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# MPT-II

## User Manual



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## REVISION RECORDS

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## STATEMENT

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1.7 Version

### **Warnings :**



This must be complied with in order to avoid any damage to the human body and to the equipment.



This is showing the important information and tips for the printer operating.

## **PRECAUTIONS**

### **1. Safety Precautions**

- 1) Be sure to use the specified battery and power supply provided by our company.
- 2) Connection to an improper power supply may cause fire, explosion or damage to the printer.
- 3) Don't put the battery into the fire or water, don't disassemble or modify the battery, don't be short circuit, otherwise may result in injury or fire even explosion.
- 4) If the printer would not be used for a long time, be sure to take off the battery, otherwise the battery may leak liquid which is corrosive, if improper operation causes battery leak, and the liquid is spattered on the skin or clothes, please wash it with water, if spattered in the eyes, please rinse them with water thoroughly and see a doctor.
- 5) Please do not open the paper case cover when it is printing or just when printing is over, do not touch the print head with hand or body, overheat may cause scald.

### **2. Operation Precautions**

- 1) 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.
- 2) Please do not open the paper case cover when it is printing, otherwise the printer may work improperly.
- 3) If print with serial interface, should not unplug the interface cable in the course of printing, or else some printing data may be lost.
- 4) When print with Bluetooth interface, the communication distance should be within 10 meters, otherwise the printer doesn't print or prints rubbish codes.
- 5) Too high (40°C) or too low (0°C) temperature and too high (85%) or too low (20%) relative humidity both effect the print quality.
- 6) The print paper in poor quality or stored for too long time also may reduce the print quality even damage the printer.

### **3. Storage Precautions**

- 1) The printer should be placed in such an environment that the temperature is between -20°C and 70°C, and the relative humidity is between 5% and 95%.
- 2) 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.
- 3) Normal thermal paper can't be kept too long, if you need to keep the receipt for a

long period, please choose long term effective thermal paper.

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

#### **4. Battery Safety Precautions**

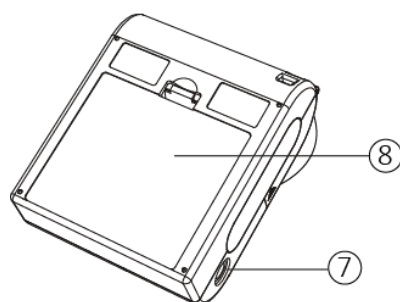
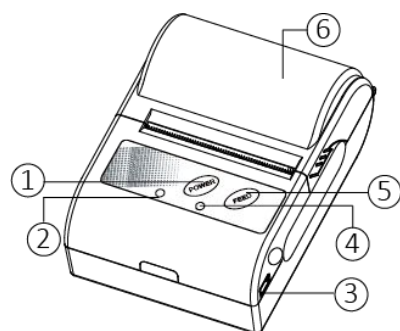
- 1) Be sure to carefully read the user manual before using the product.
- 2) Ignore the following instructions may cause battery overheating, fire, explosion, damage and / or performance, and reduced product life.
- 3) Do not allow water, sea water from entering or leaking into the battery inside. If the batteries internal safety device burn, when charging 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 heat maybe damage the resin shell and / or the insulation materials, thereby cause short-circuit inside the battery, 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.) excluded 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) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 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

overheat, 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 BRIEF INTRODUCTION

### 1.1 Appearance



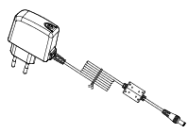
- ① Power button
- ② Red power indicator
- ③ USB interface
- ④ Blue status indicator
- ⑤ Feed button
- ⑥ Top cover
- ⑦ RS232 interface
- ⑧ Li-polymer battery

### 1.2 Accessories

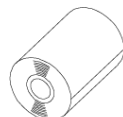
#### Standard accessories



Li-polymer battery



Power charger



Paper roll

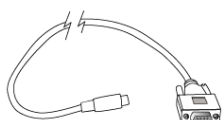


USB cable



User Manual

#### Optional accessories



Serial interface cable



Case



## CHAPTER 2 SPECIFICATIONS

Item		Parameter
		40mm paper house
Printing	Printing method	Thermal line printing
	Resolution	203dpi, 8dots/mm
	Printing speed	MAX.60mm/s
	Valid printing width	48mm
	Interface	Bluetooth,RS-232,USB
Power saving	Sleep mode	YES
Character Set	Font	ASCII:8×16,9×24,12×24;Multiple code pages support
Barcode Symbolologies	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODEBAR, CODE128, CODE93
	2D	QR code
Graphics		Support bitmap printing with different density and user defined bitmap printing (Max. 40K for per bitmap, and Max. 76K for total)
Detection	Sensors	Paper out detection
LED indicator	Power indicator	Red
	Error indicator	Blue
Charging	Power charger	12V — =0.5A
	Battery	1500mAh 7.4V rechargeable Li-polymer battery
Paper	Paper type	Thermal paper
	Recommended paper	FD210,PD150R,PD160R (OJI Paper CO.,LTD.)
	Paper width	58mm
	Paper thickness	≤0.1mm
	Paper roller diameter	≤40mm
	Paper loading	Easy loading mechanism
Physical characteristics	Working condition	0°C~40°C , 25%~80%RH
	Storage condition	-20°C~70°C,5%~95%RH
	Dimension	102.5*75*45mm
	Weight	180g (without paper roll)
Reliability	TPH	50km(not more than 12.5% printing density)/100 million pulses
Software	Emulation	ESC/POS
	Driver	Windows 2000/XP/Vista/Win7/Win8

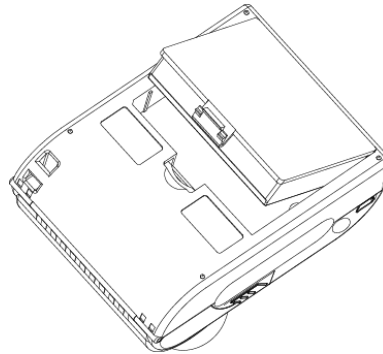
### NOTE:

Pls. use the recommended thermal paper or same quality paper, otherwise it will influence the printing quality and decrease the thermal print head life.

## **CHAPTER 3 OPERATION METHODS**

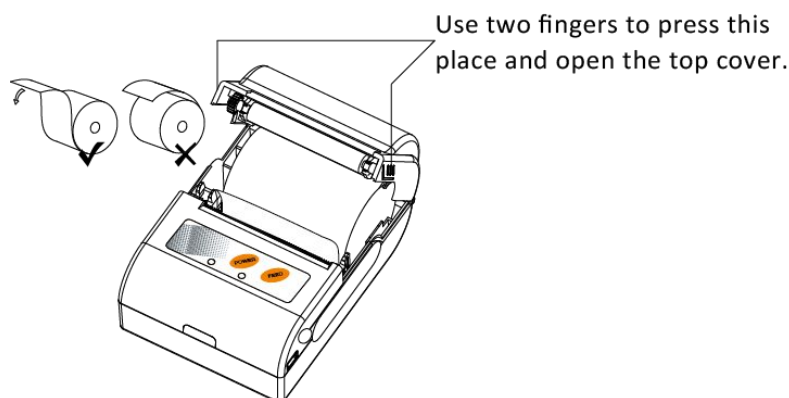
### **3.1 Preparation before using**

#### **3.1.1 Li-polymer battery installation**



- 1) Refer to the picture, put the battery in the battery slot, pls 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 picture and open the top cover.
- 2) Put the paper into the paper case, pay attention to the direction of the paper. If loaded reversely, it won't print.
- 3) Pull paper out of paper case.
- 4) Make sure paper in the center then close top cover.

### 3.2 Basic Function

#### 3.2.1 Power on

The printer is power on by pressing the 【POWER】 button lasting for about 2 seconds, and the power indicator is bright in red color.

***Notice: when the battery is almost exhausted, the status indicator blinks in blue color. In this case, you must charge the battery .See more information about the method of charging the battery in 3.2.7 Battery charging.***

#### 3.2.2 Power off

The printer is power off after holding down the 【POWER】 button for about 2 seconds. All the indicators are off when the printer is off.

#### 3.2.3 Self-test

The self-test indicate the printer's current settings, status and whether the printer has any problems. Hold down the 【FEED】 button while press 【POWER】 button about 2 seconds, the self-test begins.

The printer is ready to receive data as soon as it completes the self-test.

#### 3.2.4 Paper feeding

Users could use 【FEED】 button to feed paper manually. Printer will stop feeding when reaching max feeding distance. Max feeding distance could be set by the PC software "MPTTools". Please ask your distributor for more technical information of "MPTTools".

#### 3.2.5 Standby/Sleep

MPT-II has auto-sleep and auto-wake up function to save the battery power.

When the printer is power on, but during the pre-set standby time, no data is sent to the printer, no operation is done to the printer, it will enter auto standby mode. When the printer enters auto standby mode, the power indicator will show in red.

When the printer enters auto standby mode, the power consumption will decrease a lot, but have no influence to the printer working. The printer will auto wake up when receiving printing data without any extra operation.

When the printers enters auto standby mode, and during the pre-set auto sleep time, it receives no data and has no operation, the printer will auto turn off with all the light off. The users have to turn on the printer again if they want to use the printer.

The users can use the MPTTOOLS to set the printer standby time and sleep time.

Though the printer has auto standby and auto sleep function to save the battery power, but pls turn on the printer when it is not in use, which is the optimal way to save the battery power.

### 3.2.6 No paper alarming

MPT-II printer has the paper sensor to detect the paper end or not. If the printer has no paper, the function indicator and power indicator will flash slowly. If the paper is used up when the printer is doing the printing duty, the printer will continue to print the unfinished printing duty when a new paper is loaded.

### 3.2.7 Battery charging

When the Li-polymer battery runs out of power, blue LED indicator will flash slowly. It will power off automatically when continues printing. If you want to go on, please charge it.

#### **Charging method:**

- 1) Connect the power charger to the power connector of the printer.
- 2) Plug the power charger into an electrical outlet.

Power-off charging: LED light will always indicate blue color and goes off when fully charged.

Power-on charging: LED light will keep blinking in blue color, and depends on the current state of the printer when fully charged.

Printer could be in use when charging.

***NOTE: Please use the original battery and power charger , otherwise it will cause to printer damage and battery leakage, light and/or explosion.***

### 3.3 Bluetooth

PDA with Bluetooth interface, laptop and other information terminals can drive the mobile thermal printer MPT-II. Instructions as follows:

1. Power on printer.
2. primary device search for outer Bluetooth devices.
3. If there are some outer Bluetooth devices, choose MPT-II.
4. Enter password "0000".
5. Finish matching.

Detailed pairing methods, please refer to primary devices Bluetooth Names.

In pairing, mobile thermal printer MPT-II must be turn on.

***Note: when pairing, do not set many printers on, otherwise it can't figure out which one succeeds in pairing.***

### 3.4 LED indicator and Buzzer definition

There are one buzzer and two LED indicators to indicate the printer status. LED indicators indicate current status and buzzer indicates the changes of status.

Status indicator (blue)	Power indicator (red)	Status
Flash quickly	OFF	Power-on charging
ON	OFF	Power-off charging
Flash slowly	OFF	Battery low
ON	OFF	Power-on charging , Battery full
OFF	OFF	Power-off charging , Battery full
OFF	ON	Power on
Flash slowly	Flash slowly	Paper end
OFF	Flash slowly	Standby
Flash slowly	Flash slowly	Cover open

Buzzer	Status
Once	Power on
Twice	Power off
Once	Connect USB
Twice	USB disconnected
Once	Press 【FEED】 button
Once	Connect to power adapter
Three times	Power-on charging ,Battery full
Three times	Enter to the parameter setting mode
Four times	Download the Font library
Twice	Battery low (the printer will shut down automatically after buzzing )

### **3.5 Software Tools of MPT-II**

There is software which called MPTTools which is the software to set the printer parameters, and used to set the printer Bluetooth device name and password, Standby Time, Sleep Time, Max Feed Length and so on. Pls refer to MPTTools Guide for the instructions.

## CHAPTER 4 INSTALLATION OF DRIVER

### 4.1 The driver installation instruction of USB port interface (Windows XP)

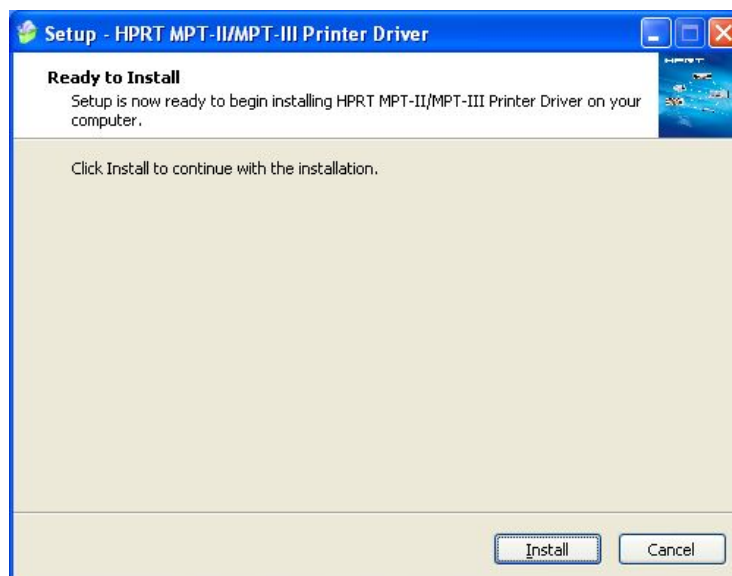


Warning: In different operating system, screen has slight difference. Please operate according to the tips.

1. Double click "HPRT MPT PrinterDriver-v-1.0.1.6.exe". Choose "English" and click "OK".



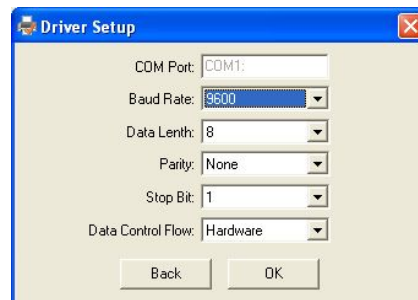
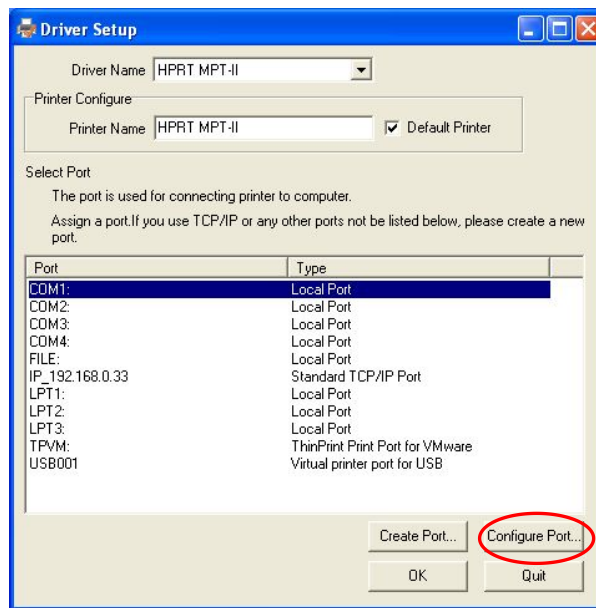
2. Click "Install".



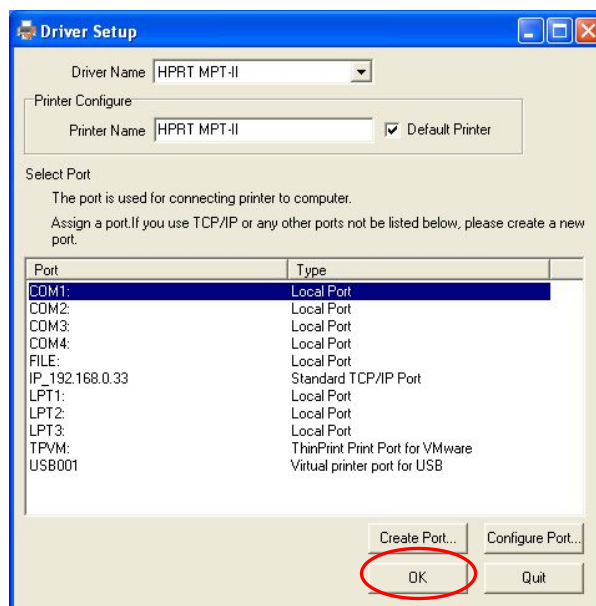
3. Choose the matched type and port. (USBxxx is for USB port, COMx is for serial port, LPTx is for parallel port). Click "Configure Port". Set parameter and click "OK".

NOTE: If printer is already connected with computer by USB port, it only need the first step and the rest will be finished automatically.





4. Click "Setup".



6. Click "Finish". The HPRT MPT-II printer driver installed successfully.

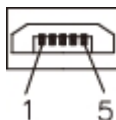


4. After installation, the icon will be found in "Start" → "Printers and Faxes".



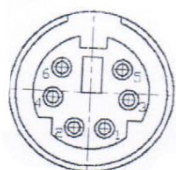
## CHAPTER 5 INTERFACE

### 5.1 USB interface



Pin No.	Name
1	VBUS
2	D-
3	D+
4	NC
5	GND

### 5.2 RS-232 interface



Pin No.	Name
1	/TXD
2	/RTS
3	GND
4	+5V
5	/RXD
6	/CTS

## **CHAPTER 6 OTHER INFORMATION**

### **6.1 Printer technical manual**

Pls refer to technical manual for more information about control instruction set, hardware interface and so on.