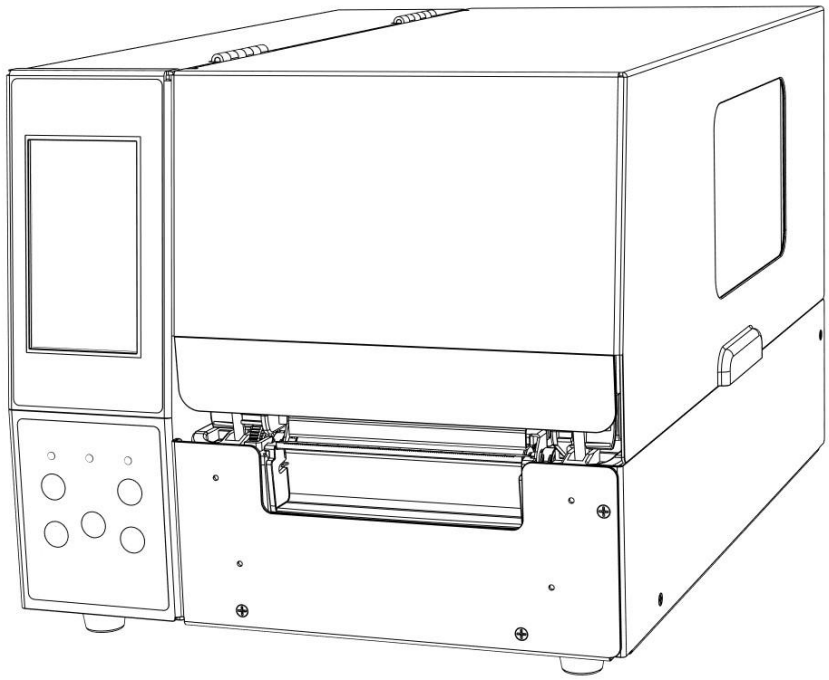
F Series Touchscreen Label Printer

User's Manual



ZMIN TECHNOLOGIES

2025-5-9 Version 1.2

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Preface

Dear customer, thank you for choosing ZMIN barcode label printer.

SHENZHEN ZMIN Technology Co., Ltd. is committed to providing you with high-quality products and services.

This manual details how to install, operate, and maintain the printer. Please read this manual carefully before using the equipment.

Disclaimer Terms

- **Copyright:** © 2023 SHENZHEN ZMIN Technology Co., Ltd. All rights reserved.
- **Declaration**: Operation of this equipment in a residential environment may cause radio interference.

⚠

- **Limitation of Liability**: The manufacturer has made every effort to ensure the accuracy of the product description; however, errors may occur. All specifications and configurations of this product are subject to change without prior notice. Neither the manufacturer nor any other party involved in the delivery of this product shall be liable for any direct or indirect damage arising from discrepancies or errors between this manual and the described product.
- **Exclusion of Consequential Damages**: Under no circumstances shall the manufacturer or any other party involved in the delivery of the product be held responsible for any damages (including but not limited to loss of business profits, business interruption, loss of business information, or other financial losses) resulting from the use or inability to use this product.

⚠Warning

- Unauthorized disassembly or assembly of the printer and its power adapter by non-manufacturer-certified personnel is strictly prohibited. Doing so may result in electric shock, mechanical injury, or damage to internal components.
- The use of damaged or worn power cords is strictly prohibited, as it may cause electric shock or fire.
- Avoid excessive bending or pulling of the power cord. Do not place heavy objects on the cord. When unplugging the power, always grip the plug itself—never pull the cord—to prevent damage that could lead to fire or electric shock.
- Refer to the specification label on the printer and power adapter to ensure that the power supply in use meets the required specifications. Use only the original or manufacturer-approved power adapter; otherwise, malfunctions or permanent damage to the printer may occur.
- This printer is intended for indoor use only. Do not operate the device outdoors or in environments with high humidity, extreme heat, or extreme cold.
- Do not apply pressure or strike the printer, as this may cause physical damage or operational failure.
- In residential environments, this product may cause radio frequency interference. In such cases, the user is responsible for taking appropriate corrective measures.
- Place the printer on a level and stable surface.
- Do not block the ventilation openings of the device, as this may cause internal overheating and lead to equipment malfunction.
- Turn off the printer power if it will not be used for an extended period of time.
- Use high-quality ribbons and label paper. The use of inferior consumables may permanently damage the print head.
- The print head becomes hot during operation. To avoid personal injury or damage to the print head, do not touch the print head while the printer is in use.
- The print head and electronic components are sensitive to electrostatic discharge (ESD). Avoid touching these parts to prevent potential damage.

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Important Notice

The thermal print head is a sensitive component due to its electromechanical characteristics and is therefore susceptible to damage.

Damage to the print head caused by improper maintenance or usage is not covered under warranty.

Please observe the following precautions to prevent premature failure of the print head during its expected service life:

1. Do not scratch or touch the print head with any hard or sharp objects.

2. To prevent corrosion or damage from electrostatic discharge (ESD), do not touch the surface of the print head with bare hands.

3. To avoid chemical corrosion, do not allow the print head to come into contact with any liquid or moist objects.

4. For cleaning purposes only, use isopropyl alcohol (IPA) — no other solvents should be used to wipe the print head surface.

5. Use only high-quality consumables, because：

- If labels contain foreign particles such as paper dust, sand, or adhesive residue, these may scratch the print head during operation.
- If the ribbon contains corrosive chemical ions such as sodium (Na), potassium (K), or chlorine (Cl), the print head may become damaged over time.

Before purchasing consumables, always verify their quality. Print head damage caused by substandard consumables will not be covered under warranty.

1 Chapter 1 Introduction

1.1 Technical Specifications

1.1.1 Printer Parameters

Model	F2T	F3T	F6T
Resolution	203DPI	300DPI	600DPI
Print Method	Direct Thermal / Thermal Transfer		
Maximum Print Speed	8 IPS(203.2 mm/s)	6 IPS(152.4 mm/s)	3 IPS(76.2 mm/s)
Maximum Print Width	4.25″(108 mm)	4.15″ (105.6 mm)	4.15″ (105.6 mm)
Maximum Print Length	315″（8000mm）	157.5″（4000mm）	78.7″（2000mm）
Memory	32 MB Flash ROM, 16 MB SDRAM		
Label Roll Dimensions	Width：Maximum 118mm，Minimum 20mm Outer Diameter：Maximum 8" (203.2 mm), Inner Diameter: Minimum 1" (25.4 mm)		
Label Thickness	0.06～1.8mm (0.002″～0.07″),including liner thickness, supports flexible metal-resistant labels		
Ribbon Dimensions	Maximum Print Width：110mm Maximum Print Length：300M Outer Diameter (Max): 2.76″(70mm) Core Diameter: 0.5″(12.7mm)		
Media Sensing Method	Adjustable Reflective and Transmissive Sensors		
Supported Barcodes	1D Barcode : Code 39，Code 93，Code 128，Codabar，EAN-8/13/128，Interleave 2 of 5，UCC-128，UPC A/E 2 and 5 add-on, etc. 2D Barcode : Data Matrix, MaxiCode, PDF417,QR, etc.		
RFID Function (Optional)	Integrated high-performance RFID reader/writer, compatible with UHF EPC Gen 2 / ISO 18000-6C tags.		
Interfaces	USB interface, RJ45 Ethernet port		
Keys/Buttons	Five input keys		
LED Indicators	Three LEDs		
Display Screen	4.3" IPS capacitive touchscreen (480×800 resolution)		
Input Power	85 - 264 VAC, 47 – 63 Hz, Rated Power: 150W		
Weight	12.5 KGS		

Dimensions (W x D x H)	Width 299 * Depth 410 * Height 270 mm
Operating Environment	Temperature: 32° F ~ +104° F (0° C ~ 40° C) Relative humidity: 5% - 85% non condensing
Storage Environment	Temperature: -40° F ~ +140° F (-40° C ~ 60° C) Relative humidity: 5% - 85% non condensing
Optional Accessories	Automatic Peeler, External Rewinder, etc.

1.1.2 Unpacking and Accessory Inspection

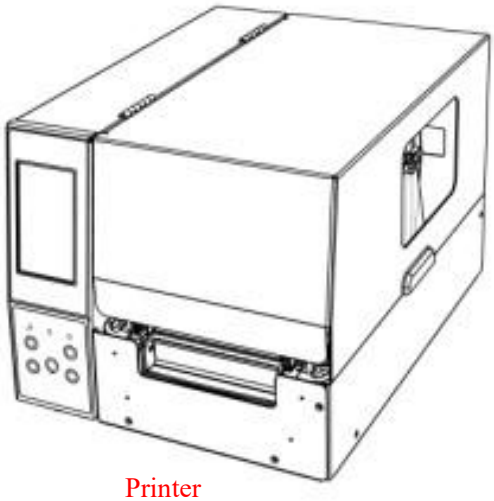
Please keep the original packaging box and all packing materials for future transportation or storage of the printer.

Before unpacking, please first inspect the printer for any damage that may have occurred during shipping. Check the exterior of the carton, the printer body, and all accessories for signs of physical damage. If shipping damage is found, immediately file a written claim with the carrier.

Please check whether all accessories are present. Verify against the packing list below. If any accessory is missing or damaged, please contact your authorized dealer immediately.

Packing List (Please refer to Figure 1.1-1):

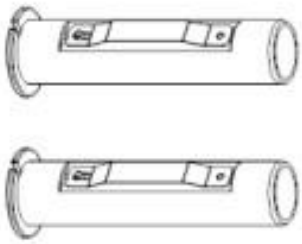
1. Printer..... 1 unit
2. Power Cord..... 1 piece
3. USB Data Cable..... 1 piece
4. Ribbon Spindle..... 2 pieces
5. Media Spindle..... 1 piece
6. Media Roll Guide..... 2 pieces
7. Large Roll Adapter..... 2 pieces
8. Quick Start Guide..... 1 copy
9. CD-ROM..... 1 disc
10. Warranty Card..... 1 copy
11. Certificate of Conformance..... 1 piece
12. Ribbon Take-up Core..... 1 piece
13. Printhead Pressure Adjustment Spring 1 piece



Printer



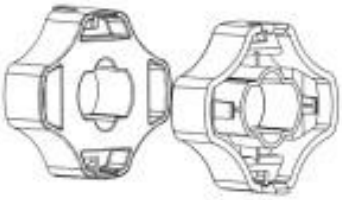
Power cord



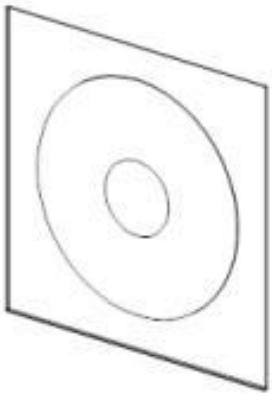
Ribbon Spindle



Media Spindle



Large Roll Adapter



CD-ROM



Media Roll Guide

Figure 1.1-1: Printer and Some Accessories

2 Chapter 2 Operation

Before installing and using the printer, please observe the following precautions:

1. **Ensure Adequate Clearance Above the Printer**: There must be enough space above the printer to facilitate lifting the top cover.
2. **Proximity to the Computer**: The distance between the printer and the computer should not exceed the length of the communication cable used to connect them.

2.1 Main Components and Structure

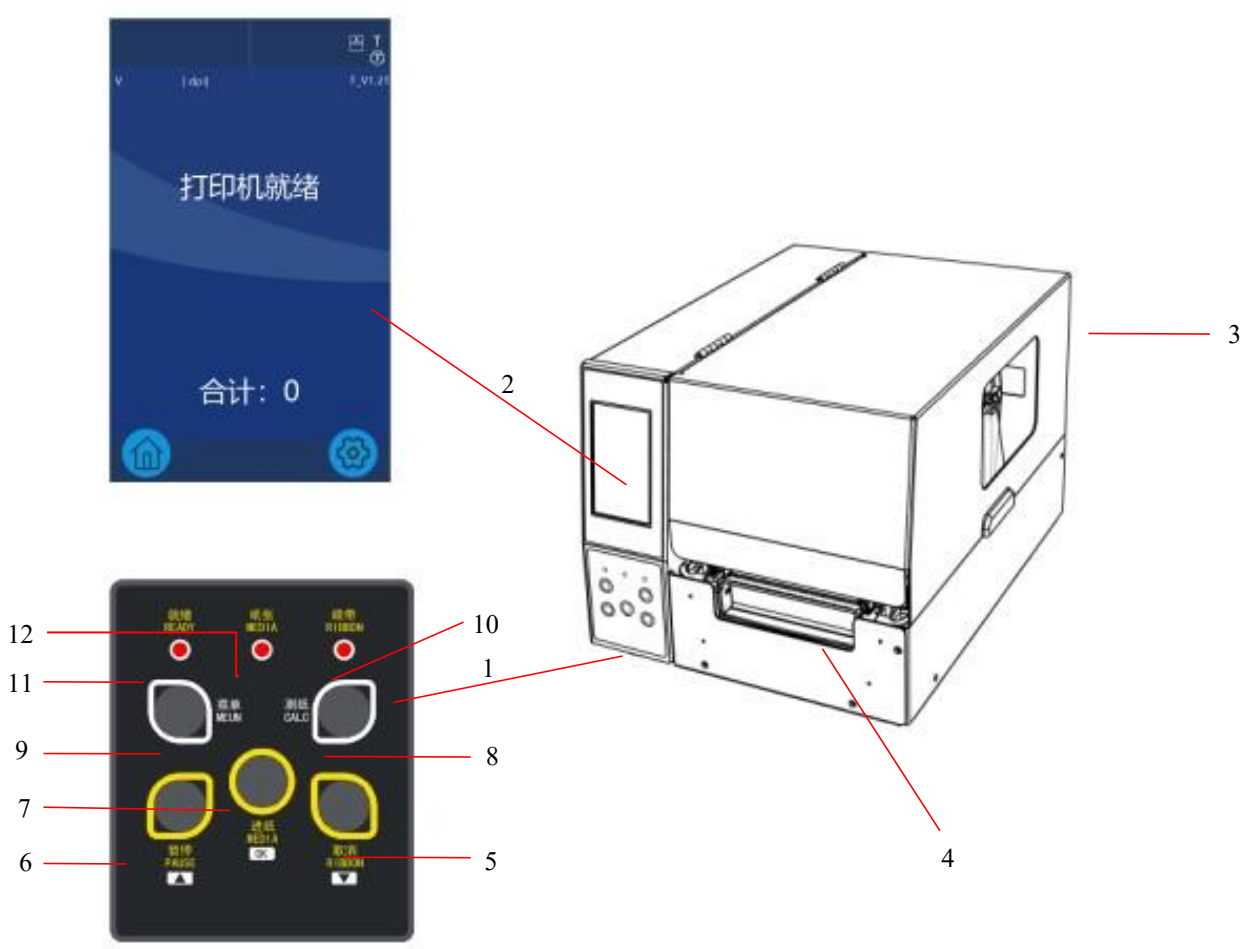


Figure 2.1-1

1. Control Panel	2. Touch Screen	3. Right-side Cover
4. Paper Exit Port	5. "CANCEL" Button	6. "PAUSE" Button
7. "FEED" Button	8. “CALC” Button	9. "MENU" Button
10. Ribbon Indicator Light	11. READY Indicator Light	12. MEDIA Indicator Light

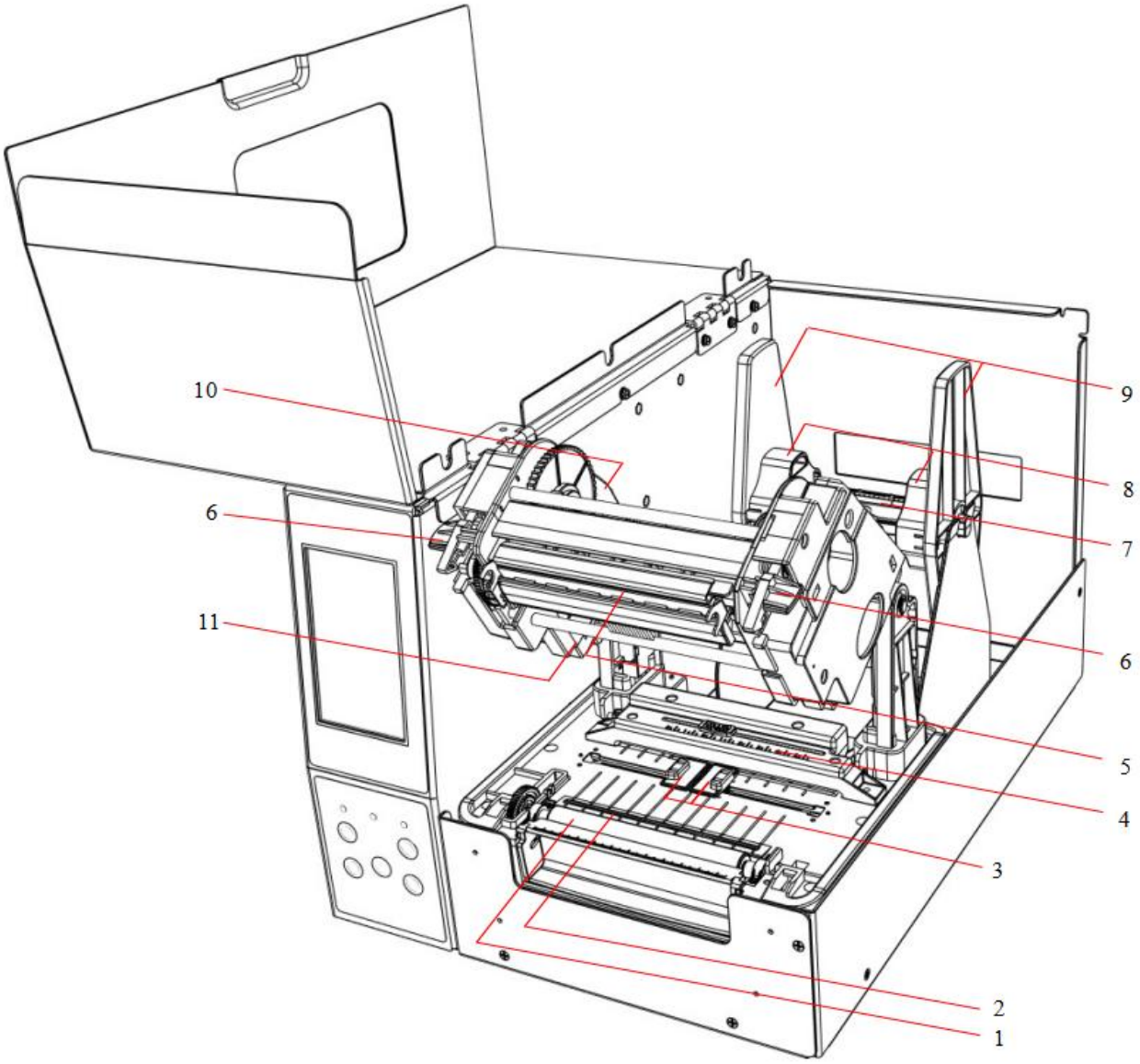


Figure 2.1-2

1.Platen Roller	2.Reflective Media Sensor	3.Media Guide
4.Adjustable Transmissive Sensor Assembly	5.Printhead Module	6.Printhead Latch Levers
7.Media Spindle	8.Large Roll Adapter	9.Media Roll Guide
10.Ribbon Take-up Core	11.Ribbon Supply Wheel	

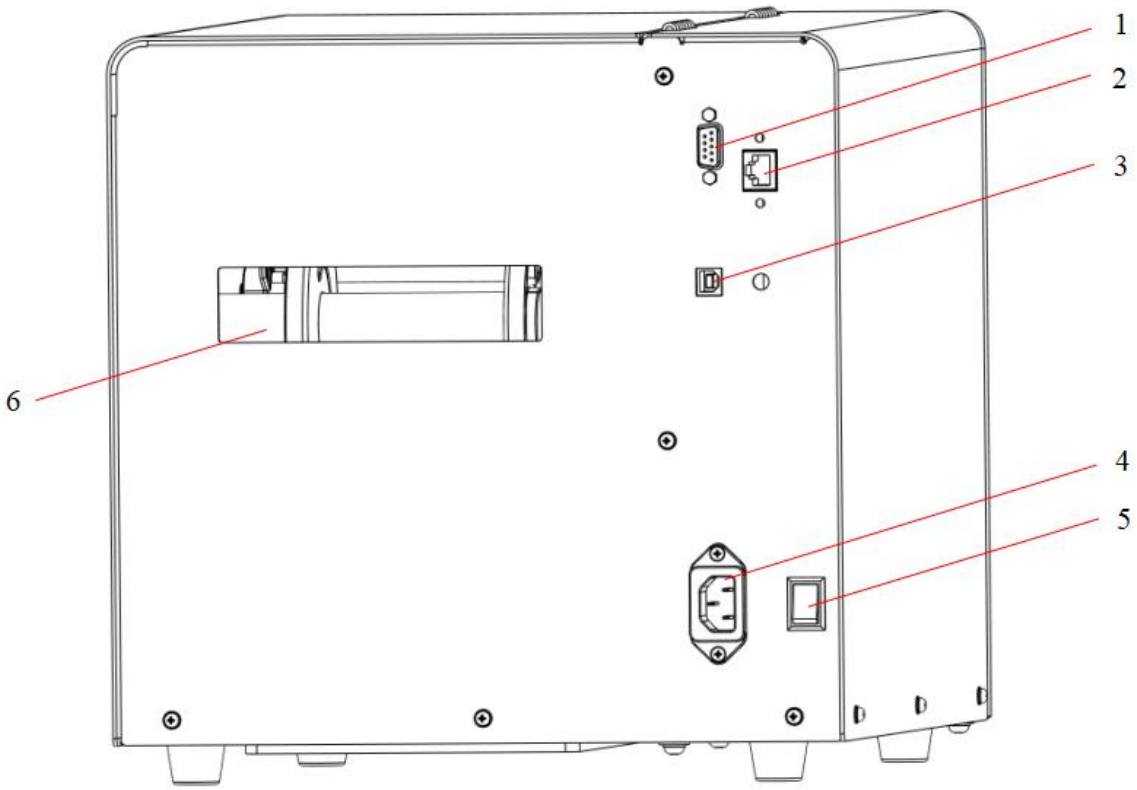


Figure 2.1-3

1.RS232 Serial Port	2.RJ45 Ethernet Port	3.USB Interface
4.Power Connector	5.Power switch	6.External Media Feed Windows

Note:

The diagram above is intended to indicate the locations of various interfaces and switches. It does not imply that every printer model includes all of the configurations shown.

2.2 Connecting to printer

2.2.1 Attaching Power

⚠ Warning:

- **Ensure that you are currently using a power cord provided with the printer or one approved by the manufacturer.**
- **Do not operate the printer in a damp or wet environment, as this may result in serious personal injury.**

1. Turn off the printer power (ensure the power switch is set to the "○" position).
2. Insert the power cord connector into the power socket at the rear of the printer.
3. Plug the other end of the power cord into an AC power outlet.

2.2.2 Connecting the Printer to the Computer

Note:

Before connecting any communication cables, make sure the printer power is turned off.

The printer is equipped with USB, RS-232 serial, and Ethernet ports. You may choose any of these interfaces to connect the printer to your computer.

1. The printer automatically detects the communication port used for connection to the computer.;
2. The current port settings can be obtained from the self-test information (refer to the printer configuration label).
3. For more detailed information about the ports, please refer to Appendix A: Port Specifications.

   To minimize electrical noise on the cable:

   a. Keep the data cable as short as possible (it is recommended not to exceed 1.8 meters).

   b. Avoid coiling or bundling the power cable with the communication cable.

2.3 Consumables Installation

- When using the thermal transfer printing method, two types of consumables need to be installed: the ribbon and the label roll.
- When using the direct thermal printing method, only the label roll needs to be installed; no ribbon is required.

The installation paths for the ribbon and label are shown in the diagram below. Detailed installation steps can be found in sections “2.3.1 Installing the Label Roll” and “2.3.2 Installing the Ribbon” of this manual.

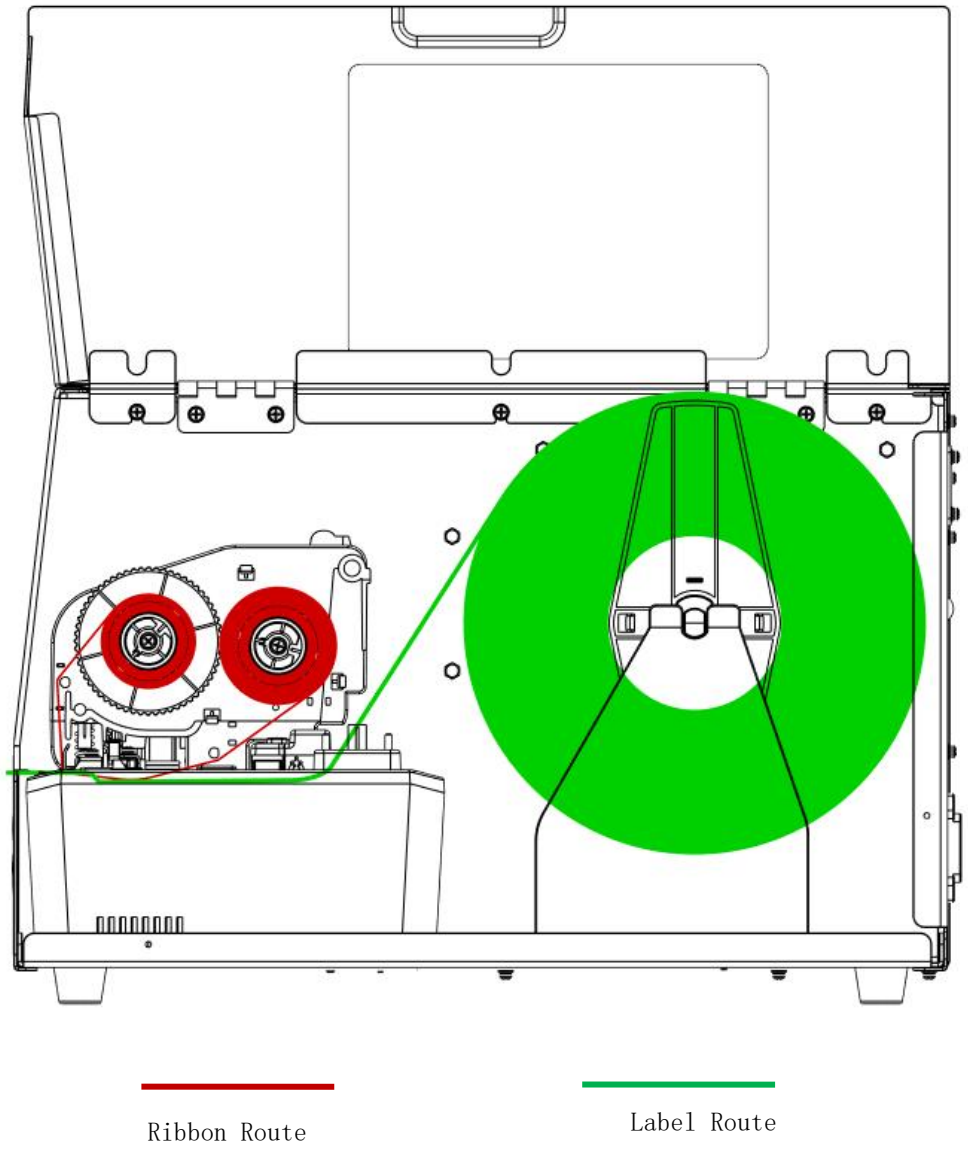


Figure 2.3-1

2.3.1 Installing the Ribbon

Notice:

- Make sure the ink side of your ribbon faces outwards. Always make sure the ink side of the ribbon faces the media and NOT the printhead.
- The maximum width of the ribbon is 110mm. When using a ribbon roll with a width less than 110m, please place the ribbon roll in the middle of the Ribbon Spindle corresponding to the scale.
- This section is not applicable to direct thermal printing.

1. Open the Right-side Cover of the Printer, as shown in Figure 2.3-2.

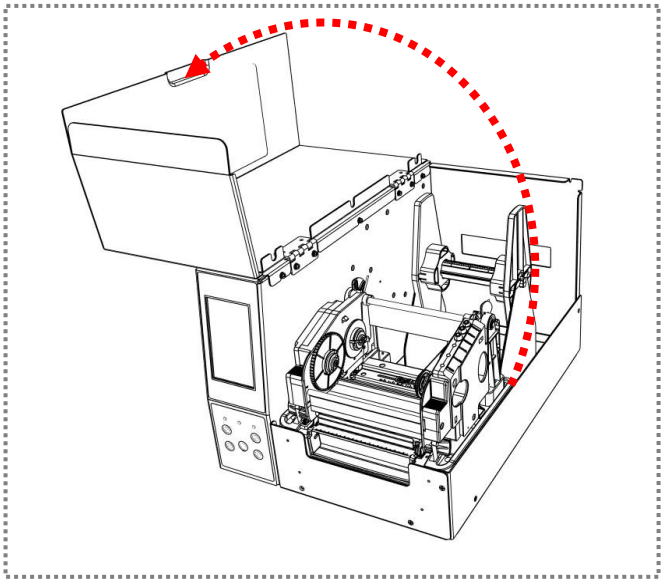


Figure 2.3-2

2. Simultaneously pull the locking clips on both sides to release the print head assembly, as shown in Figure 2.3-3.

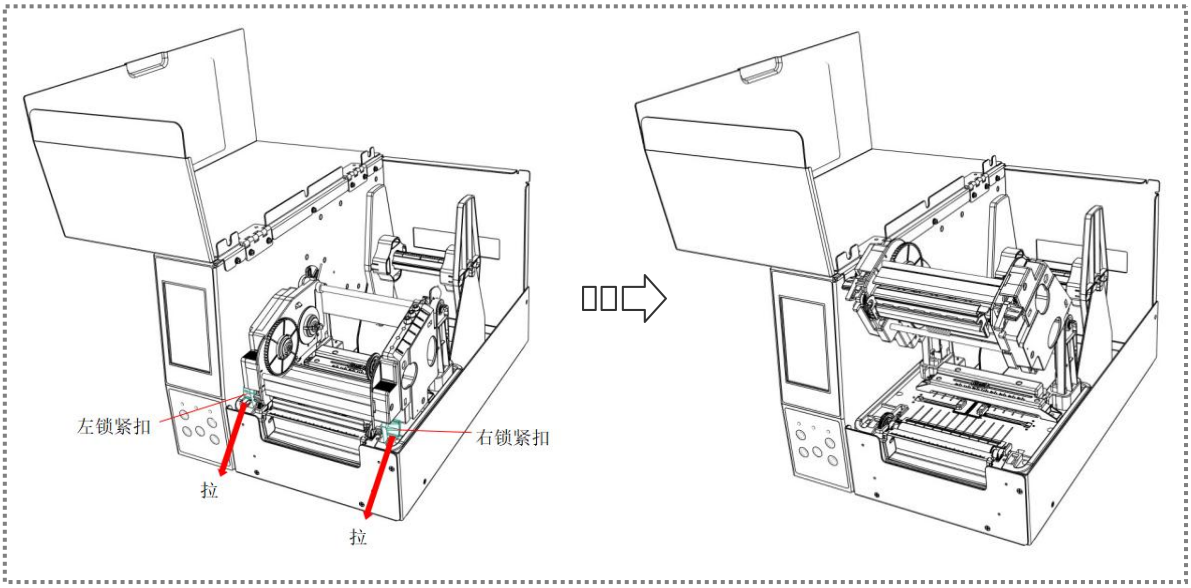


Figure 2.3-3

3. Unwind the ribbon roll and the empty core, and insert one ribbon spindle into the core of the ribbon roll and another spindle into the empty core, as shown in Figure 2.3-4.

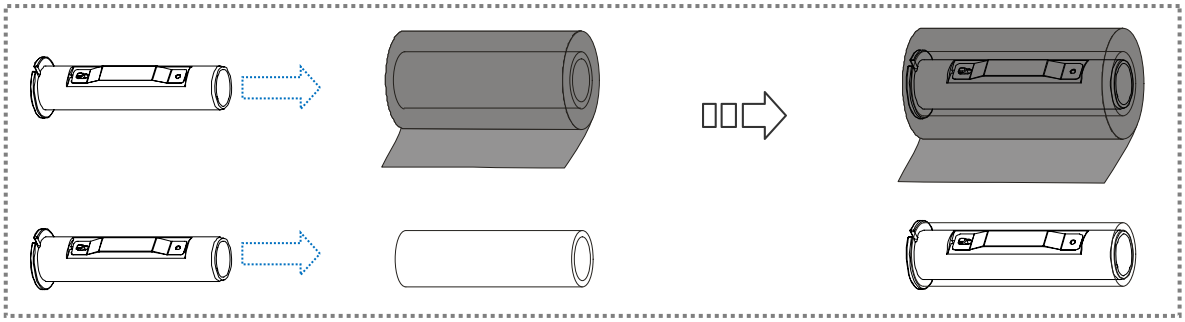


Figure 2.3-4

4. Insert the ribbon roll into the ribbon supply compartment. Ensure that the two tabs on the left side of the ribbon spindle are securely inserted into the slots of the ribbon supply spool, as shown in Figure 2.3-5.

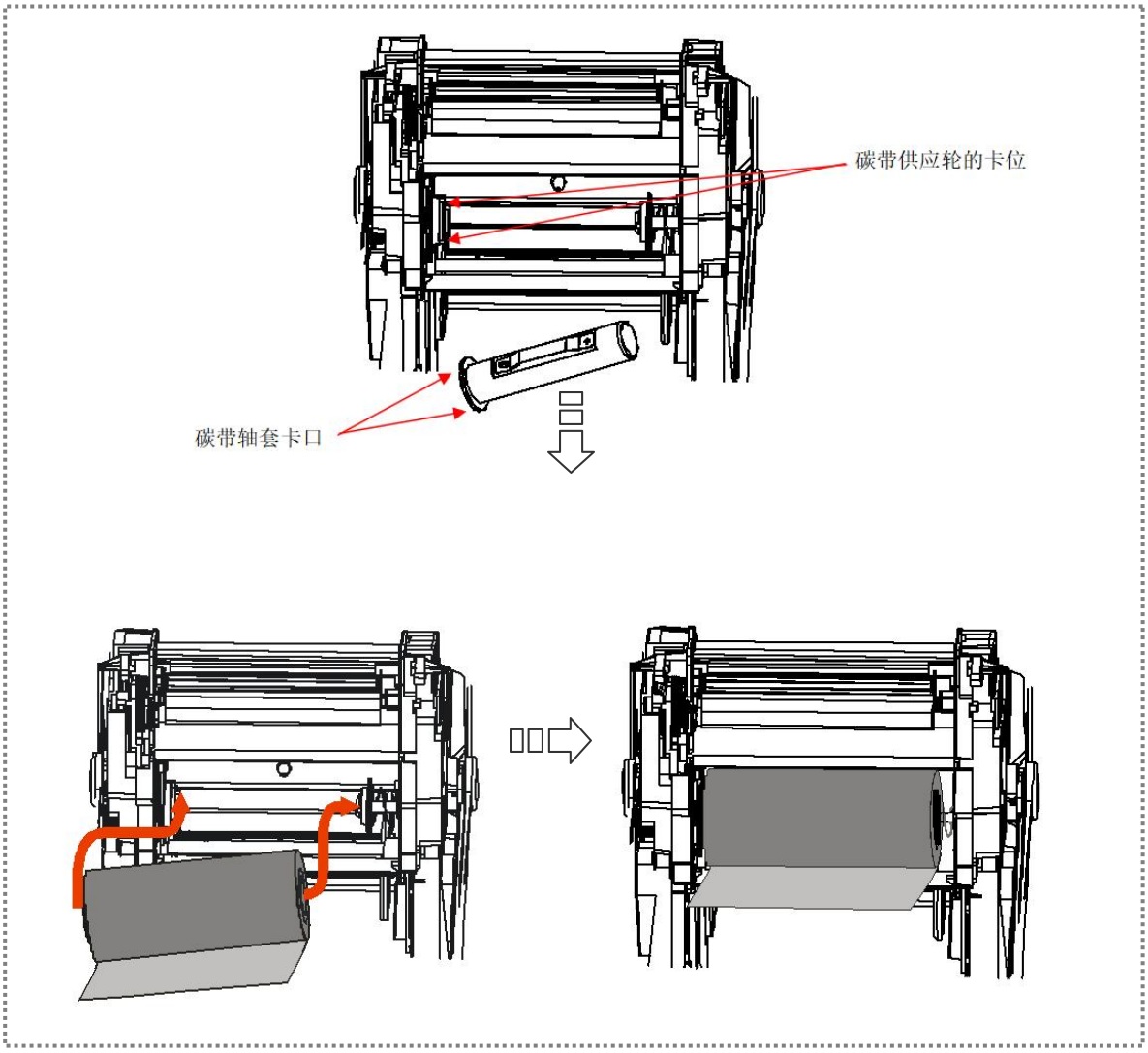


Figure 2.3-5

5. Lower the print head assembly and wind the beginning end of the ribbon onto the empty core. Use tape to secure the starting end of the ribbon to the core, as shown in Figure 2.3-6.

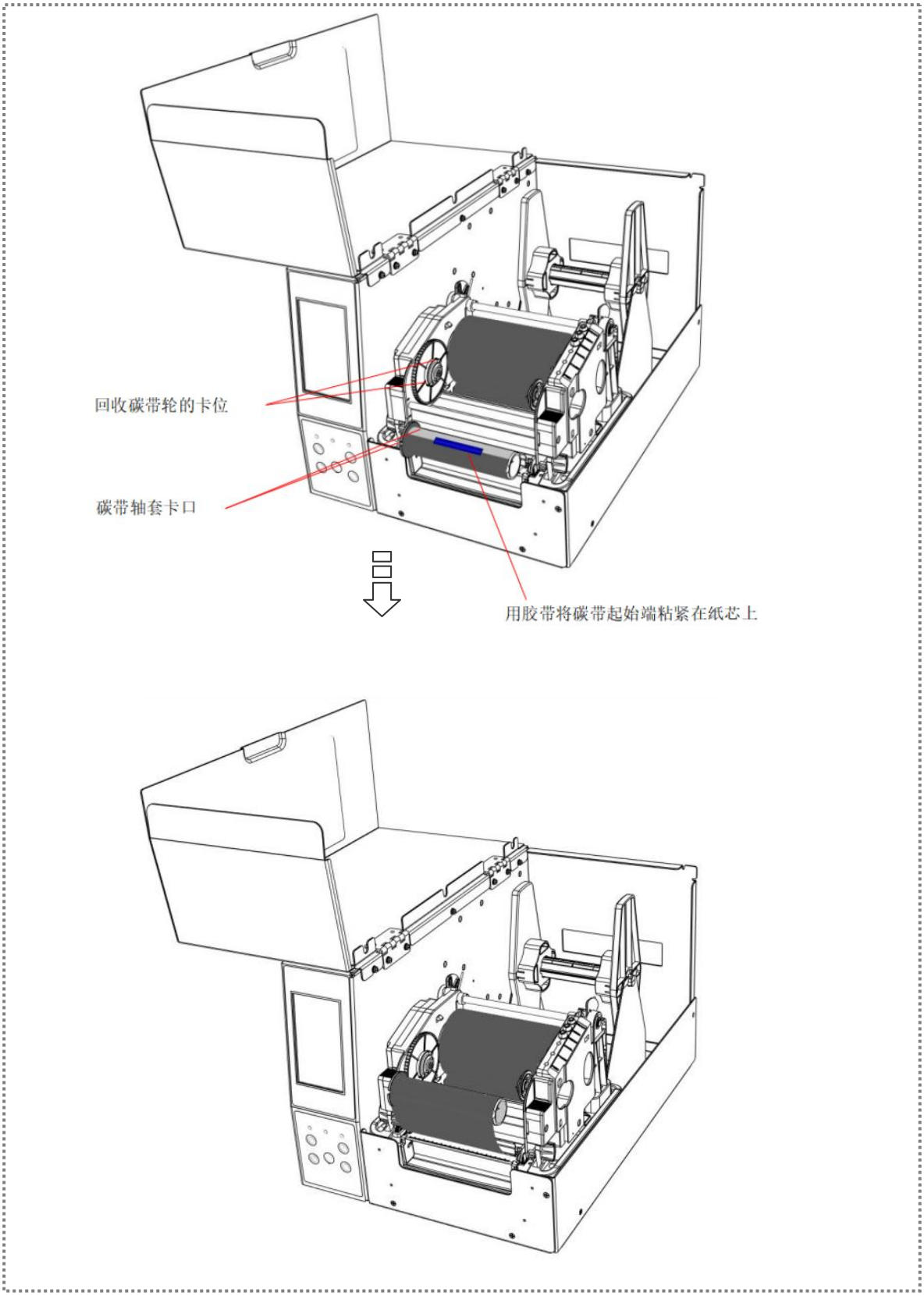


Figure 2.3-6

6. Insert the empty core into the ribbon take-up compartment. Ensure that the two tabs on the left side of the ribbon spindle are securely inserted into the slots of the ribbon take-up spool. Turn the take-up spool to tighten the ribbon. Simultaneously press both sides of the print head assembly until the locking clips snap into place. You should hear a "click" sound, as shown in Figure 2.3-7.

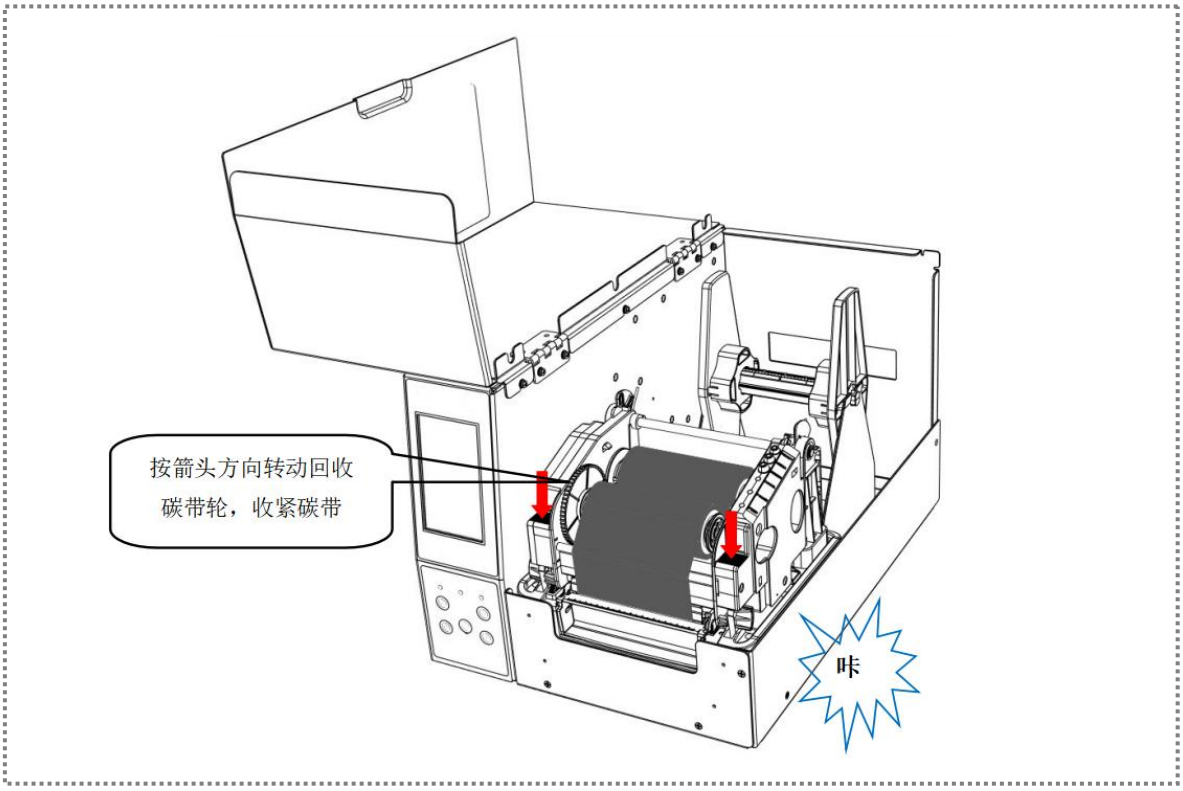


Figure 2.3-7

2.3.2 Installing the Media

The printer can operate in three different modes: Standard Mode, Peeler Mode, and Cutter Mode.

-- In Standard Mode, printed labels can be manually handled after printing.

-- In Peeler Mode, each label is automatically peeled off after it is printed.

-- In Cutter Mode, each label is automatically cut after it is printed.

Paper Roll Installation in Standard Mode：

1. Open the Right-side Cover: Open the right-side cover of the printer to expose the paper roll compartment, as shown in Figure 2.3-8.

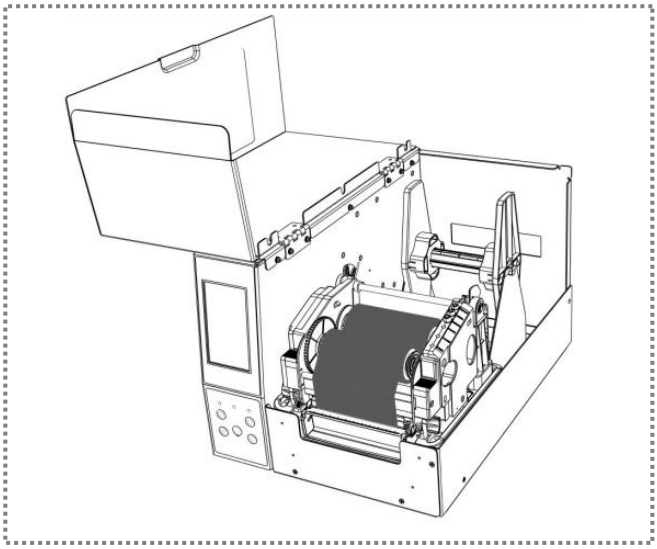


Figure 2.3-8

2. As illustrated in Figure 2.3-9, insert the large core insert, followed by the media roll spacer, the paper roll, another media roll spacer, and finally the large core insert into the media roll shaft. Ensure that the large core insert fits snugly inside the core of the paper roll. Adjust the position of the paper roll so that it is centered between the two media roll spacers for stability.

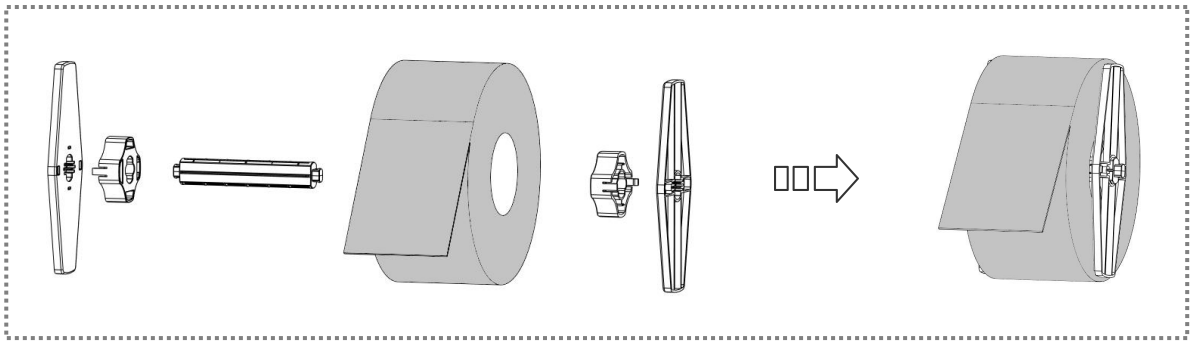


Figure 2.3-9

3. Pull the locking clips on both sides to release and lift the print head assembly, as shown in Figure 2.3-10.

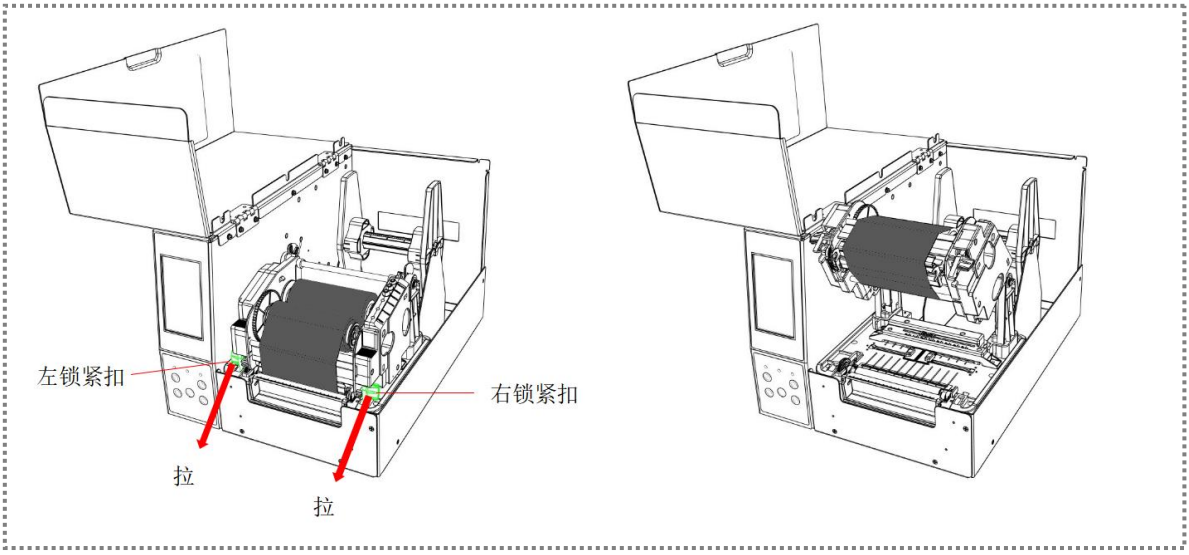


Figure 2.3-10

4. Thread the label under the paper guide roller and through the adjustable transmissive sensor. Use the two paper guides to keep the label edges aligned but do not apply excessive pressure to avoid deforming the label. Guide the label over the rubber roller and ensure it is centered. Press down on the print head assembly until the locking lever clicks into place, as shown in Figure 2.3-11.

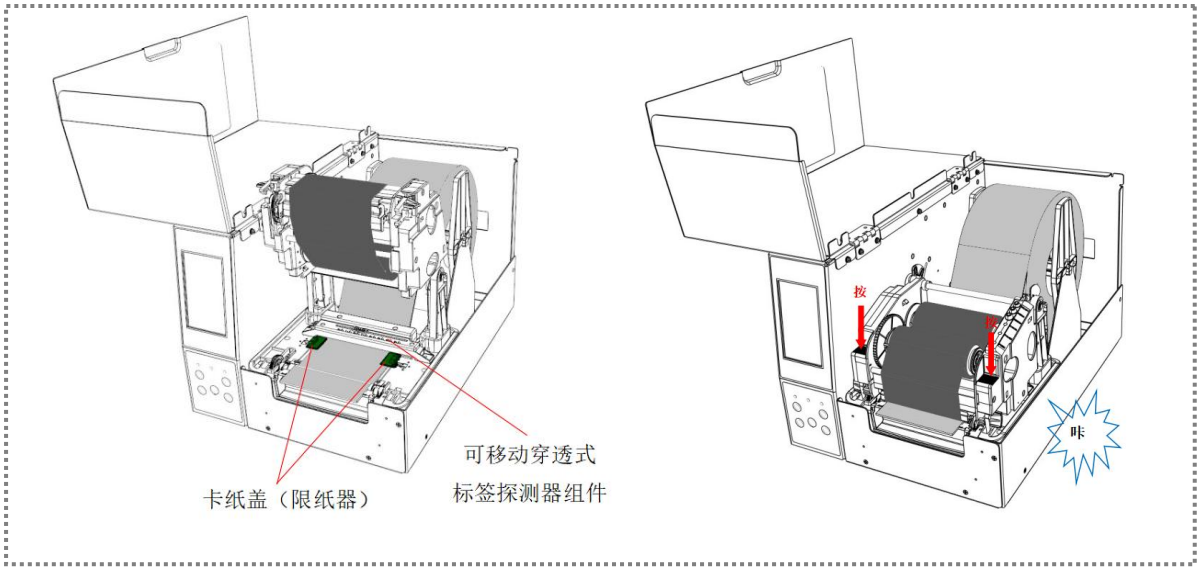


Figure 2.3-11

5. Close the side cover of the printer and press the "FEED" button. The printer will advance the label to automatically position itself at the starting point of the next label.

Notes:

- ***For Peeler Mode: Instructions for installing the paper roll in peeler mode will be provided with the peeler module.***
- ***For Cutter Mode: Instructions for installing the paper roll in cutter mode will be provided with the cutter module.***

2.4 Adjusting the Position of the Paper Sensor

Note:

The positions of both the reflective and transmissive paper sensors can be adjusted left or right.

2.4.1 Adjusting the Reflective Paper Sensor

1. Lift the Right-side Cover: Raise the right-side cover of the printer to access the internal components.
2. Release the Print Head Assembly: Pull the locking clips on both sides to release and lift the print head assembly, exposing the reflective paper sensor (Figure 2.4-1).

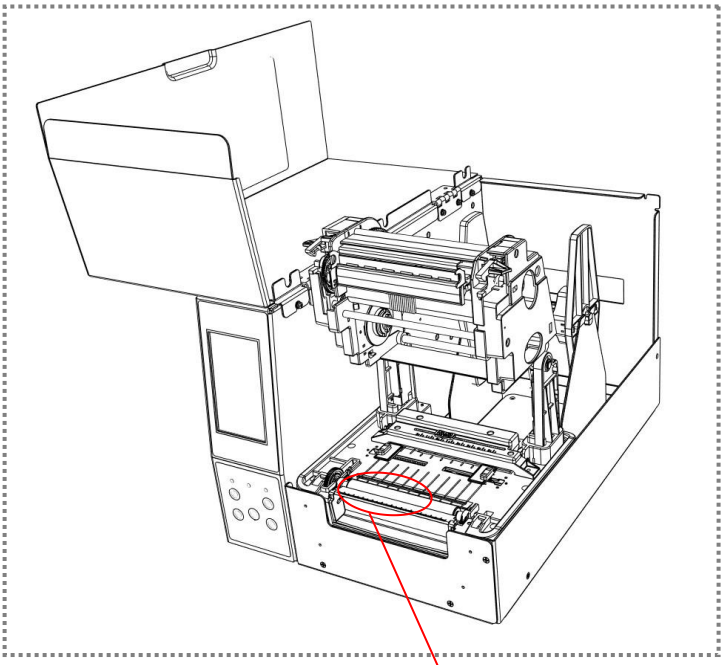


Figure 2.4-1

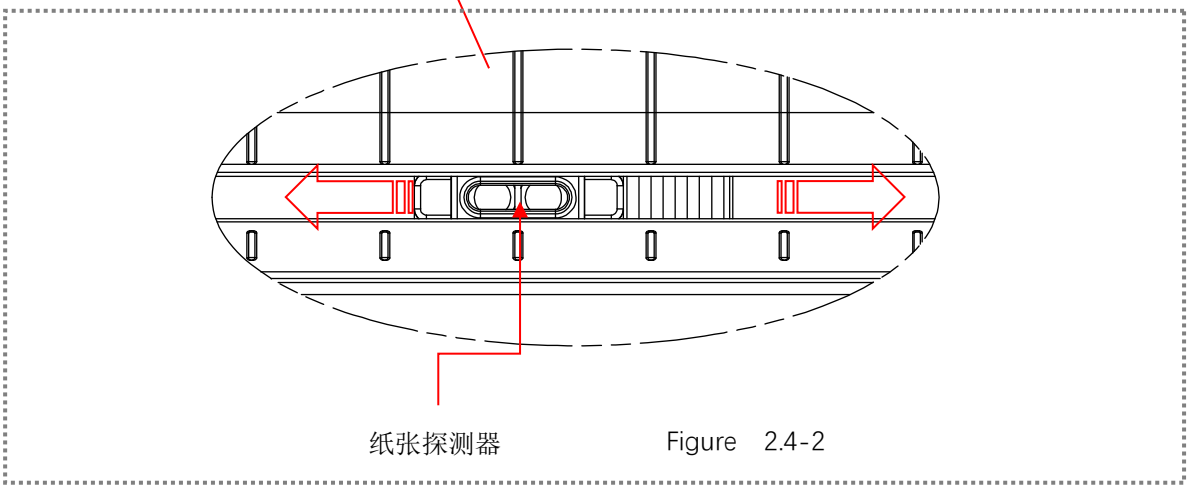


Figure 2.4-2

3. Adjust the Reflective Paper Sensor: Use a non-conductive tool such as a plastic pen to slide the reflective paper sensor left or right to the desired position (Figure 2.4-2). Refer to Figures 2.4-3, 2.4-4, and 2.4-5 for guidance on positioning the paper sensor correctly.

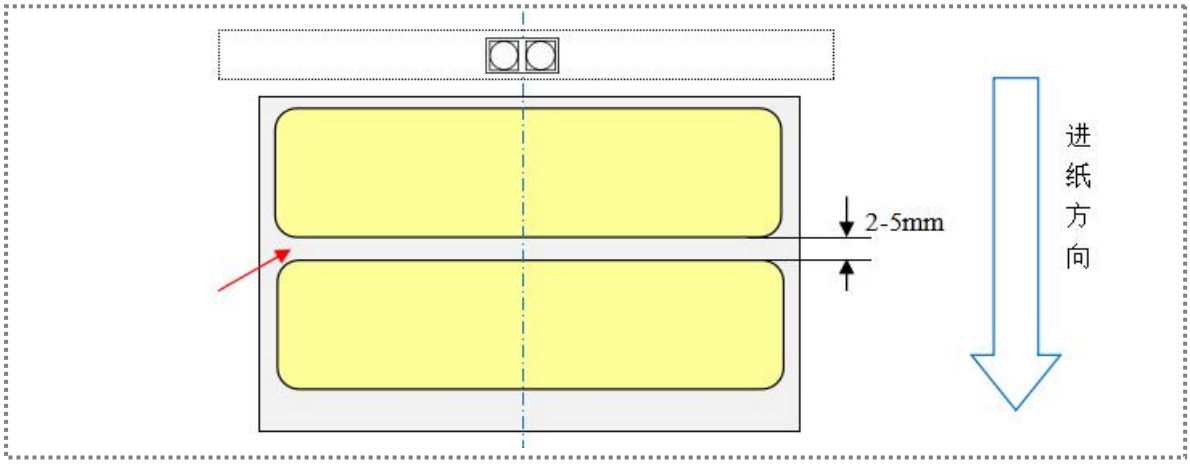


Figure 2.4-3

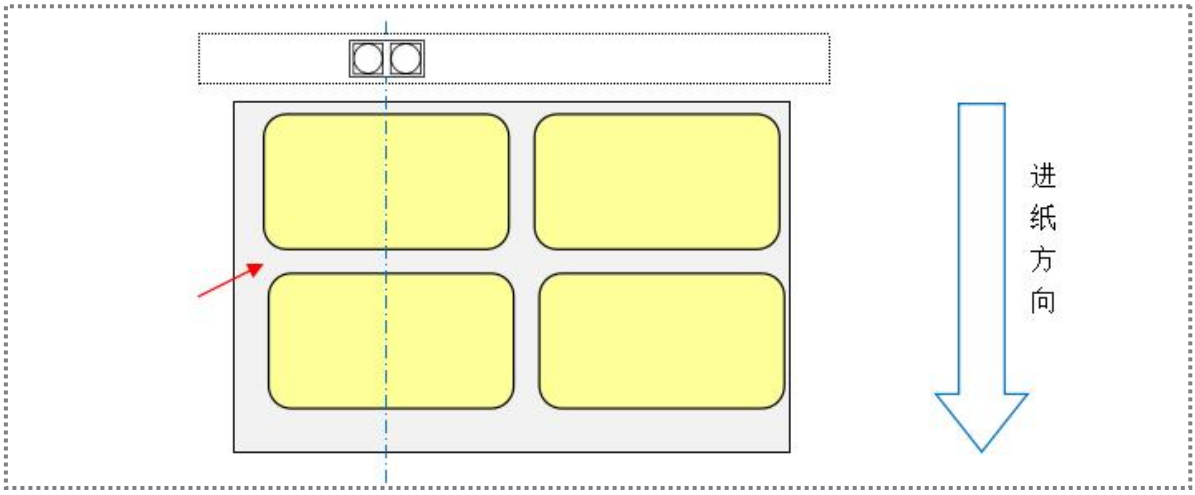


Figure 2.4-4

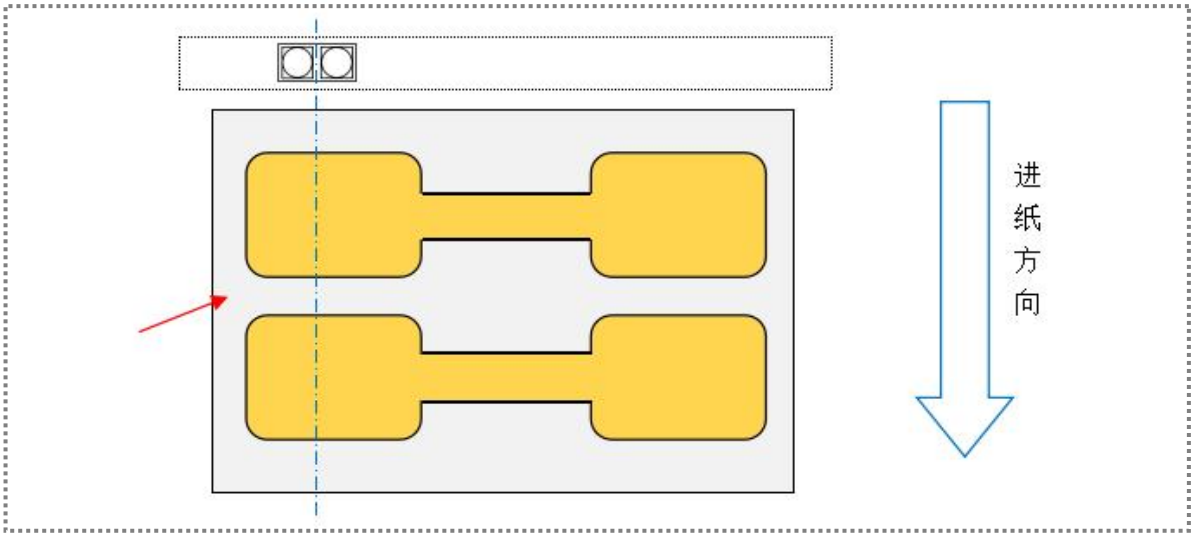


Figure 2.4-5

2.4.2 Adjusting the Transmissive Paper Sensor Position

1. Lift the Right-side Cover: Open the right-side cover of the printer to access the internal components.
2. Release the Print Head Assembly: Pull the locking clips on both sides to release and lift the print head assembly, exposing the transmissive paper sensor module (Figure 2.4-1).
3. Adjust the Transmissive Paper Sensor: The transmissive paper sensor is mounted on a sliding rail and can be manually adjusted by hand. Slide the sensor left or right to adjust its position as shown in Figure 2.4-6. Refer to Figures 2.4-3, 2.4-4, and 2.4-5 for guidance on positioning the paper sensor correctly.

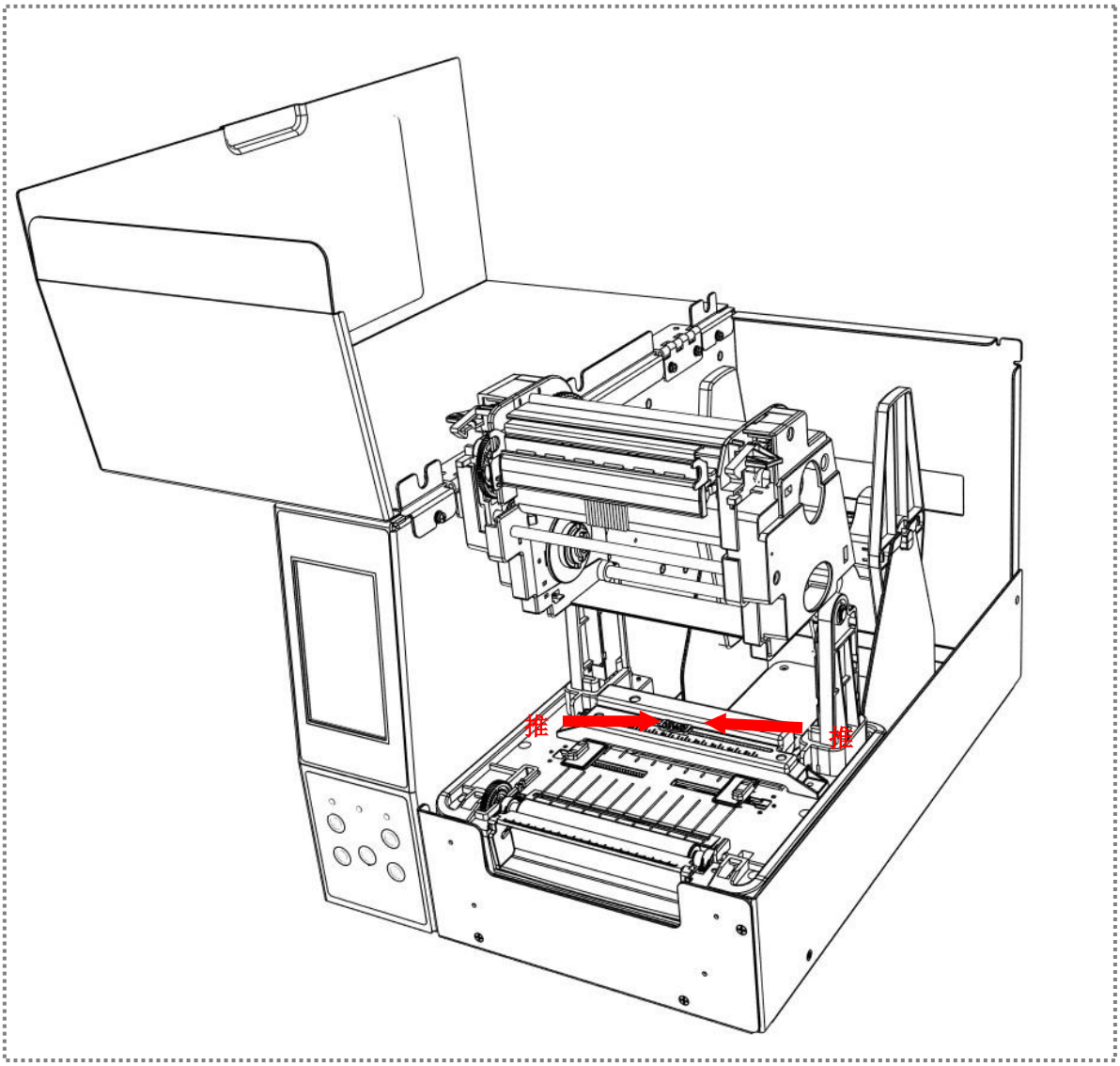


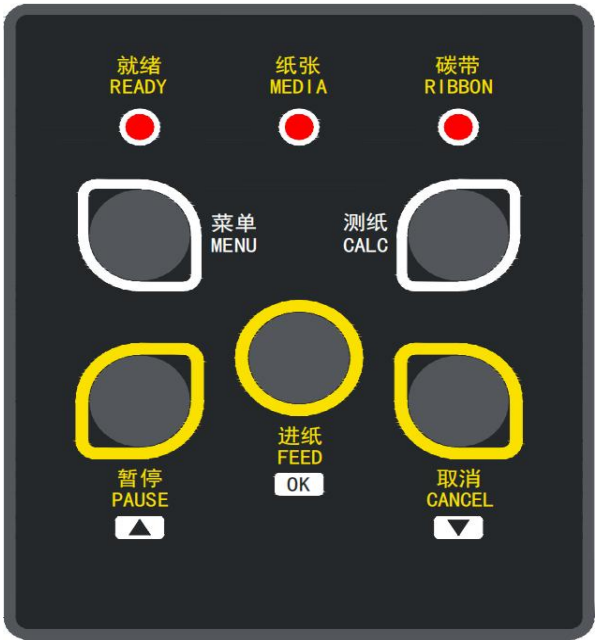
Figure 2.4-6

2.5 Operation Controls

2.5.1 Power Switch

The power switch on the printer is used to turn the printer on or off. Press the switch to the "—" position — to turn on the power, and press it to the "○" position — to turn off the power.

2.5.2 Keypad Panel



The RFID label printer keypad panel includes:

-- Three LED Indicators: "READY", "MEDIA", and "RIBBON"

-- Five Buttons: "MENU", "CALC", "FEED", "PAUSE", and "CANCEL"

2.5.3 LED Indicators

The three LED status indicators display the operational status of the printer (refer to Chapter 5 for fault indications).

The combinations of indicator lights and their meanings are listed in the table below:

○ : Light is OFF

● : Light is continuously lit

✳ : Light is flashing

Light State	Printer State
	Thermal Transfer Printing Standby Mode
	Direct Thermal Printing Standby Mode **(Refer to the "LCD Touchscreen User Guide" chapter for settings related to direct thermal printing mode)**
	Thermal Transfer Printing Mode: 1、 Pause; 2、 Data error;
	Direct Thermal Printing Mode: 1、Pause 2、Data Error
	"READY" and "MEDIA" LEDs Flashing Together: Thermal Transfer Printing Mode: "Unable to Detect Labels"
	"READY" and "MEDIA" LEDs Alternating Flashing: RFID Read/Write Error or Signal Calibration Failure
	"READY" and "MEDIA" LEDs Flashing Together: Direct Thermal Printing Mode: "Unable to Detect Labels"
	"READY" and "RIBBON" LEDs Flashing Together: Thermal Transfer Printing Mode: "Unable to Detect Ribbon"
	Entering Advanced Button Function Response Mode

2.5.4 Buttons

The keypad panel on the label printer includes five buttons. The functions of each button are summarized in the table below:

Button	Basic function	Advanced function
"FEED"	- Feed paper	Calibration -- Calibrate RFID labels
"PAUSE"	- Pause printing - Resume printing after pressing the button again	Self-test -- Perform a self-test and print diagnostic information
"CANCEL"	- Clear Print Job - Resume printer operation after troubleshooting	Reset -- Restore factory default settings
“CALC”	- Label positioning calibration and RFID signal calibration	
"MENU"	- Enter/Exit setup menu	

2.6 Advanced Functions

2.6.1 Calibrating RFID Labels (Optional Feature)

Before performing RFID label signal calibration, ensure that the RFID function is enabled in the LCD menu. Only then will the RFID signal calibration operation be effective.

Perform the "Calibrate RFID Labels" operation under the following conditions to enable the printer to accurately position RFID labels:

-- When installing RFID labels for the first time;

--When changing to a different type or size of RFID labels.

Steps:

1. Press the "Test Paper" button: The printer will perform label height calibration and RFID signal calibration (it is recommended to select this operation within the LCD touchscreen for RFID label calibration).
2. After calibration is complete, the LCD will display relevant calibration information. Press the "MENU" button to return to the main menu interface.
3. Run LabelSoft Label Editing Software: Use LabelSoft to edit label print data and perform RFID encoding operations.

Note: Calibration of RFID labels can also be performed through the LabelSoft label editing software by navigating to Settings -> RFID Label Calibration.

2.6.2 Self-Test

1. Press and hold the "PAUSE" button for approximately 5 seconds. During this time, all three LED indicators (Ready, Paper, Ribbon) will begin to flash simultaneously.

2. The printer will print out a self-test report. Once the self-test is complete, the LED indicators will stop flashing and return to their normal lit state.

3. Information Included in the Self-Test Report:

-- Printer Model and Product Number

-- Software Version Information

-- Hardware Parameters and Status

-- Printing Mode

-- Font List

2.6.3 Reset - Restore to Factory Default Settings

The following steps will reset the printer to its factory default settings:

1. In standby mode, press and hold the "CANCEL" button for approximately 5 seconds. After about 5 seconds, all three LED indicators will start flashing simultaneously.

2. Release the "CANCEL" button and then press it once more.

3. Wait for the LED indicators to stop flashing and return to their normal lit state. The reset process is now complete.

Note:

The number of printed labels and the total printed length cannot be reset.

2.6.4 Installing Printer Drivers

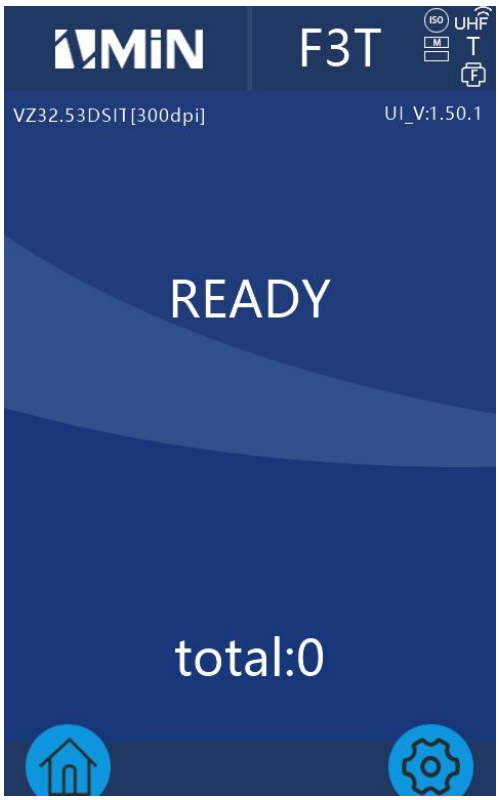
The printer drivers support mainstream operating systems such as Windows 11/10/8/7, as well as domestic operating systems like KylinOS V10, UOS V20, and Fangde V4.0. The drivers are stored on the CD-ROM provided with the printer. You can also download them from the website http://www.zmin.com.cn/en/

2.7 Label Editing Software

Each barcode label printer comes with a comprehensive LabelSoft label editing software package. The software and its user manual are stored on the included CD-ROM. You can also log in to the website http://www.zmin.com.cn/en/ to download the software.

3 Chapter 3: Introduction to LCD Touchscreen Menu and Functions

In this chapter, we will provide an overview of the LCD touchscreen menu and its functionalities. The LCD touchscreen menu serves as the user interface for industrial machines, through which various settings and operations can be performed. Below are some common LCD touchscreen menus and their functions: RFID configuration, detection operations, printing preferences setup, work mode settings, system settings, etc.



Standby interface

3.1 Description of Menu Item Functions

The parameters within the touchscreen menu are detailed in the table below.

Notes:

（1）The content and interface displayed may slightly differ between RFID and non-RFID versions. These differences will be indicated in the menu directory below.

（2）Adjustments made through the control panel may be overridden by label software or printer drivers. For more detailed information, refer to the documentation for the software or drivers.

Main Menu	Secondary menu	Three-level menu	Operation / Explanation
Main menu: RFID SETTING 01/08 *			RFID-Related Function Settings:RFID Function Switch || RFID Power || Calibration Result ||Read Tag Data || Error Handling **Definition**: The notation "01/06" indicates that "01" represents the current position within the same-level menu items, while "06" signifies that there are a total of six options at this menu level.
	RFID Method 01/06		RFID Function Switch Settings The RFID function is enabled by default on the RFID printer. To change the setting, perform the following operation: Touch the switch button.
	Power mode and One-click calibration 02/06		Set the read power and write power, as well as the calibration mode and working frequency respectively. To change the displayed value, the following operations should be performed: Touch the drop-down box to select the value to be set. After selection, shrink the drop-down box and click the "Change Settings" button. It takes effect immediately after setting the power and there is no need to restart the printer. The operations for setting parameters on this page are all like this and will not be elaborated on later.

			One-click Calibration is to perform the positioning calibration of RFID and tags based on the parameters stored inside the current printer.
		Read Power 01/06	Set the read power inside the printer, unit :dBm.
		Write Power 02/06	Set the write power inside the printer, unit :dBm.
		Working Frequency 03/06	Set the printer's working frequency: auto9, auto8(default: auto9. For specific detailed parameters, please consult the manufacturer's technical personnel.)
		Calibration Mode 04/06	Set the calibration mode (0 for staff debugging mode, 1 for regular mode, and 2 for the printer's automatic label chip to obtain the optimal power mode)
		Protocol Type 05/06	The protocol type for reading the current printer module: Default is ISO(cannot be changed)
		One-click Calibration 06/06	Locate the tags placed in the current printer and obtain the RFID signal status based on the power Settings saved inside the current printer. When the calibration is completed, switch to the result interface between the signal icon and the read/write position (the results can be switched repeatedly), and display the data to the user. If the positioning or signal is incorrect, the calibration will stop and an error will be indicated on the screen.
	Signal Diagram and Read/Write Position 03/06		1.Set RFID Read/Write Position 2.Set Specified AN Value 3.Display Label Height and Gap: Label Height (Gap), e.g., 28(2) 4.Display Maximum Read/Write Area Height 5.Display Label Read/Write Position, consistent with the position mentioned in (1) above 6.Switch to Label Positioning Result Page For detailed parameter information, please consult a technical specialist.
	RFID Read Data 04/06		Includes TID, EPC, and User (Area); The tag chip needs to be placed directly above the built-in RFID antenna of the printer for reading.
	Print Error Indicator 05/06		When an error occurs while printing RFID tags, the error will be printed on the label.
	RFID Error Retry 06/06		If an error occurs during the writing or reading of RFID data, a rewrite operation is executed. The number of retry attempts depends on the value selected by the user.

Main Menu: Detection Operations 02/08			The functionalities within this menu primarily involve label positioning, including: 1.Set Paper Detector Method (Through-beam/Reflective) 2.Detection Level (1~24) 3.Detection Length (Unit: mm)
	One-Touch Calibration 01/06		RFID Function On: One-Touch Calibration for both label height and RFID signal. RFID Function Off: One-Touch Calibration for label height only, without calibrating the RFID signal. Non-RFID Printer: Calibration of label height only, without involvement in RFID functionality.
	Detection Method 02/06		The detection method includes Through-beam and Reflective.To change the displayed value, perform the following operation: Touch the drop-down box and select the lesired setting. The selection takes effect immediately fter confirmation. Note:Generally, if a black mark is printed at the bottom of the label, the printer uses the Reflective positioning method; otherwise, the Through-beam positioning method is typically applied.

	Detection Length03/06		The detection length refers to the paper feed length used during label calibration, with a default value of 200mm. To change the displayed value, perform the following operation: Touch the drop-down box to select the desired etting. The selection is applied automatically after onfirmation. Note: For longer labels, such as airport baggage tags r wristbands, the detection length can be adjusted ccordingly.
	Label Detection and Detection Level 04/06		1. Set Detection Level (1–24), typically set to 12 by default; adjustment of this parameter affects label positioning accuracy and should be performed with guidance from the manufacturer's technical personnel. 2. Start Label Calibration 3. Display Label Calibration Curve, i.e., query the label calibration status 4. Display Distance from Print Line to Sensor 5. Display Distance from Print Line to Tear-off Position 6. Display Distance from Printer to Cutter Position 7. Display Single Label Height and Gap Between Labels 8. Set Distance from Print Line to Tear-off Position; to change the displayed value, perform the following operation: touch the text field, pop up the keyboard, enter the desired value, and click Confirm.
	Detection Height Priority 05/06		When this function is enabled, the printer will use the calibrated label height, and any label height set by external commands or driver configurations will be ignored. Default: Off
	Label Parameter Management		When users need to switch between several types of RFID labels, the power settings must also be adjusted to match the parameters suitable for each label type to

	06/06		ensure proper printing. This function allows users to save the current power settings into the printer's internal storage, enabling one-click configuration of the appropriate power settings when switching between different labels. 1.Input Field and Save Button: Enter the name of the parameter set to be saved in the input field. The name is user-defined. After entering the name, click "Save". The printer will then store the current RFID-related parameters, including power settings, into its internal memory (these settings are retained even after a power loss). 2.Load Button: Load previously saved power configuration sets. 3.Delete Button: Delete the currently selected power configuration set. 4.Delete All: Remove all saved parameter configuration sets stored in the printer.
Main Menu: Common Setting 03/08			Setting Printer Offset Parameters: 1. Tear-off Offset 2. Position Offset 2. Cutter Offset 4. Peeling Offset 5. Horizontal Offset 6. Vertical Offset Setting Printer Internal Parameters: 1. Set Built-in Print Darkness: Adjusts the darkness of the printed content. 3. Set Print Speed: Adjusts the speed at which the printer operates.
	Offset Setting 01/05	Tear-off Offset 01/06	Set Tear-off Offset Unit: mm/dot To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
		Positioning Offset	Set Positioning Offset

		02/06	Unit: mm/dot To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
		Cutter Offset 03/06	Set Cutter Offset Unit: mm/dot Note: The printer must be equipped with a cutter. To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
		Peeling Offset 04/06	Set Peeling Offset Unit: mm/dot Note: The printer must be equipped with a peeler. To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
		Horizontal Offset 05/06	Set Horizontal (X-axis) Print Offset Unit: mm/dot Negative values can be entered. To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
		Vertical Offset 06/06	Set Vertical (Y-axis) Print Offset Unit: mm/dot Negative values can be entered.

			To change the displayed value, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting.
	Port Settings 02/05	Network Configuration 01/01	Configure Network IP, Subnet Mask, Gateway Address.View MAC Address and Port Number(These items cannot be changed.) To change the displayed values, perform the following operation: Touch the text box, the keyboard will pop up. Enter the desired value and click Confirm to complete the setting. Note: Changes will take effect after the printer is restarted.
	Fixed Darkness Setting 03/05		Set Printer's Fixed Built-in Darkness, Range: 0–20;Default:0(Prints using external command darkness) Note: After setting this value, the print darkness specified by external commands or driver configurations will be invalid. To restore the use of external darkness settings, set this parameter back to 0. To change the displayed value, perform the following operation: Touch the drop-down box and select the desired value. After selection, a confirmation prompt will appear indicating the setting is complete.
	Fixed Speed Setting 04/05		Set Printer's Fixed Built-in Speed, Range: 0–12;Default: 0 (Prints using external command speed) Note:

			After setting this value, the print speed specified by external commands or driver configurations will be invalid. To restore the use of external speed settings, set this parameter back to 0. To change the displayed value, perform the following operation: Touch the drop-down box and select the desired value. After selection, a confirmation prompt will appear indicating the setting is complete. The printer speed should be adjusted according to the specific printer model.
	Built-in Label Size 05/05		Function Description: When this feature is enabled, the printer will use its built-in label size and type settings during printing, eliminating the need to specify the label dimensions and label type (e.g., continuous paper or gap paper) in the print command. Paper Type Options: With Gap: Refers to a label structure where each label is separated by a detectable gap, allowing the printer to distinguish individual labels. Continuous Paper: Refers to a roll of labels without any gaps or markings between individual labels — the entire roll is treated as a single continuous label.
Main Menu: Work Modes 04/08			Setting Printer Modes: Configure the printer's printing mode according to the desired operation. Tear-off Mode || Cutter Mode || Peeler Mode
	Print		Set Thermal or Thermal Transfer Mode

	Modes 01/05		Configure the printer to operate in either thermal mode (direct thermal) or thermal transfer mode (using a ribbon). To change the displayed value, perform the following operation: Touch the drop-down box and select the desired mode (Thermal or Thermal Transfer). After selection, a confirmation prompt will appear indicating that the setting is complete.
	Tear-off Mode 02/05		If enabled, after printing, the label will automatically stop at the tear-off position. If disabled, after printing, the label will stop directly below the print line. To change the displayed value, perform the following operation: Touch the drop-down box and select the desired mode.After selection, a confirmation prompt will appear indicating that the setting is complete.
	Cutter Mode 03/05	Cutter Switch 01/02	Note: Before enabling, ensure that the cutter is installed.
		Cutting Frequency 02/02	Specifies how often the printer should cut the labels (e.g., after printing every X number of labels). Default: Cut after every 1 label.
	Peeler Mode 04/05		Note: Before enabling, ensure that the peeler is installed.
	ZPL Template AMP 05/05	*Only Some models	Related to ZPL commands. For specific parameter meanings, please consult a technical specialist!
Main Menu: System Settings 05/08			System settings include: Language Selection, Reset Printer Internal Parameters, LCD Settings, and About.
	Language Selection 01/05		Configure the LCD touchscreen display language to Chinese/English. To change the displayed value, perform the following operation:

			Touch the drop-down box and select the desired language. After selection, a confirmation prompt will appear indicating that the setting is complete.
	Clear 02/05		Delete label templates saved in the printer's Flash memory.
	Advanced Settings 03/05		1.Provides a configuration window for technicians to adjust internal printer parameters. 2.Restore factory settings.
	Print Self-test Page 04/05		Print a self-test page in the language corresponding to the currently selected touchscreen language.
	View Internal Fonts 05/05		View and manage fonts stored inside the printer. Allows deletion of selected fonts or all fonts. For downloading and importing new fonts, please consult a technical specialist
Main Menu: Video Demonstrations 06/08			
	Printer Spring Adjustment 01/03		Video Demonstration: A video guide on how to adjust the pressure spring located at the print head position of the printer.
	Install Labels and Ribbon 02/03		Video Demonstration: A video guide on how to install both labels and thermal transfer ribbon (carbon band), demonstrating the process for these consumables.
	Clean Print Head 03/03		Video Demonstration: A video guide on how to clean a dirty print head.
Main Menu: Offline Printing 07/08 *Available on selected			Users can download print templates to the printer's internal FLASH memory and then invoke these templates using commands to perform printing tasks. Run FORM: Touch the specified FORM and click the "Run" button to execute. Delete FORM: Touch the specified FORM and click the

models only			"Delete" button to remove. Delete All FORMs: Click the "Delete All" button to remove all stored FORMs.
Main Menu: About 08/08			1. Display Screen UI Version: Shows the version of the screen user interface. 2. Display Printer Model: Shows the model number of the printer. 3. Display Printer Mainboard Serial Number: Shows the serial number of the printer's mainboard. 4. Display Printer Product Number: Shows the product number of the printer. 5. Display Printer Firmware Version: Shows the firmware version installed on the printer. 6. Display Printer Print Mode: Shows the current print mode configured on the printer. 7. Display Printer Sensor Mode Type: Shows the type of sensor mode currently in use by the printer. 8. Display Printer Print Head Resolution: Shows the resolution of the printer's print head. 9. Display Printer Fixed Darkness Setting: Shows the currently set fixed darkness value; if never set, it displays as 00. 10. Display Printer Current Read Power Value: Shows the current read power value of the printer. 11. Display Printer Current Write Power Value: Shows the current write power value of the printer. 12. Display Printer Current Calibration Mode Value: Shows the current calibration mode value of the printer. 13. Display Total Pages Printed: Shows the total number of labels printed by the printer. 14. Display Total Length Printed: Shows the total length of labels printed by the printer. 15. Display Printer Current IP Address: Shows the current IP address assigned to the printer. 16. Display Printer Current Subnet Mask: Shows the current subnet mask of the printer. 17. Display Printer Current Gateway Address: Shows the current gateway address of the printer. 18. Display Printer MAC Address: Shows the MAC address of the printer. 19. Display Printer TCP Port Number: Shows the TCP port number used by the printer.

			20. Refresh Current Printer Parameter Information: Synchronizes and refreshes the current parameter settings of the printer with those on the connected computer.

Note：The menu items on the touch screen may be changed. Please refer to the actual menu items of the printer.

3.2 Synchronize with Software

To update the touch screen status after setting certain parameters on the computer software, follow these steps:

1.Set Parameters on Computer Software: Use the appropriate printer management software or driver to configure the desired parameters on your computer.

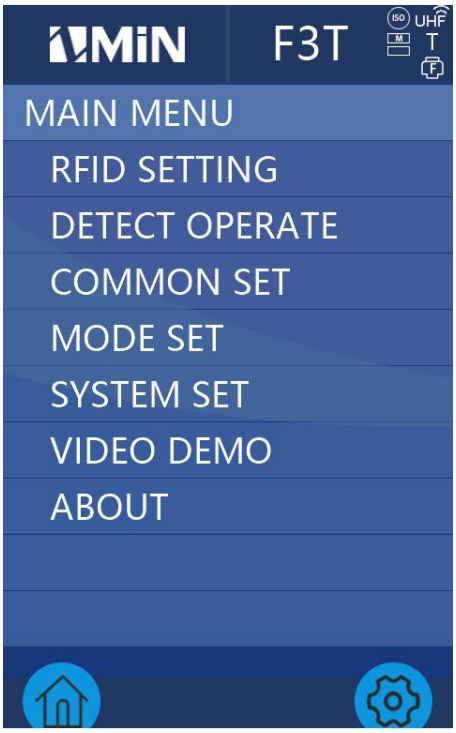
2.Refresh Touch Screen Status: In the printer software on your computer, navigate to the "About" section. Simply entering this section will refresh the data and update the touch screen status accordingly.

3.3 Detailed Explanation of LCD Touch Screen Function

The LCD touch screen is equipped with a set of software with a simple interface and complete functions. This chapter will explain in detail the configuration and usage of the printer in a graphical way.

When in standby mode, click the icon at the lower right corner to open the main Settings interface.

Note: The RFID Settings of non-RFID printers will not be displayed! Only some printers allow the [offline printing] function to be used!The functional entry points displayed by the printer will be automatically hidden due to differences between versions.

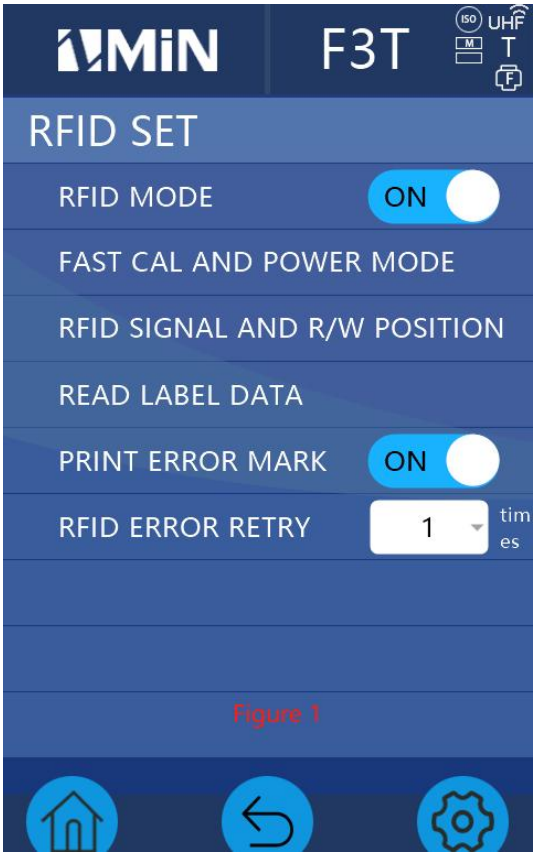


Main Menu

3.4 RFID Settings（Only RFID Printer Can enter this view）

RFID Settings are an important function for printing RFID electronic tags, and they can achieve the functions of most PC-end visual RFID calibration tools.

The table of contents is shown in Figure 1



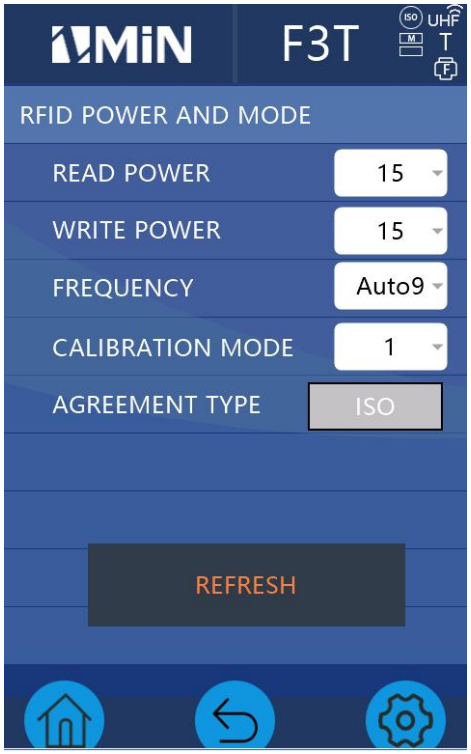
3.4.1 RFID Functions

In the RFID Settings menu, there will be an option to enable or disable the RFID function. You can enable or disable the RFID function by turning this option on or off.

If the RFID function is turned off, the printer will not detect the RFID signal when performing calibration operations, which is suitable for the calibration of ordinary tags. This means that the printer will not read or write the data on the RFID tag.

If you need to read or write RFID tags, you must turn on the RFID function when using the printer. By enabling this function, it can be ensured that the printer can accurately read and write the data on the RFID tag

3.4.2 One-Click Calibration



On this interface, you can set the read and write power, working frequency, calibration mode, etc. of the RFID module. After changing the parameters, you need to click the "Change Settings" button for it to take effect.

Calibration mode is recommended to use Mode 2.

The automatic mode can automatically identify the power of label reading and writing as well as the reading and writing positions (the calibration process takes approximately 2 to 3 minutes).

3.4.3 Signal illustration And Read/Write Positions

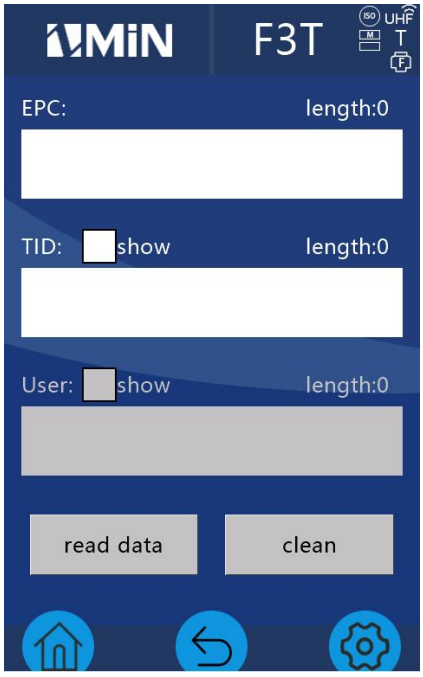


This interface displays the RFID signal calibration results, which can be used to verify whether the power settings and label feeding direction are correct. It also shows other label parameters, such as label height, number of read/write zones, and read/write positions. The read/write position can be set manually.

Note: There is no need to recalibrate after setting the read/write position — printing can start directly.

3.4.4 RFID Read Data

Read various data currently in the RFID read/write signal area.



3.4.5 Print Error Indicator

When the print error marking function of the printer is enabled, if a read or write error occurs during the printing process, the printer will print an error marking on the surface of the label to inform the user that this label is incorrect.

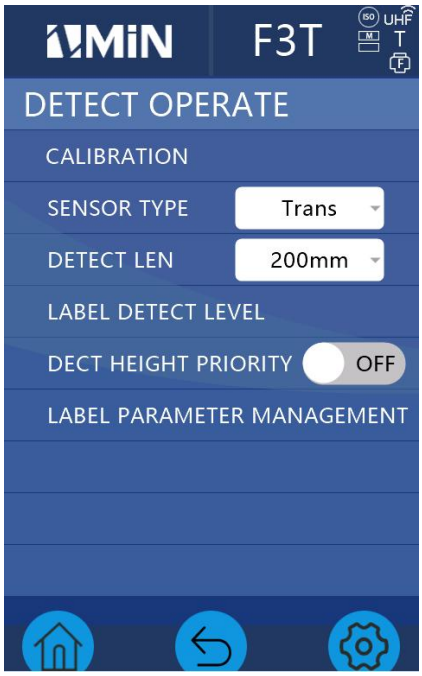
3.4.6 RFID Error Retry

This function is related to RFID error retries. If the number of error retries is 1, it will directly prompt on the screen that a printing error has occurred. If the number of error retries is set to 2 times, after the first error, the tag will be rolled back and the same data will be used to try writing data to the same tag again. If the error persists, the error will be reported.

Note: It can be used in conjunction with printing error marks

3.5 Detection Operations

The function of the detection operation mainly points to the calibration aspect of the label



3.5.1 One-Click Calibration

One-Touch Calibration is a quick and convenient function for label calibration. When you tap the One-Touch Calibration button, the printer will automatically start the calibration process, which includes detecting the label's position, size, and alignment, and adjusting the printer settings to ensure accurate label positioning during printing.

If RFID mode is enabled, the printer will calibrate both the label position and RFID signal.

If RFID mode is disabled, only label position calibration will be performed.

For non-RFID printers, only label height and gap detection will be calibrated — no RFID-related operations are performed.

After calibration, the screen will automatically switch to the data display page. If you wish to print, it is recommended to return to the home screen first.

3.5.2 Detection Method

There are two main types of detection methods: Reflective and Through-beam. They are suitable for different types of labels and application scenarios. Below is some related information and suggestions:

Reflective Detection: Reflective detection determines the label's position and alignment by detecting the light reflected from its surface. In general, flexible labels and labels with reflective materials on the surface are suitable for reflective detection.

Through-beam Detection: Through-beam detection determines the label's position and alignment by detecting light passing through the gaps or transparent parts of the label. Transparent labels and labels without reflective surfaces are suitable for through-beam detection.

Recommendation: If the gap between labels allows obvious light transmission, it is recommended to use the through-beam detection method. If one detection method does not provide satisfactory results, try switching to the other — it may offer better performance.

3.5.3 Detection Length

Detection length refers to the range over which the detection operation is performed on the label. By setting the detection length, you can ensure that the printer accurately detects the label's edges and position for correct printing.

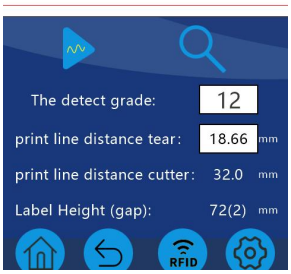
Important: The setting of the detection length should be determined based on the actual size and requirements of the label. If the detection length is too long or too short, it may lead to inaccurate detection or failure to detect the label edges.

Recommendation: Adjust the detection length gradually according to the actual situation and label dimensions to find the most suitable setting. This ensures optimal detection accuracy.

3.5.4 Label Detection and Detection Level



After the tag calibration is usually completed, you will first be redirected to the RFID calibration and positioning. You can directly jump to the corresponding settings page by selecting the third wavy button in the navigation bar below. You can set the detection tag level yourself.



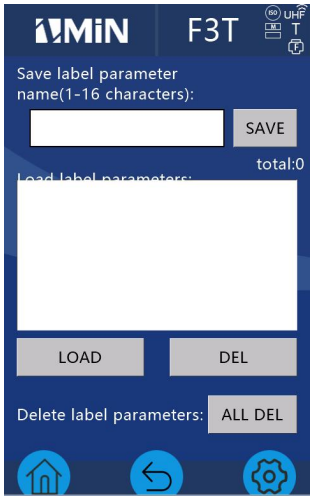
In the white area at the top of the settings page, the fluctuating peak signals obtained after calibrating the tag will be displayed. Normally, the differences influctuating peaks should not be significant and should be relatively uniform.

By observing the position of the red line in the detection, you can determine the stability of the tag. If the red line is too high, it may lead to unstable detection results, in which case the detection threshold needs to be appropriately l

3.5.5 Label Parameter Management

When users need to switch between several RFID tags, the power also needs to be adjusted to match the parameters of each tag for normal printing. This function can save the current power settings to the printer's internal storage, allowing for one-click configuration of the corresponding power when switching between different tags.

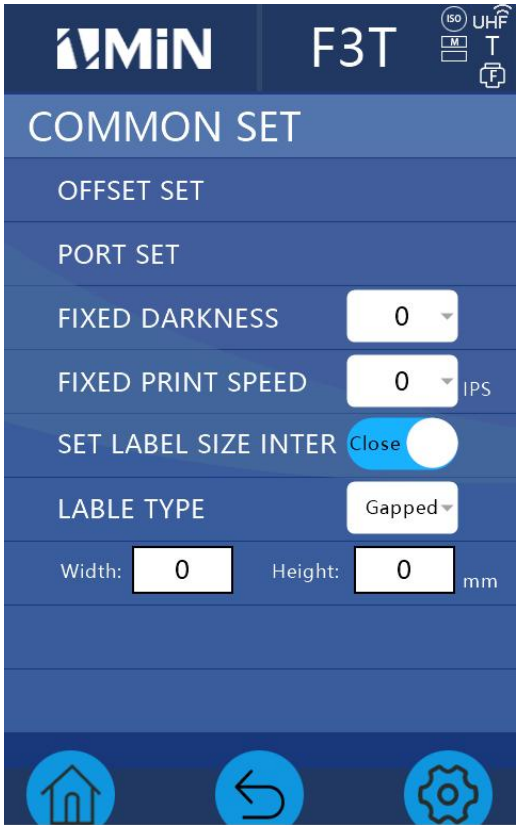
*RFID-related functions are supported, including RFID.



3.6 Common Setting

Common settings usually include adjustments made during printing, such as offset settings, port settings, print darkness, and print speed.

These settings are typically adjusted during the printing process to meet specific printing needs and requirements. You can adjust these settings based on the label layout, the characteristics of the printing material, and the desired print effect to achieve the best printing results.



3.6.1 Offset Setting

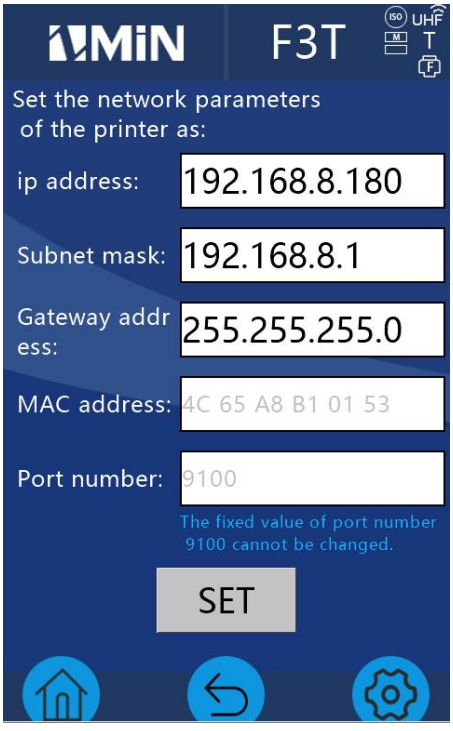


Offset Setting: Offset setting is used to adjust the position of the printed content on the label or paper. By setting the offset, users can fine-tune the print position to ensure the content aligns accurately with the desired location.

When setting the tear-off position offset distance, you can try adjusting the offset step by step to ensure the label stops correctly at the tear-off position.

Please note that when manually setting the tear-off position offset, it is recommended to perform several test prints to check if the results meet expectations. Adjustments and tests can be repeated as needed until the desired outcome is achieved.

3.6.2 Port Settings



Port Setting: Port setting is used to specify the communication port between the printer and the computer. Users can select the appropriate port type (such as USB, serial port, parallel port, etc.) to ensure the printer connects correctly and communicates with the computer.
The default IP address is: 192.168.8.180 The default subnet mask is: 255.255.255.0 The default gateway address is: 192.168.8.1
The MAC physical address is inherent to the network card and cannot be changed. The port number is predetermined in the interaction with the computer and cannot be changed.

3.6.3 Fixed Darkness Setting

Darkness Setting: Darkness setting is used to control the concentration of the ribbon used by the printer. By adjusting the darkness setting, users can control the depth of the printout. A higher darkness setting produces a darker print effect, while a lower darkness setting results in a lighter print effect.

It is recommended to find the optimal setting by gradually adjusting the darkness. Each adjustment should be around two units, allowing you to observe the impact of each change on the print result. If the darkness setting is too low and the print result is unsatisfactory, you can moderately increase the darkness setting to improve the print quality. Continue adjusting the darkness setting until you find the most suitable setting for your needs.

3.6.4 Fixed Speed Setting

Print Speed Setting: The print speed setting allows users to adjust the printer's speed. A higher print speed accelerates the printing process but may affect print quality. A lower print speed can produce higher quality results but will slow down the printing process.

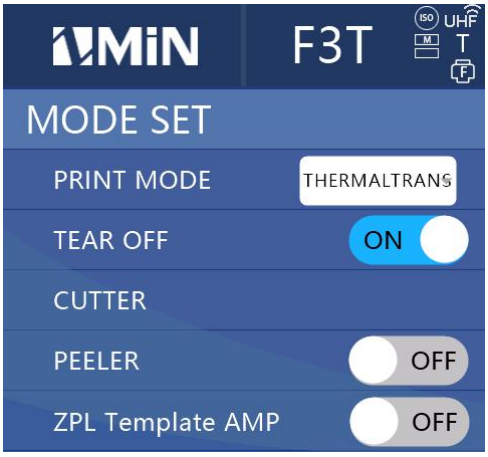
It is recommended to select an appropriate print speed based on specific printing needs and the characteristics of the printing material. If you notice a decline in print quality after increasing the speed, try reducing the speed to a more suitable level. By gradually adjusting the speed, you can find the optimal setting that enhances print speed while maintaining good print quality.

3.6.5 Built-in Label Size

Store the dimensions of the label to be printed in the printer. When printing via commands, the command does not need to specify parameters such as label size. The printer will directly use the pre-set parameters for printing. You need to set the width and height, as well as the label type.

3.7 Work Modes

Printer operating mode refers to the specific method or manner in which a printer performs printing operations. Different operating modes are applicable to different printing needs and paper types. The following is a brief introduction to several common printer operating modes.



3.7.1 Print Modes

Print mode is divided into thermal mode and thermal transfer mode. The choice between thermal and thermal transfer depends on printing needs and budget. Thermal mode is suitable for simple labels, receipts, and tickets, while thermal transfer is used for applications requiring higher durability and more media options.

Thermal Mode	Thermal Transfer Mode
Use the thermal print head to heat the thermal paper's coating, creating images or text. Thermal mode does not require a ribbon, but instead uses thermal paper. Thermal paper is a special type of paper with a heat-sensitive coating that reacts when heated, forming patterns or text.	Use the thermal transfer print head to transfer ink from the thermal transfer ribbon onto paper or other media, forming images or text. Thermal transfer printing supports a wider range of media, including paper, polyester, polypropylene, and other materials. The images and text printed using thermal transfer remain clear and durable for a longer period.

Before using the printer, it is recommended to consult the relevant user manual or contact the printer manufacturer's technical support to ensure the selection of the appropriate print mode and media.

3.7.2 Tear-off Mode

After printing is completed, the label gap remains at the tear-off position. With the tear-off mode, you can easily tear off the printed label from the tear-off position and use it directly.

3.7.3 Cutter Mode

Cutting mode requires an additional cutter accessory to enable paper cutting functionality. In cutting mode, you can specify how often the printer cuts the paper by setting the cutting frequency, which determines when the printer will cut the paper based on [the parameters you set].

3.7.4 Peeler Mode

Peeling mode requires an additional peeler accessory. The peeler functions to separate the printed label from its backing paper, allowing it to be directly taken and applied to the needed items, thus improving work efficiency. After the label is taken, the machine automatically continues to print and peel off the next label, repeating this cycle until the print task is completed.

3.7.5 ZPL Template AMP

ZPL template enlargement is a non-standard feature. For details or usage methods, please consult the printer technician.

3.8 System Settings

The options and functions in system settings are primarily designed and adjusted for the use of this software.

3.8.1 Language Selection

Select Chinese or English from the drop-down menu to set the interface language according to your preference.

Advanced settings allow you to enter commands for printer debugging or other operations.

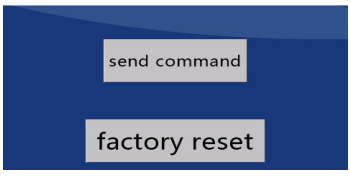
The self-test page will print in the selected language based on the printer's chosen font.

Viewing internal fonts allows you to see the fonts stored in the printer.



3.8.2 Advanced Setting





In the advanced command page of the printer, you can input command statements to adjust print effects, calibrate the printer, and perform a series of settings.

Additionally, if the printer is malfunctioning, you can try restoring it to factory settings to resolve the issue.

It's important to note that advanced commands can perform critical setups and operations on the printer. If you are unsure about the function or impact of a particular command, refer to the printer's user manual or consult the printer manufacturer's technical support.

3.8.3 Print Self-test Page

Click to immediately print the printer's self-test page, which includes content such as the serial number, network address, total print length, and other parameters.

The self-test page lists the parameter information stored in the printer. After installing the label paper (recommended width is 100mm) and the ribbon (if necessary), printing a self-test page can serve as a record of the printer's current settings.

Quick method to print a self-test page: On the button panel, press and hold the PAUSE (pause) button for about five seconds. The printer will automatically print the self-test information page.

3.8.4 View Internal Fonts

View the fonts stored inside the printer and allow for individual deletion or complete deletion. If you need to download the font, please contact the Continuous printer technician.

3.9 Video Demonstrations

This industrial printer includes built-in instructional videos to help you visually understand steps and tips for adjusting the spring pressure, installing labels and ribbons, and cleaning the print head.More videos will be added in future updates. We hope these videos provide practical help and guidance. If you have any other questions, please feel free to contact customer service.

[Figure 1]

3.10 Offline Printing

You can choose to run or clear data files stored in FLASH or RAM. These data files can be used as additional elements in print jobs when there are specific requirements for printing styles. This can be achieved through programming for secondary development or by using command statements.

*Note: This feature is only available on certain models.



[Figure 1]

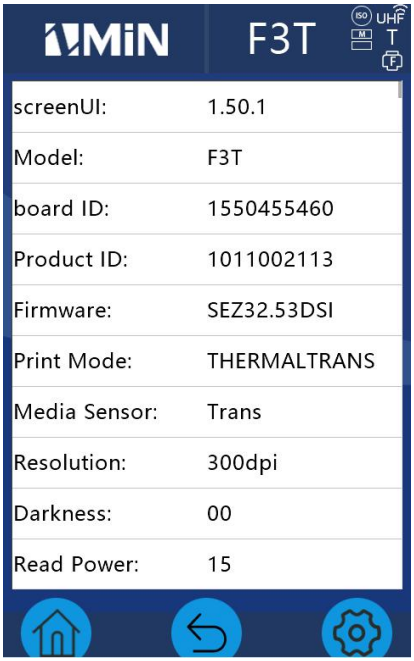
3.11 About

On this page, you can real-time obtain the printer's version information, network address, physical address, port number, and other related data.

[Figure 2]

3.12 Printer State

When the printer status is abnormal, a "prompt box" will pop up on the touch screen. Once the printer returns to normal, the prompt box will automatically close.



[Figure 2]

4 Chapter Four Maintain

⚠ Warning:

1. Before performing any maintenance on the printer, it is essential to turn off the printer's power first.

2. The print head may be very hot. When handling the print head, be extremely careful and wait for one minute to allow it to cool down before cleaning to avoid burns.

3. When cleaning, only use alcohol with a purity of 99% or higher.

During the normal use of the printer, adhesive and backing from labels or ribbons can accumulate along the print path, including on the print head and rubber roller. Over time, dust and debris can build up. If the print head, rubber roller, and print path are not cleaned, this may lead to issues such as lost labels, label jams, and printer damage. Therefore, regularly cleaning the printer is necessary.

4.1 Cleaning The Print Head

To ensure print quality and reduce damage to the print head from paper debris, sand particles, adhesive, and other contaminants, clean the print head at least once after finishing a roll of ribbon:

1. Turn off the printer's power.

2. Open the printer's top cover and the print head assembly.

3. Remove the ribbon.

4. Use a cotton swab soaked in anhydrous alcohol to wipe the print head. After wiping, check if there are any black marks or other residues on the cotton swab. Repeat the cleaning until no more stains appear on the cotton swab, indicating that the print head is clean.

4.2 Cleaning the Rubber Roller

If there are contaminants on the rubber roller, they should be removed immediately to avoid affecting print quality and damaging the print head:

1.Turn off the printer's power.

2.Use a cotton swab or soft cloth soaked in anhydrous alcohol to clean the rubber roller.

3.Manually rotate the rubber roller to ensure thorough cleaning.

4.3 Cleaning the Print Path and Inside of The Printer Case

Maintaining the cleanliness of all components inside the printer case effectively protects the print head and extends its lifespan. The cleaning method involves using a soft cloth soaked in anhydrous alcohol to wipe down the surfaces of all components inside the printer case.

Ensure that each part, especially those along the print path, is cleaned thoroughly to remove any dust, debris, or adhesive residue that could affect print quality or damage the print head.

4.4 Cleaning the Sensor

If dust or paper debris remains on the sensor, it may cause misalignment of the printed content. Use a blower (such as a rubber bulb) to remove dust and debris from the sensor. If the dirt cannot be removed by blowing, use a cotton swab soaked in anhydrous alcohol to gently clean the sensor.

5 Chapter Five Faults and Their Elimination

5.1 LCD Touchscreen Prompts

Below are common error messages. If you encounter an unknown error, please contact the manufacturer's technician.

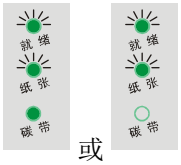
LCD Prompts	Possible Fault Causes	Solution	Precautions
Label Detection Error	Cannot Detection Label	· Check if the label roll is installed correctly · Check if the paper sensor is aligned with the label gap (or black mark, hole) · Calibrate the paper sensor	If you are using continuous paper without gaps (or black marks, holes), please check the barcode editing software and driver. You should set the paper type to continuous paper.
	The labels have been used up.	Install a new label	
	The label is stuck.	Fix the stuck part	
	The label baffle is installed incorrectly	Refer to Figure 5-6 on page 16	
	Paper sensor damaged	Repair the paper sensor	
Ribbon Detection Error	The carbon ribbons have been used up	Install a new ribbon	
	The carbon ribbon is stuck	Fix the stuck park	
	The carbon ribbon shaft sleeve is installed in reverse or not installed.	Refer to the "Operation" -> "Install the Ribbon" section for correct installation [2.3.1]	
	Ribbon sensor damaged	Repair the ribbon sensor	
RFID Read/Write Error	RFID chip failure	Please confirm that the RFID chip is normal before conducting the test	
	The configured read power is insufficient	The reading power of RFID can be appropriately increased	
	The RFID tag positioning is incorrect	Please confirm whether the detector method currently in use is correct.	The printer is equipped with both transmissive and reflective sensors.

	The RFID tag protocol is incorrect	Please confirm whether the RFID protocol configured for the current printer is consistent with the tag protocol.	For high-frequency protocols, they mainly include 15693, 14443A, NFC, etc. The default configuration protocol for high-frequency printers is the 15693 protocol.
Pause	The printer enters a paused state.	After pressing the "PAUSE" button, the printer returns to normal operation.	

5.2 Prompts from LED indicator lights

Under normal circumstances, when a printer encounters a malfunction or abnormal situation, the "READY" light on the keypad will flash, and communication between the printer and the host as well as printing operations will stop. To understand the cause of the failure, first check the flashing status of the LED indicator lights on the keypad. For models equipped with an LCD screen, you can directly view the error information on the LCD.

- **When the "READY"&"Media" indicator lights are flashing simultaneously, it indicates a fault related to the labels.**



Possible Fault Causes	Solution	Precautions
Cannot Detection the Label	· · Check if the label roll is installed correctly · Check if the paper sensor is aligned with the label gap (or black mark, hole) · Calibrate the paper sensor	If you are using continuous paper without gaps (or black marks, holes), please check the barcode editing software and driver. You should set the paper type to continuous paper.
The labels have been used up.	Install a new ribbon	
The label is stuck.	Fix the stuck part	
The label baffle is installed incorrectly	Refer to Figure 5-6 on page 16	
Paper sensor damaged	Repair the paper sensor	

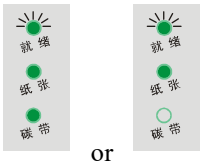
- **When the "READY" and "RIBBON" indicator lights are flashing simultaneously, it indicates a fault related to the carbon ribbon.**



Possible Fault Causes	Solution	Precautions
The carbon ribbons have been used up	Install a new ribbon	
The carbon ribbon is stuck	Fix the stuck park	
The carbon ribbon shaft sleeve	Refer to the "Operation" ->	

is installed in reverse or not installed	"Install the Ribbon" section for correct installation [2.3.1]	
Ribbon sensor damaged	Repair the ribbon sensor	

- **Only the "READY" light was flashing brightly**



or

- **Please confirm whether you have ever pressed the "PAUSE" button to put the printer into a pause state?**

Please press the "PAUSE" button and observe whether the "READY" indicator light remains constantly on again. Otherwise, the following faults may occur:

Possible Fault Causes	Solution	Precautions
The communication speed and protocol between the computer and the printer's serial port are inconsistent.	Enter the LCD port settings menu and set the baud rate for the serial port. The default baud rate for the serial port is 9600 bits per second (bps).	
Memory overflow	• Turn off the printer power and restart it. • Reset to the factory default settings.	

- **When the "READY" and "MEDIA" indicator lights alternate flashing, it indicates an error related to the RFID signal.**



Please confirm that your RFID tag is correctly positioned and that the RFID chip protocol is correct.

Press the "CANCEL" button and observe if the "READY" indicator light returns to a steady state. If not, there may be one of the following faults:

Possible Fault Causes	Solution	Precautions
RFID chip failure	Please confirm that the RFID chip is normal before	

	conducting the test	
The configured read power is insufficient	The reading power of RFID can be appropriately increased	
The RFID tag positioning is incorrect	Please confirm whether the detector method currently in use is correct.	The printer is equipped with both transmissive and reflective sensors.
The RFID tag protocol is incorrect	Please confirm whether the RFID protocol configured for the current printer is consistent with the tag protocol.	For high-frequency protocols, they mainly include 15693, 14443A/B, NFC, etc. The default configuration protocol for high-frequency printers is the 15693 protocol.

5.3 General Faults

- **Print Head Needle Broken**

When there is a fixed vertical white line appearing in the print output, it could be due to a dirty or damaged print head (as shown in the figure below).



This indicates that you should check the print head for any dirt or damage. If cleaning the print head does not resolve the issue, it may be necessary to replace the damaged part.

- **Host displays "Printer connection timeout"**

Please check:
1. Is the communication cable between the computer and the printer properly connected?
2. Is the printer power turned on?

If the problem cannot be resolved, please contact your dealer or the manufacturer's customer service department.

- **Data has been transferred, but the printer does not start printing**

1. Check whether the current printer driver is correct;
2. Perform a "reset" operation and try again.

If the printer still does not produce output, please contact your dealer.

- **Poor Print quality**

Please try the following solutions:

1. Adjust the print darkness;
2. Adjust the print speed;
3. Refer to the earlier section on printer maintenance and clean the relevant parts and components;

4. The carbon ribbon may be of poor quality or incompatible with the label — try using a different type of carbon ribbon;

5. The label material may be of poor quality — try replacing the labels.

- **Resuming Normal Operation**

After the fault has been resolved, if you wish to continue printing, simply press the "CANCEL" button on the printer's control panel.

If you restart the printer, after turning off the power, you must first delete any remaining untransmitted print data on the computer before turning the printer power back on.

5.4 Other Unidentified Faults

For any other faults with unknown causes, please seek assistance from your dealer or the manufacturer's customer service department.

Appendix A: Port Specifications

RS232 Serial Port

The printer is configured with a DB9F port

Pin	Direction	Definition
1	/	/
2	Out	TX
3	In	RX
4	In	DTR
5	-	Ground
6	Out	DSR
7	In	CTS
8	Out	RTS
9	/	/

Connection Method with the Computer：

Host 25S		Printer 9S
TX 2	.....	3 RX
RX 3	.....	2 TX
DSR 6	.....	6 DSR
DTR 20	.....	4 DTR
RTS 4	.....	7 CTS
CTS 5	.....	8 RTS
GND 7	.....	5 GND

Host 9S		Printer 9S
RX 2	.....	2 TX
TX 3	.....	3 RX
DTR 4	.....	4 DTR
DSR 6	.....	6 DSR
RTS 7	.....	7 CTS
CTS 8	.....	8 RTS
GND 5	.....	5 GND

The simplest method requires connecting only three wires.

Host 25S		Printer 9S
TX 2	.....	3 RX
RX 3	.....	2 TX
GND 7	.....	5 GND
pin 4		
pin 5		
pin 6		
pin 20		

Host 9S		Printer 9S
RX 2	.....	2 TX
TX 3	.....	3 RX
GND 5	.....	5 GND
pin 4		
pin 6		
pin 7		
pin 8		

Serial Port Configuration:

Baud Rate: 9600, 19200, 38400, 57600.
(Set the 7th and 8th positions of the DIP switch)
Data Format: 8 data bits, 1 start bit, and 1 stop bit.
Parity: No parity (non-parity).
Flow Control: RTS/CTS (hardware method).

If you are using software on Windows, you must set the flow control to "hardware" in the driver software.

Data from the computer can be transmitted to the printer through any communication port (USB, serial, or Ethernet) without prior setup, as the printer will automatically detect it. However, do not send data from another port before one port has finished sending its data, otherwise, a printer communication error will occur.

Appendix B: ASCII table

	0	1	2	3	4	5	6	7
0	NUL			0	@	P	`	p
1	SOH	XON	!	1	A	Q	a	q
2	STX		“	2	B	R	b	r
3		XOFF	#	3	C	S	c	s
4			$	4	D	T	d	t
5		NAK	%	5	E	U	e	u
6	ACK		&	6	F	V	f	v
7	BEL		‘	7	G	W	g	w
8	BS		(	8	H	X	h	x
9			)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z
B		ESC	+	;	K	[	k	{
C	FF		,	<	L	\	l	|
D	CR		-	=	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL

Note: The Euro symbol "€" corresponds to **ASCII value DEC 128** or **HEX 80**.

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