

Australian Standard™

**Electroacoustics—Audiological
equipment**

**Part 4: Equipment for extended high-
frequency audiometry**

[IEC title: Audiometers, Part 4: Equipment for extended high-
frequency audiometry]

This Australian Standard was prepared by Committee AV-003, Acoustics Human Effects. It was approved on behalf of the Council of Standards Australia on 31 July 2002 and published on 2 September 2002.

The following are represented on Committee AV-003:

Association of Australian Acoustical Consultants
Association of Consulting Engineers Australia
Australian Acoustical Society
Australian Chamber of Commerce and Industry
Australian Hearing
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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee AV-003, Acoustics Human Effects to be used as a means to demonstrate compliance with the relevant essential principles in new medical device legislation.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

This Standard is identical with and has been reproduced from IEC 60645-4:1994, *Audiometers, Part 4: Equipment for extended high-frequency audiometry*.

The objective of this Standard is to specify requirements for audiometric equipment designed for use in pure tone audiometry to ensure that extended high-frequency audiometry performed on a given human ear with different types of equipment which comply with this Standard give substantially similar results.

This Standard provides for the use of the following Australian Standard as an equivalent to a particular International Standard referenced herein:

<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO	AS
266 Acoustics—Preferred frequencies	2533 Acoustics—Preferred frequencies for measurements

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'this part of IEC 645' should read 'this Australian Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

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INTRODUCTION

This International Standard describes equipment which is designed for the measurement of hearing in the frequency range from 8 000 Hz to 16 000 Hz. Part 1 of IEC 645 specifies the requirements for pure tone audiometers with frequencies within the conventional range for audiometry from 125 Hz to 8 000 Hz. Many of the requirements are common for both frequency ranges and therefore this standard includes only such requirements that are specific to the high-frequency range.

AUSTRALIAN STANDARD

Electroacoustics—Audiological equipment

Part 4:

Equipment for extended high-frequency audiometry

1 Scope

This International Standard specifies requirements for audiometric equipment designed for use in pure tone audiometry in the frequency range from 8 000 Hz to 16 000 Hz, in addition to those that are applicable and specified in IEC 645-1.

The purpose of the standard is to ensure that extended high-frequency audiometry performed on a given human ear with different types of equipment which comply with this standard shall give substantially similar results.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 645. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 645 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 645-1: 1992, *Audiometers – Part 1: Pure tone audiometers*

ISO 389-7: *Acoustics – Reference zero for the calibration of audiometric equipment – Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions (Revision of ISO 226:1987)**

ISO 8253-1: 1991, *Acoustics – Audiometric test methods – Part 1: Basic pure tone air and bone conduction threshold audiometry*

ISO 266: 1975, *Acoustics – Preferred frequencies for measurements*

ISO 8253-2: 1992, *Acoustics – Audiometric test methods – Part 2: Sound Field Audiometry with pure tone and narrow-band test signals*

3 Explanation of terms

For the purpose of this standard the following terms apply:

3.1 extended high-frequency: An audiometric test frequency in the range from 8 000 Hz to 16 000 Hz.

NOTE – The frequency 8 000 Hz is considered both as the highest frequency in the conventional range and as the lowest frequency of the extended high-frequency range.

* At present at the stage of draft.