



**Australian Government**

**MARC019 Transmit and receive  
information by marine VHF radio within  
Australian Territorial Waters**

**Release: 1**

# MARC019 Transmit and receive information by marine VHF radio within Australian Territorial Waters

## Modification History

Release 1. This unit first released with MAR Maritime Training Package Version 2.0.

## Application

This unit involves the skills and knowledge required to transmit and receive information by marine very high frequency (VHF) radio on a vessel according to regulations and includes operating an emergency position indicating radio beacon (EPIRB).

This unit applies to all boaters using marine VHF radio equipment to transmit and receive information to and from shore and vessel-based operators within Australian Territorial Waters – defined as all waters within 12 nautical miles from the coastal baseline.

This unit is consistent with the requirements of the Radiocommunications (Maritime Ship Station – 27 MHz and VHF) Class Licence 2001.

## Pre-requisite Unit

Not applicable.

## Competency Field

C – Equipment Operations

## Unit Sector

Not applicable.

## Elements and Performance Criteria

| Elements describe the essential outcomes.                             | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Operate VHF radio equipment to transmit and receive messages</b> | 1.1 VHF radio equipment is selected for operation within limits of specifications                                                                                                              |
|                                                                       | 1.2 VHF radio equipment is operated to transmit and receive various types of signal according to manufacturer instructions, established radio operation procedures and regulatory requirements |
|                                                                       | 1.3 Regulations and procedures applicable to vessel stations equipped with radio and digital selective calling (DSC)                                                                           |

|                                                        |     |                                                                                                                                                     |
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|                                                        |     | facilities are applied during radio communication                                                                                                   |
|                                                        | 1.4 | Work health and safety/occupational health and safety (WHS/OHS) procedures and hazard control strategies are applied when operating radio equipment |
| <b>2 Access search and rescue VHF radio facilities</b> | 2.1 | Information that may be required is identified and documented                                                                                       |
|                                                        | 2.2 | Request is made to the appropriate organisation for the provision of the information in the required format and on the correct channel              |
|                                                        | 2.3 | Information is provided and received in the required format and on the correct channel                                                              |
| <b>3 Operate an EPIRB in a distress situation</b>      | 3.1 | Routine checks are carried out on EPIRBs to confirm their operational capability according to manufacturer instructions and specifications          |
|                                                        | 3.2 | EPIRB is operated according to manufacturer instructions and regulatory requirements                                                                |

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Literacy - required for reading and interpreting regulations and procedures and documenting communication problems.

## Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Radio communications involves the application of principles of marine radio and Digital Selective Calling (DSC) to accurately transmit and receive messages, including distress calls. Use of correct procedures for transmitting and receiving signals using VHF equipment is

required.

|                                                            |                                                                                                                                                                                                                 |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Radio communication includes one or more of the following: | <ul style="list-style-type: none"><li>• Distress, Urgency and Safety communications</li><li>• normal vessel to vessel service (ship to ship)</li><li>• normal vessel to shore service (ship to shore)</li></ul> |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                     |                                                                                                                                                                                                                                                       |
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| Organisations with which radio communication may be conducted include one or more of the following: | <ul style="list-style-type: none"><li>• coast stations</li><li>• fishing organisations and co-operatives</li><li>• limited coast stations</li><li>• private shore stations, including boating clubs</li><li>• state/territory police forces</li></ul> |
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|                                                                |                                                                                                                                                                                               |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Available radio services include one or more of the following: | <ul style="list-style-type: none"><li>• Automated Weather Stations</li><li>• DSC</li><li>• public communications</li><li>• scheduled broadcasts (skeds)</li><li>• search and rescue</li></ul> |
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## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

# **Assessment Requirements for MARC019 Transmit and receive information by marine VHF radio within Australian Territorial Waters**

## **Modification History**

Release 1. This unit first released with MAR Maritime Training Package Version 2.0.

## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- accurately and consistently using VHF equipment to send and receive messages and signals under normal and emergency situations according to international and national VHF radio regulations/standards
- applying the principles of marine radio and DSC to accurately transmit and receive messages, including distress calls
- cancelling an inadvertent Distress Alert or call
- carrying out radio communications in compliance with the relevant sections of the maritime provisions of the Radio Regulations adopted by the World Radiocommunication Conference (as amended), including Chapters VII and IX
- communicating effectively with other stations by using standard voice procedure, the phonetic alphabet, push to talk (PTT) switch and common radio terminology
- deploying an EPIRB
- sending and receiving Distress Alerts, and Urgency and Safety announcements by DSC
- sending, acknowledging and relaying Distress, Urgency and Safety communications by voice using recognised format
- setting up VHF equipment for use including selecting the channel, adjusting transmitter power level, adjusting squelch and using dual watch facility
- using correct procedures for transmitting and receiving signals using VHF equipment

## **Knowledge Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- basic principles of and procedures for marine VHF radio communications
- basic understanding of the Australian maritime search and rescue system, including satellite distress beacons
- EPIRB frequencies:

- 406 MHz
- 121.5/MHz (homing)
- marine VHF repeater stations
- methods of communicating vessel position
- procedures for transmitting and decoding the phonetic alphabet
- purpose of monitoring the VHF Channel 70 used for DSC, including an awareness of the procedures used in making a DSC Distress Alert, Urgency and Safety Announcement
- sections of relevant regulations related to marine VHF radio communications
- VHF radio calling, replying and relaying procedures.

## Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must satisfy the National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) standards.

Assessment must occur in operational situations where it is appropriate to do so or where this is not available, assessment must occur via an online radio simulator or simulated VHF radio communications activities and exercises covering a range of normal and emergency communication situations that are typically experienced on a vessel.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- VHF transceiver equipment – either fixed or handheld, or approved PC based simulator, which includes a DSC facility
- documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals including:
  - Marine Radio Operators VHF Handbook
  - Radiocommunications Act 1992 including
  - Radiocommunications (Maritime Ship Station – 27 MHz and VHF) Class Licence 2001
  - Relevant State legislation – for carriage requirements
- a range of relevant exercises, case studies and/or simulations.

## Links

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