



GUIDANCE NOTE
SAMSA Code: SHORT
RANGE CERTIFICATE (SRC)

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Approved by

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OPERATIONS – SEAFARER CERTIFICATION

GUIDANCE NOTE

SA MARITIME QUALIFICATIONS CODE

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SHORT RANGE CERTIFICATE (SRC): OUTLINE EXAMINATION SYLLABUS

- A General knowledge of radio communications in the maritime mobile service.
 - A.1 The general principles and basic features.
 - A.2 System overview of the GMDSS structure
 - A.3 Search and Rescue (SAR)
 - A.4 Maritime Safety Information (MSI)

- B Practical knowledge of radio equipment.
 - B.1 VHF radio installation.
 - B.2 Digital Selective Calling (DSC)
 - B.3 Antennas, interfacing and power sources

- C Procedures and practical operation of the subsystems
 - C.1 DSC Distress, urgency and safety communication procedures
 - C.2 Protection of distress frequencies.
 - C.3 Alerting, Communication and Locating Signals.

- D Radiotelephony procedures
 - D.1 Ability to exchange communications relevant to the safety of life at sea.
 - D.2 Practical and theoretical knowledge of radio communication procedures.

- E. Regulations for VHF Communications
 - E.1 Regulations, obligatory procedures and practices.

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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
MODULE 1			
(A) General knowledge of radio communications in the maritime mobile service	<p>1 The general principles and basic features</p> <p>1.1 Types of communication in the maritime mobile service</p> <p>1.1.1 Distress, urgency and safety communications</p> <p>1.1.2 SAR (Search and Rescue) Communications</p> <p>1.1.3 Public correspondence</p> <p>1.1.4 Port operations service and Ship movement service</p> <p>1.1.5 Inter-ship communications</p> <p>1.1.6 On-board communications</p> <p>1.2 Types of stations</p> <p>1.2.1 Ship stations</p> <p>1.2.2 Coast stations</p> <p>1.2.3 Rescue co-ordination centres</p> <p>1.2.4 Pilot, VTS and Port stations</p> <p>1.2.5 Aircraft stations</p> <p>1.3 General knowledge of VHF radio channels</p> <p>1.3.1 The physical concept of frequency</p> <p>1.3.2 Propagation and Range of communications</p> <p>1.3.3 The concept of radio channel:</p> <p>(i) Simplex</p> <p>(ii) Semi-duplex</p> <p>(iii) Duplex</p> <p>1.3.4 The usage and restriction on VHF channels</p> <p>1.3.5 Distress and safety channels</p> <p>1.3.6 Calling channels</p> <p>1.3.7 Inter-ship channels</p> <p>1.3.8 Port operations and Ship movement channels</p> <p>1.3.9 Public correspondence channels</p> <p>1.3.10 National channels for small craft safety.</p> <p>2 System overview of the GMDSS structure</p> <p>2.1 System design</p> <p>2.1.1 Structure</p> <p>2.1.2 Block diagram</p> <p>3 Search and Rescue (SAR)</p> <p>3.1 SAR Regions</p> <p>3.2 The role of rescue coordination centres</p> <p>3.3 Organisation of search and rescue</p> <p>3.4 SAR communications including on-scene communications</p>	<p>Examination and assessment of evidence obtained from practical demonstration of operational procedures using:</p> <p>.1 approved VHF DSC equipment</p> <p>.2 approved GMDSS communications simulator</p>	<p>General knowledge of radio communications in the Maritime Mobile Service has been demonstrated</p>

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COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
	4 Maritime Safety Information (MSI) 4.1 The NAVTEX System 4.1.1 Purpose and capabilities, including distress and safety functions 4.1.2 Message format i transmitter ID ii message type iii message number 4.1.3 Selection of transmitters and message type 4.1.4 Messages which cannot be rejected		

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<p>(B) Practical knowledge of radio equipment</p>	<p>1 VHF radio installation</p> <p>1.1 Radiotelephone channels 1.1.1 Channel selection and controls 1.1.2 Dual watch facilities and controls</p> <p>1.2 Basic controls and usage 1.2.1 Connecting the power 1.2.2 Press to transmit switch 1.2.3 High/low power output switch 1.2.4 Volume control 1.2.5 Squelch control 1.2.6 Dimmer control</p> <p>1.3 Handheld VHF radiotelephone 1.3.1 Specifications</p> <p>2. Digital Selective Calling (DSC)</p> <p>2.1 Call categorisation, priority and definitions 2.1.1 Distress 2.1.2 Urgency 2.1.3 Safety 2.1.4 Routine</p> <p>2.2 Types of call 2.2.1 Distress 2.2.2 All ships 2.2.3 Individual</p> <p>2.3 The Maritime Mobile Service Identity (MMSI) 2.3.1 The nationality identification: Maritime Identification Digits (MID) 2.3.2 Ship station numbers 2.3.3 Coast station numbers 2.3.4 Group call numbers</p> <p>2.4 Facilities and usage 2.4.1 Distress button 2.4.2 Data entry and display 2.4.3 Manual and automatic updating of vessel Position 2.4.4 Reviewing received messages 2.4.5 Watchkeeping functions and controls</p> <p>3. Antennas, interfacing and power sources</p> <p>3.1 Antennas performance and positioning 3.2 Interfacing 3.2.1 Connection to position device 3.3 Power sources 3.3.1 Connection to different power sources 3.3.2 Requirements and safety 3.3.3 Charging 3.3.4 Maintenance of batteries</p>	<p>Examination and assessment of evidence obtained from practical demonstration of operational procedures using:</p> <p>.1 approved VHF DSC equipment .2 approved GMDSS communications simulator</p>	<p>Practical knowledge of radio equipment has been demonstrated</p>
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<p>C) Procedures and practical operation of sub-systems</p>	<p>1. DSC distress, urgency and safety communication procedures</p> <p>1.1 Distress procedures</p> <p>1.1.1 Transmission of a distress alert</p> <p>1.1.2 Receipt and acknowledgement by a coast station</p> <p>1.1.3 Reception of a shore-to-ship distress alert relay</p> <p>1.1.4 Transmission of a distress alert by a station not itself in distress</p> <p>1.2 Urgency and Safety communications via DSC equipment</p> <p>1.2.1 Procedures for DSC Urgency and Safety announcements</p> <p>2. Protection of distress frequencies</p> <p>2.1 Avoiding harmful interference</p> <p>2.1.1 Avoidance of transmission of false alerts</p> <p>2.1.2 Status of Channel 16 and 70</p> <p>2.2 Transmissions during distress traffic</p> <p>2.3 Prevention of unauthorized transmissions</p> <p>2.4 Test protocols and procedures</p> <p>2.4.1 Testing DSC equipment</p> <p>2.4.2 Radiotelephone test procedures</p> <p>2.5 Avoidance of transmission in VHF guard bands</p> <p>2.6 Procedures to follow when a false or inadvertent distress alert is transmitted</p> <p>3. Alerting, Communications and Locating Signals</p> <p>3.1 406 MHz Emergency position indicating radio beacons (EPIRB's)</p> <p>3.1.1 Registration and coding</p> <p>3.1.2 Operation, activation and testing</p> <p>3.1.3 121.5 MHz homing function</p> <p>3.1.4 Mounting float-free mechanism</p> <p>3.1.5 Battery expiry date</p> <p>3.2 Search and rescue radar transponder and transmitter (SART)</p> <p>3.2.1 Operating height and range</p> <p>3.2.2 Battery expiry date</p> <p>3.3 Handheld VHF radio</p> <p>3.3.1 Operation</p> <p>3.3.2 Communication range</p> <p>3.3.3 Battery provision</p>	<p>Examination and assessment of evidence obtained from practical demonstration of operational procedures using:</p> <p>.1 approved VHF DSC equipment</p> <p>.2 approved GMDSS communications simulator</p>	<p>Procedures and practical operation of sub-systems are understood.</p>
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(D) Radiotelephony procedures	<p>1. Ability to exchange communications relevant to the safety of life at sea</p> <p>1.1 Distress communications</p> <p>1.1.1 Distress signal MAYDAY</p> <p>1.1.2 Distress call</p> <p>1.1.3 Distress message</p> <p>1.1.4 Acknowledgement RECEIVED MAYDAY</p> <p>1.1.5 Follow up distress traffic</p> <p>1.1.6 The control of distress traffic</p> <p>1.1.7 The correct use and meanings of the signals</p> <p>(i) SEELONCE MAYDAY</p> <p>(ii) SEELONCE FEENEE</p> <p>1.1.8 Transmission of a distress message by a station not itself in distress</p> <p>1.1.9 The correct use and meanings of the signal MAYDAY RELAY</p> <p>1.2 Urgency communications</p> <p>1.2.1 Urgency signal PAN-PAN</p> <p>1.2.2 Urgency call</p> <p>1.2.3 Urgency message</p> <p>1.2.4 Radiomedical</p> <p>1.3 Safety communications</p> <p>1.3.1 Safety signal SECURITE</p> <p>1.3.2 Safety call</p> <p>1.3.3 Safety message</p> <p>1.4 Awareness of the existence and use of the IMO standard marine communication phrases vocabulary</p> <p>1.4.1 English phrases</p> <p>1.5 Phonetic alphabet</p> <p>2. Practical and theoretical knowledge of radiotelephony procedures</p> <p>2.1. Traffic routines</p> <p>2.1.1 Use of call signs</p> <p>2.1.2 Establishing communication on:</p> <p>(i) Inter-ship</p> <p>(ii) Port operations</p> <p>(iii) Ship movement channels</p> <p>2.1.3 Unanswered calls and garbled calls</p> <p>2.2 Public correspondence and radiotelephony call procedures</p> <p>2.2.1 Method of calling a coast station</p> <p>2.2.2 Calls to ships from coast stations</p> <p>2.3 Traffic charges</p> <p>2.3.1 International charging system</p> <p>2.3.2 Accounting authority identification code (AAIC)</p>	<p>Examination and assessment of evidence obtained from practical demonstration of operational procedures using:</p> <p>.1 approved VHF DSC equipment</p> <p>.2 approved GMDSS communications simulator</p>	<p>Radiotelephony procedures are understood</p>
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<p>(E) Regulations for VHF communications</p>	<p>1. Regulations, obligatory procedures and practices</p> <p>1.1 Awareness of national and international documentation</p> <p>1.1.1 List of coast stations and special service stations</p> <p>1.1.2 List of ship stations and maritime mobile service identity assignments</p> <p>1.1.3 National manuals</p> <p>1.2 Knowledge of the international regulations and agreements</p> <p>1.2.1 Radio operator's certificate</p> <p>1.2.2 Ship station license</p> <p>1.2.3 Radio record keeping</p> <p>1.2.4 Secrecy of correspondence</p> <p>1.2.5 Prohibited transmissions</p> <p>1.2.6 Watch-keeping</p>	<p>Examination and assessment of evidence obtained from practical demonstration of operational procedures using:</p> <p>.1 approved VHF DSC equipment</p> <p>.2 approved GMDSS communications simulator</p>	<p>Regulations for VHF communications understood</p>
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