

**CEPT/ERC/RECOMMENDATION 31-04 (Nicosia 1994 and revised in Kyiv 2009)**

**HARMONISED CEPT EXAMINATION PROCEDURES FOR THE SHORT RANGE CERTIFICATE (SRC)  
FOR NON-SOLAS VESSELS**

Recommendation proposed by the Working Group "Frequency Management" (FM)

*Original text of the Recommendation adopted by the "European Radiocommunications Committee" (ERC):*

**INTRODUCTION**

The full implementation of the Global Maritime Distress and Safety System (GMDSS) has made it necessary to review and to harmonise the examination requirements for the certificates of maritime radio operators. Harmonised examination procedures for the General Operator's Certificate and Restricted Operator's Certificate were introduced for maritime radio operators performing radiocommunication duties on board vessels subject to SOLAS<sup>1</sup>. Likewise harmonised examination procedures for the Short Range Certificate and Long Range Certificate were introduced for maritime radio operators performing radiocommunication duties on board NON – SOLAS vessels.

The GMDSS was fully implemented as per 1. February 1999. Because of the decision-making by WRC 07, the DSC and radio telephone procedures were amalgamated into one set of regulation (see RR Article 32). The changes to the Radio Regulations needed to be fully reflected in the examination syllabus and this led to this revision. Having gained experience of the GMDSS, the opportunity has been taken to simplify and clearly define the differential between the requirements of the individual certificates. This Recommendation describes the examination procedures for maritime radio personnel on board vessels sailing in sea area A1 which use the frequencies and techniques of the GMDSS on a non-compulsory basis.

“The European Conference of Postal and Telecommunications Administrations,

*considering*

- a) that the Maritime Mobile Service and the Maritime Mobile-Satellite Service are services according to the ITU Radio Regulations (Article 1) and governed by the ITU Radio Regulations and national regulations,
- b) that provisions of the GMDSS, closely related to the Maritime Mobile Service and the Maritime Mobile-Satellite Service, are also given in SOLAS and other international conventions and resolutions,
- c) that it is desirable to establish common standards of competence for the operators of stations of the Maritime Mobile Service operating in accordance with the GMDSS,
- d) that the GMDSS entered into force on 1 February 1992 and was fully implemented on 1 February 1999,
- e) that administrations are responsible, in accordance with Article 48 of the ITU Radio Regulations, to ensure that the operators of ship stations and ship earth stations operating in accordance with the GMDSS are adequately qualified to enable efficient operation of the station,
- f) that Article 48 also requires the radio operators on vessels for which a radio installation is not compulsory under international agreements and which use the frequencies and techniques of the GMDSS to be adequately qualified in accordance with the administrations' requirement,
- g) that the basic requirements for the format of certificates are set down in Radio Regulations Article 47,

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<sup>1</sup> International Convention for the Safety of Life at Sea (1974), as amended.  
Edition of October, 2009

*recommends*

- a) that administrations issue the Short Range Certificate for candidates passing the examination described in the Annex ,
- b) that developments in IMO should be monitored and this Recommendation should be modified accordingly,
- c) that examination establishments should continuously update examination procedures,
- d) that quality assurance processes with regards to Short Range Certificate examination should be applied,
- e) that administrations mutually recognise each other's certificates when these are issued in accordance with ITU Radio Regulations Resolution 343 and the Annex of this document,
- f) that Short Range Certificates issued in accordance with this Recommendation should bear a reference to the Radio Regulations and this Recommendation.”

## ANNEX

### CEPT EXAMINATION SYLLABUS FOR THE GMDSS SHORT RANGE CERTIFICATE (SRC)

The examination should consist of theoretical supplemented by practical tests and/or assessed practical training, overseen by an independent examiner and should include at least:

#### A. GENERAL KNOWLEDGE OF RADIOCOMMUNICATIONS IN THE MARITIME MOBILE SERVICE

- A1. The general principles and basic features
- A2. System overview of the GMDSS structure
- A3. Search and Rescue (SAR)
- A4. Maritime Safety Information (MSI)

#### B. PRACTICAL KNOWLEDGE OF RADIO EQUIPMENT

- B1. VHF radio installation
- B2. Digital Selective Calling (DSC)
- B3. Antennas, interfacing and power sources

#### C. PROCEDURES AND PRACTICAL OPERATION OF THE SUBSYSTEMS

- C1. DSC Distress, urgency and safety communication procedures
- C2. Protection of distress frequencies
- C3. Alerting, Communication and Locating Signals

#### D. RADIOTELEPHONY PROCEDURES

- D1. Ability to exchange communications relevant to the safety of life at sea
- D2. Practical and theoretical knowledge of radiocommunication procedures

#### E. REGULATIONS FOR VHF COMMUNICATIONS

- E1. Regulations, obligatory procedures and practices

#### F. EXAMINATION REQUIREMENTS

## CEPT EXAMINATION SYLLABUS GUIDELINES FOR THE GMDSS SHORT RANGE CERTIFICATE (SRC)

### A. GENERAL KNOWLEDGE OF RADIOCOMMUNICATIONS IN THE MARITIME MOBILE SERVICE

#### A1. The general principles and basic features

- 1.1 Types of communication in the maritime mobile service
  - Distress, urgency and safety communications
  - SAR (Search and Rescue) Communication
  - Public correspondence
  - Port operations and ship movement service
  - Intership communications
  - On board communications
  
- 1.2 Types of stations
  - Ship stations
  - Coast stations
  - Rescue coordination centres
  - Pilot, VTS and port stations
  - Aircraft stations
  
- 1.3 General knowledge of VHF radio channels
  - The physical concept of frequency
  - Propagation and range of communications
  - The concept of radio channel: simplex, semi-duplex and duplex
  - The usage of and restriction on VHF channels
  - Distress and safety channels
  - Calling channels
  - Intership channels
  - Port operations and ship movement channels
  - Public correspondence channels
  - National channels for small craft safety

#### A2. System overview of the GMDSS structure

- 2.1 System design
  - Structure
  - Block Diagram

#### A3. Search and Rescue (SAR)

- 3.1 SAR regions
- 3.2 The role of Rescue coordination centres
- 3.3 Organisation of search and rescue
- 3.4 SAR communication including on-scene communications

#### A4. Maritime Safety Information (MSI)

- 4.1 The NAVTEX system
  - Purpose and capabilities, including Distress and Safety functions
  - Message format (transmitter ID, message type, message number)
  - Selection of transmitters and message type
  - Messages which can not be rejected

## **B. PRACTICAL KNOWLEDGE OF RADIO EQUIPMENT**

### **B1. VHF radio installation**

- 1.1 Radiotelephone channels
  - Channel selection and controls
  - Dual watch facilities and controls
- 1.2 Basic controls and usage
  - Connecting the power
  - Press to transmit switch
  - High/low output power switch
  - Volume control
  - Squelch control
  - Dimmer
- 1.3 Handheld VHF radiotelephone
  - Specifications

### **B2. Digital Selective Calling (DSC)**

- 2.1 Call categorisation, priority and definitions
  - Distress
  - Urgency
  - Safety
  - Routine
- 2.2 Types of call
  - Distress
  - All ships
  - Individual
- 2.3 Maritime Mobile Service Identity (MMSI)
  - The nationality identification: Maritime Identification Digits (MID)
  - Ship station numbers
  - Coast station numbers
  - Group call numbers
- 2.4 Facilities and usage
  - Distress button
  - Data entry and display
  - Manual and automatic updating of vessel position
  - Reviewing received messages
  - Watchkeeping functions and controls

### **B3. Antennas, interfacing and power sources**

- 3.1 Antennas performance and positioning
- 3.2 Interfacing
  - Connection to position device
- 3.3 Power sources
  - Connections to different power sources
  - Requirements and safety
  - Charging
  - Maintenance of batteries

## **C. PROCEDURES AND PRACTICAL OPERATION OF THE SUBSYSTEMS**

### **C1. DSC distress, urgency and safety communication procedures**

- 1.1 Distress procedures
  - Transmission of a distress alert
  - Receipt and acknowledgement by a coast station
  - Reception of a shore-to-ship distress alert relay
  - Transmission of a distress alert by a station not itself in distress
- 1.2 Urgency and Safety communications via DSC equipment
  - Procedures for DSC Urgency and Safety announcements

### **C2. Protection of distress frequencies**

- 2.1 Avoiding harmful interference
  - Avoidance of the transmission of false alerts
  - Status of Channel 16 and 70
- 2.2 Transmissions during distress traffic
- 2.3 Prevention of unauthorised transmissions
- 2.4 Test protocols and procedures
  - Testing DSC equipment
  - Radiotelephone test procedures
- 2.5 Avoidance of transmissions in VHF guard bands
- 2.6 Procedures to follow when a false or inadvertent Distress Alert is transmitted

### **C3. Alerting, Communication and Locating Signals**

- 3.1 406 MHz Emergency Position Indicating Radio Beacons (EPIRBs)
  - Registration and coding
  - Operation, activation and testing
  - 121.5 MHz homing function
  - Mounting float-free mechanism
  - Battery expiry date
- 3.2 Search and Rescue Radar Transponder and Transmitter (SART)
  - Operation height and range
  - Battery expiry date
- 3.3 Handheld VHF
  - Operation
  - Communication range
  - Battery provision

## **D. RADIOTELEPHONY PROCEDURES**

### **D1. Ability to exchange communications relevant to the safety of life at sea**

- 1.1 Distress communications
  - Distress signal MAYDAY
  - Distress call
  - Distress message
  - Acknowledgement RECEIVED MAYDAY
  - Follow up distress traffic
  - The control of distress traffic
  - SEELONCE MAYDAY and SEELONCE FEENEE
  - Transmission of a distress message by a station not itself in distress
  - MAYDAY RELAY

- 1.2 Urgency communications
  - Urgency signal PAN-PAN
  - Urgency call
  - Urgency message
  - Radiomedical
- 1.3 Safety communications
  - Safety signal SECURITE
  - Safety call
  - Safety message
- 1.4 Awareness of the existence and use of the IMO Standard Marine Communication Phrases Vocabulary
  - English phrases
- 1.5 Phonetic alphabet

## **D2. Practical and theoretical knowledge of radiotelephony procedures**

- 2.1 Traffic routines
  - Use of callsigns
  - Establishing communication on intership, port operation and ship movement channels
  - Unanswered calls and garbled calls
- 2.2 Public correspondence and radiotelephony call procedures
  - Method of calling a Coast Station
  - Calls to ships from Coast Stations
- 2.3 Traffic charges
  - International charging system
  - Accounting Authority Identification Code (AAIC)

## **E. REGULATIONS FOR VHF COMMUNICATIONS**

### **E1. Regulations, obligatory procedures and practices**

- 1.1 Awareness of National and International Documentation
  - List of Coast Stations and Special Service Stations
  - List of Ship Stations and Maritime Mobile Service Identity Assignments
  - National manuals
- 1.2 Knowledge of the international regulations and agreements
  - Radio Operators Certificate
  - Ship Station Licence
  - Radio record keeping
  - Secrecy of correspondence
  - Prohibited transmissions
  - Watchkeeping

## **F. EXAMINATION REQUIREMENTS**

Candidates must show proof of theoretical and practical knowledge and compliance with national requirements.