

ICS 17.140.50
CCS M 74



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

GB/T 9389.1-2026

Replacing GB/T 9389-1988

**Transmission of audio and/or video and related signals using
infra-red radiation - Part 1: General**

使用红外辐射传输音频和/或视频及相关信号 第1部分：总则

(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative References	
3 Terms, Definitions, and Abbreviations	
3.1 Terms and Definitions	
4 Terminology Explanation and General Information	
4.1 Overview	
4.2 Operating Environment	
4.3 IR Light Source	
4.4 IR Propagation Medium and Receiver	
4.5 Modulation	
4.6 IR Interference	
4.7 Electromagnetic Compatibility	
4.8 Safety Aspects	
5 Measurement conditions 8.	
5.1 Operating Environment and Measurement Conditions	
5.2 Pretreatment Conditions	
5.3 Interface (Matching) Parameters	
5.4 Presentation of Results in the Specification	
6 Specified characteristics and their measurement methods 9.	
6.1 Characteristics of IR Light Sources	
6.2 Characteristics of IR Propagation Media and Receiver	
6.3 Modulation characteristics	
7 Performance Requirements and Recommendations	
7.2 Stray IR radiation	
7.3 Polarity	
7.4 Electrical Interface	
7.5 Spurious Modulation Signal	
7.6 IR radiation from other devices and equipment	
8 System and Equipment Classification	
8.1 Overview	

8.2 Classification Standards and Coding

9 Markings and Specifications

9.1 Mark

9.2 Specification Contents

Appendix A (Informative) Application Details of IEC 61603-2, IEC 61603-3 and IEC 61603-6

A.1 Application of IEC 61603-2

A.2 Application of IEC 61603-3

A.3 Application of IEC 61603-6

Reference

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

The following sections have been published.

---Part 1: General Provisions this document replaces GB/T 9389-1988 "Sound Transmission by Infrared Radiation". Compared with GB/T 9389-1988, the main differences are structural adjustments and...

Aside from editorial changes, the main technical changes are as follows.

---The scope of this document has been changed to "free-radiation infrared signal transmission systems" (see Chapter 1, beginning of the 1988 edition);

---The following have been removed. "Purpose", "Wavelength of Infrared Radiation", "Modulation", "Subcarrier Frequency", "Frequency Offset", "Pre-emphasis of Audio Signal", and "Polarity" (see [link]).

(Chapters 2-14 of the 1988 edition)

---Added "Terms, Definitions and Abbreviations" (see Chapter 3);

---Added "Terminology Explanation and General Information" (see Chapter 4);

---Added "Measurement Conditions" (see Chapter 5);

---Added "Specified Characteristics and Measurement Methods" (see Chapter 6);

---Added "Performance Requirements and Recommendations" (see Chapter 7);

---A "Systems and Equipment Classification" has been added (see Chapter 8);

---Added "Marking and Specification Content" (see Chapter 9).

This document is modified to adopt IEC 61603-1:1997 "Transmission of audio and/or video and related signals by means of infrared radiation - Part 1.

General Principles.

Compared with IEC 61603-1:1997, this document has undergone the following structural adjustments.

---Chapter 1 corresponds to IEC 61603-1:1997, section 1.1;

---Chapter 2 corresponds to section 1.2 of IEC 61603-1:1997;

---Chapters 4 through 9 correspond to Chapters 2 through 7 of IEC 61603-1:1997, respectively;

---Table 1 corresponds to Table 2 of IEC 61603-1:1997, and Table 2 corresponds to Table 1 of IEC 61603-1:1997.

The technical differences between this document and IEC 61603-1:1997, and the reasons therefor, are as follows.

---IEC 60065 (see 4.8) has been replaced with the normatively referenced GB 4943.1-2022 to adapt to my country's technical conditions and add...

Operability;

---IEC 60068 (Parts 2 to 6) (see 5.1) has been replaced with the normatively referenced GB/T 2423 (all parts) to...

Adapt to my country's technological conditions and increase operability;

---IEC 60574-4 (see 5.3) and IEC 60268-15 (see Figures 1 and 5.3) have been replaced by the normatively referenced GB/T 14197-2012.

7.4), to adapt to my country's technological conditions and increase operability;

---IEC 60268-1 (see 5.4) has been replaced with the normatively referenced GB/T 12060.1-2017 to adapt to my country's technical conditions.

Increase operability;

---IEC 60825-1 (see 7.1) has been replaced with the normatively referenced GB/T 7247.1-2024 to adapt to my country's technical conditions.

Increase operability;

---Added normative references to IEC 61603 (all parts) (see 4.5.1, 4.6.2), and removed normative references to IEC 61603.

60574-3 (see IEC 61603-1:1997, section 7.4) is used to adapt to my country's technical

conditions and increase operability;

---IEC 60417 (see 9.1) has been replaced with the normatively referenced GB/T 5465 (all parts) to adapt to my country's technical conditions.

Increase operability;

---ISO 7000 (see 9.1) has been replaced with the normatively referenced GB/T 16273.1-2008 to adapt to my country's technical conditions and increase...

Increase operability.

---Includes the technical errata of IEC 61603-1:1997/COR1.1997, with the relevant clauses located in the outer margin.

It was marked with a vertical double line (||);

---IEV845-01-30 (see 4.3.5) has been replaced with GB/T 2900.65-2023 (referenced for informational purposes).

---IEC 61147 has been replaced with IEC 61920:2004 (see 4.5.5.2), which is used for informational purposes.

---Appendix A has removed the content related to Parts 4 and 5 of IEC 61603 (all parts) that have not yet been published, and has also removed...

A.6 "References".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document is under the jurisdiction of the National Technical Committee on Standardization of Audio, Video and Multimedia Systems and Equipment (SAC/TC242).

Introduction

GB/T 9389 "Transmission of audio and/or video and related signals using infrared radiation" is proposed to consist of the following parts.

---Part 1: General Principles. The aim is to establish a unified and universal technical and performance framework for free-radiation infrared signal transmission systems.

Using infrared radiation to transmit audio and/or video and Related Signals Part 1: General Principles