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Maritime navigation and radiocommunication equipment and systems – Shipborne radar – Performance requirements, methods of testing and required test results

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS –

Shipborne radar – Performance requirements, methods of testing and required test results

FOREWORD

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International Standard IEC 62388 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 2007. This edition constitutes a technical revision.

The main changes with respect to the previous edition are:

– in 6.2 (Transmission and interference) reference is now made to a revised Annex B (Unwanted emmisions) where the mask has been tightened from 20 dB/decade to 30 dB/decade in line with ITU requirements and a new informative Annex J has been added concerning interference from emissions in adjacent frequency bands;

– Clause 7 (Display presentation) has been simplified (and the previous Annexes J and K deleted) with reference made instead to IEC 62288 with associated changes throughout the standard;

– in 9.9.2 (PI lines and positioning) the requirements for parallel index lines have been revised;

– in 10.4.4 (Display orientation) a new mode of display orientation “head-up stabilised” has been added;

– in 11.5 (Automatic identification system) new requirements and tests have been added for types of AIS targets, AIS repeater stations and filtering of AIS targets;

– in Clause 12 (Chart radar) a new subclause 12.3 has been added for ECDIS backup requirements;

– in Clause 13 (Ergonomic criteria) a new subclause 13.5 has been added giving requirements for default control settings;

– 14.3 (Output interfacing) has been revised together with the associated Annex H to update the requirements particularly with regard to interfaces to the VDR;

– Clause 16 (Alerts and failures) has been revised to update the requirements to align with bridge alert management and new requirements added for an alert management interface with associated changes throughout the standard;

– in Clause 18 (Equipment familiarisation and documentation) a new subclause 18.3 has been added for maintenance information and equipment update.

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

FDIS	Report on voting
80/696/FDIS	80/705/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.

All the text in this standard with wording identical to that in IMO resolutions is printed in italics. Reference to MSC.192(79) is by the relevant requirement clause as indicated in brackets, for example (MSC.192/4.2.3). Some clauses from Resolution MSC.192(79) may be split and the requirements in this case are addressed separately.

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

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS –

Shipborne radar – Performance requirements, methods of testing and required test results

1 Scope

This International Standard specifies the minimum operational and performance requirements, methods of testing and required test results conforming to performance standards not inferior to those adopted by the IMO in Resolution MSC.192(79).

(MSC.192/2) The radar installation, in addition to meeting the general requirements as set out in resolution A.694(17) and the related standard IEC 60945*, should comply with the performance standards of* MSC.192(79). When a requirement of this standard is different from IEC 60945, the requirement in this standard takes precedence.

2 Normative references

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

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

IEC 61162 (all parts), *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*

IEC 61174, *Maritime navigation and radiocommunication equipment and systems – Electronic chart display and information systems (ECDIS) – Operational and performance requirements, methods of testing and required test results*

IEC 61924-2:2012, *Maritime navigation and radiocommunication equipment and systems – Part 2 Modular Structure for INS - Operational and performance requirements, methods of testing and required test results*

IEC 61996-1:2012, *Maritime navigation and radiocommunication equipment and systems – Shipborne voyage data recorder (VDR) – Part 1: Voyage data recorder (VDR) - Performance requirements – Methods of testing and required test results*

IEC 62288, *Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required results*

ITU-R Recommendation M.628, *Technical characteristics for search and rescue radar transponders*

ITU-R Recomendation M.824, *Technical parameters of radar beacons (racons)*

ITU-R Recommendation M.1176, *Technical parameters of radar target enhancers*

IHO S-52, *Specifications for chart content and display aspects of ECDIS*

IHO S-52 Annex A, *IHO ECDIS Presentation Library*

IMO Resolution A.424(XI), *Performance standards for Gyro-compasses*

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.821(19), *Performance standards for Gyro-compasses for High-Speed Craft*

IMO Resolution MSC.96(72), *Amendments to IMO Resolution A.824(19), Performance standards for devices to indicate speed and distance*

IMO Resolution MSC.116(73), *Performance standards for marine transmitting heading devices (THDs)*

IMO Resolution MSC.191(79), *Performance standards for the presentation of navigation-related information on shipborne navigational displays*

IMO Resolution MSC.192(79), *Revised performance standards for radar equipment*

IMO Resolution MSC.232(82), *Revised performance standards for electronic chart display and information systems (ECDIS)*

IMO Resolution MSC.302(87)*, Performance standards for bridge alert management*

IMO MSC.1/Circ.1389, *Guidance on procedures for updating shipborne navigation and communication equipment*

VESA-2007-5:2007, *Industry standards and guidelines for computer display monitor timing (DMT)*

DDWG DVI:1999, *Digital Visual Interface (DVI) Revision 1.0, Digital Display Working Group (DDWG)*