

About EVC

Emergency Voice Communication Systems



The information in this leaflet is to help answer many of the questions that we are frequently asked. This information should be treated only as guide and the appropriate British Standards must be referred to for a full explanation.

EVC - What is it?

- Secure, monitored audio communication compliant to British Standards.
- To assist emergency evacuation.
- Fire telephone system.
- Disabled refuge system (DRS).
- Some systems also support:
 - Disabled toilet alarms (DTA) BS5830-2:2018 Emergency Assistance Alarm Systems.
 - Steward telephones (sports grounds).

EVC - Why is it needed?

- Conformance with national standards and building regulations.
- To communicate with 'emergency personnel', within a building.
- To communicate with occupants of 'Refuge Areas'.
- To manage evacuations of buildings.

Equality Act 2010

Replaced the Disability Discrimination Act (DDA)

- Who is responsible?
 - Public service providers or building occupiers/management.
- Key point?
 - "Accessibility for ALL persons".
- What does this mean?
 - Access to GOODS, FACILITIES and SERVICES of a company must be available to all.
 - There must be "no discrimination".

British Standard - BS9999:2017

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

Applies to all non-domestic buildings above one storey.

Concerning EVC

- Anyone that would be unable to use an exit route, i.e. wheelchair users, may not be able to use stairways without assistance. For this reason 'refuge' areas are provided.
- Defines 'refuge' - enclosed fire-resisting area, served directly by safe route to an exit.
- Refuge areas must be provided with independent communication between occupants and building management.
- The two-way communication system must be readily operated by, and comprehensible to, all persons that are likely to need to use them.

Refuge Area Definition

- A safe place for disabled to await assistance for their evacuation.
- An enclosed area of fire-resisting construction.
- Must be served directly by a safe route of exit.
- Minimum size = 900mm x 1400mm - sufficient space for wheelchair to manoeuvre.
- Minimum of 30 minutes fire-resisting construction.
- Wheelchair space should not reduce the width of escape route.
- Wheelchair space must not obstruct flow of persons escaping.

British Standard - BS5839-9:2021

Fire detection and fire alarm systems for buildings - code of practice for emergency voice communication systems

The Standard provides guidelines for the use of an Emergency Voice Communication (EVC) system.

Intended Use for an EVC system

- Use by the management of the building for initial evacuation.
- Use by the fire service during an evacuation.
- Use by the fire service after an evacuation.
- Use by disabled people.
- Use by members of the public.

The Standard specifies the type of equipment that should be employed for EVC systems and how they must be designed and implemented.

Types of Call Point

Type A:

- Telephone handset behind door for voice communication.
- Conveniently avoids background noise problems.
- Should be red in colour (or red signage).
- Typically used for fire fighting.

Type B:

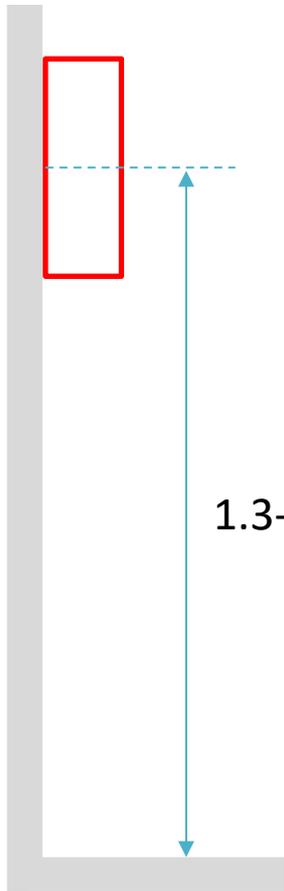
- Hands-free intercom-style outstation.
- Using loudspeaker & microphone, generally employing speech direction steering techniques.
- Should be green in colour (or green signage).
- Typically used for refuge communication.
- NB: Ensure that the caller does not need assistance before cancelling the call.

Type C:

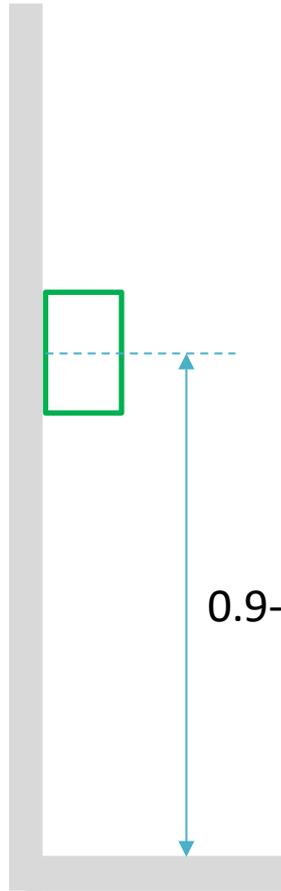
- 'Combined' outstation, with intercom-style and telephone handset options for communication.
- Telephone handset takes priority over the intercom.
- Intercom section should be mounted at a height that it is accessible by a person in a wheelchair.

British Standard - BS5839-9:2021

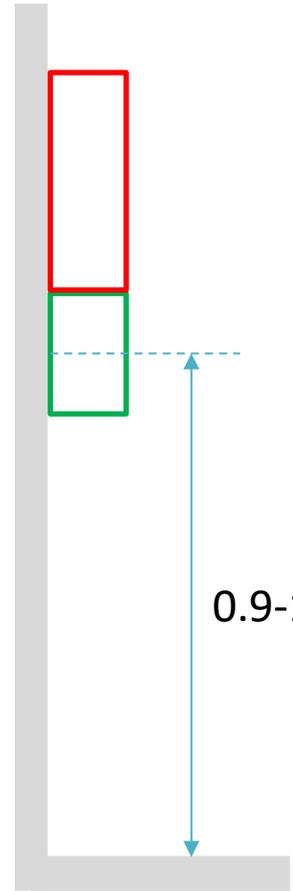
Mounting Heights for Outstations



Type A Call Point



Type B Call Point



Type C Call Point



British Standard - BS5839-9:2021

Master Station (Control Panel)

- Alerts staff and displays call locations.
- Includes telephone handset for voice communication.
- Displays activity and fault status.
- Should be located:
 - Close to the fire panel.
 - Preferably in a manned control/security room or close to fire & rescue service/access point.
 - In area of low fire risk and low background noise.
 - Vertical centre to be 1.4-1.5m above floor (or within easy reach if located in a security/control room).

Batteries

- An emergency voice communication (EVC) system must continue to work during an emergency - even if the mains power has failed.
- Backup batteries are used for this purpose.
- Batteries must be monitored and continually charged.
- The Standard typically requires: quiescent state 24 hours plus 3 hours emergency use.

Typical Cabling

- Fire Resistant cabling must be used to allow continued operation for duration of the emergency.
- 'Wiring to good commercial practices' - BS7671 - ensuring polarity, earthing and safety.
- 'Enhanced' Grade cable for:
 - Fire Telephones and Refuges in unsprinklered buildings.
- 'Standard Grade' cable acceptable for:
 - Refuges in sprinklered buildings provided the building is NOT greater than 30m in height or requires evacuation in 4 or more phases.
- Consideration should be given for the need of segregation from other services and methods of cable support.

Installation Responsibilities

- Ensure the entire installation conforms with the Standard.
- Procedure requires certificates
 - Design.
 - Installation.
 - Commissioning.
 - Optional certification:
 - Acceptance.
 - Verification.
 - Training.
- Further guidance in the Standard.

British Standard - BS5839-9:2021

Concerning Maintenance & Testing

Periodic inspection & servicing

To be carried out by competent person with

- Specialist knowledge of EVC.
- Adequate access to spares.
- Sufficient information regarding the system.
- Access to the system log book for record keeping.

Non-routine attention

- Special inspection when
 - A new organisation takes over maintenance.
 - Following repair of faults or damage.
 - Modifications made due to alterations or changes in occupancy.
 - Following a fire.
 - After long periods of disconnection.
- The responsible person to update log book entries and records.

Scheduled testing & maintenance

By the 'competent person' (generally outside organisation or manufacturer's representative)

- Six monthly:
 - Test each call point functionality and clear speech, also induction loops where fitted.
 - Ensure call points remain unobstructed and conspicuous.
 - Examine and test battery operation, are serviceable, not likely to fail before next service visit.
 - Test master station operation and fault indicator response.
- Any further checks recommended by manufacturer.
- Report defects.

Routine Testing

By the client's 'Responsible Person'

- Daily
 - Check for 'normal' condition on master panel if not permanently manned location.
- Weekly
 - Operate at least one call point, confirm correct reception & conversation is clear/intelligible. (Continue testing in rotation weekly and record results).

British Standard - BS8300-2:2018

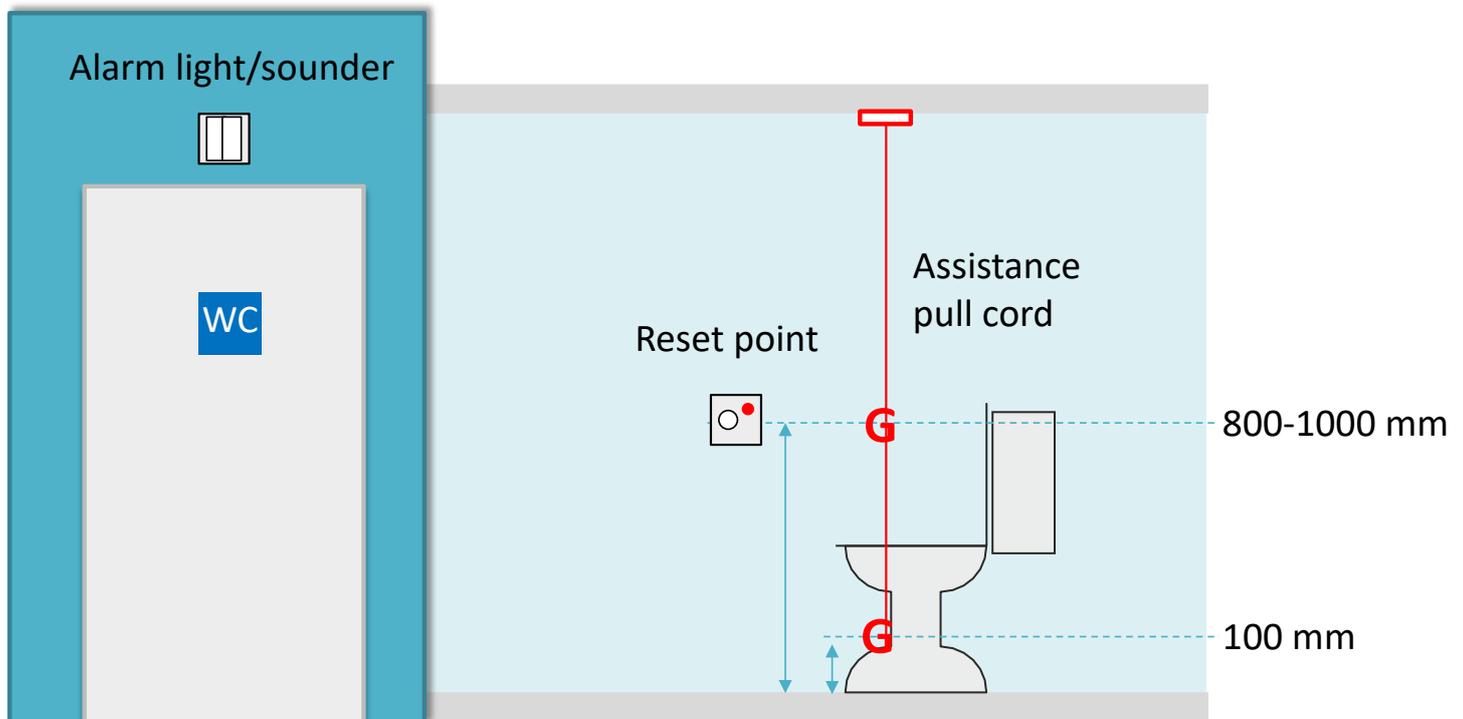
Design of an accessible and inclusive built environment. Part 2: Buildings - code of practice

The Standard requires that an accessible toilet is fitted with a suitable alarm system.

Key points

- Emergency red pull cord must be provided with two 50mm diameter red loops.
- Must enable calls for assistance to be made, even if the person has fallen to the floor.
- An audible/visual indication outside of the room that can easily be seen and heard.
- One alarm must be installed in each disabled toilet cubicle.
- Calls to be cancelled down at origin.
- The Standard also contains requirements with regards Refuge Areas and Induction Loop Systems.

Assistance Alarm Mounting Heights



Baldwin Boxall EVC Systems

Information about our fully compliant EVC systems can be found on our comprehensive website

Click on the buttons below for further details on our EVC products & systems

- Loop cabling configuration
- Fully networkable
- Fire telephones
- Steward telephones
- Disabled refuge
- Advance disabled refuge
- Emergency assistance alarms
- Super-large system capability
- Loop cabling configuration
- Fully networkable
- Fire telephones
- Steward telephones
- Disabled refuge
- Advance disabled refuge
- Emergency assistance alarms
- Radial cabling configuration
- Fully networkable
- Fire telephones
- Steward telephones
- Disabled refuge
- Roaming telephones
- Emergency assistance alarms

Complimentary EVC system
[maintenance log book](#) available

[Request EVC System Log Book](#)



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