





# Impressora Epson TM-T20

A Impressora Não Fiscal EpsonTM-T20 Com Guilhotina USB é a que oferece o melhor custo-benefício da categoria. Rápida e econômica, ela pode imprimir textos, imagens, gráficos e códigos de barras 1D, 2D – QR Code e PDF147 em uma velocidade de 150 mm por segundo. Dessa maneira, consegue reduzir em até 30% a utilização de papel.

# **TM-T20**

# **ESC/POS Ouick Reference**

# ESC/POS® Command System

EPSON ESC/POS is a proprietary POS printer command system based on the escape sequence and includes patented or patent pending commands. ESC/POS is compatible with most type of EPSON POS printers and displays.

ESC/POS is designed to reduce the processing load on the host computer in POS environments. It comprises a set of highly functional and efficient commands and also offers the flexibility to easily make future upgrades.

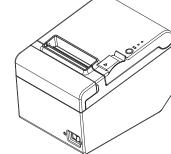
#### Aim of the Quick Reference

Quick Reference is a guide to using ESC/POS command to control the printer.

#### **Command Notation**

- RT : real-time command (executed as soon as received)
- fn= : function number of the command
- Numbers are written in decimal numeral.
- n specifies 1 byte parameter in the range 0-255.
- nL, nH specify 1 word (2 bytes) parameter as  $(nL+n\times256)$  in the range
- pL, pH specify the number of parameters after pH as  $(pL+pH\times256)$  in the range 1-65,535
- p1, p2, p3, p4 specify the number of parameters after p4 as  $(p1+p2\times256+p3\times65,536+p4\times16,777,216)$  in the rage 1-4,294,967,295.
- kc1, kc2 specify key code (2 bytes) of NV graphics or download graphics. Each range of *kc1* and *kc2* is 32–126.
- Control c

itrol codes	are as follows:	
name	code	
NUL	0	
EOT	4	
ENQ	5	
HT	9	
LF	10	
FF	12	
CR	13	
DLE	16	
DC4	20	
CAN	24	
ESC	27	of the
FS	28	
GS	29	



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#### Print Commands -

• In page mode, these commands only move the print position and do not execute

LF Prints data and feeds one line.

**CR** Functions the same as LF when auto line feed is enabled. **CR** is ignored when auto line feed is disabled or when the serial interface model is used.

ESC J n Prints data and feeds paper n dots.

ESC d n Prints data and feeds paper *n* lines.

# Line Spacing Commands —

ESC 2 Selects default line spacing. ESC 3 n Sets line spacing to *n* dots.

#### Character Commands —

**ESC SP** *n* Sets right-side character spacing to *n* dots.

ESC-nSelects underline.

n = 0: underline off, n = 1: 1-dot width, n = 2: 2-dot width

ESC E n Turns emphasized character On or Off.

n = odd: On, n = even: Off

ESC G n Turns double-strike character On or Off.

n = odd: On, n = even: Off

ESC M n Selects a character font.

n = 0, "0": Font A, n = 1, "1": Font B

GS!n Selects character size (height/width magnification).

> Upper 4 bits of n: width magnification Lower 4 bits of n: height magnification The both can be set  $0(\times 1)$  to  $7(\times 8)$

GSbnTurns smoothing On or Off for magnified characters.

 $n = \text{odd: On}, \quad n = \text{even: Off}$ 

GS B n Turns white/black reverse print On or Off for characters.

n = odd: On, n = even: Off

ESC { n Turns upside-down print mode On or Off in standard

n = odd: On, n = even: Off

ESC V n Turns 90° clockwise rotation On or Off for characters in

standard mode.

n = 1, 2, "1", "2": On, n = 0, "0": Off

#### ESC & 3 c1 c2 [x1 d1...d( $3 \times x1$ )]...[xk d1...d( $3 \times xk$ )]

Defines user-defined characters for character code: c1 to c2 of the current font.

x = width of the defined pattern

 $d1...d(3\times x)$  = pattern data for a character

Selects or cancels user-defined character set. ESC % n

n = odd: Select, n = even: Cancel

#### **Character Commands (continued)**

ESC?n Cancel the user-defined character and return the font pattern to the resident one for the current font.

n = character code to be cleared the user-defined font

#### ESC t n Selects page **n** from the character code table.

n	code table	n	code table
0	PC437: USA, Standard Europe	34	PC855: Cyrillic
1	Katakana	35	PC861: Icelandic
2	PC850: Multilingual	36	PC862: Hebrew
3	PC860: Portuguese	37	PC864: Arabic
4	PC863: Canadian-French	38	PC869: Greek
5	PC865: Nordic	39	ISO8859-2: Latin2
11	PC851: Greek	40	ISO8859-15: Latin9
12	PC853: Turkish	41	PC1098: Farsi
13	PC857: Turkish	42	PC1118: Lithuanian
14	PC737: Greek	43	PC1119: Lithuanian
15	ISO8859-7: Greek	44	PC1125: Ukrainian
6	WPC1252	45	WPC1250: Latin2
7	PC866: Cyrillic #2	46	WPC1251: Cyrillic
8	PC852: Latin2	47	WPC1253: Greek
19	PC858: Euro	48	WPC1254: Turkish
20	KU42: Thai	49	WPC1255: Hebrew
21	TIS11: Thai	50	WPC1256: Arabic
26	TIS18: Thai	51	WPC1257: Baltic Rim
30	TCVN-3: Vietnamese	52	WPC1258: Vietnamese
31	TCVN-3: Vietnamese	53	KZ-1048: Kazakhstan
32	PC720: Arabic	255	User-defined page
33	WPC775: Baltic Rim		

#### **ESC R** *n* Selects an international character set by *n*.

n	country	n	country
0	USA	9	Norway
1	France	10	Denmark II
2	Germany	11	Spain II
3	U.K.	12	Latin America
4	Denmark I	13	Korea
5	Sweden	14	Slovenia/ Croatia
6	Italy	15	China
7	Spain I	16	Vietnam
8	Japan	17	Arabia

#### **Print Position Commands**

HT Moves print position to the next horizontal tab position.

#### ESC D n1...nk NUL

Sets tab stops at **n1** to **nk** character columns.

#### GS L nL nH

Sets left margin in standard mode.

 $nL + nH \times 256$ : number of dots for left margin

#### GS W nL nH

Sets print area width in standard mode.  $nL + nH \times 256$ : number of dots for print area width

ESC a n Aligns all data in one line to the selected layout in standard mode.

n = 0, "0": Left justification

n = 1, "1": Centering

n = 2, "2": Right justification

#### Print Position Commands (continued)

ESC S nL nH

Moves print position from the left edge of print area.

 $nL + nH \times 256$ : absolute print position

ESC \ nL nH

Moves the print position from current position.

 $nL + nH \times 256$ : relative print position (-32,768–32,767)

#### Panel Button Commands -

**ESC c 5** *n* Enables or disables the panel buttons.

n = odd: Disable, n = even: Enable

#### Mechanism Control Commands -

GS V m Executes paper cut.

m = 0, "0", 1, "1"

**GS V m n** Executes paper cut after feeding **n** dots.

m = "A" or "B"

# Bit Image Commands

ESC \* m nL nH d1...dk

Stores bit image data in the print buffer.

 $nL + nH \times 256$ : number of horizontal dots

d: image data (column format)

willinge data (cordina romat)						
m	vertical density	horizontal density	vertical dots	number of <i>d</i> (= <i>k</i> )		
0	203/3 dpi	203/2 dpi	8 dots	nL + nH×256		
1	203/3 upi	203 dpi	8 dots	nL + m1x230		
32	203 dpi	203/2 dpi	24 dots	$3\times(nL+nH\times256)$		
33	203 upi	203 dpi	24 0018	3×(nL + n11×230)		

# **Graphics Commands**

GS (LpLpH 48 112 48 bx by 49 xL xH yL yH d1...dk

fn=112

GS 8 L p1 p2 p3 p4 48 112 48 bx by 49 xL xH yL yH d1...dk

Stores graphics data in the print buffer to the magnified size specified by bx, by.

bx = 1 or 2: horizontal magnification

bv = 1 or 2: vertical magnification

 $xL + xH \times 256$ : number of horizontal dots

 $vL + vH \times 256$ : number of vertical dots

GS(L204850 or GS(L20482

fn=50

Prints graphics data in standard mode.

# **NV Graphics Commands** -

GS D 48 67 48 kc1 kc2 48 49 d1...dk

Converts Windows BMP data and defines NV graphics data to key code (*kc1*, *kc2*).

**NV Graphics Commands (continued)** 

GS (L pL pH 48 67 48 kc1 kc2 1 xL xH yL yH 49 d1...dk or fn=67

GS 8 L p1 p2 p3 p4 48 <u>67</u> 48 kc1 kc2 1 xL xH yL yH 49 d1...dk

Defines NV graphics data to key code (kc1, kc2).

 $xL + xH \times 256$ : number of horizontal dots

 $vL + vH \times 256$ : number of vertical dots

#### GS (L 6 0 48 69 kc1 kc2 x y

fn=69

Prints NV graphics of key code (kc1, kc2) to the magnified size specified by **x**, **y**.

x = 1 or 2: horizontal magnification

y = 1 or 2: vertical magnification

#### GS(L204848 or GS(L20480

fn=48

Transmits the entire capacity of NV graphics area.

Send data: "70" + Size + NUL Size: "0"-"9999999" [bytes]

#### GS(L204851 or GS(L20483

fn=51

Transmits the unused capacity of NV graphics area.

Send data: "71" + Size + NUL

Size: "0"-"9999999" [bytes]

#### GS ( L 4 0 48 64 "KC"

fn=64

Transmits the key code list for defined NV graphics.

Send data: "7r" + Is + [kc1, kc2]... + NUL

Is = 65: following send data group exists, Is = 64: not exist [kc1,kc2]...: strings of key codes (0–80 bytes length)

#### GS ( L 5 0 48 65 "CLR"

fn=65

Deletes all NV graphics data.

#### GS (L 4 0 48 66 kc1 kc2

fn=66

Deletes NV graphics data of key code (kc1, kc2).

# **Download Graphics Commands**

#### GS D 48 83 48 kc1 kc2 48 49 d1...dk

fn=83

Converts Windows BMP data and defines download graphics data to key code (kc1, kc2).

GS (L pL pH 48 83 48 kc1 kc2 1 xL xH yL yH 49 d1...dk or fn=83

# GS 8 L p1 p2 p3 p4 48 <u>83</u> 48 kc1 kc2 1 xL xH yL yH 49 d1...dk

Defines download graphics data to key code (kc1, kc2).

 $xL + xH \times 256$ : number of horizontal dots

 $vL + vH \times 256$ : number of vertical dots

#### GS (L604885 kc1 kc2 x y

fn=85

Prints download graphics of key code (kc1, kc2) to the magnified size specified by x, y.

x = 1 or 2: horizontal magnification

y = 1 or 2: vertical magnification

#### GS(L204852 or GS(L20484

fn=52

Transmits the unused capacity of download graphics area.

Send data: "72" + Size + NUL

Size: "0"-"9999999" [bytes]

# **Download Graphics Commands (continued)**

#### GS (L 4 0 48 80 "KC"

fn=80

Transmits the key code list for download graphics.

Send data: "7s" + Is + [kc1, kc2]... + NUL

 $\underline{Is}$  = 65: following send data group exists,  $\underline{Is}$  = 64: not exist

[kc1,kc2]...: strings of key codes (0–80 bytes length)

#### GS ( L 5 0 48 81 "CLR"

fn=81

Deletes all download graphics data.

# GS (L 4 0 48 82 kc1 kc2

fn=82

Deletes download graphics data of key code (kc1, kc2).

# **Logo Print Commands**

- User-defined NV graphics can be set to top or bottom logo.
- Top logo is printed in the events enabled by **FS (E** (*fn*=64).
- Bottom logo is printed when paper cut command is executed.

# FS (E 6 0 62 2 kc1 kc2 a n

fn=62

Sets for top logo printing in NV memory.

kc1, kc2: user-defined key code for the logo

a: logo position ("0"=left, "1"=center, "2"=right)

n: number of lines to be removed after the logo print

# FS (E 5 0 63 2 kc1 kc2 a

fn=63

Sets for bottom logo printing in NV memory.

kc1, kc2: user-defined key code for the logo a: logo position ("0"=left, "1"=center, "2"=right)

# FS (EpLpH <u>64</u> 2 [a1 n1]...[ak nk]

fn=64

fn=65

fn=61

Enables or disables auto top logo printing.

Prints while feeding paper to cut position

Prints at power-on

Prints when Roll paper cover is closed

Prints when buffers are cleared in recovery from error

Prints after fed paper with Feed button

n = 0": Disables, n = 1": Enables

#### FS (E 4 0 65 2 an

Enables or disables logo printing temporarily.

a = 0: Top logo n = 0: Enable a = "1": Bottom logo n = "1": Disable

FS(E30612c

Transmits set values for top or bottom logo printing.

c = "0": Set values for top logo

c = "1": Set values for bottom logo

c = "2": Extended set values for top logo

c send data

"7H202" + kc1 + kc2 + pos + line + NUL "1" "7H212" +  $\frac{1}{kc1}$  +  $\frac{1}{kc2}$  +  $\frac{1}{pos}$  + NUL

"2" "7H222" + fa + fp + fc + fe + ff + NUL

kc1, kc2: user-defined key code for the logo

pos: logo position ("0"=left, "1"=center, "2"=right) *line*: number of removed lines after logo print ("0"-"255")

fa, fp, fc, fe, ff: flag for top logo print ("0"=disabled, "1"=enabled) fa:

while feeding to cut position

at power-on

when cover closed

when recovered from error with buffer clear

when fed paper by switch

#### **Logo Print Commands (continued)**

#### FS (E 6 0 60 2 c "CLR"

fn=60

Clears set values in NV memory for top or bottom logo printing.

c = "0": Top logo, c = "1": Bottom logo

#### Bar Code Commands —

#### GS k m d1...dk NUL

Prints bar code. **NUL** terminates the data.

m	bar code system	number of $d (=k)$
0	UPC-A	11 or 12
1	UPC-E	6, 7, 8, 11 or 12
2	JAN13 / EAN13	12 or 13
3	JAN8 / EAN8	7 or 8
4	CODE39	1 or more
5	ITF	even
6	CODABAR (NW-7)	2 or more

#### GS k m n d1...dn

Prints bar code. *n* specifies the data length.

m	bar code system	number of $d (=k)$
"A"	UPC-A	11 or 12
"B"	UPC-E	6, 7, 8, 11 or 12
"C"	JAN13 / EAN13	12 or 13
"D"	JAN8 / EAN8	7 or 8
"E"	CODE39	1 or more
"F"	ITF	even
"G"	CODABAR (NW-7)	2 or more
"H"	CODE93	1-255
"I"	CODE128	2-255
"J"	GS1-128	2-255
"K"	GS1 DataBar Omnidirectional	13
"L"	GS1 DataBar Truncated	13
"M"	GS1 DataBar Limited	13
"N"	GS1 DataBar Expanded	2-255

#### GS hn Sets bar code height to *n* dots.

GS w n Sets bar width of bar code.

n = 2-6 (thin-thick)

GS H n Selects print position of HRI characters.

n = 0, "0": Not printed

n = 1, "1": Above the bar code n = 2, "2": Below the bar code

n = 3, "3": Both above and below the bar code

GS f n Selects font for the HRI characters.

n = 0, "0": Font A, n = 1, "1": Font B

## Two-Dimensional Code Commands -

# GS (kpLpH cn fn [parameters]

Stores, prints symbol data, or configure the settings.

 $cn = 48 \cdot PDF417$ 

49: OR Code

50: MaxiCode

51: 2-dimensional GS1 DataBar

52: composite symbology

#### Two-Dimensional Code Commands (continued)

function		fn	cn				
1	iunction		48	49	50	51	52
Store s	ymbol data in	80	m	d1dl	k	m n d1dk	m a b d1dk
memor	у	80				( <b>m</b> =48)	
Print 2	D symbol	81			m	(m=48)	
Send 2I	O symbol size	82			m	(m=48)	
	columns	65	n	n1 n2	n		
	rows	66	n				
	module	67	n	n		n	n
	row height	68	n				
Setting	error correction	69	m n	n			
	options	70	m				
	maximum width	71				nL nH	nL nH
	font	72					n

[parameters] (blank = invalid command)  $\leftarrow$ 

Send data of **GS (k** (*fn*=82):

"7" + Id + X + 31 + Y + 31 + "1" + 31 + Fl + Ec + NUL

	number	per cn				
	of bytes	48	49	50	51	52
<u>Id</u>	1	"/"	"6"	"7"	"O"	"P"
X: horizontal dots	1-5	"0"-"99999"				
Y: vertical dots	1-5	"0"-"99999"				
<u>Fl</u> : flag	1	"0" = printable, "1" = not printable				
Ec: error code	0 or 4	N/A (0 byte) "0000"–"9999"				

#### Status Commands ————

#### DLE EOT n

Transmits real-time status as 1 byte.

n = 1: Printer status (binary: 0000xx00)

bit 2 = 1: Drawer kick-out connector pin 3: High

= 0: Drawer kick-out connector pin 3: Low

bit 3 = 1: in Offline, 0: in Online

n = 2: Offline cause status (0xx0xx00)

bit 2 = 1: Cover is open, 0: closed

bit 3 = 1: on feeding paper by switch, 0: not

bit 5 = 1: Printing stopped due to paper end, 0: not

bit 6 = 1: in Error state, 0: not

n = 3: Error cause status (0xx0x000)

bit 3 = 1: Autocutter error, 0: not

bit 5 = 1: Unrecoverable error, 0: not

bit 6 = 1: Automatically recoverable error, 0: not

n = 4: Paper end sensor status (0xx00000)

bit 5, 6 = 1: Paper end, 0: paper present

#### **Status Commands (continued)**

#### GS rn Transmits status specified by **n** as 1 byte after completion of prior print or command.

n = 1, "1": Paper sensor status

Status = 0: Paper end sensor: paper present

Status = 12: Paper end sensor: not present

n = 2, "2": Drawer kick-out connector status Status = 0: Drawer kick-out connector pin 3: Low

Status = 1: Drawer kick-out connector pin 3: High

GS a n Enables or disables basic ASB (Automatic Status Back).

bit of *n* Status (1: enable, 0: disable)

Drawer kick-out connector status

Online/offline status

Error status

Paper end sensor status

ASB status binary (x=0 or 1) first byte

0xx1 xx00

bit 2 = 1: Drawer kick-out connector pin 3: High

= 0: Drawer kick-out connector pin 3: Low

bit 3 = 1: in Offline, 0: in Online bit 5 = 1: Cover is open, 0: closed

bit 6 = 1: on feeding paper by switch, 0: not

0xx0 x000 2nd byte

bit 3 = 1: Autocutter error, 0: not

bit 5 = 1: Unrecoverable error, 0: not

bit 6 = 1: Automatically recoverable error, 0: not

0110 xx00 3rd byte

bit 2, 3 = 1: Paper end, 0: paper present

4th byte 0110 1111

# **Macro Function Commands –**

Starts or ends macro definition.

**GS** ^ rtm Executes defined macro.

repeat times

interval time (×100msec)

m = 0: repeat continuously

m = 1: repeat by pressing the Feed button

#### Miscellaneous Commands

ESC@ Initializes printer.

DLE ENO n

RT

Recovers from recoverable errors.

n = 1: Recovers and starts printing from the line where the error

RT

n = 2: Recovers after clearing both receive and print buffers

GS (D pL pH 20 [a1 b1]...[ak bk]

Enables or disables real-time command.

a = 1: **DLE DC4** (fn=1) b = 0, "0": Disable a = 2: **DLE DC4** (fn=2) b = 1, "1": Enable

ESC = nEnables or disables the printer device.

n = 1, 3: Enable, n = 0: Disable

# **Miscellaneous Commands (continued)**

#### ESC p m t1 t2

Outputs pulse to Drawer kick-out port.

m = 0, "0": connector pin 2, m = 1, "1": connector pin 5 t1: on time (×2ms), t2: off time (×2ms)

#### DLE DC4 1 mt

fn=1 RT

Outputs pulse to Drawer kick-out port in real-time.

m = 0: connector pin 2, m = 1: connector pin 5 t = 1-8: On time / Off time (×100 ms)

## GS ( H 6 0 48 48 d1 d2 d3 d4

fn=48

Transmits process ID specified by (**d1**, **d2**, **d3**, **d4**) after execution of prior print or command.

*d*=32–126: visible character Send data: 55 + 34 + *d*1 + *d*2 + *d*3 + *d*4 + NUL

#### **GS I** *n* Transmits printer ID or printer information.

ransimo printer is or printer information.			
n	information	send data	
1, "1"	Printer model ID	99	
2, "2"	Type ID	2: supported Multi-byte character	
		3: not supported	
35	Column emulation	"=#0"+NUL: normal mode	
	mode	"=#1"+NUL: 42 column mode	
65	Firmware version	95+strings+NUL	
		depends on firmware	
66	Manufacturer	95+"EPSON"+NUL	
67	Printer name	95+"TM-T20"+NUL	
68	Serial number	95+Serial number (10 bytes)+NUL	
69	Type of mounted	95+strings+NUL	
	additional fonts	depends on printers	
		ex.) "KANJI JAPANESE"	

# GS g 0 0 nL nH

#### Initialize resettable maintenance counter.

$nL + nH \times 256$	counter	unit
20	Number of lines fed	lines
21	Number of head energizations	times
22	Number of lines fed (after the print head was replaced)	lines
50	Number of autocutter operations	times
70	Duration of printer operation	hours

#### GS q 2 0 nL nH

Transmits value of resettable or cumulative maintenance counter.

counter.				
counter	unit	$nL + nH \times 256$		
counter	umt	resettable	cumulative	
Number of lines fed	lines	20	148	
Number of head energizations	times	21	149	
Number of lines fed (after the print head was replaced)	lines	22	150	
Number of autocutter operations	times	50	178	
Duration of printer operation	hours	70	198	

Send data: 95 + Value + NUL

*Value*: "0"-"999999999" (1-10 bytes length)

#### GS (K 2 0 50 m

fn=50

Selects print speed.

 $\boldsymbol{m}=0$ , "0": speed customized by **GS** ( **E** ( $\boldsymbol{fn}=5, \boldsymbol{a}=6$ )

m = 1-13 (slow-fast)

#### **Miscellaneous Commands (continued)**

#### ESC (A 3 0 97 nc

fn=97

Sounds optional external buzzer. n specifies the sound pattern. (n = 1-7) c specifies the repeat times. (c = 0: infinitely)

#### DLE DC4 3 0 0 0 1 0

fn=3 RT

Stops sounding optional external buzzer and transmits 4 bytes: 55, 84, 64, 0.

#### **DLE DC4 2 1 8**

fn=2 RT

Executes printer power-off sequence and transmits 3 bytes: 59, 48, 0.

## DLE DC4 8 1 3 20 1 6 2 8

fn=8 RT

Clears both receive and print buffers, and transmits 3 bytes: 55, 37, 0, as the Clear response.

# Page Mode Commands -

 Page mode is a free layout mode. Any print data can be put in any place on the print area and be printed by FF or ESC FF command.

**ESC L** Switches from standard mode to page mode.

**ESC S** Switches from page mode to standard mode.

FF Prints all data and switches from page mode to standard mode.

ESC FF Prints all data in page mode. After printing, the printer does not clear the buffered data, the print position, and values set by other commands.

#### ESC W xL xH yL yH dxL dxH dyL dyH

Sets the print area size and the logical origin in page mode.

 $xL + xH \times 256$ ,  $yL + yH \times 256$ : position of the logical origin  $dxL + dxH \times 256$ : width of the print area

 $dyL + dyH \times 256$ : height of the print area

**ESCT***n* Selects the print direction and the starting position in page mode.

n	print direction	starting position
0, "0"	left to right	upper left
1, "1"	bottom to top	lower left
2, "2"	right to left	lower right
3, "3"	top to bottom	upper right

## GS \$ nL nH

In page mode, moves the vertical print position from the starting position set by  $\mbox{\it ESC}\,\mbox{\it T}.$ 

 $nL + nH \times 256$ : absolute print position

#### GS \ nL nH

In page mode, moves the vertical print position from the current position.

 $nL + nH \times 256$ : relative print position (-32,768–32,767)

**CAN** Cancels print data in page mode.

#### Other Commands -

 For details, refer to TM-T20 product specification or ESC/POS Application Programming Guide for Paper Roll Printers.

• OC : obsolete command

#### **Character Commands**

**ESC!** Selects character font and styles.

#### **Miscellaneous Commands**

**GS P** Sets horizontal and vertical motion units.

**GS** ( A Executes test print.

# Bit Image Commands

**GS v 0** Prints raster bit image

OC

OC

OC

OC

OC

OC

OC

# **NV Bit Image Commands**

**FS q** Defines NV bit image in NV graphics area.

Prints NV bit image defined by FS q.

OC

# **Downloaded Bit Image Commands**

**GS \*** Defines downloaded bit image.

Prints downloaded bit image defined by GS \*

**Status Commands** 

FS<sub>p</sub>

GS/

**ESC u** Transmits peripheral device status as 1 byte.

**ESC v** Transmits status of paper sensor as 1 byte.

e. OC

#### **Mechanism Control Commands**

**ESC i** Executes paper cut.

**ESC m** Executes paper cut.

Executes paper

## **Customize Commands**

FS g 1 Writes data to NV user memory.

**FS g 2** Transmits data in NV user memory.

OC OC

#### **User Setup Commands**

**GS** ( **E** (*fn*=1) Enters User setting mode and transmits the mode change notice.

**GS ( E (fn=2)** Ends User setting mode and performs software reset.

**GS** ( **E** (*fn*=3) Sets memory switch setting values.

**GS** ( **E** (**fn**=4) Transmits memory switch setting values.

**GS** ( **E** (**fn**=5) Sets customized setting values.

**GS** ( **E** (*fn*=6) Transmits customized setting value.

**GS ( E (fn=**11) Sets configuration item for serial interface.

**GS (E (fn**=12) Transmits configuration value.

**GS** ( **E** (*fn*=15) Selects configuration item: Class of USB interface.

**GS** ( **E** (*fn*=16) Transmits configuration value for Class of USB interface.