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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19954.1-2016

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

(English Translation)

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Table of Contents

Foreword...	4
1 Scope...	6
2 Normative references...	7
3 Terms and definitions...	8
4 Electromagnetic environment...	10
5 Disturbance phenomenon...	11
6 Emission limits...	11
7 Test conditions...	15
8 Buyer/user documentations...	16

Foreword

GB/T 19954 "Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use" includes the following two parts.

- Part 1. Emission;
- Part 2. Immunity.

This Part is Part 1 of GB/T 19954.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 19954.1-2005 "Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 1. Emissions".

Main changes in this Part compared with GB/T 19954.1-2005 are as follows.

- MODIFY the normative references;
- ADD definitions, requirements and measurement methods for telecommunications or network ports in Clause 3 Terms and definitions, Clause 5 Disturbance phenomenon and Clause 6 Emission limits;
- ADD additional information that shall be stated by the manufacturer in Clause 8

Buyer/user documentations;

- ADJUST the location of Clause 6 Emission limits, Clause 7 Test conditions and Clause 8 Buyer/user documentations in this Part; ADJUST the clause and article number accordingly;
- COMBINE Table 1 and Table 2 of GB/T 19954.1-2005 INTO Table 1 in this Part.

DELETE Method B (disturbance power measurement) in disturbance phenomenon 1;

- MODIFY Annex B (normative) Measurement method for inrush current;
- ADD Annex C (normative) Measurement method for telecommunication/network port conducted emission;
- DELETE Annex F (informative) Replaced test methods for signal, control and DC power supply port conducted emission in the frequency range of 0.15 MHz to 30 MHz;
- MODIFY Annex G (informative) Inrush current limits of "thermal switch".

This Part is proposed by the 3rd Research Institute of China Electronics Technology Group Corporation.

This Part is under the jurisdiction of the National Technical Committee on Radio Interference of Standardization Administration of China (SAC/TC 79).

Drafting organizations of this Part. 3rd Research Institute of China Electronics Technology Group Corporation, China Quality Certification Center, Nanjing Rongxiang Test Equipment Co., Ltd.

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The previous edition of the standard replaced by this this standard is as follow.

- GB/T 19954.1-2005.

Electromagnetic compatibility - Product family
standard for audio, video, audio-visual and
entertainment lighting control apparatus for

professional use - Part 1. Emissions

1 Scope

This Part of GB/T 19554 specifies the limits and measurement methods of the apparatus covered by the applicable scope, which relate to the requirements of continuous and transient disturbances, conducted and radiated disturbances, which are the necessary electromagnetic compatibility requirements.

This Part applies to audio, video, audio-visual and entertainment lighting control apparatus for professional use as defined in Clause 3 and apparatus used in the electromagnetic environment described in Clause 4, including the professional digital apparatus defined in 3.5 and the components specified in 7.3.

This Part specifies that the disturbance signal frequency range is 0 Hz ~ 400 GHz, but does not make the requirements for the entire frequency band. See note 2.

Annex E provides relevant information on infrared emitters with wavelengths of 0.7 μm to 1.6 μm .

This Part does not consider conditions of disturbance source or disturbed apparatus failure.

The apparatus defined in 3.4, 3.5 and 3.6 may be operated in any form of power supply, including.

- public low-voltage power grids;
- independent power grids with similar characteristics;
- DC power supplies for specific apparatus;
- built-in batteries of the apparatus;
- standby generators.

Some of the standards referenced in this Part may not apply to independent low-voltage power grids.

NOTE 1: In special cases, such as when an apparatus is in close proximity to a high-sensitivity apparatus, the limits shall be tightened and additional measurements shall be made to limit its

electromagnetic emissions.

Professional user receiving apparatus may be very sensitive to disturbance. See Annex F for relevant information.

This Part does not apply to.

- consumer electronics products;
- specially designed security system apparatus;
- emission apparatus designed for wireless communications.

NOTE 2: In order to avoid interference, the manufacturer shall consider the characteristics of other apparatuses that may be in the same environment, to determine whether it is necessary to set the emission limits in an additional frequency range.

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.

GB 4343.1 Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 1. Emission

GB 4343.2 Electromagnetic compatibility - Requirements for household appliances electric tools and similar apparatus - Part 2. Immunity - Product family standard

GB/T 4365 Electrotechnical terminology - Electromagnetic compatibility

GB 9254 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement

GB 10963.1 Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installation - Part 1. Circuit-breakers for a.c. operation

GB 10963.2 Circuit-breakers for overcurrent protection for household and similar installation - Part 2. Circuit-breakers for a.c. and d.c. operation

GB/T 12060.3 Sound system equipment - Part 3. Methods of measurement on audio amplifiers