



J. STEPHEN Lab., Ltd.

28-6, Gajangsaneopdong-то, Osan-si, Gyeonggi-do , 447-210 Republic of Korea TEL : +82-31-8077-5000 FAX : +82-31-459-8880 www.miniprinter.com



All specifications are subject to change without notice



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.

Table of Contents

1. SAFETY CAUTION	2
2. UNPACKING	4
3. PRINTER IDENTIFICATION	5
4. CONNECTING POWER SUPPLY	7
5. HOOKING UP THE PRINTER AND COMPUTER	8
6. LOADING THE MEDIA	9
7. THE TREATMENT WHEN YOU RUN SHORT OF PAPER AND ENCOUNTER CUTTER JAM PROBLEM	11
8. SETTING UP THE SENSORS	12
9. SELF TEST	13
10. AUTO CALIBRATIONE	14
11. PAUSE FUNCTION	15
12. PRINTER CLEANING	16
13. CONNECTOR	17
14. STANDARD ROLL MEDIA SPECIFICATION	18
15. STANDARD LABEL SPECIFICATION	19
16. LABEL SPECIFICATION WITH THROUGH-HOLE	20
17. LABEL WITH BLACK MARK	21
18. CONTINUOUS STOCK SPECIFICATION	22
19. SPECIFICATIONS	23
20. COMMAND LIST	25

1. Safety Caution

For higher reliability and safety, consider the following precautionary measures. Read and follow the instructions carefully before running of the product.

Indication



Prohibition



Nust follov



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, or other injuries, or property damage

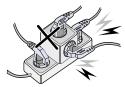




Do not pull or touch the power plug with wet hands.

(Potential risk of electric shock or fire)





Do not overload the power plug into one outlet.

(Potential risk of electric shock or fire)





Do not bend the wire and do not allow the wire to be pressed by heavy object. (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)

$\dot{\mathbb{N}}$

WARNING

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





Do not pull out the power plug to turn off the product.

(Turn off the power at installation, transportation, wiring and inspection.)



Do not disassemble, repair or modify the product.

(Potential risk unit malfunction, electric shock or fire. When the product needs to be repaired, please contact in place where you ordered.inspection.)



WARNING

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



Do not install the product in uneven or inclined surface.

(You may get hurt and it can be broken when it falls)



Keep product away from the water and other material.

(Potential risk of discoloration or electric shock)



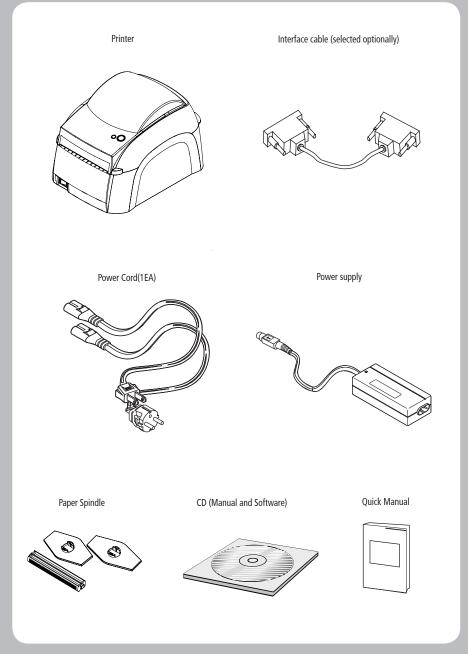
If the product that needs to be repaired, please contact in place where you ordered.

(Potential risk of fire or unit malfunction)

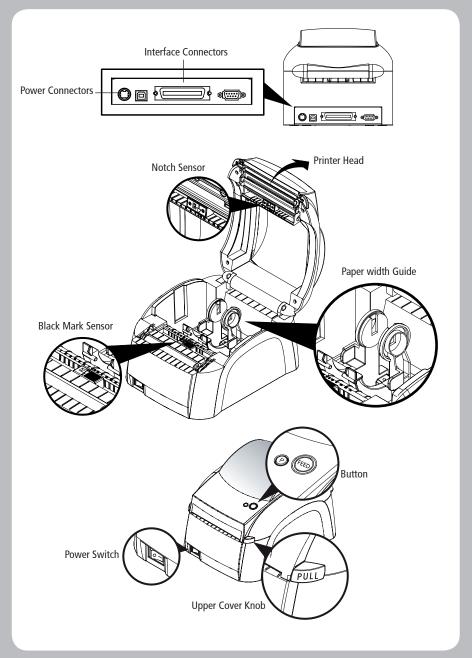


Please do not give excessive shock. (Potential risk of fire or unit malfunction)

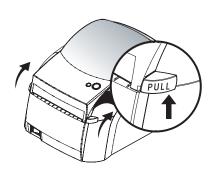
2. Unpacking



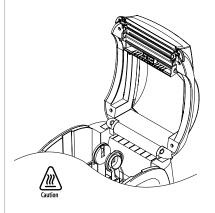
3. Printer identification



Opening the printer



Open the upper cover by pushing the knob in the direction of the arrow.



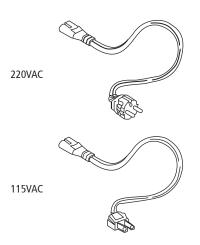
Make sure to be careful of the HOT head after using long time.

If the cover is not shut down completely, the printer may not work properly

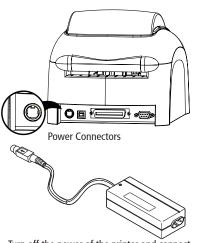


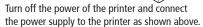
Please make sure you hear the closing sound of the upper cover.

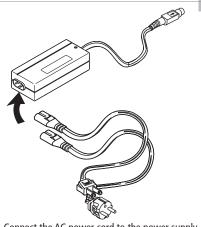
4. Connecting power supply



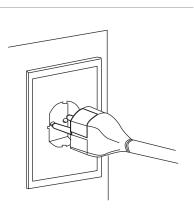
Please check the specification of the AC power cord if it is correct with your power system.





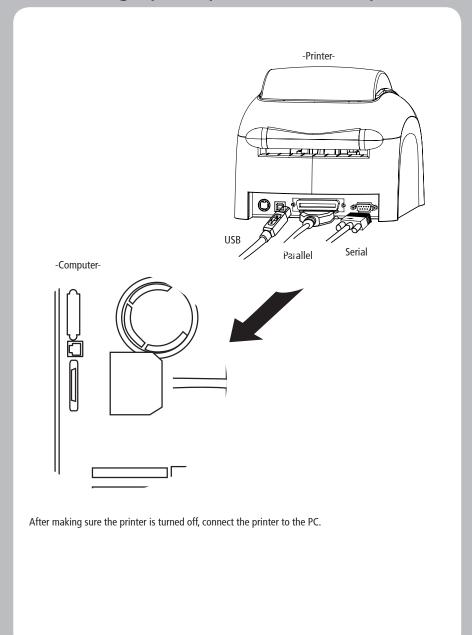


Connect the AC power cord to the power supply

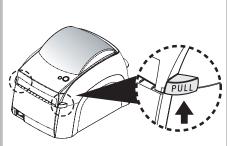


Insert a plug into the electrical outlet

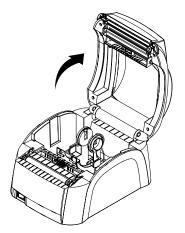
5. Hooking up the printer and computer



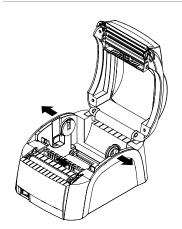
6. Loading the media



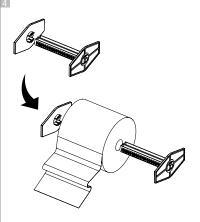
Turn off the printer and open the upper cover by pushing the knob in the direction of the arrow



Please open the upper cover as shown above

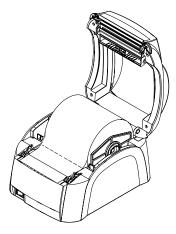


Open the paper width guides by pushing them to the right & Left sides.

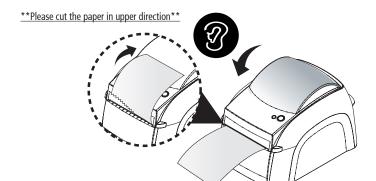


Insert the roll paper to the paper spindle as shown in the picture.

Insert the paper roll into the printer



Adjust the paper width guide to meet the paper width

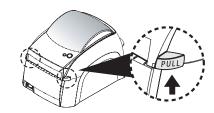


Close the upper cover completely and make sure you hear the closing sound.

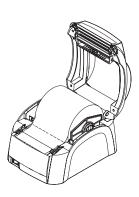
✓ NOTE

Paper fixing tap is only for 1 inch core roll paper and fan-fold paper. For 1.5" core roll paper, mount it to the label paper quide directly without using paper fixing tap.

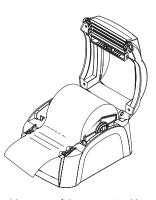
7. The treatment when you run short of paper and encounter cutter jam problem



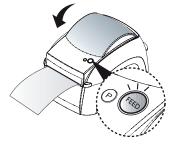
While you are printing with continuous media, please press PULL lever to the direction of the arrow.



**Installation of the new paper when the printer is short of it **



Remove of the paper seized by paper jam



After the treatment has been done as picture above, the printer function normally once you press FEED button.

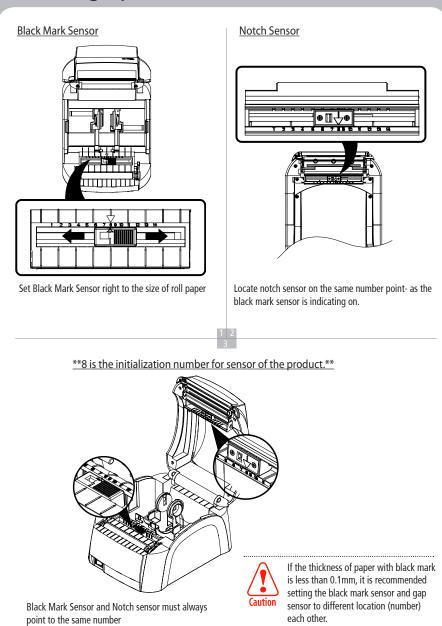


When the power is on, the ordered data will be printed without any data lost after installation of the new paper roll or treatment for paper Jam.

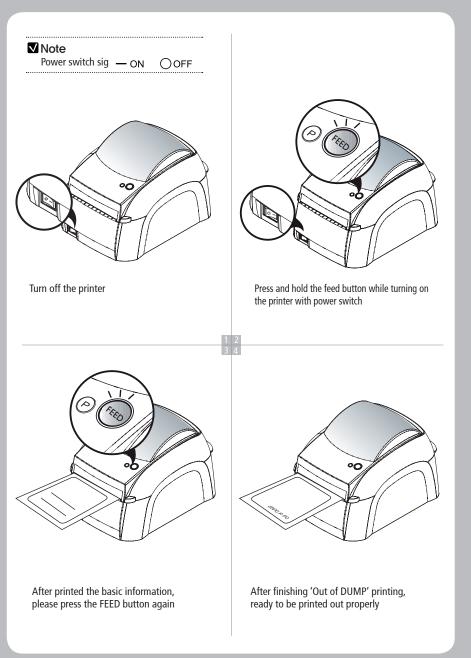
However, if these action has been done in the case the power is off, there can be some data lost since

Above the power if these action has been done in the case the power is off, there can be some data lost sinc Caution the printer buffer will not save them while the printer power is off.

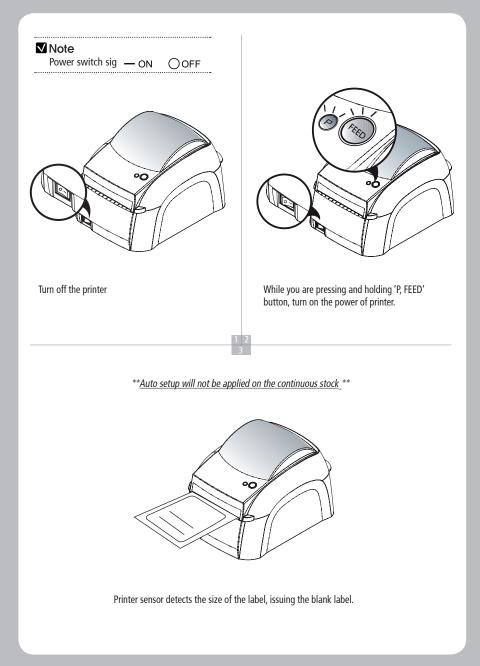
8. Setting up the sensors



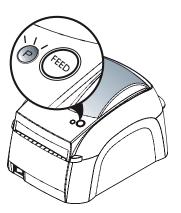
9. Self Test



10. Auto Calibration



11. Pause function



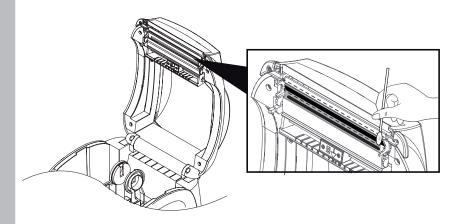
When you would pause on the printing process, press the 'P' key.

12. Printer cleaning

If the interior of the printer is dusty, printing quality can lowered. In such a case, follow the instructions below to clean up the printer.

✓ NOTE

- 1. Make sure to turn the printer power off prior to cleaning
- 2. Regarding print head cleaning, as the print head sets very hot during printing, turn off the printer power and wait approximately 10 minute before commencement.
- 3. When cleaning the print head, take care not to touch the heated portion of the print head. The print head subject to be damaged by static electricity.
- 4. Take care not to allow the print head to become scratched and /or damaged in any way.



- 1. Use an applicator swab moistened with an alcohol solution to clean the print head and remove any dusts.
- 2. Once the cleaning is completed, insert paper roll into the printer few minutes later and close the printer cover.

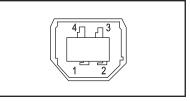
▼ Preventing Overheating

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.

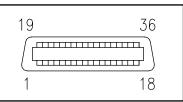
13. Connector

Interface Connectors

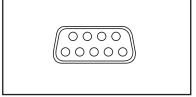
Standard







<Centronics Parallel>



<9 Pin Serial>

Centronics Parallel Interface

Pin	Signal	1/0	Description
1	STROBE-	Input	Synchronize signal Data received
2~9	DATA0~7	Input/Output	Data bit Transmitted 0~7
10	ACK-	Output	Data receiving completed.
11	BUSY	Output	Impossible to print of data receiving.
12	PE	Output	Paper empty
13	SELECT	Output	Printer status for ON/OFF line
14	AUTO FEED-	Input	Paper auto feed signal
15	GROUND	-	System ground
16	GROUND	-	System ground
17	NC	-	
18	LOGIC-H	-	+5V
19~30	GROUND	-	System ground
31	INIT-	Input	Initialize
32	ERROR-	Output	Printer error
33	GROUND	-	System ground
34	NC	-	
35	+5V	-	+5V
36	SELLECT IN-	Input	Printer select signal

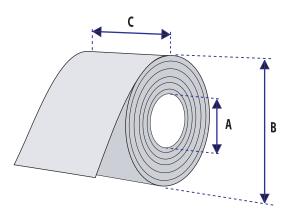
USB Interface

Pin	Signal	1/0	Description
1	+5V	-	+5V
2	DATA-	-	Printer transmit data line
3	DATA+	-	Printer transmit data line
4	GND	-	System Ground

9Pin Serial Interface

Pin	Signal	I/O	Description
3	RXD	Input	Printer receive data line RS-232C level
2	TXD	Output	Printer transmit data line RS-232C level
6,8	DTR	Output	Printer handshake to host line RS-232C level
5	GND	-	System Ground
4	DSR	Input	Data Send Ready
1,7,9	NC	-	

14. Standard roll media specification



Core		
Diameter(A)	25.4 or 38.1 mm	
Max. width	118 mm	
Roll		
Max.diameter(B)	127 mm	
Max.media width(C)	119 mm	
Min.media width(C)	18 mm	
Max.media thickness	0.15 mm	
Min.mdeia thickness	0.06 mm	

V NOTE

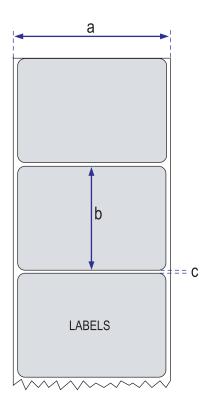
- 1. If the label thickness is more than 0.18mm, adjust the printing speed to 127mm/s.
- 2. When the paper width is less than 25.4 (1inch), please print 101.6 mm/s When the paper width is between 25.4 (1inch) to 76.2 (3inch), please print 127mm/s



Protect the media against sand, grit, and other hard particles during printing and storage. Keep the cover closed. Even very small foreign particles may cause severe harm to the delicate printhead.

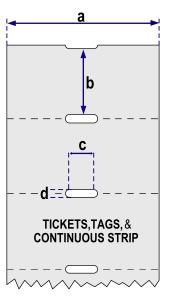
15. Standard label specification

< a> Media width (inch, liner)	
Maximum	118 mm
Minimum	18 mm
< b> Label length	
Minimum	10 mm
< c> Label gap height	
Maximum	10 mm
Minimum	2 mm
Liner	
Opacity	50~75%



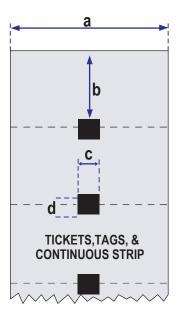
16. Label specification with Through-hole

< a> Tag or strip width		
Maximum	118 mm	
Minimum	18 mm	
< b> Tag length		
Minimum	10 mm	
< c> Detection slot width		
Minimum	14 mm	
< d> Detection slot height		
Maximum	10 mm	
Minimum	2 mm	



17. Label with Black Mark

< a> Tag or strip width		
Maximum	118 mm	
Minimum	18 mm	
< b> Tag length		
Minimum	10 mm	
< c> Black mark width		
Minimum	14 mm	
< d> Black mark height		
Maximum	10 mm	
Minimum	3 mm	



18. Continuous stock specification

The printer can use continuous paper without any detection gap or black marks.

The printer must be set for continuous paper by the Q command.

The length of each copy is decided by the size of the print image and any additional media feed is decided by the Q command.

Continuous paper cannot be used in the Test (Dump) Mode.

< a>	
Maximum	118mm
Minimum	18 mm



19. Specifications

Product Specifications

Print method		Direct Thermal
Print speed(max)		152mm/sec
Print width(max)		104mm
Print length(max)		1250 mm
Resolution		203dpi, 8 dots/mm
Paper Width(min~max	k)	18~118mm
Paper roll size(max)		Ø 25.4mm ~ Ø 127mm
Paper thickness		0.06~0.18mm
Paper Type		Label , Tag, Continuous, Fanfold
Paper sensor		Label gap, Notch, Black Mark
Interface		Serial(RS-232C), Parallel(IEEE-1284), USB
Memory	Standard	8MB SDRAM, 5MB Flash
	Option	8MB Flash
Serial baud rate		115,200 bps (max)
Peeler		Option
Programming Langua	ge	EPL II (Eltron Programming language) ZPL II (Zebra Programming language)
Barcode	1D	Code39, Code128 A/B/C, UCC/EAN-128, Code93, Codabar, Interleaved 2 of 5,UPC-A, UPC-E, UPC-A and E with 2 and 5 add on, EAN-8, EAN-13, EAN-8 and 13 with 2 or 5 digit extentions, Postnet, Plessey(MSI-1), MSI-3, German Post Code
	2D	PDF 417, QR Code, MaxiCode, Data matrix, Code 49(ZPL II)
Font Specification	EPL II	6bitmapped Font
	ZPL II	7bitmapped Font, 1 Smooth Font
Weight		4.5lbs (2.0kg)
Size (W x D x H)		190mmx254mmx169mm

Certification

- (1) FCC PART15 CLASS A
- (2) CE EMCD (CE-EMCD Class B should use Parallel shield Cable complied with IEEE-1284 standards)
- (3) UL/cUL (UL 60950-1)
- ♣"This equipment is indoor use and all the communication wiring are limited to inside of the building" or similar text.

Electrical Characteristics

(1) Input Voltage DC 24V \pm 10%

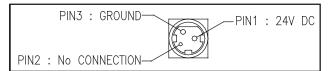
(2) Current Consumption Operating: Approx. 2.9 A (at ASC || printing)

Peak : Approx. 17 A

(at print duty 100%, For 10 seconds or less)

Stand-by: Approx. 0.15 A

(3) Power Connector



20. Command List

No.	Command	Description
1	Α	ASC Text
2	AUTOFR	Automatic Form Printing
3	В	Bar Code
4	В	RSS-14 Bar Code
5	b	Data Matrix
		MaxiCode
	6	PDF417
6	С	Counter
7	_	Cut Immediate
8	D	Density
9	El	Print Soft Font Info.
10	EK	Delete Soft Font
11	eR	User Definable Error Response
12	ES	Store Soft Font
13	f	Cut/Peel Position
14	FE	End Form Store
15	FI	Print Form Info.
16	FK	Delete Form
17	FR	Retrieve Form
18	FS	Store Form
19	GG	Retrieve Graphics
20	GI	Print Graphics Info.
21	GK	Delete Graphic
22	GM	Store Graphic
23	GW	Direct Graphic Write
24	1	Character Set Selection
25	JB	Disable Top Of Form Backup
26	JC	Disable Top Of Form Backup –All Cases
27	JF	Enable Top Of Form Backup
28	LE	Line Draw Exclusive OR
29	LO	Line Draw Black
30	LS	Line Draw Diagonal
31	LW	Line Draw White
32	M	Memory Allocation
33	N	Clear Image Buffer
34	0	Cancel Customized Settings
35	оВ	Cancel Customize Bar Code
36	oE	Line Mode Font Substitution
37	оН	Macro PDF Offset
38	oM	Disable Initial Esc Sequence Feed
39	oR	Character Substitution(Euro)
40	oW	Customize Bar Code Parameters

No.	Command	Description
41	0	Options Select
42	OEPL1	Set Line Mode
43	P	Print
44	PA	Print Automatic
45	Q	Set Form Length
		Transmissive(Gap)Sensor
		Black Line Sensor
46		Continuous Stock Set Form Width
46	q	Set Double Buffer Mode
	r	
48	R	Set Reference Point
49	<u> </u>	Speed Select
50	TD	Define Date Layout(& Print Date)
51	TS	Set Real Time Clock
52	IT	Define Time Layout(& Print Time)
53	U	Print Configuration
54	UA	Enable Clear Label Counter Mode
55	UB	Reset Label Counter Mode
56	UE	External Font Information Inquiry
57	UF	Form Information Inquiry
_ 58	UG	Graphic Information Inquiry
59	UI	Host Prompts/Codepage Inquiry
60	UM	Codepage& Memory Inquiry
61	UN	Disable Error Reporting
62	UP	Codepage& Memory Inquiry/Print
63	UQ	Configuration Inquiry
64	US	Enable Error Reporting
65	V	Define Variable
66	W	Windows Mode
67	ха	Sense Media
68	Х	Box Draw
69	Υ	Serial Port Setup
70	Z	Print Direction
71	?	Download Variables
72	^ @	Reset Printer
73	^ default	Set Printer to Factory Defaults
74	^ ee	Status Report – Immediate