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**Calibration Specification for Measuring Amplifiers
(English Translation)**

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Measuring amplifier calibration specification

1 Scope

This specification applies to the calibration of measuring amplifiers for acoustic and vibration measurements.

2 Citations

This specification refers to the following documents GB/T 3102.5-1993 "Electrical and magnetic quantities and units" GB/T 3102.7-1993 "Amount and unit of acoustics" JJF 1001-1998 General Terms and Definitions JJF 1034-2005 "Acoustic Metrology Terms and Definitions" JJF 1059-1999 "Measurement Uncertainty Evaluation and Representation" JJG188-2002 "Sound Level Meter Verification Regulations" Use of this specification should be done with the current valid version of the above cited documents.

3 terms and units of measure this specification uses the terms and definitions in JJF 1001-1998, JJF 1034-2005, and JJG188-2002.

This specification uses the quantities and units specified in GB/T 3102.5-1993 and GB/T 3102.7-1993.

4 Overview

The measuring amplifier is a wide-range, low-noise meter with specified time weighting, frequency weighting and voltage indication functions.

Device. It is mainly used for engineering measurement of acoustics and vibration, as well as verification and calibration of acoustic and vibration measuring instruments.

Usually composed of amplifiers, attenuators, frequency weighting, time weighting, filters, detectors, and indicators.

5 Measurement characteristics

5.1 Machine sensitivity the measurement amplifier's indication of a 50mV, 1kHz sinusoidal electrical signal should generally be (94.0 ± 0.2) dB. 1 During the calibration, the change in sensitivity of the whole machine should generally not exceed ± 0.02 dB.

5.2 Frequency weighting the measurement amplifier should have A weighting and can also have C weighting. Measuring amplifier's A-weighting and C-weighting and the tolerances are shown in Table 1.

1 "General" in this chapter means that the measurement performance indicators mentioned are for reference only.