Elektromagnetiline ühilduvus. Professionaalseks kasutamiseks mõeldud audio-, video- ning audiovisuaalsüsteemide ja etendusvalgustuse juhtseadmete tooteperekonna standard. Osa 1: Emissioon

Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use Part 1: Emissions

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 55103-1:2009 sisaldab Euroopa standardi EN 55103-1:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 55103-1:2009 consists of the English text of the European standard EN 55103-1:2009.
Standard on kinnitatud Eesti Standardikeskuse 31.08.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	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.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 17.07.2009.	Date of Availability of the European standard text 17.07.2009.
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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 1: Emissions

Compatibilité électromagnétique - Norme de famille de produits pour les appareils à usage professionnel audio, vidéo, audiovisuels et de commande de lumière pour spectacles - Partie 1: Emissions

Elektromagnetische Verträglichkeit - Produktfamiliennorm für Audio-, Video- und audiovisuelle Einrichtungen sowie für Studio-Lichtsteuereinrichtungen für professionellen Einsatz - Teil 1: Störaussendungen

This European Standard was approved by CENELEC on 2009-07-01. 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.

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CENELEC

European Committee for Electrotechnical Standardization
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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 55103-1 on 2009-07-01.

This European Standard supersedes EN 55103-1:1996.

The following dates were fixed:

– 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.

Contents

1 Scope

This European Standard for EMC emission 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 6.3.

Disturbances in the frequency range 0 Hz to 400 GHz are covered, but requirements are not set over the whole of that range. See Note 5.

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

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 In special cases, for instance when highly susceptible apparatus is being used in proximity, additional mitigation measures may have to be employed to reduce the electromagnetic emission further, below the specified levels.

NOTE 4 Professional-user receiving apparatus may be very sensitive to disturbance; see Annex E.

This European Standard does not apply to

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

NOTE 5 To ensure freedom from interference, manufacturers should consider the characteristics of other equipment likely to be in the same environment and thus determine whether limitation of emissions in additional frequency ranges is necessary.

The objective of this standard is to define limits and methods of measurement for apparatus defined in the scope, in relation to continuous and transient, conducted and radiated disturbances. These requirements represent essential electromagnetic compatibility requirements.

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 55013	2001	*Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement* (CISPR 13:2001, mod.)
EN 55014-1 + A1 + A2	2000 2001 2002	*Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission* (CISPR 14-1:2000 + A1:2001 + A2:2002)
EN 55022	2006	*Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement* (CISPR 22:2005, mod.)
EN 60268-3	2000	*Sound system equipment - Part 3: Amplifiers* (IEC 60268-3:2000)

EN 60107-1	1997	*Methods of measurement on receivers for television broadcast transmissions - Part 1: General considerations - Measurements at radio and video frequencies* (IEC 60107-1:1997)
EN 61000-3-2	2006	*Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)* (IEC 61000-3-2:2005)
EN 61000-3-3	1995	*Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection* (IEC 61000-3-3:1994)
+ IS1	2005	*Interpretation of Clause 5 and Annex A of EN 61000-3-3:1995 + A1:2001*
EN 61000-3-11	2000	*Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection* (IEC 61000-3-11:2000)
EN 61000-3-12	2005	*Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase* (IEC 61000-3-12:2004)

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