

GS h n

[Name]	Select bar code height			
[Format]	ASCII	GS	h	<i>n</i>
	Hex	1D	68	<i>n</i>
	Decimal	29	104	<i>n</i>
[Range]	$1 \leq n \leq 255$			
[Description]	Selects the height of the bar code.			
	<i>n</i> specifies the number of dots in the vertical direction.			
[Default]	<i>n</i> = 162			
[Reference]	GS k			

① GS k m d1...dk NUL ② GS k m n d1...dn

[Name]	Print bar code					
[Format]	①	ASCII	GS	k	<i>m</i>	<i>d1...dk</i> NUL
		Hex	1D	6B	<i>m</i>	<i>d1...dk</i> 00
		Decimal	29	107	<i>m</i>	<i>d1...dk</i> 0
	②	ASCII	GS	k	<i>m</i>	<i>n</i> <i>d1...dn</i>
		Hex	1D	6B	<i>m</i>	<i>n</i> <i>d1...dn</i>
		Decimal	29	107	<i>m</i>	<i>n</i> <i>d1...dn</i>
[Range]	① $0 \leq m \leq 6$ (<i>k</i> and <i>d</i> depends on the bar code system used)					
	② $65 \leq m \leq 73$ (<i>n</i> and <i>d</i> depends on the bar code system used)					

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 137	SHEET 136

[Description] Selects a bar code system and prints the bar code.

m selects a bar code system as follows:

m		Bar Code System	Number of Characters	Remarks
①	0	UPC-A	$11 \leq k \leq 12$	$48 \leq d \leq 57$
	1	UPC-E	$11 \leq k \leq 12$	$48 \leq d \leq 57$
	2	JAN13 (EAN13)	$12 \leq k \leq 13$	$48 \leq d \leq 57$
	3	JAN 8 (EAN8)	$7 \leq k \leq 8$	$48 \leq d \leq 57$
	4	CODE39	$1 \leq k$	$48 \leq d \leq 57, 65 \leq d \leq 90, 32, 36, 37, 43, 45, 46, 47$
	5	ITF	$1 \leq k$ (even number)	$48 \leq d \leq 57$
	6	CODABAR	$1 \leq k$	$48 \leq d \leq 57, 65 \leq d \leq 68, 36, 43, 45, 46, 47, 58$
②	65	UPC-A	$11 \leq n \leq 12$	$48 \leq d \leq 57$
	66	UPC-E	$11 \leq n \leq 12$	$48 \leq d \leq 57$
	67	JAN13 (EAN13)	$12 \leq n \leq 13$	$48 \leq d \leq 57$
	68	JAN 8 (EAN8)	$7 \leq n \leq 8$	$48 \leq d \leq 57$
	69	CODE39	$1 \leq n \leq 255$	$48 \leq d \leq 57, 65 \leq d \leq 90, 32, 36, 37, 43, 45, 46, 47$
	70	ITF	$1 \leq n \leq 255$ (even number)	$48 \leq d \leq 57$
	71	CODABAR	$1 \leq n \leq 255$	$48 \leq d \leq 57, 65 \leq d \leq 68, 36, 43, 45, 46, 47, 58$
	72	CODE93	$1 \leq n \leq 255$	$0 \leq d \leq 127$
	73	CODE128	$2 \leq n \leq 255$	$0 \leq d \leq 127$

[Details for ①]

- This command ends with a NUL code.
- When the bar code system used is UPC-A or UPC-E, the printer prints the bar code data after receiving 12 bytes bar code data and processes the following data as normal data.
- When the bar code system used is JAN13 (EAN13), the printer prints the bar code after receiving 13 bytes bar code data and processes the following data as normal data.
- When the bar code system used is JAN8 (EAN8), the printer prints the bar code after receiving 8 bytes bar code data and processes the following data as normal data.
- The number of data for ITF bar code must be even numbers. When an odd number of data is input, the printer ignores the last received data.

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 138	SHEET 137

[Details for ②]

- n indicates the number of bar code data, and the printer processes n bytes from the next character data as bar code data.
- If n is outside of the specified range, the printer stops command processing and processes the following data as normal data.

[Details in standard mode]

- If d is outside of the specified range, the printer only feeds paper and processes the following data as normal data.
- If the horizontal size exceeds printing area, the printer only feeds the paper.
- This command feeds as much paper as is required to print the bar code, regardless of the line spacing specified by **ESC 2** or **ESC 3**.
- This command is enabled only when no data exists in the print buffer. When data exists in the print buffer, the printer processes the data following m as normal data.
- After printing bar code, this command sets the print position to the beginning of the line.
- This command is not affected by print modes (emphasized, double-strike, underline, character size, white/black reverse printing, or 90° rotated character, etc.), except for upside-down printing mode.

[Details in page mode]

- This command develops bar code data in the print buffer, but does not print it. After processing bar code data, this command moves the print position to the right side dot of the bar code.
- If d is out of the specified range, the printer stops command processing and processes the following data as normal data. In this case the data buffer position does not change.
- If bar code width exceeds the printing area, the printer does not print the bar code but moves the data buffer position to the left side out of the printing area.
- Refer to Figure 3.12.3 for bar code data buffer position.

When CODE93 ($m = 72$) is used:

- The printer prints an HRI character (□) as start character at the beginning of the HRI character string.
- The printer prints an HRI character (□) as a stop character at the end of the HRI character string.

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 139	SHEET 138

- The printer prints HRI characters (■ + an alphabetic character) as a control character (<00>H to <1F>H and <7F>H):

Control character			HRI character	Control character			HRI character
ASCII	Hex	Decimal		ASCII	Hex	Decimal	
NUL	00	0	■ U	DLE	10	16	■ P
SOH	01	1	■ A	DC1	11	17	■ Q
STX	02	2	■ B	DC2	12	18	■ R
ETX	03	3	■ C	DC3	13	19	■ S
EOT	04	4	■ D	DC4	14	20	■ T
ENQ	05	5	■ E	NAK	15	21	■ U
ACK	06	6	■ F	SYN	16	22	■ V
BEL	07	7	■ G	ETB	17	23	■ W
BS	08	8	■ H	CAN	18	24	■ X
HT	09	9	■ I	EM	19	25	■ Y
LF	0A	10	■ J	SUB	1A	26	■ Z
VT	0B	11	■ K	ESC	1B	27	■ A
FF	0C	12	■ L	FS	1C	28	■ B
CR	0D	13	■ M	GS	1D	29	■ C
SO	0E	14	■ N	RS	1E	30	■ D
SI	0F	15	■ O	US	1F	31	■ E
				DEL	7F	127	■ T

[Example] Printing **GS k** 72 7 67 111 100 101 13 57 51



When CODE128 ($m = 73$) is used:

- Refer to Appendix J for the information of the CODE 128 bar code and its code table.
- When using the CODE 128 in this printer, take the following points into account for data transmission:
 - ① The top of the bar code data string must be code set selection character (any of CODE A, CODE B or CODE C) which selects the first code set.

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 140	SHEET 139

- ② Special characters are defined by combining two characters "{" and one character. The ASCII character "{" is defined by transmitting "{" twice consecutively.

Specific character	Transmit data		
	ASCII	Hex	Decimal
SHIFT	{S	7B, 53	123, 83
CODE A	{A	7B, 41	123, 65
CODE B	{B	7B, 42	123, 66
CODE C	{C	7B, 43	123, 67
FNC1	{1	7B, 31	123, 49
FNC2	{2	7B, 32	123, 50
FNC3	{3	7B, 33	123, 51
FNC4	{4	7B, 34	123, 52
"{"	{{	7B, 7B	123, 123

[Example] Example data for printing "No. 123456"

In this example, the printer first prints "No." using CODE B, then prints the following numbers using CODE C.

GS k 73 10 123 66 78 111 46 123 67 12 34 56



- If the top of the bar code data is not the code set selection character, the printer stops command processing and processes the following data as normal data.
- If combination of "{" and the following character does not apply any special character, the printer stops command processing and processes the following data as normal data.
- If the printer receives characters that cannot be used in the special code set, the printer stops command processing and processes the following data as normal data.
- The printer does not print HRI characters that correspond to the shift characters or code set selection characters.
- HRI character for the function character is space.
- HRI characters for the control character (<00>H to <1F>H and <7F>H) are space.

<Others> Be sure to keep spaces on both right and left sides of a bar code. (Spaces are different depending on the types of the bar code.)

[Reference] **GS H**, **GS f**, **GS h**, **GS w**, Appendix J

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 141	SHEET 140

GS r n

[Name] Transmit status

[Format] ASCII GS r n
 Hex 1D 72 n
 Decimal 29 114 n

[Range] $n = 1, 2, 49, 50$ [Description] Transmits the status specified by n as follows:

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

- [Details]
- When using a serial interface
 When DTR/DSR control is selected, the printer transmits only 1 byte after confirming the host is ready to receive data (DSR signal is SPACE). If the host computer is not ready to receive data (DSR signal is MARK), the printer waits until the host is ready.
 When XON/XOFF control is selected, the printer transmits only 1 byte without confirming the condition of the DSR signal.
 - This command is executed when the data in the receive buffer is developed. Therefore, there may be a time lag between receiving this command and transmitting the status, depending on the receive buffer status.
 - When Auto Status Back (ASB) is enabled using **GS a**, the status transmitted by **GS r** and the ASB status must be differentiated using the table in Appendix G.
 - The status types to be transmitted are shown below:

Paper sensor status ($n = 1, 49$):

Bit	Off/On	Hex	Decimal	Status for ASB
0, 1	Off	00	0	Paper roll near-end sensor: paper adequate.
	On	03	3	Paper roll near-end sensor: paper near end.
2, 3	Off	00	0	Paper roll end sensor: paper adequate.
	On	(0C)	(12)	Paper roll end sensor: paper near end.
4	Off	00	0	Not used. Fixed to Off.
5, 6	-	-	-	Undefined.
7	Off	00	0	Not used. Fixed to Off.

Bits 2 and 3: When the paper end sensor detects a paper end, the printer goes offline and does not execute this command. Therefore, bits 2 and 3 do not transmit the status of paper end.

EPSON	TITLE TM-T88III series Specification (STANDARD)	SHEET REVISION B	NO.	
			NEXT 142	SHEET 141