

# POS Thermal Receipt Printer

## A11 Prime

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## User's Manual

# Safety Precautions

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



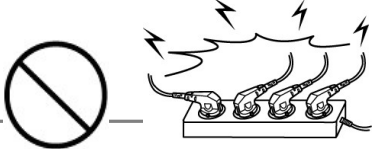
## WARNING

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.

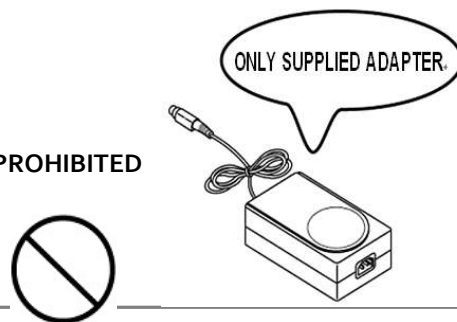
#### PROHIBITED



### You must use only the supplied adapter.

- It is dangerous to use other adapters.

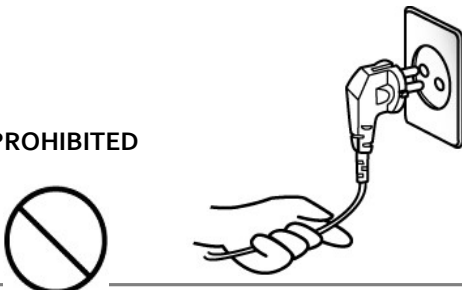
#### PROHIBITED



### 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. only standardized multi-outlets.

#### PROHIBITED



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

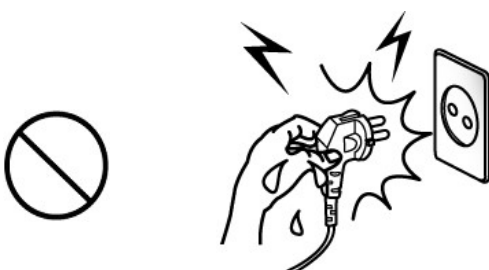
- If not, a child may put the bag on his head.

#### PROHIBITED



### Do not plug in or unplug with your hands wet.

- You can be electrocuted.



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

- A damaged cable can cause a fire.



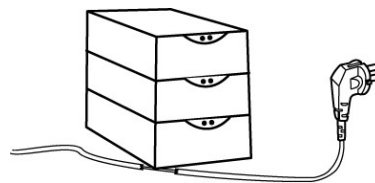
## PROHIBITED



### CAUTION

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

## PROHIBITED



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**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.

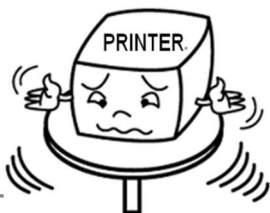
### PROHIBITED



**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 appareilestconforme aux normes class “A” interference radio tel que specifier par ministrecanadien 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 A11 Prime 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. Print at a max. speed of 250mm/s.
2. Low noise thermal printing.
3. Support of USB & Serial (Option: Ethernet/Bluetooth/Wireless LAN Interface)
4. Internal data buffer (data can be received and buffered while printing).
5. Control of external devices like cash registers through peripheral device drive circuit.
6. Barcode Printing.
7. Support of various print density settings (by changing memory switch settings).

It is advisable to read the contents of this manual carefully before using the printer for the first time.

※ All specifications are subjected to change without notice.

We at POSBANK 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.

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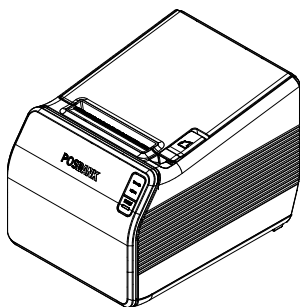
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# 1. Setting Up the Printer

## 1-1 Unpacking

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

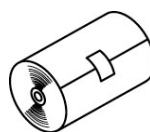
7



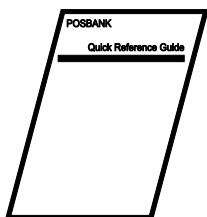
A11 Prime



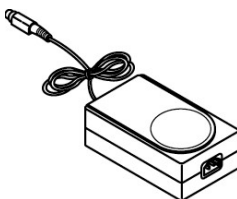
Driver CD



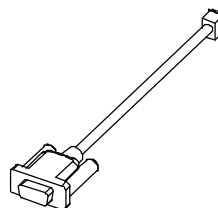
Roll Paper



Installation Guide



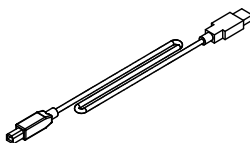
AC/DC Adapter



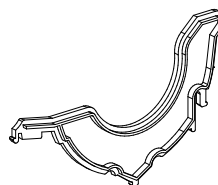
Serial Cable



Power Cord



USB A-B Cable



2"Partition

## 1-2 Connecting the Cables

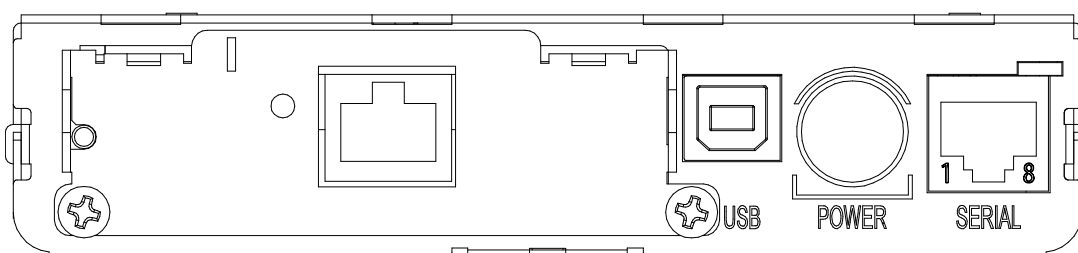
Connect the printer to the host computer using the right interface cable that complies with the specifications of the interface. The drawer to be used with the printer should meet the specifications of the printer.

### ※ NOTE

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

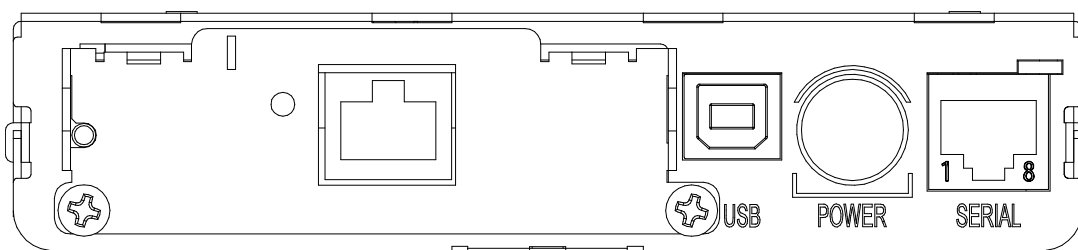
8

### 1-2-1 Serial Interface (RS-232C)



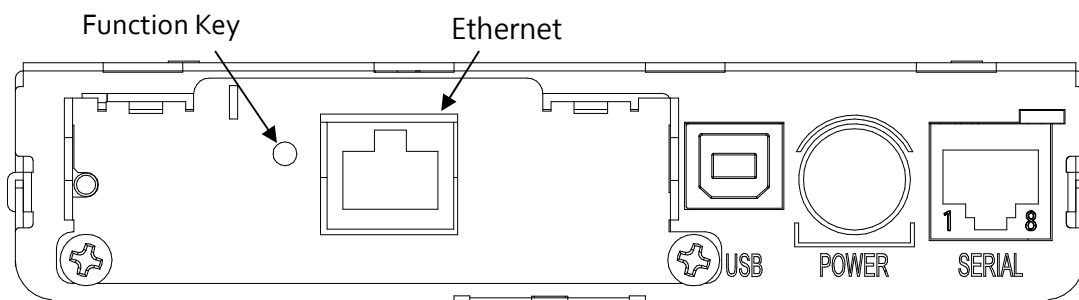
Pin No.	Signal name	Direction	Function
1	N.C	-	-
2	RxD	Input	Receive Data
3	TxD	Output	Transmit Data
4	DTR	Output	Data Terminal Ready
5	GND	-	Signal Ground
6	DSR	Input	Data Set Ready
7	RTS	Output	Ready To Send
8	CTS	Input	Clear To Send

### 1-2-2 USB Interface



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

### 1-2-3 Ethernet Interface



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	

\* If you push the function key, IP and MAC information can be obtained.

\* Refer to the Ethernet User's Manual for more detailed information.

### 1-2-4 Wireless LAN Interface

#### 1) Wireless LAN Communication Specifications

Item	Specifications
Frequency	2.412~2.484 GHz
Channel	Channel 1~13
Protocol	802.11b, 802.11g, 802.11n

#### 2) Connecting Wireless LAN

Printer can be connected to terminal devices with wireless LAN communication capability (PDA, PC, smartphone, tablet PC, etc.).

\* Refer to the Network Manual for more detailed instructions about how to establish the connection.

## 1-2-5 Bluetooth Interface

### 1) Bluetooth Communication Specifications

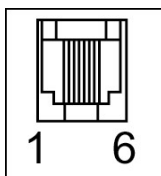
Item	Specifications
Frequency	2.402 ~ 2.480 GHz
Version	2.1 + EDR
Module Type	Class 1

### 2) Bluetooth Connection

Printer can be connected to terminal devices with Bluetooth communication capability (PDA, PC, smartphone, tablet PC, etc.)

\* Refer to the Bluetooth Connection Manual for more detailed instructions about how to establish the connection.

## 1-3 Drawer Cable



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

### ※ Warning

A11 supports only Epson Cash Drawer specifications.

Use a cash drawer that meets the printer specifications.

Using an improper cash drawer may cause faults in the cash drawer and the printer.

Make sure to use a cash drawer with an internal coil resistance of 24 ohms or higher.

(The maximum current is 1A.)

The open signal time for the cash drawer should not exceed 0.8 seconds. After opening the cash drawer, make sure to idle for at least 3.2 seconds (at least 4 times that of the open signal time) before operating it.

Do not connect to a communication connector such as telephone line or modem as it can damage the project.

### ※ Caution

Do not connect a telephone line to the drawer kick-out connector.

Otherwise, the telephone line and the computer may be damaged.

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 Installing or Replacing the Paper Roll

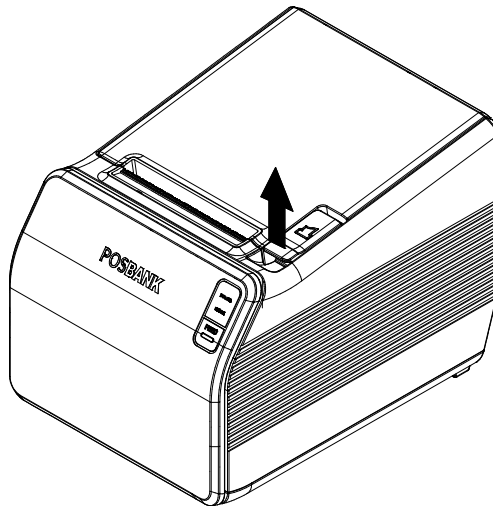
### ※ NOTE

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.

1-4-1 Make sure that the printer is not receiving data; otherwise, data may be lost.

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1-4-2 Open the paper roll cover by raise the cover-open lever.

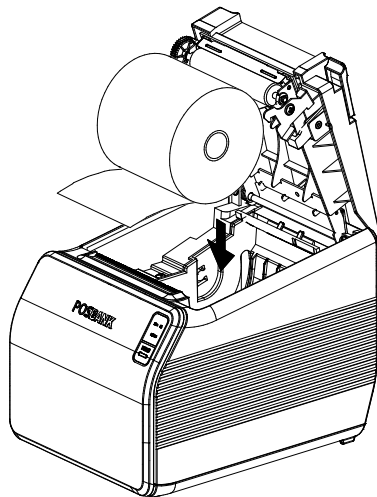


### ※ Caution

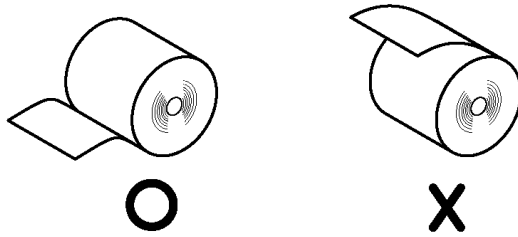
Do not open the print cover while the printer is operating, otherwise the printer may be damaged.

1-4-3 Remove any existing used paper roll core when replacing the paper roll.

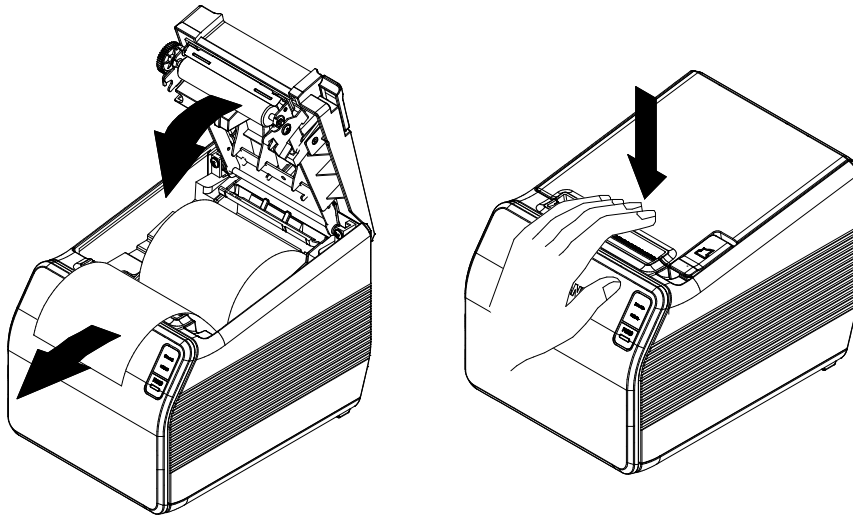
1-4-4 Insert the paper roll as shown in the following picture.



**1-4-5** Check the orientation of the roll paper when inserting it into the printer.



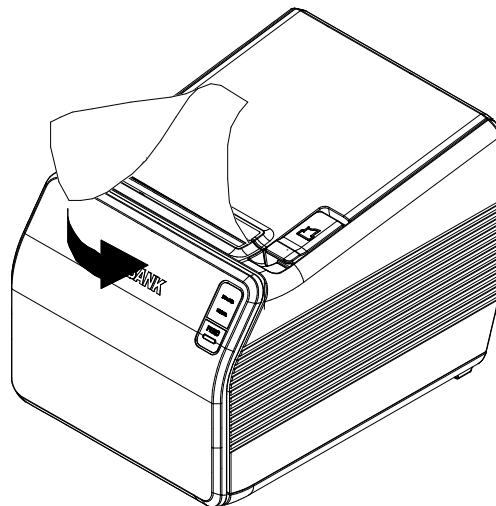
**1-4-6** Pull out a small amount of paper as shown in the picture, and close the cover.



**※ Caution**

When closing the cover, hold down the center of printer cover firmly so that paper roll is loaded correctly.

**1-4-7** Cut the paper as shown in the following picture.



## 1-5 Recommended Papers

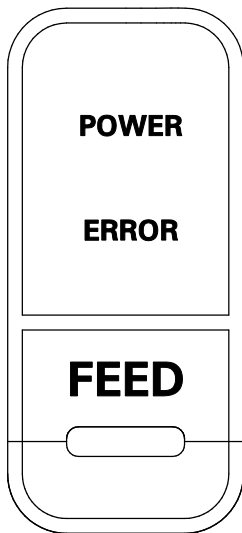
- TF50KS-E (Paper Thickness: 65μm): Nippon Paper Industries Co., Ltd.
- PD 150R (Paper Thickness: 75μm): New Oji Paper Mfg. Co., Ltd.
- PD 160R (Paper Thickness: 75μm): New Oji Paper Mfg. Co., Ltd.
- P350 (Paper Thickness: 62μm): Kansaki Specialty Paper, Inc. (USA)
- P220AG (Paper Thickness: 65μm): Mitsubishi Paper Mills Limited
- P220A (Paper Thickness: 65μm): Mitsubishi Paper Mills Limited
- F5041 (Paper Thickness: 65μm): Mitsubishi HitecPaper Flensburg GmbH

### ※ 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.

## 1-6 Using the Printer

### 1-6-1 Control Panel



#### ○ POWER

When turning on the power, a Green LED will be lit.

#### ○ ERROR

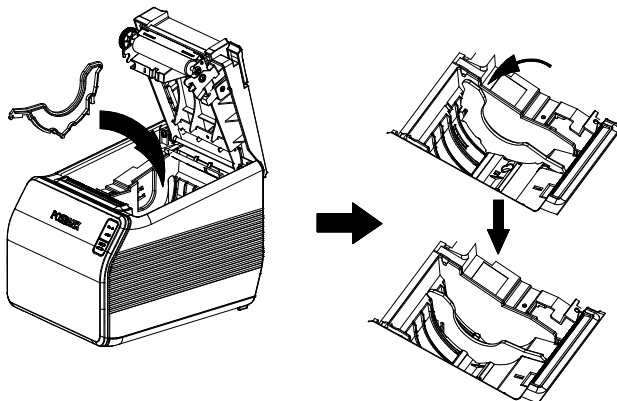
When an error occurs, a red LED will be lit.  
(e.g. no paper, cover ajar, etc.)

#### ○ FEED

Press the FEED button once to discharge extra paper. Holding down the FEED button will discharge paper continuously until the button is released.

### 1-6-2 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

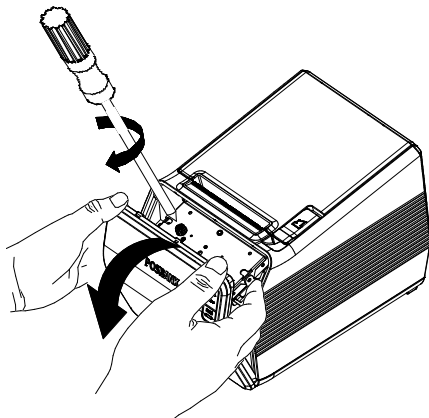
After using 2"(58mm) paper roll, do not replace it with 3"(79.5±0.5mm) paper roll. This may result in poor printing quality.

## 1-7 Removing Paper Jam

**1-7-1** When a paper jam occurs, turn the printer off and then back on, open the cover, and remove the jammed paper.

※ In case of a minor jam, it may be possible that the operating blade returns to the original position and cover can be opened simply by turning the printer off and then back on.

Follow the steps shown below if the cover does not open after power cycling.



**1-7-2** Turn the printer off.

**1-7-3** Pull the COVER-CUTTER down while holding the part which releases the paper as shown in the picture.

**1-7-4** Turn the knob and insert the blade that sticks out using a cross-head screwdriver as shown below.

**1-7-5** Lift the cover-open lever and remove the jammed paper. Put the COVER-CUTTER back in place.

**1-7-6** Turn the printer on and use it.

## 1-8 Connecting the computer

Use the cable that comes with the printer to connect the printer to computers.

**1-8-1** Plug the cable connector securely into the printer's interface connector located in the back of the printer.

**1-8-2** Attach the other end of the cable to the computer.

## 1-9 Connecting the Power Supply

### ※ CAUTION

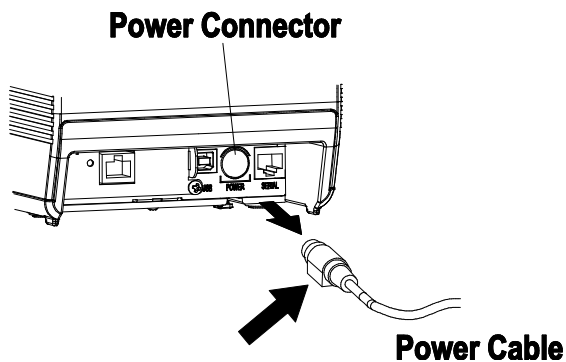
When connecting or disconnecting the power supply to and from the printer, make sure that the power supply adapter is unplugged from the electrical outlet. Otherwise you may damage the power supply or the printer.

If the power supply's rated voltage and your outlet's voltage do not match, do not plug in the power cord and contact your dealer for assistance. 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

If you want to remove the power cable, grab the arrow part of the connector securely 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 procedure is as follows:

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

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

**2-3** The self-test prints the current status of the printer including ROM version.

**2-4** After printing the current printer status, the printer wait for the next step after printing the following lines.  
(The paper signal light keeps blinking.)

**SELF-TEST PRINTING.**  
**SELECT MODES BY PRESSING FEED BUTTON.**  
**Continuous SELF-TEST : Less than 1 second**  
**VMSM Selection : 1second or more**

**2-5** Press the Feed button to resume printing or hold down the button for at least one second to change the VMSM settings.

**2-5-1** If “Continuous SELF-TEST” is selected

**2-5-1-1** Press the Feed button for less than one second to print the preset page.

**2-5-1-2** The self- test ends automatically as it prints the following line and cuts the paper

**\*\*\* COMPLETED \*\*\***

**2-5-1-3** The printer goes into normal print mode upon completion of the self-test.

**2-5-2** If “VMSM Selection” is selected

**2-5-2-1** The following lines will be printed when the VMSM opens.

**\*\* VMSM Selection \*\***  
**0 : Save and Exit**  
**1 : Print Current Settings**  
**2 : Set Serial Interface**  
**3 : Set Print Density**  
**4 : Set Print Speed**  
**5 : Set Auto cutter**  
**6 : Set Cutting mode**  
**7 : Set Buzzer control after cutting**  
**8 : Set Code Page**  
**9 : Set International Character**  
**10: Set Black Mark Mode**  
**11: Set Auto Load Mode**  
**12: Set Sensing Level**  
**13 or more : None**

**2-5-2-2** Press the Feed button to run the above function.

**2-5-2-2-1** Step 1(Select Options): The number indicates the number of times the FEED button needs to be pressed. Make sure to press it for less than 1 second.

**2-5-2-2-2** Step 2(Enter Options): hold down the button for at least one second to apply each item selected.

**2-5-2-3** Hold down the Feed button for at least 1 second to save the changes. The following line will be printed before cutting the paper.

\*\*\* COMPLETED \*\*\*

**2-6** The new settings will be automatically applied when printer resets.

※ **Note**

If you select any items not listed above, the list of “VMSM Selection” will be printed again. Setting the mode will be canceled if no item is selected in Step 1.

※ **Virtual Memory Switch Management(VMSM) Table**

Function			Default
0. Save and Exit			
1. Print Current Settings			
2. Set Serial Interface	1. Baud rate	1. 2,400bps	9,600bps
		2. 4,800bps	
		3. 9,600bps	
		4. 19,200bps	
		5. 38,400bps	
		6. 57,600bps	
		7. 115,200bps	
	2. Data length	1. 8bit	8bit
		2. 7bit	
	3. Parity bit	1. None	None
		2. Odd	
		3. Even	
	4. Handshaking	1. DTR/DSR	DTR/DSR
		2. XON/XOFF	
3. Set Print Density	1. Level 1(Light)		Level 1 (Light)
	2. Level 2		
	3. Level 3(Dark)		
4. Set Print Speed	1. Level 1(Fast)		Level 1 (Fast)
	2. Level 2		
	3. Level 3(Slow)		
5. Set Auto cutter	1. Enable		Enable
	2. Disable		
6. Set Cutting mode	1. Partial cut		Partial cut
	2. Full cut		
7. Set Buzzer control after cutting	1. Disable		Disable
	2. Internal buzzer		
	3. External buzzer		
8. Set Code page	1. Page1	1. PC437(USA,Standard Europe)	PC437
		2. Katakana(Japanese)	
		3. PC850(Multilingual)	
		4. PC860(Portuguese)	
		5. PC863(Canadian-French)	
		6. PC865(Nordic)	
		7. WPC1252(Latin1)	
		8. PC866(Cyrillic)	
	9. PC852(Latin2)		

	2. Page2	10. PC858(Euro)	
		1. PC862(Israel)	
		2. PC864(Arabic)	
		3. THAI42(Thai)	
		4. WPC1253(Greek)	
		5. WPC1254(Turkish)	
		6. WPC1257(Baltic)	
		7. Farsi	
		8. WPC1251(Cyrillic)	
		9. PC737(Greek)	
	3. Page3	10. PC775(Baltic)	
		1. THAI14(Thai)	
		2. Hebrew Old Code	
		3. WPC1255(Hebrew)	
		4. THAI11(Thai)	
		5. THAI18(Thai)	
		6. PC855(Cyrillic)	
		7. PC857(Turkish)	
		8. PC928(Greek)	
		9. THAI16(Thai)	
	4. Page4	10. WPC1256(Arabic)	
		1 : WPC1258(Vietnamese)	
		2 : Khmer(Cambodia)	
		3 : WPC1250(Czech)	
		4 : TCVN-3(Vietnamese1)	
		5 : TCVN-3(Vietnamese2)	
		6 : KS5601(Korean)	
		7 : BIG5(Traditional Chinese)	
		8 : GB2312(Simplified Chinese)	
		9 : SHIF-JIS(Japanese)	
9. Set International Character		1. USA	USA
		2. France	
		3. Germany	
		4. U.K	
		5. Denmark I	
		6. Sweden	
		7. Italy	
		8. Spain I	
		9. Japan	
		10. Norway	
		11. Denmark II	
		12. Spain II	
		13. Latin America	
		14. Korea	
10. Set Black mark mode		1. Disable	Disable
		2. Enable	
11. Set Auto Load Mode		1. Disable	Disable
		2. Enable	
12. Set Sensing Level		1. Level 0	Level 0
		2. Level 1	
		3. Level 2	
		4. Level 3	
		5. Level 4	
		6. Level 5	
		7. Level 6	
		8. Level 7	
		9. Level 8	
		10. Level 9	

### 3. Hexadecimal Dumping

This function 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 making sure that the printer is off, open the cover.

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

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

**3-4** Select the hexadecimal printing function in the mode selection menu to move to the hexadecimal printing mode.

**3-5** 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 correspond 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 are disabled.

**3-6** When the printing finishes, turn off the printer.

**3-7** Turn on the printer and then the hexadecimal mode is off.

## 4. Specification

Printing method		Thermal line printing	
Dot density		180 dpi (7 dots/mm)	
Printing width	3 inches		72 mm
	2 inches		48 mm
Paper width		79.5±0.5 mm	
Characters per line (default)		42 (Font A), 56 (Font B), 56 (Font C)	
Printing speed		Max. 250 mm/sec	
Receive Buffer Size		4K bytes	
※NOTE			
Printing speed may become slightly slower depending on the data transmission speed and the combination of commands.			
Supply voltage	SMPS Input voltage	100~240 VAC	
	Frequency	50/60 Hz	
	SMPS Output voltage	+24 VDC/2.5A	
Environmental Conditions	Temperature	0 ~ 40 ℃ (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	

\*) The specifications were determined based on operation at normal temperature using designated paper on default settings. They are subject to change depending on temperature or printing level.

\*) The specifications were tested according to POS BANK standard reliability.

## 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 any paper.

**5-1-2** Clean the print head with a cotton swab moistened with ethyl alcohol solvent.

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

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