
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 test results (IEC 61097-1:1992)

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ENGLISH VERSION

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 test results
(IEC 1097-1:1992)

Système mondial de détresse et de sécurité en mer (GMDSS)
Partie 1: Répondeur radar Recherche et sauvetage maritime (SAR) - Exigences opérationnelles et de fonctionnement, méthodes d'essai et résultats exigibles
(CEI 1097-1:1992)

Weltweites Seenotrettungssystem (GMDSS)
Teil 1: Radar-Transponder für die Seenotrettung (SART) Betriebstechnische und Leistungsanforderungen Meßverfahren und geforderte Prüfergebnisse
(IEC 1097-1:1992)

This European Standard was approved by CENELEC on 1993-03-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B-1050 Brussels

FOREWORD

At the request of the 71st Technical Board of CENELEC, the International Standard IEC 1097-1:1992 was submitted to the CENELEC members for formal vote (2MV) in August 1992 for acceptance as a European Standard.

The text of the draft was approved by CENELEC as EN 61097-1 on 9 March 1993.

The following dates were fixed:

- latest date of publication of
an identical national standard . (dop) 1994-03-01
- latest date of withdrawal of
conflicting national standards (dow) 1994-03-01

For products which have complied with the relevant national standard before 1994-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-03-01.

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A and B are informative and annex ZA is normative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1097-1:1992 was approved by CENELEC as a European Standard without any modification.

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ANNEX ZA (normative)

**OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS**

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

| IEC Publication | Date | Title | EN/HD | Date |
|--------------------|------|--|-----------|------|
| 936 | 1988 | Shipborne radar - Operational and performance requirements - Methods of test and required test results | HD 551 S1 | 1991 |
| 945 | 1988 | Marine navigational equipment - General requirements - Methods of testing and required test results | HD 552 S1 | 1989 |
| A1 | 1992 | | - | - |

Other Publications quoted:

IMO Resolutions A.422 (XI), A.477 (XII), A.530(13), A.661 (16) and A.697 (17)

IMO Resolution A.694 (17):1991 - General requirements for shipborne radio equipment forming part of the Global maritime distress and safety system and for electronic navigational aids

Safety of Life at Sea (SOLAS) Convention (1974) - Amendments concerning Radiocommunications for the Global maritime distress and safety system (GMDSS) (1988)

CCIR Recommendation 628 (as amended 1992): Technical characteristics for search and rescue radar transponders

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**Système mondial de détresse
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**Partie 1: Répondeur radar –
Recherche et sauvetage maritime (SAR) –
Exigences opérationnelles et de fonctionnement,
méthodes d'essai et résultats exigibles**

**Global maritime distress and
safety system (GMDSS) –**

**Part 1: Radar transponder –
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Operational and performance requirements,
methods of testing and required test results**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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 test results**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a world wide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation 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, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of Standards, Technical Reports or Guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 1097-1 has been prepared by IEC technical committee 80: Navigational instruments.

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

| DIS | Report on Voting | Amendment to DIS | Report on Voting |
|---------------|------------------|------------------|------------------|
| 80(CO)22, 22A | 80(CO)27 | 80(CO)28 | 80(CO)30 |

SIST EN 61097-1:2004

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

Annexes A and B are for information only.

The complete standard will include other parts according to the general plan given in annex A.

INTRODUCTION

The Global maritime distress and safety system (GMDSS) was adopted in 1988 by a conference of contracting governments to the International Convention for the Safety of Life at Sea (SOLAS) which is the responsibility of the International Maritime Organisation (IMO).

In early 1992, the Convention had been ratified by 116 countries, and applies to 97 % of world merchant ships.

The GMDSS is a ship-to-shore, shore-to-ship and ship-to-ship system. The equipment required on board ships depends upon the sea areas in which the ships operate.

For the GMDSS, the seas have been divided into four areas. Sea area A1 is within the range of VHF coastal radio stations (up to about 30 nautical miles); sea area A2 is within the range of MF/HF coastal radio stations (about 100 nautical miles); sea area A3 is within range of services provided by INMARSAT (approximately the area of the world which lies between 70° north and 70° south latitudes); and sea area A4 is the area of the world not covered by sea areas A1, A2 and A3.

In Chapter IV of the 1988 Amendments to SOLAS are contained the Regulations that define the GMDSS and in particular Part C – Ship requirements – Regulations 7-11, the equipment that is required to be carried on board ships.

IMO, in a series of Resolutions, has laid down the performance standards for such equipment; and CCIR has, at the request of IMO, developed the relevant technical characteristics.

It is the task of IEC technical committee 80 to develop for the GMDSS International technical standards that include methods of testing and required test results. These standards are required to enable international industry to develop equipment and administrations to ensure that such equipment conforms to IMO Resolutions, CCIR technical characteristics and ITU Radio Regulations.

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This series of International standards specifies the performance standards and type testing of GMDSS equipment as required by Regulations 7 to 11 of Chapter IV of the 1988 Amendments to the 1974 International Convention for Safety of Life at Sea (SOLAS).

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Some 20 separate equipment technical standards will be required and these will all be included in the IEC 1097 series of publications (see annex A).

This International Standard constitutes Part 1 of IEC 1097.