

YJ-350T/360T Use's Manual



CONTENTS

1. OUTLINE

1-1. FEATURE

1-2. APPLICATION

2. OPERATION

2-1. SPECIFICATION

2-2. EXPLANATION OF EACH OTHER

2-3. SELF-TEST

2-4. DUMP MODE

3. CONNECTIONS

3-1. SERIAL INTERFACE

3-2. PARRALL INTERFACE

3-3 THE OTHERS

4. OUTER APPEARANCE

4-1. YJ-350T

4-2. YJ-360T

5. COMMAND (EPSON TM-T88II)

1.OUTLINE

These printers are thermal method can be equipped in rack and stand alone on desk. for various data communication, POS terminal and various system.

Prior to actual use, please read this instruction manual carefully for your correct understanding.

1-1.Feature

- Ultra small-sized rack mounting thermal printing
- Extremely light weight
- High speed printing
- Paper end detecting and auto loading
- A little noise in printing
- No ribbon type
- Confirming to RS 232c and TTL and Parallel interface.
- 24 and 32, 42 columns are available.
- Self-test and Hex decimal (dump mode) applied
- Graphic printing and bar code function are available.

1-2.APPLICATION

- Instruments and inspection system
- INDICATOR and scale
- F. A. system
- A receipt
- POS SYSTEM
- Parking system
- Various data recording

2. OPERATION

2-1. SPECIFICATION

항목	사양	
	YJ-350T	YJ-360T
DESIGN	PANEL TYPE	DESK TYPE
PRINT METHOD	THERMAL MACHANISM	
COLUMNS	24/32/36/42 ON ENGLISH	
FONT SIZE	36/42COL ENGLISH: 9x24, KOREAN: 18x24 24/32COL ENGLISH: 12x24, KOREAN: 24x24	
DOT DENSITY	200 DPI(8dot/mm)	
TOTAL DOTS	384 dots/line	
PRINT SPEED	60mm/sec	60mm/sec
PRINT PAPER	57mmx50mm ROLL PAPER	57mmx60mm ROLL PAPER
PRINT WIDTH	48.0mm	
DATA BUFFER	8Kbyte	
INTERFACE	RS-232C SERIAL (BAUDRATE : 2400/9600/19200/115200bps selector)	
	CENTRONICS PARALLEL	
	USB	
INPUT POWER	DC +12 ~ 24V, 1.5A (OPTION : External AC Adaptor 110V/220V)	
SIZE (mm)	119Wx89Dx130H	110Wx165Dx85H

2-2. EXPLANATION EACH OTHER

● FUNCTION OF YJ-350T

ITEM	FUNCTION
RED LED	POWER INDICATOR. POWER ON, WHEN LIGHTING LAMP.
GREEN LED	INDICATOR "ON-LINE" <ul style="list-style-type: none"> ● ON LINE (STANDBY PRINTING.) ● LAMP OFF(NOT TO PRINT). ● LED FLASHING, WHEN NO PAPER
FEED S/W	PRESS TO ADVANCE PAPER

● FUNCTION OF YJ-360T

ITEM	FUNCTION
GREEN LED	ON- LINE INDICATOR <ul style="list-style-type: none"> ● ON LINE , WHEN LED LIGHTING.. ● NOT TO PRINT, WHEN LED OFF. ● LED FLASHING, WHEN NO PAPER
ON-LINE S/W	OPERATING ON-LINE AND OFF-LINE <ul style="list-style-type: none"> ● WHEN ONLY OFF- LINE, CAN ADVANCE PAPPER ● PRINT, WHEN ONLY ON-LINE SETTING
RED LED	INDICATOR "FEEDING MODE AND POWER ON".
FEED S/W	ADVANCEING PAPER

2-3. SELF TEST

The self -test mode checks the printers control circuit function, setting parameter, software version, and printer quality.

- ① Before running the self -test, make sure there is sufficient paper.
- ② On pressing FEED S/W(YJ-350T) or ONLINE S/W(YJ-360T), and power ON, starting the self-test.
- ③ Printer becomes ready to receive data from the host.

2-5.DUMP MODE

Dump mode checks whether printer receives data correctly from the host or not.

- ① Before running the self -test, make sure there is sufficient paper.
- ② On pressing FEED S/W(YJ-350T) or ONLINE S/W(YJ-360T), and power ON, starting the self-test.
- ③ After ending the self-test, continually press FEED S/W (YJ-350T) or ONLINE s/w(YJ-360T), Then print “**[HEX DUMP PRINT START]**” after 2 seconds.
- ④ Thought you don't touch any s/w, the printer take out HEXA mode changed data from host
- ⑤ If power off, printer “s recovered to normal mode

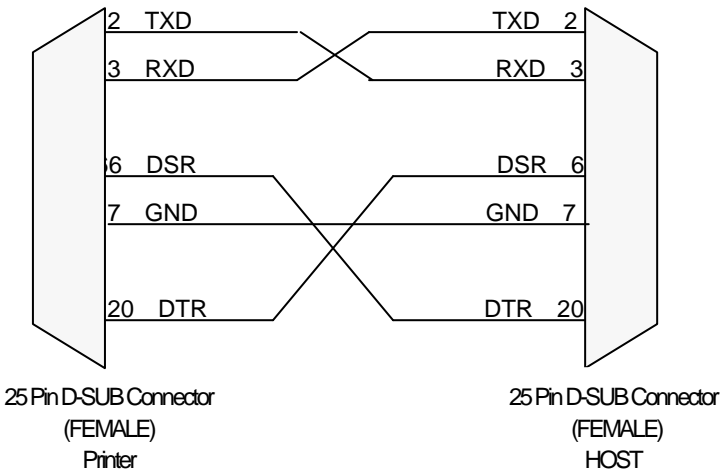
제3장. CONNECTIONS

3-1. Serial interface

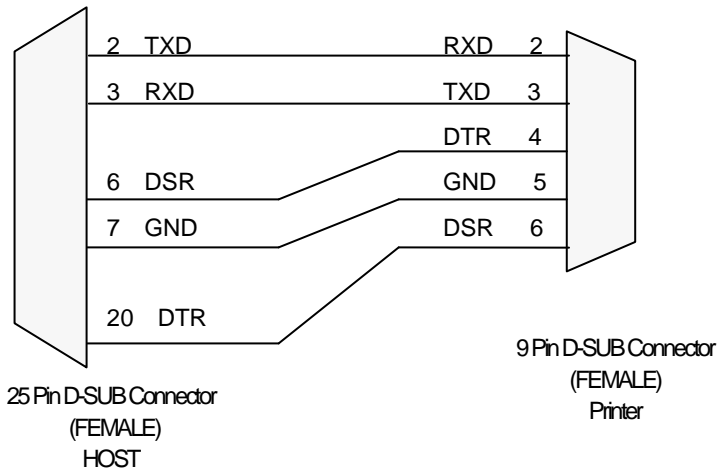
1) Serial(RS-232C)

Data Transmission	RS-232C Asynchronous
Handshaking	DTR/DSR or XON/XOFF control
Signal Level	MARK = -3 ~ -15V : "1" SPACE = +3 ~ +15V : "0"
Baud Rate	9600/19200bps (Default : 9600bps)
Bit Length	8 bits
Parity	None
Stop Bits	1 Stop
Connector	D-SUB 25 MALE

2) Interface Connection



- Handshaking 01 XON/XOFF 시 DSR/DTR Line is not available.
- On no paper , 0x07 has send on 2 times 2, and 0x11(XON) has send on refreshing paper.



3) Interface Connector

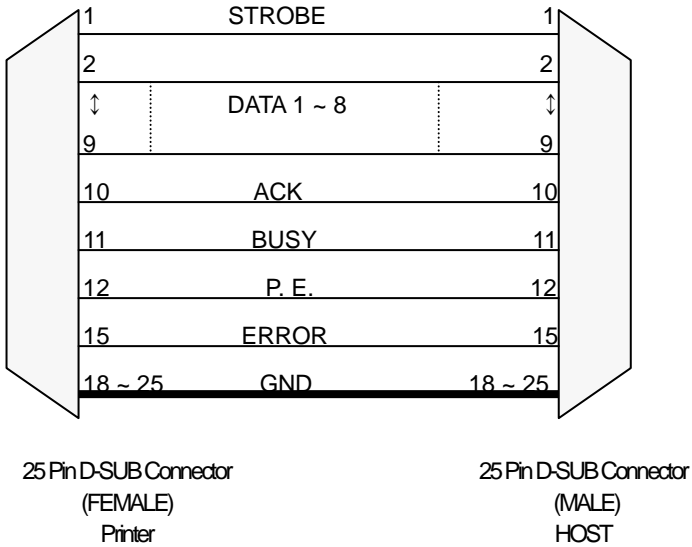
Pin	SIG.	DIRCTION	FUNCTION
2	TXD	OUT	Transmitter data
3	RXD	IN	Receive data
6	DSR	IN	<ul style="list-style-type: none"> ● Indicate Whether host could receive data or not . ● Can do it on SPACE , not do it on MARK ● Can operating on DSR/DTR Handshaking, printer transmitter data after checking the signal. ● Use it on Hardware Handshaking.
7	GND	-	Signal Ground
20	DTR	OUT	<ul style="list-style-type: none"> ● Indicate Whether printer could receive data or not. ● Can do it on SPACE , not do it on MARK, when setting DTR/DSR control ● It's on MARK as bellows; <ul style="list-style-type: none"> - Full buffer in printer - Operating on error - On self-test

3-2.Parallel interface

1) Parallel

Data Transmission	8-bit parallel
Handshaking	STROBE and BUSY or ACK
Connector	D-SUB 25 MALE

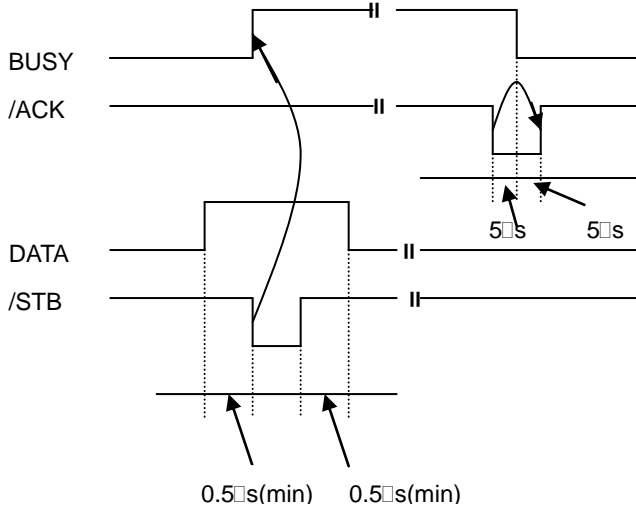
2) Interface Connection



3) Interface Connector and function

No	SIGNAL	DIR.	FUNCTION
1	/STROBE	IN	<ul style="list-style-type: none"> ● STROBE Pulse is occurred on reading data. ● HIGH on normal , LOW on reading data
2	DATA0	IN	<ul style="list-style-type: none"> ● Parallel data bits ● “1”on HIGH, “0”on LOW.
3	DATA1	IN	
4	DATA2	IN	
5	DATA3	IN	
6	DATA4	IN	
7	DATA5	IN	
8	DATA6	IN	
9	DATA7	IN	
10	ACK	OUT	<ul style="list-style-type: none"> ● Ready signal to receive data. ● HIGH on normal , LOW on operatong.
11	BUSY	OUT	<ul style="list-style-type: none"> ● Indicate Whether printer could receive data or not. ● Can not receive on HIGH, can do it on LOW
12	PE	OUT	<ul style="list-style-type: none"> ● Paper is or not ● No paper on HIGH, set it on LOW.
13	SLCT	OUT	<ul style="list-style-type: none"> ● Whether printer is ON-LINE or not . (NC)
14	/AUTO FD	IN	<ul style="list-style-type: none"> ● 1Line space is advanced on auto-feed. (NC)
15	/ERROR	OUT	<ul style="list-style-type: none"> ● Checking printer “ ERROR”
16	/INIT	IN	<ul style="list-style-type: none"> ● Hardware Reset in printer.(NC)
17	SLCT IN	IN	<ul style="list-style-type: none"> ● Select printer on LOW. (NC)
18~25	GND	-	Signal Ground

4) Signal Timing Chart



3-3. THE OTHERS

1) DIP SW DEFINE

- YJ-350T

SW No.		Define	
1	2	Serial Baud Rate	
OFF	OFF	9600bps *	
ON	OFF	19200bps	
OFF	ON	115200bps	
ON	ON	2400bps	
3		Korean Type	
OFF		WANSUNG *	
ON		JOHAP	
4		Emulation	
OFF		EPSON *	
ON		CITIZEN	
5	6	Column	
OFF	OFF	32Columns *	
ON	OFF	42Columns	
OFF	ON	24Columns	
ON	ON	36Columns	
7		8	Serial Parity
OFF	OFF	None Parity *	
ON	OFF	Odd Parity	
ON	ON	Even Parity	

* Default mode on factory - out

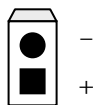
- YJ-360T

SW No.		Define
1	2	Serial Baud Rate
OFF	OFF	9600bps *
ON	OFF	19200bps
OFF	ON	115200bps
ON	ON	2400bps
3		Korean Type
OFF		완성형 *
ON		조합형
4		Emulation
OFF		EPSON *
ON		CITIZEN
5	6	Column
OFF	OFF	32Columns *
ON	OFF	42Columns
OFF	ON	24Columns
ON	ON	36Columns

* Default mode on factory - out

2) POWER CONNECTOR

- YJ-350T



DC +12V 2A

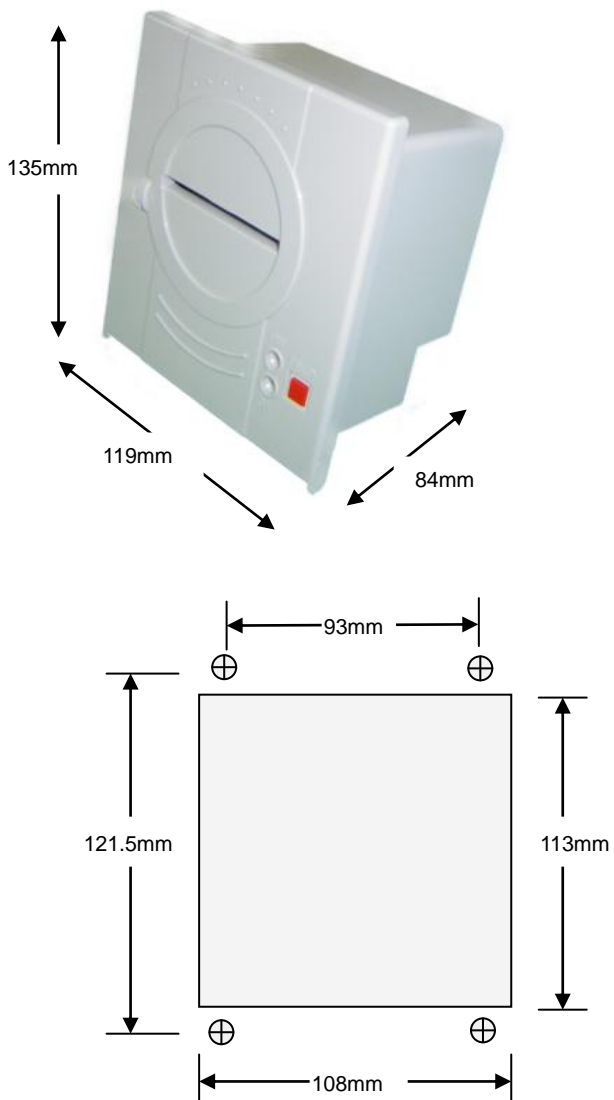
- YJ-360T



DC +12V 2A

4. OUTER APPARANCE

4-1. YJ-350T



4-2. YJ-360T



5. COMMAND SUMMARY (EPSON TM-T88II)

Command	Name
HT	Horizontal tab
LF	Print and line feed
FF	(1)Print and return (2)Print and feed label to print starting position
CAN	Cancel print data
ESC FF	Print data in label mode
ESC ! n	Select print modes
ESC \$ nL nH	Set absolute print position
ESC * m nL nH[d1...dk]	Select bit-image mode
ESC – n	Turn underline mode on/off
ESC 2	Set 1mm line spacing
ESC 3 n	Set line spacing
ESC @	Initialize printer
ESC J n	Print and feed paper
ESC R n	Select international character set
ESC d n	Print and feed paper n lines
ESC { n	Set/cancel upside-down character printing
GS ! n	Select character size
GS B n	Turn white/black reverse printing mode
GS L nL nH	Set left margin
GS h n	Select height of bar code
GS k m[d1...dk] NUL	Print bar code
GS k m n[d1...dn]	Print bar code
GS w n	Select bar code width

FF (Print and return, Print and feed label to print starting position)

[Format] ASCII : FF
Hex : 0C
Decimal: 12

[Description] (1) Standard mode : Print data in the buffer and feed
the paper to the cutting line.
(2) Label mode : Print data in the print buffer and moves to the
starting position of next page.

[Reference] DC2 m s nL nH , DC2 E

[EX] Data : "1234567890",0Ch,"ABCDEF",0Ah
Print :

1234567890

ABCDEF

CAN (Cancel print data)

[Format] ASCII : CAN
Hex : 18
Decimal : 24

[Description] Cancel print data in current line.

[EX] Data : "12345",18h,"ABCDE",0Ah
Print :

ABCDE

ESC FF (Print data in label mode)

[Format] ASCII : ESC FF
Hex : 1B 0C
Decimal : 27 12

[Description] In the Label mode, Print the data in the print
buffer and moves to starting position of next pages.

[Reference] FF, DC2 E, DC2 m s nL nH

ESC ! n (Select print modes)

[Format] ASCII : ESC ! n
 Hex : 1B 21 n
 Decimal : 27 32 n

[Description]

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font A(12x24) selected.
	On	01	1	Character font B(9x24) selected.
1				
2				
3				
4	Off	00	0	Double-height mode not selected
	On	10	16	Double-height mode selected
5	Off	00	0	Double-width mode not selected
	On	20	32	Double-width mode selected
6				
7	Off	00	0	Underline mode not selected
	On	80	128	Underline mode selected

[EX] Data : "12",1Bh,21h,01h,"34",1Bh,21h,10h,"56",1Bh,21h,
 20h,"78",1Bh,21h,80h,"90",0Ah

Print :

12₃₄56⁷⁸90

ESC FF (Print data in label mode)

[Format] ASCII : ESC FF
 Hex : 1B 0C
 Decimal : 27 12

[Description] In the Label mode,Print the data in the print
 buffer and moves to starting position of next pages.

[Reference] FF, DC2 E,DC2 m s nL nH

ESC ! n (Select print modes)

[Format] ASCII : ESC ! n
 Hex : 1B 21 n
 Decimal : 27 32 n

[Description]

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font A(12x24) selected.
	On	01	1	Character font B(9x24) selected.
1				
2				
3				
4	Off	00	0	Double-height mode not selected
	On	10	16	Double-height mode selected
5	Off	00	0	Double-width mode not selected
	On	20	32	Double-width mode selected
6				
7	Off	00	0	Underline mode not selected
	On	80	128	Underline mode selected

[EX] Data : "12",1Bh,21h,01h,"34",1Bh,21h,10h,"56",1Bh,21h,
 20h,"78",1Bh,21h,80h,"90",0Ah

Print :

12₃₄56⁷⁸90

ESC FF (Print data in label mode)

[Format] ASCII : ESC FF
 Hex : 1B 0C
 Decimal : 27 12

[Description] In the Label mode,Print the data in the print
 buffer and moves to starting position of next pages.

[Reference] FF, DC2 E,DC2 m s nL nH

ESC ! n (Select print modes)

[Format] ASCII : ESC ! n
 Hex : 1B 21 n
 Decimal : 27 32 n

[Description]

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font A(12x24) selected.
	On	01	1	Character font B(9x24) selected.
1				
2				
3				
4	Off	00	0	Double-height mode not selected
	On	10	16	Double-height mode selected
5	Off	00	0	Double-width mode not selected
	On	20	32	Double-width mode selected
6				
7	Off	00	0	Underline mode not selected
	On	80	128	Underline mode selected

[EX] Data : "12",1Bh,21h,01h,"34",1Bh,21h,10h,"56",1Bh,21h,
 20h,"78",1Bh,21h,80h,"90",0Ah
Print :

12³⁴56⁷⁸90

ESC \$ nL nH (Set absolute print position)

[Format] ASCII : ESC \$ nL nH
 Hex : 1b 24 nL nH
 Decimal : 27 36 nL nH

[Description] Set the print position of beginning(Left).

[nL + nH x 256] x 0.125 mm

0 <= n < 300

Default : 0

[Reference] GS L nL nH

[EX] Data : "1234567890",0Ah,1Bh,"\$,",3Ch,00,"1234",0Ah
 Print :

1234567890
 1234

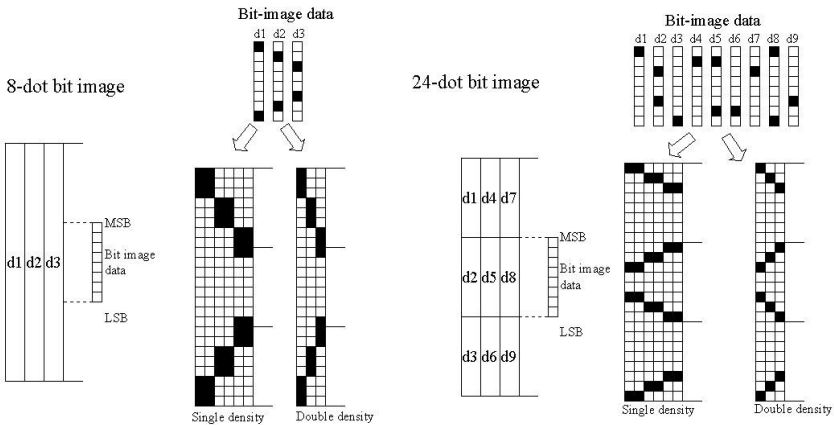
ESC * m nL nH[d1...dk] (Select bit-image mode)

[Format] ASCII : ESC * m nL nH [d1...dk]
 Hex : 1B 2A m nL nH [d1...dk]
 Decimal : 27 42 m nL nH [d1...dk]

[Description] Select bit-image mode using n for the number of dots specified by nL and nH, as follows;
 Print bit-image mode continuous :

- (1) Set the line spacing to 24
- (2) Select bit-image mode
- (3) LF(Line feed)
- (4) Repeat (2) and (3).

m	Mode	Vertical Direction	Horizontal Direction
		No. of Dots	Number of Data(k)
0	8-dot single-density	8	$nL + nH \times 256$
1	8-dot double-density	8	$nL + nH \times 256$
32	24-dot single-density	24	$(nL + nH \times 256) \times 3$
33	24-dot double-density	24	$(nL + nH \times 256) \times 3$



ESC – n (Turn underline mode on/off)

[Format] ASCII : ESC - n
 Hex : 1B 2D n
 Decimal : 27 45 n

[Description] Turns underline mode on or off, based on the following values of n.

N	Function
0,48	Turns off underline mode
1,49	Turns on underline mode(1-dot thick)
2,50	Turns on underline mode(2-dot thick)

[Reference] ESC ! n

[EX] Data : "123",1Bh,"-",01,"456",1Bh,"-",00,"
 789",0Ah
 Print :

123456789

ESC 2 (Set default line spacing)

[Format] ASCII : ESC 2
 Hex : 1B 32
 Decimal : 27 50

[Description] Set the line spacing to 32(default) for each lines.

[Reference] ESC 3 n

ESC 3 n (Set line spacing)

[Format] ASCII : ESC 3 n
 Hex : 1B 33 n
 Decimal : 27 51 n

[Description] Set the line spacing.

Spacing : n x 0.125mm(1 dot size)

Range : 24 <= n <= 255

Default : 32

[Reference] ESC 2

[EX] Data : "12345",0Ah,1Bh,"3",40h,"12345",0Ah,
1Bh,"@",",67890",0Ah

12345

12345

67890

ESC @(Initialize printer)

[Format] ASCII : ESC @

Hex : 1B 40

Decimal : 27 64

[Description] Clear the data in the print buffer and resets

the printer mode (to the same state as when the
power is turned on)

[EX] Data : 1Bh,"-",01,"12345",0Ah,"12345",1Bh,"@",",
ABCD",0Ah

Print :

12345

ABCD

ESC J n(Print and feed paper)

[Format] ASCII : ESC J n
Hex : 1B 4a n
Decimal : 27 74 n

[Description] Print the data in the print buffer and feeds nx0.125mm.

[Reference] ESC d n

[EX] Data : "12345",1Bh,4Ah,40h,"ABCD",0Ah
Print :

12345

ABCD

ESC R n(Select international character set)

[Format] ASCII : ESC R n
Hex : 1B 52 n
Decimal : 27 82 n

[Description] n selects an international character set from the following table.

[EX]

N	Character Set	N	Character Set
0	U.S.A.	6	Italy
1	France	7	Spain
2	Germany	8	Japan
3	U.K.	9	Norway
4	Denmark I	10	Denmark II
5	Sweden	11	Korea

Default : n = 0 (In case of no external ROM))

Default : n = 8 (In case of external Japanese ROM)

Default : n = 11(In case of external Korean ROM)

Default : n = 0(In case of external other cuntry ROM)

ESC d n(Print and feed paper n lines)

[Format] ASCII : ESC d n
 Hex : 1B 64 n
 Decimal : 27 100 n

[Description] Print the data in the print buffer and feed
 the paper n lines..

[Reference] ESC J n

[EX] Data : "12345",0Ah,1Bh,64h,02h,"ABCD",0Ah
 Print :

12345

ABCD

ESC { n(Set/cancel upside-down character printing)

[Format] ASCII : ESC { n
 Hex : 1B 7B n
 Decimal : 27 123 n

[Description] Sets or cancel the Upside-down characters.
 (Valid only when input at the beginning of a line.)
 bit of n = 1(Sets), bit of n = 0(Cancel).
 Default = 0

[EX] Data : "12345",0Ah,1Bh,7Bh,01h,"ABCDE",0Ah
 printed:

GS ! n (Select character size)

When upside-down
character printing
is canceled.

1	2	3	4	5	6	7	8	9	0
A	B	C	D	E	F	G	H		

When upside-down
character printing
is set.

0	6	8	7	9	5	6	7	8	9
H	G	F	E	D	C	B	A		



Paper feed direction

[Format] ASCII : GS ! n
Hex : 1D 21 n
Decimal : 29 33 n

[Description] Selects the character width/height.

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Double-height mode not selected
	On	01	1	Double-height mode selected
4	Off	00	0	Double-width mode not selected
	On	10	16	Double-width mode selected

[Reference] ESC ! n

[EX] Data : "12",1Dh,21h,01,"34",1Dh,21h,10h,"56",1Dh,
21h,11h,"78",0Ah

Print:

12345678

GS B n (Turn white/black reverse printing mode)

[Format] ASCII : GS B n
Hex : 1D 42 n
Decimal : 29 66 n

[EX] Turns on or off white/black reverse printing mode.

If, n=0 , white/black reverse printing mode is turned off(Default).

If, n=1 , white/black reverse printing mode is turned on.

[EX] Data : "12345",1Dh,42h,01h,"ABCD",1Dh,42h,00h,"67890",0Ah
Print :

12345**ABCD**67890

GS L nL nH (Set left margin)

[Format] ASCII : GS L nL nH
Hex : 1D 4C nL nH
Decimal : 29 76 nL nH

[Description] Sets the left margin.

Sets the left margin using nL and nH :

$[nL + nH \times 256] \times 0.125 \text{ mm}$

Range : $0 \leq n < 300$ (default = 0)

[Reference] ESC \$ nL nH

[EX] Data : "1234567890",0Ah,1Dh,4Ch,50h,00h,"ABCD",
0Ah,"1234",0A
Print :

1234567890
ABCD
1234

GS h n (Select height of bar code)

[Format] ASCII : GS h n
Hex : 1D 68 n
Decimal : 29 104 n

[Description] Selects the height of bar code.
Height of bar code : n x 0.125 mm
Range : $0 \leq n < 255$ (default :100)

[Reference] GS w n, GS H n, GS k m[d1...dk] NUL, GS k m n[d1...dn]

GS k m[d1...dk] NUL (Print bar code)

[Format] ASCII : GS k m [d1...dn] NUL
Hex : 1D 6B m [d1...dn] 00
Decimal : 29 107 m [d1...dn] 0

[Description] Selects a bar code system and prints the bar code.
M selects a bar code system as follows;

Bar Code	Number of characters	Remarks
UPC-A	$11 \leq k \leq 12$	$48 \leq d \leq 57$
UPC-E	$11 \leq k \leq 12$	$48 \leq d \leq 57$
EAN13(JAN)	$12 \leq k \leq 13$	$48 \leq d \leq 57$
EAN8(JAN)	$7 \leq k \leq 8$	$48 \leq d \leq 57$
CODE39	$1 \leq k$	$48 \leq d \leq 57, 65 \leq d \leq 90, 32, 36, 37, 43, 45, 46, 47$
ITF	$1 \leq k$	$48 \leq d \leq 57$
CODABAR(N W-7)	$1 \leq k$	$48 \leq d \leq 57, 65 \leq d \leq 68$ $36, 43, 45, 46, 47, 58$
CODE128A	$2 \leq k$	$0 \leq d \leq 127$
CODE128B	$2 \leq k$	$0 \leq d \leq 127$
CODE128C	$2 \leq k$	$0 \leq d \leq 127$

[Reference] GS H n, GS w n, GS h n, GS k m n[d1...dn]

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	SP	0	@	P	'	p	Ç	É	á	▨	ℓ	⊥	α	≡
1	!	1	A	Q	a	q	ü	æ	í	▨	⊥	⊥	β	±
2	"	2	B	R	b	r	é	Æ	ó	▨	⊥	⊥	Γ	≥
3	£	3	C	S	c	s	â	ô	ú	|	⊥	⊥	π	≤
4	\$	4	D	T	d	t	ä	ö	ñ	⊥	-	ℓ	Σ	∫
5	%	5	E	U	e	u	à	ò	Ñ	≠	+	⊥	o	J
6	&	6	F	V	f	v	å	û	ª	||	⊥	⊥	μ	÷
7	'	7	G	W	g	w	ç	ù	º	⊥	||	||	τ	≈
8	(	8	H	X	h	x	ê	ÿ	¿	⊥	⊥	⊥	Φ	◦
9	)	9	I	Y	i	y	ë	Ö	⊥	||	⊥	⊥	θ	·
A	*	:	J	Z	j	z	è	Ü	⊥	||	⊥	⊥	Ω	·
B	+	;	K	[	k	{	ï	ϕ	½	⊥	⊥	■	δ	√
C	,	<	L	\	l	|	î	£	¼	⊥	||	■	∞	ⁿ
D	-	=	M	]	m	}	ì	¥	ì	⊥	=	■	∅	²
E	.	>	N	^	n	~	Ä	Pt	«	⊥	⊥	■	ε	■
F	/	?	O	_	o	SP	Å	f	»	⊥	⊥	■	n	