

Title	Demonstrate knowledge of using VHF marine radio and an EPIRB		
Level	3	Credits	3

Purpose	<p>This unit standard is for people training to use very high frequency (VHF) marine radios and emergency position indicating radio beacons (EPIRBs).</p> <p>People credited with this unit standard are able to demonstrate knowledge of: marine VHF radio communications; the standard features of marine VHF radios and EPIRBs; New Zealand marine VHF Radio Service providers; routine marine VHF radio calling procedures and operating techniques; and marine VHF radio distress, urgency and safety calling procedures.</p>
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Classification	Maritime > Navigation and Seamanship
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes:
Health and Safety at Work Act 2015.
Maritime Transport Act 1994 and subsequent amendments.
Radiocommunications Act 1989 and Radiocommunications Regulations 2001.
- 2 References
International Maritime Organisation. *International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual*. London: IMO, 2019. Available at www.imo.org.
International Maritime Organisation. *International Code of Signals*. IMO 994E, 2005. Available at www.imo.org.
Maritime New Zealand. *Radio Handbook. Your Guide to Maritime Communications (Fourth Edition)*. ISBN 0-478-18816-1. Wellington: Maritime New Zealand, 2016. Available at www.maritimenz.govt.nz.
Maritime Rules and Advisory Circulars. Available at <http://www.maritimenz.govt.nz>.
- 3 The content of this unit standard, together with unit standard 19492, covers the knowledge and skills for the Maritime Restricted Radiotelephone Operator's Certificate (MRROC), administered by Radio Spectrum Management at <http://www.rsm.govt.nz>.
A radio apparatus licence is issued by the Radio Spectrum Management.
- 4 Assessment information
 - a Emergency related competencies in this unit standard must be demonstrated in simulated distress situations, not by live transmission.

- b All activities and evidence must be in accordance with manufacturer's specifications, Radiocommunications Act 1989 and Radiocommunications Regulations 2001, and the Radio Handbook.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of marine VHF radio communications.

Performance criteria

1.1 Regulations applying to VHF radio transmissions are explained.

Range hoax or nuisance calls, offences and penalties, secrecy of correspondence.

1.2 Radio propagation of VHF band radio communications is explained.

Range may include but is not limited to – station to station, repeater stations, terrain shielding, antenna height and type, power output, 'capture effect', simplex and duplex channels, limitations of cell phone use.

Outcome 2

Demonstrate knowledge of the standard features of marine VHF radios and EPIRBs.

Performance criteria

2.1 The differences between high and low power settings and when each setting should be used are explained.

Range may include but is not limited to – high and low power settings for fixed and handheld radios and the effect on receiver performance, range and capture effect, power consumption and battery life.

2.2 Radio set-up for use is explained.

Range common components and functions including but not limited to – volume, squelch, channel selection, channel 16 priority and dual watch and USA/Canada/International mode.

2.3 Channel numbering and allocation in the maritime VHF band is described.

2.4 Digital Selective Calling (DSC) is described with emphasis on the lack of national DSC coverage on VHF channel 70 within NZ waters.

2.5 The effects of misuse and interference are described.

Range may include but is not limited to – misuse of VHF channel 16 and unnecessary or excessive conversation, microphone switch jammed ‘open’, misuse of high power, interference from nearby un-shielded wiring, low battery power and misuse of squelch control.

2.6 The purpose and operation of a 406MHz (Mega Hertz) EPIRB is explained.

Range may include but is not limited to – frequencies, battery life, maintenance, test function, registration, accidental activation, disposal procedures.

Outcome 3

Demonstrate knowledge of New Zealand marine VHF Radio Service providers.

Performance criteria

3.1 The types of stations providing maritime VHF services are described.

Range stations may include but are not limited to – Maritime Radio, Coastguard Radio, licensed private radio stations, vessels; services may include but are not limited to – weather reports and forecasts, continuous weather broadcasts.

3.2 The use and format of trip reports (TRs) are explained.

3.3 The process for obtaining medical advice by marine VHF radio is explained.

Outcome 4

Demonstrate knowledge of routine marine VHF radio calling procedures and operating techniques.

Performance criteria

4.1 Routine marine radio calling procedures are explained.

Range may include but is not limited to – making a test call (radio check), establishing contact with another vessel or coast station, trip report, use of working channels, procedural words/key words, phonetic alphabet.

4.2 Operating techniques are demonstrated.

Range microphone techniques – ‘press to talk’ button, microphone.

Outcome 5

Demonstrate knowledge of marine VHF radio distress, urgency, and safety calling procedures.

Performance criteria

5.1 The procedures for formulating and sending distress messages are explained.

Range may include but is not limited to – correct use of spoken signal words ('mayday'), control of distress traffic, resumption of 'restricted' and of 'normal working', the importance of 'position' in the message, acknowledgement of a distress call and 'mayday relay'.

5.2 The procedure for formulating and sending an urgency call and message is explained.

Range correct use of spoken signal words ('pan pan'), the importance of position, criteria for an urgency call, the requirement to cancel if assistance is no longer required.

5.3 The procedure for formulating and sending a safety call and message is explained.

Range correct use of spoken signal words ('securité'), criteria for a safety call.

5.4 Prohibitions on transmissions during distress communication are described.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 July 2002	31 December 2012
Review	2	22 October 2010	31 December 2016
Review	3	15 October 2015	31 December 2022
Review	4	26 November 2020	N/A

Consent and Moderation Requirements (CMR) reference	0054
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.