

SEWOO

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sewoo



MOBILE PRINTER
MODEL : LK-P41

USER'S MANUAL

All specifications are subject to change without notice

**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.

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**Risk of explosion if battery is replaced by an incorrectly type.
Dispose of used battery according to the local disposal instructions.**



Disposal of Old Electrical&Electronic Equipment(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronics equipment. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

For USA

Information to user;

Caution: The user that changes or modifications not expressly approved by the Aroot Co., Ltd., responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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: Radio Frequency Radiation Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency RF Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

Responsible Party;

Company name : Aroot USA

Address : 19700 S. VERMONT AVE. STE 200 TORRANCE, CA 90502

Tel/FAX No : +1-310-617-7401

Homepage : miniprinter.com

For Canada

This class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada

The antenna cannot be removed (and changed) by user.

NOTE

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

CAUTION : Radio Frequency Radiation Exposure

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

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1. Safety Precautions

For better safety and reliability, adhere to the following precautionary measures.

Read and follow the instructions carefully before operation of the product.

Indication



Prohibition



Must follow



Do not disassemble



Unplug the power from the outlet



Grounding to prevent electric shock



Do not handle the product with wet hands



WARNING

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



Do not pull or touch the power plug with wet hands.

Potential risk of electric shock or fire



Do not bend the wire and do not allow the wire to be pinched or crushed by heavy objects.

Potential risk of electric shock or fire



Do not overload an electrical outlet.

Potential risk of electric shock or fire



If a power plug is broken or a plug is cut or worn, do not use it.

Potential risk of electric shock or fire





WARNING

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



Do not unplug the power cable to turn off the product.

Turn off the power using the power button



Do not disassemble, repair or modify the product.

Potential risk of malfunction, electric shock, or fire. When the product needs to be repaired, please contact your reseller



CAUTION

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



Do not install the product on an unstable or inclined surface.

May cause damage or injury



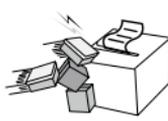
If the product needs to be repaired, please contact your reseller.

Potential risk of fire or unit malfunction



Keep product away from the water and other material.

Potential risk of fire or unit malfunction



Avoid excessive shock or drops.

Potential risk of fire or property damage





BATTERY SAFETY

For better safe use, reliability and performance of the battery, please review the following instructions carefully.

1 Storage of battery

The battery is requested to be stored under the following conditions :

- Indoor storage in a cool environment without direct sun light on the battery.
- Store battery in a dry location with low humidity.
- As long-term storage can accelerate battery self-discharge and lead to the deactivation of the battery. To minimize the deactivation effect, store battery at room temperature not too low or too high.
- When charging for the first time after long-term storage, deactivation of the battery may have led to decreased capacity. Recover such battery to original performance through repeating several cycles of full charging and discharging.
- When store battery for more than 6 month, charge at least once charring require per 6 months to prevent leakage and deterioration in performance due to self-discharging.

2 Charging battery

- Charge the battery only with suitable charger or adaptor specified (optionally provided) by Aroot. The use of an incorrect charger or adaptor such as wrong voltage and current may result in overheating, combustion and/or explosion of the battery.
- Never attempt reverse charging. Charring with polarity reversed can cause gas pressure inside of the battery to rise, which can be lead to leakage of the battery.
- Avoid overcharging. Repeated overcharging can be lead to deterioration in battery performance and over-heat occurred.
- Charging efficiency drops at high temperature.

3 Protection form unexpected damaged to battery

- (+) and/or (-) terminals must not be connected metallic materials (-) such as metal wire, necklace, chains.
- Do not drop battery from height in order to prevent them from possible malfunction or damage.
- Do not twist or band battery in order to prevent possible damage.
- Do not crush/nail battery.

4 For Safety

- a. Do not disassemble battery.
- b. Do not use battery when something abnormal found such as smells, deformation, discoloration, and so on.
- c. When the electrolyte leakage occurs, do not touch the liquid.
- d. Once watered, battery may have potential malfunctions. Do not use this battery.
- e. Do not put battery into fire.
- f. The battery must not be exposed to excessive heat such as sunlight or fire.
- g. Do not apply solder directly to battery.
- h. Do not allow children to replace batteries without adult supervision.
- i. There is danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent battery type as the original battery.
- j. Do not replace the battery with an incorrect type that can defeat safeguard.
- k. Placing battery in (extremely high or low temperatures) and (low air pressure at high altitude) during use, storage or transportation may pose a safety hazard.
- l. Do not leave the battery in an extremely high temperature surrounding environment and extremely low air pressure that can result in an explosion or the leakage flammable liquid or gas.
- m. Disposal of the battery into fire or a hot oven, or mechanically crushing or cutting of the battery, that can result in an explosion.

5 Disposal guidance of battery

- a. Don't throw away battery, separate them with recycled items.
- b. Do not incinerate battery and put in the fire. Heat may cause explosion and fire.
- c. Do isolate them each other when disposing the secondary battery having different electrochemical systems.
- d. Dispose of the battery in discharged state to prevent heat by short circuiting.
- e. Disposal guidance of battery may depend on each country and region, there for dispose battery in accordance with the regulations for each country and region.

2. Unpacking

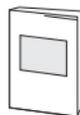
Standard



Printer



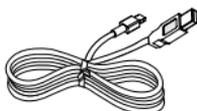
Battery



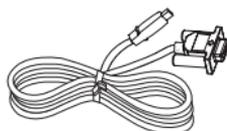
Quick Manual



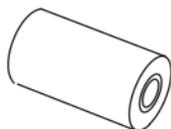
Charger



USB Cable



Serial Cable



Roll Paper

Optional



Battery Cradle
(Charging Cradle)



Car Adapter



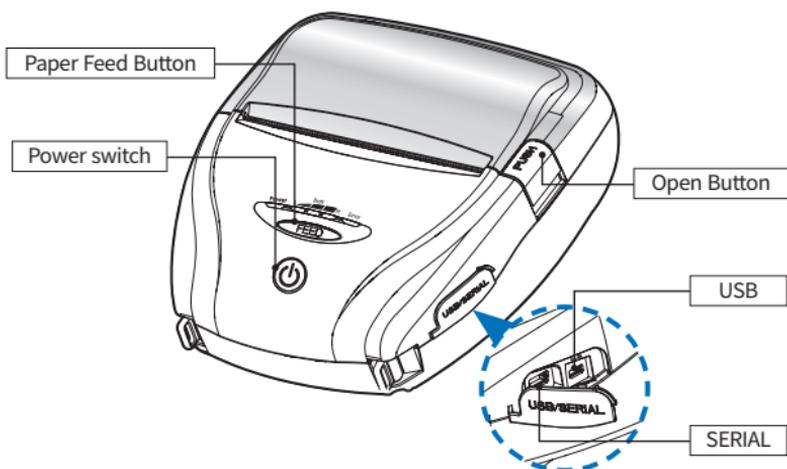
Leather Case



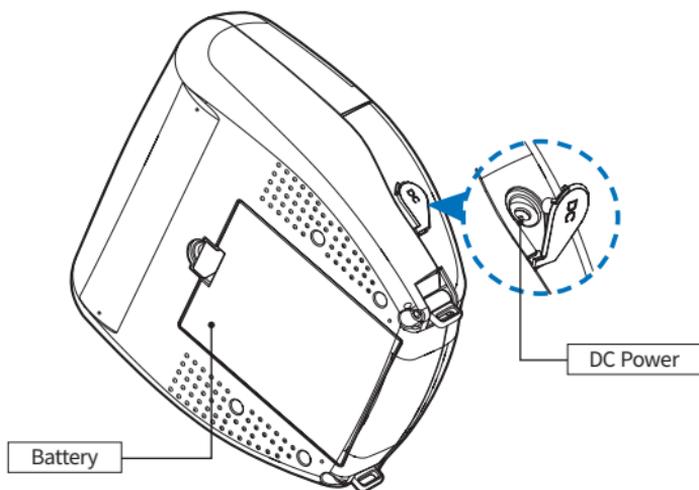
Shoulder Strap

3. Product overview

Front

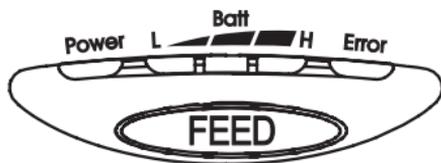


Bottom



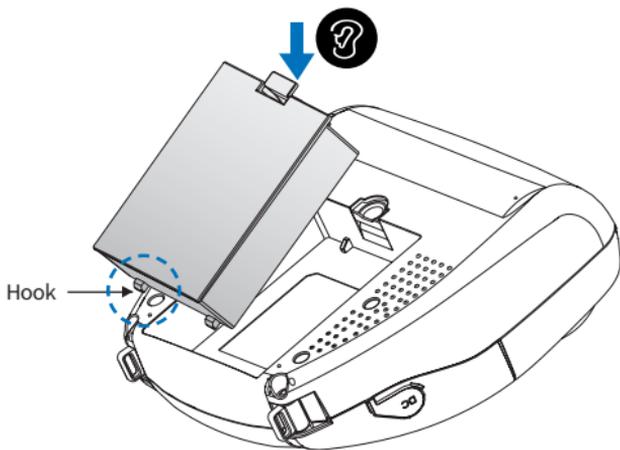
4. Usage and Installation

4-1. Control Panel Usage



Button	Name	function
	Power Button	<ul style="list-style-type: none">- This button is used to turn the printer on and off.- When the printer is off, press this button for approximately 3 seconds and the printer will power on. When you press this button while the printer is powered on, the printer will turn off.
	Paper Feed Button	<ul style="list-style-type: none">- This button can be used to manually feed the paper.- Additionally, this button is also used to initiate self-tests and Hexadecimal Dumping. <p>01 Refer to the Self Test section of this manual for information regarding self-tests.</p> <p>02 Refer to the Note in Self Test section of this manual for information regarding Hexadecimal Dumping.</p>
	Battery Status Lamp	<ul style="list-style-type: none">- If the Batt LED is lit, the battery is fully charged.- If you can hear a beeping sound and LED light is turned off, the battery is at the lowest level.- If the battery is not charged at all, the printer turns off automatically.
	Error Lamp	<ul style="list-style-type: none">- If the red light is turned on, there is no paper or the paper cover is open.

4-2. Battery Installation

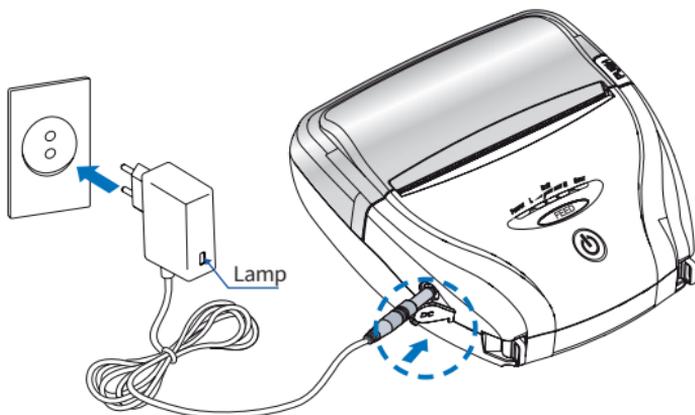


- 1 Align battery hook as shown in the picture.
- 2 Push the battery into the printer until it locks in place.

✓ NOTE

As the battery is not charged at the time of your purchase, charge the battery prior to using the printer. (Battery charger or Cradle can be used to charge)

4-3. Charging Battery



- 1 Make sure the printer is turned off.
- 2 After opening the DC JACK cover, connect the DC JACK to the printer.
- 3 Plug the power cord into the electrical outlet.

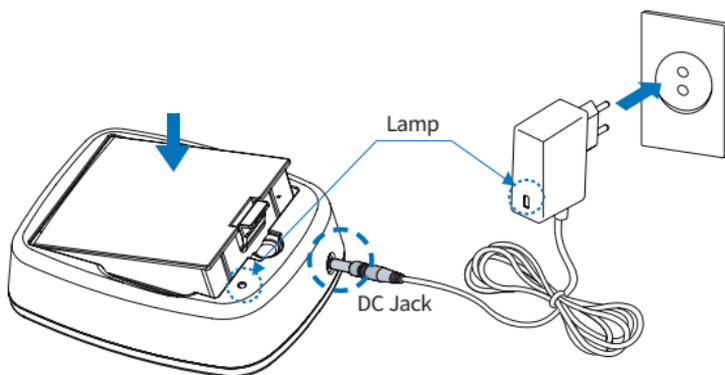
The charging status LED

Status	charging	charging complete
Charging Lamp	Red	Green

✓ NOTE

- 01 If the charger provided by the manufacturer is not used, the printer can be damaged, and the manufacturer is not liable for the consequential damage.
- 02 Before removing the battery, make sure that power is turned off.
- 03 The printer does not work when only connected to the charger.
- 04 The battery needs to be installed to operate the printer.
- 05 While charging, do not turn on the power.
- 06 Do not operate the printer while charging the battery.
- 07 Do not connect the charger while the printer is operating.

4-4. Charging Cradle Optional



- 1 Insert the battery into the battery charger as shown above.
- 2 Connect the DC JACK to the charging cradle.
- 3 Plug the power cord into the electrical outlet.
- 4 Once the charging is completed, remove the battery from the charging cradle.

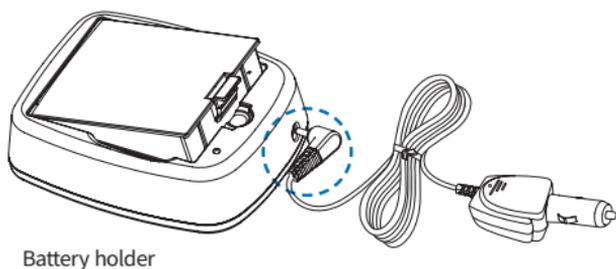
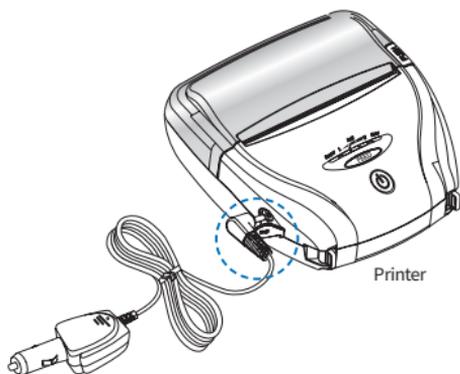
The charging status LED

Status	charging	charging complete
Charging Lamp	Red	Green

✓ NOTE

In the case the battery is not inserted properly, the red LED will blink. Remove and reinsert the battery.

4-5. Car Charger Usage *Optional*



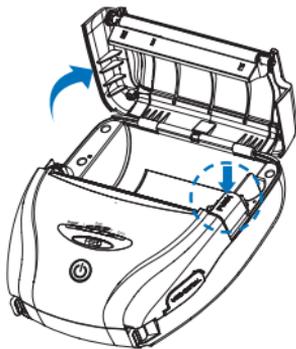
Connect the car charger into the printer or battery cradle.

Input	12 ~ 24V
Output	8.4V 0.8 ~ 1.2A

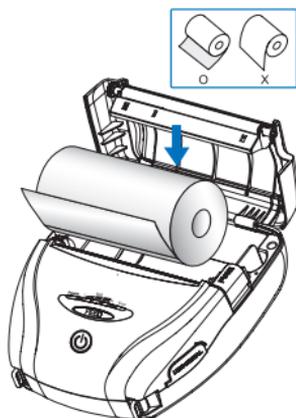
✓ NOTE

Only use the car charger included with the printer.

4-6. Paper Installation

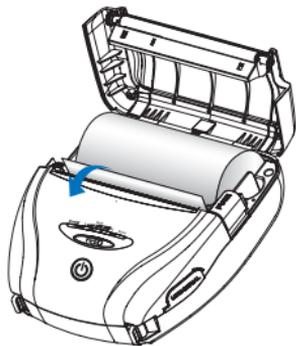


Press the PUSH button to open the paper cover.



Insert the paper in the correct direction. See the image above.

1 2
3 4

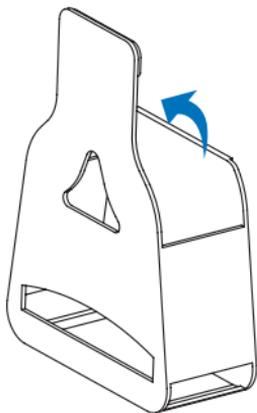


Pull a short length of paper out of the printer and close the cover.

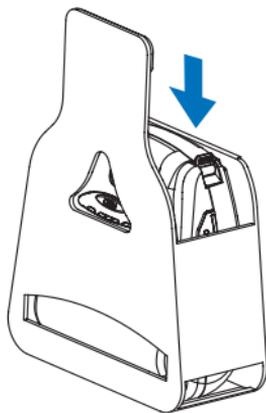


Tear off the additional paper using tear bar.

4-7. Leather Case Usage Optional

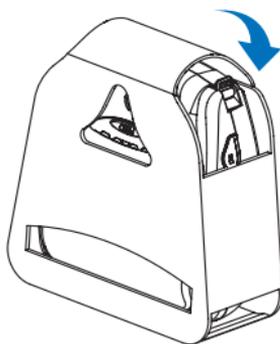


Open the leather case.



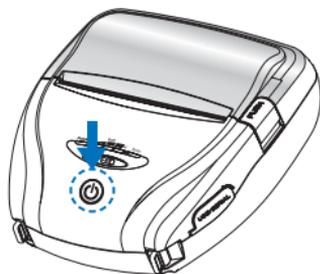
Place the printer into the leather case.

1 2
3

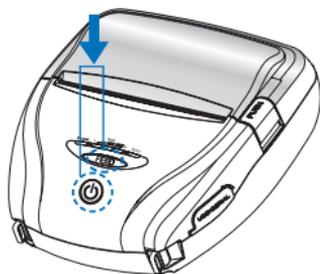


Close the cover and press down on the Velcro.

4-8. Self Test



Turn off the power by pressing the power button for approximately 3 seconds.



While you are holding the FEED button, press the power button.

1 2
3



The self-test will print.

✓ NOTE

- 01 To print ASCII pattern additionally, press the Feed button once more.
- 02 After printing ASCII pattern, the self test will be finished automatically.
- 03 If the Feed button is not pressed to print ASCII pattern, self test will be finished automatically after 3 seconds.

Self-Test Printout Sample

```
SELF-TEST
*****
Printer is as follows
Firmware Version   Ver 0.09
*****
ENGFONT           Install
Codepage 437      Install
*****
Serial Interface
Baud rate         : 115200
Data bits         : 8 bits
Parity            : none
Stop bits         : 1 bit or more
Handshaking       : DTR/DSR
Receive error     : ignore
*****
Bluetooth
BD_ADDR          :00:13:7B:52:06:ED
Passkey          :0000
*****
MSR
Read Mode         : Auto TRACK1/2
*****
Emulation         : ESC/POS
PrintDensity      : Normal
Characters        : 32 Char/Line
*****
Low Power Mode    : Not Install
Off Time          : 0 min
*****

Please press FEED button.....

pqrstuvwxyz{|}~ ÇüëäääçëëëïïAA
qrstuvwxyz{|}~ ÇüëäääçëëëïïAAE
rstuvwxyz{|}~ ÇüëäääçëëëïïAAEe
stuvwxyz{|}~ ÇüëäääçëëëïïAAEef
tuvwxyz{|}~ ÇüëäääçëëëïïAAEefó
uvwxyz{|}~ ÇüëäääçëëëïïAAEefoo
vwxyz{|}~ ÇüëäääçëëëïïAAEefooo
wxyz{|}~ ÇüëäääçëëëïïAAEefoooo
xyz{|}~ ÇüëäääçëëëïïAAEefooooü
yz{|}~ ÇüëäääçëëëïïAAEefooooüü
z{|}~ ÇüëäääçëëëïïAAEefooooüüü
{|}~ ÇüëäääçëëëïïAAEefooooüüüü
|}~ ÇüëäääçëëëïïAAEefooooüüüüü
}~ ÇüëäääçëëëïïAAEefooooüüüüüü
~ ÇüëäääçëëëïïAAEefooooüüüüüüü
ÇüëäääçëëëïïAAEefooooüüüüüüüE#
ÇüëäääçëëëïïAAEefooooüüüüüüüE#
*****0901222006*****
*** Completed ***
```

Upon initial installation or for troubleshooting, you can run the diagnostic test to get information about:

- Firmware version, emulation, codepage, sensor settings, interface settings, etc.

If no issues are found with the diagnostic test, examine other devices and software.

The diagnostic test is working independently of devices and software.

※ Motor protection from being overheated

To prevent the motor from overheating, stop the printer for at least 30 seconds after continuously printing 1.5 meters.

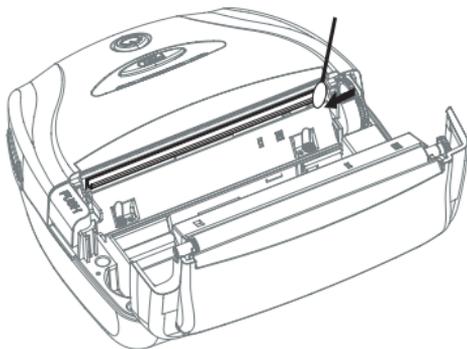
5. Cleaning the Printer

If the interior of the printer is dusty, printing quality can be reduced.

In this case, follow the instructions below to clean the printer.

✓ NOTE

- 01 Make sure to turn the printer power off prior to cleaning.
- 02 Regarding printhead cleaning, as the printhead gets very hot during printing, turn off the printer power and wait approximately 10 minutes before cleaning.
- 03 When cleaning the printhead, take care not to touch the heated portion of the printhead. The printhead can be damaged by static electricity.
- 04 Take care not to allow the printhead to become scratched and / or damaged in any way.



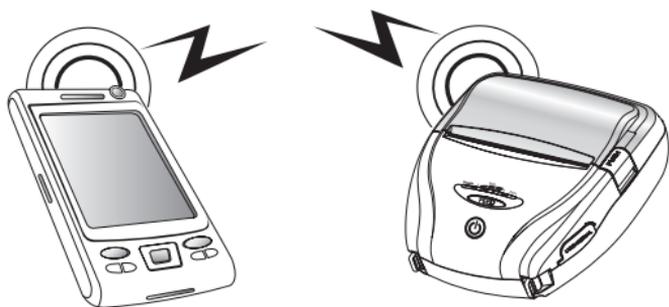
- 1 Use an applicator swab moistened with an alcohol solution to clean the printhead and remove any dust.
- 2 Once the cleaning is completed, wait a few minutes before inserting the paper roll into the printer.

✓ Preventing Overheating

To prevent the motor from overheating, continuous driving of the printer should be 1.5 m or less in print length. Set the pause time for 30 seconds or more after driving the printer.

6. Peripheral Connection

This product can communicate with other devices via Bluetooth, Wi-Fi, or a communication cable.



6-1. Bluetooth Connection *Optional*

- 1 The Printer can be connected to devices equipped with Bluetooth communication capabilities(PDAs, PCs, etc.).
- 2 Use the Bluetooth connection function supported by your device to connect to the printer.

NOTE

- Please refer to the configuration manual for details.

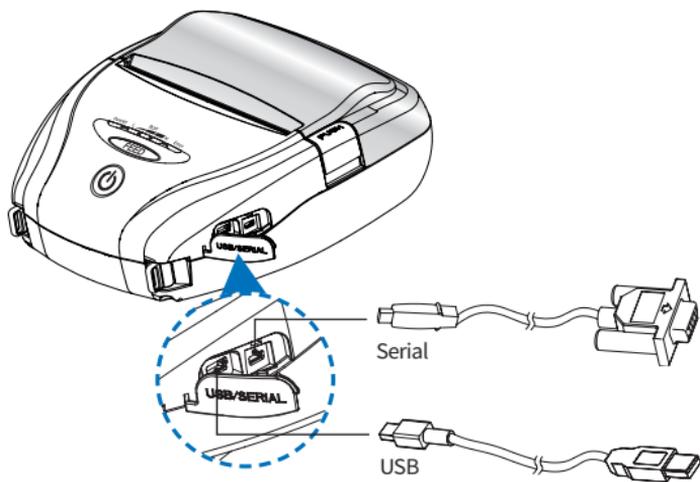
6-2. Wi-Fi Connection *Optional*

- 1 The Printer can be connected to devices equipped with Wi-Fi communication capabilities(PDAs, PCs, etc.).
- 2 Use the Wi-Fi connection function supported by the device to connect to the printer.

NOTE

- Please refer to the configuration manual for details.

6-3. Interface Cable Connection



- 1 Connect USB or Serial cable to the connector on the printer.

✓ NOTE

- Only use cables included with the printer.

- 2 Connect the interface cable to the USB port of the device(PDA, PC, etc.).

7. Printer Specification

Printing Method		Direct Thermal
Printing Speed		80 mm/sec
Resolution		203 DPI
Character Set	ESC/POS	Font A(12x24), Font B(9x17), Asian Font(KOR, JPN, CHN_GB2312, CHN_BIG5)
	CPCL	Font0/1/2/4/5/6/7, 24x24 Asian Font(KOR, JPN, CHN_GB2312, CHN_BIG5), Resident TTF, Downloadable TTF
	ZPL	Font A~H, FontGS, Resident TTF(Font0), Downloadable TTF
Barcode	ESC/POS	-1D: EAN-8, EAN-13, Code39, ITF, UPC-A, UPC-E, Codabar, Code93, Code128 -2D: QR, PDF417
	CPCL	-1D: LUPC-A(+2,+5), UPC-E(+2, +5), EAN13(+2, +5), EAN8(+2,+5), Code39 etc. (CPCL) -2D: QR, PDF417, MicroPDF417, Maxicode, Datamatrix, Aztec, TLC39, RSS14
	ZPL	-1D : Code11, ITF, Code39, Planet, EAN-8, UPC-E, Code93, Code128 etc. (ZPLII) -2D: QR, PDF417, MicroPDF417, Maxicode, Datamatrix, Aztec, TLC39, RSS14
Emulation		ESC/POS, CPCL, ZPL Command compatible
Driver		Windows Driver(XP ~, Server2003 ~), Window CE & Mobile Driver & SDK (CE 4.2~, Mobile 5.0~), Linux Driver, Mac Driver, OPOS Driver, JavaPOS Driver, iOS SDK, Android(6.0 ~) SDK
Sensor		Paper end, Gap, Black mark, Cover open

Paper	Paper Type	Thermal Receipt / Label
	Width	50 mm ~ 112 mm
	Thickness	0.06 mm ~ 0.16 mm
	Roll Max Diameter	Max. Ø 56mm
	Roll Core	12.5 mm ± 0.5 mm
Reliability	TPH	50km
	Battery	Standby: 180Hrs Stand-by(6700mAh)
Interface	Standard	Serial(RS-232C), USB
	Optional	Wi-Fi(802.11a/b/g/n), Bluetooth Smart Ready(Bluetooth4.2+BLE+NFC Tag)
Battery Charger	input	AC100 ~ 240V, 50 / 60 Hz
	output	AC/DC Charger 8.4V, 1A
Battery	Battery type	Li-ion
	output	7.2V 3350mAh, 6700mAh
	Charging time	4.0Hrs Charging time (3350mAh) 7.5Hrs Charging time (6700mAh)
Size	WxDxH(mm)	149 × 162 × 70
	WxDxH(inch)	5.87 × 6.37 × 2.75
Weight		610g (with 3350mAh battery)
Temperature	operation	-10 ~ 50°C
	storage	-20 ~ 60°C
Humidity	operation	35 ~ 80%
	storage	10 ~ 90%

8. CPCL Command Compatibility

NOTE

Compatible	Compatible with only commanders provided by the manufacturer.	Partially Compatible	Not Compatible
○	●	△	X

Printer Commands	Compatibility
PRINT	○
FORM	○
JOURNAL	○
UNITS	○
Comments	○
TEXT	Compatibility
TEXT	○
FONT-GROUP(FG)	○
TEXT CONCATENATION	○
MULTILINE(ML)	○
COUNT	○
SETMAG	○
SCALABLE TEXT	X
LINEAR BARCODES	Compatibility
BARCODE	○
BARCODE-TEXT	○
Two-Dimensional BarCodes	Compatibility
PDF417(PORTABLE DATA FILE)	○
MAXICODE	○
QRCODE	●
DATAMATRIX	●
GS1(RSS)	●

GRAPHICS	Compatibility
BOX	○
LINE	○
INVERSE-LINE	○
PATTERN	○
GRAPHICS	○
PCX	○
Advanced Commands	Compatibility
CONTRAST	○
TONE	○
JUSTIFICATION	○
PAGE-WIDTH	○
PACE	○
NO-PACE	○
WAIT	○
REWIND	X
TENSION	X
SPEED	○
SETSP	○
ON-OUT-OF-PAPER	X
ON-FEED	○
PREFEED	○
POSTFEED	○
PRESENT-AT	X
COUNTRY/CODE PAGE	○
FORMAT FILES	○
BEEP	○
CUT	X
PATIAL-CUT	X
MCR	●

Line Print Mode	Compatibility
SETLP	<input type="radio"/>
SETLF	<input type="radio"/>
Moving With X and Y Coordinates	<input type="radio"/>
LMARGIN	<input type="radio"/>
SETBOLD	<input type="radio"/>
SETSP	<input type="radio"/>
Special ASCII Characters	<input type="radio"/>
SETFF	<input type="radio"/>
SET-TOF	<input type="radio"/>
SETLP-TIMEOUT	<input type="radio"/>

9. Utilities

The following utilities and concerned manual can be found on the QR or homepage.

No.	Name	Description
1	PrinterGear	<p>This is an integrated utility that you can manage your printer with below tasks.</p> <ul style="list-style-type: none">- Printer Configuration Settings- Wireless-Lan Settings- Font(Bitmap/TrueType) Download- Printing service- Document management- FW Download- Maintenance <p>※Please refer to PrinterGear Manual for detailed information.</p>
2	LabelMaker(CPCL)	<p>This program is for label form design and designed label printing.</p>
3	Android Utility (Sewoo M_Utility) (ESC/POS)	<p>It is a utility app that prints text, barcodes, images, etc. through Bluetooth and Wi-Fi communication, and able to printer settings.</p>

10. S/W

We provides SDK, Driver, etc. as follows to respond to various S/W usage environments.

You can download this S/W from the homepage.

No	Name	Description
1	Windows Driver	This is an install program used to print a Mobile printer in Windows OS.
2	Linux Driver	This is the Cups Driver used to print a Mobile printer in the Linux environment.
3	OPOS Driver (ESC/POS)	This is a driver that controls Mobile printers using the OPOS standard. It can be used after initial setting(Mobile Printer&MSR) using the setting tool.
4	JavaPOS Driver (ESC/POS)	JavaPOS driver is an interface standard for POS software written in Java, and can be used in Mobile Printer when printing a receipt.
5	Mac Driver	This is the Cups Driver used to print a Mobile printer in the Mac OS environment.
6	Android Plugin (Sewoo Print Service Plugin) (ESC/POS)	This is a print service plug-in that allows you to print documents, images, and web pages without installing additional apps.
7	Windows SDK	This is library for communication and data output with Mobile printer in Windows OS.
8	Android SDK	This is library for communication and data output with Mobile printers in Android OS.
9	iOS SDK	This is library for communication and data output with Mobile printers in iOS.



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