

Lesson Plan -  
6.3 -1 Operate VHF Radio  
6.3 - 2 Operate SAR Unit Radio Maritime & DSC

Date: 13/1/18  
Mark Harker  
Cowes LTA / Helm

**AIM:**

Trainer - This module is delivered through initial training shoreside on the basics of VHF, voice protocol and then afloat through repetition of crew making and receiving transmissions with Coastguard and other vessels / shoreside stations.

Crew - Know how to use the VHF unit on the lifeboat, use the VHF handheld, make and receive transmissions, know the relevant VHF protocols and make a DSC / MayDay transmission.

**Training Shoreside** - Provide a walkthrough of the different VHF units / protocols and information to send and receive.

- Types of fixed VHF units / handhelds
- What to say and how to say it (Differences for Training & Shouts)
- Where to find the emergency aerial and how to use it
- Limitations of the emergency aerial
- How to send a Mayday / receive a Mayday and protocol for Mayday shouts
- Information to capture to assist in shouts

**Training Afloat** - Crew should practice sending transmissions afloat initially on training and then for shouts once ready. To aid the initial shout transmissions, pass crew numbers and details of exercise via VHF afloat instead of via landline prior to launch.

**Training Poole** - Crew Course

## VHF Units

### Station VHF Unit

This unit is located by the Chart table and provides the station with a means of monitoring transmissions between the lifeboat / Coast Guard / Casualty Vessel. It allows them to communicate with the lifeboat and to pre-empt where shore crew may be required allowing extra time to prepare for the arrival of the lifeboat and any necessary assistance it may require.



### Handheld Unit

Handheld VHF units are a key piece of equipment. They allow shorecrew to communicate the launch of the lifeboat to river traffic; communicate directly with the lifeboat during launch and recovery; communicate with the station and lifeboat when assisting from pontoons as a shorecrew party. It is also used on the lifeboat as a backup to the main VHF unit and is taken by crew when they leave the lifeboat to assist on a casualty vessel or ashore.

These units are waterproof and for those being taken afloat should have a large red flotation keyring attached to make it easier to recover.

**Maintenance** - The unit should be cleaned of any sea water on it; the battery connections covered with corrosion block and once switched off, replaced on its charging unit in the crew room.



### **Lifeboat Fixed VHF Unit**

The lifeboat has a fixed Sailor VHF radio unit. This unit can be used directly with a mic fitted to it or through the lifeboat internal communications unit which can be used from the helmets or via a handheld mic.

Ref to the Station VHF unit manual for a detailed instruction on the features functions and operating procedures.

the unit is fitted with a dual watch function which allows you to be monitoring on channel 0 for example while still having the unit monitoring channel 16.

The DSC function is basic and only requires the user to flip the flap , press the red button and hold down for 5 seconds. This sends the DSC signal and can be followed up by a Mayday call.

Trainer - demonstrate switching on the unit; using the squelch ; changing channels (inc 16 , 0 , 31 ) ; how to use dual watch; changing lighting



## VHF Aerial



The lifeboat has a VHF aerial fixed to the A frame at the stern as well as an emergency aerial which is located in the well under seats 2 and 3. Unclip seats 2 and 3 behind the seats and lift up to access the well.

The emergency aerial should be removed from its vacuum seal, both end caps removed. At one end fit the aerial antenna and cable; the antenna should be screwed in at the other end while the cable should be clipped into the VHF junction box. This can be located on the starboard side of the A frame inside under the capsized bag. Once fitted the emergency aerial can be either fitted by the junction box or held up higher by one of the crew.

FACT - The emergency aerial is restricted in its ability due to its low level to the water; crew holding it up gives it more range, however this should only be done when the lifeboat is not moving and conditions mean it is safe to do so. The loose wires are also a potential limitation.

## Transmission Protocol

The protocol used by the lifeboat is the same whether on a shout or on an exercise. However there are certain differences when launching. When launching the lifeboat will always make its initial transmission to Coastguard on Channel 16, while the shore crew will notify shipping of the lifeboat launch on channel 69.

### Exercise / Training

**Lifeboat** - Solent Coastguard, Solent Coastguard this is Cowes lifeboat, Cowes lifeboat over...

**Coastguard** - Cowes lifeboat this is Solent Coastguard, go channel 0 and standby..

**Lifeboat** - Solent Coastguard, this is Cowes lifeboat switching channel 0 and standing by

*The lifeboat radio operator will then switch the VHF unit to channel 0.*

**Coastguard** - Cowes lifeboat, this is Solent Coastguard, go ahead over..

**Lifeboat** - Solent Coastguard this is Cowes lifeboat launched on exercise, our crew numbers are XX, XX, XX, XX, we shall be operating on the (given location of where you are training such as Central Solent);

duration is (length of exercise in minutes) 120 minutes, we are SAR Capable ( this is essential as it confirms to coastguard you can be utilised by them), requesting ops normal every 15 minutes over...

**Coastguard** - Cowes Lifeboat , Solent Coastguard, ops every 15 minutes out.

FACTS -

1. Crew numbers are given as 22 (twenty two) 2 (Two) 2 (Two), broken down to confirm the number. in the event something happens to the lifeboat CG can liase with the lifeboat station on who crew are. it also confirms how many people onboard
2. Where you are operating allows coastguard to know how far you are from a shout if required or if you go missing where you were last.
3. Ops normal is an RNLI thing. by contacting coastguard every 15 minutes the Coastguard will know where you are and where you intend to go in the next 15 mins so if lost / overdue on an ops they can send help and have a more focused search area.
4. 'Over' at the end of a transmission , say you want them to come back to you. 'Out' say you have finished the conversation and expect no response.

Ops Normal Transmissions:

**Lifeboat** - Solent Coastguard this is Cowes Lifeboat over..

**Coastguard** - Cowes Lifeboat this is Solent Coastguard , go ahead over...

**Lifeboat** - Solent Coastguard this is Cowes Lifeboat, Ops normal, current location ie 'Osborne bay' , intend to head to 'Gurnard Bay' in the next 1. 5. over

**Coastguard** - Cowes lifeboat , Solent Coastguard, understood, out

This tells Coastguard, all is ok, where you are and where you will be in 15 minutes.

## Shouts

**Lifeboat** - Solent Coastguard , Solent Coastguard this is Cowes lifeboat, Cowes lifeboat over...

**Coastguard** -Cowes lifeboat this is solent Coastguard, go ahead over.. (if its a serious incident they will keep you on ch 16 or may move you to ch 0 or ch 67)

**Lifeboat** - Solent Coastguard , this is Cowes lifeboat launched on Service, our crew numbers are XX XX XX XX, we are ready for tasking (this says , tell me what you need us to do) over.

**Coastguard** - Cowes lifeboat, this is Solent Coastguard, you are tasked to..... (they will then provide you with the details of the incident, crew in seats 2 3 4 should write down the details if able to, this ensures the message is received correctly first time), over...

**Lifeboat** - Solent Coastguard this is Cowes lifeboat , (state back to the coastguard the main details of the incident to confirm its understood correctly) ( other details you provide back to coastguard may include ETA to casualty location, a request for more information, whether the casualty is on a VHF channel so you can speak to them directly etc)

Trainer - take the crew through the different types of information transmitted , requested etc. Practice this transmission set shoreside repeatedly to confirm crew understand the sequence and protocol.

## **Callsigns**

Cowes Lifeboat - Cowes Lifeboat

Coastguard - Solent Coastguard

Lifecrew when off the lifeboat with handheld - Cowes Alpha

Lifeboat Station - Cowes Boathouse

Coastguard Helicopter - Coastguard 175 (when not on a shout)

Rescue 175 (when on a shout)

When the lifeboat has been tasked to a Mayday shout, its protocol would be

example (a vessel called Omega has issued a Mayday)

Lifeboat - Mayday Omega Mayday Omega , this is Cowes Lifeboat Cowes Lifeboat over

Omega - Cowes Lifeboat, this is Mayday Omega.....(plus whatever information they transmit)

## **MayDay & Pan Pan**

In the event of a distress a Pan Pan or MayDay will be used to transmit details to either coastguard or vessels in the area to allow for assistance to be provided. These transmissions are sent on Channel 16 the emergency channel and all vessel within radio range will automatically pick it up in addition to the Coastguard who monitor channel 16.

PAN PAN

Maybe the casualty has broken down and have been left floating aimlessly, or have suffered significant structural damage to their boat that means its progress has been severely impeded. Maybe someone on board has been taken ill but their condition is not immediately life threatening. These are the kinds of incidents to use a Pan-Pan call.

Repeating Pan-Pan three times says 'it's serious, we need help but there isn't a grave and imminent danger to the boat or anyone on board

***"Pan Pan, Pan Pan, Pan Pan"***

***Your MMSI number and your vessel's name [spoken three times]***

***Your position***

***The nature of the situation [for example, "rig failure"]***

***What you intend to do***

***"Over"***



MayDay

A Mayday call is only to be used in the case of “grave and imminent danger to a vessel or persons, such as fire, sinking, man overboard etc.” So serious is a Mayday call considered to be that in many countries now anyone making a false Mayday call could be prosecuted under criminal law. It is solely intended to save lives.

***“Mayday, Mayday, Mayday”***

***“This is (name of vessel)” [spoken three times]***

***MMSI***

***callsign***

***“Mayday”***

***Your vessel's name, call sign and MMSI number [spoken once]***

***Your position***

***The nature of distress [for example, “the boat is sinking”]***

***Immediate assistance required***

***How many people are on board***

***Any other information***

***“Over”***

Maritime Mobile Service Identity (MMSI) - a nine-digit registered number further helps identify your boat

Cowes Lifeboat MMSI is **235091472** , Callsign **2FID3**

**FACT - When**

**Reference Material:**

Video Clip for Launch & Recovery Transmission

Video clip emergency aerial set up

SOP