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RSS-288
Issue 1
January 2012

Spectrum Management and Telecommunications

Radio Standards Specification

Global Maritime Distress and Safety System (GMDSS)

Preface

Radio Standards Specification RSS-288, Issue 1, *Global Maritime Distress and Safety System (GMDSS)*, replaces RSS-188, Issue 1 (Provisional), *Global Maritime Distress and Safety System (GMDSS)*, dated August 24, 1996. With this publication, RSS-188 is hereby being renumbered as RSS-288.

This document will be in force as of the publication of notice SMSE-001-012 in the *Canada Gazette*, Part I. Upon publication, the public has 120 days to submit comments. Comments received will be taken into account in the preparation of the next version of the document.

Listed below are the changes:

1. This standard has been renumbered as RSS-288 from RSS-188, in accordance with Industry Canada's numbering convention in which Radio Standards Specifications covering equipment subject to certification, but exempt from licensing, form the 200 series.
2. General reformatting and editorial changes have been made. Material common to most RSSs has been moved to RSS-Gen, *General Requirements and Information for the Certification of Radiocommunication Equipment*.
3. VHF radio transmitters and receivers for voice communication with digital selective calling (DSC) and survival craft two-way radiotelephones have been moved to RSS-182.
4. Requirements for NAVTEX receivers have been removed.
5. Requirements for Canadian Coast Guard approval of the equipment before it can be certified by Industry Canada have been transferred to Transport Canada.
6. International Maritime Organization (IMO) resolutions have been updated.
7. Standards from the International Electrotechnical Commission (IEC) and the European Telecommunications Standards Institute (ETSI) have been added.
8. The requirement that RSS-Gen shall be used in conjunction with this issue of RSS-288 is stated.
9. The list of related documents has been updated.

Issued under the authority of
the Minister of Industry

Marc Dupuis
Director General
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1. Scope

This Radio Standard Specification (RSS) sets out the requirements for certification of the following shipborne radiocommunication equipment which meets the requirements of the Global Maritime Distress and Safety System (GMDSS):

- (a) medium frequency radio transmitters and receivers for voice communication, with digital selective calling (DSC);
- (b) medium frequency and high frequency (MF/HF) radio transmitters and receivers for voice communication, with DSC and narrowband direct printing (NBDP) telegraphy; and
- (c) survival craft search and rescue transponder (SART) devices in the band 9.2-9.5 GHz.

VHF equipment which meets GMDSS requirements is governed by RSS-182, *Maritime Radio Transmitters and Receivers in the Band 156-162.5 MHz*.

The emergency position indicating radio beacon (EPIRB), which is another device of the overall GMDSS, is governed by RSS-287, *Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD)*.

2. General Information

Equipment certified under this standard is classified as Category I equipment and requires a technical acceptance certificate (TAC), issued by the Certification and Engineering Bureau of Industry Canada, or a certificate, issued by a certification body (CB).

2.1 Licensing Requirements

Radio equipment covered by this standard is exempt from licensing requirements pursuant to subsections 15.2, 34(1), 34(2) and 34.2 of the *Radiocommunication Regulations*. For further information, consult http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01360.html.

2.2 Transport Canada Acceptance

Radio equipment required to be carried on Canadian ships is subject to regulations pursuant to the *Canada Shipping Act*, the *Arctic Waters Pollution Prevention Act* and the *Radiocommunication Act*. Transport Canada is responsible for the *Canada Shipping Act* and *Arctic Waters Pollution Prevention Act* regulations relating to radio equipment.

Certification of equipment by Industry Canada signifies that the equipment has met the requirements of the above-mentioned Acts. With respect to the requirements set by Transport Canada-Marine Safety, when equipment has already been type accepted by an Administration that is a party to the *International Convention for Safety of Life at Sea* (SOLAS Convention) as complying with the appropriate standards, its test report and acceptance certificate can be sent directly to Industry Canada with proof of type acceptance, name, address, telephone number and contact person of that Administration.

For equipment that has not been type accepted, proof that the equipment complies with the required standards and that it has passed the necessary tests should be submitted to Transport Canada-Marine Safety for review. (**Note:** Applicants may send the application fees for the Industry Canada certification portion directly to Industry Canada). Once the information has been reviewed, Transport Canada-Marine Safety forwards the test report with its evaluation result to the Certification and Engineering Bureau of Industry Canada. Proof of compliance submitted for review shall be in the form of documentation issued by a classification society or a recognized independent testing establishment. See Section 2.3 below for Transport Canada-Marine Safety's contact information.

2.3 Inquiries Concerning Transport Canada Requirements

Inquires concerning Transport Canada requirements should be directed to:

Manager, Navigation Safety and Radiocommunications
Marine Safety, Transport Canada
Tower C, Place de Ville
330 Sparks Street, 10th floor
Ottawa, Ontario
Canada
K1A 0N8
Tel.: 613-991-3134
Fax: 613-993-8196
E-mail: ope-epe@tc.gc.ca

2.4 Related Documents

In addition to related documents specified in RSS-Gen, *General Requirements and Information for the Certification of Radiocommunication Equipment*, the documents in the following sections should be consulted.

All Spectrum Management and Telecommunications publications are available on Industry Canada's website at <http://www.ic.gc.ca/spectrum>, under *Official Publications*.

Any mention of a standard or document incorporated by reference refers to that standard or document as amended from time to time.

2.4.1 International Maritime Organization (IMO) Documents

Copies of IMO resolutions may be obtained from:

International Maritime Organization
4, Albert Embankment
London, England, SE1 7SR
United Kingdom
Tel.: +44 (0)20 7735 7611
Fax: +44 (0)20 7587 3210
IMO Resolution MSC.148(77)

Revised performance standards for narrow-band direct-printing

	telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX)
IMO Resolution A.694(17)	General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
IMO Resolution A.804(19)	Performance standards for shipborne MF radio installations capable of voice communications and digital selective calling
IMO Resolution A.806(19)	Performance standards for shipborne MF/HF radio installations capable of voice communications, narrowband direct printing and digital selective calling
IMO resolution A.802(19)	Performance standards for survival craft radar transponders for use in search and rescue operations

2.4.2 International Electrotechnical Commission (IEC) Documents

Copies of the IEC documents may be obtained from:

International Electrotechnical Commission
Central Office
3, rue de Varembé
Geneva, Switzerland
Tel.: +41 22 919 02 11

IEC 61097-1	Global maritime distress and safety system (GMDSS) – Part 1: Radar transponder – Marine search and rescue (SART) – Operational and performance requirements, methods of testing and required testing results
IEC 61097-3	Global maritime distress and safety system (GMDSS) – Part 3: Digital selective calling (DSC) equipment – Operational and performance requirements, methods of testing and required testing results
IEC 61097-8	Global maritime distress and safety system (GMDSS) – Part 8: Shipborne watchkeeping receivers for the reception of digital selective calling (DSC) in the maritime MF, MF/HF and VHF bands – Operational and performance requirements, methods of testing and required testing results

IEC 61097-9 Global maritime distress and safety system (GMDSS) – Part 9: Shipborne transmitters and receivers for use in the MF and HF bands suitable for telephony, digital selective calling (DSC) and narrow band direct printing (NBDP) – Operational and performance requirements, methods of testing and required testing results

2.4.3 European Telecommunications Standards Institute Documents

Copies of the “EN” and “I-ETS” documents may be obtained from:

European Telecommunications Standards Institute
650, Route des Lucioles
06921 Sophia-Antipolis Cedex
Valbonne, France
Tel: +33 (0)4 92 94 42 00

EN 300 338	Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service
EN 301 033	Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and methods of measurement for shipborne watchkeeping receivers for reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and VHF bands
ETS 300 067	Radio Equipment and Systems Radiotelex equipment operating in the maritime MF/HF service – Technical characteristics and methods of measurement
ETS 300 373	Radio Equipment and Systems (RES); Technical characteristics and methods of measurement for maritime mobile transmitters and receivers for use in the MF and HF bands

3. General Requirements

3.1 RSS-Gen Compliance

RSS-288 shall be used in conjunction with RSS-Gen for general specifications and information relevant to the equipment for which this standard applies.

4. Certification Requirements

GMDSS equipment requires approval from Transport Canada as meeting that department's operational requirements before the applicant can submit the equipment to Industry Canada for certification (see Section 2.2).

4.1 Equipment with Digital Selective Calling (DSC) and/or Narrowband Direct Printing (NBDP) Capabilities

Shipborne radio transmitter and receiver systems complete with DSC and/or NBDP capabilities shall comply with the international standards as shown in Table 1.

Table 1 – List of Standards for Equipment with DSC and/or NBDP Capabilities

Type of Equipment	Applicable Standards
MF radio transmitters and receivers for voice communication with DSC	IMO A.694(17), IMO A.804(19), IEC 61097-2, IEC 61097-8, IEC 62097-9 or EN 300 338, EN 301 033, ETS 300 373
MF and HF radio transmitters and receivers for voice communication with DSC and NBDP	IMO A.694(17), IMO A.806(19), IEC 61097-2, IEC 61097-8 and IEC 61097-9 or EN 301 033, EN 300 338, ETS 300 067, and ETS 300 373

4.2 “Add-on” DSC and/or NBDP Capabilities

If the DSC and/or NBDP capabilities are contained in an “add-on” device which is intended for connection to the voice port of a radio terminal model that has already been certified by Industry Canada (e.g. a radio terminal certified to RSS-181 or RSS-182), certification of the add-on device by Industry Canada is not required. However, each type or model of the add-on device shall be tested and shall meet the standards contained in the IMO resolutions listed in Table 1.

The testing can be performed by the manufacturer or the importer.

The test results shall be kept by the manufacturer or the importer and shall be made available to Industry Canada upon request.

Furthermore, the equipment user manual shall provide the following or equivalent notice: “This device meets the GMDSS standard (per IMO Resolution #_____). It may be connected to the voice/data input port of a radio terminal model that has already been certified by Industry Canada.”

4.3 Survival Craft Search and Rescue Transponders (SART) in the Band 9.2-9.5 GHz

Survival craft SART in the band 9.2-9.5 GHz shall comply with the following standards: IMO A.694(17), IMO A.802(19) and IEC 61097-1.
