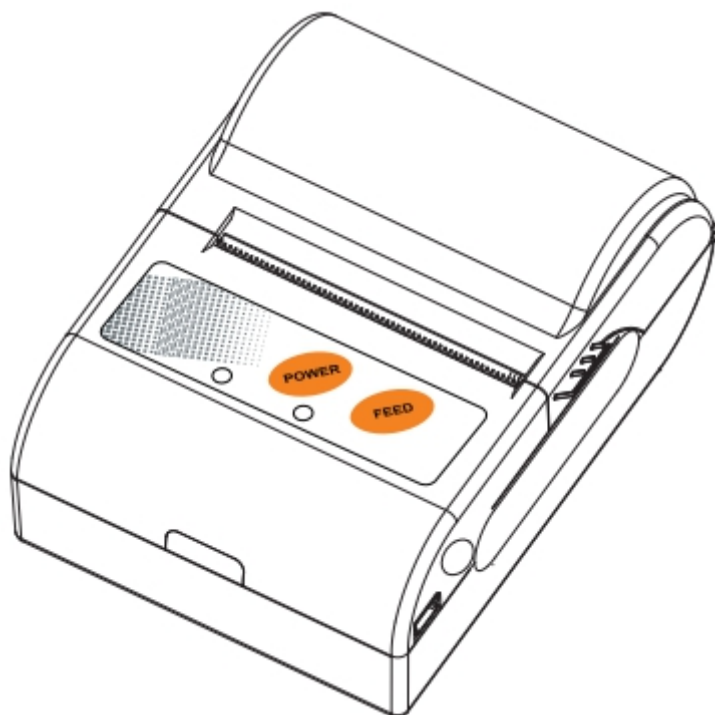

MPT-II

User Manual



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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 (50℃) or too low (-5℃) temperature and too high (80 %) or too low (25 %) 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 -40℃ and 60℃, and the relative humidity is $\leq 93\%$ (40℃) .
- 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

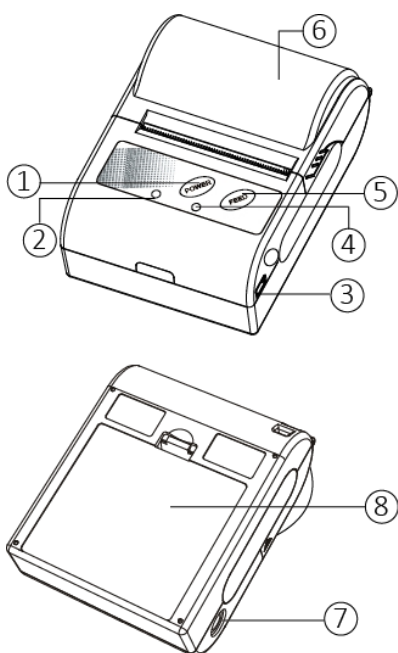
- 1) Be sure to carefully read the user manual before using the product.
- 2) Ignore the following instructions may cause battery overheating, fire, explosion, damage and/or performance, and reduced product life.
- 3) Do not allow water, sea water from entering or leaking into the battery inside. If 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

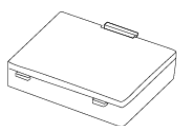
1.1 Appearance



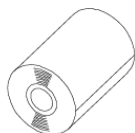
- ① Power button
- ② Red power indicator
- ③ USB interface
- ④ Blue status indicator
- ⑤ Feed button
- ⑥ Top cover
- ⑦ RS232 interface
- ⑧ Li-polymer battery

1.2 Accessories

Standard accessories



Li-polymer battery



Paper roll



USB cable



User Manual

Optional accessories



Serial interface cable



Case

CHAPTER 2 SPECIFICATIONS

Item		Parameter
Printing	Printing method	Thermal line printing
	Resolution	203dpi, 8dots/mm
	Printing speed	30~50mm/s
	Valid printing width	48mm
	Interface	Bluetooth,RS-232,USB(optional)
Power saving	Sleep mode	YES
Character Set	Font	ASCII: 12×24 GBK: 24×24
Barcode Symbolologies	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODEBAR, CODE128, CODE93
Graphics		Support bitmap printing with different density and user defined bitmap printing (Max. 40K for per bitmap, and Max. 80K for total)
Detection	Sensors	Paper out detection
LED indicator	Power indicator	Red
	Error indicator	Blue
Power supply	Power supply	USB charging
	Battery	2000mAh/7.4V rechargeable Li-ion 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	-5℃~50℃, 25%~80%RH
	Storage condition	-40℃~60℃, ≤93%RH (40℃)
	Dimension	102.5*75*45mm
	Weight	269g (without paper roll)
Reliability	TPH	50km(not more than 12.5% printing density)/100 million pulses
Software	Emulation	ESC/POS
	Driver	Windows XP/Vista/Win7/Win8

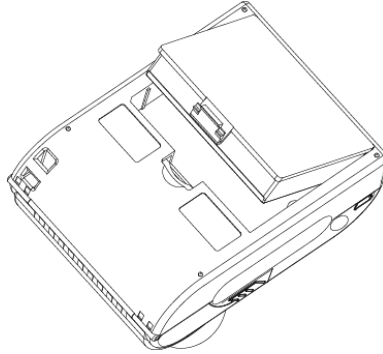
NOTE:

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

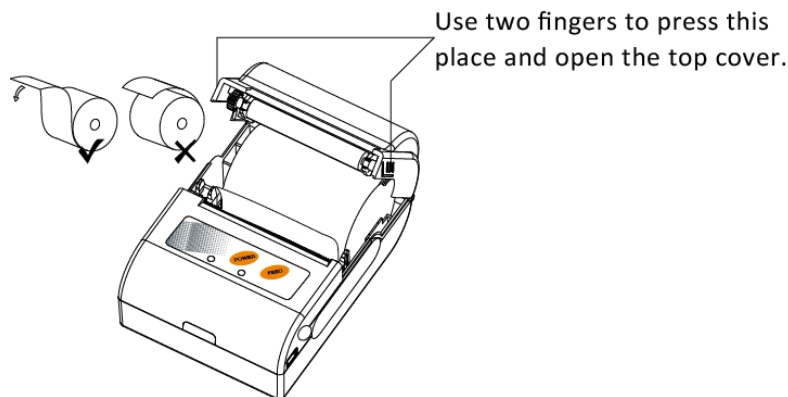
3.1 Preparation Before Using

3.1.1 Li-ion 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:

The printer is connected to a computer via USB, which provides power and collects the data.

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	OFF	Power-on charging
ON	OFF	Power-off charging
Flash	OFF	Battery low
Depends on the current state of the printer		Power-on charging , battery full
OFF	OFF	Power-off charging , battery full
OFF	ON	Power on
Flash	Flash	Paper end
OFF	Flash	Standby

Buzzer	Status
Once	Power on
Twice	Power off
Once	Press 【FEED】 button
Three times	Power-on charging, battery full
	Enter to the parameter setting mode
Four times	Download the Font library

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 OTHER INFORMATION

4.1 Printer Technical Manual

Please refer to MPT-II technical manual.

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.

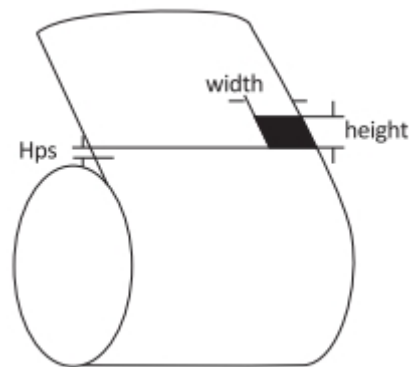
Printing position: black mark shall preprint at the left side of receipt.

Width rang: $\geq 7\text{mm}$

Height: $4\text{mm} \leq \text{height} \leq 6\text{mm}$

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. ($0\text{mm} \leq \text{Hps} \leq 1\text{mm}$)



CHAPTER 5 CLEAN PRINTER

5.1 Cleaning Head

Printing quality might be degraded by dust, foreign substance, adhesive substance, or other pollution materials stuck in the printer head or inside the printer.

When dirty, clean the print head as follows:

※NOTE:

1. Make sure to turn the printer power off prior to cleaning.
2. Open the paper cover and ribbon assembly, and remove the paper and ribbon.
3. As the print head gets very hot during printing, if intending to clean the print head, turn the printer power off and wait approximately 2~3 minute before commencement.
4. Use the cleaning pen to clean the head. When cleaning the print head, take care not to touch the heated portion of the print head. Printer Head is susceptible to damage from static electricity, etc.
5. Take care not to allow the print head to become scratched and/or damaged in any way.

5.2 Cleaning Sensor, Platen and Paper Path

※Clean the parts when there is a degradation of performance in printing quality or paper detection.

- 1) Open the paper cover and ribbon assembly, and remove the paper and ribbon.
- 2) Remove any dust or foreign substance using dry cloth or cotton swab.
- 3) Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.
- 4) After cleaning the parts, do not use the printer until the alcohol evaporates completely (1~2 min) and the printer has completely dried.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and consider removing the no-collocation statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement.

The device can be used in portable exposure condition without restriction.

WEEE(Waste Electrical and Electronic Equipment) Directive

This information only applies to customers in the European Union, according to Directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 04 July 2012 on waste electrical and electronic equipment, and to customers in countries in Europe, Middle East and Africa (EMEA) where they have implemented equivalent regulations.

For other countries, please contact your local government to investigate the possibility of recycling your product.



The product needs to be reliably earthing after being powered on.