

MOBILE PRINTER SM4-31W 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 SM4-31W 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, AC adapter or power cord by yourself.
	◆ Do not use any AC adapter and power cord other than those specified.
	◆ Do not bend the AC adapter cord or place heavy objects on it. Doing so may damage the cable and cause fire or electric shock.
	◆ Never use a damaged AC adapter cord. 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. 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 AC adapter cord.
	• 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 AC adapter cord or USB cable from the connector or the receptacle by gripping the connector. Never pull the cable itself. Doing so may damage the 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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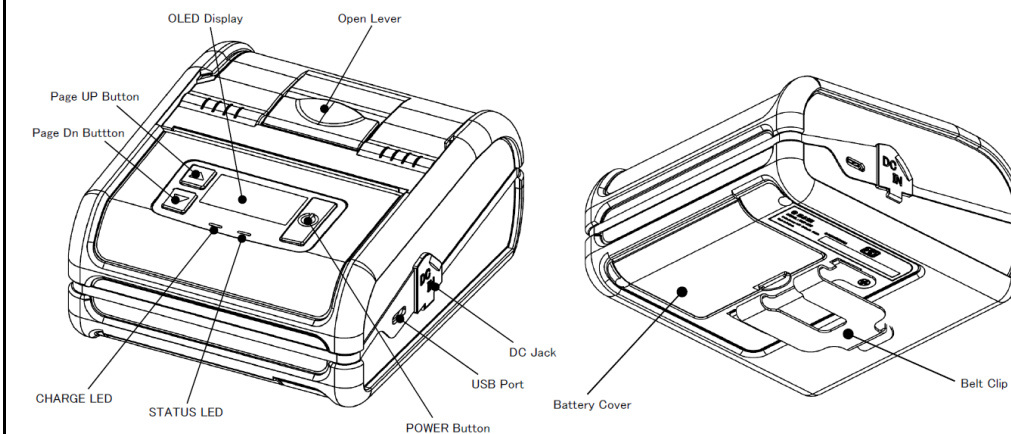
2. Preparation

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
• AC Adapter	1 piece
• 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.

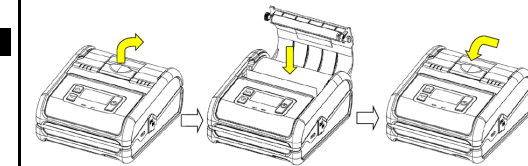
3. Handling

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
		During function setting mode	Select
		Scroll to next item	Press Page Dn button
HEXDUMP mode	Turn OFF	Mode change	Hold POWER button while pressing Page Dn button
		During HEXDUMP mode	Print remaining buffer
Offline reset	Error reset waiting	Return to Printing stand-by status	Press Page Dn button
Changes USB communication valid / invalid.	Printing stand-by status at USB connection	USB Icon switching	Hold Page Dn button and Page Up button at the same time
Display IP address	Printing stand-by status	Screen display	Press Page Dn button and Page Up button at the same time
QR code printing for wireless LAN setting	Printing stand-by status	Print QR code	Press Page Dn button and Page Up button at the same time
Black mark detection (BLACK MARK MODE = ON)	Printing stand-by status	Paper feed by blackmark	Press Page Up button
Mark sensor auto control (BLACK MARK MODE = ON)	Printing stand-by status	Paper feed for certain amount	Hold Page Dn button
Paper Feed	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 AC adapter to printer. Battery charge status is shown by an icon at the top of display screen.

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

An estimated charging time.
It takes 3 hours from 10% remaining to full charge.

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 graphic screen.
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 72mm/576dot
Paper width:	80mm
Paper thickness:	Receipt 59 to 85um
External dimensions:	Maxφ50mm
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 7.4V, 2000mAh AC adapter for charging: DC9.0V, 1.3A
Battery life:	100m or more
Dimensions:	106mm(W)x121.5mm(D)x60.5mm(H) (With elastomer)
Weight:	Approx. 370 g (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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SANEI ELECTRIC INC.

Head office
2-51-13 Ikebukuro,
Toshima-Ku, Tokyo, 171-0014, Japan
Phone: +81-3-3986-0646 (Representative)
+ 81-3-3986-1188 (Overseas sales)
Fax: +81-3-3988-5876
URL: <http://www.sanei-elec.co.jp>