Embedded Printer
# KP-301H User Manual

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Statement

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Warning

⚠Warnings must be followed to avoid harm to the human body and damage to the equipment. And pay attention to the important information and tips for printer operation.。

⚠The print head is a heating component. Do not touch the print head and surrounding components during the printing process and immediately after printing.

⚠Do not touch the print head and connection plug-in to avoid damage to the print head due to static electricity

Attention

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

Safety instructions

Safety requirements 1) The printer should be installed in a flat and stable place;

2) Leave enough space around the printer for operation and maintenance;

3) The printer should be kept away from water sources and away from direct sunlight, strong light and heat sources;

4) Do not use or store the printer in places with high temperature, high humidity or serious pollution;

5) Avoid placing the printer in places subject to vibration and impact;

6) Avoid bending the power cord with force or heavy objects;

7) Connect the printer's power adapter to a properly grounded outlet and avoid using the

same outlet with large motors or equipment that can cause power voltage fluctuations.

8) If the printer will not be used for a long time, please disconnect the printer power adapter;

9) In order to ensure printing quality and product life, it is recommended to use recommended or equivalent quality paper;

10) When plugging or disconnecting each interface, the power must be turned off, otherwise the printer control circuit may be damaged;

11) If you smell severe smoke or odor, please turn off the power and disconnect each interface, and then contact the supplier;

12) Users are not allowed to disassemble the printer for maintenance;

13) Keep this manual properly for reference.

1 Overview

1.1 Introduction
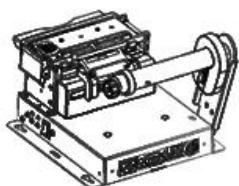
The KP-301H printing module uses a line thermal print head, which has the characteristics of high-speed printing, low noise, strong reliability, high printing quality, and stable structure. It is equipped with a dedicated engineering plastic paper outlet, including optional (Anti-blocking and anti-pull), (paper recycling) functions make installation and maintenance more convenient and faster.

1.2 Main features

1) Low noise, high speed printing

2) Convenient and fast paper loading method

3) Easy to use and maintain

4) Compatible with various widths of paper, manual paper width adjustment

5) Metal motor firmware can dissipate heat quickly

6) Optional automatic paper discharge and recycling function, anti-clogging and anti-pulling function (choose one of the two)

7) The unique design of the easy paper loading structure allows the rubber roller and the print head to slide away, making it easy to clean the print head and troubleshoot.

1.3 Unpacking list

1）Unpack the printer and save the packaging materials for future shipping.

2）Make sure you have all the items shown in Figure 1-1 and check for shipping damage.

Figure 1-1

Note: The actual contents in the box are subject to the shipping list.

1.4   Other things to note

Although we have taken great care in preparing this manual, some errors or omissions may inevitably occur. Our company does not assume any responsibility if anyone suffers losses due to using the information in this manual. For damage caused by product damage, malfunction or misuse caused by users or third parties not following or ignoring the operation and maintenance information and instructions provided by our company, as well as damage caused by unauthorized changes, repairs or modifications to the product , losses, costs or expenses, our company and its branches are not legally responsible.

Our company is not responsible for any damage or problems caused by the use of counterfeit our options, parts or unauthorized products.

2   Product specification

2.1 Specifications
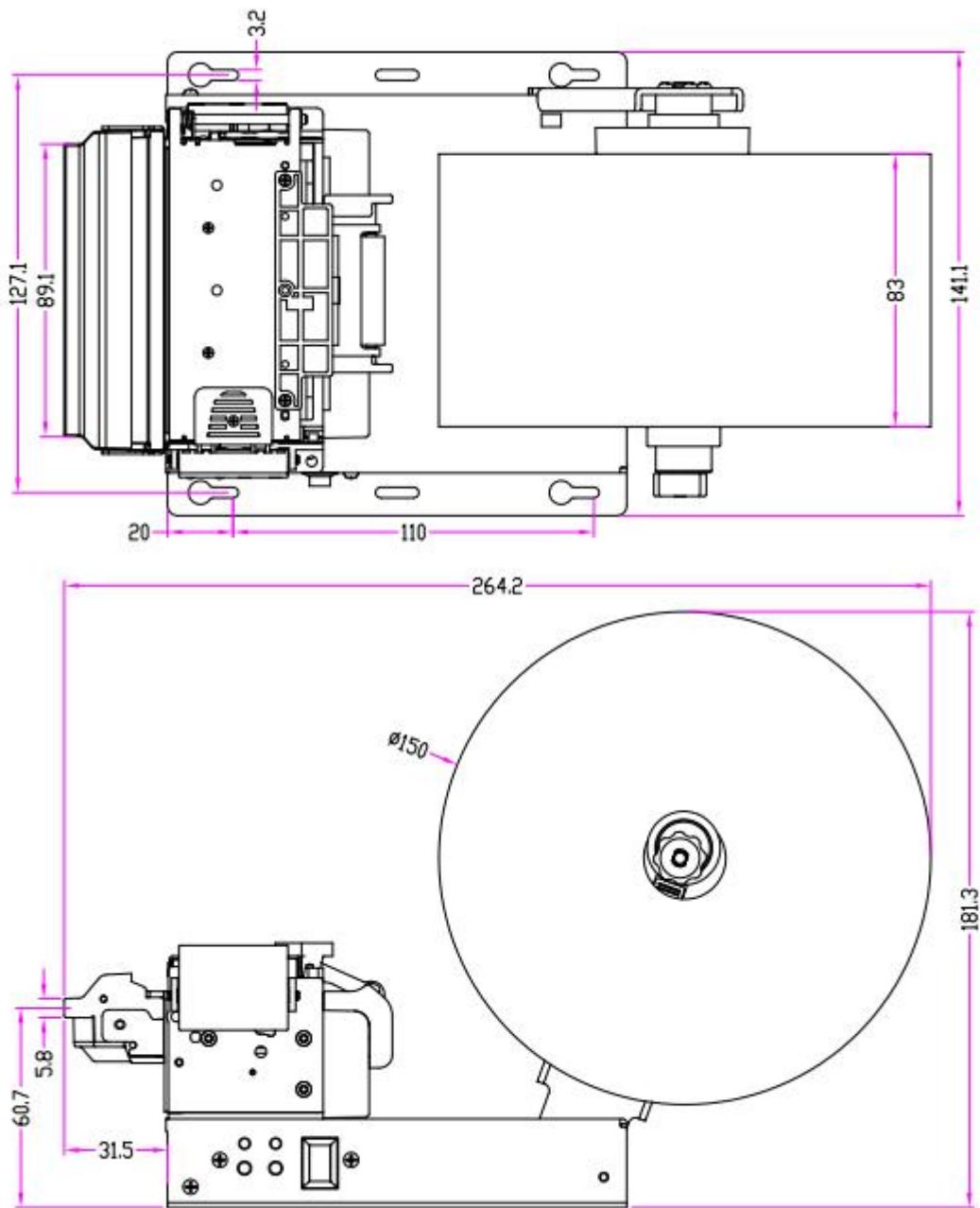
Print	Print method	Thermal-line dot method
	Print dot matrix	640Dots
	Resolution	203Dpi
	Effective print width	72mm/80mm (Max)
	Print life	100KM (Max)
	Print speed	250MM/S
	Various adjustment widths	24/48/72/80mm
	Cutter method	Partial cut/full cut
	Paper -Feed method	Automatic Feeding
Paper Roll specification	Paper type	Thermal paper roll
	Paper width	25-83 mm(adjustable)
	Paper thickness	0.045-0.12mm（optional）
Detection	THP Temperature	Thermistor
	Cover open detection	Micro touch switch
	Cutter HOME point detection	
	Shift in place	
	Automatic paper feeding/paper detection	Through-beam photoelectric sensor

	Paper near end detection	
	Black mark detection	
	Seam mark detection/transmitting and receiving	Reflective sensor
	Paper out detection/Paper bezel	
Power supply	Input voltage	110V-220V
	Output voltage	24V 2.5A DC±10%
	Average current	2A/2.5A （25% printing rate）
	Peak current	8.5A （100% printing rate）
Character	Character requirement	ASCII 9*17、12*24、 Chinese 24*24dots
	Character size	ASCII 9×17, 12×24dots , 24×24dots
	Print front	Normal, 1~8 times of height and width, highlight, inverse, underline, italic, bold
	1D code	UPC-A，UPC-E，EAN13，EAN8，CODE39，ITF，CODABAR，CODE93，CODE128
	2D code	QRCode,PDF417
Reliability	Wear resistance	100km (Max)
	Number of pulses	100 million
	Cutter life	1000,000 cuts
Operating	Indicator light	POWER light+ERROR light
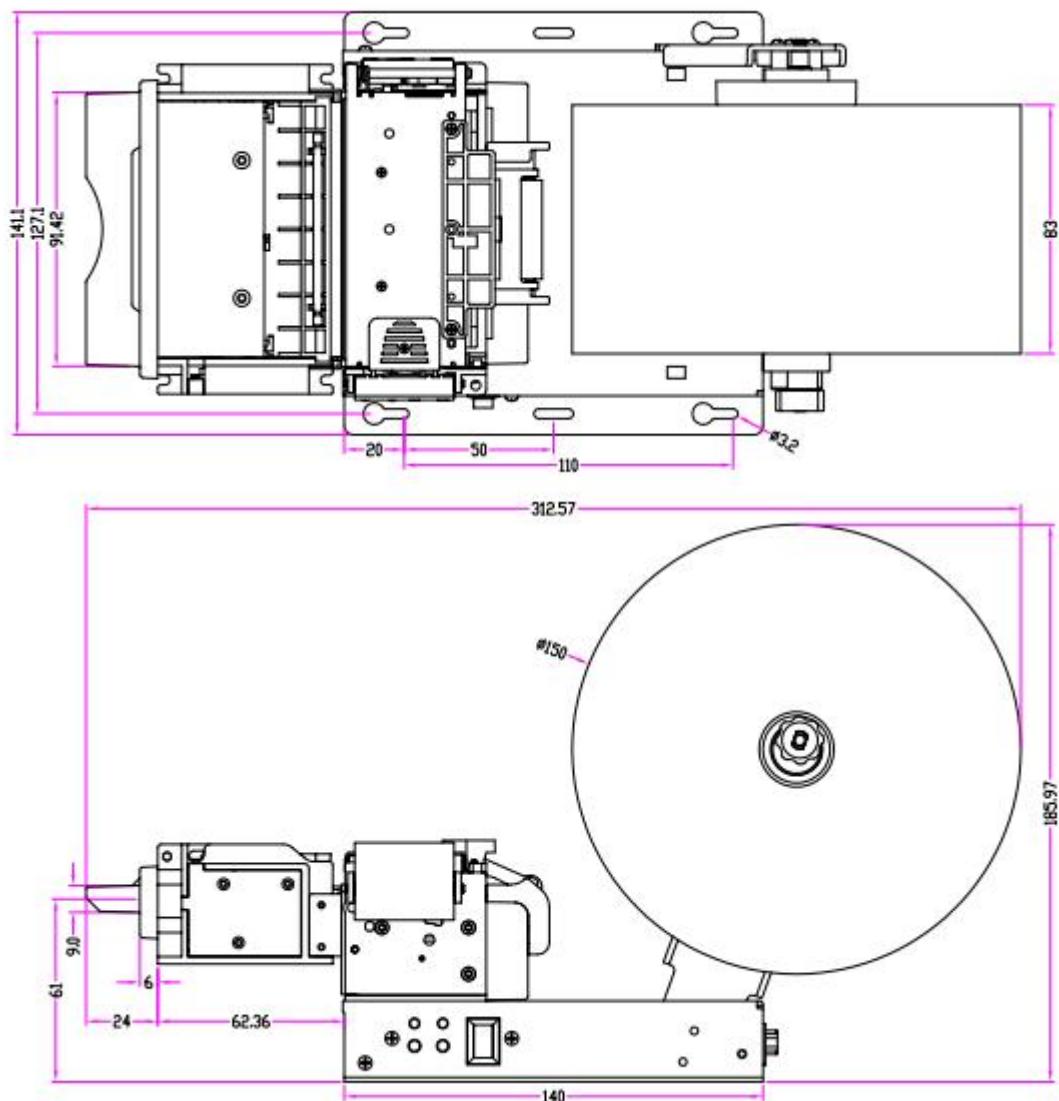
interface	Button	FEED button*1 TEST button*1
	Power switch	Ship type switch*1
Operating environment	Operating temperature	-5℃~50℃
	Operating humidity	20-80%RH（No condensation）
	Storage temperature	-20℃-70℃
	Static protection	Contact discharge 6KV、Air discharge 8KV
	Storage humidity	10-90%RH（No condensation）
Physical	Dimension	312.6(L)*141.1(W)*186mm(H) including paper roll（Paper presenter）
		264.2(L)*141.1(W)*186mm(H) including paper roll （Anti-blocking and anti-pulling）

# 3 Printer instruction
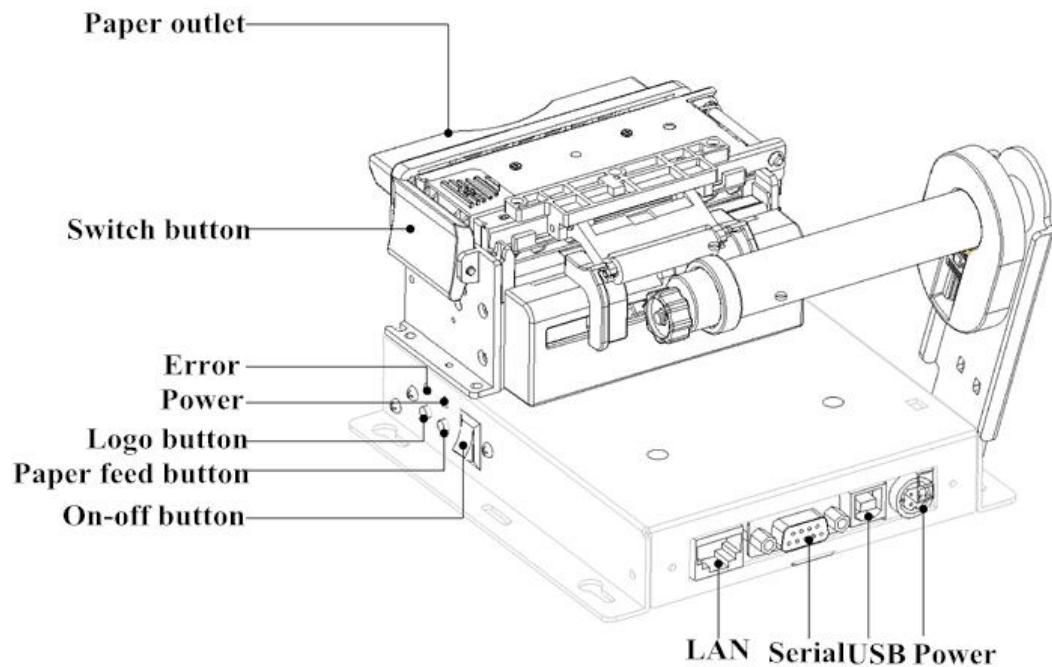
3.1 Dimension Anti-blocking and anti-pulling(mm)

3.2 Paper presenter（mm）
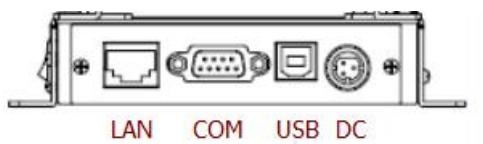
3.3   Appearance and components
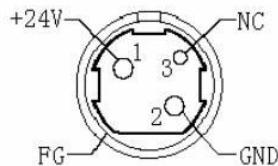
4 Interface Description

4.1 Interface Type
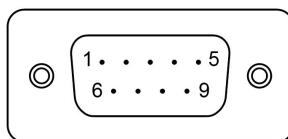
4.2 Power interface
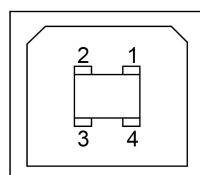
PIN No.	Signal name
1	24V
2	GND
3	NC

4.3 RS232 interface

PIN No.	Signal name
1	NC
2	TXD
3	RXD
4	NC
5	GND
6	DTR
7	NC
8	DTR
9	NC
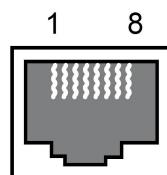
4.4 USB interface

PIN No.	Signal name

1	VBUS
2	USB-DM
3	USB-DP
4	GND

4.5 LAN interface

PIN No.	Signal name
1	TX+
2	TX-
3	RX-
4	n/c
5	n/c
6	RX-
7	n/c
8	n/c

5 Instructions for use

2.1 Buttons and operations

1) Power on:

Turn on the power, pull the printer's power switch to the "-" position, turn on the printer's power, turn on the printer, and the printer's POWER power indicator light stays on. Pull the power switch to the "O" position, turn off the power, and the POWER indicator light goes out.

2) Button:

There is a "FEED" button on the printer. This button is usually used as a paper feed button. It can be used as a self-test button when the printer is first powered on. "TEST" button This button is used as a LOGO printing button.

3) Self-test:

When the printer is not powered on, press and hold the "FEED" button, then power on, and the printer will perform self-test for about 2 seconds. The self-test will print out basic information such as the machine model, firmware version, system configuration, interface type, etc.

4) Paper feeding:

When the printer is powered on, press and hold the "FEED" button and the printer will start feeding paper. Release the button and the printer will stop feeding paper.

5) Turn on the printer self-test page and press and hold the paper feed button at the same time. A mode switching prompt appears. Press and hold the paper feed button for 2 seconds to switch to USB configuration. Short press the paper feed button to exit the configuration.

5.2 Indicator light description

The printer has two indicator lights, which are used to indicate the various statuses of the printer after it is powered on. The meanings are as follows:

Description	Green light	Red light	Beep status
Not powered on	Lights off	Lights off	No sound
Printer is normal	Always on	Lights off	No sound
Paper near end	Always on	No light	No sound
Paper jam in printer	Always on	Flashes 1 time	1 beep
Printer head not linked	Always on	Flashes 2 times	2 beeps
Printer is no paper	Always on	Flashes 3 times	3 beeps
Cutter error	Always on	Flashes 4 times	4 beeps
Temperature is too high	Always on	Flashes 5 times	5 beeps
The shaft is not depressed	Always on	Flashes 6 times	6 beeps
Black mark detection	Always on	Flashes 6 times	8 beeps
Seam mark detection	Always on	Flashes 8 times	8 beeps

Printer pulls paper	Always on	Flashes 9 times	9 beeps

⚠**Note: The printer uses a thermistor to detect the temperature of the print head. If the print head temperature exceeds 65°C, the printer will issue a warning. If the print head temperature exceeds 80℃, the printer will stop working until the temperature drops below 60℃.**

2.2 Detection instructions

1）Automatic paper feed detection：

The paper detection sensor detects whether there is paper for printing. When the sensor is triggered, it drives the motor to continuously feed paper.
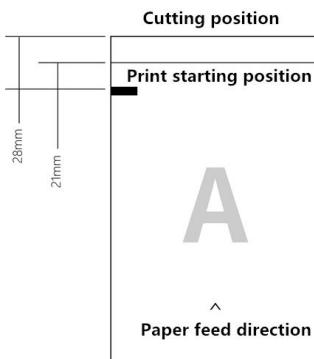
2）Paper out detection：

The paper exit detection sensor is located in the paper exit nozzle and is used to detect whether the paper has been removed. When the paper ejection detection sensor detects paper, the light bar in the paper ejection nozzle flashes slowly.

3）Black mark detection：

The black mark detection sensor is installed in the paper path and detects pre-printed black dots on the ticket if present. This black mark is used to position the paper on the preprinted paper for printing. Normally, the bill is pre-positioned to the identification point, and when the bill is completed, the paper is fed to the identification point and then cut

The position of the mark point is as shown in Figure A. The paper width is 80mm. (The marking points are all on the non-heat-sensitive layer)

4）Cover open detection：

When the paper cover is closed and the latch presses the switch arm, the cover opening detection sensor installed on the right side of the print head is activated. When the paper cover is opened, the printer enters an offline state.

5）Paper near end detection：

Paper end detection component, customers can choose the installation location according to their own needs to detect the remaining amount of paper roll. Check whether the paper roll is sufficient. If the sensor detects that there is no paper at the specified position, the PE light will light up.

6）Cutter HOME point detection：

The cutter return detection sensor is installed on the knife holder of the cutter part. If a paper jam or other abnormal situation occurs, the cutter return detection sensor can detect the jammed paper and stop the printer operation.

6 Applicable paper

6.1 Paper type

1）The printable paper width is 25mm~80mm thermal paper. Customers who use different types of ticket paper need to set them through debugging software.

2）If you need to print special size ticket paper, please contact "Xiamen Cashino

Technology Co., Ltd." to order it.

3）The printer can be used with paper thickness 0.45mm~0.125mm.

7 Troubleshooting

When the printer fails, you can refer to this chapter to handle it accordingly. If the fault still cannot be eliminated, please contact the agent or manufacturer.

7.1 Common faults

Issue phenomenon	cause of issue	Solution
The red light flashes 1 time in succession and the buzzer sounds 1 time in succession.	Printer triggers paper jam function.	Clear paper on paper jam detection
The red light flashes 2 times in succession and the buzzer sounds 2 times in succession.	The movement cable is not connected properly or has poor contact.	Check the cable and reconnect
The red light flashes 3 times in a row and the buzzer sounds 3 times in a row.	Printer is no paper	Please install printing paper correctly
The red light flashes 4 times in a row and the buzzer sounds 4 times in a row	Cutter error (cutter jammed)	Turn off the machine and then on again to reset the cutter; or turn the cover opening wrench several times to reset the cutter.
The red light flashes 5 times in a row and the buzzer sounds 5 times in a row.	Print head temperature is too hot	Turn off the printer power and wait for the printer temperature to return to normal

The red light flashes 6 times in a row and the buzzer sounds 6 times in a row.	The shaft is not pressed down (open the cover)	Close the paper compartment cover
The red light flashes 7 times in a row and the buzzer sounds 7 times in a row.	Black mark device error	Please place the correct paper roll
The red light flashes 9 times in a row and the buzzer sounds 9 times in a row.	Printer triggers paper pulling function	Release paper pulling mode
Printing only feeds paper, no data is printed out	Printing paper installed backwards	Please re-install the printing paper in another direction
Printing is unclear or stained	The print head or printing rubber roller has not been cleaned for a long time, resulting in contamination by stolen goods.	Clean the print head or rubber roller
	Poor color development on printing paper	Please use printing paper with better printing quality or color rendering effect
	Print density set low	Increase the print density to meet your needs
Portrait printing content is lost	The print head or printing roller is dirty	Clean the print head or rubber roller
	Print head failure	Contact the dealer or manufacturer

8   Routine maintenance

8.1   Precautions

1）Dust, foreign matter, gunk, or other contaminants that get stuck inside the print head or printer can reduce print quality. When dirty, please clean the print head as follows

2）Always turn off the printer before cleaning.

3）Because when printing, the print head will become very hot. Therefore, if you want to clean the print head, turn off the printer power,and wait 2~3 minutes before starting.

4) When cleaning the print head, be careful not to touch the heated part of the print head to avoid damage to the print head due to static electricity, etc.

5）Be careful not to scratch or damage the print head.

8.2   Printer head cleaning

1）Please open the printer paper compartment cover and use a cotton swab dipped in dilute alcohol (alcohol or isopropyl alcohol) to clean the print head from the center to the surroundings.

2）After cleaning the print head, do not use the printer immediately. Wait for the cleaning alcohol used to completely evaporate (1 to 2 minutes).The print head can be used only after it is completely dry.

8.3   Sensor, rubber roller and paper path cleaning

1) Please open the printer paper compartment cover and take out the paper roll.

2) Use a dry cotton cloth or cotton swab to wipe away dust or foreign matter.

3) Soak a cotton cloth or cotton swab with medical alcohol and use it to wipe away sticky foreign matter or other contaminants.

4) Do not use the printer immediately after cleaning the parts. Wait for the alcohol to completely evaporate (1 to 2 minutes) and the printer to dry completely before use.

5) ※ When the print quality or paper detection performance decreases, clean the parts.

9 Shipping and storage matters

1) Make sure the device is placed on a firm, stable, level surface.

2) When transporting the printer, it must be packed in foam, bubble bags, etc.

3) If the device is dropped, it may be damaged or otherwise injured.

4) Excessive moisture and excessive dust may damage equipment.

5) Do not place heavy objects on top of this product and never stand or lean on it.

6) The device may fall or collapse, causing damage and possible damage.

7) To ensure safety, please unplug the battery when the product is not used for a period of time.