Command Emulator on SMCS Information

Jun 18, 2018

Abstract

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
Jun 18, 2018	Added support for SM-L200, mC-Print2, mC-Print3.

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Contents

1 StarPRNT Emulation

Emulation, Paper Width and Printable Width for each model.

Model	Emulation	Paper Width	Printable Width
mC-Print2	StarPRNT	2 inch	384 dots *1
			432 dots
			406 dots
mC-Print3	StarPRNT	3 inch	576 dots *1
		2 inch	384 dots
			406 dots
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
			416 dots
~~TSP100~~	~~STAR Graphic Mode~~	~~3 inch~~	~~576 dots *1~~
		~~2 inch~~	~~406 dots~~
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
			416 dots
TSP800II	STAR Line Mode	4 inch	832 dots *1
		3 inch	576 dots
~~SM-S210i~~	~~Mobile ESC/POS®~~	~~2 inch~~	~~384 dots *1~~
~~SM-S220i~~	~~Mobile ESC/POS®~~	~~2 inch~~	~~384 dots *1~~
~~SM-S230i~~	~~Mobile ESC/POS®~~	~~2 inch~~	~~384 dots *1~~
~~SM-T300i~~	~~Mobile ESC/POS®~~	~~3 inch~~	~~576 dots *1~~
~~SM-T400i~~	~~Mobile ESC/POS®~~	~~4 inch~~	~~832 dots *1~~
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
SM-L300	StarPRNT	3 inch	576 dots *1
		2 inch	406 dots
~~SP700~~	~~STAR (Dot Impact)~~	~~3 inch~~	~~210 dots *1~~
			~~200 dots~~
		~~2 inch~~	~~160 dots~~
			~~150 dots~~

*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
~~ESC GS =~~	~~Write blank code page data~~
ESC R	Specify international character set
~~ESC /~~	~~Specify/cancel slash zero~~
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 l	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
~~FF~~	~~Form feed~~
~~ESC C~~	~~Set page length to n lines~~
~~ESC C 0~~	~~Set page length in 24 mm units~~

Cutter control

Commands	Description
~~ESC d~~	~~Paper cutter instruction~~

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
~~ESC GS (L (fn=0, 48)~~	~~Register logo data~~
~~ESC GS (L (fn=3, 51)~~	~~Send key code of the registered NV graphics~~
~~ESC GS (L (fn=64)~~	~~Send all key code of the NV graphics~~
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
~~ESC GS) L (fn=48)~~	~~Send the registered individual logo CRC~~
~~ESC GS) L (fn=49)~~	~~Send the registered individual NV graphics memory capacity~~
~~ESC GS) L (fn=50)~~	~~Send the all key code of the registered NV graphics~~

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

Initialization commands

Commands	Description
ESC @	Command initialization
~~ESC ACK CAN~~	~~Real-time printer reset~~
~~ESC ?~~	~~Reset printer~~

Memory Switch Setting commands

Commands	Description
~~ESC GS #~~	~~Set memory switch~~

Status

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

Print settings

Commands	Description
~~ESC RS d~~	~~Set print density~~
~~ESC RS r~~	~~Set printing speed~~

Special Commands

Commands	Description
~~ESC RS R~~	~~Specify the special location of use~~

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
~~ESC d~~	~~Paper cut instruction~~
~~FF~~	~~Form feed~~
~~ESC C~~	~~Set page length to n lines~~
~~ESC C 0~~	~~Set page length in 24 mm units~~

2 color printing related commands

Commands	Description
~~ESC RS c~~	~~Specify printing color in 2 color printing mode~~
~~ESC RS C~~	~~Select/cancel 2 color printing mode~~
~~ESC 4~~	~~Specify white/black inversion and printing color red~~
~~ESC 5~~	~~Cancel white/black inversion and specify printing color black~~

External device drive

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

Barcode Reader commands

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

Magnetic Card Reader commands

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

3   Star Line Mode

Font style And character set

Commands	Description
ESC RS F	Select font
ESC GS t	Specify code page *1
~~ESC GS =~~	~~Write blank code page data~~
ESC R	Specify international character set
~~ESC /~~	~~Specify/cancel slash zero~~
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
~~ESC GS b~~	~~Specify/cancel smoothing~~

Line spacing

Commands	Description
LF	Line feed
~~CR~~	~~Carriage return (same as 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
~~FF~~	~~Form feed~~
~~ESC C~~	~~Set page length to n lines~~
~~ESC C 0~~	~~Set page length in 24 mm units~~
~~VT~~	~~Feed paper to vertical tab position~~
~~ESC B~~	~~Set vertical tab position~~
~~ESC N~~	~~Set bottom margin to n lines~~
~~ESC O~~	~~Cancel bottom margin~~

Horizontal direction position

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

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
~~ESC d~~	~~Paper cutter instruction~~

External device Drive

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

Print settings

Commands	Description
ESC RS d	Set print density
ESC RS r	Set printing speed

Status

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

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
ESC GS #	Set memory switch
ESC ?	Reset printer

Raster commands

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

Black mark related commands

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

2 color printing related commands

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

Presenter related commands

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

Mark commands

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

Auto Logo commands

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

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
~~ESC GS x I~~	~~Get PDF 417 bar code expansion information~~

Print starting trigger commands

Commands	Description
~~ESC GS g 0~~	~~Print starting trigger~~
~~ESC GS g 1~~	~~Print starting timer setting~~

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
~~ESC GS y I~~	~~Get QR code expansion information~~

2D GS1 Code

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

GS1 Compound symbol

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

Page function

Commands	Description
~~ESC GS h 0~~	~~180 degree turnover~~
~~ESC GS h 1~~	~~Watermark~~

Reduced Printing function

Commands	Description
~~ESC GS c h v~~	~~Reduced Printing~~

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

Audio

Commands	Description
~~ESC GS s O~~	~~ESC GS s O Playback NV audio~~
~~ESC GS s P~~	~~ESC GS s P Stop NV audio~~
~~ESC GS s R~~	~~ESC GS s R Playback received audio~~
~~ESC GS s I~~	~~ESC GS s I Register automatic audio setting information~~
~~ESC GS s U~~	~~ESC GS s U Register user area NV audio data~~
~~ESC GS s T~~	~~Batch playback of NV audio~~

Raster Graphics

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

Pr inter information

Commands	Description
~~ESC GS) I~~	~~Transmit the type of multibyte fonts~~

Individual Logo

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

4 ESC/POS® Mode

Standard Commands

Commands	Description
HT	Horizontal tab
LF	Line feed
FF	Print and recover to page mode
~~CR~~	~~Print and carriage return~~
CAN	Cancel print data in page mode
~~DLE EOT~~	~~Real-time status transmission~~
~~DLE ENQ~~	~~Real-time request to printer~~
~~DLE DC4~~	~~Real-time output of specified pulse~~
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
~~ESC =~~	~~Select peripheral device~~
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
~~ESC c 3~~	~~Select paper out sensor to enable at paper out signal output~~
~~ESC c 4~~	~~Select paper out sensor to enable at printing stop~~
~~ESC c 5~~	~~Enable/disable panel switches~~
ESC d	Print and feed paper n lines
~~ESC p~~	~~Specify pulse~~
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
~~FS g 1~~	~~Write data to user NV memory~~
~~FS g 2~~	~~Read user NV memory data~~
~~FS p~~	~~Print NV bit image~~
~~FS q~~	~~Define NV bit image~~
GS !	Select character size
GS $	Specify absolute position for character vertical direction in page mode
GS *	Define download bit images
~~GS (A~~	~~Test print~~
~~GS (K (fn=48)~~	~~Set print density~~
~~GS (K (fn=49)~~	~~Set print speed~~
GS (L	Specify raster graphics data
GS 8 L	Specify raster graphics data
~~GS (N~~	~~Select 2 color printing~~
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
~~GS (k (cn=48, fn=82)~~	~~PDF417: Send size information of symbol data in symbol saving region~~
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
~~GS (k (cn=49, fn=82)~~	~~QR Code: Send size information of symbol data in symbol saving region~~
~~GS (k (cn=51, fn=67)~~	~~2D GS1 DataBar: Set module size~~
~~GS (k (cn=51, fn=71)~~	~~2D GS1 DataBar: Set The maximum width of the 2D GS1DataBar Expanded Stacked~~
~~GS (k (cn=51, fn=80)~~	~~2D GS1 DataBar: Store data in symbol saving region~~
~~GS (k (cn=51, fn=81)~~	~~2D GS1 DataBar: Print symbol data of symbol saving region~~
~~GS (k (cn=51, fn=82)~~	~~2D GS1 DataBar: Send size information of symbol data in symbol saving region~~
~~GS (k (cn=52, fn=67)~~	~~Compound symbol: Set module size~~
~~GS (k (cn=52, fn=71)~~	~~ompound symbol:Set The maximum width of the 2D GS1DataBar Expanded Stacked~~
~~GS (k (cn=52, fn=72)~~	~~Compound symbol: Set HRI Font~~
~~GS (k (cn=52, fn=80)~~	~~Compound symbol: Store data in symbol saving region~~
~~GS (k (cn=52, fn=81)~~	~~Compound symbol: Print symbol data of symbol saving region~~
~~GS (k (cn=52, fn=82)~~	~~Compound symbol: Send size information of symbol data in symbol saving region~~
GS /	Print download bit images
~~GS :~~	~~Start/end macro definition~~
GS B	Specify/cancel white/black inverted printing
~~GS C 0~~	~~Set counter print mode~~
~~GS C 1~~	~~Set Counter Mode (A)~~
~~GS C 2~~	~~Set counter value~~
~~GS C ;~~	~~Set Counter Mode (B)~~

Commands	Description
~~GS E~~	~~Set print speed~~
GS H	Select HRI character print position
~~GS I~~	~~Send Printer ID~~
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
~~GS ^~~	~~Execute macro~~
~~GS b~~	~~Specify/cancel smoothing~~
~~GS c~~	~~Print counter~~
GS f	Select HRI character font
GS h	Set bar code height
GS k	Print bar code *1
~~GS r~~	~~Transmission of status~~
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
~~FF~~	~~Print and recover to page mode + TOF and Cut~~
~~DLE ENQ~~	~~Real-time request to printer~~
~~GS FF~~	~~Move to BM detection position~~
~~GS (F~~	~~Adjust BM detection position~~
~~GS (M n=1~~	~~Save black mark adjustment amount~~
~~GS (M n=2~~	~~Load black mark adjustment amount~~
~~GS (M n=3~~	~~Set auto-load of black mark adjustment amount~~
~~GS <~~	~~Mechanically initialize printer~~
~~GS V~~	~~Cut paper~~

STAR Original Commands

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

*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
~~ESC SYN 0~~	~~Execute presenter paper recovery~~
~~ESC SYN 1~~	~~Set presenter paper recovery time~~
~~ESC SYN 3~~	~~Get presenter counter~~
~~ESC SYN 4~~	~~Initialize presenter counter~~
~~ESC GS SUB DC1~~	~~Specify snout opeation mode~~
~~ESC GS SUB DC2~~	~~Set snout LED ON/OFF time~~
~~ESC GS SUB DC3~~	~~Ouptut snout LED~~

STAR Original Mark Commands

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

STAR Original Auto Logo Commands

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

STAR Original Buzzer Commands

Commands	Description
~~ESC GS BEL~~	~~Ring buzzer~~
~~ESC GS EM DC1~~	~~External buzzer drive pulse condition settings~~
~~ESC GS EM DC2~~	~~External buzzer drive execution~~

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
~~ESC GS x I~~	~~Get PDF417 bar code expansion information~~

STAR Original Print Starting Trigger Control Commands

Commands	Description
~~ESC GS g 0~~	~~Print starting trigger~~
~~ESC GS g 1~~	~~Set print starting timer~~

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
~~ESC GS y I~~	~~Get QR code expansion information~~

STAR Original Page Function Commands

Commands	Description
~~ESC GS h 0~~	~~Invert 180~~
~~ESC GS h 1~~	~~Water Mark~~

Star Original Reduced Printing Function Command

Commands	Description
~~ESC GS c~~	~~Reduced printing~~

Star Original Text Search Commands

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

Star Original Printer information transmission Command

Commands	Description
~~ESC GS) I (fn=48)~~	~~Send the all kind of multibyte fonts~~

Star Original Individual Logo Command

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

Star Original Audio Commands

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