BIXOLON

User's Manual

XL5-40CT Series

Thermal Label Printer

Ver. 2.00



www.bixolon.com

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Copyright

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BIXOLON Co., Ltd. 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.

Notice - EU

This wireless device is class A that is considered to be used in an industrial environment.

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”.

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 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.

WARNING & CAUTION

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

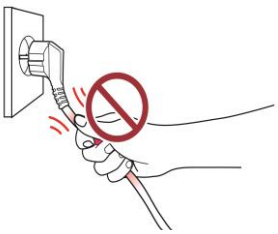
Do not connect multiple products to one single power outlet. Do not connect the product to a loose power outlet.
Use only power outlets that meet the standard. Connect the power cord only to a grounded power outlet. **Noncompliance may cause electric shock or fire.**



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.**

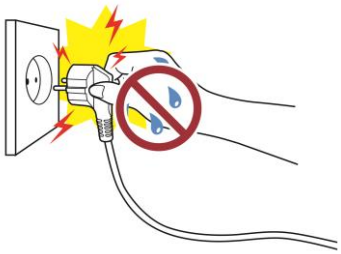


Keep small accessories or other packaging materials away from young children. Beware: children may swallow them. **Mishandling the product may incur injuries. If a child has swallowed any such thing, see a doctor at once.**

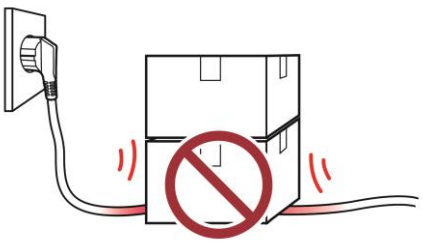




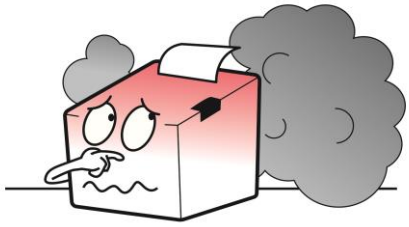
Do not touch the power cord with wet hands when pulling it from a power outlet. If the power plug or outlet is smeared with extraneous matter, wipe it with a dry cloth. **Noncompliance may cause electric shock or fire.**



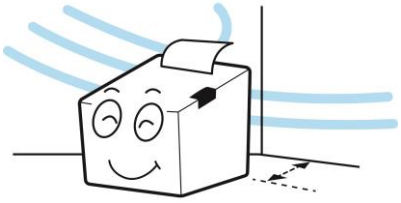
Do not allow the product to be damaged by heavy objects. **Noncompliance may cause electric shock or fire.**



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.**



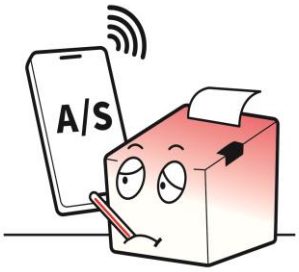
Never disassemble, repair, or modify the product at your own discretion. **When repair is necessary, contact the place of purchase.**



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, Bixolon website (http://www.bixolon.com) provides product repair.



Manual Introduction

This manual provides basic information on printers and provides ways to install, use, and check them.
In order to protect the safety of users and prevent property damage, be fully familiar with this manual before using the product. Please use it.

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 type fonts and facilitate their usage as device fonts.
5. Network Connection Manual
   This manual provides information on the configuration and usage of network interface.
6. Bluetooth Connection Manual
   This manual provides information on connection instructions the Bluetooth interface.
7. 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.

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.

Printer Introduction

XL5-40CT series printers have been designed to be connected to various types of electronic devices such as computer peripheral devices.

The main features of the printer are as follows

1. XL5-40CT: Maximum 152mm/s(Max 6ips) printing speed
   XL5-43CT: Maximum 127mm/s(Max 5ips) printing speed
2. 4inch LINERLESS THERMAL LABEL PRINTER
3. 186 x 287.7 x 173mm (W x D x H)
4. Support for multiple interfaces
   - Standard(Wire): USB & USB HOST
   - Option(Wire): USB & USB HOST & Serial & Ethernet
   - Option(Wireless): Bluetooth, WLAN
5. Easy media loading
6. Can print a range of barcodes
7. Option: LCD, RFID

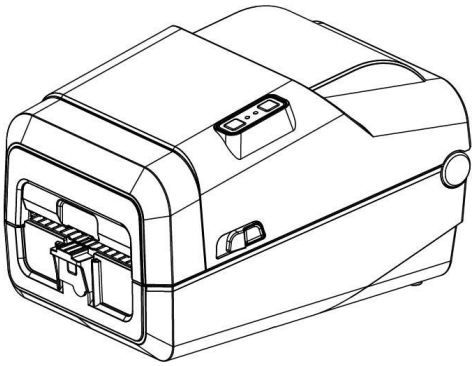
Product Symbol Introduction

	DC (Direct current)
	USB
	Ethernet

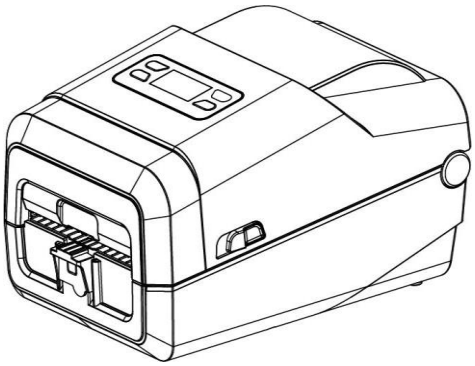
1. Content Confirmation

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 or missing.

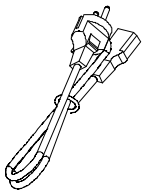
Product



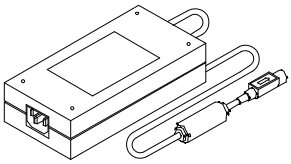
XL5-40CT/43CT



XL5-40CT/43CT LCD Model(Option)



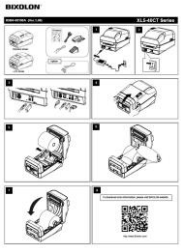
Power Cord



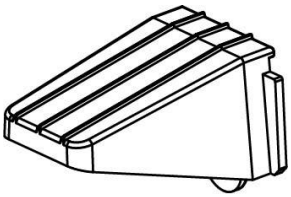
AC/DC Adapter



USB Cable



Quick Manual



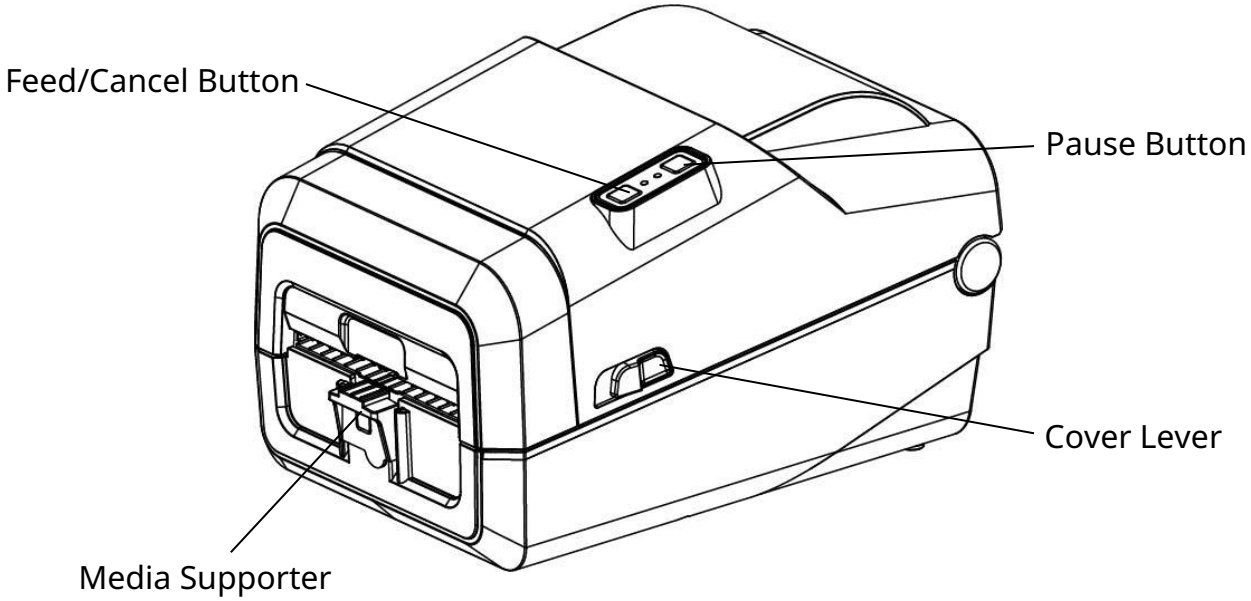
Media Supporter

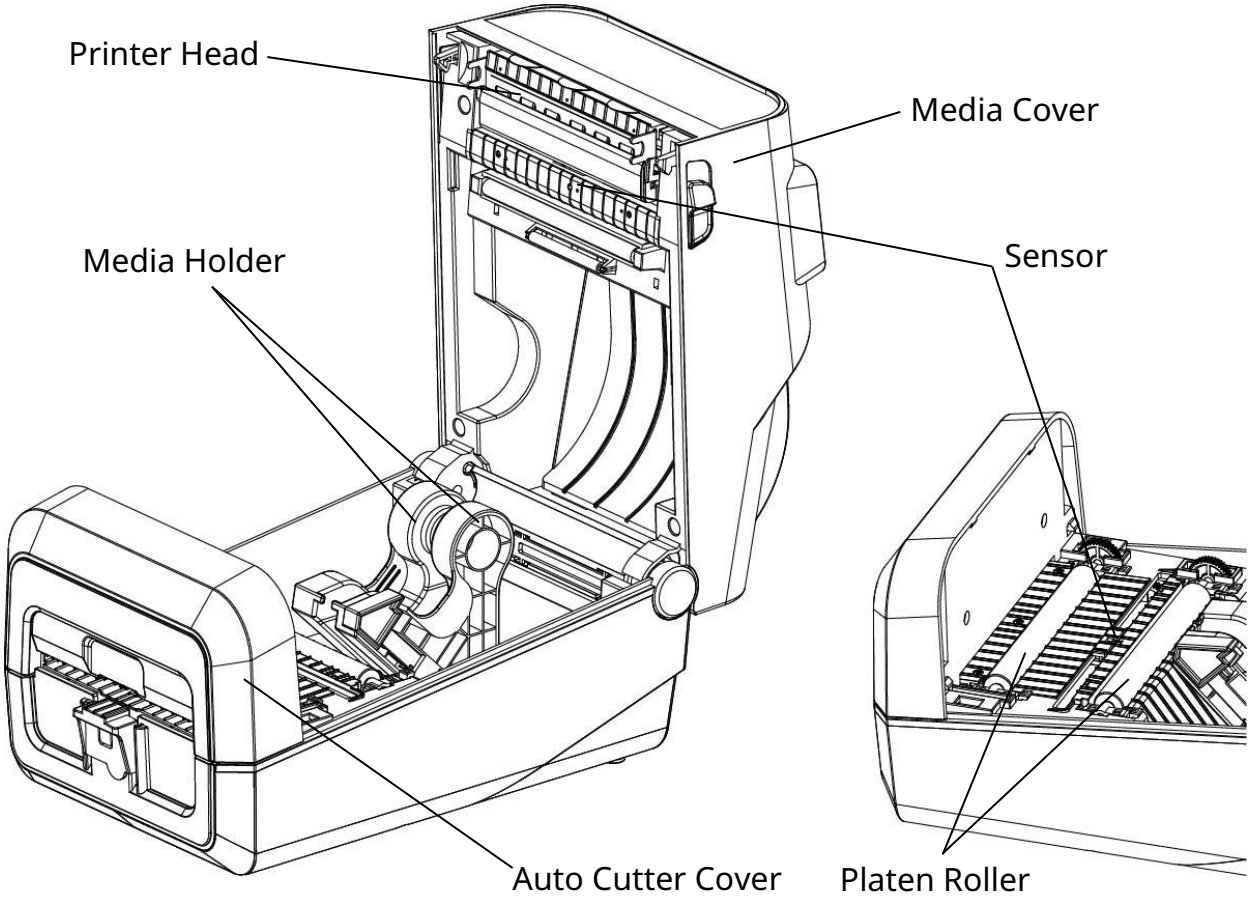
※ Optional



Serial(RS-232C) Cable

2. Product Part Names





3. Installation & Usage

3-1 Printer Installation Placings

• Install the printer in a location that meets the following conditions.

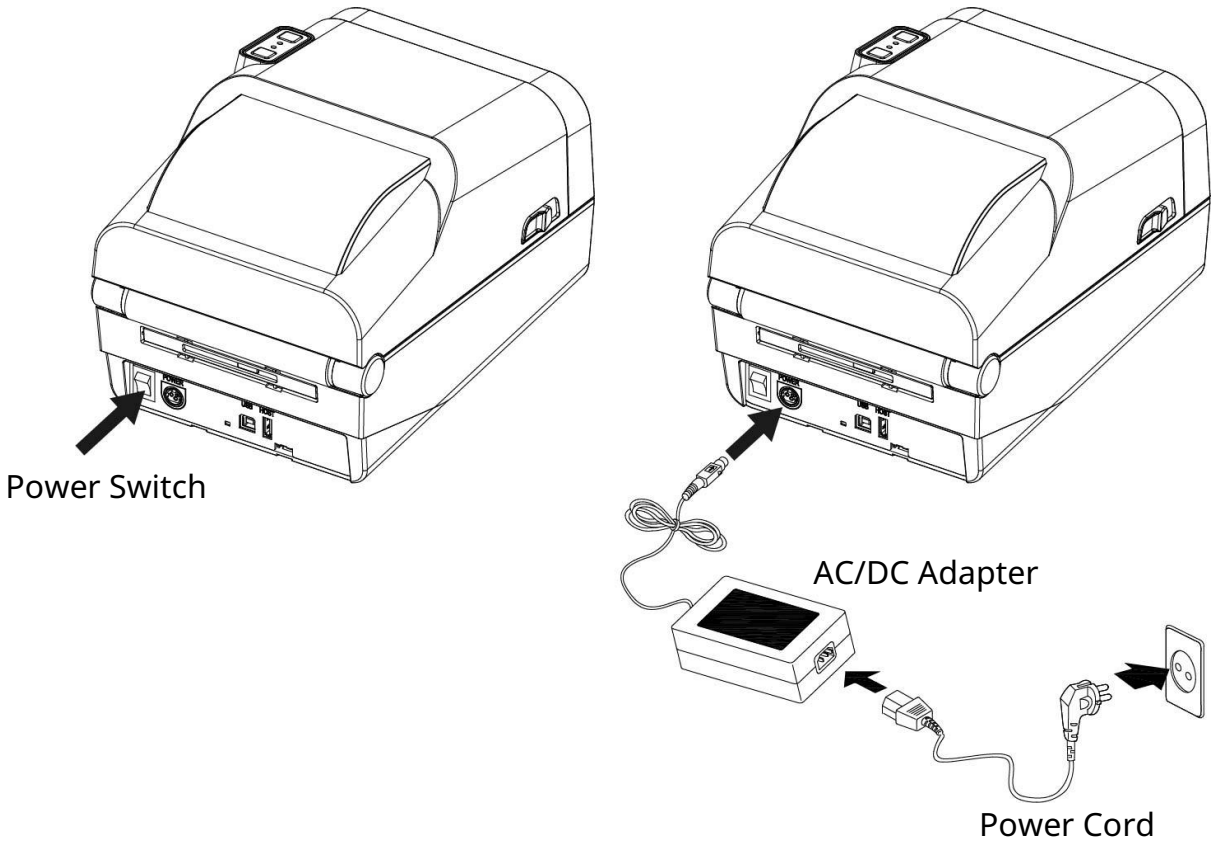
- Allow sufficient space around the printer for proper ventilation.

- Install the printer on a flat and level surface.

- Avoid humid environment.

3-2 Power Connection

• Connect power to the printer as shown below.



1) Turn off the printer power switch.

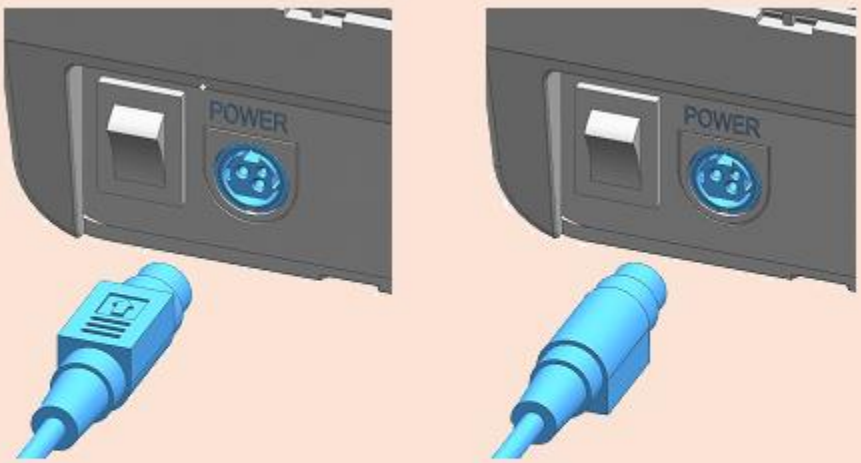
2) Check to see that the AC/DC adapter voltage matches that of the power source.

3) Connect the AC/DC adapter jack to the printer power port.

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 power connector and the printer, then pull horizontally.
- Pay attention to the direction in which you insert the power cable.



O X

- Be sure to turn off the printer before connecting the power connector to the printer. 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.

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.

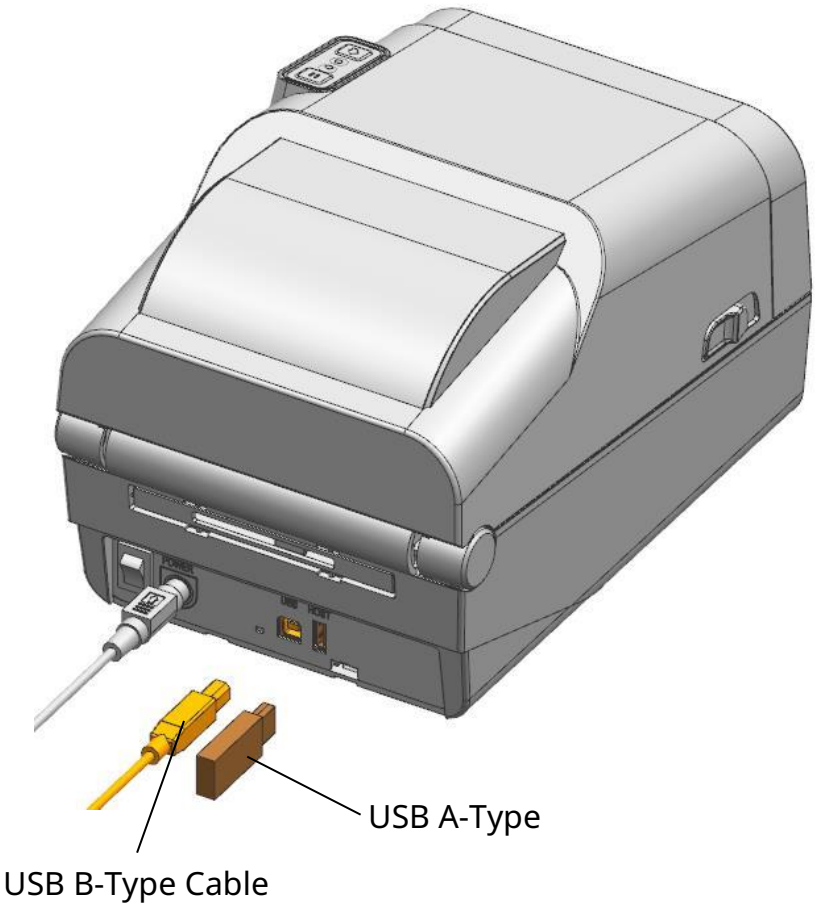
- Serial(RS-232C) Cable (1.8m or less recommended)
- USB B-Type Cable (1.8m or less recommended)
- LAN(Ethernet) Cable (3m or less, CAT-5 or higher UTP Cable)

- 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 & USB HOST)

Connect the interface cable as shown below.
This printer supports the following communications interface standards.

- USB B-Type Cable
- USB A-Type (Storage)



1) Turn off the power switch.

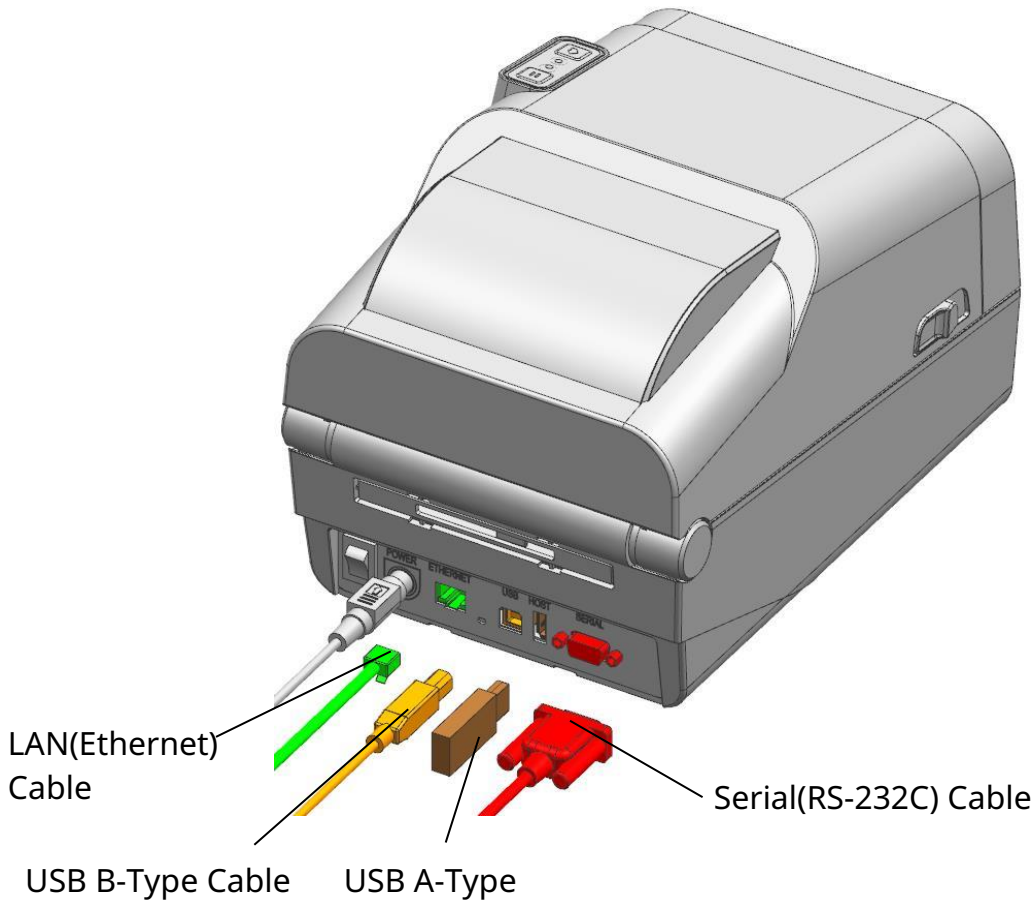
2) Connect the communication cable to the printer communication port to be used.
- Connect USB B-Type cable to the USB port.

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 Optional Interface (USB & USB HOST & Serial & Ethernet)

Connect the interface cable as shown below.
This printer supports the following communications interface standards.

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



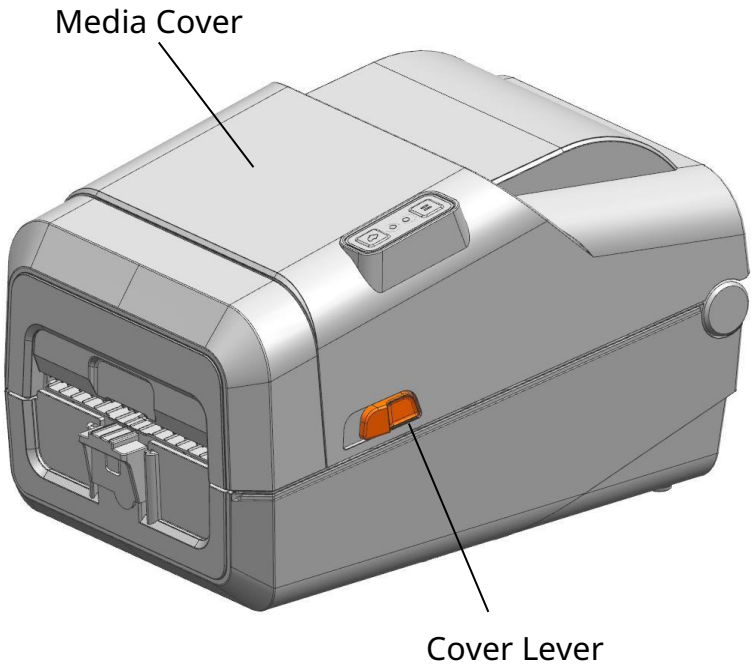
1) Turn off the power switch.

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.

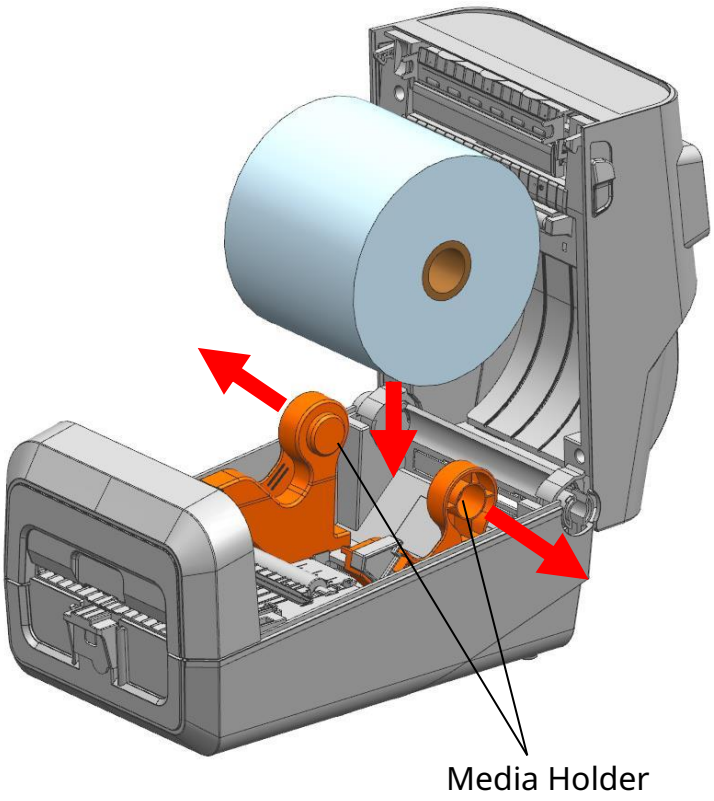
Be aware that the product's electronic components may be damaged due to discharging of electrostatic energy that accumulates on the surface of the body or other objects.

3-4 Media Installation

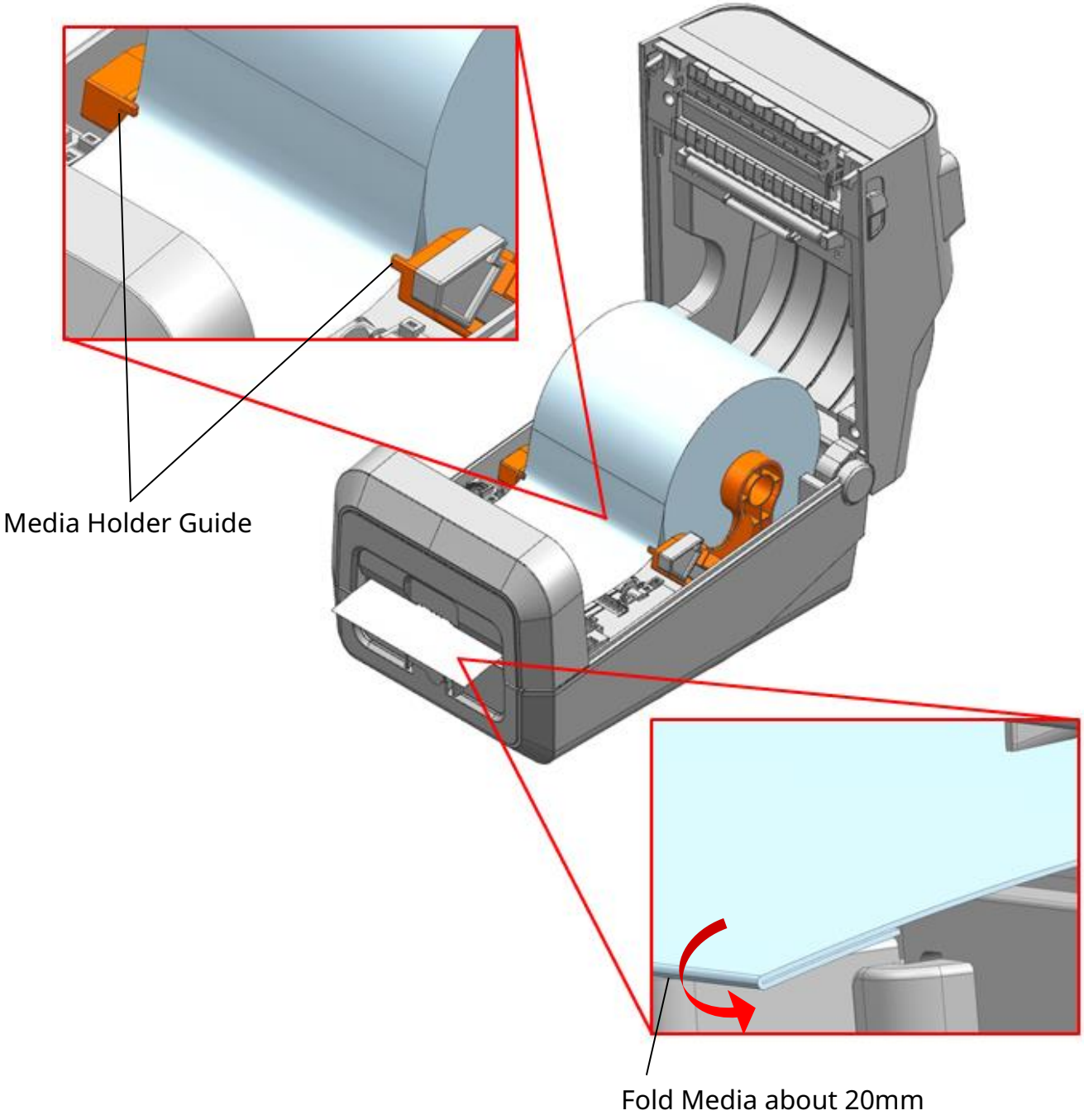
1) Pull the cover levers on both sides of the media cover and open the media cover.



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

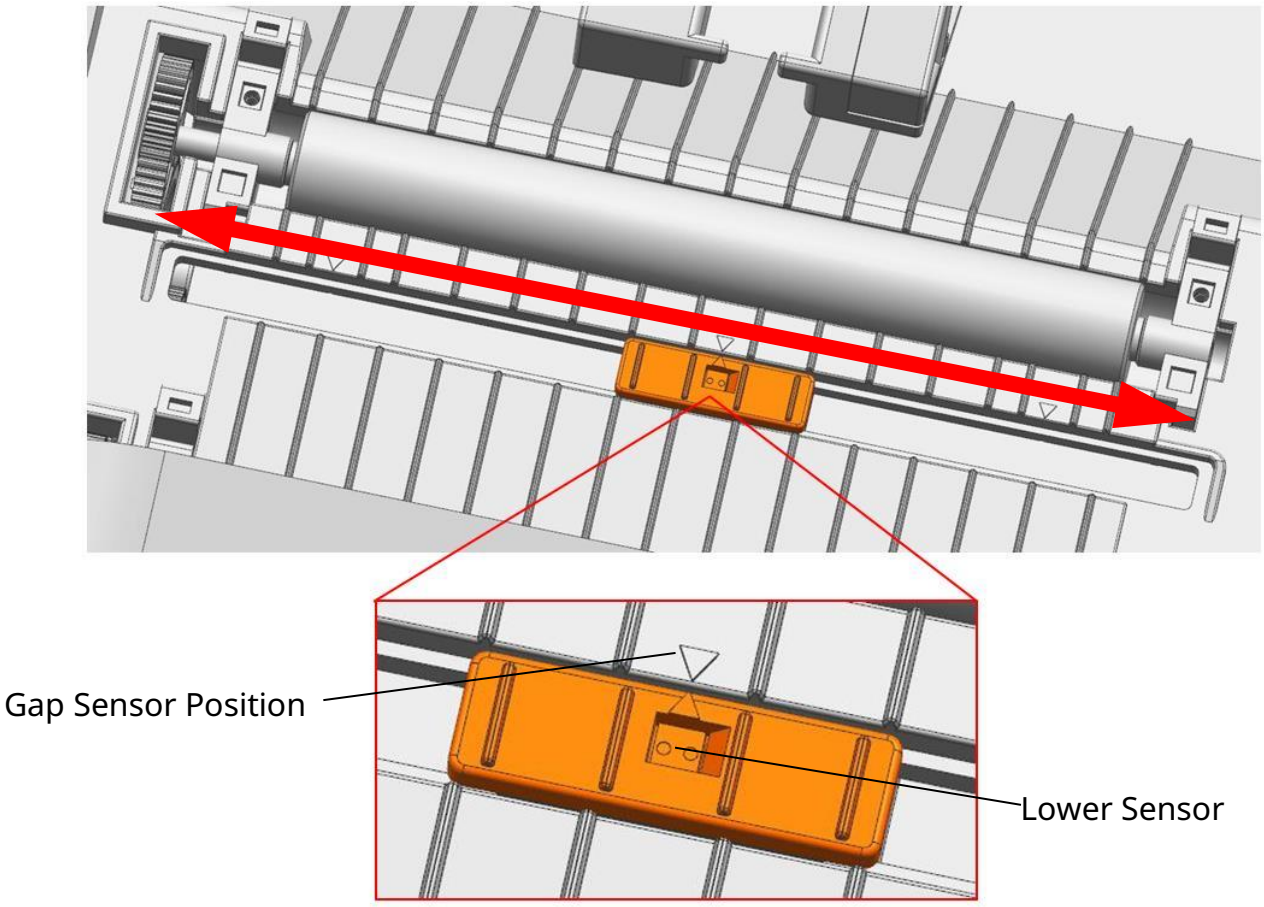


3) Pull the media out to the front of printer.
Insert the media under both sides of Media Holder Guide.
* If you are using linerless media, It may stick to other surfaces while installation, to avoid this, please fold the end of media about 20 mm before installing the media.
* Whether the media is rolled outside or inside, the printing side must faced up.



4) If you use gap media, please align the lower sensor to the center arrow position as shown below.

5) If you use black mark media roll, please lift up the media and match the lower sensor position adjust to the black mark.



- 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.
- Never insert objects or fingers while performing the cutting function. This can cause serious bodily injury.
- Be careful not to touch the cutter blade with your hand. There may be a risk of personal injury.
- The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.

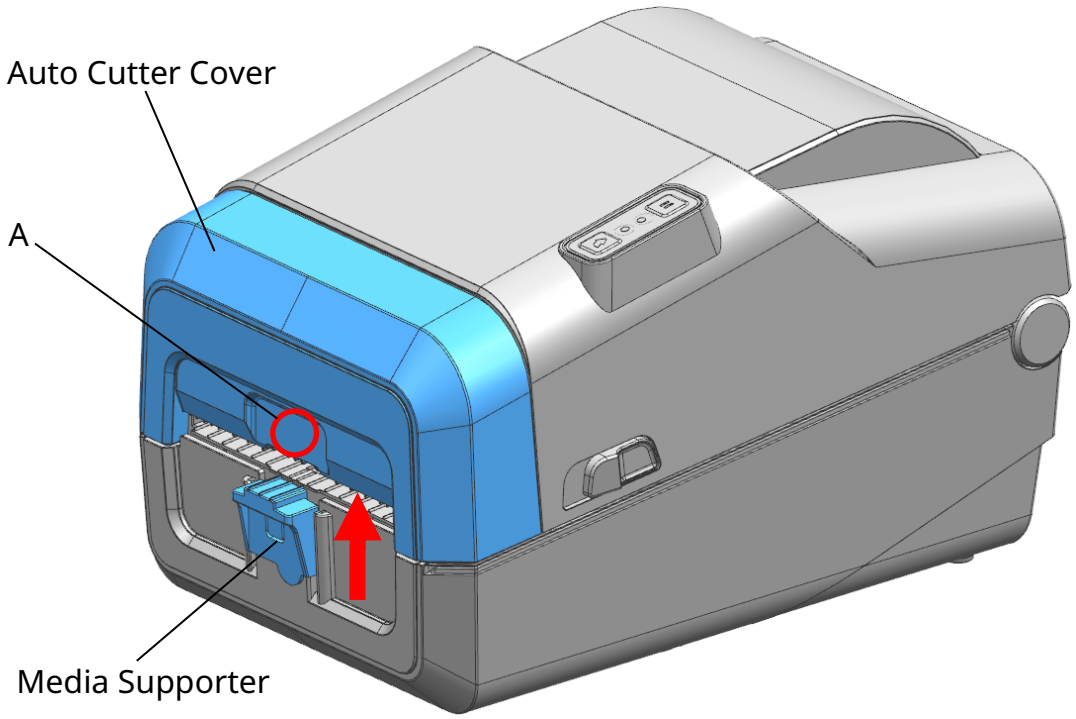
3-5 How to Use Media Supporter

The media Supporter is designed to hold media after printing until the label is removed. Use extra Media supporter included in the box for longer media.

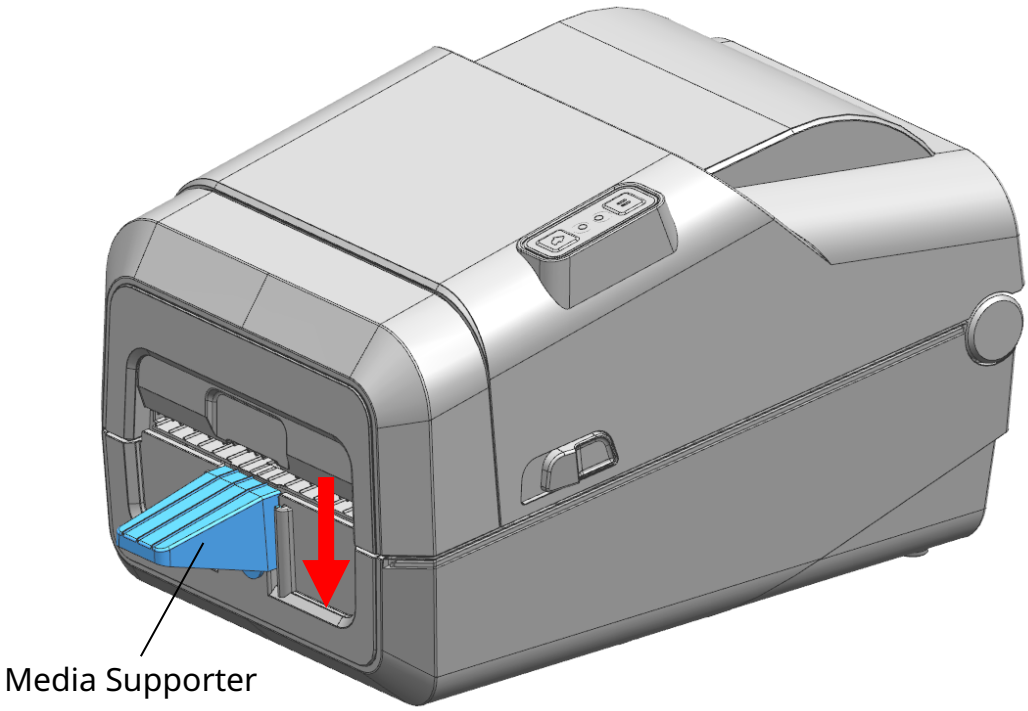
1. Turn off the printer power switch.

2. Disconnect the AC/DC adapter jack to the printer power port.

3. Press the Auto Cutter Cover(A) and remove the Media supporter.

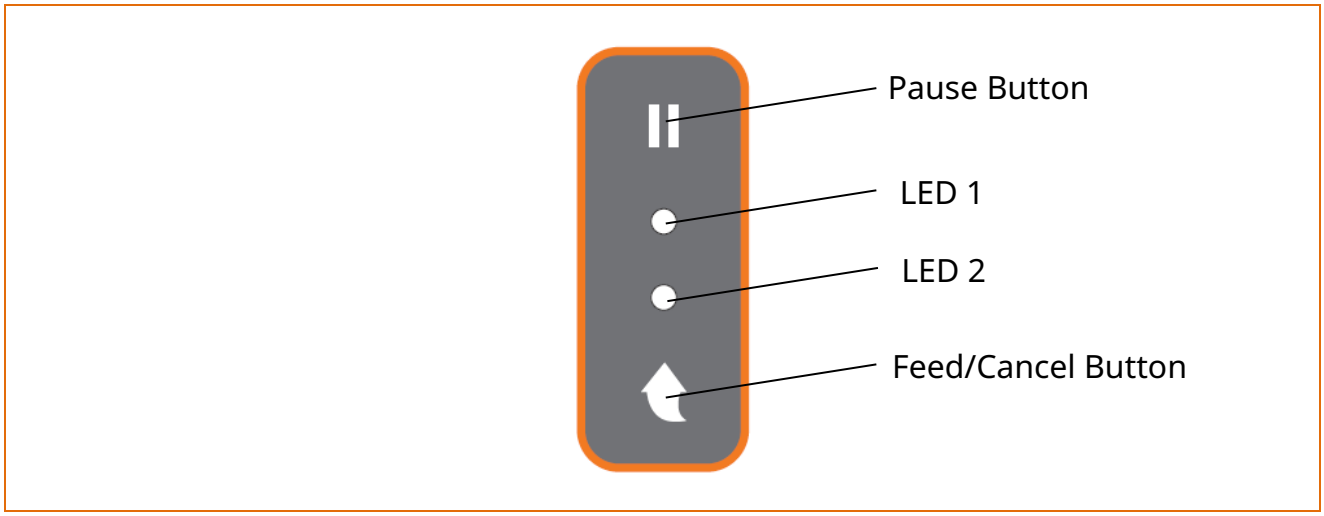


4. Replace the Media supporter included as shown below.



Make sure to turn the printer power off prior to Media Supporter.

3-6 Button & LED (Standard Model)



3-6-1 Button Operations

Printer state before operation	Button		Operation procedure	Printer operation mode
	Feed/ Cancel	Pause		
Power OFF	Press	-	Apply power while pressing the button (Hold the button until the printer starts self-test printing)	Self-test Printing
Print Ready	Press	-	Press the button	Feed
Print Ready	Press	-	Press the button for three seconds	Execute SWC (Refer 5-9)
Print Ready	-	Press	Press the button for two seconds	Stand-alone Configuration Mode (Refer 5-1)
During Printing	-	Press	Press the button for two Seconds	Pause mode
During Printing	Press	-	Press the button for two Seconds	Cancel mode
Pause mode	-	Press	Press the button	Print Resume
Pause mode	Press	-	Press the button	Print Cancel
Cancel mode	Press	-	Press the button	Print Cancel

3-6-2 LED Indicator For Various Printer Statuses

LED 1		LED 2		Printer Operation Status	
Color	Status	Color	Color		
Green	On	Green	On	Print Ready Mode	Ready Mode
Green	On	Red	Blink	Print Cancel Mode	Wait For Button Input
Green	Blink	Red	On	Print Is Paused Temporarily	Wait For Button Input
Green	Blink	Green	Blink	Print Standby Mode	Wait For Button Input
Orange	On	Orange	On	Mode Switching	Mode Switching Notification
Red	On	Orange	On	Error Mode	Media Jam (gap/black mark is not recognized)
Red	On	Green	Blink	Error Mode	Printer Head Overheating
Red	On	Orange	Blink	Error Mode	No Media
Red	On	Red	Blink	Error Mode	Media Cover Open
Red	On	-	Off	Error Mode	Media Calibration Failure
Red	Blink	Red	Blink	Error Mode	Auto-Cutter Error

3-7 Button & LCD (LCD Model)

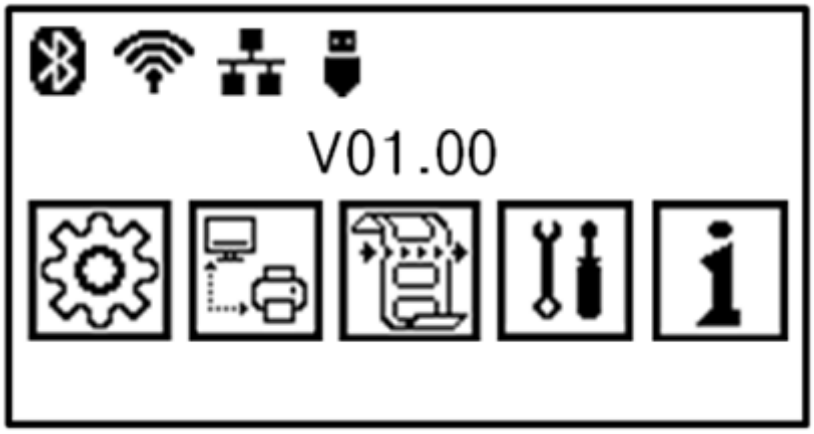


3-7-1 Button Operation

Printer state before operation	Button	Explanation
Print Ready	Menu Move	Move to the next menu (The menu moves from the top left to the bottom right)
Print Ready	Menu Select	Select menu or change value
In Menu or Print Ready	Function Button 1	Pause, Print, Save, Main screen display
In Menu or Print Ready	Function Button 2	Feed, Cancel, Previous screen display

3-7-2 Interface Status Icon

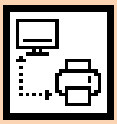
User can check the status and setting information through the LCD.



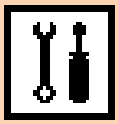
Icon	Explanation
	Bluetooth is not connected to the host
	Bluetooth is connected to the host
	Authentication is failed
	Not connected to AP
	Connected to AP, Strength: 4
	Connected to AP, Strength: 3
	Connected to AP, Strength: 2
	Connected to AP, Strength: 1
	Ethernet is connected
	USB storage is connected

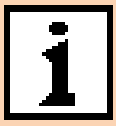
3-7-3 Menu Composition

Setting	Sub menu
	Width (Print Width)
	Length (Print Length)
	Direct (Print Direction)
	Speed (Print Speed)
	Density (Print Density)
	Method (Print Method)
	Type (Media Type)
	Tear off (Tear Off)
	Offset (Print Offset)
	Mode (Print Mode)
	Pwr act (Power Up Action)
	Head cls (Print Head Close)

Interface	Sub menu			
	Serial	Baud Rate		
		Data Bit		
		Parity		
		Stop Bit		
		Handshk (Host Handshake)		
	Ethernet	IP Protocol		
		IP Address		
		Subnet Mask		
		Gateway		
		MAC Address		
	WLAN	Channel		
		Network		
		ESSID (AP ID)		
		Auth (Authentication)		
		Encrypt (Encryption)		
		WEP Password		
		PSK Password		
		IP Protocol		
		IP address		
		Subnet Mask		
		Gateway		
		SWC (Simple Wi-Fi Connect)	Execute SWC	
			Print App URL	
	Bluetooth	Device Name		
		Pairing	Pincode	
			SSP (Secure Simple Pairing)	
		MAC Address		
		Mode	BLE (Bluetooth Low Energy)	
			STD (Standard Mode)	Connect Mode
				Auth&Enc (Authentication & Encryption)

Sensor	Sub menu
	Gap Cal (Gap Calibration)
	Black Mark Cal (Black Mark Calibration)

Tools	Sub menu		
	Self prt (Self-Test)		
	Reset (Factory Reset)		
	Dump (Data Dump Mode)		
	Head Chk (Printer Head Check)		
	USB Num (USB Serial Number)		
	Demo prt (Demo Print)		
	Files	Saved (Saved File)	Template
			Image
			Fonts (Download Fonts)
			E Drive (Flash Memory)
			A Drive (USB Storage)
		Twin (Twin Function)	PRT Set (Printer Setting)
			Template
			Image
			Fonts (Download Fonts)
		F/W Update	

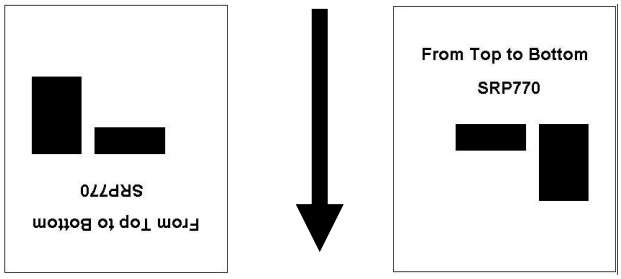
Information	Sub menu
	Info (Printer Info)
	Support

*Available only on the XL5-40CTR model.

RFID	Sub menu	
	Setting (RFID Setting)	Position(Transponder Position)
		Power(Read/Write Power)
		NumRetry(Number of retry)
		NumLabel(Number of label)
	RFID Cal (RFID Calibration)	
	TEST (RFID Test)	Write
		Read
	Info (RFID Information)	Valid Count
		Void Count

3-7-4 Setting Menu Explanation

Menu	Explanation
Width **(Print Width)**	**Explanation** Setting print width[dots] Function to adjust image buffer size according to print width **Default Value** - 203dpi: 864 dots (108mm) - 300dpi: 1,248 dots (105.7mm) **Maximum Value** - 203dpi: 864 dots (108mm) - 300dpi: 1,248 dots (105.7mm)
Length **(Print Length)**	**Explanation** Setting print length[dots] Function to adjust image buffer size according to print length **Default Value** 203dpi: 1,225 dots (153mm) 300dpi: 1,811 dots (153mm) **Maximum Value** - 203dpi: 8,000 dots (1,000mm) - 300dpi: 11,820 dots (1,000mm)

Direct **(Print Direction)**	**Explanation** Setting print direction Top to bottom: Printing from top to bottom Bottom to Top: Printing from bottom to top **Default Value** Bottom to Top **Variable Value** Bottom to Top, Top to Bottom Printing Direction  Top to bottom Bottom to top
Speed **(Print Speed)**	**Explanation** Setting print speed[ips] **Default Value** 203dpi: 5ips 300dpi: 4ips **Variable Value** - 203dpi: 3~6ips - 300dpi: 2~5ips
Density **(Print Density)**	**Explanation** Setting print density **Default Value** 203dpi: 20 300dpi: 20 **Variable Value** 0~30

Method **(Print Method)**	**Explanation** Setting print method * This function is not supported in this model. **Default Value** Direct (Direct Thermal) **Variable Value** Direct (Direct Thermal)
Type **(Media Type)**	**Explanation** Setting media type **Default Value** Continuous **Variable Value** - Gap - Black Mark - Continuous
Tear off	**Explanation** Setting media position[dots] for tear off after printing or feed **Default Value** 0 **Variable Value** -100 ~ 100
Offset **(Print Offset)**	**Explanation** Setting top print position[dots] **Default Value** 0 **Variable Value** -100 ~ 100

Mode **(Print Mode)**	**Explanation** Setting print mode suitable to the printer option * This function is not supported in this model. **Default Value** Cutter **Variable Value** Cutter
Pwr act **(Power Up Action)**	**Explanation** Setting the action for the printer after the power-up sequence. **Default Value** NO FEED **Variable Value** NO FEED, FEED, CAL LENGTH (Media Calibration), LABEL LENGTH (Setting Media Length)
Head cls **(Print Head Close)**	**Explanation** Setting the action for the printer when you close the printer cover. **Default Value** STANDBY **Variable Value** STANDBY, NO FEED, FEED, CAL LENGTH (Media Calibration), LABEL LENGTH (Setting Media Length)

3-7-5 Interface Menu Explanation

3-7-5-1 Serial

List	Explanation
Baud Rate	**Explanation** Setting the baud rate **Default Value** 115200 **Variable Value** 9600, 19200, 38400, 57600, 115200
Data Bit	**Explanation** Setting the data bit **Default Value** 8 **Variable Value** 7, 8
Parity	**Explanation** Setting the parity **Default Value** None **Variable Value** Even, Odd, None
Stop Bit	**Explanation** Setting the stop bit **Default Value** 1BIT **Variable Value** 1BIT, 2BIT
Handshk (Handshake)	**Explanation** Setting the handshake **Default Value** RTS_CTS **Variable Value** RTS_CTS, DTR_DSR, XON_XOFF

3-7-5-2 Ethernet

List	Explanation
IP Protocol	**Explanation** Setting IP assignment method **Default Value** DHCP **Variable Value** DHCP, Static IP
IP Address	**Explanation** Setting IP Address **Default Value** Static IP: 192.168.192.123 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255
Subnet Mask	**Explanation** Setting subnet mask **Default Value** Static IP: 255.255.255.0 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255
Gateway	**Explanation** Setting gateway **Default Value** Static IP: 192.168.192.254 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255
MAC Address	**Explanation** Indicating MAC address

3-7-5-3 WLAN

List	Explanation
Channel	**Explanation** Setting channel when creating Adhoc network **Default Value** 6 **Variable Value** 1 ~ 14
Network	**Explanation** Setting WLAN operation mode **Default Value** SoftAP **Variable Value** SoftAP, Infra(Infra structure), Adhoc, P2P
ESSID (AP ID)	**Explanation** Setting the ID of AP to be accessed
Auth (Authentication)	**Explanation** Setting WLAN authentication method **Default Value** Open **Variable Value** Open, Shared Key, WPA1PSK, WPA2PSK, WPA1EAP, WPA2EAP
Encrypt (Encryption)	**Explanation** Setting WLAN encryption method **Default Value** None **Variable Value** None, WEP64/128, TKIP, AES, AES+TKIP
WEP Password	**Explanation** Setting WEP password
PSK Password	**Explanation** Setting PSK password
IP Protocol	**Explanation** Setting IP assignment method **Default Value** DHCP

	Variable Value DHCP, Static IP	
IP address	**Explanation** Setting IP address **Default Value** Static IP: 192.168.1.1 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255	
Subnet Mask	**Explanation** Setting subnet mask **Default Value** Static IP: 255.255.255.0 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255	
Gateway	**Explanation** Setting gateway **Default Value** Static IP: 192.168.1.254 DHCP: 0.0.0.0 **Variable Value** 0 ~ 255	
SWC	**Execute SWC**	**Explanation** Connecting printers to network environments using SWC(Simple Wi-Fi Connect) mode
	Print App URL	**Explanation** Site linking(QR code) for SWC technical support

3-7-5-4 Bluetooth

List			Explanation
Device Name			**Explanation** Name of Device
Pairing	Pincode		**Explanation** Changes required pin code to connect
	SSP (Secure simple pairing)		**Explanation** Secure simple pairing **Default Value** Disable **Variable Value** Disable, Just Works, Numeric Comparison, Passkey Entry
MAC Address			**Explanation** Bluetooth device MAC address
Mode	BLE (Bluetooth Low Energy)		**Explanation** Bluetooth Low Energy **Default Value** Disable **Variable Value** Disable, Enable
	STD (Standard Mode)	Connect Mode	**Explanation** Setting Bluetooth connection mode **Default Value** Mode2 **Variable Value** Mode1, Mode2, Mode3
		Auth&Enc (Authentication &Encryption)	**Explanation** Setting Bluetooth authentication and encryption function **Default Value** Enable **Variable Value** Enable, Disable

3-7-6 Sensor Menu Explanation

List	Explanation
Gap Cal (Gap Calibration)	**Explanation** Detect media gap automatically.
Black Mark Cal (Black Mark Calibration)	**Explanation** Detect media black mark automatically.

3-7-7 Tools Menu Explanation

<table>
<tr><th>List</th><th colspan="3">Explanation</th></tr>
<tr><td>Self prt
(Print Self-Test)</td><td colspan="3">Explanation
Prints for self-test</td></tr>
<tr><td>Reset
(Factory Reset)</td><td colspan="3">Explanation
Initializes the printer settings to factory default</td></tr>
<tr><td>Dump
(Data Dump Mode)</td><td colspan="3">Explanation
The received data check when the printer does not work properly.
Default Value
Disable
Variable Value
Disable, Enable</td></tr>
<tr><td>Head Chk
(Print Head Check)</td><td colspan="3">Explanation
Dot-out check of head through printing</td></tr>
<tr><td>USB Num
(USB Serial Number)</td><td colspan="3">Explanation
Checks USB serial number</td></tr>
<tr><td>Demo prt
(Demo Print)</td><td colspan="3">Explanation
Demo format printing function</td></tr>
<tr><td rowspan="10">Files</td><td rowspan="5">Saved
(Saved File)</td><td>Template</td><td rowspan="5">Refer
3-7-7-1 Saved File</td></tr>
<tr><td>Image</td></tr>
<tr><td>Fonts (Download Fonts)</td></tr>
<tr><td>E Drive (Flash Memory)</td></tr>
<tr><td>A Drive (USB Storage)</td></tr>
<tr><td rowspan="4">Twin
(Twin Function)</td><td>PRT Set (Printer Setting)</td><td rowspan="4">Refer
3-7-7-2 Twin Function</td></tr>
<tr><td>Template</td></tr>
<tr><td>Image</td></tr>
<tr><td>Fonts (Download Fonts)</td></tr>
<tr><td colspan="2">F/W Update</td><td>Refer
3-7-7-3 F/W Update</td></tr>
</table>

3-7-7-1 Saved File

Displays the list of object files stored in the printer.

List	Explanation
Template	Template list stored in the printer
Image	Image list stored in the printer (*.pcx)
Fonts (Download Fonts)	Download font list stored in the printer
E Drive (Flash memory)	Saved object files in E drive
A Drive (USB storage)	Saved object files in A drive

3-7-7-2 Twin Function

Saves the current printer settings, save files (templates, images, download fonts) to another printer using USB, or loads the settings of another printer.

List	Explanation
PRT Set (Printer Setting)	**Explanation** Save printer settings to a USB storage device, or load the print settings from USB storage. **File path** F:\configuration **• Save Function Explanation** - Connect a USB storage to the printer. - Select Save on the menu using the move button() and select button(). - The printer_config file is created in the configuration folder of USB storage device. (The configuration folder is automatically created) **• Load Function Explanation** - Check whether the printer_config file exists in the configuration folder of the USB storage device. - Connect the USB storage to the printer. - Select Load on the menu using the move button() and select button(). - Loading message(Loading...) is displayed while loading, and when loading is completed, USB loading completion(Load Ok) message is displayed. - Check the changes of the printer's settings.

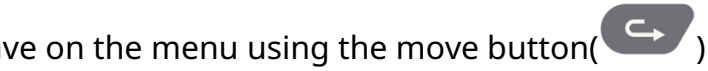
Template	**Explanation** Save template files to a USB storage device, or load the templates from USB storage. **File path** F:\ USER_AREA_TEMPLATES • **Save Function Explanation** - Connect a USB storage to the printer. - Select Save on the menu using the move button() and select button(). - Template files are stored in the USER_AREA_TEMPLATES folder of USB storage device. (USER_AREA_TEMPLATES folder is automatically created) • **Load Function Explanation** - Check whether a template files exist in the USER_AREA_TEMPLATES folder of the USB storage device. - Connect the USB storage to the printer. - Select Load on the menu using the move button() and select button(). - Loading message(Loading...) is displayed while loading, and when loading is completed, USB loading completion (Load Ok) message is displayed. - Go to Save File menu then, check the template files are saved to the printer.

Image	**Explanation** Save image files to a USB storage device, or load the images from USB storage (*.pcx) **File path** F:\ USER_AREA_PCXImages **• Save Function Explanation** - Connect a USB storage to the printer. - Select Save on the menu using the move button() and select button(). - Image files are stored in the USER_AREA_PCXImages folder of USB storage device. (USER_AREA_PCXImages folder is automatically created) **• Load Function Explanation** - Check whether the image files exist in the USER_AREA_PCXImages folder of the USB storage device. - Connect the USB storage to the printer. - Select Load on the menu using the move button() and select button(). - Loading message(Loading...) is displayed while loading, and when loading is completed, USB loading completion (Load Ok) message is displayed. - Go to Save File menu then, check the image files are saved to the printer.

Fonts (Download Fonts)	**Explanation** Save download font files to a USB storage device, or load the download font from USB storage. **File path** F:\ USER_AREA_FONTS **• Save Function Explanation** - Connect a USB storage to the printer. - Select Save on the menu using the move button() and select button(). - Download Font files are stored in the USER_AREA_FONTS folder of USB storage device. (USER_AREA_FONTS folder is automatically created) **• Load Function Explanation** - Check if the downloaded font files exist in the USER_AREA_FONTS folder of the USB storage device. - Connect the USB storage to the printer. - Select Load on the menu using the move button() and select button(). - Loading message(Loading...) is displayed while loading, and when loading is completed, USB loading completion (Load Ok) message is displayed. - Go to Save File menu then, check the download font files are saved to the printer.

3-7-7-3 F/W Update

Firmware can be updated through USB storage.

F/W Update	**Explanation** Printer firmware update available using the USB storage directly without any communication. **File path** F:\ FW_DOWNLOAD **File name** "XL5-4xCT_Vxx.xx_STD_mmddyy.fls" in F:\ FW_DOWNLOAD folder. (203dpi : x is 0 / 300dpi : x is 3) **• Download process explanation** - Check firmware file(*.fls) is in FW_ DOWNLOAD folder of USB storage. - Connect USB storage to the printer. - Select "F/W Update" from the "Files" menu. - Select "Start" from the "F/W Update" menu using the function button 1 (). - If message "F/W Update" is displayed, the firmware download has started normally. - After firmware update complete successfully, printer will be rebooted automatically.

3-7-8 Information Menu Explanation

List	Explanation
Info	**Explanation** Checking the printer information
Support	**Explanation** Site linking(QR code) for technical support.

3-7-9 RFID Menu Explanation

List		Explanation
Setting	**Position (Transponder Position)**	**Explanation** RFID transponder position can be set to match RFID label characteristics. **Default Value** 0(dot) **Default Value** -300 ~ +8000 (203dpi) -450 ~ +12000 (300dpi)
	Power (Read/Write Power)	**Explanation** Read/Write transceiver power of RFID module. **Default Value** 15(*10dbm) **Default Value** 0 ~ 30
	NumRetry (Number of retry)	**Explanation** Set the number of retries when RFID coding fails. **Default Value** 3 **Default Value** 0 ~ 10
	NumLabel (Number of label)	**Explanation** Set the number of retry labels when RFID coding fails **Default Value** 2

		Default Value 0 ~ 10
RFID Cal **(RFID Calibration)**		**Explanation** Automatically calibrate transponder position and transceiver power of RFID labels
TEST **(RFID TEST)**		**Explanation** RFID write and read test function with transponder position and power set value
Info **(RFID Information)**		**Explanation** Check or reset saved RFID void/valid value.

4. Self-test

• This function is supported on standard model(without LCD) only.

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

The self-test checks the following;

1) Make sure that the media 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, 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

• This function is supported on standard model (without LCD) only.

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

1) The Pause button( ) is pressed for two seconds while in Print Ready Mode.

2) Both LEDs will change to orange color, then release the Pause button( )
The printer will be set to Stand-alone configuration mode.

3) When the printer enters into this mode, the status of LED 1 and LED 2 are changed sequentially.

4) When the Feed/Cancel button( ) is pressed at specific LED color combination, the corresponding printer operation will be executed.

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

Sequence Number	LED 1		LED 2		Printer Operation
	Color	Status	Color	Status	
1	Green	On	Green	Blink4 times	Self-Test
2			Orange	Blink4 times	Factory Reset & Gap Calibration
3			Red	Blink4 times	Factory Reset & Black Mark Calibration
4	Orange	On	Green	Blink4 times	Factory Reset & Continuous Mode
5			Orange	Blink4 times	Data Dump Mode
6			Red	Blink4 times	Demo Mode
7	Red	On	Green	Blink4 times	Print File List
8			Orange	Blink4 times	Delete Downloaded Items
9			Red	Blink4 times	Reserved

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

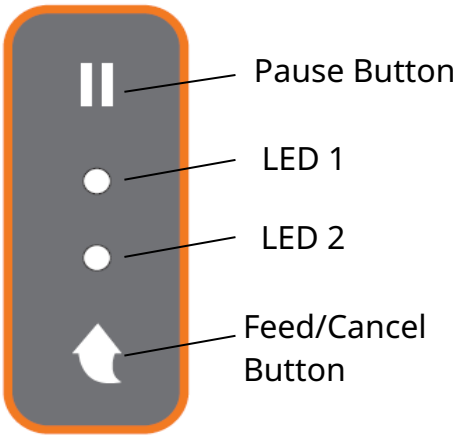
Contact the customer center if the printer does not enter stand-alone configuration mode.

5-2 Pause/Cancel

• During multiple-page print jobs, the Pause( ), Feed/Cancel button( ), Function button 1( ) and Function button 2( ) can be used to pause printing and cancel the print job altogether, respectively.

5-2-1 Pause/Resume Function

1) Standard Model

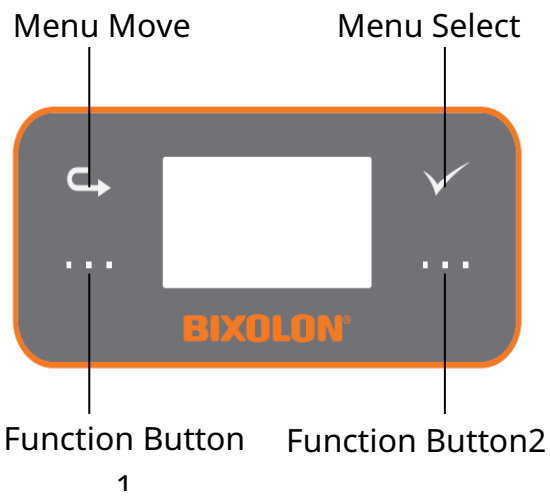


1) When printing, press the Pause button ( )

2) The printer will pause after finishing the current media printing and the status of LED will be as follows.
- LED 1: Green Blink
- LED 2: Red On

3) While the print job is paused, press the Pause button ( ) again to resume printing.

2) LCD Model



1) When printing, press the Function button 1( ).

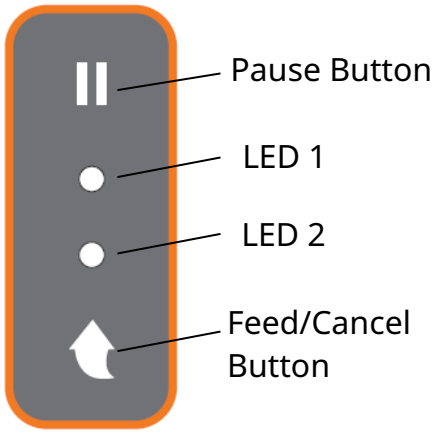
2) The printer will pause after finishing the current media printing and the status of LCD will be as follows.
- LCD Display: PAUSE

3) While the print job is paused, press the Function button 1( ) again to resume printing.

5-2-2 Print Cancellation

• 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.

1) Standard Model

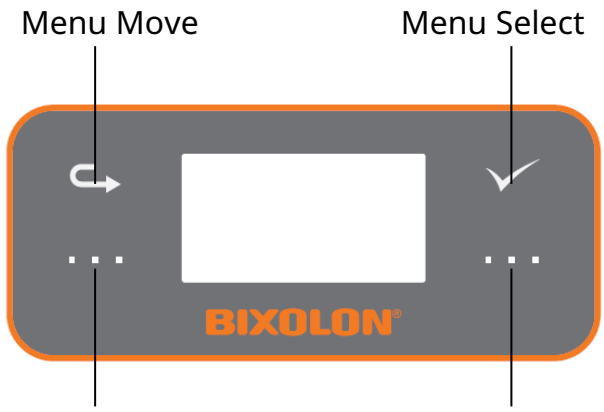


1) During printing and/or pause mode, press the Feed/Cancel button ( ) enters the print cancellation mode.

2) The LED Status in the print cancellation mode can be as follows.
- LED 1: Green On
- LED 2: Red Blink

3) While in the print cancellation mode, press the Feed/Cancel button ( ) again to return to print ready mode.

2) LCD Model



1) During printing and/or pause mode, press the Function button 2( ) enters the print cancellation mode.

2) The LCD Status in the print cancellation mode can be as follows.
- LCD Display: Press Cancel

3) While in the print cancellation mode, press the Function button 2( ) again to return to print ready mode.

Contact the authorized dealer if the printer does not execute pause/resume function.

5-3 Gap Sensor Auto Calibration Mode

• Gap sensor auto calibration mode is used when the printer does not detect a gap on the 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 has been installed properly.

(1) Standard Model

Using stand-alone configuration mode, press the Feed/Cancel button( ) at sequence number 2 gap sensor auto calibration mode (refer to 5-1).

(2) LCD Model

In print ready mode the setting menu and move to Sensor →Gap Cal(Gap Calibration) and press Function button 1( ) to process gap sensor auto calibration

* Please refer Tools Menu Explanation (3-6) for more information.

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

5-4 B/M Sensor Auto Calibration Mode

• Black mark sensor auto calibration mode is used when the printer does not detect a black mark on the 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 has been installed properly.

(1) Standard Model

Using stand-alone configuration mode, press the Feed/Cancel button( ) at sequence number 3 black mark sensor auto calibration (refer to 5-1).

(2) LCD Model

In print ready mode the setting menu and move to Sensor → Black Mark Cal(Black Mark Calibration) and press Function button 1( ) to process black mark sensor auto calibration

* Please refer Tools Menu Explanation (3-6) for more information

Contact the customer center if the printer does not execute black mark sensor auto calibration mode function.

5-5 Continuous Mode Setting

• Continuous mode setting is used when user wants to change printer to continuous mode.

XL5 Series are designed for continuous media, printing and cutting as default media length(6inch).

1) Make sure that media has been installed properly.

(1) Standard Model

Using stand-alone configuration mode, press the Feed/Cancel button( ) at sequence number 4 continuous mode setting (refer to 5-1).

(2) LCD Model

In print ready mode the setting menu and move to Setting →Type →Continuous and press Function button 1( ) to process continuous mode setting.

* Please refer Tools Menu Explanation (3-6) for more information.

Contact the authorized dealer if the printer does not execute Continuous mode function.

5-6 RFID Auto Calibration Mode

• This process must be repeated each time a different RFID label type is used.

RFID coding does not work properly due to improper position setting of the RFID transponder (coding). In such case, use RFID auto calibration mode function for a proper detection.

1) Make sure that media roll has been installed properly.

2) In print ready mode the setting menu and move to RFID → RFID Cal(RFID Calibration) and press Function button 1() to process RFID auto calibration

* Please refer Tools Menu Explanation (3-7) for more information.

Contact the customer center if the printer does not execute RFID auto calibration mode function.

5-7 Media Sensor Manual-Calibration

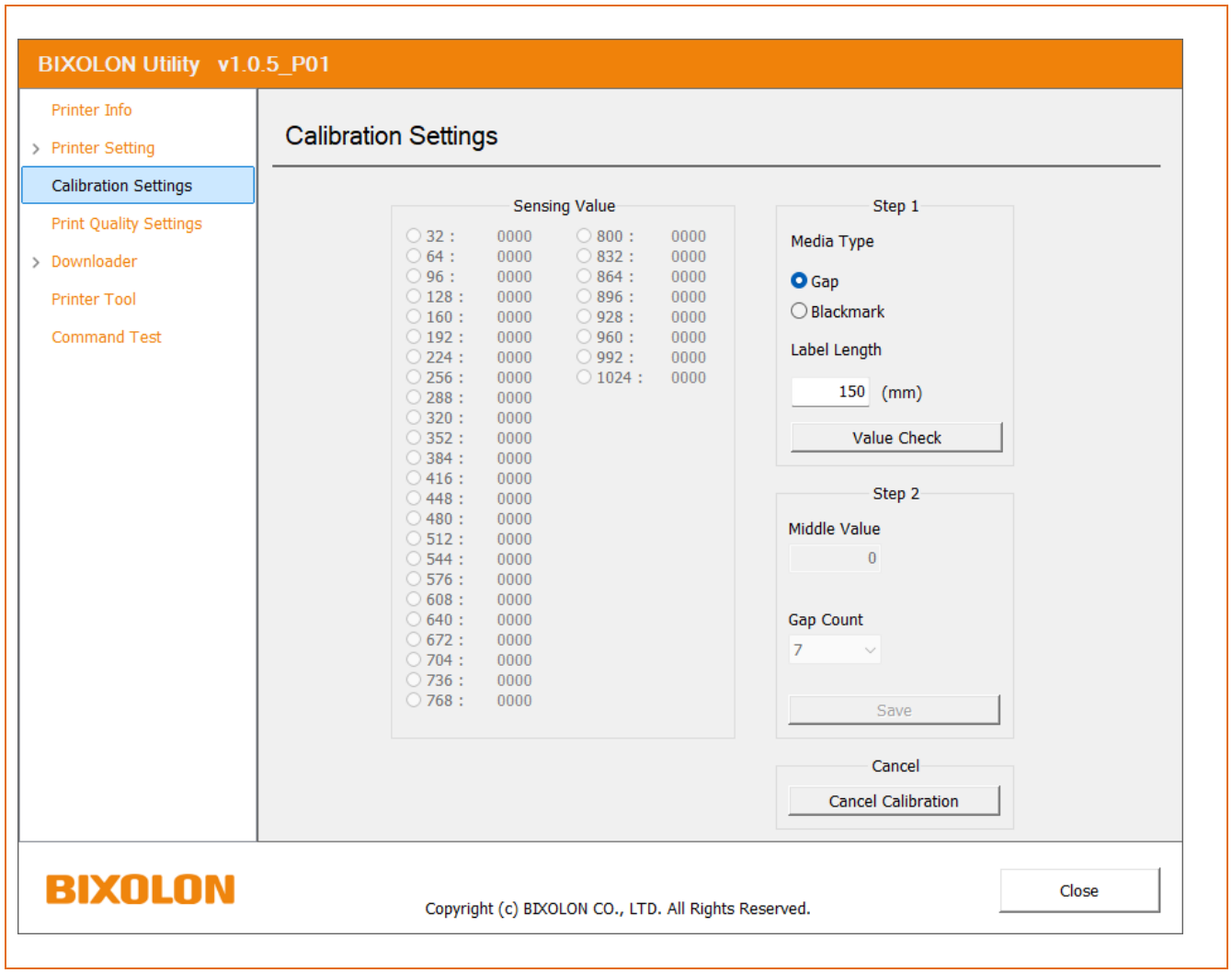
• Manual-calibration of media detection can be used when the printer cannot detect a media gap (or black mark) even after auto-calibration has been executed.

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

The BIXOLON Utility can be downloaded from the BIXOLON website.
(http://www.bixolon.com)

Users can calibrate printer to detect gap (or black mark) manually by using the BIXOLON Utility. For More information, please refer BIXOLON Utility manual.

Please make sure the printer is connected and execute the BIXOLON Utility program. Please the “Calibration Setting” Button after setting the interface type.



1) Select the sensing type and input the label length by millimeter and click “Check Sensing Value” button. Then printer starts calibration.

2) Once the calibration is done, scanned values will appear on the screen after calibration.

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”

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

5-8 Data Dump Mode

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

In this mode, the received data are not analyzed and printed, instead they are dumped in hex format without processing.

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

1) Standard Model

Using stand-alone configuration mode, press the Feed/Cancel button () at sequence number 5 data dump mode (refer to 5-1).

2) LCD Model

In print ready mode the setting menu and move to Tools → Dump → Dump Enable and press Function button 1() to run dump mode

* Please refer Tools Menu Explanation (3-6) for more information.



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

5-9 Factory Reset

• This function is used to factory reset the printer settings.

1) Make sure that media roll has been installed properly.

(1) Standard Model

Use Auto Calibration Mode(depends on the media type) for Factory Reset.

* Please refer Tools Menu Explanation (5-1) for more information.
* The printer will be rebooted automatically.

(2) LCD Model

In print ready mode the setting menu and move to Tools → Reset and press Function button 1( ) to reset the printer to Factory default.

* Please refer Tools Menu Explanation (3-6) for more information.
* The printer will be rebooted automatically.

Contact the customer center if the printer does not enter factory reset function.

5-10 SWC (Simple Wi-Fi Connect)

• Connect the printer to a network using SWC(Simple Wi-Fi Connect) mode.
** blink rate of “Pulse” is slower than blink rate of “Flash”

• Make sure that media roll has been installed properly.

1) Standard Model

(1) Press the Feed/Cancel button() for more than 3 seconds to enter SWC(Simple Wi-Fi Connect) Mode

(2) The LED status in the SWC mode ready can be as follows.
- LED 1: Green On
- LED 2: Red Blink(pulse)

(3) Printer’s LED1 Green pulse indicates that the printer is in SWC Mode. you can set network through Host Devices.
- LED 1: Green Blink(Flash → pulse)
- LED 2: Green On

(4) Once the network is not set correctly, LED1 will flash Orange, and try entering SWC Mode again.
- LED 1: Orange Blink(pulse)
- LED 2: Green On

2) LCD Model

(1) Enter SWC(Simple Wi-fi Connect) Mode using buttons. Print ready

Interface → WLAN → SWC → Execute SWC and press Function 1 button()

(2) Printer’s LCD Display “SWC Mode” indicates that the printer is in SWC Mode. You can set network through Host Devices
- LCD Display: ”Preparing...” → ”SWC Mode”

(3) Once the network is not set correctly, LCD will Display Error Message, and try entering SWC Mode again.
- LCD Display: ”Password Error Return to SWC mode”

5-11 Print Standby Mode

5-11-1 About Print Standby Mode

The printed area may become out of range of media if the media is not in the accurate printing position when the cover is opened and closed.
The printer is put into print standby mode instead of print ready mode when the cover is closed in order to prevent this problem, and it waits for additional user input.

1) Standard Model
The LED status in the print standby mode can be as follows.
- LED 1: Green Blink
- LED 2: Green Blink

2) LCD Model
The LCD status in the print standby mode can be as follows.
- LCD Display: STANDBY

The data received during print standby mode will be printed after the printer recovers to print-ready mode.

5-11-2 How to switch the printer from Print Standby Mode to Print Ready Mode

1) Standard Model
- Press the Pause button () to switch to print ready mode without feeding any media.
- Press the Feed/Cancel button () to feed one page to align the media position and switch to the print ready mode.

2) LCD Model
- Press Function button 1() to switch to print ready mode without feeding any media.
- Press Function button 2() to feed one page to align the media position and switch to the print ready mode.

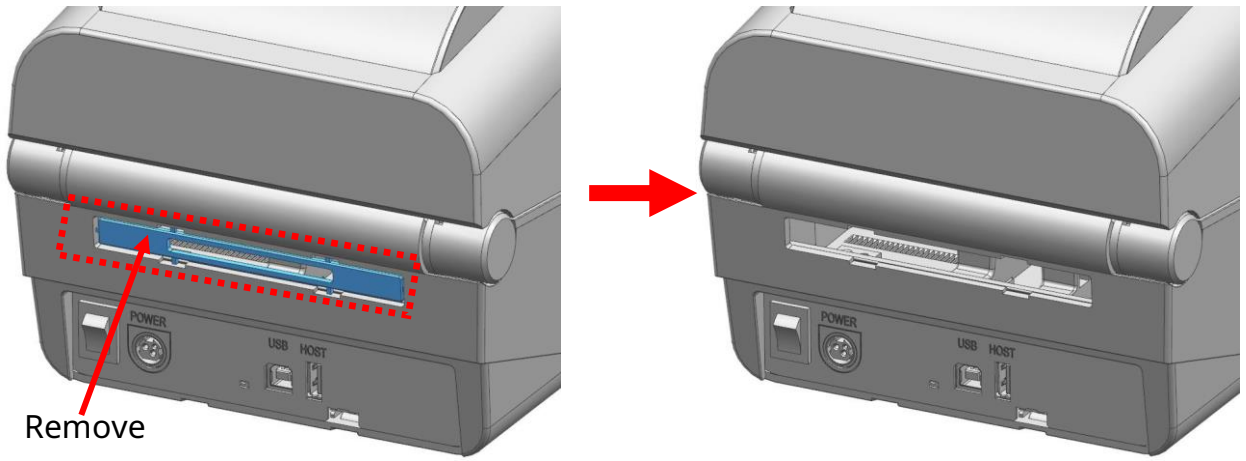


Contact the customer center if the printer does not execute print standby mode function.

5-12 Using Fan-Fold or External Media

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

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

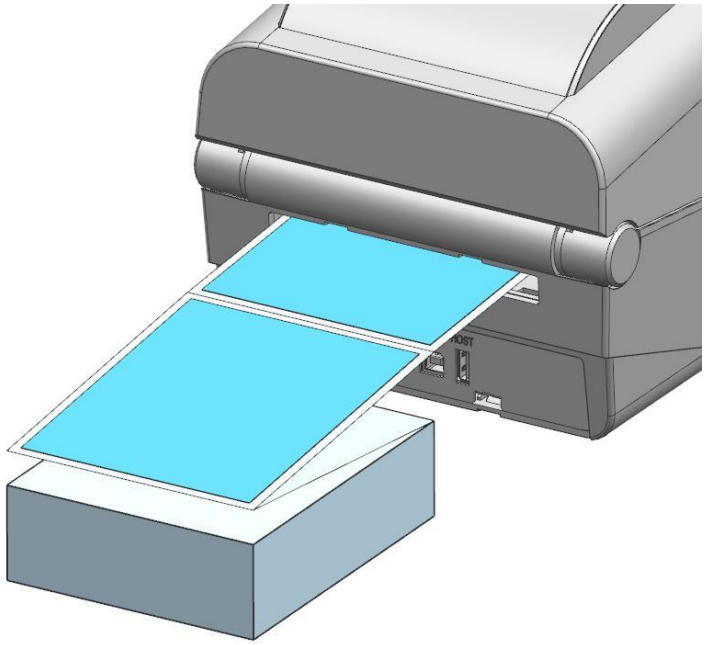


Take care not to injure the hands and/or any other part of the body when performing this step

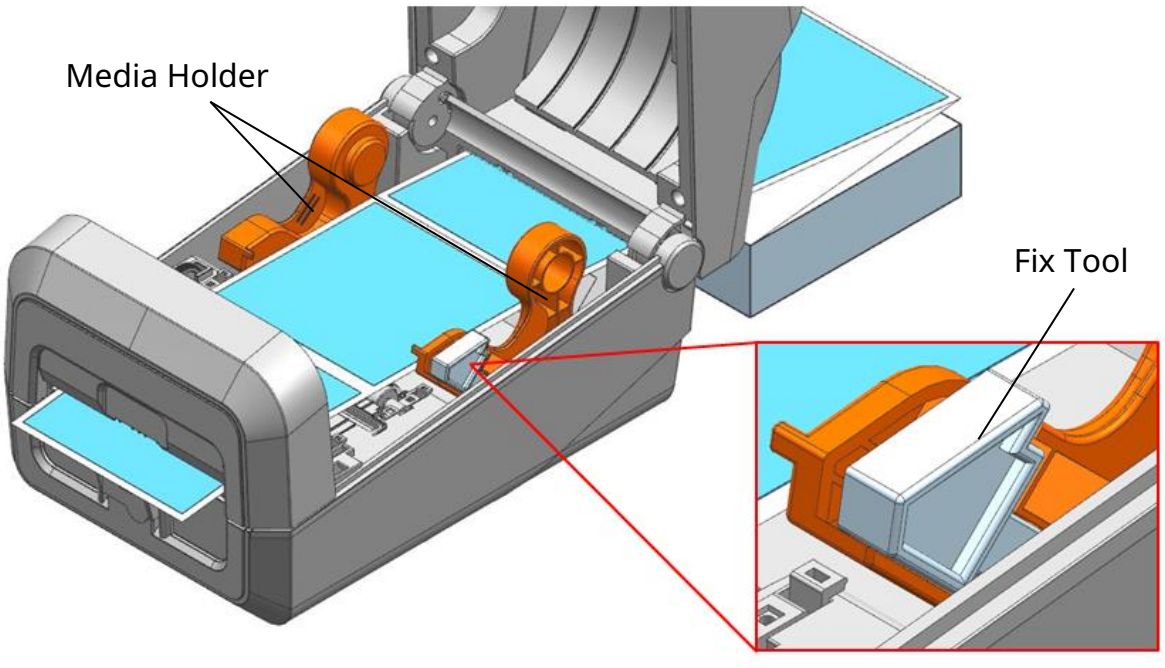
5-12-1 When using Fan-Fold media

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

1) Insert the media to at the rear of the printer as shown below.

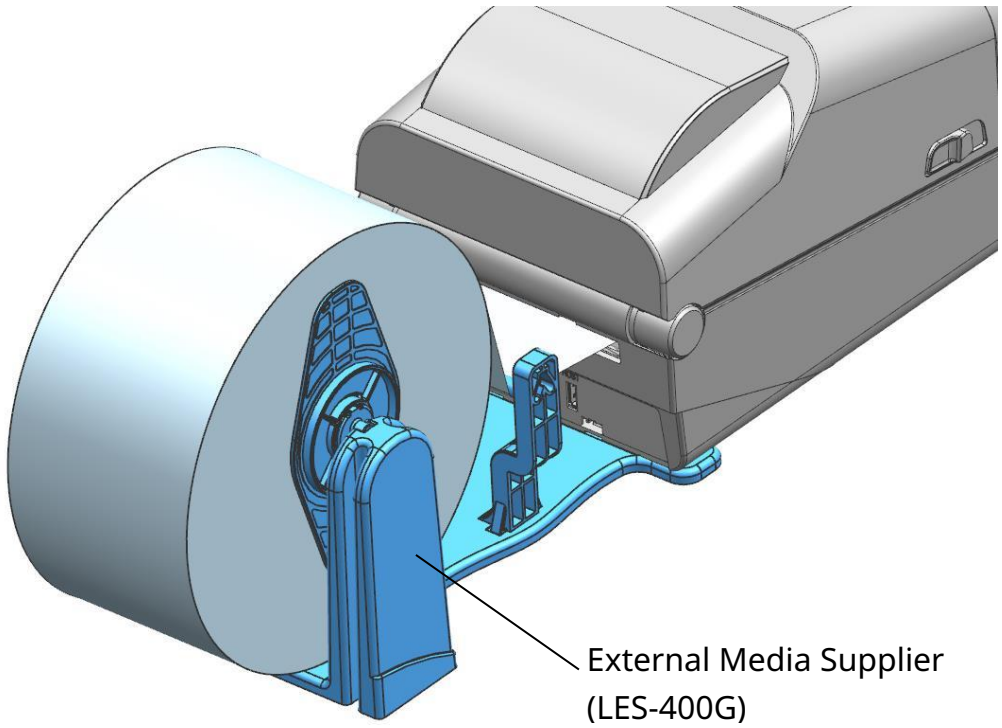


2) Adjust media holders to the media width by using the fix tool.



5-12-2 When using Large media roll (Option)

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



- 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.
- Be aware of physical damage caused by external media when Operating the printer

6. Printer Maintenance

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

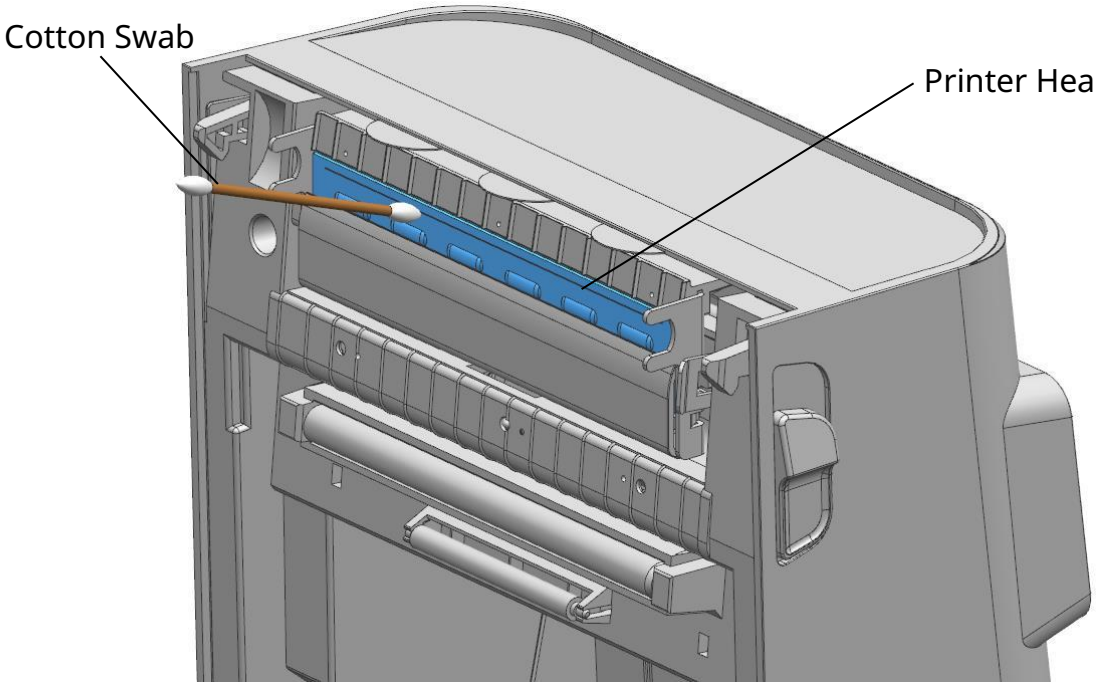
When dirty, clean the print head as follows

6-1 Cleaning Printer Head

• Be sure to turn the printer off.

1) Open the media cover and then remove adhesive foreign substances or other pollution materials with 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)



Perform the cleaning process each time the media roll is replaced to prevent print quality deterioration.

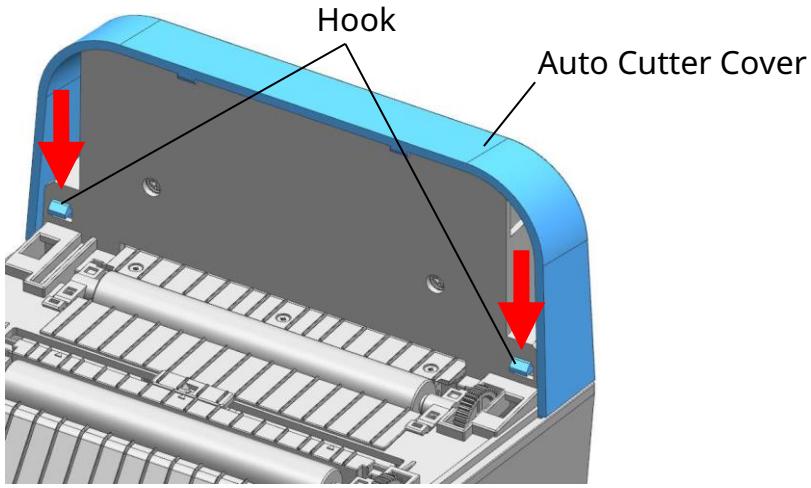
- Be sure to clean after turning the printer off.
- Be careful not to leave scratches in the print head.
  The printer may be damaged.
- The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.
- Do not touch heated area of print–head when cleaning.
  Personal injury may result from static electricity, etc.

6-2 Cleaning Auto Cutter

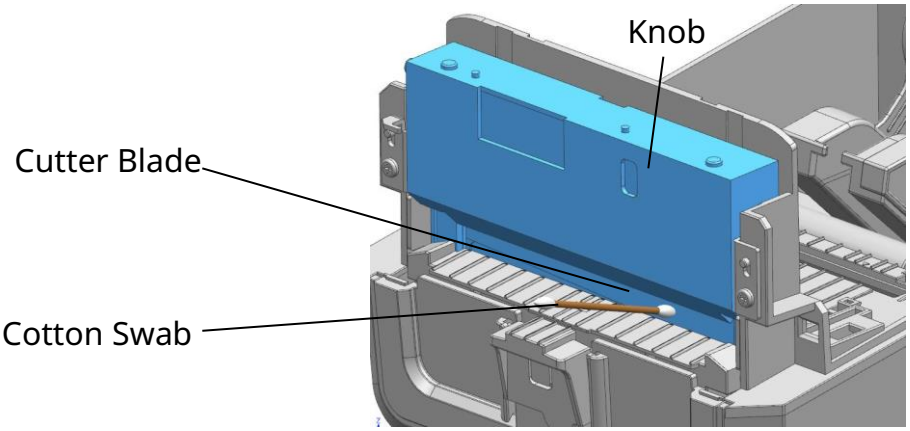
• Be sure to turn the printer off.

1) Open the media cover and remove the media.

2) Remove the auto cutter cover by pressing the hooks on both sides as shown below.



3) After exposing the cutter blade completely by rotating the knob, remove dust or foreign substances using a cotton swab dipped in medical alcohol solution.



4) After the cleaning is complete, wait 1~2 minutes the alcohol of printer to evaporate completely, then reassemble the auto cutter cover in reverse process.

- Be sure to clean after turning the printer off.
- Be careful not to scratch the cutter blade.
  The printer may be damaged.
- Do not touch cutter blade of auto cutter when cleaning.
  This can cause serious bodily injury.

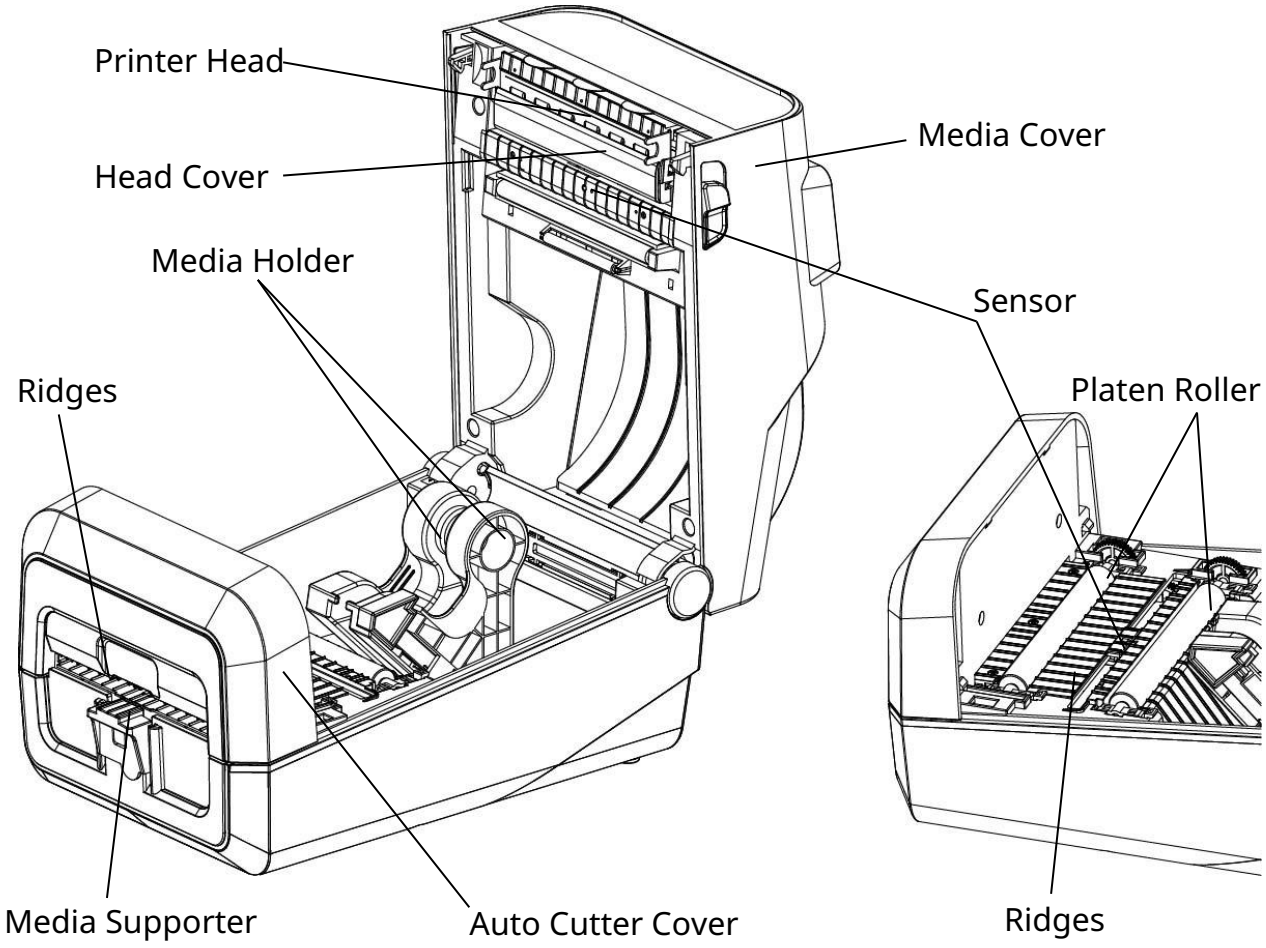
6-3 Cleaning Sensors, Roller or/and media Path

• Be sure to turn the printer off.

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.



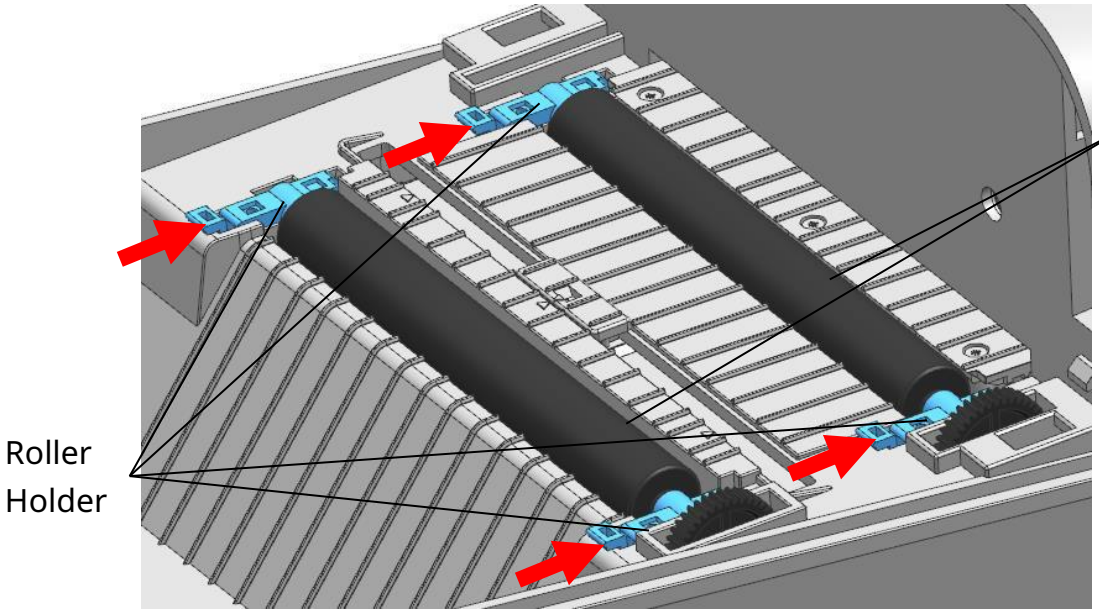
- Clean the parts when there is a degradation of performance in printing quality or media detection.
- After cleaning the parts, do not use the printer until the alcohol evaporates completely (1~2 min) and the printer has completely dried.
- Be sure to use medical alcohol only. If not, it may cause printer damage.

6-4 Replacing Roller

• Be sure to turn the printer off.

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. Specifications

7-1 Printer Specifications

Item		Description
Printer	Printing Method	Direct Thermal Printing
	Dot Density	XL5-40CT : 203 dpi (8 dot/mm) XL5-43CT : 300 dpi (11.8 dot/mm)
	Printing Width	XL5-40CT : Max. 108 mm (Max. 4.25”) XL5-43CT : Max. 105.7 mm (Max. 4.16”)
	Printing Speed	XL5-40CT : Max. 152 mm/sec (Max. 6ips) XL5-43CT : Max. 127 mm/sec (Max. 5ips)
	Printing Length	30 ~ 1,000mm
RFID	Frequency	Min. 860MHz ~ Max. 960MHz - KC(KOREA): 917MHz~923.5MHz - FCC(USA): 902MHz~928MHz - CE(EUROPE): 865MHz~868MHz
	Protocol	ISO 18000-6C / EPC Gen2
Media	Roll Width	20 ~ 114 mm (0.79 ~ 4.49”)
	Roll	Max. 127 mm (Max. 5”)
	Core	38.1 mm (1.5”)-recommended, 25.4mm(1”)
	Thickness	0.09 ~ 0.20mm
AC Adapter	SMPS Input Voltage	AC 100 – 240V
	Frequency	50/60 Hz
	SMPS Output Voltage	DC 24V ±5%
	SMPS Output Current	2.5A
Usage Conditions	Temperature	0 ~ 40 ℃ (Operating) -20 ~ 60 ℃ (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 Label Types Specification

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

Revision History

Ver.	Date	Description
2.00	10-27-2026	New