

# Magnetic tape sound recording and reproducing systems —

## Part 1: Specification for general conditions and requirements

The European Standard EN 60094-1:1993 has the status of a  
British Standard

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# Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

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## National foreword

This British Standard has been prepared by Technical Committee EPL/60 and is the English language version of EN 60094-1:1993, *Magnetic tape sound recording and reproducing systems. Part 1: General conditions and requirements*, together with its amendment A1: August 1994, published by the European Committee for Electrotechnical Standardization (CENELEC), which supersedes Harmonization Document HD 311.1 S2:1991. It is identical with IEC 94-1:1981 and its Amendment 1: July 1994, published by the International Electrotechnical Commission (IEC). The cross-reference of this standard as Part 1 of the BS 6288 series has been retained for ease of reference to other Parts of the series. This British Standard supersedes BS 6288-1:1982 which is withdrawn.

BS 6288 consists currently of the following Parts:

|                        |                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------|
| Part 1 (BS EN 60094-1) | <i>Specification for general conditions and requirements</i>                                                      |
| Part 2 (BS EN 60094-2) | <i>Specification for calibration tapes</i>                                                                        |
| Part 3                 | <i>Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape</i> |
| Part 4                 | <i>Methods for measuring the mechanical characteristics of magnetic tape for analogue recording</i>               |
| Part 5 (BS EN 60094-5) | <i>Specification for electrical magnetic tape properties</i>                                                      |
| Part 6                 | <i>Specification for reel-to-reel systems</i>                                                                     |
| Part 7 (BS EN 60094-7) | <i>Specification for cassettes for commercial tape records and domestic use</i>                                   |
| Part 8                 | <i>Specification for eight-track magnetic tape cartridge for commercial tape records and domestic use</i>         |
| Part 9                 | <i>Specification for magnetic tape cartridge for professional use</i>                                             |
| Part 10                | <i>Specification for time and address codes</i>                                                                   |
| Part 11                | <i>Guide to an address code for compact cassettes</i>                                                             |

This British Standard does not reflect a revision of the text which will be undertaken in due course.

**Additional information.** The note to 17.1.2 contains a requirement and should therefore be regarded as being part of the main text.

ISO/R 1661:1971 referred to in the text in clause 4 has been withdrawn.

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, the EN title page, pages 2 to 22, 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.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60094-1

October 1993

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Supersedes HD 311.1 S2:1991

Descriptors: Magnetic tape recording, dimensions, requirements, properties, definitions, sound recording and reproduction

English version

## Magnetic tape sound recording and reproducing systems Part 1: General conditions and requirements

(includes amendment A1:1994)  
(IEC 94-1:1981)

Systèmes d'enregistrement et de lecture du  
son sur bandes magnétiques  
Première partie 1: Conditions générales et  
spécifications (*inclut l'amendement A1:1994*)  
(CEI 94-1:1981)

Systeme für Tonaufzeichnung und -wiedergabe  
auf Magnetband  
Teil 1: Allgemeine Bedingungen und  
Anforderungen  
(*enthält Änderungen A1:1994*)  
(IEC 94-1:1981)

This European Standard was approved by CENELEC on 1993-09-22. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

### CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B-1050 Brussels**

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## Foreword

As a consequence of the IEC-CENELEC Agreement, HD 311.1 S2:1991 (IEC 94-1:1981) was submitted to the CENELEC voting procedure for conversion into a European Standard.

The text of the International Standard was approved by CENELEC as EN 60094-1 on 22 September 1993.

The following dates were fixed:

- latest date of publication  
of an identical national  
standard (dop) 1994-10-01
- latest date of withdrawal  
of conflicting national  
standards (dow) —

Annexes designated “normative” are part of the body of the standard.

In this standard, Annex ZA is normative.

## Foreword to Amendment A1

The text of document 60A (CO) 152, as prepared by Subcommittee 60A: Sound recording, of IEC Technical Committee 60: Recording, was submitted to the IEC-CENELEC parallel vote in March 1994.

The reference document was approved by CENELEC as amendment A1 to EN 60094-1 on 8 March 1994.

The following dates were fixed:

- latest date of publication  
of an identical national  
standard (dop) 1995-07-01
- latest date of withdrawal  
of conflicting national  
standards (dow) 1995-07-01

Annexes designated “normative” are part of the body of the standard. In this standard, Annex ZA is normative.

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## Section 1. General

### 1 Scope

This standard applies to the dimensional, mechanical and electrical requirements for non-perforated blank and pre-recorded magnetic tape and for the associated recording and reproducing systems such as reel-to-reel, cassette and cartridge. The methods of measurements and the necessary tolerances to secure interchangeability of recordings are included.

### 2 Definitions

#### 2.1

##### terms related to audio recording and reproducing

reference is made to IEC Publication 50: International Electrotechnical Vocabulary, Chapter 806: Recording and Reproduction of Sound and Video

#### 2.2

##### terms related to audio-engineering, sound systems and equipment

reference is made to IEC Publication 50: International Electrotechnical Vocabulary, Chapter 801: Electro-acoustics (in preparation), Chapter 806: Recording and Reproduction of Sound and Video, and IEC Publication 268-2: Sound Systems, Part 2: Explanation of General Terms

### 3 Units and symbols

The letter symbols for quantities and units in accordance with IEC Publication 27: Letter Symbols to be Used in Electrical Technology.

### 4 Drawing office practice

The drawings given in the various parts of IEC Publication 94 are drawn in accordance with IEC and ISO standards. Some of the important publications are:

- ISO/370:1975, *Toleranced Dimensions — Conversion from Inches into Millimetres and Vice Versa*.
- ISO/R 406:1964, *Inscription of Linear and Angular Tolerances*.
- ISO/R 1101-1:1969<sup>1)</sup>, *Technical Drawings — Tolerances of Form and of Position. Part I: Generalities, Symbols, Indications on Drawings*.
- ISO 1101-2:1974, *Technical Drawings — Tolerances of Form and of Position. Part II: Maximum Material Principle*.
- ISO/R 1660:1971, *Technical Drawings — Tolerances of Form and of Position. Part III: Dimensioning and Tolerancing of Profiles*.
- ISO/R 1661:1971, *Technical Drawings — Tolerances of Form and of Position. Part IV: Practical Examples of Indications on Drawings*.
- IEC Publication 617, *Graphical symbols for diagrams*.

*Those elements not listed in IEC Publication 617 shall be clearly explained.*

An explanation of the drawing system used in the different parts of this publication is to be found in Appendix A.

### 5 Scales for graphical presentation of data

#### 5.1 General

Linear or logarithmic scales are recommended for graphical presentation. Linear decibel scales are equivalent to logarithmic scales. Other kinds of scales, such as double logarithmic, shall be avoided. When using decibel scales, the zero reference should, if possible, be the rated value. In those cases, where each of the scales refers directly to physical units, it is recommended to avoid a combination of linear and logarithmic scales.

<sup>1)</sup> Under revision.