



Australian Government

Assessment Requirements for MARO011 Transmit and receive information by the Global Maritime Distress and Safety System (GMDSS)

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Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Performance Evidence

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

- applying work health and safety/occupational health and safety (WHS/OHS) procedures when operating Global Maritime Distress and Safety System (GMDSS) subsystems and equipment
- communicating effectively with others when using GMDSS subsystems and equipment
- conducting operational checks on GMDSS subsystems and equipment
- keeping a radio logbook of communications using the GMDSS equipment, including the required regulatory entries into the radio logbook
- operating GMDSS subsystems and equipment according to manufacturer instructions
- performing routine maintenance checks, including:
 - antennas
 - battery checks
 - equipment testing
- 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 numeral code.

Knowledge Evidence

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

- different types of marine radio equipment, their features, applications, operating characteristics and operating procedures
- GMDSS components
- GMDSS procedures in response to emergency situations, such as abandon ship, fire, persons in survival craft or piracy at sea
- hazards associated with radio transmission and the repair and maintenance of radio equipment and related hazard control measures

- identification of radio stations
- international and national radio regulations applicable to GMDSS communications, including Australian Maritime Safety Authority (AMSA) Marine Orders, International Telecommunications Union (ITU) and the International Convention for the Safety of Life at Sea (SOLAS) Chapter IV
- maintenance strategies and requirements for GMDSS equipment as defined in SOLAS, radio regulations and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)
- means to prevent the transmission of false distress alerts
- miscellaneous skills and operational procedures for general communications
- operational checks, including checking radio performance, measuring capacity of batteries, and measuring on and off load voltage
- principles and features of marine radio communications, including:
 - correct use of frequencies, frequency bands and modes of emission
 - definition of coverage and sea areas for digital selective calling (DSC)
 - distress, urgency and safety communication
 - frequencies for routine call and reply
 - limitations on the performance of different types of marine radio equipment
 - methods of communicating vessel position
 - purpose of and procedures for the monitoring of calling and working frequencies
 - purpose of silence periods when operating radio equipment
 - radio calling, replying and relaying procedures
- principles of radio propagation, including:
 - basic propagation mechanisms at low frequency (LF), medium frequency (MF), high frequency (HF) and very high frequency (VHF)
 - classes of emission
 - duplex, simplex paired frequencies and ITU channels
 - frequency bands
 - maximum usable frequency (MUF)
 - optimum working frequency (OWF)
- procedures for:
 - international phonetic alphabet and numeral code
 - keeping records of radio communication
 - using various GMDSS systems and services, including:
 - current inmarsat services enhanced group calling (EGC) system
 - MF/HF radio with narrow band direct printing (NBDP)
 - DSC facilities and usage
 - Enhanced group call (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
- role and method of use of ship reporting systems
- search and rescue (SAR) operation
- service publications
- statutory framework of the Maritime Mobile Service
- systems used onboard, including:
 - automatic identification system (AIS)
 - ship security alert system
 - ultra-high frequency (UHF) handhelds
- types, applications and features of basic antenna systems used in marine radio communications
- use of radio medical services.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry, including GMDSS communication equipment.

Links

Companion Volume implementation guide can be found in VetNet -

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