

Code of practice for

# Remote centres for alarm systems

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Consumer and Contract Goods Standards Policy Committee (CCM/-) to Technical Committee CCM/45, upon which the following bodies were represented:

- Association of Burglary Insurance Surveyors
- Association of Chief Police Officers of England and Wales
- Association of Security Consultants
- British Bankers' Association
- British Gas plc
- British Retail Consortium
- British Security Industry Association
- British Telecommunications plc
- Consumer Policy Committee of BSI
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Holdings)
- EEA (the Association of Electronics, Telecommunications and Business Equipment Industries)
- Electrical Contractors' Association
- Electrical Contractors' Association of Scotland
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Association
- European Association of Security Equipment Manufacturers
- Fire Brigades' Union
- Home Office
- Home Office Crime Prevention Centre
- Lloyds Underwriters Technical Services
- Loss Prevention Council
- Metropolitan Police
- Ministry of Defence
- National Approval Council for Security Systems
- National Association of Goldsmiths of Great Britain and Ireland
- National Association of Security Services
- Post Office
- Security Services Association
- Tobacco Advisory Council
- Wine and Spirit Security Liaison Ltd.

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Metropolitan Authorities
- British Fire Protection Systems Association Ltd.
- Chief and Assistant Chief Fire Officers' Association
- Consumers' Association
- Institute of Fire Safety

This British Standard, having been prepared under the direction of the Consumer and Contract Goods Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 December 1993

© BSI 1993

First published January 1981  
Second edition June 1987  
Third edition December 1993

The following BSI references relate to the work on this standard:  
Committee reference CCM/45  
Draft for comment 91/40718 DC

ISBN 0 580 22200 4

## Amendments issued since publication

| Amd. No. | Date           | Text affected                         |
|----------|----------------|---------------------------------------|
| 9235     | September 1996 | Indicated by a sideline in the margin |
|          |                |                                       |
|          |                |                                       |
|          |                |                                       |

# Contents

|                                                                                                                                                                                                    | Page               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Committees responsible                                                                                                                                                                             | Inside front cover |
| Foreword                                                                                                                                                                                           | 2                  |
| <b>Code of practice</b>                                                                                                                                                                            |                    |
| 1 Scope                                                                                                                                                                                            | 3                  |
| 2 References                                                                                                                                                                                       | 3                  |
| 3 Definitions                                                                                                                                                                                      | 3                  |
| 4 Planning                                                                                                                                                                                         | 3                  |
| 5 Construction and facilities                                                                                                                                                                      | 4                  |
| 6 Operation of an alarm receiving centre                                                                                                                                                           | 11                 |
| 7 Documentation                                                                                                                                                                                    | 15                 |
| 8 Audit                                                                                                                                                                                            | 15                 |
| <b>Annex</b>                                                                                                                                                                                       |                    |
| A (informative) Notes for guidance of inspectorates                                                                                                                                                | 16                 |
| B (normative) Additional recommendations for remote centres conforming to BS 5979 : 1993                                                                                                           | 16                 |
| C (informative) Guidelines to provide assistance to third party alarm companies and multi-site companies on the security and technical implications of remote access to remote centre data systems | 16                 |
| <b>List of references</b>                                                                                                                                                                          | Inside back cover  |

## Foreword

This British Standard code of practice has been prepared under the direction of the Consumer and Contract Goods Standards Policy Committee and supersedes BS 5979 : 1987 which is withdrawn.

The 1987 edition of BS 5979 was concerned solely with remote centres for the handling of signals from intruder alarm systems and this revision extends the recommendations to those remote centres which also handle signals from fire alarm and social alarm systems.

The 1987 edition of BS 5979 did not cover remote centres operating in conjunction with fire alarms. In 1988 the Loss Prevention Certification Board (LPCB) issued LPS 1020, a specification for remote centres monitoring fire alarms. The revised BS 5979 : 1993 incorporated fire alarm monitoring for the first time.

An LPCB Technical Panel identified a number of requirements in LPS 1020 : 1988 which do not appear in BS 5979 : 1993, and the LPCB requested that they be incorporated as recommendations into BS 5979 : 1993. The BSI committee responsible for remote centres, GW/1/11, agreed that these recommendations should be incorporated into BS 5979 : 1993 at the next revision of the standard. In the meantime the recommendations are being issued by amendment as a normative annex (annex B) to BS 5979 : 1993.

As types of building for remote centres vary it is not possible to specify all the potential solutions and therefore recommendations as given in a code of practice are appropriate.

The recommendations in this code of practice are concerned primarily with the security and operation of remote centre premises; it is recognized that additional considerations will be required in the construction of a remote centre.

The main function of an alarm receiving centre is the receipt, processing, recording and controlling of signals from remote alarm systems and the passing of the alarm signals received from such systems to an appropriate emergency service, although an alarm receiving centre may also be used for the monitoring and for the management of individual systems.

An alarm receiving centre shares the risk of all alarm systems connected to it and this demands that the integrity of the building and of the operations therein are of an appropriate standard. The reliability of the alarm receiving centre equipment is critical and it is essential that the design, construction and location of such equipment takes due account of this.

As it is intended that this British Standard code of practice will be adopted as the basis for approval and certification of remote centres by independent inspectorates operating within the fire and security industries, guidance for the use of inspectorates is given in annex A.

The standard also gives guidelines to provide assistance to third party alarm companies and multi-site companies on the security and technical implications of remote access to remote centre data systems. This appears in annex C.

As a code of practice, this British 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.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

# Code of practice

## 1 Scope

This British Standard code of practice gives recommendations for the planning, construction and facilities of manned and unmanned remote centres and for the operation of alarm receiving centres in conjunction with intruder, fire and social alarm systems and other monitoring services.

## 2 References

### 2.1 Normative references

This standard incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the inside back cover. Subsequent amendments to, or revisions of, any of these publications apply to this standard only when incorporated in it by updating or revision.

### 2.2 Informative references

This standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

## 3 Definitions

For the purposes of this British Standard the definitions given in BS 4737 : Part 1 : 1986 apply, together with the following.

### 3.1 remote centre

Premises, remote from those in which the alarm systems are fitted, where the information concerning the state of alarm systems is collected for display or for onward transmission.

### 3.2 alarm receiving centre

A continuously manned remote centre in which the information concerning the state of alarm systems is displayed and/or recorded.

NOTE. An alarm receiving centre is referred to as an alarm receiving station in BS 6804 and as a remote manned centre in BS 5839. In previous editions of this standard, alarm receiving centres were called central stations.

### 3.3 satellite

A remote centre, normally unmanned, in which the information concerning the state of alarm systems is collected and processed for onward transmission either direct, or via a further satellite, to an alarm receiving centre.

NOTE.1. The junction point of a number of alarm system signalling circuits is not regarded as a satellite.

NOTE.2. An alarm receiving centre will revert to a satellite during periods without manning.

### 3.4 shell

All parts of the boundary of a remote centre, i.e. walls, floors, roof and including any openings therein.

### 3.5 operations area

That part of an alarm receiving centre concerned directly with the display of information from the alarm systems served by the alarm receiving centre and with the onward transmission of relevant aspects of this information to an emergency service.

### 3.6 fire resistance

Ability of an element of building construction, component or structure to fulfill, for a stated period of time, the required stability, fire integrity and/or thermal insulation and/or other expected duty in a standard fire resistance test.

NOTE. The designation 'fire resistant' given to an element implies that this element fulfils the requirements of the relevant standard fire test.

### 3.7 non-combustible

Not capable of undergoing combustion under specified test conditions.

### 3.8 remote access

Facility to view/edit data without the direct intervention of the remote centre.

### 3.9 response agreement

Set of instructions agreed between the remote centre and the user as to the actions to be taken in event of an alarm signal being received.

## 4 Planning

### 4.1 Categorization

The planning for the construction, and for the routing of communications services, of a remote centre should be determined by the intended categorization of the remote centre, taking into account any foreseeable need for change.

Remote centres are categorized according to the type(s) of alarm signals handled and the consequent needs for integrity and security of construction, communications, operation and information. The two types of category are as follows.

- a) Category I is a remote centre handling signals from fire alarm systems and/or from social alarm systems.
- b) Category II is a remote centre handling signals from intruder alarm systems and, if required, from fire alarm systems and/or social alarm systems.

## 4.2 Site selection

A remote centre should be located in a building with low risk of fire, explosion, flooding, vandalism and exposure hazards from other buildings.

Where the remote centre does not have sole occupancy of the building it should be separated from the rest of the building by walls, floors, ceilings, doors, service partitions and glazing as appropriate to give a fire resistance of at least 1 h. Cable and service ducts should be sealed where they penetrate walls, floors, etc. to maintain a fire resistance of at least 1 h. Fire safety procedures for the building should cause minimum disruption to the remote centre activities.

The possibility of gas seepage around cables or pipes below ground level should be given consideration.

## 4.3 Consultation

### 4.3.1 *Public telecommunications operator*

The telecommunications company should be consulted on the routeing, availability, expansion, integrity and security of services between telephone exchanges and the remote centre.

For a category II remote centre there should be discussion with the company on the security of cable distribution points in the vicinity of, and serving, the remote centre, such as street cabinets or manholes. Wherever practical, these points should incorporate additional physical and electronic security.

### 4.3.2 *Emergency services*

The security and emergency procedures of the building housing the alarm receiving centre and the response requirements of the appropriate service(s) should be established and documented. This discussion should include consideration of escape routes and emergency exits.

There should be discussion and agreement with the appropriate emergency service(s) responsible for the areas covering the supervised premises. This discussion should include consideration of both primary and secondary means of communication with the emergency services.

### 4.3.3 *Other interested parties*

Appropriate consultation should be undertaken with any other relevant interested parties such as the Health and Safety Executive, Environmental Health Department, the Radiocommunications Agency, and/or Insurers.

## 5 Construction and facilities

### 5.1 Alarm receiving centres

#### 5.1.1 *Location*

If the alarm receiving centre structure is directly accessible from a public area it should be borne in mind that it will be more vulnerable to attack on a ground floor. Therefore it should be located in a basement or on an upper floor. For a category I alarm receiving centre, it should not be possible to view any displayed information from outside the shell.

For a category II alarm receiving centre, the interior of the operations area or equipment room(s) should not be directly visible from outside the shell.

#### 5.1.2 *Shell*

The shell and all supporting structures should have a fire resistance of not less than 1 h.

NOTE.1. The fire resistance and structural integrity of some construction materials may be reduced by the application of metal reinforcement.

For a category I alarm receiving centre, all parts of the alarm receiving centre shell, but excluding the openings described in 5.1.4 to 5.1.7, should be of substantial construction.

For a category II alarm receiving centre, all parts of the alarm receiving centre shell, but excluding the openings described in 5.1.3 to 5.1.7, should be attack resistant. They should be constructed from, for example, 225 mm solid brick wall, 150 mm reinforced concrete cast in situ or 200 mm reinforced concrete blocks. Where it is not practical to use these types of construction for floors or ceilings, the existing structure should be reinforced from above, if practicable, by, for example, low carbon steel sheets not less than 1.5 mm thick or 100 mm reinforced concrete blocks. Low carbon steel sheets should be welded together and secured by non-returnable screws.

NOTE.2. The physical protection described above has traditionally been accepted as the means for ensuring that an alarm receiving centre is resistant to attack. However, an equivalent standard of protection may be achieved by other methods, such as layered security.

#### 5.1.3 *Entrance and exits*

##### 5.1.3.1 *Category I*

All entrances and exits should be of substantial construction and capable of being made secure.

### 5.1.3.2 Category II

All entry and exit doors should be of attack resistant construction such as 6 mm low carbon steel or 50 mm hardwood with 1.5 mm carbon steel sheets securely attached to the outer surface. Hinges, frames, fixings and locking devices should be of substantial construction with a similar resistance to attack.

The normal entrance to an alarm receiving centre should be via two doors separated by a lobby with the doors interlocked to prevent both being open at the same time. The doors and the lobby area should be for the exclusive use of the alarm receiving centre. The inner door should be controlled from within the alarm receiving centre by separate physical actions from those for the outer door. All doors should open outwards from the alarm receiving centre.

The entrance lobby floor area should normally not exceed 6 m<sup>2</sup> and should have a means for the surveillance of any person in the lobby area from within the alarm receiving centre. However, where building constraints exist, the lobby may have a larger floor area provided that the surveillance facilities are such that no part of the lobby is out of the view of alarm receiving centre staff.

Where a facility to open both entrance doors from the outside is provided, to deal with an emergency within an alarm receiving centre, this should be achieved by means of a high security locking system; the keys or combination code of which should be kept in a burglary resistant safe or vault to which access is restricted to not more than two persons. This safe or vault should be located in a secure area, separate from the alarm receiving centre, and should be supervised by an alarm system conforming to BS 4737 : Part 1 : 1986 signalling to the alarm receiving centre when the safe is open.

NOTE. This could be a secure manned centre operating a keyholding service.

Supervision at the point of key retention should be by means of an alarm system conforming to Part 1 : 1986 or Part 2 : 1986 of BS 4737, as appropriate, and signalling by means of a dedicated communication channel.

### 5.1.3.3 All categories

One or more exits providing adequate means of escape in an emergency should be provided utilizing an unlocking device not requiring the use of a key and operable only from within the alarm receiving centre.

### 5.1.4 Key transfer hatch

Where provided, a key transfer hatch should not exceed 20 000 mm<sup>2</sup> in cross-sectional area.

If constructed in the shell wall of the alarm receiving centre, the outside of the key hatch should be in a restricted access area. The inner and outer doors and frames of any key hatch facility should be of substantial construction such as 6 mm low carbon steel or equivalent. Hinges, fixings and locking devices should also be of substantial construction with a similar resistance to attack. The doors should be interlocked to prevent direct access being available at any time and their actions should be controlled from within the alarm receiving centre. Barrel type systems may be used; otherwise the outer door should open outwards.

If constructed in the internal lobby wall of the alarm receiving centre, the key hatch facility may be operated with one outer door which should be interlocked to the outer lobby doors such that no two doors can be open at any one time. Its action should be controlled from within the alarm receiving centre. The door, frame, hinges and locking devices should be of the same substantial construction as if they were located in the shell wall.

Voice communication system(s) should be available between the operations area of the alarm receiving centre and the outer entrance door, the lobby area and at the key hatch.

### 5.1.5 Glazed areas in the shell

#### 5.1.5.1 Category I

Accessible glazed areas in category I alarm receiving centres should be provided with vandal-resistant laminated or wired glass.

#### 5.1.5.2 Category II

Glazed areas in the shell of a category II alarm receiving centre should be kept to a minimum, with no individual area exceeding 1.5 m<sup>2</sup>.

Where provided, glazing in the shell should be non-openable.

Any glazed area in the shell together with its frame and fixings should have substantial resistance to physical attack and all glazing should have a resistance to firearms conforming to class S86/G2 of BS 5051 : Part 1 : 1988.

All glazing not in accordance with class S86/G2 of BS 5051 : Part 1 : 1988 should be raised to this level by secondary glazing, e.g. by the addition of polycarbonate sheeting of an appropriate thickness.

### 5.1.6 Ventilation

#### 5.1.6.1 Category I

Ventilation should be controllable from within the alarm receiving centre and should be independent of the rest of the building in which it is located.