

PJ-600 Series Printer ESC/P Command Reference

Version 1.00

Model Name: PJ-622/623/662/663

<Written By> Brother Industries, Ltd.

Machine Model: PJ-622/623/662/663

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1 ESC/P commands

1 - 1 Print area

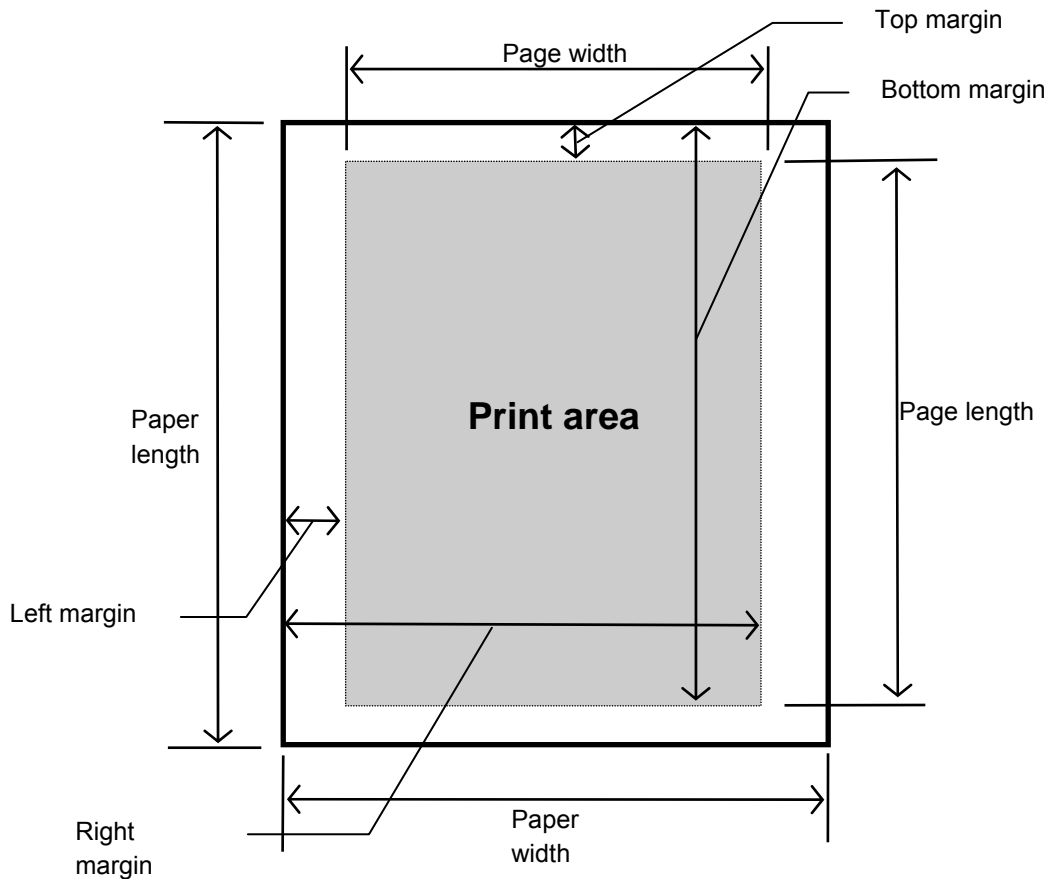
[Paper types and sizes]

- Thermal cut paper: A4/Letter/Legal sizes and any size
- Thermal roll paper: 210 mm (width)

* Any size is within a range of 210- to 216-mm wide and 25.4- to 567.3-mm long.

[Print area]

The printable area differs depending on the paper type; however, with any paper listed above, the top margin, left margin and page width of the print area are the same as with A4 paper. If the page length (8-inch page width) has been specified, the length specified with ESC/P will be applied as the page length.



- 300 dpi (300 × 300) print area (dots)

	A4	Letter	Legal	Any
Paper width	2480	2550	2550	2480 ~ 2550
Paper length	3507	3300	4200	300 ~ 6700
Top margin	30	30	30	30
Bottom margin	3330	3230	4130	230 ~ 6630
Left margin	40	40	40	40
Right margin	2440	2440	2440	2440
Page width	2400	2400	2400	2400
Page length	3300	3200	4100	200 ~ 6600

- 200 dpi (203 × 200) print area (dots)

	A4	Letter	Legal	Any
Paper width	1680	1727	1727	1680 ~ 1727
Paper length	2338	2200	2800	200 ~ 4467
Top margin	20	20	20	20
Bottom margin	2220	2153	2753	153 ~ 4420
Left margin	27	27	27	27
Right margin	1651	1651	1651	1651
Page width	1624	1624	1624	1624
Page length	2200	2133	2733	133 ~ 4400

[Limitations]

- Bit image data that extends out of the print area is discarded and not printed. The limitations of the right margin are not applied to bit images.
- Character codes that extend past the right margin are printed on the next line as a result of an overflow line feed.

1 - 2 Characters

[Font specifications]

Type	ANK characters
Font	Courier, Sans Serif
Size	10, 12, 15 CPI Proportional

The conversions from CPI (characters per inch) to dots are shown below.

	300 dpi (300 × 300)	200 dpi (203 × 200)
10 CPI	30 × 45 dots	20 × 45 dots
12 CPI	25 × 45 dots	17 × 45 dots
15 CPI	20 × 45 dots	14 × 45 dots

1 - 3 Resolution

[Resolution conversion]

With ESC/P, the basic resolution is 360 dpi. However, since the printer resolution is 200 or 300 dpi, the resolution is converted. The resolution is converted according to the horizontal character position, the vertical feed amount (line feed amount), bit images, non-standard characters and download fonts.

[Limitations]

The line thickness and position may change since the resolution of bit images is converted in each line and that of non-standard characters and download fonts is converted when the character is registered.

1 - 4 List of commands

This printer supports the following ESC/P commands.

1. Paper feed commands

Command	Code	Function
CR	0Dh	Carriage return
FF	0Ch	Form feed
LF	0Ah	Line feed
ESC 0	1Bh 30h	Specify line feed of 1/8 inch
ESC 2	1Bh 32h	Specify line feed of 1/6 inch
ESC 3 n	1Bh 33h nnh	Specify line feed of n/180 inch
ESC A n	1Bh 41h nnh	Specify line feed of n/60 inch
ESC + n	1Bh 2Bh nnh	Specify line feed of n/360 inch
ESC J n	1Bh 4Ah nnh	Specify forward paper feed of n/180 inch

2. Print area setting commands

Command	Code	Function
ESC C n	1Bh 43h nnh	Specify page length in lines
ESC C 0 n	1Bh 43h 00h nnh	Specify page length in inches
ESC N n	1Bh 4Eh nnh	Specify skip perforation
ESC O	1Bh 4Fh	Cancel skip perforation

3. Tab setting commands

Command	Code	Function
ESC B n n...0	1Bh 42h nnh...00h	Specify vertical tab position
VT	0Bh	Perform vertical tab
ESC D n n...0	1Bh 44h nnh...00h	Specify horizontal tab position
HT	09h	Perform horizontal tab

4. Print position setting commands

Command	Code	Function
ESC I n	1Bh 6Ch nnh	Specify left margin
ESC Q n	1Bh 51h nnh	Specify right margin
BS	08h	Backspace
ESC \$ n m	1Bh 24h nnh mmh	Specify absolute position
ESC ¥ (ESC \) n m	1Bh 5Ch nnh mmh	Specify relative position

5. Character selection commands

Command	Code	Function
ESC k n	1Bh 6Bh nnh	Select font
ESC P	1Bh 50h	Specify 10 cpi
ESC M	1Bh 4Dh	Specify 12 cpi
ESC g	1Bh 67h	Specify 15 cpi
ESC p n	1Bh 70h nnh	Apply/cancel proportional characters
ESC S n	1Bh 53h nnh	Apply superscript/subscript
ESC T	1Bh 54h	Cancel superscript/subscript
ESC t n	1Bh 74h nnh	Select character code table
ESC R n	1Bh 52h nnh	Select international character set

6. Character style commands

Command	Code	Function
ESC x n	1Bh 78h nnh	Select text quality
SI, ESC SI	0Fh, 1Bh 0Fh	Specify reduced characters
DC2	12h	Cancel reduced characters
SO, ESC SO	0Eh, 1Bh 0Eh	Specify auto-cancelling double-width characters
DC4	14h	Cancel auto-cancelling double-width characters
ESC W n	1Bh 57h nnh	Specify/cancel double-width characters
ESC w n	1Bh 77h nnh	Specify/cancel double-height characters
ESC E	1Bh 45h	Apply bold style
ESC F	1Bh 46h	Cancel bold style
ESC G	1Bh 47h	Apply double-strike printing
ESC H	1Bh 48h	Cancel double-strike printing
ESC- n	1Bh 2Dh nnh	Apply/cancel underlining
ESC SP n	1Bh 20h nnh	Specify character spacing
ESC q n	1Bh 71h nnh	Select character style
ESC 4	1Bh 34h	Apply italics
ESC 5	1Bh 35h	Cancel italics
ESC ! n	1Bh 21h nnh	Global formatting

7. Character definition commands

Command	Code	Function
ESC & 0 n n...	1Bh 26h 00h nnh....	Define download characters
ESC % n	1Bh 25h nnh	Apply/cancel download character set
ESC : 0 n 0	1Bh 3Ah 00h nnh 00h	Copy character set
ESC 6	1Bh 36h	Cancel upper control codes
ESC 7	1Bh 37h	Apply upper control codes

8. Supplemental function commands

Command	Code	Function
ESC @	1Bh 40h	Initialize printer

9. Others

Command	Code	Function
ESC K n m	1Bh 4Bh nnh mmh	8-dot single-density bit image
ESC L n m	1Bh 4Ch nnh mmh	8-dot double-density bit image
ESC Y n m	1Bh 59h nnh mmh	8-dot double-speed double-density bit image
ESC Z n m	1Bh 5Ah nnh mmh	8-dot quadruple-density bit image
ESC * m n1 n2..	1Bh 2Ah mmh n1h n2h...	Select bit image
ESC ? m n	1Bh 3Fh mmh nnh	Convert bit image
ESC / m	1Bh 2Fh mmh	Select VFU channel
ESC b m n...0	1Bh 62h mmh nnh ...00h	Specify VFU tab position

1 - 5 Command details

1. Paper feed commands

CR

[Name] Carriage return
[Code] 0Dh
[Function] Returns the cursor position to the left edge.
[Details] If automatic line feed has been specified with the utility, a line feed command (LF) is performed after a carriage return command (CR) is performed.

FF

[Name] Form feed
[Code] 0Ch
[Function] Feeds the paper to the next page separation.
[Details] At this time, the SO and ESC SO commands are cancelled.
The feed specifications depend on the specified feed mode.

LF

[Name] Line feed
[Code] 0Ah
[Function] Feeds the paper by one line, according to the specified line feed amount.
[Details] At this time, the SO and ESC SO commands are cancelled.

ESC 0

[Name] Specify line feed of 1/8 inch
[Code] 1Bh 30h
[Function] Specifies a line feed of 1/8 inch (about 0.32 cm).

ESC 2

[Name] Specify line feed of 1/6 inch
[Code] 1Bh 32h
[Function] Specifies a line feed of 1/6 inch (about 0.42 cm).
[Details] The default line feed setting is 1/6 inch.

ESC 3 n

[Name] Specify line feed of n/180 inch
[Code] 1Bh 33h nnh
[Function] Specifies a line feed of n/180 inch.

ESC A n

[Name] Specify line feed of n/60 inch
[Code] 1Bh 41h nnh
[Function] Specifies a line feed of n/60 inch.
[Details] The allowable setting range is $0 \leq n \leq 85$ (55h).

ESC + n

[Name] Specify line feed of n/360 inch
[Code] 1Bh 2Bh nnh
[Function] Specifies a line feed of n/360 inch.

ESC J n

[Name] Specify forward paper feed of n/180 inch

[Code] 1Bh 4Ah nnh

[Function] Performs a print operation of n/180 inch.

[Details] If a page separation is reached while feeding or if there is no more paper, the paper feed amount outside of the print area is not counted, and the remainder of the feed is performed after entering the next page.

2. Print area setting commands

ESC C n

- [Name] Specify page length in lines
- [Code] 1Bh 43h nnh
- [Function] Specifies the page length as ((line feed amount when this command is specified) * (n in lines)) inches.
- [Details] Settings that exceed 22 inches or are less than the sum of the top space (top margin) and bottom space (page length – bottom margin) are ignored. In addition, skip perforation is cancelled. The default value is 66 lines. (The default page length is 11 inches.)

ESC C 0 n

- [Name] Specify page length in inches
- [Code] 1Bh 43h 00h nnh
- [Function] Specifies the page length as n inches.
- [Details] Settings that exceed 22 inches or are less than the sum of the top space (top margin) and bottom space (page length – bottom margin) are ignored. In addition, skip perforation is cancelled. The default value is 11 inches.

ESC N n

- [Name] Specify skip perforation
- [Code] 1Bh 4Eh nnh
- [Function] Specifies ((number of line feeds n) * (line feed amount when this command is specified)) as the amount to be skipped.
- [Details] Values that exceed the page length are ignored. The print area is the area remaining when the skip amount is subtracted from the specified page length. Cancelled with the ESC O, ESC C or ESC C 0 command.

ESC O

- [Name] Cancel skip perforation
- [Code] 1Bh 4Fh
- [Function] Sets the skip amount to 0. (Cancels skip perforation.)

3. Tab setting commands

ESC B n n...0

- [Name] Specify vertical tab position
- [Code] 1Bh 42h nnh...00h
- [Function] Specifies a vertical tab position.
- [Details] Specifies a vertical tab at the position where (line feed amount when this command is specified) * (specified number of lines n).
A maximum of 16 tab positions can be specified.
A tab setting that specifies a position extending past the bottom margin is ignored.
If n = 0, the vertical tabs are cancelled (default), as when the VFU tab is set to channel 0.

VT

- [Name] Perform vertical tab
- [Code] 0Bh
- [Function] Prints the data in the print buffer, and feeds the paper to the next vertical tab position.
- [Details] Vertical tab position = Line feed amount when this command is specified * Specified number of lines
If the remaining length of paper is not enough to perform a vertical tab, an FF operation is performed according to the specified form feed mode.
If VT is received when no vertical tabs are specified, an LF operation is performed.
If VT is entered after the vertical tab positions are cleared with ESC B NUL, the operation that is performed is the same as CR.
The "specify auto-cancelling double-width characters" command is cancelled.

ESC D n n ...0

- [Name] Specify horizontal tab position
- [Code] 1Bh 44h nnh...00h
- [Function] Specifies a horizontal tab position.
- [Details] Specifies a horizontal tab at the position where (character width when the tab is performed) * (specified number of columns) + (left margin position).
Ignored if (character width when this command is specified) * (n columns) + (left margin) extends past the right margin position.
Horizontal tab settings can be specified between 44h and 00h; settings that exceed the maximum of 32 positions are ignored.
The character width when proportional characters are applied is 10 cpi.
All horizontal tabs are cancelled with ESC D 0.

HT

- [Name] Perform horizontal tab
- [Code] 09h09h
- [Function] Moves the print position to the next horizontal tab position.
- [Details] Horizontal tab position = Character width when the tab is performed * Specified number of columns + Left margin position.
This command is ignored if there is no space to perform a tab at the right of the current position.

4. Print position setting commands

ESC I n

- [Name] Specify left margin
- [Code] 1Bh 6Ch nnh
- [Function] Specifies the left margin position as the position from the left edge where (character width when this command is specified) * n, and specifies the area to the left of this as an unprinted area.
- [Details] A setting that causes the left margin to be to the right of the right margin is ignored.
Clears the line buffer, and moves the cursor to the left margin position.
The left margin position does not change if the character width is changed after the margin has been specified.
In addition, this printer operates as an 80-column device, and a setting that extends past 4.5 inches from the left edge is ignored.

ESC Q n

- [Name] Specify right margin
- [Code] 1Bh 51h nnh
- [Function] Specifies the right margin position as the position where (character width when this command is specified) * n.
- [Details] A setting that causes the right margin to be to the left of the left margin is ignored.
Clears the line buffer, and moves the cursor to the left margin position.
The right margin position does not change if the character width is changed after the margin has been specified.
In addition, the print position for the next character is compared with the right margin after one character is printed, and an overflow line feed is performed if the print position for the next character is to the right of the right margin.

BS

- [Name] Backspace
- [Code] 08h
- [Function] Moves the current position in the line buffer back one character.
- [Details] Two or more BS are ignored.

ESC \$ n m

- [Name] Specify absolute position
- [Code] 1Bh 24h nnh mmh
- [Function] Moves the cursor position to the position $(n + m * 256) / 60$ inch from the left margin.
- [Details] However, this is ignored if $(n + m * 256)$ is outside of the range 0 to 815 and if the parameter extends past the right margin.

ESC ¥ (ESC \) n m

- [Name] Specify relative position
- [Code] 1Bh 5Ch nnh mmh
- [Function] Moves the cursor position $(n + m * 256)$ dots to the right or left of the next print position.
- [Details] Ignored if the position after being moved extends past the left or right margin position.
The movement amount is the number of dots specified as a 2's complement.

This is not underlined.

The dots that the cursor is moved is in units of 1/180 inch or 1/120 inch, and can be switched with the ESC x setting. (The default is 1/180 inch.)

5. Character selection commands

ESC k n

- [N a m e] Select font
- [C o d e] 1Bh 6Bh nnh
- [Function] Switches the half-width alphanumeric font that is used between "Courier" and "Sans Serif".
- [Details] n = 30h, 00h: Courier
n = 31h, 01h: Sans Serif

ESC P

- [N a m e] Specify 10 cpi
- [C o d e] 1Bh 50h
- [Function] Uses the character set at 10 cpi.
- [Details]

ESC M

- [N a m e] Specify 12 cpi
- [C o d e] 1Bh 4Dh
- [Function] Uses the character set at 12 cpi.
- [Details] (The default is 12 cpi.)

ESC g

- [N a m e] Specify 15 cpi
- [C o d e] 1Bh 67h
- [Function] Uses the character set at 15 cpi.
- [Details] The "specify reduced characters" is cancelled.

ESC p n

- [N a m e] Apply/cancel proportional characters
- [C o d e] 1Bh 70h nnh
- [Function] Applies or cancels proportional characters for alphanumeric characters.
- [Details] n=00h or 30h: Cancel proportional characters
n=01h or 31h: Apply proportional characters

If a download character set is selected, characters are printed with the width of the defined download character when proportional characters are applied.

ESC S n

[Name] Apply superscript/subscript
[Code] 1Bh 53h nnh
[Function] Applies superscript/subscript attributes to alphanumeric characters.
[Details] n = 00h or 30h: Apply superscript attribute
The script character is printed raised.
n = 01h or 31h: Apply subscript attribute
The script character is printed lowered.
The character limitations are as described in the manual.
Amount lowered: 20 lines at 300 dpi
13 lines at 200 dpi

ESC T

[Name] Cancel superscript/subscript
[Code] 1Bh 54h
[Function] Cancels applied superscript/subscript attributes.

ESC t n

[Name] Select character code table
[Code] 1Bh 74h nnh
[Function] Selects the character table for character codes 128 through 255.
[Details] n = 00h: Select italic characters
n = 01h: Select advanced graphics (default)

* Precautions

Graphics characters (B0h through DFh and F0h through FEh of the advanced graphics code table) are printed as normal characters.

ESC R n

[Name] Select international character set

[Code] 1Bh 52h nnh

[Function] Changes a part of the alphanumeric character code table according to the value of n.

[Details]

00h	USA
01h	France
02h	Germany
03h	UK
04h	Denmark
05h	Sweden
06h	Italy
07h	Spain
08h	Japan
09h	Norway
0Ah	Denmark II
0Bh	Spain II
0Ch	Latin America
0Dh	Korea
40h	Legal

6. Character style commands

ESC x n

- [Name] Select text quality
- [Code] 1Bh 78h nnh
- [Function] Selects draft or high quality for alphanumeric characters.
n = 00h or 30h: Draft mode (1/120" movement amount)
n = 01h or 31h: Letter mode (1/180" movement amount)
- [Details] Since this printer is not installed with a draft font, the text quality does not change.
However, the setting for this command is used for the units of the movement amount when the ESC ¥ (ESC \) command is received.

SI, ESC SI

- [Name] Specify reduced characters
- [Code] 0Fh, 1Bh 0Fh
- [Function] The width of proportional characters is halved (10 cpi→16.67 cpi and 12 cpi → 20 cpi).
- [Details] Ignored if 15 cpi is specified.

DC2

- [Name] Cancel reduced characters
- [Code] 12h
- [Function] Cancels reduced characters specified with the SI or ESC SI command.

SO, ESC SO

- [Name] Specify auto-cancelling double-width characters
- [Code] 0Eh, 1Bh 0Eh
- [Function] Specifies auto-cancelling double-width enlargement for alphanumeric characters.
- [Details] Cancelled with the DC4, CR, LF, FF, VT or ESC W 0 command.

DC4

- [Name] Cancel auto-cancelling double-width characters
- [Code] 14h
- [Function] Cancels auto-cancelling double-width enlargement for alphanumeric characters.
- [Details] Double-width enlargement specified with ESC W 1 is not cancelled.

ESC W n

- [Name] Specify/cancel double-width characters
- [Code] 1Bh 57h nnh
- [Function] Specifies or cancels double-width enlargement for alphanumeric characters.
- [Details] n = 00h or 30h: Cancel double-width enlargement and auto-cancelling double-width enlargement
n = 01h or 31h: Specify double-width enlargement

ESC w n

[N a m e] Specify/cancel double-height characters
[C o d e] 1Bh 77h nnh
[Function] Specifies or cancels double-height enlargement for alphanumeric characters.
[Details] n = 00h or 30h: Cancel double-height enlargement
n = 01h or 31h: Specify double-height enlargement
Double-height enlargement is valid with ANK characters. The baseline is lowered 24/180 inch, and the characters are lengthened vertically.

ESC E

[N a m e] Apply bold style
[C o d e] 1Bh 45h
[Function] Applies the bold style to alphanumeric characters.
[Details] Characters are shifted 1 bit to the right and OR'ed.

ESC F

[N a m e] Cancel bold style
[C o d e] 1Bh 46h
[Function] Cancels the bold style.

ESC G

[N a m e] Apply double-strike printing
[C o d e] 1Bh 47h
[Function] Applies double-strike printing to alphanumeric characters.
[Details]

ESC H

[N a m e] Cancel double-strike printing
[C o d e] 1Bh 48h
[Function] Cancels double-strike printing of alphanumeric characters.

ESC – n

[N a m e] Apply/cancel underlining
[C o d e] 1Bh 2Dh nnh
[Function] Specifies or cancels underlining of alphanumeric characters.
[Details] n = 00h or 30h: Cancel underlining
n = 01h or 31h: Apply underlining
Underline position: No character limitations (45th line)
No underlining when the print position is moved with ESC \$, ESC ¥ (ESC \)
or HT

ESC SP n

- [N a m e] Specify character spacing
- [C o d e] 1Bh 20h nnh
- [Function] Specifies the amount of character spacing for alphanumeric characters.
- [Details] Since the spacing is the remainder from dividing n by 128, 0 to 127 is the normal range of parameters that are used.
The default is 0.
The units for the spacing are 1/180 inch.

ESC q n

- [N a m e] Select character style
- [C o d e] 1Bh 71h nnh
- [Function] Selects the character style for alphanumeric characters.
- [Details] n = 00h: Normal characters (default)
n = 01h: Outline
n = 02h: Shadow
n = 03h: Shadow and outline
No character limitations

ESC 4

- [N a m e] Apply italics
- [C o d e] 1Bh 34h
- [Function] Applies italics to alphanumeric characters.
- [Details] B0h through DFh as well as F4h and F5h of the advanced graphics code table are printed as normal characters.

ESC 5

- [N a m e] Cancel italics
- [C o d e] 1Bh 35h
- [Function] Cancels italics for alphanumeric characters.

ESC ! n

- [Name] Global formatting
- [Code] 1Bh 21h nnh
- [Function] Specifies the print mode for alphanumeric characters.
- [Details] The individual settings are specified according to the description for each command.

With the n values listed below for each of the commands, the added values only for global formatting are specified.

n value	Setting	Corresponding command
00h	10 cpi	ESC P
01h	12 cpi	ESC M
02h	Proportional	ESC p
04h	Reduced	SI, DC2
08h	Bold (emphasized)	ESC E, ESC F
10h	Double-strike printing	ESC G, ESC H
20h	Double width	ESC W
40h	Italics	ESC 4, ESC 5
80h	Underline	ESC -

7. Character definition commands

ESC & 0 n n...

- [Name] Define download characters
- [Code] 1Bh 26h 00h nnh....
- [Function] Defines characters that are the same as alphanumeric characters as a download character set.
- [Details] Converts the resolution of the character line buffer from 180 dpi to 300 dpi or 200 dpi when characters are defined as 32 dots wide at 300 dpi (21 dots at 200 dpi). Only high-quality characters can be defined; draft characters can also be defined as high-quality characters.
Used when applying a download character (ESC % 1).

ESC % n

- [Name] Apply/cancel download character set
- [Code] 1Bh 25h nnh
- [Function] Applies or cancels the download character set for alphanumeric characters.
- [Details] n = 00h or 30h: Cancel download character, use font from Flash area
n = 01h or 31h: Apply download character, use font from DRAM area

ESC : 0 n 0

- [Name] Copy character set
- [Code] 1Bh 3Ah 00h nnh 00h
- [Function] Copies the font from the Flash memory area to the DRAM area.

ESC 6

- [Name] Cancel upper control codes
- [Code] 1Bh 36h
- [Function] Cancels control codes 128 (80h) through 159 (9F).
- [Details] 128 (80h) through 159 (9F) function as character codes cannot be used as control codes.

ESC 7

- [Name] Apply upper control codes
- [Code] 1Bh 37h
- [Function] Applies control codes 128 (80h) through 159 (9F).
- [Details] 128 (80h) through 159 (9F) function as control codes and cannot be used as character codes.
The default settings are Cancelled (ESC 6)

8. Supplemental function commands

ESC @

[Name] Initialize

[Code] 1Bh 40h

[Function] Initialize printer

[Details] The settings that are stored depend on the setting.

Other items are as listed below.

Beginning of paper:	The current paper position is considered as the beginning.
Horizontal print position:	Left margin position
Vertical print position:	Top margin position
Margin settings:	Same settings as the margins for the print area of A4-size page
Horizontal tabs:	8 half-width characters
VFU channel:	0
Page length:	11 inches
Page width:	8 inches
ANK character pitch:	12 cpi
Line feed amount:	1/6 inch
International character set:	USA
Command mode:	ESC/P mode (Raster mode)

9. Others

ESC K n m

- [Name] 8-bit single-density bit image
- [Code] 1Bh 4Bh nnh mmh
- [Function] With the initial settings, same as ESC * 0.
- [Details] 60 dpi bit image data, n = LSB, m = MSB

ESC L n m

- [Name] 8-bit double-density bit image
- [Code] 1Bh 4Ch nnh mmh
- [Function] With the initial settings, same as ESC * 1.
- [Details] 120 dpi bit image data, n = LSB, m = MSB
The details are as described in the Epson manual.

ESC Y n m

- [Name] 8-bit double-speed double-density bit image
- [Code] 1Bh 59h nnh mmh
- [Function] With the initial settings, same as ESC * 2.
- [Details] 120 dpi bit image data, n = LSB, m = MSB
The details are as described in the Epson manual.

ESC Z n m

- [Name] 8-bit quadruple-density bit image
- [Code] 1Bh 5Ah nnh mmh
- [Function]
- [Details] 240 dpi bit image data, n = LSB, m = MSB
The details are as described in the Epson manual.

ESC * m n1 n2..

- [Name] Select bit image
- [Code] 1Bh 2Ah mmh n1h n2h...
- [Function] With the initial settings, same as ESC * 3.
- [Details] The resolution is converted according to the print command after the bit image is expanded in the 360 dpi line buffer.
The size of the 360 dpi line buffer is 2,880 dots × 48 lines. The data for a bit image that exceeds the buffer area is discarded, and an overflow line feed is not performed. The process for the right margin is also not performed. In addition, n = 72 is processed in the same way as if n = 73.

ESC ? m n

[N a m e] Convert bit image

[C o d e] 1Bh 3Fh mmh nnh

[Function] Converts the bit images of ESC K, ESC L, ESC Y and ESC Z to the bit image of parameter n in ESC *.

[Details] m refers to the bit image to be converted.

n refers to the bit image to be converted into (m of ESC *).

ESC / m

[N a m e] Select VFU channel

[C o d e] 1Bh 2Fh mmh

[Function] Selects the VFU channel.

[Details] Subsequent VT depend on the vertical tab positions specified with channel m.

ESC b m n...0

[N a m e] Specify VFU tab position

[C o d e] 1Bh 62h mmh nnh ...00h

[Function] Specifies a vertical tab position at VFU channel m.

[Details] Specifies a vertical tab at the position where (line feed amount when this command is specified) * (specified number of lines n). A tab setting that specifies a position extending past the page length is ignored.

2 Advanced commands

2 - 1 List of commands

The following commands are advanced commands specific for this printer.

Command	Code	Function
ESC i a n	1Bh 69h 61h nnh	Switch command mode
ESC i S	1Bh 69h 53h	Request printer status
ESC ~ e F 1 n1 n2	1Bh 7Eh 65h 46h 01h n1h n2h	Reverse feed

2-2 Command details

ESC i a n

[Name] Switch command mode
[Code] 1Bh 69h 61h nnh
[Function] Switches the command mode.
[Details] When setting nnh is:

00h or 30h: ESC/P mode/Raster mode (default)

03h or 33h: P-touch Template mode

If a setting other than those listed above is specified, ESC/P mode or raster mode will be entered.

Example: 1Bh 69h 61h 00h Specifies ESC/P mode.

ESC i S

[Name] Request printer status
[Code] 1Bh 69h 53h
[Function] Requests the printer status.
[Details] *Refer to the P-Touch Template Command Reference.

ESC ~ e F 1 n1 n2

[Name] Reverse feed
[Code] 1Bh 7Eh 65h 46h 01h n1h n2h
[Function] Reverse feeds the paper by the specified number of lines.
[Details] The number of lines is specified with the two bytes n1h n2h.
However, n1h is the least significant byte and n2h is the most significant byte.

The setting range for the number of lines is:

At 300 dpi: 24 to 12,000 dots

At 200 dpi: 18 to 8,000 dots

Example: 1Bh 7Eh 65h 46h 01h 04h 10h

Specifies the number of lines as 1004h = 4,100 dots.

3 Character code tables

1. Advanced graphics code table

MSB LSB	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	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	≡	⊥	F	σ	J
6			&	6	F	V	f	v	å	û	a	≡	⊥	π	μ	÷
7			‘	7	G	W	g	w	ç	ù	o	π	⊥	⊥	γ	≈
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	ç	½	⊥	⊟	■	δ	√
C			,	<	L	\	l	|	î	£	¼	⊥	⊥	■	∞	∞
D			-	=	M	]	m	}	ì	¥	¡	⊥	=	■	∅	²
E			.	>	N	^	n	~	Ä	Pts	«	⊥	≡	■	€	▪
F			/	?	O	_	o		Å	f	»	⊥	⊚	■	∩	

Precautions

- The character code 0xF2 is “≤” at 300dpi.
- The character code 0xF3 is “≥” at 300dpi.

2. Italic characters code table

MSB LSB	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p			SP	0	@	P	`	p
1			!	1	A	Q	a	q			!	1	A	Q	a	q
2			"	2	B	R	b	r			"	2	B	R	b	r
3			#	3	C	S	c	s			#	3	C	S	c	s
4			\$	4	D	T	d	t			\$	4	D	T	d	t
5			%	5	E	U	e	u			%	5	E	U	e	u
6			&	6	F	V	f	v			&	6	F	V	f	v
7			'	7	G	W	g	w			'	7	G	W	g	w
8			(	8	H	X	h	x			(	8	H	X	h	x
9			)	9	I	Y	i	y			)	9	I	Y	i	y
A			*	:	J	Z	j	z			*	:	J	Z	j	z
B			+	;	K	[	k	{			+	;	K	[	k	{
C			,	<	L	\	l	!			,	<	L	\	l	!
D			-	=	M	]	m	}			-	=	M	]	m	}
E			.	>	N	^	n	~			.	>	N	^	n	~
F			/	?	O	_	o				/	?	O	_	o	∅

3. International characters

N	Country	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
0	USA	#	\$	@	[	\	\]	^	`	{	|	}	~
1	France	#	\$	à	°	Ç	§	^	`	é	ù	é	ø
2	Germany	#	\$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
3	UK	£	\$	@	[	\	\]	^	`	{	|	}	~
4	Denmark I	#	\$	@	Æ	Ø	Å	^	`	æ	ø	å	~
5	Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	Italy	#	\$	@	°	\	é	^	ù	à	ò	è	ì
7	Spain I	Pts	\$	@	í	Ñ	¿	^	`	ø	ñ	}	~
8	Japan	#	\$	@	[	¥	]	^	`	{	|	}	~
9	Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10	Denmark II	#	\$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11	Spain II	#	\$	á	í	Ñ	¿	é	`	í	ñ	ó	ú
12	Latin America	#	\$	á	í	Ñ	¿	é	ü	í	ñ	ó	ú
13	Korea	#	\$	@	[	₩	]	^	`	{	|	}	~
64	Legal	#	\$	§	°	'	"	¶	`	©	®	†	™

Precautions for selecting the international character sets listed above

When character code 0x7C (“ø”) for Denmark, Norway or Denmark II is selected, it becomes a space if the proportional pitch is applied.

4 Differences with old machine model

Main differences with PJ-500 series printers

The following commands are new additions.

ESC i a n : Switch command mode
ESC i S : Request printer status
ESC ~ e F 1 n1 n2 : Reverse feed

Main differences with PocketBook 30i/30iB

It is the same as the above-mentioned.

5 Notes

Command not supported

The command that has not been described for this command reference not supported.

Notes for using Bluetooth

When you are connecting the machine via Bluetooth, the printer may not start to receive the data immediately after the port is opened. We advise to wait for an interval of 500 msec before sending the print data to the machine.

If you normally close and re-open the Bluetooth port between prints, we would again advise to leave 500 msec between the port being closed and re-opened.

Also, once you have sent the print data, and the printing process has begun, do not close the port. Please ensure 32 bytes of data has been received by the printer, and then close the port.