TCK837 printer specifications

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catalogue

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Set up the print area..... in page modeQS
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1 Introduction

① TCK837

TCK837 Is a light and delicate printer, in line with many industry bills and cashier printing. Low power consumption, high quality, stable performance, motor and thermal printing head after countless tests to achieve high standards, printer support U?{, internet access,?qH? Interface, can be external money box control interface, convenient and fast, practical wide.

List of supported operating systems:

WINDOWS XP

WINDOWS 7 32/64

WINDOWS 8

UBUNTU 12 32/64.04

UBUNTU 14 32/64.04

②main features

Step (delicate and beautiful

S(support U?{(Or network port) WIq I.?qH ?. Cloud printing

T (cassette control interface

Upper (low-noise, high-quality printing

Self (convenient and quick on the paper way

? (Easy to use and maintenance

T (Support for continuous paper printing

8) Compatible with multiple width paper

9) Printing speed is 180mm / s

2 Interface definition

① POWER

Power pin definition (24v model):

Pin number	Signal name
1	VIN (+24V)
2	GN D

② pin definition ofthe cassette interface

Pin number	S ignal name	Direction
1	FG	case
2	DRAWER 1	Monketbox 1 drive signal
3	DRSW	Cassette status monitoring signal
4	V DR	Cash te drive power supply
5	DR AWER 2	Monketbox 2 drive signal
6	GN D	Circuit common ground

③ USB Interface pin definition (Type B-USB)

Pin number	S ignal name	Direction
1	VB US	+5V
2	D-	Data Line (D -)
3	D +	Data Line (D +)
4	GN D	Groun d

④ Ethernet interface pin definition

Pin number	S ignal name
1	T X +
2	TX -
3	RX +
4	n /c
5	n /c
6	RX -
7	n /c
8	n /c

3 Technical specifications

Print way	Line-type thermal printing
Print paper wide	80mm
print span	72m m
resolution ratio	203DPI
Number of points per line	384 Points
print out rate	100mm/s
Printable content	GBK Chinese character library, ASCII characters, one-dimensional bar code, support different density dot map, grating bit map and download bitmap printing. Expsible 2 D barcode.
Default font	9X 24 (ASCII), 24x24 (Chinese)
Barcode type	UPC -A , UPC -E , EAN 13,EAN 8,Code 39, Codebar,Code 93 , ITF , CODAB , Code 128 , UCC/EAN128
working voltage	24V

4 List of instructions

LF	Print hand in hand paper	Print and paper-feeding instructions
CR	carriage return	
ESC J	Print and paper n points	
ESC d	Print into the paper n line	
ESC 3	Set the row spacing to be the n points	

ESC 2	Set the row spacing as the default value	Print the setup instructions
ESC $	Set up the print location	
G S L nL nH	Set the blank amount on the left side	
ES C SP n	Set the character right spacing	

ESC !	Set up the character print mode	
ESC M n	Choose the type	
GS !n	Set the character size	
G S B n	Set, unthe white printing	
ESC -n	Set, ununderline	
ESC V n	Set, remove 90° rotary printing	
ESC E n	Set, remove bold printing	
ESC G n	Set up and remove the overlapping printing	
ESC {n	Set, unreverse printing	
ESC a	Set up the print-out alignment mode	
FS &	Set the Chinese character mode	
FS ! n	Set up the Chinese character printing mode combination	
FS .	Cancel the Chinese character mode	
ESC %n	Select, and cancel the user-custom character set	
ESC &	Define a user-custom character set	
ESC ?n	Cancel the user custom character	
ESC R n	Select the international character set	
ESC t n	Select the character code page	
ESC 9n	Switch over the two-byte encoding	
ESC *	Figure vertical die-taking data filling	Graphic print instructions
GS v 0	Picture horizontal mold data printing	
GS *	Define the lower bitmap	
GS /m	Print the lower bitmap	
FS q	Define the NV bitmap	
FS p n m	Print out the NV bitmap	
GS v 0m	Print the grating bitmap	
GS n	Horizontal position print line segment (curve printing command)	
HT	horizontal tabulation	TAB instructions
ESC D	Set up the horizontal tabulation position	
GS H	Set the one-dimensional barcode-readable character (HRI) print location	One-dimensional barcode printing instructions
GS h	Set the one-dimensional barcode height	
GS w	Sets the one-dimensional barcode width	
GS k	Print a one-dimensional barcode	
GS k	Print QR code	
US Q	Dual-QR code printing	
GS (k	PDF 417 Set the number of columns in the data area	

GS (k pL pH cn fn n	Set the module type of the QR code	QR code printing instructions
GS (k pL pH cn fn n	Set the error correction level error of the QR code	
GS (k pL pH cn fn m d1…dk	Store the data of the QR code to the QR code buffer	
GS (k pL pH cn	Print the QR code	

fn m		
GS (k pL pH cn fn m	Set up the graphics information for the QR code	
G S r n	Transfer state	State instructions
D LE EOT n	Real-time transfer status	
DLE ENQ n	Live printer request	
GS a n	Allow and prohibit automatic status reply (ASB)	
ESC @	Initialize the printer	Other instructions
DC 2 T	Print self-test pages	
ESC 7	Set the print concentration	
GS V	Select the cutting mode and cut the paper	
ESC i	Fully cut paper form (OnlyForCut)	
ESC m	Half-cut paper paper (OnlyForCut)	
ESC p m	Generate a wallet pulse	
F F	Print and return to standard mode (in page mode)	Page mode instruction
CAN	Unprint the data in page mode	
ESC FF	Print in page mode	
ESC L	Select Page Mode	
ESC S	Select the standard mode	
ESC T n	Select the print area direction in page mode	
ESC W	Set up the print area in page mode	
GS $	Set the longitudinal absolute position in page mode	
GS \	Set the longitudinal relative position in page mode	
GS P	Set up the lateral and longitudinal moving units	

5 Instructions detailed explanation

① Print and paper-feeding instructions

print hand in hand paper

Directive name	Print hand in hand paper
instruction code	ASCII : LF Decal: 10 Hex-decimal system: 0A
functional description	Print the content in the print cache, then set the paper line according to the current line spacing, and adjust the print position to the starting position of the next line
Parameter range	not have

Windows default	not have
Support model	All models
matters need attention	not have
Use the example	not have

carriage return

Directive name	carriage return
instruction code	ASCII : CR Decimal system: 13 Hex system: 0D
functional description	LF when the print cache is not empty, otherwise
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	
Use the example	not have

print and paper n points

Directive name	Print and paper n points
instruction code	ASCII : ESC J n Decimal system: 2,774 n Hex-decimal system: 1B 4A n
functional description	Print the content in the print cache into the paper n point
Parameter range	0 ≤ n ≤ 255
Windows default	not have
Support model	All models
matters need attention	When the print cache is empty, only n paper After this instruction is executed, the print position moves to the starting position of the next line
Use the example	1b 40 30 31 32 1b 4a 10

print into the paper n line

Directive name	Print into the paper n line
instruction code	ASCII : ESC d n Decimal system: 27,100 n Hex-decimal system: 1B 64 n
functional description	Print the content in the print cache into the paper n line
Parameter	0 ≤ n ≤ 255

range	
Windows default	not have
Support model	All models
matters need attention	The command sets the print start position as the line starting point
Use the example	1b 40 30 31 32 1b 64 01

② Print the setting instructions

set the rows with a spacing ofn points

Directive name	Set the row spacing to be the n points
instruction code	ASCII ：ESC 3 n

	Decimal system: 2,751 n Hex-decimal system: 1B 33 n
functional description	Set the row spacing to be the n points
Parameter range	0≤n ≤255
Windows default	n =33
Support model	All models
matters need attention	The line spacing is shown as follows: If the set row spacing is less than the maximum character height in a line, then the row spacing is equal to the maximum character height If ESC 2, ESC @, printer reset, printer power off, the line spacing is restored to the default value
Use the example	1b 40 1b 33 60 30 31 32 0d 0a 30 31 32 0d 0a 1b 32 30 31 32 0d 0a 30 31 32 0d 0a

set the row spacing as the default value

Directive name	Set the row spacing as the default value
instruction code	ASCII : ESC 2 Decimal system: 2,750 Hex system: 1B 32
functional description	Set the row spacing to the default 33 points
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	Line spacing indicates detailed ESC 3 instructions If the set row spacing is less than the maximum character height in a line, then the row spacing is equal to the maximum character height You can customize the row spacing using ESC 3

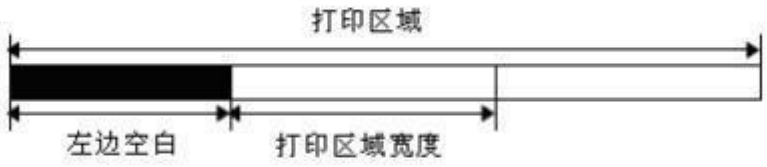
Use the example	not have

set up the print location

Directive name	Set up the print location
instruction code	ASCII : ESC $ nL nH Decimal: 2,736 nLnH Hex-decimal system: 1B 24 nL nH
functional description	Adjust the print position to the point of (nL + nH 256) away from the print start position

Parameter range	0 ≤ nL ≤ 255 , 0 ≤ nH ≤ 255
Windows default	not have
Support model	All models
matters need attention	This instruction is only valid for the bank, and the printing position is reset after the starting position is moved to the next line
Use the example	1b 40 1b 24 08 00 30 31 32 0d 0a 30 31 32 0d 0a

set the blank amount on the left side

Directive name	Set up the print location
instruction code	ASCII : GS L nL nH Decimal: 2,976 nLnH Hex-decimal system: 1D 4C nL nH
functional description	Set the left blank amount as the (nL + nH 256) point
Parameter range	0 ≤ nL ≤ 255 , 0 ≤ nH ≤ 255
Windows default	not have
Support model	All models
matters need attention	This command is valid only when processed at the starting position of a row. The legend is shown as follows:  If the setting is beyond the printable range, then the maximum printable unit is used
Use the example	1b 40 1d 4c 30 00 30 31 32 0d 0a 30 31 32 0d 0a

set the character right spacing

Directive name	Set the character right spacing

instruction code	ASCII : ESC SP n Decimal system: 2,732 n Hex-decimal system: 1B 20 n
functional description	Set the spacing to the right side of the character to [n 0.125 mm].
Parameter range	0 ≤n ≤255
Windows default	0
Support model	All models
matters need attention	For the width mode, the right character spacing is twice the normal mode. When characters are magnified, the right character spacing is n times that in general mode. This command does not affect the setting of the Chinese characters.

Use the example	1B 40 1B 20 18 30 31 32 0D 0A

choose the type

Directive name	Choose the type
instruction code	ASCII : ESC M n Decimal system: 2,777 n Hex-decimal system: 1b 4d n
functional description	Select the character type n: 0, 48 — Select the type A (1224). n: 1, 49 — Select the type B (924).
Parameter range	n = 0, 1
Windows default	n = 0
Support model	Part of the model
matters need attention	• ESC ! You can also choose the font type. But the setting of the last received command is valid.
Use the example	1b 40 1b 4d 00 30 31 32 0d 0a 1b 4d 01 30 31 32 0d 0a

set up the character print mode

Directive name	Set up the character print mode
instruction code	ASCII : ESC !n Decimal system: 2,733 n Hex-decimal system: 1B 21 n
functional description	Set how characters print (font, antiwhite, inverted, bold, height, width, and underline) , The bit of the parameter n Definition is as follows: Bit functionvalue 0 1 0-type normal small print 1 Undefined 2 Undefined 3 Bold unset 4 times high to cancel the setting 5 times width unsetting 6. Undefined

	7 Underline unset
Parameter range	not have
Windows default	n = 0

Support model	All models
matters need attention	This instruction is valid for both Chinese font and foreign language fonts When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1B 40 1B 21 01 30 31 32 0D 0A 1B 40 1B 21 02 30 31 32 0D 0A 1B 40 1B 21 04 30 31 32 0D 0A 1B 40 1B 21 08 30 31 32 0D 0A 1B 40 1B 21 10 30 31 32 0D 0A 1B 40 1B 21 20 30 31 32 0D 0A 1B 40 1B 21 40 30 31 32 0D 0A 1B 40 1B 21 80 30 31 32 0D 0A

set the character size

Directive name	Set the character size
instruction code	ASCII : GS !n Decimal system: 2,933 n Hex-decimal system: 1d 21 n
functional description	Set the character size to 1-8 times width and 1-8 x height Definition is as follows: Set the character height with 0 to 3 bits 4 to 7 bits as below

Table 1 character width setting

hexadecimal	decimal system	width
00	0	1 (Ordinary)
10	16	2 (Multiwidth)
20	32	3
30	48	4
40	64	5
50	80	6
60	96	7
70	112	8

Table2 character height setting

hexadecimal	decimal system	width
00	0	1 (Ordinary)
01	1	2 (Double height)
02	2	3
03	3	4
04	4	5
05	5	6
06	6	7
07	7	8

Parameter range	not have
Windows default	n = 0
Support	All models

model	
matters need attention	This instruction is valid for both Chinese and foreign characters except HRI characters When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1d 21 11 30 31 32 0d 0a 30 31 32 0d 0a

set, unthe white printing

Directive name	Set, unthe white printing
instruction code	ASCII : GS B n Decimal system: 2,966 n Hex-decimal system: 1d 42 n
functional description	Set or remove the antiwhite print mode. The antiwhite mode closes when the lowest effective bit of n is 0. When the lowest effective bit of n is 1, the anti-white mode is turned on.
Parameter range	not have
Windows default	n = 0
Support model	All models
matters need attention	Only the lowest bit of n is valid. The command is valid for both built-in characters and user-defined characters. When the antiwhite mode is on, it also works against the ESC SP set blank. This command does not affect bitmaps, user-defined bitmaps, barcodes, HRI characters, and space skipped by HT, ESC $. The command does not affect the line spacing. The antiwhite mode is preferred over the underlined mode. When the antiwhite mode is set, even the underlined mode is disabled (but not cancelled). When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1d 42 01 30 31 32 0d 0a 30 31 32 0d 0a

set, ununderline

Directive name	Set, ununderline
instruction code	ASCII : ESC - n Decimal system: 2,745 n Hex-decimal system: 1B 2D n
functional	Set / remove the underline mode based on the following n value:

n	function
0, 48	Remove the underline mode

description	1, 49	Set the underline mode (1 point thick)	
	2, 50	Set the underline mode (2 points thick)	
Parameter range	$0 \leq n \leq 2, 48 \leq n \leq 50$		
Windows default	$n = 0$		
Support model	All models		
matters need attention	The printer can underline all characters (including the interval to the right of the characters), except for blanks set by HT. The printer cannot print underlines the 90° characters and antiwhite characters clockwise.		

	When the underlined mode is lifted by setting a value of n to 0 or 48, the subsequent data is not printed underlined, and the roughness of the underline set before removing the underlined mode does not change. The default underlined bold degree is 1 point. Changing the character size does not affect the thickness of the current underscore. make use of ESC! You can also set or remove the underlined mode. Note, however, that the final command received is valid.
Use the example	1b 40 1b 2d 01 30 31 32 0d 0a 1b 40 1b 2d 02 30 31 32 0d 0a 1b 40 1b 2d 00 30 31 32 0d 0a

set, remove 90° rotary printing

Directive name	Set, remove clockwise 90° rotation printing
instruction code	ASCII : ESC V n Decimal system: 2,786 n Hex-decimal system: 1B 56 n
functional description	Set or remove the 90° spin printing. Release the 90° spin print when n equals 0 or 48. When n is equal to 1 or 49, set the 90° spin print.
Parameter range	$0 \leq n \leq 1$, $48 \leq n \leq 49$
Windows default	$n = 0$
Support model	All models
matters need attention	When the underline mode is set, the printer does not underline for characters that rotate 90° clockwise. In the clockwise 90° rotation mode, the height and width command amplify the characters in the opposite direction to the height width command character in the general mode. When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1b 56 01 30 31 32 0d 0a 30 31 32 0d 0a

set, remove bold printing

Directive name	Set, remove bold printing

instruction code	ASCII ：ESC E n Decimal system：2,769 n Hex-decimal system：1B 45 n
functional description	Set up or remove the bold print mode. Remove the bold print mode when the lowest effective bits of n is 0. Bold print mode is set when the lowest effective bit of n is 1.
Parameter range	0 ≤n ≤255
Windows default	n =0

Support model	All models
matters need attention	Only the lowest effective bit of n is allowed This command and the ESC! Set and remove the bold print mode in the same manner. When this command and the ESC! Use it at the same time, and be careful. When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1b 45 01 30 31 32 0d 0a 1b 40 1b 45 00 30 31 32 0d 0a 1b 40 1b 45 01 B 0 AE C 9 CF D 7 D4 BC BA 0D 0A 1b 40 1b 45 00 B 0 AE C 9 CF D 7 D4 BC BA 0D 0A

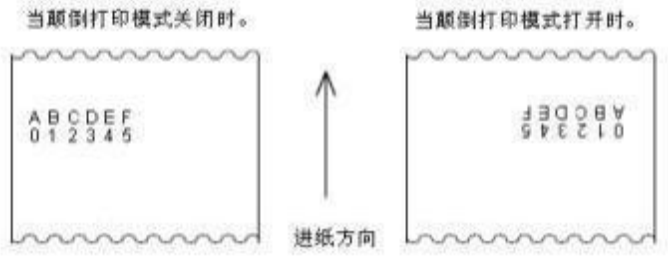
set up and remove the overlapping printing

Directive name	Set up and remove the overlapping printing
instruction code	ASCII : ESC G n Decimal system: 2,771 n Hex-decimal system: 1B 47 n
functional description	Set or remove overlapping printing mode. Remove the overlapping print mode when the lowest effective bit of n is 0. The overlapping print mode is set when the lowest effective bit of n is 1.
Parameter range	$0 \leq n \leq 255$
Windows default	$n = 0$
Support model	All models
matters need attention	Only the lowest effective bit of n is allowed. Printer output is the same in overlapping mode and bold mode. When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1b 47 00 30 31 32 0d 0a 1b 40 1b 47 01 30 31 32 0d 0a 1b 40 1b 47 01 B 0 AE C 9 CF D 7 D4 BC BA 0D 0A

set, unreverse printing

Directive name	Set, unreverse printing

instruction code	ASCII : ESC { n Decimal system: 27,123 n Hex-decimal system: 1B 7B n
functional description	Set or remove reverse print mode. Close the reverse print mode when the lowest effective bit of n is 0. Open the reverse print mode when the lowest effective bit of n is 1.

	
Parameter range	0 ≤n ≤255
Windows default	n =0
Support model	All models
matters need attention	Only the lowest bit of n is valid. This command is only valid when entered at the start of a row in the standard mode. In reverse printing mode, the printer rotates the row to print by 180° before printing. When ESC @, printer reset, power failure, this instruction setting failure
Use the example	1b 40 1b 7b 00 30 31 32 0d 0a 1b 40 1b 7b 01 30 31 32 0d 0a 1b 40 1b 7b 01 B 0 AE C 9 CF D 7 D4 BC BA 0D 0A

set up the print-out alignment mode

Directive name	Set the print alignment mode (left, center, right)
instruction code	ASCII ：ESC a n Decimal system： 2,797 n Hex-decimal system： 1B 61 n
functional description	All the data in a row are aligned, and the value of n is significant as follows： n pattern 0, 48 1, 49 2, 50 In the left between two parties On the right
Parameter range	0 n 2 or 48 n 50
Windows default	n =0
Support model	All models
matters need	When ESC @, printer reset, power failure, this instruction

attention	setting failure
Use the example	1B 40 1B 61 02 30 31 32 0D 0A 1B 40 1B 61 01 30 31 32 0D 0A 1B 40 1B 61 00 30 31 32 0D 0A

set the chinese character mode

Directive name	Set the Chinese character mode
instruction code	ASCII : FS & Decimal system: 2,838 Xhex system: 1C 26
functional description	Select the Chinese character mode
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	When selecting Chinese character mode, the printer processes all Chinese character codes, two bytes at a time. Process the Chinese character code in the order of the first byte and the second byte.
Use the example	1b 40 1C 26 B0 AE C9 CF D7 D4 BC BA 0d 0a 1C 2E B0 AE C9 CF D7 D4 BC BA 0d 0a

set up the chinese character printing mode combination

Directive name	Set up the Chinese character printing mode combination
instruction code	ASCII : FS !n Decimal system: 2,833 n Hex-decimal system: 1C 21 n
functional description	Set up the Chinese character printing mode
Parameter range	0 ≤ n ≤ 255
Windows default	0
Support model	All models

matters need attention

Position	Close / open	sixteen radix	Decimal	ASB status
0	—	—	—	undefinition.
1	—	—	—	undefinition.
2	close	00	0	The width mode is prohibited.
	open	04	4	Allow width mode.
3	close	00	0	Prohibit the height mode.
	open	08	8	Allow a fold-height mode.
4	—	—	—	undefinition.

5	—	—	—	undefinition.
6	—	—	—	undefinition.
7	close	00	0	Prohibit the underlined mode.
	open	80	128	Allow an underlined mode.

When the Chinese character mode is not selected, all character codes are processed as ASCII codes, one character at a time.

When both width mode and height mode are set (including the right and left character spacing), four times sized characters are printed.

	The printer can underline all the characters (including the right and left character spacing), but cannot underline the space set by the HT command and rotate the characters 90° clockwise. When some characters in a line are doubled up or higher, all the characters in the line are aligned along the baseline. The GS system can be used! The command roughwritten Chinese characters, the last command is valid.
Use the example	1b 40 1C 26 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 00 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 01 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 02 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 04 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 08 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 10 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 20 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 40 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 21 80 B0 AE C9 CF D7 D4 BC BA 0D 0A 1C 2E B0 AE C9 CF D7 D4 BC BA 0D 0A

cancel the chinese character mode

Directive name	Cancel the Chinese character mode
instruction code	ASCII ：FS . Decimal system: 2,846 Hex system: 1C 2E
functional description	Cancel the Chinese character mode
Parameter range	not have
Windows default	not have
Support model	All models

matters need attention	When the Chinese character mode is not selected, all character codes are processed as ASCI I codes, one character at a time.
Use the example	not have

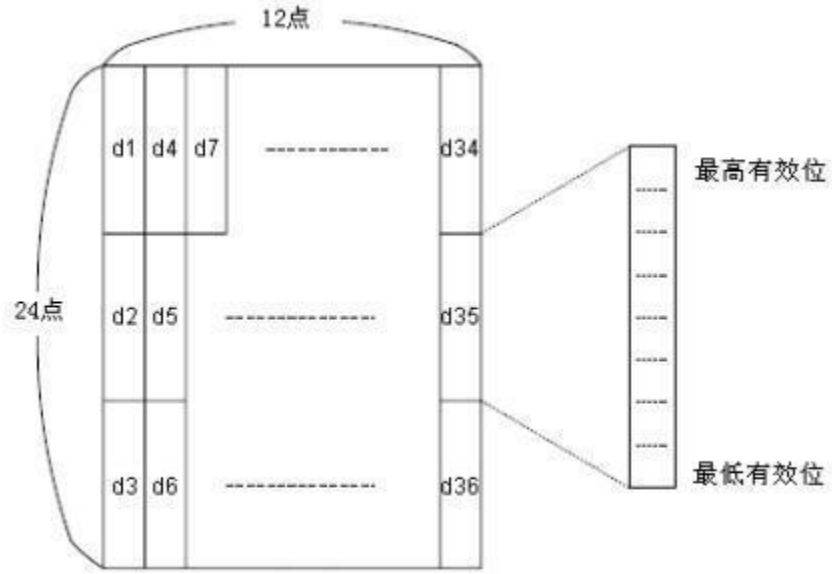
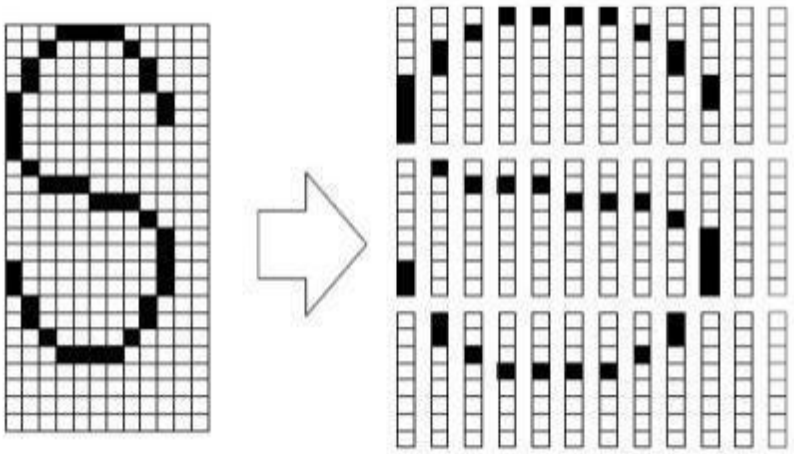
select, and cancel the user-custom character set

Directive name	Select or cancel the user-defined character set
instruction code	ASCII : ESC % n Decimal system: 2,737 n Hex-decimal system: 1B 25 n
functional description	Select or cancel the user-defined character set Cancel user custom character set when the lowest valid bit of n is 0. Select the user-custom character set when the lowest valid bit of n is 1.
Parameter range	0 ≤ n ≤ 255
Windows default	0
Support model	All models
matters need attention	When the user custom character set is cancelled, the internal character set is automatically selected.
Use the example	not have

Define a user-custom character set

Directive name	Define a user-custom character set
instruction code	ASCII : ESC & y c 1 c 2 [x 1 d 1 d (yx 1)] [xk d1 d(y x k)]..... ...Decimal: 27 38 y c 1 c 2 [x 1 d 1 d (yx 1)]...[xk d 1 d (yxk)]... Headecimal: 1B 26 y c 1 c 2 [x 1 d 1...d (y x 1)]...[xk d 1...d(yxk)]
functional description	Define user-custom characters. The y specifies the number of vertical-orientation bytes. The c 1 specifies the start character encoding and the c2 specifies the end character encoding. And xk specifies the number of horizontal direction points.
Parameter range	The range of the xy corresponds to the internal font If the font of 6 * 12, y= 2,0 x 6 If 12 * 24 fonts are selected, then y= 3,0 x 12 32 ≤ c1 ≤ c2 ≤ 126 ...0 ≤ d1 d(y*xk) ≤255
Windows default	not have
Support model	All models

matters need attention	The range of defining character encoding: ASC II code from <20> H to <7E> H (95 characters). A continuous character encoding of multiple characters. When only one character is required when, make c1= c2.d Is the point data of the character. The point pattern is the horizontal orientation starting from the left. The remaining points on the right are left blank. The data that defines the user-defined character is the (y * x) byte. Set the corresponding bit of the print point to 1 or the corresponding bit of the no-print point to 0. This command defines a different user-defined character pattern for each type.need ESC! Set the font type. User-defined characters and lower bitmaps cannot be defined simultaneously. When the command is executed, the knockdown bitmap is cleared. User-defined characters are cleared in the following situations： Execute the ESC @. carry out GS*.

	Execute the ESC?. The printer is reset or turned off in the power supply. diagram： When setting the type A (12 24).   d 1= <0F >H d 4 = <30>H d 7 = <40>H .... d 2 = <03>H d 5 = <80>H d 8 = <40>H .... d 3 = <00>H d 6 =<00>H d 9 = <20>H ....
Use the example	①y = 2 1B 40 1b 26 02 20 20 06 FF FF FF FF FF FF FF FF FF FF FF FF 1b 25 01 20 20 0D 0A 1b 3f 20 30 20 30 20 0d 0a ②y = 3 1B 40

	1b 26 03 20 20 0C 0F 03 00 30 80 00 40 40 20 80 40 10 80 40 10 80 20 10 80 20 10 40 20 20 30 10 C0 0C 00 00 00 00 00 00 00 00 1b 25 01 20 20 0D 0A 1b 3f 20 30 20 30 20 0d 0a

cancel the user custom character

Directive name	Cancel the user custom character
instruction code	ASCII : ESC ?n Decimal system: 2,763 n Hex-decimal system: 1B 3F n
functional description	Cancel the user-defined character encoded by n
Parameter range	32≤n≤126
Windows default	not have
Support model	All models
matters need attention	The command terminates using a style defined for character encoding, encoded by n appoint. After the user custom character is cancelled, print in the internal character corresponding mode. in use ESC! In the selected type, the command removes the style defined for the specified encoding. If a user-defined character is not defined, the printer ignores the command.
Use the example	not have

select the international character set

Directive name	Select the international character set
instruction code	ASCII : ESC R n Decimal system: 2,782 n Hex-decimal system: 1B 52 n

functional description	Follow the table below to select the value of n to set the international character set n character set 0 USA, USA 1 in France 2 It was found in Germany 3 The UK 4 in Denmark I 5 in Sweden 6 In Italy 7 In Spain, the I 8 In Japan 9 In Norway 10 Denmark II 11 and Spain II 12 and also in Latin America 13 and those in South Korea

	14 and also in Slovenia 15 in China
Parameter range	0≤n ≤15
Windows default	0
Support model	All models
matters need attention	
Use the example	1B 40 1B 52 00 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 60 6A 6B 6C 6D 6E 6F 70 71 72 73 74 75 76 78 79 7A 7B 7C 7D 7E 0D 0A

select the character code page

Directive name	Select the character code page
instruction code	ASCII ：ESC t n Decimal system: 27,116 n Hex-decimal system: 1B 74 n

functional description	Select n from the character code page N code page 0 CP437 [USA, European Standard] 1 KataKana [Katakana] 2 CP 850 [multi-lingual] 3 CP 860 [Portugal] 4 CP 863 [Canada-French] 5 CP 865 [Northern Europe] 6 WCP 1251 [Slavic language] 7 CP 866, Slavic 2 8 MIK [Slavic / Bulgaria] 9 CP 755 [Eastern Europe, Latvia 2] 10 [Iran, Persia] 11 for retention 12 retained 13 retained 14 retained 15 CP 862 [Hebrew] 16 W CP 1252 [Latin language 1] 17 WCP 1253 [Greece] 18 CP 852 [Latin language 2] 19 CP 858 [Latin 1 + Euro] 20 Iran [Persian language] 21 and that in Latvia

	22 CP 864 [Arabic] 23 ISO-8859-1 [Western Europe] 24 CP 737 [Greece] 25 WCP 1257 [in the Baltic Sea] 26 Thai 27 CP 720 [Arabic] 28 CP 855 29 CP 857 [Turkish language] 30 WCP 1250 [Central Europe] 31 CP 775 32 WCP 1254 [Turkish] 33 WCP 1255 [Hebrew] 34 WCP 1256 [Arabic] 35 WCP 1258 [Vietnamese] 36 ISO-8859-2 [Latin 2] 37 ISO-8859-3 [Latin 3] 38 ISO-8859-4 [Polo] 39 ISO-8859-5 [Slavic] 40 ISO-8859-6 [Arabic] 41 ISO-8859-7 [Greek] 42 ISO-8859-8 [Hebrew] 43 ISO-8859-9 [Turkish] 44 ISO-8859-15 [Latin 9] 45 [Thai 2] 46 CP 856 47 Cp 874 255 GBK 2312
Parameter range	0 ≤ n ≤ 255
Windows default	0
Support model	All models
matters need attention	
Use the example	1B 40 1C 2E 1B 74 00 80 81 82 83 84 85 86 87 88 89 8A 8B 8C 8D 8E 8F 90 91 92 93 94 95 96 97 98 9A 9B 9C 9D 9E 9F A 0 A 1 A 2 A 3 A 4 A5 A6 A7 A8 A9 AA AB AC AD AE AF B0 B 1 B 2 B 3 B 4 B 5 B 6 B7 B8 B9 BA BB BC BD BE BF C0 C1 C2 C3 C4 C5 C6 C7 C8 C9 CA CB CC CD CE CF D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 DA DB DC DD DE DF E 0 E 1 E 2 E 3 E 4 E 5 E 6 E 7 E 8 E 9 EA EB EC ED EE EF F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 FA F B FC FD FE FF 0D 0A

switch over the two-byte encoding

Directive name	Switch over the two-byte encoding

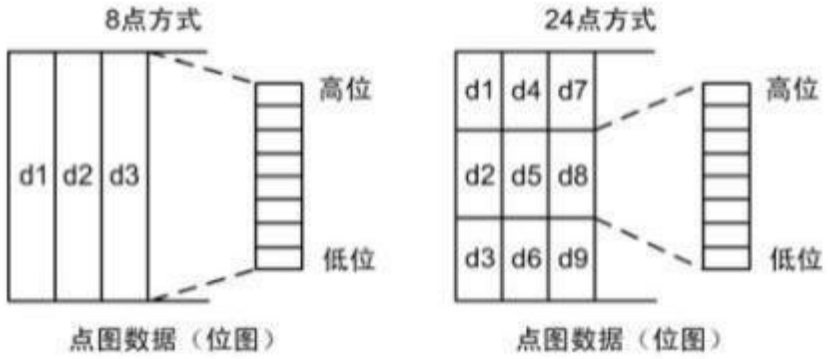
instruction code	ASCII : ESC 9 n Decimal system: 2,756 n Hex-decimal system: 1B 39 n
functional description	The corresponding code of n is shown below: n code 0 GBK 1 UTF 8 2 reserved 3 BIG 5 4 SHIFT -JIS 5 EUC-KR
Parameter range	0 ≤n ≤5
Windows default	0
Support model	Part of the model
matters need attention	The Chinese character mode should be enabled before use (1C 26 command can be enabled)
Use the example	1B 40 1C 26 1B 39 01

③ Drawing printing instructions

Figure vertical die-taking data filling

Directive name	Figure vertical die-taking data filling
instruction code	ASCII : ESC * m Hl Hh [d]k Decimal: 2,742 m Hl Hh [d] k Hex system: 1B 2A m Hl Hh [d] k
functional description	Print longitudinal die image data and the parameters are as follows: M. m is in a dot plot format: The m-mode horizontal scale is on a vertical scale 0 8-point single density 23 1 8-point double density 13 32 24-point single density 21 33 24-point double density 11 Hl and Hh are the points in the horizontal direction (Hl + 256 Hh) [d] k is the dot-plot data The k is used to indicate the number of dot plot data bytes and does not participate in transmission

Parameter range	XX 58： m = 0、1 、32 、33 1 ≤ Hl + H h × 256 ≤ 384 0 ≤ d ≤ 255 K = Hl + Hh 256 (when m = 0, 1)

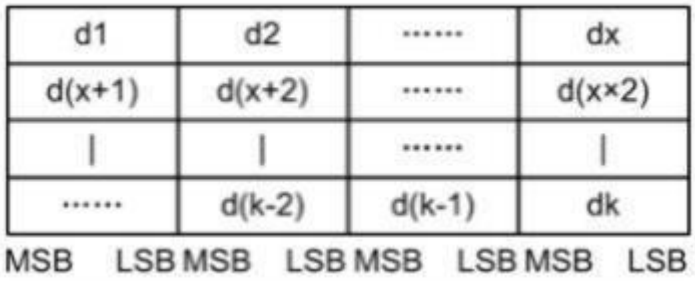
	K = (Hl + Hh 256) 3 (when m = 32,33) XX 80： m = 0、1 、32 、33 1 ≤ Hl + H h × 256 ≤ 576 0 ≤ d ≤ 255 K = Hl + Hh 256 (when m = 0,1) K = (Hl + Hh 256) 3 (when m = 32,33)
Windows default	not have
Support model	All models
matters need attention	[d] k, the corresponding bit is 1 indicates that the point is printed, the corresponding bit is 0, and the part of the horizontal direction of the image beyond the printed area will be ignored The relationship between the dot-plot data and the printing effect is as follows:  This instruction only fills the print cache. The printing of the image starts after receiving the print instruction, and the print cache is emptied after the image is printed If the image to be printed is relatively high, it can be divided into several heights of 8 (m = Images at points 0,1), or 24 (m = 32,33) are printed, respectively After filling graphics data, you can continue to fill other information so that the graphics is printed with other information After filling the point diagram, ESC J (n = 24) instruction is generally used to print, or LF instruction. However, the LF instruction to be printed will trigger the paper feeding operation (according to the line spacing), making the multiple lines of images discontinuous. The row spacing can be set to 0, then there will not be too much paper feeding. (The needle printer will start offset, if there is broken in the middle, please send data continuously)

Use the example	1B 40 1b 2a 00 0C 00 FF FF FF FF FF FF FF FF FF FF FF FF 1B 33 00 0A

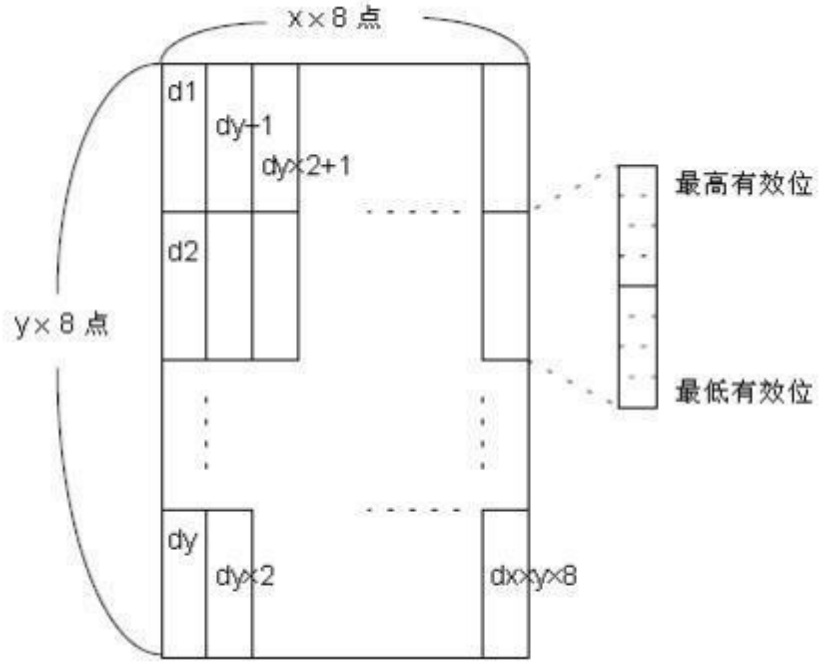
picture horizontal mold data printing

Directive name	Picture horizontal mold data printing
instruction code	ASCII ： GS v 0 Decimal: 29 118 48 m xL xH yL yH [d] k

	Hex system: 1D 76 30 m xL xH yL yH [d] k
functional description	Print the lateral die image data and the parameters are as follows: The m is the bitmap mode: The m-mode horizontal scale is on a vertical scale 0,48 Normal as described 11 1,49 x width 21 2,50-fold higher than 12 3,51, width and height 22 The number of horizontal bytes is xL, xH (xL + xH 256) The number of yL and yH are vertical points (yL + yH 256) [d] k is the dot-plot data K is the number of dot plot data bytes, k is used for schematic, without transmission
Parameter range	XX 58: $0 \le m \le 3$; $48 \le m \le 51$ $1 \le xL + xH \times 256 \le 48$ $0 \le yL \le 255$, $0 \le yH \le 255$ $0 \le d \le 255$ $k = (Hl + Hh \times 256) \times (yL + yH \times 256)$ XX 80: $0 \le m \le 3$; $48 \le m \le 51$ $1 \le xL + xH \times 256 \le 72$ $0 \le yL \le 255$, $0 \le yH \le 255$ $0 \le d \le 255$ $k = (Hl + Hh \times 256) \times (yL + yH \times 256)$
Windows default	not have
Support model	All models
matters need attention	The corresponding bit of [d] k is 1, which means that the point prints, and the corresponding bit is 0, which means that the point does not print. If the image level bytes exceed the print area, the excess part will be ignored When this instruction is executed, the paper is injected according to the size of the image, which is not affected by the row spacing setting of ESC 2 and ESC 3. After this instruction, the printing coordinate is reset to the left position and the image content is emptied The relationship between the bitmap data and the printing effect is as follows:

	 This instruction has the printing function, transfer data while printing, do not need to use the printing instruction
Use the example	1B 40 1d 76 30 00 03 00 09 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

Define the lower bitmap

Directive name	Define the lower bitmap
instruction code	ASCII ：GS * x y d 1...d (x ×y ×8) Decimal： 29 42 x y d 1 d (xy 8)... Xhex system: 1D 2A x y d 1...d (x×y×8)
functional description	Specify the number of points with x and y to define the down bitmap. The x specifies the number of horizontal points as 8 * x. The y specifies the number of vertical direction points as 8 * y
Parameter range	1 ≤ x ≤ 255 1 ≤ y ≤ 48 x *y ≤ 1536 0 ≤ d ≤ 255
Windows default	not have
Support model	All models
matters need attention	If x * y exceeds the specified range, the order is prohibited. And d shows the bitmap data. Data (d) specifies that the print bit is 1 and the no-print bit is 0. Clear down bitmap definitions if： Execute the ESC @. Execute the ESC &. The printer is reset or turned off in the power supply. The relationship between the bitmap and the printed data is shown in the following below 

Use the example	1B 40 1D 2A 03 03 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

	FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 1D 2F 00

print the lower bitmap

Directive name	Print the lower bitmap
instruction code	ASCII : GS / m Decimal system: 2,947 m Hex-decimal system: 1D 2F m
functional description	Print the down bitmap in the mode specified by m m: 0, 48 — common; 1, 49 — double width; 2, 50 — Times high; 3, 51 — Double width, double height
Parameter range	0 ≤ m ≤ 3 48 ≤ m ≤ 51
Windows default	not have
Support model	All models
matters need attention	If the bitmap data is not defined, the command is ignored. In standard mode, this command is only valid if there is no data in the print buffer. This command is invalid in print mode (bold, overlap, underlined, character size, or reverse white print), except in reverse print mode. If the lower bitmap to be printed exceeds the print area, the exceeded data is not printed.
Use the example	not have

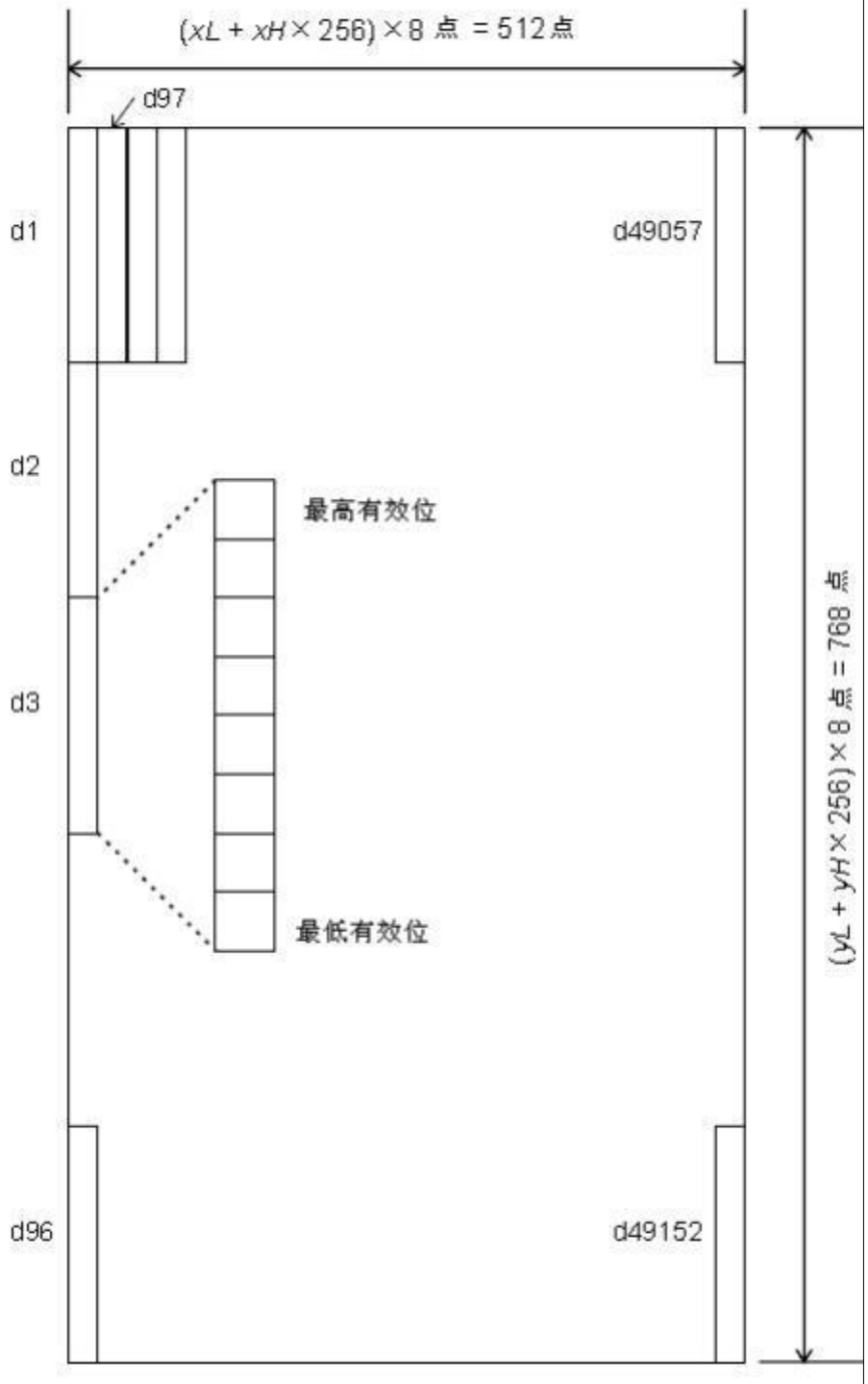
Define the wbitmap

Directive name	Define the NV bitmap
instruction code	ASCII : FS q n [xL xH yL yH d1...dk]1...[xL xH yL yH d1...dk]n Decimal: 28 113 n [xL xH yL yH d1...dk]1...[xL xH yL yH d1...dk]n Headecimal: 1C 71 n [xL xH yL yH d 1...dk]1...[xL xH yL yH d1...dk]n
functional description	The NV bitmap is defined with specific values of n. N. Specifies the number of defined NV bitmaps. xL, xH the NV bitmap in the definition is (xL + xH * 256) * 8. The yL, yH specifies the number of vertical points for the NV bitmap in the definition as (yL + yH * 256) * 8.

Parameter range	1 ≤ n ≤ 255 0 ≤ xL ≤ 255 0 ≤ xH ≤ 3 (1 ≤ (xL+xH*256) ≤ 1023) 0 ≤ yL ≤ 255) 0 ≤ yH ≤ 1 (1 ≤ (yL+yH*256) ≤ 288) 0 ≤ d ≤ 255) k = (xL +xH *256)*(yL+yH*256)*8

	And meter definition, of the data area = 64K bytes
Windows default	not have
Support model	All models
matters need attention	Performing write commands frequently may damage the NV memory. Therefore, it is recommended to do no more than 10 writes on NV memory a day. After the process of placing an image into the NV memory, the printer performs a hardware reset operation. So the user custom character, the lower bitmap should be defined after the command. Printer clear Except the receive and print buffer and reset to the mode with power on. (Hardware reset interface is not supported) The command cancels all the NV bitmaps that are already defined with that command. From the start of this command to the completion of the hardware reset, mechanical operations cannot be performed (including the use of the feeding button to initialize the print head position when the cover plate is opened). During this command processing, the printer is busy and stops receiving data when writing data to the user NV memory. So the transfer of data, including real-time commands, is prohibited during the execution of this command. An NV bitmap is a bitmap defined in a non-volatile memory. The FSp printing was defined with the FSq. In standard mode, this command is valid only valid at the beginning of a row processing. The 7 bytes of the command <FSyH> are valid. When the amount of data 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 set of bitmaps, when xL, xH, yL, yH If any parameter exceeds the definition of the range, the command is prohibited. In a set of bitmaps in the non-first group, when the printer encounters xL, xH, yL, yH When the defined range is exceeded, the command is stopped and writing the NV image begins. At this time, an undefined NV bitmap is prohibited (undefined,) but any previously defined NV bitmaps are still valid. The d represents the defined data. In the data (d) In, a 1 bit specifies a point to print and a 0 bit specifies a point that does not print. The command defines n as the number of NV bitmaps. Quantity from bitplot 01H

	Start sequence rises. So the first data group [xL xH yL d 1... The dk] is the NV bitmap 01H, the last data group [xL xH yL d 1... And dk] is the NV bitmap n. The total number coincides with the number of NV bitmaps set by the FSp command. yH yH An NV bitmap with defined data given by [xL xH yL yH d 1...dk] form. Therefore, when only one NV bitmap is present, n= 1, the printer only processes the data group [xL xH yL yH d 1...dk] once. The printer uses ([data: (xL + xH * 256) * (yL + yH * 256) * 8] + [header: 4]) bytes of the NV memory. The defined area in this printer is 192K Bytes (max.). This command can define several bitmaps, but cannot define those with a total data capacity [bitmap data + header] more than 192K bytes. Even if the ASB is set, the printer does not transmit the ASB state or perform state detection during the processing of the command. Once an NV bitmap is defined, it cannot be performed as an ESC Command, reset, power off is deleted. @

	This command only executes the definition of the NV bitmap, not the printing. The NV bitmap is printed by the FSp Command execution of. Figure: when xL = 64, xH = 0, yL = 96, yH = 0 
Use the example	1B 40 1C 71 01 03 00 03 00 FF FF FF

	1C 70 01 00

print the Nv bitmap

Directive name	Print the NV bitmap
instruction code	ASCII : FS p n m Decimal system: 28,112 nm Hex-decimal system: 1C 70 n m
functional description	Print the NV bitmap n in the mode specified by m m: 0, 48 — common; 1, 49 — double width; 2, 50 — Times high; 3, 51 — Double width, double height
Parameter range	0 ≤ m ≤ 3 48 ≤ m ≤ 51 1 ≤ n ≤ 255
Windows default	not have
Support model	All models
matters need attention	The n is the number of NV bitmaps (defined with the FSq command). And, m specifies the bitmap pattern. An NV bitmap is a bitmap defined in a non-volatile memory. The FSp printing was defined with the FSq The command is invalid when the specified NV bitmap does not exist. In standard mode, this command is valid only valid if there is no data in the print buffer. This command is not affected by the print mode (bold print, overlap, underscore, character size, reverse white print, or character 90), such as rotation. If the lower bitmap to print is more than one row, the exceeded data is not printed. In normal and width mode, the command enters the paper n point (n is the NV bitmap height), in height and four size mode (the command enters 2n point, n is the NV bitmap height), regardless of the row spacing set by ESC 2 or ESC 3. After printing the bitmap, the command sets the print position at the beginning of a row and processes the subsequent data as normal data
Use the example	not have

print the grating bitmap

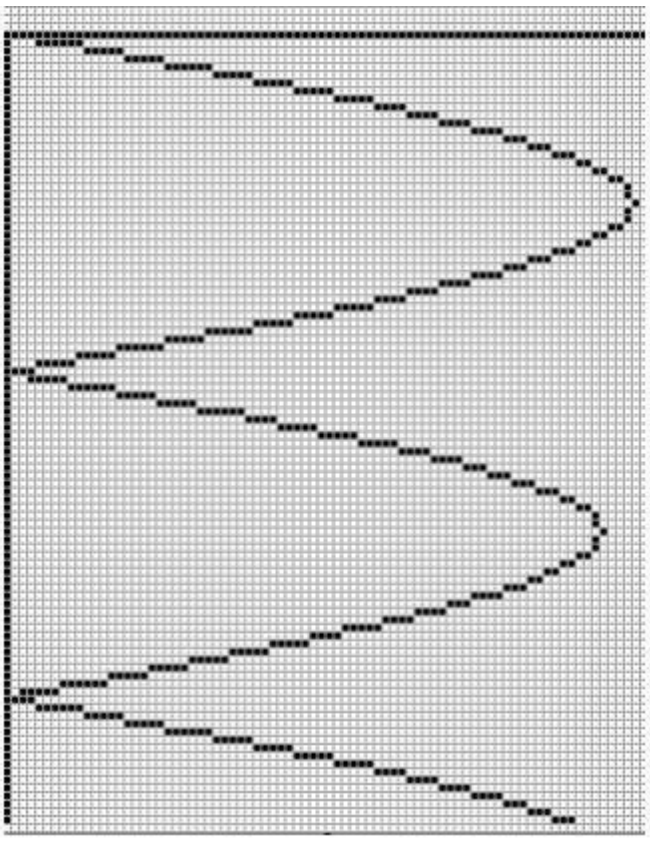
<table>
<tr><td>Directive name</td><td colspan="4"></td></tr>
<tr><td>instruction code</td><td colspan="4">ASCII ： GS v 0 m xL xH yL yH d1...dk
Decimal: 29 118 48 m xL xH yL yH d 1...dk
Xhex system: 1D 76 30 m xL xH yL yH d1...dk</td></tr>
<tr><td rowspan="4">functional description</td><td colspan="4">Print the grating bitmap and select the grating bitmap mode by the m value：</td></tr>
<tr><td>m</td><td>pattern</td><td>Longitudinal resolution (DPI)</td><td>Lateral resolution (DPI)</td></tr>
<tr><td>0,48</td><td>normal</td><td>200</td><td>200</td></tr>
<tr><td>1,49</td><td>double width</td><td>200</td><td>100</td></tr>
<tr><td>2,50</td><td>Times high</td><td>100</td><td>200</td></tr>
</table>

	3,51	Double width, double height	100	100
Parameter range	0 m 3 or 48 m 51 0 ≤ xL ≤ 255 0 ≤ xH ≤ 255 0 ≤ yL ≤ 255 0 ≤ d ≤ 255 k = (xL + xH * 256) * (yL + yH * 256) (k ≠0)			
Windows default	not have			
Support model	All models			
matters need attention	The xL, xH represents the number of horizontal bitmap bytes (xL + xH * 256) The yL, yH represents the number of vertical bitmap points (yL + yH * 256) In standard mode, this command is valid only if there is no data in the printer buffer. Character amplification, bold, printing, double printing, inverted printing, underlining, black and white backdisplay are not valid for this command. The portion of the bitmap beyond the printed area is not printed. ESC, valid for the grating bitmap. During the macro definition, the command stops the macro definition and performs the command. The command is not a part of the macro definition. And d represents the bitmap data. The corresponding bit of each byte of 1 indicates that the print point, and 0 does not print the point.			
Use the example	When xL + xH * 256=64 			

Horizontal position print line segment (curve print command)

Directive name	Horizontal position print line segment (curve print command)

instruction code	ASCII ：GS ‘n x 1sL x 1eH x 1eL x 1eH xnsL xnsH xneL xneH... ..Decimal system: 1D 27 n x 1sL x 1eH x 1eL x 1eH.xnsL xnsH xneL xneH ...Hex system: 29 39 n x 1sL x 1eH x 1eL x 1eH xnsL xnsH xneL xneH
functional description	The print zoom is as follows：Each horizontal curve segment can be considered composed of these points of segment length 1. Print n row horizontal segment, continuous use of this command can print out the desired curve.



The xksL: horizontal coordinate of K line;

The xksH: the higher order horizontal coordinate of the starting point of the K line;

The xkeL: the lower order horizontal coordinate of the end point of the K line;

The xkeH: the end point of the K line; the coordinate start position is usually to the left of the printed area. The minimum coordinate coordinate is (0,0), the maximum abscissa value is 383, the data of xkeL + xke H * 256 lines can not be arranged in order within the specified range; Char SendStr [8]; Char SendStr 2[16]; Float i; Short y 1, y 2, y1s, y2s;

```
/ / Print the Y-axis (one line)
SendStr [0]=0x 1D;
SendStr [1]=0x 27;
SendStr [2] =1; / / one row
SendStr [3]=30
SendStr [4] =0; / / Start point
SendStr[5]= 104;
SendStr [6] =1; / / End point
PreSend Data(Se ndStr ,7);
```

```
//Print  curve
SendStr [0]=0x  1D;
SendStr [ 1]=0x 27;
SendStr [2] =3; / / Three lines: X-axis, sin and cos function curve three lines:
The X-axis, sin, and cos
                        function
SendStr  [3]  = 180;  SendStr [4]  =0; / / X-axis position
SendStr [5]= 180;      SendStr [6]=0;
for (i  = 1;i<1200;i++)
 {
    y  1=sin (i/ 180*3.1416)*(380-                    / / Calculate the sin, and the function coordinates
    30)/2+180; y
    2=cos(i/ 180*3.1416)*(380-30)/2+180;     / / Calculate the cos function coordinates
    If (i== 1){y1s=y1;y2s=y2;}
    PreSend Data (SendStr ,7);

    If(y1s<y  1)
    {
      PreSend Data (& y  1s, 2); / / sin function at the starting point of the line
      PreSend Data (& y  1,2); / / sin function is at the end point of the line
     }
     E lse
     {
      PreSend Data (& y  1,2); / / sin function is at the starting point of the line
      PreSend Data (& y  1s, 2); / / sin function is at the end point of the line
     }
     If (y 2s<y2)
     {
      PreSend Data (& y  2s, 2); / / cos function is at the starting point of the line
      PreSend Data (& y  2,2); / / cos, function at the end point of the line
     }
     E lse
     {
      PreSend Data (& y  2,2); / / cos, function at the starting point of the line
      PreSend Data (& y  2s, 2); / / cos function is at the end point of the line
     }
     When y  1s =y  1; / / printing to the next row,  the sin function curve starts abscissa
     When y 2s =y 2; / / printing is in the next row,  the cos function curve starts in the abscissa
     }
```

Parameter	0≤n ≤8

range	
Windows default	not have
Support model	Portable printer
matters need attention	When a point is printed, x keL = xksL and xkeH = xksH
Use the example	1d 27 01 00 00 00 00

	1d 27 01 01 00 0f 00 1d 27 01 10 00 1f 00 1d 27 01 20 00 2c 00 1d 27 01 2d 00 3a 00 1d 27 01 3b 00 44 00 1d 27 01 45 00 4c 00 1d 27 01 4d 00 54 00 1d 27 01 55 00 5c 00 1d 27 01 5d 00 63 00 1d 27 01 64 00 6a 00 1d 27 01 6b 00 71 00 1d 27 01 72 00 77 00 1d 27 01 78 00 7d 00 1d 27 01 7e 00 84 00 1d 27 01 85 00 8a 00 1d 27 01 8b 00 91 00 1d 27 01 92 00 97 00 1d 27 01 98 00 9d 00 1d 27 01 9e 00 a 3 00 1d 27 01 a4 00 a9 00 1d 27 01 aa 00 af 00 1d 27 01 b0 00 b4 00 1d 27 01 b 5 00 b 9 00 1d 27 01 ba 00 bf 00 1d 27 01 c 0 00 c 4 00 1d 27 01 c5 00 c9 00 1d 27 01 ca 00 cf 00 1d 27 01 d0 00 d4 00 1d 27 01 d 5 00 d 8 00 1d 27 01 d9 00 dc 00 1d 27 01 dd 00 df 00 1d 27 01 e0 00 e3 00 1d 27 01 e 4 00 e 6 00 1d 27 01 e7 00 e9 00 1d 27 01 ea 00 ec 00 1d 27 01 ed 00 ef 00 1d 27 01 f 0 00 f 1 00 1d 27 01 f2 00 f3 00 1d 27 01 f 4 00 f 5 00 1d 27 01 f6 00 f7 00 1d 27 01 f 8 00 f 8 00 1d 27 01 f9 00 fa 00 1d 27 01 fb 00 fb 00 1d 27 01 fc 00 fd 00 1d 27 01 fe 00 fe 00 1d 27 01 ff 00 ff 00 1d 27 01 00 01 00 01 1d 27 01 01 01 01 01 1d 27 01 02 01 02 01 1d 27 01 03 01 03 01 1d 27 01 04 01 04 01 1d 27 01 05 01 05 01 1d 27 01 06 01 06 01 1d 27 01 06 01 06 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 06 01 06 01 1d 27 01 06 01 06 01 1d 27 01 05 01 05 01 1d 27 01 04 01 04 01 1d 27 01 04 01 04 01 1d 27 01 03 01 03 01 1d 27 01 02 01 02 01 1d 27 01 00 01 00 01 1d 27 01 ff 00 ff 00 1d 27 01 fe 00 fe 00 1d 27 01 fc 00 fd 00 1d 27 01 f 9 00 fa 00 1d 27 01 f8 00 f8 00 1d 27 01 f 6 00 f 7 00 1d 27 01 f4 00 f5 00 1d 27 01 f 2 00 f 3 00 1d 27 01 f0 00 f1 00 1d 27 01 ed 00 ef 00 1d 27 01 ea 00 ec 00 1d 27 01 e 7 00 e 9 00 1d 27 01 e4 00 e6 00 1d 27 01 e 0 00 e3 00 1d 27 01 dd 00 df 00 1d 27 01 d 9 00 dc 00 1d 27 01 d5 00 d8 00 1d 27 01 d 0 00 d 4 00 1d 27 01 ca 00 cf 00 1d 27 01 c 5 00 c 9 00 1d 27 01 c0 00 c4 00

	1d 27 01 ba 00 bf 00 1d 27 01 b5 00 b9 00 1d 27 01 b 0 00 b 4 00 1d 27 01 aa 00 af 00 1d 27 01 a 4 00 a 9 00 1d 27 01 9e 00 a3 00 1d 27 01 98 00 9d 00 1d 27 01 92 00 97 00 1d 27 01 8b 00 91 00 1d 27 01 85 00 8a 00 1d 27 01 7e 00 84 00 1d 27 01 78 00 7d 00 1d 27 01 72 00 77 00 1d 27 01 6b 00 71 00 1d 27 01 64 00 6a 00 1d 27 01 5d 00 63 00 1d 27 01 55 00 5c 00 1d 27 01 4d 00 54 00 1d 27 01 45 00 4c 00 1d 27 01 3b 00 44 00 1d 27 01 2d 00 3a 00 1d 27 01 20 00 2c 00 1d 27 01 10 00 1f 00 1d 27 01 01 00 0f 00 1d 27 01 00 00 00 00 1d 27 01 00 00 00 00 1d 27 01 01 00 0f 00 1d 27 01 10 00 1f 00 1d 27 01 20 00 2c 00 1d 27 01 2d 00 3a 00 1d 27 01 3b 00 44 00 1d 27 01 45 00 4c 00 1d 27 01 4d 00 54 00 1d 27 01 55 00 5c 00 1d 27 01 5d 00 63 00 1d 27 01 64 00 6a 00 1d 27 01 6b 00 71 00 1d 27 01 72 00 77 00 1d 27 01 78 00 7d 00 1d 27 01 7e 00 84 00 1d 27 01 85 00 8a 00 1d 27 01 8b 00 91 00 1d 27 01 92 00 97 00 1d 27 01 98 00 9d 00 1d 27 01 9e 00 a 3 00 1d 27 01 a4 00 a9 00 1d 27 01 aa 00 af 00 1d 27 01 b0 00 b4 00 1d 27 01 b 5 00 b 9 00 1d 27 01 ba 00 bf 00 1d 27 01 c 0 00 c 4 00 1d 27 01 c5 00 c9 00 1d 27 01 ca 00 cf 00 1d 27 01 d0 00 d4 00 1d 27 01 d 5 00 d 8 00 1d 27 01 d9 00 dc 00 1d 27 01 dd 00 df 00 1d 27 01 e0 00 e3 00 1d 27 01 e 4 00 e 6 00 1d 27 01 e7 00 e9 00 1d 27 01 ea 00 ec 00 1d 27 01 ed 00 ef 00 1d 27 01 f 0 00 f 1 00 1d 27 01 f2 00 f3 00 1d 27 01 f 4 00 f 5 00 1d 27 01 f6 00 f7 00 1d 27 01 f 8 00 f 8 00 1d 27 01 f9 00 fa 00 1d 27 01 fb 00 fb 00 1d 27 01 fc 00 fd 00 1d 27 01 fe 00 fe 00 1d 27 01 ff 00 ff 00 1d 27 01 00 01 00 01 1d 27 01 01 01 01 01 1d 27 01 02 01 02 01 1d 27 01 03 01 03 01 1d 27 01 04 01 04 01 1d 27 01 05 01 05 01 1d 27 01 06 01 06 01 1d 27 01 06 01 06 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 07 01 07 01 1d 27 01 06 01 06 01 1d 27 01 06 01 06 01 1d 27 01 05 01 05 01

	1d 27 01 04 01 04 01 1d 27 01 04 01 04 01 1d 27 01 03 01 03 01 1d 27 01 02 01 02 01 1d 27 01 00 01 00 01 1d 27 01 ff 00 ff 00 1d 27 01 fe 00 fe 00 1d 27 01 fc 00 fd 00 1d 27 01 f9 00 fa 00 1d 27 01 f8 00 f8 00 1d 27 01 f6 00 f7 00 1d 27 01 f4 00 f5 00 1d 27 01 f2 00 f3 00 1d 27 01 f0 00 f1 00 1d 27 01 ed 00 ef 00 1d 27 01 ea 00 ec 00 1d 27 01 e 7 00 e 9 00 1d 27 01 e4 00 e6 00 1d 27 01 e 0 00 e3 00 1d 27 01 dd 00 df 00 1d 27 01 d 9 00 dc 00 1d 27 01 d5 00 d8 00 1d 27 01 d 0 00 d 4 00 1d 27 01 ca 00 cf 00 1d 27 01 c 5 00 c 9 00 1d 27 01 c0 00 c4 00 1d 27 01 ba 00 bf 00 1d 27 01 b5 00 b9 00 1d 27 01 b 0 00 b 4 00 1d 27 01 aa 00 af 00 1d 27 01 a 4 00 a 9 00 1d 27 01 9e 00 a3 00 1d 27 01 98 00 9d 00 1d 27 01 92 00 97 00 1d 27 01 8b 00 91 00 1d 27 01 85 00 8a 00 1d 27 01 7e 00 84 00 1d 27 01 78 00 7d 00 1d 27 01 72 00 77 00 1d 27 01 6b 00 71 00 1d 27 01 64 00 6a 00 1d 27 01 5d 00 63 00 1d 27 01 55 00 5c 00 1d 27 01 4d 00 54 00 1d 27 01 45 00 4c 00 1d 27 01 3b 00 44 00 1d 27 01 2d 00 3a 00 1d 27 01 20 00 2c 00 1d 27 01 10 00 1f 00 1d 27 01 01 00 0f 00 1d 27 01 00 00 00 00

④ tabulation instructions

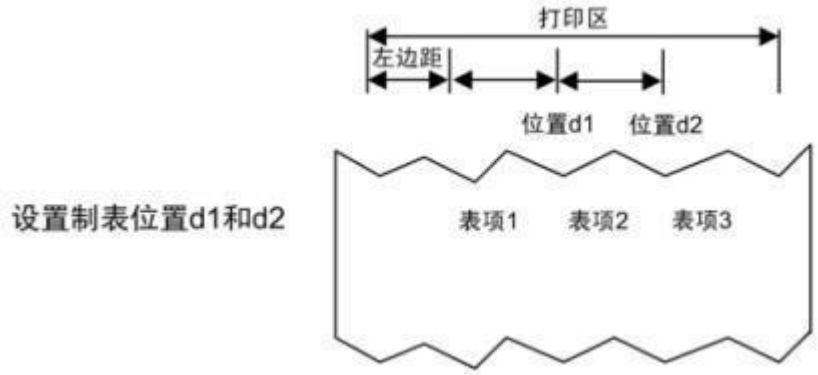
horizontal tabulation

Directive name	horizontal tabulation
instruction code	ASCII : HT Decal: 9 Hex system: 09
functional description	Move the print position to the next tabulation position
Parameter range	not have
Windows default	not have
Support model	All models

matters need attention	The tabulation position is set by the ESC D If the tabulation position is not set (default no horizontal tabulation position), this instruction will be considered an LF instruction If the tabulation position exceeds the print area, the coordinates are moved to the starting position of the next line (if the bank data is full, print and

	line feed)
Use the example	not have

set up the horizontal tabulation position

Directive name	
instruction code	ASCII : ESC D [d]k NUL Decimal system: 27 68 [d] k 0 Hex system: 1B 44 [d] k 00
functional description	Set the horizontal tabulation position, and the parameters are significant as follows: ...d 1 dk: Horizontal tabulation position in 8 points with NULL as the end character
Parameter range	XX 58 : 1 ≤ d ≤ 46 (d1 <d2 < ……dk , 1 ≤ k ≤ 16) XX80 : 1 ≤ d ≤ 70 (d1 < d 2 < ……dk , 1 ≤ k ≤ 16)
Windows default	[d] k = 0 (default no level tabulation location)
Support model	All models
matters need attention	The tabulation position is shown as follows:  Up to 16 tabulation locations are supported Using this instruction cancels the setting of previous tabulation locations K for purposes, without transmission Transfer [d] k is considered to end when encountering an NULL If dk is less than or equal to dk-1, it is considered as the end, and the remaining data is considered as ordinary data processing tabulation position can be switched by HT When the left distance is changed, the tabulation position changes simultaneously When ESC @, printer reset, power failure, this instruction setting failure

Use the example	1B 44 18 1E 00 46 4F 4F 44 09 50 52 49 43 45 09 49 44 0D0A0D0A 1B 44 18 1E 00 44 45 43 41 46 31 36 09 33 30 09 31 0D0A

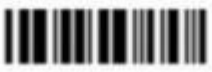
⑤ One-dimensional barcode printing instructions

set the one-dimensional barcode-readable character (HRI) print location

Directive name	Set the location of the barcode-readable character (HRI) printing
instruction code	ASCII : GS H n Decimal system: 2,972 n

	Hex-decimal system: 1D 48 n
functional description	Set the printing position of barcode readable character (HRI), and the n parameter is as follows: n PP 0, 48 1 NOT print Above the bar code , 49 Below the bar code 2, 50 Above and below the barcode 3, 51
Parameter range	0 n 3 or 48 n 51
Windows default	n = 0
Support model	All models
matters need attention	When ESC @, printer reset, power failure, this instruction setting failure
Use the example	not have

set the one-dimensional barcode height

Directive name	Set the one-dimensional barcode height
instruction code	ASCII : GS h n Decimal system: 29,104 n Hex-decimal system: 1D 68 n
functional description	Set the height of the barcode as n point, and the meaning of the parameter n is as follows:  高度为 50 高度为 100
Parameter range	1 ≤ n ≤ 255
Windows default	n = 64
Support model	All models
matters need attention	When ESC @, printer reset, power failure, this instruction setting failure
Use the example	not have

sets the one-dimensional barcode width

Directive name	Sets the one-dimensional barcode width

instruction code	ASCII ：GS w n Decimal system: 29,119 n Hex-decimal system: 1D 77 n
functional description	Set the barcode unit to n point, and the parameter n means as follows:

	宽度为 3 宽度为 4
Parameter range	1 ≤ n ≤ 6
Windows default	n = 2
Support model	All models
matters need attention	When ESC @, printer reset, power failure, this instruction setting failure
Use the example	not have

print a one-dimensional barcode

Directive name	
instruction code	(A) ASCII : GS k m [d]k NUL Decimal: 29, 107 m [d] kNUL Hex system: 1D 6B m [d] kNUL (B) ASCII : GS k m n [d]k Decimal: 29, 107 mn [d] k Hex system: 1D 6B m n [d] k
functional description	Print the one-dimensional barcode, and the significance of each parameter is as follows: M. m is the encoding mode The n is the length of the coded data, only used in (B) mode. The difference between (A) and (B) instructions is the data segment of (A) End with the NULL character, and (B) indicates the length of the data [d] k is the barcode data K is the length of the barcode data, used for indication, without transmission The relationships between the parameters is shown in the following table: (instructA)

m	coding system	Barcode data (SP indicates spaces)			
		DL	k	character set	data (d)
0	UPC -A	fixed	k = 11, 12	0~9	48≤d ≤57

	1	UPC -E	fixed	6≤k ≤8， k = 11， 12	0~9	48≤d ≤57 [equal k= 7,8,11,12， d 1 = 48]
	2	JAN 13 (EAN 13)	fixed	k = 12 ， 13	0~9	48≤d ≤57
	3	JAN 8 (EAN8)	fixed	k = 7 ， 8	0~9	48≤d ≤57
	4	CODE39	variable	1≤k ≤255	0~9 ， A~Z SP ， $ ， %， + ，	48≤d ≤57， 65≤d ≤90，

					- , ., /	d = 32, 36, 37 , 42, 43, 45 , 46, 47
	5	I TF (Interlea v ed 2 of 5)	variable	2 k 255 (even number)	0~9	48≤d ≤57
	6	C ODAB AR (NW-7)	variable	1≤k	0~9, A~D, a~d $, +, -, ., /, :	48≤d ≤57, 65≤d ≤68, 97≤d ≤100, d = 36, 43, 45 , 46 , 47, 58 (65≤d1≤68, 65≤dk ≤68, 97≤d1≤100, 97≤dk ≤100)

(instructB)

m	coding sys tem	Barcode data (SP indicates spaces)			
		DL	n	character set	data (d)
65	UPC -A	fixe d	n = 11, 12	0~9	48≤d ≤57
66	UPC -E	fixe d	6≤n ≤8, n = 11, 12	0~9	48≤d ≤57 [equal n= 7,8,11,12, d 1 = 48]
67	JAN 13 (EAN 13)	fixe d	n = 12 , 13	0~9	48≤d ≤57
68	JAN 8 (EAN8)	fixe d	n = 7 , 8	0~9	48≤d ≤57
69	CODE39	vari able	1≤n ≤255	0~9 , A~Z SP , $, %,+, - , ., /	48≤d ≤57, 65≤d ≤90 , d = 32, 36, 37, 42, 43, 45, 46 , 47
70	ITF (Interle a ved 2 of 5)	vari able	1 n 255 (even number	0~9	48≤d ≤57

				)		
	71	C ODAB AR (NW-7)	vari able	1≤n ≤255	0~9，A~D，a~d $，+，-，.，/，:	48≤d ≤57，65≤d ≤68，97≤d ≤100，d = 36，43，45，46，47，58 (65≤d1≤68，

						65≤dk ≤68，97≤d1≤100，97≤dk ≤100)
	72	CODE93	variable	1≤n ≤255	00H~7FH	0≤d ≤127
	73	CODE128	variable	2≤n ≤255	00H~7FH	0≤d ≤127
	74	UCC /EAN 128	variable	2≤n ≤255	00H~7FH C 1H~C4H(FNC)	0≤d ≤127 d = 193，194,195,196
Parameter range	(A) 0 ≤m ≤6 (B) 65 ≤m ≤74					
Windows default	not have					
Support model	All models					

matters need attention

If the barcode width exceeds the printable area, the printer does not perform the barcode printing

When this instruction is executed, it is not affected by the ESC 2 and ESC 3 line spacing setting or affect the line spacing setting

This instruction is not subject to the ESC! Character style setting impact

After this instruction is executed, the print position is returned to the print start position

Select the same coding system for m parameters 0 ~ 6 (A) and 65 ~ 71 (B), and when the printing effect is the same for m parameter 0 ~ 6 (A), the barcode data ends with NULL

Barcode data for m parameters 65 to 74 (B) represents the data length as n

K is used for indication, and no transmission is required

When printing the UPCA (m = 0 or 65), note that:

Regardless of whether the length of the input data is 11 or 12

The character, middle separator, and end character are automatically inserted

When printing a UPCE (m = 1 or 66), note that:

When the data length is 6, the system character (NSC) 0 is automatically inserted automatically

When the data lengths are 7,8,11, and 12, the first digit system character (NSC) d1 must be 0

Whether the input data length is 6 or, 7,8,11, or 12

Whether the input data length is 6,7,8,11 or 12, the barcode readable character (HRI) can only display 6 bits of data, and does not contain the system character (NSC) and check code;

The conversion relationship between transmitted data and printed data is as follows:

传输的数据										打印的数据					
d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d1	d2	d3	d4	d5	d6
0~9	0~9	0	0	0	-	-	0~9	0~9	0~9	d2	d3	d9	d10	d11	0
0~9	0~9	1	0	0	-	-	0~9	0~9	0~9	d2	d3	d9	d10	d11	1
0~9	0~9	2	0	0	-	-	0~9	0~9	0~9	d2	d3	d9	d10	d11	2
0~9	0~9	3~9	0	0	-	-	-	0~9	0~9	d2	d3	d4	d10	d11	3
0~9	0~9	0~9	1~9	0	-	-	-	-	0~9	d2	d3	d4	d5	d11	4
0~9	0~9	0~9	0~9	1~9	-	-	-	-	5~9	d2	d3	d4	d5	d6	d11

When d6 is 1 to 9, d7, d8, d9, d10 is 0, d11 is 5 to 9 start and end characters

When printing a EAN 13 (m = 2 or 67), note that:

Regardless of the length of the input data is 12 or 13

The character, middle separator, and end character are automatically inserted

When printing a EAN 8 (m = 3 or 68), note that:

Regardless of whether the length of the input data is 7 or 8

The character, middle separator, and end character are automatically inserted

When printing a CODE 39 (m = 4 or 69), note that:

When the d 1 or dn is not the start / end "*", the encoder automatically inserts the "*"

When "*" is encountered in the middle of the data, the encoder regards it as the end character, and the rest of the data is regarded as ordinary data processing;

Checkout bits are not automatically calculated and added

When printing a ITF 25 (m = 5 or 70), note that:

Start characters and ends are automatically inserted

Checkout bits are not automatically calculated and added

When printing a CODABAR (NW-7) (m = 6 or 71), note that:

Start and end characters will not be automatically inserted and need to be manually added by the user, ranging from "A" ~ "D" or "A" ~ "d"

Checkout bits are not automatically calculated and added

When printing a CODE 93 (m = 72), note that:

Start characters and ends are automatically inserted

Two check codes are automatically calculated and inserted

When the barcode-readable characters (HRI) printing is set, you do not set any HRI characters representing the start / end

When setting barcode readable characters (HRI) printing, the control characters will be replaced with spaces when CODE 128 (m = 73) is selected:

Refer to Appendix A, COD E 128 for related information and character sets.

When using CODE 128, code with the following instructions:

① You must select the character set (one of CODE A, CODE B, and CODE C) before the barcode data.

② Select the character set by sending the character "{" combined with another character; the ASCI I code character "{" Complete by sending the character "{" twice continuously.

Special characters send the data

ASCII Code sixteen decimal code decimal code

special character	send data		
	ASCII a sign or object indicating	hexadecimal code	decimal code

		number			
	SHIF T	{S	7B,53	123 ， 83	
	C ODEA	{A	7B,41	123 ， 65	
	C ODEB	{B	7B,42	123 ， 66	
	C ODEC	{C	7B,43	123 ， 67	
	FNC1	{1	7B,31	123 ， 49	
	FNC2	{2	7B,32	123 ， 50	

FNC3	{3	7B,33	123 , 51
FNC4	{4	7B,34	123 , 52
“{”	{{	7B,7B	123 , 123

[Instance] For example, printing " No.123456”

In this instance, the printer first prints with a CODE B of the ″ No.″And then print the remaining numbers with CODE C:

GS k 73 10 123 66 78 111 46 123 67 12 34 56

CODE 128:

1b 40 1d 48 02 1d 68 64 1d 77 03

1d 6b 49 0A 7B 42 4E 6F 2E 7B 43 0C 22 38

If the character set is not selected at the end of the barcode data, the printer stops the processing of this command and remains

The data below are processed as ordinary data.

If the {and the character following it are not the combination specified above, the printer stops the command

Reason, and treat the remaining data as ordinary data.

If the printer receives a character that is not barcode character set data, the printer stops the processing of this command and exceeds

The data below are processed as ordinary data.

When a printer prints HRI characters, you do not print shif t characters and character set selection data.

HRI characters for functional characters are not printed. The HRI characters of control characters (<00> Hto> <1F> H and <7F> H) are not printed; <Other> must ensure the left and right barcode gaps. The gap varied according to the barcode type.

Use the example	1b 40 1d 48 02 1d 68 64 1d 77 01 30 0D 0A 1d 6b 00 30 31 32 33 34 35 36 37 38 39 31 00 31 0D 0A 1d 6b 01 30 31 32 33 34 35 36 37 38 39 31 00 32 0D0A 1d 6b 02 30 31 32 33 34 35 36 37 38 39 31 32 00 33 0D 0A 1d 6b 03 30 31 32 33 34 35 36 37 00 34 0D 0A 1D 6B 04 30 31 32 41 42 20 24 25 2B 2D 2E 2F 00 35 0D 0A 1d 6b 05 30 31 32 33 34 35 36 37 38 39 31 32 00 36 0D 0A 1d 6b 06 2D 31 32 42 24 2B 2D 2E 00 1d 6b 06 43 31 32 33 34 35 36 34 38 39 00

	36 35 0D 0A 1d 6b 41 0c 31 32 33 34 35 36 37 38 39 30 31 32 36 36 0D 0A 1d 6b 42 0c 30 32 33 34 35 36 30 30 30 30 38 39 36 37 0D 0A 1d 6b 43 0c 30 32 33 34 35 36 30 30 30 30 38 39 36 38 0D 0A 1d 6b 44 08 30 32 33 34 35 36 30 30 36 39 20 20 4e 4f 20 24 25 2b 2d 2e 2f 31 32 33 34 35 36 30 30 0D 0A 1d 6b 45 11 4e 4f 20 24 25 2b 2d 2e 2f 31 32 33 34 35 36 30 30 37 30 20 20 20 30 32 33 34 35 36 30 30 C5 BC CA FD 0D 0A 1d 6b 46 09 30 31 32 33 34 35 36 30 30 37 31 0d 0a 1d 6b 47 05 32 33 34 35 36 37 32 0d 0a 1d 6b 48 0b 32 33 34 35 36 41 42 2e 2f 2b 2c 37 33 0d0a 1d 6b 49 0A 7B 42 4E 6F 2E 7B 43 0C 22 38 **Code 128：** 1b 40 1d 48 02 1d 68 64 1d 77 03 37 33 0d0a 1d 6b 49 0A 7B 42 4E 6F 2E 7B 43 0C 22 38

⑥ QR code printing instructions

set the module type of the QR code

Directive name	Set the module type of the QR code
instruction code	ASCII ：GS (k pL pH cn fn n Decimal: 29 40 107 pL pH cn fn n Hex-decimal system： 1D 28 6b pL pH cn fn n
functional description	Set the module type of the QR code
Parameter range	pL =3, pH =0 cn =49 fn =67 0 ≤ n ≤ 16
Windows default	n =3
Support model	All models
matters need attention	Set the type of the QR code graphics module to [n point n point].

Use the example	not have

set the error correction level error ofthe QR code

<table>
<tr><td>Directive name</td><td>Set the error correction level error of the QR code</td></tr>
<tr><td>instruction code</td><td>ASCII ：GS (k pL pH cn fn n
Decimal: 29 40 107 pL pH cn fn n
Hex-decimal system： 1D 28 6b pL pH cn fn n</td></tr>
<tr><td>functional description</td><td>Set the error correction level error of the QR code</td></tr>
<tr><td>Parameter range</td><td>pL =3, pH =0
cn =49
fn =69
48 ≤ n ≤ 51</td></tr>
<tr><td>Windows default</td><td>n =48</td></tr>
<tr><td>Support model</td><td>All models</td></tr>
<tr><td>matters need attention</td><td>Set the error correction level error of the QR code
<table>
<tr><td>n</td><td>function</td><td>consult：
Recovery presumably represents the (%)</td></tr>
<tr><td>48</td><td>Error-corrected level error L</td><td>7</td></tr>
<tr><td>49</td><td>Error-corrected level error m</td><td>15</td></tr>
<tr><td>50</td><td>Error-corrected level error q</td><td>25</td></tr>
<tr><td>51</td><td>Error-corrected level error h</td><td>30</td></tr>
</table></td></tr>
<tr><td>Use the example</td><td>not have</td></tr>
</table>

store the data ofthe QR code to the QR code buffer

<table>
<tr><td>Directive name</td><td>Store the data of the QR code to the QR code buffer</td></tr>
<tr><td>instruction code</td><td>ASCII ：GS (k pL pH cn fn m d 1…dk
Decimal： 29 40 107 pL pH cn fn m d 1...dk
Hex system： 1D 28 6b pL pH cn fn m d 1...dk</td></tr>
<tr><td>functional description</td><td>Store the data of the QR code to the QR code buffer</td></tr>
<tr><td>Parameter range</td><td>4 ≤ (pL + pH ×256) ≤ 7092 (0 ≤ pL ≤ 255, 0 ≤ pH ≤ 28)
cn =49
fn =80
m =48
0 ≤ d ≤ 255
k = (pL + pH ×256) - 3</td></tr>
<tr><td>Windows default</td><td>not have</td></tr>
</table>

Support model	All models
matters need attention	Store the data of the QR code (d 1... And dk) to the QR code buffer zone. ((pL + pH 256) -3), with bytes in m (d 1... After dk) the data were processed as figures.
Use the example	not have

Print the QR code

Directive name	Print the QR code

instruction code	ASCII ：GS (k pL pH cn fn m Decimal: 29 40 107 pL pH cn fn m Hex-decimal system： 1D 28 6b pL pH cn fn m
functional description	Print the QR code
Parameter range	pL =3, pH =0 cn =49 fn =81 m =48
Windows default	not have
Support model	All models
matters need attention	Print the QR code. The user must consider the space of the QR code graphics (the spacing between the QR code graphics up and down and the left and right sides are specified in the specification).
Use the example	1b 40 1d 28 6b 03 00 31 43 03 1d 28 6b 03 00 31 45 30 1d 28 6b 06 00 31 50 30 41 42 43 1b 61 01 1d 28 6b 03 00 31 52 30 1d 28 6b 03 00 31 51 30

set up the graphics information for the QR code

Directive name	Set up the graphics information for the QR code
instruction code	ASCII ：GS (k pL pH cn fn m Decimal: 29 40 107 pL pH cn fn m Hex-decimal system： 1D 28 6b pL pH cn fn m

functional description	Set up the graphics information for the QR code. Below are the specific details of the graphic information: Data sending for the width and height: Points in units. Other information and data are sent:

send data	hexadecimal	decimal system	data type
H eader	37H	55	1byte
F lag	36H	54	1byte
Widt h	30H-39H	48-57	1-5byte
Separator	1FH	31	1byte
H eight	30H-39H	48-57	1-5byte
Separator	1FH	31	1byte
F i xed Value	31H	49	1byte
Separator	1FH	31	1byte
Oth er I nformation	30H o 31H	48 or 49	1byte
N UL	00H	0	1byte

	"Hex =30H / decimal =48" means that the data is not printed. "Hex =31H / decimal =49" means that the data is not printed.
Parameter range	pL =3, pH =0 cn =49 fn =82 m =48
Windows default	not have
Support model	All models
matters need attention	This command does not print the QR code drawing. The user must consider the space of the QR code graphics (the spacing between the QR code graphics up and down and the left and right sides are specified in the specification).
Use the example	not have

print QR code

Directive name	Print QR code
instruction code	ASCII : GS k m v r nL nH d 1...dk Decimal: 29 107 97 v r nL nH d 1...dk Hex system: 1D 6B 61 v r n1 nH d 1...dk
functional description	Print QR code V indicates the specification of QR code and v=0 indicates the specification of QR code And r indicates the error correction level nL nH Represents the data length d 1...The dk represents the QR code data to be printed
Parameter range	0 ≤v ≤17 1 ≤r ≤4 k =nL +256 * nH
Windows default	not have
Support model	Portable printer
matters need attention	Print the QR code.
Use the example	1b 40 1D 6B 61 08 02 08 00 30 31 32 33 34 35 36 37

Dual-QR Code printing

Directive name	Dual-QR code printing
instruction code	ASCII : US Q m n Decimal system: 2,781 mn Hex-decimal system: 1F 51 m n p 1H p 1L 1 1H 1 1L ecc 1 v 1 d 1...dn p 1H p 1L 1 1H 1 1L ecc 1 v 1 d 1...dn p 1H p 1L 1 1H 1 1L ecc 1 v 1 d 1...dn P 2H p 2L 12H 12L ecc 2 v 2 dk ...dm P 2H p 2L 12H 12L ecc 2 v 2 dk ...dm P 2H p 2L 12H 12L ecc 2 v 2 dk ...dm

functional description	Print out one or two QR codes M. The specified number of QR codes. N. Specifies the module width. p 1H p 1L Specifies the position of the QR 1. (p 1H *256+p 1L) l 1H l 1L Specifies the data length for the QR 1. (l 1H *256+l 1L)

	ecc 1 Specifies the error correction level of the QR 1.(0:7%, 1:15%,2:25%,3:30%) The v 1 specifies the version of the QR 1. (1~40,0: Automatic calculated version. The larger the version, the larger the overall size of the QR code, but be careful not to exceed the printable width.) d 1... The dn specifies the data for the QR1. p 2H p 2L Specifies the position of the QR 2. (p 2H *256+p 2L) 1 2H 1 2L Specifies the data length for the QR 2. (1 2H *256+1 2L) ecc 2 Specify the error correction level of the QR 2.(0:7%, 1:15%,2:25%,3:30%) The v 2 specifies the version of the QR 2. (1~40,0: Automatic calculated version. The larger the version, the larger the overall size of the QR code, but be careful not to exceed the printable width.) ..dk . The dm specifies the data for the QR2.
Parameter range	0＜m ＜3 1≤n ≤8 0≤p 1H ， p1L ， l1H ， l1L ≤255 0≤ecc1≤3 0≤v1≤40 0≤p 2H ， p2L ， l2H ， l2L ≤255 0≤ecc2≤3 0≤v2≤40
Windows default	not have
Support model	Part of the model
matters need attention	
Use the example	1F 51 02 03 00 00 00 28 00 00 CED 2CAC 7D 7F3B1DFB5C4C4C7B8F6B6FECEACC2EBCED2CAC7D7F3B 1DFB 5C4C4C7B8F6B6FECEACC2EB 00 C0 00 28 00 00 CED 2CAC 7D3D2B1DFB5C4C4C7B8F6B6FECEACC2EBCED2CAC7D3D2B 1DFB5C4C4C7B8F6B6F ECEACC 2EB

PDF 417 set the number of columns in the data area

Directive name	PDF 417 Set the number of columns in the data area
instruction code	ASCII : GS (k pL pH cn fn n Decimal: 29 40 107 pL pH cn fn n Hex-decimal system: 1D 28 6b pL pH cn fn n
functional description	Set the number of columns in the data area of the PDF 417. Number of columns is calculated automatically when n =0. When n =0, set the number of columns to n.
Parameter range	pL =3, pH =0

	cn =48 fn =65 0 ≤ n ≤ 30
Windows default	n = 0
Support model	Part of the model
matters need attention	The following data are not included in the column numbers. Start pattern and stop pattern Left line code and right line code
Use the example	

PDF 417, Set the number of rows

Directive name	PDF 417 Set the number of rows
instruction code	ASCII : GS (k pL pH cn fn n Decimal: 29 40 107 pL pH cn fn n Hex-decimal system: 1D 28 6b pL pH cn fn n
functional description	Set the number of rows for the PDF417 The number of rows is calculated automatically when n =0. When n =0, set the number of rows to n.
Parameter range	pL =3, pH =0 cn =48 fn =66 n =0, 3 ≤ n ≤ 90
Windows default	n = 0
Support model	Part of the model
matters need attention	
Use the example	

PDF 417 set the module width

Directive name	PDF 417 Set the module width
instruction code	ASCII : GS (k pL pH cn fn n Decimal: 29 40 107 pL pH cn fn n Hex-decimal system: 1D 28 6b pL pH cn fn n
functional description	Set PDF417, the module width is n point.
Parameter range	pL =3, pH =0 cn =48 fn =67 2 ≤ n ≤ 8
Windows	n = 3

default	
Support model	Part of the model
matters need attention	
Use the example	

PDF 417, Set the row height

Directive name	PDF 417 Set the row height
instruction code	ASCII : GS (k pL pH cn fn n Decimal: 29 40 107 pL pH cn fn n Hex-decimal system: 1D 28 6b pL pH cn fn n
functional description	Set the row height of the PDF 417 to the [n * (module width)] point.
Parameter range	pL =3, pH =0 cn =48 fn =68 2 ≤ n ≤ 8
Windows default	n = 3
Support model	Part of the model
matters need attention	
Use the example	

PDF 417 set the error correction level

Directive name	PDF 417 Set the error correction level
instruction code	ASCII : GS (k pL pH cn fn m n Decimal: 29 40 107 pL pH cn fn m n Hex-decimal system: 1D 28 6b pL pH cn fn m n
functional description	PDF 417 Set the error correction level
Parameter range	pL =3, pH =0 cn =48 fn =69 m =48,49 48 ≤ n ≤ 56[when m = 48] 1 ≤ n ≤ 40 [when m = 49]
Windows default	m = 49 , n = 1
Support model	Part of the model
matters need	Set the error correction level of PDF417 When m=48, the error correction level is set by "Level Set", and the error correction level set by "Scale setting" will be cancelled. The error-corrected digital words are as follows:

n	function	Error correction of the codewords
48	Set the error correction level of	2

attention		0	
	49	Set the error correction level of 1	4
	50	Set the error correction level of 2	8
	51	Set the error correction level of 3	16
	52	Set the error correction level of 4	32
	53	Set the error correction level of 5	64
	54	Set the error correction level 6	128
	55	Set the error correction level 7	256

	56	Set the error correction level of 8	512

When m=49, the error correction level is set by "Scale setting", and the error correction level with "Level Setting" setting will be cancelled. The proportion was set to [N 10%]. The error correction level in the table is determined by the calculation
[Data codeword N 0. 1= (A)] (Parts of 0.5 and above are rounded off and will be truncated.)

bear fru it (A)	Error correction level	Error correction of the codewords
0 To 3	Set the error correction level of 1	4
From 4 to 10	Set the error correction level of 2	8
From 11 to 20	Set the error correction level of 3	16
From 21 to 45	Set the error correction level of 4	32
From 46 to 100	Set the error correction level of 5	64
From 101 to 200	Set the error correction level 6	128
From 201 to 400	Set the error correction level 7	256
401 and above	Set the error correction level of 8	512

Use the example	

PDF 417, Select the scheme

Directive name	PDF 417 Select the scheme
instruction code	ASCII : GS (k pL pH cn fn m Decimal: 29 40 107 pL pH cn fn m Hex-decimal system: 1D 28 6b pL pH cn fn m
functional description	PDF 417 Select the scheme

Parameter range	pL =3, pH =0 cn =48 fn =70 m =0,1
Windows default	m =0
Support model	Part of the model
matters need attention	Select the scheme for the PDF417

m	function
0	Select the criteria for the PDF417
1	Select the truncated PDF417

Use the example	

PDF 417 store the data to the symbol storage area

Directive name	PDF 417 Store the data to the symbol storage area
instruction code	ASCII : GS (k pL pH cn fn m d 1...dk Decimal: 29 40 107 pL pH cn fn m d 1...dk Xhex system: 1D 28 6b pL pH cn fn m d 1...dk

functional description	PDF 417 Store data (d 1... And dk) to the symbol storage area
Parameter range	4 ≤ (pL + pH × 256) ≤ 65535 (0 ≤ pL ≤ 255, 0 ≤ pH ≤ 255) cn = 48 fn = 80 m = 48 0 ≤ d ≤ 255 k = (p L + pH × 256) – 3
Windows default	not have
Support model	Part of the model
matters need attention	
Use the example	

PDF 417 print the data for the symbol storage area

Directive name	PDF 417 Print the data for the symbol storage area
instruction code	ASCII : GS (k pL pH cn fn m Decimal: 29 40 107 pL pH cn fn m Hex-decimal system: 1D 28 6b pL pH cn fn m
functional description	Encode and print the PDF417 code
Parameter range	(pL + pH × 256) = 3 (pL = 3, pH = 0) cn = 48 fn = 81 m = 48
Windows default	not have
Support model	Part of the model
matters need attention	
Use the example	1D 28 6B 08 00 30 50 30 31 32 33 34 35 1D 28 6B 03 00 30 51 30

⑦ State Directive

Transfer state

Directive name	Transfer state
instruction code	ASCII : GS r n Decimal system: 29,114 n Hex-decimal system: 1D 72 n

<table>
<tr><td>functional description</td><td>Transfer the states specified by n, as follows:<table><tr><td>n</td><td>state</td></tr><tr><td>1.49</td><td>Transfer of the paper sensor status</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table></td></tr>
<tr><td>Parameter range</td><td>n = 1, 49</td></tr>
</table>

<table>
<tr><td>Windows default</td><td>not have</td></tr>
<tr><td>Support model</td><td>All models</td></tr>
<tr><td>matters need attention</td><td>When using a serial interface:
If the DTR / DSR control is set, the printer confirms that the host is ready to receive data (DSR Signal is SPACE), transmitting only one byte. If the host computer is not ready to receive the delivery data (the DSR signal is MARK), the printer waits until the host is ready.

If the XON / XOFF control is set, the printer transmits only one byte and does not confirm the DSR signal status
。
Implement this command when the data is generated in the print buffer. Thus there may be a time interval between receipt of the command and the transmitting state, depending on the state of the receiving buffer.
When activating the ASB with GSa, the state transmitted by GSr and the ASB state must be distinguished.
The status types of the transfer are as follows:
Print Paper Sensor Status (n = 1,49):
<table>
<tr><td>Position</td><td>Close / open</td><td>hexadecimal</td><td>decimal system</td><td>ASB state</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>-</td><td>insignificance.</td></tr>
<tr><td>0,1
2,3</td><td>close</td><td>00</td><td>0</td><td>Paper exhaust sensor: sufficient printing paper.</td></tr>
<tr><td>4</td><td>open</td><td>(0C)</td><td>(12)</td><td>Paper-out sensor is short of paper.</td></tr>
<tr><td>5,6
7</td><td>close</td><td>00</td><td>0</td><td>Not used, fixed as off.</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>-</td><td>undefinition.</td></tr>
<tr><td></td><td>close</td><td>00</td><td>0</td><td>Not used, fixed as off.</td></tr>
</table>
Bits 2 and 3: When the sensor detects that the print paper is exhausted, the printer goes offline and the command is not executed. So bits 2 and 3 do not transmit the paper state.</td></tr>
<tr><td>Use the example</td><td>not have</td></tr>
</table>

Real-time transfer status

Directive name	Real-time transfer status
instruction code	ASCII : DLE EOT n Decimal system: 16 4 n Hex system: 10 04 n

functional description	Transfer the printer status and parameters in real-time according to the following parameters To specify the printer status that you want to transfer: N = 1: Transfer the printer status N = 2: Transfer the offline status N. n = 3: Transfer the error state N = 4: transfer paper sensor status n
Parameter range	1≤n≤4
Windows default	not have
Support model	All models

matters need attention

The printer receives the command

The command tries not to be inserted in a command sequence of 2 or more bytes.

The command is valid even if the printer is set as disabled by the ESC = (select peripheral) command.

The printer transmits the current state, and each state is represented by 1 byte of data.

The printer transfer status does not confirm if the host is received.

The printer receives the

command and performs it

immediately.•

This command is valid for a serial port printer. The printer receives the command immediately in any state

。

N. n =1: Printer status

Position	0/1	hexadecimal code	decimal code	function
0	0	00	0	Fixed to 0
1	1	02	2	Fixed to 1
2	0	00	0	One or two money boxes are open (Without a cash box machine, the position is fixed to zero)
	1	04	4	Both casboxes were closed
3	0	00	0	on-line
	1	08	8	off-line
4	1	10	16	Fixed to 1
5, 6		--	--	undefinition
7	0	00	00	The paper has been torn away
	1	80	96	The paper was not torn away

N = 2: Transfer the offline status

Position	0/1	hexadecimal code	decimal code	function
0	0	00	0	Fixed to 0
1	1	02	2	Fixed to 1
2	0	00	0	On the cover
	1	04	4	Cover open
3	0	00	0	Did not press the paper button
	1	08	8	Press the walk button
4	1	10	16	Fixed to 1
5	0	00	0	The printer is not short of paper
	1	20	32	Printer lack of paper

	6	0	00	00	There are no error cases
		1	40	64	There is a wrong situation
	7	0	00	0	Fixed to 0

N. n =3: Transfer the error state

Position	0/1	hexadecimal code	decimal code	function
0	0	00	0	Fixed to 0

	1	1	02	2	Fixed to 1
	2		--	--	undefinition
	3	0	00	0	There is no mistake in cutting the knife
		1	08	8	There is a mistake in cutting the knife
	4	1	10	16	Fixed to 1
	5	0	00	0	There are no unrecoverable errors
		1	20	32	There is an unrecoverable error
	6	0	00	00	Print head temperature and voltage are normal
		1	40	64	The print head temperature or voltage is out of range
	7	0	00	0	Fixed to 0

N = 4: transfer paper sensor status

Position	0/1	hexadecimal code	decimal code	function
0	0	00	0	Fixed to 0
1	1	02	2	Fixed to 1
2 , 3	0	00	0	There is paper
	1	0C	12	The paper is near
4	1	10	16	Fixed to 1
5 , 6	0	00	0	There is paper
	1	60	96	Paper
7	0	00	0	Fixed to 0

Use the example	10 04 01 10 04 02 10 04 03 10 04 04

Live printer request

Directive name	Live printer request
instruction code	ASCII : DLE ENQ n Decimal system: 16 5 n Headecimal: 10 05 n
	The printer responds to a request from the host. N. Specify the following request:

n	ask

functional description	1	Recover from the error and start the printing again from the row where the error appears.
	2	Recovery from the error after clearing the receive and print buffer.
Parameter range	n = 1, 2	
Windows default	not have	

Support model	All models
matters need attention	This command is only valid if the cover open error occurs. The printer processes the data as soon as it receives this command. Run this command even when the printer is offline, with a full print buffer or a serial interface mode error. In the parallel interface mode, this command cannot be executed when the printer is busy. Whenever the <10> H <05> H <n> (1 n 2) data sequence is sent.for instance: ESC * m nL nH dk , d 1 = <10>H, d2 = <05>H, d3 = <01>H You cannot use the command for data in a command with 2 or more bytes.for instance: If you want to send the ESC 3n to the printer, but before n is sent, the DTR (DSR for the host) becomes MARK, so the DLE ENQ occurs before n is received 2 Disruption. The DLE ENQ 2 code <10> H is treated as the ESC 3 code <10> H. DLE ENQ 2 Allows the printer to recover from the error state after clearing data from the receive buffer and print buffer. Setting in a valid state when a printer retention error occurs (such as ESC!, E SC 3 et al.) The printer can be fully initialized with this command and ESC @, which is only valid for errors that may be recovered, except for print header temperature errors.
Use the example	10 05 01

Allow and prohibit automatic status reply (ASB)

Directive name	Allow and prohibit automatic status reply (ASB)
instruction code	ASCII : GS a n Decimal system: 2,997 n Hex-decimal system: 1d 61 n
functional description	Allow or prohibit ASB and specify included status items with n as follows:

Position	Close / open	hexadecimal code	decimal code	ASB state
0	-	-	-	undefinition
1	-	-	-	undefinition
2	close	00	0	Error state is prohibited
	open	04	4	Error status allows
3	close	00	0	Print paper roll sensor status is prohibited
	open	08	8	Print paper roll sensor status allows

	4-7	-	-	-	undefinition
	First byte (printer information) :				
	Position	Close / open	hexadecimal code	decimal code	ASB state
	0,1	close	00	0	There is no definition. Fix to a value of 0.
	2	open	04	0	There is no definition. Fix to be 1.
	3	close	00	0	There is no definition. Fix to a value of 0.
	4	open	10	16	There is no definition. Fix to be 1.

	5	close	00	0	There is no definition. Fix to a value of 0.
	6	close	00	0	Do not pass the paper entry key to take the paper
		open	40	64	Leaving the paper by pressing the paper entry button.
	7		00	0	There is no definition. Fix to a value of 0.
	The second byte (printer information):				
	Position	Close / open	hexadecimal code	decimal code	ASB state
	0-4	close	00	0	There is no definition. Fix to a value of 0.
	5	close	00	0	No unrecoverable error has occurred.
		open	20	32	An unrecoverable error has occurred.
	6	close	00	0	No autorecovery error has occurred.
		open	40	64	An automatic recovery error has occurred.
	7	close	00	0	There is no definition. Fix to a value of 0.
	Third byte (paper sensor information):				
	Position	Close / open	hexadecimal code	decimal code	ASB state
	0,1	close	00	0	There is no definition. Fix to a value of 0.
	2,3	close	00	0	The printer has paper.
		open	0c	12	Printer lack of paper.
	4-7	close	00	0	There is no definition. Fix to a value of 0.
	The fourth byte (paper sensor information):				
	Position	Close / open	hexadecimal code	decimal code	ASB state
	0-3	-	-	-	There is no definition.
	4-7	close	00	0	There is no definition. Fix to a value of 0.
Parameter range	0≤n≤255				
Windows default	not have				
Support model	All models				

matters need attention	If any of the state items in the above table is allowed, the printer loses the state when the command is executed. Once the Allow status item changes, the printer automatically transfers the status. Because each state transfer represents the current state, the prohibited state terms can be changed. If all the status items are banned, then the ASB function is also banned. If the will ASB is allowed as a default setting for the printer from the first time it can receive and transfer the printer data. Transfer the following four status bytes without determining whether the host is ready to receive the data. The four state bytes must be continuous, except for the XOFF code. Because command data is executed after processing in the receiving buffer, there may be a lag time between data reception and state transmission. When using the DLE EOT, you must distinguish between the states transmitted by these commands and the ASB state
Use the example	1D 61 08

⑧ other instructions

Initialize the printer

Directive name	Initialize the printer

instruction code	ASCII : ESC @ Decimal system: 2,764 Headecimal system: 1B 40
functional description	Initialize the printer with the following contents: Clear the print cache Each parameter recovers the default value
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	not have
Use the example	not have

print self-test pages

Directive name	Print self-test pages
instruction code	ASCII : DC 2 T Decimal system: 1,894 Xx: 12 54
functional description	The printer prints a self-test page containing the program version of the printer, communication interface type, code page and some other data
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	not have
Use the example	1B 40 12 54

set the print concentration

Directive name	Set the print concentration
instruction code	ASCII : ESC 7 n 1 n 2 n 3 Decimal system: 2,755 n 1 n 2 n 3 Hex-decimal system: 1B 37 n1 n2 n3

functional description	Set the most heating point for printing, heating time, interval time: N 1 = 0-255 maximum heating points in unit (8dot s), default value of 9 (80 points); N 2 = 0-255 heating time in unit (10us), default value of 80; N 3 = 0-255 heating interval time, unit (10us), default value of 2; With many heating points, the maximum current consumption of the control board is large and the printing speed is fast. The maximum number of heating points is 8 (n1 + 1); The longer the heating time, the higher the printing black degree, and the slower the printing speed. If the heating time is too short, there may be a printed blank; The longer the interval is, the clearer the printing is, and the printing speed becomes slower;
Parameter range	
Windows default	not have
Support model	All models
matters need attention	The "Heating Time", "Heating interval" control board will automatically adjust according to the input voltage.

Use the example	Heating points: 80 points, heating time: 800us, interval time of 200us. 1B 40 1B 37 09 50 02 12 54 Heating points: 80 points, heating time: 1600us, interval time of 200us. 1B 40 1B 37 09 A 0 02 12 54 As can be seen, after the prolonged heating time, the printing concentration becomes significantly black.

select the cutting mode and cut the paper

Directive name	Select the cutting mode and cut the paper
instruction code	① ASCII : GS V m Decimal system: 2,986 m Hex-decimal system: 1D 56 m ② ASCII : GS V m n Decimal system: 2,986 mn Hex-decimal system: 1D 56 m n
functional description	Select a paper cutting mode and cut the paper. The cutting mode was selected based on the value of m as shown below

M	Cut paper mode
0, 48	Full cut
1, 49	Half cut
66	Put paper in and cut paper

Parameter range	① m = 0 , 48 , 1 , 49 ② m = 66 , 0 ≤ n ≤ 255
Windows default	not have
Support model	All models

matters need attention	This order is valid only at the beginning. And m = 0,48,1,49, and the printer directly cut the paper. When m = 66, the printer feeds [distance between print location and cutter + n (longitudinal moving unit)] and then cuts the paper. The lateral and longitudinal moving units are set by the GSP command. The paper volume was calculated using longitudinal moving units.
Use the example	1B 40 30 30 30 0D 0A 1D 56 00 30 30 30 0D 0A

	1D 56 01 30 30 30 0D 0A 1D 56 42 00

Fully cut paper form (OnlyForCut)

Directive name	Full cut paper
instruction code	ASCII : ESC i Decimal system: 27,105 Xadecimal : 1B 69
functional description	Select the cutter mode and cut it all
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	not have
Use the example	1B 40 30 30 30 0D 0A 1B 69

Half-cut paper paper (OnlyForCut)

Directive name	Half cut paper
instruction code	ASCII : ESC m Decimal system: 27,109 Headecimal system : 1B 6D
functional description	Select the cutter mode and half cut
Parameter range	not have
Windows default	not have
Support model	All models
matters need attention	not have
Use the example	1B 40 30 30 30 0D 0A 1B 6D

Generate a cassette pulse (OnlyForDrawer)

Directive name	Generate a wallet pulse

instruction code	ASCII ：ESC p m t 1 t 2 Decimal system: 27,112 m t 1 t 2 Hex-decimal system: 1B 70 m t 1 t 2
functional description	Output pulse (pulses specified by t 1 and t 2) to the pin specified by m
Parameter range	m =0,1,48,49 0 ≤ t1 ≤ 255 0 ≤ t2 ≤ 255
Windows default	not have
Support model	All models

matters need attention	1. The cassette pin is specified by m <table><tr><td>m</td><td>function</td></tr><tr><td>0,48</td><td>Cassette open / off signal (connection pin 2)</td></tr><tr><td>1,49</td><td>Cassette open / off signal (connection pin 5)</td></tr></table> 2, money box, open [t12ms], and closed [t22ms]. 3, if t2 <t1, it is [t12m s].
Use the example	1B 40 1B 70 00 60 60 1B 70 01 60 60

⑨ page mode

print and return to standard mode (in page mode)

Directive name	Print and return to standard mode (in page mode)
instruction code	ASCII : FF Decal: 12 Hex-decimal system: 0C
functional description	Print all the data in the print buffer in page mode and return to standard mode.
Parameter range	not have
Windows default	not have
Support model	80XXX
matters need attention	After printing, clear the data from the buffer. The print area set by the ESC W is reset to the default setting. The printer does not perform the paper-cutting action. The command sets the print location as the starting point of the row. This command is valid only in the page mode.
Use the example	not have

unprint the data in page mode

Directive name	Unprint the data in page mode
instruction code	ASCII : CAN Decimal system: 24 Xx system: 18
functional description	In page mode, delete all print data in the current print area.
Parameter	not have

range	
Windows default	not have
Support model	80XXX
matters need attention	This command is valid only in the page mode. If the previously set area overlaps with the current area, the overlap was also removed.
Use the example	not have

print in page mode

Directive name	Print in page mode
instruction code	ASCII : ESC FF Decimal system: 2,712 Hex system: 1B 0C
functional description	In page mode, print everything in the buffer.
Parameter range	not have
Windows default	not have
Support model	80XXX
matters need attention	This command is valid only in the page mode. After printing, the contents, ESC T and ESC W settings and the location of characters class.
Use the example	not have

select page Mode

Directive name	Select Page Mode
instruction code	ASCII : ESC L Decimal system: 2,776 Xhex system: 1B 4C
functional description	Convert from standard mode to page mode.
Parameter range	not have
Windows default	not have
Support model	80XXX

matters need attention	This command is only valid at the header of the standard mode. In page mode, the command is invalid. When FF or ESC S, the printer returns to standard mode. This command sets the print location to the location determined by the ESC T command and the ESC W command. This command converts the settings for the following commands (in which values can be set separately in standard mode and page mode) to values in page mode: 1. Set the character right spacing: ESC SP, FSS 2. Set the row spacing: ESC 2, ESC 3 The following command changes only flag bits in page mode and switches to standard mode. 1. Turn clockwise for 90° : ESCV 2. Select the alignment mode: ESCa 3. Select the Inverted mode: ESC { 4. Set the left margin: GSL 5. Set the width of the printing area: GSW In page mode, ignore the following commands: 1. Perform the test printing: GS (A The following commands are not available in the page mode: 1. Print the NV bitmap: FSp 2, define the NV bitmap: FSq 3, write to the user NV memory: FS g 1

	4. Print the grating bit map: GS v 0 When the power is off, the printer is reset, or the E S C @ command is executed, the printer returns to standard mode.
Use the example	not have

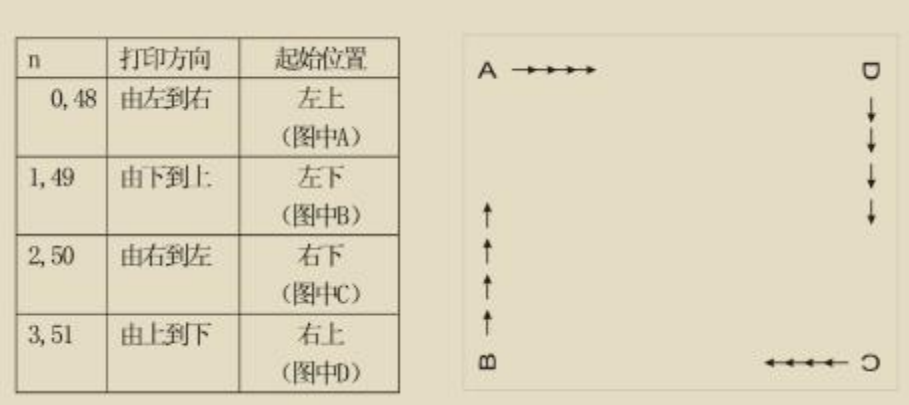
select the standard mode

Directive name	Select the standard mode
instruction code	ASCII : ESC S Decimal system: 2,783 Xhex system: 1B 53
functional description	Set up the standard mode
Parameter range	not have
Windows default	not have
Support model	80XXX
matters need attention	This command is valid in the page mode. This command cleans up the page buffer to print the data. The command places the current position at the top of the line. The page mode area is initialized as the default value. This command converts the settings for the following commands to the values in the standard mode: 1. Set the right spacing: ESC SP, FSS 2. Select row spacing: ESC 2, ESC 3 The following commands can set relevant parameters in standard mode but their set values enter page mode: 1. Print area in setting page mode: ESCW 2. Set the area direction in page mode: ESCT The following commands are ignored in standard mode: 1. Set the vertical absolute printing position in page mode: G S $ 2. Set the relative printing location in page mode: GS \ After printer hardware reset or ESC @ command, the printer returns to standard mode.
Use the example	not have

select the print area direction in page mode

Directive name	Select the print area direction in page mode
instruction code	ASCII : ESC T n Decimal system: 2,784 n Hex-decimal system: 1B 54 n

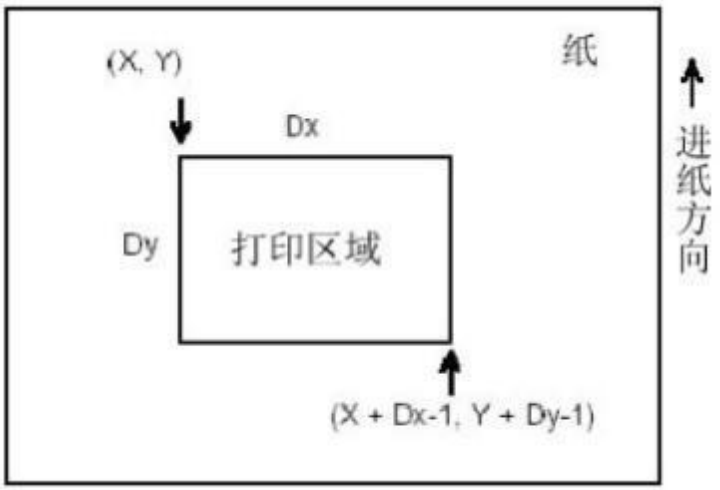
functional description	Select the orientation and start position of the print area in page mode. N Specify the direction and starting location of the print area：

	
Parameter range	0 ≤n ≤3,48 ≤n ≤51
Windows default	n =0
Support model	80XXX
matters need attention	If the current mode is standard mode, only the internal flag bit does not affect printing. This command can set the start position of the print content in the print area. The use of lateral or longitudinal moving units also varies depending on the starting position of the area print: 1. If the starting position of printing is the upper left or lower right corner of the printing area, then the arrangement direction of the printing content is perpendicular to the direction of the printing paper. The following commands use the lateral movement units: ESC SP, ESC $, ESC \ The following commands use longitudinal movement units: ESC 3, ESCJ, GS $, GS \ 2. If the printer starts from the lower left or upper right corner of the print area, the print content is arranged in the same direction as the printer input paper. The following commands use the lateral movement units: ESC 3, ESCJ, GS $, GS \ The following commands use the longitudinal movement unit: ESC SP, ESC $, ESC \
Use the example	not have

set up the print area in page mode

Directive name	Set up the print area in page mode
instruction code	ASCII : ESC W xL xH y L yH dxL dxH dyL dyH Decimal system: 2,787 xL xH yL yH dxL dxH dyL dyH Hex-decimal system: 1B 57 xL xH yL yH d xL dxH dyL dyH

functional description	Set area lateral start, longitudinal start, area width and height as follows: Transverse start position: x0 = [(xL + xH 256) lateral movement unit] Longitudinal start position: y 0 = [(yL + yH 256) longitudinal movement unit] Print area width: dx = [dxL + dxH 256] lateral movement unit] Print area height: dy = [dyL + dyH 256] longitudinal move unit]
Parameter range	0 ≤ (xL + xH × 256) ≤ 65535 (0 ≤ xL ≤ 255, 0 ≤ xH ≤ 255) 0 ≤ (yL + yH × 256) ≤ 65535 (0 ≤ yL ≤ 255, 0 ≤ yH ≤ 255) 1 ≤ (dxL + dxH × 256) ≤ 65535 (0 ≤ dxL ≤ 255, 0 ≤ dxH ≤ 255) 1 ≤ (dyL + dyH × 256) ≤ 65535 (0 ≤ dyL ≤ 255, 0 ≤ dyH ≤ 255)
Windows default	xL = xH = yL = yH = 0 dxL = 72, dxH = 2, dyL = 176, dyH = 4
Support model	80XXX
matters need attention	This command sets only internal flag bits in standard mode and does not affect printing.

	If the lateral or longitudinal start is beyond the print area, the printer stops processing the command and the data is processed as normal data. If the width or height of the print area is set to 0, the printer stops processing the command, and the data is processed as normal data. This command works with the ESC T command to determine the current print location. If the value of the transverse start position + print area width exceeds the printable area, the width of the print area is automatically adjusted to, transverse printable width-Horizontal start position. If the value of the longitudinal start position + print area height exceeds the printable area, the height of the print area is automatically adjusted to the longitudinal printable height-Longitudinal start position. Horizontal and vertical moving units are specified by the GSP, and changing the horizontal and vertical moving units does not change the current print area. Horizontal start position and area width are set with lateral moving unit, and longitudinal start position and area height are set with longitudinal moving unit. Assuming that the lateral start position, longitudinal start position, print area width and print area height are X, Y, Dx, Dy, the settings of the print area are shown in the following figure： 
Use the example	not have

set the longitudinal absolute position in page mode

Directive name	Set the longitudinal absolute position in page mode
instruction code	ASCII ： GS $ nL nH Decimal: 2,936 nLnH Hex-decimal system： 1D 24 nL nH

functional description	The absolute longitudinal position is set in page mode. This command sets the absolute position at [(nL + nH 256) (longitudinal or lateral units)] inches.
Parameter range	$0 \leq nL \leq 255, 0 \leq nH \leq 255$
Windows default	-
Support model	80XXX
matters need attention	This command is valid only in page mode. This command is ignored if [(nL + nH 256) (longitudinal or lateral units)] exceeds the set print area. Then the lateral position does not change.

	The reference location is set by the ESC T command. Depending on the orientation and starting location, the ESC T command causes the printer to do the following: ① If the print start position is in the upper left or lower right corner, the command sets the absolute position in the direction parallel to the paper direction. ② If the print start position is in the upper right or lower left corner, the command sets the absolute position in the direction perpendicular to the paper direction. Horizontal and longitudinal moving units are set by the GSP command.
Use the example	not have

set the longitudinal relative position in page mode

Directive name	Set the longitudinal relative position in page mode
instruction code	ASCII : GS \ nL nH Decimal: 2,992 nLnH Hex-decimal system: 1D 5C nL nH
functional description	In page mode, set the longitudinal movement distance with the current point as the reference point. This command sets the longitudinal movement distance to [(nL + nH 256) longitudinal or horizontally] inches relative to the current point.
Parameter range	$0 \leq nL \leq 255, 0 \leq nH \leq 255$
Windows default	-
Support model	80XXX
matters need attention	This command is valid only in page mode and is ignored in other modes. When the print position is moved down: nL + nH 256 = N When the print position is moved up, use the complement calculation: nL + n H 256 = 65536-N Any setting beyond the print area is ignored. This command determines the use of moving units according on the direction of the print area set by the ES C T: ① Use the longitudinal move unit when the printing start position is set to the upper left (from left to right) or the lower right (from right to left). ② Use the lateral movement unit when the printing start position is set to the upper right corner (the direction from top to bottom) or the lower left corner (the direction from bottom to top). Horizontal and longitudinal moving units are set by the GSP command. The GSP commands can change the lateral and longitudinal movement

	of units.
Use the example	not have

set up the lateral and longitudinal moving units

Directive name	Set up the lateral and longitudinal moving units
instruction code	ASCII : GS P x y Decal: 29 80 x y Hex-decimal system: 1D 50 x y
functional description	Set the lateral moving units approximately to 25.4/ xmm (1 / x inch) longitudinal moving units to 25.4/ ymm (1 / y inch), respectively. When x and y are 0, x and y are set to the default value.
Parameter range	$0 \leq x \leq 255, 0 \leq y \leq 255$
Windows default	At x = 200, y = 200, a moving unit is a print point. The lateral distance is approximately

	1 / 8mm, with a longitudinal distance of approximately 1 / 7mm.
Support model	80XXX
matters need attention	The perpendicular to the paper direction is transverse and the paper direction is longitudinal. In the standard mode, the following command with x or y, even if the character rotation (inverted or clockwise rotation 90° does not change; ① Commands with x: ESC SP, ESC $, ESC \, FSS, GSL, GSW ② The command with y: ESC 3, ESCJ, GSV In page mode, apply x or y according to the area direction and the print start position: ① When the print start position is set to the upper left corner (from left to right) or the lower right corner (from right to left) with the ESC T command: Command with x: ESC SP, ESC $, ESCW, ESC \, FSS Commands with y: ESC 3, ESC J, ESC W, GS $, GS \, GS V ② When the printing start position is set to the upper right corner (printing direction from top to bottom) or the lower left corner (printing direction from bottom to top) with the ESC T command: Commands with x: ESC 3, ESCJ, ESCW, GS $, GS \ Command with y: ESC SP, ESC $, ESCW, ESC \, FSS, GSV This command does not affect other previous settings. The smallest moving unit is the result of a combination of this and other commands. An inch equals the 25.4mm.
Use the example	not have