

SUPPLIES AND OPTIONS

This appendix lists the supplies and options available for the printer.

Contact your dealer for information on ordering any of these items.

SUPPLIES

Supplies	Order Number
Ribbon cartridges	
Black ribbon	CA02374-C104
Ribbon subcassette	
Black ribbon	CA02374-C204
Print head	CA02281-E718

OPTION

Option	Order Number	Description
RS-232C serial interface board.	CA02374-C992	
LAN card	KA02004-C990	Installable only on a printer model with the parallel and USB interfaces.

PRINTER AND PAPER SPECIFICATIONS

This appendix gives the physical, functional, and performance specifications for the printer.

It also gives detailed paper specifications.

PHYSICAL SPECIFICATIONS

Dimensions		80 columns	136 columns
	Height:	120 mm (4.72 in)	130 mm (5.12 in)
	Width:	415mm (16.3 in)	570 mm (22.5 in)
	Depth:	330 mm (13 in)	330 mm (13 in)
Weight:	Approximately	7.3 kg (16 lbs)	9 kg (19.8 lbs)
AC power requirements			
	Model:	M33331A/M33333A	
		100 to 120 VAC ±10%; 50/60 Hz	
	Model:	M33331B/M33333B	
		220 to 240 VAC –10%, +6%; 50/60 Hz	
Power consumption			
	Model:	M33331A/M33333A	
		Average 140 VA Maximum 255 VA	
	Model:	M33331B/M33333B	
		Average 150 VA Maximum 255 VA	
Heat generation		Average 251.2 KJ/h	
Interface		Centronics parallel	
		Centronics parallel and RS-232C serial	
		Centronics parallel and USB and LAN	
Data buffer size		0, 256, 2K, 8K, 24K, 32K, 96K or 128K bytes	
Download buffer		Maximum 128K bytes (128K minus data buffer size)	
Operating environment		5 to 38°C (41 to 100°F)	
		30% to 80% RH (no condensation)	
		Wetbulb temperature, less than 29°C (84°F)	
Storage environment		–15 to 60°C (–4 to 140°F)	
		10% to 95% RH (no condensation)	
Acoustic noise		Average 49 dBA when printing in letter quality	
		ISO 7779 (Bystander Position Front)	

**FUNCTIONAL
SPECIFICATIONS**

Print method	Impact dot matrix with a 0.2 mm, 24-wire head	
Print direction	Bidirectional logic-seeking or unidirectional seeking	
Character cell	Horizontal x vertical	
Letter (10 cpi):	36 x 24 dots	
Letter (12 cpi):	30 x 24 dots	
Report:	18 x 24 dots	
Draft:	12 x 24 dots	
High-speed draft:	9 x 24 dots	
Paper handling	Standard: Friction-feed platen (cut sheets) Push tractors (rear feed of continuous forms) Paper loading by LOAD button Advancing perforations to tear-off edge by TEAR OFF button Parking continuous forms when using cut sheets	
Paper type	1-to 5-part side-glued or paper-stapled fanfolded continuous forms or label sheets with sprocket holes 1-to 5-part top-glued cut sheets and envelopes	
Paper size		
Continuous	80 columns	136 columns
	Width: 102–267 mm (4–10.5 in)	102–420mm (4–16.5 in)
Cut sheets	Length: 102 mm (4 in) or greater	Same as left
	Width: 102–267 mm (4–10.5 in)	102–420mm (4–16.5 in)
	Length: 76–364 mm (3–14.3 in)	76–420 mm (3–16.5 in)
Paper thickness	Up to 0.35 mm (0.014 inch)	

Paper length	
By software	Programmable in one line or inch increments in all emulations
By control panel	Depends upon emulations. Default is 11 inches for all emulations.
DPL24C+/XL24E:	3, 3.5, 4, 5, 5.5, 6, 7, 8, 8.5, 11, 11.6, 12, 14, or 18 inches
ESC/P2:	4, 4.5, 5, 5.5, ..., 11, 11.5, ..., 22 inches
Number of copies	
Up to 5, including the original	
Command sets (emulations)	
Resident	Fujitsu DPL24C PLUS IBM Proprinter XL24E Epson ESC/P2
Character sets	
DPL24C+/XL24E:	• IBM PC character sets 1 and 2 • IBM PS/2 character sets (code pages 437, 850, 852, 855, 860, 863, 865, 866, and DHN) • IBM 437 and 851 • ISO 8859-1 and ECMA 94 • Total of 59 national character sets
ESC/P2:	• Fujitsu character sets (691 characters) • Italic character set • Graphics character sets 1 and 2 • IBM PS/2 character sets (code pages 437, 850, 852, 855, 860, 863, 865, 866, and DHN) • IBM 437 and 851 • ISO 8859-1 and ECMA 94 • Total of 63 national character sets

Fonts		
Resident		Eighteen fonts available
	Bit map:	Courier 10, Pica 10, OCR-B 10, OCR-A 10, Prestige Elite 12, Boldface PS, Correspondence, Compressed, Draft, and High-speed Draft
	Outline:	Courier, Timeless, and Nimbus Sans ®; each in normal, bold, and italic styles
Downloaded		Available from independent vendors
Line spacing		1, 2, 3, 4, 5, 6, 7, or 8 lines per inch. Programmable in 1/360 inch or various increments for image graphics. (ESC/P2)
Character pitch		2.5, 3, 5, 6, 10, 12, 15, 17.1, 18, or 20 cpi, or proportional spacing. Programmable in 1/360 inch or various increments for image graphics.

Characters per line		80 columns	136 columns
	10 cpi:	80 cpl	136 cpl
	12 cpi:	96 cpl	163 cpl
	15 cpi:	120 cpl	204 cpl
	17.1 cpi:	136.8 cpl	231 cpl
	18 cpi:	144 cpl	244 cpl
	20 cpi:	160 cppl	272 cpl
		cpi: characters per inch	
		cpl: characters per line	

PERFORMANCE SPECIFICATIONS

Print speed		10 cpi	12 cpi
	Letter:	113 cps	135 cps
	Report:	225 cps	270 cps
	Correspondence:	225 cps	270cps
	Draft:	360 cps	432 cps
	High-speed draft:	400 cps	480 cps(for 80-column printer)
		448 cps	537cps(for 136-colmun printer)
		cpi: characters per inch	
		cps: characters per second	

Line feed speed	80 ms per line at 6 lines per inch
Form feed speed	5.6 inches per second
Ribbon life	Up to 5.0 million characters

Certification

Safety:

Model	Regulation	Country
M33331A/M33333A	UL 60950 (for 100 to 120 VAC)	United States
	CSA-C22.2 No.60950 (for 100 to 120 VAC)	Canada
M33331B/M33333B	TÜV EN60950 (for 220 to 240 VAC)	Germany Europe

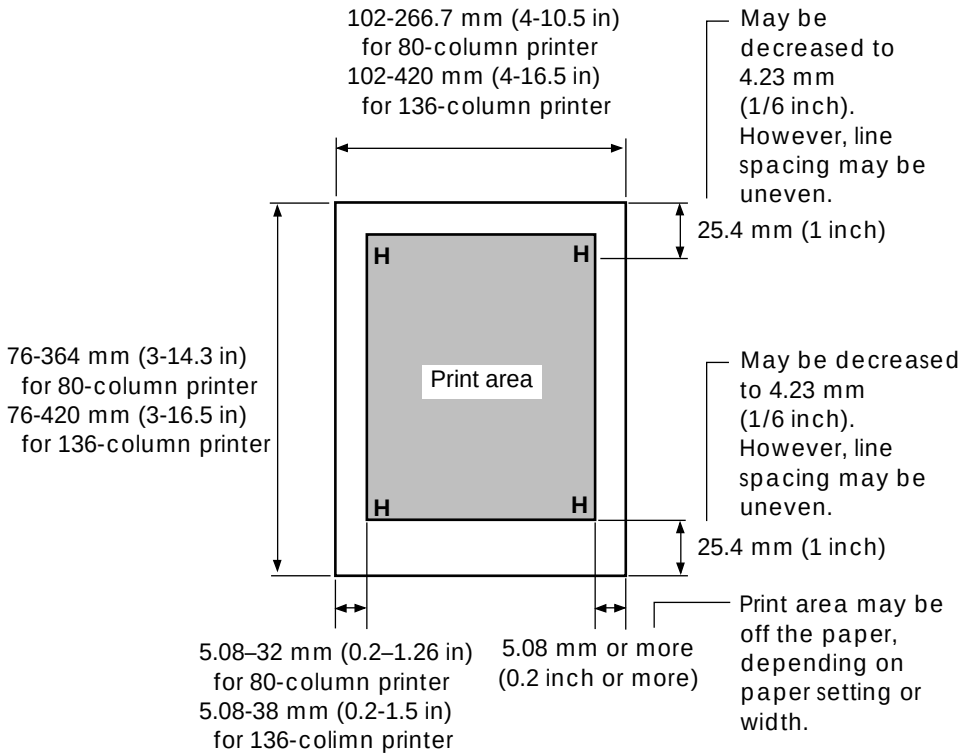
EMI regulation:

Model	Regulation	Country
M33331A/M33333A	FCC Part 15B class B	United States
	ICES-003 class B	Canada
M33331B/M33333B	EN 55022	class BEurope
	AS/NZS 3548 class B	Australia and New Zealand
M33331A/M33333A	CNS 13438 class B	Asia
M33331B/M33333B	CNS 13438 class B	Taiwan

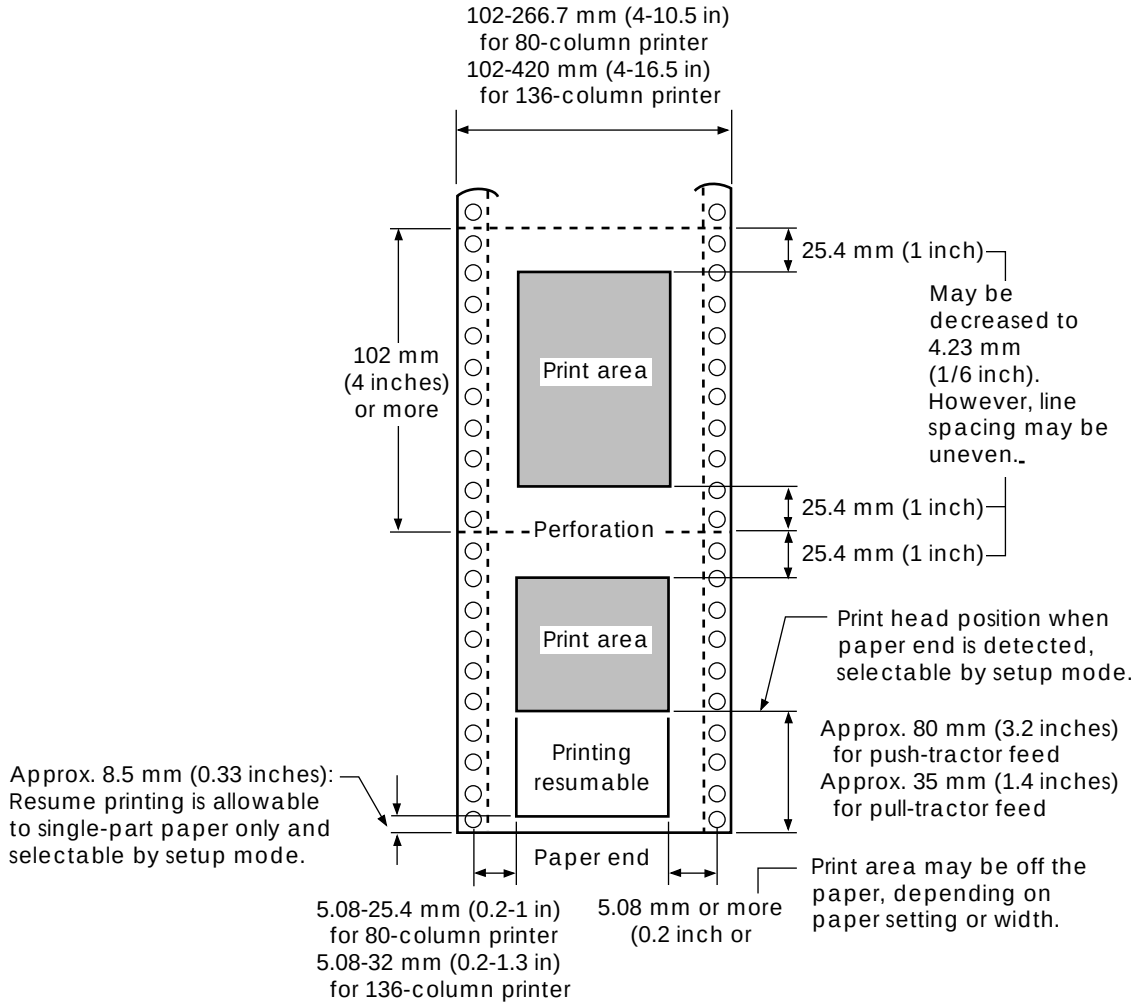
PAPER SPECIFICATIONS

Print Area

This section illustrates the recommended print area for single sheets and continuous forms.



Print area for single sheets

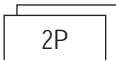
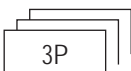
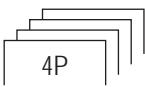
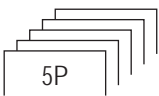


Print area for continuous forms

Paper Thickness

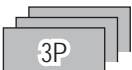
Paper thickness is given by the weight of the paper in either grams per square meter (g/m²) or in pounds per bond (lbs/bond). The following table shows the allowable paper thickness for one-part paper or for each sheet of multipart paper. The total thickness must not exceed 0.35 mm (0.014 inch).

The weight of carbonless or carbon-backed paper may vary, depending upon the paper manufacturer. When using paper of borderline thickness, test the paper before running a job.

Type of Paper	Number of Parts	Thickness
One-part	Single	52-81 g/m ² (45-70 kg or 14-22 lb)
Carbonless 2P 3P 4P 5P	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-52 g/m ² (34-45 kg or 11-17 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-17 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-17 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-17 lb)
	Bottom	40-64 g/m ² (34-55 kg or 11-17 lb)

kg: Weight in kilograms of 1000 sheets of 788 x 1091 mm paper
(1.16 g/m²)

lb: Weight in pounds of 500 sheets of 17 x 22 inch paper (3.76 g/m²)

Type of Paper	Number of Parts	Thickness
Carbon-backed	<i>Do not use in high humidity environments.</i>	
   	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Middle	40-64 g/m ² (34-55 kg or 11-17 lb)
	Bottom	40-81 g/m ² (34-70 kg or 11-22 lb)
	Top	40-52 g/m ² (34-45 kg or 11-14 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-14 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-14 lb)
	Middle	40-52 g/m ² (34-45 kg or 11-14 lb)
	Bottom	40-64 g/m ² (34-55 kg or 11-17 lb)
Carbon-interleaved	<i>Avoid using carbon-interleaved single sheets.</i>	
	Top	35-64 g/m ² (30-55 kg or 9-17 lb)
	Carbon	Counted as one sheet
	Bottom	35-81 g/m ² (30-70 kg or 9-22 lb)
	Top	35-52 g/m ² (30-45 kg or 9-14 lb)
	Carbon	Counted as one sheet
	Middle	35-52 g/m ² (30-45 kg or 9-14 lb)
	Carbon	Counted as one sheet
	Bottom	35-64 g/m ² (30-55 kg or 9-17 lb)

kg: Weight in kilograms of 1000 sheets of 788 x 1091 mm paper
(1.16 g/m²)

lb: Weight in pounds of 500 sheets of 17 x 22 inch paper (3.76 g/m²)

COMMAND SETS

This appendix describes printer commands and their parameters.

This printer has three resident command sets:

- Fujitsu DPL24C PLUS (native command set for Fujitsu DL series printers)
- IBM Proprinter XL24E
- Epson ESC/P2

Select the same emulation on the printer and in your software. If your software emulations include DPL24C PLUS, select DPL24C PLUS for optimum performance.

FUJITSU DPL24C PLUS

This section describes the printer commands for the DPL24C PLUS command set which is the native command set of this printer.

Function	Command
Print Mode Control	
Double-strike (bold) printing on	ESC G
Double-strike (bold) printing off	ESC H
Emphasized (shadow) printing on	ESC E
Emphasized (shadow) printing off	ESC F
Italic printing on	ESC 4
Italic printing off	ESC 5
Select character style and screening	ESC e S (n_1) (n_2)
$n_1 = 0$: Normal	
1: Outline	
2: Shaded	
3: Outline and shaded	
4: Thin outline	
5: Thin shaded	
6: Thin outline and shaded	
$n_2 = 0$: Transparent	
1: Light dot matrix	
2: Heavy dot matrix	
3: Vertical bars	
4: Horizontal bars	
5: Slants	
6: Back slants	
7: Lattice	
One-line double width characters on	SO or ESC SO
One-line double width characters off	DC 4
Double width characters on/off	ESC W (n)
(on: $n = 1$, off: $n = 0$)	

Function	Command
Double-height characters on/off (on: $n = 1$, off: $n = 0$) This command does not adjust the line spacing.	ESC V (n)
Multiwidth and height printing $n = 0$: Not adjusted 1: Character pitch multiplied 2: Line spacing multiplied 3: Character pitch and line spacing multiplied h_1 : Tens digit of horizontal multiple h_2 : Units digit of horizontal multiple v_1 : Tens digit of vertical multiple v_2 : Units digit of vertical multiple ($0 \leq h_1 h_2$ or $v_1 v_2 \leq 11$)	ESC u (n) (h_1) (h_2) (v_1) (v_2)
Condensed characters on	SI or ESC SI
Condensed characters off	DC2
Subscript or superscript printing on (subscript: $n=1$, superscript: $n=0$)	ESC S (n)
Subscript and superscript printing off	ESC T
Select underline type $n = 0$: Single line 1: Bold single line 2: Extremely bold single line 3: Double line 4: Bold double line 5: Extremely bold double line	ESC e U (n)
Underline on/off (on: $n=1$, off: $n=0$)	ESC - (n)
Overline on/off (on: $n=1$, off: $n=0$)	ESC e o (n)

Function	Command
Select printing style 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. $n = 0$: Pica pitch 1: Elite pitch 4: Condensed 8: Shadow 16: Bold 32: Double width 64: Proportional	ESC ! (n)
Select image overlay type This command allows you to overlay a pattern on characters. $n = 1$: Light dot matrix 2: Heavy dot matrix 3: Vertical bars 4: Horizontal bars 5: Slants 6: Back slants 7: Lattice	ESC e I (n)
Image overlay printing on/off (on: $n=1$, off: $n=0$)	ESC e L (n)
Horizontal Control Space Backspace Carriage return Elite pitch (12 cpi) Pica pitch (10 cpi) Proportionally spaced characters on/off (on: $n=1$, off: $n=0$) Set character pitch to $(n-1)/120$ inch ($1 \leq n \leq 127$) Set character pitch to $n/180$ inch ($0 \leq n \leq 255$)	SP BS CR ESC M ESC P ESC p (n) ESC US (n) ESC h (n)

Function	Command
Set character offset to $n/120$ inch Cancelled by CR or ESC x. ($0 \leq n \leq 63$) ($64 \leq n \leq 127$)	ESC DC1 (n)
Set character pitch to $n/360$ inch ($0 \leq n_1 n_2 n_3 \leq 999$) n_1 , n_2 , and n_3 are the hundreds, tens, and units digits.	ESC e H (n_1) (n_2) (n_3)
Vertical Control	
Line feed	LF
Reverse line feed	ESC LF
Form feed	FF
Advance paper $n/180$ inch ($0 \leq n \leq 255$)	ESC J (n)
Reverse paper $n/180$ inch ($0 \leq n \leq 255$)	ESC j (n)
Advance paper $n/360$ inch ($0 \leq n_1 n_2 n_3 \leq 999$) n_1 , n_2 , and n_3 are the hundreds, tens, and units digits.	ESC e J (n_1) (n_2) (n_3)
Reverse paper $n/360$ inch ($0 \leq n_1 n_2 n_3 \leq 999$) n_1 , n_2 , and n_3 are the hundreds, tens, and units digits.	ESC e j (n_1) (n_2) (n_3)
Set line spacing to $1/8$ inch (8 lpi)	ESC 0
Set line spacing to $n/180$ inch ($0 \leq n \leq 255$)	ESC 3 (n)
Set line spacing to $7/60$ inch	ESC 1
Set line spacing to $n/60$ inch ($0 \leq n \leq 127$)	ESC A (n)
Set line spacing to $1/6$ inch (6 lpi) or to the value set with the ESC A command. The preset line spacing command is ESC A (n).	ESC 2
Set line spacing to $n/360$ inch ($0 \leq n_1 n_2 n_3 \leq 999$) n_1 , n_2 , and n_3 are the hundreds, tens, and units digits.	ESC e V (n_1) (n_2) (n_3)
Set line spacing to $n/360$ inch ($1 \leq n \leq 255$)	FS 3 (n)

Function	Command
Tabulation Horizontal tab execution 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. $(1 \leq n \leq 255) (1 \leq k \leq 255)$ Move to print column n ($1 \leq n \leq 255$) Move dot column $n/360$ inch $(n = n_1 + n_2 \times 256)$ The value below is for 136-column printers. $(0 \leq n_1 \leq 255) (0 \leq n_2 \leq 19)$ $(0 \leq n_2 \times 256 + n_1 \leq 4895)$ Horizontal relative move by $n/360$ inch $(-999 \leq n_1 \ n_2 \ n_3 \leq +999)$ n_1 , n_2 , and n_3 are the hundreds, tens, and units digits of the distance. s is a plus or minus (+ or -) sign. Vertical tab execution Set vertical tabs The values of n_1 to n_k in this command are the ASCII values of the lines (at the current line spacing) at which tabs are to be set. $(1 \leq n \leq 255) (1 \leq k \leq 64)$ Move to line n ($1 \leq n \leq 255$)	HT ESC D (n_1) ... (n_k) NUL ESC HT (n) ESC \$ (n_1) (n_2) ESC e R (s) (n_1) (n_2) (n_3) VT ESC B (n_1) ... (n_k) NUL ESC VT (n)
Page Formatting Set right margin ($0 \leq n \leq 255$) Set left margin ($0 \leq n \leq 255$) Set perforation skip by n lines $(1 \leq n \leq 127)$ Perforation skip off Set page length to n lines $(1 \leq n \leq 127)$	ESC Q (n) ESC l (n) ESC N (n) ESC O ESC C (n) or ESC e c (n) or ESC FF (n)

Function	Command
Set page length to n inches ($1 \leq n \leq 22$)	ESC C NUL (n) or ESC e C NUL (n) or ESC FF NUL (n)
Set page length to n/360 inch ($n = n_1 \times 256 + n_2$) ($0 \leq n_1 \ n_2 \leq 255$) ($1 \leq n_1 \times 256 + n_2 \leq 7920$)	ESC e f (n ₁) (n ₂)
Character Set Control	
Select character set 1 Appendix E gives the character sets	ESC 7
Select character set 2 Appendix E gives the character sets.	ESC 6
Select international character set n = 0: USA 1: France 2: Germany 3: United Kingdom 4: Denmark 1/Norway 5: Sweden/Finland 6: Italy 7: Spain 8: Denmark 2	ESC R (n)
Clear print buffer	CAN
Select printer	DC1
Deselect printer (ignore input)	DC3
Force most significant bit to 1	ESC >
Force most significant bit to 0	ESC =
Cancel control over most significant bit	ESC #

Function	Command																											
Select code table $n = 0$: Code page 437 1: Code page 850 2: Code page 860 3: Code page 863 4: Code page 865 5: ISO 8859-1/ECMA 94 Select extended character by character number $(0 \leq n_1 n_2 n_3 \leq 664)$ n_1, n_2 , and n_3 are the hundreds, tens, and units digits.	ESC e C (n) ESC e E $(n_1) (n_2) (n_3)$																											
Word Processing Line justification on Automatically center printing Reset word processing features	ESC m ESC c ESC x																											
Font Selection and Downloading Select font m with source and style set by n • m (bits 0 and 1: Font device selection) <table border="1"><thead><tr><th>Bit 1</th><th>Bit 0</th><th>Selection of font</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>Resident font</td></tr><tr><td>0</td><td>1</td><td>Downloaded font</td></tr><tr><td>1</td><td>0</td><td>Resident font</td></tr></tbody></table> • m (bits 2 and 3: Print quality specification) <table border="1"><thead><tr><th>Bit 3</th><th>Bit 2</th><th>Print quality</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>Original quality of font</td></tr><tr><td>0</td><td>1</td><td>Letter quality (360 dpi)</td></tr><tr><td>1</td><td>0</td><td>Correspondence quality (180 dpi)</td></tr><tr><td>1</td><td>1</td><td>Draft quality (120 dpi)</td></tr></tbody></table>	Bit 1	Bit 0	Selection of font	0	0	Resident font	0	1	Downloaded font	1	0	Resident font	Bit 3	Bit 2	Print quality	0	0	Original quality of font	0	1	Letter quality (360 dpi)	1	0	Correspondence quality (180 dpi)	1	1	Draft quality (120 dpi)	ESC % (m) (n)
Bit 1	Bit 0	Selection of font																										
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1	1	Draft quality (120 dpi)																										

Function	Command																											
• <i>n</i> (bit 0 to 2: Specification of font number) (1) Resident fonts <table><tr><th><i>n</i></th><th><i>m</i> = 0, 0</th><th><i>m</i> = 1, 0</th></tr><tr><td>0</td><td>Courier 10</td><td>OCR-B</td></tr><tr><td>1</td><td>Prestige elite 12</td><td>OCR-A</td></tr><tr><td>2</td><td>Draft</td><td></td></tr><tr><td>3</td><td>Compressed</td><td></td></tr><tr><td>4</td><td>Boldface PS</td><td></td></tr><tr><td>5</td><td>Pica 10</td><td></td></tr><tr><td>6</td><td>Correspondence</td><td></td></tr><tr><td>7</td><td>High-speed draft</td><td></td></tr></table>	<i>n</i>	<i>m</i> = 0, 0	<i>m</i> = 1, 0	0	Courier 10	OCR-B	1	Prestige elite 12	OCR-A	2	Draft		3	Compressed		4	Boldface PS		5	Pica 10		6	Correspondence		7	High-speed draft		
<i>n</i>	<i>m</i> = 0, 0	<i>m</i> = 1, 0																										
0	Courier 10	OCR-B																										
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3	Compressed																											
4	Boldface PS																											
5	Pica 10																											
6	Correspondence																											
7	High-speed draft																											
(2) Downloaded fonts <i>n</i> = 0: Downloaded font 0 1: Downloaded font 1 Select print quality (font attributes) <i>n</i> = 0: Letter (360 x 180 dpi) 1: Correspondence (180 x 180 dpi) 2: Draft (120 x 180 dpi) 3: High-speed Draft (90 x 180 dpi) Select spacing mode (font attributes) <i>n</i> = 0: Fixed pitch font 1: Proportional spacing font Select character pitch (n/360 inch, font attributes) (0 ≤ <i>n</i>₁ ≤ 255) (1 ≤ <i>n</i>₂ ≤ 255) (<i>n</i> = <i>n</i>₁ x 256 + <i>n</i>₂) Ex. <i>n</i> = 36: 10 pitch 30: 12 pitch 24: 15 pitch 21: 17 pitch Condense/enlarge vertically (font attributes) <i>n</i> = 1: Executed 0: Not executed Select point size (n/1200 inch, font attributes) (0 ≤ <i>n</i>₁ ≤ 255) (0 ≤ <i>n</i>₂ ≤ 255) (<i>n</i> = <i>n</i>₁ x 256 + <i>n</i>₂) Ex. <i>n</i> = 166: 10 point	ESC e q (<i>n</i>) ESC e s (<i>n</i>) ESC e p (<i>n</i>₁) (<i>n</i>₂) ESC e A (<i>n</i>) ESC e v (<i>n</i>₁) (<i>n</i>₂)																											

Function					Command
Select character style (font attributes) <i>n</i> = 0: Upright 1: Italic					ESC e i (<i>n</i>)
Select stroke weight (font attributes) <i>n</i> = 249: -7 (reserved) 251: -5 (reserved) 253: -3 (light) 0: 0 (medium) 3: 3 (bold) 5: 5 (black) 7: 7 (ultrablack)					ESC e w (<i>n</i>)
Select typeface (font attributes) <i>n</i> = 1: Pica 3: Courier (bitmap) 4: Nimbus Sans ® 5: Timeless 8: Prestige 23: Boldface 130: OCR-A 131: OCR-B 134: Courier (scalable)					ESC e t (<i>n</i>)
Select font by I.D. (font attributes)					ESC e F (<i>n</i>)

<i>n</i>	Quality	Spacing	Pitch	Point	Typeface
1	LQ	Fixed	10 cpi	12 pt	Courier (bitmap)
2	LQ	Fixed	12 cpi	10 pt	Prestige
3	LQ	PS	—	12 pt	Boldface
4	LQ	Fixed	10 cpi	12 pt	Pica
9	LQ	Fixed	10 cpi	12 pt	OCR-A
10	LQ	Fixed	10 cpi	12 pt	OCR-B
32	CQ	Fixed	10 cpi	12 pt	Courier (bitmap)
34	DQ	Fixed	12 cpi	11 pt	Gothic
128	LQ	PS	—	10 pt	Timeless
129	LQ	PS	—	10 pt	Timeless Italic
130	LQ	PS	—	10 pt	Timeless Bold
132	LQ	PS	—	10 pt	Nimbus Sans ®
133	LQ	PS	—	10 pt	Nimbus Italic
134	LQ	PS	—	10 pt	Nimbus Bold
140	LQ	Fixed	10 cpi	10 pt	Courier (scalable)
141	LQ	Fixed	10 cpi	10 pt	Courier Bold (scalable)
142	LQ	Fixed	10 cpi	10 pt	Courier Italic (scalable)

Function	Command												
Copy resident font to download area $m = 0$: Courier 10 1: Prestige Elite 12 2: Draft 3: Compressed 4: Boldface PS 5: Pica 10 6: Correspondence 7: High-speed Draft $n = 0$: Downloaded font 0 1: Downloaded font 1 Create download font m (bits 4 and 5: Specifies the quality of characters to be registered) <table border="1"><thead><tr><th>Bit 5</th><th>Bit 4</th><th>Font quality selection</th></tr></thead><tbody><tr><td>0</td><td>1</td><td>Letter (360 dpi)</td></tr><tr><td>1</td><td>0</td><td>Correspondence (180 dpi)</td></tr><tr><td>1</td><td>1</td><td>Draft (120 dpi)</td></tr></tbody></table> m (bit 0: Specifies external font number to be registered)	Bit 5	Bit 4	Font quality selection	0	1	Letter (360 dpi)	1	0	Correspondence (180 dpi)	1	1	Draft (120 dpi)	ESC : NUL (m) (n) ESC & (m) (C_s) (C_e) ($data$)
Bit 5	Bit 4	Font quality selection											
0	1	Letter (360 dpi)											
1	0	Correspondence (180 dpi)											
1	1	Draft (120 dpi)											
m (bits 1, 2, 3, 6, 7) Not used (don't care) C_s (Download start character, ASCII code) C_e (Download end character, ASCII code) <table border="1"><thead><tr><th>Decimal</th><th>0 - C_s, $C_e < 255$</th></tr><tr><th>Hex</th><th>00 - C_s, C_e - FF</th></tr></thead></table> Precaution: $C_e \geq C_s$ $data$ (More than one byte of data containing bit map data) (Reserved)	Decimal	0 - C_s , $C_e < 255$	Hex	00 - C_s , C_e - FF	ESC e D ($data$);								
Decimal	0 - C_s , $C_e < 255$												
Hex	00 - C_s , C_e - FF												

Function	Command
Bit Image Graphics	
Graphics type m graphics	ESC * (m) (n ₁) (n ₂) (data)
Graphics type m graphics	ESC e b (m) (n ₁) (n ₂) (data) or ESC e B (m) (n ₁) (n ₂) (data)
Single-density graphics	ESC K (n ₁) (n ₂) (data)
Double-density graphics	ESC L (n ₁) (n ₂) (data)
High-speed double-density graphics	ESC Y (n ₁) (n ₂) (data)
Quadruple-density graphics	ESC Z (n ₁) (n ₂) (data)
360 dot per inch 24-pin graphics	FS Z (n ₁) (n ₂) (data)
Initialize Printer	
Reset printer	ESC @
Reset printer	ESC CR P
Initialize printer	ESC SUB I
Bar Code Printing	
Print bar code	ESC DC4 (b) R
b: Total number of parameters	(c) (w) (h) (a)
R: (fixed)	(ch ₁) ... (ch _n)
(To be continued)	

Function				Command
c: Type of bar code				
ASCII	Decimal	Hex	Type of bar code	
1	49	31	Codebar (nw-7)	
2	50	32	EAN 13	
3	51	33	EAN 8	
4	52	34	Code 3 to 9	
5	53	35	Industrial 2 of 5	
6	54	36	Interleaved 2 of 5	
7	55	37	Matrix 2 of 5	
A	65	41	UPC type A	
B	66	42	Code 128	
a	97	61	UPC type A with checkdigit printing	
w: Width of narrow bar in 1/1440 inch units				
h: Height of bar code				
a: Defines check characters and OCR characters				
$ch_1 \dots ch_n$: Bar code characters				
NOTE				
When EAN13, UPC type A, or UPC type A with checkdigit printing is selected as the type of barcode, printing the barcode from the left (from the first dot) will cause the omission of a flag character that should be printed on the lower left or middle left of it. Therefore, when printing these types of barcode, leave two or more spaces open from the left.				

Function	Command
Miscellaneous	
Sound bell	BEL
Enable paper-out sensor	ESC 9
Ignore paper-out sensor	ESC 8
Typewriter mode on/off (on: $n=1$, off: $n=0$)	ESC i (n)
Move print head to home position	ESC <
Unidirectional printing on/off (on: $n=1$, off: $n=0$)	ESC U (n)
Select CR code definition $n = 0$: CR = CR only 1: CR = CR + LF	ESC e r (n)
Select LF code definition $n = 0$: LF = LF only 1: LF = LF + CR	ESC e l (n)
Enter online setup mode	ESC e ONLINE (data)
Move print head (unit: 1/180 inch) ($0 \leq n_1 \leq 255$) ($0 \leq n_2 \leq 255$)	ESC e h (n_1) (n_2)

Factory Default Settings

The following table describes the printer commands used to control options of the items that can be selected in printer setup mode. Command parameters are omitted.

Item	Selectable options in setup mode	Command
Emulate	<u>DPL24C+</u> , XL24E, ESC/P2	Controllable in online setup mode
Font	<u>COUR 10</u> , PRSTG 12, COMPRSD, BOLD FCE, PICA 10, CORRESP, COUR-N, COUR-B, COUR-I, TIMLS-N, TIMLS-B, TIMLS-I, N.SAN-N, N.SAN-B, N.SAN-I. OCR-B, OCR-A, DOWNLD 0, DOWNLD 1	ESC e t ESC e F ESC %
Quality	<u>LETTER</u> , REPORT, DRAFT, HI-DRFT	ESC e q
Pitch	2.5, 3, 5, 6, <u>10</u> , 12, 15, 17, 18, 20 CPI or PROP SP	ESC e p ESC e H ESC h ESC US ESC M ESC P ESC p ESC i ESC e s
Line space	1, 2, 3, 4, 5, <u>6</u> , 7, 8, LPI	ESC e V ESC 0 ESC 1 ESC 2 ESC 3 ESC A
Character width	<u>NORMAL</u> , 2 TIMES, 4 TIMES	ESC W SO or ESC SO (DC4) ESC u ESC !
Character height	<u>NORMAL</u> , 2 TIMES, 4 TIMES	ESC V ESC u

Underline: Factory default
(): Cancel command

Item	Selectable options in setup mode	Command
Attributes	<u>NONE</u> , ITALICS, CONDNSD, SHADOW, BOLD	ESC 4 (ESC 5) SI or ESC SI (DC2) ESC E (ESC F) ESC G (ESC H) ESC e i ESC !
Page length	3.0, 3.5, 4.0, 5.0, 5.5, 6.0, 7.0, 8.0, 8.5, <u>11.0</u> , 11.6, 12.0, 14.0, 18.0 IN	ESC C NUL ESC e C NUL ESC FF NUL ESC C ESC e C ESC FF
Left end	<u>1</u> , 2, 3, ... , 41 COLM	Controllable in online setup mode
Top margin	<u>1</u> , 2, 3, ... , 10 LINE	Controllable in online setup mode
Language	USA, UK, GERMAN, FRENCH, ITALIAN, SPANISH, SWEDISH, FINNISH, DANISH1, DANISH2, NORWEGN, <u>PAGE437</u> , PAGE850, PAGE860, PAGE863, PAGE865 ISO8859, ECMA94	ESC R ESC e C
	PG852, PG852-T, PG855, PG866, HUNGARY, HUNG-T, SOLV, SOLV-T, POLISH, POLSH-T, MAZOWIA, MAZOW-T, LATIN7, LATIN2, LATN2-T, KAMENIC, KAMEN-T, TURKY, TURKY-T, CYRILIC, IBM437, IBM851, ELOT928, PG-DHN, LATIN-P, ISO-LTN, LITHUA1, LITHUA2, MIK, MACEDON, ABG, ABY, PG-MAC, ELOT927, DEC-GR, GREEK 11, PG862, HBR-OLD, HBR-DEC, ISO-TUK, RUSCII, LATIN-9	Uncontrollable by commands but controllable in online setup mode

Underline: Factory default
(): Cancel command

Item	Selectable options in setup mode	Command
Character set	SET 1, <u>SET2</u>	ESC7 ESC6
Perfora- tion skip	SKIP, <u>NO-SKIP</u>	ESC N (ESC O)
Paper width	8.0 IN, 11.0 IN, 11.4 IN, <u>13.6IN</u> , (8.0 IN is default for 80-column printer, and 13.6 IN is default for 136-column printer)	Controllable in online setup mode
Zero font	<u>NO-SLSH</u> , SLASH	Controllable in online setup mode
DC3	<u>ENABLE</u> , DISABLE	Controllable in online setup mode
CR code	<u>CR-ONLY</u> , CR & LF	ESC e r
LF code	LF-ONLY, <u>LF & CR</u>	ESC e l
Right end wrap	<u>WRAP</u> , OVR-PRT	Controllable in online setup mode
Paper-out	<u>CNTO</u> NLY, DETECT, IGNORE	ESC 9 (ESC 8)
Print direction	<u>BI-DIR</u> , UNI-DIR	ESC U

Underline: Factory default

(): Cancel command

IBM PROPRINTER XL24E
EMULATION

This section describes the printer commands for the IBM Proprinter XL24E emulation. Asterisks in the “Function” column indicate extended commands that are not supported by the original printer.

Function	Command																														
Print Mode Control																															
Double-strike (bold) printing on	ESC G																														
Double-strike (bold) printing off	ESC H																														
Emphasized (shadow) printing on	ESC E																														
Emphasized (shadow) printing off	ESC F																														
One-line double-width characters on	SO or ESC SO																														
One-line double-width characters off	DC4																														
Double-width characters on/off (on: $n = 1$, off: $n = 0$)	ESC W (n)																														
Double-height/double-width characters $n_1 = 4, n_2 = 0, m_1 = 0, m_2 = 0$ m_3 controls character height and line spacing:	ESC [@ (n_1) (n_2) (m_1) ... (m_4)																														
<table><tr><th>m_3</th><th>Height</th><th>Spacing</th></tr><tr><td>0</td><td>Unchanged</td><td>Unchanged</td></tr><tr><td>1</td><td>Normal</td><td>Unchanged</td></tr><tr><td>2</td><td>Double</td><td>Unchanged</td></tr><tr><td>16</td><td>Unchanged</td><td>Single</td></tr><tr><td>17</td><td>Normal</td><td>Single</td></tr><tr><td>18</td><td>Double</td><td>Single</td></tr><tr><td>32</td><td>Unchanged</td><td>Double</td></tr><tr><td>33</td><td>Normal</td><td>Double</td></tr><tr><td>34</td><td>Double</td><td>Double</td></tr></table>	m_3	Height	Spacing	0	Unchanged	Unchanged	1	Normal	Unchanged	2	Double	Unchanged	16	Unchanged	Single	17	Normal	Single	18	Double	Single	32	Unchanged	Double	33	Normal	Double	34	Double	Double	
m_3	Height	Spacing																													
0	Unchanged	Unchanged																													
1	Normal	Unchanged																													
2	Double	Unchanged																													
16	Unchanged	Single																													
17	Normal	Single																													
18	Double	Single																													
32	Unchanged	Double																													
33	Normal	Double																													
34	Double	Double																													
m_4 controls character width:																															
<table><tr><th>m_4</th><th>Width</th></tr><tr><td>0</td><td>Unchanged</td></tr><tr><td>1</td><td>Normal</td></tr><tr><td>2</td><td>Double</td></tr></table>	m_4	Width	0	Unchanged	1	Normal	2	Double																							
m_4	Width																														
0	Unchanged																														
1	Normal																														
2	Double																														

Function	Command
Condensed characters on Condensed and elite characters off Subscript or superscript printing on (subscript: $n = 1$, superscript: $n = 0$) Subscript and superscript printing off Underline on/off (on: $n = 1$, off: $n = 0$) Overline on/off (on: $n = 1$, off: $n = 0$)	SI or ESC SI DC2 ESC S (n) ESC T ESC - (n) ESC _ (n)
Horizontal Control Space Backspace Carriage return Elite characters on Proportionally spaced characters on/off (on: $n = 1$, off: $n = 0$)	SP BS CR ESC : ESC P (n)
Vertical Control Line feed Form feed Advance paper $n/216$ inch ($1 \leq n \leq 255$) Advance paper $n/180$ inch (in AG mode) ($1 \leq n \leq 255$) Set line spacing to $1/8$ lines Set line spacing to $7/72$ inch Set line spacing to $n/216$ inch ($0 \leq n \leq 255$) Set line spacing to $n/180$ inch (in AG mode) ($0 \leq n \leq 255$) Preset line spacing to $n/72$ inch ($1 \leq n \leq 255$) Preset line spacing to $n/60$ inch (in AG mode) ($1 \leq n \leq 255$) Set line spacing to $1/6$ inch or to the value preset by line spacing command ESC A (n)	LF FF ESC J (n) ESC J (n) ESC 0 ESC 1 ESC 3 (n) ESC 3 (n) ESC A (n) ESC A (n) ESC 2

Function	Command
Change graphics line spacing base to 1/216 or 1/180 inch (for ESC J and ESC 3) $m_1 = 4, m_2 = 0$ $0 \leq t_1 \leq 255, 0 \leq t_2 \leq 255, t_3 = 0$ $t_4 = 180 \text{ or } 216$	ESC [\ (m_1) (m_2) (t_1) ... (t_4)
Tabulation Horizontal tab execution 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. ($1 \leq n \leq 255$) ($1 \leq k \leq 28$) Clear all horizontal tabs Move print position right by $n/120$ inch ($0 \leq n_1, n_2 \leq 255$) ($n = n_1 + n_2 \times 256$) Vertical tab execution Set vertical tabs The values of n_1 to n_k in this command are the ASCII values of the lines (at the current line spacing) at which tabs are to be set. ($1 \leq n \leq 255$) ($1 \leq k \leq 64$) Clear all vertical tabs Reset tabs to default values	HT ESC D (n_1) ... (n_k) NUL ESC D NUL ESC d (n_1) (n_2) VT ESC B (n_1)... (n_k) NUL ESC B NUL ESC R
Page Formatting Set left margin at column n and right margin at column m ($0 \leq n, m \leq 255$) Set perforation skip by n lines ($1 \leq n \leq 255$) Perforation skip off Set page length to n lines ($1 \leq n \leq 255$) Set page length to n inches ($1 \leq n \leq 22$) Set top of form	ESC X (n) (m) ESC N (n) ESC O ESC C (n) ESC C NUL (n) ESC 4

Function	Command																					
Character Set Control Select character set 1 Select character set 2 Print $n_1 + n_2 \times 256$ characters from all-character set (<i>chars.</i> : codes of characters to print, $0 \leq chars. \leq 255$) Print a character from all-character set (<i>char.</i> : a code of character to print, $0 \leq char. \leq 255$) Select code page table n ($0 \leq n_1, n_2 \leq 255$) ($n = n_1 + n_2 \times 256$) <table border="1"><tr><td>c_1</td><td>c_2</td><td>Code page ID</td></tr><tr><td>0</td><td>0</td><td>Ignore command</td></tr><tr><td>1</td><td>181</td><td>Code page 437</td></tr><tr><td>3</td><td>82</td><td>Code page 850</td></tr><tr><td>3</td><td>92</td><td>Code page 860</td></tr><tr><td>3</td><td>95</td><td>Code page 863</td></tr><tr><td>3</td><td>97</td><td>Code page 865</td></tr></table> Clear input buffer Select printer Deselect printer (ignore input)	c_1	c_2	Code page ID	0	0	Ignore command	1	181	Code page 437	3	82	Code page 850	3	92	Code page 860	3	95	Code page 863	3	97	Code page 865	ESC 7 ESC 6 ESC \ (n_1) (n_2) (<i>chars.</i>) ESC ^ (<i>char.</i>) ESC [T (n_1) (n_2) 0 0 (c_1) (c_2) CAN DC1 ESC Q #
c_1	c_2	Code page ID																				
0	0	Ignore command																				
1	181	Code page 437																				
3	82	Code page 850																				
3	92	Code page 860																				
3	95	Code page 863																				
3	97	Code page 865																				
Downloading Select resident or downloaded font Ex. $n = 0$: Resident Draft 2: Resident Courier 4: Downloaded Draft 6: Downloaded Courier Create download font	ESC I (n) ESC = (n_1) (n_2) ID (m_1) (m_2) (<i>data</i>)																					

Function	Command
Bit Image Graphics	
Single-density graphics	ESC K (n_1) (n_2) (<i>data</i>)
Double-density graphics	ESC L (n_1) (n_2) (<i>data</i>)
High-speed double-density graphics	ESC Y (n_1) (n_2) (<i>data</i>)
Quadruple-density graphics	ESC Z (n_1) (n_2) (<i>data</i>)
High-resolution graphics	ESC [g (n_1) (n_2) (<i>m</i>) (<i>data</i>)
Select graphics mode (in AG mode only)	ESC * (<i>m</i>) (c_1) (c_2) (<i>data</i>)
Miscellaneous	
Sound the bell	BEL
Unidirectional printing on/off (on: $n = 1$, off: $n = 0$)	ESC U (n)
Add a carriage return to all line feeds (on: $n = 1$, off: $n = 0$)	ESC 5 (n)
Printer offline	ESC j
Enter online setup mode*	ESC e ONLINE (<i>data</i>)
Select default settings	ESC [K (n_1) (n_2) (<i>i</i>) (<i>ID</i>) (p_1) (p_2)

EPSON ESC/P2
EMULATION

This section describes the printer commands for the Epson ESC/P2 emulation. Asterisks in the “Function” column indicate extended commands that are not supported by the original printer.

Function	Command
Print Mode Control	
Double-strike (bold) printing on	ESC G
Double-strike (bold) printing off	ESC H
Emphasized (shadow) printing on	ESC E
Emphasized (shadow) 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: Outlined 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)	
Condensed characters on	SI or ESC SI
Condensed characters off	DC2
Subscript or superscript printing on	ESC S (n)
(subscript: n = 1, superscript: n = 0)	
Subscript and superscript printing off	ESC T
Underline on/off	ESC - (n)
(on: n = 1, off: n = 0)	

Function	Command
Select line $n_1 = 3, n_2 = 0, d_1 = 1$ $d_2 = 0$: Ignore command 1: Underline 2: Strike through 3: Overscore $d_3 = 0$ or 4: Cancel line selection 1: Single line 2 or 3: Double line 5: Single-dotted line 6 or 7: Double-dotted line Select printing style 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. $n = 0$: Pica pitch 1: Elite pitch 2: Proportional spacing 4: Condensed 8: Shadow 16: Bold 32: Double-width 64: Italics 128: Underline	ESC (- (n_1) (n_2) (d_1) (d_2) (d_3) ESC ! (n)
Horizontal Control Space Backspace Carriage return Set elite pitch Set pica pitch Set 15 CPI Proportionally spaced characters on/off (on: $n = 1$, off: $n = 0$) Set inter-character space to $n/120$ inch (for draft) or $n/180$ inch (for letter and proportional) ($0 \leq n \leq 127$)	SP BS CR ESC M ESC P ESC g ESC p (n) ESC SP (n)

Function	Command
Set character pitch to $(n_1 + n_2 \times 256)/360$ inch ($0 \leq n_1 \leq 255$) ($0 \leq n_2 \leq 4$) Select character pitch (specify unit o pitch) $n_1 = 1, n_2 = 0$ $d = 10$ to 19 : $10/3600$ inch = $1/360$ inch $d = 20$ to 29 : $20/3600$ inch = $1/180$ inch $d = 30$ to 39 : $30/3600$ inch = $1/120$ inch $d = 40$ to 49 : $40/3600$ inch = $1/90$ inch $d = 50$ to 59 : $50/3600$ inch = $1/72$ inch $d = 60$ to 69 : $60/3600$ inch = $1/60$ inch	ESC c (n_1) (n_2) ESC (U (n_1) (n_2) (d)
Vertical Control Line feed Form feed FF Advance paper $n/180$ inch ($1 \leq n \leq 255$) Set line spacing to $1/8$ inch Set line spacing to $n/180$ inch ($0 \leq n \leq 255$) Set line spacing to $n/60$ inch ($0 \leq n \leq 127$) Set line spacing to $1/6$ inch Set line spacing to $n/360$ inch ($0 \leq n \leq 255$)	LF ESC J (n) ESC 0 ESC 3 (n) ESC A (n) ESC 2 ESC + (n)
Tabulation Horizontal tab execution 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. ($1 \leq n \leq 255$) ($1 \leq k \leq 32$) Move print position $n/60^{(*)}$ inch right from left margin ($n = n_1 + n_2 \times 256$) Move print position $n/120^{(*)}$ inch (for draft) or $n/180^{(*)}$ inch (for letter) left or right from the current position ($n = n_1 + n_2 \times 256$) Vertical tab execution	HT ESC D $(n_1) \dots (n_k)$ NUL ESC \$ (n_1) (n_2) ESC \ (n_1) (n_2) VT

*1 This pitch is the default, but can be changed by the ESC (U command beforehand.

Function	Command
Set vertical tabs The values of n_1 to n_k in this command are the ASCII values of the lines (at the current line spacing) at which tabs are to be set. $(1 \leq n \leq 255) (1 \leq k \leq 16)$	ESC B (n_1) ... (n_k) NUL
Move to dot line $(d_1 + d_2 \times 256)/360^{(*)1}$ inch $n_1 = 2, n_2 = 0$ $(0 \leq d_1 \leq 255) (0 \leq d_2 \leq 127)$	ESC (V (n_1) (n_2) (d_1) (d_2)
Vertical relative move by $(d_1 + d_2 \times 256)/360^{(*)1}$ inch $n_1 = 2, n_2 = 0$ $(0 \leq d_1 \leq 255) (0 \leq d_2 \leq 127)$ $-32768 \leq d_1 + d_2 \times 256 \leq 32768$	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 $(0 \leq n \leq 255)$	ESC l (n)
Set top and bottom margins from top of page $n_1 = 4, n_2 = 0$ • Top margin = $(t_1 + t_2 \times 256)/360^{(*)1}$ inch $(0 \leq t_1 \leq 255) (0 \leq t_2 \leq 127)$ • Bottom margin = $(b_1 + b_2 \times 256)/360^{(*)1}$ inch $(0 \leq b_1 \leq 255) (0 \leq b_2 \leq 127)$	ESC (c (n_1) (n_2) (t_1) (t_2) (b_1) (b_2)
Set perforation skip by n lines $(1 \leq n \leq 127)$	ESC N (n)
Perforation skip off	ESC O
Set page length to n lines $(1 \leq n \leq 127)$	ESC C (n)
Set page length to n inches $(1 \leq n \leq 22)$	ESC C NUL (n)
Set page length to $(d_1 + d_2 \times 256)/360^{(*)1}$ inch $n_1 = 2, n_2 = 0$ $(0 \leq d_1 \leq 255) (0 \leq d_2 \leq 127)$	ESC (C (n_1) (n_2) (d_1) (d_2)

^{*)1} This pitch is the default, but can be changed by the ESC (U command beforehand.

Function	Command
Character Set Control	
Select character set 1	ESC 7
Select character set 2	ESC 6
Select character set table	ESC t (n)
n = 0: Italics character set	
1: Graphics character set	
2: Downloaded character set	
3: Graphics character set	
Select international character set	ESC R (n)
n = 0: USA	
1: France	
2: Germany	
3: United Kingdom	
4: Denmark 1	
5: Sweden	
6: Italy	
7: Spanish 1	
8: Japan	
9: Norway	
10: Denmark 2	
11: Spanish 2	
12: Latin America	
13: Korea	
64: Legal	

Function	Command
Assign a character set to active character set number 0 to 3 $n_1 = 3, n_2 = 0$ $d_1 =$ 0: Active character set number 0 1: Active character set number 1 2: Active character set number 2 3: Active character set number 3 $d_2 =$ 0: Italic 1: PC 437 (USA) 3: PC 850 (Multilingual) 7: PC 860 (Portugal) 8: PC 863 (Canada-French) 9: PC 865 (Norway) $d_3 = 0$	ESC (t (n_1) (n_2) (d_1) (d_2) (d_3)
Print $n_1 + n_2 \times 256$ characters from all-character set ($0 \leq n_1 \leq 255$) ($0 \leq n_2 \leq 127$) ($0 \leq n_1 + n_2 \times 256 \leq 255$) ($0 \leq \text{character codes} \leq 254$)	ESC (^ (n_1) (n_2) (<i>character codes</i>)
Clear input buffer	CAN
Delete a 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) $n =$ 0: Resident character set 1: Downloaded character set Select letter or draft quality $n =$ 0: Draft 1: Letter	ESC x (n)

Function	Command
Select type style	
•Bitmap font:	ESC k (n)
n = 0: Courier	
1: Courier	
2: Courier	
3: Prestige	
4: Courier	
5: OCR-B	
6: OCR-A	
7: Courier	
8: Courier	
9: Courier	
•Scalable font:	
n = 0: Timeless	
1: Nimbus Sans ®	
2: Courier	
3: Timeless	
4: Timeless	
5: Timeless	
6: Timeless	
7: Timeless	
8: Timeless	
9: Timeless	
Set scalable font mode	ESC X m (n ₁) (n ₂)
• m sets character pitch.	
m = 0: Keep previous pitch	
1: Set proportional space mode	
m ≥ 5: Select character pitch	
(m/360 inch)	
(Reset proportional space mode)	
• n ₁ and n ₂ set point size of font.	
Point size = (n ₁ + n ₂ x 256) x 0.5 point	
(0 ≤ n ₁ ≤ 255) (0 ≤ n ₂ ≤ 127)	
Copy resident character set to download area	ESC : NUL (n) (s)
Create download font	ESC & NUL (n ₁) (n ₂) (d ₀) (d ₁) (d ₂) (data)

Function	Command
Bit Image Graphics	
Graphics type m graphics	ESC * (m) (n ₁) (n ₂) (data)
Bit image mode definition	ESC ? (s) (n)
Single-density graphics	ESC K (n ₁) (n ₂) (data)
Double-density graphics	ESC L (n ₁) (n ₂) (data)
High-speed double-density graphics	ESC Y (n ₁) (n ₂) (data)
Quadruple-density graphics	ESC Z (n ₁) (n ₂) (data)
Select raster image graphics n ₁ = 1, n ₂ = 0 d = 1: Raster image graphics mode	ESC (G (n ₁) (n ₂) (d)
Print raster image graphics	ESC . (c) (v) (h) (m) (n ₁) (n ₂) (data)
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 @
Enter online setup mode *	ESC e ONLINE (data)

* Indicates extended commands not supported by the original printer.

D

INTERFACE INFORMATION

This printer can communicate with a computer through a Centronics parallel interface, a RS-232C serial interface, a USB interface, or a LAN interface. You can specify the interface selection mode so that the printer uses which interface or it can automatically select the interface from which it first receives data.

This appendix provides information you may need for wiring your own interface cables or for programming computer-to-printer communications. Most users do not need the information in this appendix. To simply connect your printer to your computer, follow the instructions in Chapter 2.

PARALLEL INTERFACE

This parallel interface can operate in the following two modes:

- **Unidirectional (forward channel) mode or conventional mode:** This printer supports a conventional Centronics interface.
- **Bidirectional (forward/reverse channel) mode or nibble mode:** This printer supports a bidirectional communication per Nibble mode of the IEEE 1284 Standard.

The cable connector at the printer side should be a shielded, Amphenol DDK 57FE-30360 or equivalent.

The connector pin assignments are given in the following tables by modes. In the tables:

- “Input” denotes a signal from the computer to the printer.
- “Output” denotes a signal from the printer to the computer.
- The return lines specified in the second column represent twisted pairs, with one side connected to signal ground.
- The standard signal levels are 0.0 to +0.4 V (low), and +2.4 to +5.0 V (high).

Compatible Mode

Pin No.	Return Pin No.	Signal name	Direction	Description
1	19	$\overline{\text{Data Strobe}}$ (DSTB)	Input	This signal is a strobe pulse for reading data (Data 1 to 8). The printer reads data when this signal is low. The pulse width must be 1 μs or more at the receiving terminal.
2–9	20–27	Data 1 to 8	Input	Data 8 (pin 9) is the most significant bit; however, this pin is not used in 7-bit ASCII communications. Logical 1 signals must go high at least 1 μs before the falling edge of the $\overline{\text{Data Strobe}}$ signal and must stay high for at least 1 μs after the rising edge.
10	28	$\overline{\text{Acknowledge}}$ (ACK)	Output	This pulse signal indicates that the printer has received data and is ready to accept the next set of data. This signal is also sent when the printer is switched from offline to online.
11	29	Busy	Output	Data cannot be received when this signal is high. This signal is high during data entry, when the printer is offline, when the buffer is full, or when an error occurs.
12	30	Paper Empty (PE)	Output	This signal is high when the printer is out of paper.

Pin No.	Return Pin No.	Signal name	Direction	Description
13	–	Select (SLCT)	Output	This signal is high when the printer is online.
14	–	Auto Feed XT	Input	Not used
15	–	–	–	No connection
16	–	Signal Ground	–	Logic ground level (0 V)
17	–	Frame Ground	–	Printer chassis ground line. FG and SG are connected.
18	–	+5V	Output	+5 V source (up to 300 mA)
19–30	–	Signal Ground	–	Twisted pair return lines
31	–	Input Prime (INPRM)	Input	If this signal is low for more than 50 μ s, the printer is reset to the initial condition and is placed online.
32	–	Fault	Output	This signal is low when the printer is offline, paper is out, or when there is a printer error.
33	–	Signal Ground	–	Logic ground level (0 V)
34	–	–	–	No connection
35	–	+5 VR	Output	Pulled up to +5 V through a 3.3 k Ω resistor
36	–	SLCT-IN	Input	Not used

Nibble Mode

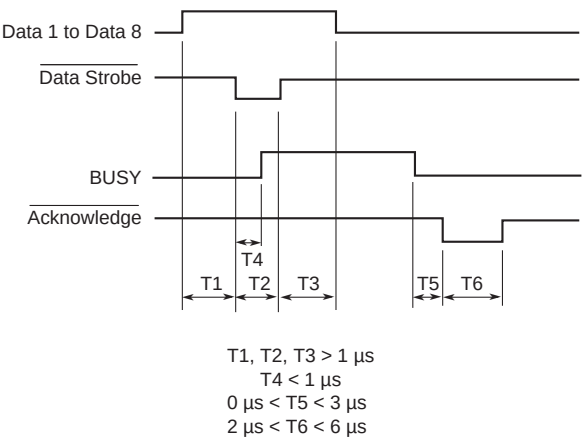
Pin numbers 2 to 9, 15 to 31, and 33 to 35 are the same as the conventional mode.

Pin No.	Return Pin No.	Signal name	Direction	Description
1	19	Host Clock	Input	This signal is set high when the host requests the reverse data transfer phase (nibble mode).
10	28	Printer Clock	Output	Reverse data transfer phase: This signal goes high when data being sent to the host is established. Reverse idle phase: This signal is set low then goes high to interrupt the host, indicating that data is available.
11	29	Printer Busy	Output	Reverse data transfer phase: Data bit 3, data bit 7, then forward path (host to printer) busy status
12	30	Ack Data Req	Output	Reverse data transfer phase: Data bit 2, then data bit 6 Reverse idle phase: This signal is set high until the host requests <u>data and</u> , after that, follows the Data Available signal.
13	–	X Flag	Output	Reverse data transfer phase: Data bit 1, then data bit 5

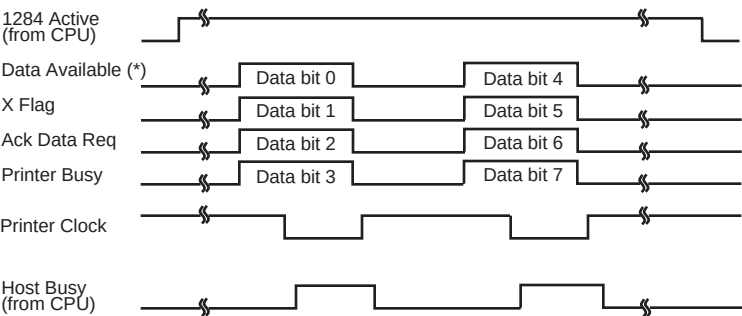
Pin No.	Return Pin No.	Signal name	Direction	Description
14	–	Host Busy	Input	Reverse data transfer phase: This signal is set low when the host can receive data, and goes high when the host has received data. Following a reverse data transfer, the interface enters the reverse idle phase when the Host Busy signal goes low and the printer has no data. Reverse idle phase: This signal goes high when the Printer Clock signal goes low so that the interface re-enters the reverse data transfer phase. If it goes high with the 1284 Active signal low, the 1284 idle phase is aborted and the interface returns to the compatibility mode.
32	–	Data Available	Output	Reverse data transfer phase: This signal is set low when the printer is ready to send data to the host. During the data transfer, it is used as data bit 0 (LSB), then data bit 4. Reverse idle phase: This signal is used to indicate that data is available.
36	–	1284 Active	Input	This signal goes high to cause the printer to enter the reverse data transfer phase (nibble mode).

Data Transmission Timing

In unidirectional mode (conventional Centronics interface), this printer guarantees the received data when the Data and Data Strobe signals from the computer have the following timing with respect to the Busy and Acknowledge signals from the printer.



In bidirectional mode (nibblemode), this printer can send data to the computer. Data is sent in units of four bits (nibble) using four output signal lines as data paths. The following outlines one byte of data sent during reverse data transfer phase in nibble mode.



* Data Available is assigned for the cable.

SERIAL INTERFACE

RS-232C is the standard serial interface for data terminal equipment. The cable connector at the printer side should be a D-subminiature Cannon or Cinch DB-25P male connector or equivalent that conforms to EIA standards.

The table that follows shows the pin assignments commonly used by most computers. In the table:

- “Input” denotes a signal from the computer to the printer.
- “Output” denotes a signal from the printer to the computer.
- The signal level for mark state (logical 1) is -3 V or lower; for space state (logical 0), it is +3 V or higher.

Pin No.	Signal Name	Direction	Description
1	FG	—	Frame Ground
2	TD	Output	Transmitted Data. This pin carries information from the printer to the computer.
3	RD	Input	Received Data. This pin carries information from the computer to the printer.
4	RTS	Output	Request To Send. Spaces are sent when the printer is ready to transmit data.
5	CTS	Input	Clear To Send. Spaces are sent when the computer is ready to receive data.
6	DSR	Input	Data Set Ready. Spaces are sent when the computer has been powered on and is ready to receive or transmit data.
7	SG	—	Signal Ground (common return)
8	CD	Input	Carrier Detect. Spaces are sent when the computer allows the printer to receive data.
11	RC	Output	Reverse Channel. This signal is used instead of the DTR signal in the RC protocol. Spaces are sent when the printer is ready to receive or transmit data.
20	DTR	Output	Data Terminal Ready. Spaces are sent when the printer has been powered on and is ready to receive or transmit data.

Serial Options

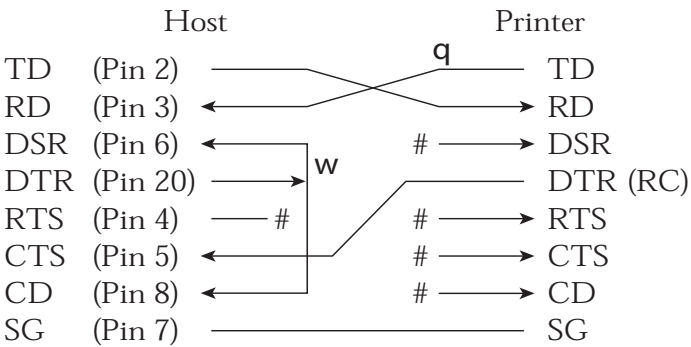
The serial options for the computer and the printer must match. Use the printer control panel, the computer operating system, or your software to change options specified as “selectable.”

Transmission mode:	Asynchronous, full duplex, or half duplex (selectable)
Speed:	150, 300, 600, 1200, 2400, 4800, 9600, or 19200 baud (selectable)
Data bits:	7 or 8 bits (selectable)
Parity bit:	Odd, even, mark, space, or none (selectable)
Start bit:	1 bit
Stop bit:	1 or 2 bits (selectable)
Protocol:	XON/XOFF (DC1/DC3), DTR (Data Terminal Ready), or RC (Reverse Channel) (selectable)
Buffer size:	256, 2K, 8K, 24K, 32K, 96K, or 128K bytes (selectable)

Cable Wiring

This printer allows two types of serial communication control: DSR-enabled and DSR-disabled. The type of control required is determined by your computer requirements. The type of control also affects the way the interface cable is wired. To determine whether you need DSR-enabled control or DSR-disabled control, use the printer **HARDWARE** function (see Chapter 5).

DSR-disabled control offers simpler cabling and communication than does DSR-enabled control. DSR-disabled control can be used to interface with an IBM PC and most other personal computers. With DSR-disabled control, the input control signals DSR, CTS, and CD are always considered high, regardless of their actual states. Therefore, no wire connection for these pins is required. The following figure shows the wiring required for connection to an IBM PC.



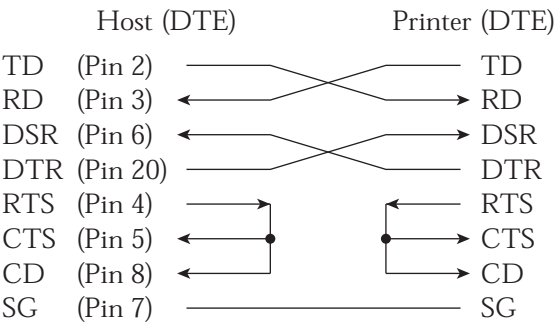
indicates an open wire.

Wire **q** is unnecessary for the DTR (or RC) protocol.

Some computers may not require wire **w**.

DSR-enabled control enables communication using an RS-232C interface. The CTS and DSR input control signals are enabled; CD is ignored. DSR must be high when the printer receives data. If the printer has data to be transmitted to the computer, the printer transmits the data when both DSR and CTS are high.

When using DSR-enabled control, use a straight-through cable to connect to a DCE (data communications equipment) device. Use a null-modem cable to connect to a DTE (data terminal equipment) device, as shown below.



Serial Protocols

A protocol is a set of instructions that control the way data is transmitted between devices such as a computer and printer. The protocol ensures that the computer does not send information to the printer faster than the information can be processed. By telling the computer when the printer can receive data, the protocol prevents the printer's buffer from overflowing.

This printer offers a choice of four different protocols for connection to a variety of computers: XON/XOFF, DTR, and RC. If your computer documentation does not recommend a particular protocol, try DTR. The following table describes the three protocols.

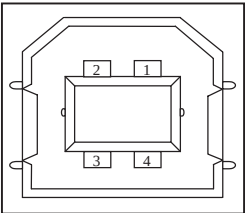
Protocol	Description
XON/XOFF (DC1/DC3)	When the printer is ready to receive data, it sends the XON (DC1) code (hex 11). When fewer than 255 bytes of space remain in the buffer (or when the printer is taken offline), the printer sends the XOFF (DC3) code (hex 13). (When the input buffer is configured for 256 bytes, the buffer limit is reduced from 255 bytes to 63 bytes.) The computer must stop transmitting data within 255 (63) characters of receiving the XOFF code, or information may be lost. If paper runs out, the printer sends an NAK code (hex 15).
DTR	DTR is a hardware protocol; that is, the DTR signal on interface cable pin 20 is used to control the flow of data rather than transmission of a character code. When the printer is ready to receive data, pin 20 is high. When fewer than 255 (63) bytes of space remain in the buffer (or when the printer is taken offline), pin 20 is low. The computer must stop transmitting data within 255 (63) characters of DTR being low, or information may be lost.
RC	The RC protocol is the same as the DTR protocol, except that the Reverse Channel signal (pin 11) is used instead of the Data Terminal Ready signal (pin 20).

USB INTERFACE

Cable

This printer supports the USB 1.1 Full speed specification. To connect to the host, use USB 2.0-compliant INF cables (5 meters (196 inch) or shorter). (Use the shielded cables.)

Connector pin alignment



No.	Signal line name	Function
1	vbus	Power supply
2	D-	Data transfer
3	D+	Data transfer
4	GND	Signal ground
Shell	Shield	

- Connector specification

Printer side

Type B receptacle (female)

Cable side

Upstream port

Type B plug (male)

Specification

- Basic specification

USB interface compliant

Note

It does not guarantee all operations on hosts.

- Power control

Self-power device

- Transmission mode

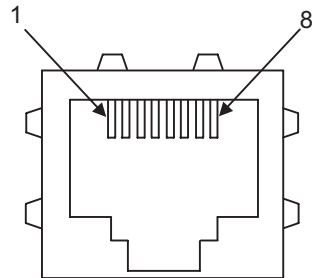
Full speed (Maximum 12 Mbps + 0.25%)

LAN INTERFACE

Cable

This printer supports the 10Base-T and 100Base-TX cables.

Connector pin alignment



No.	Signal line name	DIR	Function
1	TXO+	NIC-HUB	Transmit data +
2	TXO-	NIC-HUB	Transmit data -
3	RXI+	HUB-NIC	Receive data +
4	-	-	-
5	-	-	-
6	RXI-	HUB-NIC	Receive data -
7	-	-	-
8	-	-	-

CHARACTER SETS 1 AND 2 (DPL24C PLUS AND IBM XL24E EMULATION)

CHARACTER SETS

Below are character sets 1 and 2 of Code Page 437, available in the DPL24C PLUS command set and the IBM Proprinter XL24E emulation. Characters enclosed in boxes differ for sets 1 and 2.

Characters in set 2 also vary with the national character set. Code Page 437 is for the USA character set.

Code Page 437 Character Set 1

LNH	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL DLE SP	0	@	P	~	p	NUL DLE	á	í	ó	ú	ÿ	ÿ	ÿ	ÿ	ÿ
1	SOH DC1 !	1	A	Q	a	q	SOH DC1	â	ê	ô	û	ÿ	ÿ	ÿ	ÿ	ÿ
2	STX DC2 "	2	B	R	b	r	STX DC2	ã	ë	õ	ü	ÿ	ÿ	ÿ	ÿ	ÿ
3	ETX DC3 #	3	C	S	c	s	ETX DC3	ä	è	ö	ý	ÿ	ÿ	ÿ	ÿ	ÿ
4	END DC4 \$	4	D	T	d	t	END DC4	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
5	ENQ NAK %	5	E	U	e	u	ENQ NAK	ä	ê	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
6	ACK SYN &	6	F	V	f	v	ACK SYN	å	ë	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
7	BEL ETB '	7	G	W	g	w	BEL ETB	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
8	BS CAN (	8	H	X	h	x	BS CAN	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
9	HT EM)	9	I	Y	i	y	HT EM	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
A	LF SUB *	:	J	Z	j	z	LF SUB	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
B	VT ESC +	; K	[	k	{	VT ESC	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
C	FF FS ,	< L	\	l		FF FS	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
D	CR GS -	= M	]	m	}	CR GS	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
E	SO RS .	> N	^	n	~	SO RS	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
F	SI US /	? O	_	o	DEL	SI US	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ

Code Page 437 Character Set 2

LNH	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL DLE SP	0	@	P	~	p	Q E	á	í	ó	ú	ÿ	ÿ	ÿ	ÿ	ÿ
1	SOH DC1 !	1	A	Q	a	q	ü æ	â	ê	ô	û	ÿ	ÿ	ÿ	ÿ	ÿ
2	STX DC2 "	2	B	R	b	r	é æ	ã	ë	õ	ü	ÿ	ÿ	ÿ	ÿ	ÿ
3	ETX DC3 #	3	C	S	c	s	ä ö	ä	è	ö	ý	ÿ	ÿ	ÿ	ÿ	ÿ
4	END DC4 \$	4	D	T	d	t	å ÷	ä	ê	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
5	ENQ NAK %	5	E	U	e	u	ä ÷	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
6	ACK SYN &	6	F	V	f	v	ä ÷	å	ë	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
7	BEL ETB '	7	G	W	g	w	ç ü	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
8	BS CAN (	8	H	X	h	x	ê ý	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
9	HT EM)	9	I	Y	i	y	è ÷	ä	ê	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
A	LF SUB *	:	J	Z	j	z	è ÷	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
B	VT ESC +	; K	[	k	{	VT ESC	í c	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
C	FF FS ,	< L	\	l		FF FS	í ÷	å	é	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
D	CR GS -	= M	]	m	}	CR GS	í ÷	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
E	SO RS .	> N	^	n	~	SO RS	í ÷	å	ë	÷	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
F	SI US /	? O	_	o	DEL	SI US	Ä f	ä	è	ö	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ

ITALIC AND GRAPHICS
CHARACTER SETS (ESC/
P2 EMULATION)

The following shows character sets available in the Epson ESC/P2 emulation.
Characters differ in codes 128 to 255 (hex 80 to FF).

Italic Character Set

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL DLE SP	0	@	P	˘	p	NUL DLE SP	0	@	P	˘	p				
1	SOH DC1 !	1	A	Q	a	q	SOH DC1 !	1	A	Q	a	q				
2	STX DC2 "	2	B	R	b	r	STX DC2 "	2	B	R	b	r				
3	ETX DC3 #	3	C	S	c	s	ETX DC3 #	3	C	S	c	s				
4	EOT DC4 \$	4	D	T	d	t	EOT DC4 \$	4	D	T	d	t				
5	ENQ NAK %	5	E	U	e	u	ENQ NAK %	5	E	U	e	u				
6	ACK SYN &	6	F	V	f	v	ACK SYN &	6	F	V	f	v				
7	BEL ETB '	7	G	W	g	w	BEL ETB '	7	G	W	g	w				
8	BS CAN (	8	H	X	h	x	BS CAN (	8	H	X	h	x				
9	HT EM)	9	I	Y	i	y	HT EM)	9	I	Y	i	y				
A	LF SUB *	:	J	Z	j	z	LF SUB *	:	J	Z	j	z				
B	VT ESC +	;	K	[	k	{	VT ESC +	;	K	[	k	{				
C	FF FS ,	<	L	\	l		FF FS ,	<	L	\	l					
D	CR GS -	=	M	]	m	}	CR GS -	=	M	]	m	}				
E	SO RS .	>	N	^	n	~	SO RS .	>	N	^	n	~				
F	SI US /	?	O	_	o	DEL SI US	/	?	O	_	o	SP				

Graphics Character Set 1

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL DLE SP	0	@	P	˘	p	NUL DLE	á	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
1	SOH DC1 !	1	A	Q	a	q	SOH DC1	í	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
2	STX DC2 "	2	B	R	b	r	STX DC2	ó	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
3	ETX DC3 #	3	C	S	c	s	ETX DC3	ú	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
4	EOT DC4 \$	4	D	T	d	t	EOT DC4	û	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
5	ENQ \$ %	5	E	U	e	u	ENQ NAK	ñ	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
6	ACK SYN &	6	F	V	f	v	ACK SYN	ã	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
7	BEL ETB '	7	G	W	g	w	BEL ETB	ë	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
8	BS CAN (	8	H	X	h	x	BS CAN	ï	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
9	HT EM)	9	I	Y	i	y	HT EM	í	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
A	LF SUB *	:	J	Z	j	z	LF SUB	ï	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
B	VT ESC +	;	K	[	k	{	VT ESC	½	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
C	FF FS ,	<	L	\	l		FF FS	¾	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
D	CR GS -	=	M	]	m	}	CR GS	¾	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
E	SO RS .	>	N	^	n	~	SO RS	¾	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
F	SI US /	?	O	_	o	DEL SI US	¾	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

Graphics Character Set 2

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL DLE SP	0	@	P	~	p	ç	é	á						α	≡
1	SOH DC1 !	1	A	Q	a	q	û	æ	í						β	±
2	STX DC2 "	2	B	R	b	r	é	Æ	ó						Γ	≥
3	ETX DC3 #	3	C	S	c	s	â	ô	ú						Π	≤
4	END DC4 \$	4	D	T	d	t	ä	ö	ñ						Σ	∫
5	ENQ \$ %	5	E	U	e	u	à	ò	ñ						σ	∫
6	ACK SYN &	6	F	V	f	v	ä	ù	ä						μ	÷
7	BEL ETB '	7	G	W	g	w	ç	ù	ø						τ	≈
8	BS CAN (	8	H	X	h	x	ê	ý	¿						θ	•
9	HT RM)	9	I	Y	i	y	ë	ö	¿						ø	•
A	LF SUB *	:	J	Z	j	z	è	ù	¿						Ω	•
B	VT ESC +	;	K	[	k	{	í	c	¿						δ	√
C	FF FS ,	<	L	\	l		î	ç	¿						∞	n
D	CR GS -	=	M	]	m	}	ï	¥	¿						∅	2
E	SO RS .	>	N	^	n	~	Ä	ß	¿						ε	■
F	SI US /	?	O	_	o	DEL	À	f	»						∩	SP

NATIONAL CHARACTER SETS (ALL EMULATIONS)

Below are the 52 national character sets available for all emulations of this printer. These character sets support different characters and symbols specific to different languages. Note that these tables are for Courier 10, a resident font, and that some national character sets do not have some characters and symbols whose use depends on resident fonts. For details, see the table at the end of this appendix.

When the following character sets are used with the Epson ESC/P2 emulation, the printing of FFh code characters is not supported.
ECMA94, ISO8859, ISO-LTN, ISO-TUK, CYRILIC, LATIN-9

PAGE437/USA (Code Page 437/USA)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
2		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
3		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
4		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
5		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
6		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
7		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
8		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
9		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
A		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
B		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
C		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
D		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
E		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
F		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>

UK (British English)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
2		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
3		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
4		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
5		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
6		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
7		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
8		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
9		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
A		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
B		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
C		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
D		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
E		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
F		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>

GERMAN (German)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
2		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
3		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
4		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
5		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
6		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
7		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
8		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
9		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
A		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
B		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
C		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
D		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
E		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
F		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>

SWEDISH (Swedish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
2		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
3		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
4		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
5		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
6		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
7		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
8		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
9		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
A		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
B		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
C		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
D		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
E		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>
F		!	"	#	\$	%	&	'	(	)	*	+	,	<	=	>

ISO8859/ECMA94 (ISO 8859-1/ECMA94)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	^	p							
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	3	4	5	6	7	8	9	A	B	C	D	E	F	
3	♥	#	5	6	7	8	9	A	B	C	D	E	F			
4	♦	\$	6	7	8	9	A	B	C	D	E	F				
5	♣	%	7	8	9	A	B	C	D	E	F					
6		&	8	9	A	B	C	D	E	F						
7		'	9	A	B	C	D	E	F							
8		(	A	B	C	D	E	F								
9		)	B	C	D	E	F									
A		*	C	D	E	F										
B		+	D	E	F											
C		,	E	F												
D		=	F													
E		>														
F		/	?													

PAGE850 (Code Page 850(Multilingual))

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	^	p							
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	3	4	5	6	7	8	9	A	B	C	D	E	F	
3	♥	#	5	6	7	8	9	A	B	C	D	E	F			
4	♦	\$	6	7	8	9	A	B	C	D	E	F				
5	♣	%	7	8	9	A	B	C	D	E	F					
6		&	8	9	A	B	C	D	E	F						
7		'	9	A	B	C	D	E	F							
8		(	A	B	C	D	E	F								
9		)	B	C	D	E	F									
A		*	C	D	E	F										
B		+	D	E	F											
C		,	E	F												
D		=	F													
E		>														
F		/	?													

Character
Sets

PAGE852/PG852-T (Code Page 852)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	^	p							
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	3	4	5	6	7	8	9	A	B	C	D	E	F	
3	♥	#	5	6	7	8	9	A	B	C	D	E	F			
4	♦	\$	6	7	8	9	A	B	C	D	E	F				
5	♣	%	7	8	9	A	B	C	D	E	F					
6		&	8	9	A	B	C	D	E	F						
7		'	9	A	B	C	D	E	F							
8		(	A	B	C	D	E	F								
9		)	B	C	D	E	F									
A		*	C	D	E	F										
B		+	D	E	F											
C		,	E	F												
D		=	F													
E		>														
F		/	?													

PAGE855 (Code Page 855)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	^	p							
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	3	4	5	6	7	8	9	A	B	C	D	E	F	
3	♥	#	5	6	7	8	9	A	B	C	D	E	F			
4	♦	\$	6	7	8	9	A	B	C	D	E	F				
5	♣	%	7	8	9	A	B	C	D	E	F					
6		&	8	9	A	B	C	D	E	F						
7		'	9	A	B	C	D	E	F							
8		(	A	B	C	D	E	F								
9		)	B	C	D	E	F									
A		*	C	D	E	F										
B		+	D	E	F											
C		,	E	F												
D		=	F													
E		>														
F		/	?													

PAGE860 (Code Page 860(Portugal))

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	1	A	B	C	D	E	F	G	H	I	J	K	L
2		!	"	2	A	B	C	D	E	F	G	H	I	J	K	L
3	♥		#	3	C	D	E	F	G	H	I	J	K	L	M	N
4	♦		\$	4	D	E	F	G	H	I	J	K	L	M	N	O
5	♣		%	5	E	F	G	H	I	J	K	L	M	N	O	P
6			&	6	F	G	H	I	J	K	L	M	N	O	P	Q
7			'	7	G	H	I	J	K	L	M	N	O	P	Q	R
8			(	8	H	I	J	K	L	M	N	O	P	Q	R	S
9			)	9	I	J	K	L	M	N	O	P	Q	R	S	T
A		*	:	A	J	K	L	M	N	O	P	Q	R	S	T	U
B		+	;	B	K	L	M	N	O	P	Q	R	S	T	U	V
C		<	<	C	L	M	N	O	P	Q	R	S	T	U	V	W
D		=	=	D	M	N	O	P	Q	R	S	T	U	V	W	X
E		>	>	E	N	O	P	Q	R	S	T	U	V	W	X	Y
F		/	?	F	O	P	Q	R	S	T	U	V	W	X	Y	Z

PAGE863 (Code Page 863 (Canada-French))

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	1	A	B	C	D	E	F	G	H	I	J	K	L
2		!	"	2	A	B	C	D	E	F	G	H	I	J	K	L
3	♥		#	3	C	D	E	F	G	H	I	J	K	L	M	N
4	♦		\$	4	D	E	F	G	H	I	J	K	L	M	N	O
5	♣		%	5	E	F	G	H	I	J	K	L	M	N	O	P
6			&	6	F	G	H	I	J	K	L	M	N	O	P	Q
7			'	7	G	H	I	J	K	L	M	N	O	P	Q	R
8			(	8	H	I	J	K	L	M	N	O	P	Q	R	S
9			)	9	I	J	K	L	M	N	O	P	Q	R	S	T
A		*	:	A	J	K	L	M	N	O	P	Q	R	S	T	U
B		+	;	B	K	L	M	N	O	P	Q	R	S	T	U	V
C		<	<	C	L	M	N	O	P	Q	R	S	T	U	V	W
D		=	=	D	M	N	O	P	Q	R	S	T	U	V	W	X
E		>	>	E	N	O	P	Q	R	S	T	U	V	W	X	Y
F		/	?	F	O	P	Q	R	S	T	U	V	W	X	Y	Z

PAGE865 (Code Page 865(Nordic))

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	1	A	B	C	D	E	F	G	H	I	J	K	L
2		!	"	2	A	B	C	D	E	F	G	H	I	J	K	L
3	♥		#	3	C	D	E	F	G	H	I	J	K	L	M	N
4	♦		\$	4	D	E	F	G	H	I	J	K	L	M	N	O
5	♣		%	5	E	F	G	H	I	J	K	L	M	N	O	P
6			&	6	F	G	H	I	J	K	L	M	N	O	P	Q
7			'	7	G	H	I	J	K	L	M	N	O	P	Q	R
8			(	8	H	I	J	K	L	M	N	O	P	Q	R	S
9			)	9	I	J	K	L	M	N	O	P	Q	R	S	T
A		*	:	A	J	K	L	M	N	O	P	Q	R	S	T	U
B		+	;	B	K	L	M	N	O	P	Q	R	S	T	U	V
C		<	<	C	L	M	N	O	P	Q	R	S	T	U	V	W
D		=	=	D	M	N	O	P	Q	R	S	T	U	V	W	X
E		>	>	E	N	O	P	Q	R	S	T	U	V	W	X	Y
F		/	?	F	O	P	Q	R	S	T	U	V	W	X	Y	Z

PAGE866 (Code Page 866(Cyrillic))

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	A	B	C	D	E	F	G	H	I	J	K
1		!	"	1	A	B	C	D	E	F	G	H	I	J	K	L
2		!	"	2	A	B	C	D	E	F	G	H	I	J	K	L
3	♥		#	3	C	D	E	F	G	H	I	J	K	L	M	N
4	♦		\$	4	D	E	F	G	H	I	J	K	L	M	N	O
5	♣		%	5	E	F	G	H	I	J	K	L	M	N	O	P
6			&	6	F	G	H	I	J	K	L	M	N	O	P	Q
7			'	7	G	H	I	J	K	L	M	N	O	P	Q	R
8			(	8	H	I	J	K	L	M	N	O	P	Q	R	S
9			)	9	I	J	K	L	M	N	O	P	Q	R	S	T
A		*	:	A	J	K	L	M	N	O	P	Q	R	S	T	U
B		+	;	B	K	L	M	N	O	P	Q	R	S	T	U	V
C		<	<	C	L	M	N	O	P	Q	R	S	T	U	V	W
D		=	=	D	M	N	O	P	Q	R	S	T	U	V	W	X
E		>	>	E	N	O	P	Q	R	S	T	U	V	W	X	Y
F		/	?	F	O	P	Q	R	S	T	U	V	W	X	Y	Z

HUNGARY/HUNG-T (Hungarian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	P	^	p	Ç	é	á	í	ö	ü	ñ	~
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
5		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
6		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
7		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
8		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
9		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
A		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
B		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
C		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
D		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
E		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
F		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E

SLOV/SLOV-T (Slovenian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					Ž	P	ž	p	Č	š	á	í	ó	ú	ñ	~
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
5		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
6		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
7		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
8		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
9		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
A		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
B		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
C		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
D		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
E		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
F		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E

POLISH/POLSH-T (Polish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	P	^	p	Ç	é	á	í	ó	ú	ñ	~
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
5		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
6		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
7		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
8		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
9		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
A		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
B		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
C		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
D		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
E		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
F		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E

MAZOWIA/MAZOW-T (Mazowian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					@	P	^	p	Ç	é	á	í	ó	ú	ñ	~
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
5		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
6		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
7		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
8		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
9		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
A		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
B		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
C		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
D		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
E		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
F		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E

LATIN2/LATN2-T (Latin2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		`	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		~	p	q	r	s	t	u	v	w	x	y	z	{	}	~
7		Ç	ü	é	â	ä	å	ç	è	é	ê	ë	ì	í	î	ï
8		Ê	Ł	æ	ó	ô	õ	ö	ÿ	Ź	Ż	ž	Ł	ł	Ł	ł
9		Á	Í	Ó	Ú	Ń	Ň	Ž	Ž	ž	ž	ž	ž	ž	ž	ž
A		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
B		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
C		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
D		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
E		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
F		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š

KAMENIC/KAMEN-T (Kamenicky)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		`	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		~	p	q	r	s	t	u	v	w	x	y	z	{	}	~
7		Ç	ü	é	â	ä	å	ç	è	é	ê	ë	ì	í	î	ï
8		Ê	Ł	æ	ó	ô	õ	ö	ÿ	Ź	Ż	ž	Ł	ł	Ł	ł
9		Á	Í	Ó	Ú	Ń	Ň	Ž	Ž	ž	ž	ž	ž	ž	ž	ž
A		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
B		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
C		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
D		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
E		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
F		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š

TURKY/TURKY-T (Turkish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		`	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		~	p	q	r	s	t	u	v	w	x	y	z	{	}	~
7		Ç	ü	é	â	ä	å	ç	è	é	ê	ë	ì	í	î	ï
8		Ê	Ł	æ	ó	ô	õ	ö	ÿ	Ź	Ż	ž	Ł	ł	Ł	ł
9		Á	Í	Ó	Ú	Ń	Ň	Ž	Ž	ž	ž	ž	ž	ž	ž	ž
A		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
B		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
C		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
D		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
E		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
F		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š

CYRILIC (Cyrillic)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	A	B	C	D	E	F	G	H	I	J	K	L	M	N
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		`	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		~	p	q	r	s	t	u	v	w	x	y	z	{	}	~
7		Ç	ü	é	â	ä	å	ç	è	é	ê	ë	ì	í	î	ï
8		Ê	Ł	æ	ó	ô	õ	ö	ÿ	Ź	Ż	ž	Ł	ł	Ł	ł
9		Á	Í	Ó	Ú	Ń	Ň	Ž	Ž	ž	ž	ž	ž	ž	ž	ž
A		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
B		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
C		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
D		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
E		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š
F		Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š	š	Š

IBM437 (IBM 437)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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A																
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C																
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IBM851 (IBM 851)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
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ELOT928 (ELOT 928)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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A																
B																
C																
D																
E																
F																

PG-DHN (Code Page DHN)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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A																
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D																
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LATIN-P (Latin Polish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		~	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		p	q	r	s	t	u	v	w	x	y	z	{		}	~
7		Ć	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
8		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
9		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
A		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
B		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
C		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
D		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
E		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
F		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ

ISO-LTN (ISO Latin)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		~	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		p	q	r	s	t	u	v	w	x	y	z	{		}	~
7		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
8		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
9		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
A		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
B		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
C		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
D		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
E		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
F		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ

LITHUA1 (Lithuanian 1)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		~	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		p	q	r	s	t	u	v	w	x	y	z	{		}	~
7		Ą	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
8		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
9		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
A		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
B		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
C		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
D		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
E		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
F		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ

LITHUA2 (Lithuanian 2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
3		@	1	2	3	4	5	6	7	8	9	A	B	C	D	E
4		P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^
5		~	a	b	c	d	e	f	g	h	i	j	k	l	m	n
6		p	q	r	s	t	u	v	w	x	y	z	{		}	~
7		Ą	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
8		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
9		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
A		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
B		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
C		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
D		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
E		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ
F		Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ	Ĳ

MIK

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

MACEDON (Macedonian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ABG

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ABY

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

PG-MAC

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	Ж	П	ж	п	А	Р	а	Б	С	Т	Е
1		!	1	2	3	4	5	6	7	8	9	А	Б	В	Г	Д
2		"	2	3	4	5	6	7	8	9	А	Б	В	Г	Д	Е
3	♥	#	3	4	5	6	7	8	9	А	Б	В	Г	Д	Е	Ф
4	♦	\$	4	5	6	7	8	9	А	Б	В	Г	Д	Е	Ф	У
5	♣	%	5	6	7	8	9	А	Б	В	Г	Д	Е	Ф	У	Ю
6		&	6	7	8	9	А	Б	В	Г	Д	Е	Ф	У	Ю	Я
7		'	7	8	9	А	Б	В	Г	Д	Е	Ф	У	Ю	Я	
8		(	8	9	А	Б	В	Г	Д	Е	Ф	У	Ю	Я		
9		)	9	А	Б	В	Г	Д	Е	Ф	У	Ю	Я			
A		*	А	Б	В	Г	Д	Е	Ф	У	Ю	Я				
B		+	Б	В	Г	Д	Е	Ф	У	Ю	Я					
C		<	В	Г	Д	Е	Ф	У	Ю	Я						
D		=	Г	Д	Е	Ф	У	Ю	Я							
E		>	Д	Е	Ф	У	Ю	Я								
F		/	Е	Ф	У	Ю	Я									

ELOT927

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	~	П	Р	ι	⌒	⌒	⌒	⌒	⌒
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	2	3	4	5	6	7	8	9	A	B	C	D	E	Ф
3	♥	#	3	4	5	6	7	8	9	A	B	C	D	E	Ф	У
4	♦	\$	4	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю
5	♣	%	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я
6		&	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я	
7		'	7	8	9	A	B	C	D	E	Ф	У	Ю	Я		
8		(	8	9	A	B	C	D	E	Ф	У	Ю	Я			
9		)	9	A	B	C	D	E	Ф	У	Ю	Я				
A		*	А	Б	В	Г	Д	Е	Ф	У	Ю	Я				
B		+	Б	В	Г	Д	Е	Ф	У	Ю	Я					
C		<	В	Г	Д	Е	Ф	У	Ю	Я						
D		=	Г	Д	Е	Ф	У	Ю	Я							
E		>	Д	Е	Ф	У	Ю	Я								
F		/	Е	Ф	У	Ю	Я									

DECGR

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	~	П	Р	ι	⌒	⌒	⌒	⌒	⌒
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	2	3	4	5	6	7	8	9	A	B	C	D	E	Ф
3	♥	#	3	4	5	6	7	8	9	A	B	C	D	E	Ф	У
4	♦	\$	4	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю
5	♣	%	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я
6		&	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я	
7		'	7	8	9	A	B	C	D	E	Ф	У	Ю	Я		
8		(	8	9	A	B	C	D	E	Ф	У	Ю	Я			
9		)	9	A	B	C	D	E	Ф	У	Ю	Я				
A		*	А	Б	В	Г	Д	Е	Ф	У	Ю	Я				
B		+	Б	В	Г	Д	Е	Ф	У	Ю	Я					
C		<	В	Г	Д	Е	Ф	У	Ю	Я						
D		=	Г	Д	Е	Ф	У	Ю	Я							
E		>	Д	Е	Ф	У	Ю	Я								
F		/	Е	Ф	У	Ю	Я									

GREEK 11

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	@	P	~	П	Р	ι	⌒	⌒	⌒	⌒	⌒
1		!	1	2	3	4	5	6	7	8	9	A	B	C	D	E
2		"	2	3	4	5	6	7	8	9	A	B	C	D	E	Ф
3	♥	#	3	4	5	6	7	8	9	A	B	C	D	E	Ф	У
4	♦	\$	4	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю
5	♣	%	5	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я
6		&	6	7	8	9	A	B	C	D	E	Ф	У	Ю	Я	
7		'	7	8	9	A	B	C	D	E	Ф	У	Ю	Я		
8		(	8	9	A	B	C	D	E	Ф	У	Ю	Я			
9		)	9	A	B	C	D	E	Ф	У	Ю	Я				
A		*	А	Б	В	Г	Д	Е	Ф	У	Ю	Я				
B		+	Б	В	Г	Д	Е	Ф	У	Ю	Я					
C		<	В	Г	Д	Е	Ф	У	Ю	Я						
D		=	Г	Д	Е	Ф	У	Ю	Я							
E		>	Д	Е	Ф	У	Ю	Я								
F		/	Е	Ф	У	Ю	Я									

PAGE862

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

HBR OLD

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

HBR DEC

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ISO-TUK

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

LATIN-9

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0				0	@	P	`	p						À	Ä	à	ä
1		!	1	A	Q	R	a	q			í	±	À	Å	Å	å	ä
2		"	2	B	R	R	b	r			ï	²	Á	Ö	Ö	ö	ò
3	♥	#	3	C	S	S	c	s			ë	³	Â	Ó	Ó	ó	ó
4	♦	\$	4	D	T	T	d	t			¥	µ	Ã	Ô	Ô	ô	ô
5	♣	%	5	E	U	U	e	u			¥	¶	Ä	Õ	Õ	õ	õ
6		&	6	F	V	V	f	v			§	·	Å	Ö	Ö	ö	ö
7		'	7	G	W	W	g	w			§	¸	Ç	×	Ç	+	+
8		(	8	H	X	X	h	x			§	¹	È	Ø	Ø	ø	ø
9		)	9	I	Y	Y	i	y			©	º	É	Ù	Ù	é	ù
A		*	:	J	Z	Z	j	z			ª	»	Ê	Ú	Ú	ê	ù
B		+	<	K	[	[	k	{			«	»	Ë	Û	Û	ë	ù
C		,	<	L	\	\	l				¬	-	Ì	Ü	Ü	ì	ü
D		-	=	M	]	]	m	~			®	-	Í	Ý	Ý	í	ý
E		.	>	N	^	^	n				©	-	Î	Þ	Þ	î	þ
F		/	?	O	_	_	o				—	-	Ï	ß	ß	ï	ÿ

RUSCII

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0				0	@	P	`	p						À	Ä	à	ä
1		!	1	A	Q	R	a	q			í	±	À	Å	Å	å	ä
2		"	2	B	R	R	b	r			ï	²	Á	Ö	Ö	ö	ò
3	♥	#	3	C	S	S	c	s			ë	³	Â	Ó	Ó	ó	ó
4	♦	\$	4	D	T	T	d	t			¥	µ	Ã	Ô	Ô	ô	ô
5	♣	%	5	E	U	U	e	u			¥	¶	Ä	Õ	Õ	õ	õ
6		&	6	F	V	V	f	v			§	·	Å	Ö	Ö	ö	ö
7		'	7	G	W	W	g	w			§	¸	Ç	×	Ç	+	+
8		(	8	H	X	X	h	x			§	¹	È	Ø	Ø	ø	ø
9		)	9	I	Y	Y	i	y			©	º	É	Ù	Ù	é	ù
A		*	:	J	Z	Z	j	z			ª	»	Ê	Ú	Ú	ê	ù
B		+	<	K	[	[	k	{			«	»	Ë	Û	Û	ë	ù
C		,	<	L	\	\	l				¬	-	Ì	Ü	Ü	ì	ü
D		-	=	M	]	]	m	~			®	-	Í	Ý	Ý	í	ý
E		.	>	N	^	^	n				©	-	Î	Þ	Þ	î	þ
F		/	?	O	_	_	o				—	-	Ï	ß	ß	ï	ÿ

NATIONAL CHARACTER SETS (DPL24C PLUS AND IBM XL24E EMULATION)

The following character sets differ from those of Code Page 437 (USA), available in the DPL24C PLUS command set and the IBM Proprinter XL24E emulation.

FRENCH (French)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					à	â	ä	å	ç	é	ê	ë	ì	í	î	ï
1		!	"	£	\$	%	&	'	(	)	*	+	,	<	=	>
2	♥															
3	♦															
4	♠															
5	♣															
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ITALIAN (Italian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					à	â	ä	å	ç	é	ê	ë	ì	í	î	ï
1		!	"	£	\$	%	&	'	(	)	*	+	,	<	=	>
2	♥															
3	♦															
4	♠															
5	♣															
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

SPANISH (Spanish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					à	â	ä	å	ç	é	ê	ë	ì	í	î	ï
1		!	"	£	\$	%	&	'	(	)	*	+	,	<	=	>
2	♥															
3	♦															
4	♠															
5	♣															
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

FINNISH (Finnish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					à	â	ä	å	ç	é	ê	ë	ì	í	î	ï
1		!	"	£	\$	%	&	'	(	)	*	+	,	<	=	>
2	♥															
3	♦															
4	♠															
5	♣															
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

DANISH1/NORWEGN (Danish1/Norwegian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

DANISH2 (Danish2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

NATIONAL CHARACTER SETS (ESC/P2 EMULATION)

The following character sets differ from the graphics character sets available in the Epson ESC/P2 emulation.

DANISH1 (Danish1)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

SPANSH1 (Spanish1)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ITALIAN (Italian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				@	P	ù	p	Ç	é	á				α	β	≡
1		!	"	1	A	Q	á	ú	ó	í				Γ	π	Σ
2		"	#	2	B	R	á	ó	ó	ó				Γ	π	Σ
3		"	#	3	C	S	T	ú	ó	ó				Γ	π	Σ
4		"	#	4	D	E	F	ú	ó	ó				Γ	π	Σ
5		"	#	5	E	F	G	ú	ó	ó				Γ	π	Σ
6		"	#	6	F	G	H	ú	ó	ó				Γ	π	Σ
7		"	#	7	G	H	I	ú	ó	ó				Γ	π	Σ
8		"	#	8	H	I	J	ú	ó	ó				Γ	π	Σ
9		"	#	9	I	J	K	ú	ó	ó				Γ	π	Σ
A		"	#	*	J	K	L	ú	ó	ó				Γ	π	Σ
B		"	#	+	K	L	M	ú	ó	ó				Γ	π	Σ
C		"	#	<	L	M	N	ú	ó	ó				Γ	π	Σ
D		"	#	=	M	N	O	ú	ó	ó				Γ	π	Σ
E		"	#	>	N	O		ú	ó	ó				Γ	π	Σ
F		"	#	/	O			ú	ó	ó				Γ	π	Σ

SPANSH2 (Spanish2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

JAPAN (Japanese)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

LATIN A (Latin American)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

Character
Sets

NORWEGN (Norwegian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	é	P	é	Ç	á	í	ó	ñ	á	β	±
1		!	"		1	À	Q	æ	ü	æ	æ	ö	ü	ä	Γ	Σ
2					2	B	R	ø	ë	ä	ö	ö	ñ	ä	Γ	Σ
3			#		3	C	S	T	ä	ä	ö	ö	ñ	ä	Γ	Σ
4					4	D	T	U	ä	ä	ö	ö	ñ	ä	Γ	Σ
5			\$		5	E	V	f	ä	ä	ö	ö	ñ	ä	Γ	Σ
6					6	F	W	g	ä	ä	ö	ö	ñ	ä	Γ	Σ
7			&		7	G	X	h	ä	ä	ö	ö	ñ	ä	Γ	Σ
8			'		8	H	Y	i	ä	ä	ö	ö	ñ	ä	Γ	Σ
9			(		9	I	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ
A			*		A	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
B			+		B	K	L	æ	ä	ä	ö	ö	ñ	ä	Γ	Σ
C			<		C	L	M	ø	ä	ä	ö	ö	ñ	ä	Γ	Σ
D			, -		D	M	N	ü	ä	ä	ö	ö	ñ	ä	Γ	Σ
E			.		E	N	Ü	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
F			/		F	O	_	ä	ä	ö	ö	ñ	ä	Γ	Σ	•

FRENCH (French)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	é	P	é	Ç	á	í	ó	ñ	á	β	±
1		!	"		1	À	Q	æ	ü	æ	æ	ö	ü	ä	Γ	Σ
2					2	B	R	ø	ë	ä	ö	ö	ñ	ä	Γ	Σ
3			#		3	C	S	T	ä	ä	ö	ö	ñ	ä	Γ	Σ
4					4	D	T	U	ä	ä	ö	ö	ñ	ä	Γ	Σ
5			\$		5	E	V	f	ä	ä	ö	ö	ñ	ä	Γ	Σ
6					6	F	W	g	ä	ä	ö	ö	ñ	ä	Γ	Σ
7			&		7	G	X	h	ä	ä	ö	ö	ñ	ä	Γ	Σ
8			'		8	H	Y	i	ä	ä	ö	ö	ñ	ä	Γ	Σ
9			(		9	I	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ
A			*		A	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
B			+		B	K	L	æ	ä	ä	ö	ö	ñ	ä	Γ	Σ
C			<		C	L	M	ø	ä	ä	ö	ö	ñ	ä	Γ	Σ
D			, -		D	M	N	ü	ä	ä	ö	ö	ñ	ä	Γ	Σ
E			.		E	N	Ü	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
F			/		F	O	_	ä	ä	ö	ö	ñ	ä	Γ	Σ	•

DANISH2 (Danish2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	é	P	é	Ç	á	í	ó	ñ	á	β	±
1		!	"		1	À	Q	æ	ü	æ	æ	ö	ü	ä	Γ	Σ
2					2	B	R	ø	ë	ä	ö	ö	ñ	ä	Γ	Σ
3			#		3	C	S	T	ä	ä	ö	ö	ñ	ä	Γ	Σ
4					4	D	T	U	ä	ä	ö	ö	ñ	ä	Γ	Σ
5			\$		5	E	V	f	ä	ä	ö	ö	ñ	ä	Γ	Σ
6					6	F	W	g	ä	ä	ö	ö	ñ	ä	Γ	Σ
7			&		7	G	X	h	ä	ä	ö	ö	ñ	ä	Γ	Σ
8			'		8	H	Y	i	ä	ä	ö	ö	ñ	ä	Γ	Σ
9			(		9	I	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ
A			*		A	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
B			+		B	K	L	æ	ä	ä	ö	ö	ñ	ä	Γ	Σ
C			<		C	L	M	ø	ä	ä	ö	ö	ñ	ä	Γ	Σ
D			, -		D	M	N	ü	ä	ä	ö	ö	ñ	ä	Γ	Σ
E			.		E	N	Ü	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
F			/		F	O	_	ä	ä	ö	ö	ñ	ä	Γ	Σ	•

KOREA (Korea)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0					0	é	P	é	Ç	á	í	ó	ñ	á	β	±
1		!	"		1	À	Q	æ	ü	æ	æ	ö	ü	ä	Γ	Σ
2					2	B	R	ø	ë	ä	ö	ö	ñ	ä	Γ	Σ
3			#		3	C	S	T	ä	ä	ö	ö	ñ	ä	Γ	Σ
4					4	D	T	U	ä	ä	ö	ö	ñ	ä	Γ	Σ
5			\$		5	E	V	f	ä	ä	ö	ö	ñ	ä	Γ	Σ
6					6	F	W	g	ä	ä	ö	ö	ñ	ä	Γ	Σ
7			&		7	G	X	h	ä	ä	ö	ö	ñ	ä	Γ	Σ
8			'		8	H	Y	i	ä	ä	ö	ö	ñ	ä	Γ	Σ
9			(		9	I	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ
A			*		A	J	z	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
B			+		B	K	L	æ	ä	ä	ö	ö	ñ	ä	Γ	Σ
C			<		C	L	M	ø	ä	ä	ö	ö	ñ	ä	Γ	Σ
D			, -		D	M	N	ü	ä	ä	ö	ö	ñ	ä	Γ	Σ
E			.		E	N	Ü	ä	ä	ö	ö	ñ	ä	Γ	Σ	•
F			/		F	O	_	ä	ä	ö	ö	ñ	ä	Γ	Σ	•

LEGAL (Legal)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	S	P	^	p	Ç	É	Á			⌌	α	≡
1		!	1	A	Q	R	a	q	ü	æ	í			⌌	β	±
2		"	2	B	R	R	b	r	é	Æ	ó			⌌	Γ	≥
3		#	3	C	S	S	c	s	ä	Ö	ú			⌌	π	≤
4		\$	4	D	T	T	d	t	à	ö	ñ			⌌	Σ	∫
5		§	5	E	U	U	e	u	â	ò	Ñ			⌌	σ	÷
6		&	6	F	V	V	f	v	ã	ó	ã			⌌	μ	≈
7		'	7	G	W	W	g	w	ç	û	ø			⌌	τ	∞
8		(	8	H	X	X	h	x	ê	ÿ	Ö			⌌	θ	•
9		)	9	I	Y	Y	i	y	ë	ÿ	Ü			⌌	φ	°
A		*		J	Z	Z	j	z	è	ÿ	ü			⌌	Ω	·
B		+		:	K	K	:	k	é	ÿ	ç			⌌	δ	√
C		,		<	L	L	,	l	í	ÿ	£			⌌	ε	³
D		-		=	M	M	-	m	ï	ÿ	¥			⌌	ø	²
E		.		>	N	N	.	n	ï	ÿ	¥			⌌	ø	²
F		/		?	O	O	/	o	ï	ÿ	¥			⌌	ø	²

NATIONAL CHARACTER SETS AND SUPPORTED RESIDENT FONTS (ALL EMULATIONS)

In all emulations, this printer supports 50 national character sets for characters and symbols specific to different languages. Some national character sets, however, do not have some characters and symbols and may not be usable, depending on resident fonts. The following tables show which of the resident fonts are supported for each national character set:

Resident font		OCR-A OCR-B H-draft*** Correspondence Nimbus Sans ** Timeless ** Courier scalable** Pica 10 Bold PS Draft Compress Elite 12 Courier 10													
National character set	Name in setup menu														
USA *	USA	√	√	√	√	√	√	√	√	√	√	√	√	√	√
United Kingdom	UK	√	√	√	√	√	√	√	√	√	√	√	√	√	√
German	GERMAN	√	√	√	√	√	√	√	√	√	√	√	√	√	√

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- * USA is the same as Code Page 437.
- ** These are scalable and provided with upright, italic, and bold as resident fonts.
- *** H-draft stands for high-speed draft.
- √: Supported

Resident font		OCR-A OCR-B H-draft*** Correspondence Nimbus Sans ** Timeless ** Courier scalable** Pica 10 Bold PS Draft Compress Elite 12 Courier 10											
National character set	Name in setup menu												
Swedish	SWEDISH	√	√	√	√	√	√	√	√	√	√	√	√
ISO 8859-1	ISO8859	√	√	√	√	√	√	√	√	√	√	√	√
ECMA94	ECMA94	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 437 *	PAGE437	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 850	PAGE850	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 852	PAGE852	√	√	√	√	√	√	√	√	√	√	√	√
Code two-Pass	PAGE852-T	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 855	PAGE855	√	√	√	√		√	√	√				
Code Page 860	PAGE860	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 863	PAGE863	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 865	PAGE865	√	√	√	√	√	√	√	√	√	√	√	√
Code Page 866	PAGE866	√	√	√	√		√	√	√				
Hungarian	HUNGARY	√	√	√	√	√	√	√	√	√	√	√	√
Hungarian two-pass	HUNG-T	√	√	√	√	√	√	√	√	√	√	√	√
Slovenian	SLOV	√	√	√	√	√	√	√	√	√	√	√	√
Slovenian two-pass	SLOV-T	√	√	√	√	√	√	√	√	√	√	√	√
Polish	POLISH	√	√	√	√	√	√	√	√	√	√	√	√
Polish two-pass	POLSH-T	√	√	√	√	√	√	√	√	√	√	√	√
Mazovian	MAZOWIA	√	√	√	√	√	√	√	√	√	√	√	√
Mazovian two-pass	MAZOW-T	√	√	√	√	√	√	√	√	√	√	√	√
Latin 2	LATIN2	√	√	√	√	√	√	√	√	√	√	√	√
Latin 2 two-pass	LATIN2-T	√	√	√	√	√	√	√	√	√	√	√	√

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- *** H-draft stands for high-speed draft.
- √: Supported

Resident font		OCR-A OCR-B H-draft*** Correspondence Nimbus Sans ** Timeless ** Courier scalable** Pica 10 Bold PS Draft Compress Elite 12 Courier 10											
National character set	Name in setup menu												
Kamenicky	KAMENIC	√	√	√	√	√	√	√	√	√	√	√	√
Kamenicky two-pass	KAMEN-T	√	√	√	√	√	√	√	√	√	√	√	√
Turkish	TURKY	√	√	√	√	√	√	√	√	√	√	√	√
Turkish two-pass	TURKY-T	√	√	√	√	√	√	√	√	√	√	√	√
Cyrillic	CYRILIC	√	√	√	√			√	√	√			
IBM 437	IBM437	√	√	√	√			√	√	√		√	
IBM 851	IBM851	√	√	√	√			√	√	√		√	
ELOT 928	ELOT928	√	√	√	√			√	√	√		√	
Code Page DHN	PG-DHN	√	√	√	√	√	√	√	√	√	√	√	√
Latin Polish	LATIN-P	√	√	√	√	√	√	√	√	√	√	√	√
ISO Latin	ISO-LTN	√	√	√	√	√	√	√	√	√	√	√	√
Lithuanian 1	LITHUA1	√	√	√	√			√	√	√	√	√	√
Lithuanian 2	LITHUA2	√	√	√	√			√	√	√			
MIK	MIK	√	√	√	√			√	√	√			
Macedonian	MACEDON	√	√	√	√			√	√	√			
ABG	ABG	√	√	√	√			√	√	√			
ABY	ABY	√	√	√	√			√	√	√			
Code Page MAC	PG-MAC	√	√	√	√			√	√	√			
ELOT927	ELOT927	√	√	√	√			√	√	√			
DEC Greek	DEC GR	√	√	√	√			√	√	√			
Greek 11	GREEK 11	√	√	√	√			√	√	√			
Code Page 862	PG862	√	√	√	√	√	√						
Hebrew Old	HBR-OLD	√	√	√	√	√	√						
Hebrew DEC	HBR-DEC	√	√	√	√	√	√						
ISO-Turkish	ISO-TUK	√	√	√	√	√	√	√	√	√	√	√	√
RUSCII		√	√	√	√	√	√	√	√	√	√	√	√
LATIN-9		√	√	√	√	√	√	√	√	√	√	√	√

* USA is the same as Code Page 437.

** These are scalable and provided with upright, italic, and bold as resident fonts.

*** H-draft stands for high-speed draft.

√/: Supported

RESIDENT FONTS

This appendix provides print samples of the printer's nineteen resident fonts.



COURIER 10	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
PRESTIGE ELITE 12	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
DRAFT 12	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
COMPRESSED	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
PICA 10	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
CORRESPONDENCE 10	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
HIGH-SPEED DRAFT 12	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
BOLDFACE PS	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
OCR-B 10	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
OCR-A 10	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.

COURIER (SCALABLE)

Normal	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Bold	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Italic	<i>The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.</i>

**NIMBUS SANS ®
(SCALABLE)**

Normal	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Bold	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Italic	<i>The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.</i>

TIMELESS (SCALABLE)

Normal	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Bold	The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.
Italic	<i>The 24-wire dot-matrix printer prints quality characters and symbols using a variety of sizes and fonts.</i>

GLOSSARY OF TERMS

A4 size	A standard paper size used in Japan and other countries. Paper is 210 x 295 mm (8.25 x 11.6 inches).
Application software	SOFTWARE PROGRAMS THAT PERFORM TASKS ON A COMPUTER. SUCH PROGRAMS INCLUDE WORD PROCESSING, DATABASE MANAGEMENT, AND ACCOUNTING, FOR EXAMPLE.
ASCII	The acronym for American National Standard Code for Information Interchange. ASCII is a set of 256 codes (numbered 0 to 255) used to communicate information between a computer and another device such as a printer.
Baud rate	The speed, in bits per second, at which data is transmitted to a device such as a printer. Baud rates apply to serial data only. 1200 baud equals approximately 120 characters per second.
Bidirectional printing	Alternate printing of lines from left to right and right to left. Bidirectional printing is faster than unidirectional printing because there are no carriage returns.
Bit	The smallest unit of information in computer memory. A bit is a single digit, either a 1 or a 0, in the binary numbering system. Eight bits equal one byte.
Buffer	A storage area for data in the printer or computer. The printer's buffer consists of a print buffer and a download buffer. The print buffer holds data to be printed. The download buffer holds downloaded data such as download (soft) fonts.
Byte	A byte consists of eight bits that constitute one symbol. A byte represents a single character, such as number, letter, or special control character.

Carriage return (CR)	The return of the print head carriage to the beginning of the next line.
Centronics interface	A type of parallel interface. See Parallel interface.
Column	A vertical section on a printed page. This printer can print 80-column pages at 10-pitch (10 characters per inch).
Command set	A set of print and format commands used to control the printer. Each printer has its own resident command sets embedded in the printer firmware. These command sets are actuated by codes sent from the host computer.
Condensed print	Print that uses “condensed” characters. Condensed characters are narrower than regular characters. Using condensed print increases the number of characters per line.
Continuous forms	Connected, fan-folded sheets of paper that are fed into the printer using forms tractors. The fan-folded sheets are separated by tearing them at their perforations.
Control panel	A panel containing the printer indicators and buttons. The control panel is used to control printer operations, such as loading paper, selecting print features, and changing setup options.
cpi	Characters per horizontal inch. Also referred to as pitch. For example, 12-pitch means 12 cpi.
cps	Characters per second.
Cut sheets	See Single sheets.
Defaults	Settings selected automatically by the printer when power is turned on. Enter setup mode to change the defaults to ensure compatibility with your system hardware and software.
Dot matrix	The grid used to print characters on a dot matrix printer. Each dot corresponds to a wire in the print head.

Downloading	Transferring soft fonts from the computer to the printer's memory. Downloading allows you to use fonts not resident in the computer.
dpi	Dots per inch.
Emulation	A command set that allows one printer to print like another printer. This printer has three resident emulations: Fujitsu DPL24C PLUS (native command set), IBM proprinter XL24E, and Epson ESC/P2.
Font	A complete set of printable characters having the same size and style. For example, Courier 10 and Prestige Elite 12 are commonly used fonts.
Form feed (FF)	A signal to the printer to advance the paper forward one page. Form feeds can be executed either by your software or by holding down the LF/FF button on the printer control panel.
Graphics printing	Controlling the print head wires (dots) individually to produce a picture or an image on the page.
Hexadecimal	A base-16 numbering system (also commonly referred to as hex numbers). Since a base-16 system requires 16 digits, numbers 0 through 9 and letters A through F are used. Expressing binary numbers in hexadecimal uses fewer digits.
Hex dump	A hexadecimal printout of control codes and data. Hex dumps are used to debug computer programs and to troubleshoot printer malfunctions. To print a hex dump on the printer, use the HEX-DUMP function in setup mode.
Interface	A connection that allows communication from one part of a system to another. For example, electrical signals are transferred between the computer and printer over an interface cable.
K byte	Kilobyte. 1K byte equals 1024 bytes.

LAN interface	An interface for the local area network that supports the use of 10Base-T and 100Base-TX cables. (The use of Category 5 or greater TX cables is supported.) The maximum cable length supported is 100 meters.
Letter size	A standard paper size used in the United States and other countries. Paper is 8-1/2 x 11 inches (215.9 x 279.4 mm).
Line feed (LF)	A signal to the printer that advances the paper forward one line. Line feeds can be executed either by your software or by pressing the LF/FF button on the printer control panel.
Line spacing	The vertical spacing between lines, measured in lines per inch.
lpi	Lines per inch. Used to measure line spacing.
Monospacing	Character spacing in which each printed character has the same width. Also called fixed pitch, monospacing is the opposite of proportional spacing. Typewriter or computer-printed text is typically monospaced.
Nonresident font	Fonts not present (resident) in the printer's permanent memory. Soft fonts and fonts on font cards are examples of nonresident fonts.
Normal mode	One of the printer's two operating modes. In normal mode, the control panel can be used to perform everyday printer operations, such as loading and unloading paper, feeding paper, and selecting print features. See also Setup mode.
Offline	When the printer is offline, it receives commands from the printer control panel rather than from the computer. "Offline" indicates that the printer is not "online" with the computer.
Online	When the printer is online, it is ready to receive or is receiving commands from the computer. The printer must be online to print.
Parallel interface	A standard computer interface. Information is transferred between devices over separate wires, allowing all of the bits that make up the character to be transmitted simultaneously (in parallel).

Park position	The position in which continuous forms paper is retracted or “parked” on the rear forms tractors. When continuous forms paper is loaded, it moves forward from the park position to the platen.
Permanent memory	Memory that retains information even when power is turned off. The printer’s permanent memory retains the default settings specified using the printer setup mode.
Pitch	Characters per horizontal inch (cpi).
Platen	A hard rubber cylinder that moves paper forward during printing.
Proportional spacing	Character spacing in which wide characters occupy more space than do narrow characters. For example, characters such as “W” or “M” occupy more horizontal space than do characters such as “i” or “l.” Many soft fonts are proportionally spaced. Sometimes designated PS, proportional spacing is the opposite of monospacing.
Protocol	A set of instructions that control how data is transmitted between devices such as a computer and printer.
Rear feed	In rear feed, paper is fed from the rear of the printer. The forms tractor unit pushes paper into the printer.
Resident fonts	Fonts present (resident) in the printer’s permanent memory. For this printer, the resident fonts are Courier 10, Prestige Elite 12, Pica 10, OCR-B 10, OSR-A 10, Boldface PS, Compressed font, Correspondence, Draft, and High-speed Draft. Unlike soft fonts, resident fonts can always be accessed.
RS-232C interface	A type of serial interface. See Serial interface.
Self-test	A test that determines whether the printer is working correctly. Test pages are printed to show print quality and verify whether all characters print. The self-test only tests the printer. It does not test how the computer works with the printer.

Serial interface	A standard computer interface. Information is transferred between devices over a single wire (although other wires are used for control). A serial interface can use an interface cable greater than 3 meters (10 feet). A long cable is often necessary in networking environments, where the printer may be shared.
Setup mode	One of the printer's two operating modes. In setup mode, the controlpanel can be used to select the printer default settings, such as print features, hardware options, and top-of-form. Setup mode also provides some diagnostic functions. See also Normal mode.
Shadow printing	Shadow printing prints characters twice for emphasis. Characters printed the second time are shifted slightly to the right.
Single sheets	Single sheets are sheets of paper, envelopes, and noncontinuous multipart forms fed into the printer using the cut sheet stand. Single sheets are also called cut sheets.
Soft fonts	Fonts downloaded from a disk to the printer memory. Soft fonts are also referred to as downloaded fonts. Unlike resident fonts, soft fonts are available only when in the printer memory.
Software	Programs that control the computer and printer to perform specified tasks, such as word processing, database management, and preparation of spreadsheets. Software is sometimes referred to as application software.
Top margin	The total space at the top of the printed page. The top margin is the sum of the top-of-form setting, the software-specified top margin, and the printer's TOP-MRG setting.
Top-of-form (TOF)	The logical top of the physical page, as "understood" by the printer when loading paper. The default TOF settings are 1 inch (25.4 mm) for both cut sheets and continuous forms.

Tractor feed

A method for feeding continuous forms forward for printing. Holes on the sides of the forms fit over sprockets on two tractors located inside the printer. The forms are pushed for rear feeding.

Unidirectional printing

Printing is performed in one direction only, left to right. Unidirectional printing is slower than bidirectional printing, but the vertical alignment is more accurate. Unidirectional printing is useful when precise vertical alignment is required, as in ruled tables.

USB interface

A serial bus standard. An abbreviation of Universal Serial Bus. HotSwap using Plug&Play is available. The maximum cable length is five meters.
The transmission mode is 12 Mbps + 0.25% at full speed.

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