Radio maintenance

Aerials	• Regularly inspect aerials and mounting devices for cracking or deterioration. • Make sure all feeder connections are clean and tight and that the insulation is intact. • Do not forget to stay clear of HF antennas and feeders during transmission or you may get serious burns.
Transceivers (marine radio transmitter and receiver unit)	• Transceivers should always be located to protect the unit from rain, direct sunlight and sea spray. • To verify transceiver operations, perform a radio check with Coast Radio Melbourne if using HF or with the relevant volunteer or limited coast station if using 27 MHz.
Power supply	• No power means no radio. • Ensure the power supply is in good order, particularly if undertaking a longer voyage. • Check charge condition of battery (with voltmeter or hydrometer) on a weekly basis. • Check supply wiring is intact, insulation not cracked and the connections are clean and tight. • Make sure fuses are not loose or blown (have a supply of spare fuses of the correct capacity available).

Equipment licences and operator certification

27 MHz	• Owners do not need a licence to have the equipment, however there is a legal obligation to observe the conditions specified in the class licence. • Operators are not required to hold certification.
VHF	• Owners do not need a licence to have the equipment, however there is a legal obligation to observe the conditions specified in the class licence. • Operators are required to hold a Marine Radio Operators VHF Certificate of Proficiency (MROVCP) or its equivalent.
MF/HF	• Radio equipment is required to be licensed. An individual licence can be obtained by application to the Australian Communications Authority (ACA). • Operators are required to hold a Marine Radio Operators Certificate of Proficiency (MROCP) or its equivalent. This qualification also covers VHF operations.
Inmarsat	• Operators of Inmarsat satellite equipment require a Marine Satellite Communications Endorsement (Satcom) of their Certificate of Proficiency.

Further information on marine radio courses and a copy of the *Handbook for Radiotelephone Ship Station Operators* is available from the ACA on 1300 850 115 or Australian Maritime College on 1800 030 277.

Marine radio procedures

Routine message

In making a normal call to another vessel or coast station the most important points to remember are:

- SAY – *'(the other vessel's name)'* THREE TIMES
- SAY – *'THIS IS (your vessel's name)'* THREE TIMES
- SAY – *'OVER'*
- when he/she answers, agree on a working frequency
- after each transmission SAY – *'OVER'*
- on completion of conversation SAY – *'OUT'*.

Safety message

This message is preceded by the word *'SECURITE'* and is used for broadcasts of navigational warnings, weather warnings and weather forecasts – initiated by ship stations and shore stations.

Urgency message

An urgency message indicates that the station sending it has a very urgent message to transmit concerning the safety of a vessel or aircraft, or the safety of a person. Urgency messages are sent on all distress frequencies and are identified by the words and sequence:

- *'PAN PAN'* THREE TIMES
- *'HELLO ALL STATIONS'* THREE TIMES
- *'THIS IS… (name of the vessel)'* THREE TIMES
- *'Urgency message'* ONCE
- *'OUT'*.

Distress message

Distress messages are only sent when a vessel is in grave or imminent danger. Distress messages take priority over all other calls, so if you hear anything that sounds even remotely like a distress message, you should suspend your own calls immediately.

In an emergency, the vessel in distress has full control over all other calls; not the coast station or other vessels which may be involved, unless control is delegated.

- SAY – *'MAYDAY'* THREE TIMES
- SAY – *'THIS IS… (name of the vessel)'* THREE TIMES
- SAY – *'MAYDAY – THIS IS… (name of the vessel)'* ONCE
- state the position as accurately as you can
- describe the problem
- say how many people are on board and time afloat.

Radio silence period

Before using a radio, the operator should always glance at a watch or clock to see if it is an official radio silence period. These are for three minutes beginning every hour and half hour.

Contacts

	Web	Phone/Fax
Australian Communications Authority	www.aca.gov.au	P: 1300 850 115
Australian Maritime College	www.amc.edu.au	P: 1800 030 277
Australian Maritime Safety Authority	www.amsa.gov.au	P: 02 6279 5000
Bureau of Meteorology	www.bom.gov.au	P: 03 9669 4916 F: 03 9669 4964
Coast Radio Melbourne (Point Lonsdale)		P: 03 5258 1252
Marine Safety Victoria	www.marinesafety.vic.gov.au	P: 03 9655 3399 F: 03 9655 6611

Telephone weather services

Port Phillip and Western Port	1900 926 110	Western Bass Strait	1900 969 934
Bass Strait	1900 969 930	VIC coastal waters	1900 969 966
Northern Bass Strait	1900 969 931	Yacht Forecast for Port Phillip and Western Port	1900 920 557
Southern Bass Strait	1900 969 932		
Eastern Bass Strait	1900 969 933	Warnings	1300 659 217

Call Charges – 1900 numbers: 77¢ per minute incl. GST; 1300 numbers: low call cost – around 27.5¢ incl. GST (more from international, satellite, mobile or public phones).

Emergency procedures

1. All occupants to put on personal flotation devices.
2. Raise the alarm using:

MARINE RADIO	**27 MHz**	**Ch 88**
	VHF	**Ch 16**
	HF	**4125 KHz** **6215 KHz** **8291 KHz**
PHONE	**000**	
EPIRB	**Activate your distress beacon**	

3. Raise the alarm by attracting the attention of others:
   - activate flares when you see another vessel, aircraft or potential rescuer
   - repeatedly raise and lower arms outstretched to each side
   - display V-Sheet
   - use signalling mirror.
4. Anchor your boat to maintain position if safe to do so.
5. STAY WITH YOUR BOAT – a vessel is much easier to spot than a swimmer. If swimming against waves, tides and currents doesn't get you, hypothermia will.

All information is current at the time of printing (June 2004) and is provided as a guide only. For full details refer to the *Marine Act 1988* and the Marine Regulations 1999. For a free copy of the *Victorian Recreational Boating Safety Handbook* call **1800 223 022** or visit **www.marinesafety.vic.gov.au**
Published by Marine Safety Victoria, Level 11, 80 Collins Street, Melbourne, June 2004. Published on www.marinesafety.vic.gov.au. Authorised by the Victorian Government, 80 Collins Street, Melbourne. Printed by D&D Global Group, 101 Palmer St, Richmond.

marine radio **communications**

www.marinesafety.vic.gov.au

MarineSafety VICTORIA

Victoria The Place To Be

Introduction

There are a variety of communications options available to the commercial and recreational boater.

They include:

- marine radio
- Emergency Position Indicating Radio Beacon (EPIRB)
- satellite phone
- mobile phone.

Radio monitoring

National coast radio network

Across Australia since 1 July 2002, national monitoring of High Frequency (HF) maritime distress and safety communications (voice) is provided by nine coast radio stations located around the Australian Coast. Coast Radio Melbourne is one of the nine stations.

The national coast radio network provides distress and safety monitoring on HF frequencies 4125 kHz, 6215 kHz and 8291 kHz, 24 hours a day, seven days a week. The network is designed to provide coverage extending to 200 nautical miles off the Australian coast.

Coast Radio Melbourne

An integral component of the national coast radio network is Coast Radio Melbourne which is manned by communication officers stationed at Point Lonsdale.

In addition to its national responsibilities for monitoring on HF, Coast Radio Melbourne provides distress and safety monitoring on VHF Channel 16, 24 hours a day, seven days a week, with general coverage of Port Phillip and Western Port. It does not monitor transmission on 27 Mhz.

In the event of distress or urgency calls being received by Coast Radio Melbourne, the call is referred to the Victoria Water Police to coordinate search and rescue or other assistance as may be required. In addition to referring the call to Victoria Water Police, distress and urgency calls are also relayed to the Rescue Co-ordination Centre, Canberra.

Limited coast stations and volunteer services

There are a number of limited coast radio stations and volunteer services throughout Victoria that provide marine radio distress and safety services on VHF and 27 MHz. However, monitoring is often not continuous and coverage is usually restricted to a smaller local area. Check local area for stations and coverage capabilities in Victoria.

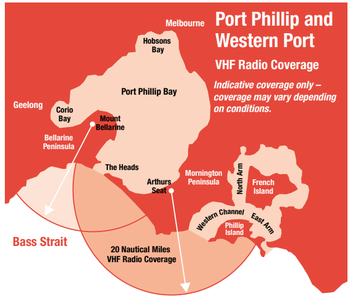
Radio equipment

Choosing the right communication equipment for your boat will depend on:

- whether you are a commercial or recreational vessel
- how big your vessel is
- how far you are going
- in what area you are planning to operate.

Commercial vessels have regulated requirements and may be required to carry a VHF and/or a HF radio.

Recreational boaters should seek advice about what is best for their personal circumstances. Here are a few guidelines on the differences.



	27 MHz	VHF	MF/HF
Who	Recreational boaters – mainly for general use	Recreational boaters and most commercial operators	Anyone making a major trip and commercial operators not covered by VHF
Cost	Approx. $150	Approx. $400	Approx. $3,000
Range	Up to 20 kilometres	Up to 50 kilometres	Depending on frequencies, it is worldwide
Monitored by	Volunteer organisations	Coast Radio Melbourne and some volunteer services	National coast radio network, which includes Coast Radio Melbourne
Licence	For equipment licensing and operator certification requirements, refer to relevant section later in this brochure		
Coverage	Not covered 24 hours a day – need to contact local monitoring groups for more detailed information **27 MHz can be noisy, unreliable and can suffer from interference from the engine**	• Coast Radio Melbourne provides monitoring on VHF Channel 16 with general coverage of Port Phillip and Western Port 24 hours a day, seven days a week • Volunteer services may provide regional or local coverage **See VHF Radio Coverage map above**	• Distress monitoring on HF frequencies are 4125 kHz, 6215 kHz and 8291 kHz • MF (2182 kHz) can only be used for ship-to-ship communications, as the national coast radio network does not monitor MF frequencies

Other safety equipment

Emergency Position Indicating Radio Beacon (EPIRB)

An EPIRB is a small self-contained battery-operated radio transmitter. It is watertight, floats and sends emergency signals to satellites.

A 406 MHz EPIRB with an in-built GPS will help pinpoint its position to within a few metres, thereby enabling quicker and more efficient search-and-rescue ability.

If you are operating more than two nautical miles offshore, you must have one of these on your vessel. An EPIRB is turned on as a last resort in a life-threatening situation, as it will activate major search and rescue teams.

Most 121.5 MHz EPIRBs send an analogue signal, but registered digital 406 MHz EPIRBs are detected faster and more accurately. They also transmit an identity code which can be cross referenced with a database maintained by the Australian Maritime Safety Authority (AMSA).

The information stored on the database tells rescuers:

- who you are
- information on your vessel
- contact details for you and shore based emergency contacts.

This information greatly assists the search-and-rescue response.

From 1 February 2009, only digital 406 MHz EPIRBs will be detected by satellite. Analogue 121.5 MHz will no longer be received.

Satellite phone

Another communication option is a satellite phone. With this on board and the right weather conditions, communications availability is worldwide.

Mobile phones

Often authorities hear the comment 'I'll be OK, I've got a mobile phone'. The simple fact is that having a mobile phone does not replace the need to have a marine radio because:

- if it gets wet, it's useless
- in an emergency, it has limitations; if there's a huge ship bearing down on you, it is not likely to have its phone number painted on the bow
- rescuers are not able to estimate your position from a mobile phone, whereas they can do that from your radio
- with a mobile phone, only one person, who is probably too far away to be of any assistance, can hear your call. Whereas, with a radio transmission, every station in the vicinity will hear your call.

So, take your phone by all means, but don't think it is going to do the job of a radio.

Weather services

27 MHz	There are weather services provided on 27 MHz by some limited coast stations and volunteer services.
VHF	• Coast Radio Melbourne broadcasts weather forecasts for waters in and around Port Phillip and Western Port on VHF Channel 67 at: 0848, 1448 and 2048 EST (add one hour for Daylight Saving Time). • Weather warnings will be preceded by an announcement on Channel 16.
MF/HF	• The Bureau of Meteorology broadcasts weather forecasts to Eastern Australia from Charleville (Queensland) on: By night – MF 2201, HF 6507, 8176 and 12365 kHz By day – HF 4426, 8176, 12365 and 16546 kHz • Scheduled broadcast times for Victorian coastal waters are: 0130, 0530, 0930, 1330, 1730 and 2130 EST (add one hour for Daylight Saving Time). • Warnings are broadcast every hour starting 0000 EST.

Navigation warnings

Coast radio stations broadcast navigation warnings on HF 8176 kHz, with Victorian warnings at: 0757, 1057, 1257, 1357, 1557, 1757 and 2357 EST (consistent with HF characteristics, not all transmissions will be received in all Victorian waters).

Coast Radio Melbourne broadcasts navigation warnings for waters in and around Port Phillip and Western Port on VHF Channel 67. Warnings are rebroadcast after the weather at 0848, 1448 and 2048 EST.

Position reporting

Coast Radio Melbourne will record vessel position information, however, a positioning monitoring or follow-up service is not provided.

For longer voyages, it is recommended that boaters use the AMSA AUSREP system on Freecall 1800 641 792.