

MOBILE PRINTER SM4-21W INSTRUCTION MANUAL

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in domestic environments, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

Introduction

Thank you very much for purchasing the SM4-21W thermal printer.
Read the 'Safety Instructions' carefully before using this printer for safe handling of it.
Save these instructions for future reference.

1. Safety instructions

To use this equipment safely, or to protect damage to the equipment, the following symbols are used throughout this manual to highlight safety information.

	Warning	The symbol indicates that failure to observe these instructions or mishandling of this equipment could lead to severe injury or death.
	Caution	The symbol indicates that failure to observe these instructions or mishandling of this equipment could lead to injury or only property damage.

Samples of symbol

- The symbol indicates caution (including DANGER or WARNING).
- The symbol indicates the action is prohibited.
- The symbol indicates a required operation that must be performed.

When using the printer

	Do not subject the printer to strong shocks by dropping or hitting it.
	Avoid using the printer at the following location. It may cause failure.
	◆ Locations with much dust, particles, water or oil.
	◆ Locations with slanted surfaces or strong vibration.
	◆ Locations with direct sunlight.
	◆ Locations near heating/warming equipment, or temperature over 50°C.
	◆ Locations with temperatures of below -10°C, a relative humidity of 80% or more, dew condensation caused by extreme temperature change.
	◆ Location with electromagnetic noise or corrosive gas.
	Do not touch the dot line on the thermal head and driver IC with metal and sandpaper etc. There is a possibility for damage of those parts.
	Do not touch the dot line on the thermal head with your fingers. The contamination may reduce the printing quality.
Do not use the printer if there is condensation occurs on the thermal head. If the condensation occurs, keep the power off until condensation evaporates completely.	
Do not block the paper exit of the printer.	
Do not use a volatile chemical such as thinner or benzene for maintenance work.	
Do not pull the paper end from the exit forcibly when the printer cover is closed.	

	Turn off the printer power when trouble such as a paper jam occurs.
	Do not use loose paper. It may cause paper jam.
	Be careful of handling the thermal head to prevent heat elements and driver IC from exposure to static electricity.

Handling printer unit

	◆ Never disassemble or repair the printer by yourself.
	◆ Do not bend the USB cable or place heavy objects on it. Doing so may damage the cable and cause fire or electric shock.
	◆ Never use a damaged USB cable. It may cause fire or electric shock.
	◆ Do not drop any metallic objects nor spill coffee, water or any other liquid.
	◆ Do not use the printer in a places where it will be exposed to excess moisture or water spray. It may result in electric shock, short circuit and failure.
	◆ Do not connect or disconnect the USB cable with wet hands.
	◆ Do not connect or disconnect the USB cable with wet hands. It may result in electric shock, short circuit and failure.

	As the thermal head may be very hot immediately after printing, do not touch it to avoid burning your fingers. Be sure that the thermal head is cool before replacing a paper or cleaning the thermal head.
	Do not open the paper cover while printing.

	◆ In the following cases, turn the printer power OFF and unplug the USB cable.
	• Smoke, unusual noises or odd smells are emitted by the printer.
	• When metallic objects is dropped or any liquid is spilled inside the printer.
	◆ Continuous use may lead to printer failure, fire and electric shock.
	◆ Make sure the fault does not continue and contact dealers for further assistance.
	Remove the USB cable from the connector or the receptacle by gripping the connector. Never pull the cable itself. Doing so may damage the USB cable.

Disposal of battery pack

	This symbol indicates a disposal that must be done separately from domestic waste by the law regulation of collecting and recycle of used battery pack. In order to prevent environmental or health damage from the waste of electric device, please dispose them collect according to a recycle law in your region with your own responsibility.
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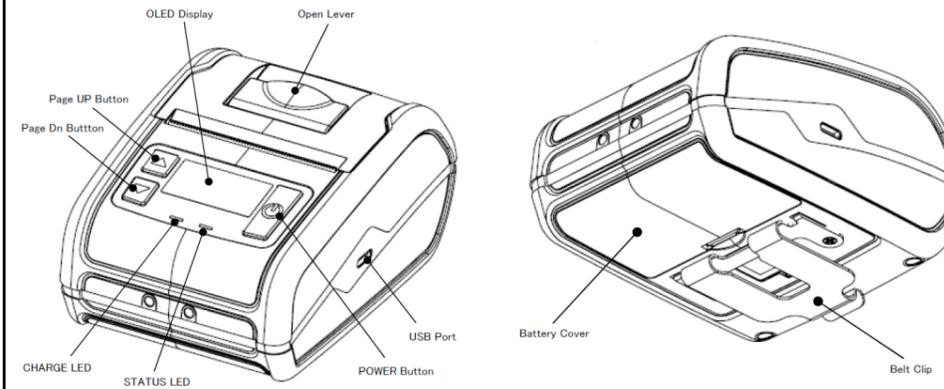
2. Preparation

2.1 Unpacking

When unpacking the printer, make sure the following components are provided, beside Printer Unit.

• Printer unit (Built-in battery pack)	1 unit
• Paper Rolls	1 roll
• Belt Clip	1 piece
• Belt clip screw	2 pieces
• Instruction Manual	1 volume
• USB-C to A Cable	1 piece

2.2 Appearance



POWER Button	: Turn power ON or OFF.
Page Up Button	: Please refer to the button operation list.
Page Dn Button	: Please refer to the button operation list.
CHARGE LED	: Indicate charging state of battery.
STATUS LED	: Indicate status of printer.
OLED Display	: This is a display that displays the status of the printer with icons and text.
USB Port	: USB interface port.
Open Lever	: Open paper cover.
Battery Cover	: Cover for battery.
Belt Clip	: A clip for attaching to a belt.

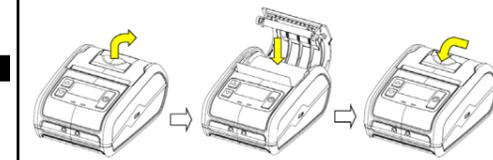
3. Handling

3.1 Button operation list

Function	Printer Status	Operation details	Button operation
Turn ON	Turn OFF	Initialization	Press POWER button
Test Print	Turn OFF	Test Print	Hold POWER button while pressing Page Up button
Function Setting mode	Turn OFF	Mode change	Hold POWER button while pressing Page Dn button
		Select	Press Page Up button
HEXDUMP mode	During function setting mode	Scroll to next item	Press Page Dn button
		Mode change	Hold POWER button while pressing Page Dn button
Offline reset	During HEXDUMP mode	Print remaining buffer	Press Page Dn button
		Error reset waiting	Return to Printing stand-by status
Changes USB communication valid / invalid.	Error reset waiting	Return to Printing stand-by status	Press Page Dn button
Display IP address	Printing stand-by status at USB connection	USB Icon switching	Hold Page Dn button and Page Up button at the same time
QR code printing for wireless LAN setting	Printing stand-by status	Screen display	Press Page Dn button and Page Up button at the same time
Black mark detection (BLACK MARK MODE = ON)	Printing stand-by status	Print QR code	Press Page Dn button and Page Up button at the same time
Mark sensor auto control (BLACK MARK MODE = ON)	Printing stand-by status	Paper feed by blackmark	Press Page Up button
Paper Feed	Printing stand-by status	Paper feed for certain amount	Hold Page Dn button
	Printing stand-by status	Paper feed while pressing	Press Page Up button

3.2 Setting Paper Roll

- 1) Pull the open lever up and open the paper cover.
- 2) Place the paper roll as shown in the picture
- 3) Close the paper cover.
- 4) Push the PageDn Button.



3.3 How to charging

Start charging when connecting USB to PC or USB power supply.

Battery charge status is shown by an icon at the top of display.

Charge Status	LED Pattern	Icon display contents
	LED Pattern G: Green R: Red ●: Turn off	
Charging completed	CHARGE LED G	
Charging	CHARGE LED R	
Not Charged	CHARGE LED ●	

An estimated charging time.
It takes 4.5 hours from 10% remaining to full charge.
Use USB battery charger that meets output more than 5V/1A.

3.4 Icon display

Information on network status of printer, battery status are displayed by icon.

Example display of icon refers to below.

Icon display	Icon meaning
	USB connected
	Bluetooth connected
	Wireless LAN communication
	Connecting to wireless router
	Button locked
	Indicates remaining battery is full
	Indicates remaining battery is extremely low
	Battery charging

3.5 Printer Status

Printer status is displayed on the LED or OLED Display.
Please Refer to a technical manual for the contents of a printer status.

3.6 Maintenance

Periodically clean the printer to maintain the printing quality and avoid failures.
It is recommended to maintain the printer every 6 months or 1 million lines of printing.

- 1) Print thermal head
When cleaning the thermal dot line on the print thermal head, use a cotton swab with alcohol (Ethanol, methanol, or Isopropyl alcohol) and wipe off stains and dust.
- 2) Platen roller
When cleaning the platen roller, use a dry soft cloth and wipe off the stain with rotating the roller.
- 3) Sensor and peripherals
Clean the stain, dust, and paper powder on the paper empty sensor.

[Caution]

- Do not use volatile chemical agents, such as thinner and benzene.
- Do not get moisture or spill liquids inside of the printer.

4. General specifications.

Command systems:	ESC/POS (MODE-A)
Printing method:	Direct line thermal
Interface:	USB, Bluetooth (BLE) Wireless LAN
Printing speed:	Max 80mm/s
Print width:	Max 48mm/384dot
Paper width:	58mm
Paper thickness:	Receipt 59 to 85um
External dimensions:	Maxφ45mm
Character:	ASCII, Katakana, PC437/850/852/ 857/858/863/865/866/860/862/864/ 737/WPC1252/1252_2/1254/1250/ 1251/CP1253
Barcode:	UPC-A/E, JAN13/8, CODE39/93, ITF, CODABAR, CODE128, GS1 Databar, Omni-directional, Truncated, Limited, Stacked, Stacked Omni-directional
2D barcode:	QR, MicroQR, MaxiCode, PDF417, MicroPDF417, DataMatrix
Power supply:	Battery Pack: DC 3.7V, 2100mAh
Battery Charging (Recommended ratings):	DC5.0V, 1.0A or more (USB Port)
Battery life:	60m or more
Dimensions:	82.5mm(W)x 112mm(D)x 57.5mm(H) (With elastomer)
Weight:	Approx. 260g (with battery pack, without Paper roll and Belt clip)

Drop impact robustness:	1.5m
Water and Dust resistant:	IP54
Operating environment:	Temperature: -10°C to +50°C *Guaranteed area for printing: +5°C to +35°C *When charging: 0°C to +40°C Humidity: 20%RH to 80%RH (No condensation) However, on the premise that 80% RH is up to 35 °C.
Storage environment:	Temperature -20°C to +60°C Humidity 10%RH to 90%RH (No condensation)
Regulation:	VCCI/CE/FCC CLASS B

This Bluetooth wireless device stores a specific wireless device which was approved by Construction Type Certification
Frequency: 2.4GHz
Modulation method: AFH system
Interference distance: ≤ 10m
Frequency change: Not Available

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