

TECHNICAL REPORT

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Aerospace — Standards for electronic instruments and systems —

*Aéronautique et espace — Normes d'instruments et de systèmes
électroniques*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this Technical Report may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 10201, was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

This fourth edition cancels and replaces the third edition (ISO/TR 10201:1996), which has been technically revised.

Introduction

ISO/TC 20, *Aircraft and space vehicles*, established a Working Group (WG 2) to evaluate the status and future needs for standards in the field of aerospace electronic instruments and systems. One of the first tasks of WG 2 was to develop a comprehensive list of standards currently being used by countries which manufacture, operate, or regulate the operation and manufacture of aerospace products. This list can then serve as a basis for identifying voids and future needs for standards.

The list provided has been circulated several times to TC 20 members and liaison organizations to obtain the most complete and current information, as well as an indication of how widely these standards are being applied.

Responses indicate that these standards have wide recognition and application by a majority of the countries most actively involved in the manufacture and operation of aircraft. TC 20 has also coordinated with international, regional, and national standards bodies which are active in developing widely recognized avionics standards.

The list is divided into four categories:

- a) communications systems;
- b) navigation and guidance systems;
- c) flight management systems, cockpit controls/displays; and instruments;
- d) miscellaneous and general applications.

Each category comprises a list of the appropriate standards developed and issued by the various organizations.

The list is as complete and accurate as possible at the date of publication of this Technical Report. It is recognized, however, that this information will change. TC 20 therefore intends to update the list eighteen months before each TC 20 plenary meeting.

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Aerospace — Standards for electronic instruments and systems

1 Scope

This Technical Report gives a list of standards related to electronic instruments and systems for aerospace.

2 Communications systems

2.1 FAA

TSO-C57a, *Aircraft Headsets and Speakers*.

TSO-C58a, *Aircraft Microphones (for Air Carrier Aircraft)*.

TSO-C31d, *High Frequency (HF) Radio Communication Transmitting Equipment Operating within the Radio Frequency Range of 1.5 to 30 MHz*.

TSO-C32d, *High Frequency (HF) Radio Communication Receiving Equipment Operating within the Radio Frequency Range of 1.5 to 30 MHz*.

TSO-C37d, *VHF Radio Communications Transmitting Equipment Operating within 117.975 to 136.000 MHz*.

TSO-C38d, *VHF Radio Communications Receiving Equipment Operating within 117.975 to 136.00 MHz*.

TSO-C50c, *Audio Selector Panels and Amplifiers*.

TSO-C59, *Airborne Selective Calling Equipment (for Air Carrier Aircraft)*.

TSO-C91a, *Emergency Locator Transmitters*.

TSO-C121, *Underwater Locating Devices (Acoustic) (Self-Powered)*.

TSO-C122, *Devices that Prevent blocked Channels Used in Two-Way Radio Communications Due to Simultaneous Transmissions*.

TSO-C126, *406 MHz Emergency Locator Transmitter (ELT)*.

TSO-C128, *Devices that Prevent Blocked Channels Used in Two-Way Radio Communications Due to Unintentional Transmissions*.

2.2 ARINC (AEEC)

538B (9/81), *Hand-Held Microphone*.

559A-2 (12/79), *Mark 2 Airborne HF/SSB System*.

560 (8/66), *Airborne Passenger Address Amplifier*.

566A-7 (7/85), *Mark 3 VHF Communications Transceiver*.

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596-4 (7/83), *Mark 2 Airborne Selcal System*.

597-5 (8/90), *Aircraft Communications Addressing and Reporting System*.

714-6 (8/90), *Mark 3 Airborne Selcal System*.

715-3 (7/84), *Airborne Passenger Address Amplifier*.

716-7 (7/87), *Airborne VHF Communications Transceiver*.

719-5 (7/84), *Airborne HF Single Sideband System*.

724-8 (7/87), *Mark 2 Aircraft Communications Addressing and Reporting System*.

724A (1/87), *Mark 2 Enhanced ACARS Avionics*.

724B-3 (12/95), *Aircraft Communications Addressing and Report System (ACARS)*.

740-1 (6/88), *Multiple-Input Cockpit Printer*.

2.3 RTCA

DO-136:1968, *Universal Air-Ground Digital Communication System Standards*.

DO-163:1976, *Minimum Performance Standards — Airborne High Frequency Radio Communications Transmitting and Receiving Equipment Operating within the Radio Frequency of 1.5 to 30 MHz*.

DO-169:1979, *VHF Air-Ground Communication Technology and Spectrum Utilization*.

DO-170:1980, *Audio Systems Characteristics and Minimum Performance Standards Aircraft Microphones (except Carbon), Aircraft Headsets and Speakers, Aircraft Audio Selector Panels and Amplifiers*.

DO-186:1984, *Minimum Operational Performance Standards for Airborne Radio Communications Equipment Operating within the Radio Frequency Range of 117.975-137.000 MHz*.

DO-203:1989, *Minimum Operational Performance Standards for Mode S Airborne Data Link Processor*.

DO-205:1990, *Design Guidelines and Recommended Standards to Support Open Systems Interconnection for Aeronautical Mobile Digital Communications — Part 1: Internetworking*.

DO-206:1990, *Minimum Aviation System Performance Standards for Radiodetermination Satellite Service (RDSS)*.

DO-207:1991, *Minimum Operational Performance Standards for Devices that Prevent blocked Channels Used in Two-way Radio Communications Due to Unintentional Transmissions*.

DO-209:1992, *Minimum Operational Performance Standards for Devices that Prevent Blocked Channels Used in Two-way Radio Communications Due to Simultaneous Transmissions*.

DO-210-A:1992, *Minimum Operational Performance Standards for Aeronautical Mobile Satellite Services (AMSS) — Part A: Purpose and Scope and Equipment Performance Requirements*.

2.4 EUROCAE

ED-18, *Audio Systems Characteristics and Minimum Performance Specifications Covering Aircraft Microphones (except Carbon), Aircraft Headsets, Handsets and Loudspeakers, Aircraft Radio Selector Panels and Amplifiers*.

ED-23B, *MOPS for Airborne VHF Receiver/Transmitter Operating in the Frequency Range 117.975 — 137.000 MHz*.