

Australian Standard™

**Sound systems for emergency purposes
(IEC 60849:1998 MOD)**



**STANDARDS
AUSTRALIA**

Currently in preview, click buy full version

This Australian Standard was prepared by Committee FP-002, Fire Detection, Warning, Control and Intercom Systems. It was approved on behalf of the Council of Standards Australia on 11 March 2004 and published on 23 April 2004.

The following are represented on Committee FP-002:

Audio Engineering Society
Australasian Fire Authorities Council
Australian Building Codes Board
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Government Analytical Laboratories, Scientific Services Laboratory
Australian Industry Group
Australian Institute of Building Surveyors
Deafness Forum of Australia
Department of Defence (Australia)
Fire Protection Association Australia
Institute of Security Executives
National Electrical and Communications Association
Property Council of Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.org.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 03327.

Australian Standard™

**Sound systems for emergency purposes
(IEC 60849:1998 MOD)**

Originated as part of AS 2220—1978.
Previous edition AS 2220.1—1989.
Revised and redesignated as AS 60849—2004.

COPYRIGHT

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5890 8

PREFACE

This Standard was prepared by the Standards Australia Committee FP-002, Fire Detection, Warning, Control and Intercom Systems to supersede, in part (emergency warning portions), AS 2220.1—1989, *Emergency warning and intercommunication systems in buildings—Equipment, design and manufacture*.

The objective of this Standard is to specify the equipment requirements for a sound system used to assist in the safe evacuation of building occupants in the event of a fire alarm or other emergency.

This Standard is an adoption with national modifications and has been reproduced from IEC 60849:1998, *Sound systems for emergency purposes*, and has been varied as indicated to take account of Australian conditions. The national modifications include a reference to installation requirements contained in AS 1670.4 and maintenance requirements contained in AS 3551 in preference to the requirements in IEC 60849.

Variations to IEC 60849:1998 are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC text, tables and figures, which, for the purposes of this Australian Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (**example**). Added figures are not themselves shaded, but are identified by a shaded border.

An optional test for c.i.e. required to operate outside the range -5°C to $+40^{\circ}\text{C}$ is specified in Clause 5.7 c).

AS/NZS 3100 shall be read in conjunction with this Standard.

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) A full point should be substituted for a comma when referring to a decimal marker.

The term 'informative' has been used in this Standard to define the application of the Appendix to which it applies. An 'informative' Appendix is only for information and guidance.

This Standard incorporates commentary on some of the clauses. The commentary directly follows the relevant clause, is designated by 'C' preceding the clause number and is printed in italics in a box. The commentary is for information only and does not need to be followed for compliance with the Standard.

CONTENTS

	<i>Page</i>
1 Scope and object	1
1.1 Scope	1
1.2 Object	1
2 Normative references	1
3 Definitions	2
3.1 Area of coverage	2
3.2 Loudspeaker zone	3
3.3 Information	3
3.4 Audibility	3
3.5 Intelligibility	3
3.6 Clarity	3
3.7 Alarm	3
3.8 Warning	3
3.9 Danger	3
3.10 Emergency	3
3.11 Emergency zone	3
3.12 Critical signal path	3
3.13 Emergency detection system	4
3.14 Voice alarm system	4
4 General system requirements	4
4.1 Principal features	4
4.2 Responsible person	5
4.3 Priorities	5
4.3.1 Classification of priorities	5
4.3.2 Operational priorities	6
4.4 Safety requirements	6
5 SYSTEM TECHNICAL REQUIREMENTS	6
5.1 Speech intelligibility	6
5.2 Automatic status indication	7
5.3 Automatic fault monitoring	7
5.4 Monitoring of software controlled equipment	8
5.5 Interface with emergency detection system	8
5.6 Secondary power supply	9
5.7 Climatic and environmental conditions	10
5.8 Marking and symbols for marking	10
5.9 Electrical matching values	10
5.10 Connectors	10
6 Installation requirements	11
7 System operation	11
7.1 Instructions for operation	11
7.2 Records to be kept	11
7.3 Maintenance	12
7.3.1 General	12
7.3.2 Maintenance instructions	12

	<i>Page</i>
Annex A (Informative) Measurement of speech intelligibility	13
Annex B (Normative) (Informative) Measurement method	16
Annex C (Informative) Attention drawing audible signals	18
Annex D (Informative) Bibliography	20

Currently in preview, click buy full version

STANDARDS AUSTRALIA

Australian Standard

Sound systems for emergency purposes
(IEC 60849:1998 MOD)

Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

1 Scope and object

1.1 Scope

This International Standard applies to sound reinforcement and distribution systems to be used to effect a rapid and orderly mobilization of occupants in an indoor or outdoor area in an emergency situation.

This standard applies to systems using tone signals and to systems with voice announcements for emergency purposes.

NOTES

- 1 The use of the system for normal sound reinforcement and distribution systems purposes under nonhazardous circumstances is not excluded.
- 2 It is recommended that the system, when used for emergency purposes, should form part of a complete facility (equipment, operating procedures and training programmes) for the control of emergencies.
- 3 Sound systems for emergency purposes may be the subject of approval by relevant authorities.

1.2 Object

The purpose of this standard is to specify the performance requirements for sound systems which are primarily intended to broadcast information for the protection of lives within one or more specified areas in an emergency.

The standard gives the characteristics and the methods of test necessary for the specification of the system.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision and parties to agreements based on this International Standard 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.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

AS 1670.4, *Fire detection, warning, control and intercom systems—System design, installation and commissioning Part 4: Sound systems and intercom systems for emergency purposes*