

ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-30

FOR

OCR-B SUB-SETS
FOR NUMERIC APPLICATIONS

September 1971

Free copies of this standard ECMA-30 are available from
ECMA European Computer Manufacturers Association
114 Rue du Rhône — 1204 Geneva (Switzerland)

ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-30

FOR

OCR-B SUB-SETS FOR NUMERIC APPLICATIONS

September 1971

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). ECMA-8 and ECMA-11 are compatible with the ISO Recommendation No. 1073 (Alphanumeric Sets for Character Recognition). The additional Standards ECMA-18 and ECMA-21 specify the positioning of characters on Single Line Documents and Journal Tape, respectively. In order to ensure better information interchange, further work has been undertaken on the standardization of the selection of OCR-B characters for those applications where the numerals alone are not sufficient but the full set is not required. This work led to the present Standard.

Passed as Standard ECMA-30 by the General Assembly of June 2-3, 1971.

1. PURPOSE

The purpose of this Standard ECMA-30 is to determine the choice of characters for those Optical Character Recognition systems which do not require to make use of the complete OCR-B repertoire and with which a restricted set makes for economical working.

2. SCOPE

The Standard specifies the OCR-B characters to be used for the following applications :

- A. Single-Line documents with a restricted repertoire.
- B. Journal Tapes

Due account has been taken of the distinguishability of characters as well as of system and semantic needs. The provision of two sets is made necessary by the differing requirements of the two applications. All the characters in the Single Line set, with the exception of the Pre-printed Long Vertical Mark, are included in the Journal Tape set.

Except for the characters SPACE and PLVM, this Standard does not specify the printed image; nor does it specify the printing quality required for interchange applications. These are defined by the Standards ECMA-11 and ECMA-15, respectively.

3. CHARACTER SET FOR SINGLE-LINE DOCUMENTS

3.1 Basic Set

10 numerals

0 1 2 3 4 5 6 7 8 9

PLUS

+

GREATER THAN

>

LESS THAN

<

PREPRINTED LONG
VERTICAL MARK

|

3.2 Optional Characters

3.2.1 Additional graphics

If more characters are required by the application the set can be extended by inclusion of:

Letter V

V

Letter X

X

3.2.2 Character SPACE

If required, e.g. for definition purposes, the character SPACE can be included in the set. Not all machines will necessarily read the character SPACE.

4. CHARACTER SET FOR JOURNAL TAPE

4.1 Basic Set

10 numerals

0 1 2 3 4 5 6 7 8 9

PLUS

+

GREATER THAN

>

LESS THAN

<

LETTER V

V

LETTER X

X

LETTER C

C

LETTER E

E

LETTER N

N

4.2 Optional Characters

If more characters are required by the application

the set can be extended by inclusion of:

LETTER S

S

LETTER T

T

The use of these two letters is subject to a restriction: they may not appear in columns in which the numerals 1 and/or 5 can appear.

APPENDIX A

Character PREPRINTED LONG VERTICAL MARK

A 1. Definition

The character PREPRINTED LONG VERTICAL MARK is a preprinted vertical line.

A 2. Dimensions

	mm		
	size I	size III	size IV
nominal stroke-width	0,35	0,38	0,50
minimum height	5,8	7,2	8,7

In addition to the required minimum height, the character PLVM must span the full height of the Printing Area (see ECMA-15 and ECMA-18).

A 3. Character Spacing

For the purpose of Character Spacing (see ECMA-15) it is to be considered as a full width character.

A 4. Use with mixed sizes

If the PLVM is used to separate two fields with different character sizes, the largest values apply.

NOTE: There is no specified maximum length for the Preprinted Long Vertical Mark.
It may, for example, be a ruled line from top to bottom of the document.

APPENDIX B

Character SPACE

B 1. Definition

The character SPACE is an intentionally blank position in a line of printing.

B 2. Width

With constant pitch printing its nominal width is equal to the printing pitch (for example 2,54 mm if the characters are printed 10 per 25,4 mm). With variable pitch printing its nominal width is equal to the largest character pitch used (i.e., the nominal distance between the vertical centrelines of two successive letters m).

B 3. Determination of more than one SPACE

The vertical centrelines (for definition see ECMA-15, par. 5.11.2) of bounding characters and the intended character pitch shall be used for the purpose of determining the number of SPACE characters between printed characters.

NOTE: The possibility of counting either a single SPACE character or the number of SPACE characters in a given blank area is dependent on the OCR reader, the print location tolerances and other factors requiring prior agreement between user and manufacturers involved.

B 4. Drawing

There is no reference drawing for this character.

