

Australian Standard<sup>®</sup>

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**Emergency warning and  
intercommunication systems in  
buildings**

**Part 1: Equipment design and  
manufacture**

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This Australian Standard was prepared by Committee BD/56, Emergency Warning and Intercommunication Systems in Buildings. It was approved on behalf of the Council of Standards Australia on 4 May 1989 and published on 11 September 1989.

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The following interests are represented on Committee BD/56:

Association of Consulting Engineers, Australia  
Australian Assembly of Fire Authorities  
Australian Fire Protection Association  
Australian Uniform Building Regulations Coordinating Council  
Building Owners and Managers Association of Australia  
Commonwealth Fire Board  
Department of Administrative Services—Construction Group  
Department of Defence  
Electrical Contractors Associations of Australia  
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## PREFACE

This Standard was prepared by the Standards Australia Committee BD/56, Emergency Warning and Intercommunication Systems in Buildings. It is Part 1 of a two-part Standard, the parts of which are as follows:

AS

2220 *Emergency warning and intercommunication systems in buildings*  
*Part 1: Equipment design and manufacture (this Standard)*  
*Part 2: System design, installation and commissioning*

This Standard together with AS 2220.2 superseded AS 2220—1978, *Emergency warning and intercommunication systems for buildings*.

This Standard provides more detailed requirements than AS 2220—1978 but it does not differ in the overall intent of that Standard.

AS 1851, *Maintenance of fire protection equipment, Part 10: Emergency warning and intercommunication systems*, specifies the periodic inspection and maintenance requirements to ensure continued effective functioning of the emergency warning and intercommunication systems designed and installed in accordance with AS 2220.

This Standard does not seek to define the buildings in which these systems are to be used as it is considered that this is the responsibility of the Building Authority in the area concerned.

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## FOREWORD

An emergency warning and intercommunication system is installed in a building for the purpose of enabling the orderly evacuation of the building in the event of an emergency. To achieve this aim, it is essential that the emergency warning and intercommunication system has the following capabilities as appropriate:

- (a) Provision for manual and automatic activation.
- (b) On activation, the ability to alert wardens with an audible alarm. (A visual alarm may also be required.)
- (c) Where both an emergency warning system and an emergency intercommunication system are required to comply with AS 2220, these systems are integrated to provide a positive means of intercommunication between the House Warden and the various floors or Zone Wardens to enable the orderly evacuation of the building.
- (d) Emission of audible or visible signals, or both, that will either -
  - (i) alert the occupants; or
  - (ii) order the occupants to vacate the building.
- (e) Ease of operation.
- (f) Continuously operable under the conditions of the hazard.

## STANDARDS AUSTRALIA

## Australian Standard

## Emergency warning and intercommunication systems in buildings

## Part 1: Equipment design and manufacture

## SECTION 1. SCOPE AND GENERAL

**1.1 SCOPE.** This Standard sets out minimum requirements for the design and manufacture of the equipment used in emergency warning and intercommunication systems, which are installed in buildings to ensure warning in the event of an emergency, and assist in the subsequent orderly evacuation of the building.

**1.2 APPLICATION.** Equipment for emergency warning and intercommunication systems in buildings shall comply with Sections 2, 3 and 4 of this Standard.

NOTE: Information which should be supplied when specifying an EWIS is shown in Appendix B.

**1.3 REFERENCE DOCUMENTS.** The following documents are referred to in this Standard:

## AS STANDARDS

1044	Limits of electromagnetic interference for electrical appliances and equipment
1076	Code of practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications)
1076.1	Part 1: Basic requirements
1099	Basic environmental testing procedures for electrotechnology
1102	Graphical symbols for electrotechnical documentation
1102.101	Part 101: General information and general index
1102.105	Part 105: Semiconductor and electron tubes
1560	Recommendations for the design and use of components intended for mounting on printed circuit boards
1603	Automatic fire detection and alarm systems
1603.4	Part 4: Control and indicating equipment
1931	High voltage testing techniques
1931.1	Part 1: General definitions, test requirements and test procedures and measuring devices
1939	Classification of degrees of protection provided by enclosures of electrical equipment
2030	Manually operating fire-alarm call points
2220	Emergency warning and intercommunication systems in buildings
2220.2	Part 2: System design, installation and commissioning
2481	All-or-nothing electrical relays (instantaneous and timing relays)
2546	Printed boards
2546.1	Part 1: General requirements and test methods
2546.3	Part 3: Design and use

2547	Semiconductor devices
2547.2.1	Part 2.1: Integrated circuits—General
2547.2.2	Part 2.2: Integrated circuits—Digital
3000	SAA Wiring Rules
AUSTEL REG 2	Interworking and non-interference requirements for customer premises equipment attached to the public switched telephone network
REG 3	General requirements for customer switching systems attached to the public switched telephone network
IEC 249	Base materials for printed circuits
249-2	Part 2: Specifications
801	Electromagnetic compatibility for industrial process measurement and control equipment
801-3	Part 3: Radiated electromagnetic field requirements
IEC 516	Tests for flammability of plastic materials for parts in devices and appliances

## APPROVAL AND TEST SPECIFICATIONS

AS 3100	Approval and test specification for definitions and general requirements for electrical materials and equipment
3108	Isolating transformers and safety isolating transformers
3108.1	Part 1: General requirements
3108.2	Part 2: Supplementary requirements—Isolating transformers
3108.3	Part 3: Supplementary requirements—Safety isolating transformers
3126	Extra-low voltage transformers
3159	Electronic sound and vision equipment
3250	Mains operated electronic and related equipment for household and similar general use

**1.4 DEFINITIONS.** For the purpose of this Standard, the definitions below apply.

**1.4.1 Alarm system**—facility provided in a building to give an alarm in the event of fire, civil commotion, bomb threat, leakage of toxic or noxious fumes, structural damage, or other emergency.

**1.4.2 Alarm signal**—a signal given by fire alarm, or other alarm system, at the fire indicator panel (FIP) or other point at the building, and to places outside the building, e.g. to a fire brigade.