



**Australian Government**

# **Assessment Requirements for MARO003 Transmit and receive information by the global maritime distress and safety system**

**Release: 2**

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## **Modification History**

Release 2. Change to Performance Evidence (PE) and Knowledge Evidence (KE) to include current terminology. Clarification of guidance information in PE, KE and Assessment Conditions.

Release 1. New unit of competency.

## **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:

- applying work health and safety/occupational health and safety (WHS/OHS) procedures when operating GMDSS subsystems and equipment
- communicating effectively with others when using GMDSS subsystems and equipment
- conducting operational checks on GMDSS subsystems and equipment
- keeping records of radio communications
- operating GMDSS subsystems and equipment according to manufacturer instructions
- reading and interpreting instructions for the use of GMDSS subsystems and equipment
- recognising typical faults with GMDSS subsystems and equipment, and taking appropriate action
- using the international phonetic alphabet and figure code.

## **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 and features of marine radio communications including:
  - correct use of frequencies, frequency bands and modes of emission
  - frequencies for routine call and reply
  - distress, urgency and safety communication
  - definition of coverage and sea areas for digital selective calling (DSC)
  - radio calling, replying and relaying procedures
  - purpose of silence periods when operating radio equipment
  - limitations on the performance of different types of marine radio equipment

- purpose for and procedures for the monitoring of calling and working frequencies
- methods of communicating vessel position
- different types of marine radio equipment, their features, applications, operating characteristics and operating procedures
- hazards associated with radio transmission and the repair and maintenance of radio equipment and related hazard control measures
- international and national radio regulations applicable to mobile marine communication
- maintenance strategies and requirements for GMDSS equipment as defined in the International Convention for the Safety of Life at Sea (SOLAS) and Radio Regulations and STCW
- means to prevent the transmission of false distress alerts
- operational checks including checking radio performance; testing fuses; measuring capacity of batteries and the specific gravity of the electrolyte; measuring on and off load voltage
- principles of radio propagation including:
  - basic propagation mechanisms at LF, MF, HF and VHF
  - maximum usable frequency (MUF)
  - optimum working frequency (OWF)
  - frequency bands
  - classes of emission
  - duplex, simplex paired frequencies and ITU channels
- procedures for:
  - keeping records of radio communication
  - transmitting and decoding the international phonetic alphabet and figure code
  - using various GMDSS systems and services including Inmarsat services (B, C, M); enhanced group calling system (EGC); MF/HF radio with NBDP; DSC facilities and usage; EGC receiver; maritime safety information (MSI) services; navigational telex (NAVTEX) system; SafetyNET system
- prohibitions on connecting non-GMDSS equipment to reserve source of supply
- radio communication problems and appropriate actions and solutions
- radio equipment faults, defects and related fault finding techniques
- requirements of ship reporting systems
- types, applications and features of basic antenna systems used in marine radio communications
- use of radio medical services.

## 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 workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>