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STANDARD

# 10149

Second edition
1995-07-15

# Information technology — Data interchange on read-only 120 mm optical data disks (CD-ROM)

*Technologies de l'information — Échange de données sur des disques optiques de diamètre* 120 mm *à lecture unique (CD-ROM)*

Reference number
ISO/IEC 10149:1995(E)

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# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 10149 was prepared by the European Association for Standardizing Information and Communication Systems (as ECMA-130) and was adopted, under a special "fast-track procedure", by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 23, *Optical disk cartridges for information interchange*, in parallel with its approval by national bodies of ISO and IEC.

This second edition cancels and replaces the first edition (ISO/IEC 10149:1989), which has been technically revised.

Annexes A to E form an integral part of this International Standard. Annex F is for information only.

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# Information technology - Data interchange on read-only 120 mm optical data disks (CD-ROM)

## 1 Scope

This International Standard specifies the characteristics of 120 mm optical disks for information interchange between information processing systems and for information storage, called CD-ROM.

The optical disk specified by this International Standard is of the type in which the information is recorded before delivery to the user and can only be read from the disk. This International Standard specifies

- some definitions, the environments in which the characteristics of the disk shall be tested and the environments in which it shall be used and stored,
- the mechanical, physical and dimensional characteristics of the disk,
- the recording characteristics, the format of the tracks, the error-detecting and the error-correcting characters, and the coding of the information,
- the optical characteristics for reading the information.

These characteristics are specified for tracks recorded with digital data. According to this International Standard, a disk may also contain one or more tracks recorded with digital audio data. Such tracks shall be recorded according to IEC 908.

## 2 Conformance

An optical disk is in conformance with this International Standard if it conforms to all its mandatory requirements.

## 3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9660:1988, *Information processing - Volume and file structure of CD-ROM for information interchange.*

IEC 908:1987, *Compact disc digital audio system.*

## 4 Definitions

For the purpose of this International Standard the following definitions apply.

**4.1** **Audio Track:** An Information Track containing digitally encoded audio information.

**4.2** **concentricity:** The diameter of a circular tolerance zone within which the centres of two circular features must lie.

**4.3** **Control byte:** An 8-bit byte from a table of 98 bytes, added to an $F_2$-Frame and containing addressing information.

**4.4** **Digital Data Track:** An Information Track organized in sectors and containing digital user data.

**4.5** **$F_1$-Frame:** A group of 24 8-bit bytes, being the output of the scrambler and input of the CIRC encoder.