

AS 3757—1990
ISO 9296: 1988

Australian Standard[®]

**Acoustics—Declared noise
emission values of computer and
business equipment**

This Australian Standard was prepared by Committee AV/7, Acoustics—Noise from Office and Household Equipment. It was approved on behalf of the Council of Standards Australia on 28 November 1989 and published on 7 May 1990.

The following interests are represented on Committee AV/7:

Association of Consulting Engineers Australia
Australian Acoustical Society
Australian Consumer Association
Australian and New Zealand Environment Council
Australian Electrical and Electronic Manufacturers Association
CSIRO, Division of Applied Physics

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

For details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard[®]

**Acoustics—Declared noise
emission values of computer and
business equipment**

First published as AS 3757—1990.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 6076 2

PREFACE

This Standard was prepared by the Standards Australia Committee on Acoustics—Noise from Office and Household Equipment.

It is identical with and has been reproduced from ISO 9296 (1988), *Acoustics—Declared noise emission values of computers and business equipment*.

For the purpose of this Australian Standard, the ISO text should be modified as follows:

References. The references to other publications should be replaced by references to Australian Standard.

<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO	AS
7779 Acoustics—Measurement of airborne noise emitted by computer and business equipment	3755 Acoustics—Measurement of airborne noise emitted by computer and business equipment

CONTENTS

	<i>Page</i>
0 Introduction	3
1 Scope and field of application	3
2 References	4
3 Definitions	4
4 Determination of the declared noise emission values	5
5 Presenting declared noise emission values	6
6 Verification of the declared noise emission values	6
 Annexes	
A Examples of noise emission declarations	8
B Character of noise	9

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

Acoustics—Declared noise emission values of computer and business equipment

0 Introduction

Information on acoustic noise emission of computers and business equipment is needed by users, planners, manufacturers and authorities. This information is required for comparison of the noise emissions from different products and for installation acoustics planning and may be used for relating to workplace noise exposure requirements.

In order for equipment noise emission values to be useful, uniform methods are necessary for the following purposes:

- Measuring noise emission values

ISO 7779 specifies uniform methods for measuring noise emission from computers and business equipment when operating under specified conditions which are typical of actual use.

- Determining the noise emission value to be declared

ISO 4871 and its annex A give guidelines for the preparation of standards for declaring noise emission values for declaration purposes, and ISO 7574 gives statistical methods for such determination.

- Presentation of declared noise emission values

For the presentation of declared noise emission values, it is of prime importance to declare sound power levels, L_{WA} . It is recognized, however, that users still desire information on sound pressure level, L_p . Therefore, this International Standard specifies that both quantities shall be declared. In order to avoid any misunderstanding between presentation of sound power levels in decibels (reference: 1 pW) and sound pressure levels in decibels (reference: 20 μ Pa), this International Standard expresses sound power level emission values in bels and sound pressure level emission values in decibels.

Optional methods for determination and presentation of subjective characteristics of noise emission are presented in Annex B.

- Verification of declared noise emission values

ISO 7574 gives methods for the verification of a declared noise emission value. In that International Standard, the procedure is restricted to verifying declared sound power levels only.

1 Scope and field of application

This International Standard applies to computer and business equipment.

This International Standard specifies

- the method for determining the declared noise emission values;
- acoustical and product information to be given in technical documents supplied to users by the manufacturer;
- the method for verifying the declared noise emission values given by the manufacturers.

The uniform methods in this International Standard use the noise data obtained in accordance with ISO 7779 and the procedures specified in ISO 4871 and ISO 7574.

The basic declared noise emission values are the declared A-weighted sound power level, $L_{WA,d}$ (a statistical maximum value corresponding to L_c in ISO 7574), and the declared A-weighted sound pressure level, L_{pAm} (a mean value), at the operator or bystander positions.