

# Understanding Emergency Voice Communication Systems (EVCS)

TOA are helping, in more ways than one, to get people safely from a building, in case of an emergency, using Emergency Voice Communication Systems (EVCS) VoCALL 5 and VoCALL 16. In this article we look at what EVCS systems are designed for, what problems they solve and what regulations apply to installing and operating these life safety systems.

## What is an EVCS?

An EVCS system allows communication in either direction between a central control point and other points throughout a building in an emergency situation. Typically located in a safe area, that affords an element of fire protection or resistance, they enable people that are trapped or unable to make their own way to safety to inform emergency services of their location when conventional services, such as mobile phones, are not able to be used. They are designed for people with either impairment or mobility issues and in the event of a person being confined due to external influences such as smoke or fire.

## What issues do they solve?

The installation of a EVCS gives people, that are unable to make their own egress from a building in an emergency, the ability to communicate with the fire service. In a high rise building it also enables the fire service to communicate with each other.



## Designing an EVCS System

- » An outstation should be installed at every refuge point.
- » Design should comply with Equalities Act for Type B outstations.
- » For tall buildings with a phased evacuation plan fire telephones (Type A outstation) should be provided for communication between fire offices and/or fire officers. The system should provide communication between a control point at the fire and rescue service level and a fire warden on every floor.

## Legislation and where EVCS should be installed.

It is a requirement, under The Disability Discrimination Act, that employers should take reasonable action to ensure the safety of employee and, in the event of an incident can be evacuated safely. Failure to comply with fire safety laws and this guidance may be considered an offence.

Within the Building Regulations 2010 Approved Document B it is a requirement that refuge areas should be provided and meet the following conditions:

- » On every storey of each protected stairway providing an exit from that storey excluding those consisting of only plant rooms.
- » They do not need to be located within the stair enclosure but should have direct access to the stair.
- » The number of spaces does not need to equal the number of wheelchair users who may be in the building as a single refuge can be occupied by more than one person during an evacuation.
- » Refuge points should be a minimum of 900mm by 1400mm in size and accessible by someone in a wheelchair.
- » They should be clearly identified.
- » In protected lobbies and stairways, they should have a mandatory sign worded 'Refuge – keep clear'.
- » They should comply with BS-5839-9.
- » The system should consist of Type B outstations that communicate with a master station either in the building control room or next to the fire detection and alarm panel.
- » The provision of refuge points should be included in the building management plan and offer relatively safe areas for people to wait for a short period of time.

## The main standards that govern the provision and operation of refuge communication systems are:

### Building Regulations Approved Doc B (Fire Safety)

Volume 2, Section 4: Design for vertical escapes – buildings other than flats, covers all commercial buildings, housing ass. Flats and all buildings unless the flat is wholly owned by the occupants.

### Building Regulations Approved Doc M

Disabled access to and use of buildings  
Section M and M1 includes Schools, Maintained Schools and purpose-built Student Accommodation.

### BS5839 Pt 9: 2021

Design, installation, commissioning and maintenance of EVCS.

### BS8300:2018

Provision of disabled facilities within a building.

### BS9999:2017

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

### Regulatory Reform (Fire Safety) Order

Risk assessments undertaken by the responsible person must make provision for means of escape for disabled people.



## Applications:

### Small: VoCALL 5

Offices  
Schools  
Residential homes



### Medium: VoCALL16 Standalone

Shopping complexes  
Hotels  
High rise office blocks  
Production facilities



### Large: VoCALL16 Network

Airports  
Hospitals  
Stadia  
University campuses





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