

# Command Emulator on SMCS Information

**Nov 18, 2016**

## **Abstract**

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This document provides information about the Command Emulator on SMCS.

It provides guidelines for our customers to build the application using the Command Emulator on SMCS.

## Version History

Release Date	Update
Nov 18, 2016	Release

### CAUTION:

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## 1 StarPRNT Emulation

Emulation, Paper Width and Printable Width for each model.

Model	Emulation	Paper Width	Printable Width
mPOP	StarPRNT	2 inch	384 dots *1
			432 dots
			406 dots
FVP10	STAR Line Mode	3 inch	576 dots *1
		2 inch	420 dots
			406 dots
<del>TSP100</del>	<del>STAR Graphic Mode</del>	<del>3 inch</del>	<del>576 dots *1</del>
		<del>2 inch</del>	<del>406 dots</del>
			<del>406 dots</del>
TSP650II	STAR Line Mode	3 inch	576 dots *1
		2 inch	406 dots
TSP700II	STAR Line Mode	3 inch	576 dots *1
			640 dots
		2 inch	420 dots
			406 dots
TSP800II	STAR Line Mode	4 inch	832 dots *1
		3 inch	576 dots
<del>SM-S210i</del>	<del>Mobile ESC/POS®</del>	<del>2 inch</del>	<del>384 dots *1</del>
<del>SM-S220i</del>	<del>Mobile ESC/POS®</del>	<del>2 inch</del>	<del>384 dots *1</del>
<del>SM-S230i</del>	<del>Mobile ESC/POS®</del>	<del>2 inch</del>	<del>384 dots *1</del>
<del>SM-T300i</del>	<del>Mobile ESC/POS®</del>	<del>3 inch</del>	<del>576 dots *1</del>
<del>SM-T400i</del>	<del>Mobile ESC/POS®</del>	<del>4 inch</del>	<del>832 dots *1</del>
BSC10	ESC/POS® Mode	3 inch	512 dots *1
		2 inch	360 dots
SM-S210i StarPRNT	StarPRNT	2 inch	384 dots *1
SM-S220i StarPRNT	StarPRNT	2 inch	384 dots *1
SM-S230i StarPRNT	StarPRNT	2 inch	384 dots *1
SM-T300i StarPRNT	StarPRNT	3 inch	576 dots *1
SM-T400i StarPRNT	StarPRNT	4 inch	832 dots *1
SM-L200	StarPRNT	2 inch	384 dots *1
<del>SP700</del>	<del>STAR (Dot Impact)</del>	<del>3 inch</del>	<del>210 dots *1</del>
		<del>2 inch</del>	<del>200 dots</del>
			<del>160 dots</del>
			<del>150 dots</del>

\*1 : Default Settings Value

## 2 StarPRNT

### Font style and character set

Commands	Description
ESC RS F	Select font
ESC GS t	Specify code page *1
<del>ESC GS =</del>	<del>Write blank code page data</del>
ESC R	Specify international character set
<del>ESC /</del>	<del>Specify/cancel slash zero</del>
ESC SP	Set ANK right space
ESC &	Register/delete 12x24 dot font download characters
ESC %	Set/cancel download characters

\*1 : CodePage 437, 932, 858, 852, 860, 861, 863, 865, 866, 855, 857, 862, 864, 737, 869, 874, 1252, 1250 and 1251 are supported.

### Chinese characters

Commands	Description
ESC p	Set to JIS Kanji character mode
ESC q	Cancel JIS Kanji character mode
ESC \$	Set/cancel JIS Kanji character modes
ESC s	Set two byte Kanji characters left/right spaces
ESC t	Set 1 byte Kanji characters left/right spaces
ESC r	Register Chinese download characters

### Print modes

Commands	Description
ESC i	Set/cancel the double wide/high printing
ESC W	Set/cancel the double wide printing
ESC h	Set/cancel the double high printing
ESC E	Select emphasized printing
ESC F	Cancel emphasized printing
ESC -	Select/cancels underling mode
ESC _	Select/cancels upperline mode
ESC 4	Select white/black inverted printing
ESC 5	Cancel white/black inverted printing
SI	Select upside-down printing
DC2	Cancel upside-down printing

### Horizontal direction position

Commands	Description
ESC I	Set left margin
ESC Q	Set right margin
HT	Move print position to horizontal tab position
ESC D	Set/cancel horizontal tab position
ESC GS A	Move absolute position
ESC GS R	Move relative position
ESC GS a	Specify position alignment

### *Line spacing*

Commands	Description
LF	Line feed
ESC a	Feed paper n lines
ESC z	Select line feed amount
ESC 0	Specify line spacing to 3 mm
ESC J	n/4 mm line feed
ESC I	n/8 mm line feed

### *Page control commands*

Commands	Description
<del>FF</del>	<del>Form feed</del>
<del>ESC C</del>	<del>Set page length to n lines</del>
<del>ESC C 0</del>	<del>Set page length in 24 mm units</del>

### *Cutter control*

Commands	Description
<del>ESC d</del>	<del>Paper cutter instruction</del>

### *Reduced Printing Function commands*

Commands	Description
ESC GS c h v	Set reduced printing

### *Page Mode commands*

Commands	Description
ESC GS P 0	Selects page mode
ESC GS P 1	Cancels page mode
ESC GS P 2	Select printing direction
ESC GS P 3	Set print region in page mode
ESC GS P 4	Specify character vertical direction absolute position
ESC GS P 5	Specify character vertical direction relative position
ESC GS P 6	Prints
ESC GS P 7	Cancel printing and page mode
ESC GS P 8	Cancel print data

### *Bit image Graphics*

Commands	Description
ESC K	Standard density bit image
ESC L	High density bit image
ESC k	Fine bit image
ESC X	Fine bit image
ESC GS S m	Graphics data printing

## Logos

Commands	Description
<del>ESC GS ( L (fn=0, 48)</del>	<del>Register logo data</del>
<del>ESC GS ( L (fn=3, 51)</del>	<del>Send key code of the registered NV graphics</del>
<del>ESC GS ( L (fn=64)</del>	<del>Send all key code of the NV graphics</del>
ESC GS ( L (fn=65)	Erase entire NV graphics data
ESC GS ( L (fn=66)	Erase the specified NV graphics data
ESC GS ( L (fn=67)	Set the specified NV graphics data
ESC GS ( L (fn=69)	Print the specified NV graphics data
<del>ESC GS ) L (fn=48)</del>	<del>Send the registered individual logo CRC</del>
<del>ESC GS ) L (fn=49)</del>	<del>Send the registered individual NV graphics memory capacity</del>
<del>ESC GS ) L (fn=50)</del>	<del>Send the all key code of the registered NV graphics</del>

## Bar code

Commands	Description
ESC b	Print bar code *1

\*1 : UPC-E, UPC-A, JAN8, JAN13, CODE39, ITF, CODE128, CODE93 and NW-7 are supported.

## QR Code commands

Commands	Description
ESC GS y S 0	Set QR code model
ESC GS y S 1	Set QR code mistake correction level
ESC GS y S 2	Set QR code cell size
ESC GS y D 1	Set QR code data
ESC GS y D 2	Set QR code data (Manual)
ESC GS y P	Print QR code

## PDF417 commands

Commands	Description
ESC GS x S 0	Set PDF417 bar code size
ESC GS x S 1	Set PDF417 ECC (security level)
ESC GS x S 2	Set PDF417 module X direction size
ESC GS x S 3	Set PDF417 module aspect ratio
ESC GS x D	Set PDF417 bar code data
ESC GS x P	Print PDF417 bar code

## 2D GS1 code, Compound symbol commands

Commands	Description
<del>ESC GS ( k (cn=51,fn=67)</del>	<del>Set 2D module size</del>
<del>ESC GS ( k (cn=51,fn=71)</del>	<del>Set The maximum width of the 2D GS1DataBar Expanded Stacked</del>
<del>ESC GS ( k (cn=51,fn=80)</del>	<del>Store data in 2D symbol saving region</del>
<del>ESC GS ( k (cn=51,fn=81)</del>	<del>Print 2D symbol data of symbol saving region</del>
<del>ESC GS ( k (cn=52,fn=67)</del>	<del>Compound symbol: Set module size</del>
<del>ESC GS ( k (cn=52,fn=71)</del>	<del>Compound symbol: Set The maximum width of the 2D GS1DataBar Expanded Stacked</del>
<del>ESC GS ( k (cn=52,fn=72)</del>	<del>Compound symbol: Set HRI Font</del>
<del>ESC GS ( k (cn=52,fn=80)</del>	<del>Compound symbol: Store data in symbol saving region</del>
<del>ESC GS ( k (cn=52,fn=81)</del>	<del>Compound symbol: Print symbol data of symbol saving region</del>

### Initialization commands

Commands	Description
ESC @	Command initialization
<del>ESC ACK CAN</del>	<del>Real time printer reset</del>
<del>ESC ?</del>	<del>Reset printer</del>

### Memory Switch Setting commands

Commands	Description
<del>ESC GS #</del>	<del>Set memory switch</del>

### Status

Commands	Description
<del>ESC RS a</del>	<del>Set status transmission conditions</del>
<del>ESC ACK SOH</del>	<del>Real time printer status (ASB Status)</del>
<del>ETB</del>	<del>Update ETB status</del>
<del>ESC RS E</del>	<del>Clear ETB counter, ETB status</del>
<del>ESC GS ETX</del>	<del>Send print end counter and initialize Print data cancel function Data time out setting</del>
<del>ESC GS ) I (fn = 48)</del>	<del>Transmit multibyte font kind</del>
<del>ESC GS ) I (fn = 49)</del>	<del>Transmit Printer information</del>

### Print settings

Commands	Description
<del>ESC RS d</del>	<del>Set print density</del>
<del>ESC RS r</del>	<del>Set printing speed</del>

### Special Commands

Commands	Description
<del>ESC RS R</del>	<del>Specify the special location of use</del>

### UTF commands

Commands	Description
ESC GS ) U (fn = 48)	Selects UTF code
ESC GS ) U (fn = 64)	Setting of the Unicode ambiguous character

### Black mark related commands

Commands	Description
<del>ESC d</del>	<del>Paper cut instruction</del>
<del>FF</del>	<del>Form feed</del>
<del>ESC C</del>	<del>Set page length to n lines</del>
<del>ESC C 0</del>	<del>Set page length in 24 mm units</del>

### 2 color printing related commands

Commands	Description
<del>ESC RS e</del>	<del>Specify printing color in 2 color printing mode</del>
<del>ESC RS C</del>	<del>Select/cancel 2 color printing mode</del>
<del>ESC 4</del>	<del>Specify white/black inversion and printing color red</del>
<del>ESC 5</del>	<del>Cancel white/black inversion and specify printing color black</del>

### External device drive

Commands	Description
<del>ESC BEL</del>	<del>Set pulse width for external device drive</del>
<del>BEL</del>	<del>External device 1 drive instruction</del>
<del>FS</del>	<del>External device 1 drive instruction</del>
<del>SUB</del>	<del>External device 2 drive instruction</del>
<del>EM</del>	<del>External device 2 drive instruction</del>
<del>ESC GS BEL</del>	<del>Ring buzzer</del>
<del>ESC GS EM DC1</del>	<del>External buzzer drive pulse condition settings</del>
<del>ESC GS EM DC2</del>	<del>External buzzer drive execution</del>

### Barcode Reader commands

Commands	Description
<del>ESC GS B 0</del>	<del>Send data to a barcode reader</del>
<del>ESC GS B 1</del>	<del>Status Request</del>
<del>ESC GS B 2</del>	<del>Barcode data request</del>
<del>ESC GS B 3</del>	<del>Buffer clear</del>

### Magnetic Card Reader commands

Commands	Description
<del>ESC M C</del>	<del>Read ISO track</del>
<del>ESC M D</del>	<del>Read ISO track</del>
<del>ESC M E</del>	<del>Read ISO 2 tracks</del>
<del>ESC M F</del>	<del>Read ISO 3 tracks</del>
<del>ESC M G</del>	<del>Read ISO track (Track 3)</del>
<del>ESC M J</del>	<del>Read JIS II track</del>
<del>EOT</del>	<del>Cancel MSR mode</del>

### 3 Star Line Mode

#### Font style And character set

Commands	Description
ESC RS F	Select font
ESC GS t	Specify code page *1
<del>ESC GS</del>	<del>Write blank code page data</del>
ESC R	Specify international character set
<del>ESC /</del>	<del>Specify/cancel slash zero</del>
ESC SP	Set ANK right space
ESC M	Specify ANK 12 dot pitch
ESC P	Specify ANK 15 dot pitch
ESC :	Specify ANK 16 dot pitch
ESC g	Specify ANK 14 dot pitch

\*1 : CodePage 437, 932, 858, 852, 860, 861, 863, 865, 866, 855, 857, 862, 864, 737, 869, 874, 1252, 1250 and 1251 are supported.

#### Character expansion settings

Commands	Description
ESC i	Set/cancel the double wide/high printing
ESC W	Set/cancel the double wide printing
ESC h	Set/cancel the double high printing
SO	Set double wide printing
DC4	Cancel double wide printing
ESC SO	Set printing magnified double character height
ESC DC4	Cancel printing magnified character height

#### Print modes

Commands	Description
ESC E	Select emphasized printing
ESC F	Cancel emphasized printing
ESC -	Select/cancels underling mode
ESC _	Select/cancels upperline mode
ESC 4	Select white/black inverted printing
ESC 5	Cancel white/black inverted printing
SI	Select upside-down printing
DC2	Cancel upside-down printing
<del>ESC GS b</del>	<del>Specify/cancel smoothing</del>

#### Line spacing

Commands	Description
LF	Line feed
<del>CR</del>	<del>Carriage return (same as line feed)</del>
ESC a	Feed paper n lines
ESC z	Select line feed amount
ESC 0	Specify line spacing to 3 mm
ESC J	n/4 mm line feed
ESC I	n/8 mm line feed

### Page control commands

Commands	Description
<del>FF</del>	<del>Form feed</del>
<del>ESC C</del>	<del>Set page length to n lines</del>
<del>ESC C 0</del>	<del>Set page length in 24 mm units</del>
<del>VT</del>	<del>Feed paper to vertical tab position</del>
<del>ESC B</del>	<del>Set vertical tab position</del>
<del>ESC N</del>	<del>Set bottom margin to n lines</del>
<del>ESC O</del>	<del>Cancel bottom margin</del>

### Horizontal direction position

Commands	Description
ESC I	Set left margin
ESC Q	Set right margin
HT	Move print position to horizontal tab position
ESC D	Set/cancel horizontal tab position
ESC GS A	Move absolute position
ESC GS R	Move relative position
ESC GS a	Specify position alignment

### Download

Commands	Description
ESC &	Register/delete 12 x 24 dot font download characters
ESC %	Set/cancel download characters

### Bit image graphics

Commands	Description
ESC K	Standard density bit image
ESC L	High density bit image
ESC k	Fine bit image
ESC X	Fine bit image

### Logos

Commands	Description
<del>ESC FS q</del>	<del>Register logo data</del>
<del>ESC FS p</del>	<del>Print logo data</del>
<del>ESC RS L</del>	<del>Print registered logo in batch/ Batch control of registered logos</del>

### Bar code

Commands	Description
ESC b	Print bar code *1

\*1 : UPC-E, UPC-A, JAN8, JAN13, CODE39, ITF, CODE128, CODE93 and NW-7 are supported.

### Cutter control

Commands	Description
<del>ESC d</del>	<del>Paper cutter instruction</del>

### External device Drive

Commands	Description
<del>ESC BEL</del>	<del>Set pulse width for external device drive</del>
<del>BEL</del>	<del>External device 1 drive instruction</del>
<del>FS</del>	<del>External device 2 drive instruction</del>
<del>SUB</del>	<del>External device 2 drive instruction</del>
<del>EM</del>	<del>External device 2 drive instruction</del>
<del>ESC GS BEL</del>	<del>Ring buzzer</del>
<del>ESC GS EM DC1</del>	<del>External buzzer drive pulse condition settings</del>
<del>ESC GS EM DC2</del>	<del>External buzzer drive execution</del>

### Print settings

Commands	Description
<del>ESC RS d</del>	<del>Set print density</del>
<del>ESC RS r</del>	<del>Set printing speed</del>

### Status

Commands	Description
<del>ESC RS a</del>	<del>Set status transmission conditions</del>
<del>ESC ACK SOH</del>	<del>Real time printer status (ASB Status)</del>
<del>ENQ</del>	<del>Real time printer status (1)</del>
<del>EOT</del>	<del>Real time printer status (2)</del>
<del>ESC ACK CAN</del>	<del>Real time printer reset</del>
<del>ETB</del>	<del>Update ETB status</del>
<del>ESC RS E</del>	<del>Clear ETB counter, ETB status</del>
<del>ESC GS ETX</del>	<del>Send print end counter and initialize</del>
	<del>Print data cancel function</del>
	<del>Data time out setting</del>

### Chinese characters

Commands	Description
ESC p	Set to JIS Kanji character mode
ESC q	Cancel JIS Kanji character mode
ESC \$	Set/cancel JIS Kanji character mode
ESC s	Set two byte Kanji characters left/right spaces
ESC t	Set 1 byte Kanji characters left/right spaces
ESC r	Register Chinese download characters

### Others

Commands	Description
CAN	Cancel print data and initialize commands
ESC @	Command initialization
<del>ESC GS #</del>	<del>Set memory switch</del>
<del>ESC ?</del>	<del>Reset printer</del>

## Raster commands

Commands	Description
<del>ESC * r R</del>	<del>Initialize raster mode</del>
<del>ESC * r A</del>	<del>Enter raster mode</del>
<del>ESC * r B</del>	<del>Quit raster mode</del>
<del>ESC * r C</del>	<del>Clear raster data</del>
<del>ESC * r D</del>	<del>Drive drawer</del>
<del>ESC * r E</del>	<del>Set EOT mode</del>
<del>ESC * r F</del>	<del>Set FF mode</del>
<del>ESC * r P</del>	<del>Set page length</del>
<del>ESC * r Q</del>	<del>Set print quality</del>
<del>ESC * r m l</del>	<del>Set left margin</del>
<del>ESC * r m r</del>	<del>Set right margin</del>
<del>ESC * r T</del>	<del>Set top margin</del>
<del>ESC * r K</del>	<del>Set print color</del>
<del>b n1 n2 d1...dk</del>	<del>Transfer raster data (auto line feed)</del>
<del>k n1 n2 d1...dk</del>	<del>Transfer raster data</del>
<del>ESC * r Y</del>	<del>Position movement in vertical direction (Line break at specified dot)</del>
<del>ESC FF NUL</del>	<del>Execute form feed mode</del>
<del>ESC FF EOT</del>	<del>Execute EOT mode</del>
<del>ESC * r N</del>	<del>Discard data for specified byte count</del>
<del>ESC * r V</del>	<del>Execute external buzzer drive</del>
<del>ESC * r S</del>	<del>Playback NV audio</del>
<del>ESC * r c 0</del>	<del>Set NV audio playback number</del>
<del>ESC * r c 1</del>	<del>Set NV audio playback count</del>
<del>ESC * r c 2</del>	<del>Set NV audio playback delay time</del>
<del>ESC * r c 3</del>	<del>Set NV audio playback interval</del>

## Black mark related commands

Commands	Description
<del>ESC d</del>	<del>Paper cut instruction</del>
<del>FF</del>	<del>Form feed</del>
<del>ESC C</del>	<del>Set page length to n lines</del>
<del>ESC C 0</del>	<del>Set page length in 24 mm units</del>
<del>VT</del>	<del>Feed paper to vertical tab position</del>
<del>ESC B</del>	<del>Set vertical tab position</del>
<del>ESC N</del>	<del>Set n line bottom margin</del>
<del>ESC O</del>	<del>Cancel bottom margin</del>

## 2 color printing related commands

Commands	Description
<del>ESC RS c 2</del>	<del>Specify printing color in 2 color printing mode</del>
<del>ESC RS C 2</del>	<del>Select/cancel 2 color printing mode</del>
<del>ESC 4</del>	<del>Specify white/black inversion and printing color red</del>
<del>ESC 5</del>	<del>Cancel white/black inversion and specify printing color black</del>
<del>ESC FS q</del>	<del>Register logo</del>
<del>ESC FS p</del>	<del>Print logo</del>

### Presenter related commands

Commands	Description
<del>ESC SYN 0</del>	<del>Execute presenter paper recovery</del>
<del>ESC SYN 1</del>	<del>Set presenter automatic recovery function and recovery time</del>
<del>ESC SYN 3</del>	<del>Acquire presenter paper counter</del>
<del>ESC SYN 4</del>	<del>Initialize presenter paper counter</del>
<del>ESC GS SUB DC1</del>	<del>Specify snout operation mode</del>
<del>ESC GS SUB DC2</del>	<del>Specify snout LED ON/OFF time</del>
<del>ESC GS SUB DC3</del>	<del>Snout LED output</del>

### Mark commands

Commands	Description
<del>ESC GS * 0</del>	<del>Print mark</del>
<del>ESC GS * 1</del>	<del>Specify mark height and line feed amount</del>
<del>ESC GS * 2</del>	<del>Specify mark color and horizontal width in each mark number</del>
<del>ESC GS * W</del>	<del>Register mark format in non-volatile memory</del>
<del>ESC GS * C</del>	<del>Initialize mark format in non-volatile memory</del>

### Auto Logo commands

Commands	Description
<del>ESC GS / W</del>	<del>Register Auto Logo setting in non-volatile memory</del>
<del>ESC GS / C</del>	<del>Initialize Auto Logo setting in non-volatile memory</del>
<del>ESC GS / 1</del>	<del>ON/OFF setting of Auto Logo function</del>
<del>ESC GS / 2</del>	<del>Command character setting</del>
<del>ESC GS / 3</del>	<del>User macro 1 setting</del>
<del>ESC GS / 4</del>	<del>User macro 2 setting</del>
<del>ESC GS / 5</del>	<del>Command character rowwriting method setting</del>
<del>ESC GS / 6</del>	<del>Setting of partial cut just prior to Auto Logo printing</del>

### PDF417 Commands

Commands	Description
ESC GS x S 0	Set PDF417 bar code size
ESC GS x S 1	Set PDF417 ECC (security level)
ESC GS x S 2	Set PDF417 module X direction size
ESC GS x S 3	Set PDF417 module aspect ratio
ESC GS x D	Set PDF417 bar code data
ESC GS x P	Print PDF417 bar code
<del>ESC GS x I</del>	<del>Get PDF 417 bar code expansion information</del>

### Print starting trigger commands

Commands	Description
<del>ESC GS g 0</del>	<del>Print starting trigger</del>
<del>ESC GS g 1</del>	<del>Print starting timer setting</del>

### QR code

Commands	Description
ESC GS y S 0	Set QR code model
ESC GS y S 1	Set QR code mistake correction level
ESC GS y S 2	Set QR code cell size
ESC GS y D 1	Set QR code data
ESC GS y D 2	Set QR code data (Manual)
ESC GS y P	Print QR code
<del>ESC GS y I</del>	<del>Get QR code expansion information</del>

### 2D GS1 Code

Commands	Description
<del>ESC GS ( k (cn=51,fn=67)</del>	<del>Set 2D module size</del>
<del>ESC GS ( k (cn=51,fn=71)</del>	<del>Set The maximum width of the 2D GS1DataBar Expanded Stacked</del>
<del>ESC GS ( k (cn=51,fn=80)</del>	<del>Store data in 2D symbol saving region</del>
<del>ESC GS ( k (cn=51,fn=81)</del>	<del>Print 2D symbol data of symbol saving region</del>

### GS1 Compound symbol

Commands	Description
<del>ESC GS ( k (cn=52,fn=67)</del>	<del>Compound symbol: Set module size</del>
<del>ESC GS ( k (cn=52,fn=71)</del>	<del>Compound symbol: Set The maximum width of the 2D GS1DataBar Expanded Stacked</del>
<del>ESC GS ( k (cn=52,fn=72)</del>	<del>Compound symbol: Set HRI Font</del>
<del>ESC GS ( k (cn=52,fn=80)</del>	<del>Compound symbol: Store data in symbol saving region</del>
<del>ESC GS ( k (cn=52,fn=81)</del>	<del>Compound symbol: Print symbol data of symbol saving region</del>

### Page function

Commands	Description
<del>ESC GS h 0</del>	<del>180 degree turnover</del>
<del>ESC GS h 1</del>	<del>Watermark</del>

### Reduced Printing function

Commands	Description
<del>ESC GS c h v</del>	<del>Reduced Printing</del>

### Page Mode

Commands	Description
ESC GS P 0	Selects page mode
ESC GS P 1	Cancels page mode
ESC GS P 2	Select printing direction
ESC GS P 3	Set print region in page mode
ESC GS P 4	Specify character vertical direction absolute position
ESC GS P 5	Specify character vertical direction relative position
ESC GS P 6	Prints
ESC GS P 7	Cancel printing and page mode
ESC GS P 8	Cancel print data

## Text Search

Commands	Description
<del>ESC GS ) B (fn=48)</del>	<del>Enable and disable text search</del>
<del>ESC GS ) B (fn=49)</del>	<del>Set the number of times to run the text search macro</del>
<del>ESC GS ) B (fn=50)</del>	<del>Set to print the string that matches in the text search</del>
<del>ESC GS ) B (fn=64)</del>	<del>Define the text search string</del>
<del>ESC GS ) B (fn=65)</del>	<del>Define the text search macro</del>
<del>ESC GS ) B (fn=66)</del>	<del>Set text search timing</del>
<del>ESC GS ) B (fn=80)</del>	<del>Register text search settings and definitions in the non-volatile memory</del>
<del>ESC GS ) B (fn=81)</del>	<del>Initialize text search settings and definitions</del>
<del>ESC GS ) B (fn=96)</del>	<del>Print the text search settings and definitions</del>
<del>ESC GS ) B (fn=97)</del>	<del>Run the text search macro</del>

## Audio

Commands	Description
<del>ESC GS c O</del>	<del>ESC GS c O Playback NV audio</del>
<del>ESC GS c P</del>	<del>ESC GS c P Stop NV audio</del>
<del>ESC GS c R</del>	<del>ESC GS c R Playback received audio</del>
<del>ESC GS c I</del>	<del>ESC GS c I Register automatic audio setting information</del>
<del>ESC GS c U</del>	<del>ESC GS c U Register user area NV audio data</del>
<del>ESC GS c T</del>	<del>Batch playback of NV audio</del>

## Raster Graphics

Commands	Description
ESC GS ( L	Specify raster graphics data
ESC GS 8 L	Specify raster graphics data

## Printer information

Commands	Description
<del>ESC GS ) I</del>	<del>Transmit the type of multibyte fonts</del>

## Individual Logo

Commands	Description
<del>ESC GS ) L (fn=48)</del>	<del>Transmit registered individual NV graphics CRC</del>
<del>ESC GS ) L (fn=49)</del>	<del>Transmit capacity used by registered individual NV graphics</del>
<del>ESC GS ) L (fn=50)</del>	<del>Transmit all registered NV graphics key codes</del>

## 4 ESC/POS® Mode

### Standard Commands

Commands	Description
HT	Horizontal tab
LF	Line feed
FF	Print and recover to page mode
<del>CR</del>	<del>Print and carriage return</del>
CAN	Cancel print data in page mode
<del>DLE EOT</del>	<del>Real time status transmission</del>
<del>DLE ENQ</del>	<del>Real time request to printer</del>
<del>DLE DC4</del>	<del>Real time output of specified pulse</del>
ESC FF	Print data in page mode
ESC SP	Set character right space amount
ESC !	Batch specify print mode
ESC \$	Specify absolute position
ESC %	Specify/cancel download character set
ESC &	Define download characters
ESC *	Specify bit image mode
ESC -	Specify/cancels underline mode
ESC 2	Set default line spacing
ESC 3	Set line feed amount
<del>ESC _</del>	<del>Select peripheral device</del>
ESC ?	Delete download characters
ESC @	Initialize printer
ESC D	Set horizontal tab position
ESC E	Specify/cancel emphasized printing
ESC G	Specify/cancel double printing
ESC J	Print and Paper Feed
ESC L	Select page mode
ESC M	Select character font
ESC R	Select international characters
ESC S	Select standard mode
ESC T	Select character print direction in page mode
ESC V	Specify/cancel char. 90 deg. clockwise rotation
ESC W	Set print region in page mode
ESC \	Specify relative position
ESC a	Position alignment
<del>ESC e 3</del>	<del>Select paper out sensor to enable at paper out signal output</del>
<del>ESC e 4</del>	<del>Select paper out sensor to enable at printing stop</del>
<del>ESC e 5</del>	<del>Enable/disable panel switches</del>
ESC d	Print and feed paper n lines
<del>ESC p</del>	<del>Specify pulse</del>
ESC t	Select character code table *1
ESC {	Specify/cancel upside-down characters

\*1 : CodePage 437, 932, 850, 860, 863, 865, 1252, 866, 852 and 858 are supported.

Commands	Description
<del>FS g 1</del>	<del>Write data to user NV memory</del>
<del>FS g 2</del>	<del>Read user NV memory data</del>
<del>FS p</del>	<del>Print NV bit image</del>
<del>FS q</del>	<del>Define NV bit image</del>
GS !	Select character size
GS \$	Specify absolute position for character vertical direction in page mode
GS *	Define download bit images
<del>GS ( A</del>	<del>Test print</del>
<del>GS ( K (fn=48)</del>	<del>Set print density</del>
<del>GS ( K (fn=49)</del>	<del>Set print speed</del>
GS ( L	Specify raster graphics data
GS 8 L	Specify raster graphics data
<del>GS ( N</del>	<del>Select 2 color printing</del>
GS ( k (cn=48, fn=65)	PDF417: Set number of positions
GS ( k (cn=48, fn=66)	PDF417: Set number of levels
GS ( k (cn=48, fn=67)	PDF417: Set module width
GS ( k (cn=48, fn=68)	PDF417: Set level height
GS ( k (cn=48, fn=69)	PDF417: Set error correction level
GS ( k (cn=48, fn=70)	PDF417: Set options
GS ( k (cn=48, fn=80)	PDF417: Store data in symbol saving region
GS ( k (cn=48, fn=81)	PDF417: Print symbol data of symbol saving region
<del>GS ( k (cn=48, fn=82)</del>	<del>PDF417: Send size information of symbol data in symbol saving region</del>
GS ( k (cn=49, fn=65)	QR Code: Set model
GS ( k (cn=49, fn=67)	QR Code: Set module size
GS ( k (cn=49, fn=69)	QR Code: Set error correction level
GS ( k (cn=49, fn=80)	QR Code: Store data in symbol saving region
GS ( k (cn=49, fn=81)	QR Code: Print symbol data of symbol saving region
<del>GS ( k (cn=49, fn=82)</del>	<del>QR Code: Send size information of symbol data in symbol saving region</del>
<del>GS ( k (cn=51, fn=67)</del>	<del>2D GS1 DataBar: Set module size</del>
<del>GS ( k (cn=51, fn=71)</del>	<del>2D GS1 DataBar: Set The maximum width of the 2D GS1DataBar</del>
<del>GS ( k (cn=51, fn=80)</del>	<del>Expanded Stacked</del>
<del>GS ( k (cn=51, fn=81)</del>	<del>2D GS1 DataBar: Store data in symbol saving region</del>
<del>GS ( k (cn=51, fn=82)</del>	<del>2D GS1 DataBar: Print symbol data of symbol saving region</del>
<del>GS ( k (cn=51, fn=82)</del>	<del>2D GS1 DataBar: Send size information of symbol data in symbol saving region</del>
<del>GS ( k (cn=52, fn=67)</del>	<del>Compound symbol: Set module size</del>
<del>GS ( k (cn=52, fn=71)</del>	<del>Compound symbol: Set The maximum width of the 2D GS1DataBar</del>
<del>GS ( k (cn=52, fn=72)</del>	<del>Expanded Stacked</del>
<del>GS ( k (cn=52, fn=72)</del>	<del>Compound symbol: Set HRI Font</del>
<del>GS ( k (cn=52, fn=80)</del>	<del>Compound symbol: Store data in symbol saving region</del>
<del>GS ( k (cn=52, fn=81)</del>	<del>Compound symbol: Print symbol data of symbol saving region</del>
<del>GS ( k (cn=52, fn=82)</del>	<del>Compound symbol: Send size information of symbol data in symbol saving region</del>
GS /	Print download bit images
<del>GS :</del>	<del>Start/end macro definition</del>
GS B	Specify/cancel white/black inverted printing
<del>GS C 0</del>	<del>Set counter print mode</del>
<del>GS C 1</del>	<del>Set Counter Mode (A)</del>
<del>GS C 2</del>	<del>Set counter value</del>
<del>GS C :</del>	<del>Set Counter Mode (B)</del>

Commands	Description
<del>GS E</del>	<del>Set print speed</del>
GS H	Select HRI character print position
<del>GS I</del>	<del>Send Printer ID</del>
GS L	Set left margin
GS P	Set basic calculation pitch
GS T	Move to top of line
GS V	Cut paper
GS W	Set print region width
GS \	Specify relative position for character vertical direction in page mode
<del>GS Δ</del>	<del>Execute macro</del>
<del>GS b</del>	<del>Specify/cancel smoothing</del>
<del>GS c</del>	<del>Print counter</del>
GS f	Select HRI character font
GS h	Set bar code height
GS k	Print bar code *1
<del>GS r</del>	<del>Transmission of status</del>
GS v 0	Print raster bit images
GS w	Set bar code horizontal size

\*1 : UPC-A, UPC-E, JAN13, JAN8, CODE39, ITF, CODABAR, CODE93 and CODE128 are supported.

### Kanji Control Commands

Commands	Description
FS !	Batch specify Chinese character print mode
FS &	Specify Chinese character mode
FS -	Specify/cancel Chinese character underline
FS .	Cancel Chinese character mode
FS 2	Define external character
FS C	Select Chinese character code type
FS S	Set Chinese character space amount
FS W	Specify/cancel double-tall, double wide Chinese characters

### ESC/POS Black Mark Related Commands

Commands	Description
<del>FF</del>	<del>Print and recover to page mode + TOF and Cut</del>
<del>DLE ENQ</del>	<del>Real time request to printer</del>
<del>GS FF</del>	<del>Move to BM detection position</del>
<del>GS ( F</del>	<del>Adjust BM detection position</del>
<del>GS ( M n=1</del>	<del>Save black mark adjustment amount</del>
<del>GS ( M n=2</del>	<del>Load black mark adjustment amount</del>
<del>GS ( M n=3</del>	<del>Set auto load of black mark adjustment amount</del>
<del>GS &lt;</del>	<del>Mechanically initialize printer</del>
<del>GS V</del>	<del>Cut paper</del>

## STAR Original Commands

Commands	Description
<del>ESC GS</del>	<del>Write data to a blank code page</del>
<del>ESC GS t</del>	<del>Select character code table *1</del>
<del>ESC GS +</del>	<del>Macro registration</del>
<del>ESC GS # m</del>	<del>Memory switch settings</del>
<del>ESC RS F</del>	<del>Select font</del>
<del>ESC RS C</del>	<del>Print mode selection</del>
<del>ESC RS L</del>	<del>Batch control logos</del>
<del>ESC GS ETX</del>	<del>Send print end counter, initialize</del>
	<del>Cancel print data feature</del>
	<del>Set data time out</del>

\*1 : CodePage 437, 932, 858, 852, 860, 861, 863, 865, 866, 855, 857, 862, 864, 737, 869, 874, 1252, 1250 and 1251 are supported.

## STAR Original Presenter Control Commands

Commands	Description
<del>ESC SYN 0</del>	<del>Execute presenter paper recovery</del>
<del>ESC SYN 1</del>	<del>Set presenter paper recovery time</del>
<del>ESC SYN 3</del>	<del>Get presenter counter</del>
<del>ESC SYN 4</del>	<del>Initialize presenter counter</del>
<del>ESC GS SUB DC1</del>	<del>Specify snout operation mode</del>
<del>ESC GS SUB DC2</del>	<del>Set snout LED ON/OFF time</del>
<del>ESC GS SUB DC3</del>	<del>Output snout LED</del>

## STAR Original Mark Commands

Commands	Description
<del>ESC GS * 0</del>	<del>Print mark</del>
<del>ESC GS * 1</del>	<del>Set mark height and line feed</del>
<del>ESC GS * 2</del>	<del>Set mark color and horizontal width</del>
<del>ESC GS * W</del>	<del>Register mark format to non-volatile memory</del>
<del>ESC GS * C</del>	<del>Initialize mark format in the non-volatile memory</del>

## STAR Original Auto Logo Commands

Commands	Description
<del>ESC GS / W</del>	<del>Register Auto Logo setting to non-volatile memory</del>
<del>ESC GS / C</del>	<del>Initialize Auto Logo setting to non-volatile memory</del>
<del>ESC GS / 1</del>	<del>Auto Logo function on/off setting</del>
<del>ESC GS / 2</del>	<del>Set command character</del>
<del>ESC GS / 3</del>	<del>Set user macro 1</del>
<del>ESC GS / 4</del>	<del>Set user macro 2</del>
<del>ESC GS / 5</del>	<del>Set command character switching method</del>
<del>ESC GS / 6</del>	<del>Set partial cut before Auto Logo printing</del>

## STAR Original Buzzer Commands

Commands	Description
<del>ESC GS BEL</del>	<del>Ring buzzer</del>
<del>ESC GS EM DC1</del>	<del>External buzzer drive pulse condition settings</del>
<del>ESC GS EM DC2</del>	<del>External buzzer drive execution</del>

### STAR Original PDF417 Commands

Commands	Description
ESC GS x S 0	Set PDF417 bar code size
ESC GS x S 1	Set PDF417 ECC (security level)
ESC GS x S 2	Set PDF417 module X direction size
ESC GS x S 3	Set PDF417 module aspect ratio
ESC GS x D	Set PDF417 bar code data
ESC GS x P	Print PDF417 bar code
<del>ESC GS x I</del>	<del>Get PDF417 bar code expansion information</del>

### STAR Original Print Starting Trigger Control Commands

Commands	Description
<del>ESC GS g 0</del>	<del>Print starting trigger</del>
<del>ESC GS g 1</del>	<del>Set print starting timer</del>

### STAR Original QR Code Commands

Commands	Description
ESC GS y S 0	Set QR code model
ESC GS y S 1	Set QR code mistake correction level
ESC GS y S 2	Set QR code cell size
ESC GS y D 1	Set QR code data (auto)
ESC GS y D 2	Set QR code data (manual)
ESC GS y P	Print QR code
<del>ESC GS y I</del>	<del>Get QR code expansion information</del>

### STAR Original Page Function Commands

Commands	Description
<del>ESC GS h 0</del>	<del>Invert 180</del>
<del>ESC GS h 1</del>	<del>Water Mark</del>

### Star Original Reduced Printing Function Command

Commands	Description
<del>ESC GS e</del>	<del>Reduced printing</del>

### Star Original Text Search Commands

Commands	Description
<del>ESC GS ) B (fn=48)</del>	<del>Enable and disables text search</del>
<del>ESC GS ) B (fn=49)</del>	<del>Set the number of times to run the text search macro</del>
<del>ESC GS ) B (fn=50)</del>	<del>Set to print the string that matches in the text search</del>
<del>ESC GS ) B (fn=64)</del>	<del>Define the text search string</del>
<del>ESC GS ) B (fn=65)</del>	<del>Define the text search macro</del>
<del>ESC GS ) B (fn=66)</del>	<del>Define the timing of the text search macro execution</del>
<del>ESC GS ) B (fn=80)</del>	<del>Register text search settings and definitions in the non-volatile memory</del>
<del>ESC GS ) B (fn=81)</del>	<del>Initialize text search settings and definitions</del>
<del>ESC GS ) B (fn=96)</del>	<del>Print the text search settings and definitions</del>
<del>ESC GS ) B (fn=97)</del>	<del>Run the text search macro</del>

### Star Original Printer information transmission Command

Commands	Description
<del>ESC GS ) I (fn=48)</del>	<del>Send the all kind of multibyte fonts</del>

### Star Original Individual Logo Command

Commands	Description
<del>ESC GS ) L (fn=48)</del>	<del>Send the registered individual logo CRC</del>
<del>ESC GS ) L (fn=49)</del>	<del>Send the registered individual NV graphics memory capacity</del>
<del>ESC GS ) L (fn=50)</del>	<del>Send all key code of the registered NV graphics</del>

### Star Original Audio Commands

Commands	Description
<del>ESC GS s O</del>	<del>Playback NV Audio</del>
<del>ESC GS s P</del>	<del>Stop NV Audio</del>
<del>ESC GS s R</del>	<del>Playback received audio</del>
<del>ESC GS s I</del>	<del>Register automatic audio setting information</del>
<del>ESC GS s U</del>	<del>Register user area NV audio data</del>
<del>ESC GS s T</del>	<del>Batch Playback NV Audio</del>