



SLOVENSKI STANDARD
SIST EN 60908:2000/A1:2000
01-april-1999

Compact disc digital audio system - Amendment A1 (IEC 60908:1987/A1:1992)

Compact disc digital audio system

Digital-Audio-System, Compact-Disc

Système audionumérique à disque compact

Ta slovenski standard je istoveten z: EN 60908:1992/A1:1993

[SIST EN 60908:2000/A1:2000](https://standards.iteh.ai/catalog/standards/sist/8d79c809-7dd3-486f-9f9a-8c1c504f3420/sist-en-60908-2000-a1-2000)

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ICS:

33.160.30 Avdio sistemi Audio systems

SIST EN 60908:2000/A1:2000 **en**

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EUROPEAN STANDARD

EN 60908/A1

NORME EUROPEENNE

EUROPÄISCHE NORM

April 1993

UDC 681.846.5:621.396

Descriptors: Optical recording, sound recording, compact disc, characteristic, interchangeability, measurement, requirement

Amendment A1 to the English version of EN 60908

Compact disc digital audio system
(IEC 908:1987/A1:1992)

Système audionumérique à disque
compact
(CEI 908:1987/A1:1992)

Digital-Audio-System,
Compact-Disc
(IEC 980:1987/A1:1992)

STANDARD PREVIEW
This amendment A1 modifies the European Standard EN 60908:1992. It was approved by CENELEC on 1993-03-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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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Ref. No. EN 60908:1992/A1:1993 E

FOREWORD

The text of document 60A(C.O.)143, as prepared by Sub-Committee 60A: Sound recording, of IEC Technical Committee N° 60: Recording, was submitted to the IEC-CENELEC parallel vote in August 1991 but failed.

Following a decision by the 73rd Technical Board, the print proof of IEC amendment 1 to IEC 908:1987 based on IEC 60A(C.O.)143 and IEC 60A(C.O.)140 was submitted to a second vote and was approved by CENELEC as amendment A1 to EN 60908 on 9 March 1993.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-06-01
- latest date of withdrawal of conflicting national standards (dow) 1994-06-01

For products which have complied with EN 60908:1992 before 1994-06-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-06-01.

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ENDORSEMENT NOTICE

SIST EN 60908:2000/A1:2000

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The text of amendment 1:1992 to the International Standard IEC 908:1987 was approved by CENELEC as an amendment to the European Standard without any modification.

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
908

1987

AMENDEMENT 1
AMENDMENT 1

1992-09

Amendement 1

Système audionumérique à disque compact

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Amendment 1

[SIST EN 60908:2000/A1:2000](https://standards.iteh.ai/catalog/standards/sist/8179-809-7d13-486f-9f9a-8c1c504b420/sist-en-60908-2000-a1-2000)

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Compact disc digital audio system

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International Electrotechnical Commission
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PREFACE

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

The text of this amendment is based on the following documents:

DIS	Reports on Voting
60A(CO)143 60A(CO)140	60A(CO)146 60A(CO)148

Full information on the voting for the approval of this amendment can be found in the Voting Reports indicated in the above table.

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CONTENTS

Insert the title of the following new subclause:

9.5 Frequency modulation of the channel bit frequency (see clause 13)

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Insert the title of the following new appendices:

APPENDIX D – Recommendations

APPENDIX E – Aperture specification for 8 cm – CD

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1. Scope

Add the following new subclause:

It is proposed to standardize a compact disc with a diameter of 80 mm, in addition to the compact disc with a diameter of 120 mm. The following additions to this standard are proposed. The small compact disc will be referred to as 8 cm – CD.

4.2 Requirements for the measuring pick-up

Replace, on page 11, the text of the last dash by the following:

– diffraction limited performance of the optical system: within the Maréchal criterion, preferably equally divided between disc and player.

SECTION TWO – DISC PARAMETERS

Replace, on page 11, the text of subclauses 5.1.1 and 5.1.3 by the following:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
5.1.1 Outer diameter	120 ± 0,3 mm 80 ± 0,2 mm	To be measured at 23 ± 2 °C and (50 ± 5) % relative humidity
5.1.3 Edge shape	Edges shall be free from burrs; chamfer or radius is permitted on both sides For 8 cm – CD, see figures 2c and 2d	

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Add the following new texts and paragraphs:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
5.6.4 Adaptor clamping area for 8 cm – CD	An outer ring with 1,5 mm in width	
5.6.5 Thickness in clamping area for 8 cm – CD adaptor	1,2 ± 0,1 mm	
5.7 Mass of disc	14 g to 33 g 6 g to 16 g for 8 cm – CD	
5.8.1 Peak deflection	±0,4 mm ±0,3 mm for 8 cm – CD	
5.8.2 Deflection averaged over one revolution	±0,3 mm ±0,2 mm for 8 cm – CD	

Replace the text of subclause 6.6 by the following:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
6.6 Limits for reflectivity variation in program area	3 % for $f < 100$ Hz	The reflectivity variation is measured by observing the variation of A_{top} , during one revolution of the disc at scanning velocity (see subclause 7.1.2)

Add to the paragraph 7.2.4, the following new text:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
7.2.3 Starting diameter of program area	50 ⁰ _{-0,4} mm	See figure 2c To be measured at 23 ± 2 °C and (50 ± 5) % relative humidity
7.2.4 Maximum diameter of program area	116 mm 75 mm for 8 cm – CD	

Replace the text of paragraphs 7.3.1.1 and 7.3.1.2 by the following:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
7.3.1.1 Deviation from nominal value	±0,5 mm ±0,35 mm for 8 cm – CD	The nominal position is defined by an ideal disc of substrate thickness 1,2 mm and refractive index of 1,55
7.3.1.2 R.M.S. value	±0,4 mm max. ±0,8 mm max. for 8 cm – CD	

Replace clause 8 by the following:

Parameters to be specified	Requirements	Methods and/or conditions of measurement
<p>8. Environmental conditions for playing the compact disc</p> <p>8.1 <i>Playing the compact disc</i></p>	<p>The disc shall be played under the following conditions:</p> <p>Temperature: -25 °C to +70 °C Relative humidity: 10 % to 95 % Absolute humidity: 0,5 g/m³ to 60 g/m³</p> <p>Max. temperature change: 50 °C Max. humidity change: 30 % RH (see also climatogram, figure 17 below)</p>	<p>Sudden changes in temperature and humidity within these ranges may temporarily cause too large a deflection. Recovery time up to several hours has to be taken into account (see also IEC 721-3-5, class 5K2)</p>
<p>8.2 <i>Temperature and humidity requirements</i></p> <p>8.2.1 Dry heat test in accordance with IEC 68-2-2 Ba</p> <p>8.2.2 Cyclic damp heat test in accordance with IEC 68-2-30 Db</p>	<p>After these tests, some time should be left for recovery before measuring (24 h or 48 h)</p> <p>Temperature: 55 °C Relative humidity : 50 % max. at 35 °C Storage time: 96 h</p> <p>Severity: a; number of cycles: 6 Temperature: max. 40 °C ± 2 °C Relative humidity: 95 % Temperature: min. 25 °C ± 3 °C Cycle time: 12 h + 12 h</p>	<p>Parameters to be measured in accordance with clause 4.</p>

Insert the following new subclause:

9.5 Frequency modulation of the channel bit frequency (see clause 13)

Unintentional frequency modulation of the channel bit frequency during mastering may cause clock regeneration problems in CD players. The maximum time error of the channel bit frequency as a function of the modulation frequency has to be below the values given in figure 18. This time error is measured with a constant linear velocity.

10.4 Noise

Add to this subclause, page 19, the following new paragraph:

Optional measurement

Single frequency noise contributions should be avoided in the RD signal. It is recommended to measure the r.m.s. value of the noise in the residual error signal with a real-time frequency analyzer (bandwidth of 100 Hz) over the frequency range from 500 Hz to 10 000 Hz.

The tracking error corresponding to the measured r.m.s. value should be less than 0,01 μm .

Replace the existing subclauses 11.1.3 and 11.2 by the following:

11.1.3 Specification of burst errors

Burst errors in the HF signal due to local defects shall not induce audible effects for any error-correcting decoding strategy.

The most simple error-correcting decoder consists of a C1 and C2 single error corrector. No more than one symbol error shall occur in a data block measured at the input of the C2 decoder.

In any case, the number of successive C1-uncorrectable blocks shall be less than 7.

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11.2 Local defects <https://standards.iteh.ai/catalog/standards/sist/8d79c809-7dd3-486f-9f9a-8c1c504b420/sist-en-60908-2000-a1-2000>

Maximum dimensions of local defects that are allowed are:

- air bubbles, diameter 100 μm
- black spots, diameter 200 μm
- black spots without birefringent area, diameter 300 μm

The minimum distance, measured between adjacent defects (of maximum diameter) along the track, is at least 20 mm.

Black spots may be dirt enclosures in the substrate, or "pin-holes" in the reflective layer.

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17.5 Channel Q

Amend, on page 29, the subclause as follows:

ADR: 4-address bits, MSB is first out:

- 0000: ADR 0, mode 0 for DATA- Q (see subclause 17.5.4);
- 0001: ADR 1, mode 1 for DATA- Q (see subclause 17.5.1);
- 0010: ADR 2, mode 2 for DATA- Q (see subclause 17.5.2);
- 0011: ADR 3, mode 3 for DATA- Q (see subclause 17.5.3);
- 0100: ADR 4, mode 4 for DATA- Q (see IEC 1104, subclause 17.5).