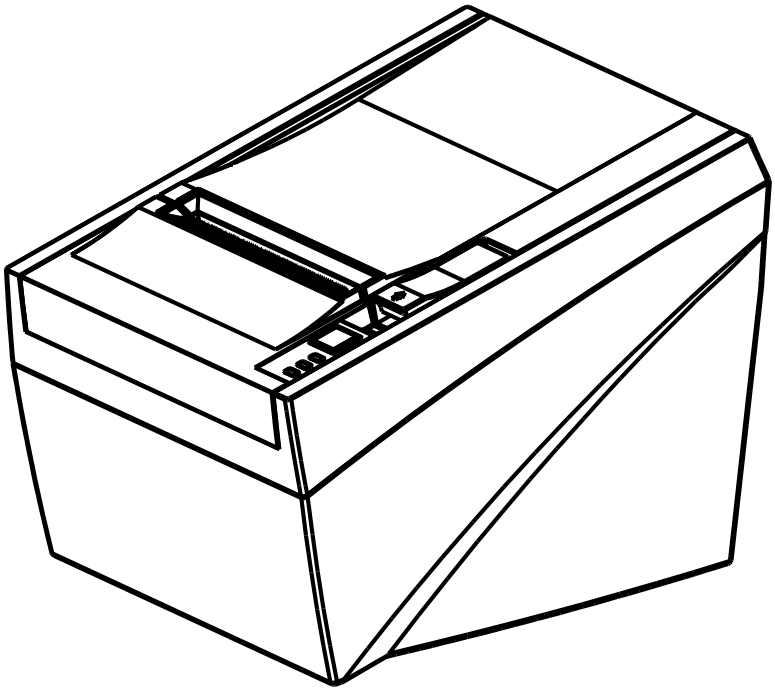
BIXOLON®

User's Manual

SRP-330

Thermal Printer

Rev. 1.05



http://www.bixolon.com

■ Safety Precautions

In using the present appliance, please keep the following safety regulations in order to prevent any hazard or material damage.

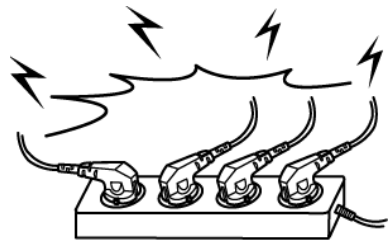
WARNING

Violating following instructions can cause serious injury or death.

Do not plug several products in one multi-outlet.

- This can provoke over-heating and a fire.
- If the plug is wet or dirty, dry or wipe it before usage.
- If the plug does not fit perfectly with the outlet, do not plug in.
- Be sure to use only standardized multi-outlets.

PROHIBITED



You must use only the supplied adapter.

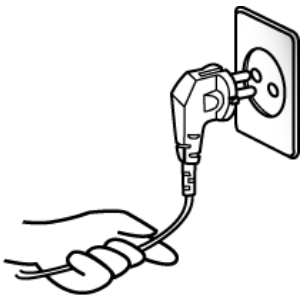
- It is dangerous to use other adapters.

PROHIBITED

Do not pull the cable to unplug.

- This can damage the cable, which is the origin of a fire or a breakdown of the printer.

PROHIBITED



Keep the plastic bag out of children's reach.

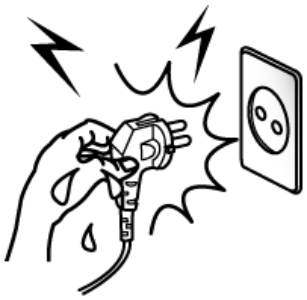
- If not, a child may put the bag on his head.

PROHIBITED

Do not plug in or unplug with your hands wet.

- You can be electrocuted.

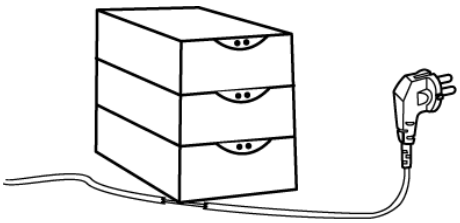
PROHIBITED



Do not bend the cable by force or leave it under any heavy object.

- A damaged cable can cause a fire.

PROHIBITED



CAUTION

Violating following instructions can cause slight wound or damage the appliance.

If you observe a strange smoke, odor or noise from the printer, unplug it before taking following measures.

- Switch off the printer and unplug the set from the mains.
- After the disappearance of the smoke, call your dealer to repair it.

TO UNPLUG

Keep the desiccant out of children's reach.

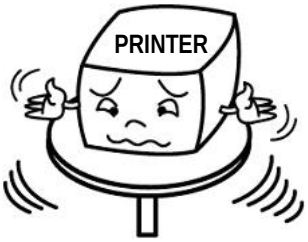
- If not, they may eat it.

PROHIBITED

Install the printer on the stable surface.

- If the printer falls down, it can be broken and you can hurt yourself.

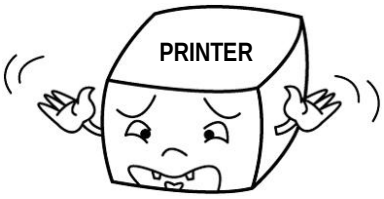
PROHIBITED



Use only approved accessories and do not try to disassemble, repair or remodel it for yourself.

- Call your dealer when you need these services.
- Do not touch the blade of auto cutter.

DISASSEMBLING PROHIBITED



Do not let water or other foreign objects in the printer.

- If this happened, switch off and unplug the printer before calling your dealer.

PROHIBITED

Do not use the printer when it is out of order. This can cause a fire or an electrocution.

- Switch off and unplug the printer before calling your dealer.

TO UNPLUG

■ Warning - U.S.A

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

■ Notice - Canada

This Apparatus complies with class “A” limits for radio interference as specified in the Canadian department of communications radio interference regulations.

Get appareil est conforme aux normes class “A” d’interference radio tel que specifier par ministre canadien des communications dans les reglements d’interference radio.

■ Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer “OFF”, before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer “OFF”.

■ Waste Electrical and Electric Equipment (WEEE)

This marking shown on the product or its literature, indicates that is should not be disposed with other household wastes at the end of its working life, To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

■ Rating Label Symbol Information

▬▬

▬ ▬ ▬ DC (Direct current)

■ Introduction

The SRP-330 Roll Printer is designed for use with electronic instruments such as system ECR, POS, banking equipment, computer peripheral equipment, etc.
The main features of the printer are as follows:

1. High speed printing : 47.28 (1/6” Feed) lines per second.

2. Low noise thermal printing.

3. USB Port & RS-232(SRP-330COS/330COSDU), USB Port & Parallel(SRP-330COP), USB Port & Ethernet(SRP-330COE)

4. The data buffer allows the unit to receive print data even during printing.

5. Peripheral units drive circuit enables control of external devices such as cash drawer.

6. Characters can be scaled up to 64 times compared to its original size.

7. Bar code printing is possible by using a bar code command.

8. Different print densities can be selected by DIP switches.

Please be sure to read the instruction in this manual carefully before using your new SRP-330.

※ NOTE
The socket-outlet shall be near the equipment and it shall be easy accessible.

※ All specifications are subjected to change without notice.

This equipment is indoor use and all the communication hiring are limited to inside of the building.

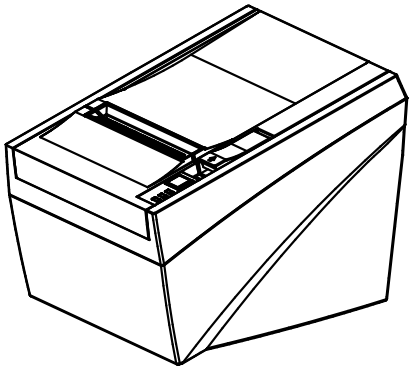
We at BIXOLON maintain ongoing efforts to enhance and upgrade the functions and quality of all our products. In following, product specifications and/or user manual content may be changed without prior notice.

■ Table of Contents

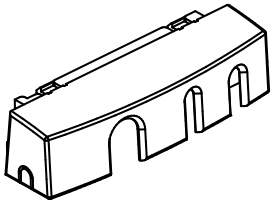
1. Setting Up the Printer

1-1 Unpacking

Your printer box should include these items. If any items are damaged or missing, please contact your dealer for assistance.

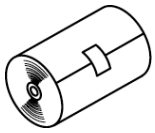


SRP-330

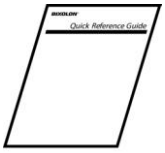


Cover Cable

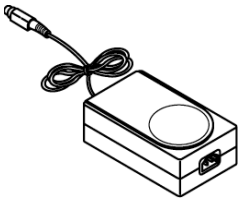
CD



Roll Paper

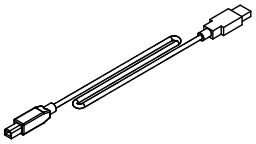


Manual

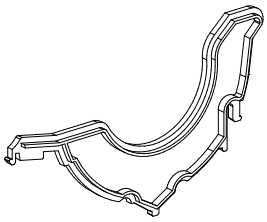


AC Adapter

Power Cord



USB A-B Cable



2” Partition

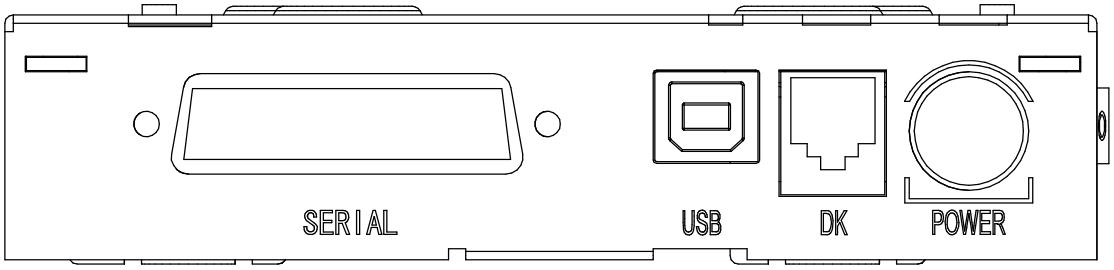
1-2 Connecting the Cables

Connect the cable that is suitable for the specifications of the printer and the host computer (POS/ECR) to the printer and the host computer. The specification of the drawer should match the printer specifications.

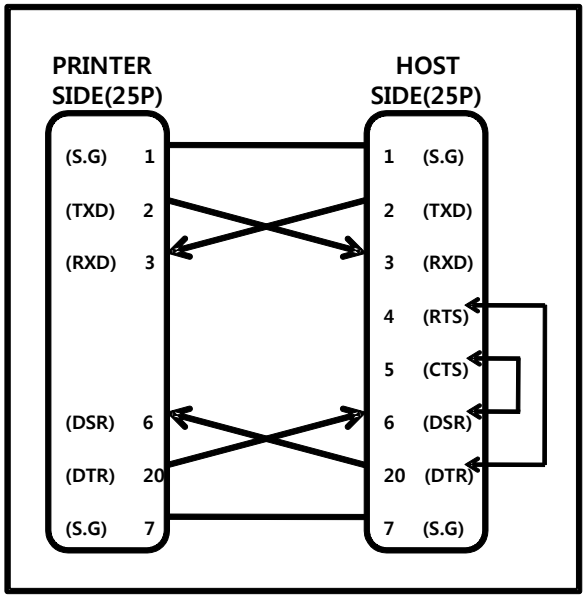
※ NOTE
Before connecting any of the cables, make sure that both the printer and the host are turned off.

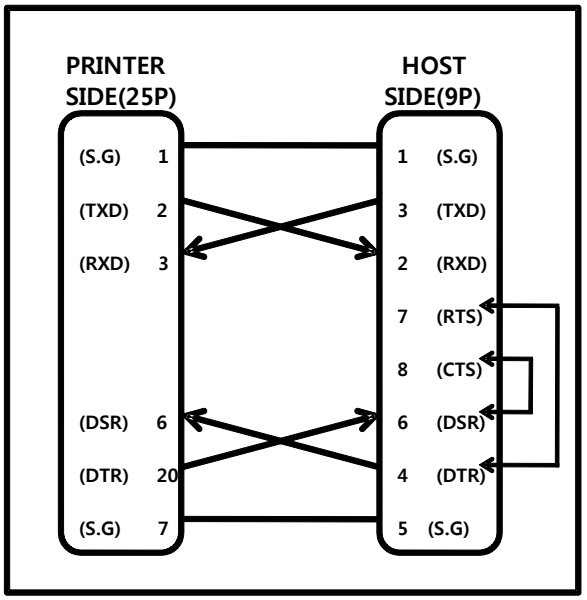
1-2-1 Serial Cable (RS-232C)

1-2-1-1 Single Serial Interface



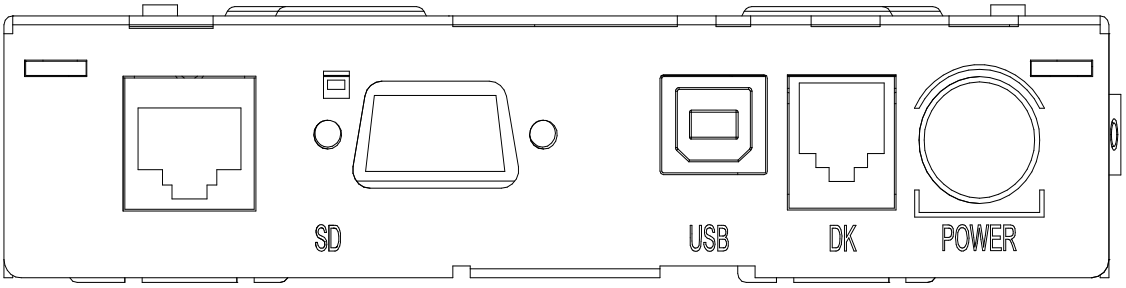
Drawer kick-out connector

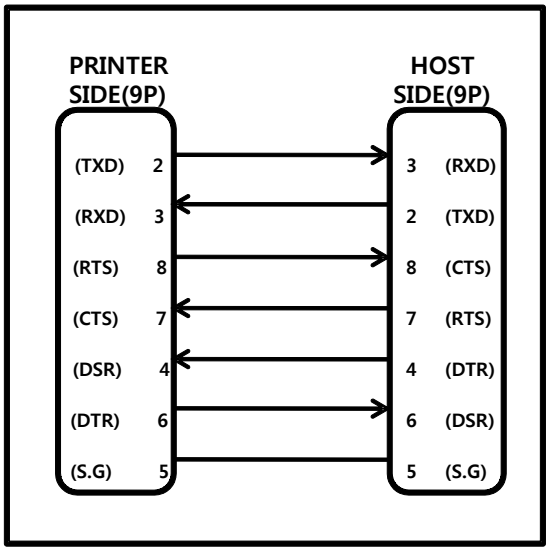




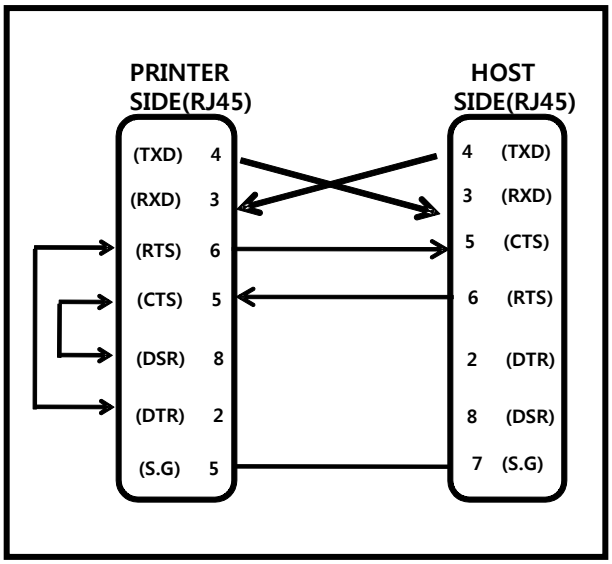
Pin No.	Signal Name	Signal Direction	Function
BODY	Frame GND	-	Frame Ground
2	TXD	Output	Transmit Data
3	RXD	Input	Receive Data
6	DSR	Input	This signal indicates whether the host computer can receive data. (H/W flow control) 1) MARK(Logic1) : The host can receive a data. 2) SPACE(Logic0) : The host can not receive a data. 3) The printer transmits a data to the host, after confirming this signal. 4) When XON/XOFF flow control is selected, the printer does not check this signal.
7	Signal GND	-	Signal Ground
20	DTR	Output	This signal indicates whether the printer is busy. (H/W flow control) 1) MARK(Logic1) : The printer is busy. 2) SPACE(Logic0) : The printer is not busy. 3) The host transmits a data to the printer, after confirming this signal. 4) When XON/XOFF flow control is selected, the host does not check this signal.
Shield	Frame GND	-	Frame Ground

1-2-1-2 Dual Serial Interface





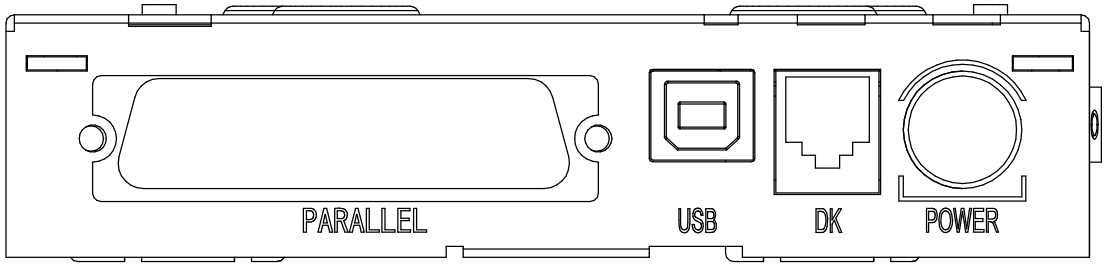
Pin Number	Signal Name	Signal Direction	Function
2	TXD	Output	Transmit data
3	RXD	Input	Receive data
4	DTR	Output	This signal indicates whether the host computer can receive the data. (Hardware flow control) 1) MARK (Logic 1): Host computer can receive the data. 2) SPACE (Logic 2): Host computer cannot receive the data. 3) Printer checks the signal and sends the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
5	Signal GND	-	Signal ground
6	DSR	Input	This signal indicates whether the printer is in operation. (hardware flow control) 1) MARK (Logic 1): Printer is in operation. 2) SPACE (Logic 2): Printer is not in operation. 3) Printer checks the signal from the host and transmits the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
7	RTS	Output	This signal indicates whether the host computer can receive the data. (Hardware flow control) 1) MARK (Logic 1): Host computer can receive the data. 2) SPACE (Logic 2): Host computer cannot receive the data. 3) Printer checks the signal and sends the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
8	CTS	Input	This signal indicates whether the printer is in operation. (Hardware flow control) 1) MARK (Logic 1): Printer is in operation. 2) SPACE (Logic 2): Printer is not in operation. 3) Printer checks the signal from the host and transmits the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.



Pin Number	Signal Name	Signal Direction	Function
2	DTR	Output	This signal indicates whether the host computer can receive the data. (Hardware flow control) 1) MARK (Logic 1): Host computer can receive the data. 2) SPACE (Logic 2): Host computer cannot receive the data. 3) Printer checks the signal and sends the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
3	RXD	Input	Receive data
4	TXD	Output	Transmit data
5	CTS	Input	This signal indicates whether the printer is in operation. (Hardware flow control) 1) MARK (Logic 1): Printer is in operation. 2) SPACE (Logic 2): Printer is not in operation. 3) Printer checks the signal from the host and transmits the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
6	RTS	Output	This signal indicates whether the host computer can receive the data. (Hardware flow control) 1) MARK (Logic 1): Host computer can receive the data. 2) SPACE (Logic 2): Host computer cannot receive the data. 3) Printer checks the signal and sends the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.
7	Signal GND	-	Signal ground
8	DSR	Input	This signal indicates whether the printer is in operation. (hardware flow control) 1) MARK (Logic 1): Printer is in operation. 2) SPACE (Logic 2): Printer is not in operation. 3) Printer checks the signal from the host and transmits the data when ready. 4) Printer does not check this signal if XON/XOFF flow control is selected.

※ Dual Serial RJ45 cable is not provided.

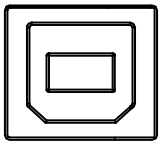
1-2-2 Parallel Cable (IEEE1284)



Drawer kick-out connector

Pin No.	Source	Compatibility Mode	Nibble Mode
1	Host	nStrobe	HostClk
2	Host / Printer	Data 0 (LSB)	-
3	Host / Printer	Data 1	-
4	Host / Printer	Data 2	-
5	Host / Printer	Data 3	-
6	Host / Printer	Data 4	-
7	Host / Printer	Data 5	-
8	Host / Printer	Data 6	-
9	Host / Printer	Data 7 (MSB)	-
10	Printer	nACK	PtrClk
11	Printer	Busy	PtrBusy /Data3,7
12	Printer	Perror	AckDataReq/Data2,6
13	Printer	Select	Xflag /Data1,5
14	Host	nAutoFd	HostBusy
15		NC	NC
16		GND	GND
17		FG	FG
18	Printer	Logic-H	Logic-H
19~30		GND	GND
31	Host	nInit	nInit
32	Printer	nFault	nDataAvail /Data0,4
33		GND	ND
34	Printer	DK_Status	ND
35	Printer	+5V	ND
36	Host	nSelectIn	1284-Active

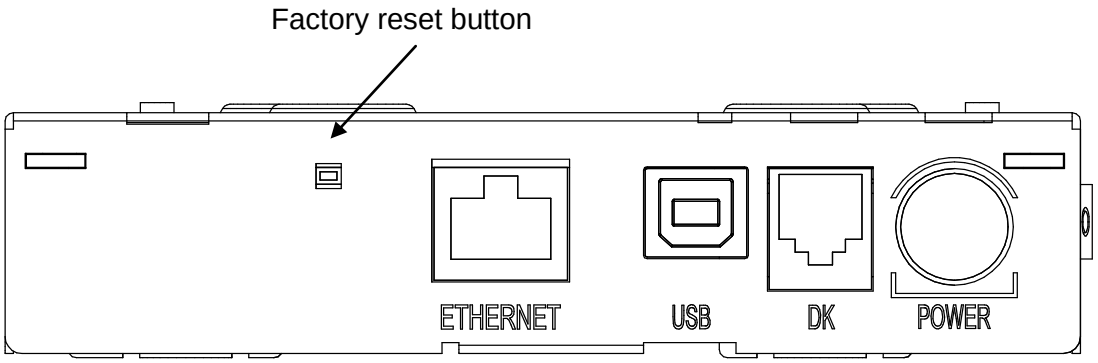
1-2-3 USB Cable



USB connector

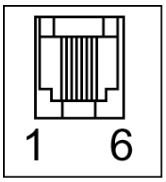
Pin No.	Signal Name	Assignment (Color)	Function
Shell	Shield	Drain Wire	Frame Ground
1	VBUS	Red	Host Power : DC5[V] / 500[mA]
2	D-	White	Differential Data Line
3	D+	Green	Differential Data Line
4	GND	Black	Signal Ground

1-2-4 Ethernet Cable



Pin No.	Signal name	Assignment (Color)	Function
1	TD+	White Orange	Transmit +
2	TD-	Orange	Transmit -
3	TCT	White Green	Receive +
4	NC	Blue	
5	NC	White Blue	
6	RCT	Green	Receive -
7	RD+	White Brown	
8	RD-	Brown	

1-3 Drawer Cable



Connect the cash drawer cable to the cash drawer connector in the back of the printer.

※ WARNING

Use the cash drawer that complies with the printer specifications.
Use of cash drawer that does not meet requirements may cause problems to both case drawer and printer.

※ PRECAUTION

Do not connect the telephone cable to the cash drawer connector port.
Connecting to phone line may case problems to phone line or printer.

Pin Number	Signal Name	Direction
1	Frame Ground	-
2	Drawer Kick-out Drive Signal 1	Output
3	Drawer Open/Close Signal	Input
4	+24V	-
5	Drawer Kick-out Drive Signal 2	Output
6	Signal Ground	-

1-4 Setting the Dip Switches

1-4-1 Serial Interface

• DIP Switch 1

SW	Function	ON	OFF	Default
1-1	Auto Cutter Selection	Disable	Enable	OFF
1-2	Flow Control	XON/XOFF	DTR/DSR	OFF
1-3	Data Length	7 bits	8 bits	OFF
1-4	Parity Check	Yes	No	OFF
1-5	Parity Selection	EVEN	ODD	OFF
1-6	Baud rate Selection (bps)	Refer to the following Table 1		OFF
1-7				ON
1-8				OFF

• Table 1 – Baud rate (bps) Selection

Transmission Speed	1-6	1-7	1-8	Default
2400	ON	OFF	OFF	9600
4800	ON	OFF	ON	
9600	OFF	ON	OFF	
19200	OFF	OFF	OFF	
38400	OFF	ON	ON	
57600	OFF	OFF	ON	
115200	ON	ON	ON	

1-4-2 Parallel / Ethernet Interface

• DIP Switch 1

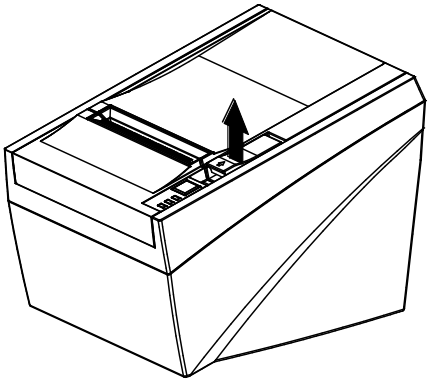
SW	Function	ON	OFF	Default
1-1	Auto Cutter Selection	Disable	Enable	OFF
1-2	Reserved	-	-	OFF
1-3	Reserved	-	-	OFF
1-4	Reserved	-	-	OFF
1-5	Reserved	-	-	OFF
1-6	Reserved	-	-	OFF
1-7	Reserved	-	-	ON
1-8	Reserved	-	-	OFF

1-5 Installing or Replacing the Paper Roll

※ NOTE
Be sure to use paper rolls that meet the specifications. Do not use paper rolls that have the paper glued to the core because the printer cannot detect the paper end correctly.

1-5-1 Make sure that the printer is not receiving data; otherwise, data may be lost.

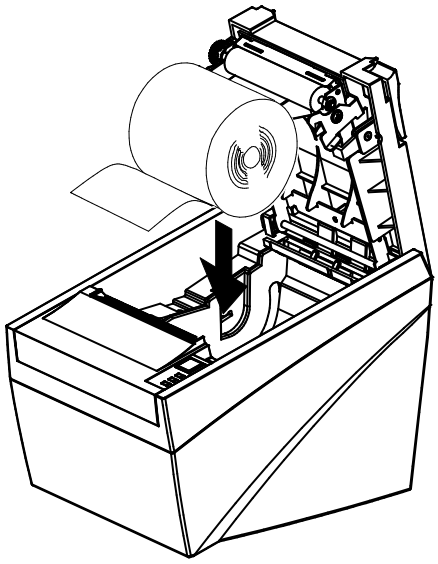
1-5-2 Open the paper roll cover by raise the cover-open lever.



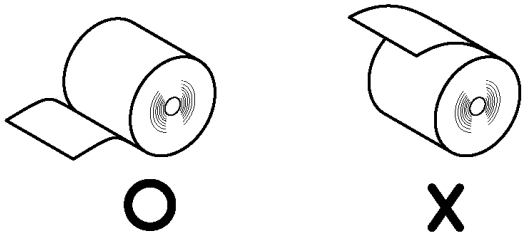
※ NOTE
Do not open the print cover while the printer is operating. This may damage the printer.

1-5-3 Remove the used paper roll core if there is one.

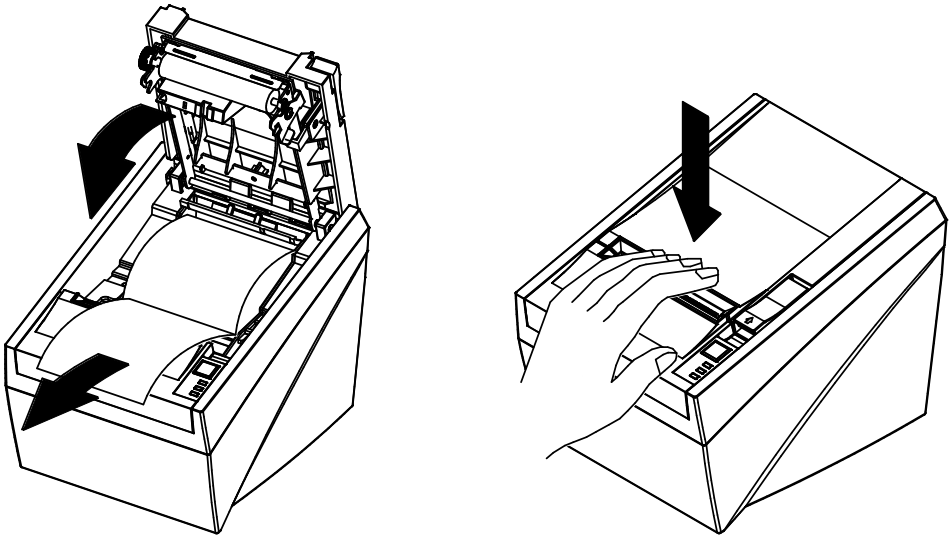
1-5-4 Insert the paper roll as shown.



1-5-5 Be sure to note the correct direction that the paper comes off the roll.

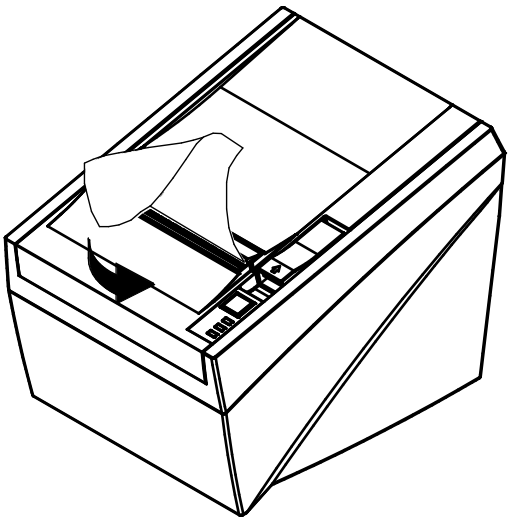


1-5-6 Pull out a small amount of paper, as shown. Then close the cover.



※ NOTE
When closing the cover, press the center of printer cover firmly to prevent paper miss-loading.

1-5-7 Tear off the paper as shown.



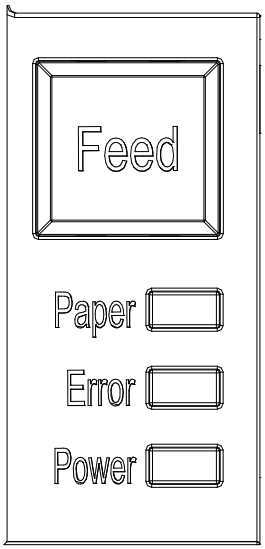
1-6 Recommended Papers

- TF50KS-E (Paper Thickness: 65μm): Nippon Paper Industries Co., Ltd.
- PD 160R (Paper Thickness: 75μm): New Oji Paper Mfg. Co., Ltd.
- P350 (Paper Thickness: 62μm): Kansaki Specialty Paper, Inc. (USA)

※ CAUTION
Use of papers other than those recommended above may damage TPH or degrade the printing quality and our company is not responsible for the damage caused by non-recommended papers. If you have to use other products, we recommend that you use papers with a similar level of quality to the recommended ones.

1-7 Using the Printer

1-7-1 Control Panel



○ POWER
The POWER light is on whenever the printer is on.

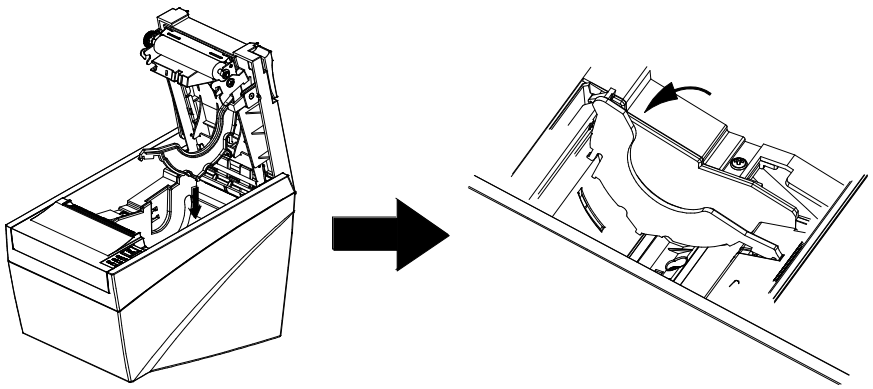
○ ERROR
This indicates an error.

○ PAPER
This light indicates the near end of the paper roll. Install a new paper roll and the printer will continue printing. When the light blinks, it indicates the self-test printing standby state or macro execution Standby state when the macro execution command is used.

○ FEED
Press the FEED button once to advance paper one line. You can also hold down the FEED button to feed paper continuously.

1-7-2 Mounting 2” Partition

Hang the partition at the front and press down the rear to mount the 2” partition as shown in the picture.



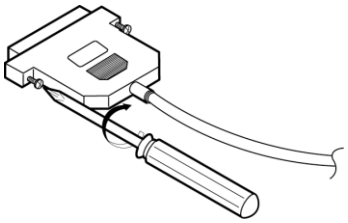
※ CAUTION
After using 2"(58mm) paper roll, do not replace it with 3"(79.5±0.5mm) paper roll.

1-8 Connecting the computer

You need an appropriate interface cable.

1-8-1 Plug the cable connector securely into the printer's interface connector.

1-8-2 Tighten the screws on both sides of the cable connector.



1-8-3 Attach the other end of the cable to the computer.

1-9 Connecting the Power Supply

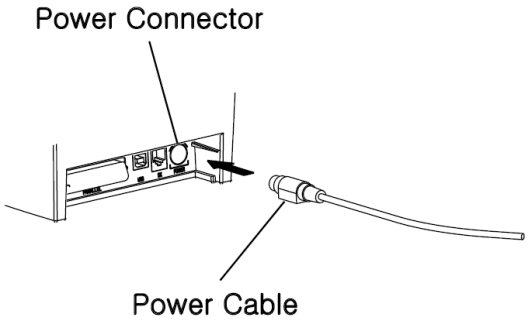
※ CAUTION
When connecting or disconnecting the power supply from the printer, make sure that the power supply is not plugged into an electrical outlet. Otherwise you may damage the power supply or the printer.

If the power supply's rated voltage and your outlet's voltage do not match, contact your dealer for assistance. Do not plug in the power cord. Otherwise, you may damage the power supply or the printer.

1-9-1 Make sure that the printer's power switch is turned off, and the power supply's power cord is unplugged from the electrical outlet.

1-9-2 Check the label on the power supply to make sure that the voltage required by the power supply matches that of your electrical outlet.

1-9-3 Plug in the power supply's cable as shown below. Notice that the flat side of the plug faces down.



※ NOTE
To remove the DC cable connector, make sure that the power supply's power cord is unplugged; then grasp the connector at the arrow and pull it straight out.

2. Self Test

The self-test checks whether the printer has any problems. If the printer does not function properly, contact your dealer. The self-test checks the following;

2-1 Make sure paper roll has been installed properly.

2-2 Turn on the power while holding down the FEED button. The self-test begins.

2-3 The self-test prints the current printer status, which provides the control ROM version and the DIP switch setting.

2-4 After printing the current printer status, self-test printing will print the following, and pause (The PAPER LED light blinks).

SELF-TEST PRINTING.
PLEASE PRESS THE FEED BUTTON.

2-5 Press the FEED button to continue printing.
The printer prints a pattern using the built-in character set.

2-6 The self-test automatically ends and cuts the paper after printing the following.

***** COMPLETED *****

2-7 The printer is ready to receive data as soon as it completes the self-test.

3. Hexadecimal Dumping

This feature allows experienced users to see exactly what data is coming to the printer. This can be useful in finding software problems. When you turn on the hexadecimal dump function, the printer prints all commands and data in hexadecimal format along with a guide section to help you find specific commands.

To use the hexadecimal dump function, follow these steps.

3-1 After you make sure that the printer is off, open the cover.

3-2 Turn on the printer, while holding down the FEED button.

3-3 Close the cover, then the printer enters the hexadecimal dump mode.

HEXADECIMAL DUMPING
To terminate hexadecimal dump
Press FEED button three times.

3-4 Run any software program that sends data to the printer. The printer will print all the codes it receives in a two-column format. The first column contains the hexadecimal codes and the second column gives the ASCII characters that corresponds to the codes.

```
1B 21 00 1B 26 02 40 40 40 40    . ! . . & . @ @ @ @
02 0D 1B 44 0A 14 1E 28 28 28    . . . D . . . . ( ( (
00 01 0A 41 0D 42 0A 43 43 43    . . . A . B . C C C
```

- A period (.) is printed for each code that has no ASCII equivalent.
- During the hex dump, all commands except DLE EOT and DLE ENQ are disabled.

3-5 When the printing finishes, press FEED button three times.

Hexadecimal Dump Completed.

4. Specification

Printing method		Thermal line printing
Dot density		180 dpi (7dots/mm)
Printing width		72 mm
Paper width		79.5±0.5 mm
Characters per line (default)		42 (Font A) 56 (Font B) 56 (Font C)
Printing speed		47.28lines/sec , 200 mm/sec
Receive Buffer Size		4K Bytes
※ **NOTE** : Printing speed may be slower, depending on the data transmission speed and the combination of control commands.		
Supply voltage	SMPS Input voltage	100~240 VAC
	Frequency	50/60 Hz
	SMPS Output voltage	+24 VDC/2.5A
Environmental Conditions	Temperature	0 ~ 45 ℃ (Operating) -20 ~ 60 ℃ (Storage)
	Humidity	10 ~ 80 % RH (Operating) 10 ~ 90 % RH (Storage) ; Except for paper
LIFE *	Mechanism Head	150 Km
	Auto Cutter	1,500,000 Cut
MCBF *	Mechanism	60,000,000 lines

* These values may vary with environment temperature, printing level, etc.

5. Appendix

5-1 Cleaning Printer

Paper dust inside the printer may lower the print quality. In this case clean the printer as follows.

5-1-1 Open the printer cover and remove the paper if exists.

5-1-2 Clean the printer head with alcohol and cotton swab.

5-1-3 Clean the paper sensor and paper roller with cotton swab and dry cloth.

5-1-4 Insert a paper roll and close the printer cover.

The remained amount of paper detected by paper near end sensor varies with the diameter of the paper core.