

PRINTER
CHARACTER
SETS

MAY 1974

CENTRONICS

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5 x 7 DOT MATRIX

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9 x 7 DOT MATRIX

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CENTRONICS PRINTER CHARACTER SETS

This document provides illustrated samples of the various character sets available on Centronics printers. Printing is accomplished by selectively firing seven solenoids attached to print wires in the print head. The free ends of the wires pass through a wire guide, at the front of the print head, which aligns the seven wires into a vertical column.

As the print head moves across the paper, the print solenoids are pulsed to drive the print wires against the ribbon, paper and platen, forming the characters out of dots (See Figure 1). De-energizing the print solenoids draws in the print wires flush with the surface of the print head.

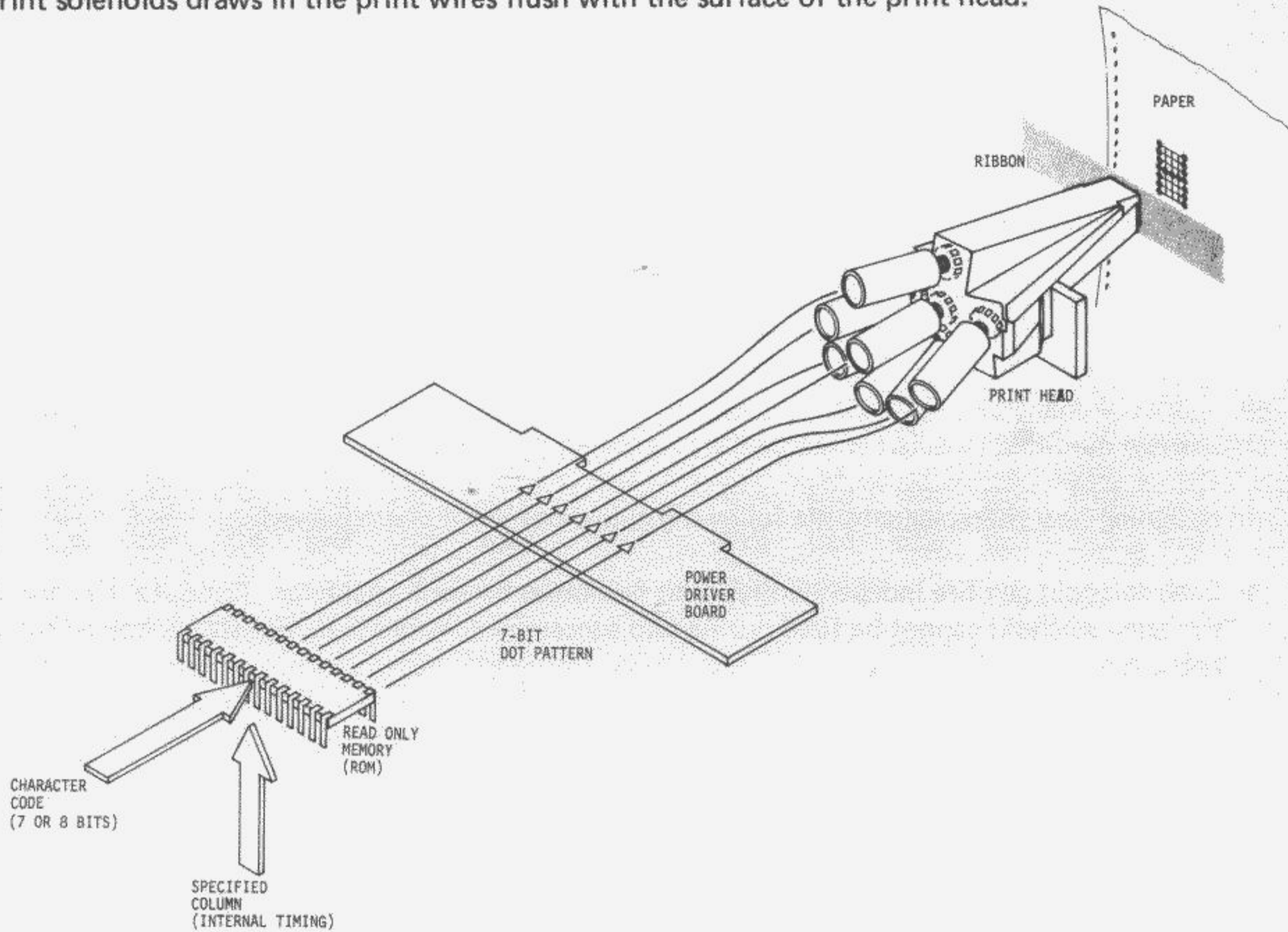


Figure 1. CHARACTER GENERATION BLOCK DIAGRAM

The printing impulses for the seven solenoids are developed in one or more logic elements called Read-Only Memories (ROM's). Each ROM is addressed by: (1) a 7-bit character code which specifies the character to be printed, and (2) an internally-generated timing signal which specifies a single column within that character. In response to these inputs, the ROM generates seven logic signals which control the dot pattern for that addressed column.

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Each ROM can generate up to five dot columns for 64 different characters. For generating 9 x 7 characters, two ROM's are used. As shown in Figure 2, one ROM generates the "full step" columns (i.e., 1, 3, 5, 7 & 9), and the other generates the "half step" columns (i.e., 2, 4, 6 & 8).

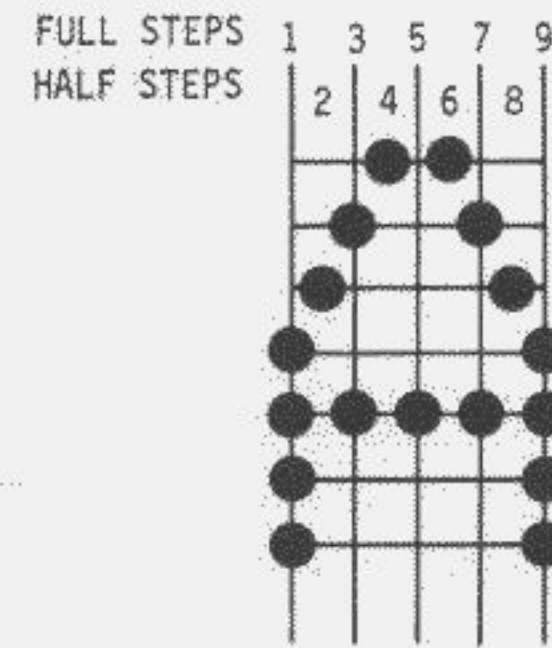


Figure 2. 9 x 7 CHARACTER (A)

Each character set illustrated in the brochure contains the following information:

1. The identification number of each ROM - For example, 27-026/027 specifies two ROM's: 27-026 generates the full-step dots and 27-027 generates the half-step dots. Identification numbers C-9262/63 specify two functionally identical ROM's.
2. The octal code used to address each character - For example, a binary 1010011 on Data Lines 7 through 1 will address the character whose octal code is 123.
3. Special characters - If a character set differs from the standard ASCII set by a few characters, these modified (special) characters are indicated by an asterisk.

In designing new character sets, the following guidelines should be observed.

- Each solenoid can fire independently up to five times for each character. For a 9 x 7 character, the same solenoid cannot be fired during two successive columns (i.e., full-step followed by a half step).
- The number of ROM's required for generating a character set is shown in the following table:

<u>No. of Characters</u>	<u>No. of ROM's Required</u>	
	(5 x 7)	(9 x 7)
64	1	2
96/128	2	4

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040	041	042	043	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136	137

STANDARD ASCII
(I.D. NO. 27-001 or C-8940)

040	041*	042	043	044*	045	046*	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136	137

*SPECIAL CHARACTERS

MODIFIED ASCII
(I.D. NO. 27-006 or C-8939)

040	041	042	043	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074*	075	076*	077
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133*	134	135*	136*	137

*SPECIAL CHARACTERS

SYSTEM
(I.D. NO. 27-007 or C-8842)

040	041	042	043*	044*	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
100*	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134*	135	136	137

*SPECIAL CHARACTERS

GERMAN
(I.D. NO. 27-010 or C-9148)

040	041	042	043*	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
080	081	082	083	084	085	086	087
090	091	092	093	094	095	096	097
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136*	137

BRITISH ASCII
(I.D. NO. 27-018 or C-9147)

040	041	042	043*	044	045*	046*	047
050	051	052*	053	054*	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074*	075	076	077
080	081	082	083	084	085	086	087
090	091	092	093	094	095	096	097
100*	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136	137

*SPECIAL CHARACTERS

MODIFIED BRITISH ASCII
(I.D. NO. 27-018 or C-9148)

040	041	042	043*	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
080	081	082	083	084	085	086	087
090	091	092	093	094	095	096	097
100*	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133*	134*	135*	136*	137

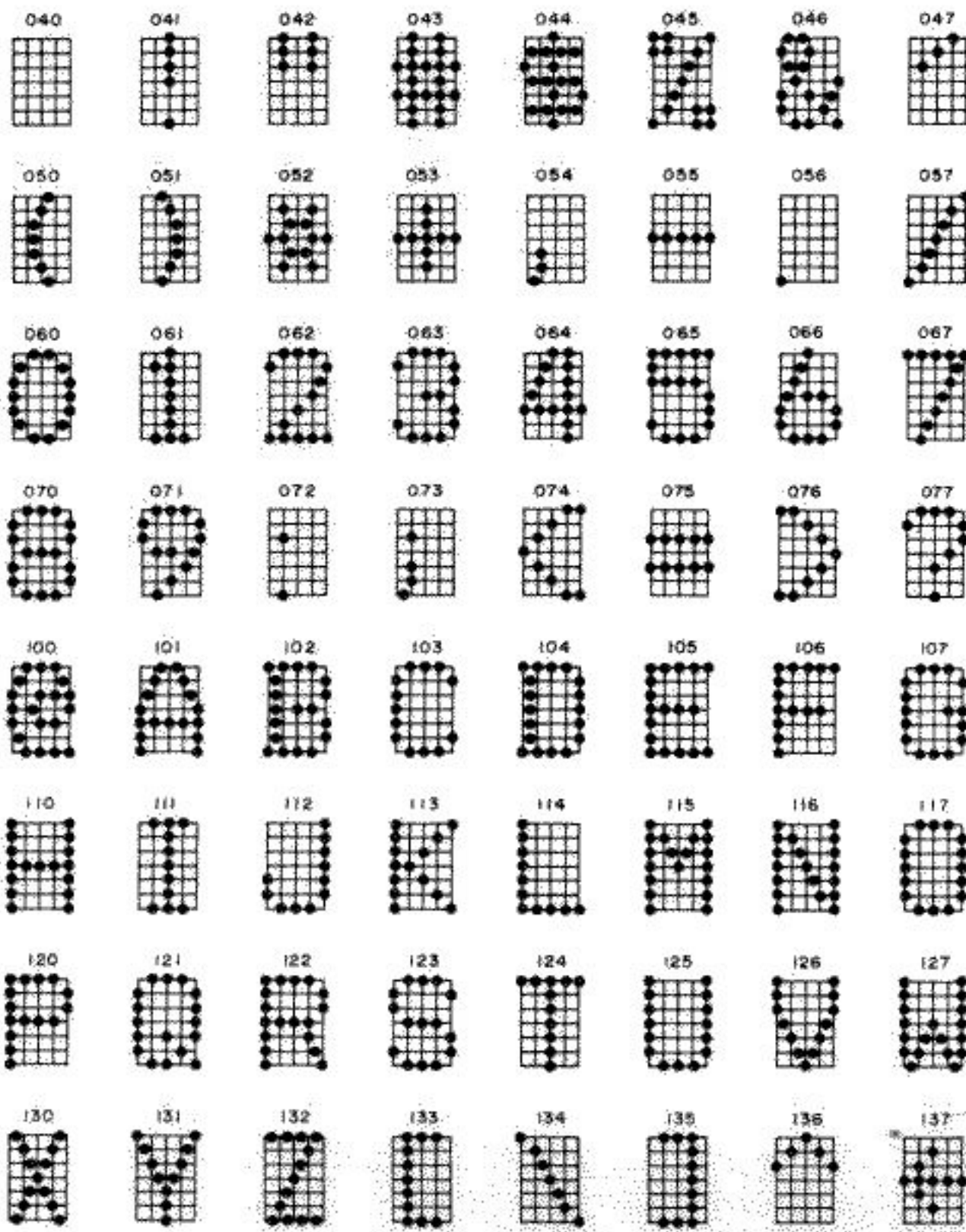
*SPECIAL CHARACTERS

SWEDEN
(I.D. NO. 27-024 or C-9296)

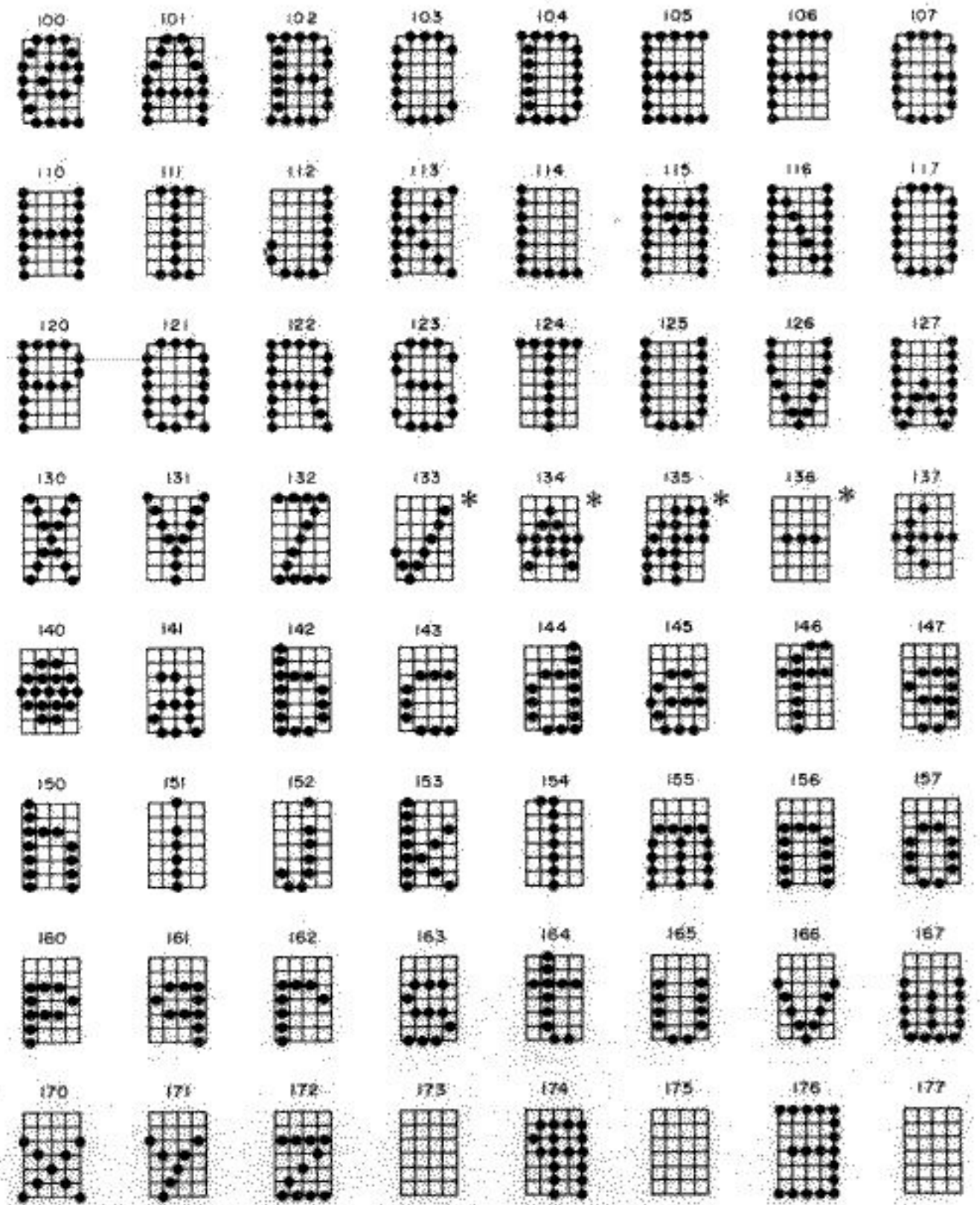
040	041	042	043*	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
080	081	082	083	084	085	086	087
090	091	092	093	094	095	096	097
100*	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133*	134*	135*	136*	137

*SPECIAL CHARACTERS

SPAIN
(I.D. NO. 27-025 or C-9297)

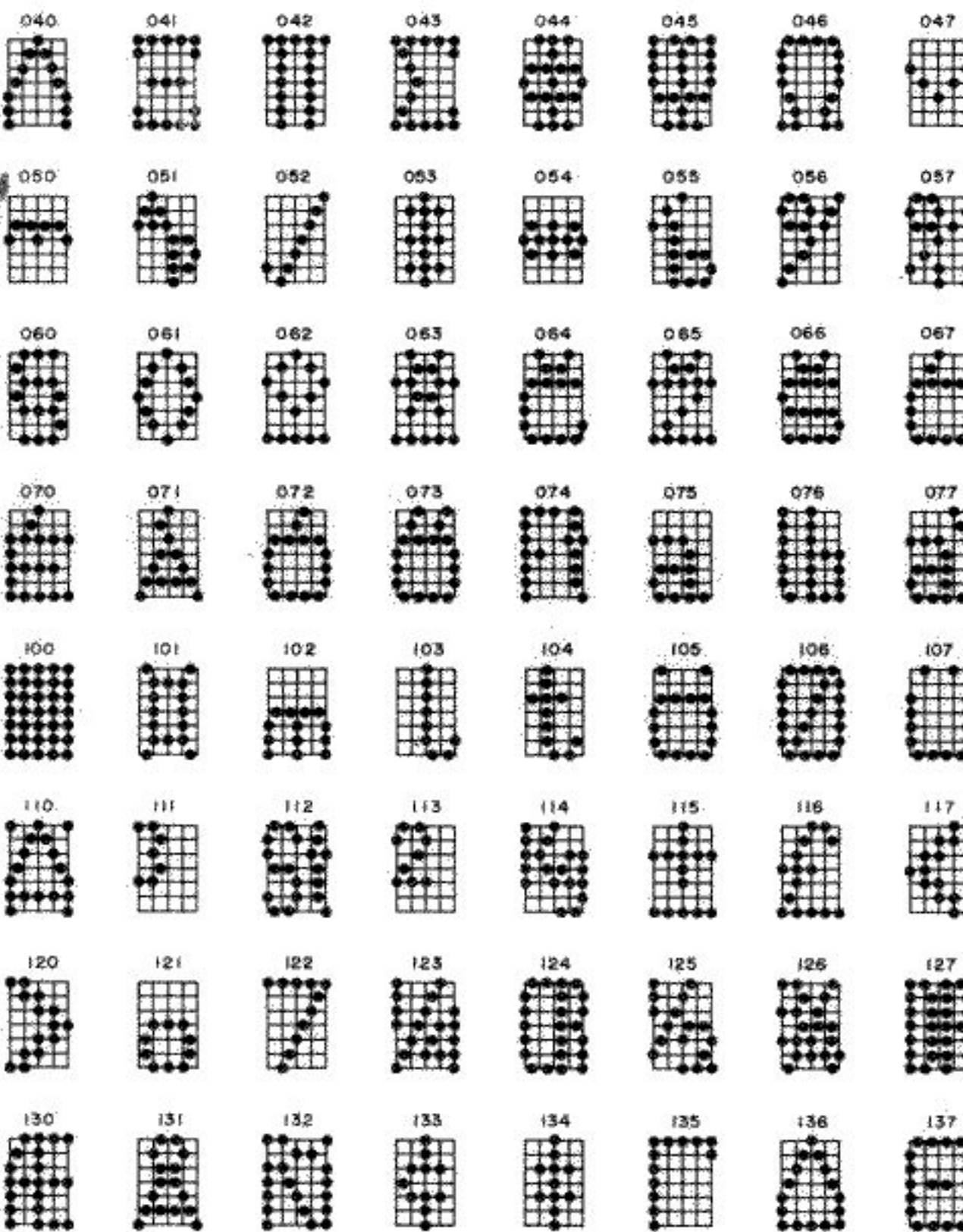


STANDARD ASCII 9 X 7
(I.D. NO. 27-002/003 or C-8837/38)

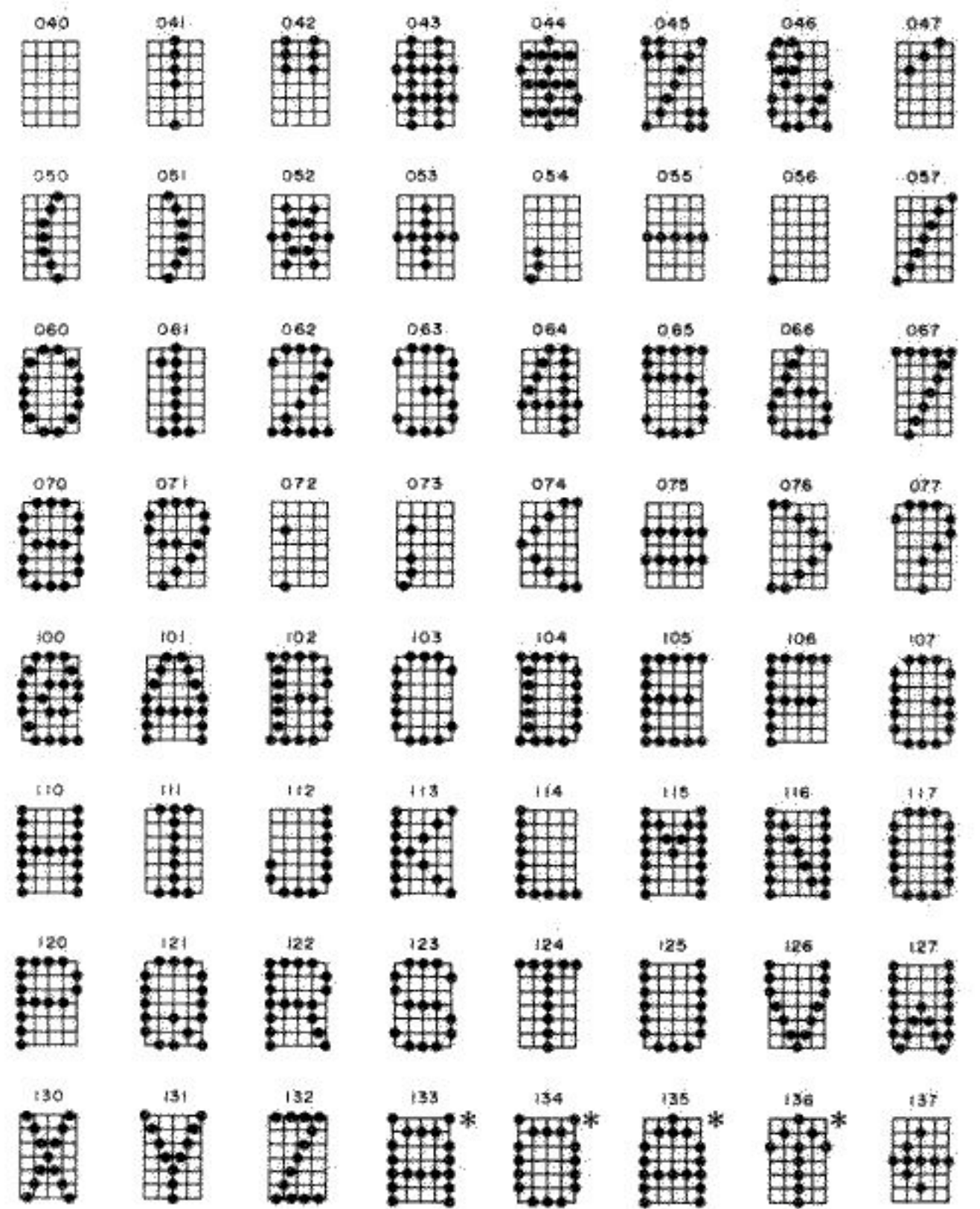


*SPECIAL CHARACTERS

UPPER/LOWER CASE (PUBLISHER)
(I.D. NO. 27-004/005 or C-9024/25)



EXPORT
(I.D. NO. 27-008/009 or C-8833/34)



*SPECIAL CHARACTERS

SWEDISH/FINNISH
(I.D. NO. 27-011/012 or C-8840/41)

The Centronics family of printers/teleprinters.

MODEL	SPEED		NO. OF COLUMNS	DOT MATRIX	
	CPS	LPM		5x7	9x7
101	165	60-200	132	x	-
101A	165	60-200	132	-	x
101AL (LSI)	165	60-200	132	-	x
102A	330	125	132	-	x
122AL	600	200	132	-	x
306	100	60-150	80	x	opt.
308 (KSR or RO)	120	-	80	x	opt.
500	100	40-150	132	x	opt.
508 (KSR or RO)	120	-	132	x	opt.