

First edition
2004-05-15

Acoustics — Reference zero for the calibration of audiometric equipment —

Part 8: Reference equivalent threshold sound pressure levels for pure tones and circumaural earphones

*Acoustique — Zéro de référence pour l'étalonnage d'équipements
audiométriques —*

*Partie 8: Niveaux de référence équivalents de pression acoustique
liminaire pour les écouteurs à sons purs circumauraux*



Reference number
ISO 389-8:2004(E)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 389-8 was prepared by Technical Committee ISO/TC 43, *Acoustics*.

ISO 389 consists of the following parts, under the general title *Acoustics — Reference zero for the calibration of audiometric equipment*:

- *Part 1: Reference equivalent threshold sound pressure levels for pure tones and supra-aural earphones*
- *Part 2: Reference equivalent threshold sound pressure levels for pure tones and insert earphones*
- *Part 3: Reference equivalent threshold force levels for pure tones and bone vibrators*
- *Part 4: Reference levels for narrow-band masking noise*
- *Part 5: Reference equivalent threshold sound pressure levels for pure tones in the frequency range 8 kHz to 16 kHz*
- *Part 6: Reference equivalent threshold sound pressure levels for acoustic test signals of short duration*
- *Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions*
- *Part 8: Reference equivalent threshold sound pressure levels for pure tones and circumaural earphones*

Part 9 on preferred test conditions for the standardization of reference equivalent threshold sound pressure levels or vibratory force levels, is under preparation.

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Introduction

This part of ISO 389 has been established in order to be able to use the same earphone for pure tone audiometry in the frequency range 125 Hz to 16 000 Hz. It specifies reference values from 125 Hz to 8 000 Hz. ISO/TR 389-5 specifies values from 8 000 Hz to 16 000 Hz.

The reference values are based on information provided by laboratories in different countries, representing the most reliable data available at this time.

At present, reference values for only one type of circumaural earphone, SENNHEISER HDA 200, are available. This earphone provides a good attenuation of background noise and its frequency response is without pronounced resonances on a human ear as well as on an ear simulator.