

Private branch exchanges for connection to public switched telephone networks run by certain public telecommunication operators —

**Part 7: Specification for the procedure
for in-service observation of PBXs
undergoing type approval**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Telecommunications Standards Policy Committee (TCT/-) to Technical Committee TCT/8, upon which the following bodies were represented:

- Association of British Telephone Attachment Suppliers Ltd.
- Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA)
- British Approvals Board for Telecommunications
- British Radio and Electronic Equipment Manufacturers' Association
- British Security Industry Association
- British Telecommunications plc
- Business Equipment Trade Association
- Cable and Wireless plc
- City of Kingston-upon-Hull Telephone Department
- Committee of London Clearing Bankers on behalf of the Committee of Scottish Clearing Bankers, Co-operative Bank, Trustee Savings Banks and Yorkshire Bank
- Communications Marketing and Servicing Association
- Computing Services Association
- Department of Trade and Industry
- Electronic Engineering Association
- Engineering Equipment and Materials Users' Association
- Independent Broadcasting Authority
- Independent Telecommunications Suppliers' Association
- Mobile Radio Users' Association
- Post Office Engineering Union
- Society of Telecom Executives
- Telecommunication Engineering and Manufacturing Association (TEMA)
- Telecommunications Managers' Association
- Telecommunications Users' Association (TUA)
- UK Offshore Operators' Association Ltd.

This British Standard, having been prepared under the direction of the Telecommunications Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 October 1990

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

- British Gas Corporation
- Central Computer and Telecommunications Agency
- Electricity Supply Industry in England and Wales
- Royal National Institute for the Blind

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Foreword

BS 6450 has been prepared under the direction of the Telecommunications Standards Policy Committee. It forms one of a series of British Standards that is being produced following the commencement of liberalization in October 1981 of the supply of certain telecommunications apparatus within the United Kingdom.

Attention is drawn to the foreword of BS 6450-1:1983.

This revision of this Part of BS 6450 supersedes BS 6450-7:1984, which is withdrawn.

In this revision, the chief changes are as follows.

- a) The compliance clause **22** has been deleted from BS 6450-1, as has the definition of net restoration time. These have been included in this Part and some definitions in Part 1 repeated, so that reference to Part 1 in order to conduct the observations specified in this Part, is not necessary.
- b) The limits on the number of separate failures permitted [see **3.2.1 a)**] have been changed to avoid anomalies.
- c) Explanatory text has been added to the forms to make them more easily understood by the persons who will use them.

This Part of BS 6450 is presented for designation, or other ratification for approval purposes, under the Telecommunications Act 1984. Ratification for approval purposes other than by means of a designation is under consideration.

It is stipulated in the Telecommunications Act 1984 that apparatus within the scope of a designated standard may only be approved for connection to a telecommunication system if it conforms to that standard. Exceptions may be determined by or under the designation, which may stipulate variations of, or additions to, the requirements of the standard and may also set conditions that have to be complied with as regards the apparatus, or its connection, or its use.

A copy of any designation, or other ratification for approval purposes, will be included when available with all copies of this British Standard. Any further information on, or details of, the designation or other ratification may be obtained from the Office of Telecommunications (OFTEL), Export House, 50 Ludgate Hill, London EC4M 7JJ.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular, attention is drawn to the Telecommunications Act, 1984.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 6450 specifies the procedure to be followed by the supplier for the assessment of PBX(s) when observed in service and connected at the user's premises to analogue interfaces of a public switched telephone network run by certain public telecommunication operators; this procedure of assessment constitutes the evaluation of PBX(s) against clause 21 of BS 6450-1:1983 and the observation of the behaviour of the PBX(s) against the appropriate Parts of BS 6450 under operational conditions.

NOTE 1 The full provisions of this Part of BS 6450 may not apply to variations of type approval, e.g. approval of PBX enhancements.

NOTE 2 For the purposes set out in this Part of BS 6450, suppliers are recommended to use the sample forms given in Appendix A to Appendix D. Suppliers' personnel do not need formal permission to reproduce the sample forms for the purposes set out in this Part of BS 6450.

NOTE 3 The titles of the publications referred to in this Part of BS 6450 are listed on the inside back cover.

NOTE 4 Unless otherwise stated all clause references refer to this Part of BS 6450.

2 Definitions

For the purposes of this Part of BS 6450, the definitions and abbreviations given in BS 4778 and BS 6450-1:1983 apply, together with the following.

2.1

trial site

a site at which in-service observation is carried out

2.2

BIS date

the date at which a PBX is brought into service for the purpose of carrying traffic to and from the PSTN

2.3

supplier

party seeking type approval

2.4

customer

party declared by supplier on PBX trial site(s)
submission form (see Appendix A)

2.5

type approval scheme

a scheme comprising the following:

- a) discussions between the supplier and the approval authority to agree a testing schedule;
- b) testing for compliance against appropriate Parts of BS 6450 in accordance with the designations under the Telecommunications Act 1984, excluding clause 21 of BS 6450-1:1983;
- c) in-service observation phase to determine compliance with clause 21 of BS 6450-1:1983;

d) where the laboratory testing of the PBX has not verified full compliance with the appropriate Parts of BS 6450, the observation of the behaviour of the PBX against the appropriate Parts of BS 6450 under operational conditions;

e) approval under Section 22(6) of the Telecommunications Act, 1984.

2.6

major failure

a state where at least 60 % of the PSTN lines of a PBX undergo simultaneous loss of service due to a failure within the PBX

NOTE An example of major failure would be system "crash" caused by the failure of the central processor in a single processor system or the simultaneous failure of all processors on a replicated system.

2.7

loss of service

a state where any established exchange line call is lost or where incorrect response to incoming exchange line calls or outgoing exchange line call attempts persists for more than 16 s

2.8

net restoration time

the sum of times spent in diagnostic and corrective work following a failure event as listed in 3.2.2

3 Compliance with clause 21 of BS 6450-1:1983

3.1 Major failures

During a period of in-service observation conducted in accordance with this Part of BS 6450, the number of major failures shall not exceed three.

3.2 Severe PSTN-affecting failures

NOTE Within a reasonable period of in-service observation, the observed number of severe failures affecting the PSTN is likely to be too low to permit this value to be used with sufficient accuracy. The rate of severe failures is therefore based upon the recording of a wider class of failures (see 3.2.2), this wider class of failure being treated as statistically representative of the rate of expected severe failures.