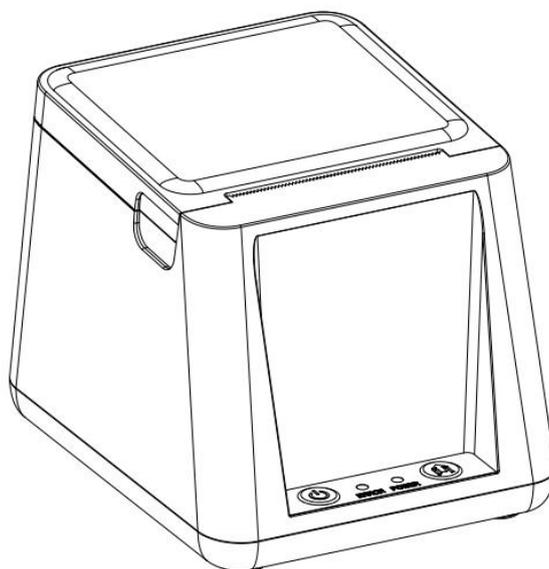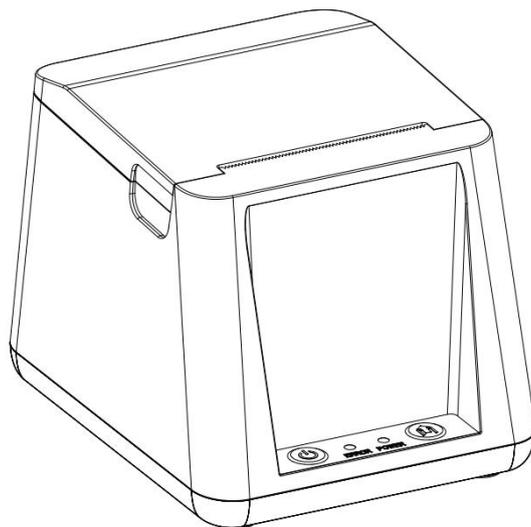# SPRT®

POS Thermal Receipt Printer
SP-POS5813/POS5814

User's Manual

(Ver 1.00)

Beijing Spirit Technology Development Co.,Ltd.

www.sprt-printer.com

Content

Introduction

SP-POS5813/POS5814 printer is a new type line thermal printer, it features in fast speed print, low print noise, high reliability, perfect print quality and ribbon needless, avoiding the vexation of regular maintenance.

SP-POS5813/POS5814 printer: small in outline dimension, simple operation, and extensive application, especially suitable for commercial cash register, PC-POS, bank POS and all kinds of receipts print.

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Chapter 1 Feature and Performance

1.1 Print Performance

● Print method: direct thermal

● Print paper width: 57.5±0.5mm

● Print density: 8 dots/mm,384 dots/line

● Print speed: max 90mm/s

● Reliability

  (1) Print head life: 50km

   Using condition:

   ＊Print 12 × 24 ASCII characters, print 50 lines each time, intermittent print repeatedly

   ＊No more than 25% of each dot line can be printed simultaneously, and the same dot of each character line can be printed vertically no more than 11 times.

   ＊Use specified thermal paper

  (2) Cutter life: 1500,000 cuts

● Valid print width: 48mm

1.2 Print Paper

Paper Type: Thermal Paper 79.5±0.5mm x φ80mm（max）

Paper Thickness: 0.06mm～0.08mm

Paper Loading Method: Easy loading

Paper Cutting Method: Manual

1.3 Print Font

● ANK Character Set

12×24 dots,1.5（W）×3.00（H）mm.

● GB GB2312-80(Chinese):

24×24 dots,3.00（W）×3.00（H）mm.

1.4 Interface

● Communication Interface:

USB Interface(Type B, Female)

Parallel(DB25, Male)

Serial(RS232, P/S2)

Bluetooth(BTDM, BTMM)

Ethernet Interface: Normal Ethernet interface.

● Cash Drawer Control:

DC12V, 1A, 6-pin RJ-11 socket.

1.5 Print Control Commands

● Character print commands: support double-width, double height print of ANK characters, user-defined

characters and Chinese characters, the character line spacing is adjustable.

● Graphics print commands: support the print of bit-map graphics and download bit-map graphics with different density

●GS barcode print commands:

 support UPC-A, UPC-E, EAN-13，EAN-8, CODE39, ITF25, CODEBAR, CODE93, CODE128

1.6 Power Supply

● DC8.5V, 2A

1.7 Operation Environment

● Operation temperature: 0～50℃; Relative humidity: 10～80％

● Storage temperature: -20～60℃; Relative humidity: 10～90℃

1.8 Outline Dimension & Weight

●Dimension: 120(L)mm×100(W) mm×95 (H)mm

● Weight: 280g(without paper roll)

Chapter 2 Operation Instructions

2.1 Printer Appearance

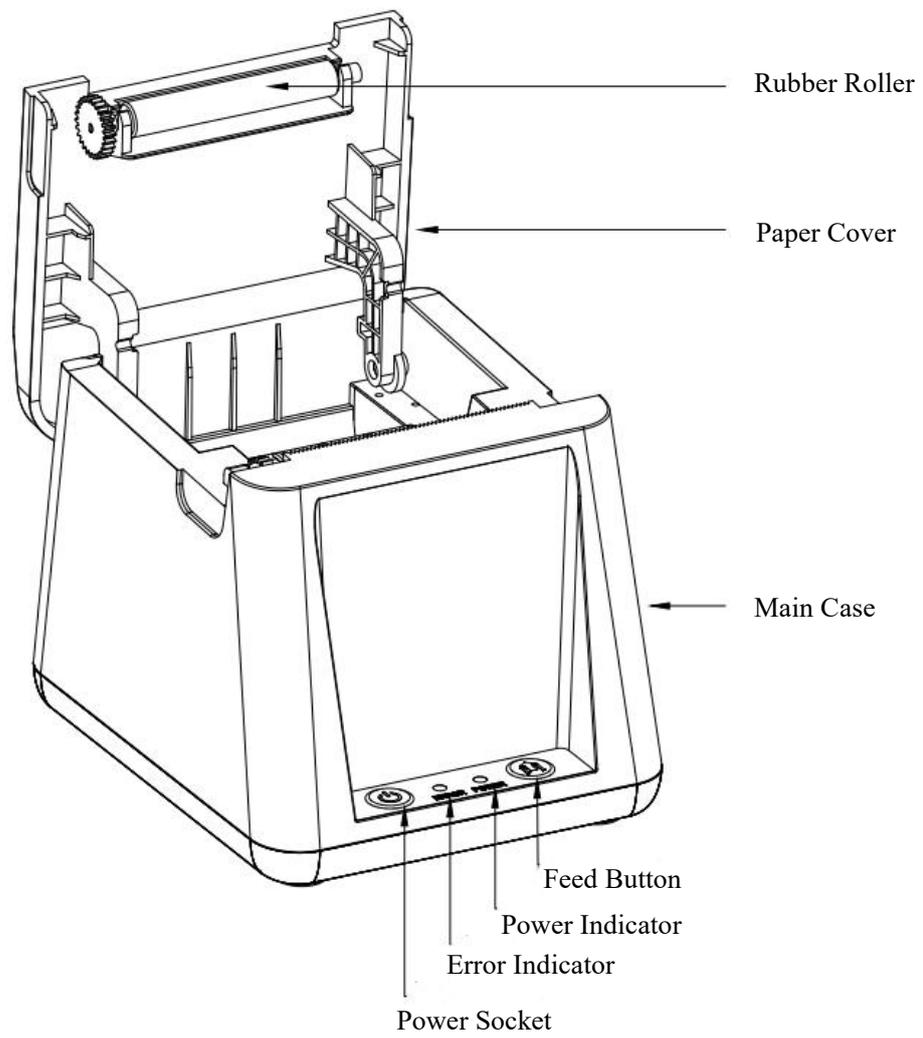Printer appearance As shown in Figure 2-1-1, Figure 2-1-2.

Rubber Roller

Paper Cover

Main Case

Feed Button

Power Indicator

Error Indicator

Power Socket

Figure 2-1-1

Ethernet   USB   Cash drawer   Parallel   Power
                              Power

Serial   Cash drawer Power   USB Cash drawer Power
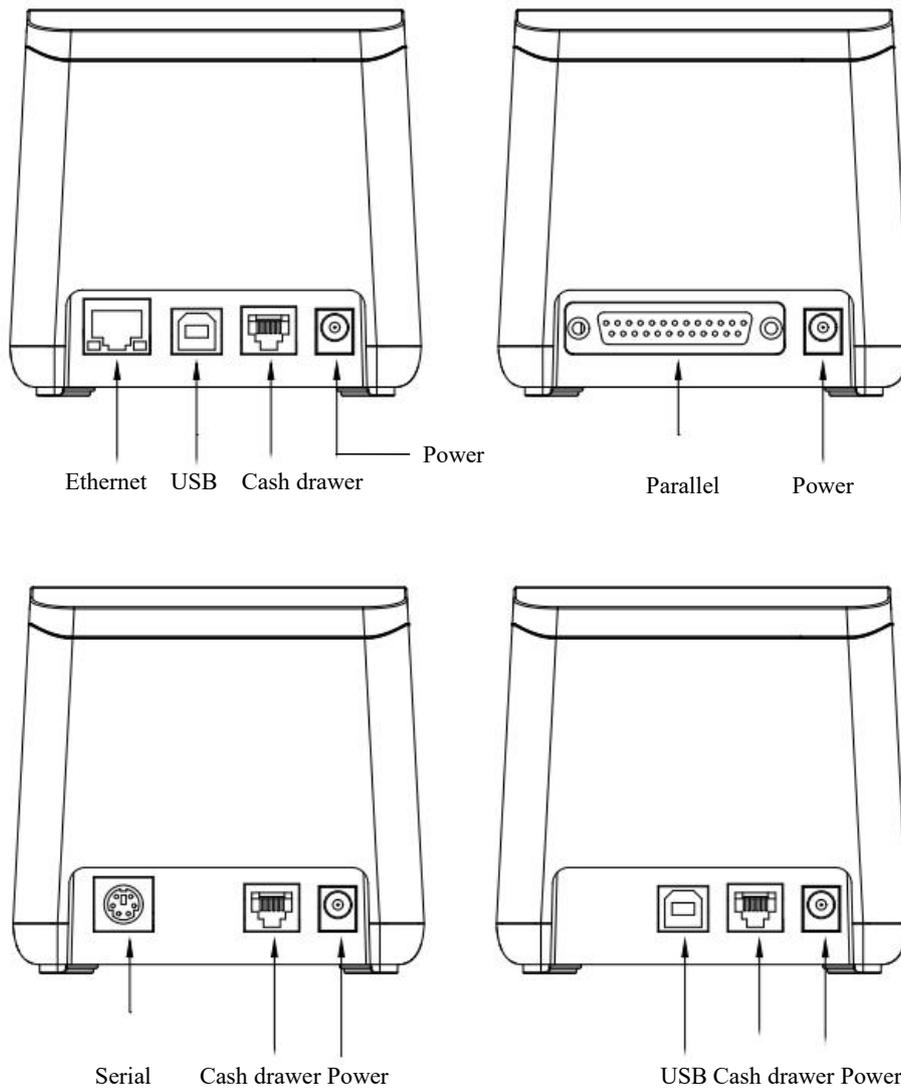
Figure 2-1-2

2.2 Paper Installation

SP-POS5813/POS5814 printer adopts 58mm width thermal paper.

The thermal paper installation steps are as follows:

1. When there is no paper in the print head, please do not press the feed button 🔘 to avoid affecting the life of the print head. As shown in Figure 2-1-1, hold the paper cover and pull it upward to open the door and change paper.

2. Do not manually pull the paper forward or stuff the paper backward after the paper cover is closed.

2.3 Interface

2.3.1 Communication Interface

1. Standard Type-B USB.

Figure 2-4 USB Interface

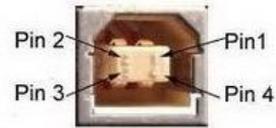| PIN NO	Function	Note
1	V Bus	The power supply is +5V.
2	Data -	The data is negative.
3	Data +	The data is positive.
4	GND	Power ground

2. Standard DB25 parallel port connector, male plug.

pins	Definition	Description	Pins	Definition	Description
1	STROBE	Active low signal for data transmission	14	Auto Feed	Automatically insert a line break for every carriage return in the printer
2	D1	The first bit of data.	15	nError	Low-level indication indicates the presence of an error state.
3	D2	The second bit of data.	16	Prime	
4	D3	The third bit of data.	17	Select Input	

5	D4	The forth bit of data.	18	GND	
6	D5	The fifth bit of data.	19		
7	D6	The sixth bit of data.	20	GND	
8	D7	The seventh bit of data.	21	GND	
9	D8	The eighth bit of data.	22	GND	
10	nACK	Response signal	23	GND	
11	BUSY	Busy signal, active high	24	GND	
12	Paper End	Paper out signal, active high	25	GND	
13	Select	High-level message indicates that the printer is online.			

3. RS232 interface

Insert the dedicated DB9-P/S2 cable and follow the instructions on the self-test page to configure the serial port.

Pin	Definition	Description
1	RS323_RX	Serial Data Receiving
2	RS323_TX	Serial Data Transmission
3	RTS	Request to send low effective.
4	CTS	Cancel sending low effective.
5	GND	
6	GND	

4．Bluetooth（BTDM，BTMM）

Turn on the Bluetooth on the terminal device, search for the corresponding device based on the Bluetooth information on the self-check page, and input the password to connect to the device.

Note:

① The "POWER" light of the device will blink within the first 30 seconds after powering on; once Bluetooth is successfully connected after 30 seconds, this light will stay on.

② Bluetooth information can be set through the settings software.

5．Ethernet

① Insert the Ethernet cable, enter the settings mode, refer to section 2.4.3, item 2, and select "Enable DHCP with 5-second delay confirmation". The device will automatically obtain an IP address and save it, which will be used as the device's static IP address thereafter.

② Use the settings software to configure the corresponding IP address.

Note: When the router's network segment changes, or when there is an IP address conflict within the local area network, the settings need to be reconfigured.

2.3.2 Cash Drawer Interface

The cash drawer interface of the SP-POS5813 printer adopts an RJ-11, 6-pin socket, as shown in Figure 2-3-1.
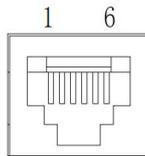

Fig. 2－3－1　Cash drawer interface

The pin definitions are as follows in Table 2-3-2:
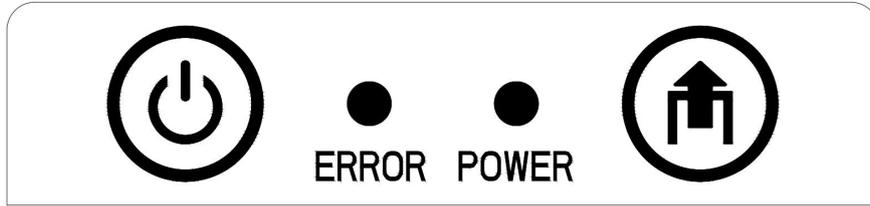
PIN NO.	Signal	Direction
1	Chassis Ground	---
2	Cash drawer driver signal	output
3	On/off signal of cash drawer	input
4	+12VDC	Output
5	N.C	---
6	Signal ground	---

Tabel 2－3－2　Definition of Cash Drawer Interface Pin

2.3.3 Power Connection

SP-POS5813/POS5814 printers are externally powered by a dedicated DC 8.5V/2A power supply.

2.4 Buzzer, Buttons and Indicators

2.4.1 Power ON/OFF

The power switch controls the power on/off status. When the device is turned off, pressing the ⏻ power button will turn it on. Pressing the power button again will turn it off.

2.4.2 Feed Button

⬆ as the paper feed key, can be used for function settings and paper feed.

1.Under normal operation, pressing the ⬆ key on the printer will feed the paper, and releasing the ⬆ key will stop the paper feed.

2.Function selection

2.4.3 combination button

1. While the printer is out of paper and powered off, press and hold down the ⬆ without releasing it. Then, briefly press the ⏻ and wait for the prompt sound "Beep...beep...". Release the ⬆ to enter upgrade mode.

2. With paper loaded and the printer powered off, press ⬆ and hold the button without releasing it. Then, briefly press the button ⏻ again and wait for the prompt sound "Beep...beep...beep...". Release the button ⬆ to enter function setting mode. Press the button briefly ⬆ once to print the corresponding functions prompt: "Print self-test, hexadecimal mode, restore factory settings, dynamic IP acquisition (UE model)". The confirmation will be automatic after a delay of 5 seconds.

2.4.4 Indicator lights and buzzer.

①Green: Indicates the power switch status, stays on when the device is turned on.

Note: Within the first 30 seconds of turning on, this light will flash; after 30 seconds of turning on, it will stay on constantly once the Bluetooth connection is successful.

②The red light and buzzer indicate error statuses. When the printer is working normally, the red "STATUS" indicator light will be off. If this light begins flashing, it indicates an abnormal warning status.

The buzzer can be set to enable or disable error alerts through parameter settings. When enabled, it will be used to indicate the type of error status, which is the same as the "STATUS" indicator light.

When the error indicator light is blinking and the buzzer is sounding (when enabled), it indicates that the printer has encountered an error. The specific type of error can be indicated by the different patterns of blinking.

The error status indicators are shown in the following table.

Indicator light status	Buzzer Status	Description
off	off	Normal
Flash once, off about 1 second.	Beep once, pause for about 1 second.	Out of paper, will resume normal operation once paper is available.
Flash twice, off for about 1 second.	Beep twice, pause for about 1 second.	The head is overheating, please wait for the engine temperature to decrease. It will automatically resume once the temperature is normal.
Flash three times, off for about 1 second.	Beep three times, pause for about 1 second.	The head heating plate is damaged and cannot be restored. It needs to be repaired.

Table 2－4

2.5 Self-Test

Self-testing can check whether the printer is working properly. In self-testing, the software version number, interface form, character configuration information, etc. are sequentially printed. If the self-test can correctly print out the self-test sample, it indicates that other parts of the printer are working properly except for the communication interface with the host. Otherwise, maintenance is required.

Self-testing method: With paper loaded and the printer turned off, press and hold the key, release within 3 seconds, and the printer will print out the self-test list.

2.6 Enter program upgrade model

Refer to section 2.4.3, step 1, to upgrade by selecting the appropriate interface and program file using the "UpdateFirmware" software.

Note: Parallel port models cannot be upgraded using a "USB to Parallel Port cable."

2.7 Hexadecimal Printing

In reference to 2.4.3, Item 2, the three lines of prompts printed in hexadecimal mode are as follows:

Hexadecimal Dump

To terminate hexadecimal dump,

Press FEED button three times.

Under this mode, all inputs will be printed as hexadecimal numbers. Press the key to feed paper for each line, repeat this process for a total of 3 times. Then, print "*** Completed ***" and exit the hexadecimal print mode.

2.8 Restore factory settings

Reference 2.4.3, item 2, only restore the printing configuration information, do not restore the Bluetooth and network configuration information.

Chapter 3: Printer Driver Installation

To install the SP-POS5813/POS5814 series printer driver, please download it from our official website at www.sprinter.com.cn. Follow these specific steps:

1. Go to the homepage and navigate to the Download Center.

2. Select "Driver Programs" and then choose "POS Printer Series."

3. Download the driver program named SP-DRV211.

During the installation process, make sure to select the printer model as "58 Thermal Series." For further instructions on how to install and use the driver program, please refer to the installation guide provided.

Appendix 1: Performance Specifications

Specifications		
Print Performance Specifications:	Printing Method	Thermal Line
	Resolution	8 dots/mm (203dpi)/ 384 dots/line
	Printing Speed	90 mm/s
	Effective Printing Width	48mm
	Paper Width	57 .5mm±0.5mm
Print Support Features	Custom character printing	Support
	Graphics Printing	Support for printing graphics with different dot densities and downloading bitmap images for printing.
	Chinese	GB2312-Level 3 Character Library: 24x24 dot matrix
	English	ASCII: 9x17 dot matrix, 12x24 dot matrix
	Barcode	UPC-A；UPC-E；EAN-13；EAN-8；CODE39；CODE93；CODABAR；ITF25； CODE128
Interface	USB, Serial, Parallel, Bluetooth, Ethernet, cash drawer	
Support function	Paper shortage alarm, overheat protection, buzzer	
Cash drawer control	DC12V, 1A, 6-pin RJ-11 socket	
Power Supply	Direct current power supply	DC8.5V，2A
Paper	Paper Type	Normal thermal paper 58×Ø 60mm

	Paper Thickness	0.06mm ~ 0.08mm
	Paper loading	Easy paper loading
	Paper Cutting Method	Manual
Physical properties	Dimension	120mm×100mm×95mm (L×W×H)
	Weight	275 g (no paper roll)
Environmental factors	Work environment temperature/humidity	0-50°C (working environment temperature) / 10-80% (relative humidity)
	Save environment temperature/humidity	- 20 ~ 60℃ (Save environment temperature) /10 ~ 90% (relative humidity)
Life span / Reliability	TPH	50km

STATEMENT

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.