Value Each Gram A professional weighing products manufacturer and supplier

SPECIAL PRINTER PT2

User Manual

v.201811

HiWEIGH Weighing system & solution
An ISO9001 registered company
@No.335 Haishen, Xingxin Road, Huinan Town, Pudong District, Shanghai 201301, China
www.hiweigh.com All rights reserved, specifications subject to change without notice

Value Each Gram

HiWEIGH
Weighing system & solution

Content

Precautions **3**

Chapter 1 Product introduce **7**

1.1 Printer exterior 7

1.2 Accessory 7

1.2.1 Standard accessories 7

1.2.2 Options accessories 8

Chapter2 Function characters **8**

2.1 Specifications 8

2.2 Other specifications 9

Chapter 3 Using method **10**

3.1 Prepare before using 10

3.1.1 Li-ion battery installation 10

3.1.2 Paper loading 10

3.2 Basic function using 11

3.2.1 Turn on 11

3.2.2 Turn off 11

3.2.3 Inspect itself 11

3.2.4 Paper feeding 12

3.2.5 Charging 12

3.3 Print connection and printing 12

3.3.1 Serial connection 12

3.3.2 RAW-IR and IrDA connection 12

3.3.3 Bluetooth 13

3.3.4 Matched pair 14

3.4 LED Indicator and buzzer definition 15

Chapter 4 Other information **15**

4.1 Printer technical manual 15

4.2 Preprinted black mark specification 15

4.3 Auto dormancy/automatic awaken, automatic turnoff 16

Precautions

◆ Safety Precautions

In using the present appliance, please keep the following safety regulations in order to prevent any hazard or material damage.

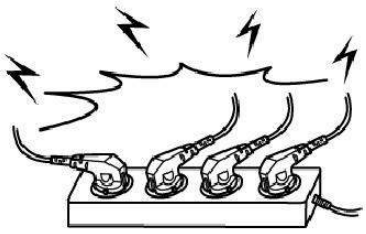
WARNING

Violating following instructions can cause serious injury or death.

Do not plug several products in one multi-outlet.

- This can provoke over-heating and a fire.
- If the plug is wet or dirty, dry or wipe it before usage.
- If the plug does not fit perfectly with the outlet, do not plug in.
- Be sure to use only standardized multi-outlets.

PROHIBIT



You must use only the supplied adapter.

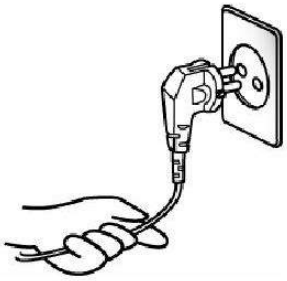
- It is dangerous to use other adapters.

PROHIBIT

Do not pull the cable to unplug.

- This can damage the cable, which is the origin of a fire or a breakdown of the printer.

PROHIBIT



Keep the plastic bag out of children's reach.

- If not, a child may put the bag on his head.

PROHIBIT

Do not plug in or unplug with your hands wet.

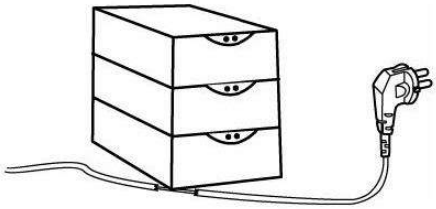
- You can be electrocuted.

PROHIBIT

Do not bend the cable by force or leave it under any heavy object.

- A damaged cable can cause a fire.

PROHIBIT

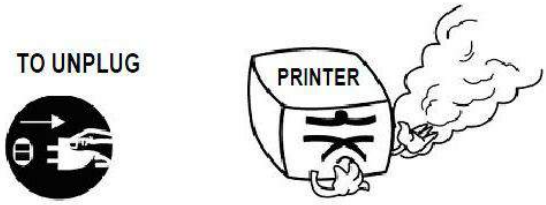


CAUTION

Violating following instructions can cause slight wound or damage the appliance.

If you observe a strange smoke, odor or noise from the printer, unplug it before taking following measures.

- Switch off the printer and unplug the set from the mains.
- After the disappearance of the smoke, call your dealer to repair it.

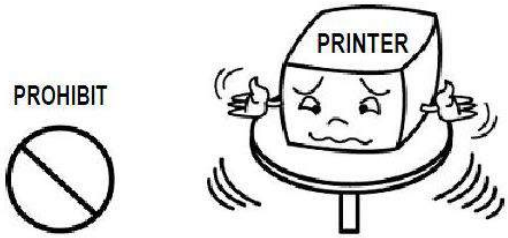


Keep the desiccant out of children's reach.

- If not, they may eat it.

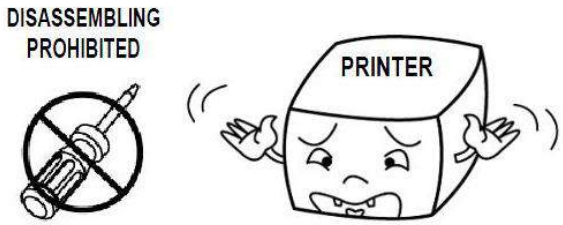
Install the printer on the stable surface.

- If the printer falls down, it can be broken and you can hurt yourself.



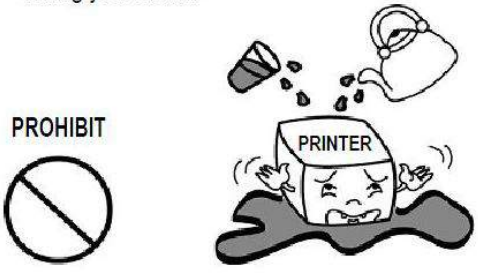
Use only approved accessories and do not try to disassemble, repair or remodel it for yourself.

- Call your dealer when you need these services.
- Do not touch the blade of auto cutter.



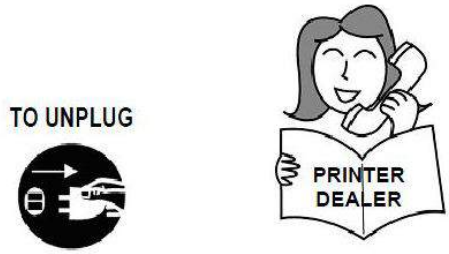
Do not let water or other foreign objects in the printer.

- If this happened, switch off and unplug the printer before calling your dealer.



Do not use the printer when it is out of order. This can cause a fire or an electrocution.

- Switch off and unplug the printer before calling your dealer.



◆ Operation Precautions

Be sure not to print continuously over 1meter, otherwise may cause damage to the printer head.

Water or other liquid should not spill into the printer, also the printer should not be appeared in the rain, or else may cause printer damage.

Please do not open the paper case cover when printing; otherwise the printer may work improperly.

If print with serial interface, should not unplug the interface cable in the course of printing, or else some printing data may be lost.

When print in Ir or IrDA mode, bus sure the Ir window of the host equipment face rightly the Ir window of the printer, the distance should be within the range of 50cm, and the angle should be within the range of 30°.

When print with Bluetooth interface, the communication distance should be within10 meters, otherwise the printer doesn't print or prints rubbish codes.

Too high(50℃) or too low(-10℃)temperature and too high(80%) or too low (20%) relative humidity both effect the quality.

The print paper in poor quality or stored for too long time also may reduce the print quality even damage the printer.

In the black mark detecting mode, the printer requires that the preprinted black mark is accordant with the black mark specifications (details please refer to 4.2); otherwise the black mark can not be detected correctly.

Be sure to use up the power of the battery before charge it, as it can ensure the using life of the battery.

◆ **Storage Precautions**

The printer should be placed in such an environment that the temperature is between -20℃ and 70℃, and the relative humidity is between 5% and 95%.

If the printer will be stored for a long time, please be sure to take out the battery, otherwise may damage the battery and printer.

Normal thermal paper can't be kept too long time. If you need to keep the receipt for a long period, please choose long term effective thermal paper.

The paper should be keep away from high temperature environment and point-blank sunshine.

◆ **Battery Safety Precautions.**

Be sure to carefully read the user manual before using the produce.

Ignore the following instructions may cause battery overheating, fire, explosion, damage and/or

performance, and reduced product life.

1) Risk of explosion if battery is replaced by an incorrect type.

2) Dispose of used batteries according to the instructions.

3) Do not allow water, sea water from entering or leaking into the battery inside. If the batteries internal safety device burn, when changing it, it may produce any abnormal current and/or voltage, and cause any abnormal chemical reaction, then may cause the battery overheating, fire and/or explosion.

4) Do not use or place the battery nearby the stove or other high temperature places. Excessive heats maybe damage the resin shell and/or the insulation materials, and then the battery may be caused overheating, burning and/or explosion.

5) When charging, use a specified charger. Other conditions (high temperature, high pressure/high current, using the modified battery charger, etc) excludes here may result in over-charging the battery and abnormal current and/or voltage, cause abnormal chemical reaction, and may cause the battery overheat, light and/or explosion.

6) Battery clearly marks with positive and negative. When connect the battery with the charger and/or printer, be sure to verify the correct battery orientation. Reverse insertion will cause the reverse charging and may cause abnormal chemical reaction, and then may cause the battery overheat, ignite, and/or explosion.

7) Do not make the battery contact with the power outlet and/or car cigarette lighter socket. This may cause high pressure and excessive current, and lead to the battery overheat, burning and/or explosion.

8) Do not heat the battery or put the battery into fire. This may melt insulation material and/or damage safety devices or safety equipment, then ignite electrolytic solution, and cause the battery overheat, burning and/or explosion.

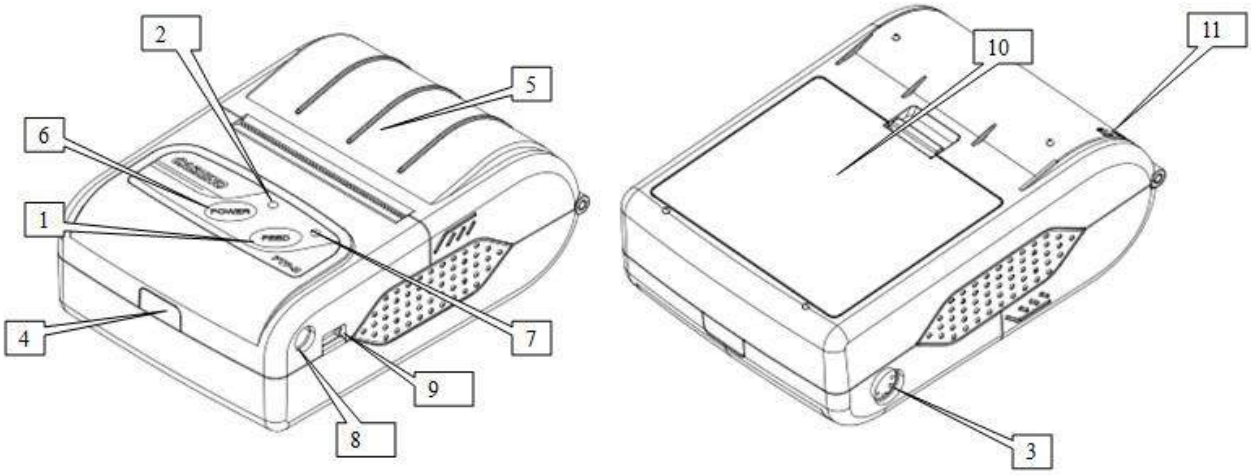
9) Do not use the battery with contrary (+) and (-) Location. In the charging process, this will cause the reverse charging and may cause abnormal chemical reaction. During use, may appear unpredictable current exception, and cause the battery overheat, ignite, and/or explosion.

10) Do not make the battery (+) and (-) contact with any metal. Also, do not carry along or store batteries with metal objects, such as necklaces, hair clips and so on. Battery internal short circuit may cause excessive current, and lead to the battery overheats, ignite, and/or explosion and the adjacent metal objects (necklaces, hairpins, etc.) may be overheating.

11) Do not throw or heavy attack the battery. If internal safety device of the batteries burn, the battery charging may cause any abnormal current and/or voltage, and abnormal chemical reaction, and lead to the battery overheat, ignite, and/or explosion.

Chapter 1 Product introduce

1.1 Printer exterior



1. Feed paper key
2. State indicator light
3. RS232 serial port socket
4. Infared ray(IR) interface
5. Printer upper cover
6. Power key
7. Power Charging indicator light
8. Power port
9. Mini USB port
10. Battery
11. Leather hang

Note: The status indicator and charging indicator light separately be set in above of the two keys. Using red and blue to show different mean.

1.2 Accessory

1.2.1 Standard accessories

USB Interface Cable

Battery

Power Adapter

Paper Roll

User Manual

1.2.2 Options accessories

CD

cigarette lighter jack charger

Serial Interface Cable

Protective Case

Chapter2 Function characters

2.1 Specifications

Model	PTP-II/IR	PTP-II/BT	PTP-II/WIFI(Developing)
Printing method	Line thermal printer		
Printing speed	50~80mm/s		

Dot pitch	8dots/mm, 384 dots/line		
Printing width	48mm		
Paper width	57.5±0.5mm		
Paper roll outer diameter	40mm (Max.)		
Paper roll inner diameter	13mm(Min.)		
Paper thickness	60-80um		
Overall dimension(WxDxH):	79x110x45mm		
Weight (g)	210(non- including the paper roll)		
Printing characters	ANK: 8x16,9X17, 9x24,12x24 GBK:24x24		
Characters/line	ANK:48, 42, 32 GBK:24, 16		
Life cycle time	50km(printing density under 12.5%)/100 million pulses		
Barcode type	1D: UPC-A,UPC-E,EAN-13,EAN-8,CODE39,CODE93, CODE128,CODEBAR,ITF25		
	2D: QR CODE, PDF417		
interface	IRDA/VIR/RAW IR, RS232,USB	Bluetooth V2.1 CLASS (V4.0 Developing) CLASS ,RS232,USB	WIFI,RS232, USB
Power	2000mAh 7.4V rechargeable Lithium battery		
Recharge adapter	Stand by recharging / AC adapter		
Black mark test	Supported		
Paper feeding	Easy paper loading		
Paper cut	By hands		
commands	ESC/POS compatible with order sets		
operate setting	Temperature -10°C~50°C ; Humidity 20%~85%		
Recharge Setting	Temperature 5°C~40°C; Humidity 20%~85%		
Storage Setting	Temperature -20°C~70°C ; Humidity 5%~95%		
Standard accessories	leather coat, li-ion battery, AC adapter, USB interface cable, Long-term preservable paper, user manual		
Optional accessories	Serial interface cable/CD/Car charger		

2.2 Other specifications

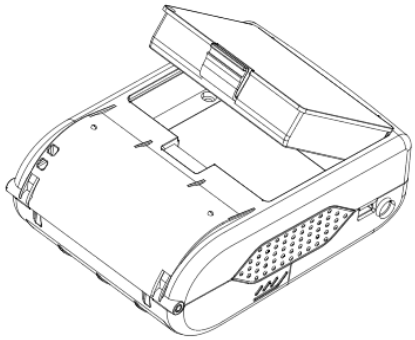
- Paper feeding method: clamshell feeding, please refer to the chapter 3.1.2
- Mark position: black mark position, please refer to the chapter 4.2
- Paper sensor: LED indicator flashes when come to paper end meanwhile alarm.
- Printing control indication: ESC/POS compatible with order set

- Power supply: 2000mAh rechargeable Li-ion battery
- Power alarm: indicator flashes when printer will run out of power and give out two short hoots. When running out of power, it will give out interval hoot to indicate charging.
- Battery full charge time: 2 to 4 hours.
- Battery duration: under 15% print density, at least 100 to 200 meters, under 25% print density, at least 100 meters, the standby time is over 15 days.

Chapter 3 Using method

3.1 Prepare before using

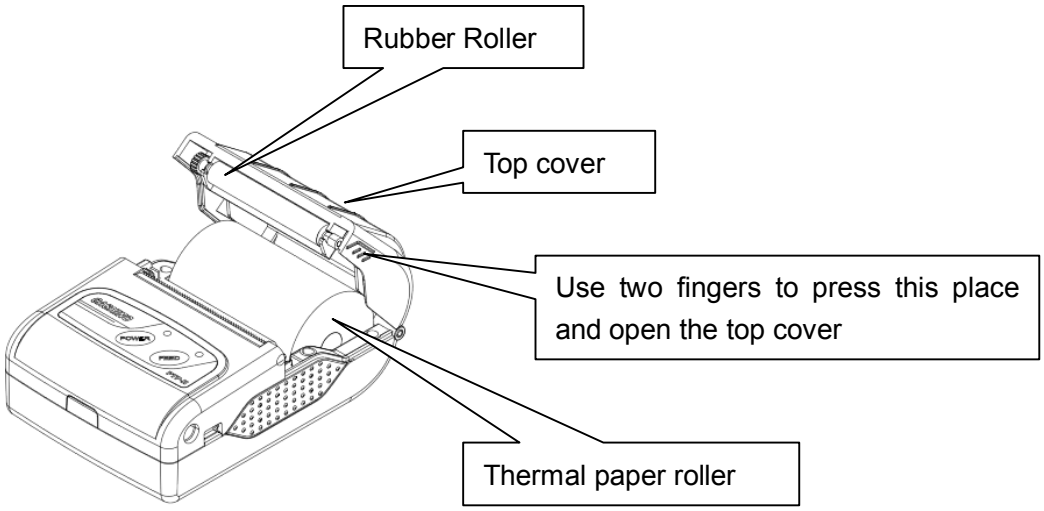
3.1.1 Li-ion battery installation



1) Refer to the picture, put the battery in the battery slot, and please pay attention to the correct positive and negative.

2) Close the battery case.

3.1.2 Paper loading



Operation methods:

1) Use two fingers to press the place showed in the above picture and open the top cover.

2) Put the paper roll into the paper case, pay attention to the direction of paper. If loaded reversely, it won't print.

3) Pull paper out of paper case.

4) Make sure paper in the center then closed top cover.

3.2 Basic function using

3.2.1 Turn on

Under the close state, Press ⏻ [POWER] button 2 seconds, the printer enters to the working state, the power indicator light (Red).

NOTE: in cash the printer function indicator light(Blue) flash and with paper, it show the power will to be exhaust, if continue to use, please change one new battery or charging power. The charging method, please refer to chapter 3.2.3

3.2.2 Turn off

Opening state, press ⏻ [POWER] button 2 seconds, the printer will be closed, all the indicator light will be off.

3.2.3 Inspect itself

The user can inspect the printer by themselves after getting the printer. To check the current state and setting.

Inspect method: turn-off. Hold [FEED] button, and then press [POWER] button the printer will print out the inspect page, the inspect page including the current state, setting, example of printer.

3.2.4 Paper feeding

Under the usual working state, press [FEED] button, start to feed paper, and will stop till 250mm.

If the paper has dark mark approved by this printer, when print to the dark mark, the printer will stop feed paper. If the feed length is setup as 0, it will be not affected by the dark mark.

3.2.5 Charging

When the power of batter to be exhausted, the function indicator shows (Blue) and flash, at the same time, the printer will give an alarm, at the comment, the user should charge the power.

The charging method: connect to the power 100-240VAC,50/60HZ,during the charging , the charging indicator light show blue and flash till finished, at the same time , the charging indicator light have been lighting

During charging, the user can usually use the printer.

3.3 Print connection and printing

3.3.1 Serial connection

The printer have one DB-9 serial port cable as option (one port connect to the printer, the other connect to MINI DIN plug)

3.3.2 RAW-IR and IrDA connection

PTP-II portable thermal printer can use IR to communicate with the host for transmitting the data.

Infrared Ray is the wireless data communication technology with infrared light as communication data carrier that explored and developed by the IrDA association.

Using method:

Infrared ray interface as the wireless data transmitting port, because of its having lower power, manure technology, easy using, is widely applicable to portable devices, such as all the palm computer with WINCE, laptop, mobile cell, palm computer, data collector, measure device and etc.

PTP-II, its hardware meets the regulations of IrDA1.1 physical layer.

Because IR interface depend on the infrared light as data carrier, there can not having any remora between the data sender and the receiver device; their infrared port should aim at and close each other.

When PTP-II/IR communicates with the host devices that hardware also meets the regulation of IrDA 1.1 physical layer, make the IR interfaces (from both PTP-II and the host device) right towards to each other (angle shall not be more than 30°), without any obstacles between them, the distance shall be less than 0.5M.

PTP-II/IR can use RAW-IR to communicate with the host device; also can adopt the Vir protocol or IrCOMM protocol (IrDA).

When using RAW-IR to communicate with the host device, IR transceiver just change the serial interface data signal into IR signal or change light signal into serial interface data signal according to the certain coding regulation. Under this situation, this IR interface is called RAW-IR. When you use RAW-IR, it is not compatible with IrDA because of the software do not use IrDA protocol during sending and receiving data.

VIR is safer and more reliable IR communication way, that is, it adds VIR protocol based on RAW-IR. In case the host device can not support IrCOMM protocol, advise to use VIR protocol.

Compared with VIR protocol, IrCOMM protocol is based on the hardware of RAW-IR, also IrCOMM is more popular way which is made by international IR Communication association. IrCOMM is one of subset of IrDA protocol that is wireless data communication protocol developed by IrDA association, based on the hardware of RAW-IR for ensuring data transmission's stability, reliability, easy using. All portable devices supporting IrDA protocol inn (such as wince, pocket pc, palm, IR cell phones etc.) can support IrCOMM. As if the host device can support IrDA protocol inn, which drive the printer to use the operation system (such as WINCE, PALM OS). So that, for developer, IrCOMM interface is the virtual serial port. As if the host device has no IrDA protocol inn and wants to realize IrCOMM data transmission, the developer has to write IrDA protocol inn. Whether the host device can support IrCOMM, please refer to the developing documents of the host device or make a consultation with the supplier of the host device.

Due to the RAW-IR interface, VIR interface and IrCOMM interface of PTP-II printer use same hardware source, so they can't work at the same time. The default mode of PTP-II is IrCOMM. If you want to change the current IR interface mode, please use the special tool of PTP-II——CONFIG modification setting. Pls refer to the details【Chapter 3: PTP-II printer tool software】

As to the detailed IrDA protocol, please refer to IrDA official website: http://www.irda.org/

3.3.3 Bluetooth

PTP-II/BT support wireless data transmission interface, meet Bluetooth 1.1 regulations, power class 2.

PTP-II/BT is only sub-device, and user need to drive the printer by Bluetooth host devices (such as PDA, mobile phone, laptop).and other Bluetooth sub-device (such as bluetooth earphone) can't drive the printer to print by Bluetooth.

Using method:

1. Through the Bluetooth tray (or on the control board), right click the Bluetooth logo, choose” Add Bluetooth equipment

2. after some time, to show find out the new equipment “PTP-II”

3. Choose “next step”, input the password”0000” in the third option” input the password” till to the finished

4. After finished, the system will show two serial port be added, general speaking, one is output port, the anther is input port.

5. Use super terminal to open” output port “, the baud rate of device is 9600, open the port.

6. Choice menus” file->attribute”, choose setting page, click the button” ASCII setting code” ,choose and tick the top two selection.

7. Click on the third button in the toolbar "call"

8 At the moment, Can enter any words, and then print it via Bluetooth printer

Note: Above 1-4 points as printer setting, 4-8 points as testing reference.

3.3.4 Matched pair

Before printing, PTP－II/BT need to pair with the host devices that drives the mobile thermal printer. Pairing process is originated by the host devices.

Usual Pairing processes as follow:

1. Turn on the printer

2. The host device search exterior Bluetooth device

3. If there are some exterior Bluetooth devices, please select “PTP-II”

4. Enter password “0000”.

5. Finish pairing.

Detailed pairing methods, please refer to the Bluetooth function introduction of the host devices

When pairing, mobile thermal printer PTP-II must be turn on.

Note: when pairing, do not turn on many printers at the same time, otherwise it can’t judge which one

succeeds in pairing.

After finished pairing, other the host device (upper machine) still can pair with this mobile thermal printer. One printer can be most allowed to pair with 8 units upper machines (the host devices) . If the ninth device will be paired with the printer, the earliest ones will be deleted from printer paring list automatically. If this earliest device will be allowed to drive the printer again, it need to pair with the printer again.

3.4 LED Indicator and buzzer definition

PTP-II has one buzzer and two LED indicators to indicate the printer status. The LED indicators indicate current status and buzzer indicates the changes of status.

LED indicator（Blue）	LED indicator（red）	Printer status	Buzzer
Flash quickly	Lamp off	Charging	
Flash slowly	Lamp off	power lack	Four beep one time per 1mins
Bright continuously	Lamp off	Finish charging	Double beep one time
Lamp off	Bright continuously	Working	
Flash slowly	Flash slowly	Paper end	Three beep continuously-warning
Lamp off	Flash slowly	dormancy	

Chapter 4 Other information

4.1 Printer technical manual

PTP-II portable thermal printer technical manual can be provided by the supplier.

This manual including the hardware interface introduce of PTP-II (serial interface, IR interface), the printing commands, and how print the dark mark, how to locate by the dark mark.

4.2 Preprinted black mark specification

If user wants to locate receipt by detecting preprinted black mark, shall accord to the following specification for the black mark. Otherwise it may cause printer can't recognize the black mark.

Printing position: black mark shall preprint at the left side of receipt.

Width rang：≥7mm

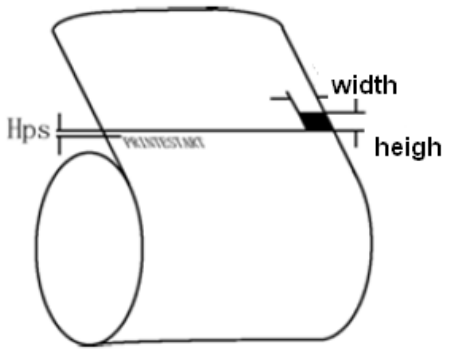
Height：4mm≤height≤6mm

Reflection rate to IR：<10% （reflection rate to the black mark on paper >65% ）

Hps：Hps indicates the distance from down edge of detecting mark from beginning line.

0mm≤Hps≤1mm

Black mark preliminary printing standard



4.3 Auto dormancy/automatic awaken, automatic turnoff

In order to save energy, prolong the using time, PTP-II printer adopts the advanced automatic dormancy, automatic awaken technology.

After turning on the Printer, if without any data sent to the printer by the host within one minute, and without pressing any buttons, the printer will be entering to the dormancy mode and the state indicator light (RED) will be in a state of slow flash .

After dormancy, the power consumption greatly reduced, and it will not affect the using. When receiving any printing data, the printer will be awaken automatically, without any other manual intervention.

After 2 hours, the printer does not receive any data, the printer will automatically turn off, and you should start it by manual.

Value Each Gram

HiWEIGH
Weighing system & solution

Value Each Gram A professional weighing products manufacturer and supplier

v.201811

User Manual

PT2

HiWEIGH Weighing system & solution

An ISO9001 registered company
@No.335 Haishen, Xingxin Road, Huinan Town, Pudong District, Shanghai 201301, China
www.hiweigh.com All rights reserved, specifications subject to change without notice