

Magnetic tape sound recording and reproducing systems —

**Part 8: Specification for eight-track
magnetic tape cartridge for commercial
tape records and domestic use**

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The preparation of this British Standard was entrusted by the Electronic Equipment Standards Committee (EEL/-) to Technical Committee EEL/22, upon which the following bodies were represented:

- British Broadcasting Corporation
- British Kinematograph, Sound and Television Society
- Council for Educational Technology for the United Kingdom
- Electronic Engineering Association
- Independent Broadcasting Authority
- Independent Television Association
- Sound and Communication Industries Federation

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Professional Recording Studios
- Audio Engineering Society
- British Tape Industry Association
- Royal Photographic Society
- Training and Educational Systems Testing Bureau

This British Standard, having been prepared under the direction of the Electronic Equipment Standards Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1989

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National foreword

This Part of BS 6288 was prepared under the direction of the Electronic Equipment Standards Committee and is identical with IEC 94-8:1987 “*Magnetic tape sound recording and reproducing systems*” Part 8 “*Eight-track magnetic tape cartridge for commercial tape records and domestic use*”, published by the International Electrotechnical Commission (IEC).

BS 6288 consists of the following Parts:

- *Part 1: Specification for general conditions and requirements;*
- *Part 2: Specification for calibration tapes;*
- *Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape;*
- *Part 4: Methods for measuring the mechanical characteristics of magnetic tape for analogue recording;*
- *Part 5: Specification for electrical magnetic tape properties¹⁾;*
- *Part 6: Specification for reel-to-reel systems;*
- *Part 7: Specification for cassettes for commercial tape records and domestic use;*
- *Part 8: Specification for eight-track magnetic tape cartridge for commercial tape records and domestic use;*
- *Part 9: Specification for magnetic tape cartridge for professional use¹⁾;*
- *Part 10: Specification for time and address codes¹⁾;*
- *Part 11: Guide to an address code for compact cassettes¹⁾.*

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

In the figures, the comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Cross-references

International Standard	Corresponding British Standard
IEC 94-1:1981	BS 6288 <i>Magnetic tape sound recording and reproducing systems</i> Part 1:1982 <i>Specification for general conditions and requirements</i> (Identical)

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ In preparation.

Section 1. General

1 Scope

This standard applies to magnetic tape sound recording with eight-track endless loop cartridges for both stereo and four-channel sound.

2 Definitions

The following definitions apply for the purposes of this standard.

2.1

endless loop cartridge

a device composed of a case containing a recorded or unrecorded magnetic tape in the form of a multiturn endless loop carried on a single hub. The tape is unwound from the inside turn of the loop and returned to the outside turn of the loop
the device can be easily and rapidly inserted in a recorder or reproducer designed for the purpose without handling the magnetic tape

2.2

capstan

the spindle or shaft, often the motor shaft itself, which drives the tape

2.3

pressure roller (pinch roller)

an idler roller which holds the magnetic tape against the capstan

NOTE Sometimes called "puck" in the USA.

2.4

capstan pressure pad

a member that holds the tape against the capstan in order to obtain suitable driving action of the tape

2.5

magnetic head

an electromagnetic transducer for converting electric signal variations into magnetic flux variations or the converse

2.6

external tape guide

a mechanical forked arm used to position the tape in a fixed path across the magnetic head

2.7

internal tape supports

the members within the case to maintain the tape within an appropriate path

2.8

switch head

a device that is utilized to change the magnetic head position. In its simplest form, the switch head may consist of two electrical contacts that are shorted by a strip of conducting foil placed on the magnetic tape

2.9

pressure pad

a resilient member used to hold the tape against a head

Section 2. Mechanical requirements for cartridges and for recording and reproducing equipment

3 Tape speed

The tape speed shall be 9.53 cm/s (3 3/4 in/s) $\pm$ 2 %. The speed and tolerance apply to machines operating from supplies having frequencies and voltages as specified by the manufacturer.

4 Tape winding

The magnetic coating shall face the openings at the front of the cartridge.

5 Position, utilization and dimensions of magnetic tracks

The designation of magnetic tracks is as follows: if the tape moves from left to right with the magnetic coating facing away from the observer, the top track is designated No. 1, the track immediately below it is designated No. 2 track, and so on.

5.1 Commercial tape records

The track dimensions shall be in accordance with Figure 4, page 8.

5.1.1 *Two-channel sound*

The track allocation shall be in accordance with Table I. All tracks shall be recorded for reproduction in the same direction. All areas adjacent to the recorded tracks specified in Figure 4, page 8, shall be free of recorded signals.

5.1.2 *Four-channel sound*

The track allocation shall be in accordance with Table II. All tracks shall be recorded for reproduction in the same direction. All areas adjacent to the recorded tracks specified in Figure 4 shall be free of recorded signals.

NOTE The recommended reproducing head core width is 0.508 mm (0.020 in) with a centre-to-centre dimension of 3.23 mm (0.127 in) for two track heads and 1.61 mm (0.063 in) for four track heads.

5.2 Domestic use

As for commercial tape records