name of ship owner/operator including address of ship owner, name of charterer (if any), and address of operator/charterer.
(26) Flag of ship operator.
(27) Email address of the above.
(28) Telephone number of above.
(29) Fax number of above.

– Section D - Cargo Data:
(30) Quantity and nature of main/relevant cargo.
(31) Shippers of main/relevant cargo (name and address).
(32) Origin of main/relevant cargo.
(33) Consignee of main/relevant cargo.
(34) Final destination of main/relevant cargo.
(35) Special queries appropriate to current operation such as "State if any cargo/person is carried being subject to UN sanctions, by YES or NO (if the answer to the query is YES, then describe on a separate sheet)."

Ship Data Cards: Ship Data Cards are amplifications of the information provided by the merchant ship on the Format Alfa that is used to facilitate cooperation between merchant ships and military assets. Masters will be asked to supply only information that is not available from other open sources, such as agents and the Internet.

Sailing Instructions (SI): SI are issued to all ships transiting a SRA and any other ships requiring specific guidance. The issue of a SI indicates that the Master has accepted the routing guidance contained within the SI. NCAGS will monitor the ship's passage and divert the ship if the threat or risk changes and a diversion message will be sent to the Master.

Diversion Order: A message from NCAGS ordering a diversion from the existing route for any reason. The first words of the text will be the identifier "DIVERSION ORDER" followed by:
(1) The reason for diversion.
(2) The position or time at which the diversion is to take place.
(3) New positions through which ships are to pass. Each position is to be preceded by its two letter designator.
(4) The immediate destination and amended ETA.

Example:
DIVERSION ORDER
(1) Acts of terrorism in your vicinity.
(2) Divert at position AB.
(3) Pass through new positions BL 4245N04800W, BM 4230N05500W, then to original position AE and original track.
(4) Amended ETA Baltimore 160800Z Jan.

Passage Amendment: This message is to be sent by a ship to report passage amendments involving changes in destination or differences of greater than 6 hours variance from the original passage plan intentions reported by Format Alfa. The message will be addressed to the original addressee of the Format Alfa. The first words of the text will be the identifier "FORMAT ALFA PASSAGE AMENDMENT" followed by:
(1) The international call sign, IMO number, and name of the ship.
(2) Position at . . . . . .
(3) Great circle or rhumb line track and speed.
(4) Name of next port of call.
(5) ETA at next port of call.

Example:
FORMAT ALFA PASSAGE AMENDMENT
(1) WGLW, 9076236, SS YOUNG AMERICA.
(2) 4315N 03515W at 181500Z Aug.
(3) Rhumb line/l9.
(4) Baltimore.
(5) 221200Z Aug.

PART IV CONTAMINATION PREDICTION SYSTEM FOR MERCHANT SHIPS AT SEA AND THE MERWARN SYSTEM

800J. Significance of NBC Warnings

Radioactive fallout from nuclear explosions and chemical and biological contamination (hereafter collectively referred to as contamination) on sea and land targets, particularly the latter, may affect large areas of adjacent waters. The areas affected will depend upon the prevailing wind conditions, and any ship close to or approaching these areas will be in grave danger. It is therefore essential that shipping should be warned of the fallout hazards and contamination in order that:

– Passive defense measures, such as activating washdown systems, may be taken.
– Course may be altered, if necessary, to avoid the dangerous zones.

800K. The MERWARN System, Warnings to Merchant Ships at Sea

A simplified contamination warning system has been established throughout NATO for broadcasting, via MERCOMMS and coastal radio stations, warnings of contamination dangerous to merchant shipping. This system calls for the origination, by NATO naval authorities, of five types of messages:

– MERWARN NBC Effective Downwind Message (MERWARN NBC EDM).
– MERWARN NBC 3 NUC.
– MERWARN NBC Chemical Downwind Message (MERWARN NBC CDM).
– MERWARN NBC 3 CHEM.
– MERWARN DIVERSION ORDER.

In some cases it may be better to provide warning of contamination by means of general plain language messages rather than by these formats.

800L. MERWARN Originating and Diversion Authorities

MERWARN Originating and Diversion authorities will be designated by national or NATO commanders before commencement of operations.

800M. Precedence of NBC Messages

All MERWARN NBC messages should be given FLASH (Z) precedence to ensure rapid handling on any military circuit between the originating authority and the MERCOMMS and/or coastal radio stations. This precedence should not be used where the rules for the use of the international safety signal (SECURITAY for voice circuits) apply.

800N. Method of Promulgation

All MERWARN NBC EDM, MERWARN NBC CDM, MERWARN NBC 3 CHEM and NBC 3 NUC messages will be transmitted in plain language, using GMT, preceded by the international safety signal, from the appropriate MERCOMMS station and from all the coastal radio stations of the area concerned. Masters need not concern themselves with the identity of the MERWARN originators, but only with the sea areas covered by each message.

800O. Relay Responsibilities

Originating authorities are responsible for relaying to:

– The appropriate Coast Earth Station (Inmarsat CES), Coast Radio Station (CRS) under their control, and/or other CRS in their geographic area.
– Their own national authorities (for transmission to merchant ships not yet copying MERCOMMS).
– Adjacent MERWARN originators and shipping diverting authorities within the geographical area affected by each MERWARN NBC 3 NUC message.

NOTE: Adjacent MERWARN originators are responsible for relaying to CES/CRS under their control as necessary.

800P. Danger Zones

All shipping in waters out to 200 nautical miles from any coast at the outset of war must be regarded as being in an area of possible fallout danger from nuclear attacks on shore.

800Q. MERWARN NBC EDM

MERWARN NBC EDM is a prediction, for a specified sea area and time interval, of the fallout which will result from a 1 megaton (MT) nuclear surface explosion. It will give the Master of a ship, observing a nuclear explosion, an immediate indication of the area likely to be affected by fallout.

MERWARN NBC EDM will be issued at 12 hour intervals from the time of activation of the MERCOMMS system, and will be valid 12 hours ahead from the date and time given in the first line of the message (line A). In the event of changing meteorological conditions it may be necessary for the originating authorities to issue MERWARN NBC EDM more frequently. The original MERWARN NBC EDM will automatically be overruled by the latest MERWARN EDM issued.

The following standard format will be used:

A. Message identifier (MERWARN NBC EDM) and date-time group (GMT) from which valid for 12 hours ahead.
B. Specified sea area for which valid.
C. Effective downwind direction (in degrees, three digits) and effective downwind speed (in knots, three digits).
D. Downwind distance of Zone 1 (in nautical miles, three digits).
E. Additional information.

Example:

A. MERWARN NBC EDM 180600ZSEP1999
B. BALTIC SEA WEST OF 15°00′E
C. 045-020
D. 078
E. NIL

NOTE: Sets B, C, and D may be repeated for different sea areas should this be considered necessary.

800R. MERWARN NBC 3 NUC, Standard Format

MERWARN NBC 3 NUC will be issued after a nuclear attack producing fallout, and gives fallout data for a specific explosion or series of explosions, which will be identified in the message.

MERWARN NBC 3 NUC messages are issued as soon as possible after the attack, and at 6 hour intervals (to the nearest hour) thereafter, for as long as fallout danger exists. They contain information which enables the Master of a ship to plot the danger area.

The standard format of MERWARN NBC 3 NUC contains the sets ALFA, DELTA, FOXTROT, and PAPAB of the military NBC 3 NUC message.

The MERWARN NBC 3 NUC has the following structure:

MERWARN NBC 3 NUC (Message identifier)

ALFA: Strike Serial Number (as defined by the naval authority).

DELTA: Date-time Group of detonation (GMT).

FOXTROT: Location of attack (latitude and longitude, or geographical place name) and qualifier (two digits as follows: AA=Actual Location, EE=Estimated Location).

PAPAB: Effective wind speed (three digits and unit of measurement), downwind distance of Zone 1 (three digits and unit of measurement), cloud radius (two digits and unit of measurement), left and right radial line of the predicted fallout hazard area (three digits and unit of measurement each).

Example:

MERWARN NBC 3 NUC

ALFA/UK/NBCC/02-001/N//
DELTA/021405ZSEP1999//
FOXTROT/451230N014312E/AA//
PAPAB/012KTS/028NM/02NM/272DGT/312DGT//

800S. MERWARN NBC 3 NUC, Plain Language Format

The MERWARN NBC 3 NUC standard format may not be suitable after a multiple nuclear attack which produces fallout from several bursts in a large or complex target area. In such cases warnings will be plain language statements of a more general nature, indicating area affected and expected movement of the fallout.

Example 1:

MERWARN NBC 3 NUC

ALFA/UK/02-001/N//
DELTA/021405ZSEP1999//
Fallout extends from Glasgow area to eastern Ireland at 021405Z and is spreading westwards with 12 Knots. Irish Sea is likely to be affected within an area of 60 nautical miles of the British coast.

Example 2:

MERWARN NBC 3 NUC

ALFA/IT/15-001/N//
DELTA/150630ZFEB1999//
Fallout is estimated to be occurring at 150830Z over Adriatic Sea east of the coast line Bari/Brindisi up to a distance of 30 nautical miles. Fallout is moving south-eastwards with 016 Knots, getting weaker. It is not expected to be dangerous after 151000Z.

800T. MERWARN NBC CDM

The MERWARN NBC CDM message contains information needed for CHEM/BIO hazard prediction by the master of a merchant ship. The MERWARN NBC CDM will be issued as required via the MERCOMMS and will be valid as specified. In the event of changes in the meteorological conditions, the MERWARN NBC CDM will be updated as required.

The following standard format will be used:

ALFA: Message identifier (MERWARN NBC CDM), date-time group (GMT) from which valid 6 hours ahead.

BRAVO: Specified sea area for which valid.

CHARLIE: Representative downwind direction (degrees, 3 digits) and representative downwind speed (knots, 3 digits).

DELTA: Maximum downwind hazard distance (nautical miles, 3 digits).

ECHO: Additional information.

Example:

ALFA MERWARN NBC CDM 180600ZSEP1999//
BRAVO BALTIC SEA WEST OF 15°00′E//
CHARLIE 045/020//
DELTA 010//
ECHO NIL//

800U. MERWARN NBC 3 CHEM

This message is issued to pass immediate warning of a predicted chemical contamination and hazard area. MERWARN NBC 3 CHEM reports are issued as soon as possible after each attack. They contain sufficient information to enable the master of a ship to plot the downwind hazard area.

The following standard format will be used for MERWARN NBC 3 CHEM:

MERWARN NBC 3 CHEM (Message identifier)

ALFA: Strike Serial Number (as defined by the naval authority).
DELTA: Date-time group (Z) of start and end of attack.
FOXTROT: Location of event.
GOLF: Delivery Means.
INDIA: Release Information.
PAPAA: Predicted attack and hazard area.

NOTE: If representative downwind speed is 5 knots or less, or variable, this letter item will consist of three (3) digits instead of coordinates, representing the radius of a circle in nautical miles centered on the location of the attack contained in set FOXTROT.

YANKEE: The representative downwind direction and speed.
ZULU: Information on actual weather conditions.
GENTEXT: Remarks.

NOTE: Some of the letter items above may not be completed in the report that is received, but there will be sufficient information for a Downwind Hazard plot to be carried out.

The MERWARN NBC 3 CHEM standard format may not be suitable after a multiple chemical attack, which produces a hazard from several attacks or depositions in a large or complex target area. In such cases warnings will be plain language statements of a more general nature, indicating areas affected and expected movement of the hazard.

Example 1:

MERWARN NBC 3 CHEM

ALFA/DA/NBCC-4/003/C//
DELTA/020300ZSEP1999//
GENTEXT/PERSISTENT NERVE AGENT VAPOR HAZARD EXISTS FROM NORFOLK TO HATTERAS AT 020300Z SEP 1999 AND IS SPREADING SOUTH-EASTWARDS AT 017 KNOTS. SEA AREA OUT TO 100 NAUTICAL MILES FROM COAST LIKELY TO BE AFFECTED BY 020600ZSEP1999//

Example 2:

MERWARN NBC 3 CHEM

ALFA/DA/NBCC-3/003/C//
DELTA/020300ZSEP1999//
GENTEXT/PERSISTENT NERVE AGENT VAPOR HAZARD AT 020600Z SEP 99 IS ESTIMATED TO BE OCCURRING OVER MOST OF THE SEA AREAS OUT TO 40 MILES EAST OF THE COAST LINE FROM NORFOLK TO HATTERAS. HAZARD IS EXPECTED TO HAVE DISPERSED BY 021000Z SEP1999//

800V. MERWARN DIVERSION ORDER

In addition to the origination of MERWARN NBC EDM and MERWARN NBC 3 NUC messages, naval authorities may, if circumstances dictate, broadcast general diversion orders, based upon the fallout threat, whereby merchant ships proceeding independently will be passed evasive routing instructions of a more general nature, using the standard NCS identifier MERWARN DIVERSION ORDER.

Example:

A. MERWARN DIVERSION ORDER
B. English Channel closed. All shipping in North Sea remain north of 052 degrees N until 031500ZSEP1999.

800W. Other Warnings

ATP-2, Vol II, gives instructions for the display of signals by ships which have received a MERWARN NBC 3 NUC message which affects their area. Ships arriving from sea but remaining beyond visual/aural range of shore stations should continue to keep radio watch in order to receive MERWARN messages.

800X. Ground Zero

The point at the surface on sea or land immediately below or above a nuclear explosion is called Ground Zero (GZ).

800Y. Effective Downwind Direction and Downwind Speed

Winds in the atmosphere vary considerably with height, both in direction and speed, and have a major influence on the distribution of radioactive fallout from a nuclear cloud.

The worst contamination will fall to the surface along a path represented by the average wind between the surface and the middle of the nuclear cloud.

Based upon meteorological information on the wind conditions in the airspace between the surface and the height of the nuclear cloud, NBC Collection Centers will compute the average direction and speed of the radioactive particles' path from the nuclear cloud to the surface.

The results of this computation make up the fallout prediction, expressed in the terms of effective downwind direction and speed. It should be noted that the direction of the effective downwind is the direction towards which the wind blows. This direction is also known as the fallout axis.

The surface wind will usually be considerably different from the effective downwind, both in direction and speed, and the surface wind should never be used to estimate the drift of fallout.

800Z. Fallout Pattern Criteria

The predicted fallout area consists of two zones, Zone 1 and Zone 2, with the following characteristics:

– Zone 1 is the zone of immediate concern. Within this zone there will be areas where exposed, unprotected personnel may receive doses of 150 cGy (rads) or greater, within 4 hours. Casualties among personnel may occur within portions of this zone.
– Zone 2 is the zone of secondary hazard. Within this zone the total dose received by exposed, unprotected personnel is not expected to reach 150 cGy (rads) within a period of 4 hours after the actual arrival of fallout, not even when the radioactive fallout remains on the deck of the ship.

Outside these two zones the risk will be negligible.

800AA. Fallout Plotting in Merchant Ships

When a nuclear explosion is reported in a MERWARN NBC 3 NUC message, the Master of a merchant ship should immediately plot the fallout area on a chart, using the information contained in the message. A plot example accompanies the next section.

When a MERWARN NBC 3 NUC is not available (for example, when a nuclear detonation is observed from the ship) the data contained in the current MERWARN NBC EDM should be used. The plotting procedures are almost identical in the two cases.

For purposes of simplification, merchant ships are to use cloud radii and safety distance as follows:

– Plotting from MERWARN NBC EDM: Use cloud radius 10 nautical miles and safety distance 15 nautical miles in all cases.
– Plotting from MERWARN NBC 3 NUC: Use the cloud radius given in the MERWARN NBC 3 NUC and, in all cases, a safety distance of 15 nautical miles.

Plotting should be performed in the following manner:

– Plot the location of the detonation (ground zero) on the chart. Look up the fourth and fifth field of set PAPAB (left and right radial line of the fallout area) and calculate the bisector. This line is the equivalent to the downwind direction. Draw a downwind axis from GZ in the downwind direction, as calculated above. Draw two additional downwind radial lines from GZ, 20° to either side of the downwind axis.
– Using GZ as center and the downwind distance of Zone 1 (second field of set PAPAB) as radius, draw an arc between the two radial lines on each side of the downwind axis. Draw a second arc between the radial lines to represent Zone 2, doubling the downwind distance for radius.
– Using GZ as center, draw a semicircle upwind (opposite the downwind axis and radials) using the cloud radius (third field of set PAPAB).
– From the intersections of the Zone 1 arc with the two radial lines, draw straight lines to the ends of the cloud radius semicircle.
– To determine the area in which fallout deposition is predicted to occur at any given time after the detonation:
– Multiply the effective downwind speed (first field of set PAPAB) by the time after the burst (in hours), the result being a distance in nautical miles.
– To and from this distance add and subtract a safety distance of 15 nautical miles to allow for finite cloud size, diffusion, and wind fluctuations. The result will be two distances.
– With GZ as center and the two safety distances obtained above as radii, draw arcs across the plotted fallout area.
– The area enclosed between the two arcs will contain, in most cases, the area of deposition of fallout at this particular time after the burst.

800AB. Plotting from MERWARN NBC 3 NUC

Example:

Given:

MERWARN NBC 3 NUC

ALFA/UK/NBCC/09-001/N//
DELTA/091715ZSEP1999//
FOXTROT/PLYMOUTH/AA//
PAPAB/018KTS/040NM/05NM/275DGT/315DGT//

Problem: Determine the predicted fallout area and the area within which fallout is predicted to deposit at the surface at 091845ZSEP1999.

Solution (See figure.):

– On the chart plot GZ. Calculate the downwind direction 295 degrees as bisector from left and right radial line (from set PAPAB, fourth and fifth field). Draw a downwind axis from GZ on a bearing of 295° for a

distance of 80 nautical miles. Draw two radial lines from GZ, bearing 275° and 315°, both 80 nautical miles long. (80 is twice the downwind distance of Zone 1.)

– Using GZ as center, draw arcs between the radial lines at 40 nautical miles downwind to mark Zone 1, and at 80 nautical miles downwind to mark Zone 2.
– From the third field of set PAPAB, the cloud radius is 5 nautical miles. With GZ as center and 5 nautical miles as radius, draw the cloud radius semicircle upwind of GZ.
– From the intersections of the Zone 1 arc with the radial lines, draw straight lines to the ends of the cloud radius semicircle.
– 091845Z is 1.5 hours after the burst. From the first field of set PAPAB, obtain the effective downwind speed; 18 knots:

  18 kts x 1.5 hr = 27 nautical miles.

  The safety distance is always 15 nautical miles.

  27 + 15 = 42 nautical miles, and 27 - 15 = 12 nautical miles.
– With GZ as center and 42 and 12 nautical miles as radii, draw arcs across the fallout pattern. The area enclosed by the two arcs and the boundary of the pattern is the area within which fallout is predicted to deposit at the surface at 091845ZSEP1999.

800AC. Contamination Plotting in Merchant Ships

When a chemical attack is reported in a MERWARN NBC 3 CHEM message, the following procedure should be followed:

– Plot the location of the attack from the details in set FOXTROT.
– Plot the coordinates or radius of the circle contained in set PAPAA.

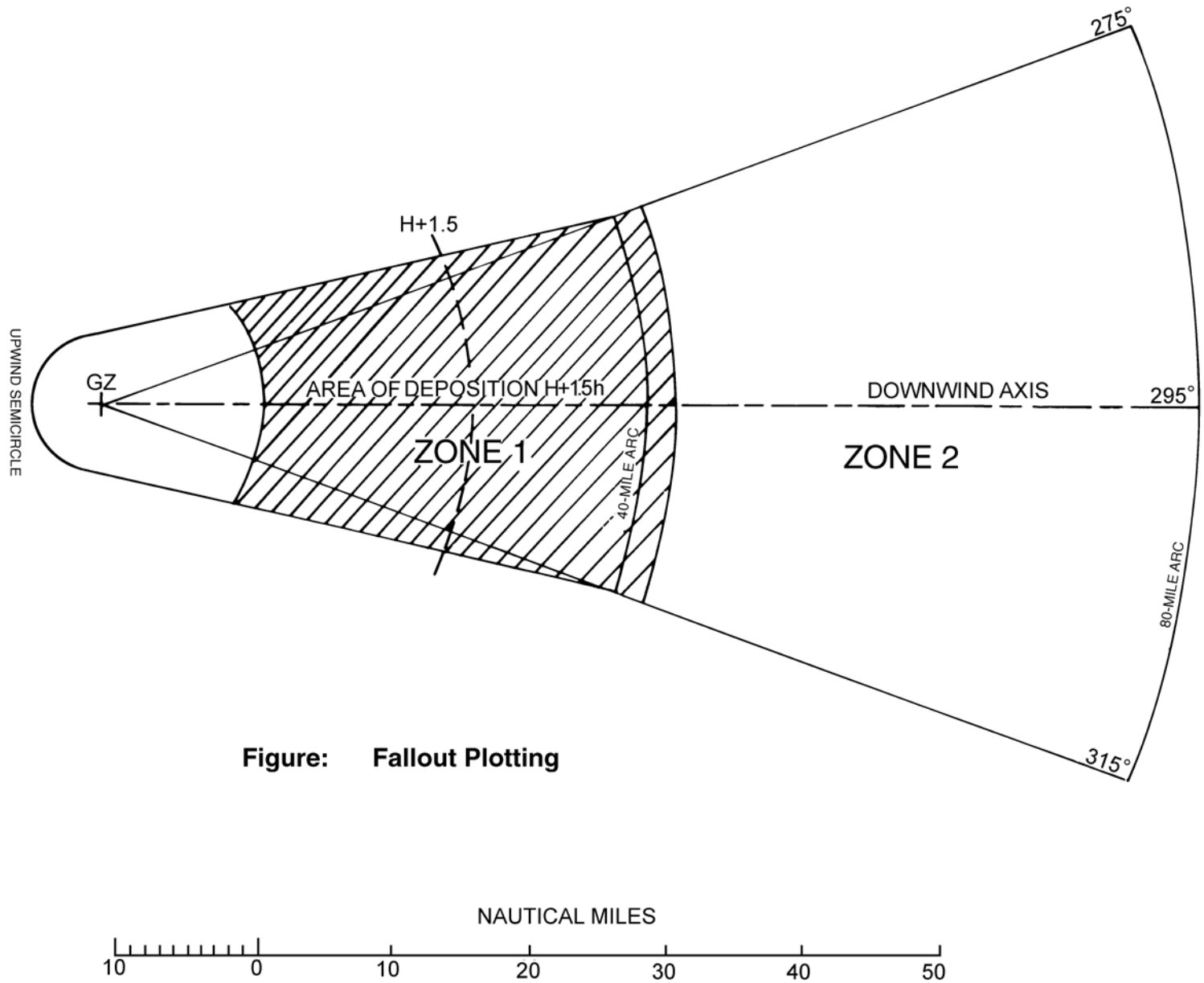


Figure: Fallout Plotting

APPENDIX A

INSTRUCTION TO MASTERS IN AN EMERGENCY ON DEFENSE AGAINST NUCLEAR FALLOUT

Attacks with nuclear weapons may be expected on land targets adjacent to your route. Such attacks are likely to result in radioactive fallout being deposited over large areas of sea, through which you may have to pass. It may be possible to issue a general warning to indicate which areas are likely to be dangerous at any particular time.

As fallout will probably be in the form of fine dust which may be invisible, you should observe the following precautions during nuclear fallout.

If your ship is equipped with the necessary instruments to detect fallout, these precautions may be relaxed accordingly.

PRECAUTIONS TO BE TAKEN: If your ship has a prearranged radioactive countermeasure plan prepared, ensure that all measures laid down in that plan are carried out. If no such plan is in existence, improvise measures as indicated below:

– Select a group, or groups, of compartments as low in the ship and as far removed from the ship's side as possible within which the crew can take shelter. These spaces should be equipped with washing and lavatory facilities, and sufficient food should be stowed there to last for the passage through the dangerous area. Spaces selected should be capable of being completely shut down with all ventilation and other openings secured.
– Strike below or cover as much gear on the weather decks as possible, particularly absorbent materials such as line, awnings, etc. Ensure that food stores and galleys are secured with all openings closed. Stop all ventilation fans and close or cover all ventilation and other openings which are not essential for running machinery and continued steaming. In the absence of suitable closures, the use of canvas covers, adhesive tape, etc., is recommended.
– Rig all available fire-fighting and deck washing hoses and nozzles to spray water continuously over as much of the weather decks and superstructure as possible, to prevent contamination settling. If complete coverage is impossible, concentrate effort on the navigating position, over the top of the shelter position(s), and above the machinery spaces.
– If a continual spraying of the upper works is impracticable, organize working parties at frequent intervals to wash down the weather decks and superstructure to reduce the buildup of contamination.
– Reduce the number of your crew who must remain on the weather decks or in positions near the weather decks, or in machinery spaces, to the bare minimum required for safe steaming, and keep the remainder in the selected shelter position(s).
– Ensure that all who must remain in exposed positions (including machinery spaces, unless ventilation can be stopped) are fully clothed, preferably in foul weather clothing, with all the skin covered so far as practicable.
– During the passage, so far as the numbers of appropriately skilled personnel allow, change around those manning exposed or relatively unsheltered positions (including the machinery spaces) as often as possible in order to spread the radiation dosage. Remember that this advice also applies to the Master, who should take as much shelter as the safe navigation of the ship will permit.
– Ensure that all who have been exposed remove at least their outer clothing on returning to shelter, wash thoroughly their exposed skin (especially hands, face, and neck) as soon as possible, and in any case before drinking or eating.
– Restrict unnecessary movement throughout the ship to minimize the possible spread of contamination.
– Unless absolutely necessary, do not distill water for drinking while in a dangerous area.
– As soon as possible after clearing a dangerous area, carry out a thorough hosing down of the all weather decks and superstructure.

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Germany	Die Weser	1
Germany	Eiderstedt	4
Germany	Flensburg	4
Germany	Haburg	3
Germany	Hamburg	1,4
Germany	Helgoland	4
Germany	Kiel	4
Germany	Lübeck	4
Germany	Mainflingen	2
Germany	Norddeich	4
Germany	Offenbach/Pinneberg	3
Germany	Rostock	4
Germany	Rügen	4
Germany	Seefiml (Hamburg)	3
Germany	Sylt	4,6
Ghana	Ada Radio	4
Ghana	Aflao	4
Ghana	Axim	4
Ghana	Cape Coast	4
Ghana	Half Assini	4
Ghana	Takoradi	4

RADIO AIDS TO NAVIGATION BY COUNTRY

Ghana	Tema Radio	4
Ghana	Winneba	4
Greece	Andros	4
Greece	Aspropirgos Radio	4
Greece	Astypalea	4
Greece	Brochas Kritis	4
Greece	Corfu	3
Greece	Faistos	4
Greece	Gerania	4
Greece	Heraklion	3
Greece	Iraklion Radio	4
Greece	Karpathos	4
Greece	Kefallinia	4
Greece	Kerkyra	4
Greece	Khios	4
Greece	Kithira	4
Greece	Knossos	4
Greece	Lichada	4
Greece	Limnos	3,4
Greece	Milos	4
Greece	Moustakos	4
Greece	Mytilini	4
Greece	Olympia Radio	3
Greece	Parnis	4
Greece	Patmos	4
Greece	Petalidi	4
Greece	Pilio	4
Greece	Piraeus	4
Greece	Poros/Darditsa	4
Greece	Rodos	4
Greece	Sfendami	4
Greece	Sitia (Mare)	4
Greece	Skiros	4
Greece	Syros	4
Greece	Thasos	4
Greece	Thermopylae	3,4
Greece	Thira	4
Greece	Tsoukalas	4
Greenland (Denmark)	Groennedal	4
Greenland (Denmark)	Island Commander Greenland	3
Greenland (Denmark)	Kook Island (Nuuk)	3
Greenland (Denmark)	Simiutaq	3
Greenland (Denmark)	Upernavik	3,4
Greenland (Denmark)	Aasiaat	3,4
Greenland (Denmark)	Angmagssalik	4

Greenland (Denmark)	Ikerasassuaq	4
Greenland (Denmark)	Nuuk	4
Greenland (Denmark)	Paamiut	4
Greenland (Denmark)	Qaqortoq	4
Greenland (Denmark)	Qeqertarsuaq	4
Greenland (Denmark)	Sisimiut	4
Grenada	Grenada Coast Guard (S. Georges), MRSC	3
Guam (USA)	Guam	3
Hong Kong, China (Associate Member of IMO)	Hong Kong	3,4
Hong Kong, China (Associate Member of IMO)	Hong Kong Marine Rescue Tai Mo Shan	4
Hong Kong, China (Associate Member of IMO)	Hong Kong Marine Rescue Victoria Peak	4
Iceland	Grindavik	3
Iceland	Hornafjordur	3,4
Iceland	Isafjordur	3,4
Iceland	Neskaupstadur (Coast Guard Radio)	3,4
Iceland	Reykjavik Radio	4
Iceland	Saudanes	3
Iceland	Siglufjordur (Coast Guard Radio)	3,4
Iceland	Vestmannaeyjar	3,4
India	Campbell Bay	4
India	Chennai (Madras)	3,4
India	Daman	4
India	Diglipor	4
India	Goa	4
India	Haldia	4
India	Kochi	4
India	Mandapam	4
India	Mumbai (Bombay)	3,4
India	New Delhi	2
India	New Mangalore	4
India	Okha	4
India	Paradip	4
India	Porbandar	4
India	Port Blair	4
India	Pune	3,4
India	Tuticorn	4
India	Vishakhapatnam	4
Indonesia	Amboina	3,4
Indonesia	Balikpapan	4
Indonesia	Batu Ampar	4
Indonesia	Belawan	4

RADIO AIDS TO NAVIGATION BY COUNTRY

Indonesia	Biak	4
Indonesia	Bitung	4
Indonesia	Cilacap	4
Indonesia	Dumai	4
Indonesia	Fak-Fak	4
Indonesia	Jakarta	2,3,4
Indonesia	Jayapura	3,4
Indonesia	Kendari	4
Indonesia	Kupang	4
Indonesia	Lembar	4
Indonesia	Makasar	3,4
Indonesia	Manokwari	4
Indonesia	Merauke	4
Indonesia	Panjang	4
Indonesia	Pontianak	4
Indonesia	Sanana	4
Indonesia	Sei Kolak Kijang	4
Indonesia	Semarang	4
Indonesia	Sibolga	4
Indonesia	Sorong	4
Indonesia	Surabaya	4
Indonesia	Tarakan	4
Indonesia	Ternate	4
Iran (Islamic Republic of)	Bandar Khomeyni	3
Iran (Islamic Republic of)	Bandar Raja'I	3
Iran (Islamic Republic of)	Bushehr	3,4
Iran (Islamic Republic of)	Chabahar	3
Iran (Islamic Republic of)	Fereydoonkenar	3
Iran (Islamic Republic of)	Abadan Radio	4
Iran (Islamic Republic of)	Abbas Radio	4
Iran (Islamic Republic of)	Abomusa Radio	4
Iran (Islamic Republic of)	Aftab Radio	4
Iran (Islamic Republic of)	Amir Abad Radio	4
Iran (Islamic Republic of)	Anzali Radio	4
Iran (Islamic Republic of)	Asaluyeh Radio	4
Iran (Islamic Republic of)	Bahonar Radio	4
Iran (Islamic Republic of)	Bandar Abbas	4
Iran (Islamic republic of)	Bandar Bushehr	4
Iran (Islamic Republic of)	Chabahar Radio	4
Iran (Islamic Republic of)	Dayer Radio	4
Iran (Islamic Republic of)	Deylm Radio	4
Iran (Islamic Republic of)	Genaveh Radio (Persian Gulf)	4
Iran (Islamic Republic of)	Jask Radio	4
Iran (Islamic Republic of)	Khark Radio	4
Iran (Islamic Republic of)	Khomeini Radio	4

RADIO AIDS TO NAVIGATION BY COUNTRY

Iran (Islamic Republic of)	Kish Radio	4
Iran (Islamic Republic of)	Kiyashahr	4
Iran (Islamic Republic of)	Lavar Radio (Persian Gulf)	4
Iran (Islamic Republic of)	Lengeh Radio	4
Iran (Islamic Republic of)	Neka Radio	4
Iran (Islamic Republic of)	Nowshahr Radio	4
Iran (Islamic Republic of)	Qeshm Radio	4
Iran (Islamic republic of)	Tehran	4
Ireland	Bantry	4
Ireland	Belmullet	4
Ireland	Carlingford	4
Ireland	Clifden	4
Ireland	Cork	4
Ireland	Dublin	4
Ireland	Glen Head	4
Ireland	Malin Head-Coastguard MRSC	3,4
Ireland	Mine Head	4
Ireland	Rosslare	4
Ireland	Shannon	4
Ireland	Valentia	3,4
Ireland	Wicklow Head	4
Israel	Haifa	3
Italy	Abbate Argento	4
Italy	Ancona (Forte Millo)	4
Italy	Ancona (IPA)	3
Italy	Augusta	3,4
Italy	Augusta Campolato Alto	4
Italy	Badde Urbara	4
Italy	Bari	4
Italy	Bari (IPB)	3
Italy	Bari (Monte Parano)	4
Italy	Cagliari	3,4
Italy	Campu Spina	4
Italy	Capo Colonna	4
Italy	Capo dell'Armi	4
Italy	Capri	4
Italy	Casa D'orso	4
Italy	Catania	4
Italy	Cefalu	4
Italy	Civitavecchia	3
Italy	Conconello	4
Italy	Crotone	3
Italy	Formia Ascatiello	4
Italy	Forte Garibaldi	4
Italy	Forte Spuria	4

Italy	Fucino	3,4
Italy	Gela C.po Soprano	4
Italy	Genova	3,4
Italy	Genova (Castellaccio)	4
Italy	Gorgona	4
Italy	Lampedusa	3,4
Italy	Livorno	3,4
Italy	M. Lauro	4
Italy	M. Mancuso	4
Italy	M. Pellegrino	4
Italy	M. San Calogero	4
Italy	M. Titolo	4
Italy	Margine Rosso (Cagliari)	4
Italy	Mazara del'Vallo	3,4
Italy	Messina	3
Italy	Monte Argentario	4
Italy	Monte Bignone	4
Italy	Monte Calvario	4
Italy	Monte Cavo	4
Italy	Monte Conero	4
Italy	Monte Erice	4
Italy	Monte Limbara	4
Italy	Monte Moro	4
Italy	Monte Nero	4
Italy	Monte Paradiso	4
Italy	Monte Sardo	4
Italy	Monte Secco	4
Italy	Monte Serpeddi	4
Italy	Monte Tului	4
Italy	Napoli	3,4
Italy	Napoli Posillipo	4
Italy	Osilo	4
Italy	Palermo	3,4
Italy	Palermo (Punta Raisi)	4
Italy	Pantelleria	4
Italy	Piancavallo	4
Italy	Porto Cervo Eliporto	4
Italy	Porto Torres	3
Italy	Punta Stilo	4
Italy	Ravenna Bassette	4
Italy	Reggio Calabria	4
Italy	Roma	2,3,4
Italy	Roma (Torvajanica)	4
Italy	San Benedetto del Tronto	3
Italy	Serra del Tuono	4

Italy	Silvi Paese	4
Italy	Siracusa Belvedere	4
Italy	Trieste	3,4
Italy	Trieste (Monte Radio)	4
Italy	Ustica	4
Italy	Varco del Salice	4
Italy	Venezia	4
Italy	Zoagli	4
Jamaica	Jamaica Coast Guard	3
Japan	Aburatsu	4
Japan	Asamagatake	4
Japan	Bisan Seto	1
Japan	Chikura	4
Japan	Choshi	4
Japan	Gesashi	6
Japan	Hagane-Yama	2
Japan	Hakadateyama	4
Japan	Hiroshima	3,4
Japan	Hokkaido	3,4
Japan	Japan Coast Guard	4
Japan	Kagoshima	3,4
Japan	Kamaishi	4
Japan	Kanmon Kaikyo	1
Japan	Kobe Coast Guard Radio	4
Japan	Kobe MRCC	3
Japan	Komagamine	4
Japan	Kushiro	1,3
Japan	Maizuru	3,4
Japan	Miyara	4
Japan	Moji MRCC	3,4
Japan	Mokkoku	4
Japan	Nagoya	1,3,4
Japan	Naha	3,4
Japan	Nawa	4
Japan	Naze	4
Japan	Nekogatake	4
Japan	Nii Shima	6
Japan	Niigata MRCC	3,4
Japan	Noro	4
Japan	Nyudozaki	4
Japan	Ohtakadoya-Yama	2
Japan	Okinawa Coast Guard Radio	4
Japan	Okinawa MRCC	3
Japan	Osaka	1
Japan	Otaru	3,4

Japan	Same	4
Japan	Senzan	4
Japan	Shakotan	4
Japan	Shimoda	4
Japan	Shiogama	3,4
Japan	Shionomisaki	4
Japan	Souyamisaki	4
Japan	Tamagusuku	4
Japan	Tokachibuto	6
Japan	Tokotan	4
Japan	Tokyo Wan	1
Japan	Tosayama	4
Japan	Yamaguchi	3,4
Japan	Yokohama	3,4
Japan	Yoko-o	4
Jordan	Ababa	3
Jordan	Aqaba Port Control	4
Kiribati	Tarawa	3
Korea (Republic of)	Busan Newport VTS	4
Korea (Republic of)	Busan	1,4
Korea (Republic of)	Chukpyon	3
Korea (Republic of)	Daesan VTS	4
Korea (Republic of)	Donghae VTS	4
Korea (Republic of)	East Regional HQs Korea Coast Guard	4
Korea (Republic of)	Gangneung	3
Korea (Republic of)	Gunsan	3,4
Korea (Republic of)	Incheon	3,4
Korea (Republic of)	Jeju	3,4
Korea (Republic of)	Kwangju	6
Korea (Republic of)	Masan VTS	4
Korea (Republic of)	Mokpo VTS	4
Korea (Republic of)	P'ohang	6
Korea (Republic of)	Pohang VTS	4
Korea (Republic of)	Pyeongtaek VTS	4
Korea (Republic of)	Pyonsan	3
Korea (Republic of)	Seoul Radio	4
Korea (Republic of)	South Regional HQs Korea Coast Guard	4
Korea (Republic of)	Taejon	2
Korea (Republic of)	Ulsan VTS	4
Korea (Republic of)	Wando VTS	4
Korea (Republic of)	West Regional HQs Korea Coast Guard	4
Korea (Republic of)	Yeosu VTS, Seoul Radio	4
Kuwait	Al Kuwayt	3
Kyrgyzstan	Biskek	2
Latvia	Akmenrags	4

Latvia	Jaunupe	4
Latvia	Jurmalciems	4
Latvia	Kolka	4
Latvia	Mersrags	4
Latvia	Riga	3,4
Latvia	Uzava	4
Latvia	Ventspils	1
Latvia	Vitrupe	4
Lebanon	Beirut Radio	4
Lebanon	Beyrouth	3
Libya	Tarabulus (Tripoli)	3
Lithuania	Klaipeda VTS	1,3,4
Lithuania	Nida	4
Lithuania	Sventoji	4
Madeira (Portugal)	Centro de Comunicacoes da Madeira	3
Madeira (Portugal)	Porto Santo	3
Malaysia	Bintulu	4
Malaysia	Gunung Berinchang	4
Malaysia	Gunung Jerai	4
Malaysia	Gunung Ledang	4
Malaysia	Kemuning	4
Malaysia	Kota Kinabalu	4
Malaysia	Kuala Rompin	4
Malaysia	Kuala Terengganu	4
Malaysia	Kuantan	4
Malaysia	Kuching	4
Malaysia	Labuan	4
Malaysia	Machang	4
Malaysia	Miri	3,4
Malaysia	Penang	3,4
Malaysia	Permatang Pauh	4
Malaysia	Port Klang	4
Malaysia	Sandakan	3,4
Malaysia	Sentosa	3,4
Malaysia	Tioman	4
Malaysia	Ulu Kali	4
Malta	Malta RCC	3
Malta	Valletta VTS	3
Mauritius	Mauritius Radio	3,4
Mexico	Acapulco	3,4
Mexico	Cd. Del Carmen	4
Mexico	Chapultepec	2
Mexico	Chetumal	3,4
Mexico	Ciudad Del Carmen	3
Mexico	Coatzacoalcos	3,4

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Mexico	Cozumel	3,4
Mexico	Ensenada	3,4
Mexico	Guaymas	4
Mexico	La Paz	4
Mexico	Lazaro Cardenas	3,4
Mexico	Manzanillo	3,4
Mexico	Mazatlan	3,4
Mexico	Progreso	3,4
Mexico	Puerto Vallarta	3,4
Mexico	Salina Cruz	4
Mexico	Tacubaya	2
Mexico	Tampico	4
Mexico	Veracruz	3,4
Monaco	Monaco	3
Montenegro (Republic of)	Bar	3,4
Morocco	Agadir	3
Morocco	Casablanca	1,3
Myanmar	Yangon Radio	4
Namibia	Walvis Bay	3
Netherland Antilles	Curacao	3
Netherlands	Appingedam	4
Netherlands	Botlek	1
Netherlands	Delfzijl	1
Netherlands	Den Helder	1,3,4
Netherlands	Dordrecht	1
Netherlands	Eemshaven	1
Netherlands	Hartel	1
Netherlands	Hoek van Holland	1
Netherlands	Hoorn	4
Netherlands	Ijmuiden	1,4
Netherlands	Kornwerderzand	4
Netherlands	Maasboulevard	1
Netherlands	Netherlands Coast Guard	3,4
Netherlands	Noordwijk Radio	4
Netherlands	Renesse	4
Netherlands	Rotterdam	1
Netherlands	Scheveningen	1,4
Netherlands	Schiermonnikoog	4
Netherlands	Station 12 (Burum, formerly Perth)	3,4
Netherlands	West Terschelling	4
Netherlands	Westkappelle	4
Netherlands	Wezep	4
Netherlands	Woensdrecht	4
New Caledonia	Noumea	3
New Zealand	Auckland	1,3,4

New Zealand	New Zealand	4
New Zealand	Otago Harbor	1
New Zealand	Wanganui	1
New Zealand	Westport	1
New Zealand	Taupo Maritime Radio	3,4
Nigeria	Lagos	3
Nigeria	Port Harcourt	3
North Korea	Hungnam	3
North Korea	Pyongyang	3
Norway	Ålesund, Aksla	4
Norway	Alta, Helligfjell	4
Norway	Andenes	4
Norway	Åsgård B, North Sea	4
Norway	Baatsfjord, Hamnefjell	4
Norway	Bergen	4
Norway	Bergen, Lindås	4
Norway	Bergen, Rundemannen	4
Norway	Berlevåg, Berlevågfjell	4,6
Norway	Bjerkreim	4
Norway	Bjørndalen (Longyearbyen)	4
Norway	Bjørnøya	4
Norway	Bo	6
Norway	Bodø	4
Norway	Bodo	3,4
Norway	Bokn	4
Norway	Brattvåg, Gamlemsveten	4
Norway	Bremanger	4
Norway	Buholmråen, Yttervåg	4
Norway	Bukten (Drammen)	4
Norway	Dolvsveden (Kristiansand)	4
Norway	Domen (Vardø)	4
Norway	Draugen, North Sea	4
Norway	Draupner, North Sea	4
Norway	Eik (Oslo)	3,4
Norway	Ekofisk, North Sea	4
Norway	Farsund	4
Norway	Fedje	1
Norway	Fjaerland	4
Norway	Floro	3,4
Norway	Fornesfjell	4
Norway	Fosnavaag, Nerlandshorn	4
Norway	Fredvang	4
Norway	Geiranger-2	4
Norway	Gulen	4
Norway	Gullfaks, North Sea	4

Norway	Hagskaret	4
Norway	Hammerfest, Tyven	4
Norway	Hareid, Hjørunganes	4
Norway	Harstad	4
Norway	Hasvik, Fuglen	4
Norway	Haugesund	4
Norway	Havøysund, Havøygavlen	4
Norway	Heidrun, North Sea	4
Norway	Heimdal, North Sea	4
Norway	Hillesøy	4
Norway	Hilsøy (Arendal)	4
Norway	Horva	4
Norway	Høyås (Halden)	4
Norway	I. Hardanger, Grimo	4
Norway	Isfjord (Svalbard)	4
Norway	Jan Mayen	4,6
Norway	Karlsøy, Torsvåg	4
Norway	Kinn	4
Norway	Kirkenes	4
Norway	Kistefjell	4
Norway	Kongsvegpasset (Svalbard)	4
Norway	Kristiansund, Varden	4
Norway	Kvalnes	4
Norway	Lebesby, Oksen	4
Norway	Ligtvor	4
Norway	Lindesnes	4
Norway	Lista, Storefjell	4
Norway	Litlefonni, Tjelbergodden	4
Norway	Ljønibba (Hellesylt)	4
Norway	Lødingen	4
Norway	Måløyg, Raudeberg	4
Norway	Mehamn, Trollhetta	4
Norway	Meløy	4
Norway	Mjøsa, Bangsberget	4
Norway	Mo I Rana	4
Norway	Molde	4
Norway	Mosvik, Skavlen	4
Norway	Myre, Vesteralen	4
Norway	Namsos, Spillumsaksla	4
Norway	Nordkapp, Honningsvåg	4
Norway	Orland, Kopparen	4
Norway	Orlandet	3,4
Norway	Orskogfjellet	4
Norway	Oseberg	4
Norway	Raften/Svolvaer	4

Norway	Ranvikheia (Risør)	4
Norway	Rogaland	3
Norway	Rogaland Radio	4
Norway	Rønvikfjell, Bodø	4
Norway	Rørvik, Falkhetta	4
Norway	Sagtennene	4
Norway	Sandnessjoen	4
Norway	Skjervøy, Stussnesfjell	4
Norway	Skjervøy, Trolltind	4
Norway	Sleipner A, North Sea	4
Norway	Snorre, North Sea	4
Norway	Sogndal, Storehogen	4
Norway	Sotra	4
Norway	Stamnes	4
Norway	Stavanger	4
Norway	Stavanger, Ullandhaug	4
Norway	Steigen	4
Norway	Stjørdal, Forbordsfjell	4
Norway	Storåsen	4
Norway	Stord	4
Norway	Storheia, Hadsel	4
Norway	Svalbard Radio	4
Norway	Tana, Algasvarre	4
Norway	Tingvoll, Reinsfjell	4
Norway	Tjome	3,4
Norway	Tønsnes	4
Norway	Traenfjord	4
Norway	Tromsø	4
Norway	Tryvann (Oslo)	4
Norway	Ula, North Sea	4
Norway	Vaerlandet	6
Norway	Værøy	4
Norway	Valhall, North Sea	4
Norway	Varangefjord, Torsvarde	4
Norway	Vardo	3,4
Norway	Vealøs (Porsgrunn)	4
Norway	Vega	4
Norway	Veggen, Narvik	4
Oman	Muscat	3
Pakistan	Karachi	1,3
Papia New Guinea	Port Moresby	3
Peru	Callao	3,4
Peru	Chancay	4
Peru	Chimbote	4
Peru	Huacho	4

Peru	Ilo	4
Peru	Iquitos	4
Peru	Mollendo	3,4
Peru	Paita	3,4
Peru	Peru National Radio	2
Peru	Pimentel	4
Peru	Pisco	4
Peru	Puno	4
Peru	Radio Victoria	2
Peru	Salaverry	4
Peru	Supe	4
Peru	Talara	4
Peru	Zorritos	4
Philippines	Davao	3
Philippines	Manila	2,3,4
Philippines	Monsanto	3
Philippines	Puerto Princesa	3
Poland	Barzowice	4
Poland	Darlowo	1
Poland	Gdynia	4
Poland	Grzywacz-Polana	4
Poland	Jaroslawiec	4
Poland	Kolobrzeg	1,4
Poland	Kolowo	4
Poland	Krynica Morska	4
Poland	Leba	1
Poland	Oksywie/Gdynia	4
Poland	Rowakol	4
Poland	Rozewie	4
Poland	Slupsk VTS	3
Poland	Swinoujscie VTS	3
Poland	Szczecin	4
Poland	Szczecin VTS	3
Poland	Witowo	3
Poland	Witowo Radio	4
Poland	Zatoka Gdansk VTS	3
Portugal	Alges	3
Portugal	Aveiro	1
Portugal	Faro	3
Portugal	Leixoes	3
Portugal	Lisbon	3
Portugal	Setubal	3
Puerto Rico (USA)	San Juan	3,4
Qatar	Doha	3
Republic of Montenegro	Obosnik	4

RADIO AIDS TO NAVIGATION BY COUNTRY

Reunion (France)	La Reunion-COSSRU	3
Romania	Constanta	3,4
Romania	Constanta, Agigea	4
Romania	Constanta, Enisala	4
Romania	Constanta, Mahmudia	4
Romania	Constanta, Sfintu Gheorghe	4
Russia	Alexandrovsk	6
Russia	Archangel	3
Russia	Astrakhan	3,4
Russia	Beringovskiy	3
Russia	Magadan	3,4
Russia	Okhotsk	3,6
Russia	Petropavlovsk	3,6
Russia	Vladivostok	3,4
Russian Federation	Arkhangelsk	2,4
Russian Federation	Avacha	4
Russian Federation	Beglica	4
Russian Federation	Cape Svobodniy	4
Russian Federation	Chirikov Cape	4
Russian Federation	Doob	4
Russian Federation	Eisk	4
Russian Federation	Gogland	4
Russian Federation	Gorki/Gorky	2,4
Russian Federation	Irkutsk	2
Russian Federation	Iskusstvennyi	4
Russian Federation	Kaliningrad	3,4
Russian Federation	Karavaldayskiy	4
Russian Federation	Khabarovsk	2
Russian Federation	Kholmsk	3,4
Russian Federation	Korsakov	4
Russian Federation	Kosa Dolgaya	4
Russian Federation	Krestovy	4
Russian Federation	Makhachkala	4
Russian Federation	Moskva	2
Russian Federation	Mount Vygoda	4
Russian Federation	Mudyug	4
Russian Federation	Murmansk	1,3,4
Russian Federation	Nakhodka	1,3,4
Russian Federation	Nevelsk	4
Russian Federation	Ninovka	4
Russian Federation	Novorossiysk	1,3,4
Russian Federation	Novosibirsk	2
Russian Federation	Nudol	3,4
Russian Federation	Petropavlovsk-Kamachatskiy	3,4
Russian Federation	Primorsk	4

Russian Federation	Saint Petersburg	4
Russian Federation	Seleznevo	4
Russian Federation	Set-Navolok	4
Russian Federation	Sochi	4
Russian Federation	Sulak	4
Russian Federation	Taganrog	4
Russian Federation	Taman	4
Russian Federation	Temryuk	4
Russian Federation	Tuapse	4
Russian Federation	Tumannaya (Posiet)	4
Russian Federation	Ussuriysk	6
Russian Federation	Vanino	4
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Cape North	Canada	1,4
Cape Pine	Canada	4
Cape Svobodniy	Russian Federation	4
Cape Town	South Africa	3,4
Capo Colonna	Italy	4
Capo dell'Armi	Italy	4
Capri	Italy	4

RADIO AIDS TO NAVIGATION BY STATION

Carbarvon	Australia	3
Cardinal	Canada	4
Carleton	Canada	4
Carlingford	Ireland	4
Carmelo Prefectura Radio	Uruguay	3
Carmelo Radio	Argentina	4
Cartagena	Spain	3,4
Cartright	Canada	4
Casa D'orso	Italy	4
Casablanca	Morocco	1,3
Castellon	Spain	3,4
Castro	Chile	3,4
Catania	Italy	4
Cayar	Senegal	4
Cd. Del Carmen	Mexico	4
Cefalu	Italy	4
Celavac	Croatia	4
Centro de Comunicacoes da Madeira	Madeira (Portugal)	3
Centro Meteorologico Antartico Presidente Eduardo Frei Montalva	Antarctica (Chile)	3
Centro Meteorologico Base Marambio	Antarctica (Argentina)	3
Chabahar	Iran (Islamic Republic of)	3
Chabahar Radio	Iran (Islamic Republic of)	4
Chafalote Radio	Argentina	4
Chaiten	Chile	4
Chanaral	Chile	4
Chanarlal	Chile	3
Chancay	Peru	4
Chapultepec	Mexico	2
Charleston	United States	3
Charleville	Australia	4
Charleville	Australia	3
Chassiron	France	4
Chebogue	Canada	1
Chennai (Madras)	India	3,4
Cherchell	Algeria	4
Chesapeake/CAMSLANT	United States	3
Cheticamp	Canada	4
Chetumal	Mexico	3,4
Chikura	Japan	4
Chile	Chile	4
Chilean Antarctic	Chile	4
Chi-Lung	Taiwan	3
Chimbote	Peru	4
China	China	4

Chincoteague	United States	3
Chipiona	Spain	4
Chirikov Cape	Russian Federation	4
Chongzuo	China	6
Choshi	Japan	4
Chukpyon	Korea (Republic of)	3
Cilacap	Indonesia	4
Ciudad Del Carmen	Mexico	3
Civitavecchia	Italy	3
Clettraval	United Kingdom	4
Clifden	Ireland	4
Clyde	United Kingdom	3,4
CNOSS Jijel	Algeria	4
CNOSS Oran	Algeria	4
Coatzacoalcos	Mexico	3,4
Cobandede	Turkey	4
Cobourg	Canada	1,4
Cold Bay	United States	3
Collafirth Hill	United Kingdom	4
Colombo	Sri Lanka	2
Colonia Prefectura Radio	Uruguay	3
Colonia Radio	Argentina	4
Combe Martin	United Kingdom	4
Comfort Cove	Canada	4
Comodoro Rivadavia	Argentina	3,4
Comox	Canada	3,4
Compass Head	United Kingdom	1,4
Conca	France	4
Conche	Canada	4
Conconello	Italy	4
Constanta	Romania	3,4
Constanta, Agigea	Romania	4
Constanta, Enisala	Romania	4
Constanta, Mahmudia	Romania	4
Constanta, Sfintu Gheorghe	Romania	4
Constitucion	Chile	3,4
Contis	France	4
Cooktown	Australia	3
Coquimbo	Chile	3,4
Corfu	Greece	3
Cork	Ireland	4
Cornwall	Canada	4
Corona	Chile	4
Corpus Christi	United States	3
Corral	Chile	4

RADIO AIDS TO NAVIGATION BY STATION

Corsen	France	1,3,4
Coruna	Spain	3,4
Cotonou Radio	Benin	4
Coudon	France	4
Cozumel	Mexico	3,4
CPB	Cape Verde	4
Craigkelly	United Kingdom	4
Cross Antilles- Guyane, MRCC Fort de France	French Antilles	3
Cross Law	United Kingdom	1
Crotone	Italy	3
Cua Ong/XVC Radio	Vietnam	3,4
Cullercoats	United Kingdom	1,3
Cumshewa	Canada	1,4
Curacao	Curacao (Netherlands)	3,4
Curacao	Netherland Antilles	3
Cuslett	Canada	4
Cuxhaven	Germany	4
Cyprus Radio	Cyprus	3,4
Da Nang/XVT Radio	Vietnam	3,4
Daesan VTS	Korea (Republic of)	4
Dahab	Egypt	4
Dakar	Senegal	3,4
Dalian	China	3
Dalian Radio	China	4
Daman	India	4
Dammam	Saudi Arabia	4
Darlowo	Poland	1
Darss	Germany	4
Dartmouth	United Kingdom	4
Darwin	Australia	3
Davao	Philippines	3
Dayer Radio	Iran (Islamic Republic of)	4
Delfzijl	Netherlands	1
Dellys	Algeria	4
Den Helder	Netherlands	1,3,4
Denmark	Denmark	4
Detroit	United States	3
Deylm Radio	Iran (Islamic Republic of)	4
Die Elbe	Germany	1
Die Ems	Germany	1
Die Jade	Germany	1
Die Weser	Germany	1
Diego Ramirez	Chile	3,4
Diglipor	India	4

Dikmen	Turkey	4
Dilektepe	Turkey	4
Dinas Head	United Kingdom	4
Dirhami	Estonia	4
Discovery	Canada	4
Doha	Qatar	3
Dolvsveden (Kristiansand)	Norway	4
Domen (Vardø)	Norway	4
Donghae VTS	Korea (Republic of)	4
Doob	Russian Federation	4
Dordrecht	Netherlands	1
Dover	United Kingdom	4
Dover-Coastguard MRCC	United Kingdom	3
Draugen, North Sea	Norway	4
Draupner, North Sea	Norway	4
Duba	Saudi Arabia	4
Dublin	Ireland	4
Dubrovnik	Croatia	3,4
Dumai	Indonesia	4
Dundas Island	Canada	1,4
Dunkerque	France	1,4
Dunnet Head	United Kingdom	1,4
Durban	South Africa	3
Durness	United Kingdom	4
Dütmen	Turkey	4
Easington	United Kingdom	1,4
East Prawle	United Kingdom	1,4
East Regional HQs Korea Coast Guard	Korea (Republic of)	4
Ecum Secum	Canada	1,4
Eemshaven	Netherlands	1
Eiderstedt	Germany	4
Eik (Oslo)	Norway	3,4
Eisk	Russian Federation	4
Eisma	Estonia	4
Ejde	Denmark	6
Ekofisk, North Sea	Norway	4
Eliza Dome	Canada	4
Emine	Bulgaria	4
Ensenada	Mexico	3,4
Ersa	France	4
Esmeraldas	Ecuador	4
Esperance	Australia	3
Espiguette	France	4
Espiritu Santo	Chile	4
Etel	France	4

RADIO AIDS TO NAVIGATION BY STATION

Fairlight	United Kingdom	1,4
Faistos	Greece	4
Fak-Fak	Indonesia	4
Falkland Islands Fisheries Department	Falkland Islands	3
Falmouth	United Kingdom	3,4
Faro	Portugal	3
Fårö	Sweden	4
Faro Evangelistas	Chile	4
Faro Fairway	Chile	4
Farsund	Norway	4
Fass Boye	Senegal	4
Fedje	Norway	1
Fereydoonkenar	Iran (Islamic Republic of)	3
Fife Ness	United Kingdom	1
Finisterre	Spain	3,4
Fitful Head	United Kingdom	4
Fjaerland	Norway	4
Flamborough	United Kingdom	1,4
Flensburg	Germany	4
Floro	Norway	3,4
Fonthill	Canada	4
Forillon	Canada	4
Formia Ascatiello	Italy	4
Fornaes	Denmark	4
Fornesfjell	Norway	4
Forsnaval	United Kingdom	4
Fort de France, Cross Antilles- Guyane	French Antilles	3
Fort Macon	United States	3
Forte Garibaldi	Italy	4
Forte Spuria	Italy	4
Forth	United Kingdom	4
Fortune Head	Canada	1,4
Fosnavaag, Nerlandshorn	Norway	4
Fox Harbor	Canada	4
Fox Island	Canada	1,4
Foyers	United Kingdom	4
France Inter (Allouis)	France	2
Fray Bentos Prefectura Radio	Uruguay	3
Fredvang	Norway	4
Frejlev	Denmark	4
Freshwater Hill	Canada	4
Fucino	Italy	3,4
Fuerteventura	Spain	4
Fugloy	Denmark	4
Fundy	Canada	3

Fuzhou	China	3
Fuzhou Radio	China	4
Galveston	United States	3
Gangneung	Korea (Republic of)	3
Gatteville	France	4
Gävle	Sweden	4
Gdynia	Poland	4
Geiranger-2	Norway	4
Gela C.po Soprano	Italy	4
Genaveh Radio (Persian Gulf)	Iran (Islamic Republic of)	4
Genova	Italy	3,4
Genova (Castellaccio)	Italy	4
Georgia	Georgia	4
Geraldton	Australia	3
Gerania	Greece	4
Gesashi	Japan	6
Geta	Finland	4
Ghazaouet	Algeria	4
Gijon	Spain	3,4
Gislovshammar	Sweden	4
Gladstone	Australia	3
Glen Head	Ireland	4
Glengorm	United Kingdom	4
Goa	India	4
Gogland	Russian Federation	4
Gomera	Spain	4
Goonhilly	United Kingdom	3,4
Gorgona	Italy	4
Gorki/Gorky	Russian Federation	2,4
Gosses-Roches	Canada	4
Göteborg	Sweden	1,4
Gotska Sandön	Sweden	4
Gower	United Kingdom	4
Grand Haven,	United States	3
Grand Lahou	Cote D'Ivore (Ivory Coast)	4
Grand Manan	Canada	4
Grand Pointe	Canada	4
Granville	France	4
Gravesend Radio	United Kingdom	1
Great Orme	United Kingdom	4
Great Ormes Head	United Kingdom	1
Gregness	United Kingdom	4
Grenada Coast Guard (S. Georges), MRSC	Grenada	3
Grimeton	Sweden	4

Grindavik	Iceland	3
Gris Nez	France	1,3,4
Groennedal	Greenland (Denmark)	4
Groix	France	4
Grosses-Roches	Canada	1
Grove	United Kingdom	4
Grove Point	United Kingdom	1
Grzywacz-Polana	Poland	4
Guam	Guam (USA)	3
Guangdong	China	4
Guangzhou	China	3
Guangzhou Radio	China	4
Guayaquil	Ecuador	2,3,4
Guaymas	Mexico	4
Guernsey Coast Guard	Channel Islands (UK)	1,3
Gulen	Norway	4
Gullfaks, North Sea	Norway	4
Gunsan	Korea (Republic of)	3,4
Gunung Berinchang	Malaysia	4
Gunung Jerai	Malaysia	4
Gunung Ledang	Malaysia	4
Habana	Cuba	3
Haburg	Germany	3
Hagane-Yama	Japan	2
Hagskaret	Norway	4
Hai Phong/XVG Radio	Vietnam	3,4
Haifa	Israel	3
Haikou HSA/MRCC Hainan Province	China	4
Haikou Radio	China	4
Hailuoto	Finland	4
Haiphong/VMRCC/MRCC Vietnam	Vietnam	4
Hakadateyama	Japan	4
Haldia	India	4
Half Assini	Ghana	4
Half Moon Beach	Saudi Arabia	4
Halifax	Canada	3,4
Halifax	Canada	4
Halmstad	Sweden	4
Hamburg	Germany	1,4
Hammerfest, Tyven	Norway	4
Hanga ROA	Chile	4
Hanko	Finland	4
Hanosand	Sweden	3
Hanstholm	Denmark	4
Hareid, Hjørunganes	Norway	4

RADIO AIDS TO NAVIGATION BY STATION

Härnösand	Sweden	4
Harrington Harbor	Canada	4
Harstad	Norway	4
Hartel	Netherlands	1
Hartland	United Kingdom	1
Hartland Point	United Kingdom	4
Hartlepool	United Kingdom	1,4
Harwich	United Kingdom	1
Hasvik, Fuglen	Norway	4
Haugesund	Norway	4
Havøysund, Havøygavlen	Norway	4
Havre St. Pierre	Canada	1,4
Heath Point	Canada	4
Heidrun, North Sea	Norway	4
Heimdal, North Sea	Norway	4
Helgoland	Germany	4
Helmcken	Canada	4
Helong	China	6
Helsingborg	Sweden	4
Helsinki	Finland	4
Hengistbury Head	United Kingdom	1,4
Heraklion	Greece	3
Hermitage	Canada	4
Hexian	China	6
Hierro	Spain	4
Hillesøy	Norway	4
Hilsøy (Arendal)	Norway	4
Hiroshima	Japan	3,4
Hirtshals	Denmark	4
Ho Chi Minh-Ville/XVS Radio	Vietnam	3,4
Hobart	Australia	3
Hoburgen	Sweden	4
Hoek van Holland	Netherlands	1
Hokkaido	Japan	3,4
Holberg	Canada	4
Holyhead	United Kingdom	3,4
Hon Gai/XVQ Radio (Quang Ninh)	Vietnam	3,4
Hong Kong	Hong Kong, China (Associate Member of IMO)	3,4
Hong Kong Marine Rescue Tai Mo Shan	Hong Kong, China (Associate Member of IMO)	4
Hong Kong Marine Rescue Victoria Peak	Hong Kong, China (Associate Member of IMO)	4
Honolulu	United States	3,4
Hoorn	Netherlands	4

RADIO AIDS TO NAVIGATION BY STATION

Hopedale	Canada	4
Hörby	Sweden	4
Horn	Canada	4
Hornafjordur	Iceland	3,4
Horta	Azores	3
Horva	Norway	4
Hourtin	France	4
Houston-Galveston	United States	1
Høyås (Halden)	Norway	4
Huacho	Peru	4
Huasco	Chile	3,4
Hudiksvall	Sweden	4
Hue/XVD Radio	Vietnam	3,4
Huelva	Spain	3,4
Hum (Lastovo island)	Croatia	4
Hum (Vis island)	Croatia	4
Humber	United Kingdom	3,4
Humboldt Bay	United States	3
Hungnam	North Korea	3
Hurghada	Egypt	4
I. Hardanger, Grimo	Norway	4
I. Orcadas Radio	Argentina	4
Ibiza	Spain	4
Ijmuiden	Netherlands	1,4
Ikerasassuaq	Greenland (Denmark)	4
Ile D'Yeu	France	4
Ilfracombe	United Kingdom	4
Ilo	Peru	4
Incheon	Korea (Republic of)	3,4
Inebolu	Turkey	4
Inuvik, N.W.T.	Canada	3
Inverbervie	United Kingdom	1,4
Iqaluit	Canada	3,4
Iquique	Chile	3,4
Iquitos	Peru	4
Iraklion Radio	Greece	4
Irkutsk	Russian Federation	2
Isafjordur	Iceland	3,4
Isfjord (Svalbard)	Norway	4
Iskusstvennyi	Russian Federation	4
Isla de Pascua	Chile	3,4
Isla Guafo	Chile	4
Isla Guafo, Faro	Chile	3
Isla Mocha, Faro	Chile	3
Isla Quiriquina, Faro	Chile	3

RADIO AIDS TO NAVIGATION BY STATION

Isla San Pedro	Chile	3
Island Commander Greenland	Greenland (Denmark)	3
Islas Orcadas del Sur	Argentina	4
Islote Fairway, Faro	Chile	3
Islotes Evangelistas, Faro	Chile	3
Ismailia	Egypt	3,4
Istanbul	Turkey	3,4
Izmir	Turkey	3,4
Jakarta	Indonesia	2,3,4
Jamaica Coast Guard	Jamaica	3
Jamanota	Curacao (Netherlands)	4
Jan Mayen	Norway	4,6
Japan Coast Guard	Japan	4
Jaroslawiec	Poland	4
Järsö	Finland	4
Jask Radio	Iran (Islamic Republic of)	4
Jaunupe	Latvia	4
Jayapura	Indonesia	3,4
Jeddah Radio	Saudi Arabia	4
Jeju	Korea (Republic of)	3,4
Jersey	Channel Islands (UK)	1,3
Jiddah	Saudi Arabia	3
Jizan	Saudi Arabia	4
Joal	Senegal	4
Jobourg	France	4
Jönköping	Sweden	4
Juan Fernandez	Chile	3,4
Juneau	United States	3,4
Jurmalciems	Latvia	4
Kagoshima	Japan	3,4
Kalajoki	Finland	4
Kaliakra	Bulgaria	4
Kaliningrad	Russian Federation	3,4
Kalix	Sweden	4
Kalmar	Sweden	4
Kamaishi	Japan	4
Kamenjak	Croatia	4
Kanmon Kaikyo	Japan	1
Karachi	Pakistan	1,3
Karavaldayskiy	Russian Federation	4
Karleby	Denmark	4
Karlskrona	Sweden	4
Karlsøy, Torsvåg	Norway	4
Karlstad	Sweden	4
Karpathos	Greece	4

Kattegat	Denmark	4
Kayalidag	Turkey	4
Kazakin	Turkey	4
Kefallinia	Greece	4
Keltepe	Turkey	4
Kemi	Finland	4
Kemuning	Malaysia	4
Kendari	Indonesia	4
Kerch	Ukraine	3,4
Kerkyra	Greece	4
Kerrouault	France	4
Ketch Harbor	Canada	4
Key West	United States	3
Khabarovsk	Russian Federation	2
Khafji	Saudi Arabia	4
Khark Radio	Iran (Islamic Republic of)	4
Khios	Greece	4
Kholmsk	Russian Federation	3,4
Khomeini Radio	Iran (Islamic Republic of)	4
Kiel	Germany	4
Kien Giang/SVK Radio	Vietnam	3,4
Kilchiaran	United Kingdom	1,4
Kilkenny Lake	Canada	4
Killarney	Canada	4
Kincardine	Canada	4
King Salmon	United States	3
Kingsburg	Canada	1,4
Kingston	Canada	4
Kinn	Norway	4
Kionia	Cyprus	4
Kirkenes	Norway	4
Kish Radio	Iran (Islamic Republic of)	4
Kistefjell	Norway	4
Kithira	Greece	4
Kivik	Sweden	4
Kiyashahr	Iran (Islamic Republic of)	4
Klaipeda VTS	Lithuania	1,3,4
Klemtu	Canada	1,4
Knossos	Greece	4
Kobe Coast Guard Radio	Japan	4
Kobe MRCC	Japan	3
Kochi	India	4
Kodiak	United States	3,4
Koebenhavn	Denmark	4
Kokkola	Finland	4

Kolka	Latvia	4
Kolobrzeg	Poland	1,4
Kolowo	Poland	4
Komagamine	Japan	4
Kongsvegpasset (Svalbard)	Norway	4
Kook Island (Nuuk)	Greenland (Denmark)	3
Koper	Slovenia	4
Köpu	Estonia	4
Kornwerderzand	Netherlands	4
Korppoo	Finland	4
Korsakov	Russian Federation	4
Kosa Dolgaya	Russian Federation	4
Kosseir Radio	Egypt	4
Kota Kinabalu	Malaysia	4
Kotka	Finland	4
Kotzebue, AK	United States	3
Kouakro	Cote D'Ivore (Ivory Coast)	4
Krestovy	Russian Federation	4
Kristiansund, Varden	Norway	4
Kristiinankaupunki	Finland	4
Krynica Morska	Poland	4
Kuala Rompin	Malaysia	4
Kuala Terengganu	Malaysia	4
Kuantan	Malaysia	4
Kuching	Malaysia	4
Kupang	Indonesia	4
Kuressaare West	Estonia	4
Kushiro	Japan	1,3
Kvalnes	Norway	4
Kwangju	Korea (Republic of)	6
L'Anse aux Meadows	Canada	4
La Garde	France	3,4
La Garoupe	France	4
La Gironde	France	1
La Goulette Port	Tunisia	3
La Guardia	Spain	4
La Loire	France	1
La Paloma Radio	Uruguay	3,4
La Paz	Mexico	4
La Reunion-COSSRU	Reunion (France)	3
La Romaine	Canada	4
La Seine	France	1
Labistica	Croatia	4
Labrador	Canada	3,4
Labuan	Malaysia	4

Lac D'aigle	Canada	1,4
L'Acadie	Canada	4
Laem Chabang	Thailand	1
Laesoe	Denmark	4
Lagos	Nigeria	3
Lampedusa	Italy	3,4
Lands End	United Kingdom	1,4
Langdon Battery	United Kingdom	1
Langham	United Kingdom	4
Larnaca	Cyprus	4
Las Palmas	Canary Islands	3
Las Palmas CCR	Spain	4
Lattakia Radio	Syria	4
Lauzon	Canada	4
Lavar Radio (Persian Gulf)	Iran (Islamic Republic of)	4
Law Hill	United Kingdom	1,4
Lazaro Cardenas	Mexico	3,4
Le Havre	France	1
Leamington	Canada	4
Leba	Poland	1
Lebesby, Oksen	Norway	4
Leixoes	Portugal	3
Lembar	Indonesia	4
Lengeh Radio	Iran (Islamic Republic of)	4
Lerwick	United Kingdom	1,4
Les Escoumins	Canada	3,4
Lessay	France	6
Lianyungang Radio	China	4
Liaoning	China	4
Liblice	Czech Republic	2
Lichada	Greece	4
Ligtvor	Norway	4
Limavady	United Kingdom	4
Limnos	Greece	3,4
Lindesnes	Norway	4
Linyan	Taiwan	3
Lisbon	Portugal	3
Lista, Storefjell	Norway	4
Litlefonni, Tjelbergodden	Norway	4
Liverpool	United Kingdom	1,3,4
Livorno	Italy	3,4
Lizard	United Kingdom	1,4
Ljønibba (Hellesylt)	Norway	4
Lockeport	Canada	1
Lockport	Canada	4

RADIO AIDS TO NAVIGATION BY STATION

Lødingen	Norway	4
Long Beach	United States	3
Long Island Sound	United States	3
LOOP Deepwater Port (Louisiana Offshore Oil Port)	United States	1
Los Vilos	Chile	4
Louisiana Offshore Oil Port (LOOP Deepwater Port)	United States	1
Lowestoft	United Kingdom	1,4
Luanda	Angola	3
Lübeck	Germany	4
Luleå	Sweden	4
Lumsden	Canada	4
Lyngby	Denmark	3,4
M. Lauro	Italy	4
M. Mancuso	Italy	4
M. Pellegrino	Italy	4
M. San Calogero	Italy	4
M. Titolo	Italy	4
Maasboulevard	Netherlands	1
Machang	Malaysia	4
Machichaco	Spain	4
Mackay	Australia	3
Madrid CCR	Spain	4
Magadan	Russia	3,4
Magallanes	Chile	3
Mahyadag	Turkey	4
Mainflingen	Germany	2
Maizuru	Japan	3,4
Makasar	Indonesia	3,4
Makhachkala	Russian Federation	4
Malaga CCR	Spain	3,4
Malin Head-Coastguard MRSC	Ireland	3,4
Måløyg, Raudeberg	Norway	4
Malta RCC	Malta	3
Manaus Radio	Brazil	4
Mandapam	India	4
Manila	Philippines	2,3,4
Manokwari	Indonesia	4
Manta	Ecuador	4
Manzanillo	Mexico	3,4
Mar del Plata	Argentina	3,4
Marcory	Cote D'Ivore (Ivory Coast)	4
Margine Rosso (Cagliari)	Italy	4
Mariehamn	Finland	4

Mariupol	Ukraine	1,4
Markiz	Turkey	4
Marsa Matrouh	Egypt	4
Masan VTS	Korea (Republic of)	4
Mauritius Radio	Mauritius	3,4
Mayport	United States	3
Mazara del'Vallo	Italy	3,4
Mazatlan	Mexico	3,4
Meaford	Canada	4
Medway	United Kingdom	1
Mehamn, Trollhetta	Norway	4
Mejillones	Chile	4
Melbourne	Australia	3
Melilla	Spain	4
Melinka	Chile	4
Meløy	Norway	4
Melvaig	United Kingdom	4
Menorca	Spain	4
Merauke	Indonesia	4
Mern	Denmark	4
Mersrags	Latvia	4
Messina	Italy	3
Miami	United States	3,4
Milford Haven	United Kingdom	3,4
Milos	Greece	4
Milwaukee	United States	3
Mine Head	Ireland	4
Miri	Malaysia	3,4
Miyara	Japan	4
Mjällom	Sweden	4
Mjøsa, Bangsberget	Norway	4
Mo I Rana	Norway	4
Mobile	United States	3
Moji MRCC	Japan	3,4
Mokkoku	Japan	4
Mokpo VTS	Korea (Republic of)	4
Molde	Norway	4
Mollendo	Peru	3,4
Monaco	Monaco	3
Mong Cai/XVM Radio	Vietnam	3,4
Monsanto	Philippines	3
Mont Belair	Canada	4
Mont Rigaud	Canada	4
Mont- St. Bruno	Canada	4
Montague	Canada	1,4

RADIO AIDS TO NAVIGATION BY STATION

Monte Argentario	Italy	4
Monte Bignone	Italy	4
Monte Calvario	Italy	4
Monte Cavo	Italy	4
Monte Conero	Italy	4
Monte Erice	Italy	4
Monte Limbara	Italy	4
Monte Moro	Italy	4
Monte Nero	Italy	4
Monte Paradiso	Italy	4
Monte Sardo	Italy	4
Monte Secco	Italy	4
Monte Serpeddi	Italy	4
Monte Tului	Italy	4
Monte Verde (Sao Vicente Island)	Cape Verde	4
Monte Xota (Santiago Island)	Cape Verde	4
Montevideo	Uruguay	4
Montevideo Armada Radio	Argentina	4
Montevideo Centro de Radio Prefectura	Uruguay	3
Montevideo Trouville	Uruguay	3
Mont-Joli	Canada	4
Mont-Louis	Canada	1,4
Montmagny	Canada	1,4
Montreal	Canada	3,4
Moriches	United States	3
Morro Curral (Sal Island)	Cape Verde	4
Moskva	Russian Federation	2
Mostaganem	Algeria	4
Mosvik, Skavlen	Norway	4
Motala	Sweden	4
Motril	Spain	4
Mount Gil	Canada	1,4
Mount Hayes	Canada	1,4
Mount Moriah	Canada	4
Mount Newton	Canada	4
Mount Ozzard	Canada	4
Mount Parke	Canada	4
Mount Vygoda	Russian Federation	4
Moustakos	Greece	4
Mt. Scenery (Saba)	Curacao (Netherlands)	4
Mudyug	Russian Federation	4
Mumbai (Bombay)	India	3,4
Mumbles Hill	United Kingdom	4
Murmansk	Russian Federation	1,3,4

RADIO AIDS TO NAVIGATION BY STATION

Muscat	Oman	3
Myeik	Burma (Myanmar)	3,4
Mykines	Denmark	4
Myre, Vesteralen	Norway	4
Mytilini	Greece	4
Naantali	Finland	4
Nacka	Sweden	4
Naden Harbor	Canada	1,4
Nadi	Fiji	4
Nagoya	Japan	1,3,4
Naha	Japan	3,4
Nain	Canada	4
Nakhodka	Russian Federation	1,3,4
Namsos, Spillumsaksla	Norway	4
Napoli	Italy	3,4
Napoli Posillipo	Italy	4
Natashquan	Canada	1,4
Navia	Spain	4
Nawa	Japan	4
Naze	Japan	4
Neka Radio	Iran (Islamic Republic of)	4
Nekogatake	Japan	4
Neskaupstadur (Coast Guard Radio)	Iceland	3,4
Netherlands Coast Guard	Netherlands	3,4
Nevelsk	Russian Federation	4
New Delhi	India	2
New Mangalore	India	4
New Orleans	United States	3,4
New York	United States	1,3
New Zealand	New Zealand	4
Newcastle	Australia	3
Newhaven	United Kingdom	1,4
Newport	Canada	1,4
Newton	United Kingdom	1,4
Nha Trang/XVN Radio	Vietnam	3,4
Nida	Lithuania	4
Nii Shima	Japan	6
Niigata MRCC	Japan	3,4
Ningbo Radio	China	4
Ninovka	Russian Federation	4
Niton	United Kingdom	3
Nome	United States	3
Noordwijk Radio	Netherlands	4
Norddeich	Germany	4
Nordkapp, Honningsvåg	Norway	4

RADIO AIDS TO NAVIGATION BY STATION

Noro	Japan	4
Norrköping	Sweden	4
North Bend	United States	3
North Cape	Canada	1,4
North Foreland	United Kingdom	1,4
North Post	Trinidad & Tobago	3
Northwood	United Kingdom	3
Nos Galata Lt	Bulgaria	1
Noss Head	United Kingdom	1,4
Noumea	New Caledonia	3
Novorossiysk	Russian Federation	1,3,4
Novosibirsk	Russian Federation	2
Nowshahr Radio	Iran (Islamic Republic of)	4
Nudol	Russian Federation	3,4
Nueva Palmiraa Prefectura Radio	Uruguay	3
Nuku'alofa	Tonga	3
Nuuk	Greenland (Denmark)	4
Nyudozaki	Japan	4
Obosnik	Republic of Montenegro	4
Observatorio Naval Caracas	Venezuela	2
Odessa	Ukraine	1,3,4
Offenbach/Pinneberg	Germany	3
Ohtakadoya-Yama	Japan	2
Okha	India	4
Okhotsk	Russia	3,6
Okinawa Coast Guard Radio	Japan	4
Okinawa MRCC	Japan	3
Oksywie/Gdynia	Poland	4
Ölands Södra udde	Sweden	4
Olympia Radio	Greece	3
Olympus	Cyprus	4
Oostende Radio	Belgium	3,4
Oran	Algeria	3,4
Oren	Turkey	4
Orillia	Canada	4
Orissaare	Estonia	4
Orland, Kopparen	Norway	4
Orlandet	Norway	3,4
Orlock Head	United Kingdom	1,4
Orskogfjellet	Norway	4
Osaka	Japan	1
Oseberg	Norway	4
Osilo	Italy	4
Osthammar	Sweden	4
Otago Harbor	New Zealand	1

RADIO AIDS TO NAVIGATION BY STATION

Otaru	Japan	3,4
Ottawa	Canada	2
P'ohang	Korea (Republic of)	6
Paamiut	Greenland (Denmark)	4
Pacific SAR Coordinator	United States	4
Paita	Peru	3,4
Palamos MRSC	Spain	3
Palamut	Turkey	4
Palermo	Italy	3,4
Palermo (Punta Raisi)	Italy	4
Palma	Spain	4
Palma de Mallorca	Spain	4
Palma MRCC	Spain	3
Panjang	Indonesia	4
Pantelleria	Italy	4
Papeete	French Polynesia	3,4
Paradip	India	4
Paramaribo	Suriname	3
Parnis	Greece	4
Pasajes	Spain	4
Patmos	Greece	4
Paysandu Prefectura Radio	Uruguay	3
Pazar	Turkey	4
Peak Kitka	Bulgaria	4
Pen March	France	4
Penang	Malaysia	3,4
Permatang Pauh	Malaysia	4
Perth	Australia	3
Peru National Radio	Peru	2
Petalidi	Greece	4
Petchaburi	Thailand	4
Peterhead	United Kingdom	4
Petropavlovsk	Russia	3,6
Petropavlovsk-Kamachatskiy	Russian Federation	3,4
Phan Rang/XVN Radio	Vietnam	3,4
Phan Thiet/XVP Radio	Vietnam	3,4
Phu Yen/XVY Radio	Vietnam	4
Piana	France	4
Piancavallo	Italy	4
Pic de l'Ours	France	4
Pic Neoulos	France	4
Pilio	Greece	4
Pimentel	Peru	4
Pinetree	Canada	4
Piraeus	Greece	4

Piriapolis Prefectura Radio	Uruguay	3
Piriapolis Radio	Argentina	4
Pisco	Peru	4
Pissouri	Cyprus	4
Placentia	Canada	4
Planier	France	4
Ploce	Croatia	4
Pohang VTS	Korea (Republic of)	4
Point Escuminac	Canada	4
Point Reyes/CAMSPAC	United States	3
Point Riche	Canada	4
Pointe au Baril	Canada	1,4
Pointe du Raz	France	4
Pointe Heath	Canada	1
Pointe Noire	Congo (Brazzaville)	3
Ponta Delgada	Azores	3
Pontianak	Indonesia	4
Porbandar	India	4
Pori	Finland	4
Porkkala	Finland	4
Poros/Darditsa	Greece	4
Porqurolles	France	4
Port Angeles	United States	3
Port aux Basques	Canada	3,4
Port Blair	India	4
Port Burwell	Canada	4
Port Caledonia	Canada	1
Port Dampier	Australia	1
Port Elizabeth	South Africa	3
Port Harcourt	Nigeria	3
Port Hardy	Canada	4
Port Hedland	Australia	1,3
Port Kembla	Australia	3
Port Klang	Malaysia	4
Port Moresby	Papia New Guinea	3
Port Naguran	United Kingdom	4
Port Said Radio	Egypt	4
Port Sudan	Sudan	3
Portland	United Kingdom	3,4
Portland, ME	United States	3
Portland, OR	United States	3
Portnaguran	United Kingdom	1
Porto Cervo Eliporto	Italy	4
Porto Santo	Madeira (Portugal)	3
Porto Torres	Italy	3

Portpatrick	United Kingdom	3
Portsmouth	United States	4
Port-Vila (YJM)	Vanuatu	3
Poti, Harbor Master	Georgia	4
Prangins	Switzerland	2
Prescott	Canada	3,4
Primera Angostura	Chile	1
Primorsk	Russian Federation	4
Prince Rupert	Canada	3,4
Prince William Sound	United States	1
Progreso	Mexico	3,4
Puerto Aguirre	Chile	4
Puerto Aysen MRSC	Chile	3
Puerto Belgrano	Argentina	4
Puerto Bolivar	Ecuador	4
Puerto Chacabuco	Chile	4
Puerto Covenas, Floating Storage Unit	Columbia	1
Puerto Deseado	Argentina	4
Puerto Eden	Chile	4
Puerto Madryn	Argentina	3,4
Puerto Montt	Chile	3,4
Puerto Natales	Chile	4
Puerto Princesa	Philippines	3
Puerto Sauce Prefectura Radio	Uruguay	3
Puerto Vallarta	Mexico	3,4
Puerto Williams	Chile	4
Puget Sound	United States	1
Pula	Croatia	4
Pulpitt Hill	United Kingdom	4
Pune	India	3,4
Puno	Peru	4
Punta	France	4
Punta Arenas	Chile	4
Punta Carretas	Uruguay	3
Punta Corona, Faro	Chile	3
Punta del Este Prefectura Radio	Uruguay	3
Punta Delgada	Chile	3,4
Punta Dungeness, Faro	Chile	3,4
Punta Stilo	Italy	4
Pyeongtaek VTS	Korea (Republic of)	4
Pyongyang	North Korea	3
Pyonsan	Korea (Republic of)	3
Qaqortoq	Greenland (Denmark)	4
Qeqertarsuaq	Greenland (Denmark)	4
Qeshm Radio	Iran (Islamic Republic of)	4

RADIO AIDS TO NAVIGATION BY STATION

Qingdao Radio	China	4
Qinhuangdao Radio	China	4
Quebec	Canada	3,4
Quellon	Chile	3,4
Quequen	Argentina	3
Quintero	Chile	4
Qunfudah	Saudi Arabia	4
Quy Nhon/XVI Radio	Vietnam	3,4
Rabigh	Saudi Arabia	4
Radio Victoria	Peru	2
Raften/Svolvaer	Norway	4
Raippaluoto	Finland	4
Rame Head	United Kingdom	1,4
Ramea Island	Canada	4
Ranvikheia (Risør)	Norway	4
Raoping	China	6
Rarotonga	Cook Islands (New Zealand)	3
Ras El Barr	Egypt	4
Ras-Alhkima	Egypt	4
Ras-Gharib	Egypt	4
Rauma	Finland	4
Ravenna Bassette	Italy	4
Rawson	Argentina	3
Recalada Rio de la Plata	Argentina	3
Recife Radio	Brazil	4
Redhead	Canada	1
Reggio Calabria	Italy	4
Renesse	Netherlands	4
Reykjavik Radio	Iceland	4
Rhiw	United Kingdom	1,4
Rhu Stafnish	United Kingdom	4
Ribeira de Vinha	Cape Verde	3
Riga	Latvia	3,4
Rijeka	Croatia	3,4
Rio Branco Prefectura Radio	Uruguay	3
Rio de Janeiro Naval	Brazil	3
Rio del la Plata	Argentina	4
Rio Gallegos	Argentina	3,4
Rio Radio	Brazil	4
Riviere au Renard	Canada	4
Riviere du Loup	Canada	1,4
Riviere-au-Renard	Canada	1,3
Riyadh	Saudi Arabia	4
Roches Douvres	France	4
Rockhampton	Australia	3

RADIO AIDS TO NAVIGATION BY STATION

Rodel	United Kingdom	1,4
Rodos	Greece	4
Roesnaes	Denmark	4
Rogaland	Norway	3
Rogaland Radio	Norway	4
Roma	Italy	2,3,4
Roma (Torvajanica)	Italy	4
Ronde Klip	Curacao (Netherlands)	4
Rondeau	Canada	4
Rongcheng	China	6
Rønvikfjell, Bodø	Norway	4
Rørvik, Falkhetta	Norway	4
Rose Inlet	Canada	4
Rosemarkie	United Kingdom	4
Rosslare	Ireland	4
Rostock	Germany	4
Rotterdam	Netherlands	1
Rouen	France	1
Rowakol	Poland	4
Rozewie	Poland	4
RSC Suva	Fiji	4
Rügen	Germany	4
Ruhnu	Estonia	4
Sacre-Coeur	Canada	4
Safaga	Egypt	4
Sagtennene	Norway	4
Saint Frieux	France	4
Saint John, N.B.	Canada	3,4
Saint Louis	Senegal	4
Saint Paul Island, AK	United States	3
Saint Petersburg	Russian Federation	4
Salaverry	Peru	4
Salina Cruz	Mexico	4
Salinas	Ecuador	4
Salto Prefectura Radio	Uruguay	3
Salwa	Bahrain	6
Sambro	Canada	1
Same	Japan	4
Samsun	Turkey	3,4
San Antonio	Chile	3,4
San Antonio Oeste	Argentina	3,4
San Benedetto del Tronto	Italy	3
San Blas	Argentina	4
San Diego	United States	3
San Francisco	United States	1,3,4

RADIO AIDS TO NAVIGATION BY STATION

San Juan	Puerto Rico (USA)	3,4
San Pedro	Chile	4
Sanana	Indonesia	4
Sandakan	Malaysia	3,4
Sandnessjoen	Norway	4
Santa Paula	United States	3,4
Santa Teresa Radio	Argentina	4
Santahamina/Helsinki	Finland	4
Santander MRSC	Spain	3,4
Sanya Radio	China	3,4
Sao Vicente Radio	Cape Verde	4
Sarköy	Turkey	4
Sarnia	Canada	3,4
Sassandra	Cote D'Ivore (Ivory Coast)	4
Saudanes	Iceland	3
Sault St. Marie, MI	United States	3
Sault Ste Marie	Canada	4
Savudrija	Croatia	4
Saxa Vord	United Kingdom	4
Scheveningen	Netherlands	1,4
Schiermonnikoog	Netherlands	4
Scillies	United Kingdom	4
Scotch Mountain	Canada	4
Scoval	United Kingdom	4
Seattle	United States	3
Seefiml (Hamburg)	Germany	3
Sei Kolak Kijang	Indonesia	4
Seleznevo	Russian Federation	4
Selsey	United Kingdom	1
Selsey Bill	United Kingdom	4
Semarang	Indonesia	4
Senj	Croatia	4
Sentosa	Malaysia	3,4
Senzan	Japan	4
Seoul Radio	Korea (Republic of)	4
Serra del Tuono	Italy	4
Serra Di Pigno	France	4
Serragia	France	4
Seru Gracia (Curaçao)	Curacao (Netherlands)	4
Set-Navolok	Russian Federation	4
Setubal	Portugal	3
Severn Bridge	United Kingdom	4
Seychelles	Seychelles	3
Sfendami	Greece	4
Shakotan	Japan	4

RADIO AIDS TO NAVIGATION BY STATION

Shanghai Radio	China	2,3,4
Shannon	Ireland	4
Shannon Hill	Canada	4
Shantou Radio	China	4
Sharm Abhur	Saudi Arabia	4
Sharm-El-Sheikh	Egypt	4
Shetland	United Kingdom	3,4
Shimoda	Japan	4
Shiogama	Japan	3,4
Shionomisaki	Japan	4
Shoeburyness	United Kingdom	1,4
Shuaiba	Saudi Arabia	4
Shuqaiq	Saudi Arabia	4
Sibenik	Croatia	4
Sibolga	Indonesia	4
Sibu Rincon (Bonaire)	Curacao (Netherlands)	4
Sidi-Kerir	Egypt	4
Siglufjordur (Coast Guard Radio)	Iceland	3,4
Silver Water	Canada	4
Silvi Paese	Italy	4
Simiutaq	Greenland (Denmark)	3
Singapore	Singapore	3
Singapore Port Operations Control Center (SPOCC)	Singapore	4
Sint Joris	Curacao (Netherlands)	4
Siracusa Belvedere	Italy	4
Sisimiut	Greenland (Denmark)	4
Sitia (Mare)	Greece	4
Skagen	Denmark	4
Skegness	United Kingdom	1,4
Skellefteå	Sweden	4
Skikda	Algeria	3,4
Skiros	Greece	4
Skjervøy, Stussnesfjell	Norway	4
Skjervøy, Trolltind	Norway	4
Skriaig	United Kingdom	4
Sleipner A, North Sea	Norway	4
Slieve Martin	United Kingdom	4
Slupsk VTS	Poland	3
Snaefell	United Kingdom	1,4
Snorre, North Sea	Norway	4
Sochi	Russian Federation	4
Södertälje	Sweden	4
Sogndal, Storehogen	Norway	4
Solent	United Kingdom	3,4

Sondby	Finland	4
Sorel	Canada	4
Sorong	Indonesia	4
Sotra	Norway	4
Soulac	France	4
Soustons	France	6
South Knapdale	United Kingdom	4
South Regional HQs Korea Coast Guard	Korea (Republic of)	4
South Stack	United Kingdom	4
Southampton VTS	United Kingdom	1
Southbury	United States	3,4
Southwest Harbor	United States	3
Souyamisaki	Japan	4
Spanish Head	United Kingdom	4
Split	Croatia	3,4
Srd	Croatia	4
St. Abbs	United Kingdom	4
St. Ann’s Head	United Kingdom	1,4
St. Anthony	Canada	3,4
St. Columba	Canada	4
St. Hilary	United Kingdom	4
St. Ives	United Kingdom	4
St. John's	Canada	3,4
St. Lawrence	Canada	4
St. Mary's, Isles of Scilly	United Kingdom	1
St. Petersburg	United States	1,3
St. Valery en Caux	France	4
Stamnes	Norway	4
Station 12 (Burum, formerly Perth)	Netherlands	3,4
Stavanger	Norway	4
Stavanger, Ullandhaug	Norway	4
Steigen	Norway	4
Stenbury Down	United Kingdom	4
Stiff Ouessant	France	4
Stjørdal, Forbordsfjell	Norway	4
Stockholm Radio	Sweden	3
Storåsen	Norway	4
Stord	Norway	4
Storheia, Hadsel	Norway	4
Stornoway	United Kingdom	3,4
Strait of Gibraltar	Spain	1
Strömstad	Sweden	4
Suderoy	Denmark	4
Suez	Egypt	4
Sulak	Russian Federation	4

RADIO AIDS TO NAVIGATION BY STATION

Sullom Voe Harbor	United Kingdom	1
Sundsvall	Sweden	4
Supe	Peru	4
Surabaya	Indonesia	4
Susak	Croatia	4
Suurupi	Estonia	4
Suva	Fiji	3,4
Svalbard	Svalbard	3
Svalbard Radio	Norway	4
Svenska Högarna	Sweden	4
Sventoji	Lithuania	4
Swansea	United Kingdom	3,4
Sweden	Sweden	4
Swinoujscie VTS	Poland	3
Sydney	Australia	3
Sydney, N.S.	Canada	3,4
Sylt	Germany	4,6
Syros	Greece	4
Szczecin	Poland	4
Szczecin VTS	Poland	3
Tabou	Cote D'Ivore (Ivory Coast)	4
Tacubaya	Mexico	2
Taejon	Korea (Republic of)	2
Taganrog	Russian Federation	4
Takoradi	Ghana	4
Talara	Peru	4
Talcahuano	Chile	3,4
Tallinn	Estonia	4
Tallinn	Estonia	3,4
Tallinn North	Estonia	4
Taltal	Chile	4
Tamagusuku	Japan	4
Taman	Russian Federation	4
Tampico	Mexico	4
Tana, Algasvarre	Norway	4
Tarabulus (Tripoli)	Libya	3
Tarakan	Indonesia	4
Tarawa	Kiribati	3
Tarifa	Spain	3,4
Tarragona	Spain	3,4
Tartous Radio	Syria	4
Tartus (Tartous)	Syria	3
Tashkent	Uzbekistan	2
Taupo Maritime Radio	New Zealand	3,4
Tees	United Kingdom	1

Tehran	Iran (Islamic republic of)	4
Tema Radio	Ghana	4
Temryuk	Russian Federation	4
Tenby	United Kingdom	4
Tenerife CCR	Spain	4
Tenerife MRCC	Canary Islands	3
Tenes	Algeria	3,4
Ternate	Indonesia	4
Texada	Canada	4
Thames	United Kingdom	3,4
Thanh HOA	Vietnam	3,4
Thasos	Greece	4
Theodosia	Ukraine	4
Thermopylae	Greece	3,4
Thira	Greece	4
Thrumster	United Kingdom	4
Thunder Bay	Canada	4
Thunder Bay, Ont.	Canada	3
Tianjin Radio	China	3,4
Tingstade	Sweden	4
Tingvoll, Reinsfjell	Norway	4
Tioman	Malaysia	4
Tiree	United Kingdom	1,4
Tiverton	Canada	1,4
Tjome	Norway	3,4
Tobermory	Canada	1,4
Tocopilla	Chile	4
Tofino, B.C.	Canada	3,4
Toila	Estonia	4
Tokachibuto	Japan	6
Tokotan	Japan	4
Tokyo Wan	Japan	1
Tongoy	Chile	3
Tønsnes	Norway	4
Torgu	Estonia	4
Torö	Sweden	4
Torosay	United Kingdom	4
Torshavn	Faroe Islands (Denmark)	3,4
Tosayama	Japan	4
Töstamaa	Estonia	4
Townsville	Australia	3
Traenfjord	Norway	4
Trafalgar	Canada	1,4
Trenton	Canada	4
Trevose Head	United Kingdom	1,4

RADIO AIDS TO NAVIGATION BY STATION

Trieste	Italy	3,4
Trieste (Monte Radio)	Italy	4
Trimingham	United Kingdom	1,4
Trois-Rivieres	Canada	4
Trollhättan	Sweden	4
Tromsø	Norway	4
Trusthorpe	United Kingdom	4
Tryvann (Oslo)	Norway	4
Tsoukalas	Greece	4
Tuapse	Russian Federation	4
Tumannaya (Posiet)	Russian Federation	4
Tunis	Tunisia	3
Turku	Finland	3,4
Tuticorn	India	4
Twillingate	Canada	1,4
Tyne Tees	United Kingdom	4
Ucka	Croatia	4
Uddevalla	Sweden	4
Ugljan	Croatia	4
Ula, North Sea	Norway	4
Uljenje	Croatia	4
Ulsan VTS	Korea (Republic of)	4
Ulu Kali	Malaysia	4
Umeå	Sweden	4
Umm Lajj	Saudi Arabia	4
Undva	Estonia	4
Upernavik	Greenland (Denmark)	3,4
Ushuaia	Argentina	3,4
Ussuriysk	Russian Federation	6
Ustica	Italy	4
Utö	Finland	4
Uusikaupunki	Finland	4
Uzava	Latvia	4
Vaasa	Finland	4
Väddö	Sweden	4
Vaerlandet	Norway	6
Værøy	Norway	4
Valdivia	Chile	4
Valencia	Spain	3,4
Valentia	Ireland	3,4
Valhall, North Sea	Norway	4
Valletta VTS	Malta	3
Valparaiso	Chile	1,4
Valparaiso Playa Ancha	Chile	2,3
Van Inlet	Canada	1

RADIO AIDS TO NAVIGATION BY STATION

Vancouver	Canada	3,4
Vanino	Russian Federation	4
Varangefjord, Torsvarde	Norway	4
Varberg	Sweden	3
Varco del Salice	Italy	4
Vardo	Norway	3,4
Varna	Bulgaria	3,4
Västerås	Sweden	4
Västervik	Sweden	4
Vealøs (Porsgrunn)	Norway	4
Vega	Norway	4
Veggen, Narvik	Norway	4
Vejby	Denmark	4
Vejle	Denmark	4
Venezia	Italy	4
Ventspils	Latvia	1
Veracruz	Mexico	3,4
Ver-sur-Mer	France	4
Veselo-Voznesenka	Russian Federation	4
Vestmannaeyjar	Iceland	3,4
Victoria	Canada	4
Victoria, B.C	Canada	3,4
Vidova Gora	Croatia	4
Vigo	Spain	3,4
Villervile	France	4
Virolahti	Finland	4
Visby	Sweden	4
Vishakhapatnam	India	4
Vitrupe	Latvia	4
Vladivostok	Russia	3,4
VTS Illichivs'k	Ukraine	4
VTS Mariupol	Ukraine	4
VTS Ochakiv	Ukraine	4
VTS Odessa	Ukraine	4
VTS Rus'ka Beak	Ukraine	4
VTS Striletskiy	Ukraine	4
Vung Tau/XVR Radio	Vietnam	3,4
Vungtau/VMRCC/MRCC Vietnam	Vietnam	4
Vysotsk	Russian Federation	4
Walney Lighthouse	United Kingdom	4
Walvis Bay	Namibia	3
Wando VTS	Korea (Republic of)	4
Wanganui	New Zealand	1
Watts Point	Canada	4
Wenzhou Radio	China	4

RADIO AIDS TO NAVIGATION BY STATION

West Hougham	United Kingdom	4
West Regional HQs Korea Coast Guard	Korea (Republic of)	4
West Terschelling	Netherlands	4
West Torr	United Kingdom	1,4
Westkappelle	Netherlands	4
Westport	New Zealand	1
Wezep	Netherlands	4
Whitby	United Kingdom	4
Wiarton	Canada	4
Wicklow Head	Ireland	4
Wideford Hill	United Kingdom	1,4
Wiluna	Australia	3,4
Windy Head	United Kingdom	4
Windyheads Hill	United Kingdom	1
Winneba	Ghana	4
Witowo	Poland	3
Witowo Radio	Poland	4
Woensdrecht	Netherlands	4
Wollaston	Chile	3,4
Woods Hole	United States	3
Woolwich Radio	United Kingdom	1
Xiamen Radio	China	4
Xian	China	2
Xuancheng	China	6
Yakutat	United States	3
Yamaguchi	Japan	3,4
Yanbu	Saudi Arabia	4
Yangon	Burma (Myanmar)	3
Yangon Radio	Myanmar	4
Yantai Radio	China	4
Yarmouth	Canada	4
Yarmouth	United Kingdom	3,4
Yeosu VTS, Seoul Radio	Korea (Republic of)	4
Yildiztepe	Turkey	4
Yokohama	Japan	3,4
Yoko-o	Japan	4
Yumrutepe	Turkey	4
Yuzhno-Sakhalinsk	Russian Federation	3,4
Yuzhnyy	Ukraine	1
Zadar	Croatia	4
Zatoka Gdansk VTS	Poland	3
Zeitiya	Egypt	4
Zhafarana	Egypt	4
Zhanjiang Radio	China	4
Zhelezniy	Russian Federation	4

RADIO AIDS TO NAVIGATION BY STATION

Zoagli	Italy	4
Zonguldak	Turkey	4
Zorritos	Peru	4