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

GB/T 12060.9-2011

Replacing GB/T 6448-1986; GB/T 6449-1986

**Sound system equipment -- Part 9: Methods of measurement
for artificial reverberation, time delay and frequency shift
equipment**

声系统设备 第9部分：人工混响、时间延迟和移频装置测量方法

(English Translation)

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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 section GB/T Part of 912,060.

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

This part of IEC 60268-9. 1977 "Sound system equipment - Part 9. Artificial reverberation, time delay and frequency shift means" consistency Cheng Non-equivalent degree, and this part of IEC 60268-9. compared to 1977, it gives a detailed measurement method, and an increase in testing equipment, measurement conditions.

This Part replaces GB/T 6448-1986 "artificial reverberation device measuring method" and GB/T 6449-1986 "time delay and frequency shift means Set measurement method. " this part of GB/T 6448-1986 and GB/T 6449-1986 compared to the main changes are as follows.

- a) the integration of GB/T 6448-1986 and GB/T 6449-1986 content into GB/T 12060 in this section;
- b) increase the foreword;
- c) an increase of terms and definitions.

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 section drafted by. China Electronics Technology Group Corporation Institute, the National Radio and Television Product Quality Supervision and Inspection Center, Guangdong Provincial Supervision, Inspection and electrical and electronic products, China Electronics Technology Group Corporation fifty Institute.

1 Scope

GB/T 12060 provisions of this part of the artificial reverberation, time delay and explain the specific features and methods of measurement of the frequency shift means.

This section applies to recording, broadcast and sound reinforcement system for the original sound signal reverb, delay and frequency offset means Production and users of consultation. Does not exclude other methods can give equivalent results.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3240 acoustic measurement commonly used frequency (GB/T 3240-1982, ISO 266. 1975, neq) GB/T 3241-2010 electro-acoustics octave and fractional octave filters (IEC 61260:1995, MOD)

3 Terms and Definitions

The following terms and definitions apply to this document.

Reverberation in room acoustics, the reverberation after the sound source stops sounding, acoustic energy in the room is still ongoing acoustic phenomena.

For artificial reverbs, reverb input means cut off electrical signals, the output signal of the device continues to simulate room reverberation Phenomenon characteristic.

Reverberation time If the signal attenuation exponential law, the reverberation time is to stop the input signal, or sound pressure level attenuation output 60dB required time.

Initial reverberation time and the late reverberation time

initialreverberationtimeandultimatereverberationtime when the signal attenuation index does not comply with the law, the initial reverberation time of the device is based on an output signal as a function of time at the initial value or less 0dB ~ -15dB range represents the average slope of the reverberation time. Late reverberation time is -15dB ~ -40dB range of the mean slope Representative reverberation time.

Linear attenuation deviation lineardeviationofdecay the maximum deviation of the actual level of the output signal attenuating means to its mean line between the slope of the line.

Initial delay time the first time interval reverberation echo signal output of the device (break point) and the input signal (corresponding discontinuity) between (ms).