

AS 2570—1982

Australian Standard

**PRINTING SPECIFICATIONS
FOR OPTICAL CHARACTER
RECOGNITION**

This Australian standard was prepared under the direction of Committee MS/20, Information Processing Systems. It was approved by the Council of the Standards Association of Australia on 10 August 1982 and published on 6 December 1982.

The following interests are represented on the committee responsible for the preparation of this standard:

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Australian Bureau of Statistics
Australian Computer Equipment Suppliers Association
Australian Computer Services Association
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Australian Electrical and Electronic Manufacturers Association
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PREFACE

This standard was prepared under the authority of the Association's Committee on Information Processing Systems. It is identical with and has been reproduced from International Standard ISO 1831, drawn up by ISO TC/97, Information Processing Systems. Acknowledgement to ISO is accordingly made.

The purpose of this standard is to establish the basis for industry standards for paper and printing to be used in Optical Character Recognition (OCR) systems, particularly for document interchange, and to assist the implementation and use of such systems.

For the purpose of this Australian standard, the text of ISO 1831 given herein should be modified as follows:

- (a) *Terminology*: The words 'Australian Standard' should replace the words 'International Standard' wherever they appear.
- (b) *Decimal comma*: The decimal point should replace the decimal comma wherever it appears.
- (c) *Cross-references*: The references to International standards should be replaced by references to Australian standards as follows:

<i>Reference to International standard</i>	<i>Appropriate Australian standard</i>
ISO 1073/2, Alphanumeric character sets for optical recognition—Part 2: Character set OCR-B-Shapes and dimensions of printed image.	AS 1436, Alphanumeric character set OCR-B for optical recognition—Part 2: Printed image dimensions and form.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

Printing specifications for optical character recognition**0 Introduction**

The purpose of this International Standard is to establish the basis for industry standards for paper and printing to be used in Optical Character Recognition (OCR) systems, particularly for document interchange, and to aid in the implementation and use of such systems.

It provides for the identification and measurement of, and establishes specifications for, the relevant parameters and gives guidance for their use.

0.1 Interpretation of the International Standard

A printing system is defined as a single unit comprising a printing machine, paper and inked ribbon (the latter only if required by the printing process). A printing system which produces printed material for OCR applications is called an OCR printing system.

The values in this International Standard shall apply to OCR printed material regardless of the printing system, font (OCR-A, OCR-B) and the specific application. The dimensional and optical characteristics of the printed image are given for three quality ranges.

Tolerance limits are specified for each parameter. These limits at least shall be achieved, but all parameters are expected to be kept well within them. If some of these parameters subject to variations of a statistical nature deviate from the specified limits, then the number and magnitude of these deviations can be reduced by using special precautions, such as a more accurate choice of the OCR printing system components, more frequent maintenance of the printing machine, a reduction of the printing speed, a shortening of the ribbon life, etc.

If the performance of an optical character recognition system is subject to variations of a statistical nature and if rejections or substitutions of characters within the tolerance limits occur then, again, the number and magnitude of these deviations can be reduced by using special precautions, such as a more frequent maintenance of the recognition system, etc.

0.2 Use of the International Standard

The measurement methods and the values of the parameters given in this standard are intended for use in OCR applications.

As a continuous, complete fulfilment of these values cannot be achieved because of the deviations of a statistical nature to which both printing and recognition systems are liable, some rejection and substitution of characters may occur. The number of rejections and substitutions which are allowed depends on the specific OCR application and shall be agreed upon, in statistical terms, by the user, the supplier(s) of the printing system and the supplier(s) of the recognition system.

In the guarantee of printing systems, the manufacturer of the printing system is given the right to specify the maintenance rate for the printing system and the supplies to be used (for example paper and ribbon).

In the guarantee of the recognition system, the supplier of the recognition system is given the right to specify the environmental conditions (temperature, humidity, illumination, maximum amount of mechanical vibrations and electromagnetic noise, etc.) and to establish the level of maintenance for the reader.

Statistical sampling plans by inspection of attributes can be used to check whether these guarantees are being observed, provided that these plans are coherent with those normally used in quality control.

Once a sampling plan has been agreed upon, the sample size (i.e. the number of characters or documents to be examined) is established by the plan.

To allow the printing system to be checked, the parameters of the printed material to be measured and the measurement methods are given in this International Standard.

When the recognition system is checked, only printed material meeting the specifications given in this International Standard shall be used, or — by agreement — representative samples of current material may be used. In the latter case the rejects must be evaluated according to their compliance with this International Standard.

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