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

GB/T 33771-2017

**Sound system equipment -- Electro-acoustical transducers --
Measurement of suspension parts**

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Foreword

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

This standard uses the re-drafting method to modify IEC 62459..2010 "sound system equipment electro-acoustic transducer suspension parts measurement".

The main technical differences between this standard and IEC 62459..2010 are as follows.

--- will 3.6,3.7 in the "note" were moved to the text of 3.6,3.7;

--- modify the contents of 3.11, the " $f_0 \sim$

$2\pi K (x_{off}) \Delta t_{mS}$

"Modified to" $f_0 \sim$

$2\pi C (x_{off}) \Delta t_{mS}$

"(See 3.11);

--- modified the contents of 6.3, will use a certain size of the constant DC signal (such as constant displacement x_{dc}) and small AC signal

(Such as displacement x_{ac}) aliasing as an excitation source, measuring the steady-state suspension of the AC component response (such as the return force of the AC part

F_{dc} "is modified to" use a constant DC signal with a certain size (such as constant force F_{dc}) and a small AC signal (such as restoring force

AC part of the F_{ac}) aliasing as the excitation source, measuring the steady-state suspension of the AC component response (such as displacement x_{ac}) "(see 6.3);

--- modified the contents of 6.4, will use a certain size of the AC signal (such as displacement x_{ac}) as the excitation source, measuring the suspension components

Of the AC response (such as the exchange of response F_{ac}) "modified to" use a certain size of the AC signal (such as AC reply force F_{ac})

As an excitation source, measure the AC response of the suspension (eg displacement

xac) "(see 6.4);

--- delete the 7.2.3 "note" footnote;

- modify the contents of 9.1, and amend "(6)" to "(1)" (see 9.1);

--- increase the "use of wide-band sinusoidal signal to measure the displacement amplitude response $X(\omega)$, to find the resonant frequency f_R , get the most

Good measurement setting parameters (measuring voltage, peak displacement) "(see 10.2.3).

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

This standard is nationalized by the National Audio, Video and Multimedia Systems and Equipment Standardization Technical Committee (SAC/TC242).

The drafting of this standard. Nanjing Institute of Acoustics, Zhejiang Tianle Group Co., Ltd., Guangzhou Guoguang Electric Co., Ltd., Suzhou

Shangsheng Electronics Co., Ltd.

1 Scope

This standard specifies the measurement of the suspension components before the electro-acoustic transducer assembly, such as centering, folding, diaphragm or cone performance of the relevant parameters

Number and measurement methods. The measurement results can be used for engineering design and quality control. This standard can improve the manufacturer of the suspension parts and the speaker manufacturer

Consistency of measurement results.

This standard applies to the measurement of the suspension components of electroacoustic transducers (eg loudspeakers). Based on the linear model and the nonlinear model of the suspension component,

Static measurement method and dynamic measurement method were used to measure the relevant parameters.

2 normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article

Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 12060.1-2017 Sound System Equipment Part 1 Overview (IEC 60268-1. 1985, MOD)

3 terms and definitions

The following terms and definitions apply to this document.

3.1

Suspension parts

A centering piece made of a dipped cloth, or a loop made of rubber, foamed material, paper or cloth.

3.2

Displacement

The distance at which the inner edge of the suspension member moves in the vertical direction.

3.3

Peak displacement

x_{peak}

The peak of displacement at the resonant frequency in the dynamic measurement.

3.4

Driving force

The restoring force, the frictional force and the inertia of the suspension member and its inner edge fixture.

3.5

Transfer function

$H(f)$

The ratio of the displacement spectrum $X(j\omega) = FT \{x(t)\}$ to the driving force spectrum $F(j\omega) = FT \{F(t)\}$ is defined by the formula (1)