

CONSOLIDATED VERSION

VERSION CONSOLIDÉE



**Global maritime distress and safety system (GMDSS) –
Part 7: Shipborne VHF radiotelephone transmitter and receiver – Operational and
performance requirements, methods of testing and required test results**

**Système mondial de détresse et de sécurité en mer (SMDSM) –
Partie 7: Émetteurs et récepteurs radiotéléphoniques en ondes métriques (VHF),
à bord des navires – Exigences d'exploitation et de fonctionnement, méthodes
d'essai et résultats d'essai exigés**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) –

Part 7: Shipborne VHF radiotelephone transmitter and receiver – Operational and performance requirements, methods of testing and required test results

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This Consolidated version of IEC 61097-7 bears the edition number 1.1. It consists of the first edition (1996-10) [documents 80/122/FDIS and 80/132/RVD] and its amendment 1 (2018-01) [documents 80/849/CDV and 80/869/RVC]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

Annex A forms an integral part of this standard.

Annex B is for information only.

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GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) –

Part 7: Shipborne VHF radiotelephone transmitter and receiver – Operational and performance requirements, methods of testing and required test results

1 Scope

This part of IEC 61097 specifies the minimum performance requirements, technical characteristics and methods of testing with required test results for VHF radio installations capable of voice communication and digital selective calling as required by chapter IV of the 1988 amendments to the 1974 International Convention for Safety of Life at Sea (SOLAS), and which is associated with IEC 60945. When a requirement in this standard is different from IEC 60945, the requirement in this standard shall take precedence.

This standard incorporates the applicable part of the performance standards included in IMO Resolution A.524(13) and A.803(19), the technical characteristics included in Recommendation ITU-R M.489-2 (formerly CCIR Recommendation 489-1), and takes account of IMO Resolution A.694(17), and conforms with the ITU Radio Regulations where applicable.

NOTE – All text of this standard, whose wording is identical to that in IMO Resolution A.524(13) and A.803(19) and Recommendation ITU-R M.489-2 is printed in *italics* and the Resolution/Recommendation and clause numbers are indicated in brackets.

The requirements for the DSC and/or watchkeeping receiver, when integrated in the equipment, are in IEC 61097-3 and the future IEC 61097-8 respectively.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61097. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61097 are encouraged to investigate the possibility of applying the most recent edition of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60945:1994, *Marine navigational equipment – General requirements – Methods of testing and required test results*

IEC 61097-3:~~1994~~, *Global maritime distress and safety system (GMDSS) – Part 3: Digital selective calling (DSC) equipment – Operational and performance requirements, methods of testing and required test results*

IEC 61162-1:1995, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners*

IMO International Convention for the Safety of Life At Sea (SOLAS): 1974, as amended in 1988 (GMDSS) – *Chapter IV: Radiocommunications*

IMO Resolution A.524(13):1983, *Performance standards for VHF multiple watch facility*

IMO Resolution A.694(17): 1991, *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.803(19): 1995, *Performance standards for shipborne VHF radio installations capable of voice communication and digital selective calling*

ITU Radio Regulations: 1995, Appendix S3: *Table of maximum permitted spurious emission power levels*

ITU Radio Regulations: 1990, Appendix 18: *Table of transmitting frequencies in the band 156-174 MHz for stations in the maritime mobile service*

ITU-R M.489-2: 1995, *Technical characteristics of radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz*

ITU-T V.11: 1993, *Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s*

ITU-T V.24: 1993, *List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit terminating equipment (DCE)*

ITU-T V.28: 1993, *Electrical characteristics for unbalanced double-current interchange circuits*

3 Performance requirements

3.1 Introduction

Performance requirements described in this clause are specified by referring to IMO Resolutions and ITU Recommendations.

3.2 General

3.2.1 (A.803(19)/1) *The VHF radio installation, in addition to meeting the requirements of the Radio Regulations, the relevant ITU-R Recommendations and the general requirements set out in Resolution A.694(17) and detailed in IEC 60945, shall comply with the following requirements and with the technical characteristics contained in clause 4 of this standard.*

3.2.2 (A.803(19)/2.1) *The installation, which may consist of more than one piece of equipment, shall be capable of operating on single-frequency channels or on single or two-frequency channels. For two-frequency channels the Radio Regulations require a separation of 4,6 MHz between the transmitting frequency and the receiving frequency.*

3.2.3 (A.803(19)/2.2) *The equipment shall provide for the following categories of calls using both voice and digital selective calling (DSC):*

- .1 distress, urgency and safety;*
- .2 ship operational requirements; and*
- .3 public correspondence.*

3.2.4 (A.803(19)/2.3) *The equipment shall provide for the following categories of communication using voice:*

- .1 distress, urgency and safety;*
- .2 ship operational requirements; and*