

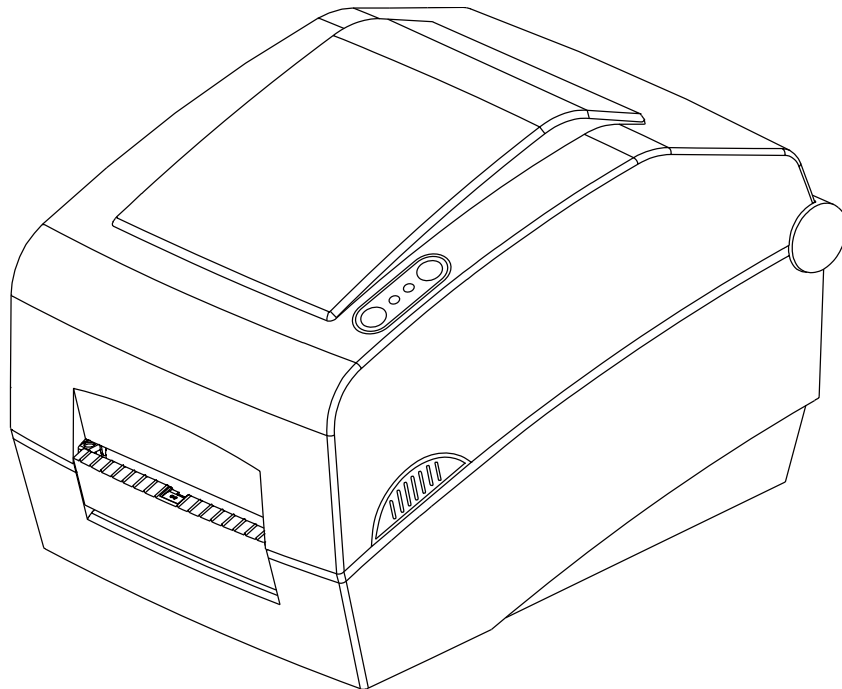
METAPACE

User's Manual

Metapace L-2

Label Printer

Rev. 1.00



■ Table of Contents

※ Manual Information & Usage Precautions	3
1. Content Confirmation	6
2. Product Part Names.....	7
3. Installation & Usage.....	9
3-1 Power Connection	9
3-2 Interface Cable Connection	10
3-3 Paper Installation	11
3-4 Ribbon Installation	12
3-5 LED Display	16
3-6 Test printing	17
4. Self-Test.....	18
5. Detailed features	19
5-1 Printer Settings with Dip switches.....	19
5-2 Printer Settings with Utility Program	21
5-3 Pause/Cancel	22
5-4 Gap Sensor Auto-Calibration	23
5-5 Gap Sensor Manual-Calibration	24
5-6 The Peel-Off	25
5-7 Using Fan-Fold Paper.....	27
5-8 Auto Cutter (Option).....	28
6. Cleaning Head.....	29
7. Appendix.....	30
7-1 Specifications.....	30
7-2 Certification.....	31
7-3 Label Types	31

■ 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 the installation instructions and main functions of the Windows Driver.

2. Unified Label Printer Utility Manual

This manual provides information on the usage of software for function selection of this product, operating condition modification, etc.

The following functions are available.

- 1) Firmware Downloader
- 2) Factory Font Downloader
- 3) Soft-Font (or Downloadable-font) Downloader
- 4) PCX File Downloader
- 5) User Setting Manager
- 6) File Transfer Manager
- 7) SLCS Tester

3. Programming (SLCS) Manual

This manual provides information on label printer commands.

4. True Font Downloader Manual

This manual provides information on the usage of the font downloader that can download True Fonts and facilitate their usage as Device Fonts.

5. Ethernet interface Manual

This manual provides information on the configuration and usage of Ethernet interface.

6. Label craft Manual

This manual provides information on the usage of the Windows PC program that can make labels by adding text, graphics, or barcodes at desired positions.

■ Safety Precautions

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



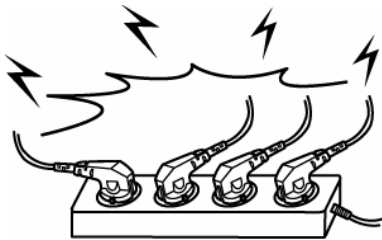
WARNING

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.

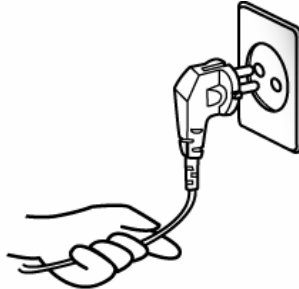
PROHIBIT



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.

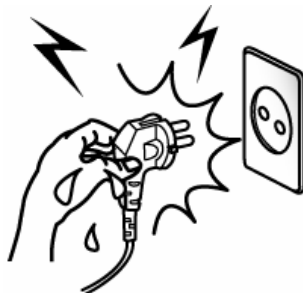
PROHIBIT



Do not plug in or unplug with your hands wet.

- You can be electrocuted.

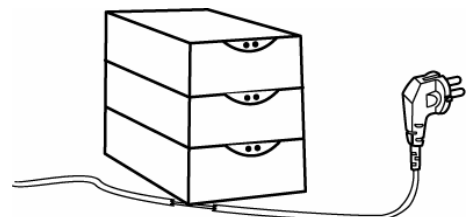
PROHIBIT



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

- A damaged cable can cause a fire.

PROHIBIT





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.

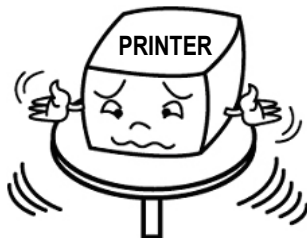
PROHIBIT



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.

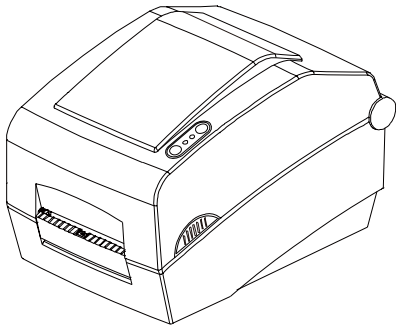
- Switch off and unplug the printer before calling your dealer.

TO UNPLUG

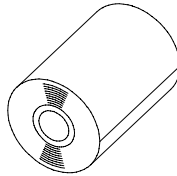


1. Content Confirmation

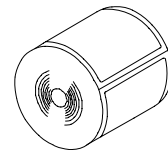
The following items should all be contained in the printer package.
Contact the dealer from which the purchase was made if any item is damaged and/or missing.



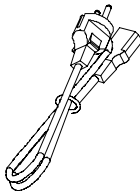
Metapace L-2



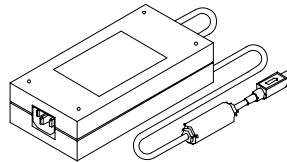
Ribbon



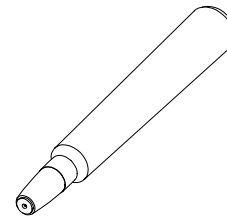
Paper



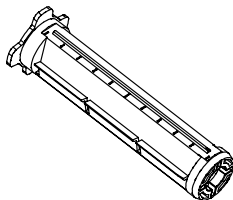
Power Cord



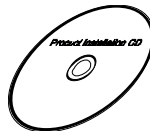
AC Adapter



Cleaning Pen



Holder Ribbon (2ea)



CD



User's Manual

※ Optional items



RS-232C (Serial) Cable

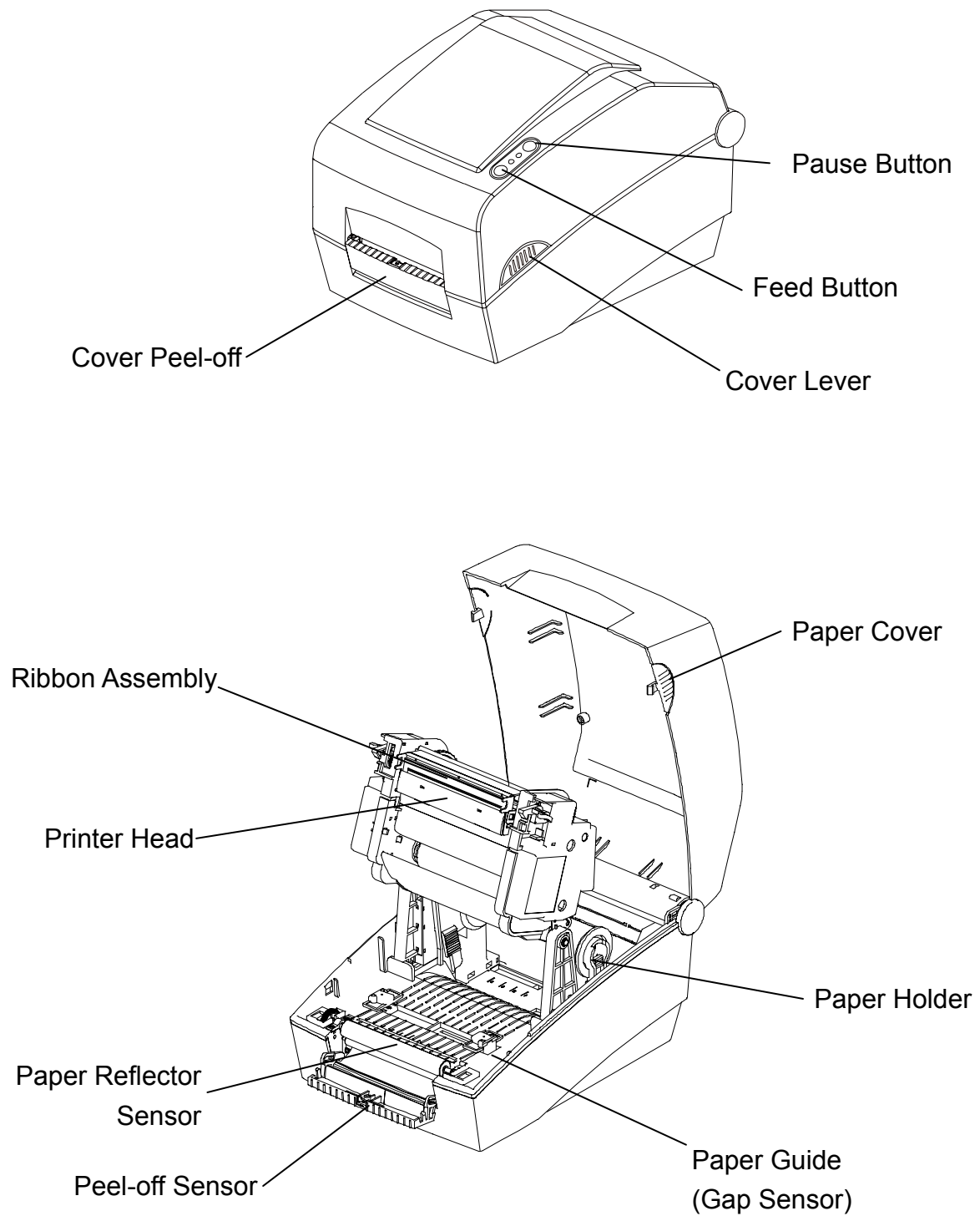


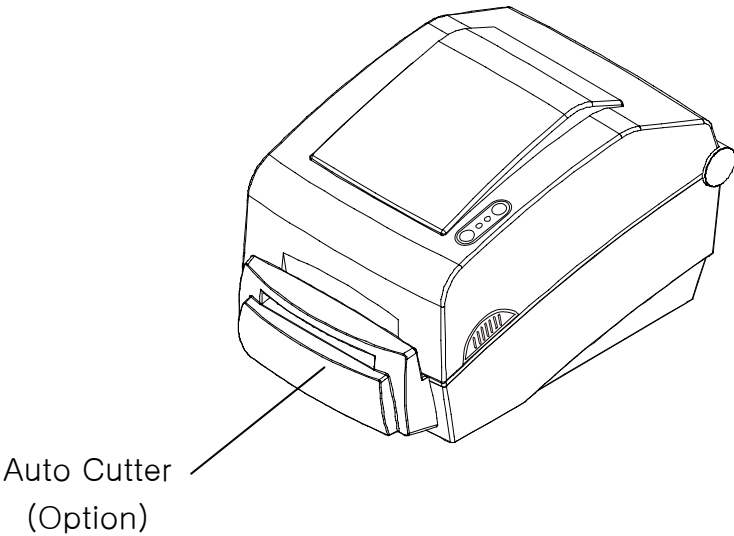
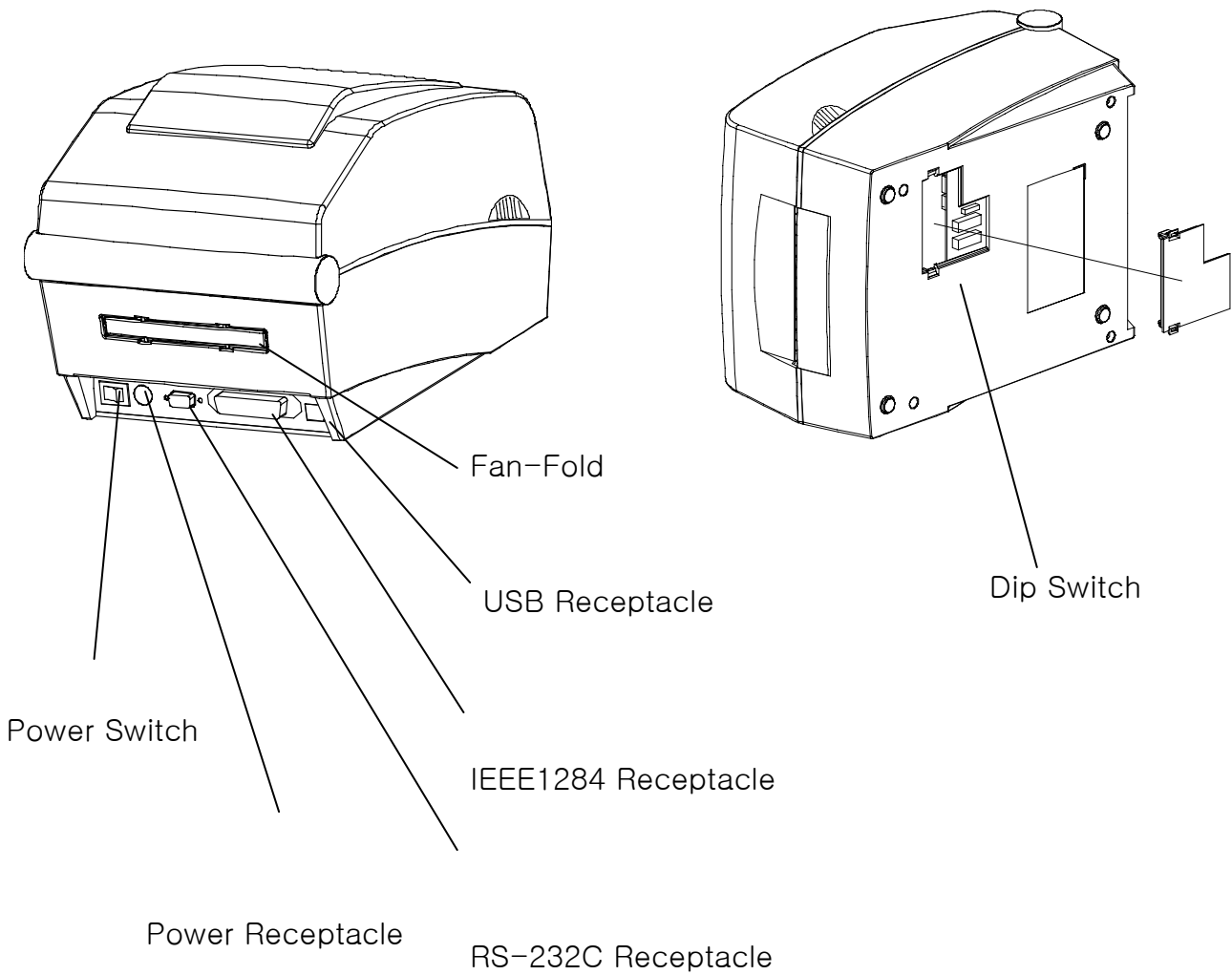
IEEE1284 (Parallel) Cable



USB Cable

2. Product Part Names

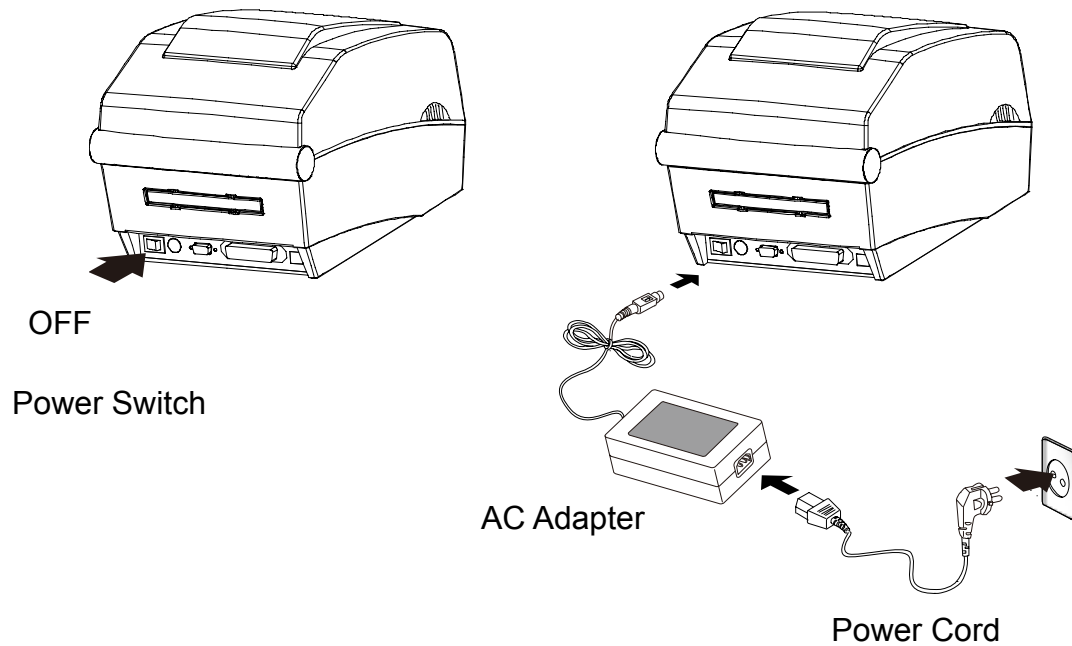




3. Installation & Usage

3-1 Power Connection

Connect power to the printer as shown below.



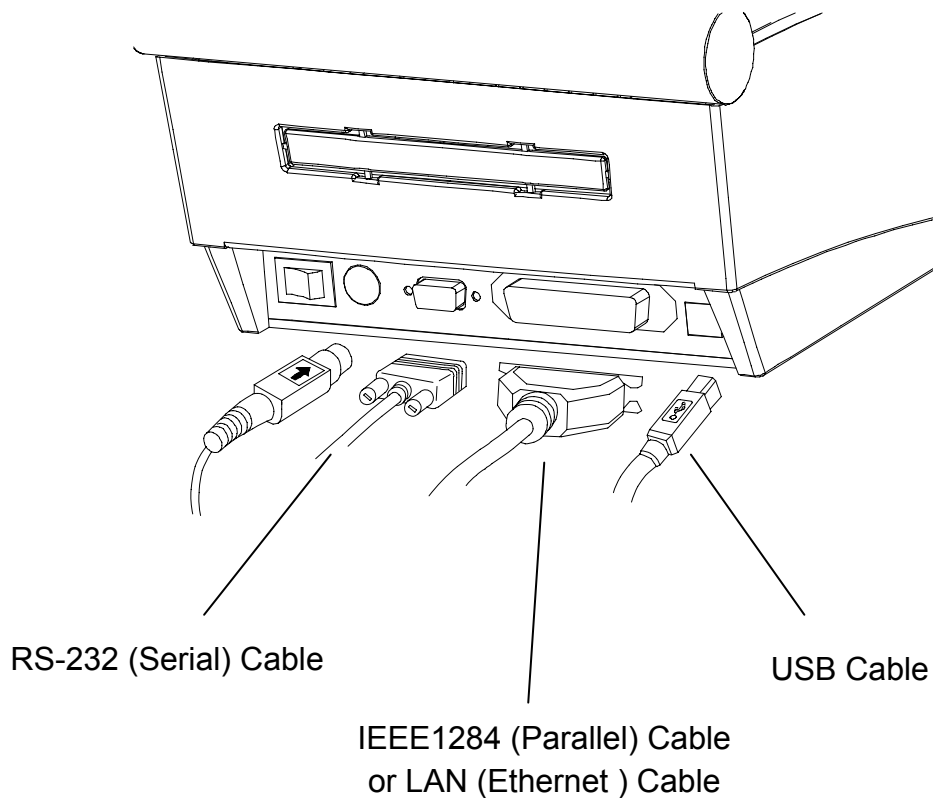
- 1) Turn off the printer power switch.
- 2) Check to see that the AC adapter voltage matches that of the power source.
- 3) Connect the AC adapter jack to the printer power connector.
- 4) Connect the power cord to the AC adapter.
- 5) Connect the power cord to a power source/outlet.

3-2 Interface Cable Connection

Connect the interface cable as shown below.

This printer supports the following communications interface standards.

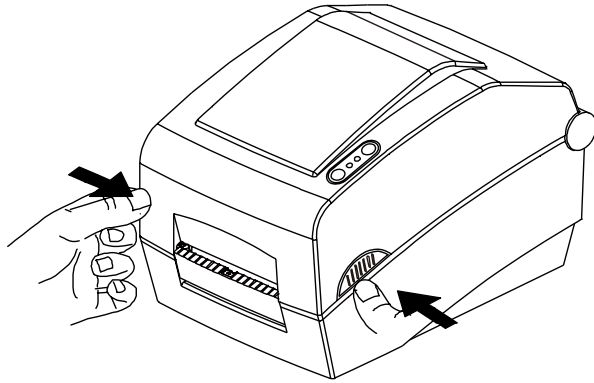
- RS-232C (Serial)
- IEEE1284 (Parallel)
- USB
- Ethernet



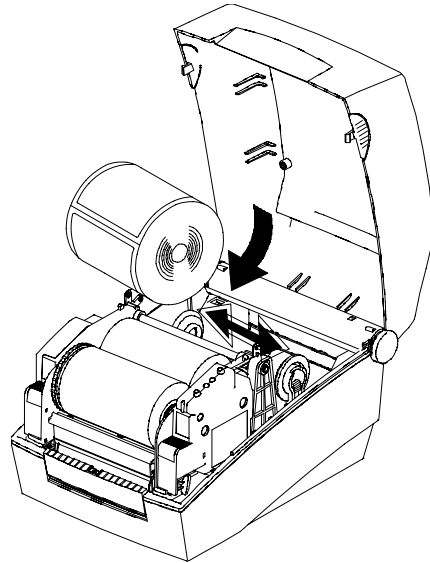
- 1) Turn off the power switch.
- 2) Connect the communication cable to the printer communication port to be used.
 - For a Serial cable, secure by tightening the screws on both sides.
 - For a Parallel cable, secure by fastening the clips on both sides.
 - Connect USB cable when using USB interface.
 - Connect LAN cable when using Ethernet interface.

3-3 Paper Installation

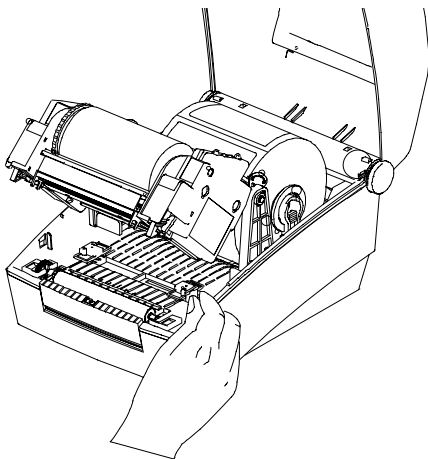
1) Open the Paper Cover.



2) Spread the paper holder and insert paper as shown.

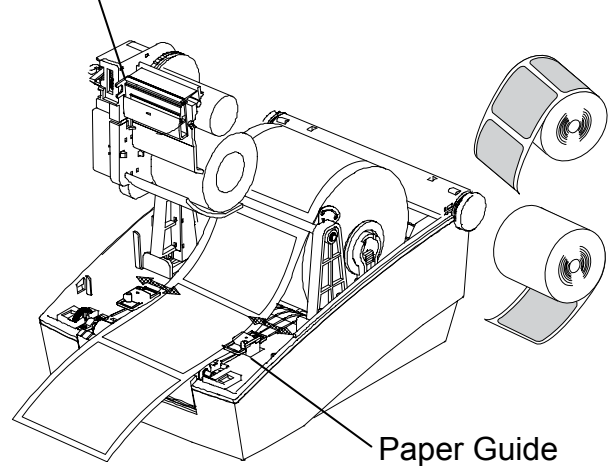


3) Open the Ribbon Assembly and spread the paper guide.



4) Adjust the paper guide to the width of the paper and close the Ribbon Assembly. (keep note of paper printing direction)

Ribbon Assembly



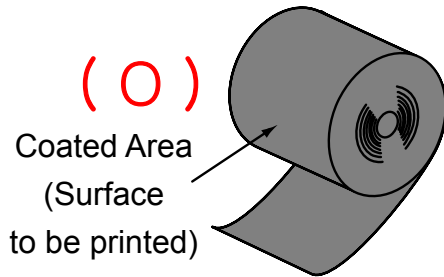
5) Close the Paper Cover.

3-4 Ribbon Installation

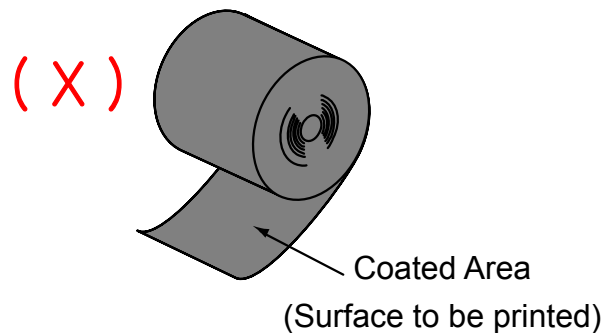
3-4-1 Type of Ribbon

1) Type by Film Coating Location

- Take note before ribbon purchase that only ribbons facing outward can be used.



Outside Ribbon



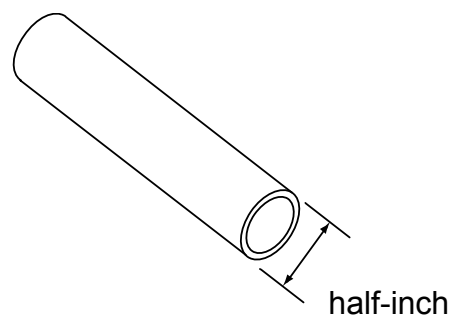
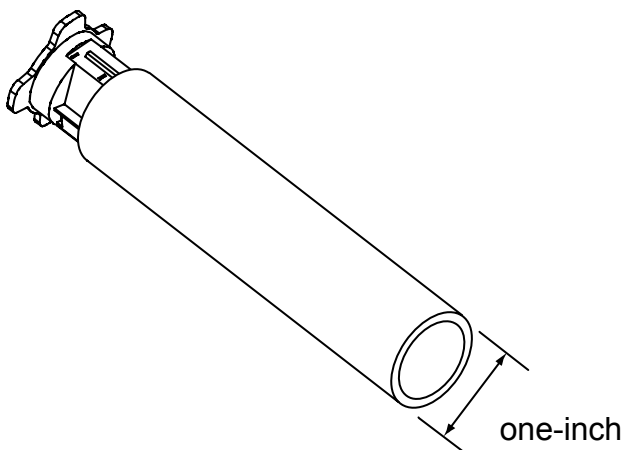
Inside Ribbon

※ Note

- Follow the procedure described below to determine the coating surface of the ribbon.
- Ribbon test using adhesive material
 - Perform contact test in order to determine which side is coated if there are useable labels.
- Complete the following steps to carry out the contact test
 - Remove the liner from the label
 - Put a piece of adhesive surface of the label on the outer/inner surface of the ribbon, and apply pressure.
 - Remove the label from the ribbon
 - Check whether adhesive surface of the label is stained by black ink ribbon.

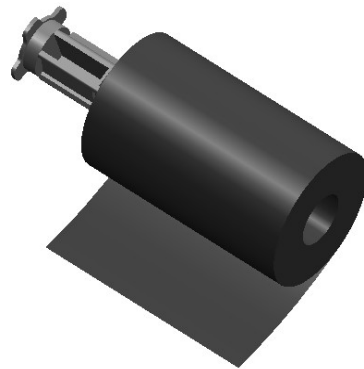
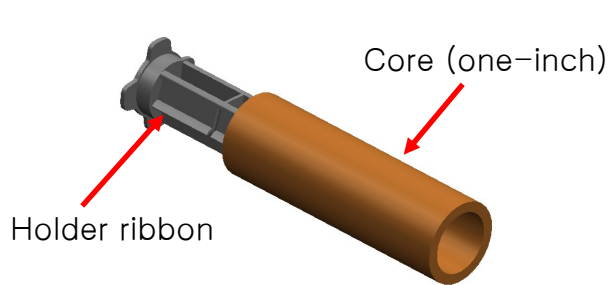
2) Type by Roll Core

- This printer can be used to one-inch or half-inch core ribbon.
- For a 1-inch core, a roll core must be used.
- The holder ribbon and roll core of the fully used ribbon must be reused.
Do not discard.

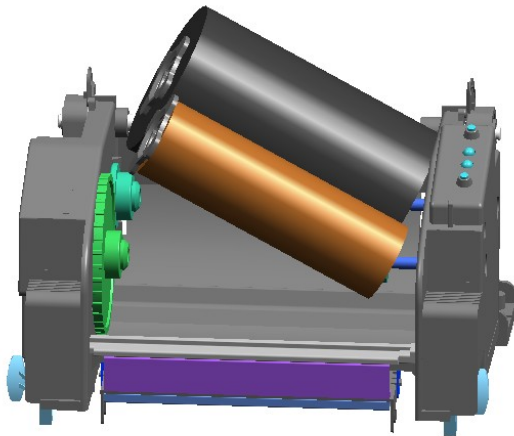


3-4-2 Inserting a One-Inch Core Ribbon

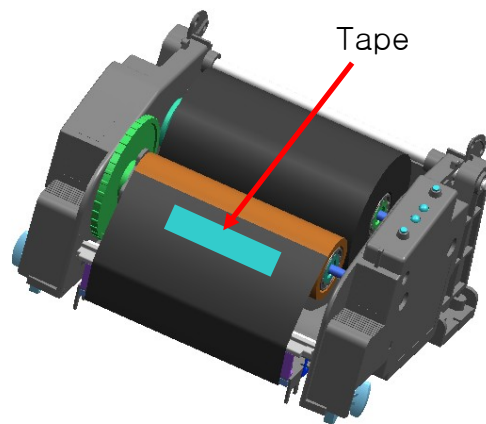
1) Insert the Holder ribbon into the core and ribbon. (keep note of ribbon printing direction)



2) Open the ribbon assembly and insert the ribbon and core by pushing from left to right.



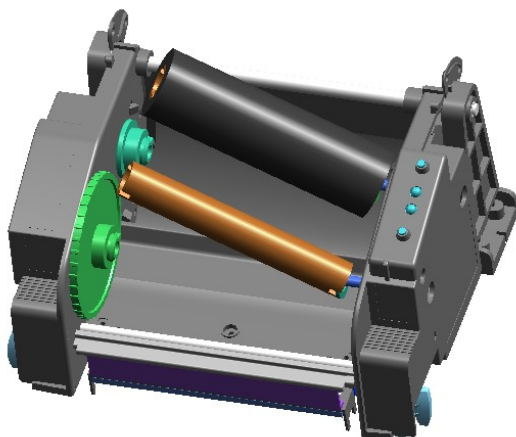
3) Apply tape to the coiling portion of the ribbon.



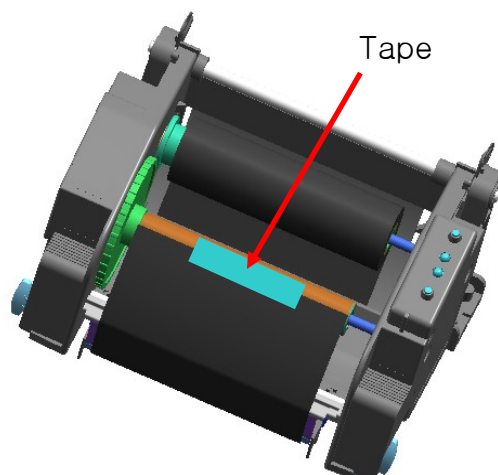
4) Press the Close area to shut the ribbon assembly.

3-4-3 Inserting a Half-Inch Core Ribbon

1) Open the ribbon assembly and insert the ribbon and core by pushing from left to right. (keep note of ribbon printing direction)



2) Apply tape to the coiling portion of the ribbon.



3-4-4 Knob Adjustment by Ribbon Length

Ribbon lengths of 74m, 100m (0.5" core), and 300m (1" core) can all be used with this product. Adjust the knob accurately according to the ribbon length (74 ~ 300 m). Exercise care as print quality and operation can be affected.

- The product is shipped with a default setting for a ribbon length of 300m (1" core). To use a 74m (0.5" core) ribbon, adjust (rotate) the knob in the direction of 74m prior to use.
- When the cover is outside the knob as shown in the image, the ribbon length is set to 74m. If the cover is inside the knob as shown in Image B, the ribbon length is set to 300m.

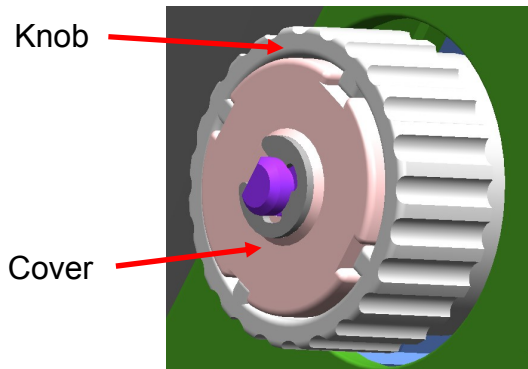
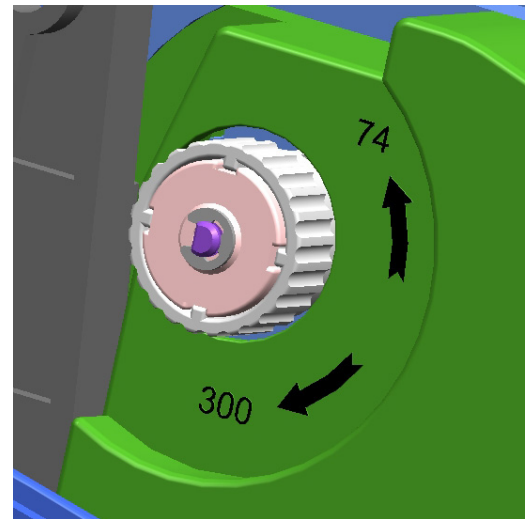


Image-A (74m)

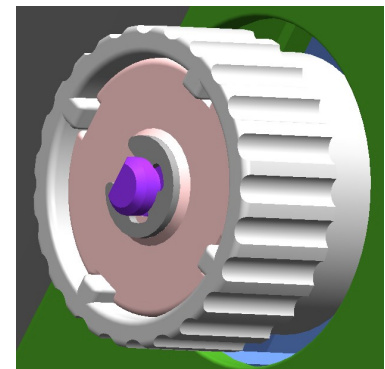
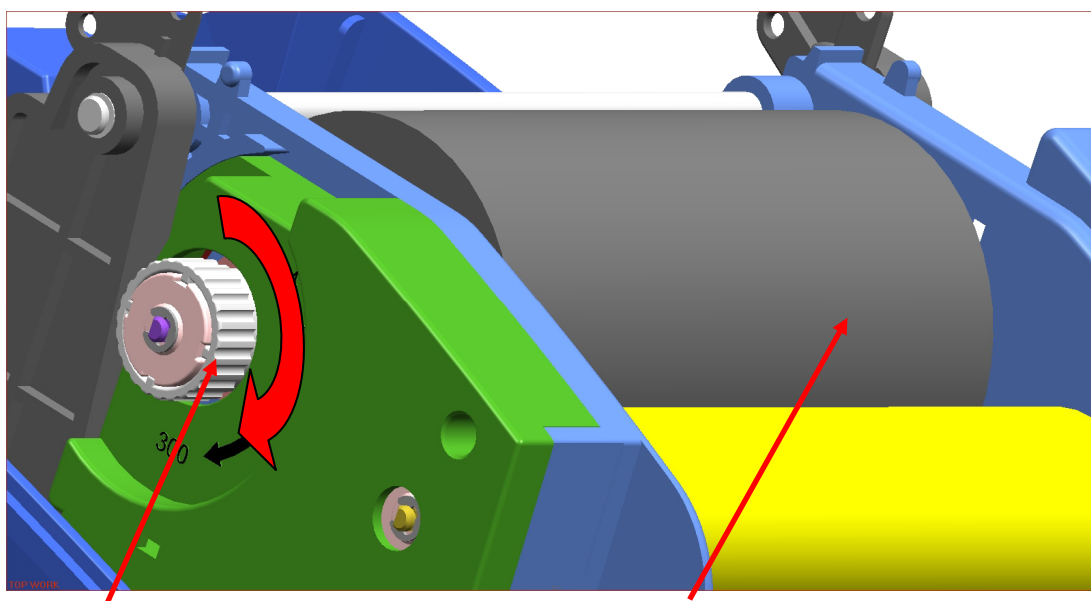


Image-B (300m)

■ Knob Adjustment

- Grasp the ribbon while it is fitted and rotate the knob as shown in the image.

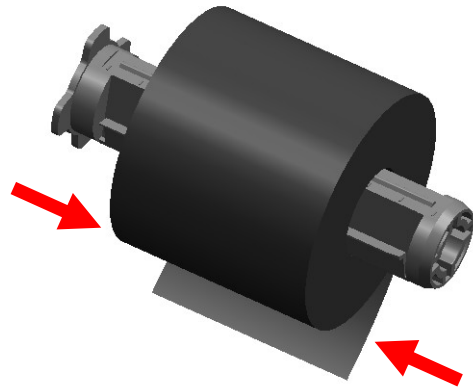


Knob

Ribbon

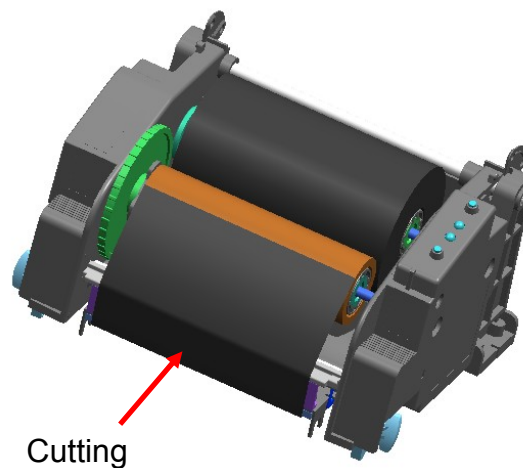
3-4-5 Narrow Ribbon Installation

When using ribbons of widths of 110mm or lower, install in a centered position on the holder ribbon.



3-4-6 Ribbon Removal

- 1) Use a knife or other sharp-edged object to cut the ribbon.
(Take care not to injure hands)
- 2) Open the ribbon assembly and remove the ribbon and core by pushing from left to right.
- 3) Detach the ribbon holder from the ribbon and core.

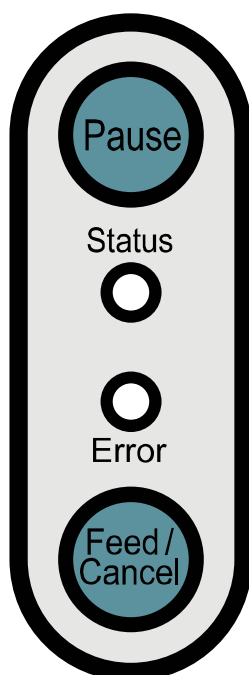


3-4-7 Ribbon Sensor Activation

To activate the ribbon sensor, check to see if the dip switch is properly set. (Refer to dip switch table) If the ribbon sensor is inactive, detection of low ribbon levels and/or disconnected ribbon is not possible.

※ CAUTION

1. When replacing a ribbon, keep affixed the core of the fully used ribbon to the ribbon coiling portion on the other side and do not discard as its use is required.
2. As the ribbon holder is required for continuous use, make sure not to misplace it.

3-5 LED Display

Pause : During print jobs, this button can be used to temporarily cease printing and/or again to resume printing.

Status : The current printer status can be viewed. (Refer to table)

Error : The current printer status can be viewed. (Refer to table)

Feed/Cancel : Paper feed or cancel the print job.

The current printer status can be viewed via the printer's LED display.

LED Type		Printer Status
Error	Status	
Green On	Green On	Normal status, on standby to receive data from the host (e.g. PC)
Red Blinking	Red On	Ribbon cover opened
Orange Blinking	Red On	No paper
Green Blinking	Red On	Print stoppage due to TPH (print head) overheating
Red On	Red On	No ribbon
Red On	Off	On standby for user button input for automatic sensor level correction
Red On	Green Blinking	Print stoppage after input of Pause button, Press Pause button again to resume printing
Red Blinking	Green On	Print cancellation after input of Cancel button, Press Cancel button to return to standby mode, all data received deleted in Cancel mode

3-6 Test printing

3-6-1 Printing using Windows driver

1) Install the Windows driver.

Refer to the “Windows driver manual” in the CD for the installation procedure.

2) Set the “port” of Windows driver to the appropriate interface to be used. Refer to the “Ethernet interface user’s manual” in the CD when using Ethernet interface.

3) Print the test page using the “Print test page” function of Windows driver.

3-6-2 Printing using label design program

- Label design program is sold separately, and contained in the CD.

1) Install the label design program.

2) Configure the interface by referring to the “Label craft manual” in the CD.

3) Print the test page after designing a label.

4. Self-Test

The self-test checks whether the printer has any problems.
(Users cannot perform this procedure if using the printer's label peel-off option.)
If the printer does not function properly, contact an authorized dealer.

The self-test checks the following;

- 1) Make sure that the paper roll has been installed properly.
- 2) Turn on the power while holding down the FEED button. The self-test begins.
- 3) The self-test prints the current printer status, which provides the control ROM version and the DIP switch settings.
- 4) After the self-test results are printed out:
 - No button input within 2 seconds: Normal Print Mode
 - Button pressed once within 2 seconds: Hex Dump Mode
 - Button pressed twice within 2 seconds: Line Print Mode
 - * Line Print Mode.
Received data is printed in sequence similar to a receipt printer.

※ Note

- When printing a short-length label (56mm or less), several labels are outputted in order to calculate/save the initial value of the label length.
- If the initial value of a short-length label (56mm or less) is saved, several labels are outputted when turning power on/off in order to locate the precise printing position.

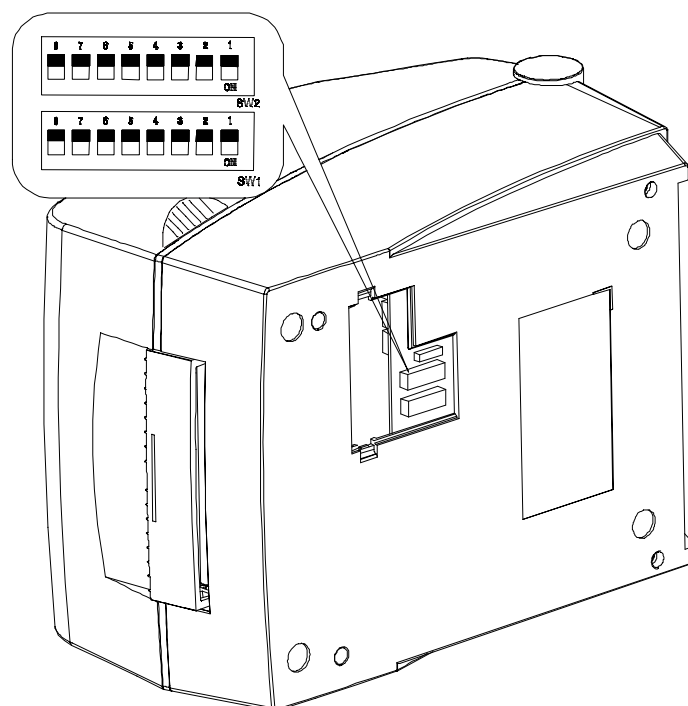
5. Detailed features

5-1 Printer Settings with Dip switches

The following functions can be selected using the dip switches.

- Print Speed, Print Density, Paper Select
- Auto Cutter, Back Feed, Ribbon Sensor Operation, Paper Sensor Operation
- Serial Communication Speed and Busy Status

The dip switches are located on the bottom of the printer.



Follow these steps when changing dip switch settings:

- 1) Turn the printer power switch off.
- 2) Turn the printer upside down and remove the dip switch cover on the bottom.
- 3) Flip the dip switches using tweezers or another narrow-ended tool. Switches are off when up and on when down following the figure.
- 4) New settings take effect when the printer is turned back on.

※ **CAUTION**

- Make sure if the dip switch cover is closed prior to operating

[Table 1] Dip Switch 1

No	Functions	Details			
1-1	Speed Selection	Off	5.0 ips		
		On	6.0 ips		
1-2 1-3 1-4	Density Selection	4	3	2	Density
		Off	Off	Off	6
		Off	Off	On	8
		Off	On	Off	10
		Off	On	On	12
		On	Off	Off	14
		On	Off	On	16
		On	On	Off	18
		On	On	On	20
1-5	Exhibition Selection	Off	Normal Mode		
		On	Demo Mode		
1-6	Media Selection	Off	Label Paper		
		On	Thermal Continuous Paper		
1-7	Auto Cutter	Off	Without Auto Cuter		
		On	With Auto Cutter		
1-8	Back Feed Option	Off	Back Feeding Enable		
		On	Back Feeding Disable		

[Table 2] Dip Switch 2

able 2] Dip Switch 2

No	Functions	Details		
2-1 2-2	Baud Rate Selection	2	1	Baud Rate
		Off	Off	9,600 bps
		Off	On	19,200 bps
		On	Off	230,400 bps
		On	On	115,200 bps
2-3	Media Detection	Off	Detect Gap	
		On	Detect Black Mark 1)Dip S/W 1-6 OFF: Reverse Side Black Mark 2)Dip S/W 1-6 On: Printed Side Black Mark (Option)	
2-4	Ribbon Sensor	off	Enable	
		On	Disable	
2-5	Reserved	Default --- off		
2-6	Busy Condition	Off	Receive Buffer Full	
		On	*Offline *Receive Buffer Full	
2-7	Paper End Sensor Status	Off	Enable	
		On	Disable	
2-8	Long Label Split Printing	Off	Disable	
		On	Enable	

5-2 Printer Settings with Utility Program

The printer settings utility program offered by the manufacturer can be used to change a variety of basic printer settings. The basic settings set via the utility override printer command settings. Thus, users wishing to use command settings to control the printer should not change the basic settings via the utility.

Run the Metapace United Label Printer Utility from the enclosed CD and click the User Setting Manager button.

1) Serial Communications Settings

Handshake, Stop Bit, Data Bit, Parity, Baud Rate, etc. can be set.

2) Language Selection

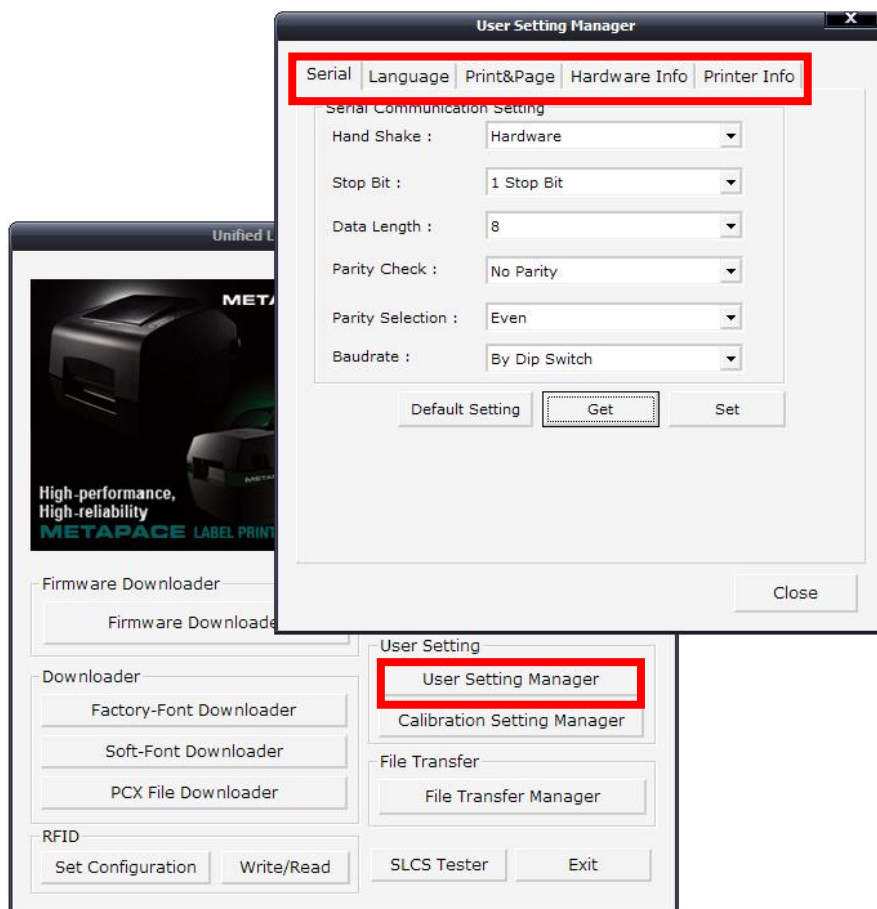
Code Page and International Character Set can be set.

3) Basic Ribbon Size & Print Density Settings

Paper Width and Length, Left/Right Margins, Print Density, etc. can be set.

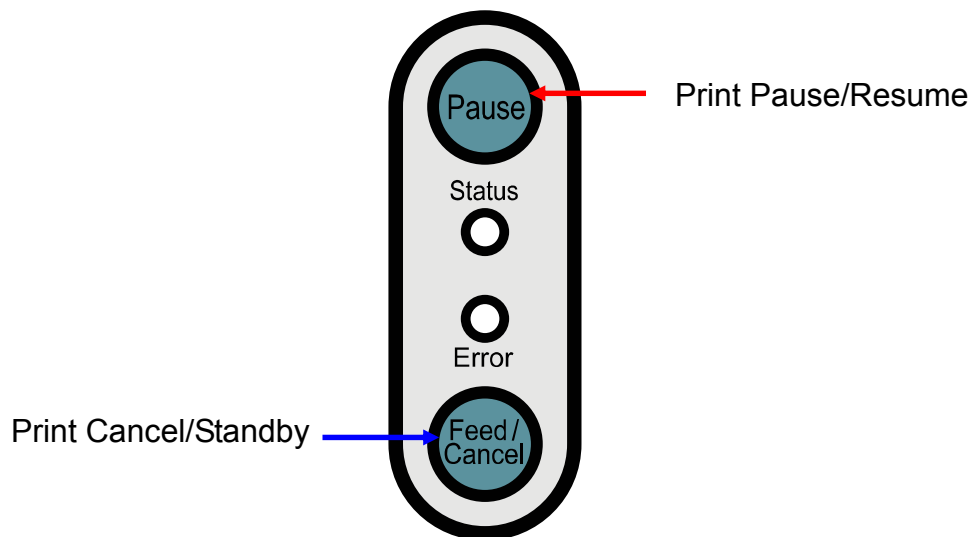
4) Hardware Information Storage

For user management of equipment, the hardware version, serial number, ID, etc. can be saved and/or confirmed via command.



5-3 Pause/Cancel

During multiple-page print jobs, the Pause and Cancel button can be used to temporarily cease printing and cancel the print job altogether, respectively.



5-3-1 Pause/Resume Function

- 1) When printing labels, pressing the Pause button will result in the temporary stoppage of printing after the currently printed label is completed, and a change in the LED status.
 - Status LED: Green Blinking
 - Error LED: Red On
- 2) While the print job is paused, press the Pause button again to resume printing.

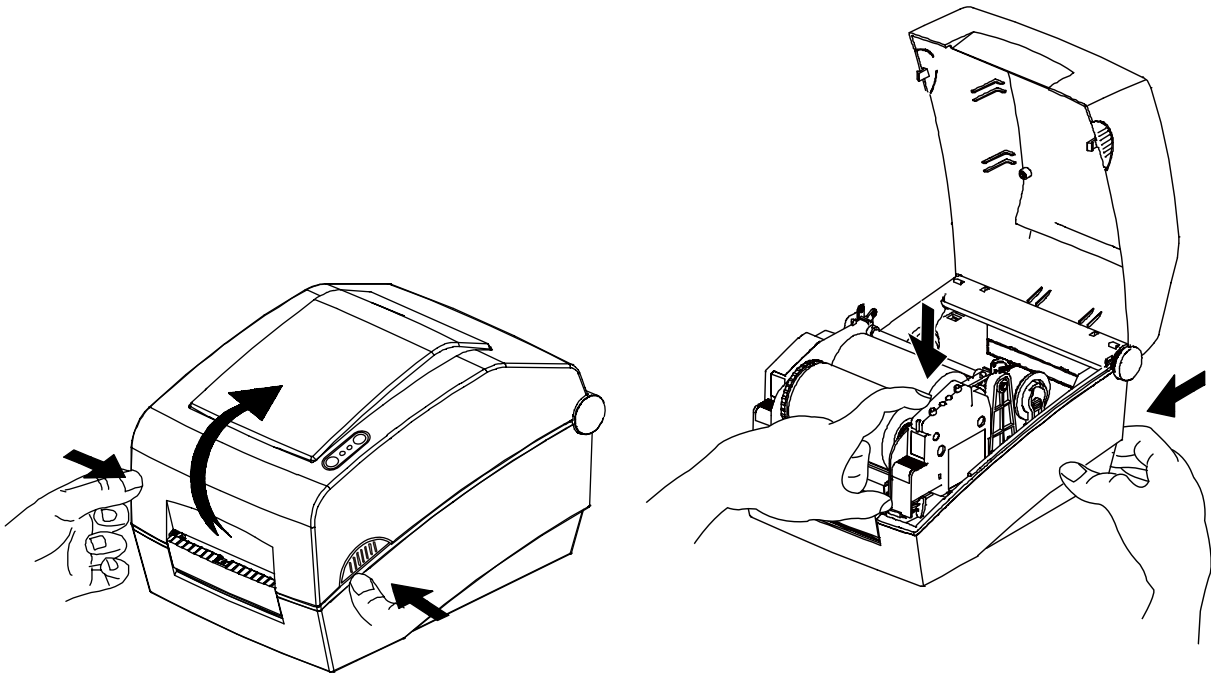
5-3-2 Print Cancellation

- 1) During label printing and/or pause mode, pressing the Cancel button enters the print cancellation mode.
- 2) The following processes occur in the print cancellation mode.
 - All label printing cancelled
 - All data received in the printer communications buffer deleted.
 - All received data deleted.
- 3) The LED status in the print cancellation mode can be as follows.
 - Status LED: Green On
 - Error LED: Red Blinking
- 4) While in the print cancellation mode, press the Cancel button again to return to print standby mode.

5-4 Gap Sensor Auto-Calibration

Gap sensor auto-calibration is used when the printer does not detect a gap on the label paper correctly. Generally a printer is set to detect most gap types, but sometimes detection fails and paper continues to be fed without stopping when special paper is used. In such cases, use the gap sensor auto-calibration function to facilitate proper detection.

- 1) Check to see that the paper is aligned correctly.
- 2) Open the paper cover and ribbon roll, and turn on the printer while holding down the paper feed button located near the ribbon roll.
 - The green LED blinks.



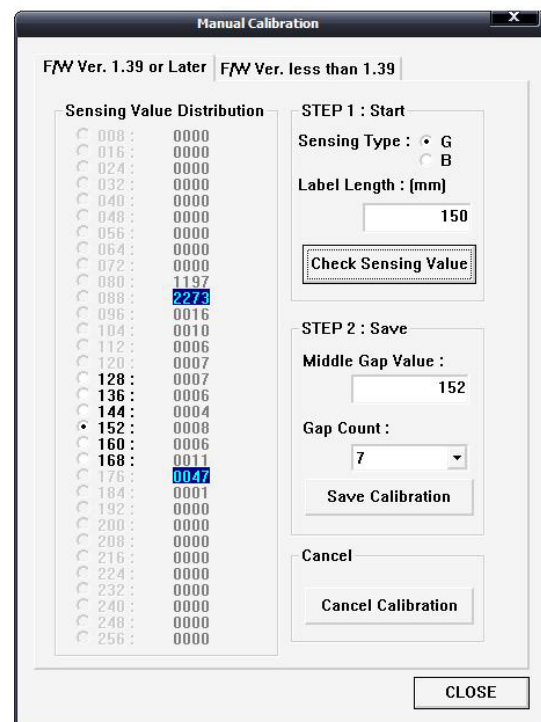
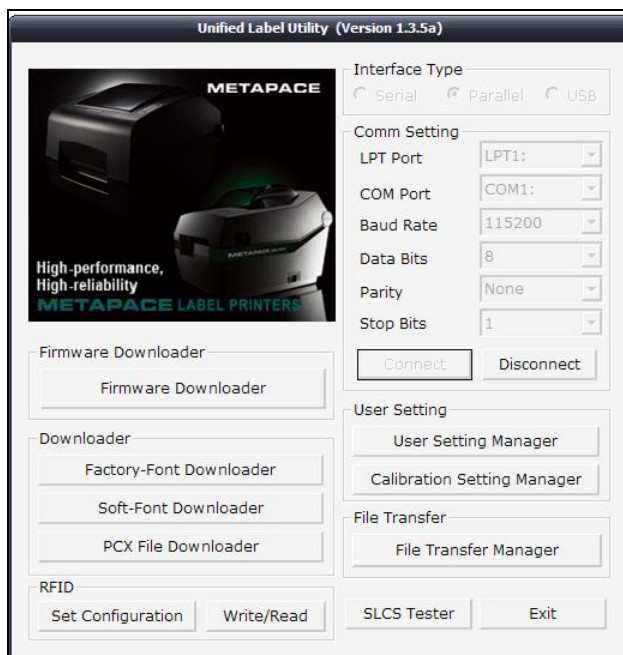
- 3) Close the ribbon roll and paper cover.
 - An information message is printed and the red LED turns on.
- 4) Press the paper feed button.
 - ① Once
 - The LED color changes to orange.
 - The previous gap sensor correction value is erased and reset to its default value.
 - ② Twice
 - The LED color changes to green.
 - The gap sensor auto-calibration is performed as 2~3 pages of paper are fed continuously.
- 5) Gap sensor auto-calibration is complete.

5-5 Gap Sensor Manual-Calibration

Manual-calibration of media detection can be used when the printer cannot detect a media gap (or black mark) even after auto-calibration has been executed.

Users can calibrate sensor parameters in detail by using the utility program provided by the manufacturer.

Please make sure the printer is connected and execute the utility program.
Please the Calibration Setting Manager Button after setting the interface type.

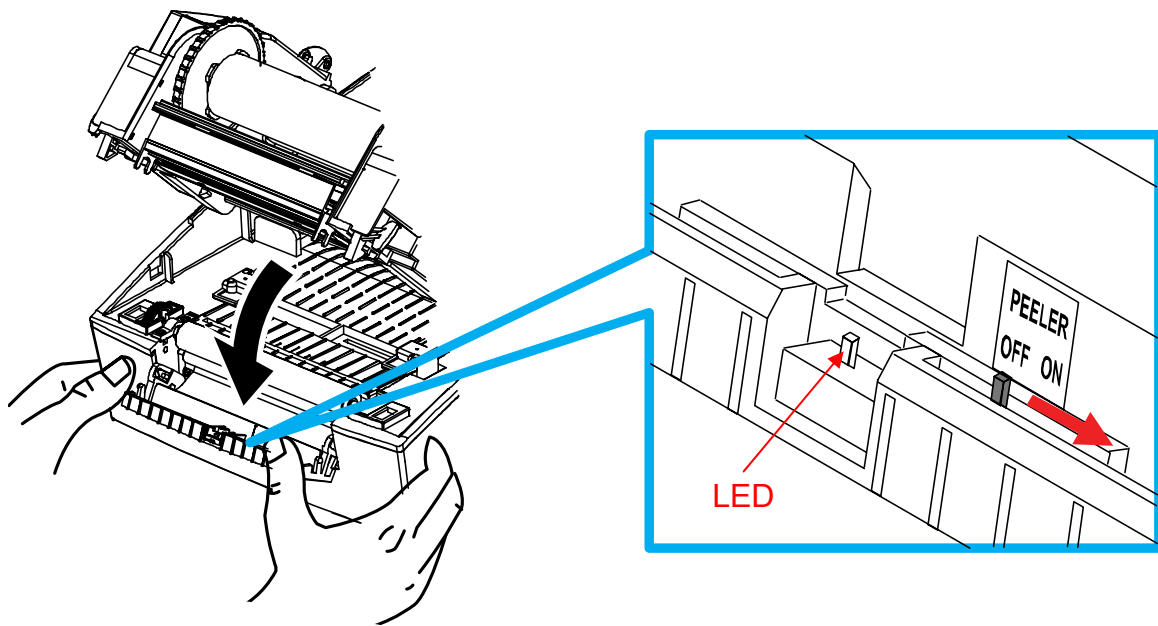


- 1) If the firmware version is Ver.1.39 or higher, please click “F/W Ver. 1.39 or Later” tap.
If the firmware is lower than Ver.139, please click on “F/W Ver. Less than” tab.
- 2) Select the sensing type and input the label length by millimeter and click on “Check Sensing Value” tap. Then printer starts to calibrate.
- 3) Printer will print the scanned values after calibration and the values will appear on the Screen.
- 4) Optimal sensing values will appear in black bold letters on the left of the utility screen and select one of the values and click on “Save Calibration”
- 5) If chosen value does not work properly, please try the other values among the black bold letters.
- 6) To go back to the initial value, please click on “Cancel Calibration”.

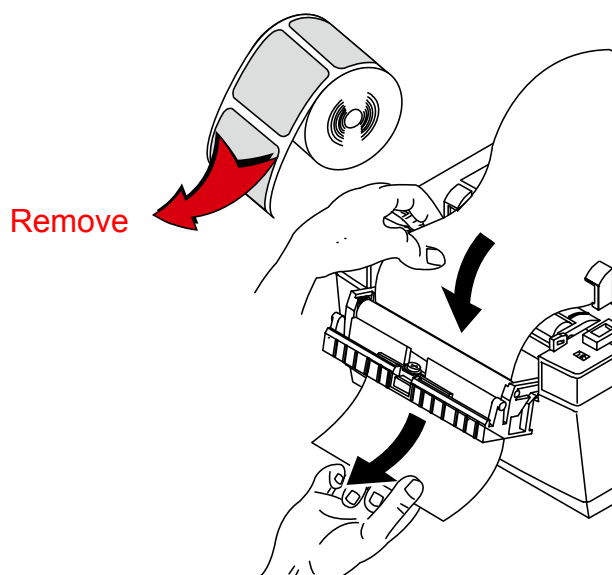
5-6 The Peel-Off

As a function that is used to peel-off labels, it is used only with label paper.
(After adjusting the peeler switch, power must be turned off and on in order for the operation to be acknowledged.)

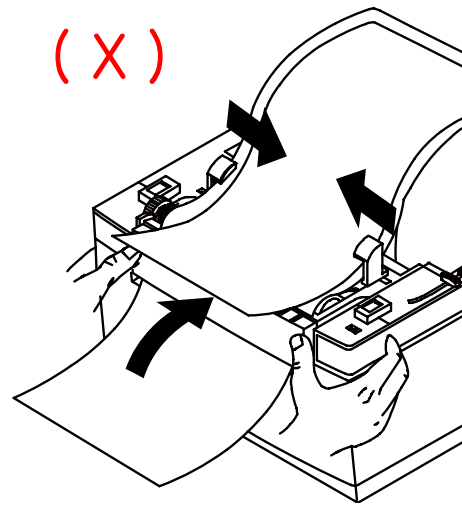
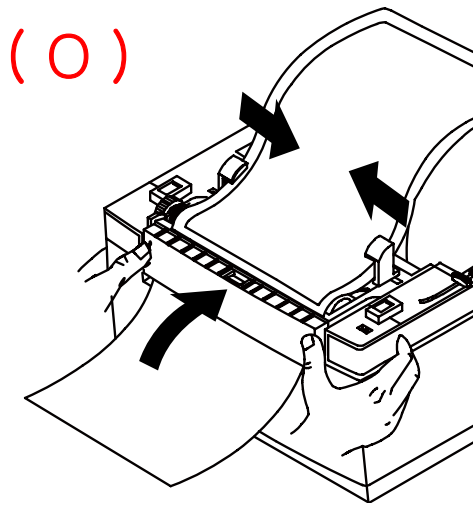
- 1) Open the paper cover.
- 2) Open the ribbon roll.
- 3) Open the label peel-off cover and set the peeler switch to the ON position.
 - Check to see that the LED has turned on.



- 4) Remove one sheet of the label paper, and insert the paper as shown in the image below.
 - Prior to removing a label, the peeler switch must be set to the ON position.



5) Adjust the paper guides and close the label peel-off cover.



6) Close the ribbon roll and paper covers.

7) Turn the printer off and on.

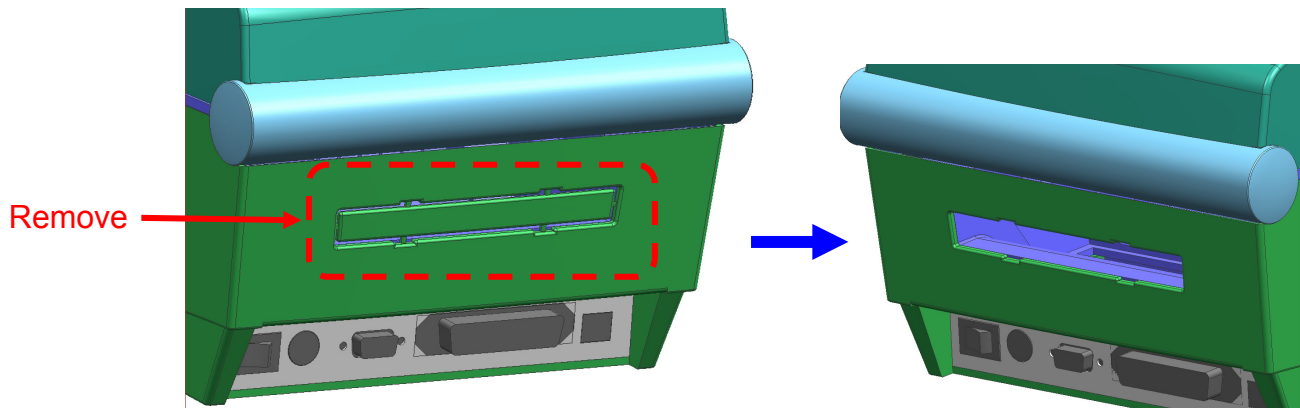
5-7 Using Fan-Fold Paper

Supplying paper to the printer externally is done as follows.

5-7-1 Printer Preparation

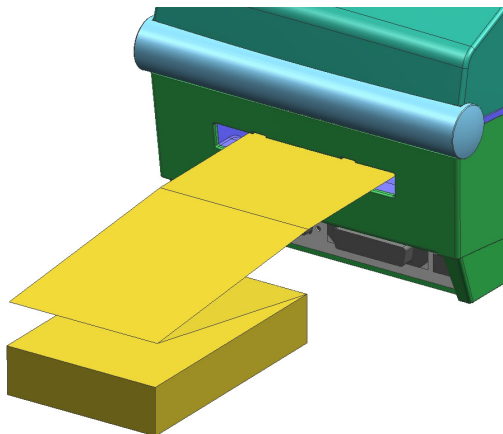
Remove the rear paper supply cover on the back side of the printer with a knife or other cutting instrument.

(Take care not to injure the hands and/or any other part of the body when performing this step.)

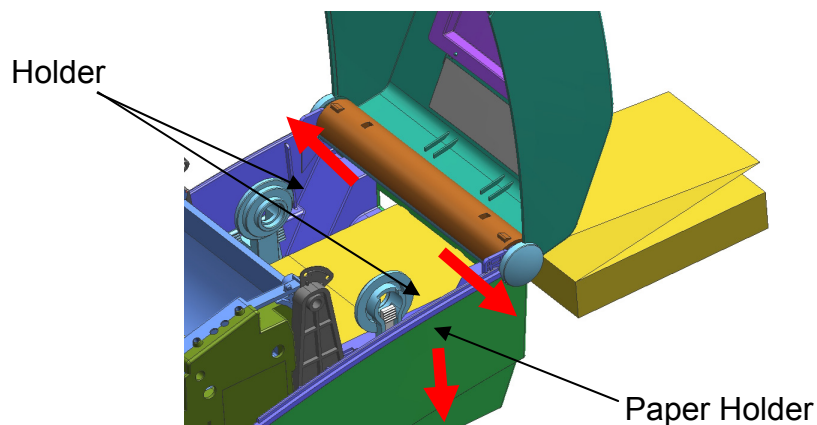


5-7-2 When Using Pan-Fold Paper

- 1) Insert the paper at the rear of the printer using the slot and guides.



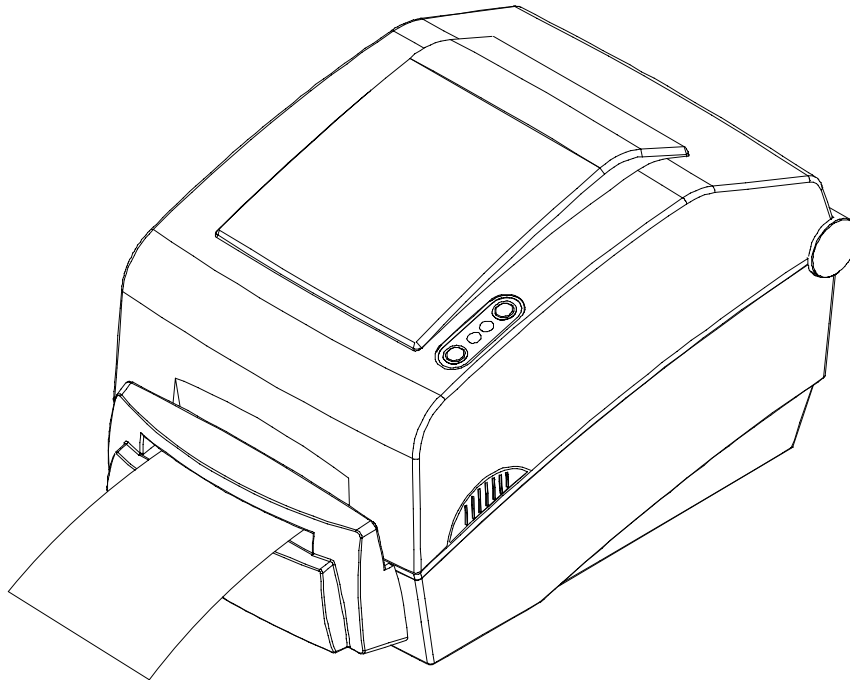
- 2) Adjust the holder and guides to the width of the paper.



5-8 Auto Cutter (Option)

The Auto Cutter can be used for automatic cutting.

- 1) Open the dip switch cover, and turn switch 1 number 7 "On".
(Refer to the printer mode settings in Chapter 5-1.)
- 2) Insert a paper roll into the printer and close the cover.



6. Cleaning Head

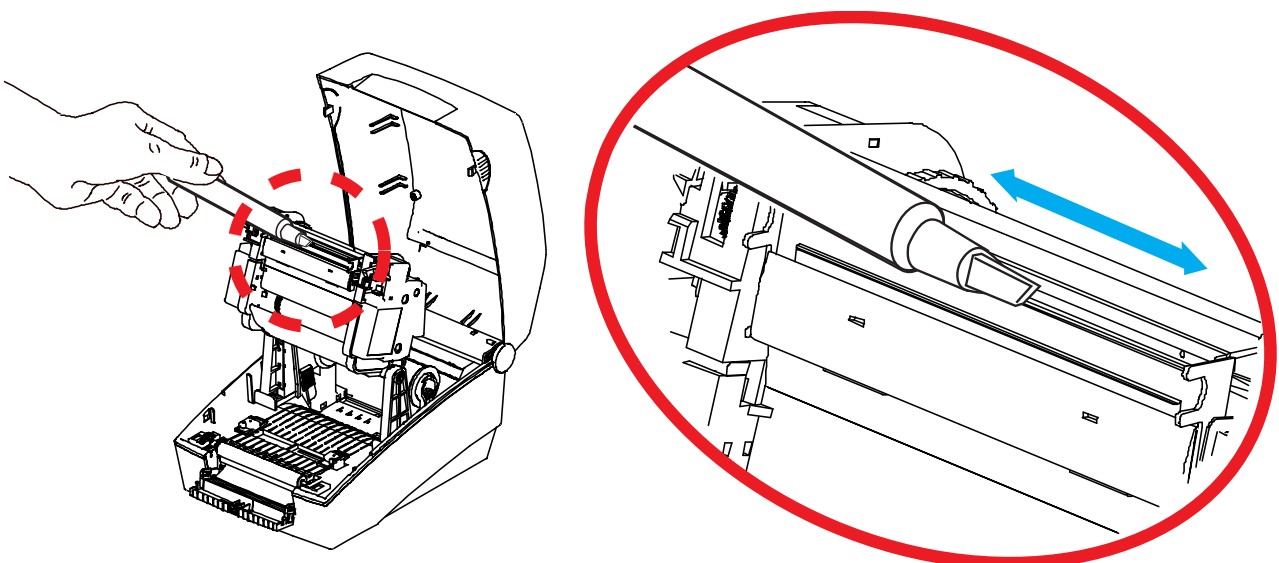
Paper dust on the heating elements may lower the printer quality.
When dirty, clean the print head as follows:

※ **CAUTION**

- Make sure to turn the printer power off prior to cleaning.
- As the print head gets very hot during printing, if intending to clean the print head, turn the printer power off and wait approximately 2~3 minute before commencement.
- When cleaning the print head, take care not to touch the heated portion of the print head.
 - Printer Head is susceptible to damage from static electricity, etc.
- Take care not to allow the print head to become scratched and/or damaged in any way.

- 1) Open the paper cover and remove paper and ribbon.
- 2) Wipe the print head with a cleaning pen.
- 3) Use a cloth moistened with an alcohol solution to clean the paper sensor are and remove any paper remnants and/or dust.
- 4) Insert paper into the printer 1~2 minutes after completing the cleaning process and close the printer cover.

- ※ Perform the cleaning process each time the paper roll is replaced to prevent print quality deterioration.



7. Appendix

7-1 Specifications

Item		Description
Printer	Printing Method	Thermal Transfer / Direct Thermal Printing
	Dot Density	203 dpi (8 dot/mm) / Option: 300 dpi (12 dot/mm)
	Printing Width	Max 104 mm
	Printing Speed	150 mm/sec (6ips)
Paper	Width	25 ~ 116 mm
	Roll	Max 130mm
	Core	25.4~38.1mm (1~1.5")
Ribbon	Length / Width	Max 300m / 33 ~ 110mm
	Type	Wax, Wax/Resin, Resin ,Outside type
	Core	0.5" / 1"
AC Adapter	Input Voltage	AC 100~240V
	Frequency	50/60 Hz
	Output Voltage	DC 24V
Usage Conditions	Temperature	0 ~ 45 °C (Operating) -25 ~ 70 °C (Storage)
	Humidity (except for paper)	30 ~ 80 % RH (Operating) 10 ~ 90 % RH (Storage)

※ **Note**

Printing speed can vary depending on the data transmission speed and combination of control commands.

7-2 Certification

1) EMC & Safety Standards

- Europe: CE EMC,CB-Scheme:IEC60950-1, GS: EN60950-1: 2001

⚠ WARNING

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

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.

7-3 Label Types

- PET