



**Australian Government**

**Assessment Requirements for MARC021  
Transmit and receive information by  
marine VHF radio**

**Release: 1**

# Assessment Requirements for MARC021 Transmit and receive information by marine VHF radio

## 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:

- adapting to changes in equipment and procedures in the workplace
- applying work health and safety/occupational health and safety (WHS/OHS) procedures and precautions when using and checking very high frequency (VHF) radio equipment
- carrying out radio communication accurately and consistently in both normal and emergency situations using shipboard VHF radio equipment, EPIRBs and SARTs in compliance with the relevant sections of the World Radiocommunication Conference (as amended) and maritime regulations
- communicating effectively with others during VHF radio communication
- conducting operational checks on VHF radio equipment
- consistently applying underpinning knowledge and skills when:
  - accessing search and rescue radio facilities
  - deploying and operating an EPIRB and a SART
  - maintaining and fault-find radio equipment
  - maintaining records of radio communication
  - operating VHF radio equipment to transmit and receive messages in accordance with manufacturer's instructions
- keeping records of radio communication
- recognising and adapting appropriately to cultural differences in the workplace, including modes of behaviour and interactions between crew and others
- recognising typical faults and problems with VHF radio equipment and take appropriate action
- reading and interpreting marine VHF radio regulations, rules and instructions
- using the phonetic alphabet
- working collaboratively with other shipboard personnel and passengers.

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## 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:

- As a minimum, assessment of knowledge must be conducted through appropriate written/oral examination and include knowledge of:
  - Australian marine search and rescue system
  - different types of marine VHF radio equipment, their features, applications, operating characteristics and operating procedures
  - EPIRB frequencies:
    - 406 MHz
    - 121.5/MHz (homing)
  - guidelines relating to the use of VHF radio communication equipment
  - hazards associated with VHF radio transmission and the repair and maintenance of VHF radio equipment, and related hazard control measures
  - limitations on the performance of different types of marine VHF radio equipment
  - marine VHF repeater stations
  - methods of communicating vessel position
  - operational checks, including:
    - checking VHF radio performance
    - measuring capacity of batteries and the specific gravity of the electrolyte
    - measuring on and off load voltage
    - testing fuses
  - principles and procedures for marine VHF radio communication
  - procedures for:
    - deploying and operating EPIRBs, SARTs and AIS-SARTs
    - keeping records of VHF radio communication
    - transmitting and decoding of the phonetic alphabet, excluding the figure code
  - purpose of and procedures for, the monitoring of calling and working frequencies
  - sections of relevant regulations related to marine VHF radio communication
  - VHF radio calling, replying and relaying procedures
  - VHF radio equipment faults and defects and related fault finding techniques and remedial procedures
  - VHF radio communication problems and appropriate action and solutions
  - WHS/OHS regulations appropriate to the operation and maintenance of VHF radio equipment.

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## 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 an appropriate range of operational situations on board an operational commercial or training vessel or where this is not available, in suitably simulated VHF radio communication activities and exercises covering a range of normal and emergency radio communication situations that are typically experienced on a vessel.

For certification requirements specified in the Radiocommunications Act 1992 assessment must comply with the assessment requirements of the relevant maritime regulations.

The candidate must demonstrate accurate and consistent use and maintenance of VHF radio equipment to send and receive messages and signals under normal and emergency situations according to international and national radio regulations.

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:

- tools, equipment, materials and personal protective equipment currently used in industry including:
  - VHF radio transceiver
  - digital selective calling (DSC) equipment
  - aerials
  - batteries
  - electrical and radio cable connections
  - electrical fuses
  - EPIRBs
  - SARTs
  - AIS search and rescue transmitter (AIS-SART)
  - AIS-man overboard (AIS-MOB) device
  - DSC-man overboard (DSC-MOB) device
- documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals including:
  - Marine Radio Operators VHF Handbook
  - Radiocommunications Act (1992)
  - Radio Regulations adopted by the World
  - Radiocommunication Conference (as amended)
- a range of relevant exercises, case studies and/or simulations.

## **Links**

MAR Maritime Training Package Companion Volume Implementation Guide at: - -  
[http://companion\\_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=22](http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=22)