

Maritime navigation and radiocommunication equipment and systems - Integrated communication system (ICS) - Operational and performance requirements, methods of testing and required test results

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English Version

Maritime navigation and radiocommunication equipment and systems - Integrated communication system (ICS) - Operational and performance requirements, methods of testing and required test results
(IEC 62940:2016)

Matériels et systèmes de navigation et de radiocommunication maritimes - Système intégré de communication (ICS) - Exigences opérationnelles et de performance, méthodes d'essai et résultats d'essai exigés
(IEC 62940:2016)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Integriertes Kommunikationssystem (ICS) - Betriebs- und Leistungsanforderungen; Prüfverfahren und geforderte Prüfergebnisse
(IEC 62940:2016)

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

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European foreword

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-11-30

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60812	NOTE	Harmonized as EN 60812.
IEC 61162-2	NOTE	Harmonized as EN 61162-2.
IEC 61162-3	NOTE	Harmonized as EN 61162-3.
IEC 62616	NOTE	Harmonized as EN 62616.

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INTRODUCTION

IEC 62940 incorporates the applicable parts of the performance standards included in IMO Resolution A.811(19) for an integrated radiocommunication system. It also incorporates the applicable requirements for the presentation of information included in IMO Resolution MSC.191(79) which is associated with IEC 62288, applicable requirements for bridge alert management included in IMO Resolution MSC.302(87) based on, and in compliance with applicable requirements for Ethernet interconnection in IEC 61162-450.

The ICS is a system in which individual radiocommunication equipment and installations are used as subsystems, i.e. without the need for their own control units, providing outputs to and accepting inputs from a communications human machine interface (COM-HMI). Each subsystem is in compliance with the type approval requirements for that subsystem where applicable, and is in compliance with the interface requirements in this document. An ICS consists of at least two individual GMDSS subsystems.

The COM-HMI is designed so that it can be made available on a bridge workstation either dedicated to communications or as part of a multi-function display.

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MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – INTEGRATED COMMUNICATION SYSTEM (ICS) – OPERATIONAL AND PERFORMANCE REQUIREMENTS, METHODS OF TESTING AND REQUIRED TEST RESULTS

1 Scope

IEC 62940 specifies the minimum operational and performance requirements, technical characteristics and methods of testing, and required test results, for shipborne integrated communication systems (ICS) designed to perform ship external communication and distress and safety communications (GMDSS) and the functions of onboard routing of this communication. It takes account of IMO Resolution A.694(17) and is associated with IEC 60945. When a requirement in this document is different from IEC 60945, the requirement in this document takes precedence.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

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

IEC 61162-450, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 450: Multiple talkers and multiple listeners – Ethernet interconnection*

IEC 61162-460:2015, *Maritime navigation and radiocommunication equipment and systems – Digital interface – Part 460: Multiple talker and multiple listeners – Ethernet interconnection – Safety and security*

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

IEC 62288:2014, *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*

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

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

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

3 Terms, definitions and abbreviations

3.1 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

COM-HMI

communications human machine interface

human machine interface for presentation and handling of communication tasks on the bridge

3.1.2

CCRS

consistent common reference system

sub-system or function of an INS for acquisition, processing, storage, surveillance and distribution of data and information providing identical and obligatory reference to sub-systems and subsequent functions within an INS and to other connected equipment, if available

3.1.3

ICS

integrated communication system

composite communication system designed to perform ship external communication and distress and safety communications and the functions of onboard routing of this communication

3.1.4

radio communication

wireless transmission of information

Note 1 to entry: Examples of radio communication are voice radio communication and the wireless exchange of data.

3.1.5

remote COM-HMI

remote communications human machine interface

human machine interface for presentation and handling of communication tasks, placed outside the ICS

3.1.6

subsystem

communication-related device within the ICS

3.2 Abbreviations

AIS	automatic identification system
BAM	bridge alert management
BNWAS	bridge navigational watch alarm system
CAM	central alert management
DSC	digital selective calling