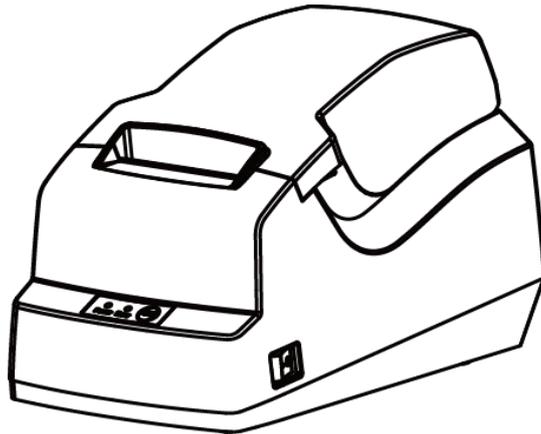


SAT15TUS



User Manual

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Cautions

Warnings:



This must be complied with, in case of bodily injury or equipment damage.



The important information for printer operations.

Note: We will keep efforts to enhance and upgrade the functions and quality of all our products. The specifications, accessories and procedures described in the manual are based on actual machines. And it may be changed without prior notice.

Important Safety Instructions

1. Safety Warning



Warnings: The print head will become very hot during printing; avoid contact with the print head after printing has finished.



Warnings: Do not touch the thermal head and connector in case static damage the printer head.

2. Instructions

Before using the printer, please carefully read the following safety consideration in case of bodily injury or equipment damage.

- 1) Place the printer on a solid and even base.
- 2) Leave enough space around printer for operation and maintenance.
- 3) Keep all liquids away from the printer.
- 4) Do not expose the printer to high temperatures, direct sunlight or dust.
- 5) Protect the printer from shock, impact and vibration.
- 6) Ensure the printer is connected to a socket with the correct mains voltage.
- 7) Switch off the power supply when it is not used for a long time.
- 8) Do not printing when there is no paper, or it will damage printer head.
- 9) To ensure the printing quality and product life, suggest use the equivalent quality paper.
- 10) Please switch off the power supply when connect/disconnect all the ports or it will cause damage to the printer control circuit.
- 11) Never carry out maintenance or repair work by yourself. Always contact a qualified service technician.

1. Production Introduction

1.1 Packing List

Please check the packing list:

1. Inspect the outside of both the box and the printer for possible damage.
2. Check whether you have received the following accessories together with the printer, if there are any items missing, please contact your local dealer.

- Printer



- Quick Start Guide



- Power Adapter
(varies by local or region)



- Power Cord
(varies by local or region)



- USB Cable



- Serial Cable



- Paper Roll



- CD

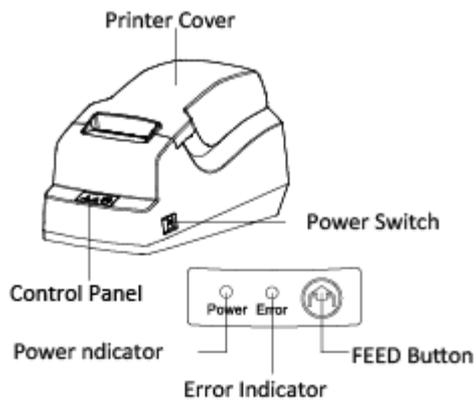


Note:

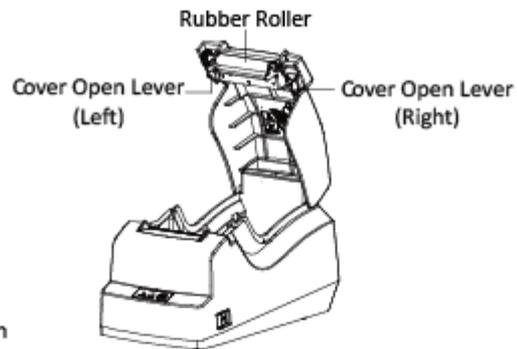
1. The power cord and power adapter vary by local or region.

1.2 Appearance

■ Front

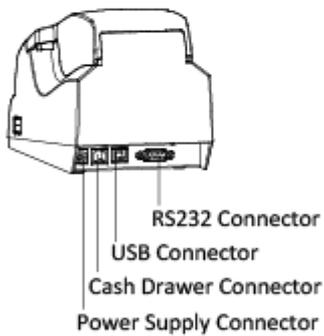


■ Cover Open

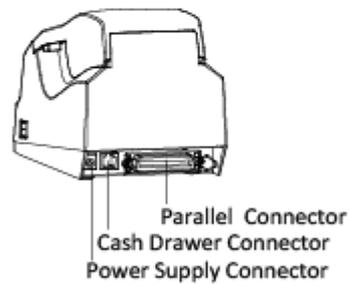


■ Rear

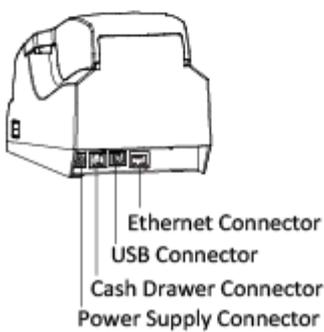
• Model 1



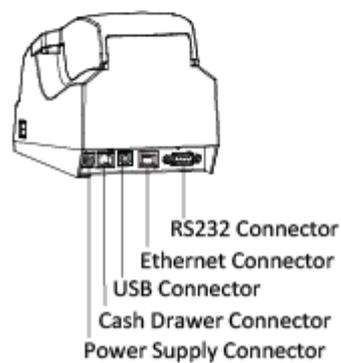
• Model 2



• Model 3



• Model 4



Specification of some part elements

1) Power indicator (Green)

Indicate the status of power.

2) Error indicator (Red)

Indicate the error status of printer.

3) Feed Button

① Feed paper

When printer is in normal, press this button to feed paper. Pressing it once, printer feed a fixed distance. Pressing it continuously, printer feed a long paper

② Print paper

When printer is power off, hold this button down and turn on the power. The printer will print a self test page.

4) Power switch

Press “O” to power off and press “—” to power on.

1.3 Definition of the LED Indicator

LED	ON/OFF	Description
Power indication (Green)	ON	Printer is ON and ready to receive data
	OFF	Power is off
Error indication (Red)	ON	Out of paper or cover is unclosed
	OFF	The printer is in a normal state
	Flashing	Error status

2. Specifications

2.1 General Specification

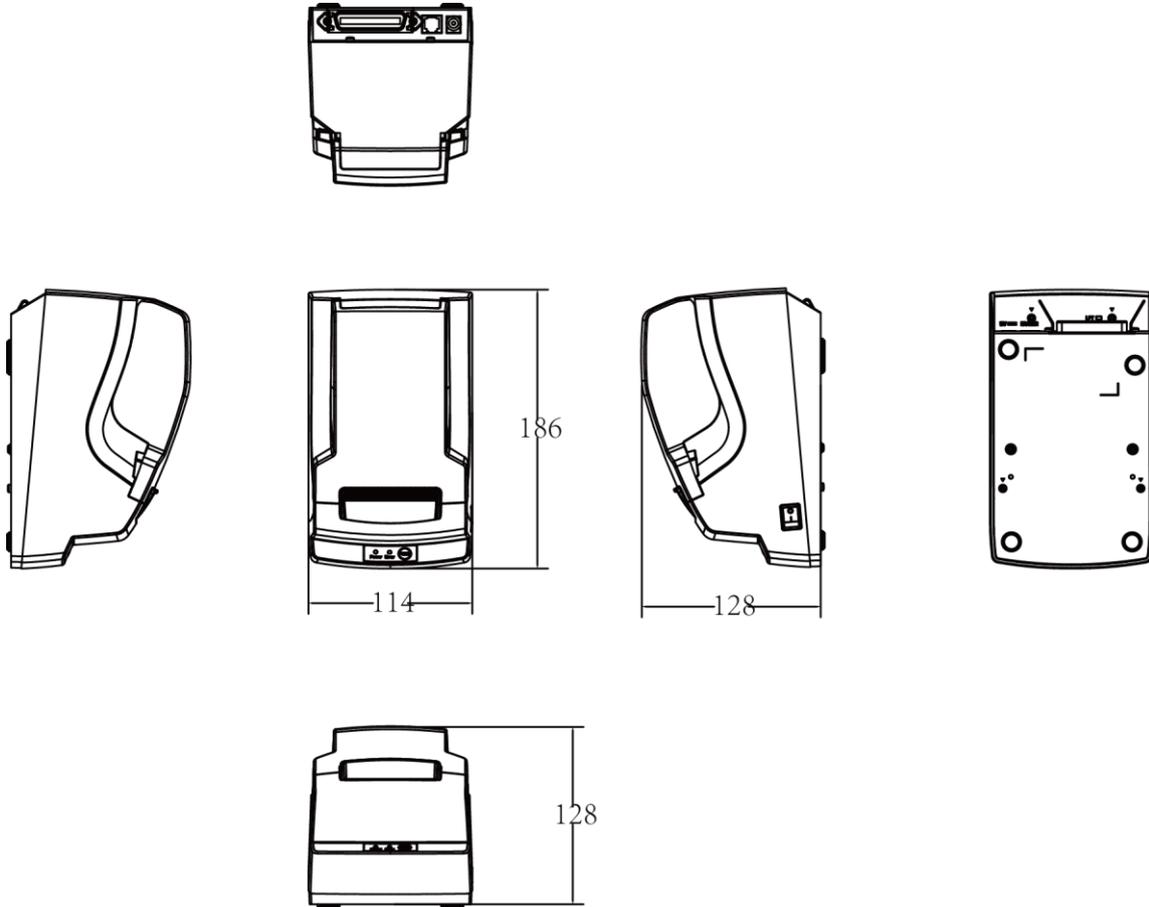
Items		Parameter
Printing	Printing method	Thermal line printing
	Resolution	203dpi
	Printing width	48mm
	Printing speed	100mm/s
	Interface (Optional)	RS232/USB/Cash drawer/Ethernet/Parallel (It depends on the different model)
Memory	RAM	20K Byte
	Flash	2M Byte
Character	Chinese	GBK16x16, 24x24dots
	Alphanumeric	ASCII 8x16, 12x24dots
	User-defined	Yes
	Codepage	[PC437 (USA: Standard Europe)], [Katakana], [PC850 (Multilingual)], [PC860 (Portuguese)], [PC863 (Canadian-French)], [PC865 (Nordic)], [PC857 (Turkish)], [PC737 (Greek)], [ISO8859-7 (Greek)], [WPC1252][PC866 (Cyrillic #2)], [PC852 (Latin 2)], [PC858 (Euro)], [KU42], [TIS11 (Thai)], [TIS18 (Thai)], [PC720], [WPC775], [PC855 (Cyrillic)], [PC862 (Hebrew)], [PC864 (Arabic)], [ISO8859-2 (Latin2)], [ISO8859-15 (Latin9)], [WPC1250], [WPC1251(Cyrillic)], [WPC1253], [WPC1254], [WPC1255], [WPC1256], [WPC1257], [WPC1258], [MIK(Cyrillic /Bulgarian)], [CP755 (East Europe, Latvian 2)], [Iran], [Iran II], [Latvian], [ISO-8859-1 (West Europe)], [ISO-8859-3(Latin 3)], [ISO-8859-4(Baltic)], [ISO-8859-5(Cyrillic)], [ISO-8859-6(Arabic)], [ISO-8859-8(Hebrew)], [ISO-8859-9(Turkish)], [PC856]
Barcode	1D	UPC-A, UPC-E, EAN8, EAN13, CODE39, ITF, CODEBAR, CODE128, CODE93
Detection	Sensors	Paper out detection

Items		Parameter
LED indicator	Power indicator	Green
	Error indicator	Red
Power supply	Input	12V $\overline{-}$ -2A (External power adapter)
	Paper type	Thermal paper
Paper loading	Paper width	58 $\begin{smallmatrix} +0 \\ -1 \end{smallmatrix}$ mm
	Recommended paper	FD210, PD150R, PD160R (OJI Paper CO.,LTD.)
	Paper thickness	0.06~0.07mm
	Paper roll diameter	83mm Max OD
	Paper loading	Easy loading
Command		ESC/POS
Physical characteristics	Working condition	0~40°C/20~85%RH
	Storage condition	-20~70°C/5~95%RH
	Dimension	196(L)*114 (W)*124.5(H)mm
	Weight	930g (without paper roll)
Reliability	TPH	150km
Agency Approvals		FCC, CE

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.

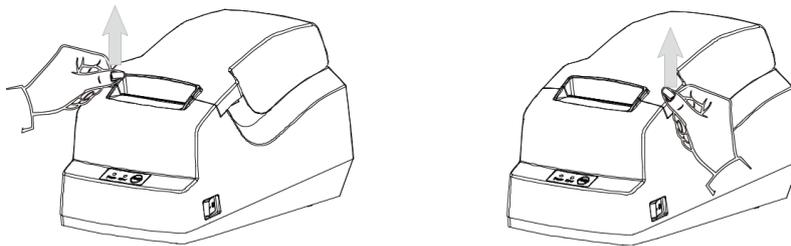
2.2 Overall Structure Dimensions



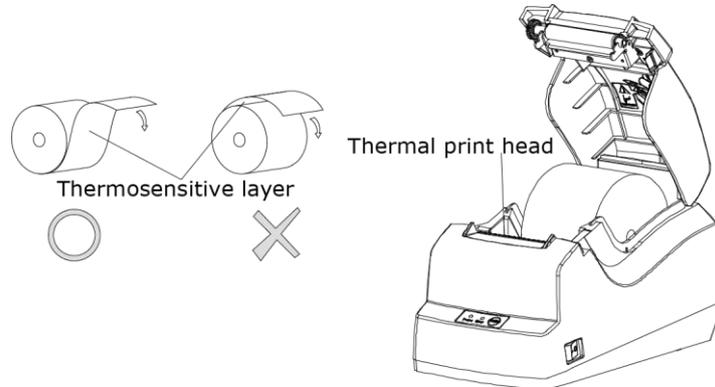
3. Operation Methods

3.1 Paper Roll Installation

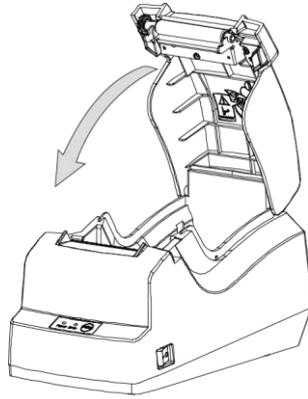
1. Press the cover open lever and lift upwards.



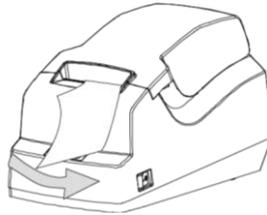
2. Load the paper roll in the correct direction as shown below. And make sure the printable side of the paper (thermosensitive layer) is facing to the thermal print head.



3. Pull out some paper roll and press down the printer cover.



4. Tear off some paper in the direction of the side of the printer.



3.2 Basic Operation

3.2.1 Power On/Power Off

When printer is power off, press power switch “—” to power on. When printer is ready, the [Power] indicator is green. If there is paper out or error in the printer, the [Error] indicator is red.

When printer is power on, press power switch “O” to power off and indicators is off.

3.2.2 Print Self Test Page

Users can print self test page when they use the printer. If there is no error on the self test page, it shows that printer works normally except communication function and charging function.

Method of printing self test page:

1. Make sure that printer is power off;
2. Hold the [FEED] button and power on. Printer will print self test page, then release the [FEED] button.

There are model, configuration of communication and font library and other information on the self test page. The last line of self test page is “***completed***”.

It indicates that self test page is finished. After that, printer enter to the normal work status.

3.2.3 Feed Paper

Printer can feed paper by hand according to the users' need. Pressing the button once, printer feed a line. If there is a need of long distance printing, press the button continuously.

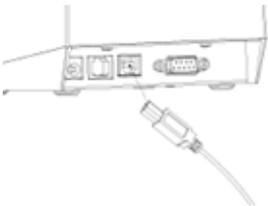
3.2.4 Tear Paper

After printing, it need to tear the receipt of the paper roll. Pay attention to the direction when tearing the paper.

4.Interfaces

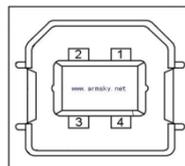
4.1 USB Interface

4.1.1 Connecting USB Cable



- 1) Confirm the power switch is turned off.
- 2) As shown, insert the USB cable into the USB interface, and ensure they are matched.
- 3) The other end of USB interface cable should

4.1.2 USB Specification



PIN No.	Signal name
1	VBUS
2	D-
3	D+
4	GND

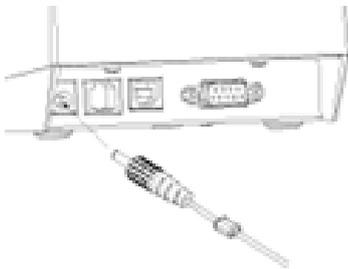
4.2 Power Supply Interface

4.2.1 Connecting Power Cable

- 1) Confirm the power switch is turned off.
- 2) Insert the power cord into the power socket on the back of the printer.

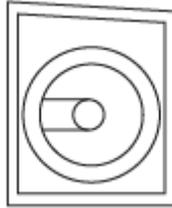
Caution:

- ◆ When the printer is not in use for a long time, disconnect the Power adapter from the wall outlet for safety.
- ◆ Be sure to use the specified battery and power source provided by our company. It may cause a fire explosion or damage to the printer for connecting to an improper power source.



4.2.2 Power Specification

The power of SAT15TUS is 12V $\overline{\text{---}}$ 2A.



4.3 Cash Drawer Interface

4.3.1 Connecting Cash Drawer



- 1) Confirm the printer power is turned off.
- 2) Insert the cash drawer cable into the cash drawer connector on the back of the printer.

❖ **Caution:**

Cash drawer interface can be connected only with a cash drawer device (Do not connect a telephone line and so on).

4.3.2 Cash Drawer Specification



Pin No.	Signal	Function
1	FG	Frame Ground
2	DRAWER 1	Drawer kick-out drive
3	DRSW	Drawer open/close signal
4	VDR	Drawer driving source
5	DRAWER 2	Drawer kick-out drive
6	GND	GND

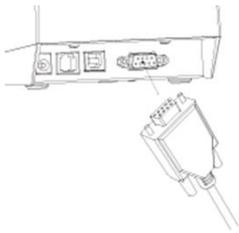


Note:

- Strictly prohibit unplug the cable while the printer is power on.
- Avoid paralleling with the strong current.
- you have to use the shielded communication line.

4.4 RS232 Interface

4.4.1 Connecting RS232 Cable



- 1) Connect the suitable interface cable to the serial port.
- 2) Connect the connector to the interface board of the printer and tight it by screws.
- 3) Connect the other end of the interface cable to the host.

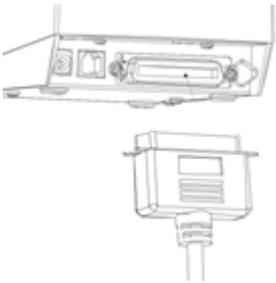
4.4.2 RS232 Specification



PIN	Name	Description
1	--	--
2	TXD	Transmit Data
3	RXD	Receive Data
4	--	--
5	GND	Ground
6	--	--
7	CTS	Clear to send
8	RTS	Request to send
9	--	--

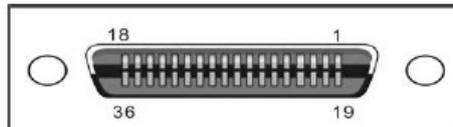
4.5 Parallel Interface

4.5.1 Connecting Parallel Cable



- 1) Confirm the power switch is turned off.
- 2) Connect the suitable interface cable to the correct connector.
- 3) Connect the other end of the interface cable to the host.

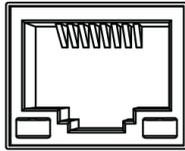
4.5.2 Parallel Specification



Pin No.	Signal name	Direction	Signal definition
1	\overline{STROBE}	Out	Gating pulse which host output to printer
2~9	D0~D7	Out	8 data lines
10	\overline{ACK}	In	Acknowledge signal which indicates already receive data
11	BUSY	In	Printer is busy that can't receive new data
12	PE	In	Paper out
13	NC	---	Not connect
14	NC	---	Not connect
15	NC	---	Not connect
16	GND	---	Logic Ground

17	CHASSIS-GND	---	Chassis ground
18	NC	---	Not connect
19~30	GND	---	Logic Ground
31	NC	---	Not connect
32	\overline{ERROR}	In	Printer is in a wrong status
33	GND	---	Logic Ground
34~36	NC	---	Not connect

4.6 Ethernet Interface



PIN NO.	SIGNAL
1	TX+
2	TX-
3	RX+
4	-
5	-
6	RX+
7	-
8	-

5. Troubleshooting

1. Power indicator is off.

Check the connection of power cable and power socket.

2. Error indicator is on when it does no print.

- ❖ If there is a paper roll
- ❖ If it is out of paper
- ❖ If the top cover is closed correctly

3. Error indicator is flashing when it does no print or no paper jam.

If the thermal head is too hot, printer will stop working until it cools down.

If it can't recover, power off the printer and power on after 10s.

4. Print faintly.

Thermal head is dirty, please clean the thermal head. If users want to know more information, please refer to "6. Methods of cleaning thermal head".

5. Take out the jammed paper.



Note: Thermal head will get very hot after printing. Don't touch it.

1. Power off the printer and open the top cover.

2. Take out the jammed paper. Reinstall the paper roll and close the top cover.

6. Printer Cleaning

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

※ CAUTION

- ▶ Make sure to turn off the printer prior to cleaning.
- ▶ As the print head gets hot during printing, intending to clean the print head. Please turn the printer off and wait approximately 2~3 minutes before commencement.
- ▶ When cleaning the print head, do not touch the heated portion of the print head. Print Head is susceptible to damage from static electricity, etc.
- ▶ Do not make the print head become scratched and/or damaged in any way.

6.1 Cleaning Head

- ▶ Open the Printer Cover and then use the cleaning pen to clean the head in the direction from the center of the head to the edges.
- ▶ After cleaning the head, do not use the printer until the alcohol used for cleaning evaporates completely (1~2 min) and the printer has completely dried.

6.2 Cleaning Sensors, Roller and/or Paper Path

- ▶ Open the printer cover and then remove the paper.
 - ▶ Remove any dust or foreign substance by using dry cloth or cotton swab.
 - ▶ Soak the cloth or cotton swab in alcohol for medical use and use it to remove adhesive foreign substances or other pollution materials.
 - ▶ After cleaning the parts, do not use the printer until the alcohol evaporates completely (1~2 min) and the printer has completely dried.
- ※ Clean the parts whenever print quality or paper detection degraded.

Attachment:

FCC-DECLARATION OF CONFORMITY

Product

SAT15TUS

We declare that the product conforms to the following specification: FCC Part 15, Subpart B Class A digital device.

This device complies with Part 15 of the FCC rules. Operation is subject to the following Two Conditions:

- This device may not cause harmful interference;
- This device must accept any interference received, including interference that may cause undesired operation.
- The user is cautioned that any changes or modification not expressly approved in this manual could void the user's authority to operate the equipment. To ensure compliance, this printer must be used with shielded communication cables.
- Use only power supplies listed in this manual and /or recommended and approved in this manual.

EC DECLARATION OF CONFORMITY

Manufacturer certifies that the following designated product

SAT15TUS

Type of product

Thermal Line Printing

It is in conformity with the standards

Test standard information

Under the Council Directive: (LVD) Directive 2014/35/EU relating to electrical equipment designed for use within Low Voltage Directive.

EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

Under the Council Directive: (EMC) Directive 2014/30/EU relating to Electro Magnetic Compatibility.

EN 55032:2015

EN 55024:2010

EN 61000-3-2:2014

EN 61000-3-3:2013

We declare herewith that as a result of the manner in which the device designated below was designed, the type of construction and the devices which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EC Rules for Safety. And we declare herewith the below mentioned model is conformity with Directive 2014/30/EU and 2014/35/EU. In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

The declaration is sole responsibility of the manufacturer