



BSI Standards Publication

## Fire detection and fire alarm systems for buildings –

Part 8: Code of practice for the design, installation, commissioning and maintenance of voice alarm systems

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## Foreword

### Publishing information

This Part of BS 5839 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 March 2013. It was prepared by Subcommittee FSH/12/5, *Fire alarm devices, voice alarm evacuation subsystems and emergency voice communications*, under the authority of Technical Committee FSH/12, *Fire detection and fire alarm systems*. A list of organizations represented on this committee can be obtained on request to its secretary.

### Supersession

This part of BS 5839 supersedes BS 5839-8:2008, which is withdrawn.

### Information about this document

This new edition introduces a number of technical changes. It does not constitute a full revision of the documents, which will be undertaken in due course. The principal changes introduced by this new edition are as follows.

- a) A new subclause **14.2** has been added to give recommendations on the placement of loudspeakers.
- b) New recommendations for audibility have been added to subclause **22.1**.
- c) The text on cables and wiring (Clause **27**) has been updated.
- d) The text on radio-linked systems (Clause **26**) has been modified to remove conflicts with BS EN 54-25:2008.
- e) The commentary to Clause **40** has been modified to include more guidance on system testing and a new item **40.1** has been added to subclause **40.1**.
- f) Annex C has been modified to avoid the assumption of an amplifier efficiency of 50% (class AB).
- g) The term "responsible person" has been removed and replaced with references to "premises management" to avoid confusion with the term defined in legislation.

Where appropriate, this standard refers to BS EN 54 product standards, particularly those that apply to components of voice alarm systems.

### Use of this document

As a code of practice, this standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this standard is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

### Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

The word “should” is used to express recommendations of this standard. The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the Clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

#### **Contractual and legal considerations**

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

# Section 1: General

## 1 Scope

This standard gives recommendations for the design, installation, commissioning and maintenance of voice alarm systems which automatically broadcast speech or warning tones, in response to signals from their associated fire detection and fire alarm systems. It also covers systems that include a manual facility for the transmission of live voice messages as well as automatically generated messages for emergency purposes.

*NOTE 1* The fire detection and fire alarm systems themselves are covered by BS 5839-1.

Systems that depend solely upon manual intervention are not covered by this standard. However, this standard can be used for guidance in the design, installation, commissioning and maintenance of such systems.

*NOTE 2* This standard applies to extensions and alterations to existing systems, at least in respect of the design, installation, commissioning, maintenance, and the certification of the new work, albeit that the extended or altered system might not, overall, conform to this standard.

*NOTE 3* BS 7827 provides further recommendations in respect of sports venues.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 4678-4, *Cable trunking – Part 4: Specification for cable trunking made from insulating material*

BS 5839-1:2013, *Fire detection and fire alarm systems for buildings – Part 1: Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises*

BS 6651:1995+A1:2005, *Code of practice for protection of structures against lightning*

BS 7621-1, *Electric cables – Specification for 300/500 V fire resistant screened cables having low emission of smoke and corrosive gases when affected by fire – Part 1: Multicore and multipair cables*

BS 7671, *Requirements for electrical installations – IET Wiring Regulations*

BS 7827, *Code of practice for designing, specifying, maintaining and operating emergency sound systems at sports venues*

BS 7846, *Electrical cables – 600/1 000 V armoured fire-resistant cables having thermosetting insulation and low emission of smoke and corrosive gases when affected by fire*

BS 8434-2, *Methods of test for assessment of the fire integrity of electric cables – Part 2: Test for unprotected small cables for use in emergency circuits – BS EN 50200 with a 930 °C flame and with water spray*

BS 9999, *Code of practice for fire safety in the design, management and use of buildings*

BS EN 54-3, *Fire detection and fire alarm systems – Part 3: Fire alarm devices – Sounders*

BS EN 54-4, *Fire detection and fire alarm systems – Part 4: Power supply equipment*