

Compuprint 9060-LA

Compuprint 9070-LA

Programmer's Manual

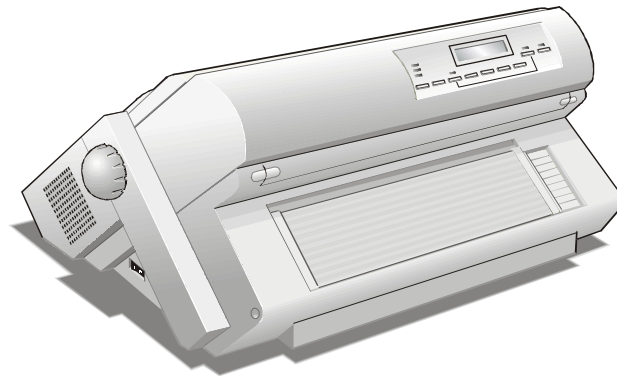


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DEC PPL2 Quick Reference

This section contains basic information on the DEC PPL2 commands supported in the Compuprint 9060-LA and 9070-LA printers.

The commands are listed by function, in the following order:

- Positioning Controls and Tabs
- Sheet size and margins
- Type size and spacing, managing implicit cursor motion
- Font management and attribute selection
- Selecting character sets
- Reports
- Miscellaneous
- Barcode printing
- Graphics

This guide is intended for use in conjunction with the *Digital Ansi-compliant Printing Protocol Level 2 Programming Reference Manual* and the *Digital Ansi-compliant Printing Protocol Level 2 Programming Supplement*. These are referred to simply as the Programming Reference Manual and the Programming Supplement, respectively.

Characters used in control functions appear in monospaced type. The following table explains some of the conventions used.

A pair of numbers separated by a slash (/) character indicates Column/Row notation. This notation refers to the location of a character in a standard code table, such as ASCII.

Spaces appear between characters in sequences for clarity; they are not part of the format. Space is designated as "*SP*" when it is part of the format of a command or sequence.

The following conventions are used in the command listings:

Conventions

Code	Description
<i>ESC</i>	Escape (1/11), introduces an escape sequence.
<i>CSI</i>	Control Sequence Introducer (9/11), introduces a control sequence. CSI can also be represented by the equivalent escape sequence <i>ESC [</i> (1/11 5/11).
<i>DCS</i>	Device Control String (9/0), introduces a device control string. DCS can also be represented by the equivalent escape sequence <i>ESC P</i> (1/11 5/0)
<i>ST</i>	String Terminator (9/12) indicates the end of a control string. ST can also be represented by the equivalent escape sequence <i>ESC \</i> (1/11 5/12).
<i>P_n</i>	Numeric parameter, or number of units that specify a distance or quantity pertaining to the escape sequence, control function or control string.
<i>P_s</i>	Selective parameter or one that identifies a list of options pertaining to the specific command. If ">" (3/14) or "?" (3/15) occurs at the beginning of a string of parameters, the following parameters are Digital private parameters. ">" or "?", if present must occur only once at the beginning of the parameter string.
<i>I_n</i>	Intermediate character - component of an escape sequence, control sequence or control string.
<i>F</i>	Final character - component of an escape sequence, control sequence or control string

Code	Description
<i>SP</i>	<p>Space (2/0)</p> <p>C0 Control Characters are given in figure "Standard 8-bit Code Table (Left Half)". C1 Control Characters are given in figure "Standard 8-bit Code Table (Right Half)". In the 7-bit environment, C1 Control Characters can be sent with an escape sequence provided in the following tables.</p> <p>Both numeric and selective parameters are interpreted as unsigned decimal integers, with the most significant digit sent first. For instance, the value 16 is coded as "16" (3/1 3/6). Leading zeros are allowed but are ignored. Plus and minus signs are not allowed.</p>

Positioning Controls and Tabs

Mnemonic	Function	Command	Remarks
BS	Backspace	0/8	<i>C0 Control Code</i>
CR	Carriage Return	0/13	<i>C0 Control Code</i>
FF	Form Feed	0/12	<i>C0 Control Code</i>
HT	Horizontal Tab	0/9	<i>C0 Control Code</i>
LF	Line Feed	0/10	<i>C0 Control Code</i>
VT	Vertical Tab	0/11	<i>C0 Control Code</i>
HTS	Horizontal Tab Set, at current position	8/8	<i>C1 Control Code</i> 7-bit environment: <i>ESC H</i>
IND	Index	8/4	<i>C1 Control Code</i> 7-bit environment: <i>ESC D</i>
NEL	Next Line	8/5	<i>C1 Control Code</i> 7-bit environment: <i>ESC E</i>

Mnemonic	Function	Command	Remarks
PLD	Partial Line Down	8/11	<i>C1 Control Code</i> 7-bit environment: <i>ESC K</i> Advance paper 1/12 in.
PLU	Partial Line Up	8/12	<i>C1 Control Code</i> 7-bit environment: <i>ESC L</i> Reverse paper 1/12 in.
VTS	Vertical Tab Set, at current position	8/10	<i>C1 Control Code</i> 7-bit environment: <i>ESC J</i>
DECCAHT	Clear All Horizontal Tabs	<i>ESC 2</i>	
DECAVT	Clear All Vertical Tabs	<i>ESC 4</i>	
DECSHTS	Set Horizontal Tab Stops	<i>CSI P_n ; ... ; P_n u</i>	P _n = tabstop position (max. 16)
DECSVTS	Set Vertical Tab Stops	<i>CSI P_n ; ... ; P_n v</i>	P _n = tabstop position (max. 16)
DECHTS	Horizontal Tab Set	<i>ESC 1</i>	
DECVTS	Vertical Tab Set	<i>ESC 3</i>	
TBC	Tab Clear	<i>CSI P_s ; ... ; P_s g</i>	P _s =0: Clear horiz. Tab at active position P _s =1: Clear vert. tab at active position P _s =2 or 3: Clear all horiz. tabs P _s =4: Clear all vert. tabs
HPA	Horizontal Position Absolute	<i>CSI P_n '</i>	P _n = position to move to

Mnemonic	Function	Command	Remarks
HPR	Horizontal Position Relative	<i>CSI P_n a</i>	P _n = position of columns down
VPA	Vertical Position Absolute	<i>CSI P_n d</i>	P _n = position to move to
VPR	Vertical Position Relative	<i>CSI P_n e</i>	P _n = number of lines down

Sheet Size and Margins

Mnemonic	Function	Command	Remarks
DECSLPP	Set Lines per Physical Page	<i>CSI P_n t</i>	P _n = number of lines per pages
DECVPLA	Set Vertical Page Length Alignment	<i>CSI P_{n1}; P_{n2} - u</i>	P _{n1} = Position of the origin from top of form (in 1/72 in.) P _{n2} = Paper length in 1/720 in.
DECSLRM	Set Left and Right Margins	<i>CSI P_{n1}; P_{n2} s</i>	P _{n1} = left margin P _{n2} = right margin
DECHPWA	Set Page Width Alignment	<i>CSI P_{n1}; P_{n2} " s</i>	P _{n1} * = origin P _{n2} * = paper width
DECSTBM	Set Top and Bottom Margins	<i>CSI P_{n1}; P_{n2} r</i>	P _{n1} = top margin P _{n2} = bottom margin

* Units are in 1/12 inch

Type Size and Spacing, Managing Implicit Cursor Motion

Mnemonic	Function	Command	Remarks
DECAWM	Autowrap Mode	<i>CSI ? 7 h</i>	Set autowrap mode
			<i>CSI ? 7 l</i>	Reset autowrap mode
DECCRNLM	Carriage Return/ New Line Mode	<i>CSI ? 40 h</i>	CR acts as New Line
		<i>CSI ? 40 l</i>	CR acts as Carriage Return
DECSPSP	Proportional Spacing Mode	<i>CSI ? 27 h</i>	Sets proportional spacing mode
		<i>CSI ? 27 l</i>	Resets proportional spacing mode
DECSHORP	Set Horizontal Pitch	<i>CSI P_s w</i>	$P_s = 0$: 10 CPI
			$P_s = 1$: 10 CPI
			$P_s = 2$: 12 CPI
			$P_s = 3$: 13.2 CPI
			$P_s = 4$: 16.5 CPI
			$P_s = 5$: 5 CPI
			$P_s = 6$: 6 CPI
			$P_s = 7$: 6.6 CPI
			$P_s = 8$: 8.25 CPI
			$P_s = 9$: 15 CPI
DECVERP	Set Vertical Pitch	<i>CSI P_s z</i>	$P_s = 0$: 6 LPI
			$P_s = 1$: 6 LPI
			$P_s = 2$: 8 LPI
			$P_s = 3$: 12 LPI
			$P_s = 4$: 2 LPI
			$P_s = 5$: 3 LPI
			$P_s = 6$: 4 LPI
			$P_s = 7$: 10 LPI
			$P_s = 10$: same as PS =1
			$P_s = 21$: 4 LPcm*
$P_s = 22$: 2 LPcm			
$P_s = 23$: 1 LPcm			
			$P_s = 10-17$ same as 0-7; 21-23 same as 31-33

Mnemonic	Function	Command	Remarks
GSM	Graphic Size Modification	<i>CSI P_{n1} ; P_{n2} SP B</i>	P _{n1} = 100: Normal height characters P _{n1} = 200: Double height P _{n1} = 300: Triple height P _{n1} = 400: Quadruple height P _{n2} = 100: Normal width characters P _{n2} = 200: Double width P _{n2} = 300: Triple width P _{n2} = 400: Quadruple width
LNM	Line Feed/New Line Mode	<i>CSI 2 0 h CSI 2 0 l</i>	LF acts as new line. LF acts as line feed.

* LPcm = Lines per centimeter

Font Management and Attribute Selection

Mnemonic	Function	Command	Remarks
SGR	Select Graphic Rendition <i>Selecting Font</i>	<i>CSI P_s m</i>	P _s = 10 : Courier P _s = 11 : Roman P _s = 12 : Sans Serif P _s = 13 : Prestige P _s = 14 : Script P _s = 15 : Courier P _s = 16 : Orator P _s = 17 : Optional card font (not available) P _s = 18 : OCR-A P _s = 19 : OCR-B P _s = ?12 : Data Block

Font Management and Attribute Selection (cont.)

Mnemonic	Function	Command	Remarks
SGR	Select Graphic Rendition- <i>Selecting Attributes</i>	<i>CSI P_s m</i>	<p>P_s = 0: Turn off all attributes, standard and private</p> <p>P_s = 1: Bold on</p> <p>P_s = 3: Slant on</p> <p>P_s = 4: Underline on; double underline off</p> <p>P_s = 9: Strike-through on</p> <p>P_s = 21: Double underline on, underline off</p> <p>P_s = 22: Bold off</p> <p>P_s = 23: Slant off</p> <p>P_s = 24: Any underline off</p> <p>P_s = 29: Strike-through on</p> <p>P_s = 30: Print Text in black</p> <p>P_s = 31: Print text in red</p> <p>P_s = 32: Print text in green</p> <p>P_s = 33: Print text in yellow</p> <p>P_s = 34: Print text in blue</p> <p>P_s = 35: Print text in magenta</p> <p>P_s = 36: Print text in cyan</p> <p>P_s = 37: Print text in "white" (no printing)</p> <p>P_s = 39: Print text in black</p> <p>P_s = 53: Overline on</p> <p>P_s = 55: Overline off</p> <p>P_s = ?0: All private attributes off</p> <p>P_s = ?4: Superscript on, subscript off</p> <p>P_s = ?5: Subscript on, superscript off</p> <p>P_s = ?6: Overline on</p> <p>P_s = ?24: Superscript and subscript off</p> <p>P_s = ?26: Overline off</p>

Mnemonic	Function	Command	Remarks
DECDLD	Download Font	<i>DCS</i> <i>parameter_string</i> <i>{D ... D ST</i>	See the <i>Programming Reference Manual</i>
DEC DEN	Printing Density Selection	<i>CSI P_s " z</i>	<i>P_s = 0</i> or 1: Select draft <i>P_s = 2</i> : Select letter quality <i>P_s = 3</i> : Select draft <i>P_s = 4</i> : Select letter quality <i>P_s = 5</i> : Select draft

Selecting Character Sets

Mnemonic	Function	Command	Remarks
ASCEF	Announce Subset of Code Extension Facilities	ESC SP L ESC SP M ESC SP N	ASCII in G0 and GL. ISO Latin-1 in G1 and GR. Same as ESC SP L ASCII in G0 and GL.
DECAUPSS	Assign User Preference Supplemental Set	<i>DCS P_s ! u D ...</i> <i>D ST</i>	<i>P_s = 0</i> : 94-char.set <i>P_s = 1</i> : 96-char.set <i>D ... D</i> :SCS designating sequence.
SS2	Single Shift 2	<i>C1 Control Code</i>	Take the next character from G2 7-bit environment: <i>ESC N</i>
SS3	Single Shift 3	<i>C1 Control Code</i>	Take the next character from G3 7-bit environment: <i>ESC O</i>
LS0	Locking Shift 0 (or Shift In)	SI	Invoke G0 into GL

Mnemonic	Function	Command	Remarks
LS1	Locking Shift 1 (or Shift Out)	SO	Invoke G1 into GL
LS2	Locking Shift 2	ESC n	Invoke G2 into GL
LS3	Locking Shift 3	ESC o	Invoke G3 into GL
LS1	Locking Shift 1 Right	ESC ~	Invoke G1 into GR
LS2	Locking Shift 2 Right	ESC }	Invoke G2 into GR
LS3	Locking Shift 3 Right	ESC |	Invoke G3 into GR
SCS	Select Character Set	ESC I ₁ I ₂ F	I ₁ = "(": Invoke 94-char.set into G0 I ₁ = ")": Invoke 94-char.set into G1 I ₁ = "*": Invoke 94-char.set into G2 I ₁ = "+": Invoke 94-char.set into G3 I ₁ = "-": Invoke 96-char.set into G1 I ₁ = ".": Invoke 96-char.set into G2 I ₁ = "/": Invoke 96-char.set into G3 I ₂ F = final characters from "SCS Final Characters".

SCS Final Characters

Character Set	I ₂ F Designator Characters	
94-Character Sets		
British	A	4/1
ASCII	B	4/2
DEC Dutch	4	3/4
DEC Finnish	5	3/5
French	R	5/2
DEC French-Canadian	9	3/9
German	K	4/11
DEC Hebrew Supplemental	"4	2/2, 3/4
DEC 7-Bit Hebrew	%=	2/5, 3/13
ISO Italian	Y	5/9
Legal	%4	2/5, 3/4
JIS Katakana	I	4/9
JIS Roman	J	4/10
DEC Norwegian/Danish	6	3/6
ISO Spanish	Z	5/10
DEC Swedish	7	3/7
DEC Swiss	=	3/13
Norwegian/Danish	'	6/0
DEC Supplemental	%5	2/5, 3/5
DEC Technical	>	3/14
DEC Special Graphics	0	3/0
DEC Portuguese	%6	2/5, 3/6

SCS Final Characters (cont.)

Character Set	I ₂ F Designator Characters	
94-Character Sets		
DEC 7-Bit Turkish	%2	2/5, 3/2
DEC 8-Bit Turkish Supplemental	%0	2/5, 3/0
DEC 8-Bit Greek Supplemental	"?	2/2, 3/15
User Preference Supplemental	<	3/12
Download Character Set	SP@	2/0, 4/0

User Preference Supplemental	I ₂ F Designator Characters	
96-Character Sets		
ISO Latin-1 Supplemental	A	4/1
ISO Latin-2 Supplemental	B	4/2
ISO Latin-Greek Supplemental	F	4/6
ISO Latin-Hebrew Supplemental	H	4/8
ISO Latin-Cyrillic Supplemental	L	4/12
ISO Latin-5 Supplemental	M	4/13
ISO Latin-9 Supplemental (*)	b	6/2
User Preference Supplemental	<	3/12
Downloaded Character Set	SP@	2/0, 4/0

(*) Contains the Euro Symbol

SCS Final Characters for Fallback Character Sets

Character Set Conventions	F Designator Character	
Fallback to DEC Finnish	C	4/3
Fallback to DEC French Canadian	Q	5/1
Fallback to DEC Norwegian/Danish	E	4/5
Fallback to DEC Swedish	H	4/8

Reports

Mnemonic	Function	Command	Remarks
DA	Device Attributes	CSI P _s c	Request Device Attributes Report. P _s must be 0.
DAR	Device Attributes Report	ESC [? P _{s1} ; P _{s2} ; ... ; P _{sn} c (printer to host)	P _{s1} = 72 P _{s2} -P _{sn} describe extensions. See the Programming Supplement.
DA2	Secondary Device Attributes	CSI > P _s c	P _s must be 0.
DA2R	Secondary Device Attributes Report	ESC [> P _{s1} ; P _{s2} ; P _{s3} ; P _{s4} ; P _{s5} c (printer to host)	P _{s1} = 69 (model 9070-LA) P _{s2} = firmware revision x 10 P _{s3} = 0 (or 1 <i>reserved</i>) P _{s4} = 20 P _{s5} = firmware edit revision

Reports (cont.)

Mnemonic	Function	Command	Remarks
DECLANS	Load ANSWERBACK without Password	$DCS P_{s1} v$ $encoded_mess_string$ ST	Message is Hex. encoded.
DECLANS	Load ANSWERBACK with Password	$DCS P_{s1};P_{n2};P_{n3}v$ $encoded_mess_string$ ST	<p>$P_s = 1$: No password - Do not store message.</p> <p>$P_s = 2$: No password - Store message:</p> <p>$P_s = 3$: Password – Store</p> <p>P_{n2}: Old password</p> <p>P_{n3}: New password</p> <p>Default password: 0</p> <p>Password range: 0 - 9999</p>
ENQ	Send ANSWERBACK Message	$0/5$	$C0$ Control Code
DECRFS	Request Font Status	$CSI P_s " \{$	P_s must be 3
DSR	Device Status Request	$CSI P_s n$	<p>$P_s = 0$ or 5: Request extended DSR</p> <p>$P_s = ?1$: Disable unsolicited reports</p> <p>$P_s = ?2$: Enable brief unsolicited reports, send extended report</p> <p>$P_s = ?3$: Enable/send extended unsolicited reports</p>
DSR	Device Status Report	<p><i>Brief:</i> $CSI P_s n$</p> <p><i>Extended:</i> $brief,$</p> <p><i>followed by</i> $CSI ? P_{n1}$</p> <p>$; P_{n2} ; \dots ; P_{nn} n$</p>	<p>$P_s = 0$: No errors</p> <p>$P_s = 3$: Error</p> <p>See the <i>Programming Supplement</i> for extended report.</p>

Miscellaneous

Mnemonic	Function	Command	Remarks
BEL	Bell	<i>O/7</i>	C0 Control Code
DECSCL	Select Conformance Level	<i>CSI P_s1 " p</i>	P _s = 0: reset native level P _s = 71: reset - DEC PPL1 P _s = 72: reset - DEC PPL2
DECSTR	Soft Terminal Reset	<i>CSI ! p</i>	Reset to initial state
RIS	Reset to initial state	<i>ESC c</i>	Reset to initial state
DECIPEM	IBM Proprinter Protocol Mode	<i>CSI ? 58 h</i> <i>CSI ? 58 l</i>	Deprecated function
ROCS	Return from Other Coding System	<i>ESC % @</i>	Return to DEC PPL2 mode
SOCS	Select Other Coding System	<i>ESC % =</i> <i>ESC % SP 2</i>	IBM Proprinter Protocol EPSON Protocol
CRM	Control Representation Mode	<i>CSI 3 h</i> <i>CSI 3 l</i>	Print hex representation for all characters Reset
DECFNVR2	Load Factory NVR Settings	<i>CDS P_s ; P_{s2} " s data_string ST</i>	P _{s1} = 0: omitted, default P _{s1} = 1: Store current state (data ignored) P _{s1} = 2: Modify with following data, store P _{s1} = 3: Load NVRAM, modify, store P _{s1} = 4: Load Factory Defaults, modify, store P _{s2} = 0: omitted, default P _{s2} = 1: data is ASCII encoded setup P _{si} ; P _{s2} ; ... ; P _{si} ; ... P _{si} : index of the value for parameter i P _{si} = 0 or omitted: leave unchanged

Miscellaneous

Mnemonic	Function	Command	Remarks
DECASFC	Automatic Sheet Feeder Control	CSI $P_s ! v$	$P_s = 0$: No change, eject paper $P_s = 1-3$: Tray n (reserved) $P_s = 4$: Front1 Tractor feeding $P_s = 5$: Front2 Tractor feeding $P_s = 99$: No change, eject paper
DECSITF	Select Input Tray Failover	CSI $P_{s1} ; P_{s2} ; \dots ; P_{sn} SP w$	$P_{s1} = 0$: Disable all composite input trays $P_{s1} = 1$: Define composite tray n $P_{s2} - P_{sn} = n$: Add tray n to the composite definition
DECPHGC	Printhead Gap Control	CSI $P_s - s$	$P_s = 0$: Automatic Gap Control (AGC) $P_s = 1-5$: Programmable Copy Control mode (PCC) - number of copies
DECUPM	Unidirectional Print Mode	CSI ? 41 h CSI ? 41 l	Selects unidirectional printing Selects bi-directional printing
SnC1R /DEC*C1	C1 Transmit /Receive	ESC SP 6 ESC SP 7 ESC SP F ESC SP G	Process 7-bit, drop 8th bit Process 7-bit and 8-bit Transmit 8-bit as 7-bit equivalents Transmit 8-bit (not supported)

Barcode Printing

Mnemonic	Function	Command	Remarks
DECBAR	Start or Stop	ESC % SP 0	Start bar code.
	Bar Codes	ESC % @	Stop bar code.
DECSBCA	Select Bar Code Attributes	CSI P _{s1} ; P _{s2} ; ... ; P _{s9} ' q	
	Parameter	Description	Value
	P _{s1}	Bar Code System	0, 2: Code 3 of 9 1: Interleaved 2 of 5 4: EAN 8 5: EAN 13 7: Codabar a/t 8: Codabar b/n 9: Codabar c/* 10: Codabar d/e 11: UPC-A 12: UPC-E 13: Postnet 14: Industrial 2 of 5 15: Code 93 16: MSI mod 10/10 17: Code 128 (EAN 128) 18: Matrix 2 of 5
	P _{n2}	Width of narrow bars in decipoints	Supported values: 8 to 45 (default = 10) Not applicable to UPC, EAN and Postnet systems.

Barcode Printing (cont.)

Mnemonic	Function	Command	Remarks
	Parameter	Description	Value
P _{n3}		Width of quiet zones in decipoints	Supported value: 180.
P _{n4}		Width of wide bars in decipoints	For EAN, UPC, supported values are in the range 20 to 158 (default is 25). P _{n4} is not used for Code 93, MSI 10/10 and Code 128 systems. Postnet bar code style is fixed to 0,0217" for bars and to 0,0255" for spaces. Pitch is 21,18 bars/inch.
P _{n5}		Ignored	
P _{n6}		Height of bars in decipoints	Min = 60 Max = 2400 Default = 120
P _{n7}		Ignored	
P _{n8}		Orientation	0, 1 or none : Horizontal symbol from left to right (portrait) 3: Vertical symbol from bottom to top (landscape - not applicable for EAN 8 & 13, UPC A & E)
P _{s9}		Human Readable Characters	0, 1: No HRC 2, 3, 4: Print HRC in OCR B Ignored for Postnet

Notes on Barcode Printing

After printing bar code, appropriate positioning control commands, must be sent to print additional barcode strings, text or graphics.

In the following examples, HPA Pn command positions the Active Position at column Pn, VPA Pn command positions the Active Position at line Pn.

1. Two barcodes Code 39 on the same line:

DECSBCA	CSI 0; ; ; ; ; ; ; 'q
DECBAR(start) data DECBAR(stop) HPA Pn	ESC % SP0 data ESC % @ CSI Pn '
DECBAR (start) data DECBAR (stop)	ESC % SP0 data ESC % @

2. Two barcodes Code 39 on the same line:

DECSBCA	CSI 0; ; ; ; ; ; ; 'q
DECBAR(start) data DECBAR(stop) VPA Pn	ESC % SP0 data ESC % @ CSI Pn d
DECBAR (start) data DECBAR (stop)	ESC % SP0 data ESC % @

Sixel Graphics Device Control String Envelope

Mnemonic	Function	Command
<i>DCS</i>	String Introducer	
$P_{s1}; P_{n2}; P_{n3} q$	Protocol Selector	<p>P_{s1}: macro parameter, select horizontal grid size and pixel aspect ratio. See Table D-12.</p> <p>P_{s2}: ignored.</p> <p>P_{n3}: horizontal grid size - overrides P_{s1} for horizontal grid size - aspect ratio unchanged. See Table D-13.</p>
<i>sixel data</i>	Picture data	Includes sixel printable characters and sixel control codes. See Table D-14.
<i>ST</i>	String Terminator	Exit Sixel Graphics mode and return to text mode.

Sixel Graphics Protocol Selector Ps1

Ps1 Value	Horizontal Grid Size (inches)	Aspect Ratio (Vert:Hor)*
0, 1 or none	1/144	2
2	1/360	5
3, 4	1/180	2.5
5, 6, 7, 8	1/144	2
9	1/72	1
> 9	1/144	2

* Vertical Grid Size = 1/72 inch, unless modified by P_{n3} or DECGRA.

Sixel Graphics Grid Size defined by P_{n3}

Pn 3 Value	HGS:VGS (dpi) by Aspect Ratio (defined by P_{s1})			
	1:1	2:1	2.5:1	5:1
0 or none	No change to HGS and VGS defined by P_{s1}			
1, 2	360:360	360:180	360:144	360:72
3, 4	180:180	180:90	180:72	180:36
5, 6, 7	144:144	144:72	180:72	180:36
8, 9	90:90	90:45	90:36	180:36
10 - 15	72:72	72:36	90:36	180:36
16, 19	45:45	72:36	90:36	180:36
> 20	36:36	72:36	90:36	180:36

Sixel Graphics Control Codes

Mnemonic	Function	Command	Remarks
DECGRA	Set Raster Attributes	" (2/2)	<p>Defines the pixel aspect ratio. Followed by parameters P_{n1} ; P_{n2} ; P_{n3}; P_{n4}</p> <p>P_{n1}: Pixel aspect ratio numerator (A)</p> <p>P_{n2}: Pixel aspect ratio denominator (R), where</p> <p>$0 < A/R < 1.5$ corresponds to 1:1</p> <p>$1.5 \leq A/R < 2.25$ corresponds to 2:1</p> <p>$2.25 \leq A/R < 3.75$ corresponds to 2.5:1</p> <p>$3.75 \leq A/R$ corresponds to 5:1</p> <p>P_{n3} and P_{n4} : ignored</p>
DECGRI	Graphics Repeat Introducer	! (2/1)	<p>Followed by a numeric value P_n and a sixel data to be repeated P_n times.</p>

Mnemonic	Function	Command	Remarks
DECGCR	Graphics Carriage Return	\$ (2/4)	Returns active positions to graphics left margins
DECGNL	Graphics Next Line	- (2/13)	Returns active position to graphics left margin on the following line
DECGCI	Graphics Color Introducer	# (2/3)	Assigns a color to a color number or selects a predefined color number. Followed by parameters $P_c ; P_u ; P_x ; P_y ; P_z$ P_c : Color number (0-255) P_u : Universal coordinate system selector: 1=HLS, 2=RGB P_x, P_y, P_z : color coordinates.
	Parameter Characters	0-9 (3/0) - (3/9)	Numeric parameters - used on the above control codes
	Parameter Separator	;(3/11)	Separates parameters - used on the above control codes
	Sixel Data	(3/15 – 3/14)	Sixel printable characters. The printer subtracts the offset (3F hexadecimal) from the received code, assigning each of the remaining low- order six bits to a grid position: LSB = top pixel MSB = bottom pixel Examples: ? (3/15): blank character @ (4/0): print only top pixel A (4/1) : print second-from-top pixel ~ (7/15): print one full column

Standard 8-bit Code Table (Left Half)

Standard Left

C0 Control Set		
----------------	--	--

Column	0	1
--------	---	---

Graphics Left (GL)						
--------------------	--	--	--	--	--	--

2	3	4	5	6	7
---	---	---	---	---	---

Row	0	DLE	20
0	1 0		18 17 10
1	SOH 1 1	DC1 (XON) 11	21 17 11
2	STX 2 2	DC2 18	22 18 12
3	ETX 3 3	DC3 (XOFF) 13	23 19 13
4	EOT 4 4	DC4 14	24 20 14
5	ENQ 5 5	NAK 21	25 21 15
6	ACK 6 6	SYN 16	26 22 16
7	BEL 7 7	ETB 17	27 23 17
8	BS 10 8	CAN 24	30 24 18
9	HT 11 9	EM 19	31 25 19
10	LF 12 A	SUB 1A	32 26 1A
11	VT 13 11	ESC 27	33 27 1B
12	FF 14 C	FS 28	34 28 1C
13	CR 15 D	GS 29	35 29 1D
14	SO 16 E	RS 30	36 30 1E
15	SI 17 F	US 31	37 31 1F

SP	40	32	20	0	60	@	100	P	120	`	140	p	160
!	41 33 21	1	61 49 31	A	101 85 61	Q	121 81 51	a	141 97 61	q	161 113 71		
"	42 34 22	2	62 50 32	B	102 86 62	R	122 82 52	b	142 98 62	r	162 114 72		
#	43 35 23	3	63 51 33	C	103 87 63	S	123 83 53	c	143 99 63	s	163 115 73		
\$	44 36 24	4	64 52 34	D	104 88 64	T	124 84 54	d	144 100 64	t	164 116 74		
%	45 37 25	5	65 53 35	E	105 89 65	U	125 85 55	e	145 101 65	u	165 117 75		
&	46 38 26	6	66 54 36	F	106 90 66	V	126 86 56	f	146 102 66	v	166 118 76		
'	47 39 27	7	67 55 37	G	107 91 67	W	127 87 57	g	147 103 67	w	167 119 77		
(	50 40 28	8	70 56 38	H	110 94 68	X	130 88 58	h	150 104 68	x	170 120 78	
)	51 41 29	9	71 57 39	I	111 95 69	Y	131 89 59	i	151 105 69	y	171 121 79		
*	52 42 2A	:	72 58 3A	J	112 96 7A	Z	132 90 5A	j	152 106 6A	z	172 122 7A		
+	53 43 2B	;	73 59 3B	K	113 97 7B	[	133 91 5B	k	153 107 6B	{	173 123 7B	
,	54 44 2C	<	74 60 3C	L	114 98 7C	\	134 92 5C	l	154 108 6C	|	174 124 7C		
-	55 45 2D	=	75 61 3D	M	115 99 7D	]	135 93 5D	m	155 109 6D	}	175 125 7D	
.	56 46 2E	>	76 62 3E	N	116 100 7E	^	136 94 5E	n	156 110 6E	~	176 126 7E		
/	57 47 2F	?	77 63 3F	O	117 101 7F	_	137 95 5F	o	157 111 6F				
DEL	177	127	7F										

ASCII Graphic Character Set

LEGEND

GL	Column/Row
4/1	Octal
A	Decimal
41	Hex

MLO-003973

Standard 8-bit Code Table (Right Half)

Standard Right

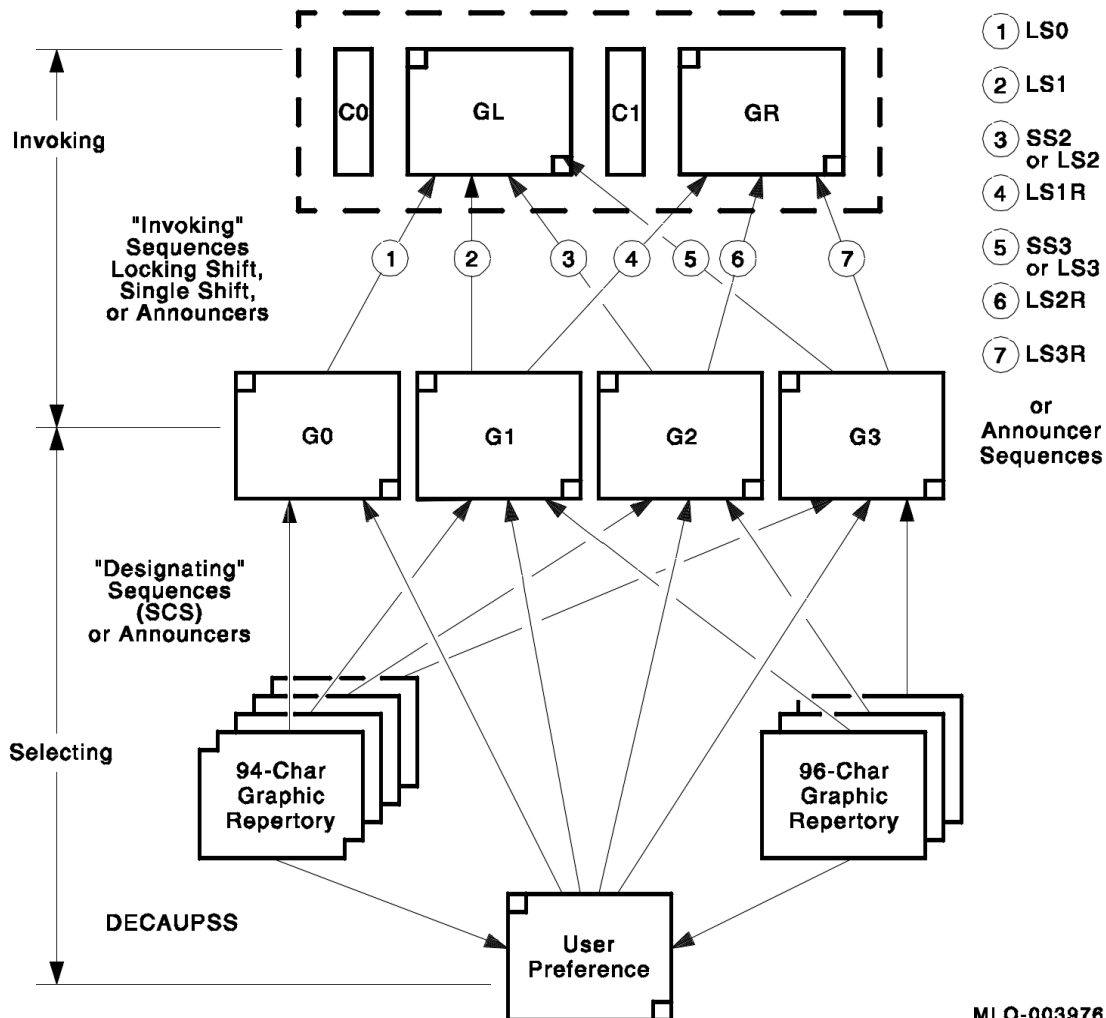
C1 Control Set			Graphics Right (GR)									
Column	8	9	10	11	12	13	14	15				
Row 0		200 128 80	DCS 144 90		240 160 A0	260 176 B0	À 192 C0		320 208 D0	à 224 E0		360 240 F0
1		201 129 81	PU1 145 91	±	261 177 B1	Á 193 C1	Ñ 321 D1	á	341 225 E1	ñ	361 241 F1	
2	BPH	202 130 82	PU2 146 92	¢	262 178 B2	Â 194 C2	Ò 322 D2	â	342 226 E2	ò	362 242 F2	
3	NBH	203 131 83	STS 147 93	£	263 179 B3	Ã 195 C3	Ó 323 D3	ã	343 227 E3	ó	363 243 F3	
4	IND	204 132 84	CCH 148 94		264 180 B4	Ä 196 C4	Ô 324 D4	ä	344 228 E4	ô	364 244 F4	
5	NEL	205 133 85	MW 149 95	¥	265 181 B5	Å 197 C5	Õ 325 D5	å	345 229 E5	õ	365 245 F5	
6	SSA	206 134 86	SPA 150 96		266 182 B6	Æ 198 C6	Ö 326 D6	æ	346 230 E6	ö	366 246 F6	
7	ESA	207 135 87	EPA 151 97	§	267 183 B7	Ç 199 C7	Ø 327 D7	ç	347 231 E7	ø	367 247 F7	
8	HTS	210 136 88	SOS 152 98	¤	270 184 B8	È 200 C8	Ð 328 D8	è	350 232 E8	ð	370 248 F8	
9	HTJ	211 137 89		©	271 185 B9	É 201 C9	Ù 331 D9	é	351 233 E9	ù	371 249 F9	
10	VTS	212 138 9A	SCI 154 9A	ª	272 186 BA	Ê 202 CA	Ú 332 DA	ê	352 234 EA	ú	372 250 FA	
11	PLD	213 139 9B	CSI 156 9B	«	273 187 BB	Ë 203 CB	Û 333 DB	ë	353 235 EB	û	373 251 FB	
12	PLU	214 140 9C	ST 156 9C		274 188 BC	Ì 204 CC	Ü 334 DC	ì	354 236 EC	ü	374 252 FC	
13	RI	215 141 9D	OSC 157 9D	¼	275 189 BD	Í 205 CD	Ý 335 DD	í	355 237 ED	ý	375 253 FD	
14	SS2	216 142 9E	PM 158 9E		276 190 BE	Î 206 CE		î	356 238 EE		376 254 FE	
15	SS3	217 143 9F	APC 159 9F	½	277 191 BF	Ï 207 CF	ß	337 223 DF	ï		377 255 FF	

DEC Supplemental Graphic Character Set

LEGEND

	GR	Column/Row
	12/1	Octal
Á	301	Decimal
	193	Hex
	C1	

Designating and Invoking Character Sets



National Replacement Character sets

Location	US	National Replacement Character Sets						
	ASCII	British	DEC Finnish	French	DEC French- Canada	German	ISO Italian	JIS Roman
2/3	#	£		£			£	
4/0	@			à	à	§	§	
5/11	[		Ä	°	â	Ä	°	
5/12	\		Ö	ç	ç	Ö	ç	¥
5/13	]		Å	§	ê	Ü	é	
5/14	^		Ü		î			
6/0	'		é		ô		ù	
7/11	{		ä	é	é	ä	à	
7/12	|		ö	ù	ù	ö	ò	
7/13	}		à	è	è	ü	è	
7/14	~		ü	trema	û	ß	ì	—

Location	US National Replacement Character Sets							
	ASCII	DEC Norw.- Danish	ISO Spanish	DEC Swedish	Norw.- Danish	DEC Dutch	DEC Swiss	DEC Portu- guese
2/3	#		£			£	ù	
4/0	@	Ä	§	É		3/4	à	
5/11	[	Æ	ı	Ä	Æ	ÿ	é	Ã
5/12	\	Ø	Ñ	Ö	Ø	1/2	ç	Ç
5/13	]	Å	ı	Å	Å	|	ê	Õ
5/14	^	Ü		Ü			î	
5/15	_						è	
6/0	'	ä		é			ô	
7/11	{	æ	°	ä	æ	trema	ä	ã
7/12	|	ø	ñ	ö	ø	f	ö	ç
7/13	}	à	ç	à	à	1/4	ü	õ
7/14	~	ü		ü		'	û	

IBM Proprinter Quick Reference

This section describes the printer commands for the IBM Proprinter protocol. Asterisks in the "Function" column indicate extended commands that are not supported by the original printer. See the *Programmer's Reference Manual* for detailed information on using these commands.

Function	Command
Print Mode Control	
Double strike printing on.	ESC G
Double strike printing off.	ESC H
Emphasized printing on.	ESC E
Emphasized printing off.	ESC F
Double width printing (one line) on.	ESC SO
Double width printing (one line) off.	DC4
Double width printing on/off. (on: $n=1$, off: $n=0$)	ESC W (n)
Double height/double width characters $l = 4, h = 0, m_1 = 0, m_2 = 0$ m_3 controls the height and line spacing	ESC [@ $l h m_1 \dots m_4$
<hr/>	
m_3	Height
	Spacing
0	Unchanged
1	Unchanged
2	Unchanged
16	Single
17	Single
18	Single
32	Double
33	Double
34	Double

Function	Command
Print Mode Control (cont.)	
<i>m₄</i> controls character width:	
<i>m₄</i>	Width
0	Unchanged
1	Single width
2	Double width
Compressed printing.	SI or ESC SI
Sets 10 cpi and disables compressed printing.	DC2
Subscript or superscript printing on. (Subscript: <i>n</i> =1, superscript: <i>n</i> =0)	ESC S (<i>n</i>)
Subscript or superscript printing off.	ESC T
Underline on/off (on: <i>n</i> =1, off: <i>n</i> =0)	ESC -(<i>n</i>)
Overscore printing (on: <i>n</i> =1, off: <i>n</i> =0).	ESC _ (<i>n</i>)
Horizontal Control	
Space	SP
Backspace	BS
Carriage return	CR
Sets 12 cpi pitch	ESC :
Proportionally spaced characters on/off (on: <i>n</i> = 1, off: <i>n</i> = 0)	ESC P (<i>n</i>)

Function	Command
Vertical Control	
Line Feed	LF
Form Feed	FF
Advance paper n base units ($1 \leq n \leq 255$) set with the ESC [\ command	ESC J (n)
Set line spacing to 1/8 lines	ESC 0
Set line spacing to 7/72 inch	ESC 1
Set line spacing to n base units ($1 \leq n \leq 255$) set with the ESC [\ command	ESC 3 (n)
Set line spacing to n/180 inch (in AG mode) ($1 \leq n \leq 255$)	ESC 3 (n)
Preset line spacing to n/72 inch	ESC A (n)
Preset line spacing to n/60 inch (in AG mode)	ESC A (n)
Set line spacing to 1/6 inch or to the value preset by line spacing command ESC A (n)	ESC 2
Change graphics line spacing base to 1/216 or 1/180 inch (for ESC J and ESC 3). Default value is 1/216" (1/180" in AG Mode)	ESC [\ (m_1)(m_2)(t_1) ... (t_4)
$m_1 = 4, m_2 = 0, 0 \leq t_1 \leq 255, 0 \leq t_2 \leq 255,$ $t_3 = 0, t_4 = 180 \text{ or } 216$	

Function	Command
Tabulation	
Horizontal tab execution	HT
Set horizontal tabs	ESC D (t_1) ... (t_{28}) NUL
The values of n_1 to n_k in this command are the ASCII values of the print columns (at the current character width) at which tabs are to be set. ($1 \leq n \leq 255$)	ESC d (n_1)(n_2)
Clear all horizontal tabs	ESC D NUL
Move print position right by $n/120$ inch ($0 \leq n, n_2 \leq 255$) ($n = n_1 + n_2 \times 256$)	ESC d (n_1) (n_2)
Vertical tab execution	VT
Set vertical tabs	ESC B (t_1) ... (t_{64}) NUL
Reset tabs to default values	ESC R
Page Formatting	
Set left margin at column n and right margin at column m ($0 \leq n, m \leq 255$)	ESC X (n) (m)
Set perforation skip by n lines ($1 \leq n \leq 255$)	ESC N (n)
Perforation skip off	ESC O
Set page length to n lines ($1 \leq n \leq 255$)	ESC C (n)
Set page length to n inches ($1 \leq n \leq 22$)	ESC C NUL (n)
Set top of form	ESC 4

Function	Command	
Color Selection		
Select print color	ESC r (<i>n</i>)	
n =		
0:	Black	
1:	Magenta (red)	
2:	Cyan (blue)	
3:	Violet	
4:	Yellow	
5:	Orange	
6:	Green	
Character Set Control		
Select character set 1.	ESC 7	
Select character set 2.	ESC 6	
Print $n_1 + n_2 \times 256$ characters from all-character set (chars.: codes of characters to print, $0 \leq chars \leq 255$)	ESC \ (<i>n</i> ₁) (<i>n</i> ₂) (<i>chars.</i>)	
Print a character from all-character set (char.: a code of character to print, $0 \leq chars \leq 255$)	ESC ^ (char)	
Selects a code page table n. ($0 < n_1, n_2 < 255$) ($n = n_1 + n_2 \times 256$), ($0 \leq c_1, c_2 < 255$)	ESC [T (<i>n</i> ₁) (<i>n</i> ₂) 00 (<i>c</i> ₁) (<i>c</i> ₂)	
c₁	c₂	Code Page ID
0	210	Code Page 210
0	220	Code page 220
1	181	Code page 437
3	82	Code page 850
3	84	Code page 852
3	85	Code page 853

Function			Command
Character Set Control (cont.)			
c₁	c₂	Code Page ID	
3	87	Code page 855	
3	89	Code page 857	
3	90	Code page 858 (contains the Euro Symbol)	
3	92	Code page 860	
3	93	Code page 861	
3	94	Code page 862	
3	95	Code page 863	
3	96	Code page 864	
3	97	Code page 865	
3	98	Code page 866	
3	101	Code page 869	
33	128	Mazowia	
33	149	ISO 8859-7	
23	27	ISO 8859-15 (contains the Euro Symbol)	
35	79	ISO Latin 1T	
35	59	Code Page 437 Greek	
35	73	ABICOMP	
35	74	BRASCII	
35	76	Code MJK	
35	77	Bulgarian	
Clear one line of data			CAN
Select printer			DC1
Deselect printer (ignore input)			ESC Q #

Function	Command
Downloading	
Select resident or downloaded font	ESC I (<i>n</i>)
Resident	Downloaded
0 10 cpi Draft	4
2 10 cpi LQ	6
3 Proportional	7
8 12 cpi Draft	12
10 12 cpi LQ	14
16 17 cpi Draft	20
18 17 cpi LQ	22
Create download font	ESC = (<i>n</i> ₁) (<i>n</i> ₂) ID (<i>m</i> ₁) (<i>m</i> ₂) (<i>data</i>)
Bit Image Graphics	
Single-density graphics	ESC K (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Double density graphics	ESC L (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
High-speed double density graphics	ESC Y (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
High resolution graphics	ESC Z (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Select graphics mode (in AG mode only)	ESC * (<i>m</i>) (<i>c</i> ₁) (<i>c</i> ₂) (<i>data</i>)
High density dot graphics printing	ESC [<i>g</i> (<i>h</i>) (<i>h</i>) (<i>m</i>) (<i>n</i> ₁) ... (<i>n</i> _{<i>k</i>}) (<i>data</i>)
Cut Sheet Feeder Control	
Select bin 1	ESC EM 1
Select bin 2	ESC EM 2
Select bin 3	ESC EM 3
Eject single sheet	ESC EM R
Park current path	ESC EM 8
Load current path	ESC EM 9
Select and load Front2 Path	ESC EM B

Function	Command
Cut Sheet Feeder Control (cont.)	
Select and load Front1 Path	ESC EM F
Select and load ASF bin 1	ESC EM 15
Select and load ASF bin 2	ESC EM 16
Select and load ASF bin 3	ESC EM 17
Miscellaneous	
Sound the bell	BEL
Unidirectional printing on/off (on: $n = 1$, off: $n = 0$)	ESC U (n)
Add a line feed to all carriage returns (on: $n=1$, off: $n=0$)	ESC 5 (n)
Printer offline	ESC j
Select default settings	ESC [K (n_1) (n_2) (i) (ID) (p_1) (p_2)

EPSON ESC/P2 Quick Reference

This section describes the printer commands for the Epson ESC/P2 protocol. Asterisks in the "Function" column indicate extended commands that are not supported by the original printer. See the *Programmer's Reference Manual* for detailed information on using these commands.

Function	Command
Print Mode Control	
Double strike printing on.	ESC G
Double strike printing off.	ESC H
Emphasized printing on.	ESC E
Emphasized printing off.	ESC F
Italic printing on.	ESC 4
Italic printing off.	ESC 5
Select character style	ESC q (n)
$n =$ 0: Normal	
1: Outlined	
2: Shaded	
3: Outline and shadowed	
One-line double-width characters on.	SO or ESC SO
One-line double-width characters off.	DC4
Double width characters on/off.	ESC W (n)
(on: $n=1$, off: $n=0$)	
Double height characters on/off.	ESC w (n)
(on: $n=1$, off: $n=0$)	
Compressed printing.	SI or ESC SI
Compressed printing off.	DC2

Function	Command
Print Mode Control (cont.)	
Subscript or superscript printing on. (Subscript: $n=1$, superscript: $n=0$)	ESC S (n)
Subscript or superscript printing on.	ESC T
Underline on/off (on: $n=1$, off: $n=0$)	ESC - (n)
Select line	ESC (- (n_1) (n_2) (d_1) (d_2) (d_3)
$n_1 = 3, n_2 = 0, d_1 = 1$	
$d_2 =$	1: Underline
	2: Strikethrough
	3: Overscore
$d_3 =$	0: Cancel line selection
	1: Single line
	2: Double line
	5: Single-dotted line
	6: Double-dotted line
Select printing style	ESC ! (n)
This command allows you to combine various printing styles. The value of n is the sum of the values of the styles you want to combine.	
$n =$	0: 10 cpi
	1: 12 cpi
	2: Proportional spacing
	4: Condensed
	8: Bold
	16: Double height
	32: Double width
	64: Italics
	128: Underline

Function	Command
Horizontal Control	
Space	SP
Backspace	BS
Carriage return	CR
Set 12 cpi	ESC M
Set 10 cpi.	ESC P
Set 15 cpi.	ESC g
Proportionally spaced characters on/off (on: $n = 1$, off: $n = 0$)	ESC p (n)
Set inter-character space to $n/120$ inch (for draft) or $n/180$ inch (for letter and proportional) ($1 \leq n \leq 127$)	ESC SP (n)
Set character pitch to $(n_1 + n_2 \times 256)/360$ inch ($0 \leq n_1 \leq 255$) ($0 \leq n_2 \leq 4$)	ESC c (n_1) (n_2)
Select character pitch (specify unit of pitch) $n_1 = 1, n_2 = 0$ $d = 10 : 10/3600$ inch = $1/360$ inch $d = 20 : 20/3600$ inch = $1/180$ inch $d = 30 : 30/3600$ inch = $1/120$ inch $d = 40 : 40/3600$ inch = $1/90$ inch $d = 50 : 50/3600$ inch = $1/72$ inch $d = 60 : 60/3600$ inch = $1/60$ inch	ESC (U (n_1) (n_2) (d)
Vertical Control	
Line Feed	LF
Form Feed	FF

Function	Command
Vertical Control (cont.)	
Advance paper $n/180$ inch ($1 \leq n \leq 255$)	ESC J (n)
Set line spacing to $1/8$ inch	ESC 0
Set line spacing to $n/180$ inch ($1 \leq n \leq 255$)	ESC 3 (n)
Set line spacing to $n/60$ inch ($1 \leq n \leq 127$)	ESC A (n)
Set line spacing to $1/6$ inch	ESC 2
Set line spacing to $1/360$ inch	ESC + (n)
Tabulation	
Horizontal tab execution	HT
Set horizontal tabs. The values of n_1 to n_k in this command are the ASCII values of the print columns (at the current character width) at which tabs are to be set. ($1 \leq n \leq 255$) ($1 \leq k \leq 32$)	ESC D (n_1) ... (n_k) NUL
Move print position right by $n/120^{*1}$ inch (for draft) or $n/180^{*1}$ inch (for letter) right from left margin ($n = n_1 + n_2 \times 256$)	ESC \$ (n_1)(n_2)
Move print position $n/120^{*1}$ inch (for draft) or $n/180^{*1}$ inch (for letter) left or right from the current position ($n = n_1 + n_2 \times 256$)	ESC \ (n_1)(n_2)
Vertical tab execution	VT
Set vertical tabs. The values of n_1 to n_k in this command are the ASCII values of the print columns (at the current character width) at which tabs are to be set. ($1 \leq n \leq 255$) ($1 \leq k \leq 16$)	ESC B (n_1) ... (n_k) NUL

*1, The value depends on the pitch set by the ESC (U command.

*2, The value depends on the pitch set by the ESC (U command. The default is $1/360$ inch.

Function	Command
Tabulation (cont.)	
Move to dot line $(d_1 + d_2 \times 256)/360^{(*2)}$ inch $n_1 = 2, n_2 = 0$ ($1 \leq d_1 \leq 255$) ($1 \leq d_2 \leq 127$)	ESC (V (n_1) (n_2) (d_1) (d_2))
Vertical relative move by $(d_1 + d_2 \times 256)/360^{(*1)}$ inch $n_1 = 2, n_2 = 0$ ($1 \leq d_1 \leq 255$) ($1 \leq d_2 \leq 127$) $-32768 \leq d_1 + d_2 \times 256 \leq 32768$	ESC (v (n_1) (n_2) (d_1) (d_2))
Page Formatting	
Set right margin to column n ($1 \leq n \leq 255$)	ESC Q (n)
Set left margin to column n ($1 \leq n \leq 255$)	ESC l (n)
Set top and bottom margins from top of page $n_1 = 4, n_2 = 0$	ESC (c (n_1) (n_2) (t_1) (t_2) (b_1) (b_2))
Top margin = $(t_1 + t_2 \times 256)/360(*2)$ inch ($0 \leq t_1 \leq 255$) ($1 \leq t_2 \leq 127$)	
Bottom margin = $(b_1 + b_2 \times 256)/360(*2)$ inch ($0 \leq b_1 \leq 255$) ($0 \leq b_2 \leq 127$)	
Set perforation skip by n lines ($1 \leq n \leq 127$)	ESC N (n)
Perforation skip off	ESC O
Set page length to n inches	ESC C (n)
Reset page length	ESC C NUL (n)
Set page length to $(d_1 + d_2 \times 256)/360(*1)$ inch $n_1 = 2, n = 0$ ($0 \leq d_1 \leq 255$) ($0 \leq d_2 \leq 127$)	ESC (C (n_1) (n_2) (d_1) (d_2))

*1, The value depends on the pitch set by the ESC (U command.

*2, The value depends on the pitch set by the ESC (U command. The default is 1/360 inch.

Function	Command
Color Selection	
Select print color	ESC r (<i>n</i>)
<i>n</i> = 0: Black 4: Yellow	
1: Magenta (red) 5: Orange	
2: Cyan (blue) 6: Green	
3: Violet	
Character Set Control	
Select character set 1	ESC 7
Select character set 2.	ESC 6
Select the active character set assigned with the ESC t (<i>n</i>) command ($0 \leq n \leq 3$)	ESC R (<i>n</i>)
Select international character set	ESC R (<i>n</i>)
<i>n</i> = 0: USA	
1: France	
2: Germany	
3: United Kingdom	
4: Denmark I	
5: Sweden	
6: Italy	
7: Spanish I	
8: Japan	
9: Norway	
10: Denmark 2	
11: Spanish 2	
12: Latin America	
13: Korea	
64: Legal	

Function	Command
Character Set Control	
Assign a character set to active character set number 0 to 3; $n_1 = 3, n_2 = 0$	ESC (t (n_1)(n_2)(d_1)(d_2)(d_3)
$d_1 =$	0: Active character set number 0, default is Italics
	1: Active character set number 1, default is Graphics
	2: Active character set number 2, default is DLL
	3: Active character set number 3, default is Graphics
$0 \leq d_2, d_3 < 255$	
$d_2 =$	$d_3 =$
1	0 PC437 (USA)
1	16 PC437 (Greek)
3	0 PC850 (Multilingual)
4	0 PC851 (Greek)
5	0 PC853 (Turkish)
6	0 PC855 (Cyrillic)
7	0 PC860 (Portuguese)
8	0 PC863 (French Canadian)
9	0 PC865 (Nordic)
10	0 PC852 (Eastern Europe)
11	0 PC857 (Turkish)
13	0 PC864 (Arabic)
14	0 PC866 (Russian)
15	0 PC869 (Greek)
24	0 PC861 (Icelandic)
25	0 Brazilian ASCII
26	0 Abicomp (Brazilian portuguese)

Function	Command
Character Set Control	
$d_2 =$	$d_3 =$
27	0 Mazowia (Polish)
28	0 Code MJK (CSFR)
29	7 ISO 8859-7 (Latin Greek)
29	15 ISO 8859-15 – contains the Euro symbol
31	0 ISO Latin 1T (Turkish)
32	0 Bulgarian
44	0 PC858 (Euro PC Multilingual) – contains the Euro symbol
Print $n_1 + n_2 \times 256$ characters from all-character set (chars.: ESC (^ (n_1) (n_2) (<i>character codes</i>) codes of characters to print, ($0 \leq n_1 \leq 255$) ($0 \leq n_2 \leq 127$) ($0 \leq n_1 + n_2 \times 256 \leq 255$) ($0 \leq \text{character codes} \leq 254$))	
Delete last line	CAN
Delete the last character	DEL
Force most significant bit to 1	ESC >
Force most significant bit to 0	ESC =
Cancel control over most significant bit	ESC #
Font Selection and Downloading	
Select font	ESC % (n)
Ex. $n =$	0: Resident
	1: Downloaded character set
Select letter or draft quality	ESC x (n)
Ex. $n =$	0: Draft
	1: Letter

Function	Command
Font Selection and Downloading (cont.)	
Select type style	ESC k (<i>n</i>)
<i>n</i> =	
0: Roman	
1: Sans Serif	
2: Courier	
3: Prestige	
4: Script	
5: OCR-B	
7: Orator	
8: Orator S (not resident)	
9: Script C (not resident)	
Copy resident character set to download area	ESC : NUL (<i>n</i>) (<i>s</i>)
Create download font	ESC & NUL (<i>n</i> ₁) (<i>n</i> ₂) (<i>d</i> ₀) (<i>d</i> ₁) (<i>d</i> ₂) (<i>data</i>)
Bit Image Graphics	
Graphics type <i>m</i> graphics	ESC * (<i>m</i>) (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Bit image mode definition	ESC ? (<i>s</i>) (<i>n</i>)
Single-density graphics	ESC K (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Double density graphics	ESC L (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
High-speed double density graphics	ESC Y (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Quadruple-density graphics	ESC Z (<i>n</i> ₁) (<i>n</i> ₂) (<i>data</i>)
Select raster image graphics	ESC (G (<i>n</i> ₁) (<i>n</i> ₂) (<i>d</i>)
<i>n</i> ₁ = 1, <i>n</i> ₂ = 0, <i>d</i> = 1: Raster image graphics mode	

Function	Command
Cut Sheet Feeder Control	
Select bin 1	ESC EM 1
Select bin 2	ESC EM 2
Select bin 3	ESC EM 3
Park current path	ESC EM 8
Load current path	ESC EM 9
Select and load Front2 Path	ESC EM B
Select and load Front1 Path	ESC EM F
Eject single sheet	ESC EM R
Select and load ASF bin 1	ESC EM 15
Select and load ASF bin 2	ESC EM 16
Select and load ASF bin 3	ESC EM 17
Miscellaneous	
Sound the bell	BEL
Move print head to home position	ESC <
Unidirectional printing on/off (on: $n = 1$, off: $n = 0$)	ESC U (n)
Initialize printer	ESC @

JIS Katakana Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR				
Column		2	10			3	11			4	12			5	13			6	14			7	15
Row				ー	60 48 30	260 176 B0	タ	100 64 C0	300 192 C0	ミ	120 80 50	320 208 D0		140 96 60	340 224 E0		160 112 70	360 240 F0	Row				
0				ー	60 48 30	260 176 B0	タ	100 64 C0	300 192 C0	ミ	120 80 50	320 208 D0		140 96 60	340 224 E0		160 112 70	360 240 F0	0				
1	・	41 33 21	241 181 A1	ア	61 49 31	281 177 B1	チ	101 65 41	301 193 C1	ム	121 81 51	321 209 D1		141 97 61	341 225 E1		161 113 71	361 241 F1	1				
2	㇀	42 34 22	242 162 A2	イ	62 50 32	282 178 B2	ツ	102 66 42	302 194 C2	メ	122 82 52	322 210 D2		142 98 62	342 226 E2		162 114 72	362 242 F2	2				
3	㇁	43 35 23	243 163 A3	ウ	63 51 33	283 179 B3	テ	103 67 43	303 195 C3	モ	123 83 53	323 211 D3		143 99 63	343 227 E3		163 115 73	363 243 F3	3				
4	・	44 36 24	244 164 A4	エ	64 52 34	284 180 B4	ト	104 68 44	304 196 C4	ヤ	124 84 54	324 212 D4		144 100 64	344 228 E4		164 116 74	364 244 F4	4				
5	・	45 37 25	245 165 A5	オ	65 53 35	285 181 B5	ナ	105 69 45	305 197 C5	ユ	125 85 55	325 213 D5		145 101 65	345 229 E5		165 117 75	365 245 F5	5				
6	㇂	46 38 26	246 166 A6	カ	66 54 36	286 182 B6	ニ	106 70 46	306 198 C6	ヨ	126 86 56	326 214 D6		146 102 66	346 230 E6		166 118 76	366 246 F6	6				
7	ア	47 39 27	247 167 A7	キ	67 55 37	287 183 B7	ヌ	107 71 47	307 199 C7	ラ	127 87 57	327 215 D7		147 103 67	347 231 E7		167 119 77	367 247 F7	7				
8	イ	50 40 28	250 168 A8	ク	70 56 38	270 184 B8	ネ	110 72 48	310 200 C8	リ	130 88 58	330 216 D8		150 104 68	350 232 E8		170 120 78	370 248 F8	8				
9	ウ	51 41 29	251 169 A9	ケ	71 57 39	271 185 B9	ノ	111 73 49	311 201 C9	ル	131 89 59	331 217 D9		151 105 69	351 233 E9		171 121 79	371 249 F9	9				
10	エ	52 42 2A	252 170 AA	コ	72 58 3A	272 186 BA	ハ	112 74 4A	312 202 CA	レ	132 90 5A	332 218 DA		152 106 6A	352 234 EA		172 122 7A	372 250 FA	10				
11	オ	53 43 2B	253 171 AB	サ	73 59 3B	273 187 BB	ヒ	113 75 4B	313 203 CB	ロ	133 91 5B	333 219 DB		153 107 6B	353 235 EB		173 123 7B	373 251 FB	11				
12	㇃	54 44 2C	254 172 AC	シ	74 60 3C	274 188 BC	フ	114 76 4C	314 204 CC	ヅ	134 92 5C	334 220 DC		154 108 6C	354 236 EC		174 124 7C	374 252 FC	12				
13	㇄	55 45 2D	255 173 AD	ス	75 61 3D	275 189 BD	ハ	115 77 4D	315 205 CD	ン	135 93 5D	335 221 DD		155 109 6D	355 237 ED		175 125 7D	375 253 FD	13				
14	㇅	56 46 2E	256 174 AE	セ	76 62 3E	276 190 BE	ホ	116 78 4E	316 206 CE	ハ	136 94 5E	336 222 DE		156 110 6E	356 238 EE		176 126 7E	376 254 FE	14				
15	㇆	57 47 2F	257 175 AF	ソ	77 63 3F	277 191 BF	マ	117 79 4F	317 207 CF	。 (Dot)	137 95 5F	337 223 DF		157 111 6F	357 239 EF				15				

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
チ	101 65 41	301 193 C1	Octal Decimal Hex

MLO-003983

DEC Special Graphics Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR				
Column		2	10			3	11			4	12			5	13			6	14			7	15
Row	0			0	60 48 30	260 176 80	⊙	100 64 40	300 192 C0	P	120 80 50	320 208 D0	◆	140 96 60	340 224 E0	—	SCAN 3	160 112 70	360 240 F0	Row	0		
1	I	41 33 21	241 161 A1	1	61 49 31	261 177 B1	A	101 65 41	301 193 C1	Q	121 81 51	321 209 D1	■	141 97 61	341 225 E1	—	SCAN 5	161 113 71	361 241 F1	1			
2	"	42 34 22	242 162 A2	2	62 50 32	262 178 B2	B	102 66 42	302 194 C2	R	122 82 52	322 210 D2	H T	142 98 62	342 226 E2	—	SCAN 7	162 114 72	362 243 F2	2			
3	#	43 35 23	243 163 A3	3	63 51 33	263 179 B3	C	103 67 43	303 195 C3	S	123 83 53	323 211 D3	F F	143 99 63	343 227 E3	—	SCAN 9	163 115 73	363 243 F3	3			
4	\$	44 36 24	244 164 A4	4	64 52 34	264 180 B4	D	104 68 44	304 196 C4	T	124 84 54	324 212 D4	C R	144 100 64	344 228 E4	┌		164 116 74	364 244 F4	4			
5	%	45 37 25	245 165 A5	5	65 53 35	265 181 B5	E	105 69 45	305 197 C5	U	125 85 55	325 213 D5	L F	145 101 65	345 229 E5	└		165 117 75	365 245 F5	5			
6	&	46 38 26	246 166 A6	6	66 54 36	266 182 B6	F	106 70 46	306 198 C6	V	126 86 56	326 214 D6	o	146 102 66	346 230 E6	┘		166 118 76	366 246 F6	6			
7	'	47 39 27	247 167 A7	7	67 55 37	267 183 B7	G	107 71 47	307 199 C7	W	127 87 57	327 215 D7	±	147 103 67	347 231 E7	T		167 119 77	367 247 F7	7			
8	(	50 40 28	250 168 A8	8	70 56 38	270 184 B8	H	110 72 48	310 200 C8	X	130 88 58	330 216 D8	N L	150 104 68	350 232 E8	|		170 120 78	370 248 F8	8		
9	)	51 41 29	251 169 A9	9	71 57 39	271 185 B9	I	111 73 49	311 201 C9	Y	131 89 59	331 217 D9	V T	151 105 69	351 233 E9	≡		171 121 79	371 249 F9	9		
10	*	52 42 2A	252 170 AA	:	72 58 3A	272 186 BA	J	112 74 4A	312 202 CA	Z	132 90 5A	332 218 DA	┐	152 106 6A	352 234 EA	≧		172 122 7A	372 250 FA	10			
11	+	53 43 2B	253 171 AB	:	73 59 3B	273 187 BB	K	113 75 4B	313 203 CB	[	133 91 5B	333 219 DB	┑	153 107 6B	353 235 EB	π		173 123 7B	373 251 FB	11		
12	,	54 44 2C	254 172 AC	<	74 60 3C	274 188 BC	L	114 76 4C	314 204 CC	\	134 92 5C	334 220 DC	┒	154 108 6C	354 236 EC	≠		174 124 7C	374 252 FC	12			
13	-	55 45 2D	255 173 AD	=	75 61 3D	275 189 BD	M	115 77 4D	315 205 DD	]	135 93 5D	335 221 DD	┓	155 109 6D	355 237 ED	∞		175 125 7D	375 253 FD	13		
14	.	56 46 2E	256 174 AE	>	76 62 3E	276 190 BE	N	116 78 4E	316 206 CE	^	136 94 5E	336 222 DE	└	156 110 6E	356 238 EE	.		176 126 7E	376 254 FE	14			
15	/	57 47 2F	257 175 AF	?	77 63 3F	277 191 BF	O	117 79 4F	317 207 CF		137 95 5F	337 223 DF	—	157 111 6F	357 239 EF	—	SCAN 1			15			

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
A	101	301	Octal
	65	193	Decimal
	41	C1	Hex

MLO-003984

DEC Technical Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR	
Column		2	10			3	11			4	12			5	13			6	14			7	15			8	16			9	17	
Row	0				}	60 48 30	260 176 B0		.	100 84 40	300 192 C0		Π	120 80 50	320 208 D0		┘	140 96 60	340 224 E0		π	160 112 70	360 240 F0								Row	0
1	√	41 33 21	241 161 A1		∟	61 49 31	261 177 B1		α	101 85 41	301 193 C1		Ψ	121 81 51	321 209 D1		α	141 97 61	341 225 E1		Ψ	161 113 71	361 241 F1								1	
2	┘	42 34 22	242 162 A2		∟	62 50 32	262 178 B2		∞	102 86 42	302 194 C2		▨	122 82 52	322 210 D2		β	142 98 62	342 226 E2		ρ	162 114 72	362 242 F2								2	
3	—	43 35 23	243 163 A3		∟	63 51 33	263 179 B3		÷	103 87 43	303 195 C3		Σ	123 83 53	323 211 D3		χ	143 99 63	343 227 E3		σ	163 115 73	363 243 F3								3	
4	┘	44 36 24	244 164 A4		∟	64 52 34	264 180 B4		Δ	104 88 44	304 196 C4		▨	124 84 54	324 212 D4		δ	144 100 64	344 228 E4		τ	164 116 74	364 244 F4								4	
5	J	45 37 25	245 165 A5		┘	65 53 35	265 181 B5		▽	105 89 45	305 197 C5		▨	125 85 55	325 213 D5		ε	145 101 65	345 229 E5		▨	165 117 75	365 245 F5								5	
6	I	46 38 26	246 166 A6		┘	66 54 36	266 182 B6		Φ	106 90 46	306 198 C6		√	126 86 56	326 214 D6		φ	146 102 66	346 230 E6		f	166 118 76	366 246 F6								6	
7	┘	47 39 27	247 167 A7		┘	67 55 37	267 183 B7		Γ	107 91 47	307 199 C7		Ω	127 87 57	327 215 D7		γ	147 103 67	347 231 E7		ω	167 119 77	367 247 F7								7	
8	L	48 40 28	250 168 A8		▨	70 56 38	270 184 B8		~	110 92 48	310 200 C8		≡	130 88 58	330 216 D8		η	150 104 68	350 232 E8		ξ	170 120 78	370 248 F8								8	
9	┘	51 43 29	251 169 A9		▨	71 57 39	271 185 B9		≈	111 93 49	311 201 C9		Υ	131 89 59	331 217 D9		ι	151 105 69	351 233 E9		υ	171 121 79	371 249 F9								9	
10	J	52 44 30	252 170 AA		▨	72 58 3A	272 186 BA		Θ	112 94 4A	312 202 CA		∩	132 90 5A	332 218 DA		θ	152 106 6A	352 234 EA		ζ	172 122 7A	372 250 FA								10	
11	┘	53 45 31	253 171 AB		▨	73 59 3B	273 187 BB		×	113 95 4B	313 203 CB		∩	133 91 5B	333 219 DB		κ	153 107 6B	353 235 EB		←	173 123 7B	373 251 FB								11	
12	L	54 46 32	254 172 AC		≤	74 60 3C	274 188 BC		Λ	114 96 4C	314 204 CC		∩	134 92 5C	334 220 DC		λ	154 108 6C	354 236 EC		↑	174 124 7C	374 252 FC								12	
13	┘	55 47 33	255 173 AD		≠	75 61 3D	275 189 BD		⇔	115 97 4D	315 205 CD		∩	135 93 5D	335 221 DD		▨	155 109 6D	355 237 ED		→	175 125 7D	375 253 FD								13	
14	J	56 48 34	256 174 AE		≥	76 62 3E	276 190 BE		⇒	116 98 4E	316 206 CE		∩	136 94 5E	336 222 DE		v	156 110 6E	356 238 EE		↓	176 126 7E	376 254 FE								14	
15	{	57 49 35	257 175 AF		∫	77 63 3F	277 191 BF		≡	117 99 4F	317 207 CF		∩	137 95 5F	337 223 DF		∂	157 111 6F	357 239 EF												15	

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
α	101 85 41	301 193 C1	Octal Decimal Hex

MLO-003985

ISO Latin-1 Supplemental Character Set

Row	Column	GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR	Row
		2	10		3	11		4	12		5	13		6	14		7	15	
0	NBSP	240 160 A0	°		260 176 B0	À		300 192 C0	Ð		320 208 D0	à		340 224 E0	ð		360 240 F0	0	
1	ı	241 161 A1	±		261 177 B1	Á		301 193 C1	Ñ		321 209 D1	á		341 225 E1	ñ		361 241 F1	1	
2	¢	242 162 A2	²		262 178 B2	Â		302 194 C2	Ò		322 210 D2	â		342 226 E2	ò		362 242 F2	2	
3	£	243 163 A3	³		263 179 B3	Ã		303 195 C3	Ó		323 211 D3	ã		343 227 E3	ó		363 243 F3	3	
4	¤	244 164 A4	´		264 180 B4	Ä		304 196 C4	Ô		324 212 D4	ä		344 228 E4	ô		364 244 F4	4	
5	¥	245 165 A5	µ		265 181 B5	Å		305 197 C5	Õ		325 213 D5	å		345 229 E5	õ		365 245 F5	5	
6	¦	246 166 A6	¶		266 182 B6	Æ		306 199 C6	Ö		326 214 D6	æ		346 230 E6	ö		366 246 F6	6	
7	§	247 167 A7	·		267 183 B7	Ç		307 199 C7	×		327 215 D7	ç		347 231 E7	÷		367 247 F7	7	
8	¨	250 168 A8	¸		270 184 B8	È		310 200 C8	Ø		330 216 D8	è		350 232 E8	ø		370 248 F8	8	
9	©	251 169 A9	¹		271 185 B9	É		311 201 C9	Ù		331 217 D9	é		351 233 E9	ù		371 249 F9	9	
10	ª	252 170 AA	º		272 186 BA	Ê		312 202 CA	Ú		332 218 DA	ê		352 234 EA	ú		372 250 FA	10	
11	«	253 171 AB	»		273 187 BB	Ë		313 203 CB	Û		333 219 DB	ë		353 235 EB	û		373 251 FB	11	
12	¬	254 172 AC	¼		274 188 BC	Ì		314 204 CC	Ü		334 220 DC	ì		354 236 EC	ü		374 252 FC	12	
13	-	255 173 AD	½		275 189 BD	Í		315 205 CD	Ý		335 221 DD	í		355 237 ED	ý		375 253 FD	13	
14	®	256 174 AE	¾		276 190 BE	Î		316 206 CE	Þ		336 222 DE	î		356 238 EE	þ		376 254 FE	14	
15	-	257 175 AF	¿		277 191 BF	Ï		317 207 CF	ß		337 223 DF	ï		357 239 EF	ÿ		377 255 FF	15	

LEGEND

	GR	
	12/1	Column/Row
Á	301 193 C1	Octal Decimal Hex

MLO-004000

ISO Latin-Hebrew Supplemental Character Set

		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR
Column		2	10		3	11		4	12		5	13		6	14		7	15
Row 0	NBSP	240 160 A0	◦		260 176 B0			300 192 C0			320 208 D0	א		340 224 E0	י		360 240 F0	Row 0
1		241 161 A1	±		261 177 B1			301 193 C1			321 209 D1	ב		341 225 E1	ו		361 241 F1	1
2	¢	242 162 A2	2		262 178 B2			302 194 C2			322 210 D2	ג		342 226 E2	ז		362 242 F2	2
3	£	243 163 A3	3		263 179 B3			303 195 C3			323 211 D3	ד		343 227 E3	ח		363 243 F3	3
4	¤	244 164 A4	,		264 180 B4			304 196 C4			324 212 D4	ה		344 228 E4	ט		364 244 F4	4
5	₴	245 165 A5	μ		265 181 B5			305 197 C5			325 213 D5	ו		345 229 E5	כ		365 245 F5	5
6	ı	246 166 A6	¶		266 182 B6			306 198 C6			326 214 D6	ז		346 230 E6	ל		366 246 F6	6
7	§	247 167 A7	•		267 183 B7			307 199 C7			327 215 D7	ח		347 231 E7	מ		367 247 F7	7
8	¨	250 168 A8	י		270 184 B8			310 200 C8			330 216 D8	ט		350 232 E8	נ		370 248 F8	8
9	©	251 169 A9	1		271 185 B9			311 201 C9			331 217 D9	כ		351 233 E9	ש		371 249 F9	9
10	×	252 170 AA	÷		272 186 BA			312 202 CA			332 218 DA	ך		352 234 EA	ת		372 250 FA	10
11	↔	253 171 AB	»		273 187 BB			313 203 CB			333 219 DB	ך		353 235 EB			373 251 FB	11
12	┘	254 172 AC	¼		274 188 BC			314 204 CC			334 220 DC	ך		354 236 EC			374 252 FC	12
13	-	255 173 AD	½		275 189 BD			315 205 CD			335 221 DD	ם		355 237 ED			375 253 FD	13
14	®	256 174 AE	¾		276 190 BE			316 206 CE			336 222 DE	ם		356 238 EE			376 254 FE	14
15	-	257 175 AF			277 191 BF			317 207 CF	=		337 223 DF	ן		357 239 EF			377 255 FF	15

LEGEND

	GR	Column/Row
	12/1	
	301 193 C1	Octal Decimal Hex

M.L.O-004003

DEC 7-Bit Turkish Character Set

Row	Column	GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR	Row
		2	10		3	11		4	12		5	13		6	14		7	15	
0				0	60 48 30	260 176 B0	İ	100 64 40	300 192 C0	P	120 80 50	320 208 D0	Ğ	140 96 60	340 224 E0	p	160 112 70	360 240 F0	0
1	ı	41 33 21	241 161 A1	1	61 49 31	261 177 B1	A	101 65 41	301 193 C1	Q	121 81 51	321 209 D1	a	141 97 61	341 225 E1	q	161 113 71	361 241 F1	1
2	"	42 34 22	242 162 A2	2	62 50 32	262 178 B2	B	102 66 42	302 194 C2	R	122 82 52	322 210 D2	b	142 98 62	342 226 E2	r	162 114 72	362 242 F2	2
3	#	43 35 23	243 163 A3	3	63 51 33	263 179 B3	C	103 67 43	303 195 C3	S	123 83 53	323 211 D3	c	143 99 63	343 227 E3	s	163 115 73	363 243 F3	3
4	\$	44 36 24	244 164 A4	4	64 52 34	264 180 B4	D	104 68 44	304 196 C4	T	124 84 54	324 212 D4	d	144 100 64	344 228 E4	t	164 116 74	364 244 F4	4
5	%	45 37 25	245 165 A5	5	65 53 35	265 181 B5	E	105 69 45	305 197 C5	U	125 85 55	325 213 D5	e	145 101 65	345 229 E5	u	165 117 75	365 245 F5	5
6	ç	46 38 26	246 166 A6	6	66 54 36	266 182 B6	F	106 70 46	306 198 C6	V	126 86 56	326 214 D6	f	146 102 66	346 230 E6	v	166 118 76	366 246 F6	6
7	'	47 39 27	247 167 A7	7	67 55 37	267 183 B7	G	107 71 47	307 199 C7	W	127 87 57	327 215 D7	g	147 103 67	347 231 E7	w	167 119 77	367 247 F7	7
8	(	50 40 28	250 168 A8	8	70 56 38	270 184 B8	H	110 72 48	310 200 C8	X	130 88 58	330 216 D8	h	150 104 68	350 232 E8	x	170 120 78	370 248 F8	8
9	)	51 41 29	251 169 A9	9	71 57 39	271 185 B9	I	111 73 49	311 201 C9	Y	131 89 59	331 217 D9	i	151 105 69	351 233 E9	y	171 121 79	371 249 F9	9
10	*	52 42 2A	252 170 AA	:	72 58 3A	272 186 BA	J	112 74 4A	312 202 CA	Z	132 90 5A	332 218 DA	j	152 106 6A	352 234 EA	z	172 122 7A	372 250 FA	10
11	+	53 43 2B	253 171 AB	;	73 59 3B	273 187 BB	K	113 75 4B	313 203 CB	Ş	133 91 5B	333 219 DB	k	153 107 6B	353 235 EB	ş	173 123 7B	373 251 FB	11
12	,	54 44 2C	254 172 AC	<	74 60 3C	274 188 BC	L	114 76 4C	314 204 CC	Ö	134 92 5C	334 220 DC	l	154 108 6C	354 236 EC	ö	174 124 7C	374 252 FC	12
13	-	55 45 2D	255 173 AD	=	75 61 3D	275 189 BD	M	115 77 4D	315 205 CD	Ç	135 93 5D	335 221 DD	m	155 109 6D	355 237 ED	ç	175 125 7D	375 253 FD	13
14	.	56 46 2E	256 174 AE	>	76 62 3E	276 190 BE	N	116 78 4E	316 206 CE	Ü	136 94 5E	336 222 DE	n	156 110 6E	356 238 EE	ü	176 126 7E	376 254 FE	14
15	/	57 47 2F	257 175 AF	?	77 63 3F	277 191 BF	O	117 79 4F	317 207 CF	—	137 95 5F	337 223 DF	o	157 111 6F	357 239 EF				15

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
A	101 65 41	301 193 C1	Octal Decimal Hex

MLO-006605

DEC 8-Bit Turkish Supplemental Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR			GL	GR							
Column		2	10			3	11			4	12			5	13			6	14			7	15			8	16			9	17			10	18							
Row	0				°	60 48 30	260 176 B0		À	100 84 C0	300 192 C0		Ç	120 80 D0	320 208 D0		à	140 98 E0	340 224 E0		ç	160 112 F0	360 240 F0	Row	0																	
1	ı	41 33 21	241 161 A1		±	61 49 31	261 177 B1		Á	101 65 C1	301 193 C1		Ñ	121 81 D1	321 209 D1		á	141 97 E1	341 225 E1		ñ	161 113 F1	361 241 F1	1																		
2	¢	42 34 22	242 162 A2		2	62 50 32	262 178 B2		Â	102 66 C2	302 194 C2		Ò	122 82 D2	322 210 D2		â	142 98 E2	342 226 E2		ò	162 114 F2	362 242 F2	2																		
3	£	43 35 23	243 163 A3		3	63 51 33	263 179 B3		Ã	103 67 C3	303 195 C3		Ó	123 83 D3	323 211 D3		ã	143 99 E3	343 227 E3		ó	163 115 F3	363 243 F3	3																		
4		44 36 24	244 164 A4			64 52 34	264 180 B4		Ä	104 68 C4	304 196 C4		Ö	124 84 D4	324 212 D4		ä	144 100 E4	344 228 E4		ö	164 116 F4	364 244 F4	4																		
5	₺	45 37 25	245 165 A5		μ	65 53 35	265 181 B5		Å	105 69 C5	305 197 C5		Õ	125 85 D5	325 213 D5		å	145 101 E5	345 229 E5		õ	165 117 F5	365 245 F5	5																		
6		46 38 26	246 166 A6		¶	66 54 36	266 182 B6		Æ	106 70 C6	306 198 C6		Ö	126 86 D6	326 214 D6		æ	146 102 E6	346 230 E6		ö	166 118 F6	366 246 F6	6																		
7	§	47 39 27	247 167 A7		•	67 55 37	267 183 B7		Ç	107 71 C7	307 199 C7		œ	127 87 D7	327 215 D7		ç	147 103 E7	347 231 E7		œ	167 119 F7	367 247 F7	7																		
8	¤	50 40 28	250 168 A8			70 58 38	270 184 B8		È	110 72 C8	310 200 C8		o	130 88 D8	330 216 D8		è	150 104 E8	350 232 E8		o	170 120 F8	370 248 F8	8																		
9	©	51 41 29	251 169 A9		1	71 57 39	271 185 B9		É	111 73 C9	311 201 C9		ù	131 89 D9	331 217 D9		é	151 105 E9	351 233 E9		ù	171 121 F9	371 249 F9	9																		
10	a	52 42 2A	252 170 AA		°	72 58 3A	272 186 BA		Ê	112 74 CA	312 202 CA		ú	132 90 5A	332 218 DA		ê	152 106 6A	352 234 EA		ú	172 122 7A	372 250 FA	10																		
11	«	53 43 2B	253 171 AB		»	73 59 3B	273 187 BB		Ë	113 75 4B	313 203 CB		û	133 91 5B	333 219 DB		ë	153 107 6B	353 235 EB		û	173 123 7B	373 251 FB	11																		
12		54 44 2C	254 172 AC		¼	74 60 3C	274 188 BC		Ì	114 76 4C	314 204 CC		ü	134 92 5C	334 220 DC		ì	154 108 6C	354 236 EC		ü	174 124 7C	374 252 FC	12																		
13		55 45 2D	255 173 AD		½	75 61 3D	275 189 BD		Í	115 77 4D	315 205 CD		ÿ	135 93 5D	335 221 DD		í	155 109 6D	355 237 ED		ÿ	175 125 7D	375 253 FD	13																		
14	İ	56 46 2E	256 174 AE		ı	76 62 3E	276 190 BE		Î	116 78 4E	316 206 CE		Ş	136 94 5E	336 222 DE		î	156 110 6E	356 238 EE		ş	176 126 7E	376 254 FE	14																		
15		57 47 2F	257 175 AF		ı	77 63 3F	277 191 BF		Ï	117 79 4F	317 207 CF		ß	137 95 5F	337 223 DF		ï	157 111 6F	357 239 EF					15																		

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
/	101	301	Octal
A	65	193	Decimal
	41	C1	Hex

MLO-006606

DEC Greek Supplemental Character Set

Row	Column	GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR	Row		
		2	10		3	11		4	12		5	13		6	14		7	15	0		
0				◦	60 48 30	260 176 B0		ι	100 84 C0	300 192 C0		120 80 50	320 208 D0	ϋ	140 98 60	340 224 E0		160 112 70	360 240 F0	0	
1	ι	41 33 21	241 161 A1	±	61 49 31	261 177 B1		Α	101 65 41	301 193 C1		Π	121 81 51	321 209 D1	α	141 97 61	341 225 E1	π	161 113 71	361 241 F1	1
2	ϣ	42 34 22	242 162 A2	2	62 50 32	262 178 B2		Β	102 66 42	302 194 C2		Ρ	122 82 52	322 210 D2	β	142 98 62	342 226 E2	ρ	162 114 72	362 242 F2	2
3	£	43 35 23	243 163 A3	3	63 51 33	263 179 B3		Γ	103 67 43	303 195 C3		Σ	123 83 53	323 211 D3	γ	143 99 63	343 227 E3	σ	163 115 73	363 243 F3	3
4		44 36 24	244 164 A4		64 52 34	264 180 B4		Δ	104 68 44	304 196 C4		Τ	124 84 54	324 212 D4	δ	144 100 64	344 228 E4	τ	164 116 74	364 244 F4	4
5	¥	45 37 25	245 165 A5	μ	65 53 35	265 181 B5		Ε	105 69 45	305 197 C5		Υ	125 85 55	325 213 D5	ε	145 101 65	345 229 E5	υ	165 117 75	365 245 F5	5
6		46 38 26	246 166 A6	¶	66 54 36	266 182 B6		Ζ	106 70 46	306 198 C6		Φ	126 86 56	326 214 D6	ζ	146 102 66	346 230 E6	φ	166 118 76	366 246 F6	6
7	§	47 39 27	247 167 A7	•	67 55 37	267 183 B7		Η	107 71 47	307 199 C7		Χ	127 87 57	327 215 D7	η	147 103 67	347 231 E7	χ	167 119 77	367 247 F7	7
8	ϝ	50 40 28	250 168 A8		70 56 38	270 184 B8		Θ	110 72 48	310 200 C8		Ψ	130 88 58	330 216 D8	θ	150 104 68	350 232 E8	ψ	170 120 78	370 248 F8	8
9	©	51 41 29	251 169 A9	1	71 57 39	271 185 B9		Ι	111 73 49	311 201 C9		Ω	131 89 59	331 217 D9	ι	151 105 69	351 233 E9	ω	171 121 79	371 249 F9	9
10	α	52 42 2A	252 170 AA	◦	72 58 3A	272 186 BA		Κ	112 74 4A	312 202 CA		ι	132 90 5A	332 218 DA	κ	152 106 6A	352 234 EA	ς	172 122 7A	372 250 FA	10
11	α	53 43 2B	253 171 AB	»	73 59 3B	273 187 BB		Λ	113 75 4B	313 203 CB		ι	133 91 5B	333 219 DB	λ	153 107 6B	353 235 EB	ι	173 123 7B	373 251 FB	11
12		54 44 2C	254 172 AC	¼	74 60 3C	274 188 BC		Μ	114 76 4C	314 204 CC		ι	134 92 5C	334 220 DC	μ	154 108 6C	354 236 EC	ι	174 124 7C	374 252 FC	12
13		55 45 2D	255 173 AD	½	75 61 3D	275 189 BD		Ν	115 77 4D	315 205 CD		ι	135 93 5D	335 221 DD	ν	155 109 6D	355 237 ED	ι	175 125 7D	375 253 FD	13
14		56 46 2E	256 174 AE		76 62 3E	276 190 BE		Ξ	116 78 4E	316 206 CE			136 94 5E	336 222 DE	ξ	156 110 6E	356 238 EE		176 126 7E	376 254 FE	14
15		57 47 2F	257 175 AF	ζ	77 63 3F	277 191 BF		Ο	117 79 4F	317 207 CF		ι	137 95 5F	337 223 DF	ο	157 111 6F	357 239 EF				15

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
A	101	301	Octal
	65	193	Decimal
	41	C1	Hex

MLO-006607

ISO Latin-2 Supplemental Character Set

		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR	
Column		2	10		3	11		4	12		5	13		6	14		7	15	
Row 0	NBSP	40 32 20	240 160 A0	°	60 48 30	260 176 B0	´	100 64 40	300 192 C0	Đ	120 80 50	320 208 D0	í	140 96 60	340 224 E0	ð	160 112 70	360 240 F0	Row 0
1	À	41 33 21	241 161 A1	à	61 49 31	261 177 B1	Á	101 65 41	301 193 C1	Ñ	121 81 51	321 209 D1	á	141 97 61	341 225 E1	ñ	161 113 71	361 241 F1	1
2	Â	42 34 22	242 162 A2	â	62 50 32	262 178 B2	Â	102 66 42	302 194 C2	Ň	122 82 52	322 210 D2	â	142 98 62	342 226 E2	ň	162 114 72	362 242 F2	2
3	Ě	43 35 23	243 163 A3	ě	63 51 33	263 179 B3	Ě	103 67 43	303 195 C3	Ó	123 83 53	323 211 D3	ǎ	143 99 63	343 227 E3	ó	163 115 73	363 243 F3	3
4	Ǫ	44 36 24	244 164 A4	ǫ	64 52 34	264 180 B4	Ǫ	104 68 44	304 196 C4	Ô	124 84 54	324 212 D4	ǻ	144 100 64	344 228 E4	ô	164 116 74	364 244 F4	4
5	Ĺ	45 37 25	245 165 A5	ĺ	65 53 35	265 181 B5	Ĺ	105 69 45	305 197 C5	Ő	125 85 55	325 213 D5	í	145 101 65	345 229 E5	ő	165 117 75	365 245 F5	5
6	Š	46 38 26	246 166 A6	š	66 54 36	266 182 B6	Š	106 70 46	306 198 C6	Ö	126 86 56	326 214 D6	ć	146 102 66	346 230 E6	ö	166 118 76	366 246 F6	6
7	Ş	47 39 27	247 167 A7	ş	67 55 37	267 183 B7	Ş	107 71 47	307 199 C7	×	127 87 57	327 215 D7	ş	147 103 67	347 231 E7	÷	167 119 77	367 247 F7	7
8	ˆ	50 40 28	250 168 A8	ˆ	70 56 38	270 184 B8	ˆ	110 72 48	310 200 C8	˘	130 88 58	330 216 D8	˘	150 104 68	350 232 E8	˘	170 120 78	370 248 F8	8
9	Š	51 41 29	251 169 A9	š	71 57 39	271 185 B9	Š	111 73 49	311 201 C9	˘	131 89 59	331 217 D9	é	151 105 69	351 233 E9	˘	171 121 79	371 249 F9	9
10	Ş	52 42 2A	252 170 AA	ş	72 58 3A	272 186 BA	Ş	112 74 4A	312 202 CA	˘	132 90 5A	332 218 DA	ę	152 106 6A	352 234 EA	˘	172 122 7A	372 250 FA	10
11	Ť	53 43 2B	253 171 AB	ť	73 59 3B	273 187 BB	Ť	113 75 4B	313 203 CB	˘	133 91 5B	333 219 DB	ë	153 107 6B	353 235 EB	˘	173 123 7B	373 251 FB	11
12	Ž	54 44 2C	254 172 AC	ž	74 60 3C	274 188 BC	Ž	114 76 4C	314 204 CC	˘	134 92 5C	334 220 DC	ë	154 108 6C	354 236 EC	˘	174 124 7C	374 252 FC	12
13	-	55 45 2D	255 173 AD	-	75 61 3D	275 189 BD	Í	115 77 4D	315 205 CD	˘	135 93 5D	335 221 DD	í	155 109 6D	355 237 ED	˘	175 125 7D	375 253 FD	13
14	Ž	56 46 2E	256 174 AE	ž	76 62 3E	276 190 BE	Î	116 78 4E	316 206 CE	˘	136 94 5E	336 222 DE	î	156 110 6E	356 238 EE	˘	176 126 7E	376 254 FE	14
15	Ž	57 47 2F	257 175 AF	ž	77 63 3F	277 191 BF	Ď	117 79 4F	317 207 CF	˘	137 95 5F	337 223 DF	ď	157 111 6F	357 239 EF	˘	177 127 7F	377 255 FF	15

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
À	101	301	Octal
	65	193	Decimal
	41	C1	Hex

MLO-006608

ISO Latin-Cyrillic Supplemental Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR				
Column		2	10			3	11			4	12			5	13			6	14			7	15
Row	0	NBSP	40 32 20	240 160 A0	A	60 48 30	260 176 B0	P	100 64 C0	300 192 C0	a	120 80 50	320 208 D0	p	140 96 60	340 224 E0	N°	160 112 70	360 240 F0	Row	0		
1		Ë	41 33 21	241 161 A1	Б	61 49 31	261 177 B1	С	101 65 41	301 193 C1	δ	121 81 51	321 209 D1	с	141 97 61	341 225 E1	ë	161 113 71	361 241 F1	1			
2		Ђ	42 34 22	242 162 A2	В	62 50 32	262 178 B2	Т	102 66 42	302 194 C2	В	122 82 52	322 210 D2	т	142 98 62	342 226 E2	ђ	162 114 72	362 242 F2	2			
3		Ѓ	43 35 23	243 163 A3	Г	63 51 33	263 179 B3	У	103 67 43	303 195 C3	Г	123 83 53	323 211 D3	у	143 99 63	343 227 E3	ѓ	163 115 73	363 243 F3	3			
4		Є	44 36 24	244 164 A4	Д	64 52 34	264 180 B4	Ф	104 68 44	304 196 C4	Д	124 84 54	324 212 D4	ф	144 100 64	344 228 E4	є	164 116 74	364 244 F4	4			
5		Ѕ	45 37 25	245 165 A5	Е	65 53 35	265 181 B5	Х	105 69 45	305 197 C5	е	125 85 55	325 213 D5	х	145 101 65	345 229 E5	ѕ	165 117 75	365 245 F5	5			
6		І	46 38 26	246 166 A6	Ж	66 54 36	266 182 B6	Ц	106 70 46	306 198 C6	Ж	126 86 56	326 214 D6	ц	146 102 66	346 230 E6	і	166 118 76	366 246 F6	6			
7		Ї	47 39 27	247 167 A7	З	67 55 37	267 183 B7	Ч	107 71 47	307 199 C7	з	127 87 57	327 215 D7	ч	147 103 67	347 231 E7	ї	167 119 77	367 247 F7	7			
8		Ј	50 40 28	250 168 A8	И	70 56 38	270 184 B8	Ш	110 72 48	310 200 C8	И	130 88 58	330 216 D8	ш	150 104 68	350 232 E8	ј	170 120 78	370 248 F8	8			
9		Љ	51 41 29	251 169 A9	Ў	71 57 39	271 185 B9	Щ	111 73 49	311 201 C9	Ў	131 89 59	331 217 D9	щ	151 105 69	351 233 E9	љ	171 121 79	371 249 F9	9			
10		Ђ	52 42 30	252 170 AA	К	72 58 3A	272 186 BA	Ъ	112 74 4A	312 202 CA	к	132 90 5A	332 218 DA	ъ	152 106 6A	352 234 EA	ђ	172 122 7A	372 250 FA	10			
11		Ђ	53 43 2B	253 171 AB	Л	73 59 3B	273 187 BB	Ы	113 75 4B	313 203 CB	Л	133 91 5B	333 219 DB	ы	153 107 6B	353 235 EB	ђ	173 123 7B	373 251 FB	11			
12		К	54 44 2C	254 172 AC	М	74 60 3C	274 188 BC	Ь	114 76 4C	314 204 CC	М	134 92 5C	334 220 DC	ь	154 108 6C	354 236 EC	к	174 124 7C	374 252 FC	12			
13		-	55 45 2D	255 173 AD	Н	75 61 3D	275 189 BD	Э	115 77 4D	315 205 CD	Н	135 93 5D	335 221 DD	э	155 109 6D	355 237 ED	ѕ	175 125 7D	375 253 FD	13			
14		Ў	56 46 2E	256 174 AE	О	76 62 3E	276 190 BE	ІО	116 78 4E	316 206 CE	о	136 94 5E	336 222 DE	іо	156 110 6E	356 238 EE	ў	176 126 7E	376 254 FE	14			
15		ІІ	57 47 2F	257 175 AF	П	77 63 3F	277 191 BF	Я	117 79 4F	317 207 CF	П	137 95 5F	337 223 DF	я	157 111 6F	357 239 EF	ІІ	177 127 7F	377 255 FF	15			

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
C	101	301	Octal
	65	193	Decimal
	41	C1	Hex

MLO-006609

ISO Latin-Greek Supplemental Character Set

		GL	GR			GL	GR			GL	GR			GL	GR			GL	GR				
Column		2	10			3	11			4	12			5	13			6	14			7	15
Row	0	NBSP	40 32 20	240 160 A0	◦	60 48 30	260 176 B0	ı ı	100 80 40	300 192 C0	Π	120 80 50	320 208 D0	ı̇ ı̇	140 96 60	340 224 E0	π	160 112 70	360 240 F0	Row	0		
	1	´	41 33 21	241 161 A1	±	61 49 31	261 177 B1	Α	101 85 41	301 193 C1	Ρ	121 81 51	321 209 D1	α	141 97 61	341 225 E1	ρ	161 113 71	361 241 F1		1		
	2	˘	42 34 22	242 162 A2	2	62 50 32	262 178 B2	Β	102 86 42	302 194 C2		122 82 52	322 210 D2	β	142 98 62	342 226 E2	ς	162 114 72	362 242 F2		2		
	3	£	43 35 23	243 163 A3	3	63 51 33	263 179 B3	Γ	103 87 43	303 195 C3	Σ	123 83 53	323 211 D3	γ	143 99 63	343 227 E3	σ	163 115 73	363 243 F3		3		
	4		44 36 24	244 164 A4	˙	64 52 34	264 180 B4	Δ	104 88 44	304 196 C4	Τ	124 84 54	324 212 D4	δ	144 100 64	344 228 E4	τ	164 116 74	364 244 F4		4		
	5		45 37 25	245 165 A5	¨	65 53 35	265 181 B5	Ε	105 89 45	305 197 C5	Υ	125 85 55	325 213 D5	ε	145 101 65	345 229 E5	υ	165 117 75	365 245 F5		5		
	6	ı	46 38 26	246 166 A6	ˆA	66 54 36	266 182 B6	Ζ	106 90 46	306 198 C6	Φ	126 86 56	326 214 D6	ζ	146 102 66	346 230 E6	φ	166 118 76	366 246 F6		6		
	7	§	47 39 27	247 167 A7	˙	67 55 37	267 183 B7	Η	107 91 47	307 199 C7	Χ	127 87 57	327 215 D7	η	147 103 67	347 231 E7	χ	167 119 77	367 247 F7		7		
	8	¨	50 40 28	250 168 A8	ˆE	70 56 38	270 184 B8	Θ	110 92 48	310 200 C8	Ψ	130 88 58	330 216 D8	θ	150 104 68	350 232 E8	ψ	170 120 78	370 248 F8		8		
	9	©	51 41 29	251 169 A9	ˆH	71 57 39	271 185 B9	Ι	111 93 49	311 201 C9	Ω	131 89 59	331 217 D9	ι	151 105 69	351 233 E9	ω	171 121 79	371 249 F9		9		
	10		52 42 30	252 170 AA	ˆI	72 58 3A	272 186 BA	Κ	112 94 4A	312 202 CA	ı̇ı̇	132 90 5A	332 218 DA	κ	152 106 6A	352 234 EA	ı̇ı̇	172 122 7A	372 250 FA		10		
	11	◀	53 43 2B	253 171 AB	▶	73 59 3B	273 187 BB	Λ	113 95 4B	313 203 CB	ı̇ı̇	133 91 5B	333 219 DB	λ	153 107 6B	353 235 EB	ı̇ı̇	173 123 7B	373 251 FB		11		
	12	¬	54 44 2C	254 172 AC	ˆO	74 60 3C	274 188 BC	Μ	114 96 4C	314 204 CC	ı̇α	134 92 5C	334 220 DC	μ	154 108 6C	354 236 EC	ı̇ο	174 124 7C	374 252 FC		12		
	13	-	55 45 2D	255 173 AD	½	75 61 3D	275 189 BD	Ν	115 97 4D	315 205 CD	ı̇ε	135 93 5D	335 221 DD	ν	155 109 6D	355 237 ED	ı̇υ	175 125 7D	375 253 FD		13		
	14		56 46 2E	256 174 AE	ˆı̇	76 62 3E	276 190 BE	Ξ	116 98 4E	316 206 CE	ı̇η	136 94 5E	336 222 DE	ξ	156 110 6E	356 238 EE	ı̇ω	176 126 7E	376 254 FE		14		
	15	—	57 47 2F	257 175 AF	ˆı̇Ω	77 63 3F	277 191 BF	Ο	117 99 4F	317 207 CF	ı̇ı̇	137 95 5F	337 223 DF	ο	157 111 6F	357 239 EF		177 127 7F	377 255 FF		15		

LEGEND

	GL	GR	
	4/1	12/1	Column/Row
A	101	301	Octal
	65	193	Decimal
	41	C1	Hex

MLO-006610

ISO Latin-5 Supplemental Character Set

Row	Column	GL	GR		GL	GR		GL	GR		GL	GR		GL	GR		GL	GR	Row
		2	10		3	11		4	12		5	13		6	14		7	15	
0	NBSP	40 32 20	240 180 A0	°	60 48 30	260 176 B0	À	100 84 40	300 192 C0	Ĝ	120 80 50	320 208 D0	à	140 98 60	340 224 E0	ğ	160 112 70	360 240 F0	0
1	ı	41 33 21	241 161 A1	±	61 49 31	261 177 B1	Á	101 85 41	301 193 C1	Ñ	121 81 51	321 209 D1	á	141 97 61	341 225 E1	ñ	161 113 71	361 241 F1	1
2	ı̇	42 34 22	242 162 A2	²	62 50 32	262 178 B2	Â	102 86 42	302 194 C2	Ï	122 82 52	322 210 D2	â	142 98 62	342 226 E2	ò	162 114 72	362 242 F2	2
3	£	43 35 23	243 163 A3	³	63 51 33	263 179 B3	Ã	103 87 43	303 195 C3	Ó	123 83 53	323 211 D3	ã	143 99 63	343 227 E3	ó	163 115 73	363 243 F3	3
4	¤	44 36 24	244 164 A4	´	64 52 34	264 180 B4	Ä	104 88 44	304 196 C4	Ô	124 84 54	324 212 D4	ä	144 100 64	344 228 E4	ô	164 116 74	364 244 F4	4
5	¥	45 37 25	245 165 A5	µ	65 53 35	265 181 B5	Å	105 89 45	305 197 C5	Õ	125 85 55	325 213 D5	å	145 101 65	345 229 E5	õ	165 117 75	365 245 F5	5
6	ı̈	46 38 26	246 166 A6	¶	66 54 36	266 182 B6	Æ	106 90 46	306 198 C6	Ö	126 86 56	326 214 D6	æ	146 102 66	346 230 E6	ö	166 118 76	366 246 F6	6
7	§	47 39 27	247 167 A7	·	67 55 37	267 183 B7	Ç	107 91 47	307 199 C7	×	127 87 57	327 215 D7	ç	147 103 67	347 231 E7	÷	167 119 77	367 247 F7	7
8	¨	50 40 28	250 168 A8	¸	70 56 38	270 184 B8	È	110 72 48	310 200 C8	Ø	130 88 58	330 216 D8	è	150 104 68	350 232 E8	ø	170 120 78	370 248 F8	8
9	©	51 41 29	251 169 A9	¹	71 57 39	271 185 B9	É	111 73 49	311 201 C9	Ù	131 89 59	331 217 D9	é	151 105 69	351 233 E9	ù	171 121 79	371 249 F9	9
10	ª	52 42 2A	252 170 AA	º	72 58 3A	272 186 BA	Ê	112 74 4A	312 202 CA	Ú	132 90 5A	332 218 DA	ê	152 106 6A	352 234 EA	ú	172 122 7A	372 250 FA	10
11	«	53 43 2B	253 171 AB	»	73 59 3B	273 187 BB	Ë	113 75 4B	313 203 CB	Û	133 91 5B	333 219 DB	ë	153 107 6B	353 235 EB	û	173 123 7B	373 251 FB	11
12	¬	54 44 2C	254 172 AC	¼	74 60 3C	274 188 BC	Ì	114 76 4C	314 204 CC	Ü	134 92 5C	334 220 DC	ì	154 108 6C	354 236 EC	ü	174 124 7C	374 252 FC	12
13	-	55 45 2D	255 173 AD	½	75 61 3D	275 189 BD	Í	115 77 4D	315 205 CD	İ	135 93 5D	335 221 DD	í	155 109 6D	355 237 ED	ı̇	175 125 7D	375 253 FD	13
14	®	56 46 2E	256 174 AE	¾	76 62 3E	276 190 BE	Î	116 78 4E	316 206 CE	Š	136 94 5E	336 222 DE	î	156 110 6E	356 238 EE	š	176 126 7E	376 254 FE	14
15	-	57 47 2F	257 175 AF	¿	77 63 3F	277 191 BF	Ï	117 79 4F	317 207 CF	ß	137 95 5F	337 223 DF	ï	157 111 6F	357 239 EF	ÿ	177 127 7F	377 255 FF	15

LEGEND

	GR	
	12/1	Column/Row
À	301 193 C1	Octal Decimal Hex

MLO-006611

ISO Latin 9

	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0		0	@	P	·	p	Ç	É	á	☐	Ł	đ	Ó	-
1	!	1	A	Q	a	q	ü	æ	í	☐	±	Đ	ß	±
2	"	2	B	R	b	r	é	Æ	ó	☐	ŧ	Ë	Ö	-
3	#	3	C	S	c	s	â	ô	ú	|	ŧ	Ë	Ò	¾
4	\$	4	D	T	d	t	ä	ö	ñ	|	-	È	õ	¶
5	%	5	E	U	e	u	à	ò	Ñ	Á	†	€	Õ	§
6	&	6	F	V	f	v	â	û	ä	Ä	ã	í	μ	‡
7	'	7	G	W	g	w	ç	ù	ó	À	Ã	î	þ	¸
8	(	8	H	X	h	x	ê	ÿ	ı	©	Ł	ÿ	ƒ	°
9	)	9	I	Y	i	y	ë	ö	®	‡	Ŧ	Ÿ	Ú	·
A	*	:	J	Z	j	z	è	ü	ˆ	||	±	Ŧ	Û	·
B	+	;	K	[	k	{	ı	ø	½	Ŧ	Ŧ	☐	Ü	1
C	,	<	L	\	l	|	í	£	¼	Ŧ	Ŧ	☐	Ý	3
D	-	=	M	]	m	}	ı	ø	ı	¢	=	:	Ÿ	2
E	.	>	N	^	n	˘	Ä	×	«	¥	Ŧ	İ	-	·
F	/	?	O	_	o		Å	f	»	Ŧ	×	☐		

Generic Character Set Tables

The following are the character set table which are common to the IBM and the EPSON protocol.

Code Page 210

	80	90	A0	B0	C0	D0	E0	F0
0	A	P	ι	⋮	⊥	⊥	Ω	
1	B	Σ	κ	⋮	⊥	⊥	ά	±
2	Γ	T	λ	⋮	⊥	⊥	έ	≥
3	Δ	Y	μ	|	⊥	⊥	ή	≤
4	E	Φ	ν	⊥	—	⊥	ï	∫
5	Z	X	ξ	⊥	⊥	⊥	ί	J
6	H	Ψ	ο	⊥	⊥	⊥	ό	÷
7	Θ	Ω	π	⊥	⊥	⊥	ύ	≈
8	I	α	ρ	⊥	⊥	⊥	ü	°
9	K	β	σ	⊥	⊥	⊥	ώ	£
A	Λ	γ	ς	⊥	⊥	⊥	À	•
B	M	δ	τ	⊥	⊥	■	É	√
C	N	ε	υ	⊥	⊥	■	Η	n
D	Ξ	ζ	φ	⊥	=	■	Ι	²
E	Ο	η	χ	⊥	⊥	■	Ό	■
F	Π	θ	ψ	⊥	⊥	■	Υ	ω

Code Page 220

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	⊥	⊥	α	≡
1	ü	í	í	⋮	⊥	⊥	β	±
2	é	ó	ó	⋮	⊥	⊥	Γ	≥
3	â	ô	ú	|	⊥	⊥	π	≤
4	ä	ö	ñ	⊥	—	⊥	Σ	∫
5	à	ò	Ñ	⊥	⊥	⊥	σ	J
6	À	û	æ	⊥	⊥	⊥	μ	÷
7	ç	ù	º	⊥	⊥	⊥	τ	≈
8	ê	Á	¿	⊥	⊥	⊥	Φ	°
9	ë	Ö	¡	⊥	⊥	⊥	θ	•
A	è	Û	Ł	⊥	⊥	⊥	Ω	•
B	ï	Ò	½	⊥	⊥	■	δ	√
C	î	Ł	¼	⊥	⊥	■	∞	n
D	ì	Ú	;	⊥	=	■	ø	²
E	Ä	Ë	«	⊥	⊥	■	€	■
F	È	Ï	»	⊥	⊥	■	∩	

Code Page 437 Greek

	80	90	A0	B0	C0	D0	E0	F0
0	A	P	ι	⋮	⊥	⊥	ω	Ω
1	B	Σ	κ	⋮	⊥	⊥	ά	±
2	Γ	T	λ	⋮	⊥	⊥	έ	≥
3	Δ	Y	μ	|	⊥	⊥	ή	≤
4	E	Φ	ν	⊥	—	⊥	ï	∫
5	Z	X	ξ	⊥	⊥	⊥	ί	J
6	H	Ψ	ο	⊥	⊥	⊥	ό	÷
7	Θ	Ω	π	⊥	⊥	⊥	ύ	≈
8	I	α	ρ	⊥	⊥	⊥	ü	°
9	K	β	σ	⊥	⊥	⊥	ώ	£
A	Λ	γ	ς	⊥	⊥	⊥	À	¥
B	M	δ	τ	⊥	⊥	■	É	√
C	N	ε	υ	⊥	⊥	■	Η	n
D	Ξ	ζ	φ	⊥	=	■	Ι	²
E	Ο	η	χ	⊥	⊥	■	Ό	■
F	Π	θ	ψ	⊥	⊥	■	Υ	

Code Page 850

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	Ł	Ǿ	Ó	-
1	ü	æ	í	⋮	Ł	Đ	β	±
2	é	Æ	ó	⋮	Т	Ê	Ô	=
3	â	ô	ú	|	Ł	È	Ò	¾
4	ä	ö	ñ	|	-	È	õ	¶
5	à	ò	Ñ	Á	†	ı	Ö	Ş
6	â	û	æ	Â	ã	í	μ	÷
7	ç	ù	º	À	Ã	î	þ	.
8	ê	ÿ	ı	©	Ł	Ï	Ð	°
9	ë	ö	®	¶	¶	Ј	Ú	¨
A	è	Û	¬	||	≡	Г	Û	·
B	ï	ø	½	¶	¶	■	Û	¹
C	î	£	¼	¶	¶	■	ý	³
D	ì	Ø	ı	¢	=	!	Ý	²
E	Ä	×	«	¥	¶	İ	-	■
F	Å	f	»	γ	α	■	'	

Code Page 852

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	Ł	đ	Ó	-
1	ü	Ł	í	⋮	Ł	Đ	β	˘
2	é	ı	ó	⋮	Т	Đ	Ô	.
3	â	ô	ú	|	Ł	È	Ñ	˘
4	ä	ö	Ą	|	-	đ	ń	˘
5	û	Ł	ą	Á	†	Ñ	ñ	Ş
6	é	ı	ż	Â	À	ı	ş	÷
7	ç	ş	ż	È	ă	ı	ş	.
8	ı	ş	Ę	Ş	Ł	ě	Ř	°
9	ë	ö	ę	¶	¶	Ј	Ú	¨
A	ő	Û		||	≡	Г	ř	·
B	ó	ř	ż	¶	¶	■	Û	ú
C	î	ř	č	¶	¶	■	ý	Ř
D	ž	Ł	ş	Ž	=	Т	Ý	ř
E	Ä	×	«	ž	¶	Û	ı	■
F	Ć	č	»	γ	α	■	'	

Code Page 853

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	Ł		Ó	-
1	ü	ć	í	⋮	Ł		β	
2	é	Ć	ó	⋮	Т	Ê	Ô	ł
3	â	ô	ú	|	Ł	È	Ò	ħ
4	ä	ö	ñ	|	-	È	Ć	˘
5	à	ò	Ñ	Á	†	ı	ğ	Ş
6	ê	û	ğ	Â	Ŝ	ı	μ	÷
7	ç	ù	ğ	À	Ŝ	ı	Ħ	.
8	ê	ı	Ħ	Ş	Ł	ı	ħ	°
9	ë	ö	ñ	¶	¶	Ј	Ú	¨
A	è	Û		||	≡	Г	Û	·
B	ï	ğ	½	¶	¶	■	Û	
C	î	£	¼	¶	¶	■	Û	³
D	ì	Ć	ş	Ž	=		Û	²
E	Ä	×	«	ž	¶	İ		■
F	Ć	ĵ	»	γ	α	■	'	

Code Page 855

	80	90	A0	B0	C0	D0	E0	F0
0	ђ	љ	а	▯	Л	л	Я	-
1	Ђ	Љ	А	▯	⊥	Л	р	ы
2	ѓ	њ	б	▯	Т	м	Р	ы
3	Ѓ	Њ	Б	|	⊥	М	с	з
4	ё	ђ	ц	⊥	-	н	С	З
5	Ё	Ђ	Ц	х	⊥	Н	Т	Ш
6	є	ќ	д	Х	к	о	Т	Ш
7	Є	Ќ	Д	И	К	О	У	Э
8	ѕ	џ	е	И	Љ	п	У	Э
9	Ѕ	У	Е	⊥	Ѓ	Ј	Ж	Щ
A	і	ц	Ф	||	⊥	Г	Ж	Щ
B	І	Ц	Ф	⊥	⊥	■	В	Ч
C	й	ю	Г	⊥	⊥	■	В	Ч
D	Й	Ю	Г	й	=	П	Ь	
E	ј	ъ	«	Й	⊥	я	Ь	■
F	Ј	Ъ	»	Ј	α	■	Њ	

Code Page 857

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	Á	▯	Л	о	ó	-
1	ü	æ	í	▯	⊥	а	β	±
2	é	Æ	ó	▯	Т	È	Ò	
3	â	ô	ú	|	⊥	È	Ò	¾
4	ä	ö	ñ	⊥	-	È	õ	¶
5	à	ò	Ñ	À	⊥		Õ	§
6	â	û	Ç	Â	ã	í	μ	÷
7	ç	ù	ğ	À	Ã	î		.
8	ê	ı	ı	©	⊥	ÿ	×	°
9	ë	ö	®	⊥	⊥	Ј	Ú	¨
A	è	ù	¬	||	⊥	Г	Û	.
B	ï	ø	½	⊥	⊥	■	Û	1
C	î	£	¼	⊥	⊥	■	ì	3
D	ı	ø	ı	φ	=	ı	ÿ	2
E	Ä	§	«	¥	⊥	İ	-	■
F	Å	§	»	Ј	α	■	'	

Code Page 858

Code Page 860

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	▯	⊥	⊥	α	≡
1	ü	À	í	▯	⊥	⊥	β	±
2	é	È	ó	▯	⊥	⊥	Γ	≥
3	â	ô	ú	|	⊥	⊥	π	≤
4	ã	õ	ñ	⊥	—	⊥	Σ	∫
5	à	ò	Ñ	⊥	⊥	⊥	σ	∫
6	Á	Ú	æ	⊥	⊥	⊥	μ	÷
7	ç	ù	º	⊥	⊥	⊥	τ	≈
8	ê	ì	¿	⊥	⊥	⊥	Φ	°
9	Ê	Ï	Ò	⊥	⊥	⊥	θ	•
A	è	Û	¬	⊥	⊥	⊥	Ω	•
B	Í	Φ	½	⊥	⊥	■	δ	√
C	Ò	£	¼	⊥	⊥	■	∞	n
D	ì	Û	ì	⊥	=	■	∅	2
E	Ã	℞	«	⊥	⊥	■	€	■
F	Â	Ó	»	⊥	⊥	■	∩	

Code Page 861

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	▯	⊥	⊥	α	≡
1	ü	æ	í	▯	⊥	⊥	β	±
2	é	Æ	ó	▯	⊥	⊥	Γ	≥
3	â	ô	ú	|	⊥	⊥	π	≤
4	ä	ö	Á	⊥	—	⊥	Σ	∫
5	à	þ	Í	⊥	⊥	⊥	σ	∫
6	á	ú	Ó	⊥	⊥	⊥	μ	÷
7	ç	Ý	Ú	⊥	⊥	⊥	τ	≈
8	ê	ý	¿	⊥	⊥	⊥	Φ	°
9	ë	ö	¬	⊥	⊥	⊥	θ	•
A	è	Û	¬	⊥	⊥	⊥	Ω	•
B	Ð	ø	½	⊥	⊥	■	δ	√
C	ð	£	¼	⊥	⊥	■	∞	n
D	Þ	ø	ì	⊥	=	■	∅	2
E	Ä	℞	«	⊥	⊥	■	€	■
F	Å	f	»	⊥	⊥	■	∩	

Code Page 862

	80	90	A0	B0	C0	D0	E0	F0
0	⋈	ı	á	▯	⊥	⊥	α	≡
1	ı	ø	í	▯	⊥	⊥	β	±
2	λ	ϑ	ó	▯	⊥	⊥	Γ	≥
3	ı	η	ú	|	⊥	⊥	π	≤
4	η	ϑ	ñ	⊥	—	⊥	Σ	∫
5	ı	ı	Ñ	⊥	⊥	⊥	σ	∫
6	ı	ı	æ	⊥	⊥	⊥	μ	÷
7	η	ρ	º	⊥	⊥	⊥	τ	≈
8	ı	ı	¿	⊥	⊥	⊥	Φ	°
9	ı	ı	¬	⊥	⊥	⊥	θ	•
A	ı	ı	¬	⊥	⊥	⊥	Ω	•
B	ı	φ	½	⊥	⊥	■	δ	√
C	ı	£	¼	⊥	⊥	■	∞	n
D	ı	ı	ì	⊥	=	■	∅	2
E	ı	℞	«	⊥	⊥	■	€	■
F	ı	f	»	⊥	⊥	■	∩	

Code Page 863

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	|	▤	⊥	⊞	α	≡
1	ü	È	´	▥	⊥	⊞	β	±
2	é	Ê	ó	▦	⊥	⊞	Γ	≥
3	â	ô	ú	|	⊥	⊞	π	≤
4	Â	Ê	¨	|	-	⊥	Σ	∫
5	à	Ï	¸	⊥	⊥	⊥	σ	∫
6	¶	û	³	⊥	⊥	⊥	μ	÷
7	ç	ù	ˉ	⊥	⊥	⊥	τ	≈
8	ê	æ	î	⊥	⊥	⊥	Φ	°
9	ë	ô	¸	⊥	⊥	⊥	θ	•
A	è	Û	¸	⊥	⊥	⊥	Ω	•
B	ï	φ	½	⊥	⊥	■	δ	√
C	î	£	¼	⊥	⊥	■	∞	n
D	=	Û	¾	⊥	=	■	∅	²
E	À	Û	«	⊥	⊥	■	€	■
F	§	f	»	⊥	⊥	■	∩	

Code Page 864

	80	90	A0	B0	C0	D0	E0	F0
0	°	β		◆	φ	∩	-	∫
1	•	∞	-	∫	∫	∫	∫	∫
2	•	∅	∫	∫	∫	∫	∫	∫
3	√	±	£	∫	∫	∫	∫	∫
4	▤	½	∫	∫	∫	∫	∫	∫
5	-	¼	∫	∫	∫	∫	∫	∫
6	|	≈		∫	∫	∫	∫	∫
7	+	«		∫	∫	∫	∫	∫
8	+	»	∫	∫	∫	∫	∫	∫
9	∫	∫	∫	∫	∫	∫	∫	∫
A	∫	∫	∫	∫	∫	∫	∫	∫
B	∫		∫	∫	∫	∫	∫	∫
C	∫		∫	∫	∫	∫	∫	∫
D	∫	∫	∫	∫	∫	∫	∫	∫
E	∫	∫	∫	∫	∫	∫	∫	∫
F	∫	∫	∫	∫	∫	∫	∫	∫

Code Page 865

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	▤	⊥	⊞	α	≡
1	ü	æ	í	▥	⊥	⊞	β	±
2	é	Æ	ó	▦	⊥	⊞	Γ	≥
3	â	ô	ú	|	⊥	⊞	π	≤
4	ä	ö	ñ	|	-	⊥	Σ	∫
5	à	ò	ñ	⊥	⊥	⊥	σ	∫
6	â	û	ª	⊥	⊥	⊥	μ	÷
7	ç	ù	º	⊥	⊥	⊥	τ	≈
8	ê	ÿ	¿	⊥	⊥	⊥	Φ	°
9	ë	ö	¸	⊥	⊥	⊥	θ	•
A	è	Û	¸	⊥	⊥	⊥	Ω	•
B	ï	∅	½	⊥	⊥	■	δ	√
C	î	£	¼	⊥	⊥	■	∞	n
D	ì	∅	;	⊥	=	■	∅	²
E	Ä	Æ	«	⊥	⊥	■	€	■
F	Å	f	»	⊥	⊥	■	∩	

Code Page 866

	80	90	A0	B0	C0	D0	E0	F0
0	А	Р	а	▯	Л	л	р	Ё
1	Б	С	б	▯	Т	т	с	ё
2	В	Т	в	▯	Т	т	т	Е
3	Г	У	г	|	т	л	у	е
4	Д	Ф	д	|	-	Е	Ф	Й
5	Е	Х	е	≡	+	Г	х	й
6	Ж	Ц	ж	≡	Г	ц	У	
7	З	Ч	з	≡	Г	ч	У	
8	И	Ш	и	≡	Г	ш	°	
9	И	Щ	й	≡	Г	щ	°	
A	К	Ъ	к	≡	Г	ъ	°	
B	Л	Ы	л	≡	Г	ы	√	
C	М	Ь	м	≡	Г	ь	№	
D	Н	Э	н	≡	Г	э	α	
E	О	Ю	о	≡	Г	ю	■	
F	П	Я	п	≡	Г	я		

Code Page 869

	80	90	A0	B0	C0	D0	E0	F0
0	Т	İ	▯	Л	Т	ξ	-	
1	Ï	İ	▯	Л	Υ	η	±	
2	Ō	Ó	▯	Т	Φ	ϑ	υ	
3		Ú	|	т	Χ	ι	φ	
4		Α	|	-	Ψ	κ	χ	
5	Υ	Β	Κ	+	Ω	λ	§	
6	Α	ÿ	Γ	Λ	Π	α	μ	ψ
7	©	Δ	Μ	Ρ	β	ν	™	
8	·	Ω	Ε	Ν	ε	γ	ξ	°
9	¬	²	Z	≡	Г	ο	™	
A	!	³	H	≡	Г	π	ω	
B	'	ά	½	≡	Г	ε	ü	
C	'	£	Θ	≡	Г	σ	Û	
D	Ε	έ	Ι	Ε	=	δ	ς	ώ
E	-	ή	«	Ο	≡	ε	τ	■
F	Η	ί	»	Γ	Σ	■	'	

Abicom

	80	90	A0	B0	C0	D0	E0	F0
0			ò	ı	ò			
1	À	Ó	à	ó				
2	Á	Ô	á	ô				
3	Â	Õ	â	õ				
4	Ã	Ö	ã	ö				
5	Ä	Æ	ä	æ				
6	Ç	Ù	ç	ù				
7	È	Ú	è	ú				
8	É	Û	é	û				
9	Ê	Ü	ê	ü				
A	Ë	ÿ	ë	ÿ				
B	Ì	ˆ	ì	β				
C	Í	£	í	α				
D	Î	·	î	ο				
E	Ï	§	ï	ι				
F	Ñ	°	ñ	±				

Brazilian ASCII

	80	90	A0	B0	C0	D0	E0	F0
0			°	À	Ð	à	ð	
1		ı	±	Á	Ñ	á	ñ	
2	ϕ	²	Â	Ò	â	ò		
3	£	³	Ã	Ó	ã	ó		
4	α	´	Ä	Ô	ä	ô		
5	¥	μ	Å	Õ	å	õ		
6	ı	¶	Æ	Ö	æ	ö		
7	§	·	Ç	Ç	ç	œ		
8	¨	˙	È	Ø	è	ø		
9	©	¹	É	Ù	é	ù		
A	ª	º	Ê	Ú	ê	ú		
B	«	»	Ë	Û	ë	û		
C	¬	¼	Ì	Ü	ì	ü		
D	–	½	Í	Ý	í	ý		
E	®	¾	Î	Þ	î	þ		
F	–	¿	Ï	ß	ï	ÿ		

Mazowian

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	Ę	Ż	⋮	Ł	⊥	α	≡
1	ü	ę	ż	⋮	±	⌊	β	±
2	é	ł	ó	⋮	⌊	⌊	Γ	≥
3	â	ô	ó	|	⌊	⊥	π	≤
4	ä	ö	ń	⌊	–	⊥	Σ	∫
5	à	ć	ń	⌊	+	⊥	σ	∫
6	ą	û	ż	⌊	⌊	⌊	μ	÷
7	ç	ù	ż	⌊	⌊	⌊	τ	≈
8	ê	ś	ś	⌊	⊥	⌊	Φ	°
9	ë	ö	ŗ	⌊	⌊	⌊	θ	•
A	è	ù	ŗ	⌊	⊥	⌊	Ω	•
B	ĩ	żł	½	⌊	⌊	■	δ	√
C	î	ł	¼	⌊	⌊	■	∞	n
D	ć	¥	ı	⌊	=	■	∅	²
E	Ä	Ś	«	⌊	⌊	■	€	■
F	Ą	f	»	⌊	⊥	■	∩	

Code MJK

	80	90	A0	B0	C0	D0	E0	F0
0	Č	É	á	⋮	Ł	⊥	α	≡
1	ü	ž	í	⋮	±	⌊	β	±
2	é	ž	ó	⋮	⌊	⌊	Γ	≥
3	ď	ô	ú	|	⌊	⊥	π	≤
4	ä	ö	ň	⌊	–	⊥	Σ	∫
5	ď	ó	ň	⌊	+	⊥	σ	∫
6	ř	û	ř	⌊	⌊	⌊	μ	÷
7	č	ú	ô	⌊	⌊	⌊	τ	≈
8	ě	ý	š	⌊	⊥	⌊	Φ	°
9	ě	ö	ř	⌊	⌊	⌊	θ	•
A	ł	ù	ř	⌊	⊥	⌊	Ω	•
B	í	š	ř	⌊	⌊	■	δ	√
C	ř	ł	¼	⌊	⌊	■	∞	n
D	ř	ý	š	⌊	=	■	∅	²
E	Ä	Ř	«	⌊	⌊	■	€	■
F	Á	ť	»	⌊	⊥	■	∩	

	80	90	A0	B0	C0	D0	E0	F0
0	А	Р	а	р	⊥	⋮	α	≡
1	Б	С	б	с	⊥	⋮	β	±
2	В	Т	в	т	⊥	⋮	Γ	≥
3	Г	У	г	у	|	|	π	≤
4	Д	Ф	д	ф	—	⊥	Σ	∫
5	Е	Х	е	х	+	⊥	σ	∫
6	Ж	Ц	ж	ц	⊥	⊥	§	μ
7	З	Ч	з	ч	||	⊥	τ	≈
8	И	Ш	и	ш	⊥	⊥	Φ	°
9	Й	Щ	й	щ	⊥	⊥	∅	•
A	К	Ъ	к	ъ	⊥	⊥	Ω	•
B	Л	Ы	л	ы	⊥	■	δ	√
C	М	Ь	м	ь	⊥	■	∞	n
D	Н	Э	н	э	=	■	∅	²
E	О	Ю	о	ю	⊥	■	€	■
F	П	Я	п	я	⊥	■	∅	∅

	80	90	A0	B0	C0	D0	E0	F0
0			°	ı	Π	Û	π	
1			'	±	A	P	α	e
2			'	²	B		β	ς
3			£	³	Γ	Σ	γ	σ
4			'	Δ	T	δ	τ	
5			"	E	Υ	ε	υ	
6			!	A	Z	Φ	ξ	φ
7			§	•	H	X	η	χ
8			"	E	Θ	Ψ	θ	ψ
9			©	H	I	Ω	ι	ω
A				T	K	ı	ı	ı
B			«	»	Λ	ÿ	λ	ü
C			¬	∅	M	á	μ	ó
D			—	½	N	é	ν	ú
E				Υ	E	ή	ξ	ώ
F			—	Ω	O	í	o	

	80	90	A0	B0	C0	D0	E0	F0
0			°	À	Ğ	à	ğ	
1			ı	±	Á	Ñ	á	ñ
2			φ	²	Â	Ò	â	ò
3			£	³	Ã	Ó	ã	ó
4			α	'	Ä	Ô	ä	ô
5			¥	μ	Å	Õ	å	õ
6			!	¶	Æ	Ö	æ	ö
7			§	•	Ç	×	ç	÷
8			"	,	È	Ø	è	ø
9			©	¹	É	Ù	é	ù
A			ª	º	Ê	Ú	ê	ú
B			«	»	Ë	Û	ë	û
C			¬	¼	Ì	Ü	ì	ü
D			—	½	Í	Ý	í	ý
E			®	¾	Î	Ş	î	ş
F			—	¿	Ï	ß	ï	ÿ

Code Page 437

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	Ł	⌘	α	≡
1	ü	í	í	⋮	⊥	⌘	β	±
2	é	Ó	ó	⋮	⊥	⌘	Γ	≥
3	â	ô	ú	|	⊥	⌘	π	≤
4	ä	ö	ñ	|	-	⌘	Σ	∫
5	à	ò	Ñ	≡	+	⌘	σ	∫
6	À	Û	à	≡	⊥	⌘	μ	÷
7	ç	ù	ó	⌘	⊥	⌘	τ	≈
8	ê	Á	¿	⌘	⌘	⊥	Φ	°
9	ë	Ö	¡	≡	⌘	⊥	Θ	•
A	è	Û	È	≡	⌘	⌘	Ω	•
B	ï	Ò	½	⌘	⌘	■	δ	√
C	î	£	¼	⌘	⊥	■	∞	n
D	ì	Ú	;	⌘	=	■	∅	2
E	Ä	Ŕ	«	≡	⊥	■	€	■
F	È	ÿ	»	⌘	±	■	∩	

D-Hebrew

	80	90	A0	B0	C0	D0	E0	F0
0	Ç	É	á	⋮	Ł	⌘	κ	∫
1	ü	æ	í	⋮	⊥	⌘	∫	∅
2	é	Æ	ó	⋮	⊥	⌘	λ	γ
3	â	ô	ú	|	⊥	⌘	∫	∫
4	ä	ö	ñ	|	-	⌘	∫	∫
5	à	ò	Ñ	≡	+	⌘	∫	∫
6	à	û	à	≡	⊥	⌘	∫	∫
7	ç	ù	ó	⌘	⊥	⌘	∫	∫
8	ê	ÿ	¿	⌘	⊥	⊥	∫	∫
9	ë	Ö	¡	≡	⌘	⊥	'	∫
A	è	Û	È	≡	⌘	⌘	∫	∫
B	ï	Ç	½	⌘	⌘	■	∫	√
C	î	£	¼	⌘	⊥	■	∫	n
D	ì	¥	;	⌘	=	■	∅	2
E	Ä	Ŕ	«	≡	⊥	■	∫	■
F	À	ƒ	»	⌘	±	■	∫	

New Hebrew

	80	90	A0	B0	C0	D0	E0	F0
0	κ	∫	á	⋮	Ł	⌘	α	≡
1	∫	∅	í	⋮	⊥	⌘	β	±
2	λ	γ	ó	⋮	⊥	⌘	Γ	≥
3	∫	∫	ú	|	⊥	⌘	π	≤
4	∫	∫	ñ	|	-	⌘	Σ	∫
5	∫	∫	Ñ	≡	+	⌘	σ	∫
6	∫	∫	à	≡	⊥	⌘	μ	÷
7	∫	∫	ó	⌘	⊥	⌘	τ	≈
8	∫	∫	¿	⌘	⊥	⊥	Φ	°
9	'	∫	¡	≡	⌘	⊥	Θ	•
A	∫	∫	È	≡	⌘	⌘	Ω	•
B	∫	Ç	½	⌘	⌘	■	δ	√
C	∫	£	¼	⌘	⊥	■	∞	n
D	∅	¥	;	⌘	=	■	∅	2
E	∫	Ŕ	«	≡	⊥	■	€	■
F	∫	ƒ	»	⌘	±	■	∩	

ISO 8859-15

	80	90	A0	B0	C0	D0	E0	F0
0			°	À	Ä	à	ä	
1		ı	±	Á	Ñ	á	ñ	
2		ç	²	Â	Ò	â	ò	
3		£	³	Ã	Ó	ã	ó	
4		€	Ž	Ä	Ô	ä	ô	
5		¥	μ	Å	Õ	å	õ	
6		Š	¶	Æ	Ö	æ	ö	
7		§	•	Ç	×	ç	÷	
8		š	ž	È	Ø	è	ø	
9		©	¹	É	Ù	é	ù	
A		ª	º	Ê	Ú	ê	ú	
B		«	»	Ë	Û	ë	û	
C		´	ƒ	Ì	Ü	ì	ü	
D		-	œ	Í	Ý	í	ý	
E		®	Ÿ	Î	Þ	î	þ	
F		-	ı	İ	ß	ı	ÿ	

IBM Character Set Tables

IBM Character Set 1

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	'	p	NUL		á	|	À	Ð	a	=
01		DC1	!	1	A	Q	a	q		DC1	í	|	Á	Ñ	ß	±
02		DC2	“	2	B	R	b	r		DC2	ó	|	Â	Ò	G	=
03		DC3	#	3	C	S	c	s		DC3	ú	³	Ã	Ó	p	=
04		DC4	\$	4	D	T	d	t		DC4	ñ	'	Ä	Ô	S	(
05			%	5	E	U	e	u			Ñ	μ	Å	Õ	s)
06			&	6	F	V	f	v			ª	¶	Æ	Ö	µ	÷
07	BEL		'	7	G	W	g	w	BEL		º	·	Ç	×	t	~
08	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	¸	È	Ø	F	°
09	HT		)	9	I	Y	i	y	HT		¬	¹	É	Ù	T	·
0A	LF		*	:	J	Z	j	z	LF		¬	º	Ê	Ú	O	·
0B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	»	Ë	|	d	v
0C	FF		,	<	L	\	l	|	FF		¼	¼	Ì	_	8	n
0D	CR		-	=	M	]	m	}	CR		ı	½	Í	|	f	²
0E	SO		.	>	N	^	n	~	SO		«	¾	Î	|	e	|
0F	SI		/	?	O	_	o	DEL	SI		»	¿	Ï	-	n	SP

IBM Character Set 2

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	'	p	Ç	É	á	|	À	Đ	a	=
01		DC1	!	1	A	Q	a	q	ü	æ	í	|	Á	Ñ	ß	±
02	`	DC2	“	2	B	R	b	r	é	Æ	ó	|	Â	Ò	G	=
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	³	Ã	Ó	p	=
04	♦	DC4	\$	4	D	T	d	t	ä	ö	ñ	'	Ä	Ô	S	(
05	♣	§	%	5	E	U	e	u	à	ò	Ñ	μ	Å	Õ	s)
06	♠		&	6	F	V	f	v	å	û	ª	¶	Æ	Ö	μ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	·	Ç	×	t	~
08	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	,	È	Ø	F	º
09	HT		)	9	I	Y	i	y	ë	ö	¬	¹	É	Ù	T	·
0A	LF		*	:	J	Z	j	z	è	Ü	¬	º	Ê	Ú	O	·
0B	VT	ESC	+	;	K	[	k	{	ï	ç	½	»	Ë	|	d	v
0C	FF		,	<	L	\	l	|	î	£	¼	¼	Ì	_	8	n
0D	CR		-	=	M	]	m	}	ì	¥	ì	½	Í	|	f	²
0E	SO		.	>	N	^	n	~	Ä	ƒ	«	¾	Î	|	e	|
0F	SI		/	?	O	_	o	DEL	Å	f	»	¿	Ï	-	n	SP

EPSON Character Set Tables

USA																France																	
	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0		00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0			0	@	P	`	p	Ç	É	á	☐	⊥	⊥	α	≡	0			0	à	P	`	p	Ç	É	á	☐	⊥	⊥	α	≡		
1			!	1	A	Q	a	q	ü	æ	í	☐	⊥	⊥	β	±	1			!	1	A	Q	a	q	ü	æ	í	☐	⊥	⊥	β	±
2			"	2	B	R	b	r	é	Æ	ó	☐	⊥	⊥	Γ	≥	2			"	2	B	R	b	r	é	Æ	ó	☐	⊥	⊥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú	|	|	⊥	π	≤	3	♥		#	3	C	S	c	s	â	ô	ú	|	|	⊥	π	≤
4	♦		\$	4	D	T	d	t	ä	ö	ñ	|	-	⊥	Σ	∫	4	♦		\$	4	D	T	d	t	ä	ö	ñ	|	-	⊥	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	≠	+	⊥	σ	∫	5	♣	§	%	5	E	U	e	u	à	ò	Ñ	≠	+	⊥	σ	∫
6	♠		&	6	F	V	f	v	â	û	à	≠	⊥	⊥	μ	÷	6	♠		&	6	F	V	f	v	â	û	à	≠	⊥	⊥	μ	÷
7			'	7	G	W	g	w	ç	ù	º	⊥	⊥	⊥	τ	≈	7			'	7	G	W	g	w	ç	ù	º	⊥	⊥	⊥	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°	8			(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌈	⊥	⊥	⌋	θ	•	9			)	9	I	Y	i	y	ë	ö	⌈	⊥	⊥	⌋	θ	•
A			*	:	J	Z	j	z	è	ü	⌈	⊥	⊥	⌋	Ω	•	A			*	:	J	Z	j	z	è	ü	⌈	⊥	⊥	⌋	Ω	•
B			+	;	K	[	k	{	ï	ç	½	⊥	⊥	■	δ	√	B			+	;	K	°	k	é	ï	ç	½	⊥	⊥	■	δ	√
C			,	<	L	\	l	|	î	£	¼	≠	⊥	■	∞	n	C			,	<	L	ç	l	ù	î	£	¼	≠	⊥	■	∞	n
D			-	=	M	]	m	}	ì	¥	;	⊥	=	■	∅	²	D			-	=	M	§	m	è	ì	¥	;	⊥	=	■	∅	²
E			.	>	N	^	n	~	Ä	Ⓜ	«	≠	⊥	■	€	■	E			.	>	N	^	n	ˆ	Ä	Ⓜ	«	≠	⊥	■	€	■
F			/	?	O	_	o		Å	f	»	⊥	≠	■	∩	F			/	?	O	_	o		Å	f	»	⊥	≠	■	∩		

Germany

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0			0	§	P	`	p	Ç	É	á	⋮	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	⋮	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	⋮	⊥	⊥	Γ	≥	
3	♥	#	3	C	S	c	s	â	ô	ú	|	⊥	⊥	π	≤	
4	♦	\$	4	D	T	d	t	ä	ö	ñ	⊥	⊥	⊥	Σ	∫	
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	≠	+	ƒ	σ	J
6	♠	&	6	F	V	f	v	â	û	ä	≠	⊥	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	⊥	⊥	⊥	τ	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°	
9		)	9	I	Y	i	y	ë	ö	⊥	≠	⊥	⊥	θ	•	
A		*	:	J	Z	j	z	è	ü	⊥	⊥	⊥	⊥	Ω	•	
B		+	;	K	Ä	k	ä	ï	φ	½	⊥	⊥	⊥	δ	√	
C		,	<	L	Ö	l	ö	î	£	¼	≠	⊥	⊥	∞	n	
D		-	=	M	Ü	m	ü	ï	¥	;	⊥	=	⊥	∅	²	
E		.	>	N	^	n	ß	Ä	⊥	«	≠	⊥	⊥	∈	■	
F		/	?	O	_	o	Å	f	»	⊥	⊥	⊥	⊥	∩		

United Kingdom

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0			0	@	P	`	p	Ç	É	á	⋮	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	⋮	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	⋮	⊥	⊥	Γ	≥	
3	♥	£	3	C	S	c	s	â	ô	ú	|	⊥	⊥	π	≤	
4	♦	\$	4	D	T	d	t	ä	ö	ñ	⊥	⊥	⊥	Σ	∫	
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	≠	+	ƒ	σ	J
6	♠	&	6	F	V	f	v	â	û	ä	≠	⊥	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	⊥	⊥	⊥	τ	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°	
9		)	9	I	Y	i	y	ë	ö	⊥	≠	⊥	⊥	θ	•	
A		*	:	J	Z	j	z	è	ü	⊥	⊥	⊥	⊥	Ω	•	
B		+	;	K	[	k	{	ï	φ	½	⊥	⊥	⊥	δ	√	
C		,	<	L	\	l	|	î	£	¼	≠	⊥	⊥	∞	n	
D		-	=	M	]	m	}	ï	¥	;	⊥	=	⊥	∅	²	
E		.	>	N	^	n	~	Ä	⊥	«	≠	⊥	⊥	∈	■	
F		/	?	O	_	o	Å	f	»	⊥	⊥	⊥	⊥	∩		

Denmark 1

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0			0	@	P	`	p	Ç	É	á	⋮	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	⋮	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	⋮	⊥	⊥	Γ	≥	
3	♥	#	3	C	S	c	s	â	ô	ú	|	⊥	⊥	π	≤	
4	♦	\$	4	D	T	d	t	ä	ö	ñ	⊥	⊥	⊥	Σ	∫	
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	⊥	⊥	ƒ	σ	J
6	♠	&	6	F	V	f	v	â	û	æ	⊥	⊥	⊥	μ	÷	
7		'	7	G	W	g	w	ç	ù	ó	⊥	⊥	⊥	τ	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	°	
9		)	9	I	Y	i	y	ë	ö	⊥	⊥	⊥	⊥	θ	•	
A		*	:	J	Z	j	z	è	ù	⊥	⊥	⊥	⊥	Ω	•	
B		+	;	K	Æ	k	æ	ï	φ	½	⊥	⊥	⊥	δ	√	
C		,	<	L	Ø	l	ø	î	£	¼	⊥	⊥	⊥	∞	n	
D		-	=	M	Å	m	å	ì	¥	;	⊥	⊥	⊥	∅	2	
E		.	>	N	^	n	~	Ä	℞	«	⊥	⊥	⊥	€	■	
F		/	?	O	_	o		Å	f	»	⊥	⊥	⊥	∩		

Denmark 2

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0			0	É	P	é	p	Ç	É	á	⋮	⊥	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	⋮	⊥	⊥	β	±	
2		"	2	B	R	b	r	é	Æ	ó	⋮	⊥	⊥	Γ	≥	
3	♥	#	3	C	S	c	s	â	ô	ú		⊥	⊥	π	≤	
4	♦	\$	4	D	T	d	t	ä	ö	ñ	⊥	⊥	⊥	Σ	∫	
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	⊥	⊥	ƒ	σ	J
6	♠	&	6	F	V	f	v	â	û	æ	⊥	⊥	⊥	μ	÷	
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Sweden

Italy

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Turkey

Legal

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Old Hebrew

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Retrieving Access to Configuration

If you have selected the Minimum Value of the `USER ACCESS` Function, and you want to retrieve the access to Set-Up, proceed as follows:

1. Make sure the printer is powered-off.
2. Press the Set-up and the Pause buttons while powering the printer on and maintain the buttons depressed until `Testing...` is displayed.
The display shows `USER ACCESS`.
3. Select the required user access level according to the procedure of the section "Setting the User Access Authorization" in "Configuring your Printer".