SRP-275III Command Manual

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2. SRP-275III Supported Commands

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2-1 Command Description Items

<div style="background-color:orange; text-align:center">**Command**</div>

Function: Command function outline

Code: Command format expressed in ASCII, hexadecimal, and decimal codes

Range: Argument value (Setting range) for the command

Default: Initial argument value for the command

Description: Detailed command function description

Remarks: Additional information about using the command

Differences: Variations depending on the printer model

2-2 Details of Control Commands

<div style="background-color:orange; text-align:center">**EOT**</div>

Function: **Transmit status**

Code:

ASCII	EOT	n
Hex	04	n
Decimal	4	n

Range: $1 \leq n \leq 4$

Default: None

Description: This command transmits the printer-related status specified by n as follows:

n	Function
1	Transmit printer status
2	Transmit off-line status
3	Transmit error status
4	Transmit paper roll sensor status

■ Printer transmits the following status

n=1: Printer status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2	0	00	0	Drawer kick-out connector pin 3 is LOW
	1	04	4	Drawer kick-out connector pin 3 is HIGH
3	0	00	0	Online
	1	08	8	Offline
4	1	10	16	Not used. Fixed to On
5	0	00	0	Not used. Fixed to Off
6	0	00	0	Not used. Fixed to Off
7	0	00	0	Not used. Fixed to Off

n=2: Off-line status

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Fixed
1	On	02	2	Fixed
2	Off	00	0	Cover is closed
	On	04	4	Cover is open
3	Off	00	0	Paper is not being fed by using the paper FEED button
	On	08	8	Paper is being fed by the paper FEED button
4	On	10	16	Fixed
5	Off	00	0	No paper-end stop
	On	20	32	Printing is being stopped
6	Off	00	0	No error
	On	40	64	Error has occurred
7	Off	00	0	Fixed

n=3: Error status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2	0	00	0	No mechanical error
	1	04	4	Mechanical error occurred
3	0	00	0	No autocutter error
	1	08	8	Autocutter error occurred
4	1	10	16	Not used. Fixed to On
5	0	00	0	No unrecoverable error
	1	20	32	Unrecoverable error occurred
6	0	00	0	No auto-recoverable error
	1	40	64	Auto-recoverable error occurred
7	0	00	0	Not used. Fixed to Off

n=4: paper sensor status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2,3	00	00	0	Paper near end sensor: paper adequate
	11	0C	12	Paper near end sensor: paper near end
4	1	10	16	Not used. Fixed to On
5,6	00	00	0	Paper end sensor: paper present
	11	60	96	Paper end sensor: paper not present
7	0	00	0	Not used. Fixed to Off

Remarks: ■ This command can be executed in a real time mode using DLE.

■ In a real time mode, the status is transmitted to the host upon being requested that can check the printer operational condition with it and takes appropriate measures accordingly.

Differences: None

HT

Function: **Horizontal tab**

Code:

ASCII	HT
Hex	09
Decimal	9

Range: None

Default: None

Description: This command moves the print position to the next horizontal tab position. If the next horizontal tab position is not specified, this command will be void.

Remarks: ■ The horizontal tab position is set by <ESC> D.

              ■ With the underline mode turned on, the underline printing is not applied to the tab space created by this command.

Differences: None

LF	

Function: **Print and line feed**

Code:

ASCII	LF
Hex	0A
Decimal	10

Range: None

Default: None

Description: Prints the data in the print buffer and feed on line.

Remarks: ■ The amount of paper fed per line is vased on the value set using the line spacing command(ESC 2 or ESC 3).

                 ■ After printing, the printing position moves to the beginning of the line.

Differences: None

CR

Function: **Print and carriage return**

Code:

ASCII	CR
Hex	0D
Decimal	13

Range: None

Default: None

Description: This command prints the data. With auto line feed enabled, it performs printing and one line feeding same as LF.

Remarks: ■ Auto line feed is only enabled with a parallel interface using the DIP switch.

Differences: ■ Auto line feed is turned on by setting DIP S/W 2-1

DLE

Function: **Set real-time command mode**

Code:

ASCII	DLE
Hex	10
Decimal	16

Range: None

Default: None

Description: This command enables commands to be operable in real-time.

Remarks:
■ A single command following this command is regarded as a real time command.
■ The real time command is stored into the receive buffer and executed with higher priority than other commands.
■ If this command is processed as a parameter of the other command, the data following this command might bring about the unwanted result.
■ The commands that are allowed to be executed in real time mode vary depending on the printer model.

Differences: ■ Commands that can be executed in real time mode: EOT, DC4, GS I,GS a, GS r

DC4

Function: **Generate pulse**

Code:

ASCII	DC4	n	m	t
Hex	14	n	m	t
Decimal	20	n	m	t

Range: $n = 1$, $m=0,1$, $1 \leq t \leq 8$

Default: None

Description: ■ This command generates the drive pulse to connector pin m with pulse width defined by t as following:
- Drawer kick-out connector pin 2 is selected with $m=0$ while pin 5 chosen for $m=1$.
- Pulse ON time is [t x100 ms] and OFF time [t x100 ms]

Remarks: ■ This command can be executed in a real time mode by placing DLE prior to it.

■ In a real time mode, upon receiving this command, the printer outputs the drive pulse to the specified connector pin.

Differences: None

ESC SP

Function: **Set the character right space**

Code:

ASCII	ESC	SP	n
Hex	1B	20	n
Decimal	27	32	n

Range: $0 \le n \le 255$

Default: n=0

Description: ■ This command sets the size of space to right of character.
  • Right space = n × [horizontal motion units].

Remarks: ■ In a double width mode, the right space will be doubled.
  ■ Horizontal motion unit varies depending the printer model.

Differences: ■ Horizontal motion unit: 0.159mm(1/160 inch)

ESC !

Function: **Set print mode**

Code:

ASCII	ESC	!	n
Hex	1B	21	n
Decimal	27	33	n

Range: $0 \leq n \leq 255$

Default: n=0

Description: This command selects print mode(s) with bits having following meanings.

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font A selected
	On	01	1	Character font B selected
1,2	Off	00	0	Reserved
3	Off	00	0	Emphasized mode not selected
	On	08	8	Emphasized mode selected
4	Off	00	0	Double-height mode not selected
	On	10	16	Double-height mode selected
5	Off	00	0	Double-width mode not selected
	On	20	32	Double-width mode selected
6	Off	00	0	Reserved
7	Off	00	0	Underline mode not selected
	On	80	128	Underline mode selected

Remarks: ■ As alternative to this command, ESC M, ESC E and ESC – can be used for the selection for character font, emphasized mode and underline mode respectively.
■ The entire character print width is underlined, but the space skipped by HT is not.
■ If both double width and double height are selected, the characters will be quadrupled.

Differences: ■ Character configuration(Font A, Font B): Font A(9 × 9), Font B(7 x 9)

ESC %

Function: **Select/cancel user-defined character set**

Code:

ASCII	ESC	%	n
Hex	1B	25	n
Decimal	27	37	n

Range: $0 \leq n \leq 255$

Default: n = 0

Description: ■ This command selects/deselects user-defined character set that is downloaded by user. To make it valid, the least significant bit should be defined like following.
   • When n=0, the user-defined character set is deselected.
   • When n=1, the user-defined character set is selected.

Remarks: ■ The resident character set is enabled and used right after canceling the user defined character set.

Differences: None

			ESC &			

Function: **Define user-defined character set**

Code:

ASCII	ESC	&	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]
Hex	1B	26	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]
Decimal	27	38	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]

Range:
$y = 2$
$32 \le c1 \le c2 \le 126$
$0 \le x \le 12$ (Font A)
$0 \le x \le 10$ (Font B)
$0 \le d \le 255$
$k = c2 - c1 + 1$

Default: None

Description: ■ This command defines user-defined characters for character codes in a designated range from the start character code, c1 to the end character code, c2.
• y denotes the number of bytes in the vertical direction, x the number of dots in the horizontal direction, and d the dot data for the user-defined characters.

Remarks: ■ Alphanumeric characters (20H (decimal 32) to 7EH (decimal 126)) are definable.

■ Once user defined characters are defined, they remain available until they are redefined; ESC ? or ESC @ is executed; the printer is reset.

■ The following shows the relationship between the definition data and printing result with downloaded character consisting of 9x7 dots.

						MSB
d1	d3	d5	d7	d9	d11	d13
						LSB
						MSB
d2	d4	d6	d8	d10	d12	d14
						LSB

Differences: ■ Character configuration(Font A, Font B): Font A(9 × 9), Font B(7 x 9)

ESC *

Function: **Specify bit image mode**

Code:

ASCII	ESC	*	m	nL	nH	d1...dk
Hex	1B	2A	m	nL	nH	d1...dk
Decimal	27	42	m	nL	nH	d1...dk

Range: $m = 0, 1$
$0 \le nL \le 255$
$0 \le nH \le 3$
$0 \le d \le 255$
$k = nL + nH \times 255$

Default: None

Description: ■ This command specifies the bit image for the mode m as to the number of dots specified by nL and nH.

• d specifies the bit image data with 1 for printed data and 0 for not printed.

• k denotes the number of horizontal dots.

m	Mode	Number of dots in vertical direction	Dot density In horizontal	Number of bytes (k)
0	8-dot single-density	8	Single-density	nL + nH x 256
1	8-dot double-density	8	Double-density	nL + nH x 256

Remarks: ■ If the bit image data being entered is beyond the number of dots to be printed, the surplus will be discarded.

■ If the value of m is beyond the conditions, the subsequent data after m will be treated as normal data.

Differences: DPI : Dots per Inch (25.4mm)

m	Mode	Number of dots in vertical direction	Vertical dot density (DPI)	Horizontal dot density (DPI)	Number of bytes (k)
0	8-dot single-density	8	72	80	nL + nH x 256
1	8-dot double-density	8	72	160	nL + nH x 256

ESC –

Function: **Turn underline mode on/off**

Code:

ASCII	ESC	-	n
Hex	1B	2D	n
Decimal	27	45	n

Range: $0 \le n \le 2$, $48 \le n \le 50$

Default: n=0

Description: ■ This command enables the print data following it to be printer out underlined.
　　　　• The underline mode varied depending on the following values of n:

n	Function
0,48	Turns off underline mode
1,49	Turns on underline mode, set at 1-dot thick
2,50	Turns on underline mode, set at 1-dot thick

Remarks: ■ The spaces generated by horizontal tab are not underlined.

　　　　　 ■ Using bit 7 of ESC !, the underline mode can be activated/deactivated as well.

Differences: None

		ESC 2	

Function: **Select default line spacing**

Code:

ASCII	ESC	2
Hex	1B	32
Decimal	27	50

Range: None

Default: None

Description: This command sets the default line spacing The default line spacing is approximately 4.23mm, which is equivalent to 12 dots.

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ Default line spacing: 4.23 mm(12 dots)

ESC 3

Function: **Set line spacing**

Code:

ASCII	ESC	3	n
Hex	1B	33	n
Decimal	27	51	n

Range: $0 \leq n \leq 255$

Default: Corresponding to the default line spacing defined by ESC 2

Description: ■ This command sets the line spacing using a following rule.
  • Line spacing = n x (vertical or horizontal motion units)

Remarks: ■ The vertical motion unit is 0.176mm(1/144 inch) (the minimum movement amount). This value equals a half dot pitch. The default value is (n = 24).
■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ Vertical or horizontal motion unit and maximum line spacing settable:

Model	Vertical unit	Horizontal unit	Max line spacing
SRP-275III	0.176mm (1/144 inches)	0.176mm (1/144 inches)	44.98mm

ESC <		

Function: **Return home**

Code:

ASCII	ESC	<
Hex	1B	3C
Decimal	27	60

Range: None

Default: None

Description: This command moves the print head to the standby position.

Remarks: ■ The standard position is on the left.
     ■ After processing this command, the print position may be readjusted.

Differences: None

	ESC =

Function: **Select peripheral device**

Code:

ASCII	ESC	=	n
Hex	1B	3D	n
Decimal	27	61	n

Range: $1 \leq n \leq 3$

Default: None

Description: This command selects the device to which the host computer communicates according to n as follows:

n	Function
1	Enables the printer
2	Disables the printer
3	Enables the printer

Remarks: ■ The printer discards all of the received data commands with the exception of ESC = and real-time commands while being disabled.
■ The normal operation will be resumed by ESC @, power cycling or printer reset.
■ If ASB is activated when the printer is disabled by this command, the status is transmitted to the host at a preset interval.

Differences: None

ESC ?

Function: **Cancel user-defined characters.**

Code:

ASCII	ESC	?	n
Hex	1B	3F	n
Decimal	27	63	n

Range: 32 ≤ n ≤ 126

Default: None

Description: This command removes user-defined character specified by character code n.

Remarks: ■ In place of the deleted user-defined character, the cooresponding resident character is printed.
■ The user-defined characters for each font can be deleted independently.

Differences: None

ESC @

Function: **Initialize printer**

Code:

ASCII	ESC	@
Hex	1B	40
Decimal	27	64

Range: None

Default: None

Description: This command cancels conditions previously set and initializes the printer to the conditions having existed at power on.

Remarks:
- The data in the printer buffer is cleared.
- The settings of DIP switch are not re-read.
- The data in the receive buffer is not discarded.
- All of the settings such as print mode and line feed are cleared.
- NV graphics and NV user memory are not cleared.

Differences: None

ESC D

Function: **Set horizontal tab position**

Code:

ASCII	ESC	D	n1...nk	NUL
Hex	1B	44	n1...nk	00
Decimal	27	68	n1...nk	0

Range: $1 \le n \le 255$, $0 \le k \le 32$

Default: n=8, 16, 24, 32, 40,....., 232, 240, 248

Description: ■ This command sets the horizontal tab position.
- n defines the number of columns from the beginning of the line to the horizontal tab setting.
- k denotes the number of horizontal tab positions to be set.
- The horizontal tab position is stored as a value of [character width x n] measured form the beginning of the line.

Remarks: ■ The data [n]k signifying the set position is transmitted in the ascending order and ends with a NUL code.
■ ESC D NUL cancels all horizontal tab positions.
■ Tab position is set at the value of [character width x n] from the beginning of the line.
■ The character width includes the space to the right of the character, and it will be twice the normal character when the double width characters are selected.
■ If the data [n]k is equal to or smaller than the preceding data [n]k-1, the horizontal tab setting has been completed.
■ Up to 32 horizontal tabs can be set, the data exceeding this limit is processed as normal ones.
■ Even if the character width is changed after setting the horizontal tab positions, the horizontal tab positions remain unchanged.

Differences: None

ESC E

Function: **Turn emphasized mode on / off**

Code:

ASCII	ESC	E	n
Hex	1B	45	n
Decimal	27	69	n

Range: $0 \leq n \leq 255$

Default: n=0

Description: ■ This command turns emphasized mode on or off by toggling the least significant bit of n like following.
         • When the LSB of n is 0, emphasized mode is turned off.
         • When the LSB of n is 1, emphasized mode is turned on.

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ In the emphasized mode, the print speed will be slow because 2-pass print starts.

ESC G

Function: **Turn double-strike mode on/off**

Code:

ASCII	ESC	G	n
Hex	1B	47	n
Decimal	27	71	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description: ■ This command turns double-strike mode on or off by toggling the least significant bit of n like following.
  • When the LSB of n is 0, emphasized mode is turned off.
  • When the LSB of n is 1, emphasized mode is turned on.

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ In the double-strike mode, the print speed will be slow because 2-pass print starts.

ESC J

Function: **Print and feed paper**

Code:

ASCII	ESC	J	n
Hex	1B	4A	n
Decimal	27	74	n

Range: $0 \leq n \leq 255$

Default: None

Description: This command prints the data in the print buffer and feeds the paper [n X vertical motion unit].

Remarks:
■ After printing, the printing position moves to the beginning of the line. The postion of the left margin is the beginning of the line.
■ The vertical motion unit is used.
■ This command is used to temporarily feed a specific length without changing the line spacing set by other commands.

Differences: ■ Vertical motion unit and maximum feed amount:

Model	**Vertical unit**	**Max feed amount**
SRP-275III	0.176mm (1/144 inches)	44.98mm

ESC K

Function: **Print and reverse feed**

Code:

ASCII	ESC	K	n
Hex	1B	4B	n
Decimal	27	75	n

Range: $0 \leq n \leq 48$

Default: None

Description: This command prints the data in the print buffer and feeds the paper n x (vertical motion unit) in the reverse direction.

Remarks: ■ After printing, the printing position moves to the beginning of the line. When a left margin is set, the postion of the left margin is the beginning of the line.
■ The vertical motion unit is used.
■ This command is used to temporarily feed a specific length without changing the line spacing set by other commands.
■ The reverse paper feeding may cause unexpected problems such as incorrect paper feeding, unusual noise and paper rubbing against the ink ribbon.

Differences: None

ESC M

Function: **Select character font**

Code:

ASCII	ESC	M	n
Hex	1B	4D	n
Decimal	27	77	n

Range: n = 0, 1, 48, 49

Default: n=1

Description: None

Remarks: ■ The printer model has it own configuration of Font A and B.
        ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC R

Function: **Specify international character set**

Code:

ASCII	ESC	R	n
Hex	1B	52	n
Decimal	27	82	n

Range: $0 \leq n \leq 11$

Default: n=0

Description: This command specifies international characters according to n values.

n	Character set	n	Character set
0	U.S.A	6	Italy
1	France	7	Spain I
2	Germany	8	Japan
3	U.K	9	Norway
4	Denmark I	10	Denmark II
5	Sweden	11	PC-999

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ When n = 11, PC-999 is available.

	ESC U

Function: **Specify unidirectional print mode**

Code:

ASCII	ESC	U	n
Hex	1B	55	n
Decimal	27	85	n

Range: $0 \leq n \leq 255$

Default: $n = 0$

Description: ■ This command selects/deselects the unidirectional print according to the value of n that is valid only for the least significant bit.
- Unidirectional print mode is turned on with n=0, and turned off with n=1

Remarks: ■ In this mode, the printer will print from the left to the right, preventing horizontal shear in printing, in particular, for double height print.
      ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

		ESC a	

Function: **Set position alignment**

Code:

ASCII	ESC	a	n
Hex	1B	61	n
Decimal	27	97	n

Range: 0 ≤ n ≤2, 48 ≤ n ≤50

Default: n=0

Description: Alingns all the data in one line to a specified position, using n as follows:

n	Alignment
0, 48	Left alignment
1, 49	Center alignment
2, 50	Right alignment

Remarks: ■ This command is valid only when processed at the beginning of the line..
 ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC d

Function: **Print and feed n lines.**

Code:

ASCII	ESC	d	n
Hex	1B	64	n
Decimal	27	100	n

Range: 0 ≤ n ≤ 255

Default: None

Description: This command feeds the paper by n lines after printing the data in the print buffer.

Remarks:
■ The per-line paper feed amount is based on the value set by the line spacing related commands, ESC 2 and ESC 3.
■ If the feed amount set is beyond the maximum feed amount, the feed amount will be set to the maximum feed amount automatically.

Differences:
■ Maximum feed amount: 255 lines.

ESC e

Function: **Print and reverse feed n lines.**

Code:

ASCII	ESC	e	n
Hex	1B	65	n
Decimal	27	101	n

Range: $0 \leq n \leq 1$

Default: None

Description: ■ This command feeds the paper by n lines in the reverse direction after printing the data in the print buffer.

Remarks: ■ The per-line paper feed amount is based on the value set by the line spacing related commands, ESC 2 and ESC 3.

Differences: ■ The maximum reverse paper feed amount is 1 line to prevent the paper jam and paper rubbing against the ink ribbon.

ESC g 0

Function: Define macro

Code:

ASCII	ESC	g	0	<k> [<nH > <nL>]k [d1…dm]k
Hex	1B	67	00	<k> [<nH > <nL>]k [d1…dm]k
Decimal	27	103	0	<k> [<nH > <nL>]k [d1…dm]k

Range: $k \leq 10$
$0 \leq nL \leq 255$
$0 \leq nH \leq 255$
$[(256 \times nH) + nL]_1 + \ldots + [(256 \times nH) + nL]_k < $ 2Mbit (256KB)
$0 \leq d \leq 255$

Default: None

Description: ■ This command defines macro into NV memory such as a logo image.
  • k denotes the total number of macro to be stored in NV memory.
  • $m=(256 \times nH) + nL$ specifies the size of macro in byte

Remarks: ■ 2M bit (256KB) of the flash is allocated for saving NV bit image.
    ■ This command is useful to define NV bit image (Logo).
    ■ The NV bit image is printed by ESC g n.

Differences: None

		ESC g n	

Function: **Execute macro**

Code:

ASCII	ESC	g	n
Hex	1B	67	n
Decimal	27	103	n

Range: $1 \leq n \leq 10$

Default: None

Description: ■ This command executes macro using the value of n.
   • n denotes the macro index number that is automatically given to the macro in a downloading order while being defined by ESC g.

Remarks: ■ The NV bit image should be defined by ESC g preceding this command. When executing the macro not being defined, this command is ignored.

Differences: None

	ESC i	

Function: **Partial cut**

Code:

ASCII	ESC	i
Hex	1B	69
Decimal	27	105

Range: None

Default: None

Description: ■ This command executes a partial cut of the paper with one point left uncut.

Remarks: ■ The same partial cut as this command is executed using ESC m and GS V.

Differences: ■ This command is effective for the printer equipped with an autocutter.
      ■ Autocutter operation should be enabled by setting the autocutter control DIP switch.
      ■ If the autocutter control DIP switch of the printer not equipped with autocutter is set, the printer does not operate, displaying the error signal by LED.

	ESC m

Function: **Partial cut**

Code:

ASCII	ESC	m
Hex	1B	6D
Decimal	27	109

Range: None

Default: None

Description: ■ This command executes a partial cut of the paper with one point left uncut.

Remarks: ■ The same partial cut as this command is executed using ESC i and GS V.

Differences: ■ This command is effective for the printer equipped with an autocutter.
■ Autocutter operation should be enabled by setting the autocutter control DIP switch.
■ If the autocutter control DIP switch of the printer not equipped with autocutter is set, the printer does not operate, displaying the error signal by LED.

	ESC p

Function: **Generate pulse**

Code:

ASCII	ESC	p	m	t1	t2
Hex	1B	70	m	t1	t2
Decimal	27	112	m	t1	t2

Range: m = 0, 1, 48, 49
$0 \leq t1 \leq 255, 0 \leq t2 \leq 255$

Default: None

Description: This command outputs the signals specified with t1 and t2 to the connector pins defined by m.

m	**Connector pin**
0, 48	Drawer kick-out connector pin 2
1, 49	Drawer kick-out connector pin 5

Remarks: ■ The ON time is [t1 x 2ms], and the OFF time is as [t2 x 2ms].
• If t2 is smaller than t1, OFF time is set to [t1 x 2ms].

Differences: None

ESC r

Function: **Select print color**

Code:

ASCII	ESC	r	n
Hex	1B	72	n
Decimal	27	114	n

Range: n = 0, 1, 48, 49

Default: n = 0

Description: ■ This command selects a print color for each line, using n as follows.
   • When n = 0 or 48, black is selected.
   • When n=1 or 49, red is selected.

Remarks: ■ This command is valid only when processed at the beginning of the line.
      ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

		ESC t	

Function: **Select character code table**

Code:

ASCII	ESC	t	n
Hex	1B	74	n
Decimal	27	116	n

Range: $0 \leq n \leq 5$, $16 \leq n \leq 19$, $21 \leq n \leq 31$, $33 \leq n \leq 41$, n=255

Default: For model not supporting Thai character: n=0
For model supporting Thai character support : n = 20

Description: This command specifies code page according to the value of n as follows:

n	Code page
0	Page 0 437 (USA, Standard Europe)
1	Page 1 Katakana
2	Page 2 850 (Multilingual)
3	Page 3 860 (Portuguese)
4	Page 4 863 (Canadian-French)
5	Page 5 865 (Nordic)
16	Page 16 1252 (Latin I)
17	Page 17 866 (Cyrillic #2)
18	Page 18 852 (Latin 2)
19	Page 19 858 (Euro)
21	Page 21 862 (Hebrew DOS code)
22	Page 22 864 (Arabic)
23	Page 23 Thai42
24	Page 24 1253 (Greek)
25	Page 25 1254 (Turkish)

n	Code page
26	Page 26 1257 (Baltic)
27	Page 27 Farsi
28	Page 28 1251 (Cyrillic)
29	Page 29 737 (Greek)
30	Page 30 775 (Baltic)
31	Page 31 Thai14
33	Page 33 1255 (Hebrew New code)
34	Page 34 Thai 11
35	Page 35 Thai 18
36	Page 36 855 (Cyrillic)
37	Page 37 857 (Turkish)
38	Page 38 928 (Greek)
39	Page 39 Thai 16
40	Page 40 1256 (Arabic)
41	Page 41 1258 (Vietnam)
255	User Code Page (Space)

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: ■ Code pages not supported:
  • n = 36, 39, 40
  • When n=255, the code page specified by the memory switch is enabled.

	ESC u

Function: **Transmit peripheral device status**

Code:

ASCII	ESC	u	n
Hex	1B	75	n
Decimal	27	117	n

Range: n = 0, 48

Default: None

Description: This command transmits a byte of data with the least significant bit(LSB) specifying the peripheral device status as follows:

LSB	Status of drawer kick-out connector pin 3
0	Low
1	High

Remarks: ■ The peripheral device status can be transmitted using GS r.

Differences: None

<div style="background-color:orange"><center>**ESC v**</center></div>

Function: **Transmit paper sensor status**

Code:

ASCII	ESC	v
Hex	1B	76
Decimal	27	118

Range: None

Default: None

Description: ■ This command transmits a byte of data specifying the paper sensor status.
                   ■ The status of paper near end and paper end sensors is sent to the host as follows:
                   • When paper near end is detected, 0x03 is transmitted.
                   • When paper end is detected, 0xC is transmitted.

Remarks: ■ The paper sensor status can be transmitted using GS r.
                   ■ The near end senor is optional while paper end sensor required.
                   ■ If the printer is not equipped with a near end sensor, the paper near end sensor is considered as normal condition.

Differences: None

ESC {

Function: **Turns upside-down printing mode on/off**

Code:

ASCII	ESC	{	n
Hex	1B	7B	n
Decimal	27	123	n

Range: $0 \le n \le 255$

Default: n=0

Description: This command selects/deselects upside-down printing mode according to the least significant bit as follows.

LSB	Upside-down mode
0	Turned off
1	Turned on

Remarks:

■ This command is valid only when entered at the beginning of the line.

■ 180 rotated characters are printed from right to left in upside-down print mode.

■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Example
Normal   Upside- down Mode
ABCDEF   ⱯBCDEℲ

Differences: None

FS !

Function: Set print mode for Kanji characters

Code:

ASCII	FS	!	n
Hex	1C	21	n
Decimal	28	33	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description: This command signifies the print modes such as double-width mode, double-height mode, and underline mode for Kanji characters as follows:

Bit	Binary	Hex	Decimal	Status
0	Off	00	0	Reserved
1	Off	00	0	Reserved
2	Off	00	0	Double-width mode is Off
	On	04	4	Double-width mode is On
3	Off	00	0	Double-height mode is Off
	On	08	8	Double-height mode is On
4-6	Off	00	0	Reserved
7	Off	00	0	Kanji underline mode is Off
	On	80	128	Kanji underline mode is Off

Remarks:
■ Kanji underline mode can be set using FS -.
■ Double-width and height modes can be set using GS !.
■ In Kanji underline mode, the underline printing is not performed under 90°clockwise rotated characters, white/black reverse characters, and spaces skipped by HT, ESC $, or ESC \.
■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

FS &

Function: **Select Kanji character mode**

Code:

ASCII	FS	&
Hex	1C	26
Decimal	28	38

Range: None

Default: None

Description: This command sets Kanji character mode.

Remarks:
■ This command is available only for the Japanese, Chinese, and Korean models.
■ Kanji codes are comprised of 2 bytes and processed in order of the first and second byte.
■ The setting of this command remains effective until ESC !, ESC @, printer reset, power cycling or FS is executed.

Differences: None

FS -

Function: Turn underline mode on/off for Kanji characters

Code:

ASCII	FS	-	n
Hex	1C	2D	n
Decimal	28	45	n

Range: 0 ≤ n ≤ 1, 48 ≤ d ≤ 49

Default: n=0

Description: This command select/deselects underline mode for Kanji characters, based on the following values of n:

n	Underline mode for Kanji characters
0, 48	Turned off
1, 49	Turned on

Remarks:
■ Kanji underline mode can be set using FS !.
■ The settings of this command are valid only for Kanji characters.
■ The setting of this command remains effective until ESC !, ESC @, printer reset, or power cycling is executed.

Differences: None

	FS .	

Function: **Cancel Kanji character mode**

Code:

ASCII	FS	.
Hex	1C	2E
Decimal	28	46

Range: None

Default: None

Description: This command cancels Kanji character mode.

Remarks:
■ This command is available only for the Japanese, Chinese, and Korean models.

■ Kanji character mode is enabled using FS &.

■ Once Kanji character mode is canceled, the printer processes a character code as 1-byte code of alphanumeric characters.

■ The setting of this command remains effective until ESC !, ESC @, printer reset, or power cycling is executed.

Differences: None

FS p

Function: **Print NV bit image**

Code:

ASCII	FS	p	n	m
Hex	1C	70	n	m
Decimal	28	112	n	m

Range: $1 \leq n \leq 255$
                 $0 \leq m \leq 1, 48 \leq m \leq 49$

Default: None

Description: This command prints NV bit image n using the mode specified by m as follows:

m	Mode
0, 48	Normal
1, 49	Double-width

Remarks:
- BS ^ L and BS ^ 7 can be used for printing NV bit image.
- The NV bit image is defined by FS q.
- n is assigned to each NV bit image to be stored in download order by FS q.
- This command has no effect with NV bit image not defined in advance.
- The printer does not print the NV bit image that is beyond one line of print area.
- When using unidirectional print mode, there will be no vertical misali gnment between the top and bottom parts of the printed pattern.

Differences: DPI : Dots per Inch (25.4mm)

Mode	Vertical Dot Density (DPI)	Horizontal Dot Density (DPI)
Normal	72	160
Double-width	72	80

FS q				

Function: **Define NV bit image**

Code:

ASCII	FS	q	n	[xL xH yL yH d1...dk]1... [xL xH yL yH d1...dk]n
Hex	1C	71	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

Range: $1 \le n \le 255$
$1 \le (xL + xH \times 256) \le 1023$ $(0 \le xL \le 255, 0 \le xH \le 3)$
$1 \le (yL + yH \times 256) \le 288$ $(0 \le yL \le 255, yH = 0,1)$
$0 \le d \le 255$
$k = (xL + xH \times 256) \times (yL + yH \times 256) \times 8$

Default: None

Description: ■ This command defines the NV bit image in the NV memory.
      • n denotes the number of the NV being defined.
      • (xL, xH) and (yL, yH) set the number of dots in the horizontal and vertical directions to [(xL + xH × 256) x 8] and [(yL + yH × 256) x 8] respectively for the NV bit image.

Remarks: ■ BS ^ L and BS ^ 7 can be used for defining NV bit image.
    ■ When this command is entered, all NV bit images previously defined are removed from the NV memory.
    ■ After completion of this command, the printer executes a software reset to restore the settings as when turned on.
    ■ The NV bit image is printed by FS p.
    ■ During the execution of this command, paper feed button, ASB and real time functions will not operate.

■ Bit image data and print result ws:

d1	dY+1	…	.	MSB
d2	dY+2	…	dk-2	LSB / MSB
. . .	. . .	…	dk-1	LSB / MSB
dY	dY x 2	…	dk	LSB / MSB
				LSB

Differences: ■ The capacity of NV memory available is 256KB.

	FS S			

Function: **Set Kanji character spacing**

Code:

ASCII	FS	S	n1	n2
Hex	1C	53	n1	n2
Decimal	28	83	n1	n2

Range: $0 \leq n1 \leq 32$, $0 \leq n2 \leq 32$

Default: n1 = 0, n2 = 0

Description: ■ This command sets left- and right-side spacing for Kanji characters, n1 and n2 respectively.
   • Left-side character spacing is [n1×horizontal unit].
   • Right-side character spacing is [n2×horizontal unit].

Remarks: ■ In a double width mode, the right space will be doubled.
   ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

FS W

Function: **Turn quadruple-size mode on/off for Kanji characters**

Code:

ASCII	FS	W	n
Hex	1C	57	n
Decimal	28	87	n

Range: $0 \leq n \leq 1$

Default: n = 0

Description: This command turns quadruple-size mode on or off for Kanji characters, using a least significant bit of n as follows:

n	Quadruple-size mode
0	Turned off
1	Turned on

Remarks: ■ FS ! or GS ! can be used to generate the quadruple-size Kanji characters.
■ The setting of this command remains effective until ESC @, printer reset or power cycling is executed.

Differences: None

FS (L

Function: **Feeds paper to the cutting position**

Code:

ASCII	FS	(	L	pL	pH	fn	m
Hex	1C	28	4C	02	00	42	m
Decimal	28	40	76	2	0	66	m

Range: (pL + pH × 256) = 2 (pL = 2, pH = 0)
fn = 66
m = 48, 49

Default: None

Description: ■ Feeds paper to the cutting position.

m	Function
48	Fees paper to the next cutting position. • This command is ignored if the current position is located on the cutting position.
49	Feeds paper to the next cutting position. • Feeds paper to the next cutting position if the current position is located on the cutting position.

• Feeds paper forward only (Does not feed paper backward).

Remarks:

Differences: None

GS (A

Function: Execute test print

Code:

ASCII	GS	(	A	pL	pH	n	m
Hex	1D	28	41	pL	pH	n	m
Decimal	29	40	65	pL	pH	n	m

Range:

(pL + pH x 256) = 2 (pL=2, pH=0)
$0 \leq n \leq 2, 48 \leq n \leq 50$
$1 \leq m \leq 3, 49 \leq m \leq 51$

Default: None

Description:

■ This command prints a specified pattern for testing on a roll paper.
  • Roll paper is selected with n specified as follows:

n	Paper type
0, 48	
1, 49	Roll paper
2, 50	

  • Different kinds of test patterns are selected according to m as follows:

m	Test pattern
1, 49	Hexadecimal dump mode
2, 50	Printer configuration printing
3, 51	Rolling pattern printing

Remarks:

■ The printer cancels a macro definition in progress If this command is processed. The macro becomes invalid.
■ After completion of this command, a software reset is executed automatically to restore the printer status set during power cycling.
■ All of the data transmitted from the host to the printer is printed and identified in hexadecimal dump mode.
■ The real time command and ASB operations are not executed during the printing of printer configuration (m=2, 50) and rolling pattern (m=3, 51).

Differences: None

GS I

Function: **Transmits printer ID**

Code:

ASCII	GS	I	n
Hex	1D	49	n
Decimal	29	73	n

Range: 1 ≤ n ≤ 69

Default: None

Description: ■ This command transmits the printer ID or information.
      • Transmits 1 byte of printer ID, using n as follows:

n	Printer ID	Specification
1,49	Printer model ID	Printer model
2,50	Type ID	Printer type
3,51	Printer feature ID	Printing method and Printer size

      • Transmits specified printer information, using n as follows:

n	Printer ID type	Specification
65	Firmware version	Firmware version
66	Manufacturer	BIXOLON
67	Printer model	Printer model
69	Code page	Currently enabled code page

Remarks: ■ Printer information (When n = 65, 66, 67, 69) consist of [Header ~ NULL] data as shown below:

Transmitted data	Hex	Decimal	Amount of data
Header	5FH	95	1byte
Printer information	Depends on the model	Depends on the model	0-15 bytes
NUL	00H	0	1byte

■ The firmware version can be confirmed by self test printing.

Differences: ■ The printer ID is shown according to printer models as follows:

Printer ID	SRP-275III
1(Printer model ID)	0x0d
2(Type ID)	Type ID varies depending on functions the printer supports as follows: - 0x01 (Multi-byte character) - 0x02 (Autocutter) - 0x03 (Autocutter + Multi-byte character) - 0x04 (Customer display) - 0x05 (Multi-byte character + Display) - 0x07 (Customer display + Autocutter + Multi-byte Character)
3(Printer feature ID)	0x64
66(Manufacturer)	BIXOLON
67(Printer model)	SRP-275III
69(Language of Font)	Code page currently being used. Refer to cod page setting command, ESC t.

GS V

Function: **Select cut mode and cut paper**

Code:

	ASCII	GS	V	m	
①	Hex	1D	56	m	
	Decimal	29	86	m	
	ASCII	GS	V	m	n
②	Hex	1D	56	m	n
	Decimal	29	86	m	n

Range: ① m=0, 1, 48, 49 ② m=65, 66, 0 ≤ n ≤ 255

Default: None

Description: This command cuts paper in the specified mode as follows.

	m	Function
①	0,1,48,49	Executes a partial cut (one point left uncut)
②	65	Feeds paper to (cutting position + n × vertical motion unit) and executes a partial cut(one point left uncut)
	66	Feeds paper to (cutting position + n × vertical motion unit) and executes a partial cut(one point left uncut)

Remarks: For ①
■ If an auto cutter is not provided, this command is ignored command is executed.
For ②
■ When n = 0, the printer feeds the paper to the cutting position and cuts it.
■ If an auto cutter is not provided, the printer only feeds the paper for specified amount.
■ Vertical motion unit is used for calculating a paper feed amount.

GS a

Function: **Enable/Disable Automatic Status Back (ASB)**

Code:

ASCII	GS	a	n
Hex	1D	61	n
Decimal	29	97	n

Range: $0 \leq n \leq 255$

Default: n=0

Description: ■ This enables or disables ASB (Automatic Status Back) according to n.
          • ASB is enabled when n > 0.

Remarks: ■ ASB is the function that transmit the printer status such as cover open/close and Online/Offline] continuously at the time interval specified regardless of the status change if ASB is enabled. Using this ASB function, the host can check to see if the printer is running properly.
        ■ Once ASB has been enabled, the printer continues to transmit the current printer status at the specified interval until ASB is disabled.
        ■ When n = 0, ASB is disabled. The printer stops transmitting the status.
        ■ With parallel and USB interface, the printer status is transmitted whenever the host computer changes to the reverse mode regardless of the printer status change. It is recommended that the periodic time interval at which the host changes to reverse mode is more than 500ms in order to receive the correct status.
        ■ With serial interface, ASB status is transmitted continuously at the interval of 1 sec even if the status is not changed.
        ■ The setting of this command remains effective until ESC @, printer reset or power cycling is executed.

■ The printer information transmitted is comprised of 4 bytes as follows:
  • First byte(printer information)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Not used. Fixed to Off
1	Off	00	0	Not used. Fixed to Off
2	Off	00	0	Drawer kick-out connector pin 3 is LOW
	On	04	4	Drawer kick-out connector pin 3 is HIGH
3	Off	00	0	On-line
	On	08	8	Off-line
4	On	10	16	Not used. Fixed to On
5	Off	00	0	Cover is close
	On	20	32	Cover is open
6	Off	00	0	Paper is not being fed by the paper feed button
	On	40	64	Paper is being fed by the paper feed butto
7	Off	00	0	Not used. Fixed to Off

  • Second byte(printer information)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Not used. Fixed to Off
1	Off	00	0	Not used. Fixed to Off
2	Off	00	0	No mechanical error
	On	04	4	Mechanical error
3	Off	00	0	No auto cutter error
	On	08	8	Auto cutter error occurred
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	No unrecoverable error
	On	20	32	Unrecoverable error
6	Off	00	0	No automatically recoverable error
	On	40	64	Automatically recoverable error occurred
7	Off	00	0	Not used. Fixed to Off

  − If an unrecoverable error (bit 5) occurs, turn off the power as soon as possible.

• Third byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Function
0,1	Off	00	0	Paper near end sensor: paper adequate
	On	03	3	Paper near end sensor: paper near end
2,3	Off	00	0	Paper end sensor: paper present
	On	0C	12	Paper end sensor: no paper present
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	Not used. Fixed to Off
6	Off	00	0	Not used. Fixed to Off
7	Off	00	0	Not used. Fixed to Off

• Fourth byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Function
0	On	01	1	Not used. Fixed to On
1	On	02	2	Not used. Fixed to On
2	On	04	4	Not used. Fixed to On
3	On	08	8	Not used. Fixed to On
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	Not used. Fixed to Off
6	Off	00	0	Not used. Fixed to Off
7	Off	00	0	Not used. Fixed to Off

Differences: None

	GS r

Function: **Transmit status**

Code:

ASCII	GS	r	n
Hex	1D	72	n
Decimal	29	114	n

Range: n=1, 2, 49, 50

Default: None

Description: The command transmits the status specified by n as follows:

n	Function
1, 49	Transmits paper sensor status
2, 50	Transmits drawer kick-out connector status

Remarks:
■ The status is one byte.
■ The status to be transmitted is as follows:
  • Paper sensor status (n=1, 49):

Bit	Off/On	Hex	Decimal	Function
0, 1	Off	00	0	Paper near-end sensor: Paper adequate
	On	03	3	Paper near-end sensor: Paper near end
2, 3	Off	00	0	Paper end sensor: Paper present
	On	0C	12	Paper end sensor: Paper not present
4	Off	00	0	Fixed
5	Off	00	0	Reserved
6	Off	00	0	Reserved
7	Off	00	0	Fixed

Bits 2 and 3: This command can not be executed when the printer is offline due to the lack of paper. Therefore, the status of bit 2 (1) and bit 3 (1) is not transmitted.

• Drawer kick-out connector status (n=2, 50):

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Drawer kick-out connector pin 3 is LOW
	On	01	1	Drawer kick-out connector pin 3 is HIGH
1	Off	00	0	Reserved
2	Off	00	0	Reserved
3	Off	00	0	Reserved
4	Off	00	0	Fixed
5	Off	00	0	Reserved
6	Off	00	0	Reserved
7	Off	00	0	Fixed

Differences: None