

Elektromagnetiline ühilduvus. Professionaalseks kasutamiseks mõeldud audio-, video- ning audiovisuaalsüsteemide ja etendusvalgustuse juhtseadmete tooteperekonna standard. Osa 2: Häiringukindlus

Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use Part 2: Immunity

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 55103-2:2009 sisaldab Euroopa standardi EN 55103-2:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.08.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 17.07.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 55103-2:2009 consists of the English text of the European standard EN 55103-2:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.08.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 17.07.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English version

**Electromagnetic compatibility -
Product family standard for audio, video, audio-visual
and entertainment lighting control apparatus for professional use -
Part 2: Immunity**

Compatibilité électromagnétique -
Norme de famille de produits
pour les appareils à usage professionnel
audio, vidéo, audiovisuels et de
commande de lumière pour spectacles -
Partie 2: Immunité

Elektromagnetische Verträglichkeit -
Produktfamilienorm für Audio-, Video-
und audiovisuelle Einrichtungen sowie
für Studio-Lichtsteuereinrichtungen
für professionellen Einsatz -
Teil 2: Störfestigkeit

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CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC).

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 55103-2 on 2009-07-01.

This European Standard supersedes EN 55103-2:1996.

The following dates were fixed proposed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-07-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers protection requirements of EC Directive 2004/108/EC. See Annex ZZ.

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Contents

1	Scope	4
2	Normative references	4
3	Definitions	5
4	Electromagnetic environment	6
5	Disturbing phenomena	7
6	Immunity requirements	7
7	Testing	12
7.1	Performance criteria.....	12
7.2	General.....	12
7.3	Ports.....	13
7.4	Sub-assemblies.....	13
7.5	Racks and cabinets.....	14
8	Documentation for the purchaser/user	14
8.1	Documentation which shall be supplied to the purchaser/user.....	14
8.2	Documentation which shall be available to the purchaser/user upon request.....	14
Annex A (normative) Method of measurement of immunity to radiated magnetic fields, 50 Hz to 10 kHz		15
Annex B (normative) Methods of measurement of common mode immunity for balanced signal and control ports intended to be connected to cables whose total length according to the manufacturer's specification may exceed 10 m; 50 Hz to 10 kHz		20
Annex C (informative) Apparatus using infra-red radiation for open-air transmission purposes		26
Annex D (informative) Guidance for test houses on immunity testing of audio, video, audio-visual and entertainment lighting control apparatus for professional use		27
Annex E (informative) Background information about this standard		31
Annex ZZ (informative) Coverage of Essential Requirements of EC Directives		32
Bibliography		33
Figures		
Figure 1 - Examples of ports.....		5
Figure A.1 - Construction of Helmholtz coils for homogeneous fields.....		17
Figure A.2 - Construction of the radiating loop for inhomogeneous fields.....		18
Figure A.3 - Typical test setup for immunity to inhomogeneous magnetic field.....		18
Figure B.1 - Test interface - Test set-up 1.....		20
Figure B.2 - Calibration arrangement for test set-up 1.....		21
Figure B.3 - Test set-ups.....		23
Figure B.4 - Equaliser circuit.....		23
Tables		
Table 1 - Immunity requirements.....		7
Table B.1 - Test method selection.....		19
Table D.1 - Five-point scales for subjective assessment.....		29

1 Scope

This European Standard for EMC immunity requirements applies to professional audio, video, audio-visual and entertainment lighting control apparatus as defined in 3.6 intended for use in the environments described in Clause 4. This includes the digital apparatus defined in 3.5 and sub-assemblies, see 7.4.

Disturbances in the frequency range 0 Hz to 400 GHz are covered, but requirements are not established over the whole of that range.

NOTE 1 In Annex C, information is included on infra-red radiation in the wavelength range 0,7 μm to 1,6 μm .

The objective of this standard is to define the immunity test requirements, test signals, performance criteria and test methods for apparatus defined in the scope, in relation to electromagnetic immunity to continuous and transient conducted and radiated electromagnetic disturbances including electrostatic discharges. These test requirements represent essential electromagnetic compatibility requirements.

Fault conditions of source or victim apparatus are not taken into account.

Apparatus as defined in 3.4, 3.5 and 3.6 may be operated with any source of power.

NOTE 2 Sources of power may include, for example: the public low-voltage supply; private supplies with similar characteristics; a d.c. source provided specifically for the apparatus; batteries internal to the apparatus; stand-by generators. Some standards may not apply to private low-voltage supplies.

NOTE 3 If it is intended to use a hand-held transmitter in proximity, additional mitigation measures may have to be employed to increase the electromagnetic immunity further, beyond the specified limits.

This European Standard does not apply to

- consumer apparatus,
- apparatus specifically designed for security systems,
- apparatus designed to radiate electromagnetic energy for radio communications purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 55020	2007	<i>Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement (CISPR 20:2006)</i>
EN 61000-3-2	2006	<i>Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2:2005)</i>
EN 61000-4-2 + A1 + A2	1995 1998 2001	<i>Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test (IEC 61000-4-2:1995 + A1:1998 + A2:2000)</i>
EN 61000-4-3 + A1	2006 2008	<i>Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3:2006 + A1:2007)</i>
EN 61000-4-4	2004	<i>Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test (IEC 61000-4-4:2004)</i>

EN 61000-4-5	2006	<i>Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test (IEC 61000-4-5:2005)</i>
EN 61000-4-6	2007	<i>Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields (IEC 61000-4-6:2003 + A1:2004 + A2:2006)</i>
EN 61000-4-11	2004	<i>Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests (IEC 61000-4-11:2004)</i>
EN 61000-6-2	2005	<i>Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments (IEC 61000-6-2:2005)</i>
HD 483.1 S2	1989	<i>Sound system equipment - Part 1: General (IEC 60268-1:1985 + A1:1988)</i>

3 Definitions

For the purposes of this document, the following terms and definitions apply.

Definitions related to EMC and to relevant phenomena may be found in the EU Directive on EMC (2004/108/EC), in IEC 60050-161 and in other IEC and CISPR Publications.

3.1

electromagnetic compatibility

the ability of a device, unit of equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable disturbances to anything in that environment

3.2

port

particular interface of the specified apparatus with the electromagnetic environment (see Figure 1)

3.3

enclosure port

the physical boundary of the apparatus through which electromagnetic fields may radiate or impinge

3.4

professional apparatus

apparatus for use in trades, professions or industries and which is not intended for sale to the general public

3.5

professional digital apparatus

professional apparatus designed for the purpose of controlling audio, video, audiovisual or entertainment lighting characteristics, by means of periodic pulsed electrical waveforms, or of processing audio, video or lighting control signals in digital form

3.6

professional entertainment lighting control apparatus

professional apparatus producing electrical control signals for controlling the intensity, colour, nature or direction of the light from a luminaire, where the intention is to create artistic effects in theatrical, television or musical productions and visual presentations

3.7

test report

the documentation of the EMC tests performed, and their results, prepared by the persons who carried out the tests, for example the manufacturer or a test laboratory