

INTERNATIONAL STANDARD

ISO/IEC 1863

Second edition
1990-05-01

**Information processing — 9-track, 12,7 mm
(0,5 in) wide magnetic tape for information
interchange using NRZ1 at 32 ftpmm (800 ftpi) —
32 cpmm (800 cpi)**

*Traitement de l'information — Bande magnétique à 9 pistes de 12,7 mm (0,5 in) de
large, pour l'échange d'information, employant NRZ1 à 32 ftpmm (800 ftpi) —
32 cpmm (800 cpi)*



Reference number
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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 1863 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

This second edition cancels and replaces the first edition (ISO 1863 : 1976), which has been technically revised.

Annex A forms an integral part of this International Standard. Annexes B and C are for information only.

Information processing — 9-track, 12,7 mm (0,5 in) wide magnetic tape for information interchange using NRZ1 at 32 ftpmm (800 ftpi) — 32 cpmm (800 cpi)

1 Scope

This International Standard specifies a format and recording standard for 9-track, 12,7 mm (0,5 in) magnetic tape to be used for data interchange between information processing systems, communication systems, and associated equipment utilizing the 7-bit coded character set (see ISO 646), its extension in ISO 2022 where required, and the 8-bit coded character set (see ISO 4873). Magnetic labelling for use on magnetic tape is the subject of ISO 1001. The magnetic tape and reel to be used shall conform to ISO 1864 and/or ISO 8064.

NOTE — Numeric values in the SI and/or Imperial measurement system in this International Standard may have been rounded off and therefore are consistent with, but not exactly equal to, each other. Either system may be used, but the two should be neither intermixed nor reconverted. The original design was made using the Imperial measurement system.

2 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 indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 646 : 1983, *Information processing — ISO 7-bit coded character set for information interchange*.

ISO 1001 : 1986, *Information processing — File structure and labelling of magnetic tapes for information interchange*.

ISO 1864 : 1985, *Information processing — Unrecorded 12,7 mm (0,5 in) wide magnetic tape for information interchange — 32 ftpmm (800 ftpi) NRZ1, 126 ftpmm (3 200 ftpi) phase encoded and 356 ftpmm (9 042 ftpi), NRZ1*.

ISO 2022 : 1986, *Information processing — ISO 7-bit and 8-bit coded character sets — Coded extension techniques*.

ISO 4873 : 1986, *Information processing — ISO 8-bit code for information interchange — Structure and rules for implementation*.

ISO 8064 : 1985, *Information processing — Reels for 12,7 mm (0,5 in) wide magnetic tapes — Sizes 16, 18 and 22*.

3 Definitions

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

3.1 magnetic tape: A tape which will accept and retain magnetic signals intended for input, output and storage purposes on computers and associated equipment.

3.2 reference tape: A tape which has been selected for given properties for use in calibration.

3.3 Master Standard Reference Tape: A reference tape selected as a standard for signal amplitude.

NOTE — A Master Standard Reference Tape has been established by the US National Institute for Standards and Technology (NIST).

3.4 Secondary Standard Reference Tape: A tape the performance of which is known and stated in relation to that of the Master Standard Reference Tape.

NOTE — Secondary Standard Reference Tapes are available from NIST (Office of Standard Reference Materials, Room B 311, Chemistry Building, NIST, Gaithersburg, Md 20899, USA) under part number SRM 3200.

It is intended that these be used for calibration of tertiary tapes for use in routine calibration.

3.5 Typical Field: In the plot of Average Signal Amplitude against recording field at the specified flux transition density, the Typical Field is the minimum field that causes an average Signal Amplitude equal to 95 % of the Maximum Average Signal Amplitude.

3.6 Reference Field: The Typical Field of the Master Standard Reference Tape at the specified recording density.

3.7 Standard Reference Amplitude: The average peak-to-peak signal amplitude derived from the Master Standard Reference Tape on the NIST measurement system under the recording conditions specified in 5.6.1.

3.8 reference edge: The edge further from an observer when a tape is lying flat with the magnetic surface uppermost and the direction of movement for recording is from left to right.