RONGTA USER MANUAL

RPW210 WRISTBAND PRINTER

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I. Product Introduction

Thank you for purchasing the RPW210 wristband printer from our company, which gives you safe, reliable and efficient printing quality at an affordable price. At the same time, the super function and easy operation of RPW210 are widely used in the fields of medical industry, entertainment and service industry, catering industry, supermarket and community group buying.

1.1 Safety Warnings

⚠ Warning: The tear blade has a sharp edge, please be careful not to touch to prevent cuts.

⚠ Warning: The print head is a hot part. Do not touch the print head and its surrounding parts during or just after printing. Children must use it under adult supervision.

⚠ Warning: Do not touch thermal printhead surfaces and connectors. Avoid electrostatic damage to the print head.

1.2 Main Features

❏ High printing quality
❏ Low noise
❏ The attractive appearance
❏ Reasonable structure, simple use and maintenance
❏ Label off intelligent handling function
❏ Fast printing, with print speed of up to 150mm/s, saving printing time greatly.
❏ Superior heat dissipation, can handle heavy printing workload
❏ Reprinting function, can effectively avoid the loss and omission of label information in the printing process caused by lack of paper.
❏ Automatic paper positioning after re-opening and re-closing the cover,
❏ Can effectively avoid the trouble and waste of labels caused by printing dislocation
❏ Automatic identification of paper

II. Safety Instructions

Before operating and using the printer, please carefully read the following items and strictly observe the use rules.

❶ Please install the printer on a stable surface to avoid printer suffered from any vibration and shocks.

❷ Do not use and store printers in places with low temperature, high temperature, high humidity, and serious pollution.

❸ Connect the printer's power adapter to an appropriate grounding socket. Avoid using the same socket with large motors or other equipment that may cause voltage fluctuation of power supply.

❹ Keep water or conductive materials (such as metal) out of the printer. Once it occurs, Power should be turned off immediately.

❺ Never use the printer without paper, otherwise it will seriously damage the printing rubber roller and thermal head.

❻ Unplug the product from the power outlet if the printer is idle for a long time.

❼ Do not disassemble or modify the product personally.

❽ Use only the power adapter specified in this instruction.

❾ In order to ensure the printing quality and prolong the service life of the product, it is recommended to use the recommended or equivalent thermal printing paper.

❿ Do not plug/unplug the product with the product powered on.

⓫ When plugging and unplugging the printer power cord, please hold the arrow position of the printer power connector with your hand, not the cord of the printer power cord.

⓬ Please keep this manual for the future use and reference.

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III. Appearance and Components
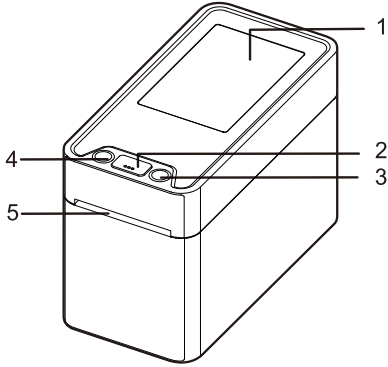
❏ Front View
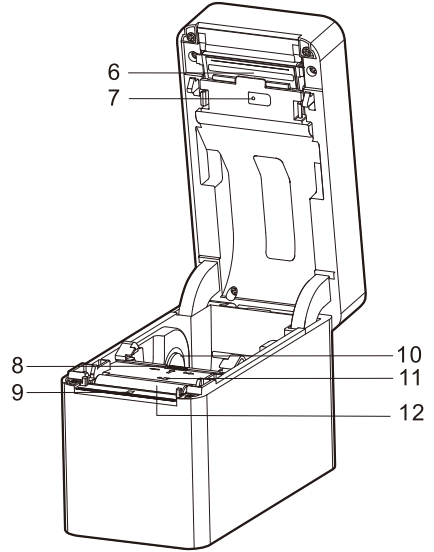
❏ Rear View
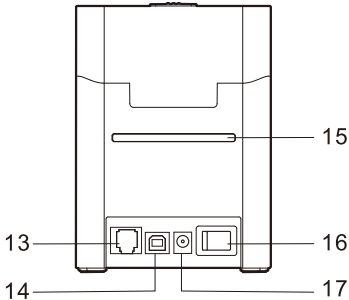
☺ Remark： The interface is optional or customized, and the specific interface is subject to the actual object.

❏ Inside View

1. Paper observation window
2. Open the cover button
3. FEED key and indicator
4. PAUSE key and indicators
5. Tear the paper knife
6. Print the head piece
7. Dual optical coupling
8. Paper width adjustment button
9. Roll back the optocoupler
10. Paper width adjustment block
11. Reflection optocoupler
12. Rubber rolls
13. Network Interfaces
14. USB Port
15. Position of backward paper feed
16 Switch
17. Power Ports

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IV. Technical Parameters

4.1 Printing Parameters

Specification sheet	
Model	RPW210
Effective resolution	203 dpi
Printing method	Thermal line printer
Printing speed	150mm/s (Max)
Print width	56mm (Max)
Paper width	60mm (Max)
Paper thickness	0.06-0.18mm
Bin capacity	127mm(Maximum external diameter of built-in volume 127mm)
Loading mode	Backward paper
Paper type	Label paper, continuous paper, black label paper
Interface type	USB+ Network port (customized or optional Bluetooth, WiFi)
Movement life	50KM (Label paper) 100KM (Continuous paper)
Print character	
Character size	ASCII Font A: 12x24 ASCII Font B: 9x17 Chinese character 24x24
Type of bar code	One-dimensional code：Code 39、39C、I25、Code 93、ITF25、EAN128、Code 128、Codabar、EAN-8、EAN8+2、EAN8+5、EAN-13、EAN13+2、EAN13+5、UPC-A、UPCA+2、UPCA+5、UPC-E、UPCE+2、UPCE+5 MSIC、ITF14、EAN14、CODE11 QR code: QRCODE、PDF417 (optional)
Extended character table	CP437,CP850,CP852,CP860,CP863,CP865,CP866, WPC1250，WPC1251，WPC1252，WPC1253，WPC1254
Character printing	Support ANK characters, custom characters and Chinese characters double width, double height printing, can adjust the spacing of characters
Power supply	
Input power supply	AC 100 $\sim$ 240V 50/60Hz
Output power supply	DC 24V ⎓ 2.5A
Environmental requirements	
Working environment	Operating temperature: 0~40℃ ，Operating temperature: 20~85% (No condensation)
Storage environment	Storage temperature:-20~70℃ ，Storage temperature:5~95% (No condensation)
Environmental conditions	
Print command	TSC/ZPL
Drive	XP、Win7、Win10、Win11、Mac、IOS、Android

☺ This product information is subject to change without notice

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V. Installation and Operation of Printer

5.1 Printer Unpacking

Check the parts:

Before use, make sure the accessories are included in the package(the following picture is an example). If any thing is missing, contact the supplier or manufacturer. The specific accessories may not be included depending on the printer model.

| Printer | Power cord | USB cable | Quick Installation Guide |

5.2 Connecting the Printer

❏ **Connect the power line**

(1) Confirm that the printer power switch is in the off "O" state;
(2) Connect one end of the power cord to the printer;
(3) Connect the other end of the power cord to a nearby socket;
(4) Press the (switch) button of the printer to turn it on.

❏ **Connect the USB cable**

(1) Connect the USB cable (TYPE-B header) to the printer;
(2) Connect the USB cable (TYPE-A header) to the PC host;
(3) Turn the printer power switch to the power on (I) state.

ON   OFF

Connect to PC host
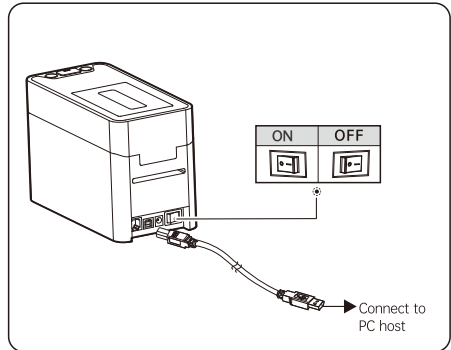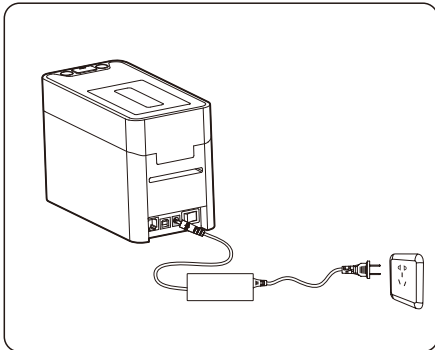
☺ This manual is for reference only, the specific functions and product pictures may be slightly different from the actual product, please refer to the actual product

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5.3 Installation consumables

❏ Reel mounting

(1) Press the cover key to open the paper bin cover;

(2) Slide the paper width adjustment button to adjust the appropriate width
    according to the paper width;

(3) Load the paper roll and turn the printing side up;

(4) Center the end of the paper on the paper roller and slightly over the outlet;

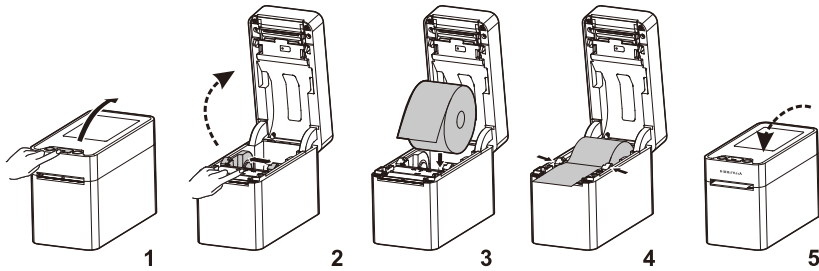(5) Press the center of the top cover, close it, and ensure that the card is in place.

1   2   3   4   5

❏ Folding paper mounting

(1) Press the cover key to open the paper bin cover;

(2) Slide the paper width adjustment button to adjust the appropriate width
    according to the paper width;

(3) After the paper inlet, load the folded paper in the direction shown;

(4) Center the end of the paper on the paper roller and slightly over the outlet;

(5) Press the center of the top cover, close it, and ensure that the card is in place.

1   2   3   4   5
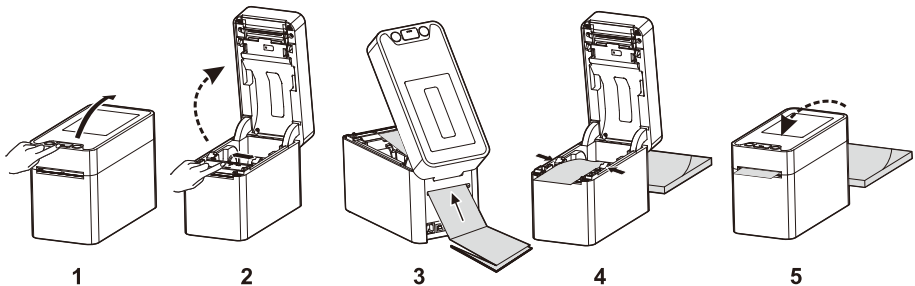
☺ Note:

1. printer paper width: 20~60mm
2. consumables support: wristband, label paper, folding paper, continuous paper, black label paper

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VI. Printer switch/button function/indicator/buzzer description

6.1 Power Switch

Power switch Switches on and off the printer power supply. The printer's power switch is located at the back of the printer. When the "-" of the switch is pressed, Open the printer; When the "O" of the switch is pressed, the printer is turned off.

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

6.2 Key Function Description

Press the key	Function description	Definition
Hull switch	Power source	When the "-" of the switch is pressed, the printer is turned on; When the "O" of the switch is pressed, the printer is turned off.
FEED key (right)	Paper feed	In standby state, press the [FEED] key, and walk a label when the paper is not continuous; Press 12mm once for continuous paper.
	Paper learning	In the standby state, long press the [FEED] key for 3S, and you will hear a "drip" sound. Release the FEED key to the printer for paper learning.
	Self-checking page	Long press the [FEED] key in the standby state. 5S will hear "drip" and "drip" 2 sounds. Release the FEED key and the printer prints the self-test page.
	Instruction switching	In the standby state, long press the [FEED] key 7S and you will hear 3 sounds of "drip", "drip" and "drip".Release the [FEED] key and the printer will switch between TSC/ZPL instructions and print the self-test page.
PAUSE key (left)	Pause	Press PAUSE while printing, and the printer will pause the current print Quest; When you press PAUSE again, the printer will resume the original printing task.
	Self-checking page	After the printer is connected, press and hold the [FEED] key and power on the printer. In about 3S, the printer will start to print the self-test page.

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6.3 Indicator Description

Definition	Setting	Describe
Power lamp (left)	PAUSE key /POWER key	After the printer is powered on, press the power button, and the power light is green on; When the pause button is pressed during the printing process, the power light blinks green;
Status light (right)	FEED key	After the printer is turned on, the status light is green, indicating that the printer is normal. A red light indicates that the printer status is incorrect.

6.4 Buzzer Description

LED indicator status	Buzzer status	Instructions
Indicator light green	Buzzer "drip" 1 sound	The printer initialization succeeded
The PAUSE /POWER key blinks green	/	Print pause
The FEED key blinks red twice	The buzzer rings twice in a row	Movement error
FEED key flashing red 3 times	The buzzer rings three times in a row	Missing paper error
FEED key flashing red 5 times	The buzzer rings five times in a row	Overheat error
FEED key flashing red 6 times	The buzzer rings six times in a row	Opening error
FEED key flashing red 7 times	The buzzer rings seven times in a row	Seam marking error
FEED key blinking red 8 times	The buzzer rings eight times in a row	Black label error
FEED key blinking red 9 times	The buzzer sounded nine times in a row	No SDRAM was detected
FEED key flashing red 10 times	The buzzer rings 10 times in a row	No serial FLASH detected

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VII. Printer test

7.1 Print the self-test page

When the printer is initially installed or there are any problems with the printer, you can run self-test program to confirm the following status： firmware version, printer parameter setting status, print quality, and related setting information of external devices, etc. After confirming that there is no problem with the printer after the self-test, please check other devices or software. This function runs independently of other devices or software.

The self-test method is as follows:

7.1.1 Ensure that the power supply is connected and the rolls are correctly installed.

7.1.2 Ensure that the printer is powered off and the top cover is closed properly.

7.1.3 Press and hold the [FEED] key, then turn on the power switch, and the printer will print the self-test page after about 3S. Release the FEED after printing the self-test page.

7.2 Printing Using Windows Drivers

7.2.1 Installing the Windows Driver. For details, see the Driver Installation Instructions.

7.2.2 Set Port of the Windows driver to the corresponding interface to use. Print the test page using the Print Test Page feature of the Windows driver.

7.3 Label Learning

⚠ **Note:** In the following cases, the user can learn the label positioning so that the printer can better locate the label:

● Install and use the printer for the first time;

● First use of printer after sensor cleaning;

● Re-use the printer after a long period of unused;

● Replace the new type of paper roll;

● During the printing process, the printer cannot effectively identify the mark;

In the printer ready state, long press [FEED] key 3s will hear "drip" 1 sound, release [FEED] key printer Do paper study. Users can also learn through the printer tool.

⚠ **Note:** After learning is completed, you can re-open the top cover and put the blank label paper that you have just learned into the ready place Print to avoid paper waste.

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VIII. Printer setup tool practical instructions

8.1 Label printing tool download

(1) Go to www.rongtatech.com

(2) Click Service and Support, find the tool download: Label printing tool click download

8.2 Usage Instructions

The printer must be ready before using the setup tool:

(1) Make sure that the printer is connected to the power supply and is in the shutdown state;

(2) The communication cable used is inserted into the communication connection plug of the corresponding printer;

(3) Confirm that the printer has installed the paper roll;

(4) Turn on the power switch;

## 8.3 Connection test

Run: The following picture is displayed:

RTLabelPrinterTool
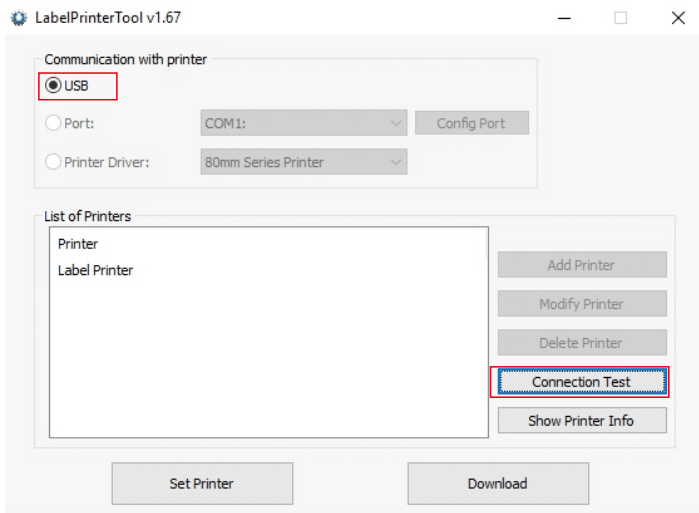
Select **[USB]** or other port according to the model interface or connect through the driver port, click **[Connection test]**
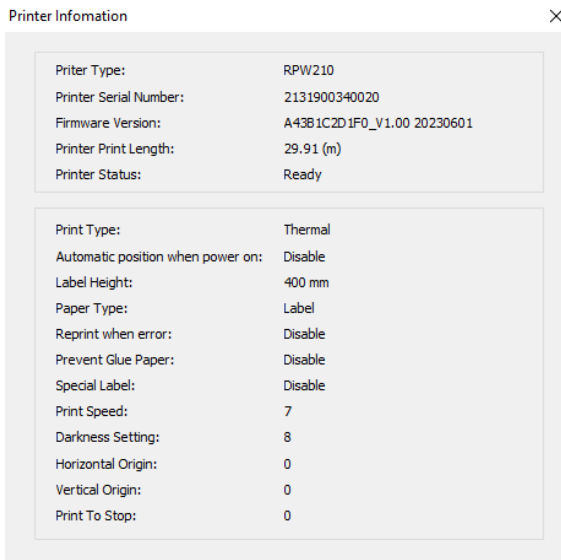
WRISTBAND PRINTER

If the following figure shows success, it means that the printer has been connected (if the connection is unsuccessful, please reinstall the communication cable and check the communication Settings).
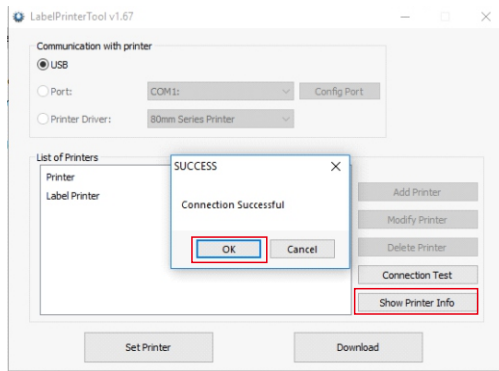

8.4 Displaying Printer Information

Click **[Printer information]** to view the basic information of the current printer.

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8.5 Downloads

When the firmware version of the printer is low or non-ideal, you can click **[Download]**. The following dialog box is displayed. Click **[Program]** to select the program, and then click **[Update]**. If the printer indicator is off for about 3s, turn on the startup position (turned off by default), a sheet of paper will be displayed after the automatic power-on. You can open the printer information to confirm whether the update is successful.can click the printer information to check whether the printer is updated successfully.

⚠ **Note:** Do not operate the printer during the update process until the printer is normally on. Otherwise, the update may fail.
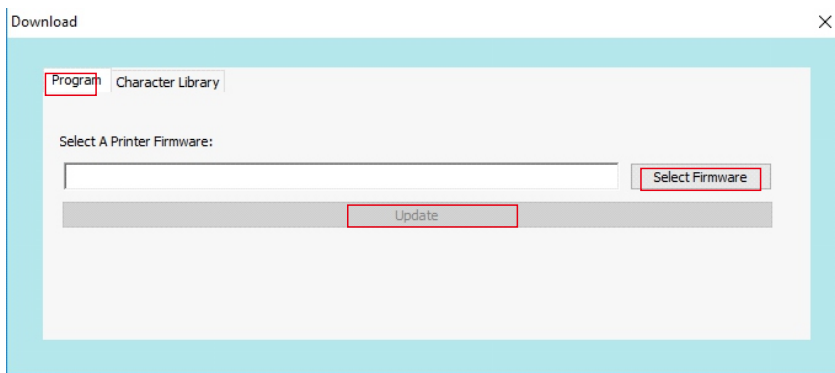

If the user wants to update the font by himself, he can select **[Font]**, click **[Open file]** to select the font file, and then click Update. At this time, it will pop up to select the input address. In no special circumstances, enter "0", and wait for the progress bar to complete the font update.

WRISTBAND PRINTER
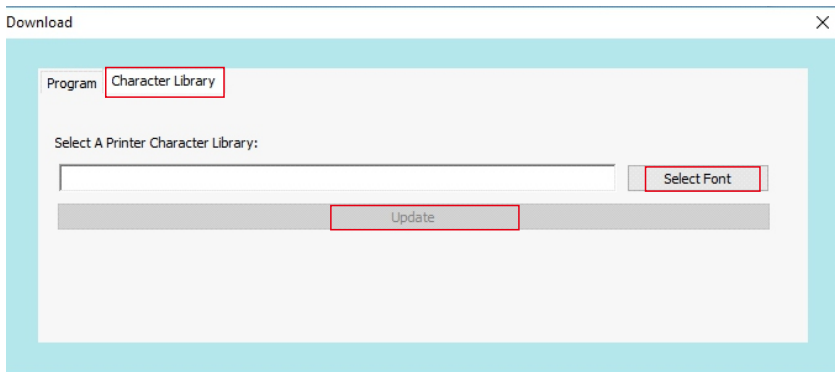
8.6 Setting a Printer

8.6.1 Print setup

Click **[Set Printer]** to pop up the following window, you can change the basic parameters in the print setting interface. The function details are as follows:
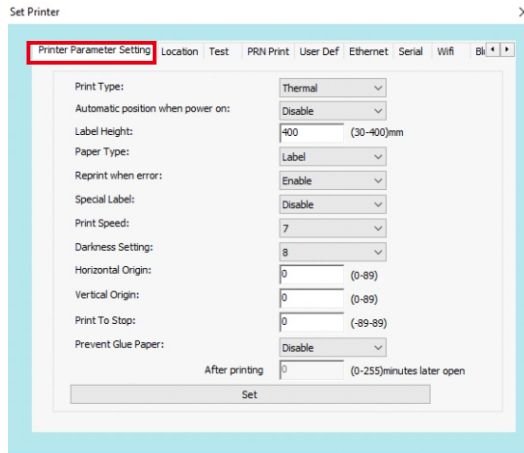
Submenu	Description	Parameter description (parameter order is consistent with description)	Defaults
Print Type	Thermal ribbon	0~1	0
Automatic position when power on	Enable/disable	0~1	1
Label height	Max label height supported	30~400mm（Two bytes)	400
Paper type	Continuous paper, label paper, and black-marked paper	0~2	1
Reprint when Error	Enable/disable	0~1	1
Special label	Enable/disable（Default off)	0~1	0
Print Speed	Speed setting	0~9	5
Darkness setting	Density setting	0~15	8
Horizontal Origin	Adjust the horizontal print start position	Adjust the horizontal start coordinate option: (+00 - +89) point	0
Vertical Origin	Adjust the vertical coordinate of print start position	Adjust the vertical start coordinate option: (+00 - +89) point	0
Print To stop	Locate the regular, paper tearing and cutter positions (take the paper tearing position as the zero point)	Start 0 - 255 minutes after stopping printing	0
Prevent Glue Paper	If specified time is exceeded, feed paper back and forth before printing the first sheet	Set label stop position option: (-89 - +89) point	0

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8.6.2 Calibrating Labels

When the printer is ready, switch to the label calibration interface (as shown below) :
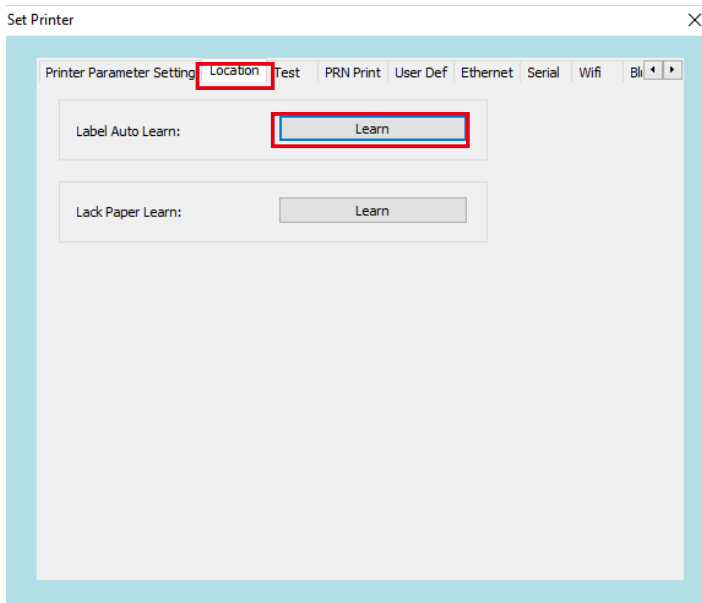
(1) Label automatic learning: by learning to recognize the specifications of the newly loaded paper;

(2) Lack of paper learning: It can solve the problem that when there is no paper or the learning
label can not find the gap, click the lack of paper learning without paper and close the cover.
Finally, reload the paper for automatic label learning;

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8.6.3 Print Test

Switch to the print test interface (as shown below)
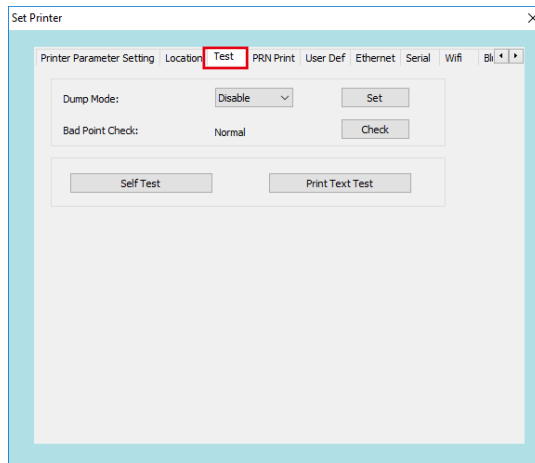
Debug mode: Default off, on the printer to print the original data sent, convenient for us to find errors; Error mode can only be exited by restarting the printer.

(1) Print head bad spot detection: when the printer is ready, click **[Check]** to check whether the print head is normal, if it is not normal, it will often show bad points (as shown below);
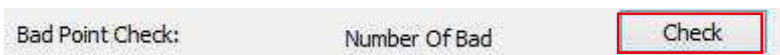
(2) Print self-test page: When the printer is initially installed or there is any problem with the printer, you can click [print self-test page] to confirm the firmware Version, printer parameter setting status, print quality and related Settings of external devices, etc.;
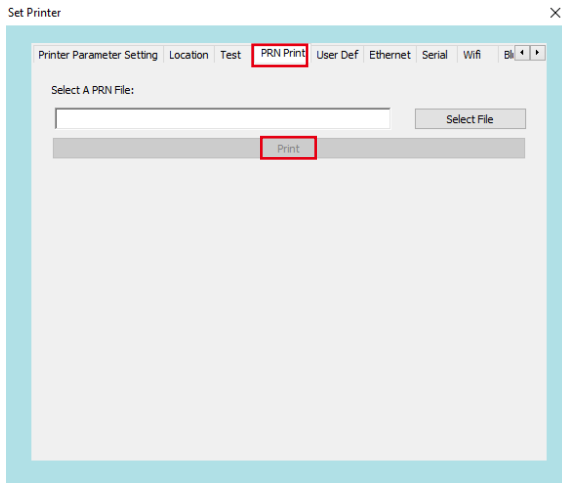
(3) Print test text: As shown in the following figure, you can enter the text you want to print in the text box, and set the printable area in label mode. Click **[Print]** to print the test.

⚠ **Note:** Text printing only supports TSC instruction, ZPL instruction does not support
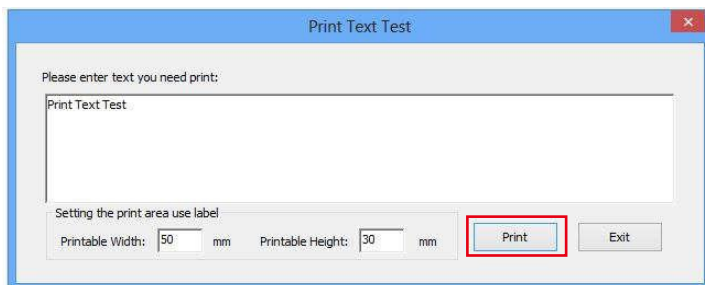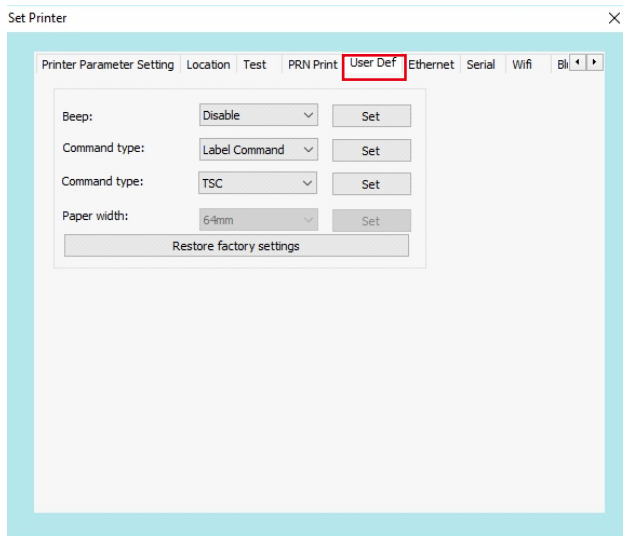
8.6.4 PRN Printing

Click to open the file, select an RRN file and click Print to print the PRN file.

8.6.5 User Settings

Switch to the user Settings interface (as shown below), you can set the buzzer sound on and off or restore the factory default Settings of the printer.

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8.6.6 Ethernet

On the Ethernet interface, you can set Ethernet parameters.

(1) Set the IP address of the printer to "192.168.1.87" and set the communication port.

(2) Set the subnet mask of the printer to 255.255.255.0.

(3) Set the gateway of the printer to "192.168.1.1".

(4) Set the DHCP function of the printer. By default, the DHCP of the printer is turned off.

　　If necessary, it can be turned on so that the printer can automatically obtain an IP address.

(5) Set the MAC address and set the network transmission rate.

⚠ **Note:** After setting the Ethernet IP address, the IP address corresponding to the printer driver network port must also be changed to the set/assigned IP address, so that the printer can be connected.

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8.6.7 Character Set Settings

Switch to the character set setting interface, click the drop-down button to select the desired codepage and click Settings.
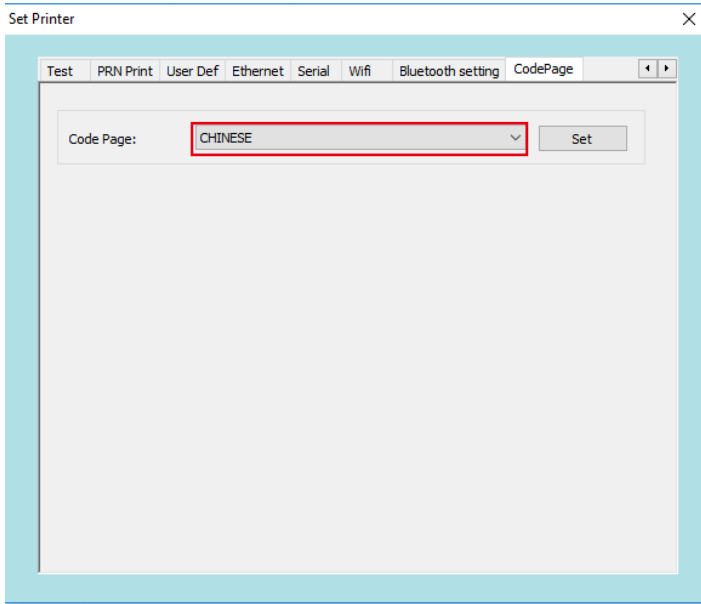
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IX. Driver installation instructions

9.1 Driver Download

(1) Go to www.rongtatech.com

(2) Click Service and Support, find the driver download: Wristband printer driver click download

9.2 Installation Description

9.2.1 Printer Default Instruction (TSC) driver Installation

(1) Confirm that the printer is connected to the power supply, and turn the printer on;

(2) Use USB communication cable to plug into the USB interface of the corresponding printer

and connect to the computer;   RPW210DriverInstall_V1.01

(3) Boot the default TSC command, double-click to open the driver software

(4) Select the corresponding language and click **[OK]**

(5) Click **[Install]**

WRISTBAND PRINTER
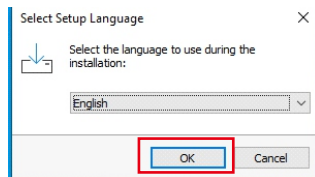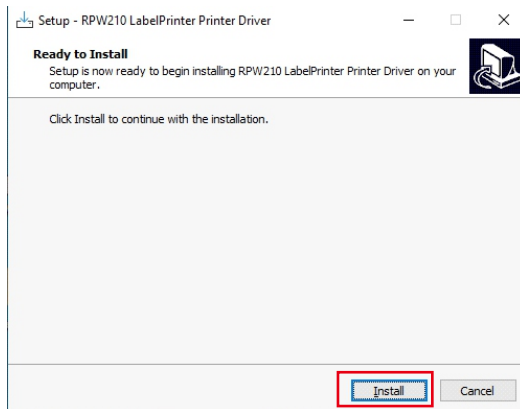
(6) The system prompts the installation success screen. Click **[OK]** to confirm the installation success.

(7) Click **[Finish]**. Users can view the installed drivers in the Control panel: Devices and Printers.
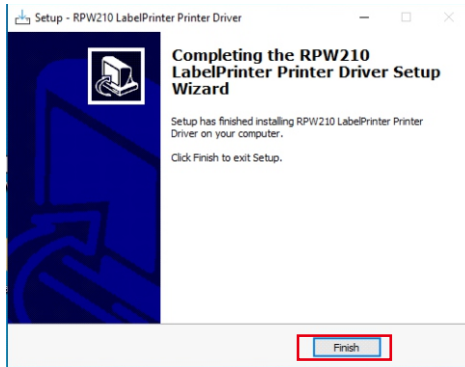
9.2.2 Switching Instruction (ZPL) Driver Installation

(1) Automatic installation:

Example: After the TSC command driver is installed. Long press the printer FEED key until the printer "drops" 3 sound and release, the printer will switch the command to ZPL command, at the same time, it will print the self-check page, you can judge whether the command switchover is successful through the se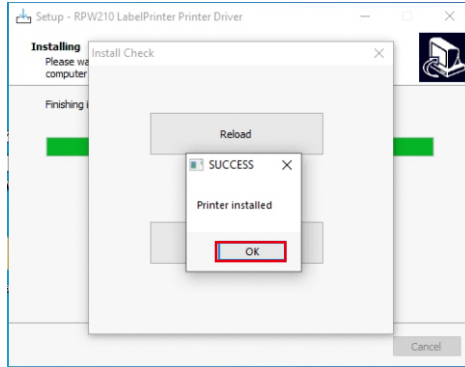lf-check page. At this time, the system will automatically install the corresponding driver of the ZPL instruction, and the user can check whether the installed driver is successful through the control panel: device and printer (on the contrary, the TSC instruction is also changed to ZPL instruction).

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(2) If the installation is not successful, the user can manually install:

(2.1) Set the printer to the instruction that needs to be installed

(2.2) Double-click the driver software   RPW210DriverInstall_V1.01

(2.3) Select the language and click [OK]
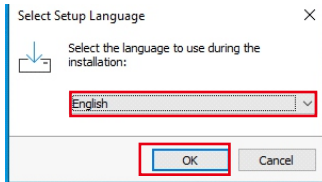
(2.3) Click [Install]
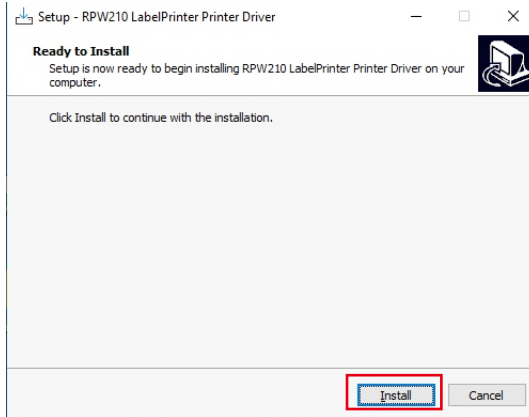
(2.4) The system will pop up: Reinstall, click [Reload]

WRISTBAND PRINTER
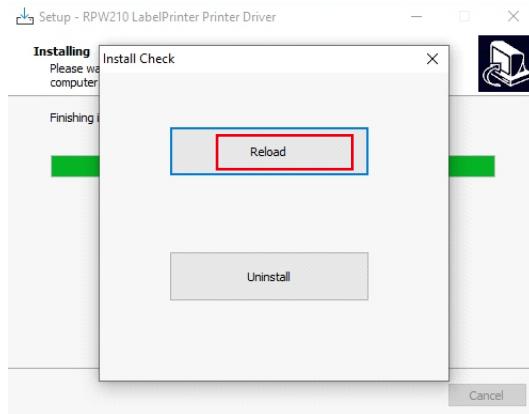
(2.5) If the system displays a message indicating that the installation is successful, click **[OK]**.
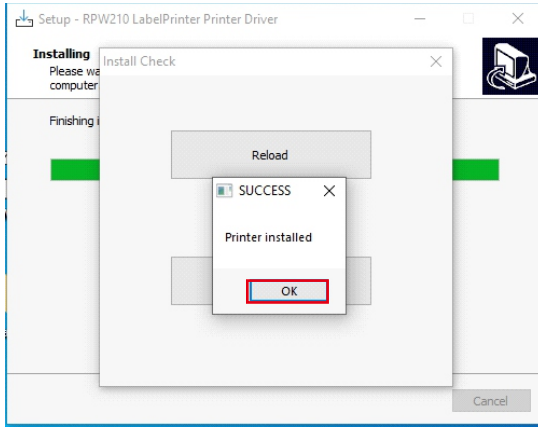
(2.6) Click to **[Finish]**. Users can view the installed drivers in the Control panel: Devices and Printers.
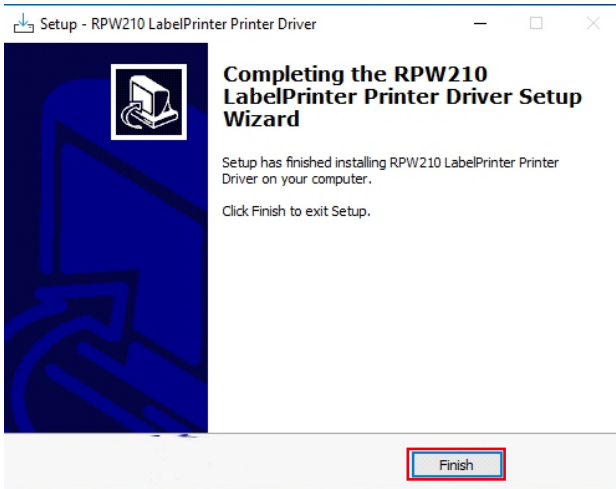
X. Cleaning the Printer

10.1 Cleaning the Printer Head

Clean the print head when one of the following conditions occurs to the printer:

(1) Printing is not clear.

(2) A vertical column of the printed page is not clear.

(3) The paper feeding noise is high.

The print head cleaning steps are as follows:

(1) Turn off the power supply of the printer, open the upper cover and remove the paper if exists.

(2) If printing has just been completed, wait for the print head to cool completely.

(3) Clean the printer head with a soft cotton moistened with ethyl alcohol.

(4) After waiting for absolute ethyl alcohol to volatilize completely, close the upper cover and try printing again.

Rubber Roller
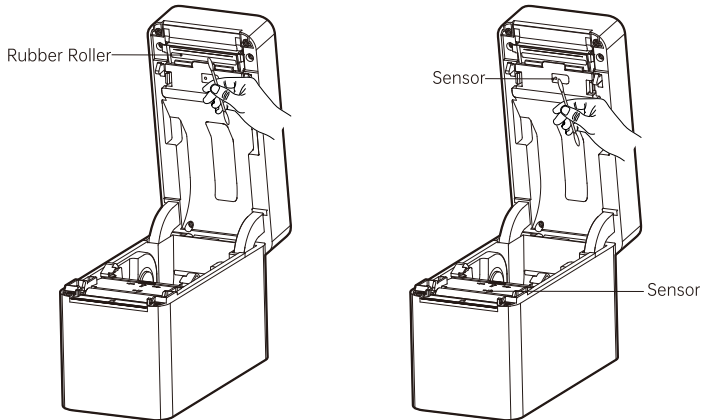
Sensor

Sensor

10.2 Cleaning the Sensor

Clean the paper shortage sensor when one of the following conditions occurs to the printer:

(1) In the printing process, the printer occasionally stops printing and alarms for paper shortage.

(2) No alarm for paper shortage.

The paper shortage sensor cleaning steps are as follows:

(1) Turn off the power supply of the printer, open the upper cover, and remove the paper if there is any.

(2) Wipe off the dust and stain on the sensor surface with soft cotton cloth (which should be dried) dipped in absolute ethyl alcohol.

(3) After waiting for absolute ethyl alcohol to volatilize completely, close the upper cover and try to start the machine again.

10.3 Cleaning the Printing Rubber Roller

When one of the following conditions occurs to the printer, the printing rubber roller should be cleaned:

(1) Printing is not clear.

(2) A vertical column of the printed page is not clear.

(3) The paper feeding noise is high.

The printing Rubber Rollers cleaning steps are as follows:

(1) Turn off the power of the printer and open the upper cover.

(2) Use a soft cotton cloth (which should be dried) dipped in a neutral detergent to wipe off dust and stains on the surface of the printing rubber roller.

(3) Close the upper cover after the cleaning agent is completely volatilized.
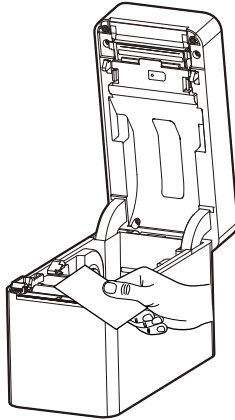
⚠ Attention:

(1) The power supply must be turned off during the daily maintenance of the printer.

(2) Do not touch the surface of the print head with hands and metal objects, and do not scratch the surface of the print head, printing rubber roller and sensor with tweezers and other tools.

(3) The organic solvents such as gasoline and acetone shall not be used.

(4) Wait until absolute ethyl alcohol is completely volatilized, then turn on the power supply to continue printing.

XI. Troubleshooting

The table below shows common problems and solutions for operators. If you have followed the simple troubleshooting methods but the printer is still not functioning properly, please contact the customer service department of your dealer for assistance.

Fault Phenomenon	Cause	Solution
POWER indicator is off	1. The AC plug and the power supply plug are not properly connected to the printer socket.	1. Check the power connector and ensure that the AC power socket and power supply plug are properly connected to the printer. 2. Check whether the power indicator of the power adapter is on 3. Turn on the power switch.
Unable to print	1. The communication cable is not properly connected to the printer and PC host. 2. Communication interface setting error. 3. Print status error.	1. Reconnect the communication cable. 2. Ethernet See 8.6.6 in this manual 3. Printer indicator information, check whether the printer The standby indicator is steady on (refer to 6.3 in this manual)
Incomplete print content	1. The paper is not centered.	1. Adjust the paper position. 2. Set the correct label size.
Incorrect positioning	1. Label learning is not performed. 2. Seam label detection photo coupler is offset. 3. Wrong mode selected.	1. Label learning is performed. (Refer to 7.3 of this manual) 2. Open the cover to confirm whether the seam label detection component is offset. For black label paper, move the seam label detection component according to the black label position so that the detection photocoupler can detect the black label. Label paper/continuous paper: The detection photocoupler must be in the paper range. 3. Use the setting tool to open the printer information and confirm whether the paper type is the same as the paper loaded in the printer, which can be changed by using the setting tool.
Poor print result	1. Paper loading error. 2. Print density/speed setting error. 3. Print head/rubber roller has dust or adhesive accumulation. 4. The print head is damaged.	1. Reload the paper. 2. Readjust the print density/speed of printer by using the setting tool or the software. Printing density can be coarsely tuned with the setting tool and finely tuned with the driver. 3. Clean the print head/rubber roller. (refer to 10.1 "Cleaning Print Head"/10.2 "Cleaning Sensor"/10.3 "Cleaning Printing Rubber Roller" of the Manual.) 4. Use the setting tool to detect bad point of head piece. If the print head is damaged, please contact the customer service department of your dealer for repairs. (Refer to this text Manual 8.6.3)

WRISTBAND PRINTER

XII. FCC WARNING

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure statement.

The device can be used in portable exposure condition without restriction

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WRISTBAND PRINTER

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