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

GB/T 15952-2010

Replacing GB/T 15952-1995

**Electroacoustics -- Specifications for personal sound exposure
meters**

电声学 个人声暴露计规范

(English Translation)

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Foreword

This standard is identical with IEC 61252:2002 "electro-acoustics personal sound exposure meter specifications" (in English). This standard references the following countries the corresponding standard home contents and IEC 61252:2002 "electro-acoustics personal sound exposure meter specifications" (English Version) Content equivalents.

a) GB/T 3238-1982 Acoustics volume level and a reference value (neqISO 1683. 1983);

b) GB/T 3240-1982 acoustical measurement commonly used frequency (neqISO 266. 1975);

c) GB/T 3785-1983 sound level meter Electricity, Sound Performance and Test Methods (neq IEC 60651. 1979);

Evaluation of hearing impairment d) GB/T 14366-1993 Acoustics measurements and noise occupational noise-induced (eqvISO 1999.1990).

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

a) instead of as a decimal by decimal comma " , " ;

b) use the "standard" instead of "this International Standard";

c) Remove the IEC 61252:2002 in the preface, in which the individuals concerned and the sound exposure meters and integrating sound level meter is the difference between the contents of cooperation and this standard the "Introduction";

d) Normative documents according to the introductory phrase of GB/T 1.1-2000 rewritten;

e) The IEC 61252. "Definitions" section of the 2002 merger of the two key words, according to GB/T 1.1-2000 requirements rewritten;

f) 15.1.2 "Before release of the amendments" is replaced by "Prior to this release." this standard replaces GB/T 15952-1995 "personal sound exposure meters." this standard and GB/T 15952-1995 compared to the main changes are as follows.

a) the standard name was changed to "electro-acoustics for personal sound exposure meters norms";

b) "Introduction" section of GB/T 1.1-2000 requirements rewritten;

c) Remove the "IEC foreword";

d) "Introduction," added the former "IEC foreword" in relation to personal sound exposure meters and integrating sound level meter difference;

e) normative reference list file, add about six electromagnetic compatibility standard and GB/T 21230-2007 (ISO 9612:1997, IDT) and other documents;

f) increased "(personal sound exposure meter) reference bearing" terms and definitions;

g) Chapter 14 of u) item from the 1995 edition of the u), v) the content of the two merger;

h) In Chapter 14, "User's Guide," added the first w) to cc);

i) an increase of Chapter 15, "electrostatic and electromagnetic compatibility requirements and test procedures";

j) Added Appendix C "emission limits." this standard Annex A, Annex B and Annex C is informative appendix.

The standard proposed by the Ministry of Industry and Information Technology of the

People's Republic of China.

This standard by the National Standardization Technical Committee electro-acoustics (SAC/TC23) centralized.

This standard was drafted. Hengyang Heng Instrument Electric Co., Ltd., China Institute of Metrology, red acoustic equipment factory Jiaying factory, measurement Shenzhen Quality Inspection Institute.

Introduction

The intent of this standard, personal sound exposure meter is used to measure sound exposure, the instantaneous A-weighted sound pressure frequency square time integral. Its work as is the principle according to GB/T 17181 measured sound exposure level is based, that is, "and other energy exchange rate", the integration time constant sound level doubles (Or halved) will sound exposure doubled (or halved). Similarly, the integration time constant of the input sound level increases (or decreases) 3dB, the sound exposure Doubled (or halved).

Noise dosimeter is usually designed to indicate the percentage of statutory limit noise dose. Limit its definition of national regulations vary, and will change. In order to facilitate international comparison with the conventional recording sound exposure value represented by this standard specifies a quadratic Pa hour indication sound storm Lu instruments. As long as the manufacturer specified will be shown value is converted to quadratic Pa hour method, it allows outside Pa hours quadratic Other Unit indication sound exposure, for example, display fraction or percentage of the "dose" --- the provisions to sound quadratic Pa units of hours of exposure.

Personal sound exposure meter main application is to measure human exposure to sound near the head, for example, according to GB/T 14366 and other standards to evaluate possible hearing Power loss. Personal sound exposure meter microphone can be worn on the shoulder, collar, or other parts of your ear. For a number of specific cases, for example, in the factory, the incident angle of the sound will be great changes during the working day, the sound of the instrument worn on the body indicated may be exposed and personnel Measurements at different time of absence. When the sound when the body is not present estimates of exposure, it should consider wearing affect the body's personal sound exposure meter.

The standard for personal sound exposure meter standard and GB/T 17181-1997 comparable specification for integrating sound level meter in a practical range Consistent. Compared with the 1997 release of GB/T 17181 in the specification, there are four main differences.

a) measures and displays sound exposure instead of the equivalent continuous sound pressure level or frequency weighted sound exposure level;

- b) the accuracy of short duration signal points and the square with the provisions of sound exposure duration 1ms ~ 10ms of constant amplitude of 4kHz Repeat measurement burst tone sequence, rather than the measurement of duration ranging from single 4kHz horn tone bursts of 1ms ~ 1s in response, each of the burst tone is accompanied by its own continuous-phase, low 4kHz background signal;
- c) personal sound exposure meter specifications include positive and negative unipolar acoustic impulse response difference between the exposure limit values are shown;
- d) does not require the wearing of the human body sound exposure meter used microphone directivity requirements.

Electro-acoustics personal sound exposure meters Specification

1 Scope

1.1

standard provides a level of accuracy of the personal sound exposure meter electric, acoustic performance requirements, when A-weighted sound pressure level range is 80dB ~ 130dB, the nominal frequency range of 63Hz ~ 8kHz, this level of accuracy and compliance with GB/T 17181 requirements for Type 2 Points Sound Level Meter fairly.

1.2

This standard applies to the measurement of steady, intermittent, fluctuating, A-weighted sound or irregular pulse sound exposure instrument. Comply with this Standard Specification for instrument worn on the body measurement specified sound exposure. Measurement of workplace sound exposure, according to GB/T 14366 and GB/T 21230 Determination of occupational noise exposure may be useful.

1.3

sound exposure in a given position, by instantaneous frequency-weighted sound pressure squared integrated over time, it included a sound pressure of both its duration Physical measure.

1.4

Instrument performance deviates from a predetermined tolerance level on behalf of a specific instrument performance design goals. Within a specified range of environmental conditions, requirements Within this standard tolerance of personal sound exposure meter work.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including