ESC/POS print control command

The following table is a brief list of print commands, categorized by function

chapter	instruction	Briefly
1Printer control command		
1.1	ESC @	Printer initialization
1.2	GSFF	Print and feed to next top of page (only for black
1.3	LF	print and wrap
1.4 _	ESC J n	print and feed
1.5 _	ESC K n	print and return
2 -character Chinese character parameter setting command		
2.1	ES C ! n	Select Western character print mode
2.2	FS ! n	Select Kanji character print mode
2.3	GS ! n	set character size
2.4 _	ESC – n	Set the underline print mode
2.5 _	ESC E n	Set bold print mode
2.6 _	GS B n	Set the reverse print mode
2.7 _	ESC V n	Set character rotation mode
2.8 _	FS &	Set Chinese character printing mode
2.9 _	FS .	Set the mixed printing mode of Chinese characters
2. 10	ESC R n	Select international character set
2.1 1	ESC t n	Select character code page
3 print typesetting parameter setting command		
3.1 _	ESC 3 n	Set line spacing
3.2 _	ESC SP n	Set character right spacing
3.3 _	ESC a n	Choose an alignment
3.4 _	GS L	set left margin
3.4 _	GS W	Set the print area width
4 barcode printing commands		
4.1	GS hn	Set barcode height
4.2	GS wn	Set barcode width
4.3	GS H n	Select the print position of barcode readable
4.4	GS pn	Set the barcode to its way
4.5	GS k	print barcode
4.6	RS 7	QR code printing
5 Image Printing		
5.1	G S v	print raster bitmap
5.2	F S q n	define NV bitmap
5.3	F S p n m	print NV bitmap
6Printer status feedback		

6.1	DLE EOT n	real-time status transfer
6.2	GSr	Transmission status
6.3	GS In	Query firmware version
7 Cut Control		
7.1	ESC i	full cut
7.2	ESC m	half cut

Description: The dot pitch in this command set is 0.125mm (1mm=8dots), and the parameter part n is a decimal value

1 basic control commands

1.1 ESC @

[name] Initialize the printer

[Format] ASCII code ESC @

hex code 1B 40

decimal code 27 64

[description] Initialize the printer and restore the default parameters of the printer.

1.2 GSFF

[name] Print and feed to next top of page

[Format] ASCII code GS FF

hex code 1D 0C

decimal code 29 12

[description] Print the data in the print buffer, and feed the paper to the preset black mark cutting position when the black mark function is valid .

1.3 LF

[name] print and wrap

[Format] ASCIIcode LF

hex code 0A

decimal code 10

[description] Print the data in the print buffer and wrap it in a new line.

1.4 _ ESC J n

[name] print and feed

[Format] ASCIIcode ESC J n

hex code 1B 4A n

decimal code 27 74 n

[range] $0 \leq n \leq 255$

[description] Print the data in the print buffer and feed it n vertical dot pitches. After printing, set the start of the next line as the printing start position (one vertical dot spacing is0.125mm, the same below) .

1.5 _ ESC K n

[name] print and return

[Format] ASCIIcode ESC K n

hex code 1B 4 B n

decimal code 27 7 5 n

[range] $0 \leq n \leq 255$

[description] Print the data in the print buffer and return it n vertical dot pitches. After printing, the start of the next line is set as the print start position .

2 Character parameter setting command

2.1 ESC ! *n*

[command] Select Western character print mode

[Format] ASCIIcode ESC ! n

hex code 1B 21 n

decimal code 27 33 n

[range] $0 \le n \le 255$

[description] When double-height and double-width modes are selected at the same time, quadruple-sized characters are printed ; the characters are aligned along the baseline .

By specifying parameters The value selects the print mode. parameter n is defined as follows:

bit	value	significance
0	0	Western characters (half width) font A (12*24)
	1	Western characters (half width) font B (8*16)
1,2	-	undefined
3	0	Cancel bold mode
	1	set bold mode
4	0	Cancel double height mode
	1	Set double height mode
5	0	Cancel double-width mode
	1	Set double-width mode
6	-	undefined
7	0	Cancel underline mode
	1	set underline mode

2.2 FS ! *n*

[command] Select Kanji character print mode

[Format] ASCII code FS ! n

hex code 1 C 21 n

decimal code 2 8 33 n

[range] $0 \le n \le 255$

[description] When double-height and double-width modes are selected at the same time, quadruple-sized characters are printed ; the characters are aligned along the baseline .

By specifying parametersn The value selects the print mode. The parameter n is defined as follows:

bit	value	significance
0	0	Chinese character (full width) font A (24*24)
	1	Chinese character (full width) font B (16*16)
1	-	undefined
2	0	Cancel double-width mode
	1	Set double-width mode
3	0	Cancel double height mode
	1	Set double height mode
4	-	undefined
5	-	undefined
6	-	undefined
7	0	Cancel underline mode
	1	set underline mode

2.3 GS ! *n*

[name] set character size

[Format] ASCII code GS ! *n*

hex code 1 D twenty one *n*

decimal code 29 33 *n*

[range] $0 \le n \le 255$ ($1 \le$ vertical multiple ≤ 2, $1 \le$ Horizontal multiple ≤ 8)

[description] use bit0~3 Bit select character height, use bit4~7 bit selects the character width as follows:

bit 0	bit 1	bit 2	bit 3	high
0	0	0	0	1 times
1	0	0	0	2 times
0	1	0	0	3 times
1	1	0	0	4 times
0	0	1	0	5
1	0	1	0	6
0	1	1	0	7
1	1	1	0	8

bit 4	bit 5	bit 6	bit 7	width
0	0	0	0	1 times
1	0	0	0	2 times
0	1	0	0	3 times
1	1	0	0	4 times
0	0	1	0	5 times
1	0	1	0	6 times
0	1	1	0	7 times
1	1	1	0	8 times

2.4 ESC – n

[name] set / ununderline

[Format] ASCII code ESC - *n*

hex code 1 B 2D *n*

decimal code 27 45 *n*

[range] $0 \le n \le 2$

[description] Based on the followingnvalue to set / disable underline mode:

n	significance
0	Disable underline mode
1	Set underline mode (1 point thick)
2	Set underline mode (2 point thick)

2.5 ESC E *n*

[name] Enable/disable bold printing

[Format] ASCII code ESC E *n*

hex code 1B 45 *n*

decimal code 27 69 *n*

[range] $0 \le n \le 1$

[description] Sets or cancels the bold print mode.

n	significance
0	Disable bold print mode
1	Set bold print mode

2.6 GS B *n*

[name] Enable/disable reverse printing

[Format] ASCII code GS B *n*

hex code 1D 42 *n*

decimal code 29 66 *n*

[range] $0 \le n \le 1$

[description] Sets or cancels the reverse print mode.

n	significance

0	Release the reverse print mode
1	Setting the reverse print mode

2.7 ESC V *n*

[name] Set/cancel character rotation

[Format] ASCII code ESC V *n*

hex code 1B 56 *n*

decimal code 27 86 *n*

[range] 0 ≤ *n* ≤ 1

n	significance
0	Cancel rotation mode
1	set up90° clockwise rotation mode

[description] When underline mode is set, for clockwise90°Rotated characters are not underlined by the printer.

2.8 FS &

[name] Set Chinese character printing mode

[Format] ASCII code FS &

hex code 1C 26

decimal code 2 8 38

[description] Select Kanji character mode

2.9 FS .

[name] set kanjiASCIICharacter mixed print mode

[Format] ASCII code FS .

hex code 1C 2E

decimal code 28 46

[description] select Chinese charactersASCIIcharacter mix mode

2.10 E S C R n

[name] Select international character set

[Format] ASCII code ESC R *n*

hex code 1B 52 *n*

decimal code 27 82 *n*

[range] 0<= n <= 13

[description] Choose from the table below Text , sets the international character set

n	character set
0	U.S.
1	France
2	Germany
3	U.K.
4	Denmark I
5	Sweden
6	Italy
7	Spain I
8	Japan
9	Norway
10	Denmark II

2.11 ESC t n

[name] Select character code page

[Format] ASCII code ESC t *n*

hex code 1B 74 *n*

decimal code 27 116 *n*

[description] Select pages from the character code table, with the following values of n:

Numbering	character page	Numbering	character page
0	PC437 [US European Standard]	14	PC1251
1	PC737	15	PC1252
2	PC775	16	PC1253
3	PC850	17	PC1254
4	PC852	18	PC1255
5	PC855	19	PC1256
6	PC857	20	PC1257
7	PC858	twenty one	PC928
8	PC860	twenty two	Hebrew old
9	PC862	twenty three	IINTEL CHAR
10	PC863	twenty four	Katakana
11	PC864	25	Special symbols 00-1F
12	PC865	26	SPACE PAGE
13	PC866		

3 print typesetting parameter setting command

3.1 ESC 3 *n*

[name] Set line spacing

[Format] ASCII code ESC 3 n

hex code 1B 3 3 n

decimal code 27 51 n

[range] $0 \leq n \leq 255$

[description] Set the character line spacing to n vertical dots. (1mm=8dots)

3.2 ESC SP *n*

[name] Set character right spacing

[Format] ASCII code ESC SP n

hex code 1B 20 n

decimal code 27 32 n

[range] 0 ≤ *n* ≤ 255
[description] Sets the spacing on the right side of the character to n horizontal dots. In double- width mode, the space on the right side of the character is double the normal value; when the character is enlarged, the space on the right side of the character is enlarged by the same factor.

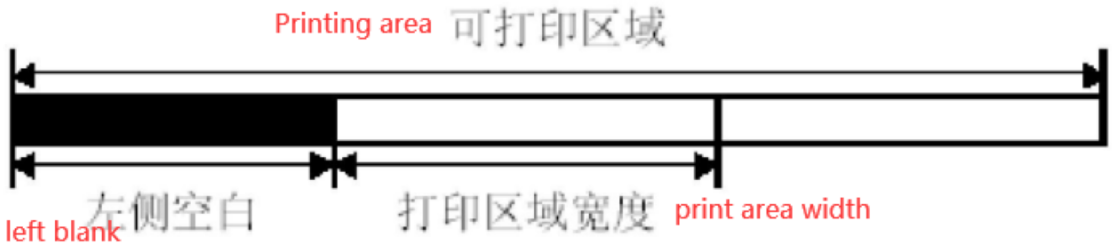
3.3 ESC a *n*

[name] Choose an alignment
[Format] ASCII code ESC a n
hex code 1B 61 n
decimal code 27 97 n
[range] 0 ≤ *n* ≤ 2
[description] This command is valid only at the beginning of a line processing ; this command performs alignment in the print area ; aligns a line of data according tonThe specified position is aligned , the optional value and meaning of *n :*

n	significance
0	Align left
1	Centered
2	Align right

3.4 GS L *nL nH*

[name] set left margin
[Format] ASCII code GS L nL nH
hex code 1D 4C nL nH
decimal code 2 9 76 nL nH
[range] 0 ≤ *nL* ≤ 255 , 0 ≤ *nH* ≤ 255
[Description] nL and nH set the left margin.
The left margin is set to [(nL+nH*256)*0.125mm].



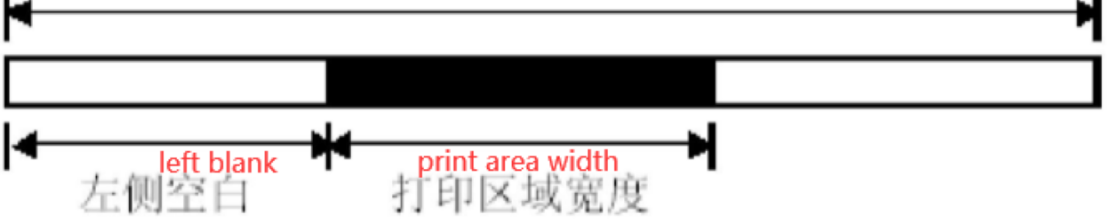
3.5 GS W *nL nH*

[name] set print area width
[Format] ASCII code GS W nL nH
hex code 1D 57 nL nH
decimal code 2 9 87 nL nH
[range] 0 ≤ *nL* ≤ 255 , 0 ≤ *nH* ≤ 255
[Description] nL and nH set the print area width.
The print area width is set to [(nL+nH*256)*0.125mm].

4 barcode print command

4.1 GS h *n*

[name] Set barcode height
[Format] ASCII code GS h n



hex code 1D 68 n
decimal code 29 104 n
[range] $1 \le n \le 240$, unit 0.125mm
[description] Select the bar code height, n set the number of dots in the vertical direction, if n>240, the bar code height will be set to 40dots.

4.2 GS w *n*

[name] Set barcode width
[Format] ASCII code GS w n
hex code 1D 77 n
decimal code 29 119 n
[range] $1 \le n \le 4$
[description] Sets the bar code horizontal size.
n is defined as follows:

N	Multi-level barcode unit width (mm)	Binary barcode width	
		narrow line width	wide bar width
1	0.125	0.125	0.25
2	0.25	0.25	0.50
3	0.375	0.375	0.75
4	0.50	0.50	1.0

4.3 GS H *n*

[name] Select the print position of barcode readable characters
[Format] ASCII code GS H n



n Select the print location as follows:

n	Read character position
0	do not print
1	above the barcode
2	below the barcode
3	print both top and bottom

4.4 GS p *n*

[name] Set the barcode to its way
[Format] ASCII code GS p *n*
hex code 1D 50 *n*
decimal code 29 90 n

[range] n = 0, 1 , 2
[description] When printing barcodes, select a font for reading characters. Optional value and meaning of n

n	Alignment
0	Align left
1	center align
2	Align right

4.5GS _ k

[name] print barcode
[Format] This command has two formats:
Format1 (0 ≤ m ≤ 8)

ASCII code GS k *m d1* …d *k NUL*
hex code 1D 6B *m d1* …d *k 00*
decimal code 29 107 *m d1* …d *k 0*

Format 2 (65 ≤ m ≤ 73)
ASCII code GS k *m n d1* … *dn*
hex code 1D 6B *m n d1* … *dn*
Decimal code 29 107 *m n d1* … *dn*

[range] 0 ≤ m ≤ 8 (k andd depending on the barcode system used)
65 ≤ m ≤ 73 (n andd depending on the barcode system used)
(n is the data length of the printed barcode)
[description] Select a barcode system and print barcodes.
m Define the barcode system used, as shown in the following table:

m		barcode system	number of characters	Remark
①	0	UPC-A	11 ≤ k ≤ 12	48 ≤ d ≤ 57
	1	UPC-E	11 ≤ k ≤ 12	48 ≤ d ≤ 57
	2	JAN13 (EAN13)	12 ≤ k ≤ 13	48 ≤ d ≤ 57
	3	JAN8 (EAN8)	7 ≤ k ≤ 8	48 ≤ d ≤ 57
	4	CODE39	1 ≤ k	48 ≤ d ≤ 57,65 ≤ d ≤ 90
	5	ITF	1 ≤ k (k is even)	48 ≤ d ≤ 57
	6	CODABAR	1 ≤ k	48≤d≤57,65≤d≤68 _ _ _ _
②	7	Standard EAN13	12 ≤ k ≤ 13	48 ≤ d ≤ 57
	8	Standard EAN8	7 ≤ k ≤ 8	48 ≤ d ≤ 57
	65	UPC-A	11 ≤ n ≤ 12	48 ≤ d ≤ 57
	66	UPC-E	11 ≤ n ≤ 12	48 ≤ d ≤ 57
	67	JAN13 (EAN13)	12 ≤ n ≤ 13	48 ≤ d ≤ 57
	68	JAN8 (EAN8)	7 ≤ n ≤ 8	48 ≤ d ≤ 57
	69	CODE39	1 ≤ n ≤ 255	48 ≤ d ≤ 57,65 ≤ d ≤ 90
	70	ITF	1 ≤ n ≤ 255 (n is an	48 ≤ d ≤ 57

71	CODABAR	1 ≤ n ≤ 255	48≤d≤57,65≤d≤68 _ _ _ _ _ _ _ _ 36 42 45 46 47 58
72	CODE93	1 ≤ n ≤ 255	0 ≤ d ≤ 127
73	CODE128	1 ≤ n ≤ 255	0 ≤ d ≤ 127
74	Standard EAN13	12 ≤ n ≤ 13	48 ≤ d ≤ 57
75	Standard EAN8	7 ≤ n ≤ 8	48 ≤ d ≤ 57

[Note] • If the horizontal dimension exceeds the print area, the excess will be ignored.

• The printer does not calculate the check code .If the barcode requires a check code ,the check code needs to be included in the barcode data . Theprinter is not responsible for checking the correctness of the check code. If the user calculates the check code incorrectly, the barcode will be damaged. Unable to scan.

• If readable characters are set to print, CODE93 andCODE128 Invisible characters in code cannot be printed out Come, replace it with ' □ ' at this time .

• CODE39code does not include extensionsCODE39code (EXTERN CODE 39).

• CODE93code does not include extensionsCODE93code (EXTERN CODE 93).

• CODE128 The header of the barcode data string must be the code set selection character (CODE A, CODE B, orCODE C), a The code set can also be switched within each barcode. with characters ' { ' and a character combination to define a special function. by continuous transmission twice ' { ' definitionASCIIcharacter ' { ' . As shown below

ASCII	HEX	Function
{A	7B, 41	Choose an encoding set
{B	7B, 42	Choose an encoding set
{C	7B, 43	Choose an encoding set
{S	7B, 53	SHIFT
{1	7B, 31	FNC1
{2	7B, 32	FNC2
{3	7B, 33	FNC3
{4	7B, 34	FNC4

4.6 DC3 PH nm

[Name] QR code printing

[Format] ASCII code DC3 P H n m

hex code 13 50 48nm _

decimal code 19 80 72nm _

[Range] 1 ≤ n ≤ 5

[Description] When n=1, m is the version number of the QR code, and the value range is (1-40);

When n=2, m is to set the error correction level of the two-dimensional code, and the value range is (1-4);

When n=3, m is to set the width of the QR code module, and the value range is (1-9);

When n=4, m is the content of the set QR code;

Format 1: m + DH+DL + data content (inner code)

m=01

DH*256 +DL: length in bytes

Format 2: m + data content (internal code) + 00

m=02

When n=5, print the QR code directly.

5 Graphics/Image Printing Commands

5.1 GS v 0 m xL xH yL yH d1...dk

[name] print raster bitmap

[Format] ASCII code GS v 0 m xL xH yL yH d1…dk

Hex 1D 76 30 m xL xH yL yH d1…dk

Decimal code 29 118 48 m xL xH yL yH d1…dk

[Range] 0≤m≤3, 1(xL(128

xH=0, here 1((xL +xH*256) (128

0(yL(255

1(yH(15, here 1((yL +yH*256) (4095

0(d(255

k = (xL +xH*256) *(yL+yH*256) (k(0)

[Description] Set raster bitmap mode m value setting mode is as follows

m	model	vertical dot density	Horizontal dot density
0	ordinary	203.2dpi	203.2dpi
1	double width	203.2dpi	101.6dpi
2	double high	101.6dpi	203.2dpi
3	quadruple size	101.6dpi	101.6dpi

(dpi: print dots per 25.4mm {1 inch})

[Note] xL, xH set the number of data bytes in the horizontal direction of the bitmap (xL+xH*256);
yL, yH set the number of data bytes in the vertical direction of the bitmap (yL+yH*256).
In standard mode, this command is valid only when there is no data in the print buffer.
For raster bitmap printing, this command is not affected by the print mode (character size, bold, overlap, upside-down, underline, reverse print mode, etc.).

[Detailed description] ●If the width of the print area set by GS L (Set Left Margin) is smaller than the minimum print width, the printer only expands the problematic line to the minimum width. The minimum width is one point for normal mode m=0 and double height mode m=2, and two points for double width mode m=1 and quadruple size mode m=3.

●Data within the print area is read in and discarded point by point. If the print position of subsequent characters is a multiple of 8 . The print position of the characters to be printed as raster bitmap subsequently, set by HT (horizontal tabulation), ESC $ (set absolute print position), ESC \ (set relative print position) and GS L (set left margin). Certainly. The ESC a (set alignment) setting is also valid for raster bitmaps. When the command is received during the macro definition, the printer ends the macro definition and executes the command, the definition of the command should be clear.

●d indicates bitmap data, the bit corresponding to the printed point is 1, and the corresponding bit of the non-printed point is 0.

[Example] When xL+xH*256=64:

5.2 FS qn [xL xH yL yH d1 ... dk] 1 ... [xL xH yL yH d1 ... dk] n

[name] define NV bitmap

[Format] ASCII code FS qn [xL xH yL yH d1...dk]1...[x L xH yL yH d1...dk]n

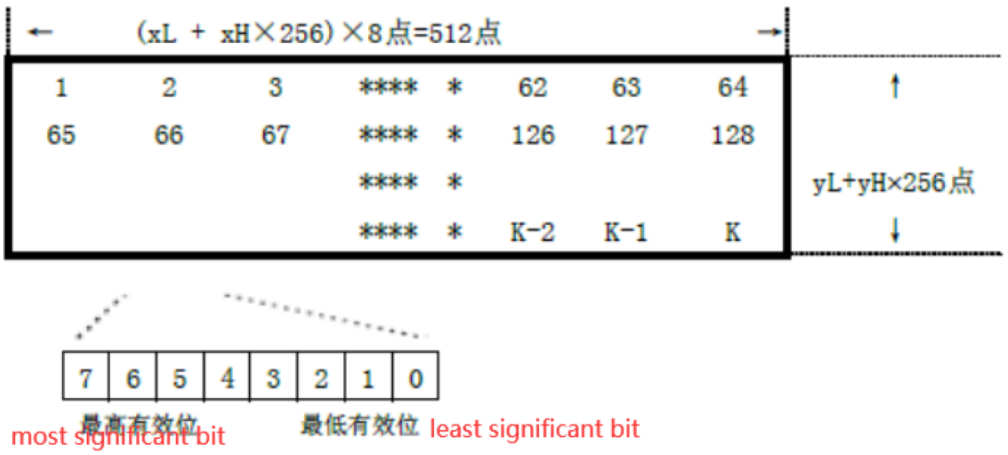
Hexadecimal code 1C 71 n [xL xH yL yH d1...dk]1...[x L xH yL yH d1...dk]n

Decimal code 28 113 n [xL xH yL yH d1...dk]1...[x L xH yL yH d1...dk]n

[Range] 1≤n≤255

0≤xL≤255

0≤xH≤3 (when 1≤(xL + xH * 256)≤1023



0≤yL≤255

0≤yH≤1 (when 1≤(yL + yH * 256)≤288

0≤d≤255

k = (xL + xH * 256) * (yL + yH * 256) * 8

Sum-meter-defined data area = 192K bytes

[Description] Define the NV bitmap with a specific n value.

□□ ● n specifies the number of NV bitmaps defined.

□□ ● xL, xH Specify the number of points in the horizontal direction for the NV bitmap in the definition as (xL + xH * 256) * 8.

□ ● yL, yH Specifies the number of points in the vertical direction for the NV bitmap in the definition as (yL + yH * 256) * 8.

[Caution] ● Frequent execution of write commands may damage the NV memory.

Therefore, it is recommended to perform no more than 10 writes to NV memory in a day.

□□ □ ● After the process of placing an image into the NV memory, the printer performs a hardware reset operation , so user-defined characters, downloaded bitmaps and macros should be defined after completing this command. The printer clears the receive and print buffers and resets to the mode that was in effect at power up.

□□ ● This command cancels all NV bitmaps defined by this command.

□□ ● From the start of processing of this command to the completion of hardware reset, mechanical operations (including initializing the print head position when the cover is opened, using the paper feed button to feed paper, etc.) cannot be performed.

□□ ● During the processing of this command, the printer is busy and stops receiving data while writing data to the user NV memory. Therefore, data transfer, including real-time commands, is prohibited during the execution of this command.

□□ ● NV bitmap is a bitmap defined in non-volatile memory. Use FS q to define FS p print.

□□ ● In standard mode, this command is valid only at the beginning of a line.

□□ ● The command is valid only after the 7 bytes <FS□yH> of the command are processed normally.

□□ ● When the data volume exceeds the left capacity of the range defined by xL, xH, yL, yH, the printer will process the range defined by xL, xH, yL, yH outside the defined range.

□□ ● In the first group of bitmaps, when any parameter in xL, xH, yL, yH exceeds the defined range, this command is prohibited.

□□ ● In a group of bitmaps other than the first group, when the printer encounters xL, xH, yL, yH beyond the defined range, it will stop processing the command and start writing NV images. At this point, NV bitmaps that have not yet been defined are disabled (undefined,) but any previously defined NV bitmaps are still valid.

□□ ● d represents definition data. In data (d), a 1-bit designates a point to be printed and a 0-bit designates a point not to be printed.

□□ ● This command defines n as the number of NV bitmaps. The number increases sequentially from bitmap 01H. Therefore the first data group [xL xH yL yH d1...dk] is the NV bitmap 01H and the last data group [xL xH yL yH d1...dk] is the NV bitmap n. The total number is consistent with the number of NV bitmaps set by the FS p command.

□□ ● The definition data of an NV bitmap consists of [xL xH yL yH d1...dk]. Therefore, when n=1 when there is only one NV bitmap, the printer processes the data set [xL xH yL yH d1...dk] only once. The printer uses ([data: (xL □□ xH ¬256) ¬(yL □□ yH ¬256)¬□ 8] □□ [header:4]) bytes of NV memory.

□□ ● The defined area in this printer is 192K bytes (maximum). This command can define several bitmaps, but cannot define bitmaps whose total data capacity [bitmap data + header] exceeds 192K bytes.

□□ ● Even if ASB is set, the printer does not transmit the ASB status or perform a status check while processing the command.

Measurement.

□□ ● When this command is received during macro definition, the printer stops the macro definition and starts to execute the command.

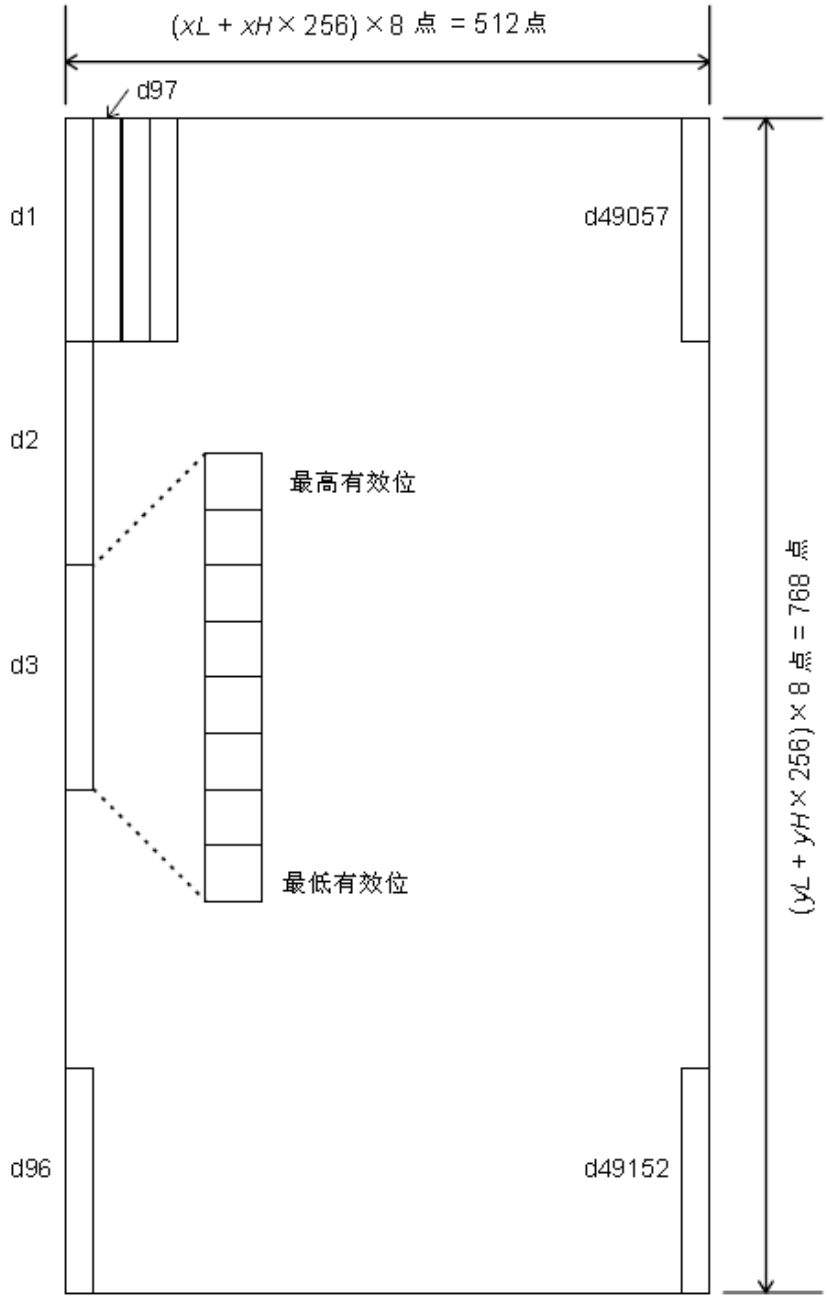
□□ ● Once an NV bitmap is defined, it cannot be deleted by executing ESC @ command, reset, or power off.

□□ ● This command only executes the definition of NV bitmap and does not execute printing. The NV bitmap is printed by the FS p command

implemented.

[Reference] FS p

[Example] When xL = 64, xH = 0, yL = 96, yH = 0



5.3 FS p n m

[name] print NV bitmap

[Format] ASCII code FS p n m

hex code 1C 70 n m

decimal code 28 112 n m

[Range] 1≤n≤255

0≤m≤3 , 48≤m≤51

[Description] Print NV bitmap n with the mode specified by m:

m	model	vertical dot density	Horizontal dot density
0, 48	ordinary	203.2 dpi	203.2 dpi
1, 49	double width	203.2 dpi	101.6 dpi
2,50	double high	101.6 dpi	203.2 dpi
3, 51	4 times the	101.6 dpi	101.6 dpi

size

dpi: Print dots per 25.4 mm {1 inch}.

□□ ● n is the number of NV bitmaps (defined with the FS q command).

□□ ● m specifies the bitmap mode.

[Note] ● NV bitmap is a bitmap defined in non-volatile memory. Define FS p print with FS q

□□ ● This command is invalid when the specified NV bitmap does not exist.

□□ ● In standard mode, this command is valid only when there is no data in the print buffer.

□□ ● This command is not affected by print mode (bold print, overlap, underline, character size, reverse print, or character 90□), except for reverse print modes such as rotation.

□□ ● If the NV bitmap print area width set with GS L and GS W is less than one vertical line , perform the following operations only for the problematic line. In NV bitmap mode, a vertical line means one point in normal mode (m'0, 48) and double height mode (m'2, 50), double width mode (m'1, 49) and quadruple size mode Two points under (m□3, 51) :

① In NV bitmap mode, the width of the print area is extended to the right to a vertical line, in this case , it does not exceed the print area.

② If the width of the print area cannot be extended by one vertical line, the left margin is reduced to accommodate one vertical line.

□□ ● If the downloaded bitmap to be printed exceeds one line, the excess data will not be printed.

□□ ● In the normal and double-width modes, the command feeds n points (n is the height of the NV bitmap), in the double-height and quadruple size modes (the command feeds 2n points, and n is the height of the NV bitmap) , regardless of the line spacing set by ESC 2 or ESC 3.

□□ ● After printing the bitmap, this command sets the print position at the beginning of a line, and processes the subsequent data as normal data.

[Reference] ESC *, FS q , GS / , GS v 0

6 Printer Status Feedback

6.1 DLE EOT n

[name] real-time status transfer

[Format] ASCII code DLE EOT n

hex code 10 04 *n*

decimal code 16 4 *n*

[range] *n* = 1,2,3,4

[description] The printer status is transmitted in real time. parametern is used to specify the printer status to be transmitted. Defined as follows: n = 1: Send printer status

n = 2: Send offline status

n = 3: Transmit error

status

n = 4: Transport roll paper sensor status

n = 5: external sensor query status

[Details] • The printer transmits the current state, each state is a byte of data ;

• When the printer receives this command, it starts to execute.

• In serial interface mode, this command is executed even when the printer is offline, the receive buffer is full, or an error condition occurs .

n = 1 printer status

bit	off / on	hex code	decimal code	Fu
0	open	00	0	Unused. Select On.
1	open	02	2	Unused. Select On.
2	open	04	4	Unused. Select On.

3	close	00	0	online.
	open	08	8	Offline.
4	open	10	16	Unused. Select On.
5	close	00	0	Do not wait for online
	open	20	32	Waiting for online error
6	close	00	0	The feed key is
	open	40	64	The paper feed key is on.
7	close	00	0	Unused. Select Off.

Note: bit 5: The printer will call the process of waiting for a key press during macro command execution and self-test as an online error.

n = 2 offline states

bit	off / on	hex code	decimal code	Fu
0	close	00	0	Unused. Select Off.
1	open	02	2	Unused. Select On.
2	close	00	0	The nose lifter is closed.
	open	04	4	The nose lifter is open.
3	close	00	0	Paper is not fed by the feed
	open	08	8	Paper is not fed by the feed
4	open	10	16	Unused. Select On.
5	close	00	0	The paper is not used up.
	open	20	32	When the paper runs out,
6	close	00	0	No errors.
	open	40	64	An error occurred.
7	close	00	0	Unused. Select Off.

bit5: Turns ON when the paper out sensor detects that the paper is out and stops printing

n = 3 error states

bit	off / on	hex code	decimal code	Function
0	close	00	0	Unused. Select Off.
1	open	02	2	Unused. Select On.
2	close	00	0	There are no mechanical
	open	04	4	A mechanical error has
3	close	00	0	No auto-cut errors.
	open	08	8	An automatic paper
4	open	10	16	Unused. Select On.
5	close	00	0	There are no
	open	20	32	An unrecoverable error
6	close	00	0	There are no automatically
	open	40	64	An automatically
7	close	00	0	Unused. Select Off.

bit 2: The printer lifts the head lift lever during printing and cannot be foundBMClassified as a mechanical error.

bit 6: If the temperature of the print head is too high during printing, the bit6will be left on until the print head temperature has effectively cooled or when the head lifter is opened during printing.

n = 4 continuous paper sensor status

bit	off / on	hex code	decimal code	F
0	close	00	0	Unused. Select Off.
1	open	02	2	Unused. Select On.
2	close	00	0	Near paper end detector,
3	open	0C	12	The near end detector detects that the paper is near the end
4	open	10	16	Unused. Select On.
5	close	00	0	Paper End Sensor: With
6	open	60	96	End of paper sensor detected end of roll paper.
7	close	00	0	Unused. Select Off.

n = 5 External sensor status

bit	off / on	hex code	decimal code	F u
0	close	00	0	jam sensor normal
	open	01	1	Paper jam occurs
1	close	00	0	no action
	open	02	2	Empty data after recycled paper or paper jam
2	close	00	0	Out of paper or function
	open	04	4	paper outlet
3	close	00	0	External sensor status is
	open	08	8	jam
4	close	00	0	
	open	10	16	Unused. Select On.
5	close	00	0	Sensor status is normal
	open	20	32	black mark error
6	close	00	0	Unused. selected off
	open	40	64	
7	close	00	0	Unused. selected off
	open	80	128	

6.2 GS r

[name] Transmission status

[Format] ASCII code GS r n

hex code 1D 72 *n*

decimal code 29 114 *n*

[range] *n* = 1

[description] Transport paper sensor status

Paper sensor status (n = 1)

bit	off / on	hex code	decimal	
0	close	00	0	Paper near end sensor: The paper
1	open	03	3	Paper near end sensor: The paper

2,3,4 _	close	00	0	Unused. Select On.
5,6	open	60	96	Printer idle state (printing
7	close	00	0	Unused. Select Off.

Note: After the printer has finished printing the last piece of data, send this command to get a return byte 60; if this command is sent and no data is returned after the timeout, the real-time status of the printer can be queried through DLE EOT n.

6.3 GS In

[name] Querying the Printer Firmware Version

[Format] ASCII code GS I *n*

hex code 1 D 49 *n*

decimal code 29 73 *n*

[range] *n* = 3

[Description] Query the printer firmware version

7 Cutter Control

7.1 ESC i

[name] full cut

[Format] ASCII code ESC i

hex code 1B 69

decimal code 27 105

[description] Full cut paper

7.2 ESC m

[name] half cut

[Format] A S C I I code ESC m

hex code 1B 6D

decimal code 27 109

[description] half cut paper