



Purpose:

The e-learning module is designed for theoretical training of GMDSS radio operators in accordance with Chapter IV, IMO Radio Regulation and IMO Model Course 1.25 "GMDSS General Operator's Certificate.

What is an e-learning module?

E-learning module is the electronic textbook on one or more sections. Theoretical materials can be accompanied by drawings, diagrams, photos, animations and videos. There is a test for assessment of knowledge gained at the end of each section.

Contents:

- Basic concept of the GMDSS
- Possibilities and Provisions of Maritime Mobile and Maritime Mobile-Satellite Service
- GMDSS Communication systems
- GMDSS alerting and announcement Systems
- Emergency communication
- Public communication procedures

Target groups

Deck - Management
Deck - Operational

Ship types

Generic



Regulations

- Chapter IV STCW Code
- IMO Radio Regulation
- IMO Model Course 1.25 "GMDSS General Operator's Certificate"



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Section 2: Basic concept of the GMDSS

2.3. Sea Areas.

The GMDSS is based on the concept of using four marine communication sea areas to determine the operational, maintenance and personnel requirements for maritime radio communications.

- Sea Area A1 means an area within the radiotelephone coverage of at least one VHF coast station in which continuous Digital Selective Calling (DSC) alerting is available. Such an area could extend typically about 30 nautical miles (nm) from the coast station (SOLAS Ch. IV, reg. 2-12).
- Sea Area A2
- Sea Area A3
- Sea Area A4

Note: In accordance with IMO resolution Res.MSC.496(105) dated 04/28/2022: "Sea area A3 means an area, excluding sea areas A1 and A2, within the coverage of a recognized

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Section 2: Basic concept of the GMDSS

2.4.5. General radiocommunications.

General radiocommunications in the GMDSS are those communications between ship stations and shore-based communication networks which concern the management and operation of the ship.

These communications can be conducted on any appropriate channel, including those used for public correspondence.

Examples are orders for pilot and tug services, chart replacement, repairs, etc.

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Section 4: GMDSS Communication systems

GMDSS Communication systems.

Radiocommunication: Telecommunication by means of radio waves.

4.1 Radiotelephony.

Telephony: A form of telecommunication primarily intended for the exchange of information in the form of speech.

Radiotelephone call: A telephone call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service.

The first rule in terrestrial radiocommunication services in the VHF and MF/HF maritime bands, should always be:

Listen first – Then transmit

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Section 5: GMDSS alerting and announcement Systems

To ensure that the search and rescue transmission will be receivable over a useful distance it is essential that the SART be mounted as high as possible. In order to maximize the range, the regulations require a mounting height of at least 1 meter above sea level.

They operate in 9GHz band and transmit only, assuming they are switched on, when triggered by another radar pulse of a vessel or aircraft or a station ashore radar.

Then SART signals can be received by vessels in a distance of approximately 5 nautical miles, detection at longer ranges will be achieved from aircraft; at 3000 ft. for example, the aircraft radar should elicit a useful response up to 30 nautical miles away from the SART.

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Section 6: Emergency communication

6.1.2. Survival craft communication facilities.

Survival craft station is a mobile station in the maritime mobile service or the aeronautical mobile service intended solely for survival purposes and located on any lifeboat, liferaft or other survival equipment.

The most important factor of people survive in life rafts and boats is their rapid detection by SAR forces.

Therefore, when leaving the vessel, the crew must ensure that the rafts and boats have the communication facilities and warning.

A portable VHF radio station is used for radio communication of life boats or rafts among themselves, as well as with other ships that are in vicinity and for making a radiotelephone distress call.

When leaving the ship, radio stations are transferred to lifeboats and rafts.

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Test table

COMMENT

The maritime community has developed a special billing procedure for communication service for maritime customers. And special currency denominations are used for invoicing and settlements:

- Special Drawing Rights (SDR);
- Goldfrank (GF).

Test of question

In what currency international radio communication should be charged?

Select all correct answers:

- Euro.
- SDR.
- GoldFrank.
- USD.

Attempts: 1

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