

BIXOLON®

User's Manual

XD3-40d Series

THERMAL LABEL PRINTER

Ver. 1.02



www.bixolon.com

Copyright

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BIXOLON maintains ongoing efforts to enhance and upgrade the functions and quality of all our products.

In the following, product specifications and/or user manual content may be changed without prior notice.

Caution

Electronics, such as printers, are prone to damage by static electricity. Therefore, to protect the printer from static electricity, be sure to turn off the printer before connecting or disconnecting the cable to the rear of the printer. If the printer is damaged by static electricity, contact your local dealer.

This equipment is not suitable for use in locations where children are likely to be present. When the printer is operating with the media cover open, do not wear anything that can touch the drive, such as clothing, necklaces, rings, watches, or employee certificates close to it. Also, keep yourself away from the printer as it is dangerous for some parts of the body to come into contact with it. If an object or part of your body touches the drive, immediately disconnect the power cord or turn off the power switch on the back of the product.

Warning

Hazardous moving parts
Keep fingers and other body parts away
Pull the print head lever can be stop all moving parts.



IEC 60417-6057 (2011-05) for other moving parts.

Mise en garde

Les appareils électroniques, tels que les imprimantes, risquent d'être endommagés par l'électricité statique. Par conséquent, pour protéger l'imprimante de l'électricité statique, veuillez à l'éteindre avant de connecter ou de déconnecter le câble situé à l'arrière de celle-ci. Si l'imprimante est endommagée par l'électricité statique, contactez votre revendeur local

Cet appareil n'est pas adapté d'utiliser dans des endroits où des enfants sont probablement d'être présents.

Lorsque l'imprimante fonctionne avec le capot ouvert, ne portez rien qui puisse entrer en contact avec le mécanisme, tel que des vêtements, des colliers, des bagues, des montres ou des certificats d'employé à proximité. Éloignez-vous également de l'imprimante car il est dangereux que certaines parties du corps entrent en contact avec celle-ci. Si un objet ou une partie de votre corps entre en contact avec le mécanisme, débranchez immédiatement le câble d'alimentation ou éteignez l'interrupteur situé à l'arrière du produit.

Attention

Pièces mobiles dangereuses
Veuillez à ce que vos doigts ou toute partie du corps n'entre(nt) pas en contact avec ces pièces. Tirez le levier de la tête d'impression pour arrêter toutes les pièces en mouvement.



IEC 60417-6057 (2011-05) pour les autres pièces mobiles.

Compliance information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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.

Caution: Exposure to Radio Frequency Radiation.

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

Caution: Any Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Class A Digital Device : Wired Device

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

This Class A digital apparatus complies with Canadian ICES-003.

Appareil numérique de classe A: appareil filaire

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

Cet appareil numérique de la classe A est conform à la norme NMB-003 du Canada.

Waste Electrical and Electric Equipment (WEEE)



This marking shown on the product or its literature, indicates that it 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.



WARNING & CAUTION

It describes death, physical injuries, serious financial losses, and damage to data etc. that can be caused to the user.

Do not connect multiple products to one single power outlet. Do not connect the product to a loose power outlet. Use only power outlets that meet the standard. Connect the power cord only to a grounded power outlet. **Noncompliance may cause electric shock or fire.**



Use only authentic products from BIXOLON. **The company will not provide post-sale support for damage or other quality issues that any fake (refurbished) products may incur.**



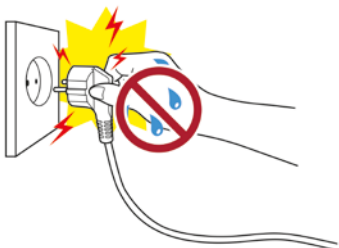
Do not bend or strain the power cord excessively. Push the power cord all the way into the power outlet lest it remain loose. Make sure to hold the cord tight when separating it from the power outlet. Do not remove the power cord while the product is in use. **Noncompliance may cause electric shock or fire.**



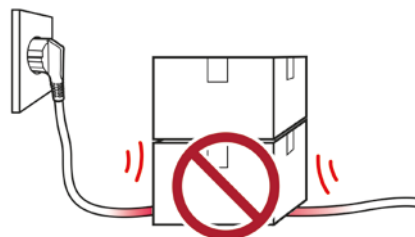
Keep small accessories or other packaging materials away from young children. Beware: children may swallow them. **Mishandling the product may incur injuries. If a child has swallowed any such thing, see a doctor at once.**



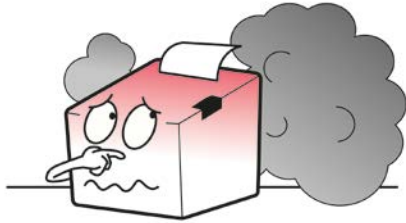
Do not touch the power cord with wet hands when pulling it from a power outlet. If the power plug or outlet is smeared with extraneous matter, wipe it with a dry cloth. **Noncompliance may cause electric shock or fire.**



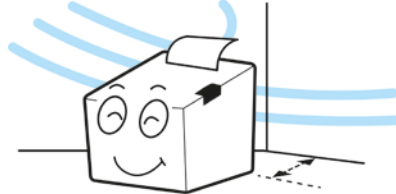
Do not allow the product to be damaged by heavy objects. **Noncompliance may cause electric shock or fire.**



If the product emits a strange sound, burning smell, or smoke, turn off the power immediately and unplug the power cord. If the product is dropped or its exterior is damaged, turn off the power immediately and unplug the power cord. Do not subject the product to shock. **It may start a fire. It may damage the product.**



Install the product in a well-ventilated place by keeping it a certain distance from the wall. The product installed in certain places such as where a lot of fine dust is generated, where the temperature is too high or too low, where there is a lot of moisture or water, and at airports or stations that are used continuously for a long time may suffer serious quality problems due to the influence of the surrounding environment. **An increase in internal temperature may start a fire. Be sure to contact the place of purchase before installing the product.**



Install the product in a fixed place preventing it from tipping over. When moving the product, turn off the power and disconnect all cables connected to the product, including the power cord. **It may damage the product.**



Never disassemble, repair, or modify the product at your own discretion. **When repair is necessary, contact the place of purchase.**



Do not let any foreign substances enter the product. Do not place heavy objects, liquids, or metals on the product. **It may start a fire. It may damage the product.**



If there is a problem with the product, please contact the place of purchase. In addition, Bixelon website (<http://www.bixelon.com>) provides product repair.



Manual Introduction

This user's guide 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. Manuals for each discipline are available on the home page.

1. Windows Driver Manual

This manual provides information on the installation instructions and main functions of the windows driver.

2. Unified Label Utility-II Manual

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

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. Network Connection Manual

This manual provides information on network configuration and usage methods.

6. Label design program 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.




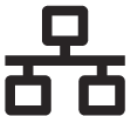
Printer Introduction

Following in the footsteps of the industry recognised SRP-E770 series, the entry-level XD3-40d is a new Direct Thermal 4-inch (118mm) Desktop workhorse offering day-to-day quality 203 dpi output across your logistics, warehousing and manufacturing installations. Simple to setup and use, the XD3-40d also benefits from tool-less printhead and platen replacement to ensure uptime is maximised. Product or asset labelling, Document management, patient and quest identification, Shipping and logistics printing, the XD3-series offers a balance of cost and performance, including print speed, tear and peel media handling, plus networked options.

The main features of the printer are as follows

1. Maximum 127mm/s printing speed.
2. 4inch THERMAL LABEL PRINTER
3. 181 x 222 x 168 (W x D x H)
4. Support for multiple interfaces (Standard: USB, Option: USB & Serial & Ethernet)
5. Easy media loading
6. Can print a range of barcodes
7. Supporting peeler option

Product Symbol Introduction

	DC (Direct current)
	Warning, Caution
	USB
	Ethernet

Manual Symbol Introduction



**Precaution
& Warning**

It describes death, physical injuries, serious financial losses, and damage to data etc. that can be caused to the user.



Note

It provides additional information on the function and performance of the product.

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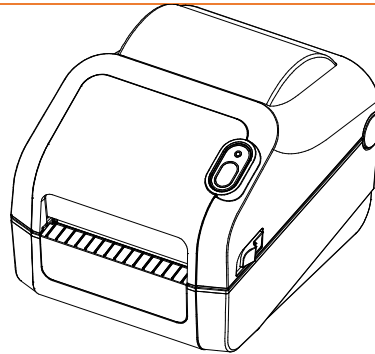
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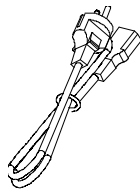
1. Content Confirmation



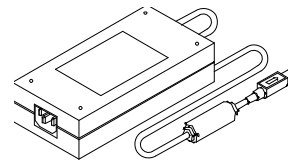
- If there is any part missing, please contact the place of purchase.
- The actual part may look different from the image.



XD3-40d



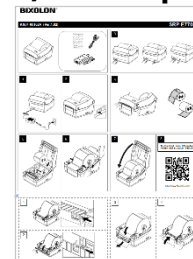
Power Cord



AC/DC Adapter



USB Cable



Quick Manual

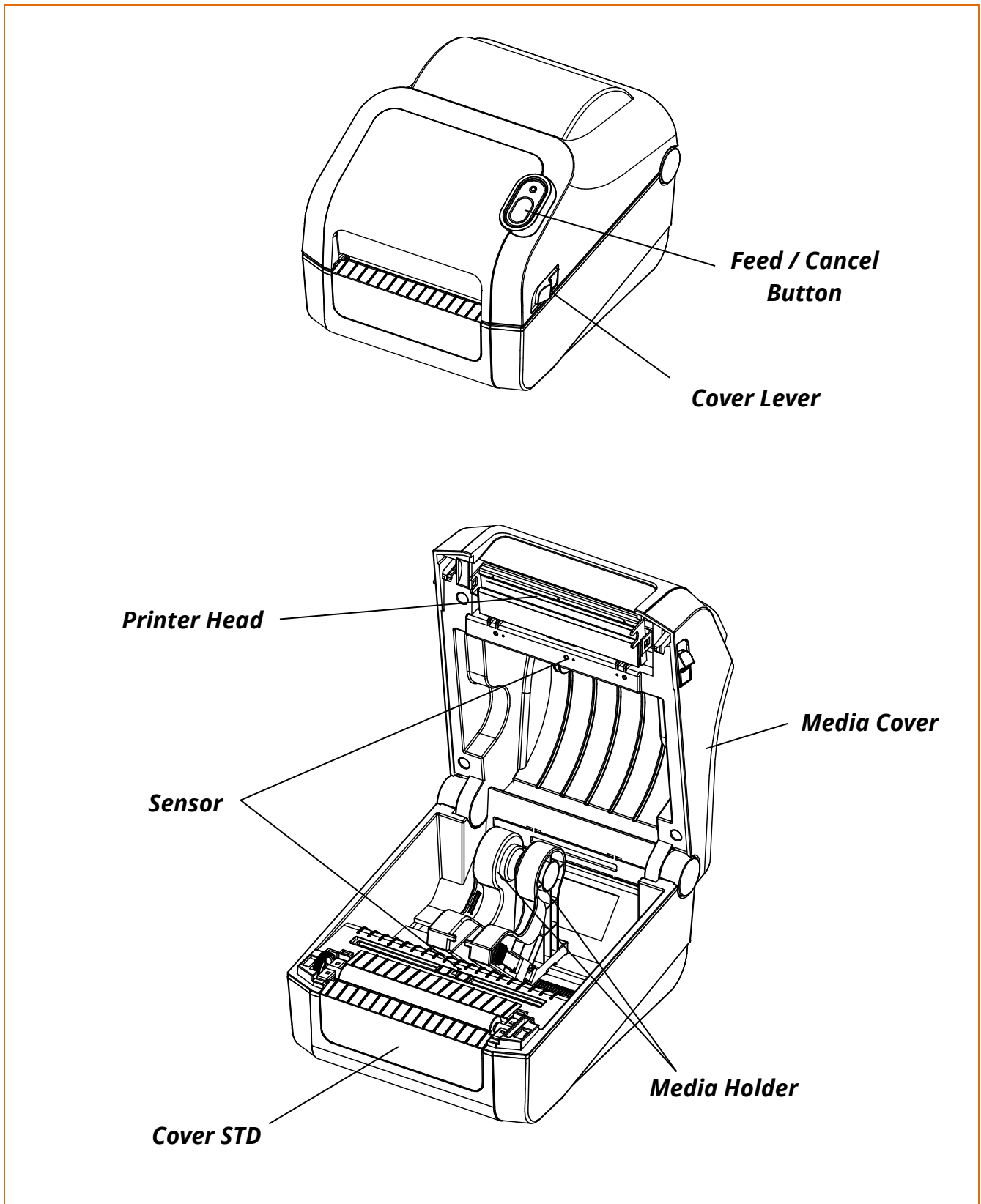
※ **Optional**

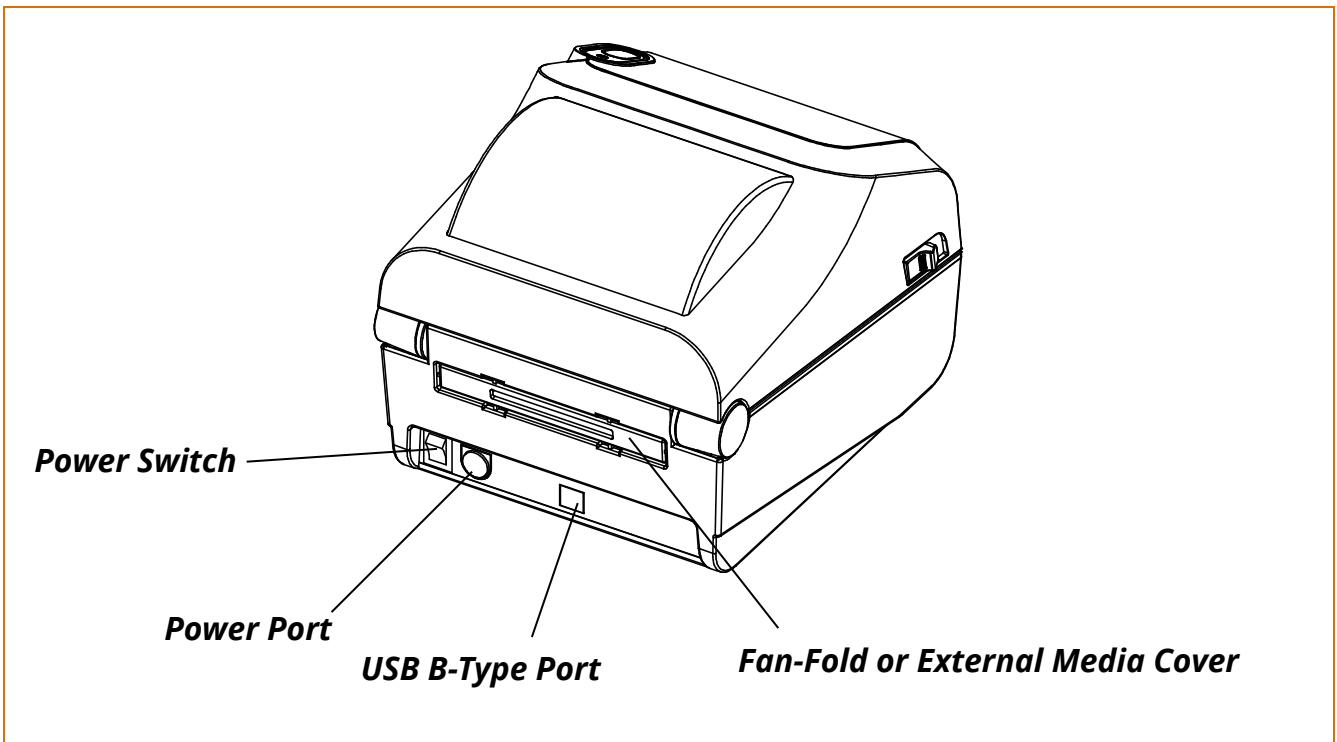


Serial(RS-232C) Cable

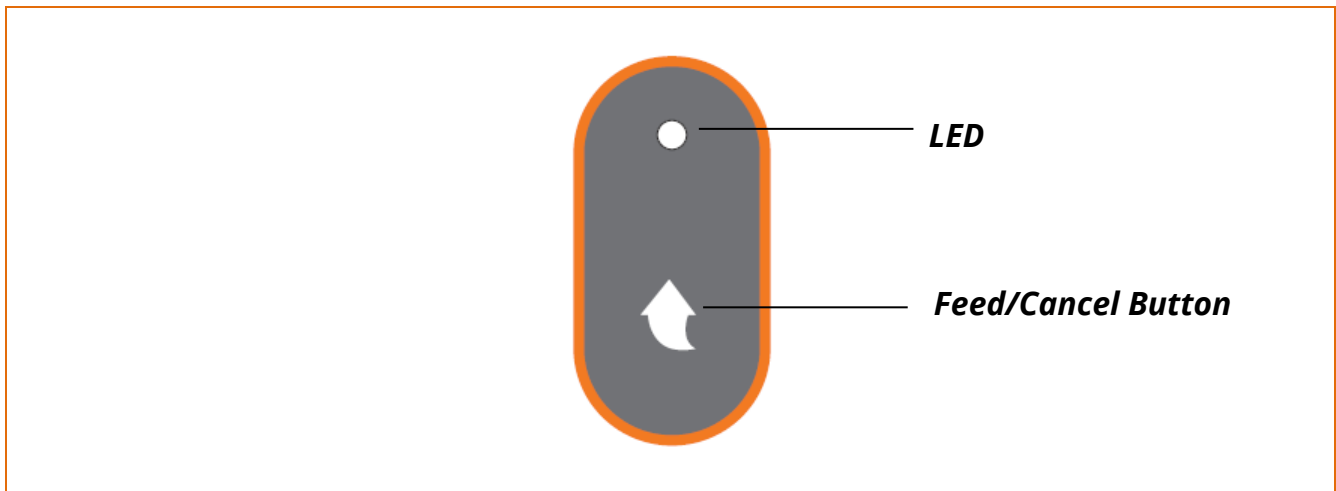
2. Product Part Names

2-1 Printer Part Names





2-2 Button & LED



2-2-1 Button Operations

Feed/Cancel button can be used for various purposes as follows.

1) Feed Media

In print standby state, pressed for shorter than 3 seconds, the printer feed one media.

2) Stand-alone Configuration Mode

In print standby state, pressed for longer than 3 seconds, the printer enters into stand-alone configuration mode. Please refer to [5-1 Stand-alone Configuration Mode](#) for details.

3) Pause and Resume printing

If pressed while printing media, printing toggled between pause and resume.

2-2-2 LED Indicator for Various Printer Statuses

1) Green LED on

The printer waits for the data from host (PC) in normal mode.

2) Green LED blinking

- The printer has stopped by pressing feed button.
- It restarts printing when pressed again.

3) Orange LED on

It means media gap/black mark sensing error.

It becomes on when the printer fails to detect the media or media jam occurred.

When fails to detect the media correctly, use auto calibration function.

4) Orange LED blinking

- No media
- Make sure the media is loaded correctly

5) Red LED on

The printer cover is open

6) Red LED blinking

TPH (Thermal Printing Head) overheated

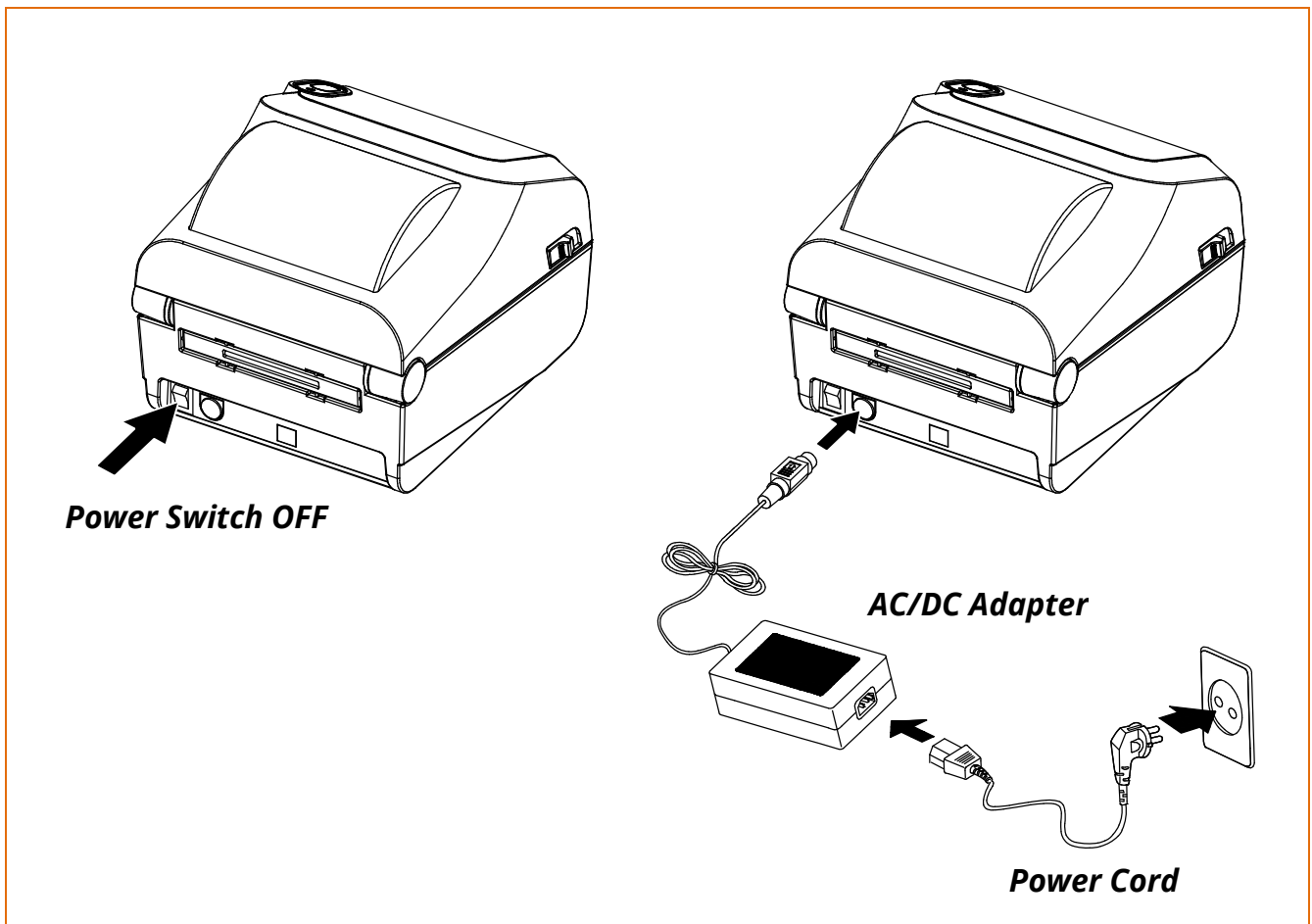
3. Installation & Usage

3-1 Printer Installation Placings

- Install the printer in a location that meets the following conditions.
 - Allow sufficient space around the printer for proper ventilation.
 - Do not place objects close to the back or bottom of the printer, which may hinder the air circulation.
 - Install the printer on a flat and level surface.
 - Avoid humid environment.
 - Install in a place that does not exceed the protocol standard of the wireless communication or the specified maximum distance.
 - For stable wireless communication, install in a place where there is no physical obstacle (wall, object, etc.).

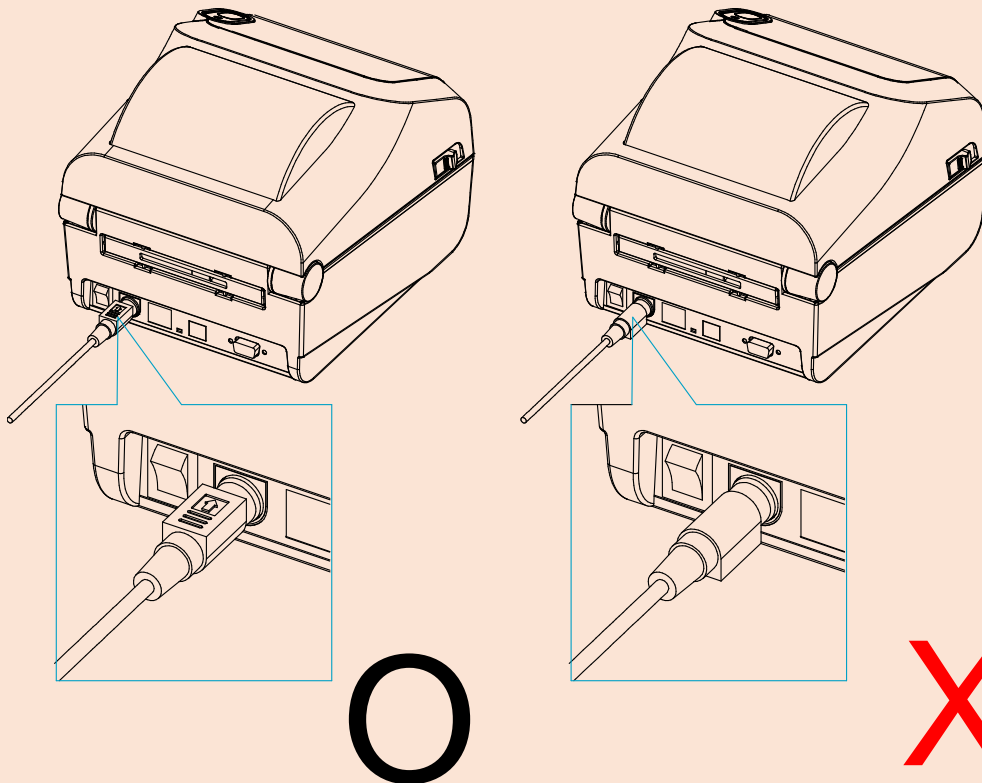
3-2 Power Connection

- Connect power to the printer as shown below.



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

- Only use a power supply provided by BIXOLON.
BIXOLON shall bear no responsibility for damage caused by using a third-party power supply.
- Check the power supply's label to check its electronic specs.
- For the safety of people and equipment, please use the appropriate power cord for your country or region.
- When removing the power supply, make sure you have a firm grasp of the plug terminal of the power cable and the printer and pull horizontally.
- Be sure to turn off the printer before connecting the power cord to the printer connector. This can cause serious electrical damage and bodily injury.
- Do not operate the printer and power supply in a humid environment. This can cause serious electrical damage and bodily injury.
- Do not connect an input voltage beyond the specifications of the power supply. This may result in product damage and fire.
- Pay attention to the direction in which you insert the power cable.



3-3 Interface



Shielded cables must be used to prevent radiation and reception of electrical noise. Use the shortest possible communication cable to minimize the detection of electrical noise in the cable.

- Serial(RS-232C) Cable (1.8m or less recommended)
- USB B-Type Cable (1.8m or less recommended)
- LAN(Ethernet) Cable (3m or less, CAT-5 or higher UTP Cable)

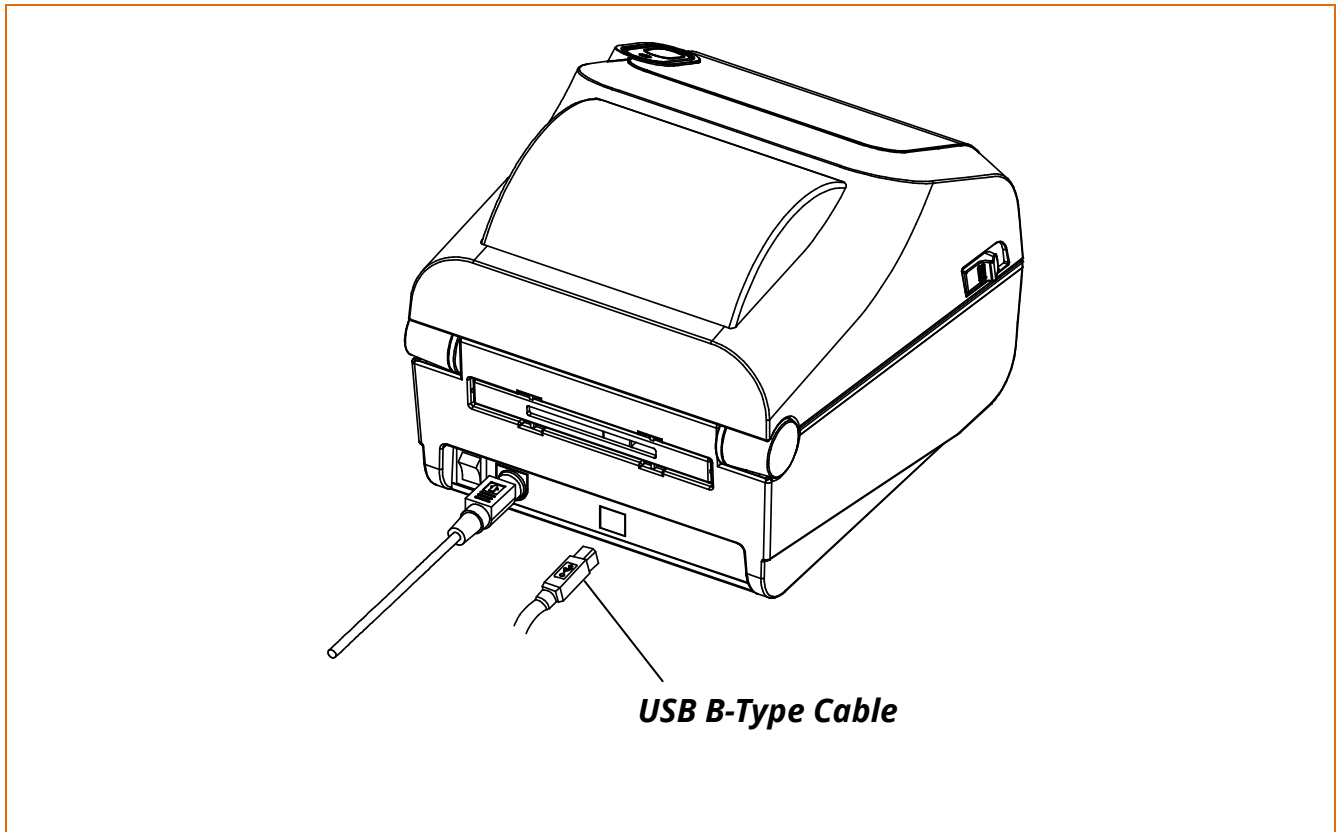


- **Connecting unshielded communication cables is in violation of EMC standards. Use the cable approved by us.**
- **Do not bundle the communication cable with objects that may cause electrical noise and interference. The printer may be damaged.**
- **After turning off the power switch of printer, connect and disconnect the communication cable. This can cause serious electrical damage and bodily injury.**

3-3-1 Standard Interface(USB only)

Connect the interface cable as shown below.
The product supports the following interfaces.

- USB B-Type Cable



- 1) Turn off the power switch.
- 2) Connect the communication cable to the printer communication port to be used.
 - Connect USB B-Type cable to the USB port.



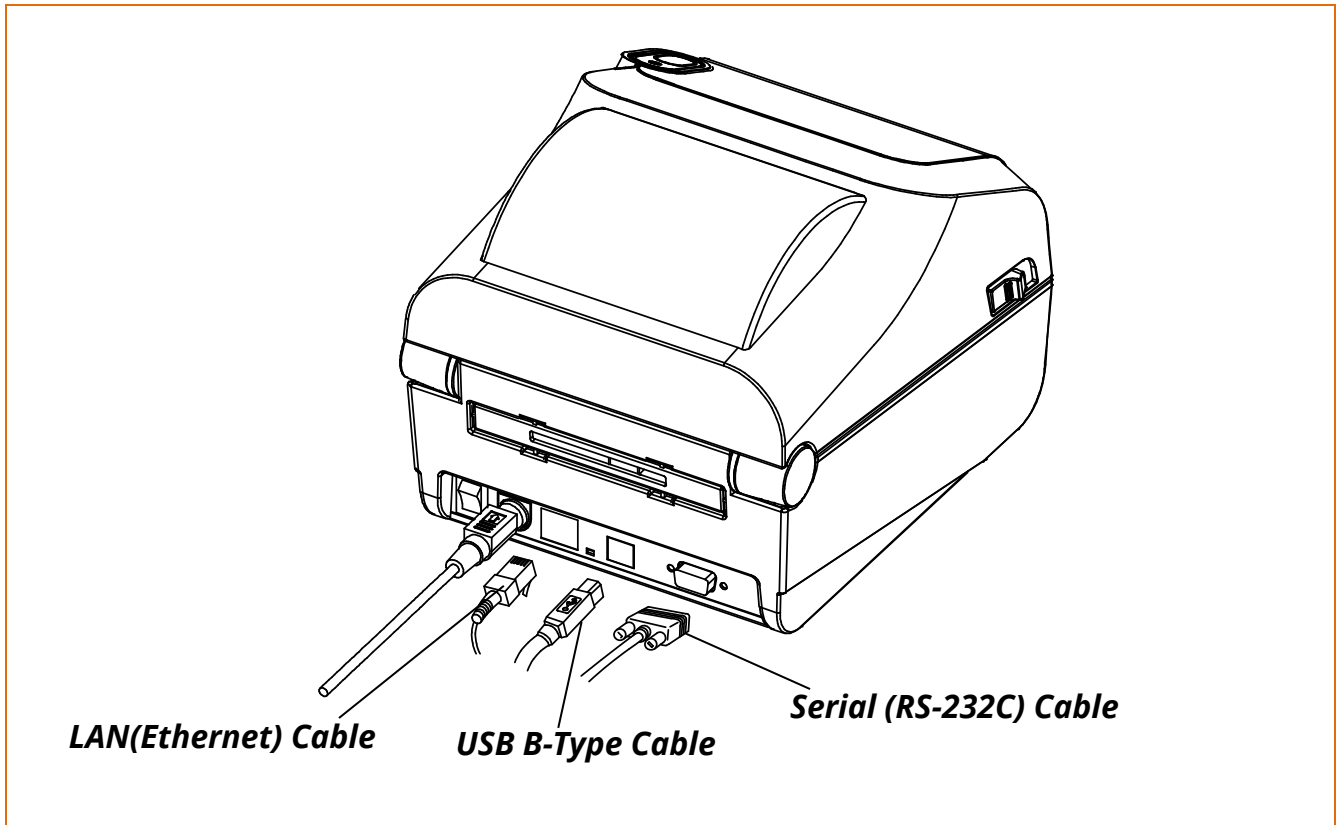
Be aware that the product's electronic components may be damaged due to discharging of electrostatic energy that accumulates on the surface of the body or other objects.

3-3-2 Option Interface(USB & Serial & Ethernet)

Connect the interface cable as shown below.

The product supports the following interfaces.

- Serial(RS-232C) Cable
- LAN(Ethernet) Cable
- USB B-Type Cable



1) Turn off the power switch.

2) Connect the communication cable to the printer communication port to be used.

- Connect the serial(RS-232C) cable to the serial port and tighten the screw on both sides.
- Connect the LAN(ethernet) cable to the ethernet port.
- Connect USB B-Type cable to the USB port.

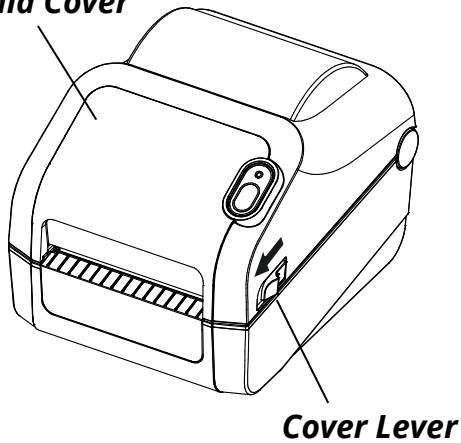


Be aware that the product's electronic components may be damaged due to discharging of electrostatic energy that accumulates on the surface of the body or other objects.

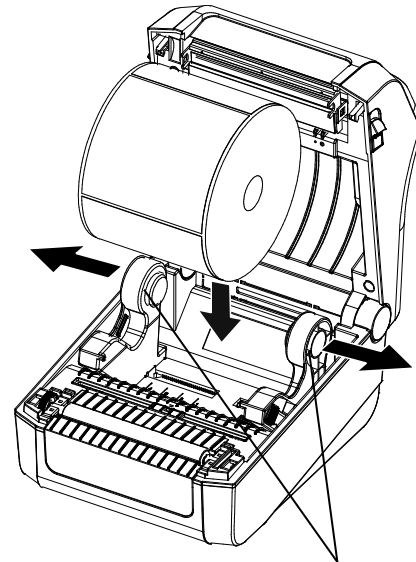
3-4 Media Installation

1) Pull the cover levers on both sides of the media cover and open the media cover.

Media Cover

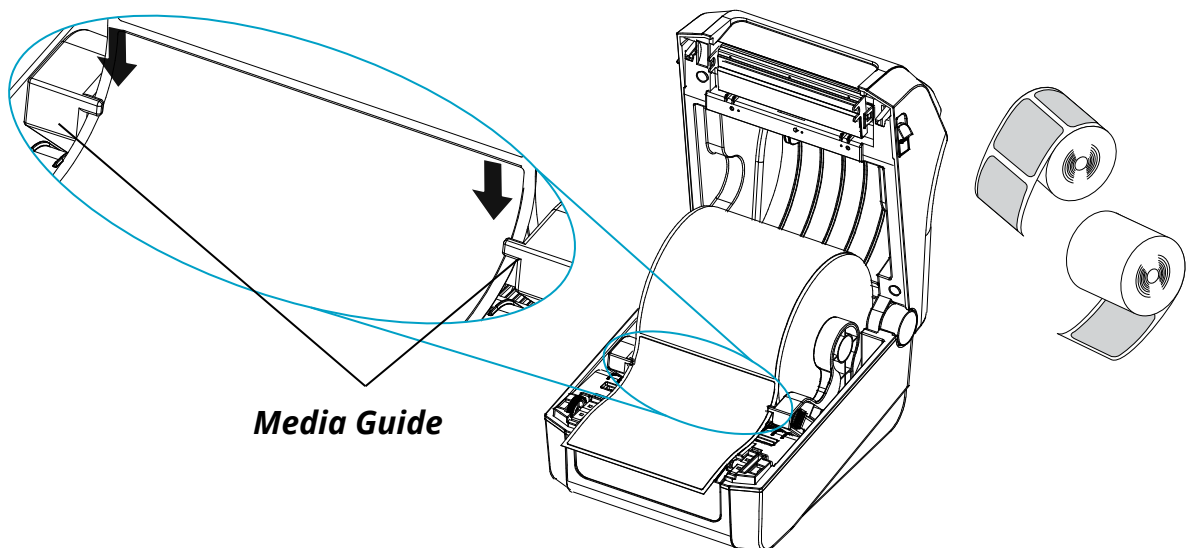


2) Spread the media holder and insert media as shown.



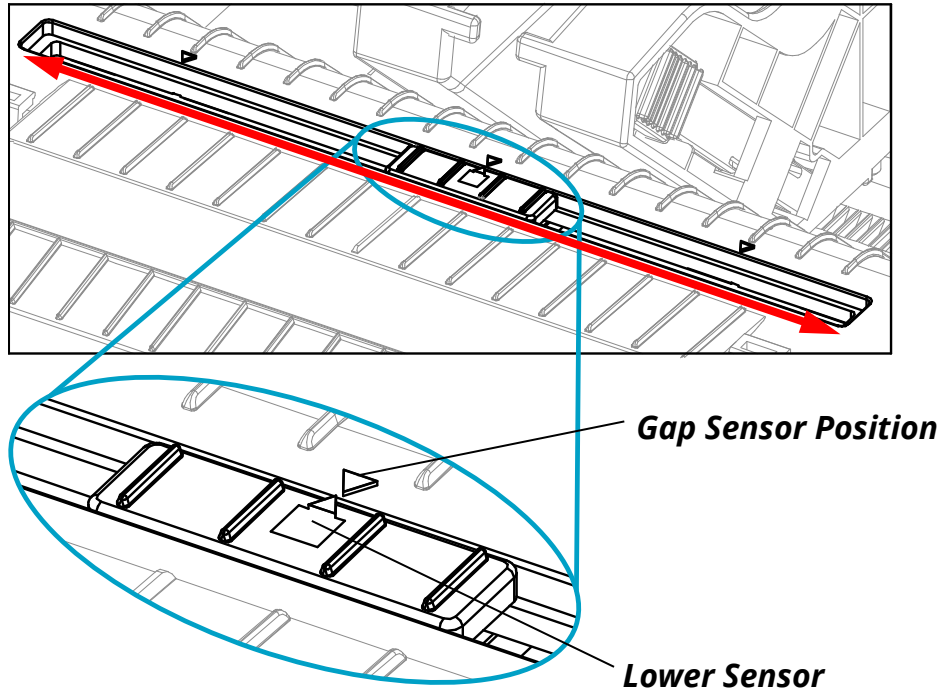
Media Holder

3) Whether the media label is wound inwards or outwards, its printing surface must face up.



Whether the media is rolled outside or inside, the printed side must face up.

- 4) If you use gap media, please move the lower sensor to the arrow position as shown below.
- 5) If you use black mark or notch media roll, please lift up the media and match the sensor position adjust the black mark or notch hole.



- When opening or closing the cover, be careful not to pinch Your fingers.
- Do not open the print head levers while the printer is printing. The printer may be damaged.
- Change the media when the printer is not receiving data, or data May be lost.
- While the printer is operating, the print head gets very hot, so turn off the power and let it cool down completely. The hot print head can cause serious burns.

4. Self-test

The self-test checks whether the printer has any problems.

(Remove the printed media from peeler before using the self-test if using the printer's media peeler option.)

- 1) Make sure that the media roll has been installed properly.
- 2) Turn on the power while holding down the Feed/Cancel button.
The self-test begins. (It takes about 10 seconds before starting self-test)
- 3) The self-test prints the current printer configuration information.
- 4) After the self-test results are printed out, a printer enters into print ready mode.



If the printer does not function properly, contact an authorized dealer.

5. Detailed features

5-1 Stand-alone Configuration Mode

- Various modes can be executed by using button and LED status.

5-1-1 Start Stand-alone Configuration Mode and execute each function

- 1) Make sure that a printer is in print standby state.
- 2) Press the feed button for about 3 seconds, then the LED changes to orange color.
- 3) Release the feed button, then the printer starts the stand-alone configuration mode and 6 numbers of LED status changes sequentially.
- 4) When the feed button is pressed at specific LED status, the corresponding operation will be executed.

5-1-2 Function List of Stand-alone Configuration Mode

Sequence Number	LED		Printer Operation
	Color	Status	
1	Green	Blink 4 times	Self-Test
2	Orange	Blink 4 times	Factory Reset and Gap Calibration
3	Red	Blink 4 times	Factory Reset and Black Mark Calibration
4	Green	Keep On 3 seconds	Reserved
5	Orange	Keep On 3 seconds	Data Dump Mode
6	Red	Keep On 3 seconds	Demo Mode



This information can be printed out by printer self-test.



Contact the customer center if the printer does not enter stand-alone configuration mode.

5-2 Media Length Measurement

- The printer needs to have the exact length of currently installed media to make a proper print image. For this, the printer automatically starts media length measurement mode in the following conditions.

- 1) When the printer has no measure length, for example first feeding after installation.
- 2) When the detected media length differs from the measured value.

In this mode, the printer feeds 2 or 3 media to measure the exact length of media and saves the measured value on printer's non-volatile memory.

5-3 Pause/Resume

- Press feed button to pause at the middle of media printing.

- 1) Press feed button once.
- 2) Printer stops after on-going printing and green LED is blinking
- 3) Press feed button once again. It resumes printing in a queue.



Contact the customer center if the printer does not execute pause/resume function.

5-4 Gap Sensor Auto Calibration Mode

- Gap sensor auto calibration mode is used when the printer does not detect a gap on the label media correctly.

Generally a printer is set to detect most types of gap but sometimes it fails to detect and keep feeding the media without a stop when special media used. In such case, use gap sensor auto calibration mode function for a proper detection.

- 1) Make sure that media roll has been installed properly.
- 2) Use stand-alone configuration mode, sequence number 2
(refer to [5-1 Stand-alone Configuration Mode](#))
 - Sequence number 2: Gap media auto calibration mode



Contact the customer center if the printer does not execute gap sensor auto-calibration mode function.

5-5 Black Mark Sensor Auto Calibration Mode

- Black mark sensor auto calibration mode is used when the printer does not detect a Black mark on the label media correctly.

Generally a printer is set to detect most types of black mark but sometimes it fails to detect and keep feeding the media without a stop when special media used. In such case, use black mark sensor auto calibration mode function for a proper detection.

- 1) Make sure that media roll has been installed properly.
- 2) Use stand-alone configuration mode, sequence number 3
(refer to [5-1 Stand-alone Configuration Mode](#))
 - Sequence number 3: Black mark media auto calibration mode



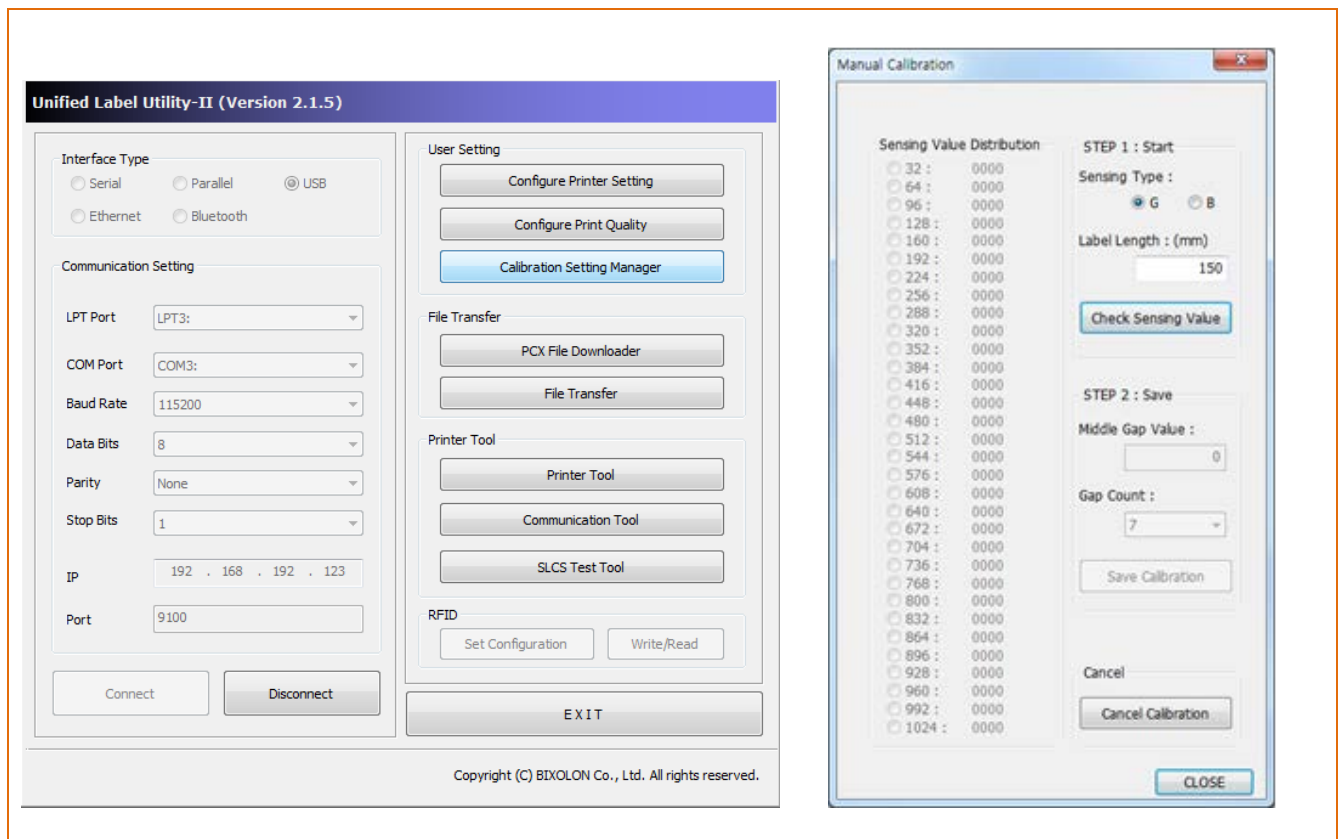
If smart media detection fails, please proceed gap or B/M sensor auto-calibration accordingly

5-6 Media Sensor Manual-Calibration

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

Users can calibrate sensor parameters in detail by using the utility program provided by the manufacturer. The utility can be obtained from the Internet via the BIXOLON website www.bixolon.com.

Please make sure the printer is connected and execute the utility program.
Please press the calibration setting manager button after setting the interface type.



XD3-40d Series

- 1) Select the sensing type and input the label length(mm) and click on “Check Sensing Value” button then printer starts to calibrate.
- 2) After calibration, the scanned values will appear on the screen.
- 3) 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”
- 4) If chosen value does not work properly, please try the other values among the black bold letters.
- 5) To go back to the initial value, please click on “Cancel Calibration” button.



Contact the customer center if the printer does not enter media sensor manual calibration mode.

5-7 Data Dump Mode

- This function can be used to diagnose the communication issues when the printer does not work correctly.

In this mode, the received data will be printed in hex format.

Use stand-alone configuration mode, sequence number 5 (refer to [5-1 Stand-alone Configuration Mode](#)) to start data dump mode.

Turn the printer off and on to recover to the print standby mode.

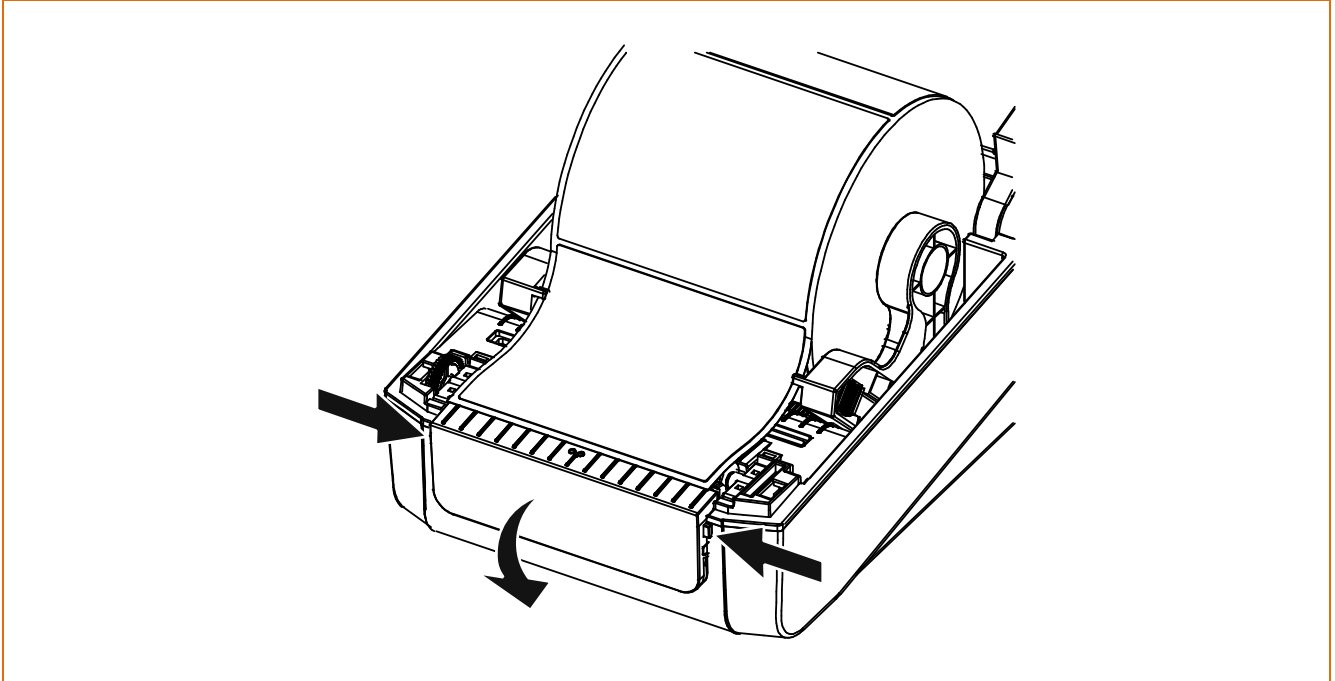


Contact the customer center if the printer does not enter data dump mode.

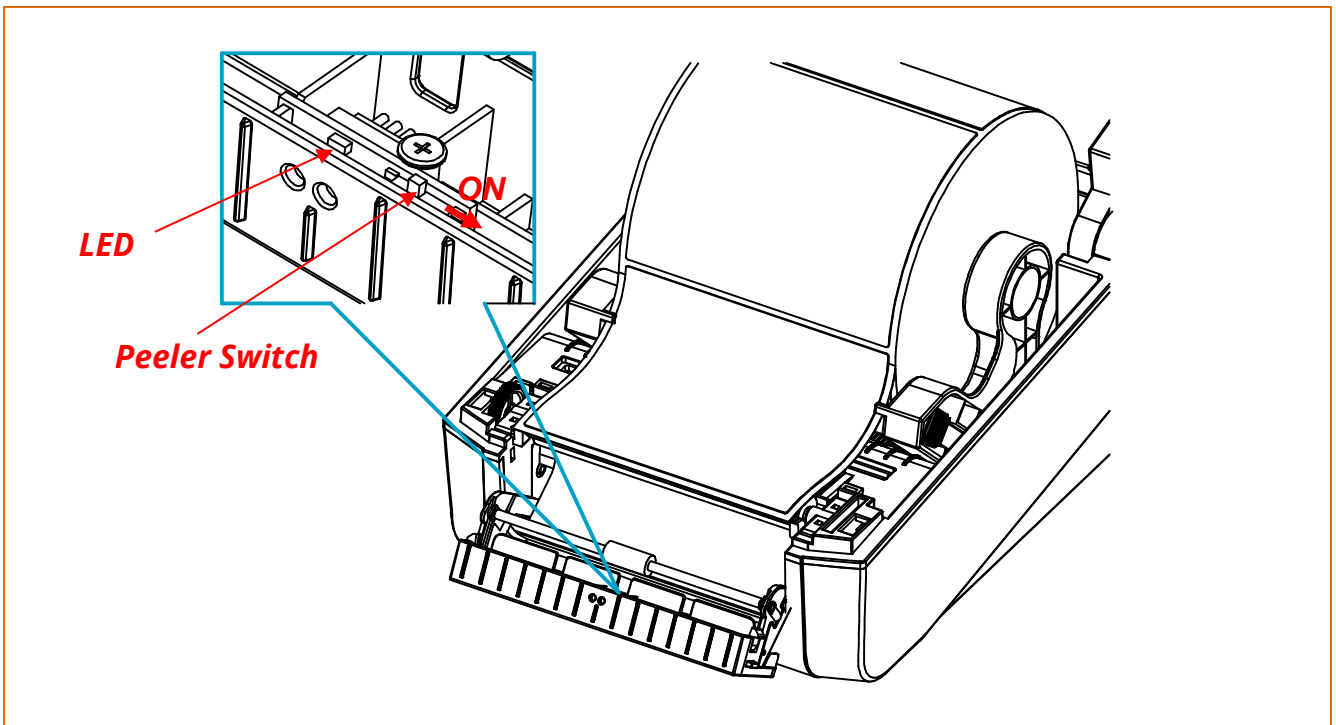
5-8 Media Installation Method of Peeler Model(Optional)

• For peeler model, install media in the following ways.
Use a peeler to automatically separate the printed media from the liner.

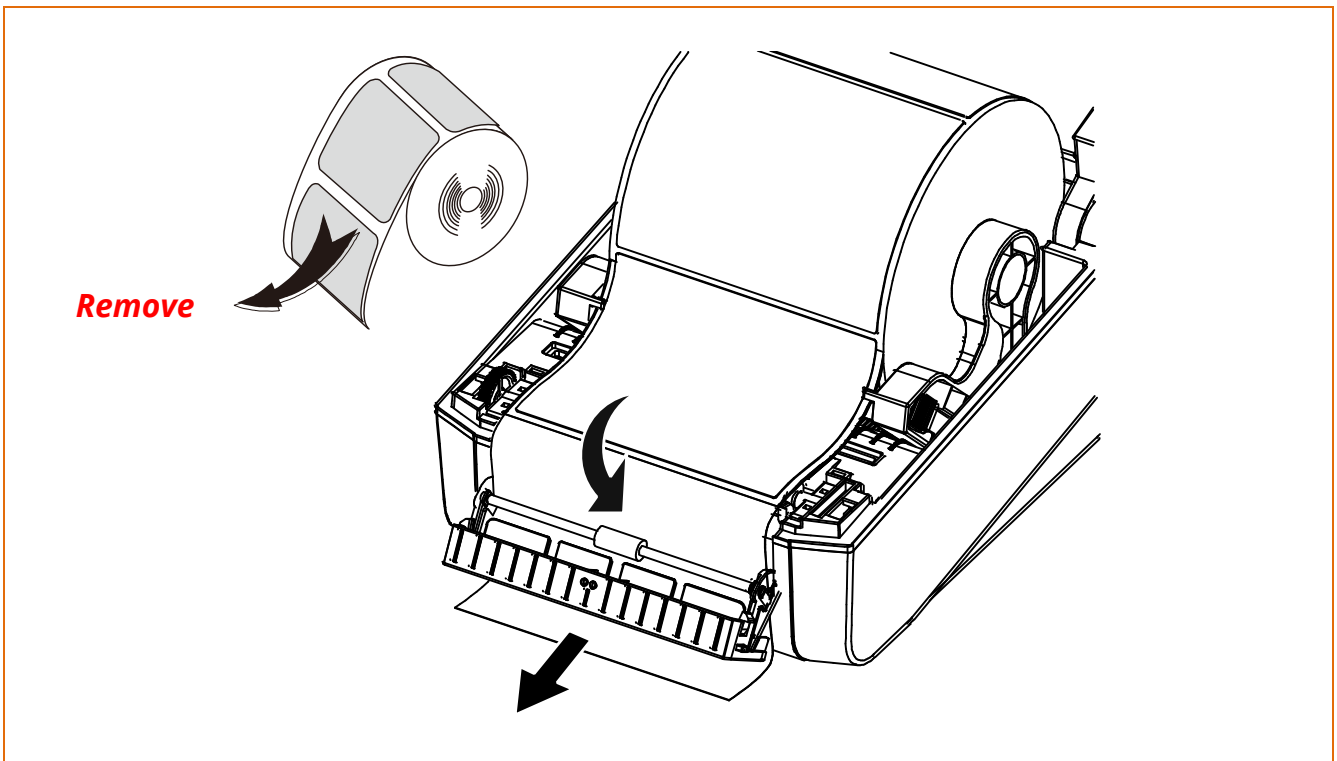
- 1) Open the media cover.
- 2) Open the peeler cover.



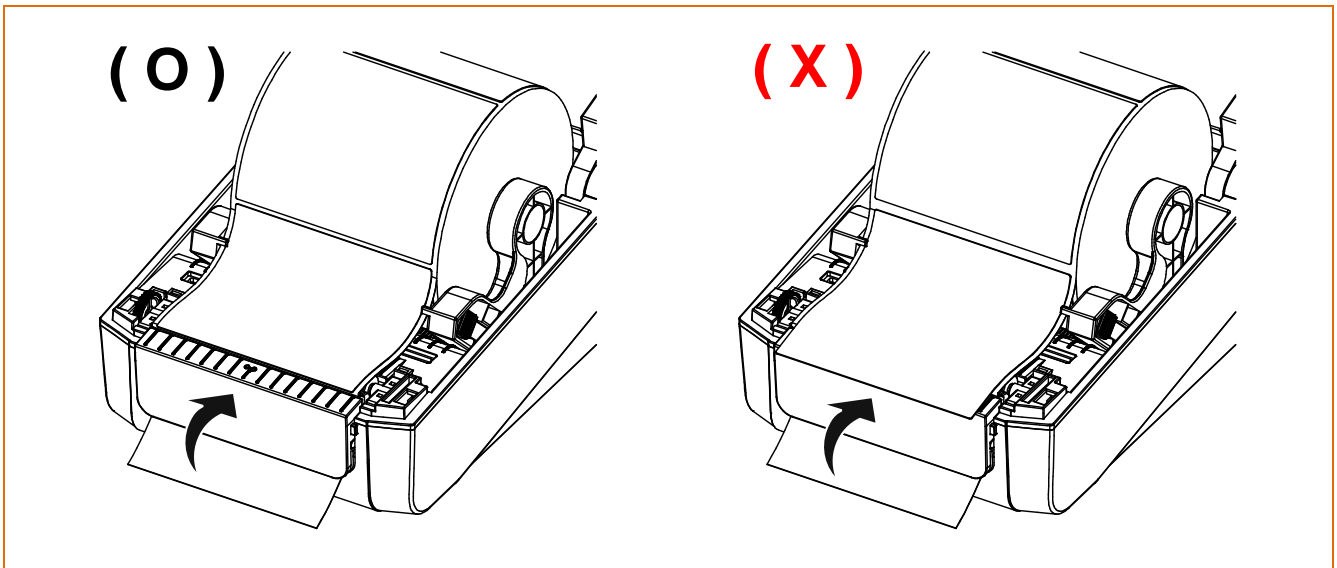
3) Set the peeler switch to the 'ON' position and check to see that the LED has turned on



4) Remove the media and insert the media through the slot.



5) Close the media cover until a click sound is heard.



6) Turn the printer off and back on.

- When opening or closing the cover, be careful not to pinch your fingers.
- Do not open the print head levers while the printer is printing. The printer may be damaged.
- Change the media when the printer is not receiving data, or data may be lost.
- The peeler function is only available for label media.
- Turn the printer off before peeler switch on / off
- When the peeler is switched on, the next label will not be printed unless the printed label is removed from the peeler.
- When the peeler is switched off, the peeler does not work.
- While the printer is operating, the print head gets very hot, so turn off the power and let it cool down completely. The hot print head can cause serious burns.

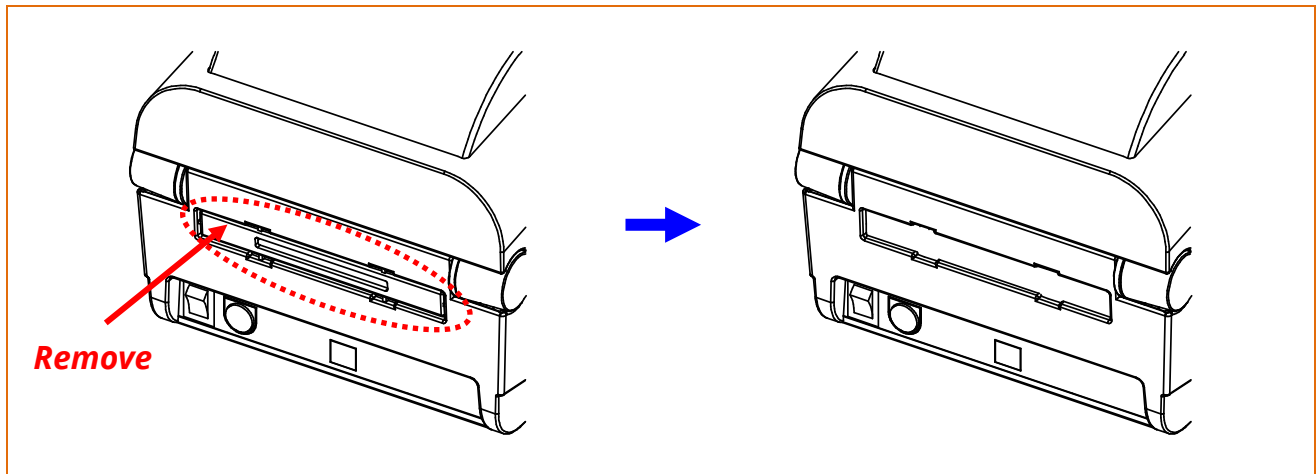


5-9 Using Fan-Fold or External Media

- Supplying media to the printer externally is done as follows.

5-9-1 Printer Preparation

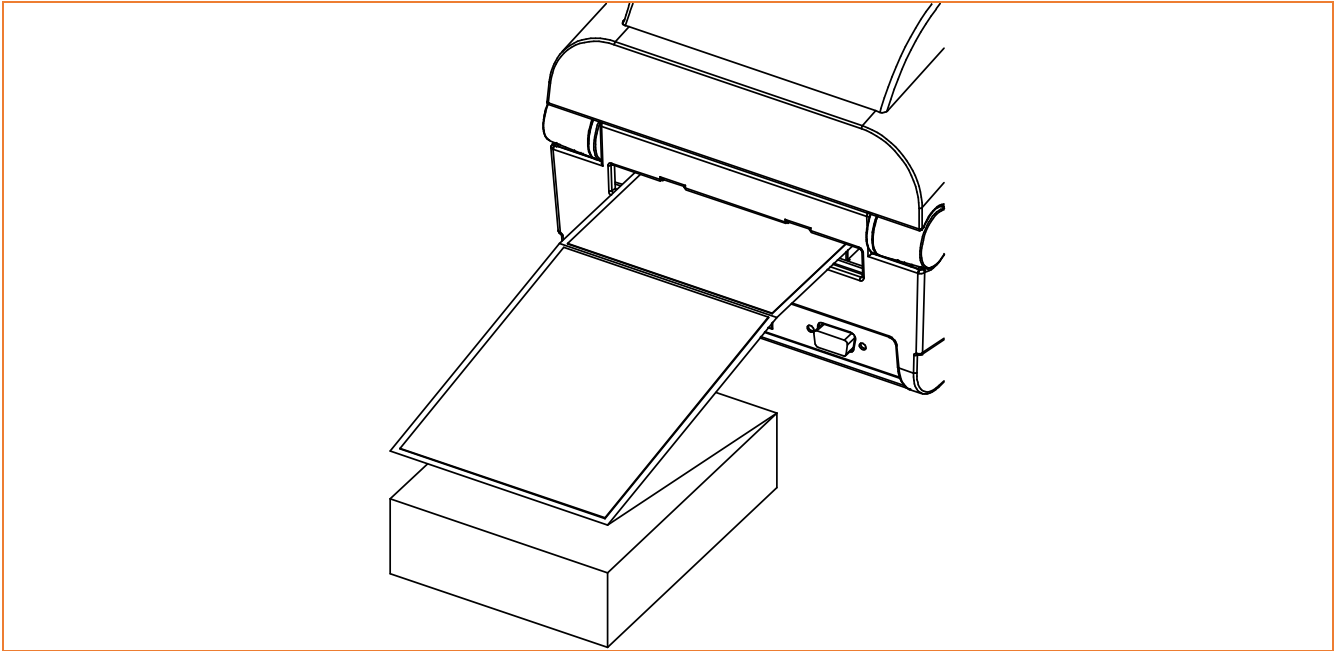
Remove the rear media supply cover on the back side of the printer with a knife or other cutting instrument.



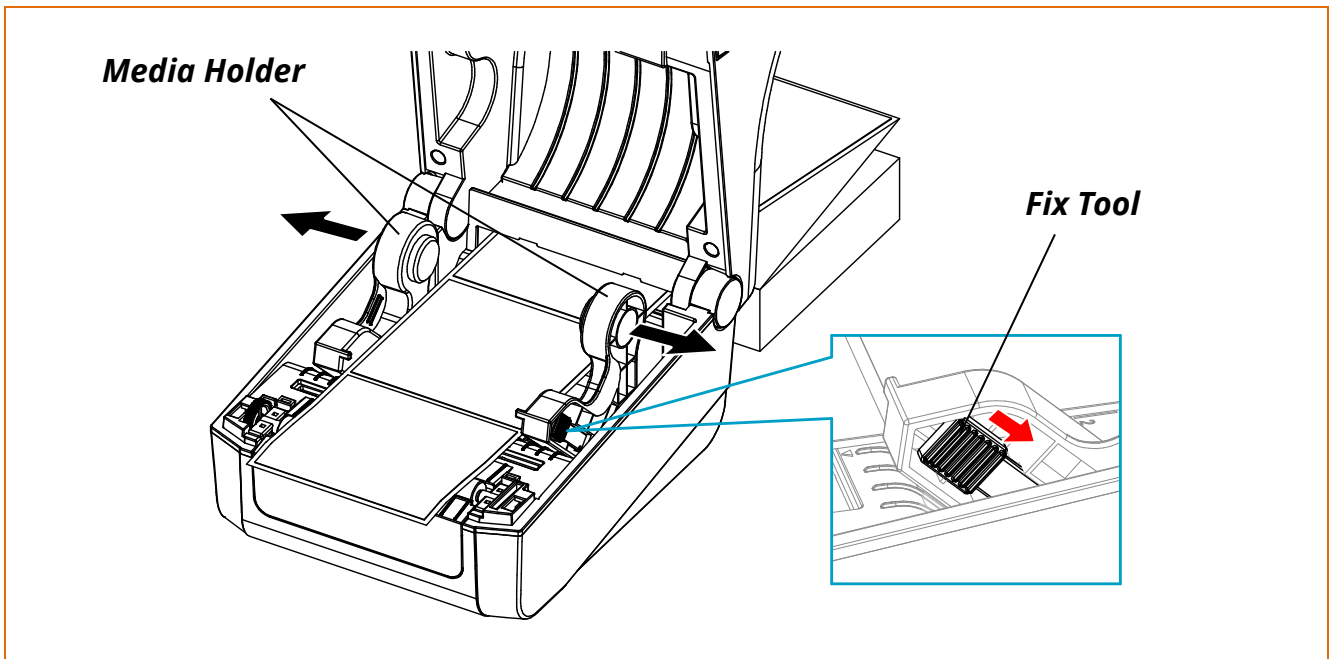
- Take care not to injure the hands and/or any other part of the body when performing this step.
- Do not open the print cover while the printer is operating, otherwise the printer may be damaged.
- To prevent data loss, replace media only when the printer is not receiving any data.

5-9-2 When using Fan-Fold media

1) Insert the media at the rear of the printer as shown below and open the media cover.

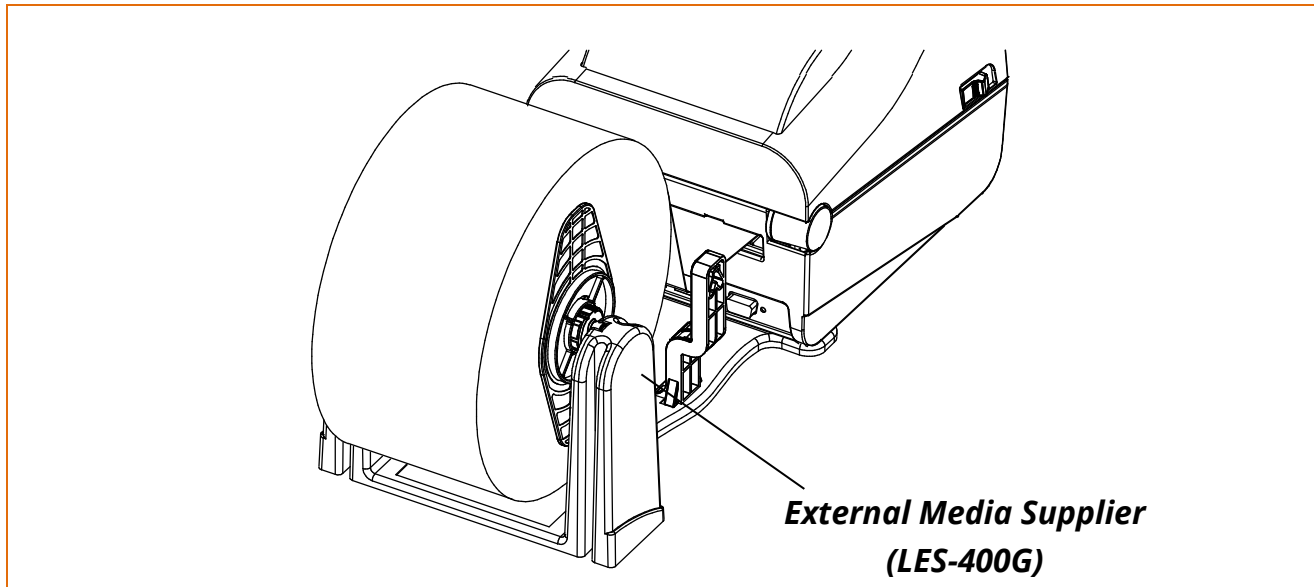


2) Adjust media holders to the media width by using the fix tool.



5-9-3 When using Large-Capacity media roll(Optional)

Install the external media supplier(LES-400G) as shown below and adjust media holders to the media.



- Do not open the print cover while the printer is operating, otherwise the printer may be damaged.
- To prevent data loss, replace media only when the printer is not receiving any data.

6. Cleaning Printer

Printing quality might be degraded by dust, foreign substance, adhesive substance, or other pollution materials stuck in the printer head or inside the printer.

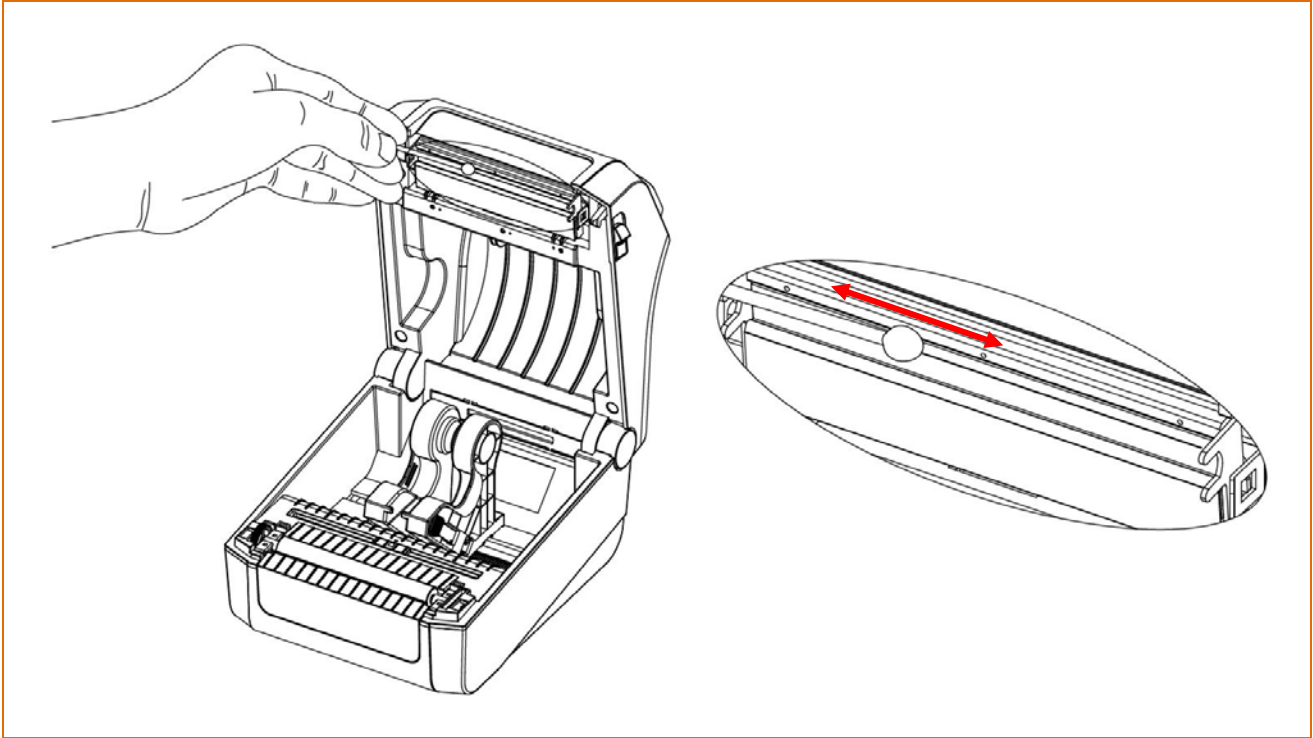
Clean the printer periodically to prevent quality degradation.



- **Be sure to clean after turning the printer off.**
- **Be careful not to leave scratches in the print head.**
The printer may be damaged.
- **Print head is very hot while the printer is printing, so clean the printer after cooling it sufficiently with power off.**
- **Do not touch heated area of print-head when cleaning.**
Personal injury may result from static electricity, etc.

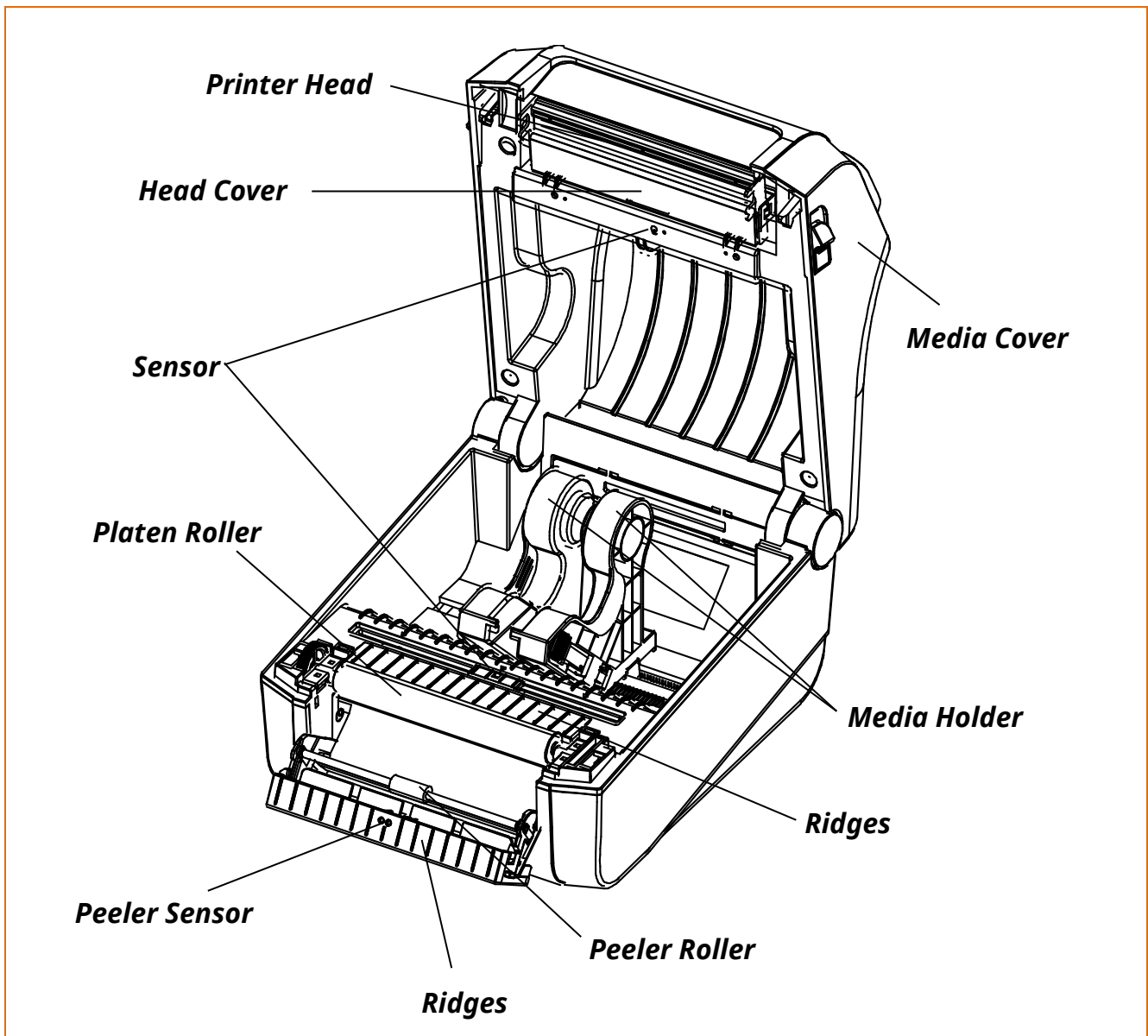
6-1 Cleaning Head

- 1) Open the paper cover and clean the printhead using the cloth or cotton swab soaked in alcohol for medical.
- 2) After cleaning the head, do not use the printer until the alcohol used for cleaning evaporates completely. (1~2 min)



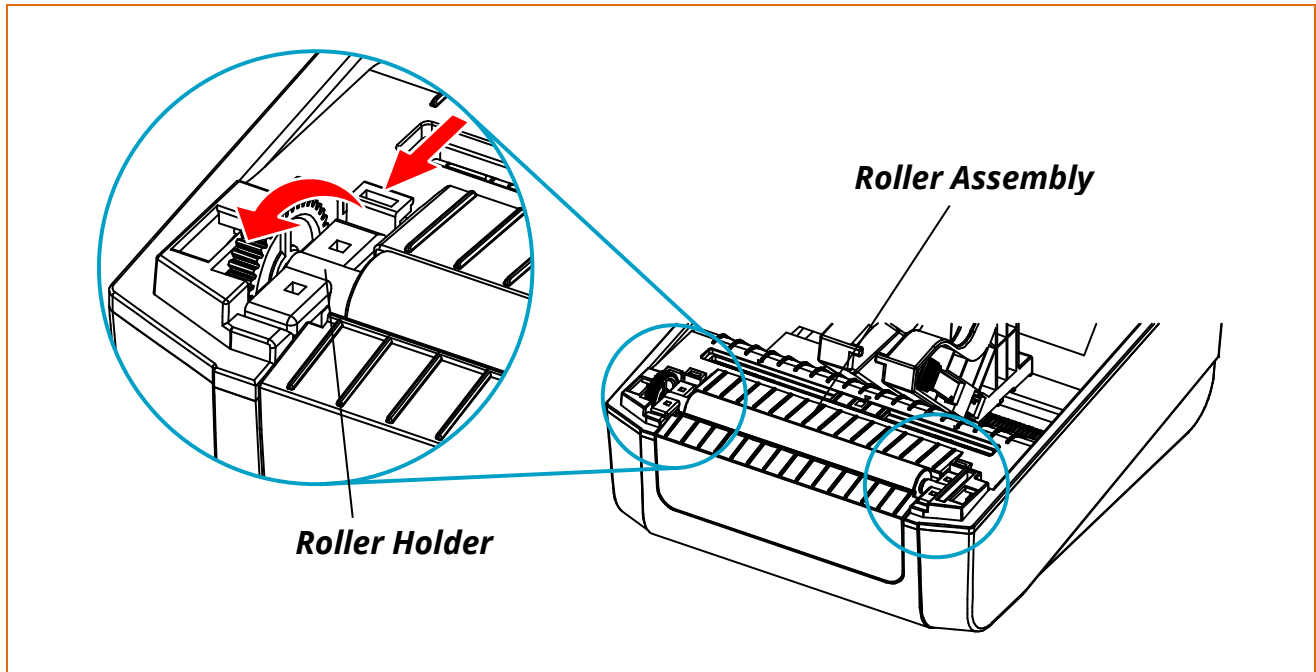
6-2 Cleaning Sensors, Roller or/and Media Path

- 1) Open the media cover and remove the media.
- 2) Remove any dust or foreign substance using dry cloth or cotton swab.
- 3) Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.



6-3 Replacing Roller

- 1) Open the media cover and remove the media.
- 2) Pull the roller holders and separate the roller assembly.



- 3) Assemble new roller assembly in reverse order.



- Make sure to turn the printer power off prior to cleaning.
- While the printer is operating, the print head gets very hot, so turn off the power and let it cool down completely. The hot print head can cause serious burns.

7. Appendix

7-1 Specifications

	Item	Description
Printer	Printing Method	Direct Thermal Printing
	Dot Density	203 dpi (8 dot/mm)
	Printing Width	Max. 104 mm (Max. 4.09")
	Printing Speed	Max. 127 mm/sec (Max. 5ips)
Media	Roll Width	15 ~ 118 mm (0.59 ~ 4.64")
	Roll	Max 127 mm (Max. 5")
	Core	25.4 ~ 38 mm (1" ~ 1.5")
AC/DC Adapter	Input Voltage	AC 100 - 240V
	Frequency	50/60 Hz
	Output Voltage	DC 24V ±5%
	Output Current	2.5A
Usage Conditions	Temperature	0 ~ 40 °C (Operating) -20 ~ 60 °C (Storage)
	Humidity (except for media)	10 ~ 80 % RH (Operating) 10 ~ 90 % RH (Storage)



Print speed may vary depending on the data transfer speed and the combination of command.



- **In case of danger, turn off the power to cut the connection.**
- **The power cord must be grounded to ensure safety and reduce electromagnetic interference**

7-2 Media Types

- The Media types used with this printer are as follows.
 - Control Media: PET
 - Other Media: PET

