

INTERNATIONAL STANDARD



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



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – PRESENTATION OF NAVIGATION-RELATED INFORMATION ON SHIPBORNE NAVIGATIONAL DISPLAYS – GENERAL REQUIREMENTS, METHODS OF TESTING AND REQUIRED TEST RESULTS

FOREWORD

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International Standard IEC 62288 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This standard supports the performance standards for the presentation of navigation-related information on shipborne navigational displays, adopted by the IMO in resolution MSC.191(79) in December 2004.

This second edition cancels and replaces the first edition published in 2008 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- References to IBS have been removed as IMO has revoked MSC.64(67) Annex 1:1996, Performance standards for integrated bridge systems (IBS).

- Subclause 4.9 (Alerts and indicators) has been revised to align the requirements with the IMO resolutions MSC.252(83), MSC.302(87) and A.1021(26) published since MSC.191(79), together with a new Annex F for alert related icons.
- Clause 5 (Presentation of operational information) has been revised with a new requirement added for merging AIS targets from multiple sources.
- Test methods have been reviewed and further guidance on testing added to Annex D. A new normative Annex G has been added for testing of colours, intensity and flicker.
- Annex A (Presentation of colours and symbols) has been revised with AIS AtoN symbols, AIS-SART symbol and wheel over position symbol redefined, and new symbols added for AIS SAR aircraft, AIS SAR vessel, MSI and AIS application specific messages.

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

FDIS	Report on voting
80/733/FDIS	80/738/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.

NOTE All text in this standard whose wording is identical to text contained in an IMO document is printed in *italics*. Reference to the document is noted at the beginning of the paragraph. The notation contains a prefix referring to the document and a suffix with the paragraph number from the document (for example, (MSC191/1); (SN243/1), etc.).

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

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MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – PRESENTATION OF NAVIGATION-RELATED INFORMATION ON SHIPBORNE NAVIGATIONAL DISPLAYS – GENERAL REQUIREMENTS, METHODS OF TESTING AND REQUIRED TEST RESULTS

1 Scope

This International Standard specifies the general requirements, methods of testing, and required test results, for the presentation of navigation-related information on shipborne navigational displays in support of IMO resolutions MSC.191(79) and MSC.302(87).

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

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

IEC 61966-4, *Multimedia systems and equipment – Colour measurement and management – Part 4: Equipment using liquid crystal display panels*

IEC 62065, *Maritime navigation and radiocommunication equipment and systems – Track control systems – Operational and performance requirements, methods of testing and required test results*

IEC 62388, *Maritime navigation and radiocommunication equipment and systems – Shipborne radar – Performance requirements, methods of testing and required test results*

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

IHO S-52 Annex A, *IHO ECDIS presentation library*

IMO 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 MSC.191(79):2004, *Performance standards for the presentation of navigation related information on shipborne navigational displays*

IMO MSC.192(79):2004, *Performance standards for radar equipment*

IMO MSC.232(82):2006, *Revised performance standards for electronic chart display and information systems (ECDIS)*

IMO SN.1/Circ.243/Rev.1:2014, *Guidelines for the presentation of navigation related symbols, terms and abbreviations*

IMO MSC.252(83):2007, *Performance standards for integrated navigation systems (INS)*

IMO MSC.302(87):2010, *Performance standards for bridge alert management (BAM)*

IMO A.1021(26):2009, *Code on Alerts and Indications*

VESA-2001-6, *Flat Panel Display Measurements (FPDM)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

activated AIS target

(MSC191/A) *target activated for the display of additional graphically presented information*

EXAMPLE Heading line, velocity vector, etc.

3.2

automatic identification system AIS

system which complies with the requirements set forth in Annex 3 to IMO Resolution MSC.74(69)

3.3

AIS target (or reported AIS target)

(MSC191/A) *target generated from an AIS message*

3.4

alarm

(MSC.302/A) *a high-priority alert. Condition requiring immediate attention and action by the bridge team, to maintain the safe navigation of the ship*

3.5

alert

(MSC.302/A) *announcement of abnormal situations and conditions requiring attention. Alerts are divided in four priorities: emergency alarms, alarms, warnings and cautions. An alert provides information about a defined state change in connection with information about how to announce this event in a defined way to the system and the operator*

3.6

associated target

(MSC191/A) *target simultaneously representing a tracked radar target and a reported AIS target having similar parameters (for example, position, course, speed, etc.) and which comply with an association algorithm*

3.7

brilliance

adjustment of luminance of a display for ambient light

EXAMPLE Control of backlight for LCD (liquid cristal display).

3.8

caution

(MSC.302/A) *lowest priority of an alert. Awareness of a condition which does not warrant an alarm or warning condition, but still requires attention out of the ordinary consideration of the situation or of given information*