

# User's Manual XD5-40t Series

# THERMAL TRANSFER LABEL PRINTER Ver. 1.00



http://www.bixolon.com

# Introduction

XD5-40t series printers have been designed to be connected to various types of electronic devices such as computer peripheral devices.

#### <u>\* The main features of the printer are as follows</u>

- 1. XD5-40t : Maximum 152mm/s(Max 6ips) printing speed XD5-43t : Maximum 102mm/s(Max 4ips) printing speed
- 2. 4inch THERMAL TRANSFER LABEL PRINTER
- 3. 211 x 285 x 188 (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 : Peeler, Auto Cutter
- 8. Option : LCD

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

#### **W** Use only authorized supplies that can be trusted!

- We are not responsible for quality and service for damage caused by the use of unauthorized products (or recycled ones).

# **Safety Information**

Marning: Warnings must be heeded carefully in order to prevent serious physical harm.

A Caution: Cautions must be heeded in order to prevent minor injuries, equipment damage, or data loss.

# **Symbol Information**

	DC (Direct current)
Ň	Warning, Caution
	USB
융	Ethernet

# **Table of Contents**

1. Content Confirmation	. 9
2. Product Part Names	10
3. Installation & Usage	
3-1 Printer Installation Placings	
3-2 Power Connection	
3-3 Interface	-
3-3-1 Standard Interface (USB & USB HOST)	
3-3-2 Optional Interface (USB & USB HOST & Serial & Ethernet)	
3-4 Media Installation	18
3-5 Ribbon Installation	
3-5-1 Type of Ribbon	
3-5-2 Inserting a 1 Inch Core Ribbon	
3-5-3 Inserting a 0.5 Inch Core Ribbon	
3-5-4 Knob Adjust Method According to Ribbon Type	22
3-5-5 Narrow Ribbon Installation	
3-5-6 Ribbon Removal	
3-5-7 Ribbon Sensor Activation	
3-6 How to Use the Ribbon Guide	
3-7 Button & LED (Standard Model)	
3-7-1 Button Operations	
3-7-2 LED Indicator For Various Printer Statuses	
3-8 Button & LCD (LCD Model)	
3-8-1 Button Operation	
3-8-2 Interface Status Icon	
3-8-3 Menu Composition	
3-8-4 Setting Menu Explanation	
3-8-5 Interface Menu Explanation	
3-8-6 Sensor Menu Explanation	
3-8-7 Tools Menu Explanation	
3-8-8 Information Menu Explanation	47
4. Self-test	48
5. Detailed Features	49
	49
5-1-1 Start Stand-alone Configuration Mode and execute each function	49
5-1-2 Function List Of Stand-alone Configuration Mode	49
5-2 Pause/Cancel	
5-2-1 Pause/Resume Function	50
5-2-2 Print Cancellation	51
5-3 Smart Media Detection	52
5-4 Gap Sensor Auto Calibration Mode	52
5-5 B/M Sensor Auto Calibration Mode	
5-6 Media Sensor Manual-Calibration	54
5-7 Data Dump Mode	55
5-8 Factory Reset	
5-9 Print Standby Mode	
5-9-1 About Print Standby Mode	

5-9-2 How to switch the printer from Standby Mode to Print Ready Mode 5-10 Media Installation Method of Peeler (Option) Model 5-11 Using Fan-Fold or External Media 5-11-1 When using Fan-Fold media	57 59 60
5-11-2 When using Large media roll (Optional) 5-12 Auto Cutter (Optional)	61 62
<b>6. Printer Maintenance</b> 6-1 Cleaning Printer Head 6-2 Cleaning Sensors, Roller or/and media Path 6-3 Replacing Roller.	<b> 63</b> 63 64
<b>7. Appendix</b> 7-1 Specifications 7-2 Label Types	

# **Manual Information**

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.

#### 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

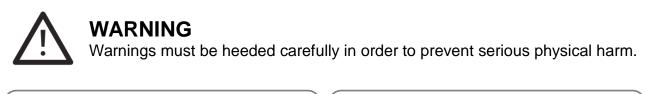
This manual provides information on connection instructions the Bluetooth interface.

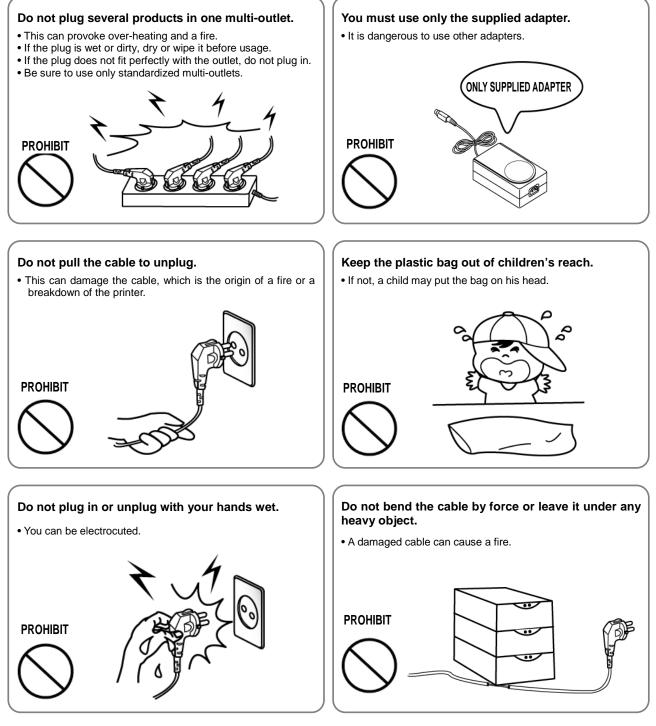
#### 7. Label Design Program Manual

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.

# **Safety Precautions**

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

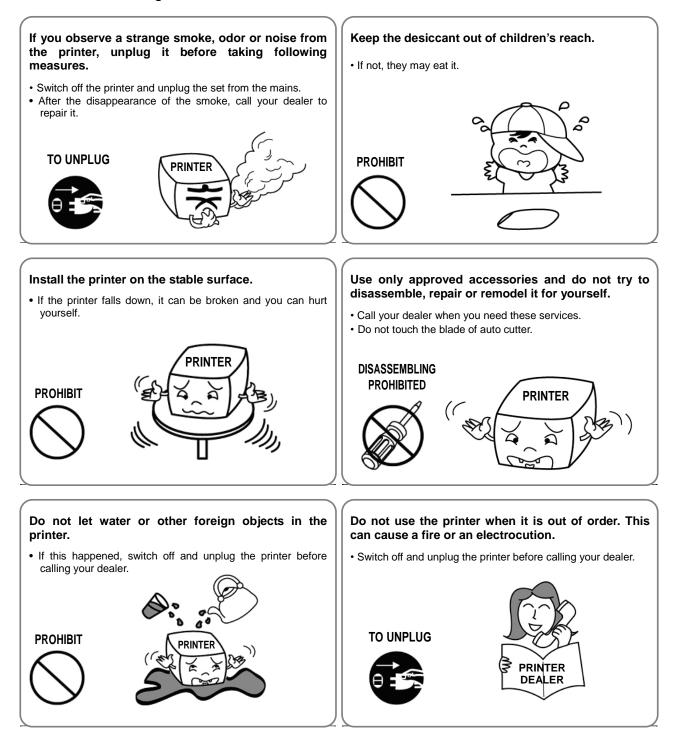






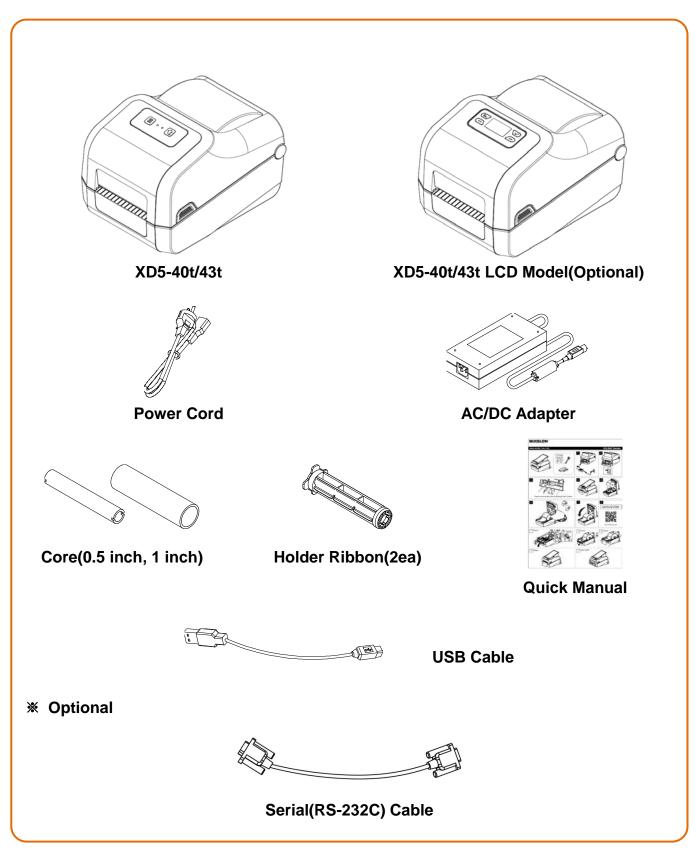
## CAUTION

Cautions must be heeded in order to prevent minor injuries, equipment damage, or data loss.

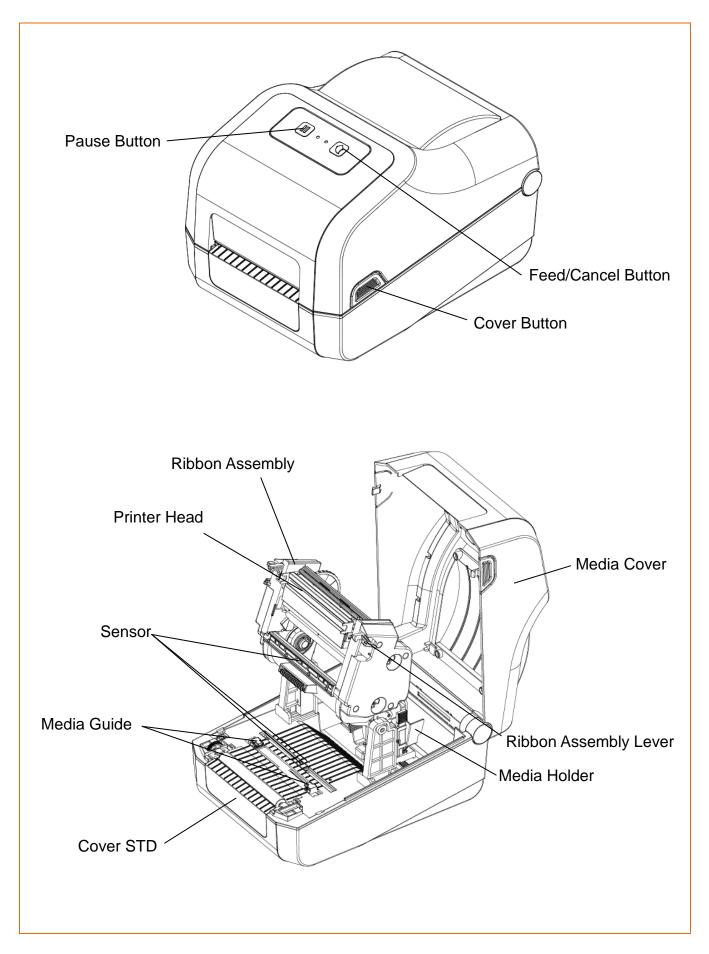


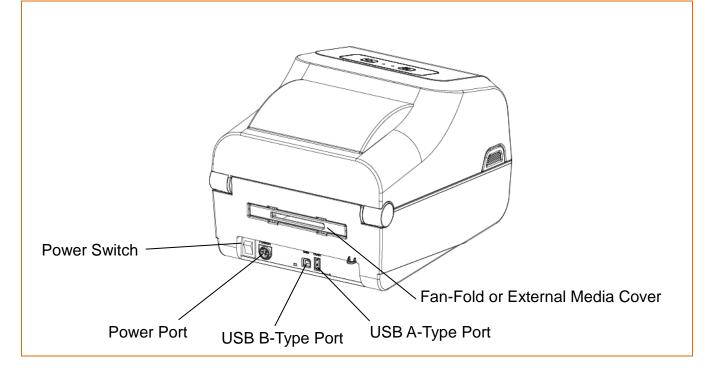
## **1. Content Confirmation**

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.



# 2. Product Part Names





# 3. Installation & Usage

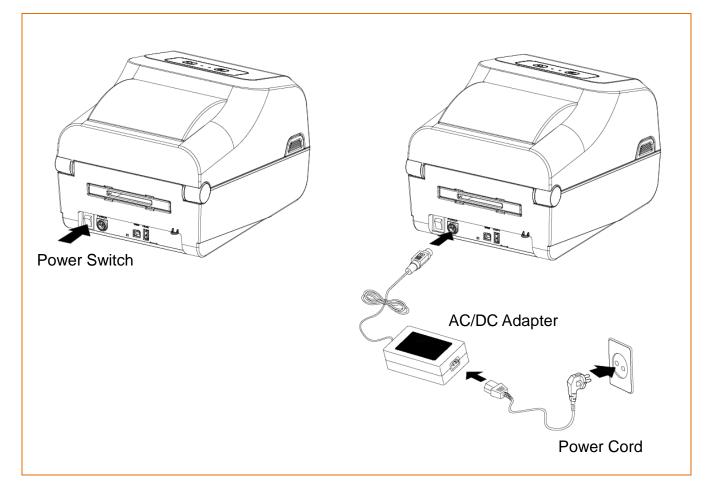
#### **3-1 Printer Installation Placings**

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

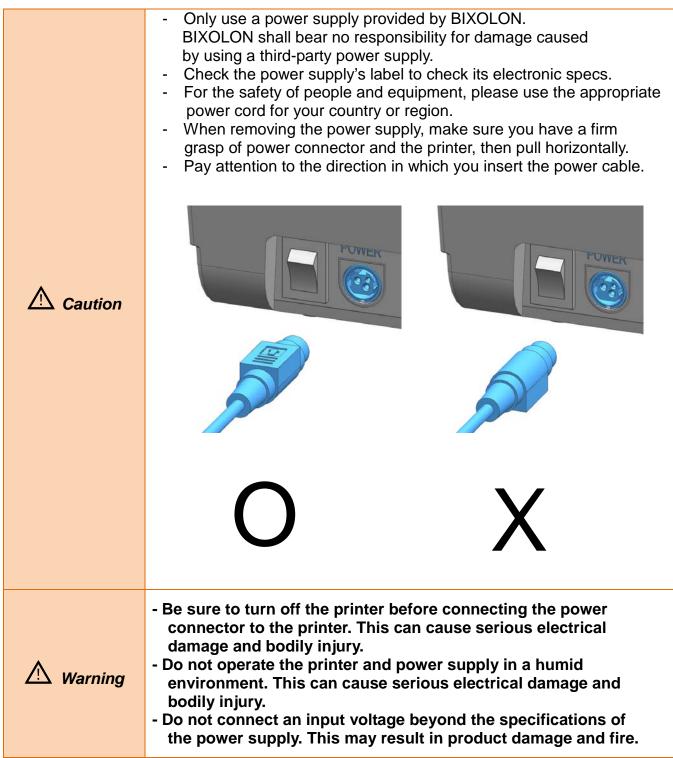
- Allow sufficient space around the printer for proper ventilation.
- Install the printer on a flat and level surface.
- Avoid humid environment.

#### **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.



#### **3-3 Interface**

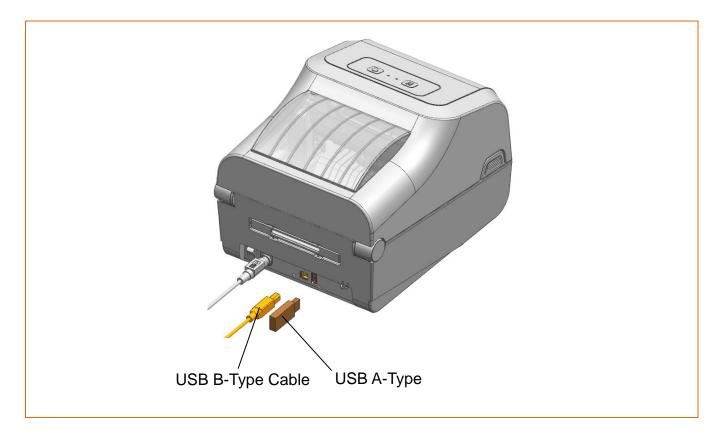
Note	Shielded cables must be used to prevent radiation and reception of electrical noise. Use the shortest possible communication cable to minimize the detection of electrical noise in the cable. - Serial(RS-232C) Cable (1.8m or less recommended) - USB B-Type Cable (1.8m or less recommended) - LAN(Ethernet) Cable (3m or less, CAT-5 or higher UTP Cable)
A Caution	<ul> <li>Connecting unshielded communication cables is in violation of EMC standards. Use the cable approved by us.</li> <li>Do not bundle the communication cable with objects that may cause electrical noise and interference. The printer may be damaged.</li> <li>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.</li> </ul>
A Warning	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)

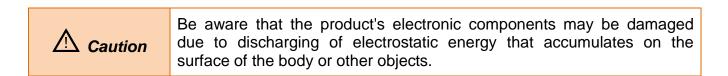
Connect the interface cable as shown below.

This printer(standard) supports the following interfaces.

- 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.

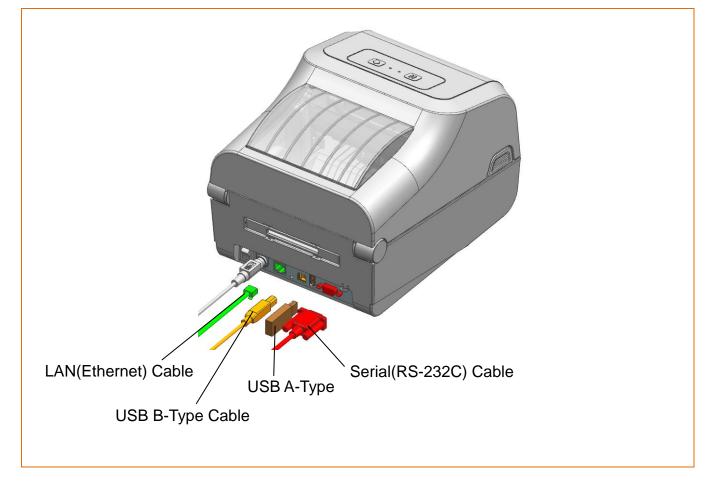


#### 3-3-2 Optional Interface (USB & USB HOST & Serial & Ethernet)

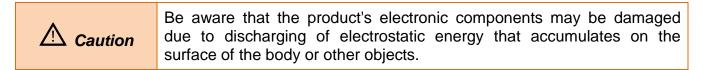
Connect the interface cable as shown below.

This printer(optional) supports the following interfaces.

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

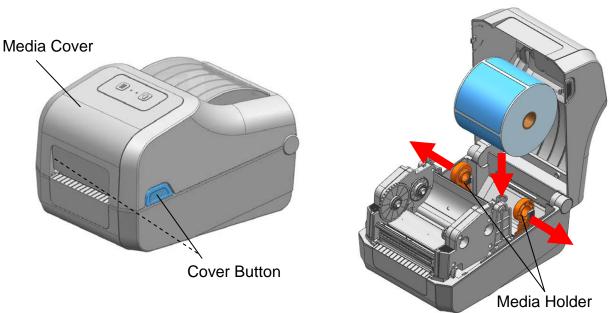


- 1) Turn off the power switch.
- 2) Connect the communication cable to the printer communication port to be used.
  - Connect the serial(RS-232C) cable to the serial port and tighten the screw on both sides.
  - Connect the LAN(Ethernet) cable to the Ethernet port.
  - Connect USB B-Type cable to the USB port.

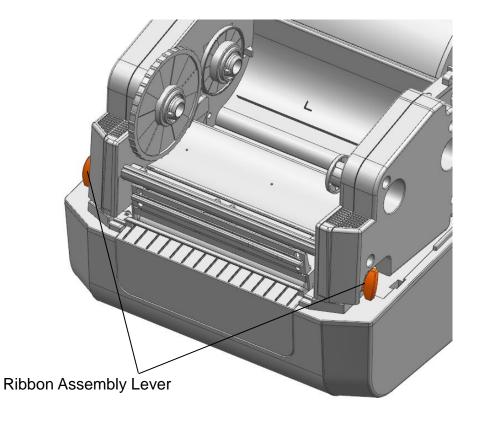


#### 3-4 Media Installation

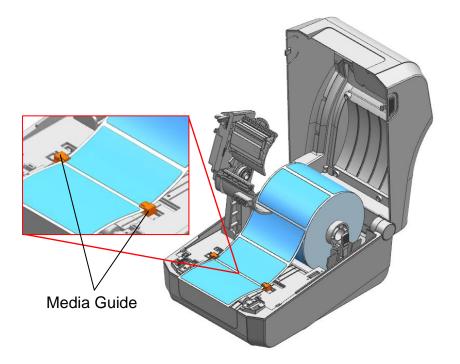
- 1) Open the media cover as push the cover button on both sides of the media cover.
- 2) Spread the media holder and insert media as shown.



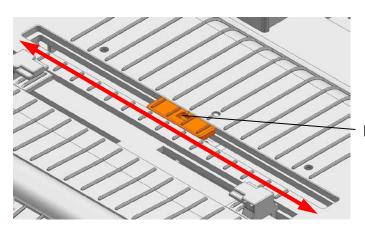
3) Pull the ribbon assembly lever on both sides of the ribbon assembly and open the ribbon assembly.



- 4) Pull the media out to the front of printer.
  - Adjust the media guides to the width of the media.
  - \* Whether the media is rolled outside or inside, the printing side must faced up.



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



Black Mark & Notch Sensor

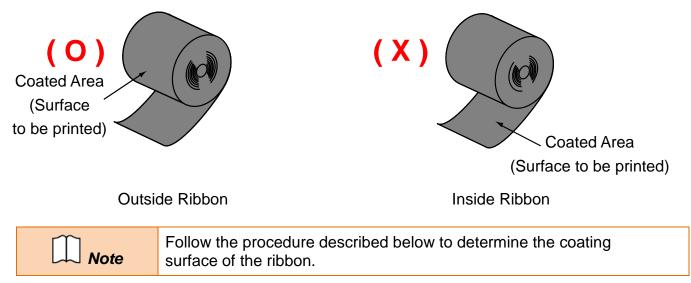
A Caution	<ul> <li>When opening or closing the cover, be careful not to pinch your fingers.</li> <li>Do not open the print head levers while the printer is printing. The printer may be damaged.</li> <li>Change the media when the printer is not receiving data, or data may be lost.</li> </ul>
⚠ Warning	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 Ribbon Installation**

#### 3-5-1 Type of Ribbon

1) Type by Film Coating Location

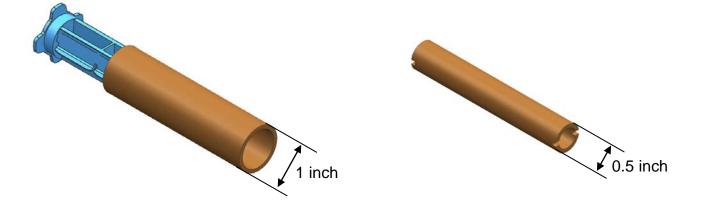
- This printer supports ribbons facing outward only.



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

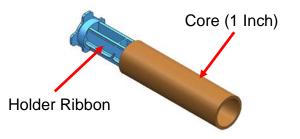
#### 2) Type by Roll Core

- This printer can be used to 1 inch or 0.5 inch core ribbon.
- For a 1 inch core, a roll core must be used.
- The holder ribbon and roll core of the fully used ribbon must be reused. Do not discard.

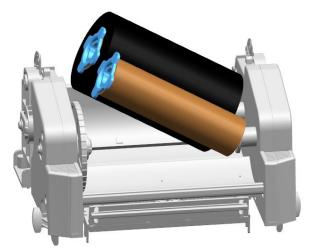


#### 3-5-2 Inserting a 1 Inch Core Ribbon

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



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



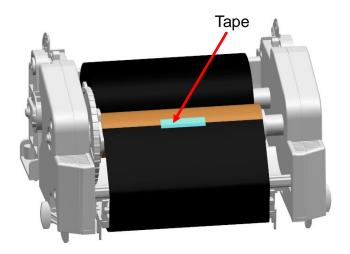
4) Close the ribbon assembly.

#### 3-5-3 Inserting a 0.5 Inch Core Ribbon

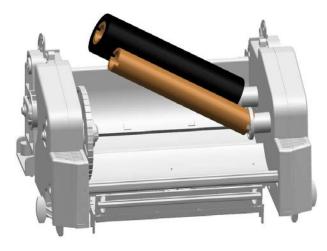
 Open the ribbon assembly and insert the ribbon and core by pushing to the right. (keep attention of ribbon printing direction)

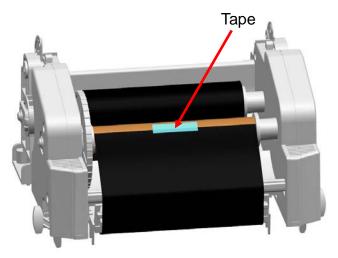


3) Apply tape to the core of the ribbon.



2) Apply tape to the core of the ribbon.



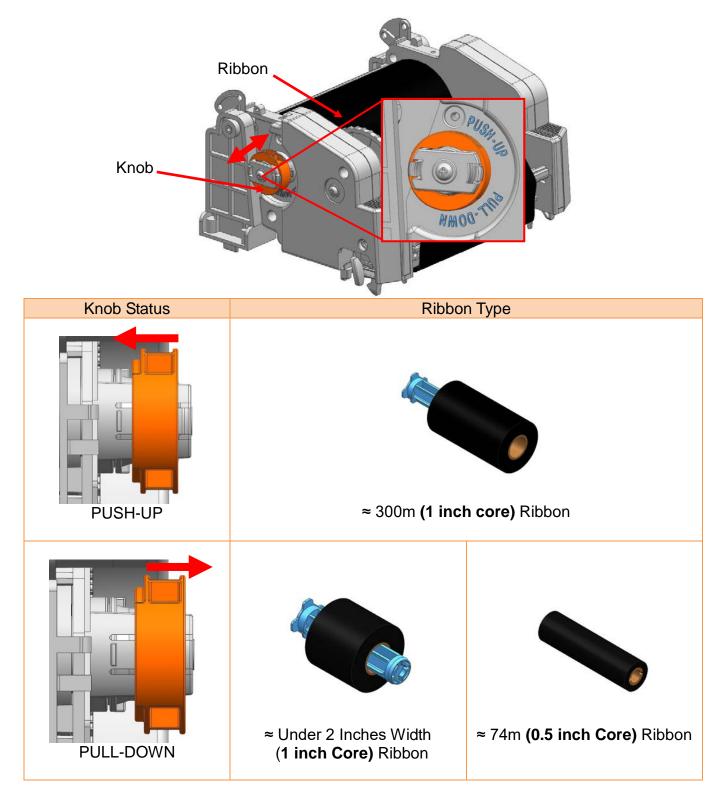


#### 3-5-4 Knob Adjust Method According to Ribbon Type

Use printer after adjusting knob correctly, according to ribbon length and width.

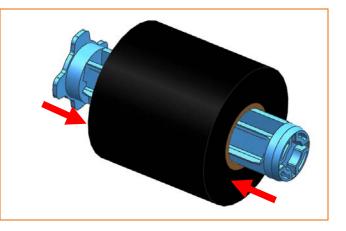
PUSH-UP state of knob to which being inward is the factory default specification and you can push or pull the knob.

Please note that push or pull operation affects print quality and operation.



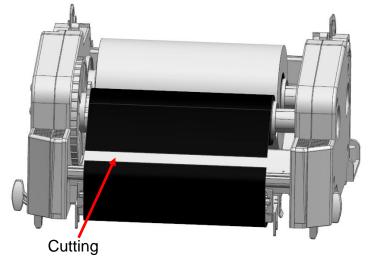
#### 3-5-5 Narrow Ribbon Installation

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



#### 3-5-6 Ribbon Removal

- 1) Cut the ribbon.
- 2) Open the ribbon assembly and remove the ribbon and core by pushing to the right.
- 3) Remove the holder ribbon from the ribbon and core.



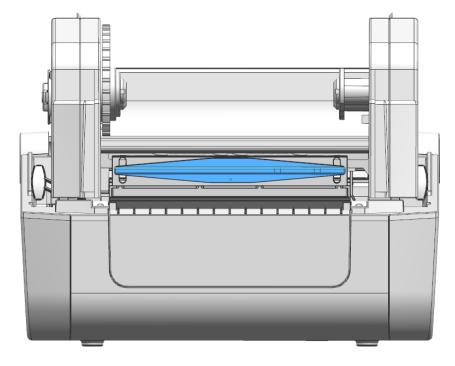
#### 3-5-7 Ribbon Sensor Activation

Check the settings related to ribbon detection sensor if printing does not stop when the printer is out of ribbon or ribbon is broken.

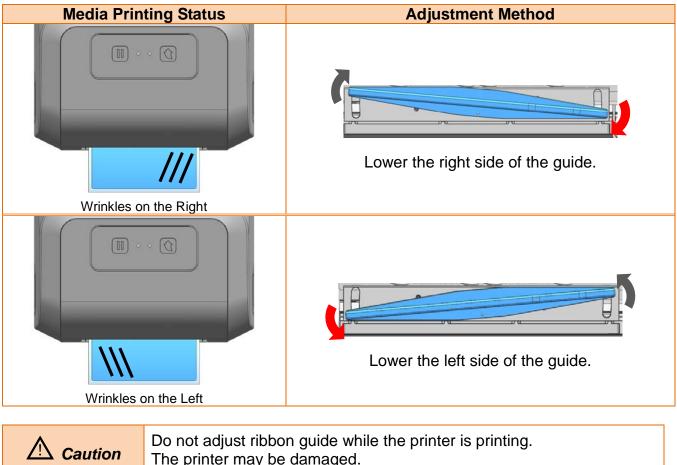
\* Ribbon detection sensor can be enabled by command control. And default setting can be changed by Unified Label Utility-II.

⚠ Caution	<ul> <li>When replacing a ribbon, keep affixed the core of the fully used ribbon to the ribbon coiling portion on the other side and do not discard as its use is required.</li> <li>As the ribbon holder is required for continuous use, make sure not to misplace it.</li> </ul>
-----------	--

#### 3-6 How to Use the Ribbon Guide

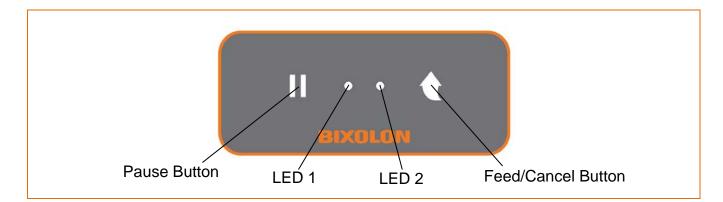


Wrinkles can be improved by adjusting on the ribbon guides.



The printer may be damaged.

## 3-7 Button & LED (Standard Model)



#### 3-7-1 Button Operations

Printer state	But	ton		
before operation	Feed/ Cancel	Pause	Operation procedure	Printer operation mode
Power OFF	Press	-	Apply power while pressing the button (Hold the button until the printer starts self-test printing)	Self-test Printing Mode.
Print Standby	Press	-	Press the button	Feed Mode
Print Standby	-	Press	Press the button for two seconds	Stand-alone Configuration Mode
During Printing	-	Press	Press the button for two Seconds	Print Pause Mode
During Printing	Press	-	Press the button for two Seconds	Print Cancel Mode
Print Pause Mode	Press	-	Press the button	Print Cancel Mode

## 3-7-2 LED Indicator For Various Printer Statuses

LED 1		LED 2		Printer Operation	
Color	Status	Color	Color		Status
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

#### 3-8 Button & LCD (LCD Model)



#### 3-8-1 Button Operation

Printer state before operation	Button	Explanation
Print Ready	C-> 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

#### 3-8-2 Interface Status Icon

1

88 〒 番 単 〒 V01.00
() 

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

lcon	Explanation
*	Bluetooth is not connected to the host
8	Bluetooth is connected to the host
70	Authentication is failed
Пi	Not connected to AP
Ŕ	Connected to AP, Strength: 4
<u></u>	Connected to AP, Strength: 3
Ŷ	Connected to AP, Strength: 2
Ŧ	Connected to AP, Strength: 1
·목· 호호	Ethernet is connected
Ţ	USB storage is connected
[+]	Receiving data, Printing

## 3-8-3 Menu Composition

Setting	Sub menu
	Width (Print Width)
	Length (Print Length)
	Direct (Print Direction)
	Speed (Print Speed)
	Density (Print Density)
563	Method (Print Method)
222	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				
	Baud Rate				
		Data Bit			
	Serial	Parity			
		Stop Bit			
		Handshk (Host Handshake)			
		IP Protocol			
		IP Address			
	Ethernet	Subnet Mask			
		Gateway			
		MAC Address	MAC Address		
		Channel			
		Network			
		ESSID (AP ID)	ESSID (AP ID)		
		Auth (Authentication)			
		Encrypt (Encryption)			
<u>الم</u>	WLAN	WEP Password			
		PSK Password			
		IP Protocol			
		IP address			
		Subnet Mask			
		Gateway			
		Smart Connect Act (Smart Connect Active)			
		Device Name			
	Bluetooth	Pairing	Pincode		
			SSP (Secure S	imple Pairing)	
		MAC Address			
			BLE (Bluetooth Low Energy)		
		Mode		Connect Mode	
			STD (Standard Mode)	Auth&Enc (Authentication	
				& Encryption)	

Sensor	Sub menu
<u> 400)</u>	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)		
Ĩ	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

## 3-8-4 Setting Menu Explanation

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

	Explanation Setting print direction Top to bottom: Printing from top to bot Bottom to Top: Printing from bottom to Default Value Bottom to Top		
	Variable Value Bottom to Top, Top to Bottom		
Direct (Print Direction)			
	OLTARS MOTTOD OF TOP TO POTTOM	From Top to Bottom SRP770	
	Explanation Setting print speed[ips]		
	Default Value		
Speed	203dpi : 5ips		
(Print Speed)	300dpi : 3ips		
	<b>Variable Value</b> - 203dpi : 3~6ips - 300dpi : 2~4ips		

	Explanation Setting print density
Density	Default Value
	203dpi : 20
(Print Density)	300dpi : 20
	Variable Value
	0~30
	Explanation
	Setting print method
Method	Default Value
(Print Method)	Trans(Thermal Transfer)
	Variable Value
	Direct (Direct Thermal), Trans(Thermal Transfer)
	Explanation
	Setting media type
	Default Value
Туре	Gap
(Media Type)	
(media Type)	Variable Value
	- Gap
	- Black Mark
	- Continuous
	Explanation
	Setting media position[dots] for tear off after printing or feed
	Default Value
Tear off	0
	0
	Variable Value
	-100 ~ 100
L	1

over.
on),
,,

#### 3-8-5 Interface Menu Explanation

## 3-7-5-1 Serial

List	Explanation
Baud Rate	<ul> <li>Explanation Setting the baud rate</li> <li>Default Value 115200</li> <li>Variable Value 9600, 19200, 38400, 57600, 115200</li> </ul>
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

### 3-8-5-2 Ethernet

List	Explanation
	Explanation Setting IP assignment method
IP Protocol	Default Value DHCP
	Variable Value DHCP, Static IP
	Explanation Setting IP Address method
IP Address	<b>Default Value</b> 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: 0.0.00
	<b>Variable Value</b> 0 ~ 255
MAC Address	Explanation Indicating MAC address

#### 3-8-5-3 WLAN

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

	Explanation
	Setting IP assignment method
IP Protocol	Default Value
	DHCP
	Verieble Velue
	Variable Value
	DHCP, Static IP
	Explanation
	Setting IP address
	Default Value
IP address	Static IP: 192.168.1.1
	DHCP: 0.0.0.0
	Variable Value
	0 ~ 255
	Explanation
	Setting subnet mask
	Default Value
Subnet Mask	Static IP: 255.255.255.0
	DHCP: 0.0.0.0
	Variable Value
	0 ~ 255
	Explanation
	Setting gateway
	Default Value
Gateway	Static IP: 192.168.1.254
Calenay	DHCP: 0.0.0.0
	Variable Value
	0 ~ 255
	Explanation
	After searching a Smart Connection Act Enabled printer with the
	smart phone app, enable or disable the function synchronizing Wi-Fi
Smart Connect Act	login information connected to the smart phone.
(Smart Connect	
Activate)	Default Value
	Disable
	Variable Value
	Disable, Enable

#### 3-8-5-4 Bluetooth

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

### 3-8-6 Sensor Menu Explanation

List	Explanation	
Gap Cal	<b>Explanation</b> Detect media gap automatically.	
(Gap Calibration)		
Black Mark Cal	Exploration	
(Black Mark	Explanation Detect media black mark automatically.	
Calibration)	Delect media black mark automatically.	

### 3-8-7 Tools Menu Explanation

List	Explanation		
Self prt	Explanation		
(Print Self-Test)	Prints for self-test		
Reset	Explanation		
(Factory Reset)	Initializes the printer settings to factory default		
	Explanation The received data check when the printer does not work properly.		
Dump (Data Dump Mode)	Default Value Disable Variable Value Disable, Enable		
Head Chk (Print Head Check)	Explanation Dot-out check of head through printing		
USB Num (USB Serial Number)	Explanation Checks USB serial number		
Demo prt (Demo Print)	Explanation Demo format printing function		
		Template	
		Image	Refer
	Saved	Fonts (Download Fonts)	3-6-7-1
	(Saved File)	E Drive (Flash Memory)	Saved File
		A Drive (USB Storage)	
Files		PRT Set (Printer Setting)	
LIE2	Twin	Template	Refer
	(Twin Function)	Image	3-6-7-2
		Fonts (Download Fonts)	Twin Function
	F/W Update		<b>Refer</b> 3-6-7-3 F/W Update

### 3-8-7-1 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 font list stored in the printer	
(Download Fonts)		
E Drive	Saved object files in E drive	
(Flash memory)		
A Drive	Saved object files in A drive	
(USB memory)		

#### 3-8-7-2 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
List PRT Set (Printer Setting)	<ul> <li>Explanation Save printer settings to a USB storage device, or load the print settings from USB storage.</li> <li>File path F:\configuration <ul> <li>Save Function Explanation</li> <li>Connect a USB storage to the printer.</li> <li>Select Save on the menu using the move button( ) and select button( ).</li> <li>The printer_config file is created in the configuration folder of USB storage device. (The configuration folder is automatically created)</li> </ul> </li> <li>Load Function Explanation <ul> <li>Check whether the printer_config file exists in the configuration folder of the USB storage device.</li> <li>Connect the USB storage to the printer.</li> </ul> </li> </ul>
(Printer Setting)	<ul> <li>USB storage device. (The configuration folder is automatically created)</li> <li>• Load Function Explanation</li> <li>- Check whether the printer_config file exists in the configuration folder of the USB storage device.</li> </ul>

	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
	select button( ).
	- Template files are stored in the USER_AREA_TEMPLATES folder of
Tomplata	USB storage device.
Template	(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
	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.

	<b>Explanation</b> 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	<ul> <li>Image files are stored in the USER_AREA_PCXImages folder of USB storage device.</li> <li>(USER_AREA_PCXImages folder is automatically created)</li> </ul>
	Load Function Explanation
	<ul> <li>Check whether the image files exist in the USER_AREA_PCXImages folder of the USB storage device.</li> <li>Connect the USB storage to the printer.</li> </ul>
	- Select Load on the menu using the move button () and select button ().
	<ul> <li>Loading message(Loading) is displayed while loading, and when loading is completed, USB loading completion(Load Ok) message is displayed.</li> </ul>
	<ul> <li>Go to Save File menu then, check the image files are saved to the printer.</li> </ul>

	Evaluation
	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().
Fonts	- Download Font files are stored in the USER_AREA_FONTS folder of
(Download	USB storage device.
Fonts)	(USER_AREA_FONTS folder is automatically created)
Fontsj	
	Load Function Explanation
	- Check if the downloaded font files exist in the USER_AREA_FONTS
	folder of the USB storage device.
	<ul> <li>Connect the USB storage to the printer.</li> </ul>
	- Select Load on the menu using the move button
	select button( ).
	<ul> <li>Loading message(Loading) is displayed while loading, and when loading is completed, USB loading completion (Load Ok) message is displayed.</li> </ul>
	<ul> <li>Go to Save File menu then, check the download font files are saved to the printer.</li> </ul>

#### 3-8-7-3 F/W Update

Firmware can be updated through USB storage.

	<b>Explanation</b> Printer firmware update available using the USB storage directly without any communication.
	<b>File path</b> F:\ FW_DOWNLOAD
	File name "XD5-4xt_Vxx.xx_STD_mmddyy.fls" in F:\ FW_ DOWNLOAD folder.
F/W Update	<ul> <li>Download process explanation</li> <li>Check firmware file(*.fls) is in FW_ DOWNLOAD folder of USB storage.</li> <li>Connect USB storage to the printer.</li> <li>Select "F/W Update" from the "Files" menu.</li> <li>Select "Start" from the "F/W Update" menu using</li> </ul>
	<ul> <li>the function button 1 ().</li> <li>If message "F/W Update" is displayed, the firmware download has started normally.</li> <li>After firmware update complete successfully, printer will be rebooted automatically.</li> </ul>

## 3-8-8 Information Menu Explanation

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

# 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( $\blacksquare$ ) is pressed for two seconds while in Print Ready Mode.
- 2) Both LEDs will change to orange color, then release the Pause button(<sup>11</sup>) 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	LED 1		LED 2		Printer Operation
Number	Color	Status	Color	Status	Printer Operation
1			Green	Blink4 times	Self Test
2	Green	On	Orange	Blink4 times	Print File List
3			Red	Blink4 times	Factory Reset
4			Green	Blink4 times	Gap Calibration
5	Orange	On	Orange	Blink4 times	Black Mark Calibration
6			Red	Blink4 times	Data Dump Mode
7			Green	Blink4 times	Demo Mode
8	Red Or	led On C	Orange	Blink4 times	Reserved
9			Red	Blink4 times	Delete Downloaded Items

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



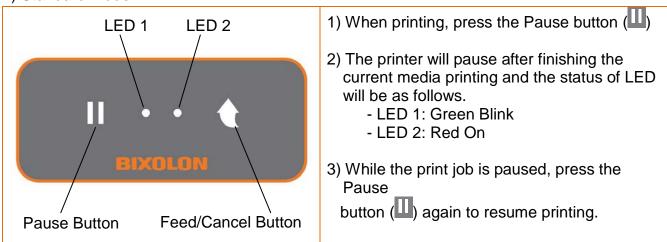
#### 5-2 Pause/Cancel

• During multiple-page print jobs, the Pause  $(\blacksquare)$ , Feed/Cancel button  $(\frown)$ ,

Function button  $1(^{(1)})$  and Function button  $2(^{(1)})$  can be used to pause printing and cancel the print job altogether, respectively.

#### 5-2-1 Pause/Resume Function

#### 1) Standard Model



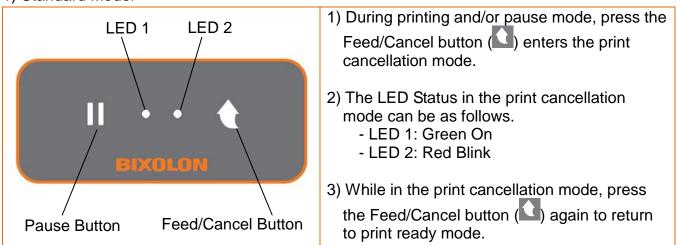
#### 2) LCD Model

Menu Move	Menu Select	<ol> <li>When printing, press the Function button 1(<sup>1</sup>).</li> </ol>
Function Butt	ention Button2	<ul> <li>2) The printer will pause after finishing the current media printing and the status of LCD will be as follows.</li> <li>- LCD Display: PAUSE</li> <li>3) While the print job is paused, press the Function button 1() again to resume printing.</li> </ul>

#### 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



#### 2) LCD Model

Menu Move Menu Select	<ol> <li>During printing and/or pause mode, press the Function button 2( ) enters the print cancellation mode.</li> </ol>
	<ul> <li>2) The LCD Status in the print cancellation mode can be as follows.</li> <li>LCD Display: Press Cancel</li> <li>3) While in the print cancellation mode, press the Function button 2( ) again to return to print ready mode.</li> </ul>
Function Button 1 Function Button 2	

A Caution

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

#### 5-3 Smart Media Detection

- Media with gap and black mark can be identified without additional settings.
- 3~5 pages of media will be used depending on the types of media.
- Smart Media Detection function is executed in the followings cases
  - When the printer is installed first time, it is executed by pressing the Feed/Cancel

button( ) for LED model, pressing Function button 2( ) for LCD model.

- If the printer is installed first time, printer command will execute Smart Media Detection.
- When change of media length or type is detected during feeding or printing.
- When the different media type command is entered from the configured media type.
- After factory reset.



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

#### 5-4 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.

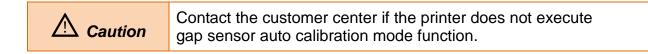
- 1) Make sure that media roll has been installed properly.
- 2) Standard Model

Using stand-alone configuration mode, press the Feed/Cancel button(L) at sequence number 4 gap sensor auto calibration mode (refer to 5-1).

3) 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.



#### 5-5 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 roll has been installed properly.
- 2) Standard Model

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

3) 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.

▲ Caution

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

#### 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 auto-calibration has been executed.

Users can calibrate sensor parameters in detail by using the Unified Label Utility-II program provided by the manufacturer.

The Unified Label Utility-II can be downloaded from the Internet via the BIXOLON website. (<u>www.bixolon.com</u>)

Please make sure the printer is connected and execute the Unified Label Utility-II program. Please the Calibration Setting Manager Button after setting the interface type.

			Sensing Value Distribution 32 : 0000 64 : 0000 96 : 0000 128 : 0000	STEP 1 : Start Sensing Type : G O B
nified Label	Utility-II		0 160 : 0000 0 192 : 0000 0 224 : 0000	Label Length : (mm) 150
Interface Type O Serial	© Parallel ◯ USB ◯ Ethernet	User Setting Configure Printer Setting	256 : 0000 288 : 0000 320 : 0000	Check Sensing Value
Communication	n Setting	Configure Print Quality	0 352 : 0000 0 384 : 0000 0 416 : 0000	
LPT Port	LPT1: v	Calibration Setting Manager	0 448 : 0000 0 480 : 0000	STEP 2 : Save
COM Port	COM1:	Downloader	0 512 : 0000 0 544 : 0000	Middle Gap Value :
Baud Rate	115200 ▼	PCX File Downloader	576 : 0000 608 : 0000	Gap Count :
Data Bits	8 🔹	Printer Tool	640 : 0000 672 : 0000	7
Parity	None	Send File	0 704 : 0000 0 736 : 0000	
Stop Bits	1	Printer Tool	768 : 0000 800 : 0000	Save Calbration
IP	192 . 168 . 100 . 185	Communication Tool	C 832 : 0000 C 864 : 0000	
Port	9100	SLCS Test Tool	0 896 : 0000 928 : 0000	Cancel
	Connect Disconnect	EXIT	© 960 : 0000 © 992 : 0000 © 1024 : 0000	Cancel Calibration

- 1) Select the sensing type and input the label length by millimeter and click "Check Sensing Value" button. Then printer starts calibration.
- 2) Printer will print the scanned values after calibration and the 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"



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 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 6 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.

#### 5-8 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.

#### 5-9 Print Standby Mode

#### 5-9-1 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.

#### 5-9-2 How to switch the printer from Standby Mode to Print Ready Mode

- 1) Standard Model
  - Press the Pause button ( $\blacksquare$ ) 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.

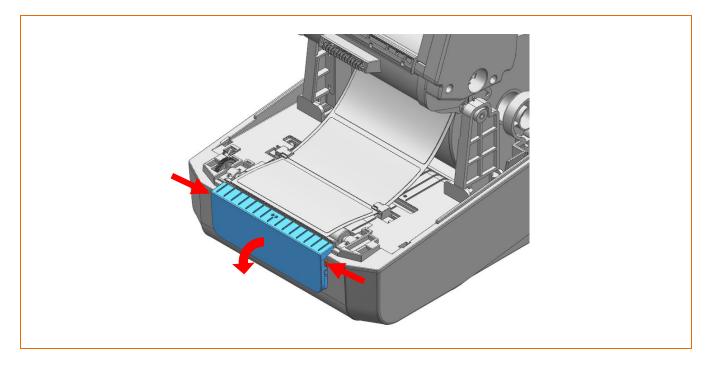
- 2) LCD Model
  - Press "Function button 1()")" to switch to print ready mode without feeding any media.
  - Press "Function button 2()")" to feed one page to align the media position and switch to the print ready mode.



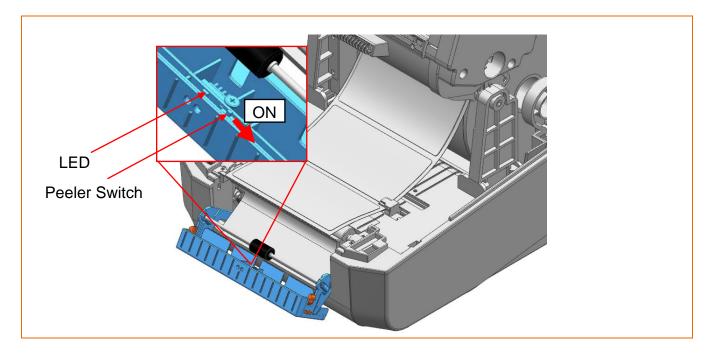
Contact the customer center if the printer does not execute print standby mode function.

#### 5-10 Media Installation Method of Peeler (Option) Model

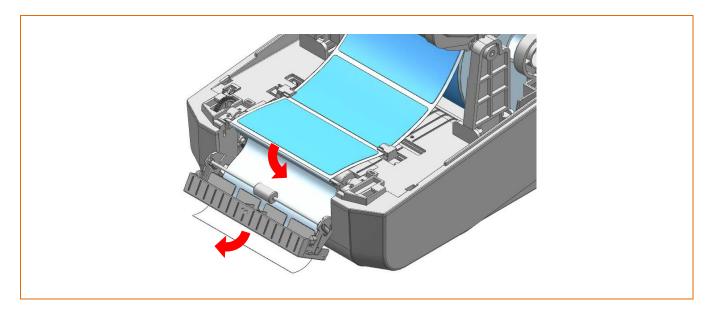
- Use a peeler to separate the printed media from the liner automatically. To use peeler, install media in the following ways:
- 1) Open the media cover.
- 2) Open the peeler cover.



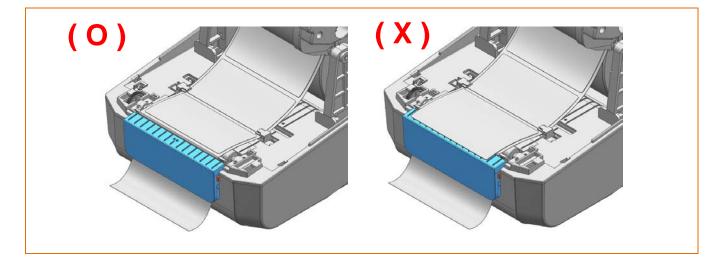
3) Set the peeler switch 'ON' position and check to LED has turned on.



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



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

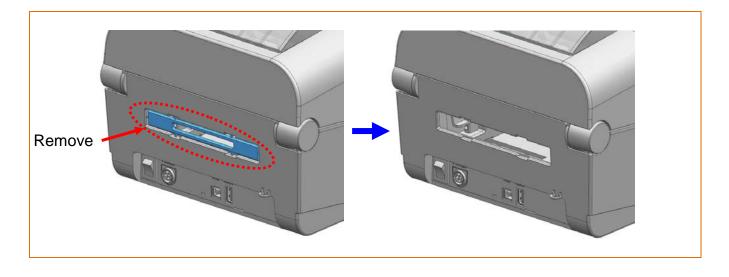


6) Close the ribbon assembly and media cover until a click sound is heard.

A Caution	<ul> <li>When opening or closing the cover, be careful not to pinch your fingers.</li> <li>The peeler function is only available for Gap media.</li> <li>When the peeler is switched on, the next label will not be printed unless the printed label is removed from the peeler.</li> <li>When the peeler is switched off, the peeler does not work.</li> </ul>
⚠ Warning	The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.

#### 5-11 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.



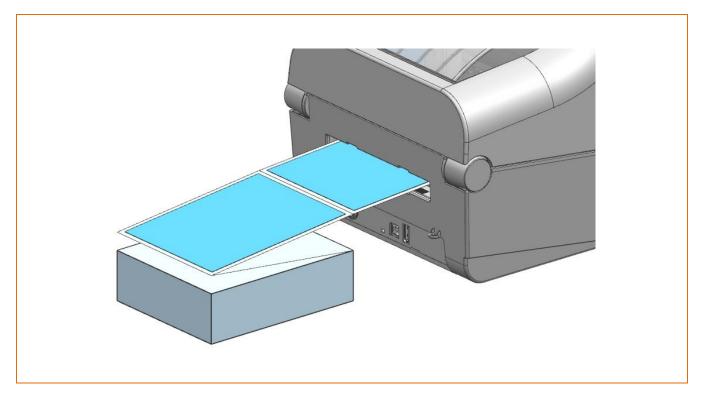


Take care not to injure the hands and/or any other part of the body when performing this step

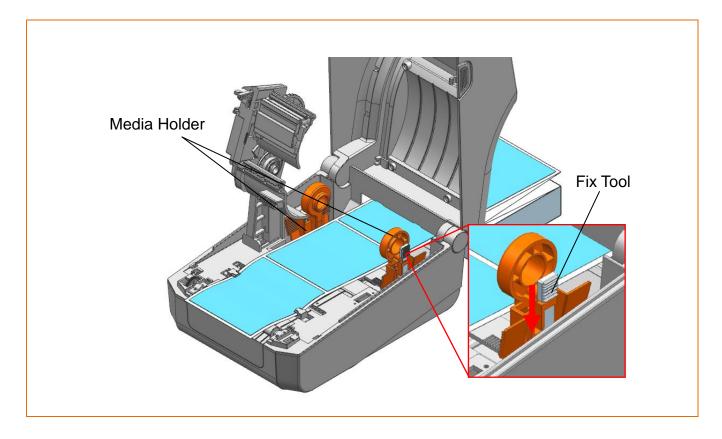
### 5-11-1 When using Fan-Fold media

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.

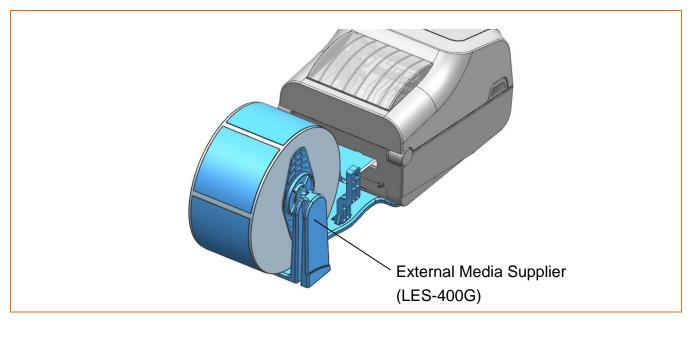


2) Adjust media holders to the media width by using the fix tool.



### 5-11-2 When using Large media roll (Optional)

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



⚠ Caution	<ul> <li>Do not open the print cover while the printer is operating, otherwise the printer may be damaged.</li> <li>To prevent data loss, replace media only when the printer is not receiving any data.</li> <li>Be aware of physical damage caused by external media when operating the printer</li> </ul>
-----------	--

## 5-12 Auto Cutter (Optional)

• For auto media cutting, products equipped with auto cutter are available.

Auto-Cutter can be controlled by command or Unified Label Utility-II.



Note	Please refer CUT(Auto-cutter Enable/Disable) of Programming (SLCS) Manual or Unified Label Utility-II Manual for more information.
A Caution	<ul> <li>When opening or closing the cover, be careful not to pinch your fingers.</li> <li>Do not open the media cover while the printer is operating. The printer may be damaged.</li> <li>Change the media when the printer is not receiving data, or data may be lost.</li> </ul>
⚠ Warning	<ul> <li>Never insert objects or fingers while performing the cutting function. This can cause serious bodily injury.</li> <li>Be careful not to touch the cutter blade with your hand. There may be a risk of personal injury.</li> <li>The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.</li> </ul>

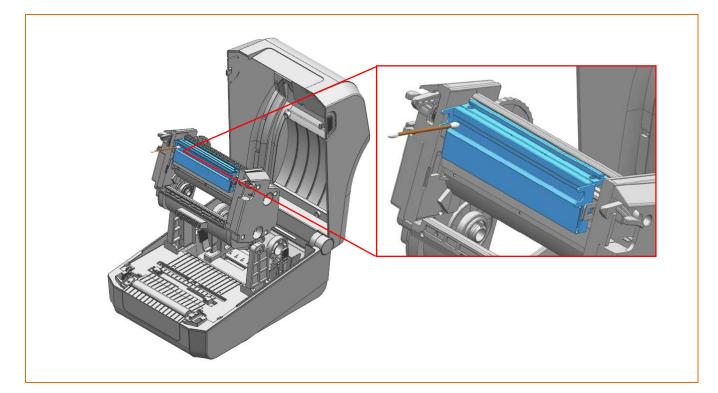
# 6. Printer Maintenance

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

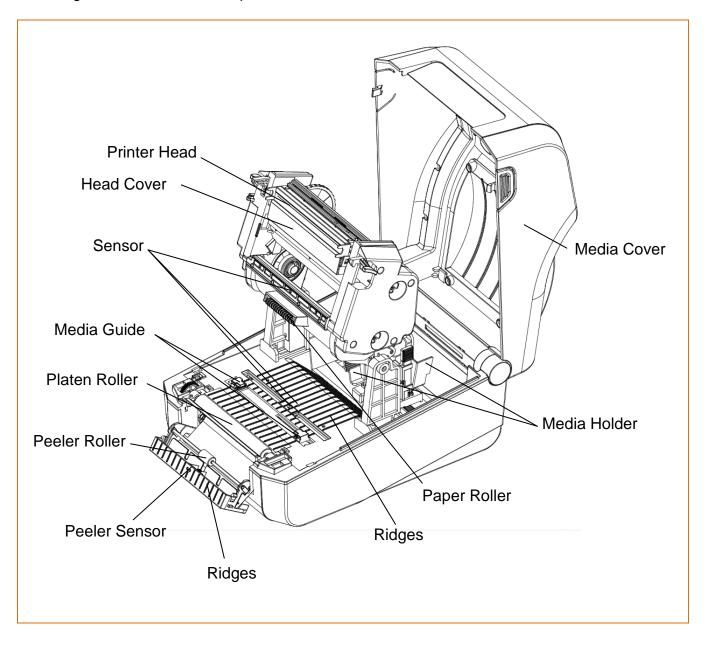
- Be sure to turn the printer off.
- 1) Open the media cover and then remove adhesive foreign substances or other pollution materials with the cloth or cotton swab soaked in alcohol for medical.
- 2) After cleaning the head, do not use the printer until the alcohol used for cleaning evaporates completely. (1~2 min)



Note	Perform the cleaning process each time the media roll is replaced to prevent print quality deterioration.
A Caution	<ul> <li>Be sure to clean after turning the printer off.</li> <li>Be careful not to leave scratches in the print head. The printer may be damaged.</li> <li>The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.</li> </ul>
A Warning	Do not touch heated area of print–head when cleaning. Personal injury may result from static electricity, etc.

#### 6-2 Cleaning Sensors, Roller or/and media Path

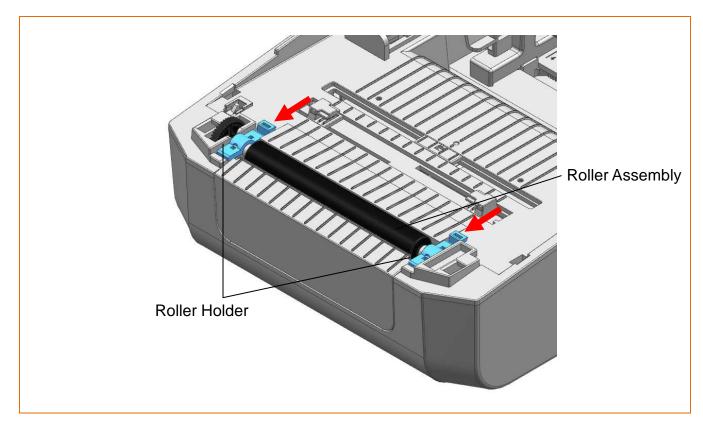
- Be sure to turn the printer off.
- 1) Open the media cover and remove the media.
- 2) Remove any dust or foreign substance using dry cloth or cotton swab.
- 3) Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.



- Be sure to use medical alcohol only. If not, it may cause printer damage.
---

#### 6-3 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.

⚠ Caution	Make sure to turn the printer power off prior to cleaning.
⚠ Warning	The print head gets extremly hot while printing or after the printing, this can cause serious burns. Do not touch the print head.

# 7. Appendix

## 7-1 Specifications

Item		Description	
	Printing Method	Thermal Transfer Printing	
	Dot Density	XD5-40t: 203 dpi (8 dot/mm) XD5-43t: 300 dpi (11.8 dot/mm)	
Printer	Printing Width	XD5-40t: Max. 108 mm (Max. 4.25") XD5-43t: Max. 105.7 mm (Max. 4.16")	
	Printing Speed	XD5-40t: Max. 152 mm/sec (Max. 6ips) XD5-43t: Max. 102 mm/sec (Max. 4ips)	
	Printing Length	Up to 1,000mm	
	Roll Width	15 ~ 118 mm (0.59 ~ 4.64")	
Media	Roll	Max. 127 mm (Max. 5")	
ivieula	Core	25.4 ~ 38.1 mm (1" ~ 1.5")	
	Thickness	0.06 ~ 0.20mm	
Ribbon	Length / Width	Max 300m / 33 ~ 110mm(1.3~4.3")	
	Type(Outside)	Wax, Wax/Resin, Resin	
	Core	0.5" / 1"	
	SMPS Input Voltage	AC 100 - 240V	
AC Adapter	Frequency	50/60 Hz	
	SMPS Output Voltage	DC 24V ±5%	
	SMPS Output Current	2.5A	
Usage	Temperature	0 ~ 40 ℃ (Operating) -20 ~ 60 ℃ (Storage)	
Conditions	Humidity	10 ~ 80 % RH (Operating)	
	(except for media)	10 ~ 90 % RH (Storage)	

Note	Print speed may vary depending on the data transfer speed and the combination of command.	
⚠ Caution	<ul> <li>In case of danger, turn off the power to cut the connection.</li> <li>The power cord must be grounded to ensure safety and reduce electromagnetic interference</li> </ul>	

## 7-2 Label Types

• The label types used with this printer are as follows.

- Control Labels: PET
- Other Labels: PET

# Copyright

© BIXOLON Co., Ltd. All rights reserved.

This user manual and all property of the product are protected under copyright law. It is strictly prohibited to copy, store, and transmit the whole or any part of the manual and any property of the product without the prior written approval of BIXOLON Co., Ltd. The information contained herein is designed only for use with this BIXOLON product. BIXOLON is not responsible for any direct or indirect damages, arising from or related to use of this information.

- The BIXOLON logo is the registered trademark of BIXOLON Co., Ltd.
- All other brand or product names are trademarks of their respective companies or organizations.

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.

# 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.

# **Revision History**

Ver.	Date	Page	Description
1.00	17.03.20	-	New