

VHF FACT SHEET

Marine “Very High Frequency” (VHF) radio for recreational boaties

Four simple steps for marine VHF radio

1. Get the right VHF waterproof radio for your boating activity
2. Complete a Maritime VHF Radio Operator Certificate Course
3. Get a call sign for your boat
4. Each time you go boating, check the VHF radio coverage, and take two waterproof ways to call for help.

Always take two waterproof ways to call for help

- Remember, if you can't call for help, we can't rescue you.
 - A VHF radio is your best two-way communication device at sea.
 - It links you with other boats with VHF in the area and you can also call distress channel 16.
 - Maritime NZ advises skippers to always have a handheld, waterproof VHF radio on your person, attached to your lifejacket, or in a handy grab bag.
 - A VHF radio fixed to a boat has greater range and is better for regular communication, but you will be unable to use it, if your boat capsizes or you fall overboard.
 - If possible, have both a handheld VHF radio on your lifejacket and a fitted VHF radio on your boat.
 - VHF is not just for emergencies – it is versatile, and can be used for many things in addition to making emergency calls.
- A distress beacon is ideal as the back-up device. It can send a distress signal to a search and rescue satellite when you activate it but you cannot speak or give any details of what has happened. <https://www.maritimenz.govt.nz/recreational/safety/communications/beacons/>
- A cellphone in a waterproof bag is handy, but should not be your main way of keeping in contact. The range is shorter than VHF, you can only call one person at a time, and is difficult to use, and may be unusable, in the water. .
- Communications devices include flares, torches and air horns, whistles, can be useful in certain circumstances, but all have major limitations. <https://www.maritimenz.govt.nz/recreational/safety/communications/distress-flares.asp>

View VHF radio coverage map

- Check the VHF radio coverage and frequencies on this map. You can also download the free Marine Mate mobile app, check with your local Coastguard, local council or other boaties.
- <https://www.maritimenz.govt.nz/images/recreational/communications/radio-coverage-full-map.png>

With VHF radio you're connected to a rescue network at sea – everyone with a VHF on the correct channel can hear you

- One of the big advantages of a VHF radio is your call can be heard by many people at the same time – you really are broadcasting to anyone on the same channel you are using.
- Maritime NZ's Maritime Operations Centre¹ (MOC) and Coastguard monitor VHF channels.
- Other vessels in the area, who are listening on the same VHF channel, can hear you and come to your aid, and you can even be heard by other VHF users on land.
- You can hear other VHF users on the same channel and help them.

Emergency channel 16

- Channel 16 is the international distress and calling channel for VHF.
- In New Zealand, Channel 16 is monitored 24/7 by the Maritime Operations Centre, which is staffed by experienced radio operators. They are in the same building as the Rescue Coordination Centre NZ which coordinates search and rescue operations for land, air and sea.
- However, there are still radio "dead spots" caused by rugged terrain like cliffs that block your line of sight to a repeater. This is particularly so in the fiords and inland waterways, but can happen at sea too. If you are unsure take a beacon, as well as your VHF radio.

It is not just for emergencies

- Marine VHF radio is versatile, and can be used for many things in addition to making emergency calls, including:
- Trip reports – where you are leaving from, where you are going, who is with you, when you are leaving, and when you will be back
- Changes of plan
- Receiving regular weather forecasts and updates
- Letting people know before you cross a bar and when you have crossed
- Keeping in touch with others – friends on the water, family on land, search and rescue etc.
- Letting people know if you have a problem that is not an emergency, before it becomes an emergency – breakdown, run out of fuel, injury etc.
- You could save a life – you could hear other boats' distress calls and can come to their aid.

¹ MOC is also known as the Maritime Radio Service and can be known by many local names, e.g. Taupo Maritime Radio and Napier Maritime Radio. These local names are repeaters and the radio operator is at the MOC in Lower Hutt.

Offshore – too far away to see the coast

- VHF works best in line-of-sight.
- If you are so far out to sea that you can't see the coast, then as a simple rule of thumb your VHF radio probably won't reach the coast.
- Take a distress beacon.
- Your cellphone will not have coverage.
- If you will be boating far enough out to sea that you cannot see the coast, get expert advice about communication equipment like single sideband radio (SSB) or a satellite phone. Yachting NZ can provide this for all recreational vessels not only sailing yachts. (09) 361 1471; reception@yachtingnz.org.nz; www.yachtingnz.org.nz. Coastguard Boating Education also provides SSB training www.boatingeducation.org.nz, info@boatingeducation.org.nz, or call 0800 40 80 90.

Coastal waters and harbours – you can see the coast

- Download the Marine Mate mobile app before going boating which will show you the VHF frequency used in each area.
- Marine VHF radio is your best two-way communications device.
- Coastal waters are generally within range of VHF repeaters.
- However, there are still radio dead spots caused by cliffs and other rugged terrain that can block your radio's line-of-sight to a repeater. That is why you need a back-up, and a distress beacon is ideal.
- A radio dead spot can also block cellphone coverage.

Inland waterways – rivers and lakes

- For inland rivers and lakes, Maritime NZ advises that skippers take a distress beacon (EPIRB or PLB) as their first choice of communication plus another device (flare, air horn, torch).
- VHF radio has limited coverage on inland waterways and lakes and in many places is not monitored by authorities.
- VHF works by line-of-sight and repeaters. The signal can be blocked by hills, cliffs, river-bends etc. This means VHF coverage on inland waterways limited and some areas have no VHF coverage or cellphone coverage.
- Check with the local Coastguard, fishing and boating clubs, *Radio Handbook*, local council, or local Maritime NZ office for advice or with regarding VHF radio coverage, where you will be boating.
- VHF is often used for boat-to-boat communication during events (e.g. tourist excursions, jet boat races etc.) but this still relies on line-of-sight to a repeater or between the boats. There may also be designated channels for events – check with the organisers or the local council.

Powered craft

- **A hand-held, waterproof VHF** radio worn on the person is recommended, provided marine VHF radio coverage is available in the area where the boating will take place.
- The Forum also recommends that a registered **emergency locator beacon** be carried, particularly when venturing any significant distance off the coast. Locator beacons work both at sea and on inland waterways. An EPIRB is preferred, but a PLB is a useful alternative.
- And almost everyone carries a cellphone these days – boaties need to make sure they remain usable after immersion by keeping the **cellphone dry in waterproof lanyard bags**. While cell phones are not a suitable substitute for maritime radios, and coverage can be limited, they are another important safety communications tool.
- **Flares** (including electronic flares) and **waterproof torches** can play a part and are widely recognized, and should be considered as part of any emergency communications kit.

Non-powered craft

- **A hand-held, waterproof VHF radio** worn on the person is recommended, provided radio coverage is available in the area where the boating is to take place.
- A cellphone is a useful backup, but boaties need to make sure they remain usable after immersion by keeping the **cellphone dry in waterproof lanyard bags**, and remain accessible by being carried on the person. However, cellphone coverage is not available in many recreational boating areas.
- Small dinghies, kayaks, canoes, inflatables and paddle boarders may choose to carry a registered **PLB**, worn on their person.
- **Flares** (including electronic flares) and **waterproof torches** can play a part and are widely recognized, and should be considered as part of any emergency communications kit.

Overseas voyaging

- For vessels undertaking blue water voyages, a float free EPIRB and a single sideband radio (SSB) or satellite phone is a mandatory requirement under Category 1 safety requirements of Yachting NZ (refer to www.yachtingnz.org.nz/racing/safety-regulations)

Buying a marine VHF radio

- VHF radios cost less than a modern smartphone and are much more useful at sea.
- It must be a waterproof, marine VHF radio. Only VHF radios designed for the sea will withstand sea spray, saltwater and harsh sun.
- Visit a specialist marine retailer to discuss what the best VHF radio for your boating activities is.
- If your boat is big enough to have a fixed VHF radio, then seriously consider getting one as well as a handheld, they have a significantly longer range.
- Handheld VHF radios are ideal for kayaks, dinghies, and powerboats. They come with various clips and bands for wearing on belts and lifejackets, or attaching to your wrist.
- If possible, have a handheld radio on your person, or in a grab bag, and a fixed VHF radio on your boat.

Do a Coastguard Boating Education VHF radio course

- You need to know how to use your VHF radio properly, for an emergency, or not.
- Coastguard Boating Education offers the Maritime VHF Radio Operator Certificate course face to face or online.
- It takes only a few hours and costs \$85.
- Contact Coastguard Boating Education at www.boatingeducation.org.nz, info@boatingeducation.org.nz, or call 0800 40 80 90.

Your boat needs a call sign

- Once you have done a course you can get a call sign, which is unique to your boat.
- There might be several boats in New Zealand with the same name as yours.
- It is registered on the National Search and Rescue Database, which will include other information about your boat and emergency contact details that will make it easier to help you.
- If you sell your boat you can keep your call sign or let it go with the boat's new owner.
- One off cost is \$45.
- Coastguard Boating Education contacts www.boatingeducation.org.nz, info@boatingeducation.org.nz, 0800 40 80 90, (09) 361 4700

Legal requirements

- You need to have a Maritime VHF Radio Operator Certificate, unless you are calling about or responding to an emergency. This can be done through Coastguard Boating Education.
- You must have a call sign for your boat when you call on your VHF radio. These are allocated by Coastguard Boating Education.
- Coastguard Boating Education contacts www.boatingeducation.org.nz, info@boatingeducation.org.nz, 0800 40 80 90, (09) 361 4700

Links and resources:

- Maritime NZ enquiries@maritimenz.govt.nz
- Maritime communications for recreational boaties
<https://www.maritimenz.govt.nz/recreational/safety/communications/>
- Coastguard Boating Education www.boatingeducation.org.nz
- VHF channels sticker <https://www.maritimenz.govt.nz/commercial/documents/marine-channels.pdf>
- Radio handbook (detailed 72 page guide to marine radio)
<https://www.maritimenz.govt.nz/commercial/documents/Radio-Handbook.pdf>
- How to make a Mayday call <https://www.maritimenz.govt.nz/contact-us/mayday.asp>
- Mayday call sticker <https://www.maritimenz.govt.nz/commercial/documents/distress-calling.pdf>