

INTERNATIONAL STANDARD

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

**Matériels et systèmes de navigation et de radiocommunication maritimes –
Interfaces numériques –
Partie 1: Émetteur unique et récepteurs multiples**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

Part 1: Single talker and multiple listeners

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IEC 61162-1 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems. It is an International Standard.

This sixth edition cancels and replaces the fifth edition published in 2016. This edition constitutes a technical revision.

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

- a) alternative hardware is given in 5.1 which may now be as specified in this document or as specified in IEC 61162-2;
- b) the data transmission rate given in Clause 6 is now configurable. The default remains as 4 800 (bits/s) but higher rates may be provided;

- c) new identifiers have been added to Table 4;
- d) new sentences AGL, EPM, GDC, NLS, SEL, SLM, SMV and VBC have been added;
- e) revisions have been made to ABK, ABM, ACN, ALC, ALF, ARC, BBM, DDC, DTM, EPV, FIR, GBS, GFA, GLL, GNS, GRS, GSA, GST, GSV, HRM, NRX, POS, RLM, ROR, RSA, TLB, TTD, VSD and XDR;
- f) the previous Annex A, Glossary, has been deleted as being of historical interest.

The text of this International Standard is based on the following documents:

Draft	Report on voting
80/1093/FDIS	80/1097/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 61162 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
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INTRODUCTION

The IEC 61162 series consists of 5 parts which specify digital interfaces for application in marine navigation, radiocommunication and system integration, as follows:

- IEC 61162-1: Single talker and multiple listeners;
- IEC 61162-2: Single talker and multiple listeners, high speed transmission;
- IEC 61162-3: Serial data instrument network;
- IEC 61162-450: Multiple talkers and multiple listeners – Ethernet interconnection;
- IEC 61162-460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

IEC technical committee 80 interface standards are developed with input from manufacturers, private and government organisations and equipment operators. The information is intended to meet the needs of users at the time of publication, but users should recognise that as applications and technology change, interface standards should change as well. Users of this document are advised to immediately inform the IEC of any perceived inadequacies therein.

The first edition of IEC 61162-1 was published in 1995. The second edition published in 2000 removed some sentences which were no longer in use, added some new sentences and included details of the ship equipment defined in IMO resolutions together with appropriate sentences for communication between them. This information was subsequently removed from the third edition when it became the practice to specify the sentence formatters in the individual standards for equipment.

The third edition published in 2007 introduced a re-arrangement of the text and new sentences particularly to support the automatic identification system and the voyage data recorder. The third edition also introduced a further type of start of sentence delimiter. The conventional delimiter "\$" was retained for the conventional sentences which are now called "parametric sentences". The new delimiter "!" identifies sentences that conform to special purpose encapsulation.

The fourth edition removed some sentences which were not in use, added some new sentences for new applications and made some corrections and additions. In particular, the sentences of relevance to satellite navigation receivers were expanded to facilitate the description of new satellite systems.

The fifth edition also removed some sentences which were no longer in use, added some new sentences for new applications and made some corrections and additions.

This sixth edition adds some new sentences for new applications and makes some corrections and additions.

This edition has been aligned where appropriate and possible with NMEA 0183 version 4.10.