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# INTERNATIONAL STANDARD



# 1862

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## **Information processing — 9-track, 12,7 mm (0.5 in) wide magnetic tape for information interchange recorded at 8 rpmm (200 rpi)**

*Traitement de l'information — Bande magnétique à 9 pistes, de 12,7 mm (0,5 in) de large, pour l'échange d'information, enregistrée à 8 rangées par millimètre (200 rpi)*

**First edition — 1975-12-15**

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**UDC 681.327.64**

**Ref. No. ISO 1862-1975 (E)**

**Descriptors :** data processing, magnetic tapes, half-inch magnetic tape, 9-track magnetic tape, information interchange, specification, data layout, coding.

Price based on 7 pages

Preisgr. **E**

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1862 was drawn up by Technical Committee ISO/TC 97, *Computers and information processing*, and circulated to the Member Bodies in November 1974.

It has been approved by the Member Bodies of the following countries :

Belgium	Italy	Spain
Bulgaria	Japan	Switzerland
Czechoslovakia	New Zealand	Turkey
France	Poland	U.S.A.
Germany	Portugal	U.S.S.R.
Hungary	Romania	Yugoslavia
Ireland	South Africa, Rep. of	

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 1862-1971 of which it constitutes a technical revision.

# Information processing — 9-track, 12,7 mm (0.5 in) wide magnetic tape for information interchange recorded at 8 rpmm (200 rpi)

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a 9-track, 8 rows per millimetre (rpmm) [200 rows per inch (rpi)], 12,7 mm (0.5 in) wide magnetic tape for interchangeability of tape between information processing systems which utilize the 7-bit coded character set specified in ISO 646. It refers solely to magnetic tape for digital recording, on which the direction of magnetization is nominally longitudinal as opposed to nominally transverse.

### NOTES

1 Certain other aspects of coding requirements, such as significance of binary digits, sequence of characters, filling of unused positions and magnetic labelling for use on magnetic tape, are the subject of ISO 962 and ISO/R 1001.

2 Details of unrecorded tape and reels are specified in the complementary publication, ISO 1864.

## 2 REFERENCES

ISO 962, *Information processing — Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track, 12,7 mm (0.5 in) magnetic tape.*

ISO/R 1001, *Magnetic tape labelling and file structure for information interchange.*

ISO 1864, *Information processing — Unrecorded 12,7 mm (0.5 in) wide magnetic tape for information interchange — 8 and 32 rpmm (200 and 800 rpi), NRZI, and 63 rpmm (1 600 rpi), phase-encoded.*

## 3 DEFINITIONS

NOTE — The material contained in clauses 3 and 4 of this International Standard is duplicated from ISO 1864 for unrecorded magnetic tape. The latter document shall be considered to be correct, that is, the primary document, so far as any differences between the comparable clauses of the two documents are concerned (in the event of these clauses referring to the 200 rpi recording density).

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

**3.1 magnetic tape :** 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 the calibration.

**3.3 secondary reference tape :** A tape intended for routine calibrating purposes, whose performance is known and stated in relation to that of a reference tape.

**3.4 signal amplitude reference tape :** A reference tape selected as a standard for signal amplitude.

NOTE — A master standard (computer amplitude reference) has been established at the U.S. National Bureau of Standards (NBS), based on reference tapes and heads. Secondary signal amplitude reference tapes are available from NBS under the part number SRM 3200.

**3.5 reference field :** For any specified packing density, the minimum field applied to the signal amplitude reference tape which causes an output signal equal to 95 % of the maximum output.

**3.6 reference edge :** The edge further from an observer, or nearer the top of a page, when a tape is lying flat with the magnetic surface uppermost and the direction of movement for recording from left to right. (See figures 1 and 2.)

**3.7 in contact :** An operating condition in which the magnetic surface of a tape is in contact with a magnetic head.

**3.8 track :** A longitudinal area on the tape along which a series of magnetic signals may be recorded.

**3.9 packing density :** The number of bits of recorded information per unit length of track.

**3.10 inter-block gap :** A DC-erased section of tape separating blocks of information.

## 4 REFLECTIVE MARKERS (See note introducing clause 3, and figure 3)

Each reel of tape shall be furnished with two photo-reflective markers, each consisting of, or equivalent to, a transparent plastic base with a metallic (for example vaporized aluminium) coating sandwiched between the base and a thin layer of low cold flow thermal setting adhesive.

Reflective markers shall be placed on the side of the tape which does not carry the magnetic surface, and they shall be on opposite edges of the tape with the beginning-of-tape reflective marker (BOT) on the reference edge.