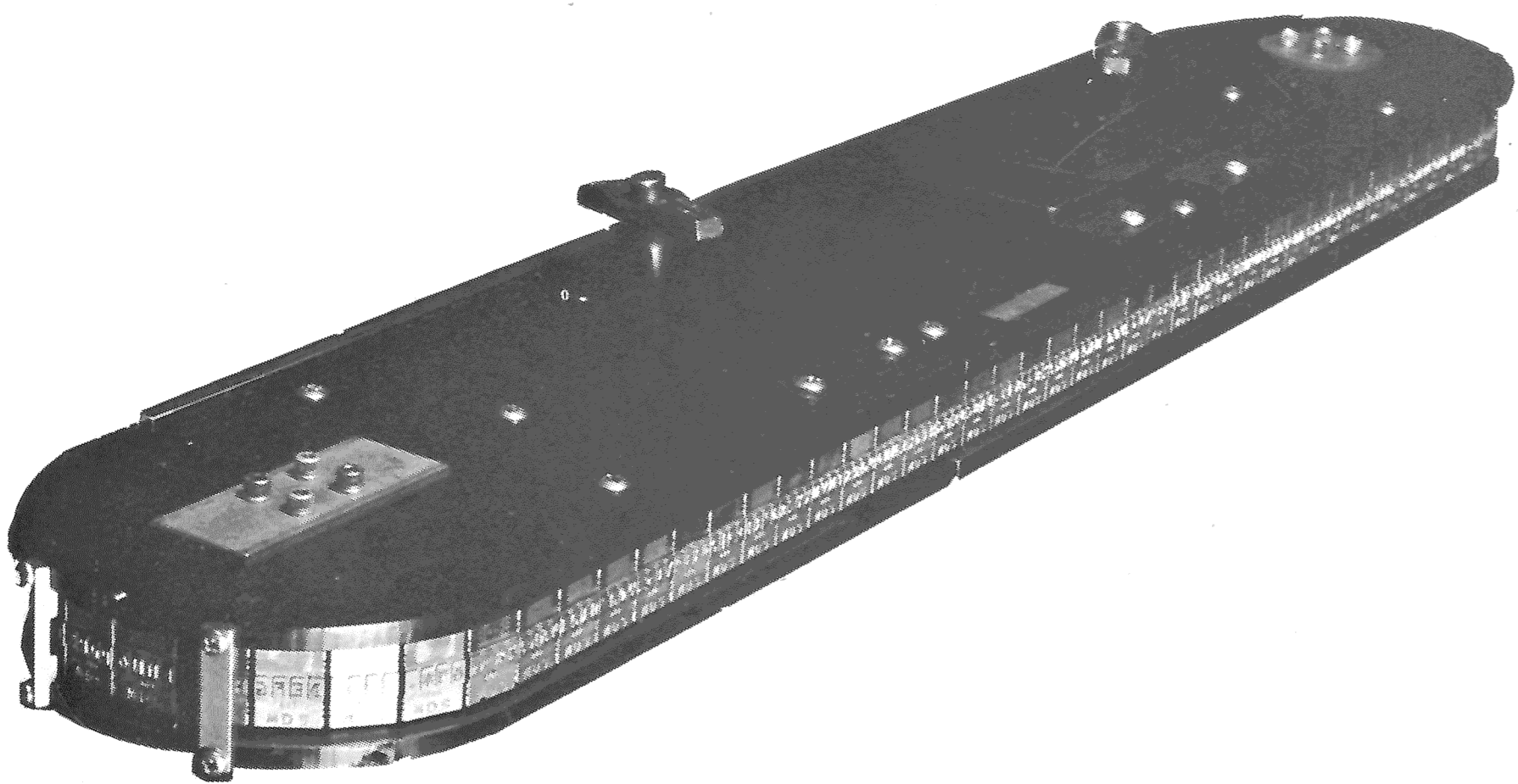


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PRINT CHAIN SUMMARY

INTRODUCTION

This booklet contains standard character set layouts representative of print chains used on MDS End-User and OEM Chain Printers. Character sets of 16, 48, 64, 96 and 128 characters are depicted.

A print chain is constructed of 96 four-character slugs mounted end-to-end on a belt. A 16-character set requires 4 slugs, therefore, the entire set can be repeated 24 times. Repeatability depends upon the size of the character set selected.

The printing speed of a chain printer is rated in part, upon the size of the character set and the frequency with which that set can be printed. The nominal printing speeds for the standard character sets are listed in table form herein.

Standard type styles are MDS .097, OCR-A, OCR-B, KATAKANA, MDS LABEL FONT, and CYRILLIC. The .097 font is a sans-serif type style designed for maximum legibility. It has a squared alpha "O" and a rounded numeric "zero" to eliminate confusion between alpha and numeric groupings. OCR-A is the standard type style for Optical Character Readers used in the United States. OCR-B is the standard type style for optical character readers used in Europe, and has been designed to meet the requirements of ECMA. The Katakana type style is the Japanese EDP standard. A Label Font and Cyrillic Font are also available.

All of these styles are illustrated on the sample sheets herein.

Two separate chain listings are furnished, one for End-User Chain Printers and one for OEM Chain Printers. Most End-User chains are ordered by a double feature number and some are ordered by a Part Number (P/N.) OEM chains are ordered by P/N; however, the End-User chain cartridges may be ordered for OEM Chain Printers.

The bold boxed-in sequence number for the P/N and Feature number listings refers to the same number associated with the chain layouts. There is a separate listing and layout sheet for each category, i.e., End-User or OEM.

The chain layouts show the first line of each style with four characters depicted on each slug. Each chain layout illustrated below the first line shows only the slugs that are different.

SPECIAL ARRANGEMENTS

A special arrangement is one ordered to rearrange the characters of a standard type-slug and/or to substitute other characters selected from available type (artwork). New characters may also be specified by the customer.

Requirements for special arrangements and/or new characters are subject to acceptance by MDS via an RPQ.

NOTE:

Inclusion in this catalog of special fonts such as OCR-A, OCR-B etc., does not necessarily guarantee that any such characters will print according to the specification standards for the font.

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TABLE OF PRINT RATES (lines per minute)

CHARACTER SET	PRINTERS			
	2443	2444	2445 ⁽¹⁾	7530
16	350	450	900	350
48	280	380	380	280
64	200	300	600	200
96	170	210	470	170
128	150	162	370	150

(1) OCR-A and OCR-B cartridge evaluation tests have not been completed for this printer. Have your Sales Representative check with Engineering before ordering one of these cartridges.

**MDS PRINTER MODELS
2443, 2444, 2445 AND 7530 ONLY**

No.	Compatibility	Chain Cartridge Feature/Part Number										Coding EBCDIC	I/O Converter P/N	
		16		48		64		96		128			To sn 234	Above 301
		2400	7500/7201	2400	7500/7201	2400	7500/7201	2400	7500/7201	2400	7500/7201			
1	IBM	24574 24585	574 585	24575 24585	575 585	24576 24585	576 585	24577 24585	577 585	24578 24585	578 585		020533901	02060902
2	HONEYWELL	---	---	---	---	24576 24586	576 586	---	---	---	---		020533901	02060902
3	UNIVAC XS-3	---	---	---	---	24576 24587	576 587	---	---	---	---		020533901	02060902
4	BURROUGHS 5000	---	---	---	---	24576 24588	576 588	---	---	---	---		020533901	02060902
5	GE/NCR	---	---	---	---	24576 24589	576 589	---	---	---	---		020533901	02060902
6	USASCII '68	---	---	---	---	004602318	004602318	004602319	004602319	---	---		020533901	02060902
7	IBM 48 H/HN	---	---	24575 24211	---	---	---	---	---	---	---		020533901	02060902
8	RPO STANDARD	---	---	---	---	004602326	004602306	---	---	---	---		---	004564001
9	RPO STANDARD	---	---	004602309	004602309	---	---	---	---	---	---		---	005003401
10	RPO STANDARD	---	---	---	---	004602310	004602310	---	---	---	---		---	620602902
11	GERMAN EBCDIC	---	---	---	---	---	---	004602308	004602308	---	---		020533903	020602904
12	OCR-A	24574 24184	574 75184	---	---	---	---	---	---	---	---		---	020602905 005008801*
13	OCR-A	---	---	24575 24184	575 75184	24576 24184	576 75184	---	---	---	---		---	005011601
14	RPO STANDARD OCR-A	---	---	---	---	004602328	004602328	---	---	---	---		---	020602902
15	OCR-B GERMAN	24574 24186	574 75186	24575 24186	575 75186	24576 24186	576 75186	24577 24186	577 75186	24578 24186	578 75186		020533901	02060902
16	OCR-B SWEDEN/FINLAND	24574 24187	574 75187	24575 24187	575 75187	24576 24187	576 75187	24577 24187	577 75187	---	---		020533901	02060902
17	OCR-B NORWAY/DENMARK	24574 24188	574 75188	24575 24188	575 75188	24576 24188	576 75188	24577 24188	577 75188	---	---		020533901	02060902
18	OCR-B UNITED KINGDOM	24574 24189	574 75189	24575 24189	575 75189	24576 24189	576 75189	24577 24189	577 75189	24578 24189	578 75189		020533901	02060902
19	OCR-B FRENCH	24574 24190	574 75190	24575 24190	575 75190	24576 24190	576 75190	24577 24190	577 75190	24578 24190	578 75190		020533901	02060902
20	OCR-B ITALIAN	24574 24191	574 75191	---	---	24576 24191	576 75191	---	---	---	---		020533901	02060902
21	OCR-B PORTUGUESE	---	---	---	---	24576 24192	576 75192	---	---	---	---		020533901	02060902
22	OCR-B YUGOSLAVIAN	---	---	---	---	24576 24193	576 75193	---	---	---	---		020533901	02060902
23	OCR-B SPANISH	---	---	---	---	24576 24194	576 75194	---	---	---	---		020533901	02060902
24	OCR-B ICL	---	574 592	---	575 592	---	576 592	---	577 592	---	---		020533901	02060902
25	KATA-KANA JAPANESE STANDARD	---	---	---	---	---	576 593	---	577 593	---	---		020533902	020602903 005007601*
26	RPO KATA-KANA	---	---	---	---	---	---	004602327	004602327	---	---		---	020602903
27	RPO KATA-KANA W/FARRINGTON STYLE NUMERICS	---	---	---	---	---	---	004602311	004602311	---	---		---	020602903
28	LABEL FONT	---	---	---	---	---	576 594	---	---	---	---		---	020602902
29	CYRILLIC	---	---	---	---	---	---	---	577 75153	---	---		---	020602907

NOTES: *2445 Chain Printer
Hyphens (--) indicate character set inappropriate for intended compatibility.

*2445 Chain Printer

NO.

1	0123	4567	89\$. % * _ ,	@ABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZ#	&' + /	<=>? ; : ()	_"^_	¢! \	abc	defg	hijk	lmno	pqrs	tuvw	xyz#	[]	0123	4567	89()	+ - + -	┌ ┐ └ ┑	+ ≤ ▢ ≥	° . ■ ◇	~ < >	
2														CR " ^ #	¢ ! ▢																
3														\ [^ #] ! Δ ▣																	
4											&] + /			[" ^ ≤ x ≥ + #																	
5] " ^ [+ ! \ +																	
6														_"^_ [!] \																	~ }
7			(* _ ,)ABC							XYZ=																				
8														¢ ! ▣																	
9	1234	5678	90 = ' .	ABC							() + /																				
10											Ø ' + /			_"^_																	
11			ü * _ ,								XYZÖ Ä ' + /			_"^_ ä ! v #																	xyz° [] Ö _

USASCSOCR-A

12	4 5 6 7 /	0123	4567	89\$.																												
13				% * _ ,	89\$.	#ABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZ&	@ ▽ []	+ = ! ?	¢ ; : ▽ \ ! _																	
14	0123	4567	89\$.	% * _ ,	#ABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZ&	@ ` []	4 5 6 7 /	¢ ; : " \ ! _	+ = ! ?																	

ECMA OCR-B

15	0123	4567	89Ü.	% * _ ,	ÖABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZÄ	&' + /	<=>? ; : ()	_"^_	¢ £ ! \	abc	defg	hijk	lmno	pqrs	tuvw	xyz#	ö ß ä ü	0123	4567	89()	+ - + -	┌ ┐ └ ┑	+ ≤ ▢ ≥	° . ■ ◇	~ < >	
16			89Å.											_"^_	¢ £ ! \								ö ~ ä ä									
17			89Å.		ØABC						XYZÆ			_"^_	¢ £ ! \								ö ~ æ ä									
18			89£.		@ABC						XYZ#			_"^_	¢ ! \								~ }									
19			89Fr.		@ABC						XYZ#			_"^_	¢ ! \								[]									
20			89£.		ÒABC						XÿZì			_"^_	¢ ! \																	
21			89Ç.		ÃABC						XYZÖ			_"^_	¢ ! \																	
22			89Č.		ǞABC						XYZ#			_"^_	¢ ! \																	
23			89\$.		ÑABC						XYZ#			_"^_	¢ ! \																	
24			89\$.		@ABC						XYZ#			+ "] +	¢ ! [_																	~ < >

KATAKANA

25	アイウエ	オカキク	ケコサシ	スセソタ	チツテト	ナニヌネ	ノハヒフ	ハホマミ	ムメモヤ	ヨヨリ	ルロワ	ン	0	1234	5678	9 _ , .	* ?) (¥ % = +	@ ; AB	CDEF	GHIJ	KLMN	OPQR	STUV	WXYZ
26																			/ : AB						
27													ン	0	1234	5678	9 _ , .								

MDS LABEL FONT

28	0123	4567	89L.	% * _ ,	@ABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZJ	&' + /	/ = \	┌ ┐ ()	_"^_	┐ ┌ _ \
----	------	------	------	---------	------	------	------	------	------	------	------	--------	-------	---------	------	---------

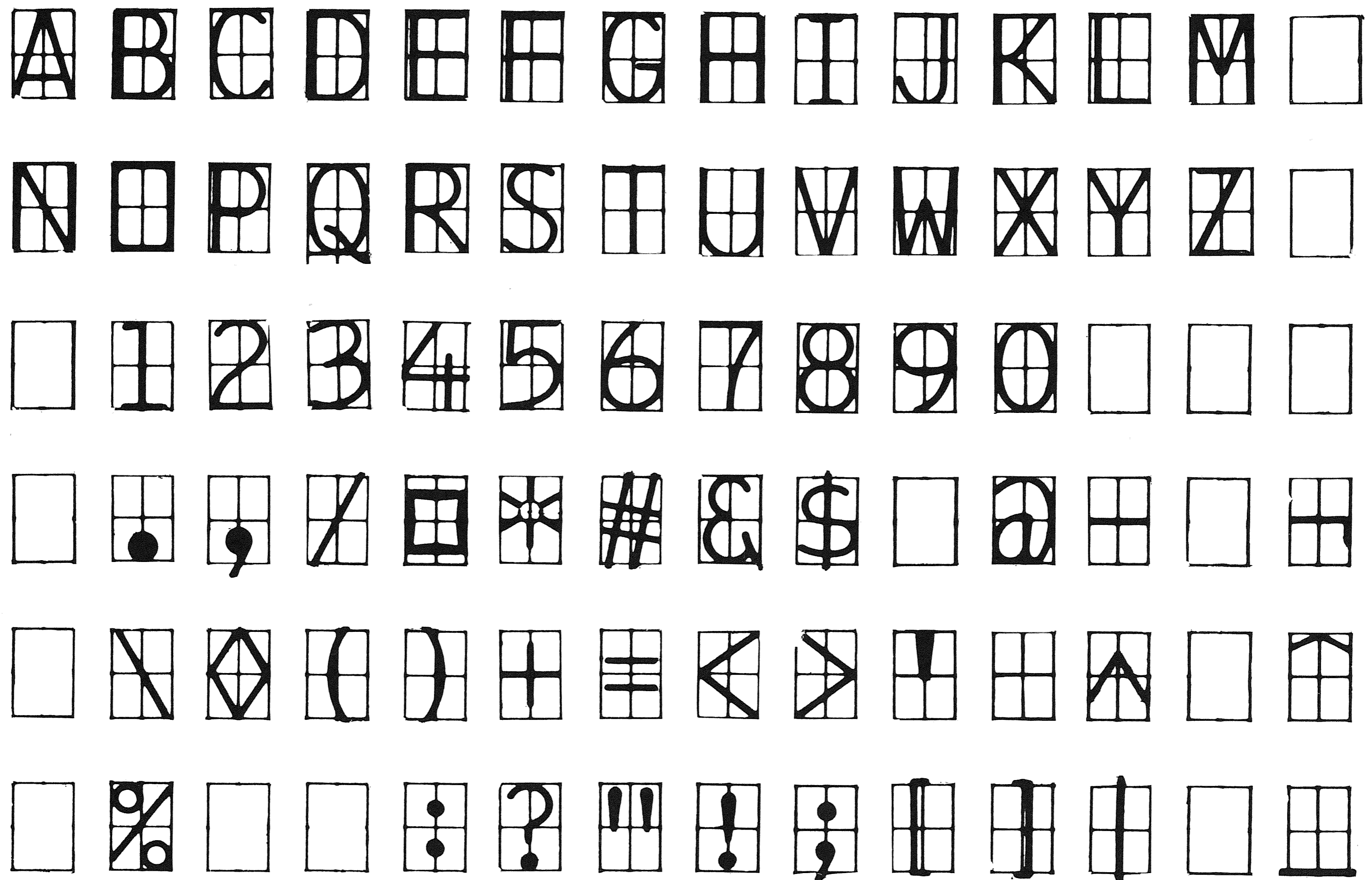
CYRILLIC

29	0123	4567	89\$.	% * _ ,	ÖABC	DEFG	HIJK	LMNO	PQRS	TUVW	XYZ#	&' + /	УБГД	ЖЗИЙ	ЛПФЦ	ЧШЩЫ	ЪЮЯ	Ъ #	_"^_	▣ ! ! ¢	<=>? ; : ()	BLANK
----	------	------	-------	---------	------	------	------	------	------	------	------	--------	------	------	------	------	-----	-----	------	---------	--------------	-------

**MDS OEM PRINTER MODELS
4330, 4331, 4333 AND 4335**

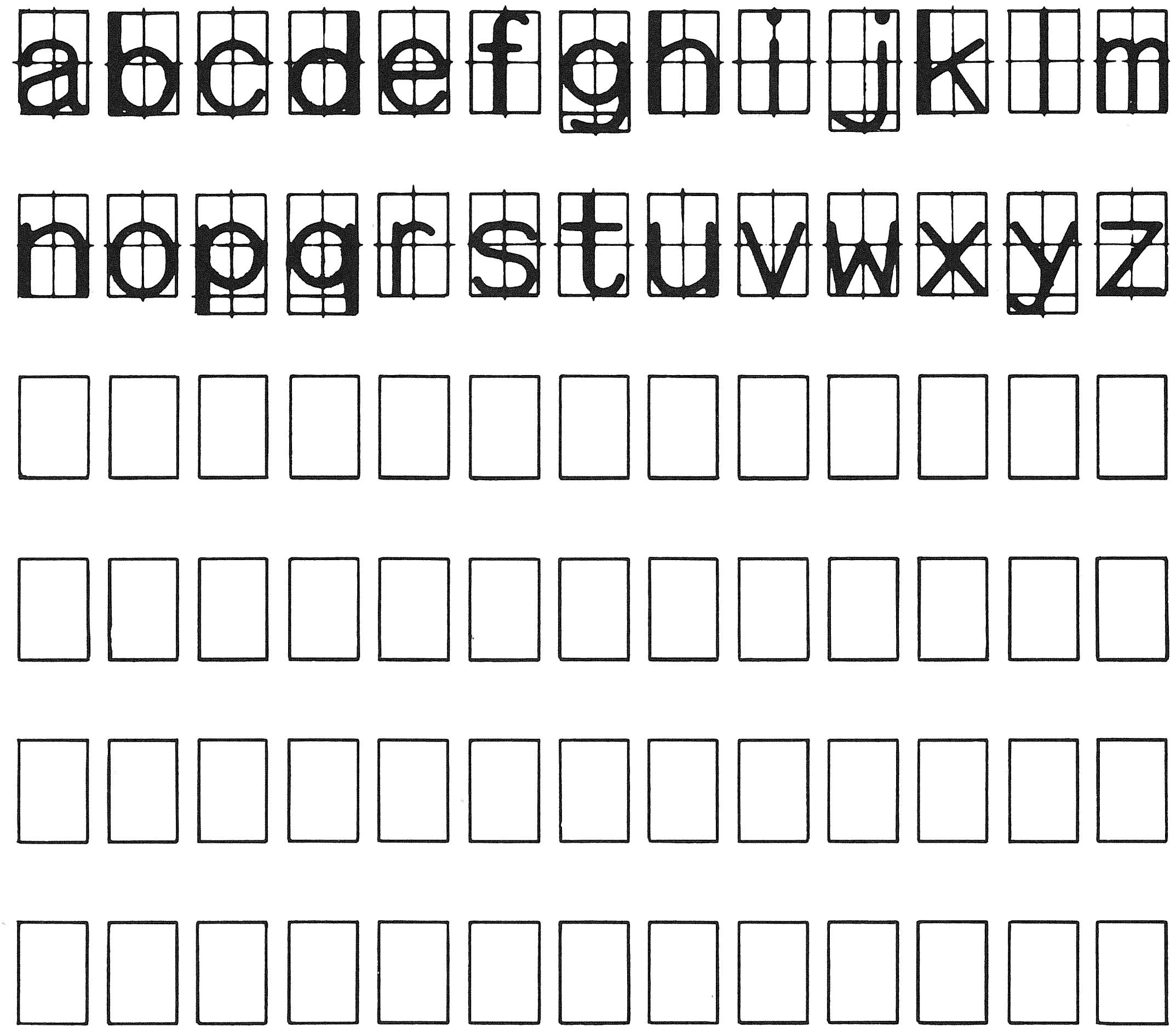
Chain Cartridge Part No. (Prefix 004 omitted)							I/O Converter P/N		
No.	Compatibility	16	48	64	96	128	Coding	To sn 234	sn 301 up
1	USASCII - '68	602205	602204	602203	---	---	*ASCII	020373304	020429633
					---	---	**ASCII	020373305	020429634
					602218	602221	USASCII	020373301	020429630
2	USASCII (Alt.)	---	---	---	602219	---	USASCII	020373301	020429630
3	IBM PN/QN	602205	602204	602207	---	---	+EBCDIC	020373303	020429632
4	MDS 1100	602205	602204	602208	---	---	BCD	020373311	020429635
5	IBM 1401 A	---	---	602209	---	---	BCD	020373312	020429636
6	IBM 1401 H	---	602204	602210	---	---	BCD	020373313	020429637
7	MDS 1100 F470 BURROUGHS 5000 NCR-Compatible	602205	602204	602211	---	---	BCD	020373314	020429638
		602205	602204	602211	---	---	B-BCD	020373318	020429642
		602205	602204	602211	---	---	N-BCD	020373302	020429631
8	HONEYWELL 200 RCA 301 RCA 3301	602205	602204	602212	---	---	H-BCD	020373315	020429639
		602205	602204	602212	---	---	R1-BCD	020373317	020429641
		602205	602204	602212	---	---	R2-BCD	020373316	020429640
9	GERMAN (RPQ)	---	---	602217	---	---	ASCII	020373304	020429633
10	ICS	---	---	---	602220	---	ASCII	020373301	020429630
11	RPQ STANDARD	---	---	602216	---	---	ASCII	---	020429633 020429634
12	U-K (ECMA)	---	---	602214	---	---	*ECMA	020373304	020429633
13	GERMAN (ECMA)	---	---	602215	---	---	**ECMA	020373305	020429634
							ECMA	020373301	020429630
14	IBM 48-H/HN	---	602206	---	---	---	4330	020373306	020602906
15	LABEL FONT	---	---	602213	---	---	BCD	020373311	020429635
							+EBCDIC	020373303	020429632
16	USASCSOCR (OCR-A)	560021	560022	560007	---	---	EBCDIC	---	020602905
17	USASCSOCR (OCR-A)	602321	---	---	---	---	EBCDIC	---	020602905
18	GERMANY (OCR-B)	602401	602402	602403	602404	602405	EBCDIC	020533901	020602902
19	SWEDEN/FINLAND (OCR-B)	602406	602407	602408	602409	---	EBCDIC	020533901	020602902
20	DENMARK/NORWAY (OCR-B)	602410	602411	602412	602413	---	EBCDIC	020533901	020602902
21	UNITED KINGDOM (OCR-B)	602414	602415	602416	602417	602418	EBCDIC	020533901	020602902
22	FRANCE (OCR-B)	602419	602420	602421	602422	602423	EBCDIC	020533901	020602902
23	ITALY (BCD) (OCR-B)	602414	---	602434	---	---	EBCDIC	020533901	020602902
24	BRAZIL/PORTUGAL (OCR-B)	---	---	602435	---	---	EBCDIC	020533901	020602902
25	YUGOSLAVIA (BCD) (OCR-B)	---	---	602436	---	---	EBCDIC	020533901	020602902
26	SPAIN (BCD) (OCR-B)	602438	---	602437	---	---	EBCDIC	020533901	020602902
27	GERMANY (ECMA)	602438	---	602424	602425	---	EBCDIC	020533901	020602902
28	SWEDEN (ECMA)	602438	---	602426	602427	---	EBCDIC	020533901	020602902
29	DENMARK (ECMA)	602438	602439	602428	602429	---	EBCDIC	020533901	020602902
30	UNITED KINGDOM (ECMA)	602438	---	602430	602431	---	EBCDIC	020533901	020602902
31	FRANCE (ECMA)	602438	---	602432	602433	---	EBCDIC	020533901	020602902
32	ICL (OCR-B)	602438	602439	602440	602441	---	EBCDIC	020533901	020602902

NOTES: *6-Level ASCII/ECMA Bit b6 suppressed.
**6-Level ASCII/ECMA Bit b7 suppressed.
+6-Level truncated EBCDIC
Hyphens (---) indicate character set inappropriate for intended compatibility.
Consult the Factory regarding availability of any part not listed.



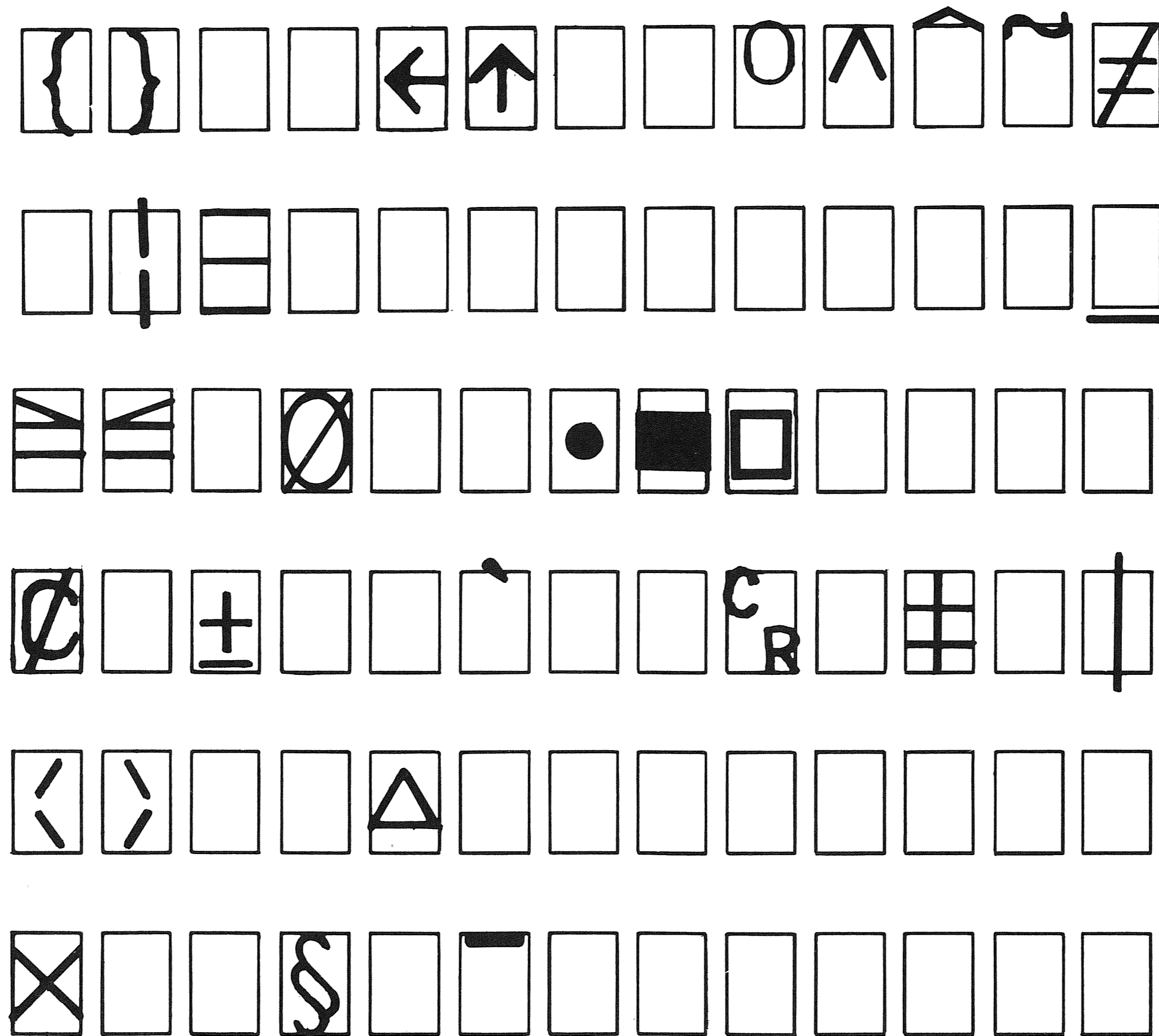
For the MDS Chain Printer (all models), the characters illustrated above are Standard Type. All alphanumeric and special graphics characters of the 16-, 48-, and 64-Character Sets of the basic standard arrangements are shown. For those characters included in a specific arrangement, see "Chain Layouts" for the appropriate printer model.

Figure 1. Basic Character Set, Standard Type (0.097"), MDS Chain Printers



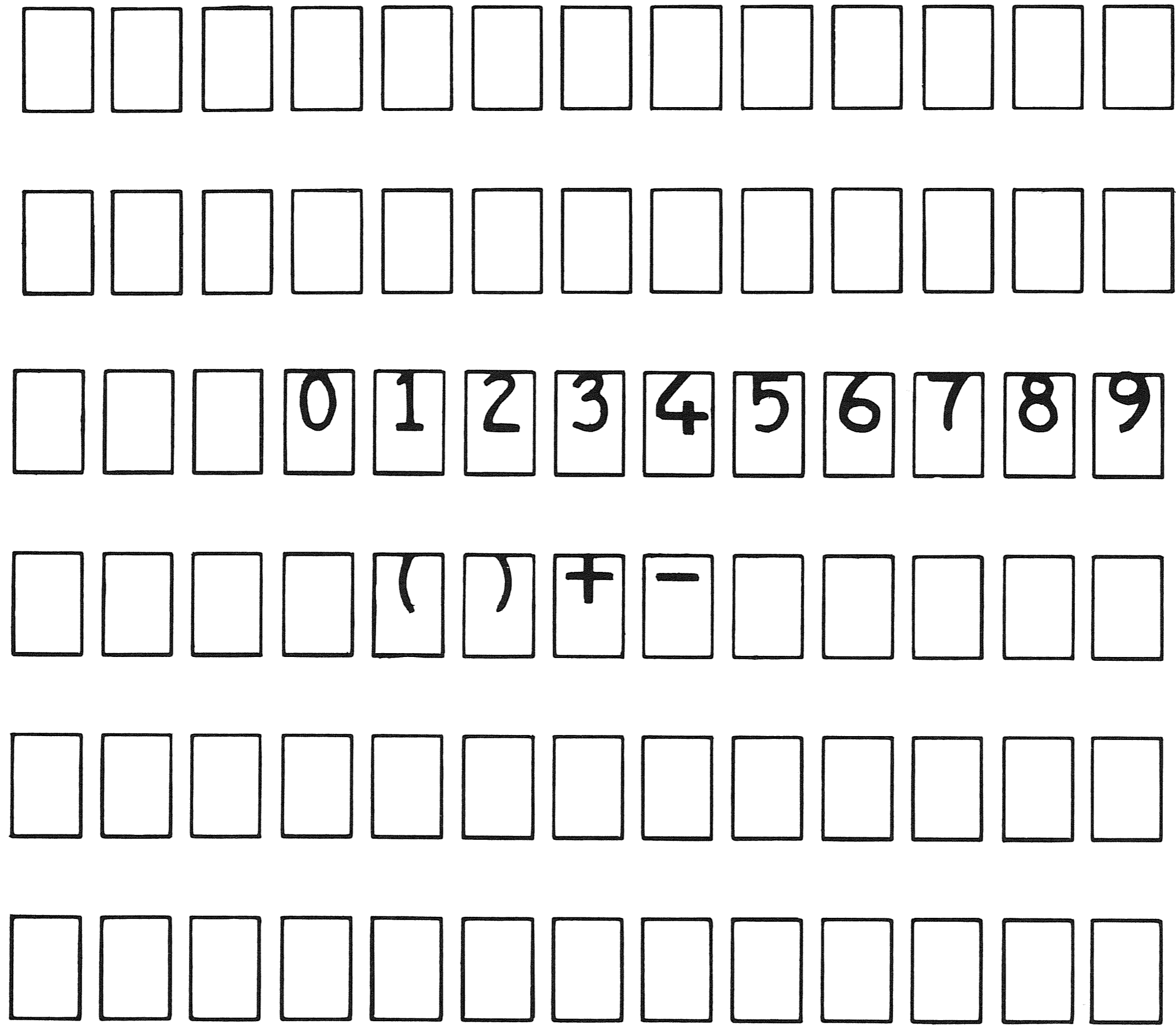
For the MDS Chain Printer (all models), the characters illustrated above are MDS Standard Type. The lower case letters of standard 96- and 128-character sets (Domestic) are shown.

Figure 2. Lower Case Letters, Standard Type, MDS Chain Printers



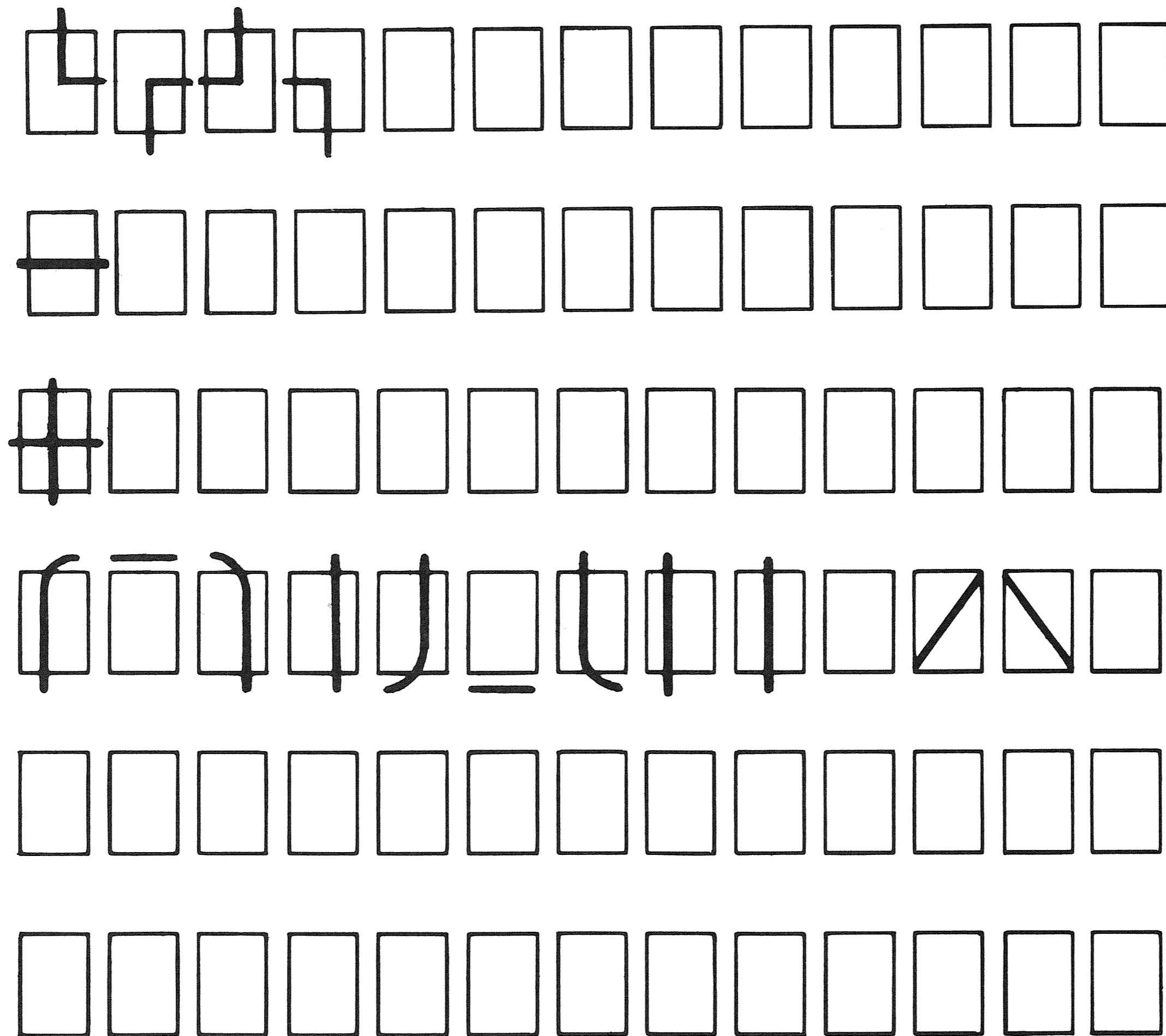
For the MDS Chain Printer (all models), the characters illustrated above are Standard Type. For those included in a specific arrangement, see "Chain Layouts" for the appropriate model.

Figure 3. Special Graphics, Standard Type, MDS Chain Printers



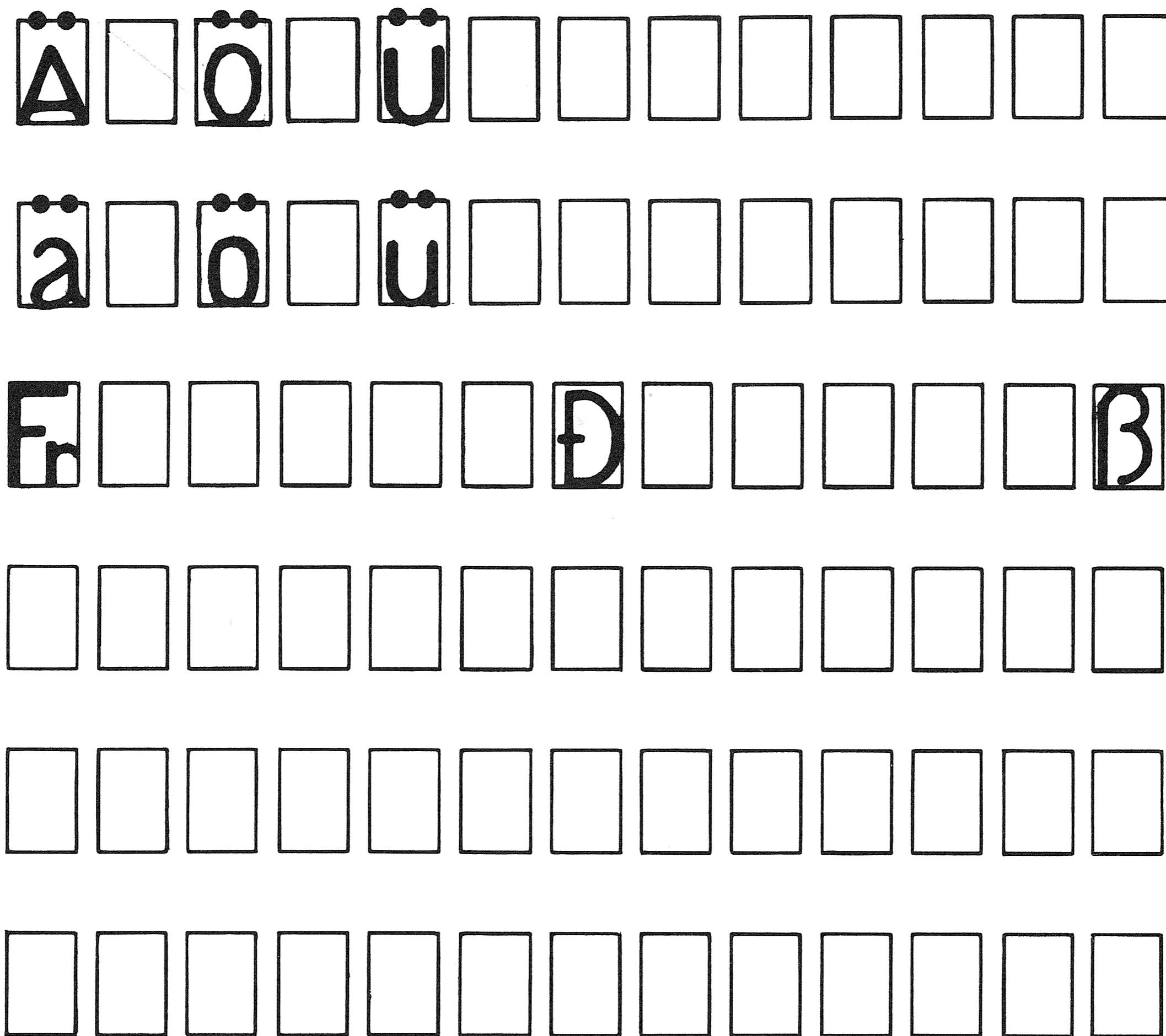
For the MDS Chain Printer (all models), the characters illustrated above are Standard Type.

Figure 4. Special Superscript Characters, Standard Type, MDS Chain Printers



All symbols illustrated above are designed for 8 lines-per-inch spacing (vertically). Symbols shown in the upper three rows are plotting-type symbols. Symbols shown in the lower three rows are graphic segments (character strokes) for composition of large-size printout in stroke matrices.

Figure 5. Special Purpose Symbols, MDS Chain Printers



For the MDS Chain Printer (all models), the characters illustrated above are Standard Type.

Figure 6. National Characters, Standard Type, MDS Chain Printers

A B C D E F G H I J K L M
 N O P Q R S T U V W X Y Z
 0 1 2 3 4 5 6 7 8 9
 . , : ; = + / \$ * ^ &
 ! - { } % ? [\] ≠

- NOTES: (1) Not Equals (≠) is not a ANSI OCR character but is a composite of ANSI OCR characters Equals (=) and Slant (/).
- (2) All other characters illustrated above are designed to meet the requirements of the American National Standards Institute for Size A characters for Optical Character Recognition (USASCSOCR X3.17-1966).

Figure 7. MDS ANSI Optical Character Recognition Type, Size A, MDS Chain Printers

A B C D E F G H a b c d e f g h
 I J K L M N O P i j k l m n o p
 Q R S T U V W X q r s t u v w x
 Y Z * + , - . / y z ð ø æ
 0 1 2 3 4 5 6 7 £ \$: ; < % > ?
 8 9 ; [@ ! # & ,]
 (=) " ' ` ^ ~ ˇ
 Ä Ö Å Ñ Ü Æ Ø ↑ ≤ ≥ × ÷ ° α

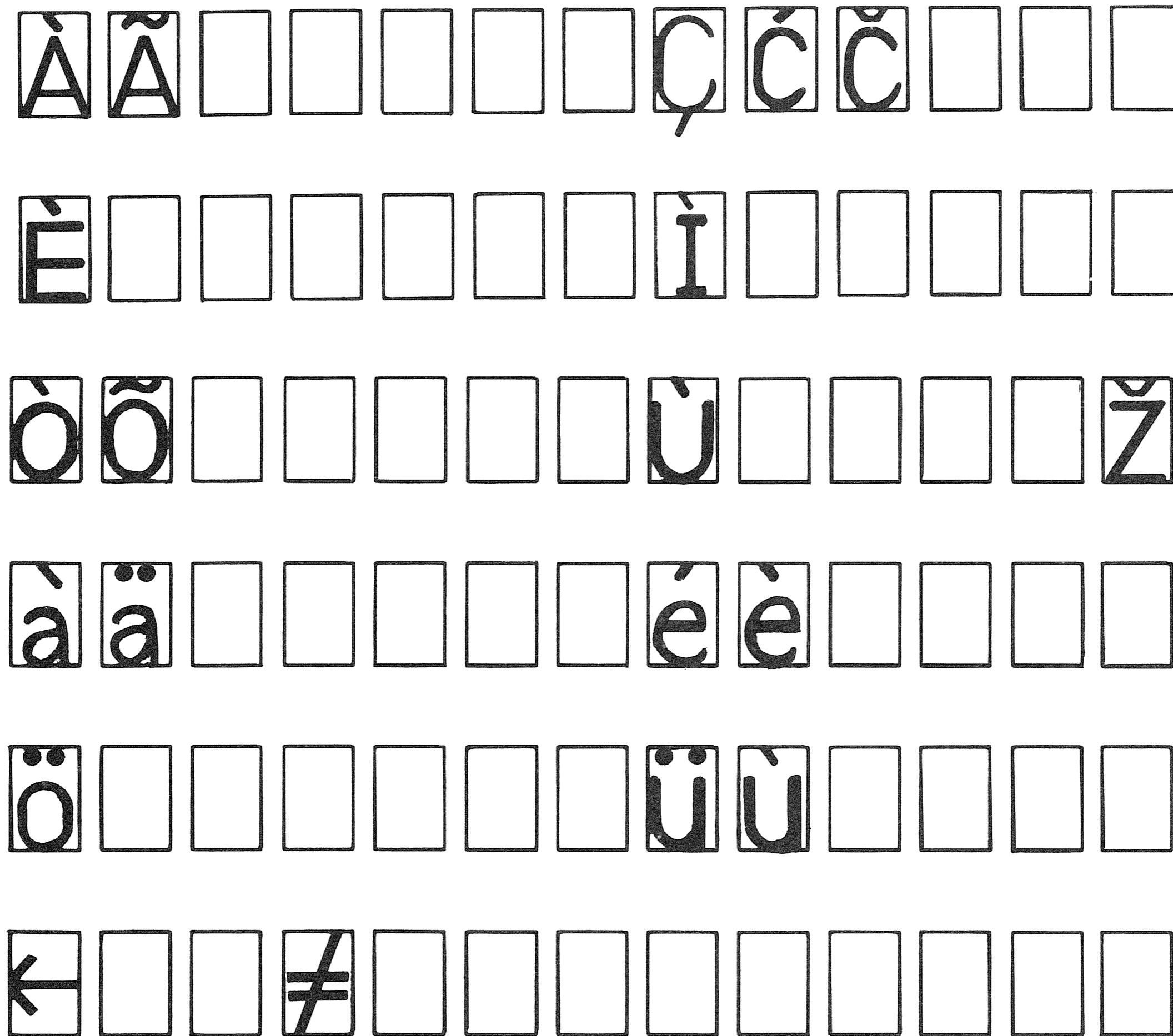
See next page for notes.

Figure 8. MDS ECMA Optical Character Recognition Type, Class B, Size I, MDS Chain Printers

NOTES:

1. The characters illustrated on page 17 are standard type for standard European Character Sets for the MDS Chain Printer. All "OCR-B" alphanumeric, special graphic, National Alphabetic and National Monetary characters of the standard European Character Sets are shown. For those Characters included in a specific arrangement, see "Chain Layouts" for the appropriate printer model.
2. Except as noted below, the characters illustrated are designed to meet the requirements of the European Computer Manufacturers Association (ECMA) for Class B, Size I characters for optical character recognition (ECMA-11, 1965).
3. The ECMA-alternate location of Comma (,) and Semicolon (;), such as to appear on or above the baseline, is standard for the MDS Chain Printer. The ECMA-standard location of these characters, such as to extend below the baseline, is an alternate style (indicated by an asterisk *).
4. The location of Underline (—) is slightly raised from the ECMA-standard to facilitate printing on standard MDS Chain Printers (indicated by a +).
5. Refer to Figure 9 for MDS Composite ECMA OCR-B characters for standard European character sets for the MDS Chain Printer.

MDS ECMA Optical Character Recognition Type, Class B, Size I, MDS Chain Printers (Notes)



The characters illustrated above are MDS composite-ECMA OCR Class B, Size I designed for use with MDS ECMA OCR-B characters illustrated in Figure 8.

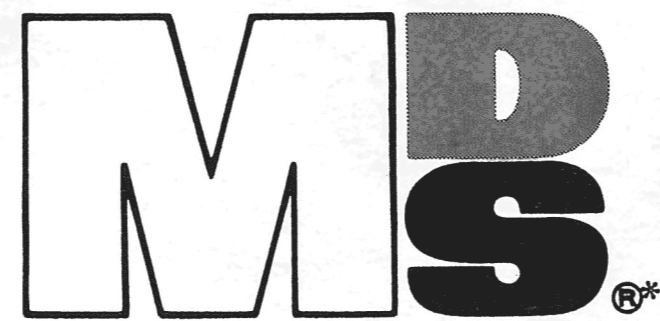
Figure 9. MDS Composite ECMA Optical Character Recognition Type, Class B, Size I; MDS Chain Printers

ア イ ウ エ オ カ キ ク ケ コ
サ シ ス セ ソ タ チ ツ テ ト
ナ ニ ヌ ネ ノ ハ ヒ フ ヘ ホ
マ ミ ム メ モ ヤ ユ ヨ ラ リ
ル レ ロ ワ ン ン 〃 〇 ￥

For the MDS Chain Printer (all models), the characters illustrated above are standard type for standard Japanese Katakana character sets, Yen (¥) is non-Katakana.

Figure 10. MDS Katakana Type, Japanese EDP Standard Character Set, MDS Chain Printers

THE THROUGHPUT SPECIALISTS



MOHAWK DATA
SCIENCES CORP.

PALISADE STREET • HERKIMER, NEW YORK 13350

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