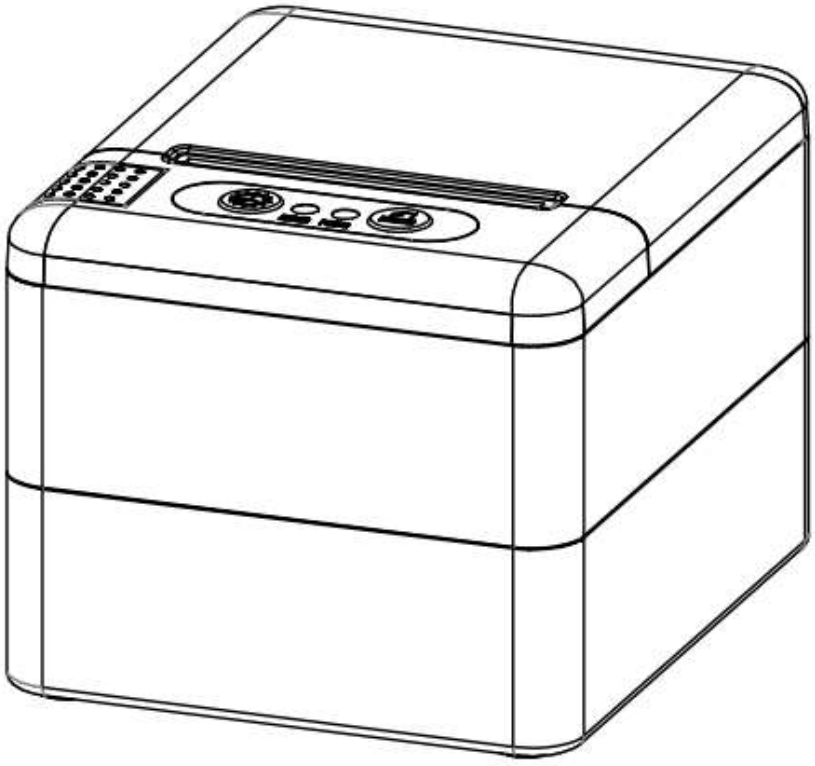
P20
Thermal Receipt Printer

Operation Manual



Content

Statement 4

Safety Tips 5

Chapter 1 Product Introduction 8

1 . 1 Introduction … 8

1 .2 Main Features … 8

1 . 3 Unpacking List … 8

1 .4 Appearance … 9

1 . 5 Dimensions … 10

Chapter 2 Product Specifications … 11

2 . 1 Technical Specifications … 11

2 .2 Printing consumables technical specifications … 12

2 .2. 1 Continuous paper parameters … 12

2 .2. 2 Paper usage precautions … 12

2 . 3 Printing and cutting positions 13

2 . 3 . 1 Printing position … 13

2 . 3 . 2 Tear-off position … 13

Chapter 3 Installation and Usage 14

3 . 1 Installing the Paper Roll … 14

3 .2 Connecting to the Power Supply … 16

3 . 3 Connecting Cash Drawer … 17

3 .4 Indicator Light Description 17

3 . 5 Print Test … 18

3 . 5 . 1 Print “Self-Test” Page… 18

3 . 5 . 2 Printing using the Windows driver 18

3 . 6 Use of Bluetooth 19

Chapter 4 Interface Signals 20

4. 1 USB 20

4.2 Cash Drawer port.... 20

Chapter 5 Troubleshooting 21

5 . 1 Printer is not working 21

5 .2 Error Indicator Light 21

5 . 3 Problems encountered during printing 21

Chapter 6 Cleaning the Printer 22

6 . 1 Cleaning the Print Head 22

6 .2 Clean the sensors, rollers and paper path 22

Appendix: Description of the Restriction of Hazardous Substances in Electrical and Electronic Products..... 23

Statement

The contents of this manual may not be altered without prior written permission. Brightek Printer Co., Ltd. reserves the right to modify the product in terms of technology, components, software, and hardware. If users require further information on the product, please contact Brightek Printer Co., Ltd. No section of this manual may be reproduced or transmitted in any form or by any means without the company's written permission.

Copyright

This manual was printed in 2025. Copyright belongs to Brightek Printer Co., Ltd.
Printed in China. Version 1.0.

Warnings and Cautions



Warnings: The contents of the manual must be followed to avoid personal injury and equipment damage.



Cautions: This manual provides important information and tips for operating the printer.

Special Reminder

To domestic users in China: Thank you for choosing and purchasing our products. To protect your after-sales service rights, please carefully fill out the attached product warranty card.

(If the warranty card is not filled out, our company will not provide after-sales warranty service)

Safety Tips

Before operating the printer, please read the following precautions carefully to avoid personal injury or equipment damage.

1. Safety warning signs



Warnings: The contents of the manual must be followed to avoid personal injury and equipment damage.



Cautions: This manual provides important information and tips for operating the printer.

2. Safety Precautions



Warnings: Violation of the following may result in serious injury or death.

(1) Do not plug several plugs into a multi-socket outlet at the same time
- This can cause overheating and fire.
- If the plug is wet or dirty, dry it or wipe it clean before use.
- If the plug does not fit the socket, do not plug it in.
- Use only a standard multi-socket socket.

(2) You may only use the adapter supplied by the supplier in this package
- Using any other adapter is dangerous

(3) Do not pull on the cable to unplug the printer.
- This may damage the cable, resulting in fire or printer malfunction.

(4) Do not plug or unplug the power plug when your hands are wet
- This may result in electric shock

(5) Do not bend the cable with force or place it under heavy objects.
- Damaged cables may cause a fire.

⚠ **Note:** Violation of the following precautions may result in minor injury or damage to the equipment

(1) If the printer emits unexplained smoke, odors, or noises, unplug it and then perform emergency procedures.
- Turn off the printer and unplug the device.
- After the smoke stops, call your dealer for repairs.

(2) Install the printer on a stable surface.
- If the printer falls, it may break and cause injury.

(3) Use only approved accessories and do not attempt to disassemble, repair, or modify the product yourself.
- If you require any of these services, please call your dealer.

(4) Do not pour water or other objects into the printer.
- If this happens, turn off the printer and unplug it. Then, call your dealer.

(5) Do not use the printer if it malfunctions, as this may result in fire or electric shock.
- Turn off the printer and unplug it, then call your dealer.

(6) Others:
- Allow ample space around the printer for operation and maintenance.
- Keep the printer away from water and out of direct sunlight, strong light, and heat.
- Do not use or store the printer in areas with high temperatures, high humidity, or severe pollution.
- Avoid placing the printer in areas subject to vibration and shock.
- Connect the printer's power adapter to a properly grounded outlet, avoiding the same outlet as large motors or other devices that could cause voltage fluctuations.
- If the printer will not be used for an extended period, disconnect the power adapter from the printer.
- To ensure print quality and product life, we recommend using recommended or equivalent paper.
- When connecting or disconnecting interfaces, be sure to turn off the power supply. Failure to do so may damage the printer's control circuitry.
- Retain this manual for future reference.

3. Other Notes

While every care and attention has been taken in preparing this manual, errors and omissions are inevitable. We assume no responsibility for any losses incurred as a result of using the information in this manual. We and our affiliates are not legally responsible for any damages, losses, costs, or expenses caused by product damage, malfunction, or misuse resulting from failure to follow or disregard of the operating and maintenance information and instructions provided by us, or from unauthorized alterations, repairs, or modifications to the product. We assume no legal responsibility for any damage or problems caused by the use of counterfeit options, components, or unauthorized products.

Due to continuous product improvement, the specifications, accessories, and procedures described in this manual are based on actual equipment and are subject to change without notice.

4. WEEE (Waste Electrical and Electronic Equipment)



This symbol and text on this product indicate that the corresponding item should not be disposed of with other household waste after use. To prevent possible harm to the environment or human health if waste is not handled properly, please separate items marked with this symbol from other types of waste and recycle them responsibly, thereby promoting the sustainable reuse of material resources. Household users should contact the retailer where they purchased the product or their local government for details on where and how to recycle these items in an environmentally friendly manner. Commercial users should contact the supplier and check the terms and conditions of the purchase agreement. This product should not be disposed of with other commercial waste.

Chapter 1 Product Introduction

1.1 Introduction

The P20 is a thermal receipt printer. Featuring high print quality, high speed and high stability, it is widely used in commercial POS systems, the restaurant industry, and other applications requiring on-site, real-time receipt printing.

The P20 thermal printer can connect to other devices via USB and cash drawer ports, and drivers are available for Windows XP, Windows 7 / 8 / 10.

1.2 Main Features

(1) Low noise, high-speed printing
(2) Convenient and fast paper loading
(3) Simple operation and maintenance
(4) Cash drawer control interface

1.3 Unpacking List

(1) Unpack the printer and retain the packaging for future shipping.
(2) If any items are damaged or missing, please contact the dealer from whom you purchased the product.



Printer



USB Cable



Thermal Paper



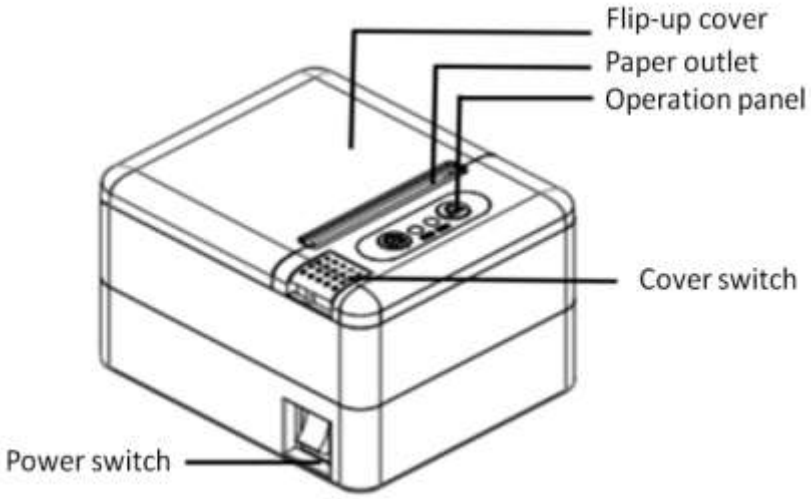
Power Adapter

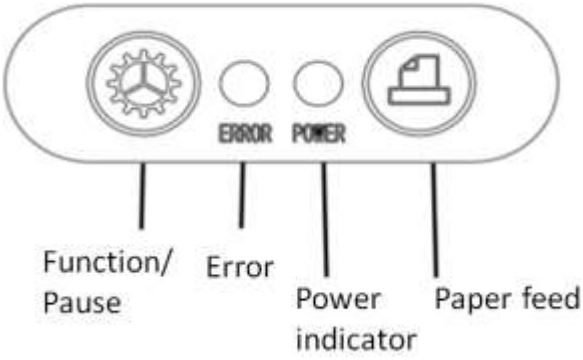


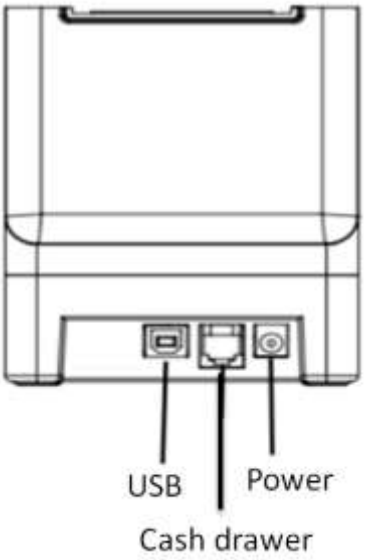
User Manual

Note: P20 thermal printer supports Bluetooth function

1.4 Appearance

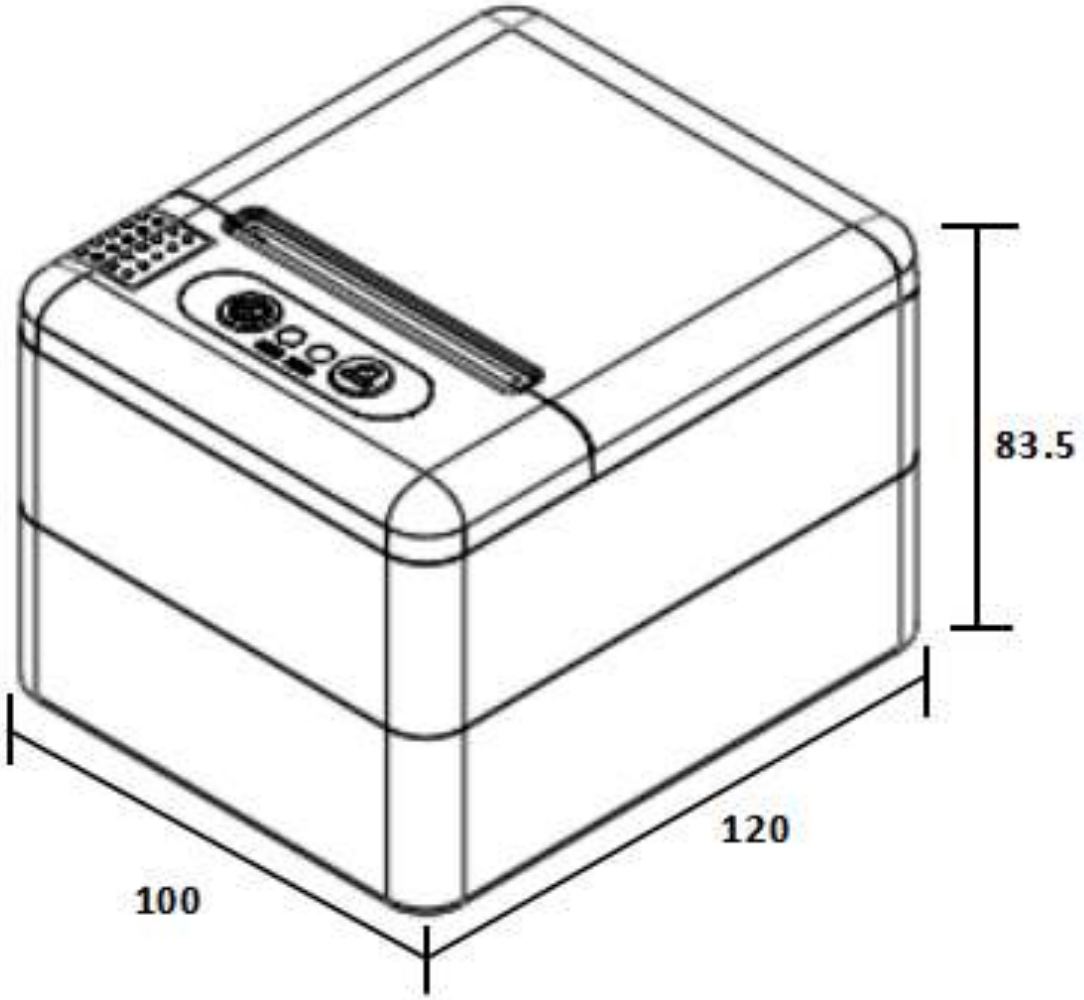








1.5 Dimensions



(Unit: mm)

Chapter 2 Product Specifications

2.1 Technical Specifications

Items		Parameter
Printing	Printing method	Direct thermal line printing
	Resolution	203 Dots /inch (8 dots/mm)
	Printing speed	90 mm/sec (Max.)
	Paper width	57 mm (Max.)
	Print width	48 mm (Max.)
	Commend	ESC / POS
	Sensor	Paper out detection, print head temperature detection
Consumables	Paper type	Thermal Receipt Paper
	Paper width	57mm ± 0.5mm
	Paper thickness	0.06 ~ 0.08 mm
	Paper roll diameter	50 mm
	Core inner diameter	17 mm
Software	Driver	Driver is provided by the manufacturer
Barcode	1D	Code128 , Codabar , EAN8 , EAN13
	2D	QR code / PDF417
Interface	USB	YES
	Bluetooth	YES (optional)
	Ethernet	NO
	Parallel	NO
	Cash drawer port	YES
	Serial	NO
Power	Power Adapter	Input: AC110V~220V, 50~60Hz; Output: DC8.5V, 1.5A
Environmental parameters	Working	Temperature 5℃~40℃, Humidity 10%~90% RH (Non-condensing)
	Storage	Temperature -25℃~55℃, Humidity 5%~95% RH (Non-condensing)
Physical parameters	Dimensions	120mm X 100mm X 83.5mm
	Weight	about 310g
	Noise (< 65dB)	60dB
Accessories		Power adapter, data cable, user manual, thermal paper roll (57*50mm)
Certifications		CCC, SRRC
TPH	Print head life	30 KM

2.2 Printing consumables technical specifications

2.2.1 Continuous paper parameters

(1) Paper Type: Thermal Receipt Paper
(2) Paper Width: Supports 57mm ± 0.5mm printing paper roll
(3) Paper Thickness: 0.06mm to 0.08mm
(4) Recommended Paper:

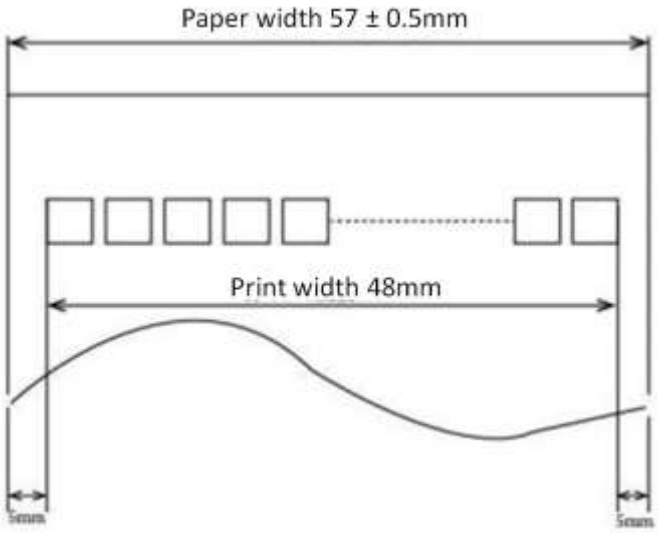
Paper model	Manufacturer
WH-R57*50	Brightek Printer Co., Ltd.

2.2.2 Paper usage precautions

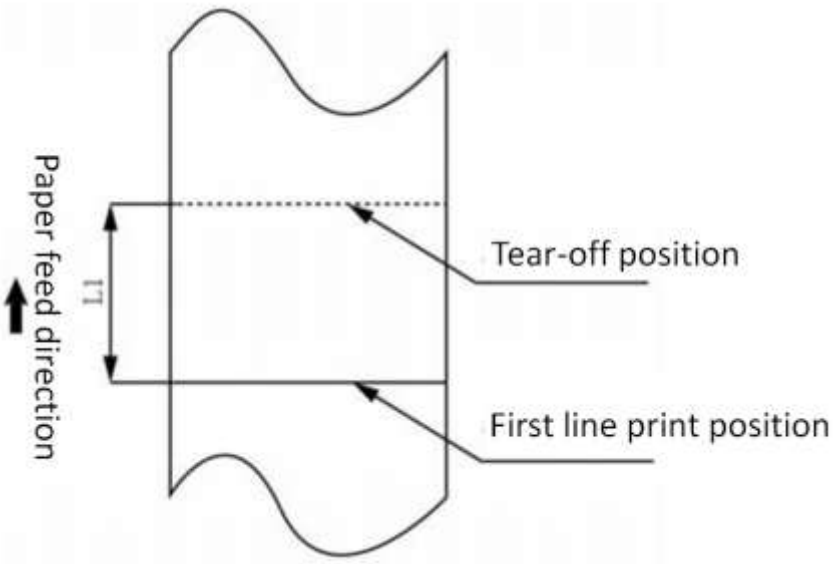
(1) Use recommended paper or equivalent quality. Using other types of paper may affect printing quality and the life of the print head.
(2) Do not stick paper to the paper roll core.
(3) If the paper is contaminated with chemicals or oils, it may fade or lose its thermal sensitivity, affecting printing quality.
(4) Do not rub the surface of the paper with your fingernails or hard objects, as this may cause fading.
(5) When the ambient temperature exceeds 70°C, the paper will fade. Therefore, pay special attention to the effects of ambient temperature, humidity and light.

2.3 Printing and cutting positions

2.3.1 Printing position



2.3.2 Tear-off position



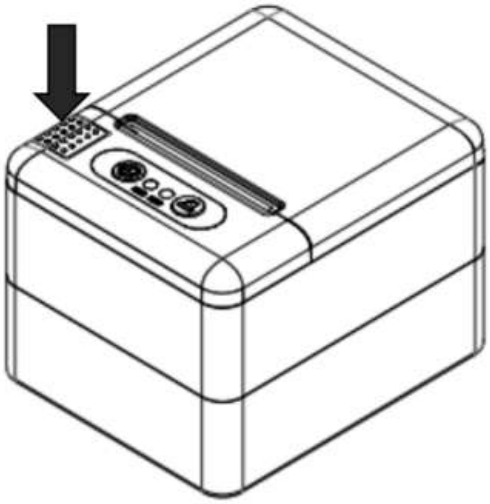
Model	L1
P20 Series Thermal Printer	11 mm

Chapter 3 Installation and Usage

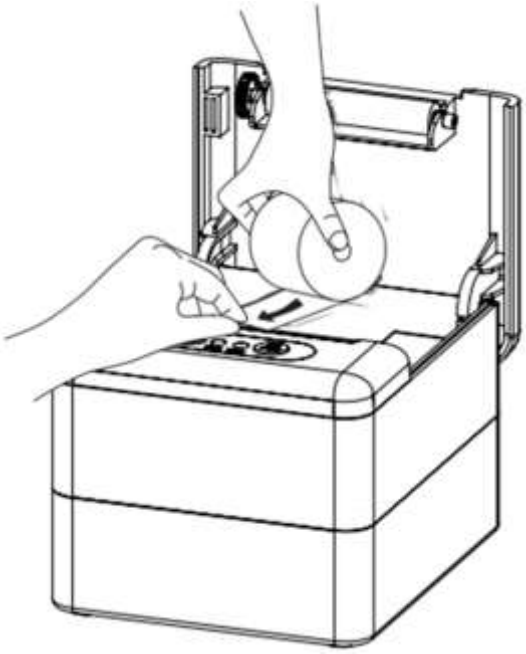
3.1 Installing the Paper Roll

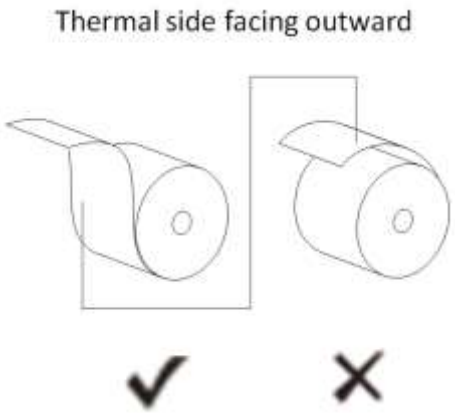
(1) Press the cover switch (as shown by the arrow in the figure below) and lift up the printer cover.

(2) If there is a paper tube in the paper bin, please remove it.

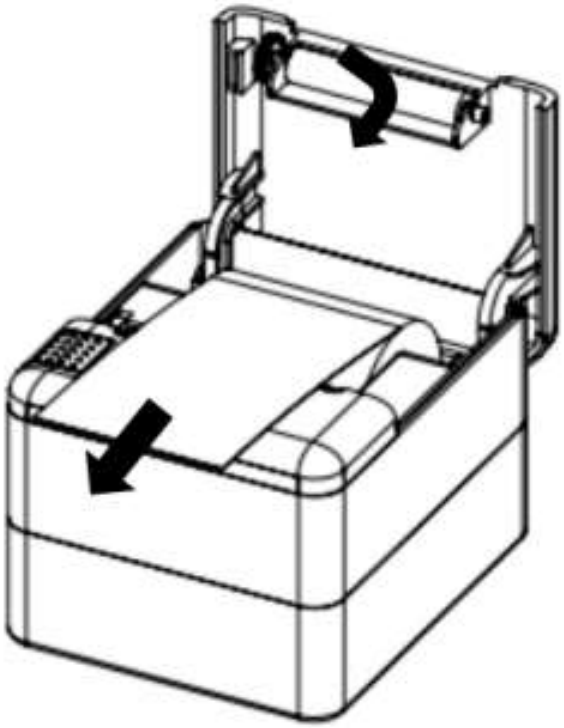


(3) Place the paper roll into the paper bin, paying attention to the correct placement direction of the paper roll.

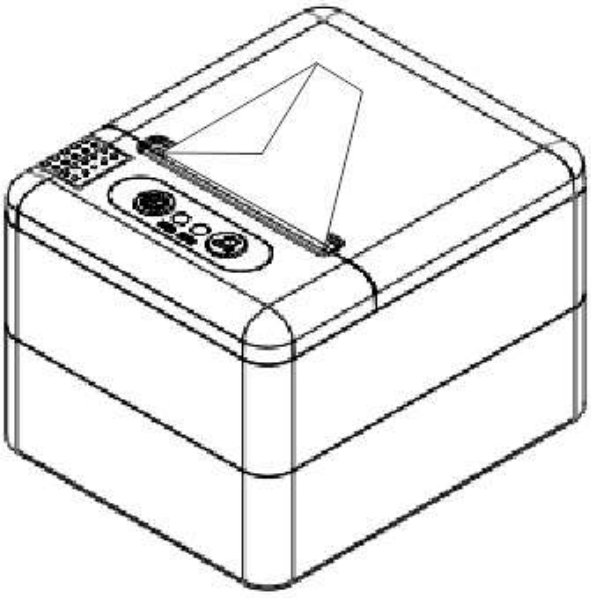




(4) Please pull out a small portion of paper from the front of the paper roll and close the printer cover.



(5) Tear off any excess paper at the paper outlet.

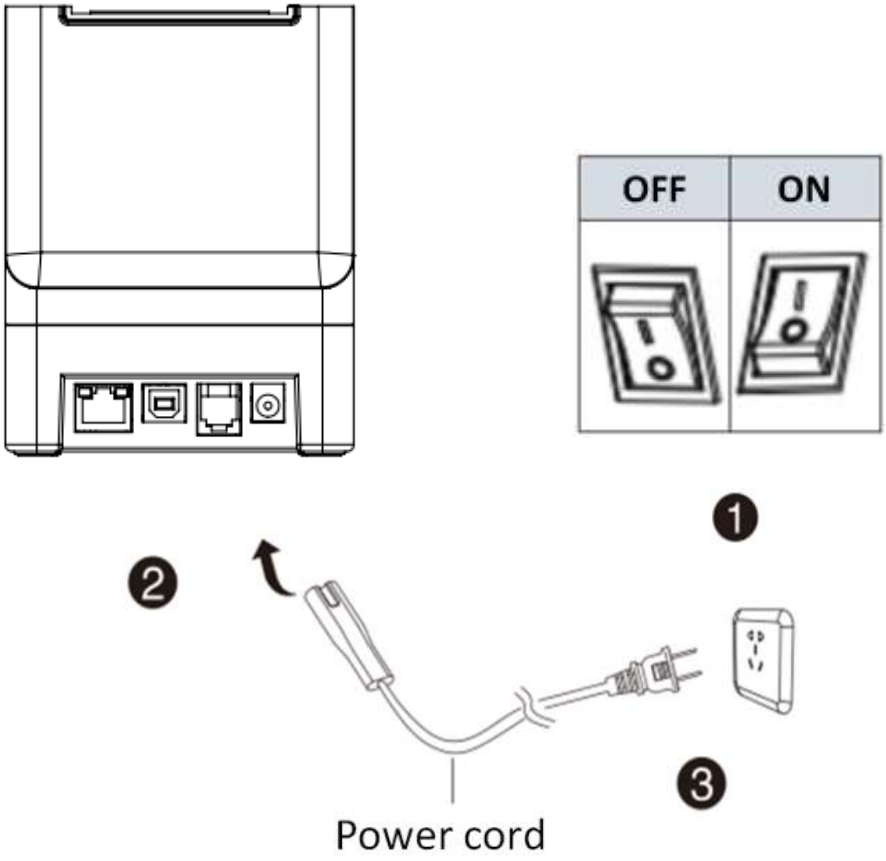


3.2 Connecting to the Power Supply

(1) Make sure the printer's power switch is off (O).

(2) Connect the power cord to the printer.

(3) Connect the other end of the power cord to a nearby AC socket.



Note:

(1) Use only the standard 8.5V/1.5A power adapter provided with the printer.

(2) When plugging or unplugging the power adapter, hold the connector housing and avoid pulling on the cable.

(3) Avoid dragging the power adapter cable, as this can damage the cable and cause fire or electric shock.

(4) Avoid placing the power adapter near overheating equipment, as this can melt the cable and cause fire or electric shock.

(5) If the printer is not in use for an extended period, disconnect the power adapter from the printer.

3.3 Connecting Cash Drawer

(1) Make sure the printer's power switch is off.
(2) Plug the cash drawer cable into the cash drawer port on the rear of the printer.

Warning: The cash drawer port can only be connected to a 12V cash drawer device and cannot be connected to a telephone line.

3.4 Indicator Light Description

Indicator light function:

Item	Status	Description
Power indicator (Green light)	Constant ON	Printer is working properly
	OFF	Printer is not working
Fault indicator (Red light)	Flash	Printer is in an error state
	OFF	Printer is in a normal state

Description	Power indicator	Error indicator
Open the printer cover	ON	Flash
Out of paper	ON	Flash
Paper exists, lid down, not closed	ON	OFF

Note:

The printer uses a thermistor to detect the temperature of the print head. If the print head temperature exceeds 70°C, the printer will issue a warning and stop working until the temperature drops to 60°C.

3.5 Print Test

3.5.1 Print “Self-Test” page

When initially installing the printer or if you encounter any issues, you can run a self-test to check the following information: firmware version, printer parameter settings, print quality, and settings related to external devices. If the self-test confirms that there is no issue with the printer, check other devices or software. This function operates independently of other devices or software.

The self-test procedure is as follows:

(1) Ensure that the power supply is connected and the paper roll is correctly installed.
(2) Ensure that the printer is off and the top cover is closed.
(3) Press and hold the paper feed button, then press the power button to turn on the printer. After the fault light turns on and off, immediately release the buttons. The printer will begin printing the self-test page.

3.5.2 Printing using the Windows driver

(1) Install the Windows driver.
Please refer to the Windows Driver Manual to complete the driver installation.
(2) Set the Windows driver's port to the appropriate interface.
(3) Use the "Print Test Page" function in the Windows driver to print a test page.

3.6 Use of Bluetooth

Before using Bluetooth printing, you must pair your printer with a host device. The pairing process is initiated by the host device. The typical pairing procedure is as follows:

(1) Turn on the printer.
(2) The host device searches for external Bluetooth devices.
(3) If there are multiple external Bluetooth devices, select the printer.
(4) Complete pairing.

⚠ **Note:**

(1) The printer must be powered on during pairing.
(2) Please pair each printer individually; otherwise, you may not be able to determine which printer is paired successfully.
(3) After pairing is successful, other host device cannot pair with the printer. If you need to pair with other host device, you must disconnect first.

Printing using the Bluetooth interface:

For a host device with virtual Bluetooth (such as a smart phone, pocket PC, Palm and laptop computer, etc.), after successful pairing, you can send print data to the printer via virtual Bluetooth for printing.

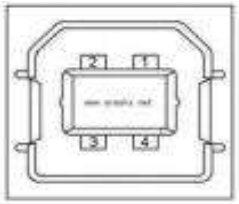
⚠ **Note: The models P20-U0-P and P20-U0-L do not support Bluetooth and voice functions**

Please note the following when connecting to food delivery Apps:

(1) The printer defaults to manual order printing.
(2) To use the printer's automatic order acceptance and printing function, please enable the automatic order acceptance option in the food delivery app.
(3) When connecting multiple platforms to the same printer via Bluetooth, please disable the software-specific printer option in the food delivery app.
(4) Please strictly follow the instructions in the food delivery app.

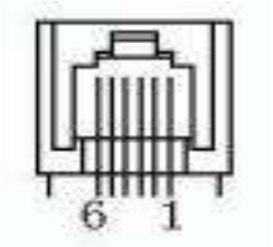
Chapter 4 Interface Signals

4.1 USB



Pin No.	Signal
1	VBUS
2	D-
3	D+
4	GND

4.2 Cash Drawer port



Pin No.	Signal
1	FG
2	Drawer 1
3	DRSW
4	VDR
5	Drawer 2
6	GND

Electrical Characteristics:

- Drive Voltage: DC 12V
- Drive Current: 1A (Maximum)
- Cash Drawer Status Detection Signal: "L" = 0 to 0.5V; "H" = 3 to 5V

Chapter 5 Troubleshooting

If the printer malfunctions, refer to this chapter for appropriate solutions. If the problem persists, please contact the dealer or manufacturer.

5.1 Printer is not working

Problems	Possible causes	Solutions
The indicator light is off. The printer is not working.	The printer has no power	Connect the printer to power
	The printer is not turned on	Turn on the printer
	Circuit board is damaged	Contact the dealer or manufacturer

5.2 Error Indicator Light

Problems	Possible causes	Solutions
The error indicator light is flashing	The top cover is lifted	Close the top cover
	Out of paper	Replace the paper roll
	Print head overheating	Turn off the printer and wait for the print head temperature to return to normal.

5.3 Problems encountered during printing

Problems	Possible causes	Solutions
Printing is unclear or smudged	he paper roll is not installed correctly	Check if the paper is loaded correctly
	The paper does not meet the requirements	Use recommended thermal paper
	The print head or print roller is dirty	Clean the print head or print roller
	Print density setting is low	Increase the print density to meet your needs
Paper cannot be output normally	Paper jam	Open the top cover, check the paper path, and clear the paper jam.
Printed content is lost	The print head or print roller is dirty	Clean the print head or print roller
	Print head failure	Contact the dealer or manufacturer

Chapter 6 Cleaning the Printer

Dust, foreign matter, sticky substances, or other contaminants stuck to the print head or inside the printer may reduce print quality. Clean the print head as follows if it is dirty.

※ Precautions:

(1) Always turn off the printer before cleaning.
(2) The print head becomes very hot during printing. Therefore, if you want to clean the print head, please turn off the printer and wait 2 to 3 minutes before starting.
(3) When cleaning the print head, be careful not to touch the heated area to avoid damage from static electricity.
(4) Be careful not to scratch or damage the print head.

6.1 Cleaning the Print Head

(1) Open the printer cover and clean the print head from the center to the sides with a cleaning pen or cotton swab dipped in alcohol.
(2) After cleaning the print head, do not use the printer immediately. Wait for the alcohol to fully decompose (1-2 minutes) and the print head to dry completely before use.

6.2 Clean the sensors, rollers and paper path

(1) Open the printer cover and remove the paper roll.
(2) Use a dry cotton cloth or cotton swab to wipe away any dust or foreign matter.
(3) Soak a cotton cloth or cotton swab in alcohol and use it to remove any sticky foreign matter or other contaminants.
(4) Do not use the printer immediately after cleaning the components. Wait for the alcohol to evaporate completely (1 to 2 minutes) and the printer to dry completely before use.

※ When print quality or paper detection performance deteriorates, clean the parts.

Appendix: Description of the Restriction of Hazardous Substances in Electrical and Electronic Products

1. Name and content of harmful substances in the product:

Part Name	Toxic and hazardous substances or elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr6+)	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
Power/Electrical Components	X	O	O	O	O	O
Print Head	X	O	O	O	O	O
Metal parts	X	O	O	O	O	O
Motherboard	X	O	O	O	O	O
Wire	X	O	O	O	O	O
Packaging materials and accessories	O	O	O	O	O	O
※ This table is prepared in accordance with the provisions of SJ/T 11364						
O: Indicates that the content of the toxic and hazardous substance in all homogeneous materials of this component is below the limit requirements specified in GB/T 26572-2011.						
X: Indicates that the content of the toxic and hazardous substance in at least one homogeneous material of the component exceeds the limit requirements specified in GB/T 26572-2011.						

2. Mark for Restriction of Hazardous Substances in Electrical and Electronic Products:



All electrical and electronic products sold within the People's Republic of China must be marked with this mark. The number within the mark represents the environmentally friendly use period of the electrical and electronic product under normal use.

