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Global maritime distress and safety system (GMDSS) – Part 4: INMARSAT-C ship earth station and INMARSAT enhanced group call (EGC) equipment – Operational and performance requirements, methods of testing and required test results

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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International Standard IEC 61097-4 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This second edition cancels and replaces the first edition published in 1994. This edition constitutes a technical revision.

The main changes with respect to the previous edition are:

– the IMO references and requirements have been updated to the new performance standards for Inmarsat-C ship earth stations adopted in 1995;
– the requirements for interfaces have been updated to the current version of IEC 61162-1;
– the general requirements have been updated to the current version of IEC 60945;

– Annex B concerning radiated unwanted emissions has been updated to current requirements.

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

FDIS	Report on voting
80/487/FDIS	80/497/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 61097 series, published under the general title *Global maritime distress and safety system (GMDSS)*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS) –

Part 4: INMARSAT-C ship earth station and INMARSAT enhanced group call (EGC) equipment – Operational and performance requirements, methods of testing and required test results

1 Scope

This part of IEC 61097 specifies the performance requirements and methods of testing for INMARSAT-C ship earth stations (SES) capable of transmitting and receiving direct-printing communications, and for enhanced group call (EGC) equipment, for use in the GMDSS. The available variants are:

Class 0: An EGC receiver, either stand-alone or an element of a GMDSS installation in accordance with the INMARSAT design and installation guidelines (DIGs) for GMDSS installations.

Class 1: A basic SES providing shore-to-ship and ship-to-shore message transfer only.

Class 2: As class 1 but with EGC as an alternative to shore-to-ship transfer using a shared receiver.

Class 3: As class 1 but with EGC using an independent receiver.

The standard complies with IMO performance requirements stated in the normative references, INMARSAT technical characteristics and test procedures, and IEC 60945 general requirements except where modifications are explicitly stated in this standard. Technical characteristics essential to GMDSS operation as defined by the IMO are identified.

All text of this standard, whose wording is identical to that in IMO SOLAS Convention 1974 as amended in 1988 and Resolutions A.807(19), A.664(16), and A.694(17) is printed in *italics* and reference made to the Resolution/Recommendation and subclause number.

This standard covers equipment construction and testing. Matters relating to installation may also be found in the normative references listed in clause 2. Those to be found in IMO Resolutions A.807(19) and A.664(16) are reproduced in annex A.

Responsibility for type approval of INMARSAT-C and INMARSAT-EGC is vested in INMARSAT by IMO Resolutions A.807(19) and A.664(16). Therefore, this standard does not reproduce INMARSAT test procedures in full, but refers to where they are given in INMARSAT documentation cited in the normative references to this standard.

NOTE For the purposes of this standard the terms INMARSAT-C, INMARSAT Standard-C and Standard-C refer to the same equipment.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60945:2002, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

ISO 2022, *Information technology – Character code structure and extension techniques*

International Convention for the safety of life at sea (SOLAS), Regulations IV/7, IV/8, IV/9 and IV/10 of the 1988 amendments concerning radiocommunications for the GMDSS

IMO Resolution A.807(19):1995, *Performance Standards for INMARST--C ship earth stations capable of transmitting and receiving direct-printing communications as amended by Resolution MSC.68(68) Annex 4*

IMO Resolution A.664(16):1989, *Performance standards for enhanced group call equipment*

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: *NAVTEX Manual*

INMARSAT-C System definition manual (SDM):

– Volume 3, *Part 2, Chapter 2, Mobile earth station technical requirements*
– Volume 3, *Part 2, Chapter 5, Ship earth station technical requirements*
– Volume 3, *Part 2, Chapter 8, Technical requirements for an EGC receiver*

INMARSAT: *Recommended test procedures (RTP) for the type approval of INMARSAT-C mobile earth stations*

INMARSAT: *Design and installation guidelines (DIGs) for INMARSAT-C ship earth stations and enhanced group call receivers*

Recommendation ITU-R M.540-2[1)]:1990, *Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships*

1) Formerly CCIR Recommendation 540-2.