

Marine Radio Operation

VHF Marine Radios

VHF marine radios are a great asset to all who use them. They are not chat lines however, and should be used for working messages only. Misuse of the equipment could disrupt other users within the area. All VHF radio users are legally required to hold an operators licence and the vessel to which the radio is fitted must have a ship radio licence. A 'station' is a term for a VHF Radio. As a general rule listen to the channel for 30 seconds before transmitting to ensure it is not already in use.

The Radio

All marine radio equipment must be approved according to government specifications. There is a maximum power output of 25W although 1W is usually sufficient for most activities other than distress calls or public correspondence.

Channels

Channel 6 and 16 are mandatory on a VHF radio.

Channel	Purpose
16	International Distress, safety and calling
6	Primary Intership
8, 72, 77	Intership
12, 14	Port Operations
67	Small Craft safety
M, M2	Marina Special Licence
2, 24, 26, 28	Ship to shore (public correspondence)
6, 67, 73	Search And Rescue Co-ordination

VHF Signals

The range of VHF is line of sight and has an Inter-ship range of 15-25 miles. Ship to shore range is about 30-50 miles. The dual watch (D/W) facility allows you to monitor two channels via switching. Do not transmit on dual watch. Digital selective calling uses CRS but requires an additional kit for the radio set.

The capture effect is when a receiver within range of two stations will receive only the more powerful or closer signal, the other signal will be lost.

Aerials

Aerial should be high and upright and clear of other aerials by at least 1M. An emergency aerial should also be carried.

Control of Communication

Ship to shore - coast radio station

Inter-ship - station calling

Search and Rescue - Vessel in distress, relay station, Coastguard, on scene vessel / aircraft

Duration of Calls

Test Call / Radio Check - 10 sec

Calling on Channel 16 - 1 min

Calling again on Channel 16 - 3 min

Listen on channel before calling - 30 sec

Distress calls

Coastguard use GMT all year round. Each station has an obligation to respond to a distress call: write down time, name, position, nature of distress, no of people on board and additional information.

If the Coastguard says 'wait' this means they will respond within 10 mins. Any longer than that should be given a reason prior. Only repeat things three times if it is a distress call. Other wise use their name once and your name twice. Distress calls should make the following 7 points in order:

Distress call

Identity

Position (Note that the position is given in geographical area as distance 'from object' not 'to object' when working out bearing. Otherwise use Lat. and Long.)

Nature of distress

Information for search and rescue

Invitation to reply

Message	Meaning
Mayday (Distress)	<p>Definition: When a vessel or person is in grave and imminent danger and requires immediate assistance. fire, accident damage, lee shore situation (under lee shore is when you are sheltered by the shore), diver not surfaced, man lost overboard, person is gravely ill. Example:</p> <p style="text-align: center;">MAYDAY, MAYDAY, MAYDAY. This is Evelyn Rose, Evelyn Rose, Evelyn Rose MAYDAY Evelyn Rose. My position is: 180 degrees, one mile from buoy number 1. I am sinking and require immediate assistance Four crew members on board, all safety equipment and EPIRB at 406 MHz</p>
Mayday Relay	<p>Mayday relays are transmitted when the station in distress cannot itself transmit a distress signal or when, although not in a position to assist a distress message is heard that has not been acknowledged. Example:</p> <p style="text-align: center;">MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY. This is Yacht Fulmar, Yacht Fulmar, Yacht Fulmar MAYDAY Evelyn Rose. Position is: 180 degrees, one mile from buoy number 1. Yacht sinking and requires immediate assistance Four crew members on board, all safety equipment and EPIRB at 406 MHz</p>
Pan Pan	<p>Definition : When a station has a very urgent message to transmit concerning safety of a ship, aircraft or person. Example:</p> <p style="text-align: center;">PAN PAN, PAN PAN, PAN PAN Hello all stations, Hello all stations, Hello all stations This is Evelyn Rose, Evelyn Rose, Evelyn Rose My position is: 180 degrees, one mile from buoy number 1. I have been in a collision and require assistance of a tug</p>
Pan Pan Medico	<p>Definition: This call would usually use a link call via a radio station to a hospital doctor. Do not address the radio station first as these are not monitored 24 hrs. Direct to Coastguard first on Ch 16. Serious medical conditions warrant a Mayday call. Example:</p> <p style="text-align: center;">PAN PAN MEDICO, PAN PAN MEDICO, PAN PAN MEDICO Holyhead Coastguard, Holyhead Coastguard, Holyhead Coastguard This is Evelyn Rose, Evelyn Rose, Evelyn Rose We are 3 miles due North of West Point Crew member on board with severe chest pain We have medical and safety equipment on board Immediate medical assistance required, Over PAN PAN MEDICO, PAN PAN MEDICO, PAN PAN MEDICO Evelyn Rose, Evelyn Rose, Evelyn Rose This is Holyhead Coastguard, Holyhead Coastguard, Holyhead Coastguard Standby on channel 26 for link call Over PAN PAN MEDICO This is Evelyn Rose Will standby for link call on 26 Thank you - listening 16 Over</p>

Seelonce Mayday	Radio Silence Definition. Imposing radio silence by controlling station
Seelonce Distress	Radio Silence Definition. Issued by other station Example: MAYDAY - SEELONCE MAYDAY, SEELONCE MAYDAY, SEELONCE MAYDAY. This is Severn Radio - Severn Radio - Out
Prudonce	
Seelonce Feenee	
Securite	<p>Security, Security, Security</p> <p>Hello all stations, Hello all stations, Hello all stations</p> <p>This is Evelyn Rose, Evelyn Rose, Evelyn Rose</p> <p>My position is: 180 degrees, one mile from buoy number 1.</p> <p>My engine has broken down and I am anchoring in a southbound traffic lane, Request ships keep clear, over.</p>

NAME OF SHIP..... CALL SIGN.....

DISTRESS TRANSMITTING PROCEDURES
(For use only when Immediate Assistance required)

1. Ensure transmitter is switched to Channel 16 -156.8MHz.
2. If possible **transmit two tone Alarm Signal for 1/2 to 1 minute.**
3. Then say:

MAYDAY, MAYDAY, MAYDAY
THIS IS..... (Ship's name or call sign 3 times).....
MAYDAY

followed by ship's name or call sign

POSITION.....

Nature of distress.....

Aid required..... OVER
4. Listen for a reply and if none repeat above procedure, particularly during the 3-minute silence period commencing at each hour and half-hour.

Example - If possible Alarm Signal followed by:
MAYDAY, MAYDAY, MAYDAY.
This is EVELYN ROSE, EVELYN ROSE, EVELYN ROSE
MAYDAY, EVELYN ROSE

Position: 54 24 north 018 33 West.
I am on fire and require immediate assistance. OVER.

Common Terminology

Radio Command	Meaning
All after-	Used after the proword 'SAY AGAIN' to request a repetition of a portion of a message.
All before	Used after the proword 'SAY AGAIN' to request a repetition of a portion of a message.
Correct	Reply to repetition of a message that has been preceded by the prowords READ BACK FOR CHECK when it has been correctly repeated.
Correction	spoken during the transmission of a message means - An error has been made in this transmission. Cancel the last word or group. The correct word or group follows.
In Figures	The following numeral or-group of numerals are to be written as figures.
In Letters	The following numeral or group of numerals are to be written in letters as spoken.
I Read Back	If the receiving station is doubtful about the accuracy of the whole or any part of a message it may repeat it back to the sending station, preceding the repetition with the prowords I READ BACK
I Say Again	I am repeating transmission or portion indicated.
I Spell	I shall spell the next word or group of letters phonetically.
Out	This is the end of working to you. The end of work between two stations is indicated by each station adding the word OUT at the end of the last reply.
Over	The invitation to reply. Note that the phrase OVER AND OUT is never used.
Radio Check	Please tell me the strength and the clarity of my transmission.
Received	Used to acknowledge receipt of a message, i.e., YOUR NUMBER...RECEIVED. In cases of language difficulties, the word 'ROMEO' is used.
Say Again	Repeat your message or portion referred to i.e., SAY AGAIN ALL AFTER... SAY AGAIN ADDRESS etc. (Note:- This is typical of the need to memorise all these catch phrases'. To use the word REPEAT would be wrong REPEAT is used to emphasize. something).
Station Calling	Used when a station receives a call which is intended for it, but is uncertain of the identification of the calling station.
This Is	This transmission is from the station whose call sign immediately follows. In cases of language difficulties the abbreviation DE spoken as DELTA ECHO is used
Wait	If a called station is unable to accept traffic immediately it will reply to you with the proword WAIT....
Minutes	If the probable duration of the waiting time exceeds 10 minutes the reason for the delay should be given.
Word After or Word Before	Used after the proword SAY.
Again	to request repetition of a portion of a radiogram or message.
Wrong	Reply to a repetition of a radio telegram that has been preceded by the prowords 'I READ BACK, when it has been incorrectly repeated.

The phonetic alphabet

Letter	Channel	Pronounced as
A	Alfa	AL FAH
B	Bravo	BRAH VO
C	Charlie	CHAR LEE
D	Delta	DELL TAH
E	Echo	ECK OH
F	Foxtrot	FOKS TROT
G	Golf	GOLF
H	Hotel	HOH TELL
I	India	IN DEE AH
J	Juliett	JEW LEE ETT
K	Kilo	KEY LOH
L	Lima	LEE MAH
M	Mike	MIKE
N	November	NO VEM BER
O	Oscar	OSS CAH
P	Papa	PAH PAH
Q	Quebec	KEH BECK
R	Romeo	ROW ME OH
S	Sierra	SEE AIR RAH
T	Tango	TANG GO
U	Uniform	YOU NEE FORM
V	Victor	VIK TAH
W	Whiskey	WISS KEY
X	X-ray	ECKS RAY
Y	Yankee	YANG KEY
Z	Zulu	ZOO LOO

Other Points

Do	Do not
<ul style="list-style-type: none"> Practice your procedure drills Practice the phonetic alphabet 	<ul style="list-style-type: none"> Transmit false or deceptive messages Transmit without and ID name or call sign Close down station Broadcast a message without expecting a reply Communicate without using coast radio station