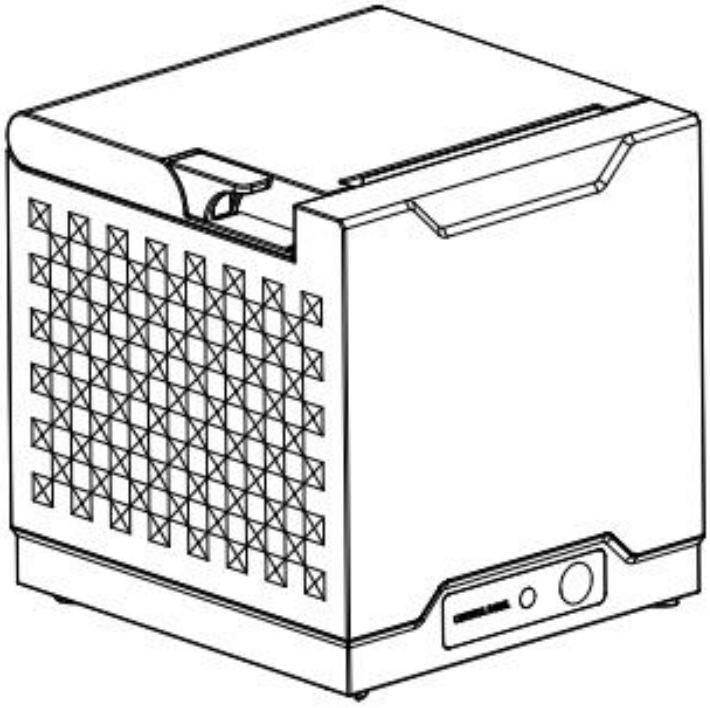
POS Thermal Receipt Printer

(SP-POS895)

User's Manual
Ver 1.00



Beijing Spirit Technology Development Co., Ltd.
www.sprt-printer.com

STATEMENT

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⚠ Warnings and Cautions

Warnings

Follow the stated precautions to avoid personal injury or equipment damage.

Cautions

This manual provides essential information and tips for operating the printer

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Precautions

Please carefully read this chapter before using the printer.

Safety Precautions

- Do not touch the print head or its connected components to avoid burns or damage caused by static electricity.
- If the printer emits smoke, unusual odors, or abnormal noises, immediately turn off the printer and disconnect the power. Continuing use may cause a fire. Contact your dealer or SPRT Customer Service Center for assistance.
- Do not attempt to disassemble the printer yourself. Unauthorized repairs are dangerous and may void the warranty provided by the supplier.
- Use only the power adapter supplied or one that meets the specified standards. An improper power adapter may damage the printer and cause a fire.
- Prevent foreign objects from entering the printer to avoid damage to internal components, which could result in severe consequences like fire or accidents.
- If water or other liquids enter the printer, immediately disconnect the power and contact your dealer or SPRT Customer Service Center for assistance. Continuing use may result in a fire.

Operational Precautions

- Do not submerge the printer in water or expose it to rain, as this may cause damage.
- Do not open the paper cover during printing, as this may disrupt the printer's operation.
- When using the USB interface, do not disconnect the USB cable during printing, as this may result in incomplete print data.
- Although the printer can operate steadily between 0℃ and 50℃, excessively high temperatures (above 45℃) or low temperatures (below 5℃) may reduce print quality.
- High humidity (above 85% relative humidity) or low humidity (below 20% relative humidity) may degrade print quality.
- Using low-quality or expired thermal paper may reduce print quality and even damage the Printer.
- When printing labels, ensure that the label dimensions do not exceed the printer's design specifications, as this may cause malfunctions.

Storage Precautions

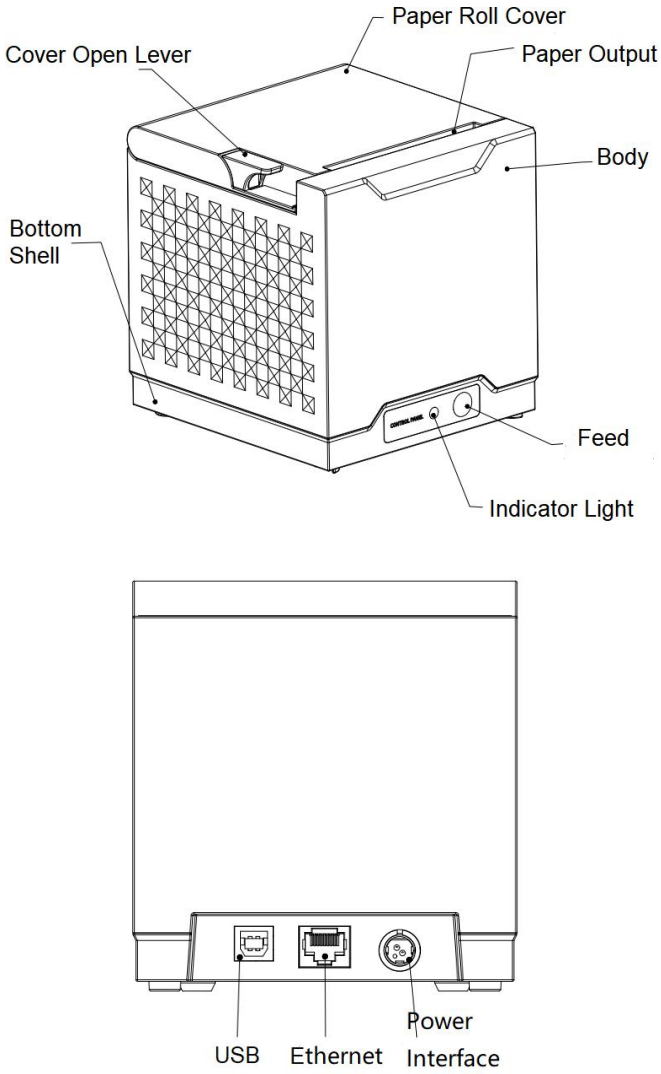
- Store the printer in an environment with a temperature of -20℃ to 60℃ and relative humidity of 10% to 90%.

This is a Class A product.

Warning: Operating this equipment in a residential environment may cause radio interference.

Chapter 1 Printer Appearance and Models

1.1 Printer Appearance



SP-POS895 Appearance

1.2 Model

Model	Description	Print Density
SP-POS895Ud	USB Interface	8dots/mm (203dpi)
SP-POS895UEd	USB + Ethernet Interface (within 100M)	

Chapter 2 Specification & Parameters

2.1 Printier Specification

- ✧ Printing Method: Thermal Line
- ✧ Paper Width: 79.5±0.5mm
- ✧ Effective Printing Width: 72mm
- ✧ TPH: 100Km.

  Conditions of Use:

  * Print 12 × 24 Western characters, 50 lines each time, and repeat intermittently.

  * Use normal thermal paper
- ✧ Cutter Life: 1,000,000 cuts
- ✧ Resolution: 8dots/mm（203dpi）, 576dots/line
- ✧ Printing Speed: 160mm/s（25% printing density）

2.2 Printing paper

- ✧ Paper roll model: TF50KS－E（Japan paper co.ltd）

  AF50KS-E(JUJO THERMAL)
- ✧ Paper roll: Paper Type ---Normal Thermal Paper 80xф80mm（Max.）

  Inner diameter ---ф13mm（Min.）

  Paper Thickness ---0.06mm～0.08mm

2.3 Character Set

- ✧ BIG5, GB18030
- ✧ ASCII: 12x24/24x24/9x17
- ✧ Code page;ANK: 12x24/24x24/9x17
- ✧ Self-defined Character & Bitmap
- ✧ 1D：UPC-A、UPC-E、EAN-13、EAN-8、CODE39、ITF25、CODABAR、 CODE93、CODE128
- ✧ 2D：PDF417、QR Code、DATA Matrix

2.4 Physical Parameters

- ✧ Dimension： 125(L)X120(W)X128(H)mm
- ✧ Weight： 565g（Without paper roll）
- ✧ Paper roll diameter：≤80mm
- ✧ Interface： USB, Ethernet

2.5 Environmental parameters

- ✧ Operating Temp：0℃～50℃
- ✧ Operating Humidity：10%～85%
- ✧ Storage Temp：-20℃～60℃
- ✧ Storage Humidity：10%～90%

2.6 Other parameters

- ✧ Command：ESC/POS
- ✧ Power Supply ：DC24V±5%,1A

Chapter 3 Operation Guidance

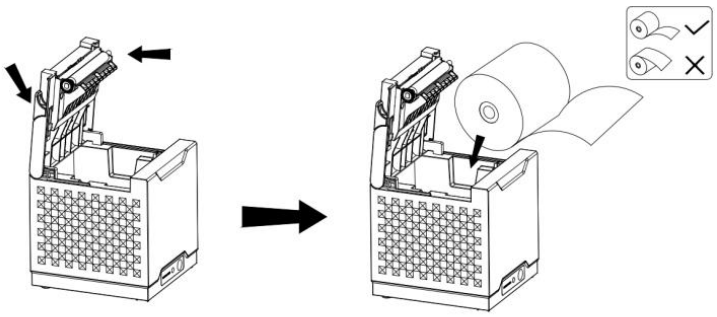
3.1 Operation Instruction

Paper roll installation

(1) Push the cover open lever on the left side upward to open the paper bin.

(2) Place the thermal paper roll into the paper bin , as shown in Figure F1. Pull out a section of the paper roll, and then place the end of the paper on the printer head, with the thermal side of the paper facing the print head. As shown in Figure F2.

(3) Close the roll paper cover and press it down gently. Be careful not to pull the paper forward or backward by hand.



F1 F2

3.2 Basic Operation Instruction

3.2.1 Power on

In the shutdown state, close the [paper cover], then plug in the power cord and turn on the printer. The cutter performs the reset operation, and the indicator light turns on, then the printer enters the normal working mode.

3.2.2 Shutdown

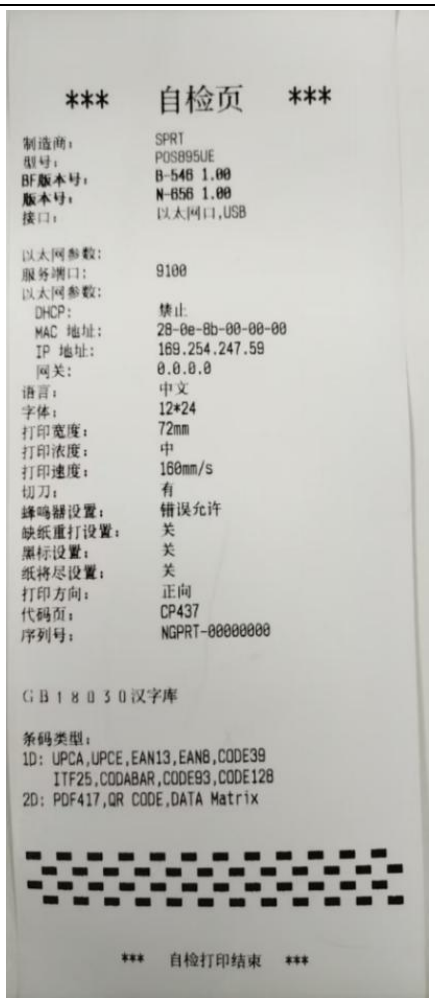
Disconnect the power supply and shut down

3.2.3 Self test

Self-test can detect whether the printer is working properly. If it can print out the self-test page correctly, it means that except for the interface with the host, the printer is normal. Otherwise, it needs to be repaired.

The self-test prints out in order: printer model, software version, interface type, default values of printer parameters, default code page content (if the language is set to English) or Chinese character library name (if the language is set to Chinese), and barcode type.

Press the [FEED] key twice within 3 seconds, and the printer will immediately print out a self-test page. The parameters of the self-test pages of different models may vary. The self-test page of the SP-POS895UE model is as shown in the figure:



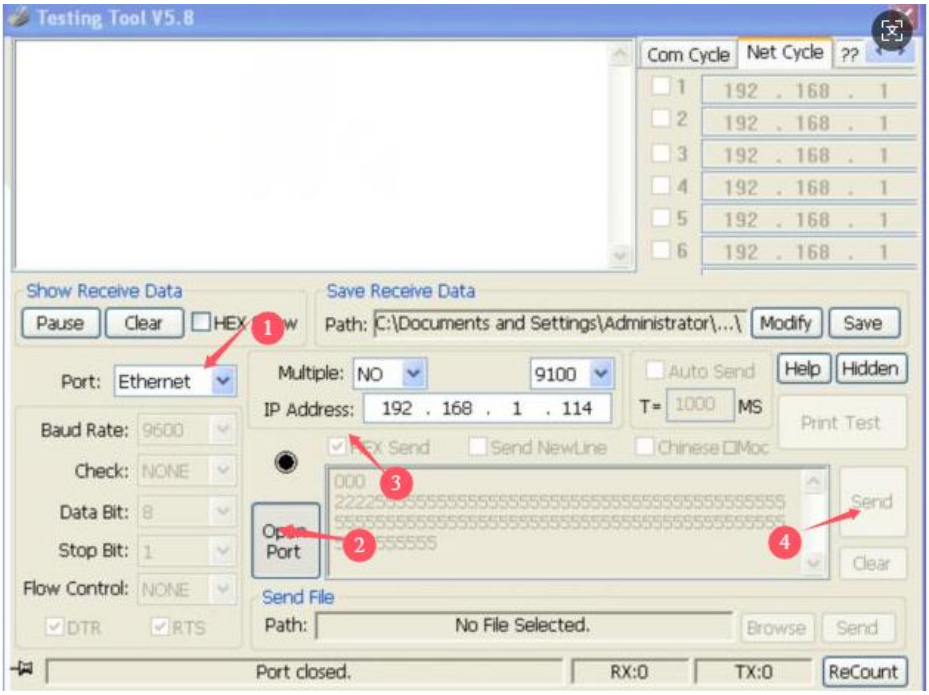
3.2.4 Paper feeding (manual feeding)

Press the [FEED] key to feed paper: short press for short paper feeding, long press for long paper feeding.

Note: For paper feeding operation, the time interval between pressing the [FEED] key twice must be longer than 3 seconds. Short presses of the [FEED] key twice within 3 seconds will trigger the printing of self-test.

3.2.5 Factory Settings Reset

Use the testing tool to send the factory reset command: 1B 09 1B 92 FF 01. As shown in the figure:



3.2.6 Hexadecimal Printing

Follow the steps below to enable hexadecimal printing mode on the printer:

In standby mode, open the paper cover.

Within 3 seconds, press the [FEED] button twice quickly, then close the paper cover.

At this point, the following 3 lines of content will be printed:

Hexadecimal Dump

To terminate hexadecimal dump,

Press FEED button three times.

This indicates that the printer has entered hexadecimal mode. In this mode, all input will be printed as hexadecimal numbers. To exit hexadecimal printing mode, open the paper cover, press the [FEED] button three times within 3 seconds, and the printer will print "*** Completed ***".

3.2.7 Printer Parameter Settings

Use the configuration tool on the PC to perform the settings.

3.2.8 Cutter Jamming Handling

If the cutter gets jammed, turn off the power and then power it back on. The cutter will return to its original position. If paper is jammed, open the paper cover and remove the paper.

3.2.9 Upgrade Procedure

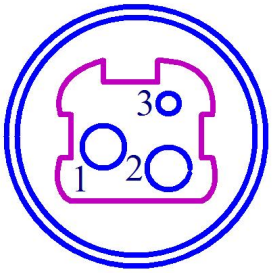
Connect the USB cable or serial cable to the computer, ensuring the printer is powered on and in a normal state (no error status). At this point, the upgrade can be performed using the PC-side upgrade tool.

1. Open the “UpdateFirmware.exe” upgrade tool.
2. Select the USB port or the appropriate serial port, open the port, select the firmware file to be upgraded, and click "Start Upgrade". Wait until the data update is complete, and the printer will automatically enter upgrade mode.
3. After the upgrade is complete, the printer will automatically print a self-test page and return to normal working mode.

3.3 Interface Connection and Printing

3.3.1 Power Interface

The rated supply voltage is DC 24V ±5%, with a rated current of 1A. The socket type is A-1009-3P. The appearance and pin definitions are shown in Figure 3-1.



PIN NO.	Signal
1	+24VDC
2	Ground
3	NC

Fig. 3-1 Power socket and pin definition

3.3.2 USB Interface

The standard configuration of the SP-POS895 printer is equipped with a standard USB printer cable D-type data connection cable, which is used to connect the printer and the host device. The printer's USB belongs to the slave device type (DEVICE); the appearance and pin definition are shown in 3-2.

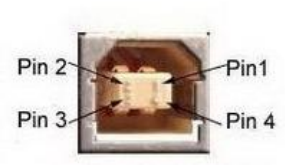


Fig.3-2 USB Interface

Pin No.	Function	Notes
1	V Bus	——
2	Data -	Data -
3	Data +	Data +
4	GND	Ground

3.3.3 Ethernet Interface

Models equipped with a network port use an RJ45 network socket; the appearance is shown in Figure 3-2.

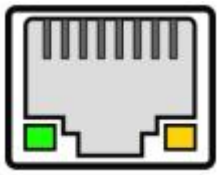


Figure 3-2 Ethernet Interface

1. **Configure DHCP Switch:** Use the setup tool to configure the DHCP switch.
2. **Manually Operate DHCP to Obtain a Static IP from the Current Network Segment:** After enabling the DHCP function, connect the network cable, power on the device, and it will automatically obtain an IP address.
3. **Automatically Obtain a Static IP from the Current Network Segment:** DHCP is turned off by default. After powering on the device while connected to the router via a network cable, if the printer's current IP cannot connect to the router, DHCP will automatically be enabled to obtain an IP address.

3.4 Buzzer, Indicator Light, and Button Operations

The SP-POS895 printer has one button, one built-in buzzer, and one indicator light.

[FEED] is the paper feed button. Press and hold the **[FEED]** button to feed paper. Release the button to stop feeding paper.

The buzzer is used to indicate error states and can be enabled or disabled for error alarms through parameter settings. The error state types are the same as the indicator light.

The **green indicator light** is the printer's status light, used to indicate the printer's operating status and errors.

The following table lists the indicator types:

Indicator lights status	Buzzer Status	Description
On	Silent	Normal working state
Flashes once, off for ~1 second	Beeps once, pauses for ~1 second	Out of paper; resumes normal operation once paper is loaded.
Flashes twice, off for ~1 second	Beeps twice, pauses for ~1 second	Printhead overheated; resumes automatically once temperature lowers.
Flashes three times, off for ~1 second	Beeps three times, pauses for ~1 second	Printhead heating element damaged; non-recoverable, requires repair.

Chapter 4: Additional Information

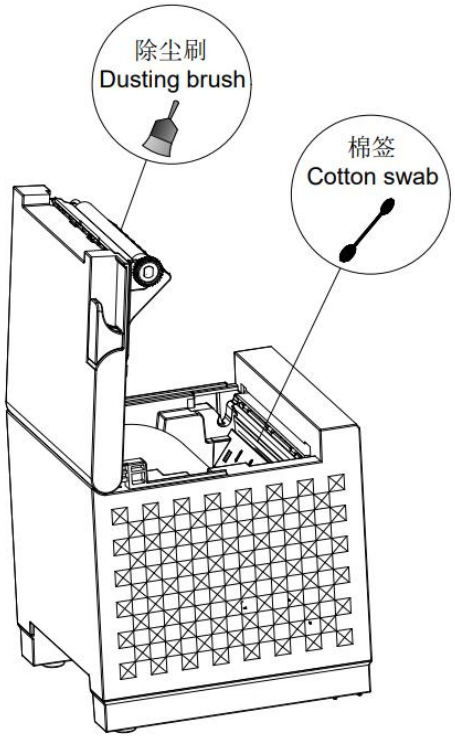
4.1 Developer Manual

The **SP-POS89x Developer Manual** is a technical guide designed to assist SP-POS895 printer users in developing printer applications. This manual can be requested from the company.

4.2 Cleaning and maintenance

The printer requires regular maintenance:

In the powered-off state, use a cotton swab dipped in an appropriate amount of alcohol to clean the print head, removing carbon buildup, dust, and other impurities. Use a dust brush to clean the paper scraps and dust from the printer’s rollers.



Chapter 5: Using the Printer on Windows

The SP-POS895 thermal receipt printer driver version is **SP-DRV2155Win**. The driver and installation instructions can be downloaded from our company website (https://www.sprt-printer.com/). Detailed instructions are not provided here.