# TM-T20II

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## ESC/POS Quick 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.

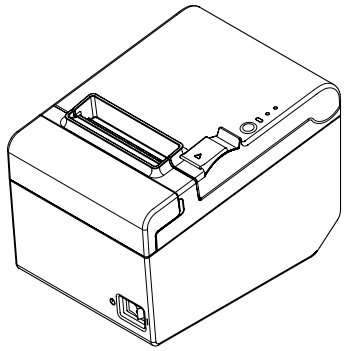
### Aim of the Quick Reference

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***×256) in the range 0–65,535.
- ***pL***, ***pH*** specify the number of parameters after ***pH*** as (***pL***+***pH***×256) in the range 1–65,535
- ***p1***, ***p2***, ***p3***, ***p4*** specify the number of parameters after ***p4*** as (***p1***+***p2***×256+***p3***×65,536+***p4***×16,777,216) in the range 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 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 |
| FS | 28 |
| GS | 29 |



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## Print Commands

- In page mode, these commands only move the print position and do not execute actual printing.

**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 – *n*** Selects 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(×1) to 7(×8)

**GS b *n*** Turns smoothing On or Off for magnified characters.
***n*** = odd: On, ***n*** = 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 mode.
***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 × x1)]...[xk d1...d(3 × xk)]***
Defines user-defined characters for character code: ***c1*** to ***c2*** of the current font.
***x*** = width of the defined pattern
***d1...d(3×x)*** = pattern data for a character

**ESC % *n*** Selects or cancels user-defined character set.
***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 |
| 16 | WPC1252 | 45 | WPC1250: Latin2 |
| 17 | PC866: Cyrillic #2 | 46 | WPC1251: Cyrillic |
| 18 | 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***×256: number of dots for left margin

**GS W *nL nH*** Sets print area width in standard mode.
***nL*** + ***nH***×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 $ *nL nH*** Moves print position from the left edge of print area.
***nL*** + ***nH***×256: absolute print position

**ESC \ *nL nH*** Moves the print position from current position.
***nL*** + ***nH***×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***×256: number of horizontal dots
***d***: image data (column format)

| *m* | vertical density | horizontal density | vertical dots | number of *d* (= *k*) |
|---|---|---|---|---|
| 0 | 203/3 dpi | 203/2 dpi | 8 dots | ***nL*** + ***nH***×256 |
| 1 | | 203 dpi | | |
| 32 | 203 dpi | 203/2 dpi | 24 dots | 3×(***nL*** + ***nH***×256) |
| 33 | | 203 dpi | | |

## Graphics Commands

**GS ( L *pL pH* 48 112 48 *bx by* 49 *xL xH yL yH d1...dk*** or 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
***by*** = 1 or 2: vertical magnification
***xL*** + ***xH***×256: number of horizontal dots
***yL*** + ***yH***×256: number of vertical dots

**GS ( L 2 0 48 50** or **GS ( L 2 0 48 2** fn=50

Prints graphics data in standard mode.

## NV Graphics Commands

**GS D 48 67 48 *kc1 kc2* 48 49 *d1...dk*** fn=67

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

**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 67 48 *kc1 kc2* 1 *xL xH yL yH* 49 *d1...dk***

Defines NV graphics data to key code (***kc1***, ***kc2***).
***xL*** + ***xH***×256: number of horizontal dots
***yL*** + ***yH***×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 ( L 2 0 48 48** or **GS ( L 2 0 48 0** fn=48

Transmits the entire capacity of NV graphics area.
Send data: "70" + *Size* + NUL
*Size*: "0"–"99999999" [bytes]

**GS ( L 2 0 48 51** or **GS ( L 2 0 48 3** fn=51

Transmits the unused capacity of NV graphics area.
Send data: "71" + *Size* + NUL
*Size*: "0"–"99999999" [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 83 48 *kc1 kc2* 1 *xL xH yL yH* 49 *d1...dk***

Defines download graphics data to key code (***kc1***, ***kc2***).
***xL*** + ***xH***×256: number of horizontal dots
***yL*** + ***yH***×256: number of vertical dots

**GS ( L 6 0 48 85 *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 ( L 2 0 48 52** or **GS ( L 2 0 48 4** fn=52

Transmits the unused capacity of download graphics area.
Send data: "72" + *Size* + NUL
*Size*: "0"–"99999999" [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
*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 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 ( E *pL pH* 64 2 *[a1 n1]...[ak nk]*** fn=64

Enables or disables auto top logo printing.

| *a* | function |
|---|---|
| 48 | Prints while feeding paper to cut position |
| 64 | Prints at power-on |
| 65 | Prints when Roll paper cover is closed |
| 66 | Prints when buffers are cleared in recovery from error |
| 67 | Prints after fed paper with Feed button |

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

**FS ( E 4 0 65 2 *a n*** fn=65

Enables or disables logo printing temporarily.
***a*** = "0": Top logo ***n*** = "0": Enable
***a*** = "1": Bottom logo ***n*** = "1": Disable

**FS ( E 3 0 61 2 *c*** fn=61

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 |
|---|---|
| "0" | "7H202" + *kc1* + *kc2* + *pos* + *line* + NUL |
| "1" | "7H212" + *kc1* + *kc2* + *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
*fp*: at power-on
*fc*: when cover closed
*fe*: when recovered from error with buffer clear
*ff*: 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 h *n*** 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 ( k *pL pH cn fn [parameters]***

Stores, prints symbol data, or configure the settings.

***cn*** = 48: PDF417
49: QR Code
50: MaxiCode
51: 2-dimensional GS1 DataBar
52: composite symbology

## Two-Dimensional Code Commands (continued)

| function | | *fn* | *cn* | | | | |
|---|---|---|---|---|---|---|---|
| | | | 48 | 49 | 50 | 51 | 52 |
| Store symbol data in memory | | 80 | *m d1...dk* (*m*=48) | | | *m n d1...dk* | *m a b d1...dk* |
| Print 2D symbol | | 81 | *m* (*m*=48) | | | | |
| Send 2D symbol size | | 82 | *m* (*m*=48) | | | | |
| Setting | columns | 65 | *n* | *n1 n2* | *n* | | |
| | rows | 66 | *n* | | | | |
| | module | 67 | *n* | *n* | | *n* | *n* |
| | row height | 68 | *n* | | | | |
| | error correction | 69 | *m n* | *n* | | | |
| | options | 70 | *m* | | | | |
| | maximum width | 71 | | | | *nL nH* | *nL nH* |
| | font | 72 | | | | | *n* |

***[parameters]*** (blank = invalid command) ↵

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

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

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

## Status Commands

**DLE EOT *n*** RT

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

**GS r *n*** 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

## Status Commands (continued)

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

| bit of *n* | Status (1: enable, 0: disable) |
|---|---|
| 0 | Drawer kick-out connector status |
| 1 | Online/offline status |
| 2 | Error status |
| 3 | 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 |
| 2nd byte | 0xx0 x000 |
| | bit 3 = 1: Autocutter error, 0: not |
| | bit 5 = 1: Unrecoverable error, 0: not |
| | bit 6 = 1: Automatically recoverable error, 0: not |
| 3rd byte | 0110 xx00 |
| | bit 2, 3 = 1: Paper end, 0: paper present |
| 4th byte | 0110 1111 |

## Macro Function Commands

**GS :** Starts or ends macro definition.

**GS ^ *r t m*** Executes defined macro.

***r***: repeat times
***t***: interval time (×100msec)
***m*** = 0: repeat continuously
***m*** = 1: repeat by pressing the Feed button

## Miscellaneous Commands

**ESC @** Initializes printer.

**DLE ENQ *n*** RT

Recovers from recoverable errors.

***n*** = 1: Recovers and starts printing from the line where the error occurred
***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 = *n*** Enables or disables the printer device.

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

**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 *m t*** 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 + ***d1*** + ***d2*** + ***d3*** + ***d4*** + NUL

**GS I *n***

Transmits printer ID or printer information.

| *n* | information | send data |
|---|---|---|
| 1, "1" | Printer model ID | 99 |
| 2, "2" | Type ID | 3: supported Multi-byte character<br>2: not supported |
| 35 | Column emulation mode | "=#0"+NUL: normal mode<br>"=#1"+NUL: 42 column mode |
| 65 | Firmware version | 95+*strings*+NUL<br>└ depends on firmware |
| 66 | Manufacturer | 95+"EPSON"+NUL |
| 67 | Printer name | 95+"TM-T20II"+NUL |
| 68 | Serial number | 95+Serial number (10 bytes)+NUL |
| 69 | Type of mounted additional fonts | 95+*strings*+NUL<br>└ depends on printers<br>ex.) "KANJI JAPANESE" |

**GS g 0 0 *nL nH***

Initialize resettable maintenance counter.

| ***nL*** + ***nH***×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 g 2 0 *nL nH***

Transmits value of resettable or cumulative maintenance counter.

| counter | unit | ***nL*** + ***nH***×256 | |
|---|---|---|---|
| | | 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"–"9999999999" (1–10 bytes length)

**GS ( K 2 0 48 *m*** fn=48

Selects print control mode.

***m*** = 1, "1": standard

***m*** = 2, "2": best for fence barcode

***m*** = 3, "3": best for ladder barcode

***m*** = 4, "4": best for 2-dimensional code



**GS ( K 2 0 50 *m*** fn=50

Selects print speed.

***m*** = 0, "0": speed customized by **GS ( E** (***fn*** = 5, ***a*** = 6)

***m*** = 1–13 (slow–fast)

**ESC ( A 3 0 97 *n c*** 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***×256, ***yL*** + ***yH***×256: position of the logical origin

***dxL*** + ***dxH***×256: width of the print area

***dyL*** + ***dyH***×256: height of the print area

**ESC T *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 **ESC T**.

***nL*** + ***nH***×256: absolute print position

**GS \ *nL nH*** In page mode, moves the vertical print position from the current position.

***nL*** + ***nH***×256: relative print position (-32,768–32,767)

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

## Other Commands

- For details, refer to *TM-T20II product specification or ESC/POS Command Reference*.
- 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

### NV Bit Image Commands

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

**FS p** Prints NV bit image defined by **FS q**. OC

### Downloaded Bit Image Commands

**GS *** Defines downloaded bit image. OC

**GS /** Prints downloaded bit image defined by **GS ***. OC

### Status Commands

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

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

### Mechanism Control Commands

**ESC i** Executes paper cut. OC

**ESC m** Executes paper cut. OC

### Customize Commands

**FS g 1** Writes data to NV user memory. OC

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