SVENSK STANDARD SS-EN 55020

Fastställd	Utgåva	Sida	Ingår i
2007-03-26	4	1 (1+90)	SEK Område EMC

Svenska Elektriska Kommissionen, SEK

Rundradiomottagare, TV-mottagare och tillhörande utrustning – Immunitet mot elektromagnetiska störningar – Gränsvärden och mätmetoder

Sound and television broadcast receivers and associated equipment – Immunity characteristics – Limits and methods of measurement

Som svensk standard gäller europastandarden EN 55020:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 55020:2007.

Nationellt förord

Europastandarden EN 55020:2007

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC

– **CISPR 20, Sixth edition, 2006 - Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 55020, utgåva 3, 2002, SS-EN 55020/A1, utgåva 1, 2003, SS-EN 55020/A2, utgåva 1, 2005, SS-EN 55020 C1, utgåva 1, 2005, SS-EN 55020/IS1, utgåva 1, 2007 och SS-EN 55020/IS2, utgåva 1, 2007, gäller ej fr o m 2009-12-01.

ICS 33.100.20

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

Svenska Elektriska Kommissionen, SEK, svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55020

January 2007

ICS 33.100.20

Supersedes EN 55020:2002 + A1:2003 + A2:2005 + IS1:2007 + IS2:2007

English version

Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement

(CISPR 20:2006)

Récepteurs de radiodiffusion et de télévision et équipements associés - Caractéristiques d'immunité - Limites et méthodes de mesure (CISPR 20:2006)

Ton- und Fernseh-Rundfunkempfänger und verwandte Geräte der Unterhaltungselektronik - Störfestigkeitseigenschaften - Grenzwerte und Prüfverfahren (CISPR 20:2006)

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

Ref. No. EN 55020:2007 E

Foreword

The text of document CISPR/I/200/FDIS, future edition 6 of CISPR 20, prepared by CISPR SC I, Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 55020 on 2006-12-01.

This European Standard supersedes EN 55020:2002 (+ corrigendum September 2005) + A1:2003 (+ corrigendum September 2005) + A2:2005 + IS1:2007 + IS2:2007.

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)	2007-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-12-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives 89/336/EEC, 2004/108/EC and 1999/5/EC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard CISPR 20:2006 approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

CISPR 22	NOTE	Harmonized as EN 55022:2006 (modified).
CISPR 24	NOTE	Harmonized as EN 55024:1998 (modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

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

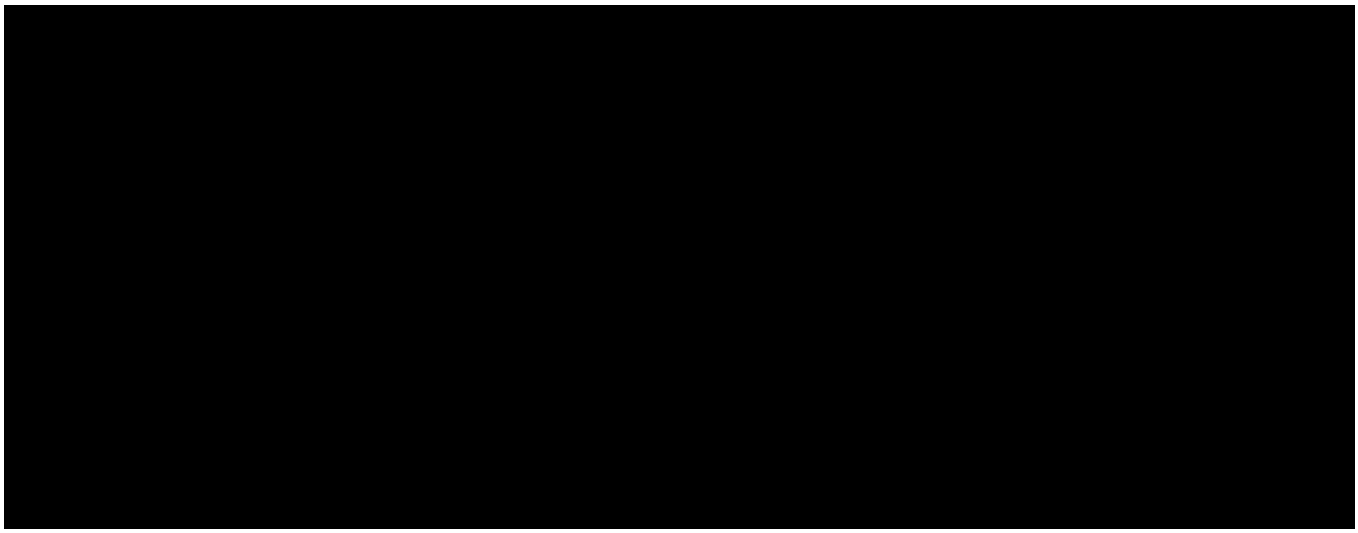
Publication	Year	Title	EN/HD	Year
CISPR 16-1-3	-[1)]	Specification for radio disturbance and immunity measuring apparatus and methods Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	EN 55016-1-3	2006[2)]
IEC 60050-161	-[1)]	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 60268-1	1985	Sound system equipment Part 1: General	HD 483.1 S2[3)]	1989
IEC 61000-4-2	-[1)]	Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995[2)]
IEC 61000-4-3	-[1)]	Electromagnetic compatibility (EMC) Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006[2)]
IEC 61000-4-4	-[1)]	Electromagnetic compatibility (EMC) Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2004[2)]
IEC 61672-1	2002	Electroacoustics - Sound level meters Part 1: Specifications	EN 61672-1	2003
ETS 300 158	1992	Satellite Earth Stations and Systems (SES) - Television Receive Only (TVRO-FSS) Satellite Earth Stations operating in the 11/12 GHz FSS bands	-	-
ETS 300 249	1993	Satellite Earth Stations and Systems (SES) - Television Receive-Only (TVRO) equipment used in the Broadcasting Satellite Service (BSS)	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

[3)] HD 483.1 S2 includes A1 to IEC 60268-1.

Publication	Year	Title	EN/HD	Year
ITU-R Recommendation BS 468-4	-[1)]	Measurement of audio-frequency noise voltage level in sound broadcasting	-	-
ITU-R Recommendation BT.471-1	1986	Nomenclature and description of colour bar signals	-	-
ITU-R Recommendation BT.500-10	-[1)]	Methodology for the subjective assessment of the quality of television pictures	-	-
ITU-T Recommendation J.61	-[1)]	Transmission performance of television circuits designed for use in international connections	-	-



CONTENTS

SOUND AND TELEVISION BROADCAST RECEIVERS AND ASSOCIATED EQUIPMENT – IMMUNITY CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT

1 Scope and object

This standard for immunity requirements applies to television broadcast receivers, sound broadcast receivers and associated equipment intended for use in the residential, commercial and light industrial environment.

This standard describes the methods of measurement and specified limits applicable to sound and television receivers and to associated equipment with regard to their immunity characteristics to disturbing signals.

This standard is also applicable to the immunity of outdoor units of direct to home (DTH) satellite receiving systems for individual reception.

NOTE 1 Receiving systems for collective reception, in particular cable distribution head ends (Community Antenna Television, CATV) and community reception systems (Master Antenna Television, MATV) are covered by IEC 60728-2.

NOTE 2 Broadcast receivers for digital signals are covered by Annex I and Annex J.

Immunity requirements are given in the frequency range 0 Hz to 400 GHz. Radio-frequency tests outside the specified frequency bands or concerning other phenomena than given in this standard are not required.

The objective of this standard is to define the immunity test requirements for equipment defined in the scope in relation to continuous and transient, conducted and radiated disturbances including electrostatic discharges.

These test requirements represent essential electromagnetic immunity requirements.

Test requirements are specified for each port (enclosure or connector) considered.

NOTE 3 This standard does not specify electrical safety requirements for equipment such as protection against electric shocks, unsafe operation, insulation co-ordination and related dielectric tests.

NOTE 4 In special cases, situations will arise where the level of disturbances may exceed the levels specified in this standard e.g. where a hand-held transmitter is used in proximity to an equipment. In these instances special mitigation measures may have to be employed.

The environments encompassed by this standard are residential, commercial and light-industrial locations, both indoor and outdoor. The following list, although not comprehensive, gives an indication of locations which are included:

– residential properties, e.g. houses, apartments, etc.;
– retail outlets, e.g. shops, supermarkets, etc.;
– business premises, e.g. offices, banks, etc.;
– areas of public entertainment, e.g. cinemas, public bars, dance halls, etc.;
– outdoor locations, e.g. petrol stations, car parks, amusement and sports centres, etc.;
– light-industrial locations e.g. workshops, laboratories, service centres, etc.;
– car and boat.

Locations which are characterized by their mains power being supplied directly at low voltage from the public mains are considered to be residential, commercial or light industrial.

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.

CISPR 16-1-3, *Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power*

IEC 60050(161), *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electro-magnetic compatibility*

IEC 60268-1:1985, *Sound system equipment – Part 1: General*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test.* Basic EMC Publication

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test.* Basic EMC Publication

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test.* Basic EMC Publication

IEC 61672-1:2002, *Electroacoustics – Sound level meters – Part 1: Specifications*

ETS 300 158:1992, *Satellite Earth Stations and Systems (SES) – Television Receive Only (TVRO-FSS) Satellite Earth Stations operating in the 11/12 GHz FSS bands*

ETS 300 249:1993, *Satellite Earth Stations and Systems (SES) – Television Receive-Only (TVRO) equipment used in the Broadcasting Satellite Service (BSS)*

ITU-R BS.468-4, *Measurement of audio-frequency noise voltage level in sound broadcasting*

ITU-R BT.471-1:1986, *Nomenclature and description of colour bar signals*

ITU-R BT.500-10, *Methodology for the subjective assessment of the quality of television pictures*

ITU-T J.61, *Transmission performance of television circuits designed for use in international connections*