



SLOVENSKI STANDARD

SIST EN 60094-1:1999

01-april-1999

Magnetic tape sound recording and reproducing systems -- Part 1: General conditions and requirements (IEC 60094-1:1981)

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

Systeme für Tonaufzeichnung und -wiedergabe auf Magnetband -- Teil 1: Allgemeine Bedingungen und Anforderungen

Systèmes d'enregistrement et de lecture du son sur bandes magnétiques -- Partie 1: Conditions générales et spécifications

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Ta slovenski standard je istoveten z: EN 60094-1:1993

ICS:

33.160.30 Avdio sistemi Audio systems

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EUROPEAN STANDARD

EN 60094-1

NORME EUROPEENNE

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October 1993

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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
(IEC 94-1:1981)

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

Systeme für Tonaufzeichnung
und -wiedergabe auf Magnetband
Teil 1: Allgemeine Bedingungen
und Anforderungen
(IEC 94-1:1981)

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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 day 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.

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ENDORSEMENT NOTICE

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The text of the International Standard IEC 94-1:1981 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
27	series	Letter symbols to be used in electrical technology	HD 245	series
50(801)	1984	International Electrotechnical Vocabulary (IEV) - Chapter 801: Acoustics and electro-acoustics https://standards.iteh.ai/catalog/standards/sist/17061dc9-32fd-4534-9592-2711c55220ed/sist-en-60094-1-1999	-	-
50(806)	1975	Chapter 806: Recording and reproduction of sound and video	-	-
117*	-	Recommended graphical symbols	-	-
263	1975	Scales and sizes for plotting frequency characteristics and polar diagrams	-	-
268-2	1971*	Sound system equipment Part 2: Explanation of general terms	-	-
268-12	1975*	Part 12: Circular connectors for broadcast and similar use	-	-

* IEC 117 has been superseded by the IEC 617 series
IEC 268-2:1987 + A1:1991 are harmonized as HD 483.2 S2:1993
IEC 268-12:1987 + A1:1991 are harmonized as HD HD 483.12 S2:1993

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IEC Publication -----	Date ----	Title -----	EN/HD -----	Date -----
268-14A*	-	-	-	-
268-15	1978*	Part 15: Preferred matching values for the interconnection of sound system components	-	-
581-4	1979	High fidelity audio equipment and systems: Minimum performance requirements - Part 4: Magnetic recording and reproducing equipment	-	-

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* IEC 268-14A has been superseded by IEC 268-11:1987 + A1:1989 + A2:1991 which are harmonized as HD 483.11 S3:1993
IEC 268-15:1987 + A1:1989 + A2:1990 + A3:1992 are harmonized as HD 483.15 S4:1992

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
94-1

Quatrième édition
Fourth edition
1981

**Systemes d'enregistrement et de lecture
du son sur bandes magnétiques**

**Première partie:
Conditions générales et spécifications**

iTeh STANDARD PREVIEW

(standards.iteh.ai)

**Magnetic tape sound recording
and reproducing systems**

<https://standards.iteh.ai/catalog/standards/sist/17061dc9-32fd-4534-9592-0ed/sist-en-60094-1-1999>

Part 1:

General conditions and requirements

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MAGNETIC TAPE SOUND RECORDING AND REPRODUCING SYSTEMS

Part 1: General conditions and requirements

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.
- 4) The IEC has not laid down any procedure concerning marking as an indication of approval and has no responsibility when an item of equipment is declared to comply with one of its recommendations.

PREFACE

This standard has been prepared by Sub-Committee 60A: Sound Recording, of IEC Technical Committee No. 60: Recording.

This standard should be read in conjunction with IEC Publication 38: Standard Voltages, IEC Publication 65: Safety Requirements for Mains Operated Electronic and Related Apparatus for Household and Similar General Use, IEC Publication 268-1: Sound System Equipment, Part 1: General, IEC Publication 268-3: Sound System Equipment, Part 3: Sound System Amplifiers, IEC Publication 386: Method of Measurement of Speed Fluctuations in Sound Recording and Reproducing Equipment and IEC Publication 651: Sound Level Meters.

A first draft was discussed at the meeting held in Ottawa in 1976. A draft, Document 60A(Central Office)54, was submitted to the National Committees for approval under the Six Months' Rule in April 1979.

The National Committees of the following countries voted explicitly in favour of publication:

Australia	Germany	Sweden
Austria	Hungary	Turkey
Belgium	Korea (Republic of)	Union of Soviet
Canada	Netherlands	Socialist Republics
Egypt	South Africa (Republic of)	United Kingdom
France	Spain	

The Japanese vote was positive except for the speed tolerances given in Clause 10, which the Japanese National Committee considers to be too severe for domestic cassette/cartridge equipment.

IEC Publication 94 and its supplements are under revision. The new IEC Publication 94 will be issued in several parts, of which this is Part 1.

It will have the following parts:

Part 1: General conditions and requirements

General: electrical requirements for the magnetic tape recording and reproducing systems; mechanical requirements for the magnetic tape; tape identification; programme identification (object of this standard).

Part 2: Calibration tapes

Minimum requirements for calibration tapes for making adjustments and comparative assessments of the reproducing performance (First edition 1975).

Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape (First edition 1979)

Part 4: Mechanical magnetic tape properties

Characteristics to be specified and relevant methods of measurement. Equipment to be used to determine the mechanical properties of magnetic tapes (in preparation).

Part 5: Electrical magnetic tape properties

Characteristics to be specified, methods of measurement and equipment to be used for the determination of the electrical properties of magnetic tape for analogue sound recording and reproduction (in preparation).

Part 6: Reel-to-reel systems

Mechanical requirements and dimensions, including reels, hubs and relevant track allocations (in preparation).

Part 7: Cassette for commercial tape records and domestic use

Mechanical requirements and dimensions, including track allocation (in preparation, based on IEC Publication 94A, First edition 1972).

Part 8: Eight-track magnetic tape cartridge for commercial tape records and domestic use

Mechanical requirements and dimensions, including track allocation (in preparation, based on IEC Publication 94B, First edition 1974).

Part 9: Magnetic tape cartridge for professional use

Mechanical requirements and dimensions, including track allocation (in preparation).

This standard being divided into different parts, the particular requirements for the different recording systems on specific tape carriers contained in Parts 6 to 9 have to be used with Part 1: General conditions and requirements.

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The clauses of these particular requirements supplement or modify the corresponding clauses in Part 1.

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Where there is no corresponding clause or sub-clause in the particular requirements, the clause or sub-clause of Part 1 applies without modification as far as is reasonable. Where the text of the particular requirement states "addition", "modification" or "replacement", the relevant requirement of Part 1 should be adapted accordingly.

This standard applies only when there is a specific part containing particular requirements concerning a recording system. Individual countries however, may wish to consider its application, so far as is reasonable, to systems designed on basically new principles and for which no specific requirements have been determined up till now.

Other IEC publications quoted in this standard:

Publications Nos:	27:	Letter Symbols to be Used in Electrical Technology.
	50:	International Electrotechnical Vocabulary Chapter 801: Electro-acoustics (in preparation). Chapter 806: Recording and Reproduction of Sound and Video.
	117:	Recommended Graphical Symbols; Graphical Symbols.
	263:	Scales and Sizes for Plotting Frequency Characteristics and Polar Diagrams.
	268-2:	Sound System Equipment, Part 2: Explanation of General Terms.
	268-12:	Part 12: Circular Connectors for Broadcast and Similar Use.
	268-14A:	First Supplement to Publication 268-14, Part 14: Mechanical Design Features, Chapter II: Connecting Devices, Section One: Circular Connectors for the Interconnection of Sound System Components.
	268-15:	Part 15: Preferred Matching Values for the Interconnection of Sound System Components.
	581-4:	High Fidelity Audio Equipment and Systems: Minimum Performance Requirements, Part 4: Magnetic Recording and Reproducing Equipment.

MAGNETIC TAPE SOUND RECORDING AND REPRODUCING SYSTEMS

Part 1: General conditions and requirements

SECTION ONE - 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)*: Technical Drawings - Tolerances of Form and of Position. Part I: Generalities, Symbols, Indications on Drawings.

* Under revision