

Marine communications

Licences and certificates

You need an operating certificate to use a VHF and MF/HF radio. The *Marine Radio Operator's Certificate of Proficiency* (MROCP) covers VHF and MF/HF radio use. The Marine Radio Operator's VHF Certificate of Proficiency (MROVCP) for VHF radio only, is the normal certificate for recreational boaters. Station (equipment) licences are also needed for MF/HF long range radio equipment. You do not need a certificate to use 27MHz equipment, but doing a course will improve your knowledge of marine radios and give you the confidence to use it correctly.

Many volunteer marine rescue agencies provide radio courses or can tell you where a local course is available. More information about licensing of radios and operators can be found at the Australian Communications and Media Authority website (www.acma.gov.au/Citizen/Consumer-info/All-about-spectrum/Marine-and-Amateur-Radio).

Equipment

Marine radios are essential and can be the only way to:

- save lives by communicating with other boats or marine rescue groups
- receive on water navigational warnings and weather updates.

There are many factors for you to consider when you buy or use marine communications equipment, including:

- your area of operations and the location of local volunteer marine rescue groups (please visit www.msq.qld.gov.au/Safety/Marine-radios.aspx for details)
- the number of boats in the same area
- the size and type of your boat and your budget.

Mobile phones

Mobile phones are only back-up devices, not substitutes, for emergency marine radio communications, as:

- the cellular system does not have distress priority alerting
- mobile phones may be out of range, have low batteries or become water damaged
- marine radios are used to broadcast so that all parties involved can listen. Mobile phones only call point to point. If you don't know a number, you can't call for assistance even if the boat is in sight
- rescue organisations cannot use a radio direction finder to trace a mobile telephone call
- few volunteer rescue vessels have mobile phones, causing delays while calls are relayed from shore.

In an emergency the most vital link between the rescuers and the rescued is radio communications.



There are four main types of marine communications equipment

1. **VHF:** This is the preferred radio for short range marine communications and is listened to by all large vessels. Maritime Safety Queensland and volunteer marine rescue stations monitor VHF channel 16 (distress frequency) for most of the Queensland coast 24 hours/7 days and can respond to emergency calls. Weather information is broadcast on VHF channel 67.
2. **27MHz:** This has a very limited range, so you should check that a limited coast station is in your immediate vicinity before relying on this equipment for your safety. Most marine rescue groups monitor channel 27.88MHz, if in range, but larger vessels at sea do not listen to this radio.
3. **HF:** These radios have a greater communication range if travelling long distances from shore, but they rely on atmospheric conditions and hull material. They can be difficult to operate. Queensland HF services at Cairns (call sign: Coast Radio Cairns) and Gladstone (call sign: Coast Radio Gladstone) monitor HF frequencies 4125, 6215 and 8291 kHz 24 hours/7 days. Weather broadcasts and navigational warnings are made on HF frequency 8176kHz.
4. **Satellite equipment:** Satellite equipment and telephones have excellent coverage and are preferred for long range communications. Training and operator certification are necessary before using this type of equipment. You are recommended to buy this type of equipment if you are going on offshore voyages.

Operating procedures

Standard international radio procedures:

Routine calls	Distress calls	Urgency calls	Safety calls
Boats are strongly encouraged to log on/off with their local volunteer marine station and update changes to location and intentions.	The distress call 'mayday' may be used only if the boat is in grave or imminent danger and immediate assistance is required (e.g. if the boat is sinking or on fire). This call has priority over all other transmissions. Distress frequencies are: VHF 16, 27.88 MHz or HF 4125, 6215 and 8291 kHz.	The urgency call 'pan pan' should be used when the distress call cannot be justified but a very urgent message about the safety of your boat or a person needs to be transmitted (e.g. your vessel is disabled and drifting onto a lee-shore or a crew member is seriously ill). Distress call frequencies may be used.	The safety call 'securite' should be used to broadcast important navigational warnings to other stations (e.g. a severe weather warning or if you see a large floating object that could damage a boat's hull).
<p>Call procedure:</p> <ul style="list-style-type: none"> clearly state the boat/group you are calling (spoken 3 times) 'this is – name of your boat' (spoken 3 times) clearly state the message 'over' Wait for a response. 	<p>Call procedure:</p> <ul style="list-style-type: none"> 'mayday, mayday, mayday' 'this is – name and radio call sign of boat in distress' (spoken 3 times) 'mayday' 'name and radio call sign of boat' 'detail of boat's position' 'nature of distress and assistance required' 'other information, including number of people on board, vessel description and intentions' 'over' Wait for a response. 	<p>Call procedure:</p> <ul style="list-style-type: none"> 'pan pan, pan pan, pan pan' 'hello all stations, hello all stations, hello all stations' 'this is – name and radio call sign of boat' (spoken 3 times) 'details of the boat's position' 'details of assistance required and other information' 'over' Wait for a response. 	<p>Call procedure:</p> <ul style="list-style-type: none"> 'say-cure-e-tay, say-cure-e-tay, say-cure-e-tay' (SECURITE) 'hello all stations, hello all stations, hello all stations' 'this is – name and radio call sign of your boat or shore station' (spoken 3 times) 'details of the warning' 'over' Wait for a response. <p>Note: The initial safety call can be made on a distress frequency, but you should change to a working frequency to broadcast the safety message.</p>

Have you checked your radio equipment?

- Is the correct frequency/channel selected?
- Is the volume and squelch adjusted correctly?
- Is the RF gain set to maximum sensitivity?
- Power supply – is the battery fully charged?
- Antenna – are the leads and whip intact, not corroded, with proper earthing and good connections.

Quick safety tips

- Carrying a VHF radio when boating can be an added safety measure. It means other boats in the area can hear a distress call if there is an emergency.
- Mobile phones are only good as a back-up for marine communications. They can easily be out of range or have a flat battery.
- Listen before transmitting on marine radio.
- The battery terminals and other connections on all radio equipment should be checked regularly and cleaned. For better communications, all radio equipment should be connected directly to the battery.