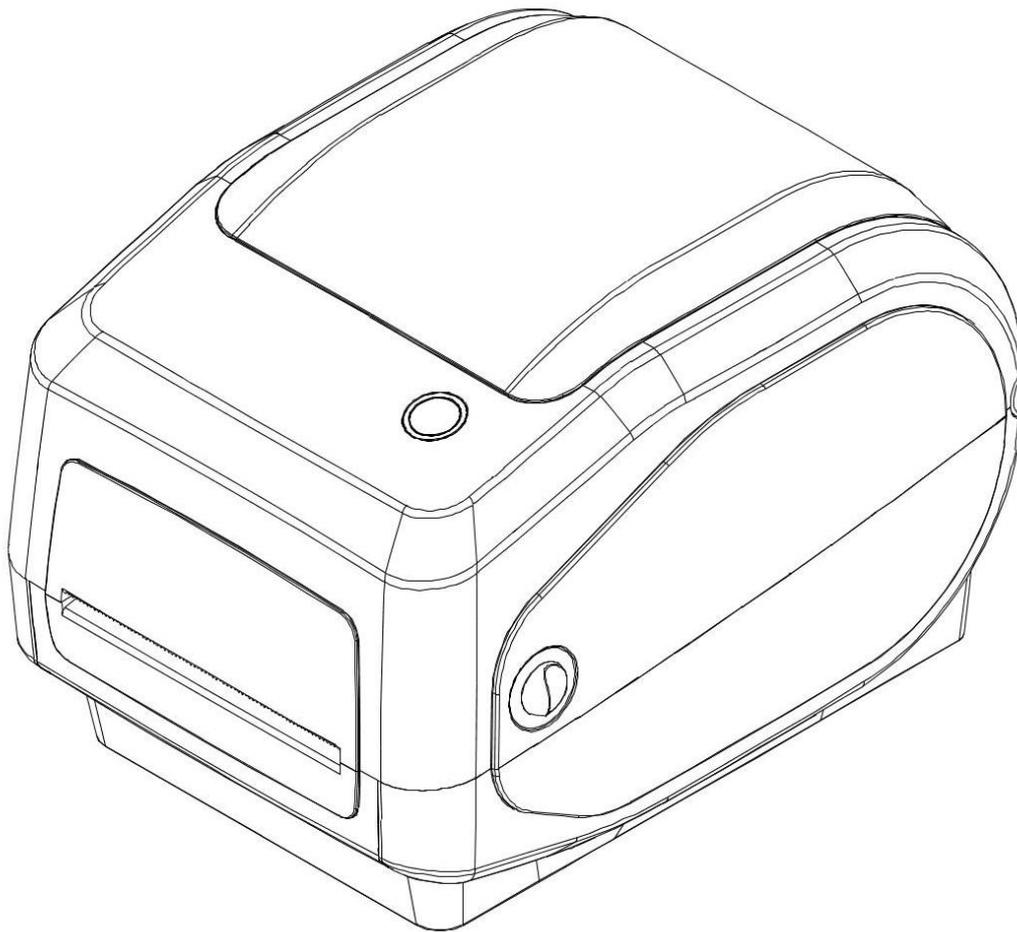


# Desktop Thermal Transfer Barcode Printer

TD-403T Desktop Thermal Transfer Barcode Printer  
User Manual



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# I. Product Introduction

Thank you for purchasing our barcode printer.

This machine is equipped with a gear-driven motor that can process 300 meters of ribbon and is designed with large-capacity roll label paper. If the internal paper capacity of 5 "OD (outer diameter) is not enough, just purchase an external label paper holder. This model can support 8 "OD (outer diameter) paper capacity that meets industrial grade standards.

The removable black label sensor supports a wide range of paper types and can be used with a variety of printing materials, including label paper, medical wristbands and folded labels. Other than that, all other commonly used barcode paper can be used.

This printer is widely used in the following areas with its super-powerful function and ease of operation:

## Application areas

- ❖ Manufacturing & warehousing and logistics industry
  - Manufacturing identification roll label
  - Inventory management label
  - Operation instruction label
  - Distribution instruction label
  - Product specification label
  - Logistics management label
  - Electronic product roll label
- ❖ Parcel post
  - Sending/receiving label
- ❖ Medical industry
  - Doctor-patient identification
  - Drug label
  - Specimen label
- ❖ Retail industry
  - Price label

- Jewelry products
- Asset management
- Washable label

❖ Small office/studio

### **1. Safety warning**

Warning 1: Do not touch the paper cutting serrations on the front of the printer to prevent lacerations.

Warning 2: The print head is a heating component. To prevent thermal burns, do not touch the print head and its surrounding components during or immediately after printing! Minors must be supervised by an adult when using the device.

Warning 3: Do not touch the surface of the print head and the connectors to avoid damage to the print head due to contact with static electricity.

Warning 4: The use of printer device in the daily living environment may cause radio interference, so please try to stay away from radio equipment during use.

### **2. Main features**

- ❖ High print quality
- ❖ Low noise
- ❖ Attractive appearance
- ❖ Reasonable structure, easy to use and maintain
- ❖ Fast printing, as fast as one label per second, greatly saving printing time
- ❖ Excellent heat dissipation for high-volume continuous operation
- ❖ Reprint function, which can effectively avoid label information loss and incomplete printing caused by Out Of Paper during printing

*The illustrations and text descriptions in this manual may be different from the actual ones. Please refer to the actual product.*

## II. Safety Instructions

Before operating the printer, please read the following contents carefully and follow them strictly.

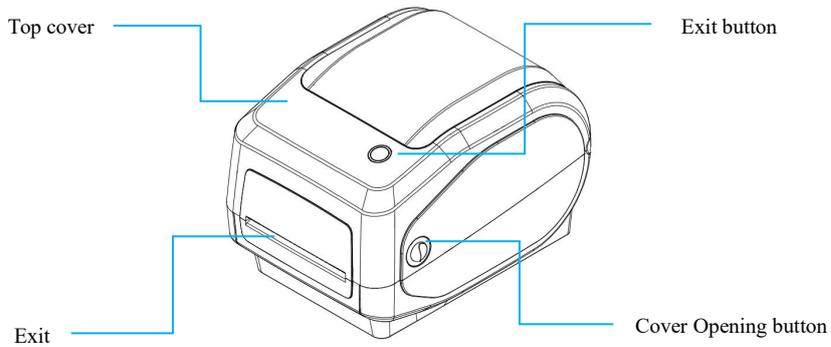
1. The printer should be placed steadily to prevent from vibration and shock.
2. Do not use or store the printer in places with high temperature, high humidity, and heavy pollution.
3. Connect the printer's power adapter to a grounded socket. Refrain from using the same socket with large motors or other devices that can cause voltage fluctuations in the power supply.
4. The printer should be kept away from water or conductive materials (such as metal). In the event of any occurrence, turn off the power immediately.
5. The printer must not print in no paper state, as this will seriously damage the printer rubber rollers and the thermal print head.
6. If you do not use the printer for a long time, disconnect the printer's power adapter.
7. The user shall not disassemble the printer for maintenance or modification without authorization.
8. Only use the included dedicated power adapter.
9. To guarantee print quality and extend product lifespan, it is advisable to use the recommended thermal printing paper of equal quality.
10. Make sure the printer is powered off when unplugging or plugging the cable.
11. When unplugging and plugging the printer's power cord, please hold the printer's power connector at the arrow (do not hold the flexible cord of the power cord for plugging or unplugging).

*Please keep this manual in a safe place for reference.*

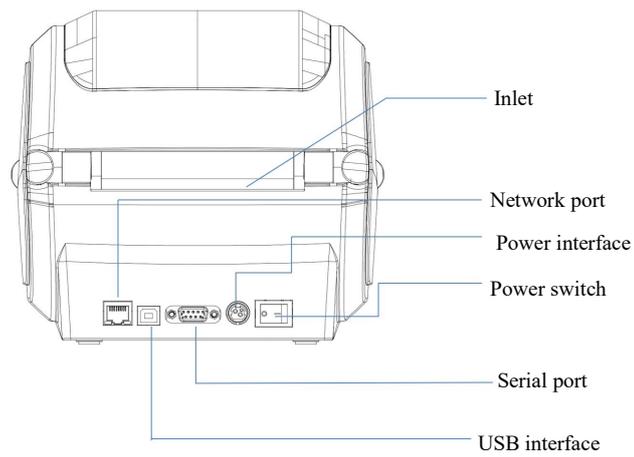
### III. Appearance Components

#### Desktop Barcode Printer

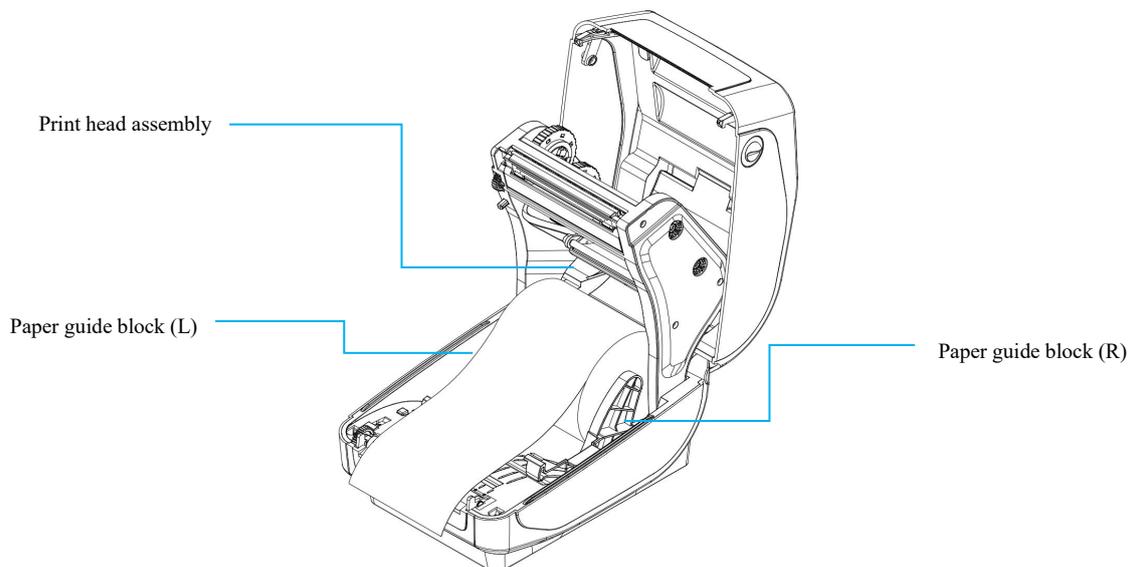
Front view



Rear view



Inside view



## IV. Technical Parameters

<b>Print parameters</b>	
Model	TD-403T
Print method	Line thermal/Line thermal transfer printing
Print speed	Thermal transfer printing: 150mm/s (max), thermal: 203mm/s
Effective resolution	(max)
Maximum print width	203dpi
Maximum print length	108 mm
Print head lifespan	1778 mm
Communication interface	150km
Sensor	USB/Network port/Serial port/Bluetooth/WIFI
Memory	Cover opening sensor/Ribbon sensor/Reflective sensor
Flash memory	(mobile)/Through-beam sensor
Character size	SDRAM: 8M FLASH: 8M English 9x17dot, English 12x24dot, Chinese 24x24dot
<b>Printing character</b>	
Character set	GB18030
Extended character table	PC437, Katakana, PC850, PC860, PC863, PC865, West Europe, Greek, Hebrew, East Europe, Iran, WPC1252, PC866, PC852, PC858, IranII, Latvian, Arabic, PT151, 1251, PC747, WPC1257, Vietnam, PC864, PC1001, Uygur, Thai
1D code	TSPL: CODE128, EAN128, ITF25, CODE39, CODE93, EAN13, EAN13+2, EAN13+5, EAN8, EAN8+2, EAN8+5, CODABAR, POSTNET, UPC-A, UPC-A+2, UPC-A+5, UPC-E, UPC-E+2, UPC-E+5, CPOST, MSI, MSIC, PLESSEY, ITF14, EAN14, CODE11 ZPL: Code 11, Interleaved 2 of 5, Code 39, Panet Code, EAN-8,

	UPC-E, Code 93, Code 128, EAN-128, EAN-13, Industrial 2 of 5, standard 2 of 5, Codabar, MSI, Plessey, UPC/EAN Extensons, UPC-A, POSTAL
QR code	QR code, PDF417, Micro PDF 417, DataMatrix, AZTEC
Character magnification/rotation	1-10x magnification /0°, 90°, 180°, 270° rotation/mirror printing/white printing
<b>Power supply</b>	
Power adapter	Input: 100~240V 50/60Hz
Input power	Output: 24V-2.5A
<b>Environmental requirements</b>	
Working environment	Temperature: 5-40°C, humidity (non-condensing) 25~85%
Storage environment	Temperature: -10-60°C, humidity (non-condensing): 10~90%
<b>Instructions</b>	
Support system	Windows/Mac/Linux
Print instructions	TSPL/ZPL/CPCL/EPL/DPL
<b>Media</b>	
Paper type	Gap paper, continuous paper, black label paper, folded single paper, flexible anti-metal label
Paper width	20~118mm
Paper length	10~1778mm
Paper thickness	0.06~0.254mm
Axes size of paper roll	1 inch/25.4mm
Outer diameter of paper roll	127mm (max)
Ribbon width	30~110mm
Ribbon length	300m
Axes size of ribbon	1 inch/25.4mm
Outer diameter of ribbon	67mm (max)

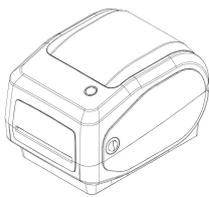
Note: The standard interface is USB, with additional interfaces available for selection. The specific interfaces will depend on the actual product

## V. Printer Installation and Operation

### 1. Unpack the printer

Check the packing list:

Please check the supporting parts when unpacking. If there are any omissions, please contact the supplier or manufacturer (examples below). The selection of specific accessories should be based on the presence of the corresponding interface in the device.



Printer



Quick Install Guide



Adapter



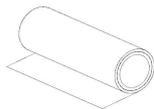
Power Cord



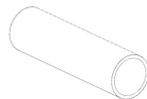
USB Cable



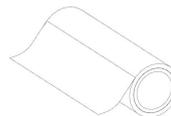
Paper Roller



Ribbon



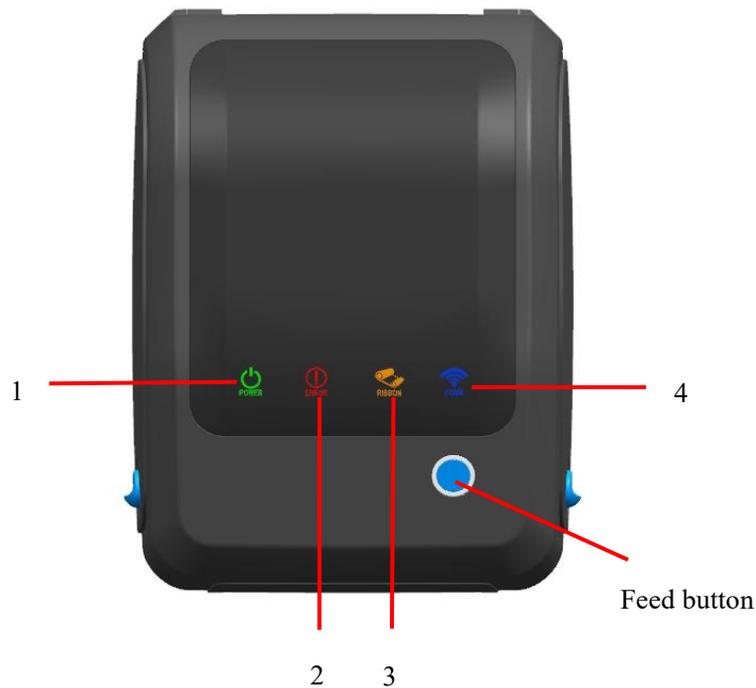
Ribbon Cartridge



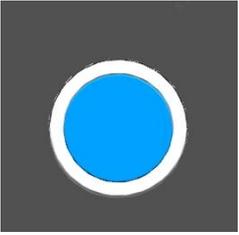
Art Paper

*The pictures are for reference only. The actual product shall prevail.*

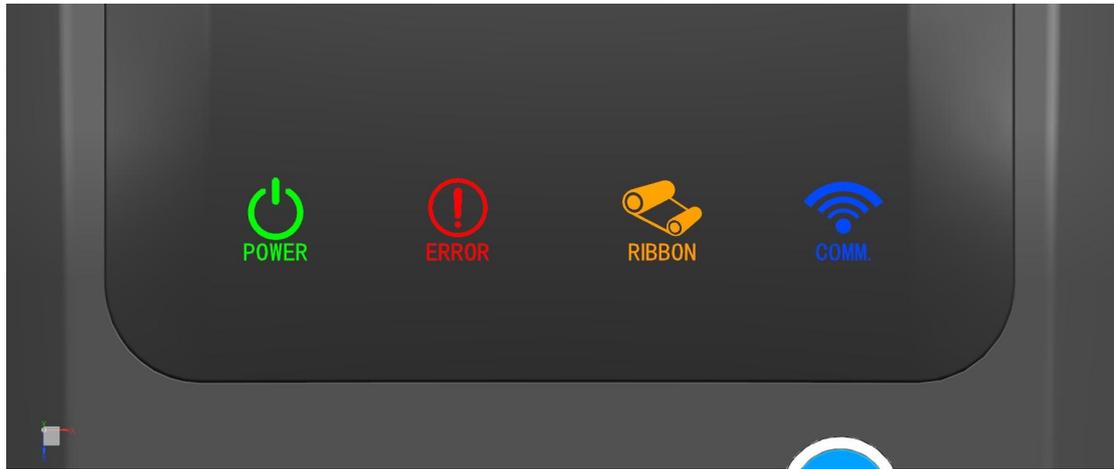
## 2. Printer parts



1. Power light (POWER)-----green light
2. Error light (ERROR)-----red light
3. Ribbon light (RIBBON)-----orange light
4. Ethernet on-line light (Comm.)-----blue light

<b>Operation Button</b>	
<b>Button</b>	<b>Function</b>
<p>Paper Ejection, Pause, and Error Cancellation Button</p> 	<ol style="list-style-type: none"> <li>① When the machine is in a ready state, press this button, it will eject a piece of paper;</li> <li>② When the machine is in a printing state, press this button, it will pause printing;</li> <li>③ When the machine is in a pause state, press this button, the machine will cancel pause (resume printing job);</li> <li>④ When the machine is in a error state, press this button, the</li> </ol>

	machine will cancel the error state and resume printing function.
--	---



Function	Description
Thermal transfer mode ready	When the green light (POWER) and orange light (RIBBON) are constantly on, the printer is ready for thermal transfer mode.
Thermal mode ready	When the green light (POWER) is light up, the printer is ready for thermal mode.
Cover opening	When you open the cover, 6 beeps will sound and the red light (ERROR) and orange light (RIBBON) will flash simultaneously.
Pause	Click the FEED (FEED) button and the printer will pause.
Out of paper	When the printer is out of paper, 3 beeps will sound and the red light (ERROR) is constantly on.
No ribbon state	When there is no ribbon, 3 beeps will sound and the red light (ERROR) will be constantly on, while the green light (POWER) and orange light (RIBBON) will keep flashing.

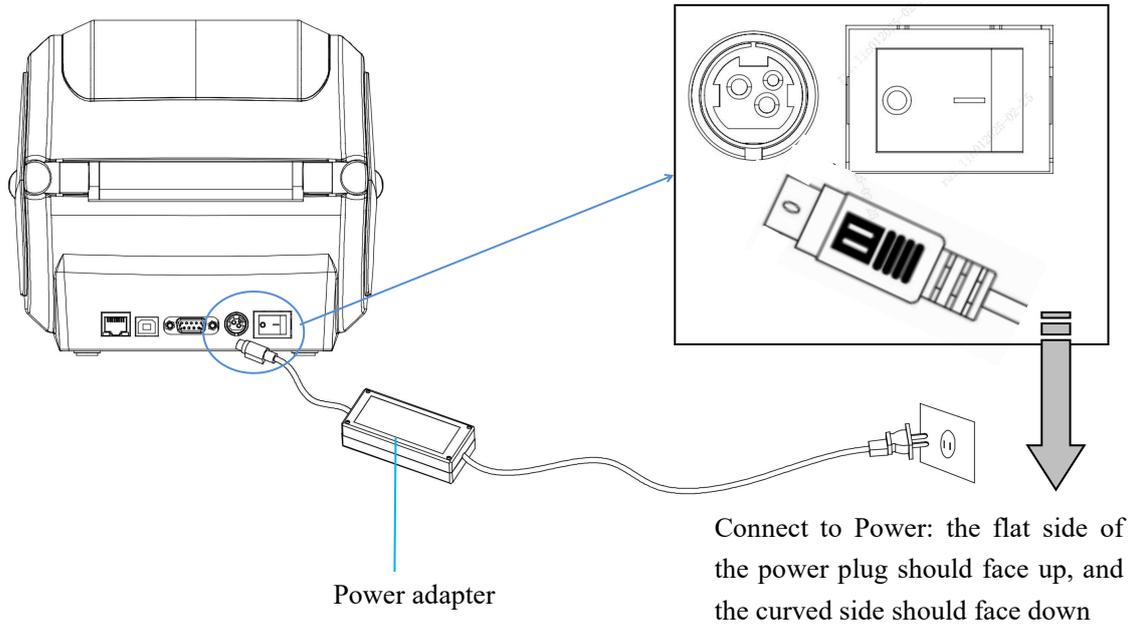
Ribbon out	When the ribbon is about to run out, the orange light will flash.
Positioning abnormality (black label or gap)	When the gap/black label cannot be found, 7 beeps will sound and the red light (ERROR) will keep flashing.
Overheat alarm	When the machine overheats, 5 beeps will sound and the green light (POWER) and red light (ERROR) will flash alternately.
Instruction error	When a instruction error occurs, 2 beeps will sound and the red light (ERROR) is constantly on.
Network port ready for online connection	When the RJ45 network cable is plugged in and connected normally, the blue light is constantly on.

### 3. Printer connection method

#### Connect the power cord

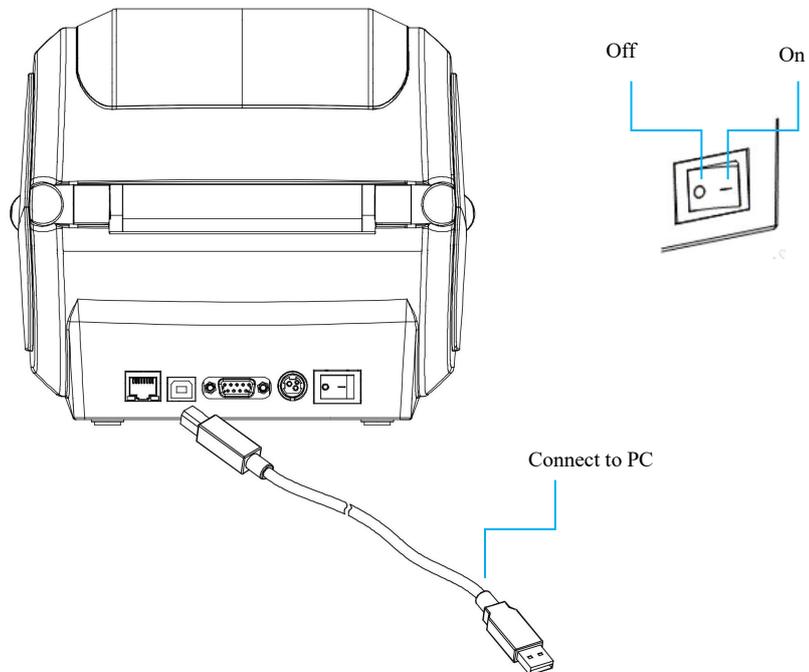
- (1) Make sure the printer power is off (○);
- (2) Connect the power adapter to the printer;
- (3) Connect the power cord to the power adapter;
- (4) Connect the other end of the power cord to a nearby socket.

*Please use the included dedicated power adapter. The connection diagram is shown below:*

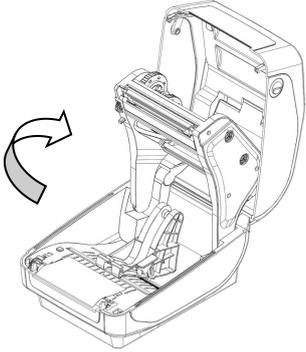
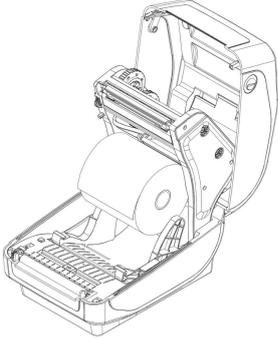
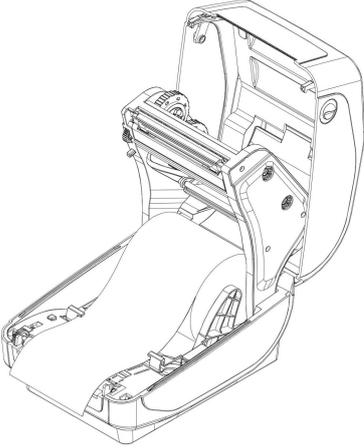


### Connect a USB cable

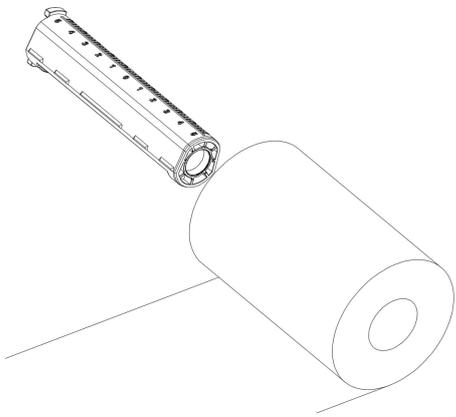
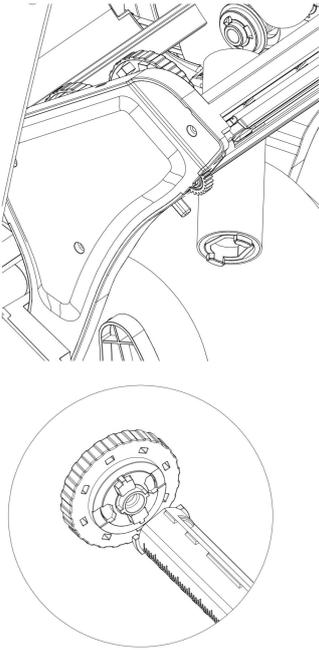
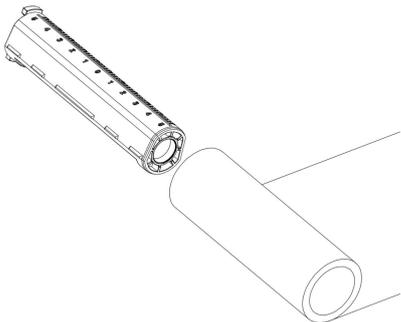
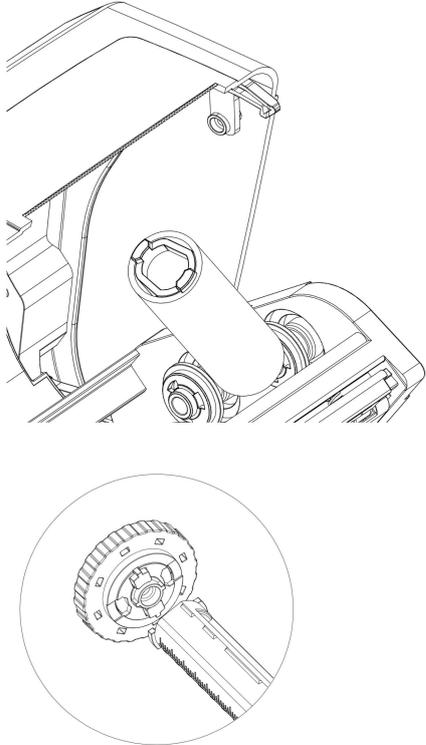
- (1) Connect the USB cable to the printer;
- (2) Connect the USB cable to the PC;
- (3) Turn the printer power on.

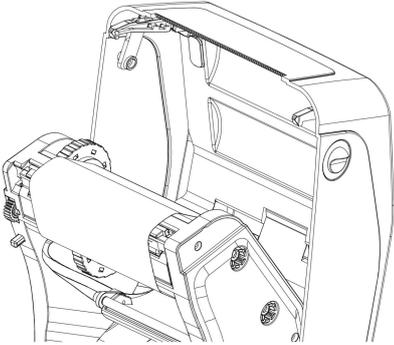
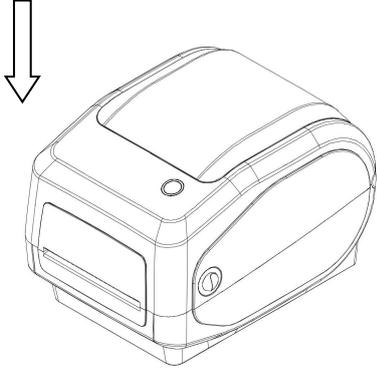


#### 4. Paper roll installation

	
<p>1. Press the cover opening button with both hands and lift the cover upwards.</p>	<p>2. Pull up the locking button of the right paper guide block by hand, then pull the left and right paper guide blocks to both sides, place the label paper, and release your hand to adjust the position so that the paper guide blocks clamp the label roll.</p>
	
<p>3. Pass the label paper through the gap sensor, black label sensor, and inlet to complete the installation.</p>	

## 5. Ribbon installation

	
<p>1. Insert the ribbon into the ribbon spindle.</p>	<p>2. Snap the ribbon spindle into the right side of the positioning shaft at the rear of the printer, then snap the left side into the hexagonal wheel, and check whether it is loose.</p>
	

<p>3. Insert the ribbon rewind spindle into the ribbon spindle</p>	<p>4. Snap the ribbon spindle into the right side of the positioning shaft at the front of the printer, then snap the left side into the hexagonal wheel, and check whether it is loose.</p>
	
<p>5. Pull out the ribbon and wrap it around the print head and securely affix it to the rewind spindle. Rotate the rewind wheel until the black section fully covers the print head. <i>Note: Wrap the ribbon's shiny side up around the print head.</i></p>	<p>2. Close the front cover, press the top cover down with both hands and press firmly. When you hear a "click", the top cover is closed completely and the installation is complete.</p>

## 6. Bluetooth pairing and printing (only valid for printers with Bluetooth)

Bluetooth printers need to be paired with the master device driving the printer before they work. The pairing process is initiated by the master device.

The usual pairing method is as follows:

- (1) Turn on the printer;
- (2) The master device searches for external Bluetooth devices;
- (3) If there are multiple external Bluetooth devices, select the printer corresponding to the Bluetooth MAC address. See the self-test page for the Bluetooth MAC address;
- (4) Enter the initial password "0000" or "1234";
- (5) Complete pairing.

Please refer to the Bluetooth function description of the master device for specific pairing methods. The TD-403T Desktop Transfer Thermal Barcode Printer with Bluetooth interface must be in standby state during pairing.

*Note: When pairing, do not turn on multiple devices simultaneously, as it may be difficult to determine which device has successfully paired.*

A printer can be only connected to one Android device and one iOS device simultaneously. When multiple upper computers are paired with the printer, the printer will automatically remove the first upper computer that was paired from its pairing list. Consequently, if this upper computer requires access to print, it must undergo re-pairing. (Only applicable to multi-connection Bluetooth)

## 7. Print with Bluetooth interface (only valid for printers with Bluetooth)

The upper computer, equipped with a virtual Bluetooth serial port (such as smartphones, laptops, desktop computers with a virtual Bluetooth interface, etc.), can send print data to the printer (with Bluetooth) for printing after successful pairing through the virtual Bluetooth serial port. If the upper computer does not have a virtual Bluetooth serial port, connect the printer driver to print.

**The following are the steps for connecting a Bluetooth interface to a PC for printing: (taking the serial port/network data debugger as an example)**

- The laptop can be paired with the printer that needs to be connected through the system's Bluetooth function (as shown in Figure 1-4);
- After the printer has been paired successfully, use the upper computer software (such as serial port/network data debugger, etc.) to select the corresponding virtual Bluetooth serial port for connection;
- After the virtual Bluetooth serial port connection is successful, enter the print instructions in the data sending area and click the "Send" button to print (as shown in Figure 5)



Figure 1



Figure 2



Figure 3



Figure 4

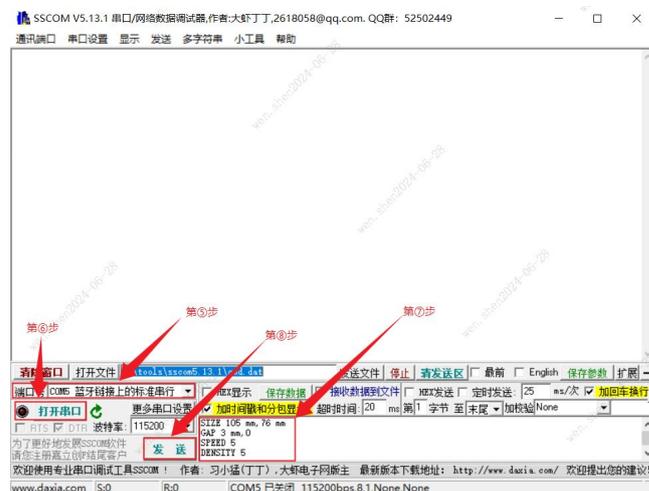


Figure 5

Note: A desktop computer must be outfitted with a Bluetooth adapter to enable printing in the same manner; conversely, a laptop is typically equipped with an integrated Bluetooth module and does not use an external Bluetooth adapter.

## 8. WiFi Network configuration (only valid for printers with WiFi)

A WiFi printer must be properly configured to establish a connection with the master device on the WiFi network before working. The configuration process is initiated by the master device.

### (1) The following are the steps to configure WiFi on a mobile device:

- Turn on the printer;
- The master device searches for an external WiFi network (e.g., a router) and connects to the WiFi network;
- Use "FeasyWiFi" APP for Bluetooth network connection and network configuration.
- Just enter the router password and wait for the WiFi network configuration to complete.

Note: When using the "FeasyWiFi" APP software to configure the network, you need to connect the corresponding printer Bluetooth in the "Bluetooth Networking" interface. It is recommended not to turn on multiple printers simultaneously when using Bluetooth networking; if there are multiple external Bluetooth devices, you can check the Bluetooth name and MAC address by printing a self-test page; pay attention to the last 4 characters of the Bluetooth name.

### (2) The method for configuring WiFi on PC is as follows:

- Connect the printer to a power source using a power cord, and establish a USB data connection between the printer and the computer;
- On the computer, open the label printer setting tool (printer\_setting\_boxed.exe) and select "wifi settings" in the setting tool;
- In "STA mode", enter the external WiFi name (such as router) and password, and the setting is successful (as shown in Figure 1);
- Select "wifi\_ip settings" and click "Read" to obtain IP information (as shown in Figure 2 and Figure 3).



Figure 1

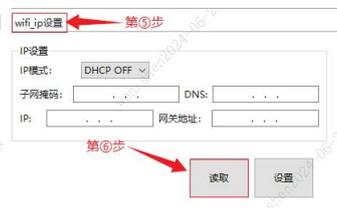


Figure 2



Figure 3

### (3) "AP mode" does not require network configuration, and just connect the printer to hotspot directly. The operation method is as follows:

- On the computer, open the label printer setting tool and select "WiFi Settings" in the setting tool;
- Switch WiFi mode to "AP" and click "Settings";

- c. After successful setting, click "Read" to obtain the AP\_IP address (as shown in Figure 4 and Figure 5)



Figure 4

Figure 5

*Note: When using the label setting tool for configuration, pay attention to distinguishing between "STA mode" and "AP mode". In both modes, IP address information can be queried by printing a self-test page.*

## 9. Print with WiFi interface

### PC connected WiFi interface for printing:

A desktop computer can connect to a WiFi hotspot (such as router) in 'STA mode' or to a printer hotspot in 'AP mode' by plugging in a wireless network adapter. Subsequently, you can use upper computer software (such as network debugging assistant, etc.) , and enter the relevant IP address. Upon successful connection, you can wirelessly send printing instructions to the WiFi printer for printing.

*Note: The laptop has its own WiFi module function, no need to plug in a wireless network adapter.*

**In "STA mode", connect the WiFi printer using the upper computer software as follows (taking the network debugging assistant as an example):**

- When the printer is in the startup ready state, plug in a wireless network adapter on the PC and establish a connection with the WiFi hotspot configured by the printer;
- Open the upper computer software. In the upper computer software: (1) Select "TCP Client" as the protocol type; (2) Enter the IP address obtained by the configuration as the remote host address; (3) Enter the TCP port number as the remote host port number: 9100
- Click the "Connect" button and the network is successfully connected;
- Enter the print instructions in the data sending area and click the "Send" button to print (as shown in Figure 1)



Figure 1

*Note: The "AP mode" operation method is the same as the "STA mode" operation method. The WiFi\_IP address can be queried on the self-test page*

## The PC side uses the driver to connect to WiFi printing:

The desktop computer can be connected to the WiFi network hotspot in "STA mode" (such as a router) or the printer hotspot in "AP mode" by inserting a wireless network card, and then installing the WiFi printer driver, you can send print jobs to the printer with WiFi through the wireless network for printing

Note: Laptop comes with WiFi module function, no need to insert wireless network card;

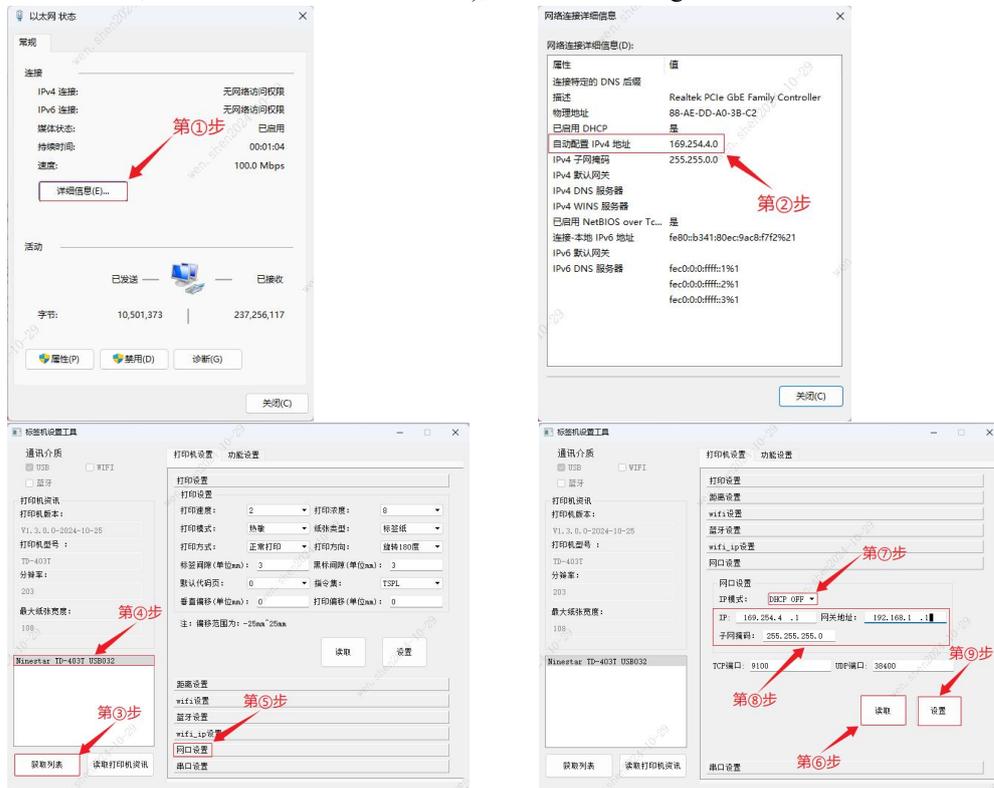
## 10. Print using a network port:

### Print the directly connected network port on the PC (using only DHCP OFF IP mode) :

You can directly connect the printer network port to the computer network port using a network cable, set the static IP address of the network port using the label machine setting tool, and install the network port printer driver. Then you can send print jobs to the printer through the network port for printing.

### If the printer network port is directly connected to the computer network port using a network cable, set the Label Machine Setting Tool as follows:

- View the IP address of the PC during direct connection (path: Control Panel → Network and Internet → Network and Sharing Center), click "Ethernet" in the interface, after entering the interface, click "Details" to view the IP address (as shown in Figure 1 and 2).
- Open Label Machine Setting Tool to obtain the printer list and select the printer model in the printer list
- Select Network Port Settings, change the IP address mode to DHCP OFF, enter an IP address in the same network segment as the PC IP address (for example, IP: 169.254.xxx.xxx, gateway: 192.168.1.1, subnet mask: 255.255.255.0), and click Settings.



## PC Ethernet port printing (using only DHCP ON IP mode) :

Use one network cable to connect the printer network port to the router network port, and another network cable to connect the computer network port to the router network port. Obtain the dynamic IP address of the network port using the label machine setting tool, and install the network port printer driver. Then you can send print jobs to the printer through the network port

*Note: Network ports can also be printed through the Intranet formed within the company, and the carrier is required to assign network IP (such as a router, etc.). The Intranet needs to pay attention to whether the IP address is in the same network segment.*

## When the Ethernet is connected using network cables, perform the following operations on the Label Printer Setting Tool:

- View the IP address of the PC during direct connection (path: Control Panel → Network and Internet → Network and Sharing Center), click "Ethernet" in the interface, after entering the interface, click "Details" to view the IP address (as shown in Figure 1 and 2).
- Open Label Machine Setting Tool to obtain the printer list and select the printer model in the printer list
- Select Network Port Settings, change the IP mode to DHCP ON, and click Read to obtain the IP address of the network port



*Note: ① If the IP address mode is DHCP OFF, select DHCP ON in Network Port Setting, click Set, and then click Read*

*② For details about Windows system, see the Windows Driver Installation and Printing Test Page Instructions.*

*③ For detailed steps of Mac system, see "Mac Driver Installation and Printing Test Page Instructions";*

*For details about the Ubuntu system, see "Ubuntu Driver Installation and Printing Test Page Instructions".*

## 11. Print using a serial port (Supported by Windows drivers only)

### The PC is connected to the serial port for printing

Use the serial cable to connect the serial port of the printer to the USB port of the computer, use the label machine setting tool to obtain the serial port setting parameters, and then install the serial port printer driver, you can send print jobs to the printer through the serial port for printing

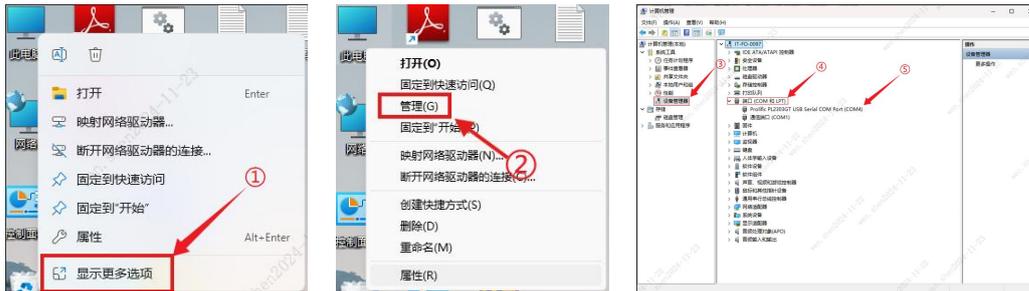
Note: ①: You can also obtain serial port parameter information by printing the self-test page. ②: For details about Windows system, see "Windows Driver Installation and Printing Test Page Description".

### How to confirm the connection to the printer COM port is as follows:

a. Find the icon of "This Computer" in the computer desktop, click "right button", choose "Show more options", and then select "Management" in the interface.

b. Enter the "Computer Management" interface, find and select "Device Manager" on the "left" of the interface, find and select "Port (COM and LPT)" on the "right" of the interface, you can view the COM port of the serial port connected between the computer and the printer.

Note: 1: Pay attention to whether the serial cable needs to be installed with a serial port driver; otherwise, the serial cable cannot be used directly. 2: If there are multiple COM ports in Port (COM and LPT), remove and insert the serial cable to determine the COM port of the printer.



## VI. Printer Switches, Buttons and Indicator Lights

### 1. Power switch

The power switch is used to turn the printer power on and off. The printer's power switch is located at the rear of the printer. When the "-" button is pressed, the printer turns on; when the "○" button is pressed, the printer turns off.

*Note: Turn on the switch only after the power supply is connected.*

### 2. Buttons and indicator lights

#### Description of button functions

Button	Printer status	Function	Description
Feed button	Ready mode	Feed	When the printer is ready (LED is green), click this button and the roll label paper will feed into the front of the next label sheet.
Feed button	Print mode	Pause	The printer pauses printing by clicking the (PAUSE) button during multiple consecutive prints.
Feed button	Pause mode	Cancel pause	When the printer is in a paused state, click the (PAUSE) button to cancel pause, and the printer resumes normal printing.
Feed button	Error occurred	Cancel error	When the error (red) light is on, click the the (PAUSE) button, and the printer will cancel the error, resume the print function, and reprint the label layout when the error occurred.

#### Description of indicator lights

Function	Description	Light signal status	Beep
Power-on self-test	<p>A.Power off the printer</p> <p>B.Confirm that the printer is fed with paper and close the top cover of the printer</p> <p>C.Press and hold the (FEED) button and power on the printer. When you hear a beep, release the button to print out a self-test test page</p>		

<b>Printer initialization</b>	<p>A.Power off the printer</p> <p>B.Press and hold the (FEED) button and power on the printer. When you hear 8 beeps, release the button. At this time, the printer will reset the printer parameters to Factory Defaults</p>		
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*Note: Indicator lights are defined in several versions. Please refer to the actual product.*

## VII. Printer Test

### 1. Print self-test page

When the printer is initially installed or there is a problem with the printer, you can perform a self-test program to confirm the following status: parameter setting status of the firmware version printer, print quality, and related setting information of external devices, etc. If you confirm that there is no problem with the printer after the self-test, please check other devices or software. This feature operates independently from other devices or software.

#### The self-test method is as follows:

- (1) Confirm that the power is connected and the roll of paper is installed correctly.
- (2) Confirm that the printer is turned off and the top cover is securely closed.
- (3) Press and hold the feed button, then press the power button to turn on the printer, and release the button after the printer is turned on (when you hear 1 beep).

### 2. Print with Windows drivers

- (1) Install Windows drivers until the driver installation is complete.
- (2) Set the "Port" of the Windows drivers as the corresponding interface to be used.
- (3) Use the "Print Test Page" function of the Windows drivers to print a test page.

*Note: See "Windows Driver Installation and Printing Test Page Instructions" for detailed steps*

### 3. Print with Mac drivers

- (1) Install MAC drivers until the driver installation is complete.
- (2) Open "Printer Queue" after the Mac driver printer is successfully added.
- (3) Use the "Print Test Page" function of the Mac drivers to print a test page

*Note: See "Mac Driver Installation and Printing Test Page Instructions" for detailed steps*

### 4. Print with Ubuntu drivers

- (1) Install Ubuntu drivers until the driver installation is complete.
- (2) Enter the "Printer Properties" interface after the Ubuntu driver printer is added successfully.
- (3) Use the "Print Test Page" function of the Ubuntu drivers to print a test page.

*Note: See "Ubuntu Driver Installation and Printing Test Page Instructions" for detailed steps*

### 5. Label learning

In the following cases, the user can learn label positioning so that the printer can better position the label:

- Install and use the printer for the first time;
- Use the printer for the first time after the sensor has been cleaned;
- Reuse the printer after it has not been used for a long time;
- Replace the new type of paper roll;
- The printer cannot identify the mark effectively during printing;
- Restore the label printer to factory settings;

### **6. Out Of Paper learning**

- (1) Put the gap label paper into the printer and turn on the printer;
- (2) Connect the printer to the computer with a USB cable and open the label printer setting tool;
- (3) After confirming that the connection between the printer and the setting tool is normal, perform DAC self-learning first;
- (4) Rewind the label paper and leave the printer in a paperless state for Out Of Paper learning;
- (5) After successful learning, pass the label paper through the paper guide block, and the printer can be used normally.

### **7. Gap learning**

- (1) Put the gap label paper into the printer and turn on the printer;
- (2) Connect the printer to the computer with a USB cable and open the label printer setting tool;
- (3) After confirming that the connection between the printer and the setting tool is normal, perform DAC self-learning first;
- (4) Then use the setting tool "Gap Self-Learning" button and wait until the printer learns successfully.

### **8. Black label learning**

- (1) Put the gap label paper into the printer and turn on the printer;
- (2) Connect the printer to the computer with a USB cable and open the label printer setting tool;
- (3) Take out the gap label paper and put in the black label paper;
- (4) Then use the setting tool "Black Label Self-Learning" button and wait until the printer learns successfully.

When the printer learns in continuous paper mode, learning is not effective.

Users use the printer tool software to complete the learning (see the Printer Setup Tool Instructions for details).

*Note: ① Upon completing the learning, you may reopen the top cover and put the blank label paper that you have just learned to print in the printer again to avoid wasting paper;*

*② If you accidentally perform Out Of Paper learning while the printer is in a paper state, you can make the printer in a paperless state and perform Out Of Paper learning again.*

*③ After restoring the factory settings, if the printer cannot be used normally, it is necessary to relearn the printer to ensure its normal use. The operation method is as follows;*

- a. Open the label printer setting tool and perform the "DAC Self-Learning" first (ensure that the paper in the machine is gap paper);*
- b. After the DAC self-learning is completed, perform "Gap Self-Learning";*

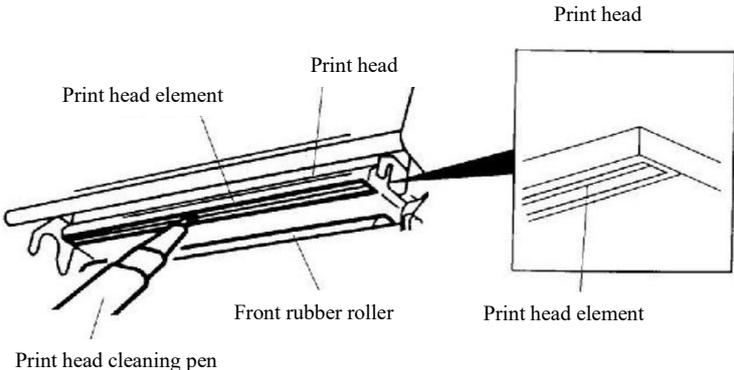
- c. *After completing the gap self-learning, rewind the learning label paper and make the printer in a paperless state for "Out Of Paper learning";*
- d. *Take out the gap label paper, put in the black label paper, and finally perform "Black Label Self-Learning".*

## VIII. Clean the Printer

Perform this simple printer maintenance program to ensure print quality and extend printer lifespan. Here are some our maintenance recommendations.

1. Please use the tools listed below to clean and maintain your printer:

- Cotton swab
  - Cotton cloth
  - Vacuum cleaner or air brush
  - 100% industrial alcohol
2. Cleaning and maintenance steps:

Cleaning part	Step
<p><b>Print head</b></p>	<ol style="list-style-type: none"> <li>1. Please power off the printer</li> <li>2. Allow the print head to cool for at least one minute</li> <li>3. Wipe the surface of the print head with a cotton swab moistened with 100% industrial alcohol</li> </ol> 
<p><b>Rubber roller</b></p>	<ol style="list-style-type: none"> <li>1. Please power off the printer</li> <li>2. Rotate the rubber roller and carefully wipe it with a cotton cloth or cotton swab moistened with 100% industrial alcohol</li> </ol>
<p><b>Paper cutting blade</b></p>	<p>Wipe with a cotton cloth moistened with 100% industrial alcohol</p>
<p><b>Sensor</b></p>	<p>Use an air brush or vacuum cleaner to remove dust from the sensor</p>
<p><b>Machine exterior</b></p>	<p>Wipe with a damp cotton cloth</p>

<b>Machine interior</b>	Use an air brush or vacuum cleaner to remove dust from the machine
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Note:

- Do not touch the print head directly with your hands. If you accidentally touch it with your hands, please wipe it with a cotton swab moistened with 100% industrial alcohol
- Please use industrial alcohol
- Do not use medicinal alcohol, which may damage the print head
- If your printer frequently displays error messages, please clean your printer's sensors frequently
- The printer has a maximum print rate of 15%per dot line. If a full-width black line is required, the height of the black line must not be greater than40 dots(5mm high for 203 DPI models, 3.3mm high for 300 DPI models).

## IX. Troubleshooting

Operator's common problems and solutions are described in the table below. If your troubleshooting as described below does not resolve the problem, or if the printer is still not functioning properly, contact the printer manufacturer's customer service for further assistance.

<b>Problems</b>	<b>Possible causes</b>	<b>Solutions</b>
<b>The power light does not light up</b>	<ul style="list-style-type: none"> <li>● The plug of the AC socket and the plug of the power supply are not properly connected to the printer socket</li> <li>● Printer power switch is not on</li> </ul>	<ul style="list-style-type: none"> <li>● Check the power connector and make sure that the AC socket and the plug of the power supply are properly connected to the printer</li> <li>● Turn on the power switch</li> </ul>
<b>Ribbon out</b>	<ul style="list-style-type: none"> <li>● Ribbon out</li> <li>● The ribbon installation path is incorrect</li> </ul>	<ul style="list-style-type: none"> <li>● Install new ribbon</li> <li>● Please follow the steps for ribbon installation to reinstall</li> </ul>
<b>Out of paper</b>	<ul style="list-style-type: none"> <li>● Out of label paper</li> <li>● The roll label installation path is incorrect.</li> <li>● Gap/black label sensor detected incorrectly</li> </ul>	<ul style="list-style-type: none"> <li>● Install new label paper</li> <li>● Please follow the steps for label installation to reinstall</li> <li>● Recalibrate label sensor</li> </ul>
<b>Paper jam</b>	<ul style="list-style-type: none"> <li>● Gap/black label sensor detected incorrectly</li> <li>● The label size is not set correctly</li> <li>● There may be roll label paper jammed inside the printer</li> </ul>	<ul style="list-style-type: none"> <li>● Recalibrate label sensor</li> <li>● Set the correct label size</li> <li>● Clean the inside of the printer</li> </ul>
<b>Unable to print</b>	<ul style="list-style-type: none"> <li>● Check whether the transmission line is connected to the machine's transmission port slot</li> </ul>	<ul style="list-style-type: none"> <li>● Reconnect the transmission line</li> <li>● Replace with new transmission line</li> </ul>

		<ul style="list-style-type: none"> <li>● The ribbon and label used do not match</li> <li>● Confirm whether the ink side of the ribbon is installed correctly</li> <li>● Reinstall the ribbon</li> <li>● Clean the print head</li> <li>● The printer's print density is not set correctly</li> <li>● The print head connection cable is not well connected. Please turn off the printer power and reconnect the print head connection cable</li> <li>● Please confirm whether the connection cable of the stepper motor is connected correctly</li> </ul>
<b>Poor print quality</b>	<ul style="list-style-type: none"> <li>● The ribbon and label paper are not installed correctly</li> <li>● Dust or adhesive build-up on the printing head</li> <li>● The print density is set improperly</li> </ul>	<ul style="list-style-type: none"> <li>● Reinstall consumables</li> <li>● Clean the print head</li> <li>● Clean rubber rollers</li> </ul>
	<ul style="list-style-type: none"> <li>● Print head damaged</li> <li>● The ribbon and label used do not match</li> </ul>	<ul style="list-style-type: none"> <li>● Adjust the print density and speed of the printer</li> <li>● Print out the self-test value to see if the print head is damaged. If the print head is damaged, please replace it</li> </ul>

		<ul style="list-style-type: none"> <li>● Replace with suitable ribbon or label paper</li> <li>● If the thickness of the label exceeds 0.22 mm , the print quality may not be good enough, please increase the pressure of the printing head first</li> <li>● Confirm that the print head holder is completely closed</li> </ul>
<b>Paper skip occurs during printing</b>	<ul style="list-style-type: none"> <li>● The label size setting is incorrect or incomplete</li> <li>● The sensor is not recalibrated when the label is replaced</li> <li>● The label sensor is covered with dust, causing incorrect detection</li> </ul>	<ul style="list-style-type: none"> <li>● Please confirm that the label size setting is correct</li> <li>● Please recalibrate the label sensor</li> <li>● Use an air brush to remove dust from the sensor</li> </ul>
<b>The printing position is incorrect when printing small roll labels</b>	<ul style="list-style-type: none"> <li>● The label sensor is not set correctly</li> <li>● The label size is not set correctly</li> <li>● The vertical offset in the label style of the printer driver is not set correctly</li> </ul>	<ul style="list-style-type: none"> <li>● Recalibrate label sensor</li> <li>● Set the correct roll label size and roll label gap size</li> <li>● If you are using BarTender software , set the vertical offset in the printer driver</li> </ul>
<b>The content to be printed on the left and right sides is missing</b>	<ul style="list-style-type: none"> <li>● The label size is not set correctly</li> </ul>	<ul style="list-style-type: none"> <li>● Set the correct label size</li> </ul>

<p><b>Wrinkle problem</b></p>	<ul style="list-style-type: none"> <li>● The ribbon is not installed correctly</li> <li>● The label paper is not installed correctly</li> <li>● Print density is incorrect</li> <li>● The label paper is not fed correctly</li> </ul>	<ul style="list-style-type: none"> <li>● Please set a suitable label printing density</li> <li>● Please adjust the roll label width adjuster to fit the label width</li> </ul>
<p><b>Gray lines appear on black label paper</b></p>	<ul style="list-style-type: none"> <li>● The print head is dirty</li> <li>● The rubber roller is dirty</li> </ul>	<ul style="list-style-type: none"> <li>● Clean the print head</li> <li>● Clean rubber rollers</li> </ul>
<p><b>No printing on the label</b></p>	<ul style="list-style-type: none"> <li>● The roll label installation path is incorrect</li> </ul>	<ul style="list-style-type: none"> <li>● Please refer to the steps in the label installation chapter to reinstall the label</li> </ul>