

Updated April 2025



RADIO HANDBOOK

Your guide to marine communication

- ✓ **DO** use VHF channel 16 or the SSB frequency appropriate for your location for distress, safety and calling. On cellphones, call 111 if there is an emergency and you are close to shore.
- ✓ **DO** replace your handset correctly when not in use (open microphones are the main cause of serious interference on VHF channels).
- ✓ **DO** listen before transmitting, to avoid causing interference to others.
- ✓ **DO** use your vessel's name and radio call sign.
- ✓ **DO** use accepted operating procedures and correct procedural words (known as 'prowords'). Remember that the other station may not use English as its first language.
- ✓ **DO** be brief, because marine radio is for shipping business only. If you want to chat, use Citizen Band radio or a cellphone.
- ✓ **DO** speak clearly and courteously.
- ✓ **DO** wait for a reply to calls before transmitting again, or before changing channels or frequencies.

X **DON'T** make long transmissions. Remember that you are blocking the frequency or channel for other users.

X **DON'T** operate your marine radio in a way that endangers or interferes with other people or vessels.

X **DON'T** transmit false or misleading messages. The transmission of a false distress message is an offence under the Maritime Transport Act.

✓ **ALWAYS** keep a listening watch on VHF channel 16. The next life saved could be yours.

RADIO HANDBOOK

Your guide to marine communication

April 2025

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Introduction

This handbook is a guide for operators of coastal and vessel¹ radio stations, including operators of VHF (very high frequency) and SSB (single sideband, also called MF/HF) radios.

This handbook provides information about:

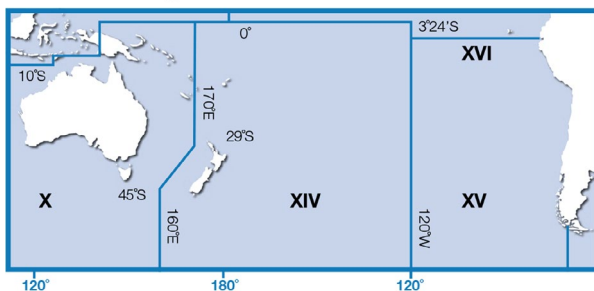
- how search and rescue (SAR) is managed in New Zealand
- distress, urgency and safety calls, including appropriate use of cellphones
- radio-telephone procedures
- coverage
- useful contacts and terms.

Maritime radio

For seafarers, their vessel's radio is their main lifeline to land.

Maritime New Zealand's Maritime Radio Service (Maritime Radio) is responsible for maintaining VHF and HF radio services for New Zealand's coastal waters and much of the South Pacific Ocean and Tasman Sea. It monitors radio frequencies for distress messages 24/7.

NAVAREA regions



¹ Ship (vessel) station: any mobile radio station in the Maritime Radio Service located on board any vessel that is not permanently moored.

The region covered by the New Zealand Distress and Radio Safety Service is known as NAVAREA XIV and includes 12.5 percent of the Earth's ocean surface. It extends from the middle of the Tasman Sea to the mid-Pacific Ocean, and from Antarctica to south of the equator.

Maritime NZ is also responsible for broadcasting Maritime Safety Information (MSI) within the NAVAREA. MSI includes meteorological information, coastal and oceanic navigational warnings, ice accretion warnings and ionospheric prediction forecasts.

The service provided by Maritime NZ is monitored at all times by staff working at the Maritime Operations Centre (MOC), co-located with the Rescue Coordination Centre New Zealand (RCCNZ) in the Hutt Valley. This is complemented by a network of volunteer private radio operators located around New Zealand and its offshore islands.

Maritime Radio comprises 30 coastal VHF stations. Of these, 28 provide VHF radio coverage throughout the coastal waters of New Zealand. The other two stations provide VHF radio coverage in the coastal waters of the Chatham Islands. There is also an oceanic MF/HF radio station located east of Lake Taupo.

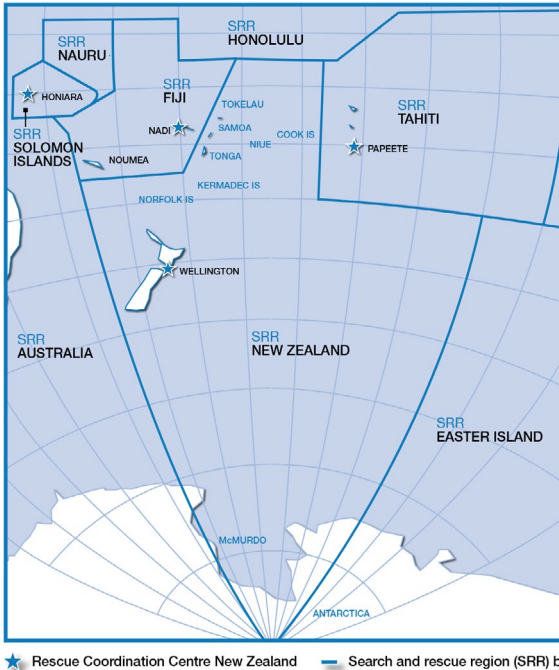
All stations are linked to the MOC. It coordinates the transmission of all MSI on voice HF and VHF, as well as navigational warnings broadcast over the Inmarsat SafetyNET satellite system. The scheduled broadcast times, channels and frequencies are shown on pages 47-49.

The MOC also provides these services to mariners:

- telephone patch and message relay facilities for SAR and medical purposes on VHF and SSB
- reception and processing on VHF and MF/HF (SSB) of:
- trip reports (TRs)
- ships' meteorological observations
- incoming clearance requests from Customs and the Ministry for Primary Industries.

How search and rescue is managed in New Zealand

Search and rescue regions (SRR)



The RCCNZ is responsible for coordinating, within the New Zealand search and rescue region (SRR):

- search and rescue operations that require coordination at the national level
- maritime and aviation search and rescue missions within New Zealand's SRR
- land-based missions that are initiated via Satellite Distress Notification Devices
- SAR support and advice to emergency response partners (for example, NZ Police, Ambulance and Civil Defence).

The region extends halfway to Australia, halfway to Chile, and from south of the equator to Antarctica.

All SAR efforts coordinated by RCCNZ are called Category II incidents. RCCNZ is staffed 24/7 with fully qualified search and rescue officers (SAROs).

The New Zealand Police are responsible for coordinating Category I incidents, which include many maritime SAR missions close to shore. Category I incidents also include land-based SAR efforts that do not arise from a distress beacon being activated. RCCNZ frequently provides support and advice to the New Zealand Police during Category I SAR incidents.

Further information about RCCNZ can be found on the Maritime NZ website at www.maritimenz.govt.nz/rccnz

RCCNZ is also the repository for 406 MHz emergency beacon registrations. Registration is free. Register at www.beacons.org.nz. If you need advice or assistance, freephone 0800 406 111 or email contact.beacons@maritimenz.govt.nz

How radio works

Radio waves

Radio transmitters work by supplying a rapidly changing electrical current to an aerial (antenna), to create a changing electromagnetic field. The speed at which these currents change controls the speed at which the electromagnetic field around the aerial changes. This is measured in hertz (Hz).

1 Hz	1 hertz	1 cycle per second
1 kHz	1 kilohertz	1 thousand cycles per second
1 MHz	1 megahertz	1 million cycles per second
1 GHz	1 gigahertz	1 billion cycles per second

Consider the image of a pebble dropped into a pond, with the pebble representing the transmitter. The radiating ripples represent the fluctuating electromagnetic fields. These fields are called radio waves, and they radiate out from the aerial at the speed of light.

Marine VHF radio operates at a frequency of approximately 156 MHz, while MF/HF (single sideband or SSB) radios operate at frequencies from about 2 MHz to 22 MHz.

Frequency characteristics

The different frequencies have different characteristics for specific purposes, and are subdivided into bands:

Frequency range	Band classification	Band abbreviation
10-30 kHz	Very low frequency	VLF
30-300 kHz	Low frequency	LF
300-3000 kHz (3 MHz)	Medium frequency	MF
3-30 MHz	High frequency	HF
30-300 MHz	Very high frequency	VHF
300-3000 MHz (3 GHz)	Ultra-high frequency	UHF
3 GHz-30 GHz	Super-high frequency	SHF

VHF radio waves travel in a straight line and do not bend to any great extent over hills, headlands or the horizon. VHF radio is used for local transmissions, but aerials must be in sight of each other (meaning they have 'line of sight').

MF radio waves have a greater tendency to follow the Earth's curvature. They suit medium-range navigational aids, regional broadcasting and medium-range communications because they can travel around obstructions and over the horizon.

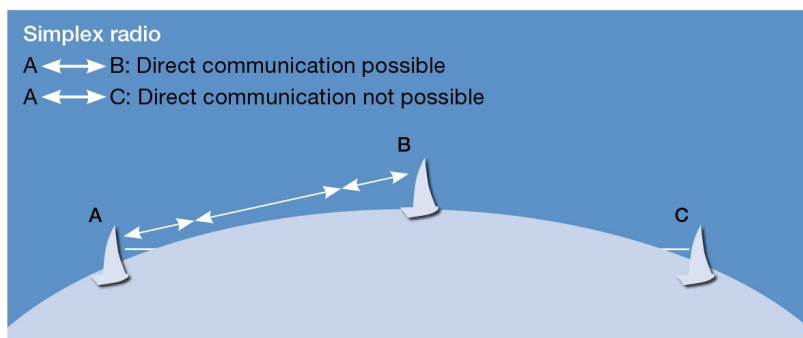
HF radio waves do not bend over the horizon, but use a layer of the Earth's atmosphere (the ionosphere) to reflect radio waves back to Earth. The ionosphere's properties vary throughout the day, but it is most stable shortly before sunrise and just after sunset. These are particularly good times for SSB communications in the HF band.

During the daytime, SSB transmissions are not as reliable, due to the sun's effect on the ionosphere. In general, higher frequencies such as 12 MHz or 16 MHz achieve better communications during daylight, while lower frequencies such as 4 MHz or 6 MHz work better at night.

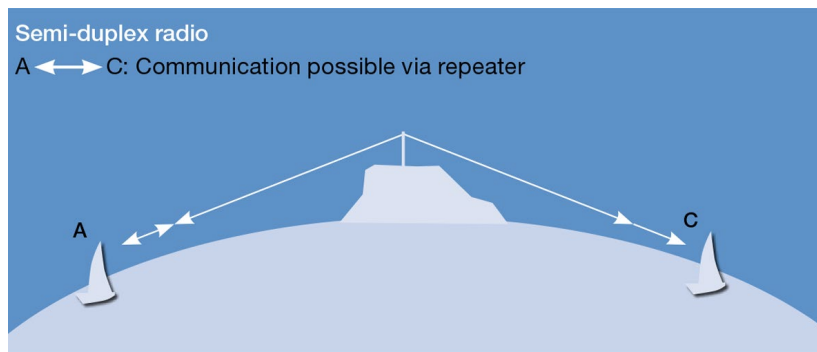
The distance between stations is also a factor, with higher frequencies (8 MHz and higher) providing better results at longer ranges.

Simplex and semi-duplex VHF radio

Simplex means both stations use the same frequency for transmitting and receiving. All channel 16 transmissions are simplex.



Semi-duplex uses a third (repeater) station, normally located on a mountain or similarly elevated location. The repeater receives the incoming signal and simultaneously retransmits it on a different frequency. To do this, semi-duplex uses two frequencies, one to transmit and another to receive through a repeater.



Because VHF signals will not pass through land masses, a repeater may be placed on a hilltop so that stations on opposite sides can communicate with each other. By elevating the repeater station, vessels up to about 70 miles apart can communicate, even though the line of sight between the vessels may be less than 10 miles.

Aerials (antennae)

The approximate distance in miles from an aerial to the horizon is calculated in this way:

$$\text{Distance} = 1.2\sqrt{\text{aerial height (metres)}} \times 3$$

Note: the aerial height in the formula is the height above sea level. Two aerials will be in range of each other when their distances overlap.

Not all aerials radiate power equally in all directions, and a single 'whip' (dipole) aerial mounted vertically at the vessel's masthead will usually provide the best 360° coverage.

Shielding

Aerials should be positioned to avoid being shielded by superstructure, masts and similar structures that could interfere with the radio waves as they radiate from the aerial. The masthead is usually the best location because aerials are less prone to damage there and the range is maximised.

Distress calls

Channel 16 is the international VHF channel for maritime distress and hailing (calling).

Distress, urgency and safety calls

Special calls are used in cases of distress, urgency and safety, and must be properly understood and used.

DISTRESS: the radio-telephone distress signal **MAYDAY** is used to indicate that a vessel, aircraft or person is in grave and imminent danger and requires **immediate** assistance.

URGENCY: the radio-telephone urgency signal **PAN PAN** is used to indicate that a vessel has a very urgent message to transmit about its safety (such as loss of steering).

SAFETY: the radio-telephone safety signal **SÉCURITÉ** (pronounced say-cure-ee-tay) is used to indicate that the calling station has an important navigational or meteorological warning to transmit.

Communicating distress

A station in distress may use any means at its disposal to attract attention, make its position known and obtain help.

Use of **MAYDAY** is prohibited except to indicate distress.

The distress call has absolute priority over all other transmissions. All vessels and coastal stations² hearing it must immediately cease all transmissions that could interfere with the distress communications, and must maintain a listening watch on the frequency being used.

Distress calls and distress messages should usually be sent only on the authority of the vessel's master or skipper, or the person responsible for the station.

² Coastal station: a land station in the Maritime Radio Service.

Stations monitoring distress communications should exercise great care not to interfere with the transmissions of the station in distress or with other assisting stations.

When **MAYDAY** is not warranted but urgency is required for the safety of the vessel or person, the urgency signal **PAN PAN** should be used.

Distress and urgency calls and messages must be cancelled if assistance is no longer required or when the incident is over.

Distress procedure

The distress procedure follows this sequence:

- distress call
- distress message.

These frequencies are dedicated to distress, safety and calling:

- VHF radio distress calls, transmitted on channel 16
- SSB distress calls, transmitted on 2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz or 16420 kHz.

Distress call

Switch to **full power**.

A distress call consists of:

- the distress signal **MAYDAY** (three times), and
- the words **THIS IS** (once), and
- the name of the vessel in distress (three times), and
- the callsign of the vessel in distress (once).

The distress call should be followed **immediately** by the distress message (see page 17).

Distress message

A distress message consists of:

- the distress signal **MAYDAY** (once), and
- the name of the vessel in distress (once), and
- the callsign of the vessel in distress (once), and
- the position of the vessel (either the latitude and longitude, or as a true bearing and distance from a charted geographical point) (once), and
- the nature of the distress (once), and
- the type of assistance required (once), and
- the number of people on board (once), and
- any other information that may help the rescue, such as the sea conditions or description of the vessel (once), and
- the word **OVER** (once).

Example of a distress call followed immediately by a distress message

- Switch to VHF channel 16 or SSB 2182 kHz, 4125 kHz, 6215 kHz.
- Switch to **full power**.
- MAYDAY, MAYDAY, MAYDAY.
- THIS IS ALBATROSS, ALBATROSS, ALBATROSS
ZULU MIKE 1726.
- MAYDAY ALBATROSS ZULU MIKE 1726 - FIVE
NAUTICAL MILES WEST OF KAPITI ISLAND - HOLED
AND LISTING HEAVILY, ENGINE ROOM FLOODED
- REQUIRE IMMEDIATE ASSISTANCE - THREE
PEOPLE ON BOARD - SEAS ROUGH.
- OVER.

DISTRESS CALL DISTRESS MESSAGE

Important: Listen on the same frequency for an acknowledgement.

Acknowledging a distress message

Any station hearing a distress call and message should write it down. Inform the officer of the watch, skipper or master immediately.

If no immediate response is heard from a shore station, **acknowledge** the distress call and take all possible steps to attract the attention of other stations that may be able to help.

Acknowledging a distress call consists of:

- the distress signal **MAYDAY** (once), and
- the name of the vessel in distress (once), and
- the callsign of the vessel in distress (once), and
- the words **THIS IS** (once), and
- the name of the station acknowledging receipt (once), and
- the callsign of the station acknowledging receipt (once), and
- the word **RECEIVED** (once), and
- the distress signal **MAYDAY** (once), and
- If there is any doubt about the position of the vessel in distress, repeat the position back to confirm it, and
- the word **OVER** (once).

Example of an acknowledgement of a distress call

- MAYDAY.
- ALBATROSS ZULU MIKE 1726.
- THIS IS BLUE DUCK ZULU MIKE 1983.
- RECEIVED MAYDAY.
- If there is any doubt about the position of the vessel in distress, repeat the position back to confirm it.
- OVER.

Relaying a distress message

In most cases, a vessel or coastal station re-transmits a distress message to summon further assistance.

Relaying a distress message consists of:

- the signal **MAYDAY RELAY** (three times), and
- the words **ALL STATIONS** (three times), and
- the words **THIS IS** (once), and
- the name of the relaying station (three times), and
- the callsign of the relaying station (once), and
- the distress message, as broadcast by the vessel in distress (see page 16), and
- the word **OVER** (once).

Example of relaying a distress message

- MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY.
- ALL STATIONS, ALL STATIONS, ALL STATIONS.
- THIS IS BLUE DUCK, BLUE DUCK, BLUE DUCK ZULU MIKE 1983.
- MAYDAY ALBATROSS ZULU MIKE 1726 - FIVE NAUTICAL MILES WEST OF KAPITI ISLAND - HOLED AND LISTING HEAVILY, ENGINE ROOM FLOODED - REQUIRE IMMEDIATE ASSISTANCE - THREE PEOPLE ON BOARD - SEAS ROUGH.
- OVER.

In cases where the distress message is repeated on a frequency other than that used by the vessel in distress, an indication should be given of the frequency used and the time the message was received.

Example where the distress message is repeated on a frequency other than that used by the vessel in distress

- Follow the initial procedures as outlined previously, then:
- (repeat the distress message) THE FOLLOWING RECEIVED ON CHANNEL 60 AT 0930 - MAYDAY ALBATROSS ZULU MIKE 1726 - FIVE NAUTICAL MILES WEST OF KAPITI ISLAND.
- OVER.

Controlling distress traffic

Although Maritime Radio stations cover New Zealand waters, there may be situations when another station - called the 'controlling station' - or the vessel in distress has to control the distress traffic.

In all cases, the controlling station or the vessel in distress should inform SAR authorities, usually via Maritime Radio. Coordination of any SAR will then pass to RCCNZ or the New Zealand Police, the two legally constituted SAR coordinating authorities in New Zealand.

If necessary, the controlling station or the vessel in distress may impose silence on other stations in the area, using the signal **SEELONCE MAYDAY**, followed by its own name and callsign.

Example of when silence is imposed on other stations in area

- SEELONCE MAYDAY (followed by the station or vessel name and call sign). Used by the station in distress or the controlling station (generally Taupo Maritime Radio) to impose silence.

Resuming normal working

When distress communications have ceased, the controlling station will transmit a message addressed to **ALL STATIONS**, indicating that normal working may be resumed.

Example of a message sent by the controlling station to advise that normal working may be resumed

- MAYDAY.
- ALL STATIONS, ALL STATIONS, ALL STATIONS.
- THIS IS TAUPO MARITIME RADIO, TAUPO MARITIME RADIO, TAUPO MARITIME RADIO, ZULU LIMA MIKE 0940 (time of the message) ALBATROSS ZULU MIKE 1726.
- SEELONCE FEENEE.³
- OUT.

³ SEELONCE FEENEE: A signal used to advise that distress communications have ended and normal working may be resumed.

Important: the radio watch and contact with the vessel in distress should continue until all activity has ended. A distress or urgency call can be cancelled by transmitting a message advising that assistance is no longer required. After that time, a normal listening watch should be maintained.

When circumstances change, a vessel that has broadcast a **MAYDAY** may change the message to a **PAN PAN** when grave and imminent danger has passed. A **PAN PAN** can also be upgraded to a **MAYDAY** if a situation deteriorates.

Urgency signal and message

The radio-telephone urgency signal is **PAN PAN** (spoken three times) and indicates that the calling station has a very urgent message to transmit about the safety or operational capability of a vessel, or about a person in difficulty. Medical emergencies are normally designated as **PAN PAN** messages.

The urgency signal has priority over all other communications except distress. All stations hearing it must take care not to interfere with the transmission of the message that follows.

The urgency message may be addressed either to **ALL STATIONS** or to an **INDIVIDUAL STATION**. As soon as the station responsible for transmitting the urgency message knows that action is no longer necessary, it must cancel the message.

The urgency signal and message should be sent on any international distress frequency or channel for radio-telephone. In the case of a long message or medical call, the caller should change to a working frequency.

See the next page for an example of an urgency message.

Example of an urgency message

- Switch to **full power**.
- Use VHF channel 16 or SSB 2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz or 16420 kHz (or any other frequency where it is known that a coastal station or vessel is keeping watch).
- PAN PAN, PAN PAN, PAN PAN.
- ALL STATIONS, ALL STATIONS, ALL STATIONS
(**OR** say: [SPECIFIC] STATION, [SPECIFIC] STATION, [SPECIFIC] STATION)
- THIS IS ALBATROSS, ALBATROSS, ALBATROSS ZULU MIKE 1726 – FIVE NAUTICAL MILES WEST OF KAPITI ISLAND – DISMASTED AND DRIFTING – REQUIRE TOW – SEA SMOOTH – NO IMMEDIATE DANGER.
- THERE ARE (number of) PEOPLE ON BOARD.
- OVER.

Important: Listen on the same frequency for an acknowledgement.

Safety signal and message

The radio-telephone safety signal **SÉCURITÉ** (say-cure-ee-tay) is spoken three times. This indicates that a station or vessel is about to transmit a message containing an important navigational or meteorological warning.

Navigational and meteorological warnings are broadcast by Maritime Radio stations as soon as possible after they have been received, then repeated following the next silence period (for SSB only), and at scheduled times (as shown on pages 47-49), until they are cancelled or replaced.

The safety signal and call should normally be sent on VHF channel 16, SSB 2182 kHz, 4125 kHz or 6215 kHz, and the safety message that follows is transmitted on a working frequency.

Safety messages are usually addressed to **ALL STATIONS**, but in some cases may be addressed to a specific station.

Example of a safety signal and message

- SÉCURITÉ, SÉCURITÉ, SÉCURITÉ.
- ALL STATIONS, ALL STATIONS, ALL STATIONS.
- THIS IS TAUPO MARITIME RADIO, TAUPO MARITIME RADIO, TAUPO MARITIME RADIO, ZULU LIMA MIKE.
- LISTEN 2207 kHz (working frequency) FOR (type of warning message).
- OUT.

Emergency position-indicating radio beacons (EPIRBs)

All vessels should carry a 406 MHz EPIRB.

EPIRBs are designed to alert authorities that someone is in distress and to provide a homing signal for searching aircraft. EPIRBs operate on the 406 MHz frequency, with a low-power homing signal on 121.5 MHz. Some EPIRBs include Automatic Identification System (AIS) homing functionality.

EPIRBs sold in New Zealand should meet the requirements of AS/NZS 4280-1.

The Cospas-Sarsat international satellite system for SAR monitors only the 406 MHz frequency. The system covers the entire world, with information collected by satellites passed onto ground stations. For New Zealand, these alerts are received by RCCNZ at its base in Lower Hutt near Wellington.

Each 406 MHz EPIRB transmits a unique identification number (called a Hex ID or UIN). Provided this number is registered with RCCNZ, the identity of the vessel and its owner will be known, and a SAR officer will immediately call the people registered as their contacts. Once activated, an EPIRB should be left running continuously until the rescue is completed.

DO NOT turn the EPIRB off, because RCCNZ SAR officers will be responding to the alert, to determine your position and the nature of your emergency.

Register your EPIRB

To register your 406 MHz beacon, go to www.beacons.org.nz. Registration is free, confidential and required by law under Maritime Rule 43.29.



Changes to your EPIRB registration

It is **vital** for SAR efforts that RCCNZ is notified of any changes related to your 406 MHz EPIRB registration. These changes include change of ownership, contact details or vessel. To update your registration details, go to www.beacons.org.nz or email RCCNZ at contact.beacons@maritimenz.govt.nz

Important: Great care should be taken to avoid accidentally activating a beacon. Beacons should be stowed correctly and **not stored or disposed of without first removing the batteries**.

Most cases of accidental activation occur when an EPIRB is dumped at a rubbish tip, thrown in a cupboard, or has gear stowed on top of it. These transmissions may interfere with genuine distress signals, and locating the source of them can be very costly and time consuming.

If a beacon is accidentally activated, immediately contact RCCNZ on freephone **0508 472 269**, or the Maritime Operations Centre on **(04) 550 5280**, or Maritime Radio via VHF or HF radio.

Leave the beacon active until RCCNZ or Police have been spoken to and made aware of the situation, and you have been instructed to switch it off.

Personal locator beacons (PLBs)

PLBs also operate on the 406 MHz frequency, with a low-power 121.5 MHz homing signal.

PLBs are used extensively by trampers (hikers) and frequently as personal beacons on small craft. It is important to know:

- not all PLBs float, so they should always be attached to a person or in a flotation pouch
- once activated, PLBs generally operate for 24 hours (rather than an EPIRB's 72 hours of operation).



Summary: Procedures for distress

Type of call				
	Radio type	Distress	Distress acknowledgement	Distress relay
Distress channel	VHF only	Channel 16	Channel 16	Channel 16
Call	VHF and SSB	- MAYDAY - MAYDAY - MAYDAY - THIS IS - name - name - name - callsign	- MAYDAY - name (of vessel in distress) - name - name - callsign	- MAYDAY RELAY - MAYDAY RELAY - MAYDAY RELAY - ALL STATIONS - ALL STATIONS - THIS IS - name (the station or vessel acknowledging) - name - name - callsign
Message	VHF and SSB	- MAYDAY - name - callsign - position - nature of distress - type of help required - number of people on board - any other info (vessel description, weather, sea state, etc) - OVER	- THIS IS - name - name - name - callsign (of acknowledging station or vessel) - RECEIVED - MAYDAY - OVER	- MAYDAY - name - callsign (of vessel in distress) - distress message (as given by vessel in distress) - OVER
Remarks	VHF and SSB	Write the message down. Listen on same frequency as MAYDAY received. Must be cancelled if no longer required		If repeated on a different frequency, say: - THE FOLLOWING RECEIVED ON - channel/frequency - time of message and repeat the distress message

Type of call			
	Radio type	Controlling distress traffic	Resuming normal working
Distress channel	VHF and SSB	Channel 16	Channel 16 – SSB 2182 kHz, 4125 kHz, 6215 kHz
Call	VHF and SSB	- SEELONCE MAYDAY - name (of station controlling traffic) - callsign	- MAYDAY - ALL STATIONS - ALL STATIONS - ALL STATIONS - THIS IS - name - name - name - callsign (of the coastal station) - time of message - name - callsign (of vessel in distress)
Message	VHF and SSB		- SEELONCE FEENEE - OUT (for normal working)
Remarks	VHF and SSB		

TABLE CONTINUES OVER PAGE

Summary: Procedures for distress (continued)

Type of call			
	Radio type	Urgency	Safety (important navigation or meteorological warning)
Distress channel	VHF and SSB	Channel 16	Channel 16, then working channel
Call	VHF and SSB	- PAN PAN - PAN PAN - PAN PAN [then say:] - ALL STATIONS - ALL STATIONS - ALL STATIONS - OR say: - Specific station - Specific station - Specific station [then say:] - THIS IS - name - name - name - callsign	- SÉCURITÉ - SÉCURITÉ - SÉCURITÉ - ALL STATIONS - ALL STATIONS - ALL STATIONS - THIS IS - name - name - name - callsign - LISTEN (working frequency) FOR (type of warning)
Message	VHF and SSB	- PAN PAN - PAN PAN - PAN PAN - location - nature of problem - the situation - type of assistance needed - danger level - number of persons on board (POB) - OVER	- ALL STATIONS - ALL STATIONS - ALL STATIONS - THIS IS - name - callsign - warning message
Remarks	VHF and SSB	Listen on same frequency. Must be cancelled if no longer required. In case of a longer message or medical call, transfer to working channel	

Using cellphones for distress and urgency calls

There are serious limitations to using a cellphone rather than a marine radio:

- Many areas do not have cellphone coverage or have limited offshore range.
- Changes in the density of traffic using a cellphone site onshore can change phone coverage without warning, meaning a cellphone cannot be fully relied on to provide communication in the event of an emergency.
- Cellphones can only provide person-to-person communications.
- They cannot broadcast and are not a substitute for a properly installed marine radio with a trained operator.
- Nearby vessels are in the best position to provide assistance in many emergencies, but they will be unaware of an emergency unless VHF radio and/or flares are used. However, a cellphone sealed in a plastic bag is a useful back-up to marine radio in areas where there is good coverage, and may provide life-saving communications.

If you choose to use a cellphone, keep a phone charger on board and carry a spare battery, because your phone will use more power if you are a long distance from a cellphone site. While at sea, use power conservation features (if available).

Put your cellphone in a waterproof plastic bag to protect it in case of the vessel capsizing or being swamped. It can be used while still inside the bag without losing signal strength.

Keep your cellphone on you or clipped to your lifejacket, so you can access it in an emergency or if you end up in the water without warning.

If you use a cellphone to call for assistance, follow these instructions:

- Dial 111 for distress or urgency messages.
- Provide emergency services with:
 - the name and a brief description of the vessel
 - cellphone number
 - vessel's location or position
 - nature of the problem and assistance required
 - number of people on board
 - the skipper's name, home address and landline phone number
 - any other relevant information.
- Don't hang up after talking to SAR services, unless you are instructed to do so.
- Once you have been instructed by emergency services to hang up, keep the line free for access by SAR services.
- Conserve the cellphone's battery as much as you can.

Using satellite telephones

Satellite telephones provide global coverage and are a better option than cellphones, but calls from these are more expensive. **Freephone numbers do not work on satellite telephones.**

To contact RCCNZ, phone (00 64 4) 577 8030. If your phone has a speed dial or voice command facility, save this number onto the phone before you set out.



Radio-telephone procedure

Radio communications use specific words (procedural words or 'prowords') and abbreviations. It is important for all marine radio operators to use the correct procedure and prowords.

The recipient of your call may not have English as their first language. By following international conventions and using prowords, you are more likely to be understood. Safety or lives may depend on using clear communication.

Follow this process for ordinary radio communications:

- Turn the radio on, adjust the volume and squelch, and select a channel.
- **Listen.** Others may be using the channel for messages more urgent than your own.
- **Think.** Prepare what you are going to say before you transmit, and keep your message brief.
- When not transmitting, ensure you do not hold down the transmit switch (Push to Talk or PTT). If this switch is jammed or held down by mistake, it prevents any other person from transmitting any messages on your selected frequency or channel, and your radio cannot receive.
- Speak simply and clearly, using the correct prowords.
- Avoid using local names, terms and jargon, which will cause confusion.

WARNING: some marine radios are equipped with a VHF DSC facility. DSC signals from these radios are not processed by the New Zealand Maritime Radio network. Other, similarly equipped, radios within VHF range **may** be able to receive and interpret these signals but this cannot be guaranteed. In New Zealand coastal waters, voice **must** be used for **distress** and **urgency** messages.

Procedural words (prowords)

It is essential that all stations use the correct terms when using their radio. The International Maritime Organization (IMO) and International Telecommunication Union (ITU) have developed a system of prowords over many decades that are used primarily to promote safety at sea.

Prowords aid comprehension and precision for mariners, whose first language may not be English. These words are taught to student operators around the world.

In recent years, other terms that are not prowords have been introduced in New Zealand and other nations, and in some cases are quite widely used. Some of these additional terms are local in origin and others come from American Citizen Band radio and amateur (ham) radio, but they are not appropriate for maritime communications.

Use **only** the IMO/ITU prowords listed (below and next page), without exception.

Proword	Meaning
Affirmative	Yes. You are correct. What you have transmitted is correct.
All after ...	The portion of the message to which I refer is that portion which follows ...
All before ...	The portion of the message to which I refer is that portion which precedes ...
Correction	I have made a mistake; this version following is the correct one ...
Disregard, out	This transmission is in error - disregard it.
Figures ...	A group of one or more characters, the first of which is the correct one.
From ...	The originator of this message follows ...

Proword	Meaning
Initials ...	A group of one or more characters, the first of them a letter, follows...
I read back ...	The following is a response to your instruction "Read back..."
I say again ...	I am repeating the transmission or portion indicated...
I spell ...	I will spell the next word phonetically...
MAYDAY (three times)	A vessel or person is in grave and imminent danger.
Negative	Not received. No.
Nothing heard	The station called did not respond.
Out	Ending transmission – no answer is required or expected.
Over	End of my transmission – I am ready for your reply. ('Over' and 'Out' are NEVER used together by one station.)
PAN PAN (three times)	I have urgent traffic or an urgent situation.
Radio check	The caller is requesting confirmation that their radio is working and an indication of strength and clarity. (The response is given on a scale of 1–5 for both, with 1 being the least. A typical response might be '4 by 4'.)
Roger	I have received and understand your last transmission. (Does not mean 'Yes' or 'Permission granted'.)
Say again ...	Repeat all of your last transmission. (Response: 'I SAY AGAIN'.)
SÉCURITÉ(three times)	I have a navigation problem. I am expecting a state of emergency to develop, or I have information relating to a hazard to navigation.

Proword	Meaning
This is ...	This transmission is from the station whose name and callsign follow...
Time ...	Following is the time or date/time group of this message...
To ...	To the following addressee(s) for action...
Unknown station	The identity of the station is unknown. Identify and say again.
Wait ...	I must pause for a few seconds. Do not transmit yet.
Wilco ...	I will cooperate. (Not the same as 'Roger' and must not be used together. Only to be used by the addressee.)
Word (or all) after ...	The word(s) I did not receive is (are) the word (or all) after...
Word (or all) before	The word(s) I did not receive is (are) the word (or all) before...

Phonetic alphabet

When you need to spell out callsigns, words and other information, use this format:

Letter	Word	Spoken as	Letter	Word	Spoken as
A	Alpha	AL FAH	N	November	NO VEM BER
B	Bravo	BRAH VOH	O	Oscar	OSS CAR
C	Charlie	CHAR LEE	P	Papa	PAH PAH
D	Delta	DELL TAH	Q	Quebec	KEH BECK
E	Echo	ECK OH	R	Romeo	ROW ME OH
F	Foxtrot	FOKS TROT	S	Sierra	SEE AIR RAH

G	Golf	GOLF	T	Tango	TANG GO
H	Hotel	HOH TELL	U	Uniform	YOU NEE FORM or OO NEE FORM
I	India	IN DEE AH	V	Victor	VIK TAH
J	Juliet	JEW LEE ETT	W	Whiskey	WISS KEY
K	Kilo	KEY LOH	X	X-ray	ECKS RAY
L	Lima	LEE MAH	Y	Yankee	YANG KEY
M	Mike	MIKE	Z	Zulu	ZOO LOO

Transmitting numbers (figures)

When transmitted by radio, numbers can become garbled and then are incorrectly recorded by the receiving station. Numbers (referred to by the proword 'figures') should be transmitted as a series of single-digit numbers.

Number	Word	Spoken as	Number	Word	Spoken as
0	Zero	ZEE ROH	6	Six	SIX
1	One	WUN	7	Seven	SEV EN
2	Two	TOO	8	Eight	AIT
3	Three	TREE	9	Nine	NINE ER
4	Four	FOH WER	DECIMAL	Decimal	DAY SEE MAL
5	Five	FIFE			

Emphasised syllables are shown in **bold** text.

Example of transmitting figures

- You are in distress and your global positioning system (GPS) shows you are in the following position:
43° 45.97'S, 174° 52.48'E.
- The position should be transmitted as:
WE ARE IN 4 – 3 DEGREES 4 – 5 DECIMAL 9 – 7
MINUTES SOUTH;
1 – 7 – 4 DEGREES 5 – 2 DECIMAL 4 – 8 MINUTES EAST.

SSB frequencies and VHF channels

All vessels licensed to operate in the marine frequency bands between 1605 kHz and 2850 kHz must be able to transmit and receive on 2182 kHz. Distress, urgency and safety calls should be made on this frequency.

The 2182 kHz frequency is also the general calling (hailing) and reply frequency when establishing communication with vessels and coastal stations, and is used by coastal stations to announce the transmission of safety information and lists of current messages.

Except for distress and urgency, all communications should be carried out on a working or inter-ship frequency, leaving 2182 kHz available for such calls. Safety traffic should also be transmitted on a working frequency.

New Zealand SSB frequencies in medium and high-frequency bands (MF/HF)

Supplementary calling frequency.	2045 kHz
Supplementary ship-to-ship frequency.	2068 kHz
Inter-ship working frequency (for use after communication has been established on 2182 kHz or 2045 kHz).	2456 kHz 2638 kHz 2068 kHz

New Zealand SSB frequencies in medium and high-frequency bands (MF/HF)	
Harbour authority working frequency 2162 kHz.	2162 kHz 2012 kHz
Working frequencies for exchanging messages between private coastal stations and ships (after communication has been established on 2182 kHz or 2045 kHz).	2480 kHz 2444 kHz
For communication with coastal stations providing communication for aquatic sporting events (also used by land stations providing communication for sporting events).	2089 kHz 2129 kHz
Working frequencies between coastal and ship stations, ⁴ or inter-ship (after initial contact has been established on 4125 kHz).	4146 kHz 4417 kHz
Working frequencies between coastal and ship stations, or inter-ship (after initial contact has been established on 6215 kHz).	6224 kHz 6227 kHz
Working frequencies for exchanging messages between Taupo Maritime Radio and ships (after communication has been established on a calling frequency).	2207 kHz 4146 kHz 6224 kHz 8297 kHz 12356 kHz 16531 kHz

⁴ Any mobile radio station in the Maritime Radio Service located on board any vessel that is not permanently moored.

International distress and calling frequencies in medium and high-frequency bands (MF/HF)

The international distress, safety and calling frequency for radio-telephony. ALWAYS KEEP A LISTENING WATCH ON THIS CHANNEL	2182 kHz
The international distress, safety and calling frequency.	4125 kHz 6215 kHz
International calling frequency only (not monitored by Maritime Operations Centre (MOC)/callsign ZLM).	8255 kHz
International distress and safety frequency only.	8291 kHz
International distress, safety and calling frequencies	12290 kHz 16420 kHz

VHF channels used in New Zealand

The international distress, safety and calling frequency for the marine mobile VHF radio-telephone service. All vessels' stations licensed to operate in the authorised bands between 156 MHz and 174 MHz must be able to transmit and receive on this channel. ALWAYS KEEP A LISTENING WATCH ON THIS CHANNEL	16
Inter-ship navigation safety.	13
Working channels for inter-ship communication.	6, 8
Working channels for harbour authority radio communications on port operation and vessel movements.	9, 10, 11, 12, 14
Continuous weather transmission channels	19, 20, 79, 2019, 2020, 2079
Two-frequency talk-through repeater channels (working channel for Chatham Islands Maritime Radio and allocated to Coastguard and other private coastal stations).	1, 2, 3, 4, 5, 7, 18, 60, 1, 62, 63, 64, 65, 66

VHF channels used in New Zealand (continued)	
Working channel for Whangarei, Tolaga, Wairarapa, Taranaki, D'Urville, Fox, Puysegur, Kaikoura and Waitaki Maritime Radio and anti-pollution operations.	67
Working channel for Cape Reinga, Plenty, Napier, Farewell, Picton, Akaroa, Greymouth and Bluff Maritime Radio.	68
Working channel for Great Barrier and Whanganui Maritime Radio.	69
DSC (Digital Selective Calling) distress alert and messaging.*	70
Working channels between coastal and ship stations (after initial contact has been made on channel 16) and for Kaitaia, Auckland, Runaway, Wellington, Westport, Fiordland, Chalmers, Cape Egmont and Stewart Island Maritime Radio.	71
Channel for use in association with marina developments.	73
Working channels between coastal and vessel stations (after initial contact has been made on channel 16).	74
Channels available for aquatic events.	17, 77
Working channels for Chatham Islands Maritime Radio.	60, 62

*There is currently no shore-based VHF DSC in New Zealand.

Operator qualifications, callsigns and IDs

To operate a VHF or MF/HF radio under the General User Radio License (GURL), you must hold a valid maritime radio operator's certificate and have a New Zealand-allocated callsign.

To operate a VHF radio, a Maritime VHF Operator's Certificate (MVOC) is the minimum requirement. This is obtainable from Coastguard.

The certificate to operate an MF/HF radio is detailed in the Radio Spectrum Management document 'Radio Operator Certificate and Callsign Rules' (PIB 46). See

All transmissions must be identified by the vessel's name and callsign. Because many vessels have similar names, radio operators should use their vessel's callsign to correctly identify themselves.

Radio Spectrum Management agents issue SSB callsigns and MMSI (Maritime Mobile Service Identity) numbers. VHF callsigns and MMSI numbers are allocated and administered by Coastguard Tautiaka Moana (see page 58).

Operating procedure

Except in situations of distress, radio stations should first listen to ensure that other communications will not be interrupted before transmitting on any frequency or channel. This is particularly important on VHF channel 16, and on SSB frequencies 2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz and 16420 kHz.

Calling (hailing) frequencies should be used only for initial calls and replies, except in cases of distress or urgency. When communication has been established, stations must change to a working frequency before continuing.

The following example illustrates the procedure for contacting another vessel station.

Example of procedure for contacting another vessel station

Calling on channel 16:

- KOTARE (up to three times) ZM1624 – THIS IS OCEAN BLUE (up to three times) ZM1234 – ARE YOU RECEIVING ME? – OVER.
- OCEAN BLUE ZM1234 – THIS IS KOTARE ZM1624 –CHANGE TO CHANNEL 6 – OVER.
- KOTARE – OCEAN BLUE – ROGER GOING TO CHANNEL 06 – OVER.

Working on channel 6:

- KOTARE (up to three times) – THIS IS OCEAN BLUE – ARE YOU RECEIVING ME? – OVER.
- OCEAN BLUE – THIS IS KOTARE RECEIVING YOU LOUD AND CLEAR – GO AHEAD – OVER.
- KOTARE – THIS IS OCEAN BLUE – WILL BE ARRIVING PICTON AT ABOUT 6 PM. CAN WE MEET YOU AT THE FERRY TERMINAL THEN? – OVER.
- OCEAN BLUE – THIS IS KOTARE – WE CAN MAKE THAT MEETING – SEE YOU THEN – OVER.
- KOTARE – THIS IS OCEAN BLUE – OUT.

This example illustrates VHF operation and inter-ship communication. The same procedure is used for ship-to-shore and MF/HF communications.

Silence period

VHF: There is no provision for silence periods in the VHF maritime mobile service.

SSB: During their hours of service, all radio-telephone stations that are licensed for operation in the frequency bands between 1605 kHz and 2850 kHz must keep watch on 2182 kHz for three minutes at the start of each hour and half-hour. During these periods, all transmissions between the frequencies of 2173.5 kHz and 2190.5 kHz must stop, except for distress and urgency communications.

Time: The clock used by the radio operator must be checked regularly to ensure correct timekeeping, especially during the silence periods.

Radio listening watch

Having vessel and coastal stations listen on the international distress frequency of channel 16 and/or 2182 kHz is an essential part of maintaining the safety of life at sea.

RCCNZ has coordinated several SAR incidents where vessels and people have been in extreme danger and made a MAYDAY broadcast. Relay broadcasts on channel 16 did not raise any response from other vessels, and when SAR resources arrived at the scene they found other craft near the vessel in distress. If any of these had been keeping an appropriate listening watch, they could have given assistance straight away and reduced the peril for people in grave and imminent danger.

Remember: Always keep a listening watch. The next life saved could be yours.

With a properly installed and maintained radio, maintaining a listening watch uses very little power. All modern marine radios have the facility for dual watch (and/or multi-channel scanning), allowing multiple channels to be monitored at the same time.

Watches are kept continuously at the locations and on the calling frequencies listed on pages 47-49.

Voyage or trip reports

Vessels are encouraged to provide coastal stations with details of their voyages. These trip reports (TR) are useful in the event of a SAR operation, and can help to determine a vessel's last known position.

Regular TRs also ensures that the vessel's radio equipment is functioning properly – for example, that it has not locked into transmit mode through failure or improper microphone stowage. When attempting a bar crossing, VHF radio is invaluable to determine the sea state.

On departure, the TR comprises:

- the abbreviation TR (Tango Romeo)
- the vessel's name and callsign
- port of departure
- port of destination and, if possible, estimated time of arrival (ETA)
- the number of people on board (POB).

Example

- TR OCEAN BLUE / ZM1234 LEAVING WELLINGTON.
ETA PICTON 1800 TODAY, THREE POB. OVER.

On arrival, the TR comprises:

- the abbreviation TR
- the vessel's name and callsign
- the port and, if applicable, estimated time of departure (ETD).

Example

- TR OCEAN BLUE / ZM1234 ARRIVED PICTON. STATION
CLOSING. ETD 0900 THURSDAY. OVER.

Fishing vessels are also strongly advised to report their positions to the nearest coastal station:

- on leaving port for the fishing grounds
- on arrival at the fishing grounds
- when proceeding from one area to another on the same voyage, or on arrival in port.

Example

- TR OCEAN BLUE / ZM1234 LEAVING WELLINGTON FOR
MERNOO BANK AREA. ETA 0600 ON THE 11TH. THREE POB.
OVER.

Every effort should be made to notify arrival at a safe anchorage or at the end of the voyage. However, unless a vessel is reported overdue, the absence of a closing TR will not initiate a search or other follow-up action.

Coverage and services

Maritime Radio: VHF and SSB

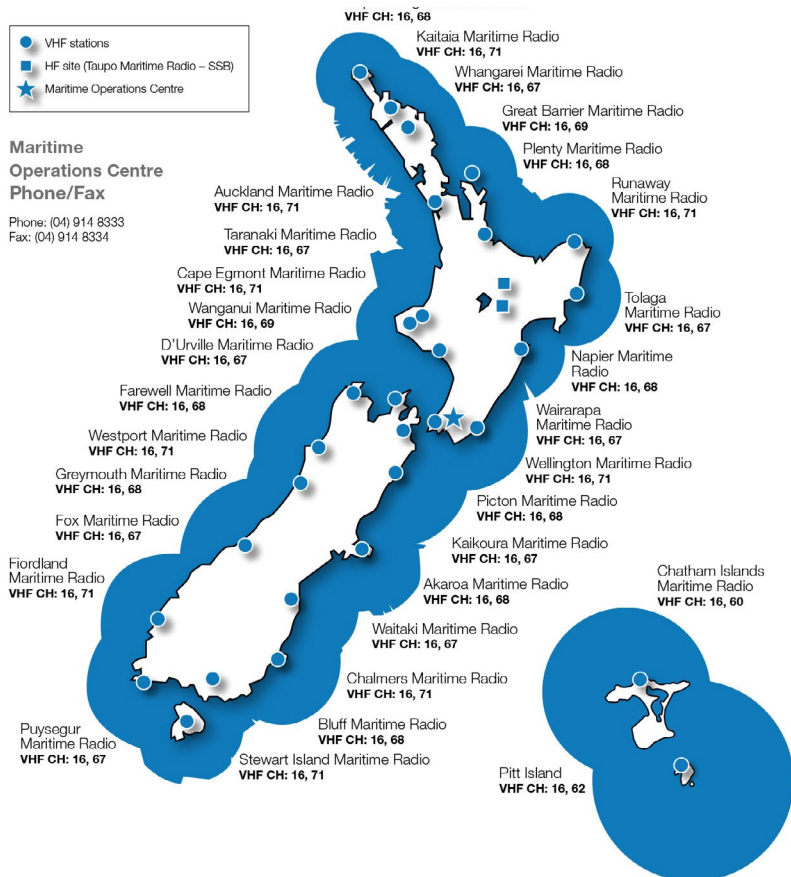
MNZ's Maritime Operations Centre and private coastal station operators provide maritime radio services for New Zealand waters. These services are summarised below.

For private coastal stations, the range of services is indicated, but not all operators offer the full range. For details of these, refer to the 'New Zealand Nautical Almanac', published annually.



Service	Maritime Operations Centre	Private
Public non-commercial service	Yes	Some
Watchkeeping on VHF distress channel	Continuous	Varies
Watchkeeping on MF/HF distress frequencies	Continuous	Varies
Provision of communications for distress situations	Yes - nationally and NAVAREA XIV	In some locations
Regular schedule of weather and navigational bulletins on VHF and MF/HF	Yes	Some
Immediate weather warnings	Yes	Some
Location	31 radio stations, remotely controlled from a single national operating centre	Local or regional service in many locations
Commercial services, such as messaging or connection to the telephone network	No. Customs/Immigration/Ministry for Primary Industries and medical advice only	Some
Personalised subscription service	No	Some
Voyage or trip reports	Yes	Yes

Maritime Radio VHF coverage



Note: gaps in coverage may exist within the areas shown, due to terrain 'shadows' (which can occur under cliffs close to the shore or in bays and flords) and occasional system maintenance.

A continuous listening watch is kept on channel 16 by all Maritime Radio VHF stations.

The VHF coverage shown on the map is for vessels with a 25W (normal full power) radio working into a correctly installed antenna mounted 4 metres or more above the waterline.

VHF broadcasts

Maritime Radio makes the following broadcasts each day. These include weather warnings, situation and forecast, and navigational warnings.

All times are in New Zealand Local Time and include a long-range (five-day) outlook.

All New Zealand coastal VHF stations broadcast forecasts for all weather areas simultaneously (see pages 38-39).

Maritime Radio VHF voice broadcasts	
Calling	Channel 16.
Working	Channels 67, 68, 69, 71 (see page 46 for area detail)
Times	0133, 0533, 0733, 1033, 1333, 1733, 2133 NZST and NZDT

Note: the 1033 broadcast includes all warnings in force and reports from coastal stations, but provides no situation or forecast.

Local area forecasts and current wind conditions are also broadcast continuously by Coastguard using channels:

- a) two digit radios 19, 20, 79
- b) four digit radios 2019, 2020, 2079.

Chatham Islands Maritime Radio coastal VHF stations transmit weather forecasts simultaneously on their working channels 60 and 62 at 0603, 1403, 1803, 2203 (Chatham Islands Local Time).⁵

⁵ New Zealand local time (either NZDT or NZST) plus 45 minutes.

Taupo Maritime Radio/ZLM (MF/HF)

The MF/HF (SSB) Maritime Radio Service is provided by Taupo Maritime Radio, whose antennae are on a site in the central North Island.

A continuous watch is kept on all calling frequencies. The calling and working frequencies are shown below.

Taupo Maritime Radio VHF voice frequencies (kHz)						
Calling	2182	4125	6215	8291	12290	16420
Working	2207	4146	6224	8297	12356	165531

For vessels near New Zealand, the lower frequency bands (in MHz) generally provide the best radio communication with Taupo Maritime Radio.

Taupo Maritime Radio Digital Selective Calling (DSC) frequencies (kHz)					
Distress	4207.5	6312.0	8414.5	12577.0	16804.5

MF/HF propagation can never be exactly predicted for all places, times and conditions. For guidance on the best frequencies to use, mariners are advised to keep a close watch on the Ionospheric Prediction Service (IPS) warnings in 'Notices to Mariners'.

MF/HF broadcasts

The following broadcasts are made on MF/HF frequencies from Taupo Maritime Radio. A preliminary call is made on the calling frequencies, with broadcasts then made on the working frequencies. All times are in New Zealand Local Time.

Broadcast type	Times	Frequencies (kHz)	
		Calling	Working
Coastal warnings and bulletins (including Chatham Islands)	0133 0533 1333 1733	2182 6215 4125	2207 6224 4146
Coastal reports	0803 1203 2003	2182 4125 6215	2207 4146 6224
Oceanic warnings*	0303 0333 1503 1533	6215 8291 12290 16420	6224 8297 12356 16531
Oceanic weather bulletins and warnings*	0903 1003 2103 2203	6215 8291 12290 16420	6224 8297 12356 16531

* For daylight savings, add one hour.

Notes:

- Bulletins contain the weather situation and forecast.
- Reports contain the weather situation at selected coastal sites.
- Warnings include navigational, ionospheric and meteorological warnings.

Warnings

Meteorological warnings are issued by the New Zealand Meteorological Service, and navigational warnings are issued by MNZ (from RCCNZ). LINZ issues Notices to Mariners, but these are not navigational warnings.

Warnings are broadcast on VHF by Maritime Radio and on SSB by Taupo Maritime Radio as soon as possible after they have been received.

Warnings are also broadcast via satellite services, described further under Satellite safety services. The warnings are repeated on SSB following the next silence period, and then at scheduled times until they are cancelled or replaced.

All warning information is available from Maritime Radio stations or Taupo Maritime Radio on request.

NAVAREA warnings are concerned with the information that ocean-going mariners require for their safe navigation. Coastal navigation warnings broadcast information that is necessary for safe navigation within areas seaward of the fairway buoy or pilot station, while Local warnings broadcast information that covers inshore waters, often within the limits of jurisdiction of a harbour or port authority. Harbour authorities provide local harbour warnings, but if they do not have a continuous VHF radio service, Maritime Radio stations will broadcast radio navigation warnings on their behalf.

Some of the information contained in coastal navigational warnings covers:

- changes to lights, buoys and beacons affecting major shipping areas
- the establishment of major aids to navigation, or significant changes to existing ones
- the presence of large, unwieldy tows in congested waters, or vessels engaged in seismic surveys that require other vessels to keep well clear
- areas where SAR, weapon firing, cable-and pipe-laying activities, anti-pollution exercises – or other potentially dangerous operations – are being carried out near shipping areas
- significant malfunctioning of radio communications services.

Other weather information

Additional forecasts for small craft operating in local waters are broadcast by Radio New Zealand community stations and normally read with scheduled news programmes, which may vary in length. Some private radio stations also broadcast local forecasts.

Marine weather information is also available from MetService New Zealand's website at metservice.co.nz

Many private coastal stations also broadcast local marine weather and safety information.

Medical advice

Medical advice may be obtained by transmitting a message to any of the coastal VHF stations of Maritime Radio or by SSB to Taupo Maritime Radio/ZLM.

The stations will forward the message to RCCNZ, which will contact the appropriate medical authority and pass on their reply to the vessel. No charge is made for this service.

Ionospheric Prediction Service (IPS)

Communications over SSB are variable but predictable, due to ionospheric changes (see page 8). During periods of degraded ionospheric propagation, warnings are transmitted by Taupo Maritime Radio.

The quarterly optimum frequencies are published in the New Zealand Nautical Almanac.

Satellite safety services

The International Maritime Organization (IMO) has now recognized two mobile satellite services for operation within the Global Maritime Distress and Safety System (GMDSS). These services are Inmarsat and Iridium. Many vessels are now equipped with these satellite

systems, which provide messaging, among other services, and can be used for sending distress alerts and receiving safety information.

Maritime Safety Information (MSI) is provided by MetService (coastal and oceanic weather information and forecasts) and MNZ (NAVAREA XIV and Coastal Navigation Warnings) via these satellite services. These broadcasts are coded so that all vessels fitted with the satellite equipment can receive them.

Vessels fitted with a recognised mobile satellite receiver wishing to receive coastal navigation warnings should ensure they have Coastal Warning Area 'Z' selected. Refer New Zealand Nautical Almanac Annual New Zealand Notices to Mariners No. 9 for further information on MSI services.

Coastal bulletins contain current warnings, the current weather situation and forecasts for New Zealand coastal forecast areas.

Content of broadcast	Time (UTC)
Situation, forecasts and warnings for New Zealand coast.	0130
Met warnings for SW Pacific – 0° to 55°S, 150°E to 120°W, southern area forecast.	0330
Warnings, situation and forecasts, 0° to 55°S, 150°E to 120°W.	0930
Situation, forecasts and warnings for New Zealand coast	1330
Met warnings for SW Pacific – 0° to 55°S, 150°E to 120°W, southern area forecast	1530
Warnings, situation and forecasts, 0° to 55°S, 150°E to 120°W.	2130

Oceanic bulletins contain warnings, situation and forecasts for these five weather forecast areas:

Region	Coordinates
Islands	Equator to 25°S, 160°E to 120°W.
Subtropic	From 25S to 40S, western boundary from 40S 163E to 29S 170E then to 25S 170E, eastern boundary 170W.
Forties	From 40S to 55S, western boundary from 40S 163E to 45S 160E then to 55S 160E, eastern boundary 170W.
Pacific	25°S to 55°S, 170°E to 120°W.
Southern	55° to Antarctica, 160°E to 120°W.

These bulletins are broadcast on Inmarsat-C at the times listed in the table on page 52. See the 'Marine High Seas Weather Bulletin' from [MetService New Zealand](#)⁶

Tsunami warnings in New Zealand

The National Emergency Management Agency (NEMA) is responsible for tsunami warnings in New Zealand. NEMA maintains a 24/7 monitoring and warning capability and works closely with GNS Science to conduct tsunami threat assessment for New Zealand following earthquakes in the Pacific. New Zealand is a member of the Pacific Tsunami Warning System.

For more information, see the 'Annual New Zealand Notice To Mariners (ANTM) Number 11' in the [New Zealand Nautical Almanac](#)⁷

⁶ www.metservice.com

⁷ www.linz.govt.nz

Other information

Medical evacuation (Medevac)

Use this checklist when notifying a Medevac alert	Tick
Name and callsign of the vessel with the medical emergency.	
Type and/or description of vessel.	
Position in latitude and longitude in degrees and minutes, or bearing and distance from a charted landmark.	
Date and time of position.	
Vessel's course and speed.	
Patient's name, nationality, age, gender.	
Patient's symptoms.	
Medication recently given.	
Medication available on board.	
Radio frequencies in use or monitored.	
Contact address, phone or fax number, website or email address.	
Last port of call, port of destination, estimated time of arrival.	
On-scene weather (wind strength and direction, visibility) and sea conditions.	
Other pertinent information, such as a cellphone or satellite telephone number.	

There may be local variations to this checklist.

Sea rescue by helicopter

Once a helicopter has been tasked, the time it takes to locate a vessel in distress and the effectiveness of its rescue effort depend largely on the cooperation of the vessel involved.

You should provide information to the radio station about:

- your position, as accurately as possible (latitude/longitude in degrees and minutes or by bearing and distance from a charted landmark)
- a description of the vessel
- the nature of your distress
- your communications capabilities (such as VHF, SSB, EPIRB, cellphone or satellite telephone number, if applicable).

From the air, and especially if there are many other vessels in the area, it can be difficult for the helicopter crew to identify the vessel it is searching for, unless the vessel uses a distinctive signal that can be clearly seen.

To ensure the on-scene time for the helicopter is kept to a minimum:

- brief your crew on what to expect
- activate your EPIRB, which has a homing signal and, usually, a strobe light
- by day, use an orange smoke float distress flare, an orange square (some are marked with a black 'V'), a signal lamp or heliograph
- at night, use a torch or a red hand-held flare (do not fire a parachute flare when the helicopter is close by)
- where possible, give a cellphone or satellite telephone number to the coordinating agency (either RCCNZ or Police).

Working with a helicopter

- When the helicopter arrives, change course to place the wind 30° on the port bow if possible, and maintain this new course at your standard speed.
- Lash or stow all loose gear that could be blown about by the helicopter's powerful down-draught.
If possible, drop all sail and motor. Lash your boom(s) to the coachroof.
- Keep all unnecessary personnel out of the way while the helicopter is winching.
- Allow the winch cable (high-line) to touch the water or the vessel before you handle it, to dissipate any build-up of static electricity.
- Do not allow the winch cable to become attached (or make fast) to the vessel under any circumstances.
- Ensure the person being lifted is wearing a lifejacket, if possible. If the person is a patient, they should be made as comfortable as possible and, if conscious, briefed and reassured about the rescue procedure.
- At night, light the deck using lights or torches facing downwards.
- By day, indicate the apparent wind by using a flag or smoke (as long as it will not impair the pilot's visibility).
- On reaching the shore, follow the instructions of the pilot or crewman, leaving the helicopter in a forward direction and keeping well clear of the tail rotor and engine exhausts.

Do exactly as the helicopter pilot tells you. The pilot will not put their crew and machine in any unnecessary danger.

Be aware that no form of communication by radio (or even person-to-person conversation) is usually possible when a helicopter is overhead, due to its noise.

Secrecy of correspondence

Any person who receives information not intended for them shall not disclose or make use of that information or disclose the existence of the transmission unless they are specifically authorised to do so.

Transmissions in harbour

To avoid interference to any other radio service, minimum transmitter power should be used by vessels while in harbour.

Testing radio apparatus

When it is necessary for a vessel to transmit signals for testing, the transmissions must be brief and should include the vessel's call sign and name. A shielded dummy load may also be used for testing purposes.

Interference

It is **critical** that all stations interfere as little as possible with the working of other stations. Operators should restrict their use of the radio frequency/channel to an absolute minimum. Unnecessary conversation not only interferes with the genuine needs of other users, but may also disrupt a distress call. If you want to chat, use a cellphone, Citizen Band radio or satellite telephone.

Another common cause of interference is the handset switch (PTT) being accidentally activated. Take care to replace the handset correctly in its holder after use.

Offences and penalties

Except in the case of an emergency or distress situation, maritime radio users must be licensed.

New Zealand law provides penalties for people who communicate false information affecting safety. Every person who uses any means to knowingly provide another person with false information about the safety of a vessel, structure or person commits an offence under the Maritime Transport Act. The penalty can be imprisonment for up to 12 months and/or a fine of up to \$10,000.

Use of a radiotelephone to provide false or misleading information is also an offence under the Radio Communications Act 1989, with a penalty of up to \$30,000 (or \$200,000 for a company).

Useful contacts

406 MHz distress beacon/EPIRB registration

email contact.beacons@maritimenz.govt.nz

beacons.org.nz

Coastguard Tautiaki Moana

PO Box 91322, Victoria Street West, Auckland 1142

Ph 0800 40 80 90 or (09) 361 4700 Fax (09) 376 4775

coastguard.nz

Land Information New Zealand (LINZ)

Lambton House, 160 Lambton Quay

Private Bag 5501, Wellington 6145

Ph (04) 460 0110 Fax (04) 472 2244

linz.govt.nz (click on the 'Mariners' link)

Marine Pollution Response Service (MPRS)

PO Box 45209, Auckland 0651

Ph (09) 834 3908 Fax (09) 834 3907

Email mprs@maritimenz.govt.nz

Maritime New Zealand (MNZ)

PO Box 25620, Wellington 6146

Ph (04) 473 0111 Fax (04) 494 1263

Email enquiries@maritimenz.govt.nz

For contact details for MNZ district offices, see maritimenz.govt.nz

Maritime Operations Centre (MOC)

Ph 0800 MARITIME (0800 627 484) or (04) 550 5280

Fax (04) 550 4001

Email maritime@kordia.co.nz

Rescue Coordination Centre New Zealand (RCCNZ)

PO Box 30050, Lower Hutt 5040

Ph (04) 577 8030 Fax (04) 577 8038

Email rccnz@maritimenz.govt.nz

RCCNZ 24-hour numbers:

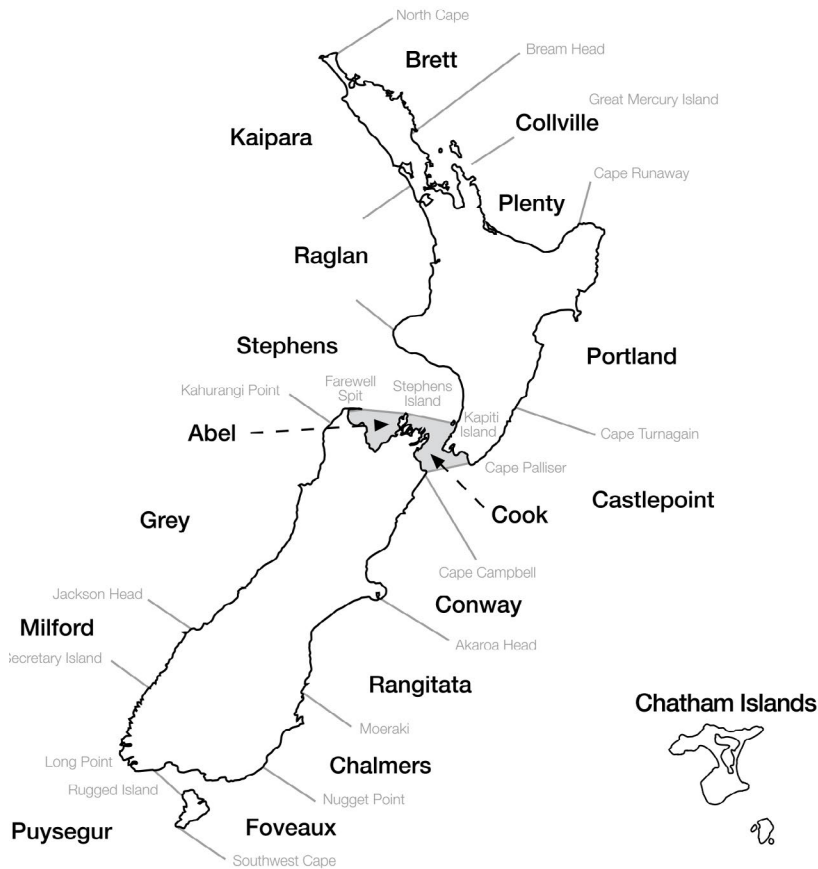
Freephone **0508 472 269** (not available to satellite telephone users)

Accident reporting Freephone **0508 222 433**

Other useful information for boat owners includes:

- 'New Zealand Nautical Almanac' (published annually and available from many bookshops or chandlers)
- 'New Zealand Notices to Mariners' (available free from LINZ)
- National Emergency Management Agency (NEMA)
civildefence.govt.nz

Coastal weather forecast areas



Up-to-date weather information is provided on the MetService website at [metservice.com](https://www.metservice.com) and the MetService Marine App (download via Google Play and App Store) or by phoning MetPhone on 0900 999 + your area code.

VHF marine channels



*Note: Nowcasting is also available on 2019, 2020 and 2079 for four-digit radios.

RADIO **DISTRESS** CALLING

Use only if you are in imminent danger and need immediate help.

Activate distress beacon if carried. Wear lifejackets.
Switch radio to full power.

- 1 **VHF Ch 16** (or SSB 2182, 4125, 6215, 8291)
- 2 **MAYDAY MAYDAY MAYDAY**
- 3 **THIS IS** **3 TIMES**
- 4 **CALLSIGN** **ONCE**
- 5 **MAYDAY**
- 6 Vessel's latitude and longitude, or bearing and distance from a known landmark
- 7 Nature of distress and assistance required
- 8 Other information – number of persons on board, description of vessel, liferaft or dinghy carried
- 9 **OVER**
- 10 Allow a short time for reply. If no reply, repeat the distress call, working through all the distress frequencies on the radio. If contact is made with a shore station, tell them you have activated your distress beacon and follow their instructions.

