

Specification for

# Paper tape for data processing —

Part 2: Dimensions and location of  
punched holes in paper tape

# Co-operating organizations

The Data Processing Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives of the following Government departments and scientific and industrial organizations:

- Aslib
- British Computer Society Ltd.\*
- British Electrical and Allied Manufacturers' Association\*
- British Federation of Master Printers\*
- British Paper and Board Makers' Association\*
- British Railways Board
- British Telecommunication Research Ltd.
- Business Equipment Trade Association\*
- Civil Service Department\*
- Committee of London Clearing Bankers
- Data-Processing Management Association
- Electricity Council, The Central Electricity Generating Board, and the Area Boards in England and Wales
- Electronic Engineering Association\*
- Engineering Equipment Users' Association
- Government Communications Headquarters\*
- Institute of Chartered Accountants in England and Wales
- Institute of Cost and Works Accountants
- Institute of Municipal Treasurers and Accountants (Incorporated)
- Institution of Electrical Engineers
- Institution of Mechanical Engineers
- London Transport Executive
- Machine Tool Trades Association
- Ministry of Technology
- National Coal Board\*
- National Computing Centre Limited
- National Research Development Corporation
- Post Office\*
- Radio and Electronic Component Manufacturers' Federation
- Society of British Aerospace Companies
- Technical Section of the British Paper and Board Makers' Association
- Telecommunication Engineering & Manufacturing Association

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Confederation of British Industry
- H.M. Stationery Office
- Ministry of Defence (Army Dept.)
- Ministry of Technology — Computer Advisory Service, Technical Support Unit
- Ministry of Technology — National Physical Laboratory
- Research Association For the Paper and Board, Printing and Packaging Industries (PIRA)

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## Foreword

This standard makes reference to the following British Standards:

BS 3880, *Specification for paper tape for data processing*.

BS 3880-1, *Unpunched paper tape*.

BS 3880-3, *Representation of codes on paper tape*<sup>1)</sup>.

BS 3880-4, *General requirements for data interchange on punched paper tape*<sup>1)</sup>.

Paper tape is one of the three main media for input and output in connection with computer installations and for the recording and storage of data. The group of standards under the general heading BS 3880, "*Paper tape for data processing*", sets out the specification in logical order, that is to say, according to the life of the tape from paper stock to the medium through which the data is transferred.

Revision of the former standard, BS 3880:1965, was necessitated by the publication of further specifications, and the information contained in this earlier standard is now separated into the relevant publications within the group under the general heading BS 3880, "*Paper tape for data processing*", and is in conformity with related publications of the International Organization for Standardization (ISO)<sup>2)</sup>. The Parts of the standard in this group are as follows:

1) Part 1, "*Unpunched paper tape*", deals with properties of the material, the methods of testing and the dimensions of the unpunched tape. The relatively small amount of information required by the paper converter to supply coils of unpunched tape ready for use, which formerly appeared in BS 3880:1965, has been included in Part 1 of the present edition of the standard so that all the requirements of the unpunched paper tape are embraced within this one document.

2) This Part 2, "*Dimensions and location of punched holes in paper tape*", specifies both the dimensions of the punched holes at the time of punching and the location of the feed holes with respect to the data holes and reference edge of the tape.

3) Part 3, "*Representation of codes on paper tape*", specifies correspondence between particular patterns of punched holes and the bit patterns by which characters are encoded. (In course of preparation.)

4) Part 4, "*General requirements for data interchange on punched paper tape*", specifies the handling and storage requirements to effect satisfactory interchange of data on punched paper tape. (In course of preparation.)

The successful interchange of data by means of punched paper tape depends to a great extent on the accuracy with which it conveys the information encoded on it. This accuracy is directly dependent on the behaviour of the material under varying ambient conditions. The basic material being paper, and the tapes being subject to change in ambient conditions, brought about demands for specifications controlling the dimensions as well as the properties of the material. The dimensions referred to in this Part of the standard are the sizes and relative positions of the feed holes and data holes punched in the tape with respect to a reference edge, which are vital for the efficient functioning of installations.

A potential problem exists regarding the assessment of the quality of punching of the holes in paper taper, and this is further accentuated by the proliferation of high-speed readers, particularly of the optical type. Although this Part of the standard does not deal with paper tape properties some reference to this aspect is thought to be desirable, perhaps as an appendix, and work is proceeding to this end.

<sup>1)</sup> In course of preparation.

<sup>2)</sup> ISO/R . . . . , "*Properties of unpunched paper tape*" (in course of preparation, see ISO DR 1729).  
ISO/R 1154, "*Dimensions of punched paper tape for data interchange*".