BIXOLON®

User's Manual
SRP-270

Impact Printer
Rev. 1.05

http://www.bixolon.com
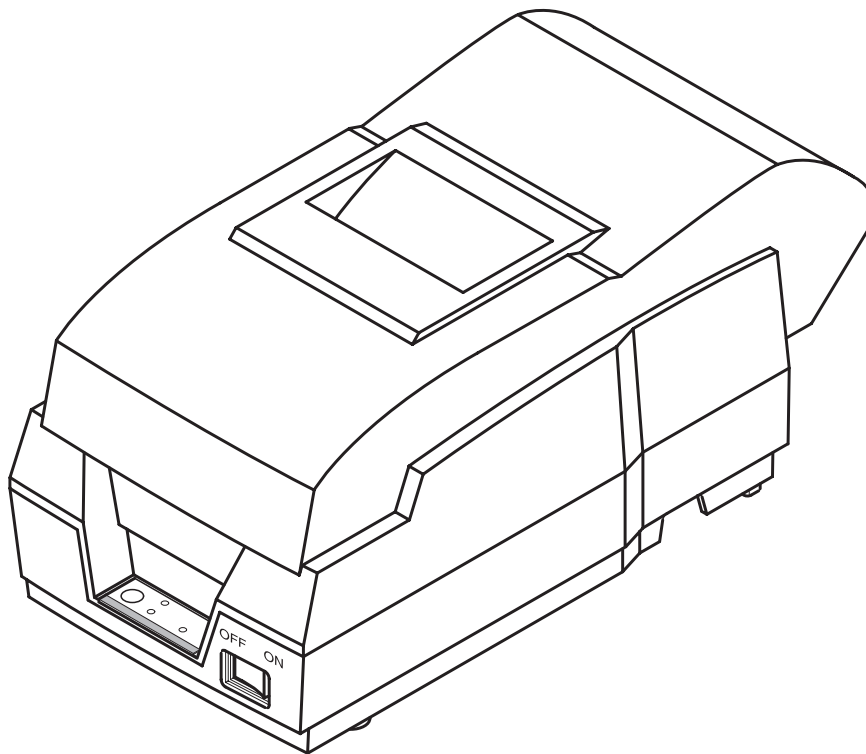
■ Table of Contents

■ Manual Information

This user manual contains basic information for product usage as well as for emergency measures that may be required.

※ The following separate manuals provide more detailed content on various technological issues and areas.

1. Windows Driver Manual
This manual provides information on installation and main functions of the Windows Driver for this product.

2. OPOS Driver Manual
This manual provides information on installation and main functions of the OPOS Driver for this product.

3. Control Commands Manual
This manual provides information on the protocol and functions of the control commands that can be used with this product.

4. Code Pages Manual
This manual provides information on each character code page that can be used with this product.

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.

■ Safety Precautions

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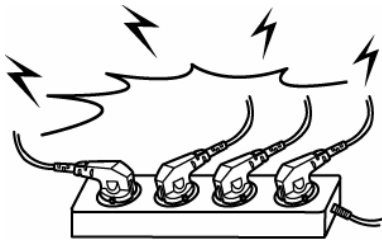
⚠ WARNING

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.

PROHIBIT

You must use only the supplied adapter.

• It is dangerous to use other adapters.

ONLY SUPPLIED ADAPTER

PROHIBIT

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.

PROHIBIT
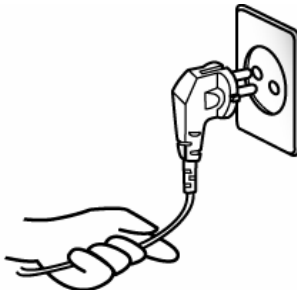
Keep the plastic bag out of children's reach.

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

PROHIBIT

Do not plug in or unplug with your hands wet.

• You can be electrocuted.

PROHIBIT

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

• A damaged cable can cause a fire.

PROHIBIT

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⚠ CAUTION

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

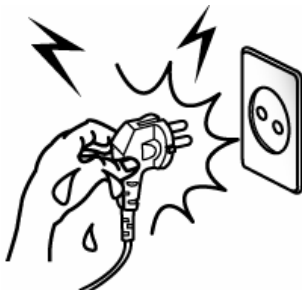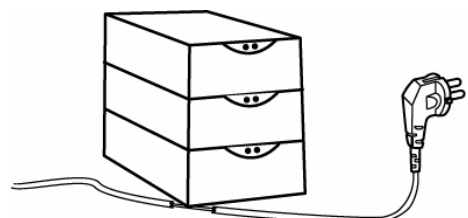**If you observe a strange smoke, odor or noise from the printer, unplug it before taking following measures.**

• 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.

PROHIBIT

Install the printer on the stable surface.

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

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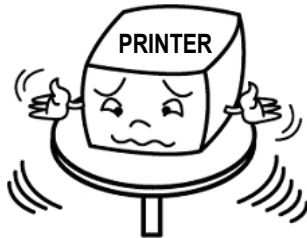
Use only approved accessories and do not try to disassemble, repair or remodel it for yourself.

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

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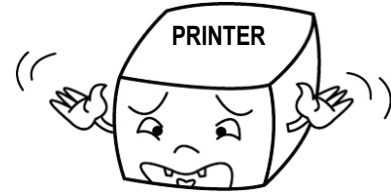
Do not let water or other foreign objects in the printer.

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

PROHIBIT

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

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■ Other Precautions

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BIXOLON Co., Ltd. is not legally liable for any damages and/or issues resulting from the use of options and/or parts that are not authentic BIXOLON products or authorized products.

1. Content Confirmation

The following items should all be contained in the printer package.
Contact the dealer from which the purchase was made if any item is damaged and/or missing.
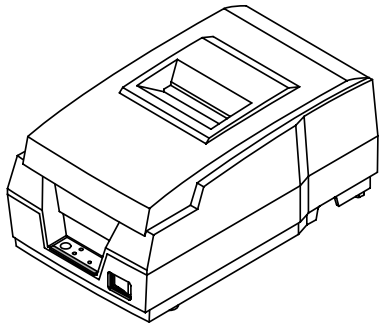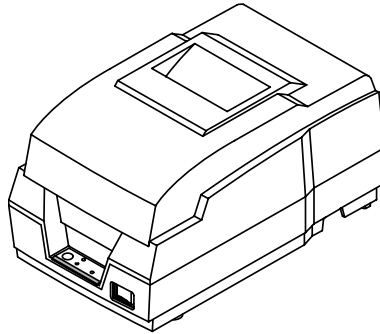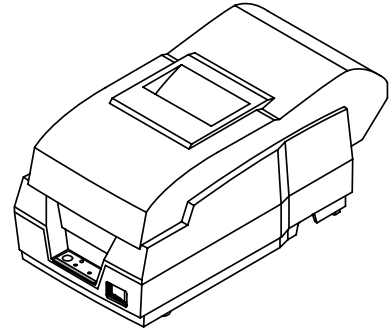
SRP-270A　　　　　　SRP-270C　　　　　　SRP-270D
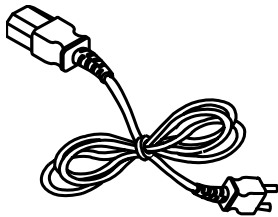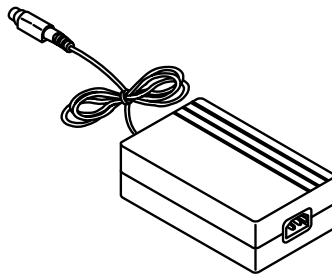
Power Cord　　　　　　AC Adapter　　　　　　Paper Roll
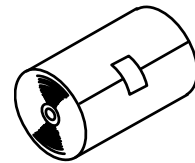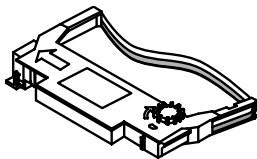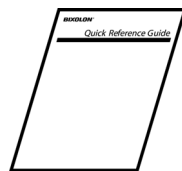
Ribbon Cartridge　　　Installation Guide　　　　CD
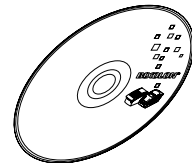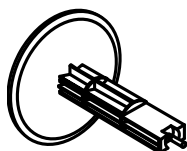
SRP-270D Exclusive
Spool

Rev. 1.05

2. Product Part Names

Cartridge Knob

Printer Cover

Spool

Ribbon Cartridge

Auto Cutter

Paper Feed Button
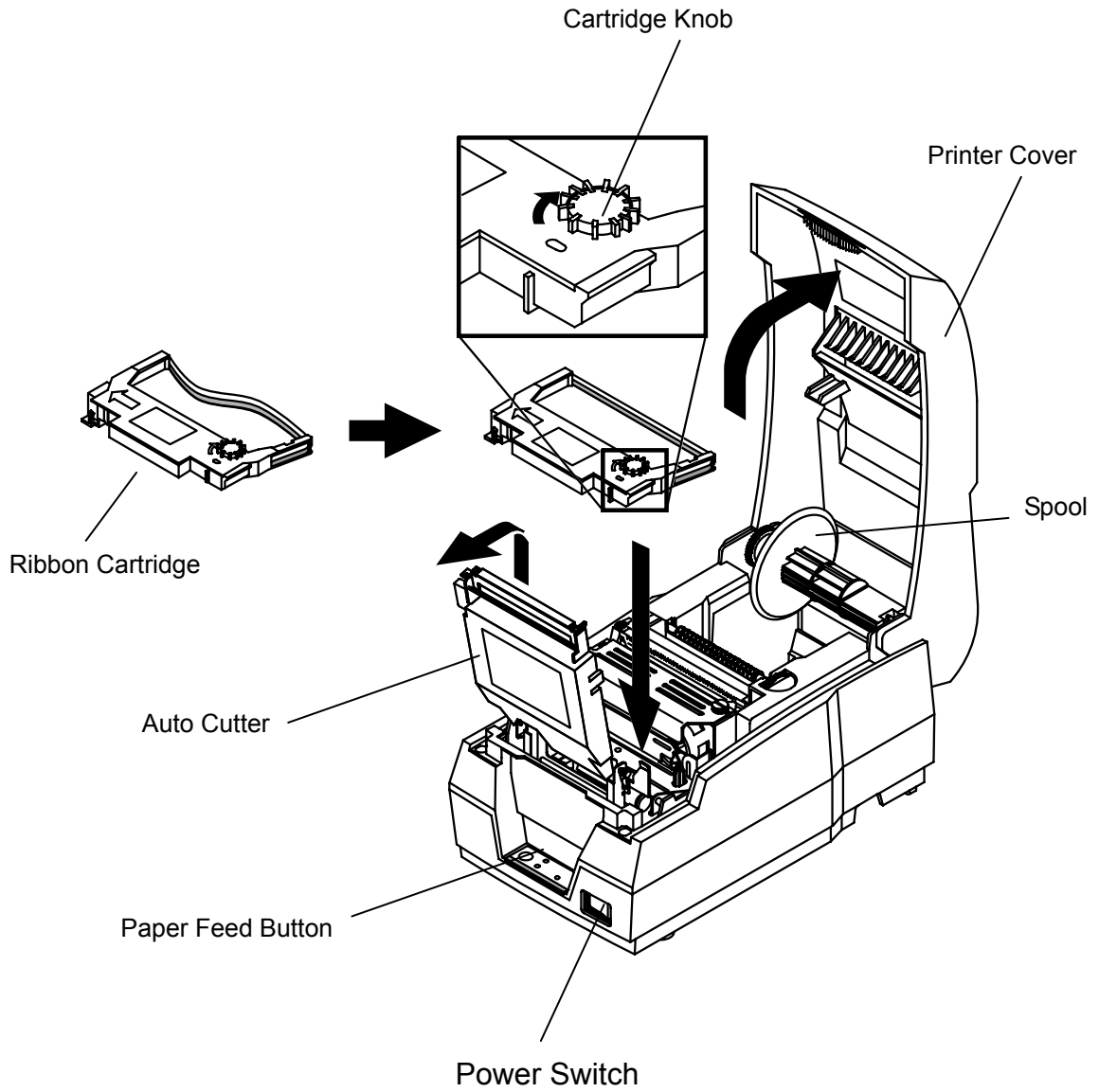
Power Switch

3. Installation & Usage

3-1 Power Connection

Connect power to the printer as shown below.

AC Adapter

Power Cord
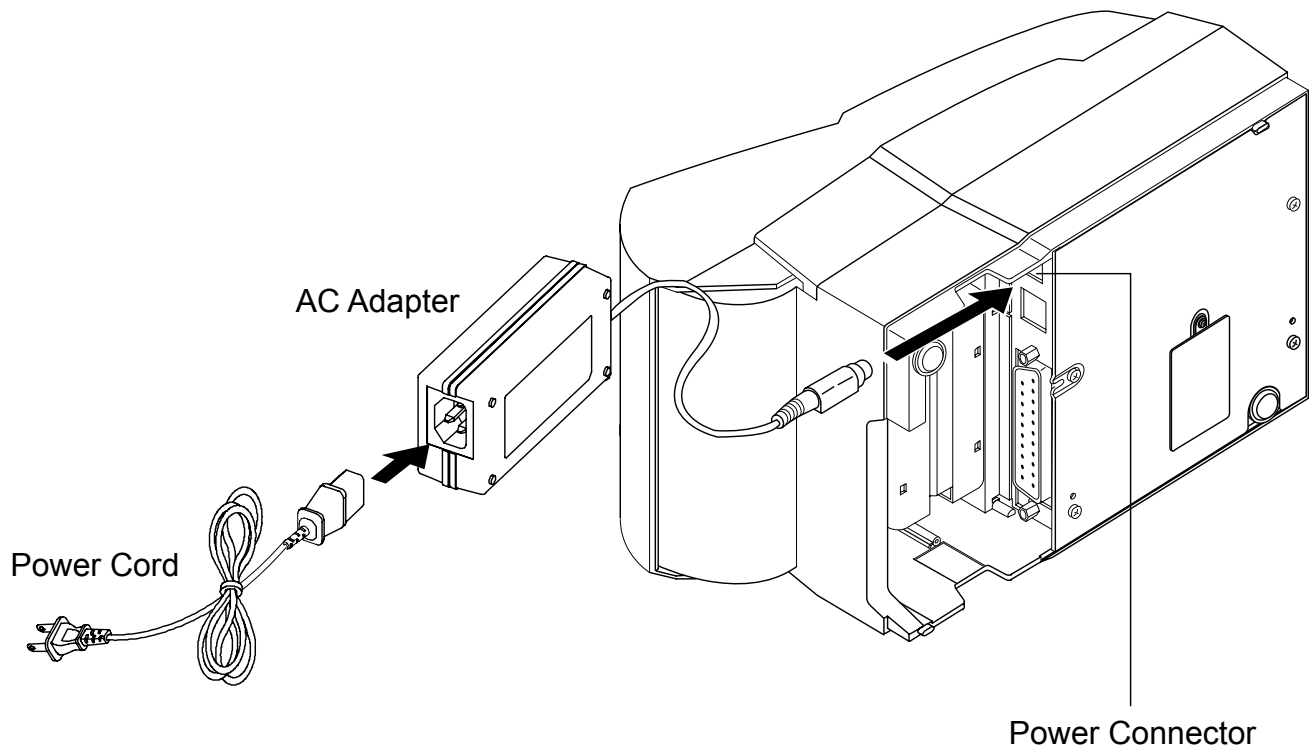
Power Connector

1) Turn off the printer power switch.

2) Check to see that the AC adapter voltage matches that of the power source.

3) Connect the AC adapter jack to the printer power connector.

4) Connect the power cord to the AC adapter.

5) Connect the power cord to a power source/outlet.

3-2 Interface Cable Connection

Connect the printer with a POS system (PC, ECR, etc.) via an interface cable as shown below.

This printer supports the following communications interface standards.

- RS-232C (Serial)
- RS-485 (Serial)
- IEEE1284 (Parallel)
- USB

Interface Connector
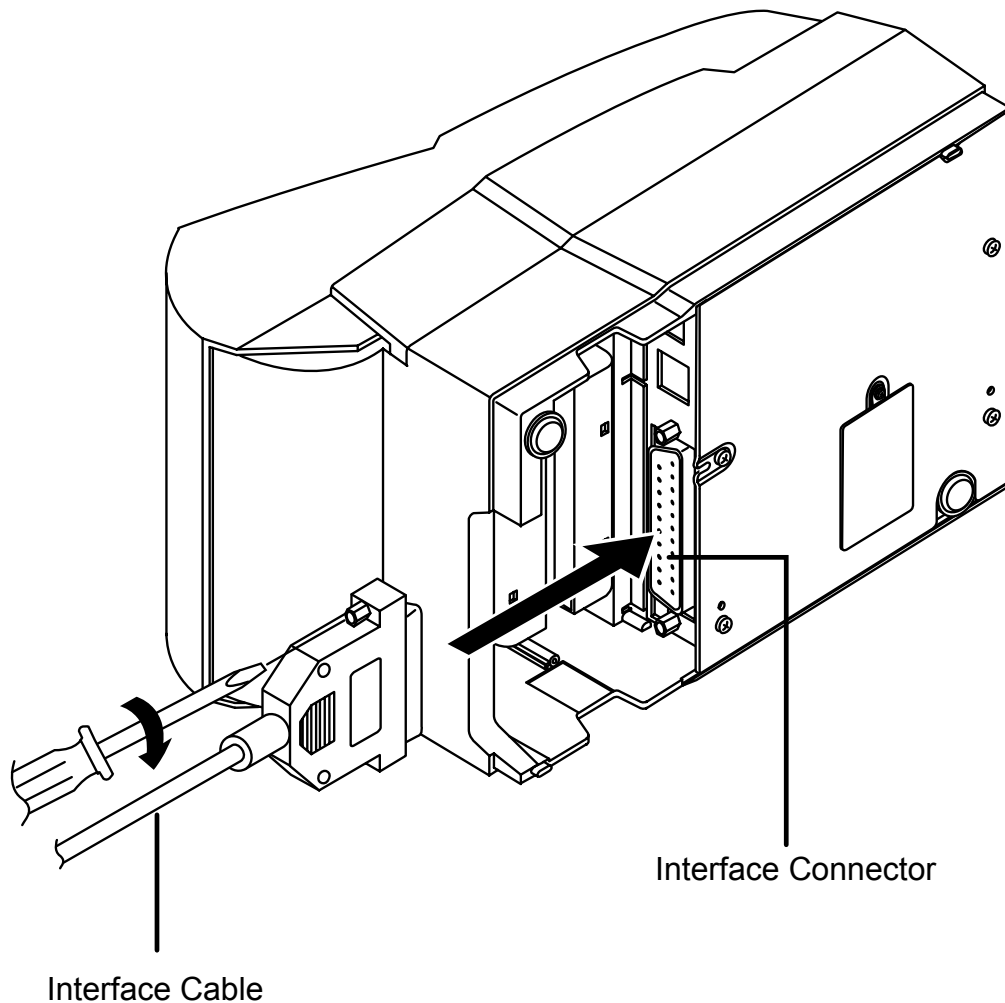
Interface Cable

1) Turn off the power switch on both the printer and the POS system (PC, ECR, etc.).

2) Connect the interface cable to the printer interface connector.
    - For a Serial cable, secure by tightening the screws on both sides.
    - For a Parallel cable, secure by fastening the clips on both sides.

3-3 Cash Drawer Connection

Connect the printer and cash drawer via the interface cable as shown below.

Cash Drawer Connector
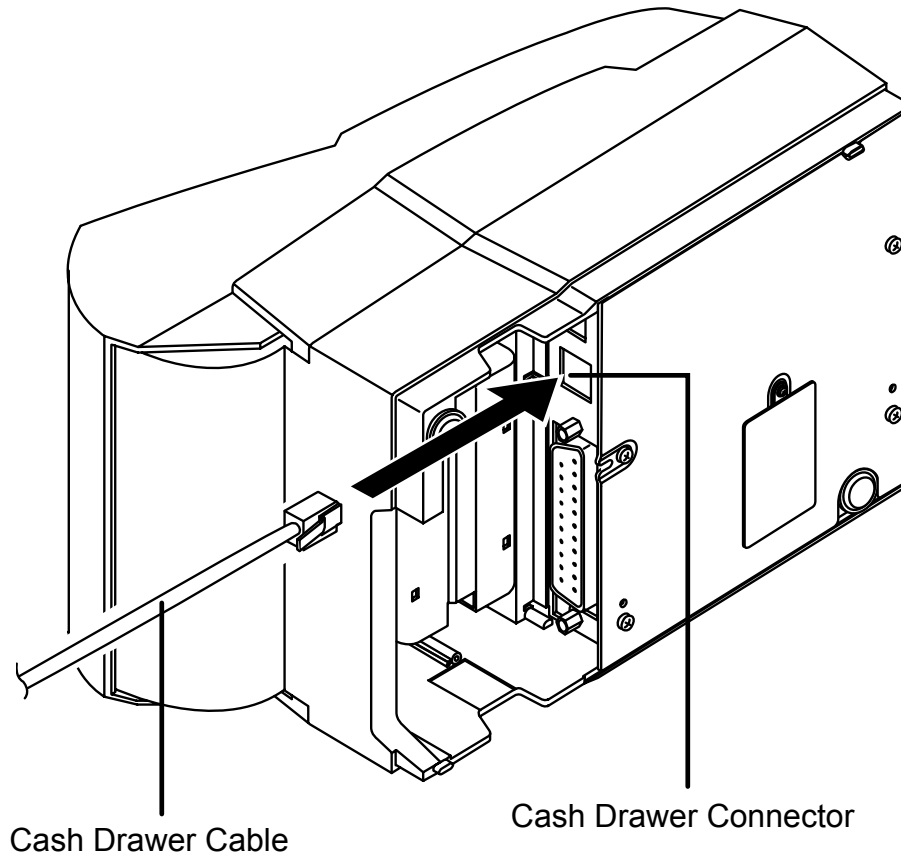
Cash Drawer Cable

1) Turn off the power switch on both the printer and the POS system (PC, ECR, etc.).

2) Connect the cash drawer cable to the printer cash drawer connector.

※ **CAUTION**
Do not connect a telephone line to the printer cash drawer connector.
Doing so may cause damage to the printer and telephone line.

3-4 Ribbon Cartridge Installation

Install the ribbon cartridge as shown below.
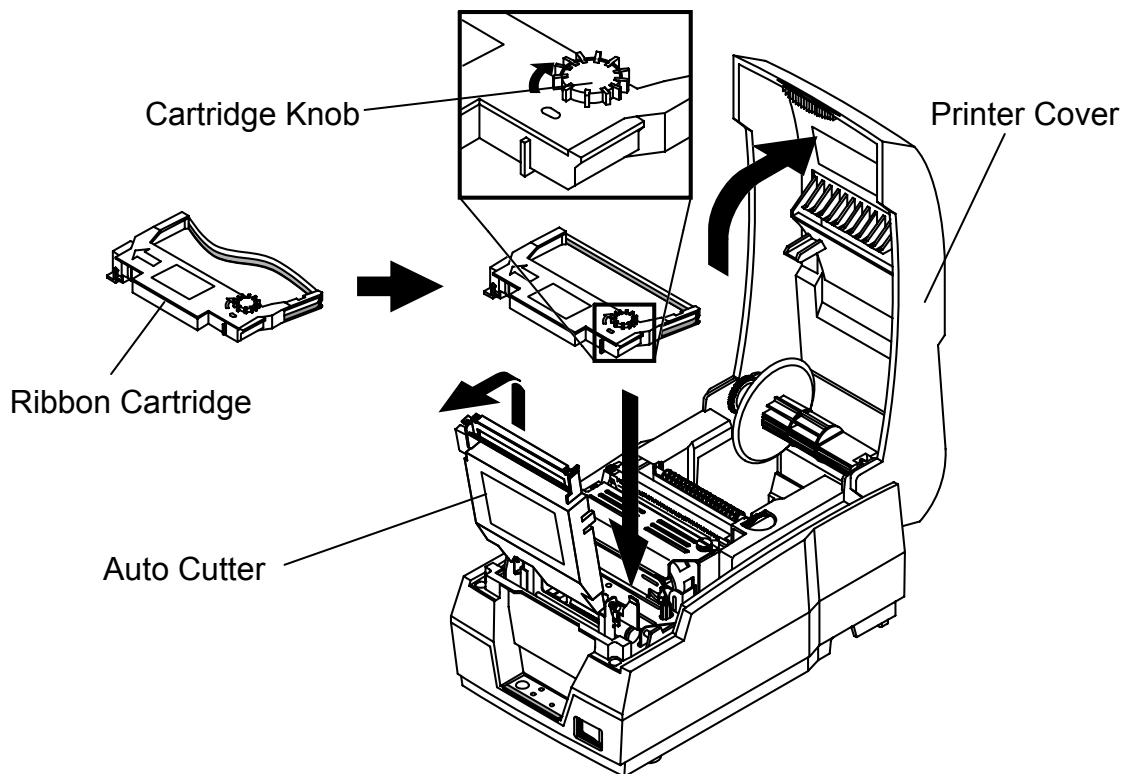
1) Turn off the printer power switch.

2) Open the printer cover.

3) Before inserting the ribbon cartridge, turn the cartridge knob clockwise in order prevent the ribbon from tangling.

4) Insert the ribbon cartridge as shown in the image above, and set the ribbon so that is behind the printer head.

5) To allow the ribbon to move freely within the ribbon cartridge during insertion, turn the cartridge knob clockwise once more.

※ **CAUTION**

Only use BIXOLON-approved ribbon cartridges.
Use of an unapproved ribbon cartridge can result in malfunction and/or other issues.
In such cases, warranty service is not available.

3-5 Paper Installation

The paper used varies by printer model.
- SRP-270 A/C: 1-layer paper
- SRP-270 D: 2-layer paper

3-5-1 SRP-270 A/C Model

1) Turn on the printer power.

2) Open the printer cover. (Remove any core of a fully used paper roll if present.)

3) Undo the paper roll, and make sure that the lower edge is cleanly cut.
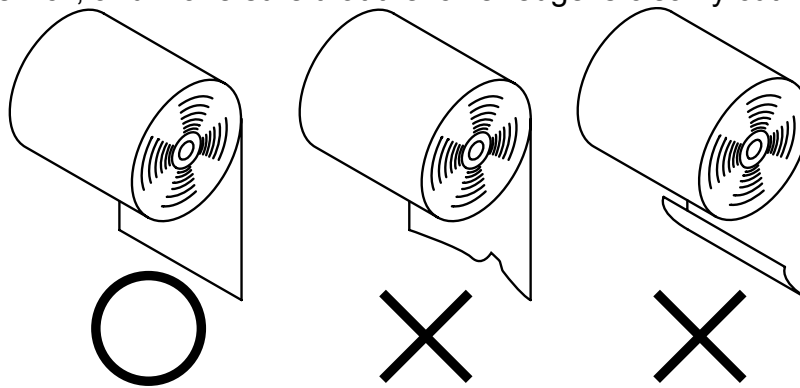
4) Insert the paper roll as shown below.
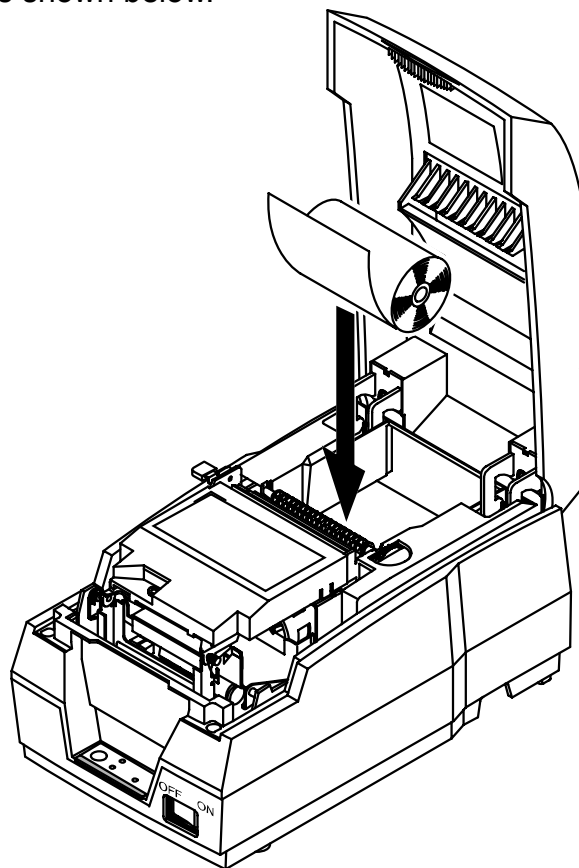
5) Insert the end of the paper roll into the paper slot as shown below.   The paper then feeds automatically.
   Automatic cutting is available for printer models equipped with auto cutters.
   (SRP-270C)
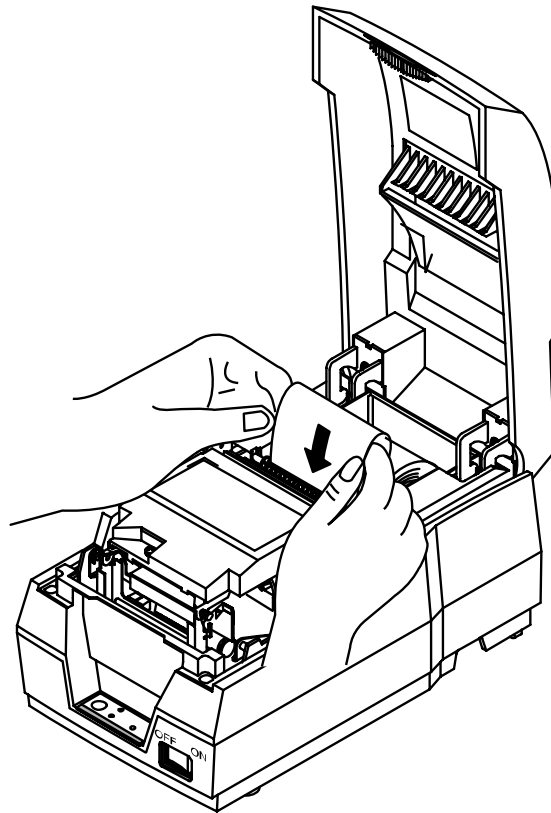
- For printer models without auto cutters, tear off the paper as shown below.
  (SRP-270A)
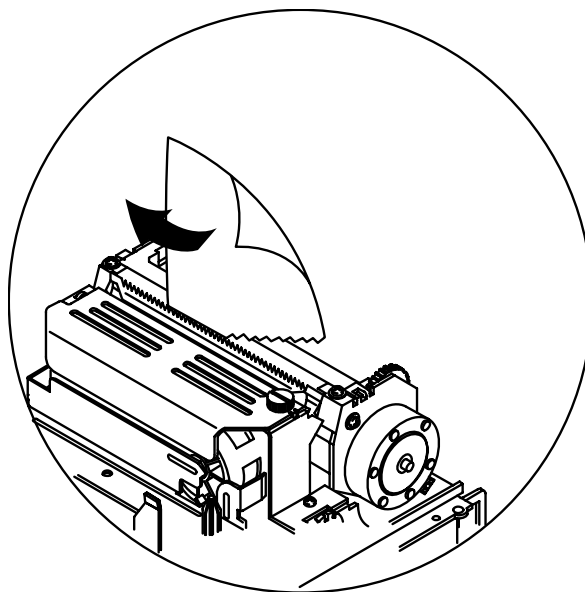
3-5-2 SRP-270 D Model

1) Turn on the printer power.

2) Open the printer cover. (Remove any core of a fully used paper roll if present.)

3) Undo the paper roll, and make sure that the lower edge is cleanly cut.
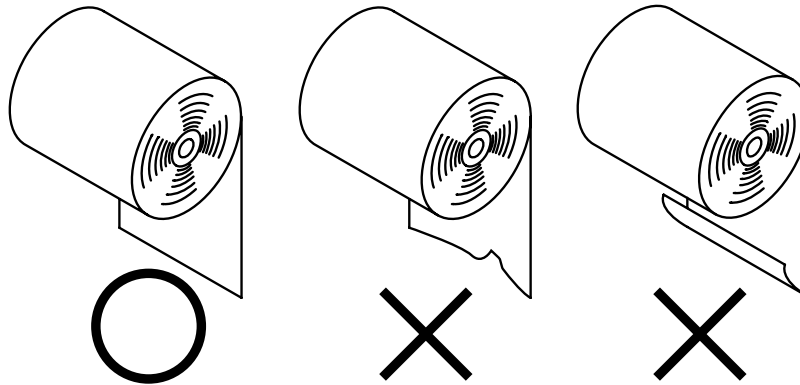
4) Insert the paper roll as shown below. (Exercise special care to align the paper direction correctly.)
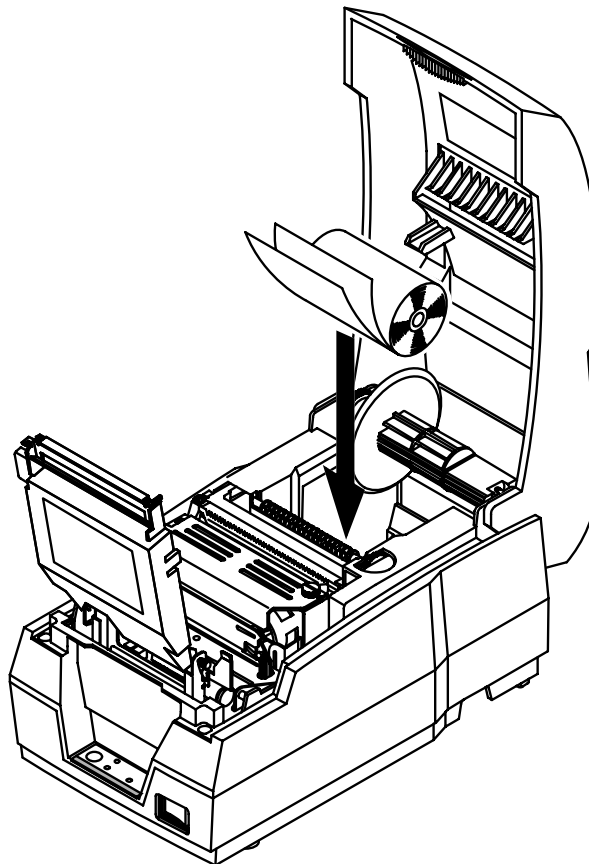
5) Insert the end of the paper roll into the paper slot as shown below.   The paper then feeds automatically.
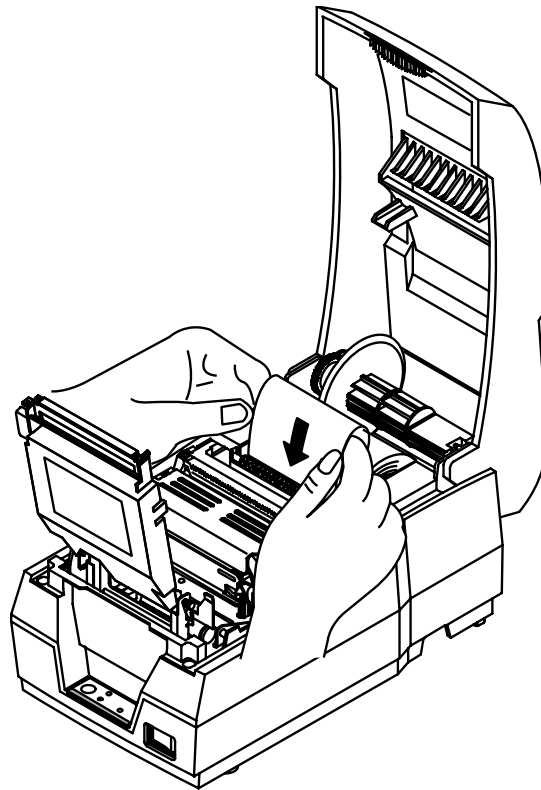
6) Turn the spool and insert the paper into the groove.   Wrap the paper around the spool several times, and then affix into the spool slot.

Spool
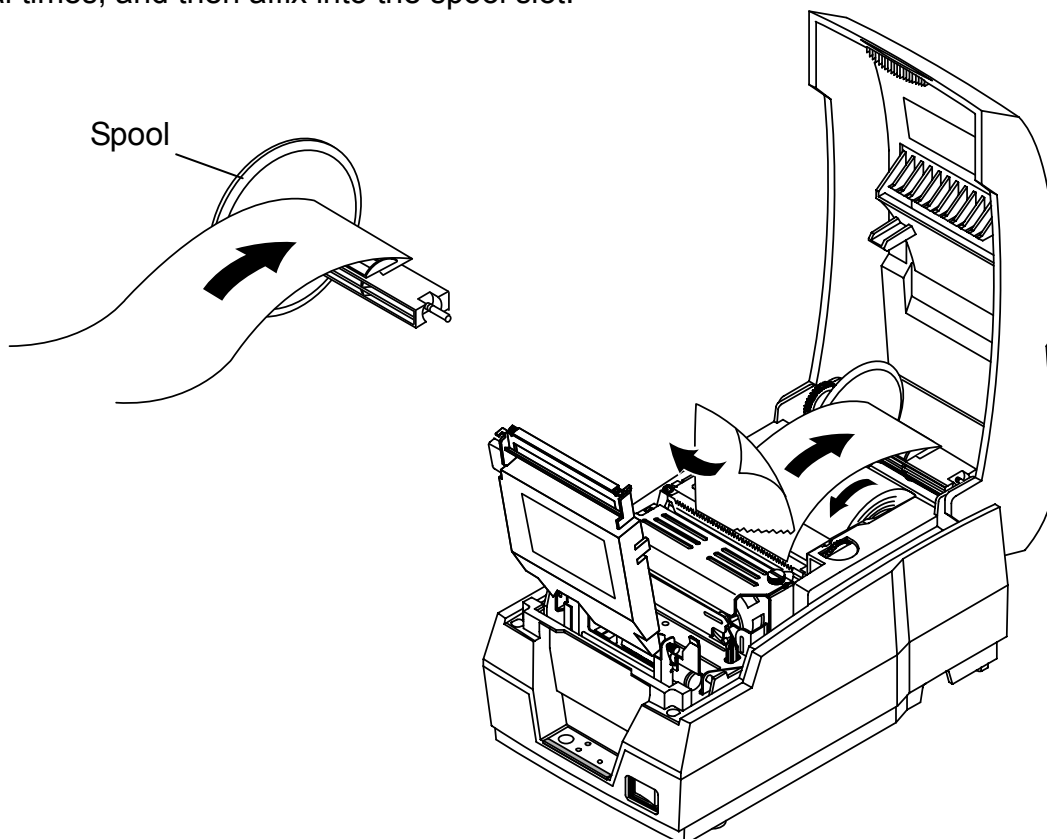
7) Tear off any extruding paper.
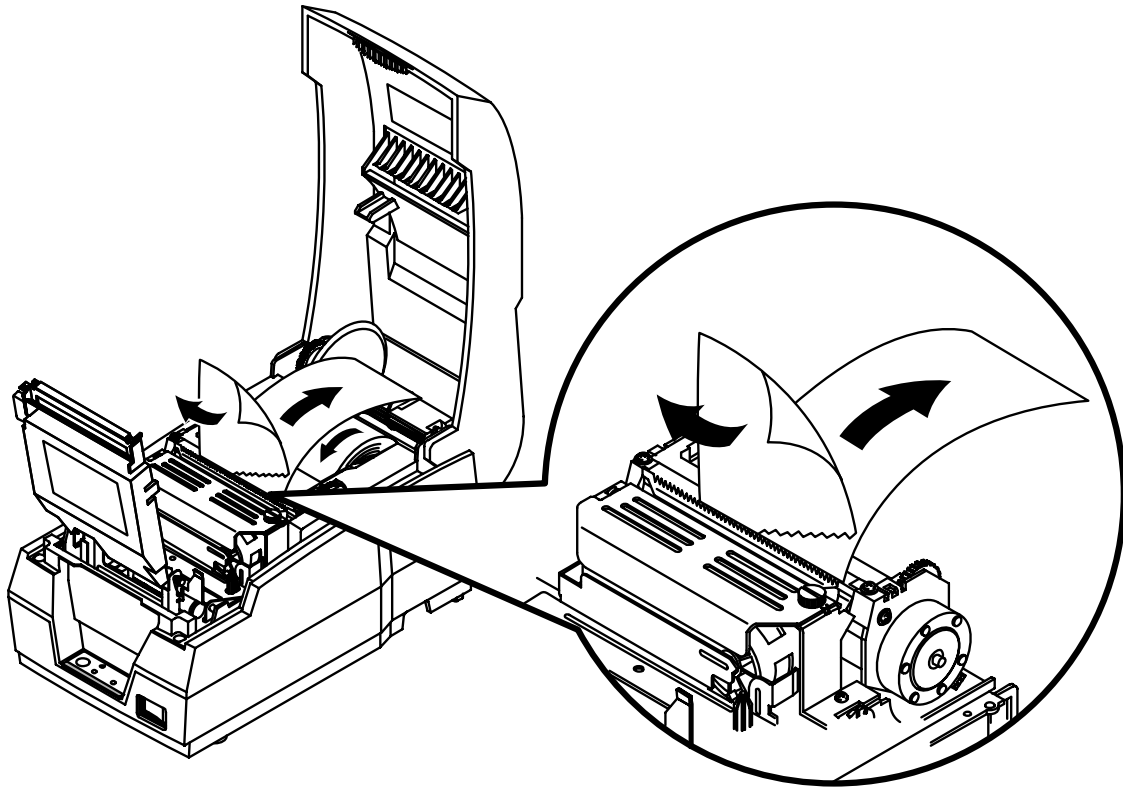
8) Close the auto cutter, and then close the printer cover.
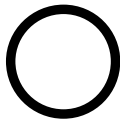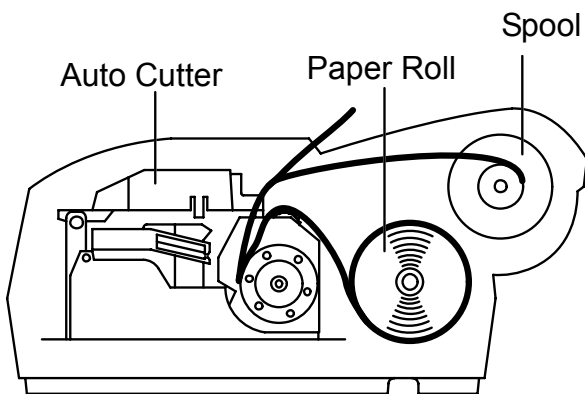
(Correct Paper Installation)
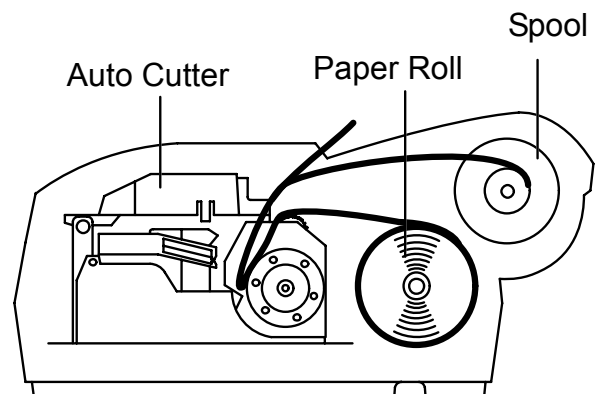
(Incorrect Paper Installation)

3-6 Control Panel Usage
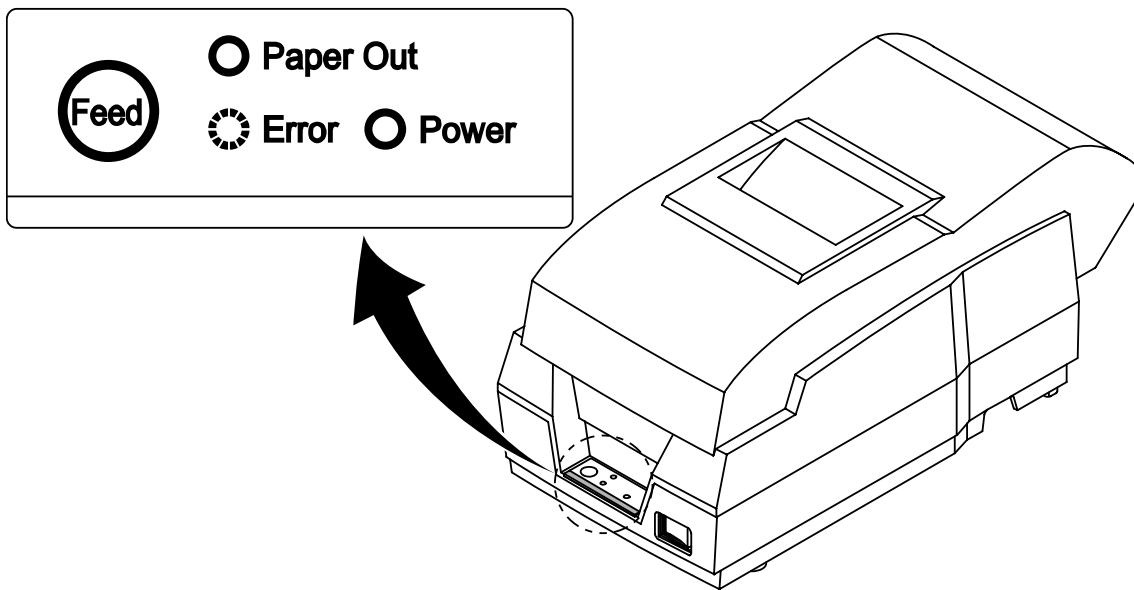
O Feed   Press this button to feed paper.
                    This button is also used for self-tests and hexa-printing.
                      - Refer to "4. Self-Test" for details related to self-tests.
                      - Refer to the service manual for information on hexa-printing.

O Power   This lamp turns green when the printer power is on.

O Error   This lamp turns red when a printer error occurs.

O Paper Out This lamp turns red when paper has been fully used.

4. Self-Test

Run the self-test when first setting the printer or when encountering a problem. The following printer attributes can be assessed.

- Control Circuits, Mechanisms, Print Quality, and ROM Version

If no issue is found with the printer after running the self-test, examine the other devices or peripherals and software. This function is independent of such other devices and software.

Self-Test instructions are as follows.

1) Check to see that the paper is properly installed.

2) Turn off the printer power and close the printer paper cover.

3) Press the paper feed button and simultaneously turn on the printer power to commence the self-test.

4) The test ceases after printing the current printer status and the following message.
     (The 'PAPER LED' lamp blinks.)

SELF-TEST PRINTING.
PLEASE PRESS THE FEED BUTTON.

5) To additionally print the embedded characters in the printer, press the paper feed button once more.

6) The self-test ends automatically after the following message is printed.

** CHARACTER TEST COMPLETED **

5. Fine Tuning

5-1 Dip Switch Adjustment

The dip switches can be used to select the following printer functions.

- Emulation
- Auto Cutter, Font Interval, Auto Line Feed
- Serial Communications Settings, Hexa-Printing

The dip switches are located on the under side of the printer.
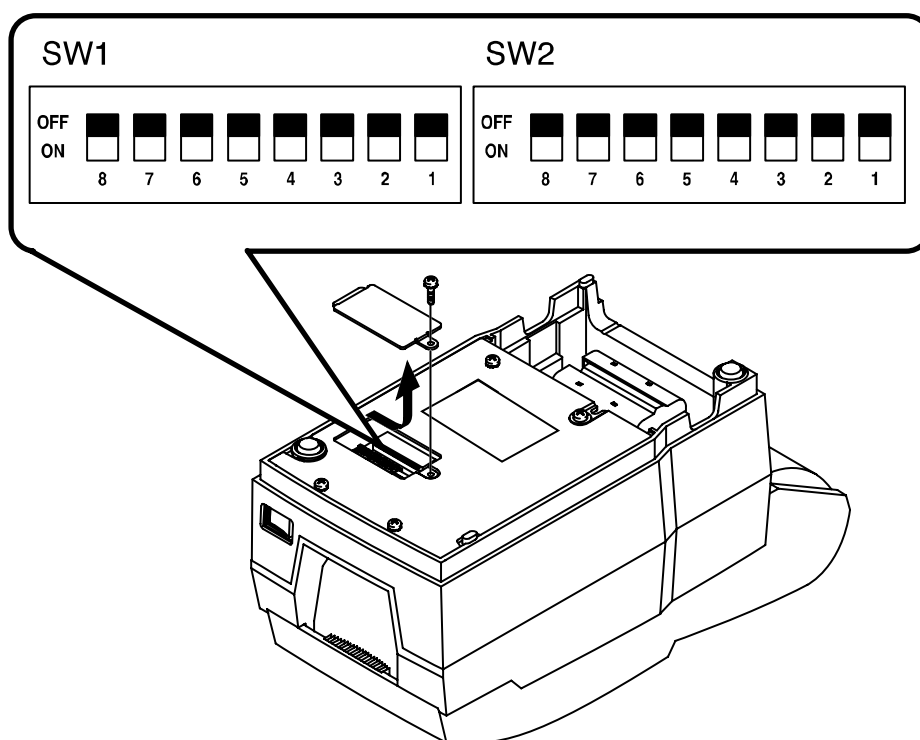
Dip switch adjustment instructions are as follows.

1) Turn off the printer power.

2) Turn the printer over and remove the dip switch cover.

3) Use a pointy edged object to adjust the dip switches.
   (Refer to the following diagram for functions per switch.)

4) New settings take effect when turning the printer back on.

[Diagram 1] Switch Functions When Using a Serial Interface (RS232C & RS485)

[Dip Switch 1 Settings]

Switch	Function	On	Off	Default
SW1-1	Emulation Selection	Refer to Chart (1) below.		Off
SW1-2				Off
SW1-3	Auto Cutter Selection	Enable	Disable	On
SW1-4	Font Interval Selection	2	3	Off
SW1-5	Service Technician Mode			-
SW1-6				-
SW1-7				Off
SW1-8	Korean Type Selection	Unified	Complete	Off

Chart (1) Emulation Mode Selection

SW1–1	SW1-2	Mode
Off	Off	BXL/POS
Off	On	CITIZEN
On	Off	STAR

[Dip Switch 2 Settings]

Switch	Function	On	Off	Default
SW2-1	Auto Line Feed Selection	Always Enable	Always Disable	Off
SW2-2	Hexa-Printing Selection	Enable	Disable	Off
SW2-3	Handshaking Selection	On/Off	DTR/DSR	Off
SW2-4	Word Length Selection	7 Bit	8 Bit	Off
SW2-5	Parity Check Selection	Enable	Disable	Off
SW2-6	Parity Selection	Even	Odd	Off
SW2-7	Baud Rate Selection	Refer to Chart (2) below.		Off
SW2-8				Off

Chart (2) Baud Rate Selection

Baud Rate	SW2–7	SW2–8
19200	On	On
2400	Off	On
4800	On	Off
9600	Off	Off

[Diagram 2] Switch Functions When Using a Parallel or USB Interface

[Dip Switch 1 Settings]

Switch	Function	On	Off	Default
SW1-1	Emulation Selection	Refer to Chart (1) below.		Off
SW1-2				Off
SW1-3	Auto Cutter Selection	Enable	Disable	On
SW1-4	Font Interval Selection	2	3	Off
SW1-5	Service Technician Mode			-
SW1-6				-
SW1-7				Off
SW1-8	Korean Type Selection	Unified	Complete	Off

Chart (1) Emulation Mode Selection

SW1–1	SW1-2	Mode
Off	Off	BXL/POS
Off	On	CITIZEN
On	Off	STAR

[Dip Switch 2 Settings]

Switch	Function	On	Off	Default
SW2-1	Auto Line Feed Selection	Always Enable	Always Disable	Off
SW2-2	Hexa-Printing Selection	Enable	Disable	Off
SW2-3	Reserved	-	-	Off
SW2-4	Reserved	-	-	Off
SW2-5	Reserved	-	-	Off
SW2-6	Reserved	-	-	Off
SW2-7	Reserved	-	-	Off
SW2-8	Reserved	-	-	Off

5-2 Paper Jam Removal

Remove jammed paper as shown below.
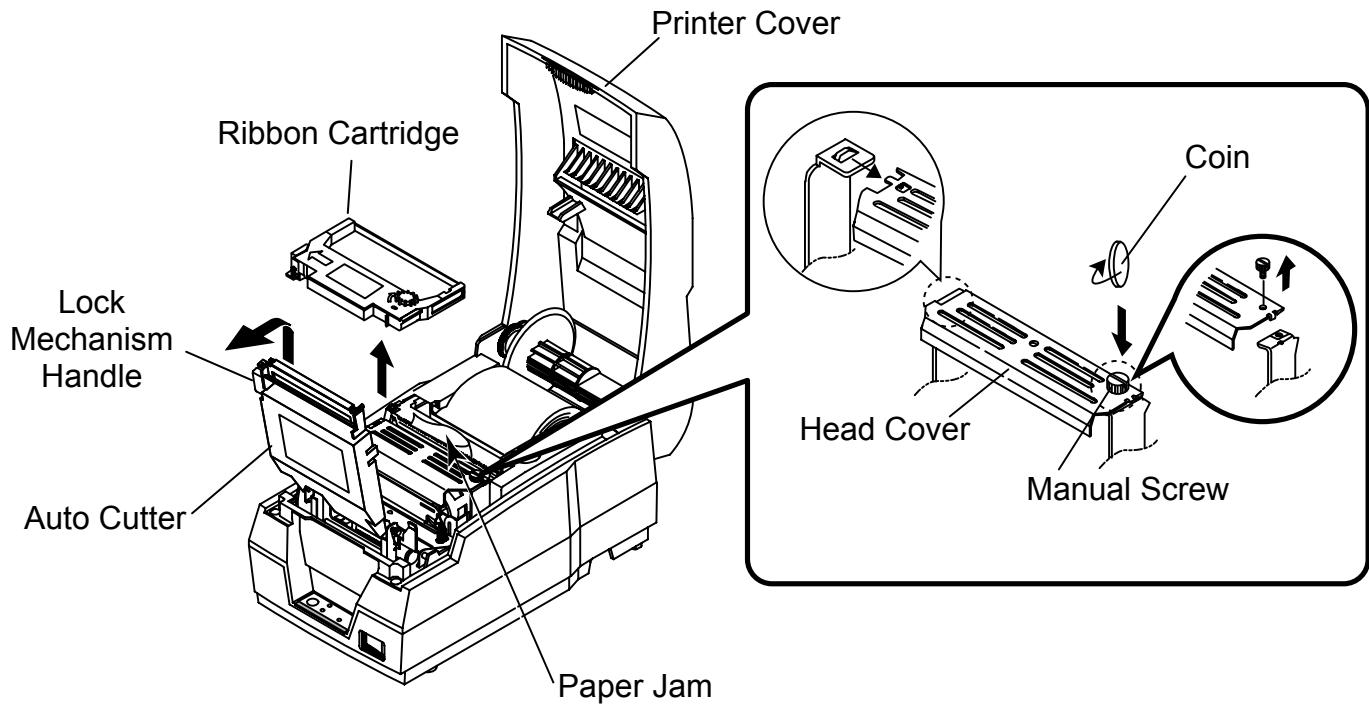
1) Open the printer cover.

2) Lift the lock mechanism handle and raise the auto cutter.

3) Remove the ribbon cartridge.

4) Use a screwdriver or coin to loosen the manual screw as shown above.

5) Remove the head cover.

Paper Jam

Head
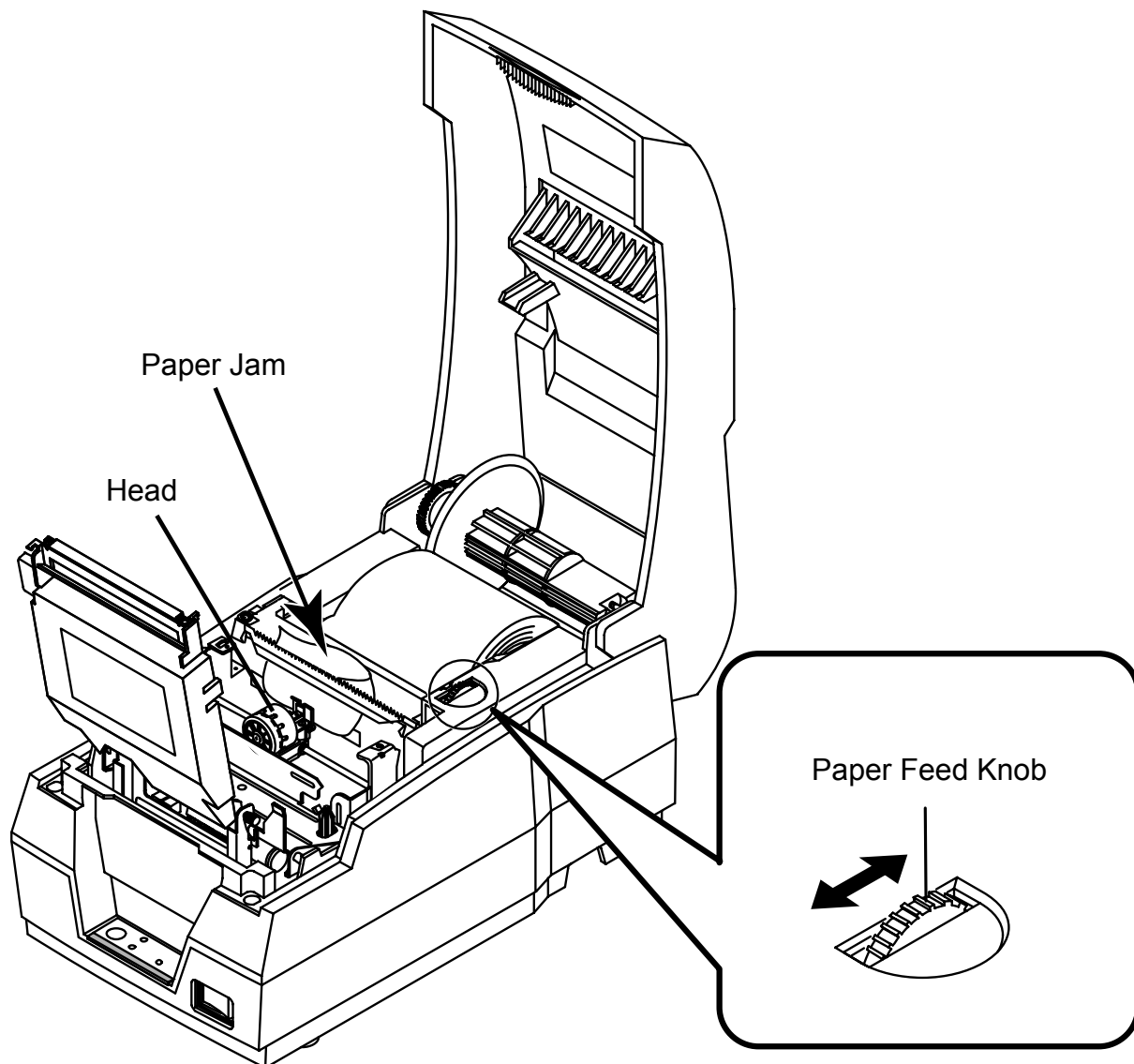
Paper Feed Knob

6) Push the head to the left and fix in place.

7) Turn the paper feed knob and remove the jammed paper.

8) Replace the head cover and fasten the screw.

9) Place the ribbon cartridge and paper back in their original positions and close the printer cover.

※ **WARNING**
The printer head can get hot during printing.
After printing, wait at least 10 minutes to allow cooling before handling the printer interior.

※ CAUTION

If the cutting edge of the auto cutter is not in its normal position, paper cannot be inserted properly.

Insert a screwdriver into the hole near the bottom of the auto cutter as shown below, and turn the gear within the auto cutter to adjust the cutting edge to its normal position.

[Cutting Edge Position]   Cutting Edge

Normal Position   Wrong Position

※ CAUTION

If the cutting edge of the auto cutter is not in its normal position, paper cannot be inserted properly.
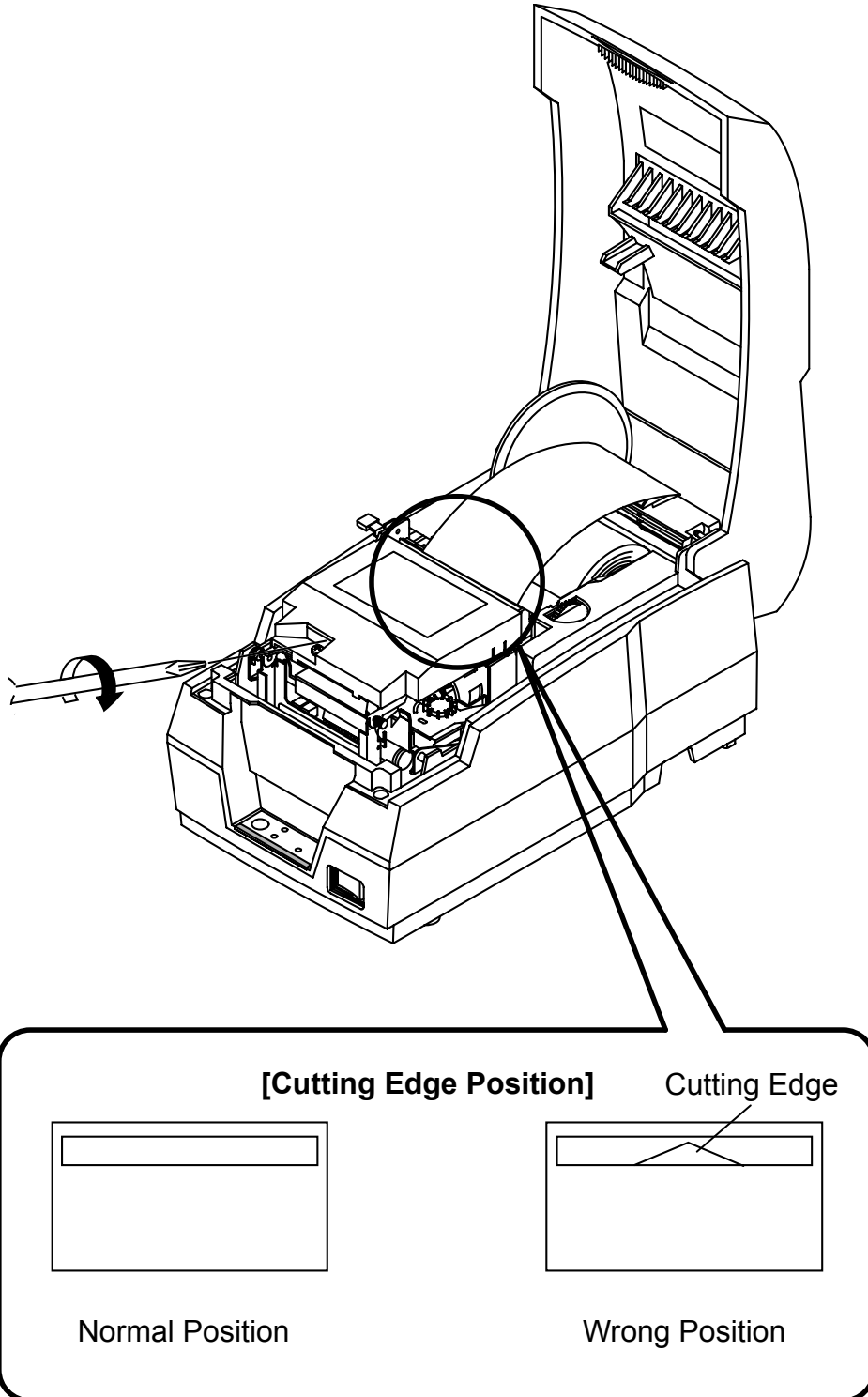
6. Appendix

6-1 Specifications

Item		Description
Printer	Printing Method	Serial Impact Dot
	Head Pin Number	9
	Print Direction	Two-way
	Print Speed	4.6 LPS (lines per second)
	Characters Per Line	Font A 33 (9*9), Font B 40 (7*9), Korean 20 (17*9)
Ribbon	Type	Cartridge type (RRC-201 B/R)
	Color	Black/Red
	Life	Black: 1,500,000 characters Red: 750,000 characters
Paper	Type	Roll
	Width	76 ± 0.5mm (2.99" ± 0.22")
	Diameter	Max. φ83mm
	Thickness	0.06mm ~ 0.085mm (0.002" ~ 0.003")
Adapter	SMPS AC Input	AC100 ~ 240V (50Hz ~ 60Hz)
	SMPS Voltage, Current	DC 24 V, 1.5 A
Auto Cutter	Cutter Type	Guillotine type
	Cutter Width	Max. 85 mm
	Cutter Thickness	Max. 0.1mm
Other	Total Volume	SRP-270A/AS/AP/AU: 160(W)*249(D)*130(H)mm (6.3"*9.8"*5.12") SRP-270C/CS/CP/CU: 160(W)*249(D)*149(H)mm (6.3"*9.8"*5.87") SRP-270D/DS/DP/DU: 160(W)*295(D)*160(H)mm (6.3"*11.61"*6.3")
	Weight	Weight (printer) / Weight (with box & accessories) SRP-270A: 2.2 Kg (4.9 lbs) / 3.2 Kg (7.1 lbs) SRP-270C: 2.5 Kg (5.5 lbs) / 3.5 Kg (7.7 lbs) SRP-270D: 2.6 Kg (5.7 lbs) / 3.6 Kg (7.9 lbs)
	Reliability	Head: 300 million dots Printer: 18 million lines (MCBF) Auto Cutter: 1 million cuts
	Operation Temperature	0℃ ~ 40℃ (32°F ~ 104°F)
	Operation Humidity	30% ~ 80%
	Storage Temperature	-5℃ ~ 50℃ (23°F ~ 122°F)
	Storage Humidity	10% ~ 90%

6-2 RS-232C (Serial Interface) Cable Specifications

1) Printer Rear Image

Serial Interface   Cash Drawer Power Connector
           Connector
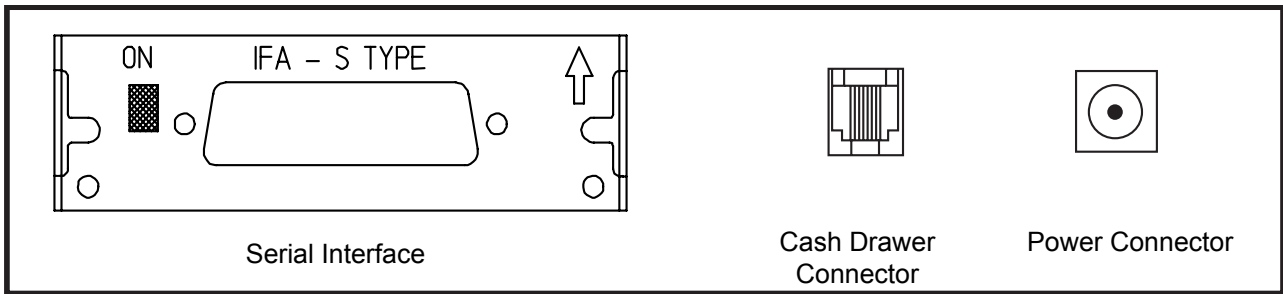
※ Turning the dip switch on the Serial interface to the ON position connects DTR and RTS signals together.

2) Cable Specifications
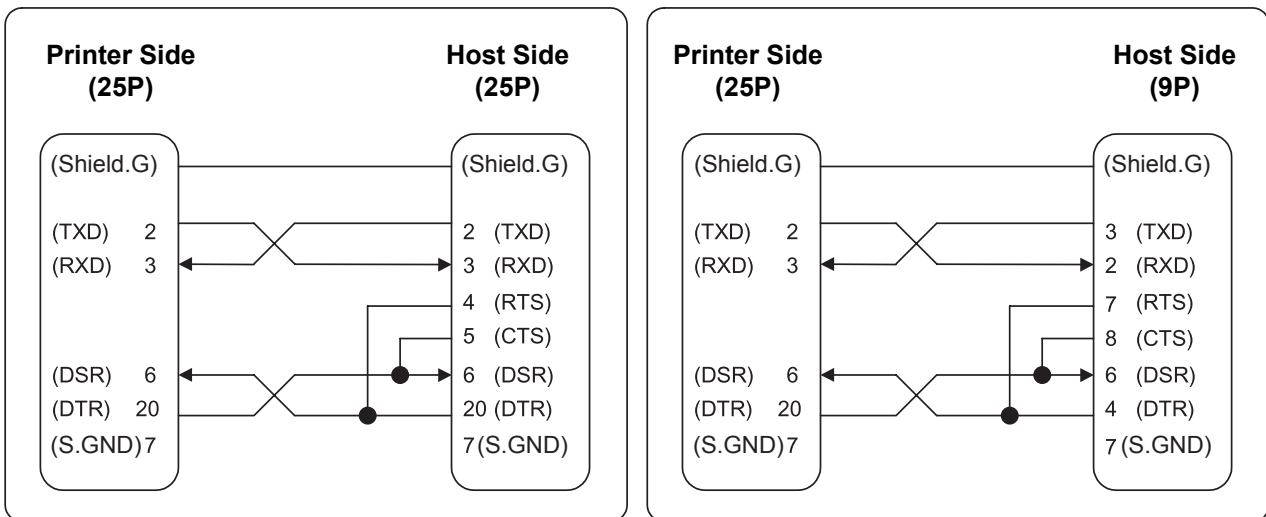
Pin No.	Signal	Direction	Function
1	FG	-	Frame Ground
2	TxD	Output	Transmit Data
3	RxD	Input	Receive Data
4	RTS	Output	Ready To Send
5	CTS	Input	Clear To Send
6	DSR	Input	Data Set Ready
7	SG	-	Signal Ground
20	DTR	Output	Data Terminal Ready

6-3 RS-485 (Serial Interface) Cable Specifications

1) Printer Rear Image

Serial Interface   Cash Drawer Connector   Power Connector
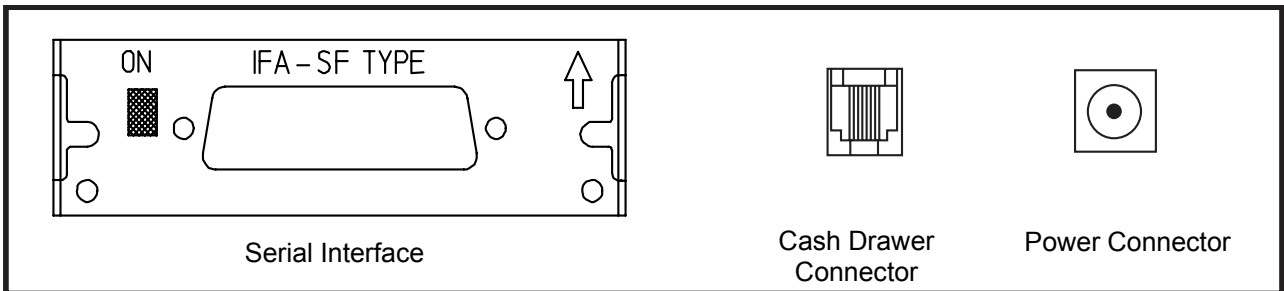
2) Cable Specifications

Pin No.	Signal	Direction	Function
1	FGND	-	Frame Ground
2	SD2	Output	Send Data
3	SD1	Output	
4	RD2	Input	Receive Data
5	RD1	Input	
7	SGND	-	Signal Ground
8 9	DR2 DR1	Output	Same as DTR (RS-232)
10 11	CS2 CS1	Input	Same as DSR (RS-232)

6-4 IEEE1284 (Parallel Interface) Cable Specifications

1) Printer Rear Image

Parallel Interface   Cash Drawer Connector   Power Connector
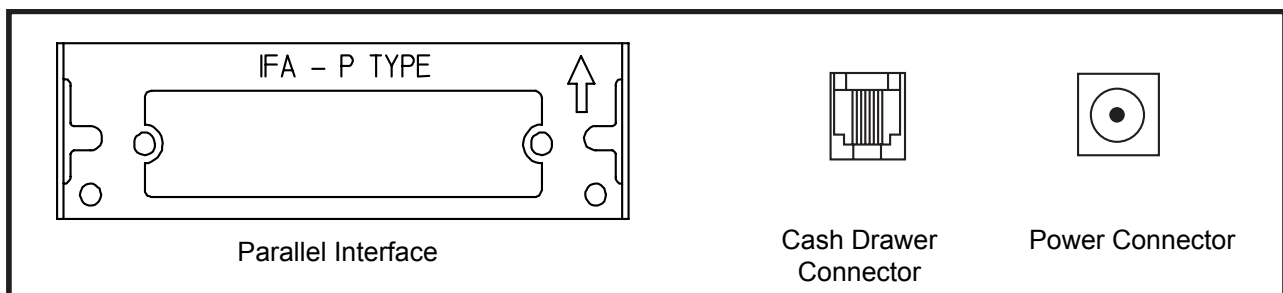
2) Cable Specifications

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

6-5 USB Interface Cable Specifications

1) Printer Rear Image
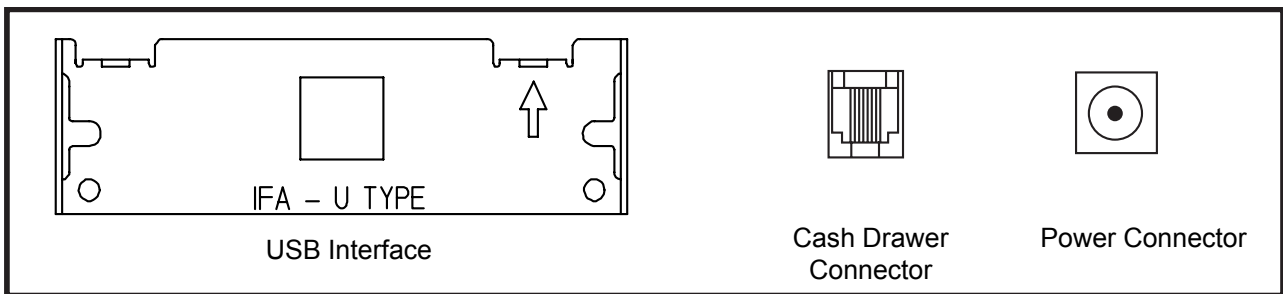
2) Cable Specifications

Pin No.	Signal	Wire Color	Function
1	VBUS	Red	Host Power
2	D-	White	Data (D-)
3	D+	Green	Data (D+)
4	GND	Black	Signal Ground
Shell	Shield	Drain Wire	Frame Ground

6-6 Cash Drawer Cable Specifications

Pin No.	Signal	Direction
1	Frame Ground	-
2	Cash Drawer Control Signal 1	Output
3	Cash Drawer Operation Confirm Signal	Input
4	+24V	-
5	Cash Drawer Control Signal 2	Output
6	Signal Ground	-

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6-7 Certification

1) EMC & Safety Standards

　　• Europe:　CE EMC,CB-Scheme:IEC60950-1, GS: EN60950-1: 2001
　　• North America:　FCC rules parts 15B

⚠ *WARNING*

Use of an unprotected interface cable with this printer conflicts with EMC standards. Users should only use cables approved by BIXOLON.

2) CE Mark

　　• EMC Directive 89/336/EEC　　　　　EN55002:1994+A1:1995+A2:1997
　　　　　　　　　　　　　　　　　　　EN55024:1998+A1:2001+A2:2003
　　　　　　　　　　　　　　　　　　　EN61000-3-2:2000
　　　　　　　　　　　　　　　　　　　EN61000-3-3:1995+A1:2001
　　　　　　　　　　　　　　　　　　　EN6100-4-2:1995+A1:1998+A2:2001
　　　　　　　　　　　　　　　　　　　EN6100-4-3: 2002+A1:2002
　　　　　　　　　　　　　　　　　　　EN6100-4-4:2004
　　　　　　　　　　　　　　　　　　　EN6100-4-5:1995+A1:2001
　　　　　　　　　　　　　　　　　　　EN6100-4-6:1996+A1:2001
　　　　　　　　　　　　　　　　　　　EN6100-4-8:1993+A1:2001
　　　　　　　　　　　　　　　　　　　EN6100-4-11:1994+A1:2001

　　• Low Voltage Directive 73/23/EEC　　Safety: EN60950-1:2001

3) WEEE (Waste Electrical and Electric Equipment)

This mark shown on the product or its literature indicates that the corresponding item should not be discarded at the end of its working life with other household waste.　To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate marked items from other types of waste and recycle them responsibly to promote the sustained 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 conduct environmentally safe recycling of such items. Commercial users should contact their suppliers and check the terms and conditions of purchase contracts.　This product should not be combined with other commercial waste for disposal.

6-8 Label Types

The label types used with this printer are as follows.
　　• Control Labels: PC
　　• Other Labels: PET

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