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

GB/T 12060.5-2011

Replacing GB/T 9396-1996

**Sound system equipment -- Part 5: Methods of measurement
for main characteristics of loudspeakers**

声系统设备 第5部分：扬声器主要性能测试方法

(English Translation)

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Table of Contents

Introduction

1 Scope

2 Normative references

3 Measurement Condition

3.1 General Condition

3.2 Measurement Condition

4 Measurement signal

4.1 Overview

4.2 Sinusoidal signal

4.3 Broadband noise signal

4.4 Narrowband noise signal

4.5 Pulse signal

5 3 acoustic environment

5.1 Overview

5.2 Free-field conditions

5.3 Half-space free-field conditions

5.4 Diffusion field conditions

5.5 Simulated free-field conditions

5.6 Analog half-space free-field conditions

6 Unwanted acoustic noise and electrical noise

7 Speakers and microphone position measurement

7.1 Measured under free-field and half-space free-field conditions from the

Location 7.2 under diffuse field conditions the speaker

7.3 Under simulated conditions of free-field position of the speaker and microphone

8 5 measuring equipment

9 Acoustic measurement accuracy of

10-speaker setup

Harmony 10.1 installation speaker unit load

Foreword

GB/T 12060 "Sound system equipment" is divided into the following sections.

- Part 1. General;
- Part 2. General method of calculation and interpretation of the term;
- Part 3. audio amplifier measurement methods;
- Part 4. Methods of measurement microphones;
- Part 5. Methods for measuring performance main speaker;
- Part 6. Auxiliary passive components;
- Part 7. Headphones measurement methods;
- Part 8. AGC device;
- Part 9. Artificial reverberation, time delay and frequency shift measurement means;
- Part 10. Peak program level meters;
- Part 11. Sound system equipment connectors for the interconnection of the application;
- Part 12. Radio and with similar sound system connected applications;
- Part 13. speaker listening tests;
- Part 14. Circular and oval speaker, shape and installation dimensions;
- Part 16. the speech transmission index (STI) objective assessment of the level of speech intelligibility;
- Part 17. Standard volume tables;
- Part 18. Peak program level meters - Digital audio peak level meter.

This part of GB/T 12060 Part 5.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method is equivalent to using IEC 60268-5:2007 "Sound system equipment - Part 5. Loudspeakers" (in English).

For ease of use, this section made the following editorial changes.

- a) instead of as a decimal by decimal comma " , " , " , " ;
- b) Remove IEC 60268-5:2007 Foreword;
- c) 7 is a block diagram of the test equipment "filter network" and "Speaker" represented by the dashed box and labeled "speaker unit or speakers system";

d) in FIG. 8 Fluxmeter to Tesla meter.

This part is GB/T 9396-1996 "The main speaker performance testing methods" amendments.

Section compared with GB/T 9396-1996 The main changes are as follows.

- a) 4.1 "measured signal", 5.1 "acoustic environment", asked to indicate the measurement results;
- b) 11.2 "standard measurement box";
- c) Remove the previous version in Chapter 17, "pure tone hearing check," added 17.1.3 "listening test normal work," 17.4.3 "mechanical noise listening Inspection (cackle) ";
- d) 16.2 impedance curve measurement, the former version of "constant method is generally preferred" to "constant voltage method is generally preferred";
- e) 17.1 Requirements "amplifier should have the ability to supply non-peak voltage clipping of a sinusoidal signal of the speaker. The peak voltage to is less noise voltage test twice. "Former version requirements" amplifier should be able to at least twice the speaker speakers Rated positive Sinusoidal voltage sinusoidal signal ";
- f) Chapter 18, "input power", remove the measurement provisions; 18.4 US predetermined rated sinusoidal voltage, the provisions of the previous version 20.3 US is the maximum sinusoidal voltage;
- g) Chapter 19, "frequency characteristics", the "resonant frequency" carve item "Unit" and "system" two paragraphs; the other columns 19.3 "vented or no Radiation source speaker system tuning frequency ";
- h) 20.1, the amended 22.1.1 will "sound pressure" misprints "voltage" errors the previous version;
- i) 21.1.2.3a), and fed to the speaker pink noise signal is limited to the effective frequency range;
- j) increased 21.1.3 "low frequency measurement correction";
- k) 23.4 "coverage angle (including multiple)";
- l) to Chapter 24, "the magnitude of the nonlinear", Chapter 9 12060.2 consistent with GB/T ;
- m) increased 24.1.3 "higher than the rated input voltage measuring method sinusoidal voltage";
- n) Remove the previous version 26.5 "total noise distortion", 26.6 "n order noise distortion", 26.7 "characteristic of noise distortion"; 24.4 "n times the modulation loss True "in the amended version before the leak wrote" $f_2 \pm f_1$ ";

- o) 24.6 supplemented with "difference frequency distortion" of the content; delete the previous version 26.11 "intermodulation noise";
- p) Chapter 26, "stray field", including static and dynamic components, the first version of the static and cross into points; test specified distance from the previous version Different; delete the previous version 27.2 "Note. use a permanent magnet speakers, usually divided into a cross does not make sense, but the exciting Young Microphone cross is divided into meaningful ";
- q) Chapter 28 "design data", adding "voice coil turns; coil length; magnetic gap height; the maximum stroke X_{p-p} ";
- r) increase the informative Appendix A, Appendix B, Appendix C, Appendix D; delete the previous version of Appendix A (informative annex);
- s) of this section reg number and IEC 60268-5:2007 "Sound system equipment - Part 5. Loudspeakers" (English Version) consistent.

This Part replaces GB/T 9396-1996 "The main speaker performance test methods." this part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This part of the National Audio, video and multimedia systems and equipment Standardization Technical Committee (SAC/TC242) centralized.

This part mainly drafted by. Jiangsu Electronic Information Products Quality Supervision and Inspection Institute, Nanjing University Institute of Acoustics, Guoguang Electric CO., LTD.

1 Scope

This section applies to a speaker sound system, fully handled as a passive element, not including the speaker system with built-in amplifiers.

Note 1: This section the term "Speaker" refers to the speaker unit itself, but also baffled, one or more speakers or horn loudspeakers single cabinet Yuan and related devices such as built-in speaker system dividers, transformers and other passive components thereof.

The purpose of this section is given to explain the characteristics and use of sine, specify the relevant measurement noise or pulse signal of the speaker.

Note 2: The measurement method is given in this section to reflect the characteristics of the speakers appropriately selected.

Note 3: If the same results can be obtained other measurement methods, detailed method used should be given together with the measurement results.

Note 4: The following provisions taking into account Category.