INTERNATIONAL STANDARD

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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 test results

Système mondial de détresse et de sécurité en mer (SMDSM) –

Partie 9: Emetteurs et récepteurs de bord de navires utilisables dans les bandes décamétriques et hectométriques pour la téléphonie, l'appel sélectif numérique (ASN) et l'impression directe à bande étroite (IDBE) – Exigences d'exploitation et de fonctionnement, méthodes d'essai et résultats d'essai exigés

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FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
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6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61097-9 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

The text of this standard is based on the following documents:

FDIS	Report on voting
80/147/FDIS	80/164/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

Annexes A, B and C are for information only.

The bilingual version of this standard will be issued later.

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 test results

1 Scope

This part of IEC 61097 specifies the minimum operational and performance requirements and methods of testing with required test results for transmitters and receivers capable of voice communication, digital selective calling and narrow band direct printing telegraphy for the GMDSS operating in either the medium frequency band only or in medium and high frequency bands allocated in the ITU Radio Regulations to the Maritime Mobile Service, as required by Chapter IV of SOLAS 1974 as amended in 1988 and which is associated with IEC 60945. When a requirement in this standard is different from IEC 60945, the requirement of this standard shall take precedence.

This standard refers to equipment for:

– single side-band (SSB) transmission and reception for radiotelephony;

– frequency shift keying or single side-band transmission and reception for digital selective calling signals (DSC) according to Recommendation ITU-R M.493-7; and

– frequency shift keying or single side-band transmission and reception for narrow band direct printing telegraphy (NBDP) according to Recommendation ITU-R M.625-3;

as applicable.

This standard refers to radio equipment, which is not integrated with DSC encoders or decoders, or NBDP modems, but defines the interfaces with, and the RF characteristics of, such equipment.

NOTE – The requirements for integrated DSC encoders or decoders may be found in IEC 61097-3 and for integrated NBDP modems in the future IEC 61097-11.

These requirements include the relevant provisions of the Radio Regulations and of the IMO Resolutions A.334(IX), A.421(XI), A.694(17), A.804(19), and A.806(19) and SOLAS.

NOTE – The requirement for two-tone generators (A.421(XI)) is only applicable until 1 February 1999.

If the equipment, or parts of it, is designed in such a manner that it can be used for other categories of maritime radiocommunication services (e.g. radio data or facsimile transmission), those parts of the equipment shall fulfil the relevant requirements of the appropriate standards for the service(s) in question.

NOTE – All text of this standard the wording of which is identical to that in IMO Resolutions and to that in the relevant ITU-R Recommendations is printed in *italics* and is prefixed by references (804 etc.) in brackets. When the text is identical in A.804 and A.806 the reference A.806 will be used.

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 editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60945:1996, *Maritime navigation and radiocommunication equipment and systems – 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 tests results*

IEC 61097-8 – *Global maritime distress and safety system (GMDSS) – Part 8: Shipborne watchkeeping receivers for reception of digital selective calling (DSC) in the maritime MF, MF/HF and UHF bands – Operational and performance requirements, methods of testing and required test results* [1)]

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

ISO 3791:1967, *Office machines and data processing equipment – Keyboard layouts for numeric applications*

International Convention on Safety of Life at Sea (SOLAS):1974 (as amended), *Chapter IV: Radiocommunications*

IMO Resolution A.334(IX):1975, *Recommendation on operational standards for radiotelephone transmitters and receivers*

IMO Resolution A.421(XI):1979, *Operational standards for radiotelephone alarm signal generators*

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.804(19):1995, *Performance standards for shipborne MF radio installations capable of voice communication and digital selective calling*

IMO Resolution A.806(19):1995, *Performance standards for shipborne MF/HF radio installations capable of voice communication, narrow-band direct-printing and digital selective calling*

ITU :1994, *Radio Regulations*

ITU-R M.493-7:1995, *Digital selective-calling system for use in the maritime mobile service*

ITU-R M.625-3:1995, *Direct-printing telegraph equipment in the maritime mobile service*

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1) To be published.

ITU-T E.161 (formerly CCITT Recommendation E.161):1988, *Arrangement of figures, letters and symbols on telephones and other devices that can be used for access to a telephone network*

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