

ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA - 18

PRINTING LINE POSITION ON OCR SINGLE LINE DOCUMENTS

2nd Edition — January 1977

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BRIEF HISTORY

ECMA TC4 started their standardization work in the field of Optical Character Recognition in June 1961. This work led to the adoption of the Standards ECMA-8 (Nominal Character Dimensions of the OCR-A Font), ECMA-11 (Alphanumeric Character Set for OCR-B) and ECMA-15 (Printing Specification for OCR). In order to ensure better information interchange, further work has been undertaken on the arrangement of the information on specific data media. This Standard ECMA-18 is directed to documents bearing a single line of characters recognizable by machine. Its 1st edition was issued in November 1968. Since then, all three Standards mentioned above have been revised and re-issued. The present 2nd edition of Standard ECMA-18 has taken these revisions into account.

The main differences between the two editions relate to the replacement of Size II by Size IV and to the suppression of the clauses related to mixed sizes in the same line.

THIS 2nd EDITION SUPERSEDES THE EDITION DATED NOVEMBER 1968.

1. SCOPE

The purpose of this Standard ECMA-18 is to establish the position of the printing line for documents containing a single line of information to be read by an optical character reader. It contains the basic definition and recommendations concerning the position of the printing line.

2. SIZES

This Standard is applicable to characters printed in Size I, Size III or Size IV. These sizes are defined by their width and their height as follows:

Size I	:	1,40 mm x 2,40 mm
Size III	:	1,52 mm x 3,20 mm
Size IV (OCR-A)	:	2,04 mm x 3,80 mm
Size IV (OCR-B)	:	2,10 mm x 3,60 mm

3. REFERENCE EDGE

The Reference Edge of a document shall be the bottom edge.

4. CLEAR AREA

The Clear Area (see Note 1) shall be located at the bottom of the document: it shall extend over the whole length of the document and have a height H_1 of at least 16 mm for Size I and Size III and of 20 mm for Size IV.

5. PRINTING LINE POSITION

The different fields which compose the printing line shall all be contained in the Printing Area (see Note 2). The horizontal centreline of the Printing Area shall be located at a height $H_2 = 9,6$ mm from the Reference Edge; this is independent of the height of the Printing Area.

The nominal position of the printing line (horizontal centreline of the characters), shall coincide with the horizontal centreline of the Printing Area.

6. PRINTING AREA HEIGHT

The height H_3 of the Printing Area depends upon the font size as follows:

<u>Size</u>	<u>H_3</u>
I	5,8 mm
III	7,2 mm
IV	8,4 mm

The values specified for the Printing Area height H_3 are obtained taking into account the vertical misalignment and the stroke width tolerances permitted in 4.5.8 and 5.8 of Standard ECMA-15. A tolerance of 1,6 mm has been added in order to accomodate misalignment among fields resulting from printing and possible guillotining.

7. MARGINS

The right and left hand Margins (see Note 3) shall be at least 6 mm, measured in the direction parallel to the Reference Edge.

NOTES

1. Definition of the Clear Area (Standard ECMA-15, 5.10):

"The Clear Area is that region of a document reserved for the OCR characters and the clear space around these characters."

2. Definition of the Printing Area (Standard ECMA-15, 5.9):

"The Printing Area is a rectangle that has one side parallel to the document reference edge and is intended to contain only machine readable characters of one line."

3. Definition of the Margin (Standard ECMA-15, 5.11):

"The distance between any boundary of the Printing Area and the nearest parallel paper edge is called the Margin."



