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BS 5839-9:2021



BSI Standards Publication

Fire detection and fire alarm systems for buildings

Part 9: Code of practice for the design, installation,
commissioning and maintenance of emergency voice
communication systems

bsi.

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Published by BSI Standards Limited 2021

ISBN 978 0 539 13563 3

ICS 13.220.20; 13.320

The following BSI references relate to the work on this document:

Committee reference FSH/12/5

Draft for comment 20/30416719 DC

Amendments/corrigenda issued since publication

Date	Text affected
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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 August 2021. It was prepared by Subcommittee FSH/12/5, *Alarm devices, voice alarm evacuation sub-systems and emergency voice communications*, under the authority of Technical Committee FSH/12, *Fire detection and alarm systems*. A list of organizations represented on these committees can be obtained on request to the committee [BS 2646-5:1993](#) manager.

Supersession

This part of [BS 5839](#) supersedes [BS 5839-9:2011](#), which is withdrawn.

Relationship with other publications

[BS 5839](#) is published in the following parts:

- Part 1: *Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises;*
- Part 3: *Specification for automatic release mechanisms for certain fire protection equipment;*
- Part 6: *Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises;*
- Part 8: *Code of practice for the design, installation, commissioning and maintenance of voice alarm systems;* and
- Part 9: *Code of practice for the design, installation, commissioning and maintenance of emergency voice communication systems.*

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- clarification of the three primary applications for emergency voice communication (EVC) systems, namely, fire telephone, refuge intercom and stewards' telephones at sports grounds;
- several changes to definitions;
- introduction of a Type C outstation;
- clarification of recommendations regarding visual indicators on stewards' telephones;
- clarification of recommendations for locations of stewards' telephones;
- inclusion of recommendations when more than one master station is provided;
- changes in recommendations regarding background noise;
- inclusion of recommendations regarding EVC systems installed on campuses where transmission paths might not meet the recommendations of this standard;
- mains isolation recommendations brought into line with [BS 5839-1](#);
- inclusion of recommendations regarding testing of non-EVC mode devices that might be provided; and
- inclusion of new normative annex regarding calculating standby battery capacity.

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regarding the status of this publication can be found in the Standards Catalogue on the BSI website at bsigroup.com/standards, or by contacting the Customer Services team.

Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

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As a code of practice, this British Standard takes the form of recommendations and guidance. It is not to be quoted as if it were a specification. Users are expected to ensure that claims of compliance are not misleading.

Users may substitute any of the recommendations in this British Standard with practices of equivalent or better outcome. Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

Presentational conventions

The provisions of 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.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. "organization" rather than "organisation").

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.

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Introduction

Emergency voice communication (EVC) can be used for different applications, such as communicating with people in refuges, communicating with fire wardens, fire marshals and firefighters in firefighting lobbies and communicating with stewards at sporting events.

Emergency voice communication systems, as later defined in this part of [BS 5839](#), are used in connection with life safety and need, therefore, to be subject to high standards of design, manufacture, installation, commissioning and maintenance, similar to those covering fire detection and fire alarm systems and voice alarm systems.

This part of [BS 5839](#) has been prepared to:

- a) give guidance to those who specify, design, manufacture, install, commission, maintain and use such emergency voice communication systems; and
- b) ensure that high standards of reliability, safety and security are achieved, together with acceptable standards of performance.

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Section 1: General

1 Scope

This part of [BS 5839](#) provides recommendations for the planning, design, installation, commissioning and maintenance of emergency voice communication (EVC) systems in and around buildings and at sports, entertainment and similar venues. It does not recommend whether or not an emergency voice communication system is installed in a given premises.

This part of [BS 5839](#) relates to the use of EVC in communicating with people in refuges, fire wardens, fire marshals and firefighters in firefighting lobbies and communicating with stewards at sporting events. Use, other than in fire emergency situations, by disabled persons and others, although not precluded, is not addressed in detail.

Other than in exceptional circumstances, EVC systems are not intended as the means of raising a fire alarm, instead of manual call points. Refer to [BS 5839-1](#) for guidance on fire detection and alarm systems.

This part of [BS 5839](#) covers systems with components linked by wires, wirelessly, or a combination of both.

This part of [BS 5839](#) covers EVC systems and is therefore not intended to cover general-purpose intercom systems, lift intercom systems, local (internal) telephone systems for general use, or any external communication systems, such as the public switched telephone network and cellular telephone networks.

Voice alarm systems are primarily intended for the automatic broadcasting of evacuation messages; they are covered by [BS 5839-8](#) and are therefore excluded from this part of [BS 5839](#).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document¹⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS 476 (all parts), *Fire tests on building materials and structures*

[BS 4678-4](#), *Cable trunking – Part 4: Specification for cable trunking made of insulating material*²⁾

[BS 5266-1](#), *Emergency lighting – Code of practice for the emergency lighting of premises*

[BS 5839-1:2017](#), *Fire detection and alarm systems for buildings – Part 1: Code of practice for system design, installation, commissioning and maintenance of systems in non-domestic premises*³⁾

[BS 7629-1](#), *Electric cables – Specification for 300/500 V fire resistant, screened, fixed installation cables having low emission of smoke and corrosive gases when affected by fire – Part 1: Multicore cables*

[BS 7671](#), *Requirements for Electrical Installations – IET Wiring Regulations*

[BS 9999](#), *Fire safety in the design, management and use of buildings – Code of practice*⁴⁾

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.

²⁾ Withdrawn in 2019.

³⁾ This document also includes informative reference to BS 5839-1:2002+A2:2008.

⁴⁾ This document also includes informative reference to [BS 9999:2017](#).