



## British Standard –

### BS5839 Part 1 – 2002.

## Fire detection and fire alarm systems for buildings –

### Part 1: Code of practice for system design, installation, commissioning and maintenance.

The following detail represents the LynxPro considered view relating to the BS5839 published on the 15<sup>th</sup> October 2002 and supersedes BS5839 1988.

Comment in *italics* represents the corresponding or related parts of text taken from the official British Standard publication. A copy of the Standard may be purchased direct from the British Standards.

*The need for a fire detection and alarm system, and the nature of the system, will often be determined by a fire risk assessment carried out by a competent person.*

*As a code of practice, the BS5839 takes the form of guidance and recommendations. It may be used as a basis for a specification and particular care should be taken to ensure that claims of compliance are not misleading.*

**LynxPro, strongly recommend that independent professional advice be taken to ensure no misleading, misrepresentation or misunderstanding of the British Standards in terms of compliance or otherwise be made.**

Also see our web page FAQ's for additional questions you may have concerning the British Standards.

### Overview.

The revised British Standard BS5839, for the first time makes reference to fire alarm warnings for people with impaired hearing. Commentary and recommendations are put forward in Clause 18 and Annex C of the revised standard.

As a company and a supplier of systems used to provide fire alarm warnings to the deaf and hearing-impaired, **LynxPro** has incorporated and in instances exceeded the recommendations put forward in the British Standard.

## Clause 18 – Fire alarm warnings for people with impaired hearing.

### 18.1 Commentary.

In their commentary, BSi states Alarm devices for the hearing impaired may be **fixed, movable or portable**. They then define these three types as: **fixed**, that is to say equipment fastened to a support or otherwise secured to a specific location. **Movable**, is such equipment not fixed to a specific location and is normally operational whilst in changed locations. For example a local unit, which may be placed on a table top and operates a vibrating pad in a bed. **Portable**, is equipment designed to be in operation while being carried, they give as example radio pagers.

In the commentary BSi clearly states: **No British Standard specification for alarm devices for the hearing impaired are available at present in the UK.** As such no cross-reference may be drawn for any existing British Standards

The BS does, wherever possible, recommend that these clauses (Clause 18 and Annex C) should be followed and any variations ought to be subject to risk assessment to ensure no hearing impaired person is exposed to undue risk. Within the commentary the BSi highlight the requirement of all radio paging systems to be licensed with the Radio Communications Agency. Compliance with the Wireless Telegraphy Act is a legally enforceable law of the land.

### 18.2 Recommendations.

This clause sector is defined in two parts **18.2.1 General** and **18.2.2 Portable alarm devices**.

The General 18.2.1 sector provides four recommendations. a) – d). The first recommendation covers visual alarm signals and are cross-referenced to Clause 17. The second recommendation refers to tactile alarm devices, which may be fixed, movable or portable. Fixed and moveable tactile devices should be regarded as fire alarm devices. The third recommendation is that any tactile device be of sufficient intensity to attract attention. The fourth recommendation states that advice should be sought from the Radio Communications Agency as to the conformity requirements.

Clause 18.2.2 covers devices supplementary to the prime means of giving an alarm of fire. i.e. **radio pagers**. Nine recommendations are put forward in this clause. They are:

- The pager should receive the signal within 5 secs of the alarm becoming active.
- The warning signal should continue for a minimum of 60 secs after reception, the signal may be intermittent.
- In a fire condition, the signal must be continuous, if intermittent signals are transmitted the spacing between each transmission must not exceed 10secs and the alarm may only be cancelled at the control panel.
- Where the radio pager is used for receiving other signals, messages for example, the recipient should be able to identify the different signals received.
- The fire alarm signal should take priority over any other messages.

- A failure between the interconnections between the control and indication equipment and the portable device should be identified at the portable device within 5 minutes of the failure.
- Pagers may be powered by a single power source i.e. battery and provide details of a low power source.
- The off switch should be designed to ensure the pager is not turned off inadvertently.
- All faults of the control equipment should be result in an identification of the fault at the fire detection and alarm system control.

The BS5839 in **Annex C** makes cross reference to BS EN 54-2, the BSi however point out that as EN 54-2 was not drafted to take into account tactile alarm devices a number of principals of EN 54-2 be taken into account. Special attention is drawn to; Mains failure, fault conditions as highlighted in 18.2.2, visual indication of the power supply, multiple fire signals received should not affect the fire warning message, control of the transmission signal to cease should only be accessed at level 2 as defined by EN54-2, the fire alarm signal to the pager may only be ceased by reset of the fire alarm panel control and repeat transmissions do not cease after a pre-determined period, finally, ***the operation of the system should not be reliant on any disk drive or volatile memory.***

## Conclusions.

With the inclusion of the recommendations the BSi go some way towards providing a means of identifying a minimum expectation and requirement for those using a radio paging system as a fire warnings system for the deaf and hearing-impaired.

We would ask you consider that any such radio paging systems are no more than a substitute for the fire alarm sounder for those with impaired hearing who might not have the ability to 'hear' the fire alarm sounder. A radio paging system is therefore **complimentary** to the fire alarm system and not a fire alarm detection or fire alarm system in itself.

**A full risk assessment should be carried out** to identify an individual's specific need and therefore requirement.

In our manufacturing process we at **LynxPro** have considered carefully the recommendations of the BSi and incorporated those recommendations into the LynxPro systems. The BSi in their standard state *that fire protection should not be confused with fire prevention or other fire precautions and the provision of a fire detection system should never be regarded as giving complete protection against fire.*

There may be other BSi standards that are more appropriate to the individual's specific requirements. For example BS8300 covers the design of buildings for disabled access. Where a radio paging system is used for more than just providing warning of the activation of the fire alarm BS7807 may be more appropriate.

BS5839 is, to the layman, a complex document as such, if you are in any doubt we recommend you seek **independent** professional advice. Such advice may be obtained from your local fire service, H&S Executive and other such authorities.

For more information please contact LynxPro on 0871 717 9033 or  
via email at [info@lynxpro.co.uk](mailto:info@lynxpro.co.uk)