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NATIONAL STANDARD OF THE
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**Instruments for the Measurement of Sound Intensity –
Measurement with Pairs of Pressure Sensing Microphones**

声强测量仪 用声压传声器对测量

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Foreword

This Standard was formulated according to the international standard IEC 1043 *Electroacoustics – Instruments for the Measurement of Sound Intensity – Measurement with Pairs of Pressure Sensing Microphones* (First Edition) 1993-12. The technical contents are equivalent with the international standard IEC 1043. The formulation principle shall follow GB/T 1.1-1993 *Directives for the work of standardization - Unit 1: Drafting and presentation of standards - Part 1: General rules for drafting standards*, so that adapt to the requirements for international trade, technical and economic exchanges.

The Annex A of this Standard is normative.

The Annexes B, C, D, and E of this Standard are informative.

This Standard was proposed by the Ministry of Electronics Industry of the People's Republic of China.

This Standard shall be under the jurisdiction of National Technical Committee on Electroacoustics and Audiovisual Equipment of Standardization Administration of China.

Drafting organization of this Standard: The Third Research Institute of the Ministry of Electronics Industry

Chief drafting staffs of this Standard: Pan Yuewu, Li Huan, Luan Lizhu, and Fu Xiaoling.

Instruments for the Measurement of Sound Intensity – Measurement with Pairs of Pressure Sensing Microphones

1 Scope

The primary purpose of this Standard is to ensure the accuracy of measurements of sound intensity applied to the determination of sound power in accordance with GB/T 16404. To meet the requirements of GB/T 16404, instruments are required to analyze the sound intensity in one-third octave or octave bands, and optionally to provide A-weighted band levels. They are also required to measure sound pressure level in addition to sound intensity level to facilitate the use of the field indicators described in GB/T 16404.

This Standard only applies to instruments which detect sound intensity by pairs of spatially separated pressure sensing microphones.

This Standard specifies performance requirements for instruments used for the measurement of sound intensity, and their associated calibrators.

The requirements are intended to reduce to a practical minimum any differences in equivalent measurements made using different instruments, including instruments comprising probes and processors from different manufacturers.

2 Normative References

The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. At the time of publication, the editions indicated are valid. All standards are subject to revision. The parties who are using this Standard shall explore the possibility of using the latest version of the following standards.

GB/T 3241-1998 Octave-band and fractional-octave-band filters (eqv IEC 1260:1995)

GB/T 3785-1983 Electric, sonic properties and measuring methods for sound level meters

GB/T 15173-1994 Sound calibrators (eqv IEC 1014:1989)

GB/T 16404-1996 Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points (eqv ISO 9614-1:1993)

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