A

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
Ribbon subcassette
   Black ribbon
	CA02374-C104
	
	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.

B

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

		80 columns	136 columns
Continuous	Width:	102–267 mm (4–10.5 in)	102-420mm (4-16.5 in)
	Length:	102 mm (4 in) or greater	Same as left
Cut sheets	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
- Fujitsu character sets (691 characters)

ESC/P2:
- 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

Specifications

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:

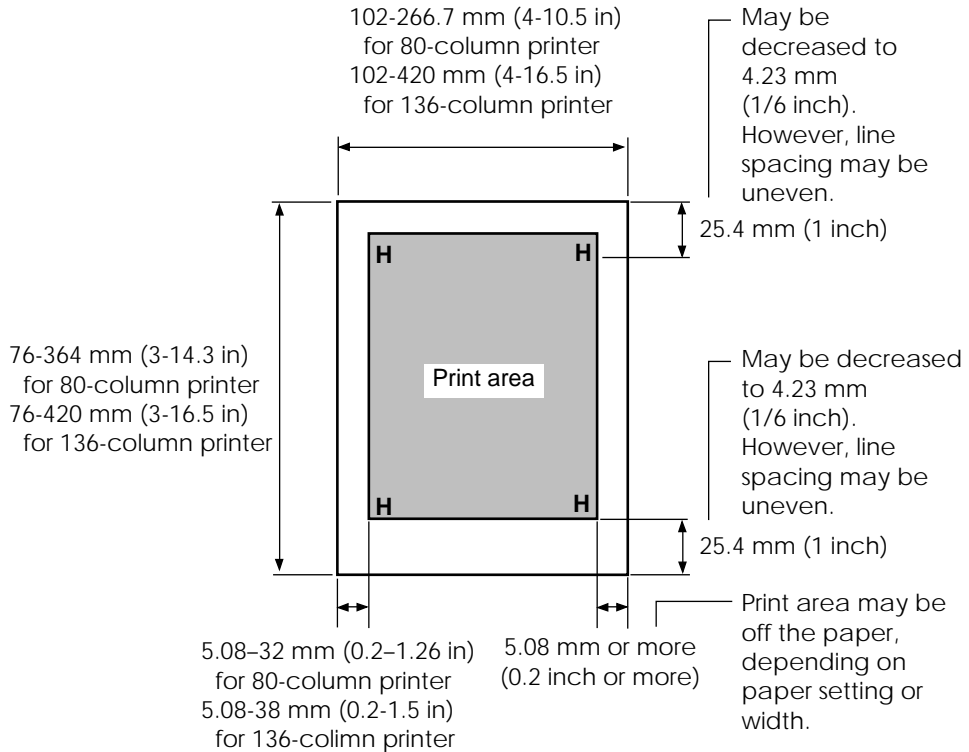| Model	Regulation	Country
M33331A/M33333A	UL 60950 (for 100 to 120 VAC)	United States
	CSA-C22.2 No.60950 (for 100 to 120 VAC)	Canada
M33331B/M33333B	TÜV EN60950 (for 220 to 240 VAC)	Germany Europe

EMI regulation:

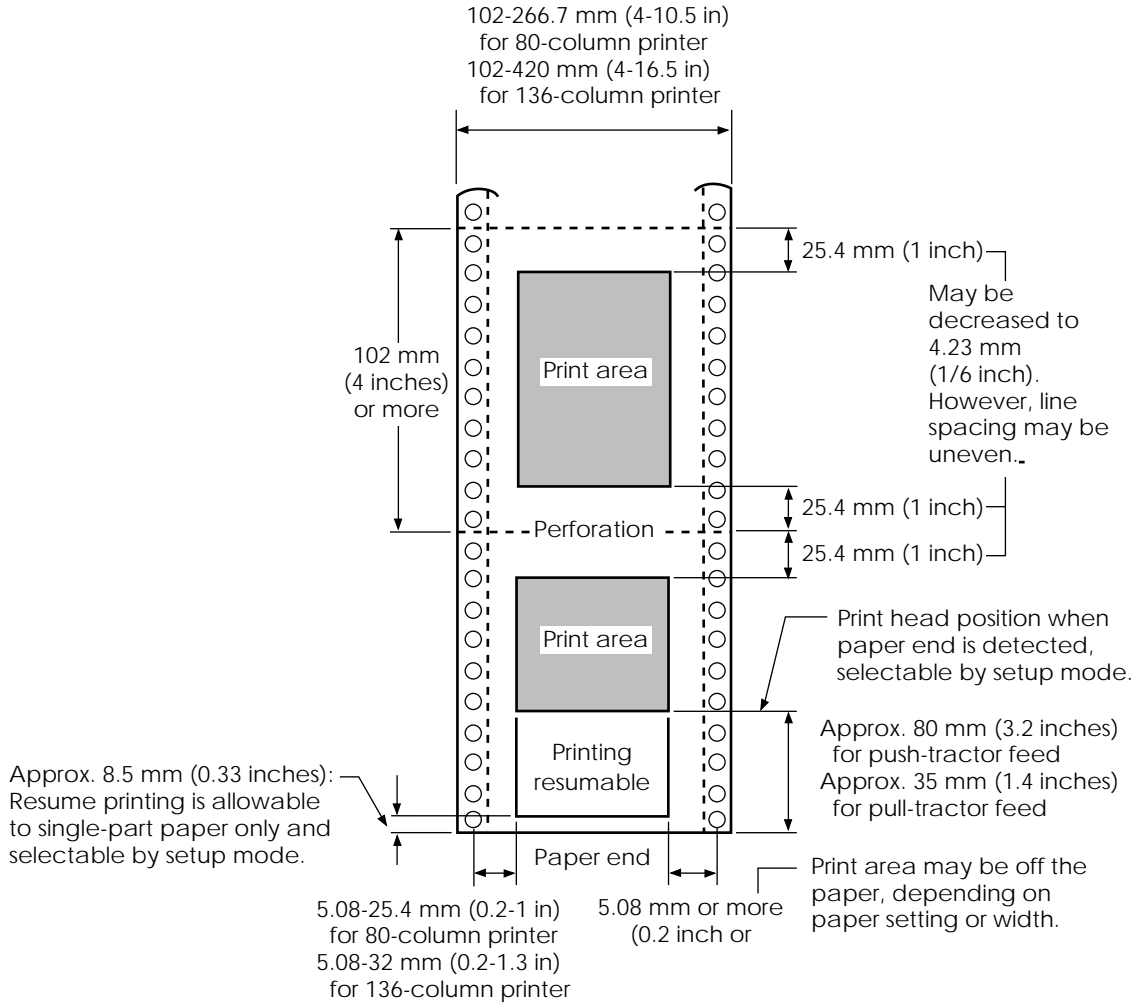| Model	Regulation	Country
M33331A/M33333A	FCC Part 15B class B	United States
	ICES-003 class B	Canada
M33331B/M33333B	EN 55022	class BEurope
	AS/NZS 3548 class B	Australia and New Zealand
M33331A/M33333A	CNS 13438 class B	Asia
M33331B/M33333B	CNS 13438 class B	Taiwan

Specifications

PAPER SPECIFICATIONS   **Print Area**

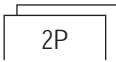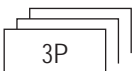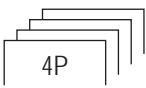This section illustrates the recommended print area for single sheets and continuous forms.

102-266.7 mm (4-10.5 in) for 80-column printer
102-420 mm (4-16.5 in) for 136-column printer

May be decreased to 4.23 mm (1/6 inch). However, line spacing may be uneven.

25.4 mm (1 inch)

76-364 mm (3-14.3 in) for 80-column printer
76-420 mm (3-16.5 in) for 136-column printer

Print area

May be decreased to 4.23 mm (1/6 inch). However, line spacing may be uneven.

25.4 mm (1 inch)

H   H

H   H

5.08–32 mm (0.2–1.26 in) for 80-column printer
5.08-38 mm (0.2-1.5 in) for 136-colimn printer

5.08 mm or more (0.2 inch or more)

Print area may be off the paper, depending on paper setting or width.

Print area for single sheets

102-266.7 mm (4-10.5 in)
for 80-column printer
102-420 mm (4-16.5 in)
for 136-column printer

102 mm
(4 inches)
or more

Print area

Perforation

Print area

Printing
resumable

Paper end

25.4 mm (1 inch)

May be
decreased to
4.23 mm
(1/6 inch).
However, line
spacing may be
uneven.

25.4 mm (1 inch)

25.4 mm (1 inch)

Print head position when
paper end is detected,
selectable by setup mode.

Approx. 80 mm (3.2 inches)
for push-tractor feed
Approx. 35 mm (1.4 inches)
for pull-tractor feed

Print area may be off the
paper, depending on
paper setting or width.

Approx. 8.5 mm (0.33 inches):
Resume printing is allowable
to single-part paper only and
selectable by setup mode.

5.08-25.4 mm (0.2-1 in)
for 80-column printer
5.08-32 mm (0.2-1.3 in)
for 136-column printer

5.08 mm or more
(0.2 inch or

Print area for continuous forms

Specifications

Paper Thickness

Paper thickness is given by the weight of the paper in either grams per square meter (g/m^2) 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	Top Bottom	40-64 g/m^2 (34-55 kg or 11-17 lb) 40-81 g/m^2 (34-70 kg or 11-22 lb)
3P	Top Middle Bottom	40-64 g/m^2 (34-55 kg or 11-17 lb) 40-64 g/m^2 (34-55 kg or 11-17 lb) 40-81 g/m^2 (34-70 kg or 11-22 lb)
4P	Top Middle Middle Bottom	40-64 g/m^2 (34-55 kg or 11-17 lb) 40-64 g/m^2 (34-55 kg or 11-17 lb) 40-64 g/m^2 (34-55 kg or 11-17 lb) 40-81 g/m^2 (34-70 kg or 11-22 lb)
5P	Top Middle Middle Middle Bottom	40-52 g/m^2 (34-45 kg or 11-17 lb) 40-52 g/m^2 (34-45 kg or 11-17 lb) 40-52 g/m^2 (34-45 kg or 11-17 lb) 40-52 g/m^2 (34-45 kg or 11-17 lb) 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/m^2)

lb: Weight in pounds of 500 sheets of 17 x 22 inch paper (3.76 g/m^2)

Type of Paper	Number of Parts	Thickness
Carbon-backed	*Do not use in high humidity environments.*	
2P	Top Bottom	40-64 g/m² (34-55 kg or 11-17 lb) 40-81 g/m² (34-70 kg or 11-22 lb)
3P	Top Middle Bottom	40-64 g/m² (34-55 kg or 11-17 lb) 40-64 g/m² (34-55 kg or 11-17 lb) 40-81 g/m² (34-70 kg or 11-22 lb)
4P	Top Middle Middle Bottom	40-64 g/m² (34-55 kg or 11-17 lb) 40-64 g/m² (34-55 kg or 11-17 lb) 40-64 g/m² (34-55 kg or 11-17 lb) 40-81 g/m² (34-70 kg or 11-22 lb)
5P	Top Middle Middle Middle Bottom	40-52 g/m² (34-45 kg or 11-14 lb) 40-52 g/m² (34-45 kg or 11-14 lb) 40-52 g/m² (34-45 kg or 11-14 lb) 40-52 g/m² (34-45 kg or 11-14 lb) 40-64 g/m² (34-55 kg or 11-17 lb)
Carbon-interleaved	*Avoid using carbon-interleaved single sheets.*	
2P	Top Carbon Bottom	35-64 g/m² (30-55 kg or 9-17 lb) Counted as one sheet 35-81 g/m² (30-70 kg or 9-22 lb)
3P	Top Carbon Middle Carbon Bottom	35-52 g/m² (30-45 kg or 9-14 lb) Counted as one sheet 35-52 g/m² (30-45 kg or 9-14 lb) Counted as one sheet 35-64 g/m² (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)

Specifications

C

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)
$\quad n_1 = 0$: Normal	
$\qquad\quad$ 1: Outline	
$\qquad\quad$ 2: Shaded	
$\qquad\quad$ 3: Outline and shaded	
$\qquad\quad$ 4: Thin outline	
$\qquad\quad$ 5: Thin shaded	
$\qquad\quad$ 6: Thin outline and shaded	
$\quad n_2 = 0$: Transparent	
$\qquad\quad$ 1: Light dot matrix	
$\qquad\quad$ 2: Heavy dot matrix	
$\qquad\quad$ 3: Vertical bars	
$\qquad\quad$ 4: Horizontal bars	
$\qquad\quad$ 5: Slants	
$\qquad\quad$ 6: Back slants	
$\qquad\quad$ 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)
$\quad$ (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)

Command Sets

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	SP
Backspace	BS
Carriage return	CR
Elite pitch (12 cpi)	ESC M
Pica pitch (10 cpi)	ESC P
Proportionally spaced characters on/off (on: *n*=1, off: *n*=0)	ESC p (*n*)
Set character pitch to (n-1)/120 inch $(1 \le n \le 127)$	ESC US (*n*)
Set character pitch to n/180 inch $(0 \le n \le 255)$	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*)

Command
Sets

Function	Command
Tabulation	
Horizontal tab execution	HT
Set horizontal tabs	ESC D (n_1) ... (n_k)
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. $(1 \leq n \leq 255)$ $(1 \leq k \leq 255)$	NUL
Move to print column n $(1 \leq n \leq 255)$	ESC HT (n)
Move dot column n/360 inch $(n = n_1 + n_2 \times 256)$ The value below is for 136-column printers. $(0 \leq n_1\ 255)$ $(0 \leq n_2 \leq 19)$ $(0 \leq n_2 \times 256 + n_1 \leq 4895)$	ESC \$ (n_1) (n_2)
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.	ESC e R (s) (n_1) (n_2) (n_3)
Vertical tab execution	VT
Set vertical tabs	ESC B (n_1) ... (n_k)
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. $(1 \leq n \leq 255)$ $(1 \leq k \leq 64)$	NUL
Move to line n $(1 \leq n \leq 255)$	ESC VT (n)
Page Formatting	
Set right margin $(0 \leq n \leq 255)$	ESC Q (n)
Set left margin $(0 \leq n \leq 255)$	ESC l (n)
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) or ESC e c (n) or ESC FF (n)

Function	Command
Set page length to n inches $(1 \le n \le 22)$	ESC C NUL (*n*) or ESC e C NUL (*n*) or ESC FF NUL (*n*)
Set page length to n/360 inch $(n = n_1 \text{ x } 256 + n_2)$ $(0 \le n_1\ n_2 \le 255)$ $(1 \le n_1 \text{ x } 256 + n_2 \le 7920)$	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 #

Command Sets

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
	ESC e C (*n*)

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 E
	(n_1) (n_2) (n_3)

Word Processing	
Line justification on	ESC m
Automatically center printing	ESC c
Reset word processing features	ESC x
Font Selection and Downloading	
Select font m with source and style set by n •*m* (bits 0 and 1: Font device selection)	ESC % (*m*) (*n*)

Bit 1	Bit 0	Selection of font
0	0	Resident font
0	1	Downloaded font
1	0	Resident font

•*m* (bits 2 and 3: Print quality specification

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)

Function	Command
• *n* (bit 0 to 2: Specification of font number) (1) Resident fonts (2) Downloaded fonts $n = 0$: Downloaded font 0 1: Downloaded font 1	

Select print quality (font attributes)
 $n = 0$: 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)
	ESC e q (*n*)

Select spacing mode (font attributes) $n = 0$: Fixed pitch font 1: Proportional spacing font	ESC e s (*n*)

Select character pitch (n/360 inch, font attributes)
 $(0 \le n_1 \le 255)\ (1 \le n_2 \le 255)$
 $(n = n_1 \times 256 + n_2)$
 Ex. $n = 36$: 10 pitch
  30: 12 pitch
  24: 15 pitch
  21: 17 pitch
	ESC e p (n_1) (n_2)

Condense/enlarge vertically (font attributes) $n = 1$: Executed 0: Not executed	ESC e A (*n*)
Select point size (n/1200 inch, font attributes) $(0 \le n_1 \le 255)\ (0 \le n_2 \le 255)$ $(n = n_1 \times 256 + n_2)$ Ex. $n = 166$: 10 point	ESC e v (n_1) (n_2)

(Resident fonts table, nested under item (1))

n	**m = 0, 0**	**m = 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	

Command Sets

Function	Command

Select character style (font attributes)
    n = 0: Upright
        1: Italic
	ESC e i (n)

Select stroke weight (font attributes)
    n = 249: –7 (reserved)
        251: –5 (reserved)
        253: –3 (light)
          0: 0 (medium)
          3: 3 (bold)
          5: 5 (black)
          7: 7 (ultrablack)
	ESC e w (n)

Select typeface (font attributes)
    n = 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 (n)

Select font by I.D. (font attributes)	ESC e F (n)

n	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
	ESC : NUL (m) (n)

Create download font • m (bits 4 and 5: Specifies the quality of characters to be registered)	ESC & (m) (Cs) (Ce) ($data$)

• m (bits 4 and 5: Specifies the quality of characters 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)

• m (bit 0: Specifies external font number to be registered)

Bit 0	Font number selection	Remarks
0	Downloaded font 0	At power on, resident font 0 is automatically downloaded.
1	Downloaded font 1	At power on, resident font 1 is automatically downloaded.

• m (bits 1, 2, 3, 6, 7) Not used (don't care)
• Cs (Download start character, ASCII code)
• Ce (Download end character, ASCII code)

Decimal	0 - Cs, Ce < 255
Hex	00 - Cs, Ce - FF

  Precaution: $Ce \geq Cs$
• $data$ (More than one byte of data containing bit map data)

(Reserved)	ESC e D ($data$);

Command Sets

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

$ch_1 ...ch_n$:   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.

Command Sets

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

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, BOLDFCE, 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>CNTONLY</u>, DETECT, IGNORE	ESC 9 (ESC 8)
Print direction	<u>BI-DIR</u>, UNI-DIR	ESC U

Underline: Factory default
(   ):   Cancel command

Command Sets

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	ESC W (n)
(on: $n = 1$, off: $n = 0$)	
Double-height/double-width characters	ESC [@ $(n_1)(n_2)$
$n_1 = 4$, $n_2 = 0$, $m_1 = 0$, $m_2 = 0$	(m_1) ... (m_4)
m_3 controls character height and line spacing:	

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:

m_4	Width
0	Unchanged
1	Normal
2	Double

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

Command Sets

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

Function	Command
Character Set Control	
Select character set 1	ESC 7
Select character set 2	ESC 6
Print $n_1 + n_2$ x 256 characters from all-character set	ESC \ (n_1) (n_2) (*chars*.)
(*chars*.: codes of characters to print, $0 \leq chars. \leq 255$)	
Print a character from all-character set	ESC ^ (*char*.)
(*char*.: a code of character to print, $0 \leq char. \leq 255$)	
Select code page table n	ESC [T (n_1) (n_2)
$(0 \leq n_1, n_2 \leq 255)$ (n = $n_1 + n_2$ x 256)	0 0 (c_1) (c_2)

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

Function	Command
Clear input buffer	CAN
Select printer	DC1
Deselect printer (ignore input)	ESC Q #
Downloading	
Select resident or downloaded font	ESC I (*n*)
Ex. *n* = 0: Resident Draft	
2: Resident Courier	
4: Downloaded Draft	
6: Downloaded Courier	
Create download font	ESC = (n_1) (n_2) ID (m_1) (m_2) (*data*)

Command Sets

Function	Command
Bit Image Graphics	
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*)
High-resolution graphics	ESC [g $(n_1)(n_2)$ (*m*) (*data*)
Select graphics mode (in AG mode only)	ESC * (*m*) $(c_1)(c_2)$ (*data*)
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 (*data*)
Select default settings	ESC [K $(n_1)(n_2)$ (*i*) (*ID*) $(p_1)(p_2)$

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: $n = 0$)	

Command Sets

Function	Command
Select line	ESC (- $(n_1)(n_2)$
$n_1 = 3$, $n_2 = 0$, $d_1 = 1$	$(d_1)(d_2)(d_3)$
$d_2 = 0$: 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	ESC ! (n)
This command allows you to combine	
various printing styles. The value	
of n is the sum of the values of the	
styles you want to combine.	
$n = 0$: Pica pitch	
1: Elite pitch	
2: Proportional spacing	
4: Condensed	
8: Shadow	
16: Bold	
32: Double-width	
64: Italics	
128: Underline	
Horizontal Control	
Space	SP
Backspace	BS
Carriage return	CR
Set elite pitch	ESC M
Set pica pitch	ESC P
Set 15 CPI	ESC g
Proportionally spaced characters on/off	ESC p (n)
(on: $n = 1$, off: $n = 0$)	
Set inter-character space to n/120 inch (for	ESC SP (n)
draft) or n/180 inch (for letter and	
proportional) $(0 \leq n \leq 127)$	

Function	**Command**
Set character pitch to $(n_1 + n_2 \times 256)/360$ inch $(0 \le n_1 \le 255)$ $(0 \le n_2 \le 4)$	ESC c (n_1) (n_2)
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 (U (n_1) (n_2) (d)
Vertical Control	
Line feed	LF
Form feed FF	
Advance paper n/180 inch $(1 \le n \le 255)$	ESC J (n)
Set line spacing to 1/8 inch	ESC 0
Set line spacing to n/180 inch $(0 \le n \le 255)$	ESC 3 (n)
Set line spacing to n/60 inch $(0 \le n \le 127)$	ESC A (n)
Set line spacing to 1/6 inch	ESC 2
Set line spacing to n/360 inch $(0 \le n \le 255)$	ESC + (n)
Tabulation	
Horizontal tab execution	HT
Set horizontal tabs The values of n_1 to n_k in this command are the ASCII values of the print columns (at the current character width) at which tabs are to be set. $(1 \le n \le 255)$ $(1 \le k \le 32)$	ESC D (n_1) ... (n_k) NUL
Move print position n/60[*1] inch right from left margin $(n = n_1 + n_2 \times 256)$	ESC $ (n_1) (n_2)
Move print position n/120[*1] inch (for draft) or n/180[*1] inch (for letter) left or right from the current position $(n = n_1 + n_2 \times 256)$	ESC \ (n_1) (n_2)
Vertical tab execution	VT

[*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 $(d_1 + d_2$ x $256)/360^{(*1)}$ 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 $(d_1 + d_2$ x $256)/360^{(*1)}$
 inch
    $n_1 = 2, n_2 = 0$
    $(0 \leq d_1 \leq 255)$ $(0 \leq d_2 \leq 127)$
    $-32768 \leq d_1 + d_2$ x $256 \leq 32768$
	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 = $(t_1 + t_2$ x $256)/360^{(*1)}$ inch
            $(0 \leq t_1 \leq 255)$ $(0 \leq t_2 \leq 127)$
    • Bottom margin = $(b_1 + b_2$ x $256)/360^{(*1)}$ 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 $(d_1 + d_2$ x $256)/360^{(*1)}$ 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 $n_1 + n_2$ x 256 characters from all-character set $(0 \le n_1 \le 255)$ $(0 \le n_2 \le 127)$ $(0 \le n_1 + n_2$ x $256 \le 255)$ $(0 \le character\ codes \le 254)$	ESC (^ (n_1) (n_2) $(character\ codes)$
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	
($0 \le n_1 \le 255$) ($0 \le n_2 \le 127$)	
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.

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	Direc-tion	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	Direc- tion	Description
13	–	Select (SLCT)	Output	This signal is high when the printer is online.
14	–	$\overline{\text{Auto Feed XT}}$	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	–	$\overline{\text{Input Prime}}$ (INPRM)	Input	If this signal is low for more than 50 μs, the printer is reset to the initial condition and is placed online.
32	–	$\overline{\text{Fault}}$	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 ký resistor
36	–	$\overline{\text{SLCT-IN}}$	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	Direc- tion	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 estab- lished. 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 data and, after that, follows the Data Available signal.
13	–	X Flag	Output	Reverse data transfer phase: Data bit 1, then data bit 5

Interface

Pin No.	Return Pin No.	Signal name	Direc-tion	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	–	$\overline{\text{Data Available}}$	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 $\overline{\text{Data Strobe}}$ signals from the computer have the following timing with respect to the Busy and $\overline{\text{Acknowledge}}$ signals from the printer.

Data 1 to Data 8

$\overline{\text{Data Strobe}}$

BUSY

$\overline{\text{Acknowledge}}$

T4

T1 T2 T3   T5 T6

T1, T2, T3 > 1 µs
T4 < 1 µs
0 µs < T5 < 3 µs
2 µs < T6 < 6 µs
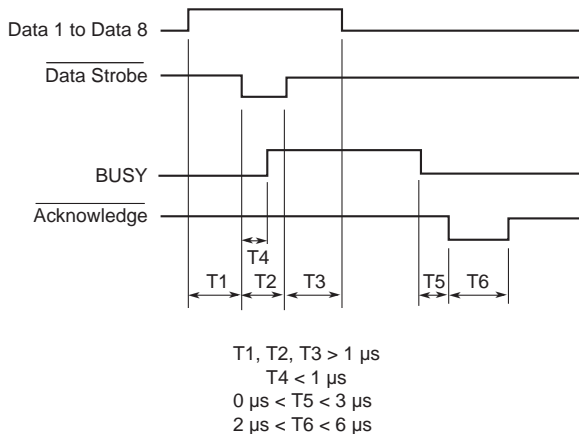
In bidirectional mode (nibblemode), this printer can send data to the computer. Data is sent in units of four bits (nibble) using four output signal lines as data paths. The following outlines one byte of data sent during reverse data transfer phase in nibble mode.

1284 Active
(from CPU)

Data Available (*)   Data bit 0   Data bit 4

X Flag   Data bit 1   Data bit 5

Ack Data Req   Data bit 2   Data bit 6

Printer Busy   Data bit 3   Data bit 7

Printer Clock

Host Busy
(from CPU)
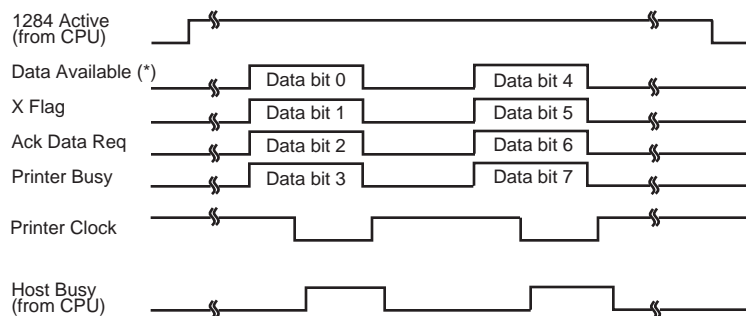
* $\overline{\text{Data Available}}$ is assigned for the cable.

INTERFACE INFORMATION

Interface

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	Direc- tion	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.

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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 HARDWRE 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.

```
                    Host                      Printer
                                      q
        TD    (Pin 2)  ——————    ——————   TD
        RD    (Pin 3)  ←——————    ——————→  RD
        DSR   (Pin 6)  ←—————      #  ——————→  DSR
                                w
        DTR   (Pin 20) ——————→       ——————   DTR (RC)
        RTS   (Pin 4)  ———— #        #  ——————→  RTS
        CTS   (Pin 5)  ←——————       #  ——————→  CTS
        CD    (Pin 8)  ←——————       #  ——————→  CD
        SG    (Pin 7)  ————————————————————   SG
```
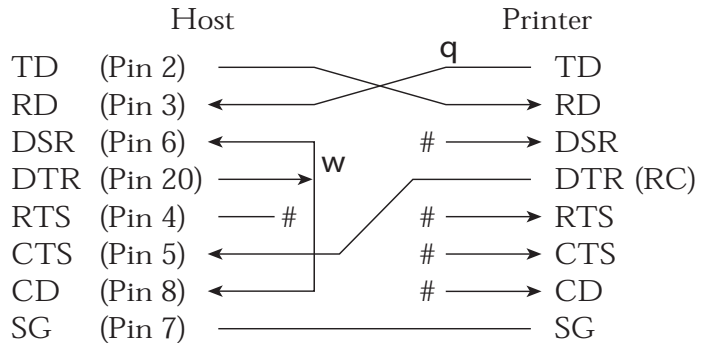
# indicates an open wire.

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.

```
            Host (DTE)                  Printer (DTE)
        TD    (Pin 2)  ——————    ——————   TD
        RD    (Pin 3)  ←——————    ——————→  RD
        DSR   (Pin 6)  ←——————    ——————→  DSR
        DTR   (Pin 20) ——————    ——————   DTR
        RTS   (Pin 4)  ————→       ←————  RTS
        CTS   (Pin 5)  ←————•      •————→  CTS
        CD    (Pin 8)  ←————       ————→  CD
        SG    (Pin 7)  ————————————————————   SG
```
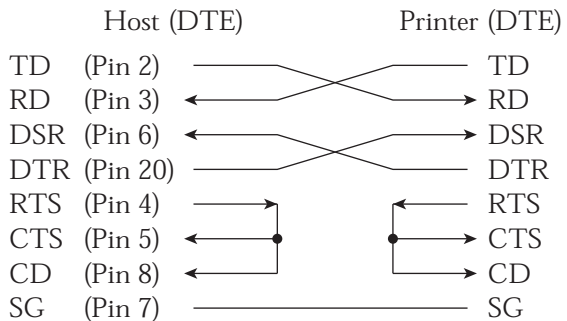
Serial Protocols

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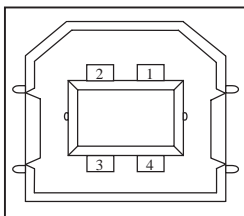
No.	Signal line name	Function
1	vbus	Power supply
2	D-	Data transfer
3	D+	Data transfer
4	GND	Signal ground
Shell	Shield	

- Connector specification

   Printer side   Type B receptacle (female)

                               Upstream port

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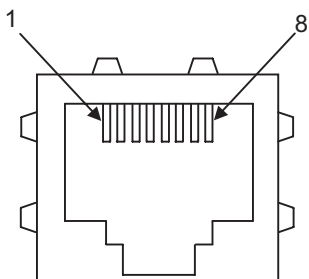
No.	Signal line name	DIR	Function
1	TXO+	NIC-HUB	Transmit data +
2	TXO-	NIC-HUB	Transmit data -
3	RXI+	HUB-NIC	Receive data +
4	-	-	-
5	-	-	-
6	RXI-	HUB-NIC	Receive data -
7	-	-	-
8	-	-	-

CHARACTER SETS

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

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

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	░	└	╨	α	≡
1	SOH	DC1	!	1	A	Q	a	q	SOH	DC1	í		⊥	╤	ß	±
2	STX	DC2	"	2	B	R	b	r	STX	DC2	ó	▓			Γ	≥
3	ETX	DC3	#	3	C	S	c	s	ETX	DC3	ú				π	≤
4	EOT	DC4	$	4	D	T	d	t	EOT	DC4	ñ	┤	—	┗	Σ	⌠
5	ENQ	NAK	%	5	E	U	e	u	ENQ	NAK	Ñ	╡	┼	┌	σ	⌡
6	ACK	SYN	&	6	F	V	f	v	ACK	SYN	ª				µ	÷
7	BEL	ETB	'	7	G	W	g	w	BEL	ETB	º	┐			τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕		┴	Φ	°
9	HT	EM	)	9	I	Y	i	y	HT	EM	⌐	╢	┟		θ	•
A	LF	SUB	*	:	J	Z	j	z	LF	SUB	¬				Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╖		■	δ	√
C	FF	FS	,	<	L	\	l	|	FF	FS	¼	╜		■	∞	ⁿ
D	CR	GS	-	=	M	]	m	}	CR	GS	¡	┘		■	ø	²
E	SO	RS	.	>	N	^	n	~	SO	RS	«	┙	╬	■	ε	■
F	SI	US	/	?	O	_	o	DEL	SI	US	»	┐			∩	SP

Code Page 437 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	ü	æ	í		⊥	╤	ß	±
2	STX	DC2	"	2	B	R	b	r	é	Æ	ó	▓			Γ	≥
3	♥	DC3	#	3	C	S	c	s	â	ô	ú				π	≤
4	♦	DC4	$	4	D	T	d	t	ä	ö	ñ		—	┗	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ		┼	┌	σ	⌡
6	♠	SYN	&	6	F	V	f	v	å	û	ª				µ	÷
7	BEL	ETB	'	7	G	W	g	w	ç	ù	º	┐			τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕		┴	Φ	°
9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐	╢	┟		θ	•
A	LF	SUB	*	:	J	Z	j	z	è	Ü	¬				Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╖		■	δ	√
C	FF	FS	,	<	L	\	l	|	î	£	¼	╜		■	∞	ⁿ
D	CR	GS	-	=	M	]	m	}	ì	¥	¡	┘		■	ø	²
E	SO	RS	.	>	N	^	n	~	Ä	₧	«	┙	╬	■	ε	■
F	SI	US	/	?	O	_	o	DEL	Å	ƒ	»	┐			∩	SP

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	░	└	╨	α	≡
1	SOH	DC1	!	1	A	Q	a	q	SOH	DC1	í	▒	┴	╤	ß	±
2	STX	DC2	"	2	B	R	b	r	STX	DC2	ó	▓	┬	╥	Γ	≥
3	ETX	DC3	#	3	C	S	c	s	ETX	DC3	ú	│	├	╙	π	≤
4	EOT	DC4	$	4	D	T	d	t	EOT	DC4	ñ	┤	─	╘	Σ	⌠
5	ENQ	§	%	5	E	U	e	u	ENQ	NAK	Ñ	╡	┼	╒	σ	⌡
6	ACK	SYN	&	6	F	V	f	v	ACK	SYN	ª	╢	╞	╓	µ	÷
7	BEL	ETB	'	7	G	W	g	w	BEL	ETB	º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕	╚	╪	Φ	°
9	HT	EM	)	9	I	Y	i	y	HT	EM	⌐	╣	╔	┘	Θ	•
A	LF	SUB	*	:	J	Z	j	z	LF	SUB	¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	|	FF	FS	¼	╝	╠	▄	∞	ⁿ
D	CR	GS	–	=	M	]	m	}	CR	GS	¡	┘	═	▌	ø	²
E	SO	RS	.	>	N	^	n	~	SO	RS	«	┐	╬	▐	ε	■
F	SI	US	/	?	O	_	o	DEL	SI	US	»	┐	╧	▀	∩	SP

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	ü	æ	í	▒	┴	╤	ß	±
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	EOT	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	å	û	ª	╢	╞	╓	µ	÷
7	BEL	ETB	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A	LF	SUB	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D	CR	GS	–	=	M	]	m	}	ì	¥	¡	╜	═	▌	ø	²
E	SO	RS	.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F	SI	US	/	?	O	_	o	DEL	Å	ƒ	»	┐	╧	▀	∩	SP

Character
Sets

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				0	@	P	`	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

UK (British English)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥		£	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

GERMAN (German)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	`	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Ä	k	ä	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ö	l	ö	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	Ü	m	ü	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	ß	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

SWEDISH (Swedish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	É	P	é	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦		¤	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Ä	k	ä	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ö	l	ö	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	Å	m	å	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	Ü	n	ü	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

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				°	À	Ð	à	ð
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3	♥		#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4	♦		$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5	♦	§	%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6	♦		&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D			−	=	M	]	m	}				½	Í	Ý	í	ý
E			.	>	N	^	n	~			®	¾	Î	Þ	î	þ
F			/	?	O	_	o				¯	¿	Ï	ß	ï	ÿ

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	Ç	É	á	░	└	ð	Ó	−
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	Ð	ß	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	Ê	Ô	=
3	♥		#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ò	¾
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
5	♦	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
6	♦		&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7			'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8			(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	Þ	°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
B			+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
C			,	<	L	\	l	|	î	£	¼	╝	╠	▄	ý	³
D			−	=	M	]	m	}	ì	Ø	¡	¢	═	¦	Ý	²
E			.	>	N	^	n	~	Ä	×	«	¥	╬	Ì	¯	■
F			/	?	O	_	o		Å	ƒ	»	┐	¤	▀	´	

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	Ç	É	á	░	└	đ	Ó	−
1			!	1	A	Q	a	q	ü	Ĺ	í	▒	┴	Đ	ß	˝
2			"	2	B	R	b	r	é	í	ó	▓	┬	Ď	Ô	˛
3	♥		#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ń	ˇ
4	♦		$	4	D	T	d	t	ä	ö	Ą	┤	─	ď	ń	˘
5	♦	§	%	5	E	U	e	u	ů	Ľ	ą	Á	┼	Ň	ň	§
6	♦		&	6	F	V	f	v	ć	ľ	Ž	Â	Ă	Í	Š	÷
7			'	7	G	W	g	w	ç	Ś	ž	Ě	ă	Î	š	¸
8			(	8	H	X	h	x	ł	ś	Ę	Ş	╚	ě	Ŕ	°
9			)	9	I	Y	i	y	ë	Ö	ę	╣	╔	┘	Ú	¨
A			*	:	J	Z	j	z	Ő	Ü	¬	║	╩	┌	ŕ	·
B			+	;	K	[	k	{	ő	Ť	ź	╗	╦	█	Ű	ű
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E			.	>	N	^	n	~	Ä	×	«	ż	╬	Ů	ţ	■
F			/	?	O	_	o		Ć	č	»	┐	¤		′	

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	ђ	љ	а	░	└	п	Я	э
1			!	1	A	Q	a	q	Ђ	Љ	А	▒	┴	Л	р	ы
2			"	2	B	R	b	r	ѓ	њ	б	▓	┬	М	Р	Ы
3	♥		#	3	C	S	c	s	Ѓ	Њ	Б	│	├	М	с	з
4	♦		$	4	D	T	d	t	ё	ħ	ц	┤	─	н	С	З
5	♦	§	%	5	E	U	e	u	Ё	Ћ	Ц	х	┼	Н	т	ш
6	♦		&	6	F	V	f	v	є	ќ	д	Х	╦	о	Т	Ш
7			'	7	G	W	g	w	Є	Ќ	Д	И	╠	п	у	э
8			(	8	H	X	h	x	ѕ	ў	е	И	╚	п	У	э
9			)	9	I	Y	i	y	Ѕ	Ў	Е	╣	╔	┘	ж	щ
A			*	:	J	Z	j	z	і	џ	ф	║	╩	┌	Ж	Щ
B			+	;	K	[	k	{	І	Џ	Ф	╗	╦	█	в	ч
C			,	<	L	\	l	|	ї	ю	г	╝	╠	▄	В	Ч
D			−	=	M	]	m	}	Ї	Ю	Г	й	═	й	ъ	§
E			.	>	N	^	n	~	ј	ъ	«	Й	╬	Й	я	¤
F			/	?	O	_	o		Ј	Ъ	»	┐		■		№

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	@	P	`	p	Ç	É	á	▓	└	╨	α	≡
1		!	1	A	Q	a	q	ü	À	í	░	┴	╤	ß	±
2	♥		"	2	B	R	b	r	é	È	ó	▓		╥	Γ	≥
3	♦	#	3	C	S	c	s	â	ô	ú	│		╥	π	≤
4	♦	$	4	D	T	d	t	ã	õ	ñ	┤		╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡		╞	σ	⌡
6	♠		&	6	F	V	f	v	Á	Ú	ª			╟	µ	÷
7		'	7	G	W	g	w	ç	ù	º				τ	≈
8		(	8	H	X	h	x	ê	Ì	¿			Φ	°
9		)	9	I	Y	i	y	Ê	Õ	Ò	╣		╒	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║		╓	Ω	·
B		+	;	K	[	k	{	í	¢	½	╗		■	δ	√
C		,	<	L	\	l	|	Ô	£	¼	╝		■	∞	ⁿ
D		-	=	M	]	m	}	ì	Ù	¡	╜		■	ø	²
E		.	>	N	^	n	~	Ã	₧	«	╛		╪	ε	■
F		/	?	O	_	o		Â	ó	»	┐		■	∩	

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	@	P	`	p	Ç	É	¦	▓	└	╨	α	≡
1		!	1	A	Q	a	q	ü	È	´	░	┴	╤	ß	±
2	♥		"	2	B	R	b	r	é	Ê	ó	▓		╥	Γ	≥
3	♦	#	3	C	S	c	s	â	ô	ú	│		╥	π	≤
4	♦	$	4	D	T	d	t	Â	Ë	¨			╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	Ï	¸	╡		╞	σ	⌡
6	♠		&	6	F	V	f	v	¶	û	³			╟	µ	÷
7		'	7	G	W	g	w	ç	ù	─				τ	≈
8		(	8	H	X	h	x	ê	¤	Î			Φ	°
9		)	9	I	Y	i	y	ë	Ô	⌐	╣		╒	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║		╓	Ω	·
B		+	;	K	[	k	{	ï	¢	½	╗		■	δ	√
C		,	<	L	\	l	|	î	£	¼	╝		■	∞	ⁿ
D		-	=	M	]	m	}	‾	Û	¾	╜		■	ø	²
E		.	>	N	^	n	~	À	Ù	«	╛		╪	ε	■
F		/	?	O	_	o		§	f	»	┐		■	∩	

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	@	P	`	p	Ç	É	á	▓	└	╨	α	≡
1		!	1	A	Q	a	q	ü	æ	í	░	┴	╤	ß	±
2	♥		"	2	B	R	b	r	é	Æ	ó	▓		╥	Γ	≥
3	♦	#	3	C	S	c	s	â	ô	ú	│		╥	π	≤
4	♦	$	4	D	T	d	t	ä	ö	ñ			╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡		╞	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª			╟	µ	÷
7		'	7	G	W	g	w	ç	ù	º				τ	≈
8		(	8	H	X	h	x	ê	ÿ	¿			Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣		╒	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║		╓	Ω	·
B		+	;	K	[	k	{	ï	ø	½	╗		■	δ	√
C		,	<	L	\	l	|	î	£	¼	╝		■	∞	ⁿ
D		-	=	M	]	m	}	ì	Ø	¡	╜		■	ø	²
E		.	>	N	^	n	~	Ä	₧	«	╛		╪	ε	■
F		/	?	O	_	o		Å	f	¤	┐		■	∩	

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	@	P	`	p	А	Р	а	▓	└	╨	р	Ё
1		!	1	A	Q	a	q	Б	С	б	░	┴	╤	с	ё
2	♥		"	2	B	R	b	r	В	Т	в	▓		╥	т	Є
3	♦	#	3	C	S	c	s	Г	У	г	│		╥	у	є
4	♦	$	4	D	T	d	t	Д	Ф	д			╘	ф	Ї
5	♣	§	%	5	E	U	e	u	Е	Х	е	╡		╞	х	ї
6	♠		&	6	F	V	f	v	Ж	Ц	ж			╟	ц	ў
7		'	7	G	W	g	w	З	Ч	з				ч	ў
8		(	8	H	X	h	x	И	Ш	и			ш	°
9		)	9	I	Y	i	y	Й	Щ	й	╣		╒	щ	•
A		*	:	J	Z	j	z	К	Ъ	к	║		╓	ъ	·
B		+	;	K	[	k	{	Л	Ы	л	╗		■	ы	√
C		,	<	L	\	l	|	М	Ь	м	╝		■	ь	№
D		-	=	M	]	m	}	Н	Э	н	╜		■	э	¤
E		.	>	N	^	n	~	О	Ю	о	╛		╪	ю	■
F		/	?	O	_	o		П	Я	п	┐		■	я	

HUNGARY/HUNG-T (Hungarian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á	▒	└	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▒	┬	╥	Γ	≥
3		♥	#	3	C	S	c	s	â	ő	ú	│	├	╙	π	≤
4		♦	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ó	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	ç	ú	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ú	ő	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ű	ż	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ì	¥	¡	╜	═	▌	ø	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

SLOV/SLOV-T (Slovenian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	ž	P	ž	p	Ç	É	á	▒	└	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▒	┬	╥	Γ	≥
3		♥	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4		♦	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ý	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	ü	¬	║	╩	┌	Ω	·
B			+	;	K	š	k	š	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Đ	l	đ	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	ć	m	ć	ì	¥	¡	╜	═	▌	ø	²
E			.	>	N	č	n	č	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

POLISH/POLSH-T (Polish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	Ę	ż	▒	└	đ	α	-
1			!	1	A	Q	a	q	ü	ę	ź	▒	⊥	Đ	β	"
2			"	2	B	R	b	r	é	ł	ó	▒	┬	Ď	π	ˇ
3		♥	#	3	C	S	c	s	â	ô	ó	│	├	Ë	π	˘
4		♦	$	4	D	T	d	t	ä	ö	ń	┤	─	ď	Σ	´
5	♣	§	%	5	E	U	e	u	ů	ć	Ń	Á	┼	Ň	ň	§
6	♠		&	6	F	V	f	v	ą	ľ	ż	Â	Ã	Í	š	÷
7			'	7	G	W	g	w	ç	ù	ž	Ě	ä	Î	š	¸
8			(	8	H	X	h	x	ê	ś	¿	Ş	╚	ě	ě	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	ú	¨
A			*	:	J	Z	j	z	ő	ü	¬	║	╩	┌	ŕ	·
B			+	;	K	[	k	{	ő	Ť	ź	╗	╦	█	Ű	ű
C			,	<	L	\	l	|	î	Ł	č	╝	╠	▄	ý	Ř
D			-	=	M	]	m	}	ć	¥	ş	╜	═	Ţ	Ý	ř
E			.	>	N	^	n	~	Ä	ś	«	╛	╬	▐	ţ	■
F			/	?	O	_	o		Å	č	»	┐	╧	▀	˝	

MAZOWIA/MAZOW-T (Mazowian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	Ę	ż	▒	└	⊥	α	≡
1			!	1	A	Q	a	q	ü	ę	ß	▒	⊥	╤	β	±
2			"	2	B	R	b	r	é	ł	ó	▒	┬	╥	Γ	≥
3		♥	#	3	C	S	c	s	â	ô	ó	│	├	╙	π	≤
4		♦	$	4	D	T	d	t	ä	ö	ń	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ć	Ń	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	ą	û	ź	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	ż	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ś	§	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	zł	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	î	Ł	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ć	¥	¡	╜	═	▌	ø	²
E			.	>	N	^	n	~	Ä	ś	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Character Sets

LATIN2/LATN2-T (Latin2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p	Ç	É	á	▓	L	⊥	ó	≡	
1		!	1	A	Q	a	q	ü	Ĺ	í		⊥	⊤	β	±	
2	♥	"	2	B	R	b	r	é	Æ	ó	▓		╥	Ô	≥	
3	♦	#	3	C	S	c	s	â	ô	ú		╨	╨	Ĺ	π	≤
4	♦	$	4	D	T	d	t	ä	ö	ñ	┤		├	ď	Σ	⌠
5	♣ §	%	5	E	U	e	u	ů	Ĺ	Ñ	Á	┼	Ń	ň	⌡	
6	♠	&	6	F	V	f	v	å	ľ	ž	┤	├	Í	š	÷	
7		'	7	G	W	g	w	ç	ù	ž	Ě	├	╫	š	≈	
8		(	8	H	X	h	x	ê	ÿ	¿	┐	Ĕ	Ŕ	°		
9		)	9	I	Y	i	y	ë	Ö	┌	┘	┌	Ú	•		
A		*	:	J	Z	j	z	è	Ü	¬			┴	┴	Ω	·
B		+	;	K	[	k	{	ï	Ť	½	┐	▐	δ	√		
C		,	<	L	\	l	|	î	ť	Č	┘		▐	ý	Ř	
D		-	=	M	]	m	}	í	¥	ì	╜		▐	Ý	ř	
E		.	>	N	^	n	~	Ä	Ŕ	«	┤	╪	Û	€	■	
F		/	?	O	_	o		Å	č	»	┐		∩			

KAMENIC/KAMEN-T (Kamenicky)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p	č	É	á	▓	L	⊥	α	≡	
1		!	1	A	Q	a	q	ü	ž	í	▓	⊥	⊤	β	±	
2	♥	"	2	B	R	b	r	é	ž	ó	▓	┤	╥	Γ	≥	
3	♦	#	3	C	S	c	s	ď	ö	ú		╨	╨	π	≤	
4	♦	$	4	D	T	d	t	ä	ö	ň	┤		├	Σ	⌠	
5	♣ §	%	5	E	U	e	u	Ď	Ó	Ñ	╡	├	├	σ	⌡	
6	♠	&	6	F	V	f	v	Ť	ů	┤	├	├	μ	÷		
7		'	7	G	W	g	w	č	Ú	Ó	╗	├	╫	τ	≈	
8		(	8	H	X	h	x	ě	Ý	š	┐	┴	┴	Φ	°	
9		)	9	I	Y	i	y	Ě	Ö	┐	┘	┌	θ	•		
A		*	:	J	Z	j	z	Ĺ	Ü	ŕ	┤	╨	╨	Ω	·	
B		+	;	K	[	k	{	í	š	Ŕ	┐	▐	δ	√		
C		,	<	L	\	l	|	ľ	Ĺ	¼	┘	▐	∞	ⁿ		
D		-	=	M	]	m	}	í	Ý	§	╜	▐	ø	²		
E		.	>	N	^	n	~	Ä	Ŕ	«	┤	╪	€	■		
F		/	?	O	_	o		Á	ť	»	┐		∩			

TURKY/TURKY-T (Turkish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p	Ç	É	á	▓	L	⊥	α	≡	
1		!	1	A	Q	a	q	ü	æ	í	▓	⊥	⊤	β	±	
2	♥	"	2	B	R	b	r	é	Æ	ó	▓	┤	╥	Γ	≥	
3	♦	#	3	C	S	c	s	â	ô	ú		╨	╨	π	≤	
4	♦	$	4	D	T	d	t	ä	ö	ñ	┤		├	Σ	⌠	
5	♣ §	%	5	E	U	e	u	à	ò	Ñ	╡	├	├	σ	⌡	
6	♠	&	6	F	V	f	v	å	û	Ğ	┤	├	├	μ	÷	
7		'	7	G	W	g	w	ç	ù	ğ	╗	├	╫	τ	≈	
8		(	8	H	X	h	x	ê	İ	¿	┐	┴	┴	Φ	°	
9		)	9	I	Y	i	y	ë	Ö	┌	┘	┌	θ	•		
A		*	:	J	Z	j	z	è	Ü	¬	┤	╨	╨	Ω	·	
B		+	;	K	[	k	{	ï	¢	½	┐	▐	δ	√		
C		,	<	L	\	l	|	î	£	¼	┘	▐	∞	ⁿ		
D		-	=	M	]	m	}	ı	¥	¡	╜	▐	ø	²		
E		.	>	N	^	n	~	Ä	Ş	«	┤	╪	€	■		
F		/	?	O	_	o		Å	ş	»	┐		∩			

CYRILIC (Cyrillic)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p			А	Р	а	р	№		
1		!	1	A	Q	a	q			Ё	Б	С	б	с	ё	
2	♥	"	2	B	R	b	r			Ђ	В	Т	в	т	ђ	
3	♦	#	3	C	S	c	s			Ѓ	Г	У	г	у	ѓ	
4	♦	$	4	D	T	d	t			Є	Д	Ф	д	ф	є	
5	♣ §	%	5	E	U	e	u			Ѕ	Е	Х	е	х	ѕ	
6	♠	&	6	F	V	f	v			І	Ж	Ц	ж	ц	і	
7		'	7	G	W	g	w			Ї	З	Ч	з	ч	ї	
8		(	8	H	X	h	x			Ј	И	Ш	и	ш	ј	
9		)	9	I	Y	i	y			Љ	Й	Щ	й	щ	љ	
A		*	:	J	Z	j	z			Њ	К	Ъ	к	ъ	њ	
B		+	;	K	[	k	{			Ћ	Л	Ы	л	ы	ћ	
C		,	<	L	\	l	|			Ќ	М	Ь	м	ь	ќ	
D		-	=	M	]	m	}				Н	Э	н	э	§	
E		.	>	N	^	n	~			Ў	О	Ю	о	ю	ў	
F		/	?	O	_	o				Џ	П	Я	п	я	џ	

IBM437 (IBM 437)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Α	Ρ	ι	░	└	╨	ω	≡
1			!	1	A	Q	a	q	Β	Σ	κ	▒	┴	╤	ά	±
2			"	2	B	R	b	r	Γ	Τ	λ	▓	┬	╥	έ	≥
3	♥		#	3	C	S	c	s	Δ	Υ	μ	│	├	╙	ή	≤
4	♦		$	4	D	T	d	t	Ε	Φ	ν	┤	─	╘	ΐ	⌠
5	♣	§	%	5	E	U	e	u	Ζ	Χ	ξ	╡	┼	╒	ό	⌡
6	♠		&	6	F	V	f	v	Η	Ψ	ο	╢	╞	╓	ύ	÷
7			'	7	G	W	g	w	Θ	Ω	π	╖	╟	╫	ϋ	≈
8			(	8	H	X	h	x	Ι	α	ρ	╕	╚	╪	ΰ	°
9			)	9	I	Y	i	y	Κ	β	σ	╣	╔	┘	ώ	∙
A			*	:	J	Z	j	z	Λ	γ	ς	║	╩	┌	Ω	·
B			+	;	K	[	k	{	Μ	δ	τ	╗	╦	█	£	√
C			,	<	L	\	l	|	Ν	ε	υ	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	Ξ	ζ	φ	╜	═	▌	ø	²
E			.	>	N	^	n	~	Ο	η	χ	╛	╬	▐	í	■
F			/	?	O	_	o		Π	θ	ψ	┐	╧	▀	ó	

IBM851 (IBM 851)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	Ί	ί	░	└	Τ	ζ	
1			!	1	A	Q	a	q	ü	Ϊ	ΐ	▒	┴	Υ	η	±
2			"	2	B	R	b	r	é	Ό	ΰ	▓	┬	Φ	θ	υ
3	♥		#	3	C	S	c	s	â	ô	ύ	│	├	Χ	ι	φ
4	♦		$	4	D	T	d	t	ä	ö	Α	┤	─	Ψ	κ	χ
5	♣	§	%	5	E	U	e	u	à	Ύ	Β	Κ	┼	Ω	λ	§
6	♠		&	6	F	V	f	v	Ά	û	Γ	Λ	Π	α	μ	ψ
7			'	7	G	W	g	w	ç	ù	Δ	Μ	Ρ	β	ν	·
8			(	8	H	X	h	x	ê	Ώ	Ε	Ν	╚	γ	ξ	°
9			)	9	I	Y	i	y	ë	Ö	Ζ	╣	╔	┘	ο	¨
A			*	:	J	Z	j	z	è	Ü	Η	║	╩	┌	π	ω
B			+	;	K	[	k	{	ï	ά	½	╗	╦	█	ρ	ΰ
C			,	<	L	\	l	|	î	£	Θ	╝	╠	▄	σ	ΰ
D			-	=	M	]	m	}	Έ	ή	Ι	Ξ	═	δ	ς	ό
E			.	>	N	^	n	~	Ä	½	«	Ο	╬	ε	τ	■
F			/	?	O	_	o		Ή	§	»	┐	Σ	▀	Σ	´

ELOT928 (ELOT 928)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	ΐ	Π	ΰ	π
1			!	1	A	Q	a	q			‘	±	Α	Ρ	α	ρ
2			"	2	B	R	b	r			’	²	Β		β	ς
3	♥		#	3	C	S	c	s			£	³	Γ	Σ	γ	σ
4	♦		$	4	D	T	d	t				΄	Δ	Τ	δ	τ
5	♣	§	%	5	E	U	e	u				΅	Ε	Υ	ε	υ
6	♠		&	6	F	V	f	v			¦	Ά	Ζ	Φ	ζ	φ
7			'	7	G	W	g	w			§	·	Η	Χ	η	χ
8			(	8	H	X	h	x			¨	Έ	Θ	Ψ	θ	ψ
9			)	9	I	Y	i	y			©	Ή	Ι	Ω	ι	ω
A			*	:	J	Z	j	z				Ί	Κ	Ϊ	κ	ϊ
B			+	;	K	[	k	{			«	»	Λ	Ϋ	λ	ϋ
C			,	<	L	\	l	|			¬	Ό	Μ	ά	μ	ό
D			-	=	M	]	m	}				½	Ν	έ	ν	ύ
E			.	>	N	^	n	~				Ύ	Ξ	ή	ξ	ώ
F			/	?	O	_	o				―	Ώ	Ο	ί	ο	

PG-DHN (Code Page DHN)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ą	ź	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	Ć	ż	í	▒	┴	╤	ß	±
2			"	2	B	R	b	r	Ę	ł	ó	▓	┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	Ł	§	ú	│	├	╙	π	≤
4	♦		$	4	D	T	d	t	Ń	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	Ó	ò	Ń	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	Ś	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	Ż	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	Ź	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ą	Ö	⌐	╣	╔	┘	Θ	∙
A			*	:	J	Z	j	z	ć	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ę	¢	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	ł	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ń	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	~	ó	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		ś	ƒ	»	┐	╧	▀	∩	

Character Sets

LATIN-P (Latin Polish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á	▓		╨	ó	≡
1			!	1	A	Q	a	q	ü	æ	í		┴	╥	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	├		Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú		│	╞	Ń	≤
4	♦		$	4	D	T	d	t	ä	ö	Ą	─		╘	ń	⌠
5	♣	§	%	5	E	U	e	u	à	ò	ą	┼		╒	σ	⌡
6	♠		&	6	F	V	f	v	ć	û	ã		│		μ	÷
7		'	7	G	W	g	w	ç	Ś	Ω		┐	╟		τ	≈
8		(	8	H	X	h	x	ł	ś	Ę		┤	╪		Φ	°
9		)	9	I	Y	i	y	ë	Ö	ę		╡	╘		θ	∙
A		*	:	J	Z	j	z	è	Ü	¬		╛		Ω	·
B		+	;	K	[	k	{	ï	¢	ź		┐		δ	√
C		,	<	L	\	l	|	î	£	¼		█		∞	ⁿ
D		-	=	M	]	m	}	ź	Ł	¡	Ź		ø	²
E		.	>	N	^	n	~	Ä	Ř	«	ż	╬	Є	■
F		/	?	O	_	o	Ć	ƒ	»		╝	∩

ISO-LTN (ISO Latin)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p			°	Ř	Đ	ŕ	đ
1			!	1	A	Q	a	q			Ą	ą	Ã	Ñ	á	ń
2			"	2	B	R	b	r			˘	¸	Ã	Ñ	â	ň
3	♥		#	3	C	S	c	s			Ł	ł	Ă	Ó	ă	ó
4	♦		$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5	♣	§	%	5	E	U	e	u			Ľ	ĺ	Ĺ	Ő	í	ő
6	♠		&	6	F	V	f	v			Ś	ś	Ć	Ö	ć	ö
7		'	7	G	W	g	w			§	ˇ	Ç	×	ç	÷
8		(	8	H	X	h	x			¨	¸	Č	Ř	č	ř
9		)	9	I	Y	i	y			Š	š	É	Ů	é	ů
A		*	:	J	Z	j	z			Ş	ş	Ę	Ú	ę	ú
B		+	;	K	[	k	{			Ť	ť	Ë	Ű	ë	ű
C		,	<	L	\	l	|			Ź	ź	Ě	Ü	ě	ü
D		-	=	M	]	m	}				˝	Í	Ý	í	ý
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LITHUA1 (Lithuanian 1)

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MACEDON (Macedonian)

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GREEK 11

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6	♠		&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}				½	Í	İ	í	ı
E			.	>	N	^	n	~			®	¾	Î	Ş	î	ş
F			/	?	O	_	o				¯	¿	Ï	ß	ï	ÿ

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	Ð	à	ð
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3	♥		#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4	♦		$	4	D	T	d	t			€	ž	Ä	Ô	ä	ô
5	♠	§	%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6	♣		&	6	F	V	f	v			Š	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			š	ž	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	Œ	Ì	Ü	ì	ü
D			-	=	M	]	m	}			-	œ	Í	Ý	í	ý
E			.	>	N	^	n	~			®	Ÿ	Î	Þ	î	þ
F			/	?	O	_	o				¯	¿	Ï	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	А	Р	а	▓	└	┴	р	Ё
1			!	1	A	Q	a	q	Б	С	б	▓	⊥	┬	с	ё
2			"	2	B	R	b	r	В	Т	в	▓	┤	┬	т	Г
3	♥		#	3	C	S	c	s	Г	У	г	│	├	┤	у	г
4	♦		$	4	D	T	d	t	Д	Ф	д	┤	├	┴	ф	Є
5	♠	§	%	5	E	U	e	u	Е	Х	е	┤	├	┌	х	є
6	♣		&	6	F	V	f	v	Ж	Ц	ж	┤	├	├	ц	І
7			'	7	G	W	g	w	З	Ч	з	┐	├	┼	ч	і
8			(	8	H	X	h	x	И	Ш	и	┐	┴	┼	ш	Ї
9			)	9	I	Y	i	y	Й	Щ	й	┘	├	┌	щ	ї
A			*	:	J	Z	j	z	К	Ъ	к	┤	┴	┴	ъ	·
B			+	;	K	[	k	{	Л	Ы	л	┐	█	█	ы	√
C			,	<	L	\	l	¦	М	Ь	м	┘	┘	┘	ь	№
D			-	=	M	]	m	}	Н	Э	н	┘	┘	█	э	¤
E			.	>	N	^	n	~	О	Ю	о	█	█	┘	ю	■
F			/	?	O	_	o		П	Я	п		█	█	я	

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				0	à	P	`	p	Ç	É	á		L	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	⊤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	⊤	╥	Γ	≥
3	♥		£	3	C	S	c	s	â	ô	ú		├	L	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	—	╘	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	+	╒	σ	∫
6	♠		&	6	F	V	f	v	å	û	ª	╣	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖		╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
B			+	;	K	°	k	é	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	ç	l	ù	î	£	¼	╝	╠	█	∞	ⁿ
D			–	=	M	§	m	è	ì	¥	¡	┘	═	█	ø	²
E			.	>	N	^	n	¨	Ä	₧	«	┘	╬	█	∈	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	█	∩	

ITALIAN (Italian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	ù	p	Ç	É	á		L	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	⊤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	⊤	╥	Γ	≥
3	♥		£	3	C	S	c	s	â	ô	ú		├	L	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	—	╘	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	+	╒	σ	∫
6	♠		&	6	F	V	f	v	å	û	ª	╣	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖		╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
B			+	;	K	°	k	à	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	ç	l	ò	î	£	¼	╝	╠	█	∞	ⁿ
D			–	=	M	é	m	è	ì	¥	¡	┘	═	█	ø	²
E			.	>	N	^	n	ì	Ä	₧	«	┘	╬	█	∈	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	█	∩	

SPANISH (Spanish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	`	p	Ç	É	á	▓	L	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	⊤	β	±
2			"	2	B	R	b	r	é	Æ	ó		⊤	╥	Γ	≥
3	♥		£	3	C	S	c	s	â	ô	ú		├	L	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	—	╘	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	+	╒	σ	∫
6	♠		&	6	F	V	f	v	å	û	ª	╣	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖		╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
B			+	;	K	¡	k	°	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ñ	l	ñ	î	£	¼	╝	╠	█	∞	ⁿ
D			–	=	M	¿	m	ç	ì	¥	¡	┘	═	█	ø	²
E			.	>	N	^	n	~	Ä	₧	«	┘	╬	█	∈	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	█	∩	

FINNISH (Finnish)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	É	P	é	p	Ç	É	á	▓	L	⊥	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	⊤	β	±
2			"	2	B	R	b	r	é	Æ	ó		⊤	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú		├	L	π	≤
4	♦		¤	4	D	T	d	t	ä	ö	ñ	┤	—	╘	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	+	╒	σ	∫
6	♠		&	6	F	V	f	v	å	û	ª	╣	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖		╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	Ü	¬		╩	┌	Ω	·
B			+	;	K	Ä	k	ä	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ö	l	ö	î	£	¼	╝	╠	█	∞	ⁿ
D			–	=	M	Å	m	å	ì	¥	¡	┘	═	█	ø	²
E			.	>	N	Ü	n	ü	Ä	₧	«	┘	╬	█	∈	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	█	∩	

DANISH1/NORWEGN (Danish1/Norwegian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	É	P	é	p	Ç	É	á			└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	·
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Æ	k	æ	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ø	l	ø	î	£	¼	╝	╠	█	∞	ⁿ
D			-	=	M	Å	m	å	ì	¥	¡	╜	═	█	ø	²
E			.	>	N	Ü	n	ü	Ä	₧	«	╛	╬	█	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐		█	∩	

DANISH2 (Danish2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á			└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3	♥		#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4	♦		$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	·
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	ø	½	╗	╦	█	δ	√
C			,	<	L	\	l	|	î	£	¼	╝	╠	█	∞	ⁿ
D			-	=	M	]	m	}	ì	ø	¡	╜	═	█	ø	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	█	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐		█	∩	

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				0	@	P	`	p	Ç	É	á			└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	·
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Æ	k	æ	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ø	l	ø	î	£	¼	╝	╠	█	∞	ⁿ
D			-	=	M	Å	m	å	ì	¥	¡	╜	═	█	ø	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	█	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐		█	∩	

SPANSH1 (Spanish1)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á			└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í		⊥	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3			₧	3	C	S	c	s	â	ô	ú		├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	ö	⌐	╣	╔	┘	θ	·
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Í	k	¨	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ñ	l	ñ	î	£	¼	╝	╠	█	∞	ⁿ
D			-	=	M	¿	m	}	ì	¥	¡	╜	═	█	ø	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	█	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐		█	∩	

ITALIAN (Italian)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	ù	p	Ç	É	á	▓		L	⊥	α	≡
1		!	1	A	Q	a	q	ü	æ	í	▓	⊥	⊤	β	±
2		"	2	B	R	b	r	é	Æ	ó	▓	┤	⊤	Γ	≥
3		#	3	C	S	c	s	â	ô	ú	│	⊤	π	≤
4		$	4	D	T	d	t	ä	ö	ñ	┤	─	⊢	Σ	⌠
5	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	⌐	σ	⌡
6		&	6	F	V	f	v	å	û	ª	╢	μ	÷
7		'	7	G	W	g	w	ç	ù	º	τ	≈
8		(	8	H	X	h	x	ê	ÿ	¿	Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣	┌	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║	┴	Ω	·
B		+	;	K	°	k	à	ï	¢	½	┐	⊤	δ	√
C		,	<	L	\	l	ò	î	£	¼	┌	■	∞	ⁿ
D		–	=	M	é	m	è	ì	¥	¡	┘	ø	²
E		.	>	N	^	n	ì	Ä	₧	«	┘	╪	∈	■
F		/	?	O	_	o	Å	ƒ	»	┐	∩

SPANSH2 (Spanish2)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	á	P	`	p	Ç	É	á	▓		L	⊥	α	≡
1		!	1	A	Q	a	q	ü	æ	í	▓	⊥	⊤	β	±
2		"	2	B	R	b	r	é	Æ	ó	▓	┤	⊤	Γ	≥
3		#	3	C	S	c	s	â	ô	ú	│	⊤	π	≤
4		$	4	D	T	d	t	ä	ö	ñ	┤	─	⊢	Σ	⌠
5	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	⌐	σ	⌡
6		&	6	F	V	f	v	å	û	ª	╢	μ	÷
7		'	7	G	W	g	w	ç	ù	º	τ	≈
8		(	8	H	X	h	x	ê	ÿ	¿	Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣	┌	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║	┴	Ω	·
B		+	;	K	¡	k	í	¢	½	┐	⊤	δ	√
C		,	<	L	Ñ	l	ñ	£	¼	┌	■	∞	ⁿ
D		–	=	M	¿	m	ó	¥	¡	┘	ø	²
E		.	>	N	é	n	ú	Ä	₧	«	┘	╪	∈	■
F		/	?	O	_	o	Å	ƒ	»	┐	∩

JAPAN (Japanese)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p	Ç	É	á	▓		L	⊥	α	≡
1		!	1	A	Q	a	q	ü	æ	í	▓	⊥	⊤	β	±
2		"	2	B	R	b	r	é	Æ	ó	▓	┤	⊤	Γ	≥
3		#	3	C	S	c	s	â	ô	ú	│	⊤	π	≤
4		$	4	D	T	d	t	ä	ö	ñ	┤	─	⊢	Σ	⌠
5	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	⌐	σ	⌡
6		&	6	F	V	f	v	å	û	ª	╢	μ	÷
7		'	7	G	W	g	w	ç	ù	º	τ	≈
8		(	8	H	X	h	x	ê	ÿ	¿	Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣	┌	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║	┴	Ω	·
B		+	;	K	[	k	ï	¢	½	┐	⊤	δ	√
C		,	<	L	¥	l	î	£	¼	┌	■	∞	ⁿ
D		–	=	M	]	m	ì	¥	¡	┘	ø	²
E		.	>	N	^	n	Ä	₧	«	┘	╪	∈	■
F		/	?	O	_	o	Å	ƒ	»	┐	∩

LATIN A (Latin American)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	á	P	ü	p	Ç	É	á	▓		L	⊥	α	≡
1		!	1	A	Q	a	q	ü	æ	í	▓	⊥	⊤	β	±
2		"	2	B	R	b	r	é	Æ	ó	▓	┤	⊤	Γ	≥
3		#	3	C	S	c	s	â	ô	ú	│	⊤	π	≤
4		$	4	D	T	d	t	ä	ö	ñ	┤	─	⊢	Σ	⌠
5	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	⌐	σ	⌡
6		&	6	F	V	f	v	å	û	ª	╢	μ	÷
7		'	7	G	W	g	w	ç	ù	º	τ	≈
8		(	8	H	X	h	x	ê	ÿ	¿	Φ	°
9		)	9	I	Y	i	y	ë	Ö	⌐	╣	┌	θ	•
A		*	:	J	Z	j	z	è	Ü	¬	║	┴	Ω	·
B		+	;	K	¡	k	í	¢	½	┐	⊤	δ	√
C		,	<	L	Ñ	l	ñ	£	¼	┌	■	∞	ⁿ
D		–	=	M	¿	m	ó	¥	¡	┘	ø	²
E		.	>	N	é	n	ú	Ä	₧	«	┘	╪	∈	■
F		/	?	O	_	o	Å	ƒ	»	┐	∩

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	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4			¤	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Æ	k	æ	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ø	l	ø	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	Å	m	å	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	Ü	n	ü	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

FRENCH (French)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	à	P	`	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	°	k	é	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	ç	l	ù	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	§	m	è	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	¨	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

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	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	Æ	k	æ	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	Ø	l	ø	î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	Å	m	å	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	Ü	n	ü	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

KOREA (Korea)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p	Ç	É	á	░	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	∙
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	₩	l			î	£	¼	╝	╠	▄	∞	ⁿ
D			-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
E			.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

LEGAL (Legal)

L/H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	`	p	Ç	É	á		∟	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í		┴	╤	β	±
2			"	2	B	R	b	r	é	Æ	ó		┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	┤	├	╙	π	≤
4			$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9			)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	•
A			*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B			+	;	K	°	k	©	ï	¢	½	╗	╦	█	δ	√
C			,	<	L	'	l	®	î	£	¼	╝	╠	▄	∞	ⁿ
D			–	=	M	"	m	†	ì	¥	¡	╜	═	▌	ø	²
E			.	>	N	¶	n	™	Ä	₧	«	╛	╬	▐	∈	■
F			/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	

Character
Sets

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

(Continued on the next page)

*   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

National character set	Name in setup menu	Courier 10	Elite 12	Compress	Draft	Bold PS	Pica 10	Courier scalable **	Timeless **	Nimbus Sans **	Correspondence	H-draft ***	OCR-B	OCR-A
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	√	√	√	√	√	√	√	√	√	√	√		

* 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

National character set	Name in setup menu	Courier 10	Elite 12	Compress	Draft	Bold PS	Pica 10	Courier scalable**	Timeless **	Nimbus Sans **	Correspondence	H-draft***	OCR-B	OCR-A
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	RUSCII	√	√	√	√	√	√	√	√	√				√
LATIN-9	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

The 24-wire dot-matrix printer prints
quality characters and symbols using
a variety of sizes and fonts.

**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

The 24-wire dot-matrix printer prints
quality characters and symbols using
a variety of sizes and fonts.

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

The 24-wire dot-matrix printer prints
quality characters and symbols using
a variety of sizes and fonts.

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.

Glossary

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.

Glossary

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 thecomputer works with the printer.

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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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