

TE300/TE310 Series

Thermal Transfer Printer

User's Manual



Klemsan

Printer Standard Features

The printer offers the following standard features.

Product standard feature	TE300 (300 dpi model)	TE310 (300 dpi model)
Thermal transfer printing	○	○
Direct thermal printing	○	○
Plastic	○	○
Gap sensor	○	○
Reflective, full-range moveable black mark sensor	○	○
Ribbon sensor	○	○
Head open sensor	○	○
USB 2.0 (Hi-Speed) interface	○	○
16 MB DRAM memory	○	—
64 MB DRAM memory	—	○
8 MB Flash memory	○	—
128 MB Flash memory	—	○
RTC	—	○
BUZZER	—	○
One button for feed and pause	○	○
One LED indicator for 3 colors	○	○
Standard industry emulations right out of the box including Eltron® and Zebra® language support	○	○
Internal 8 alpha-numeric bitmap fonts	○	○
Fonts and bar codes can be printed in any one of the four directions (0, 90, 180, 270 degrees)	○	○
Internal Monotype Imaging® true type font engine with one CG Triumvirate Bold Condensed scalable font	○	○
Downloadable fonts from PC to printer memory	○	○
Downloadable firmware upgrades	○	○

Printer Optional Features

The printer offers the following optional features.

Product standard feature	User options	Dealer options	Factory options
Extended plate for external roll mount assembly with 3" core label spindle (8.4 OD)	<input type="radio"/>		
Internal Bluetooth v4.0			<input type="radio"/>

For TE310 Series only:

KP-200 Plus (with RS-232 interface)	<input type="radio"/>		
External BT module (with RS-232 interface)	<input type="radio"/>		
Peeler module		<input type="radio"/>	

Regular full cut cutter (Guillotine cutter) Media thickness: 0.06~0.19 mm Media type: receipt and label liner w/o glue		<input type="radio"/>	
Regular full/partial cutter (Guillotine cutter) Media thickness: 0.06~0.19 mm Media type: receipt and label liner w/o glue		<input type="radio"/>	
Internal Wi-Fi module			<input type="radio"/>

Note: 1. Option for either internal Wi-Fi or internal Bluetooth only, not coexistence.
2. Except for the linerless cutter, regular/heavy duty/care label cutters DO NOT cut on media with glue.

General Specifications

General Specifications	TE300	TE310
Physical dimensions	204 mm (W) x 164 mm (H) x 280 mm (L)	
Weight	2.4kg	2.5kg
Electrical	External universal switching power supply Input: AC 100-240V, 2A, 50-60 Hz Output: DC 24V, 2.5A, 60W, LPS	
Environmental condition	Operation: 5 ~ 40°C (41 ~ 104°F), 25~85% non-condensing Storage: -40 ~ 60 °C (-40 ~ 140°F), 10~90% non-condensing	

Print Specifications

Print Specifications	TE300	TE310
Print head resolution	300 dots/inch (12 dots/mm)	300 dots/inch (12 dots/mm)
Printing method	Thermal transfer and direct thermal	
Dot size (width x length)	0.084 x 0.084 mm (1 mm = 11.8 dots)	0.084 x 0.084 mm (1 mm = 11.8 dots)
Print speed (inches per second)	Up to 5 ips Up to	Up to 5 ips
Print speed for peel mode	N/A	Up to 3 ips
Max. print width	105.7 mm (4.16")	105.7 mm (4.16")
Max. print length	1,016 mm (40")	11,430 mm (450")

Ribbon Specifications

Ribbon Specifications	
Ribbon outside diameter	1" core: Max. 67mm
	0.5" core: Max. 40mm
Ribbon length	1" inner core: 300 meters
	0.5" inner core: 110 meters
Ribbon core inside diameter	0.5 and 1 inch
Ribbon width	40 ~ 110 mm
Ribbon wound type	Outside wound

Media Specifications

Media Specifications	TE300 (300 dpi model)	TE310 (300 dpi model)
Label roll capacity	Max. 5" OD	
Media type	Continuous, die-cut, black mark, fan-fold, notch	
Media wound type	Outside wound	
Media width	20mm ~ Max. 112 mm	
Media thickness	0.06 mm (2.36 mil) ~ 0.19 mm (7.48 mil)	
Media core diameter	1" (25.4 mm) & 1.5" (38 mm) ID core	
Label length	5 mm ~ Max. printing length	
Label length (peeler mode)	N/A	1" ~ 6" (25.4 ~ 152.4 mm)
Label length (cutter mode)	N/A	1" ~ Max. printing length
Gap height	Min. 2 mm (0.09")	
Black mark height	Min. 2 mm (0.09")	
Black mark width	Min. 8 mm (0.31")	

Operations Overview

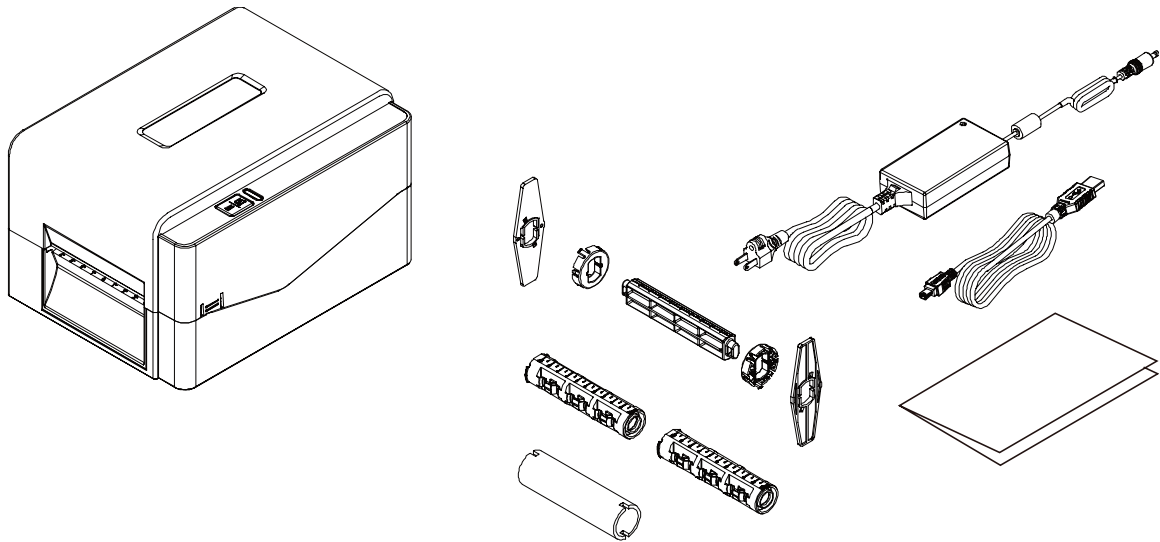
Unpacking and Inspection

This printer has been specially packaged to withstand damage during shipping. Please carefully inspect the packaging and printer upon receiving the bar code printer. Please retain the packaging materials in case you need to reship the printer.

Unpacking the printer, the following items are included in the carton.

- One printer unit
- One quick installation guide
- One power cord
- One external universal switching power supply
- One USB interface cable
- A pair of 1" Ribbon spindles for 300M ribbon
- One 1" ribbon paper core
- One label spindle with two fixing tabs and two 1.5" adapters

If any parts are missing, please contact the Customer Service Department of your purchased reseller or distributor.



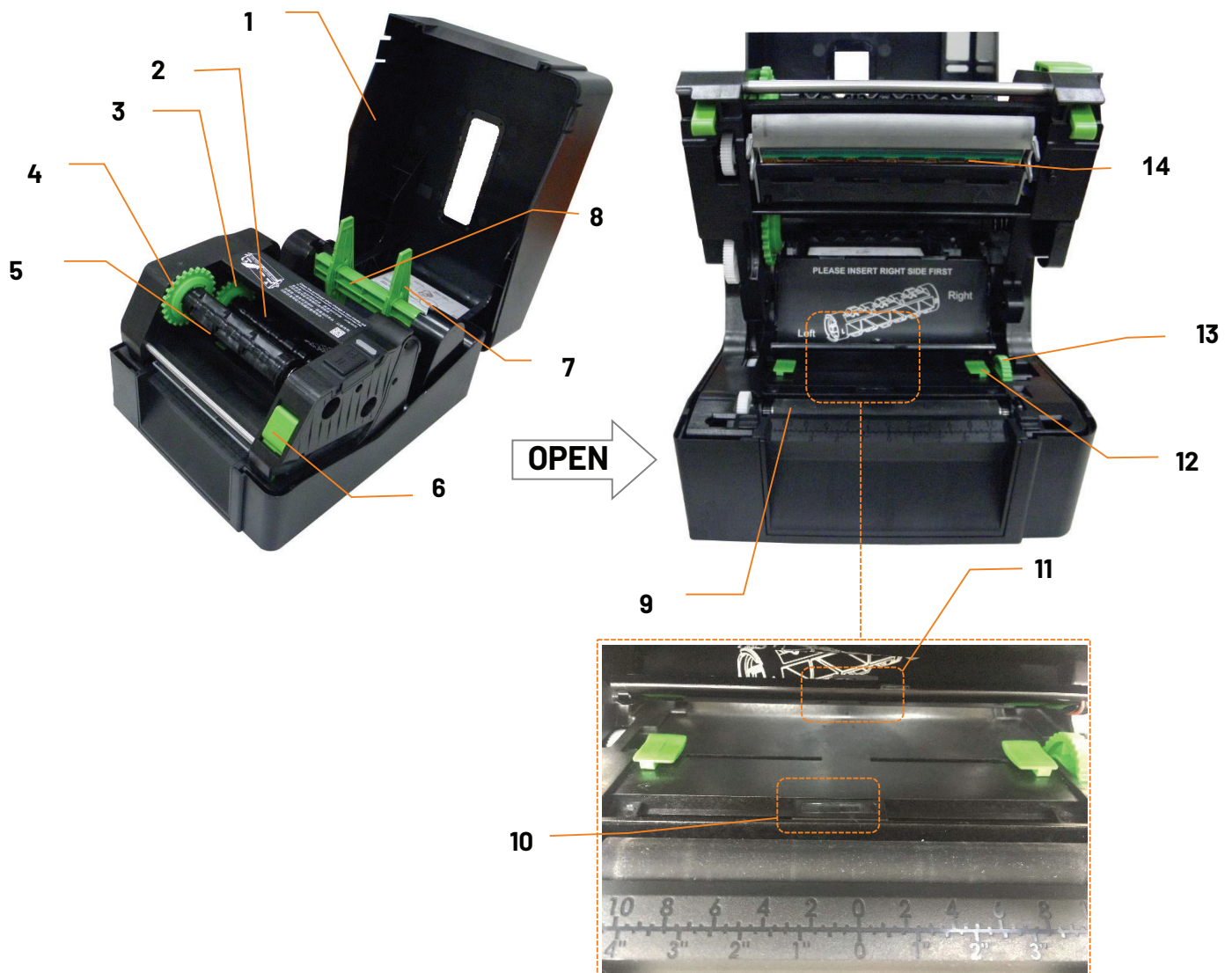
Printer Overview

Front View



1. LED indicator
2. Feed/Pause button
3. Top cover open tab
4. Paper exit chute

Interior View

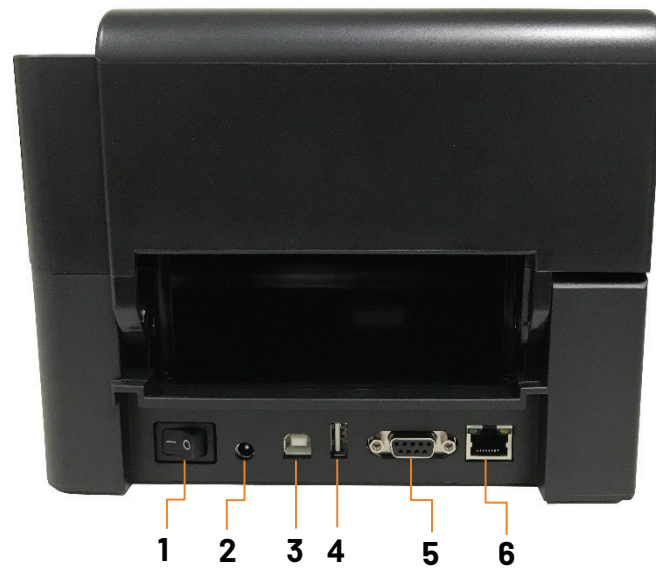


- | | |
|------------------------------|---------------------------------|
| 1. Printer top cover | 8. Media supply spindle |
| 2. Ribbon supply spindle | 9. Platen roller |
| 3. Ribbon supply hub | 10. Black mark sensor |
| 4. Ribbon rewind hub | 11. Gap sensor |
| 5. Ribbon rewind spindle | 12. Media guide |
| 6. Print head release button | 13. Media guide adjustment knob |
| 7. Fixing tabs | 14. Print head |

WARNING

HAZARDOUS MOVING PARTS
KEEP FINGERS AND OTHER
BODY PARTS AWAY

Rear View



1. Power switch
2. Power jack socket
3. USB interface (USB 2.0/Hi-Speed mode)
4. USB host (TE310 Series only)
5. RS-232 interface (TE310 Series only)
6. Ethernet interface (TE310 Series only)

Note:

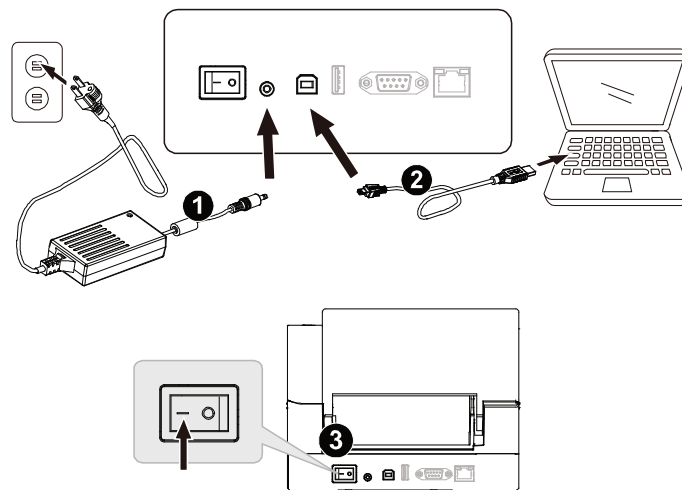
The interface picture here is for reference only. Please refer to the product specification for the interfaces availability.

Setup

Setting up the Printer

Place the printer on a flat, secure surface, then follow the steps below:

1. Plug the power cord into the AC power cord socket at the rear of the printer. Then, plug the other side into a properly grounded power outlet.
2. Connect the printer to the computer with the provided USB cable.
3. Push the power switch on “-” side to open the power of printer.



Note:

- Please switch OFF printer power switch prior to plugging in the power cord to printer power jack.
- The interface picture here is for reference only. Please refer to the product specification for the interfaces availability.

Loading the Ribbon

1. Open the printer top cover by pressing the top cover open tabs located on each side of the printer.



2. Insert the paper core to the ribbon rewind spindle.

Note:

- **Note: Please follow the direction when installing the ribbon rewind spindle.**



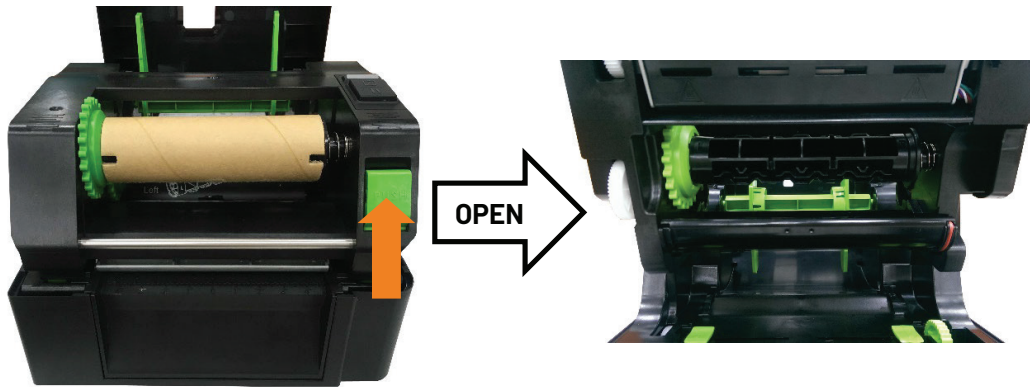
3. Insert the right side of ribbon rewind spindle first. Then, insert the left side to the hole at the left side of ribbon rewind hub (green).

Note:

- **Note: Please follow the direction when installing the ribbon rewind spindle. It can also be substituted by 0.5 or 1 inch paper roll with notches on both sides. Please insert it at the ribbon rewind hub directly.**



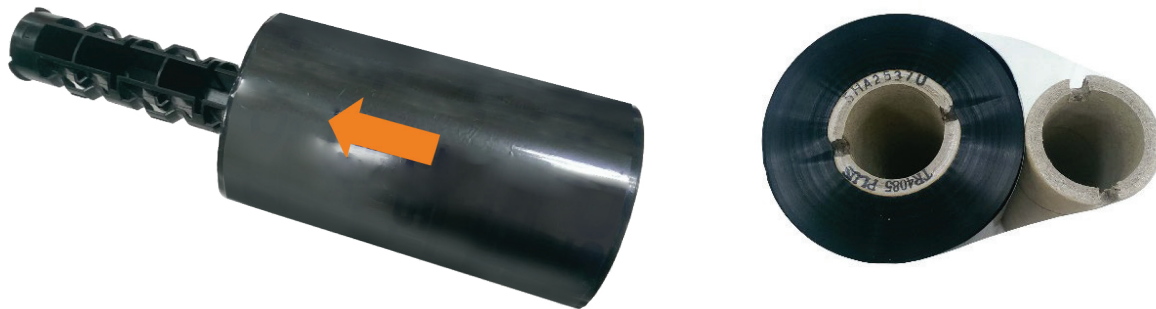
4. Push the print head release button to open the print head mechanism.



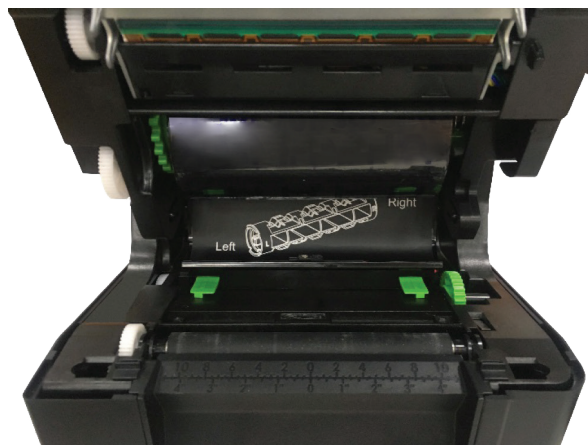
5. Insert the ribbon to the ribbon spindle.

Note:

- **Note: The ribbon spindle can be substituted by insert the ribbon with notches on both sides to the ribbon mechanism directly.**

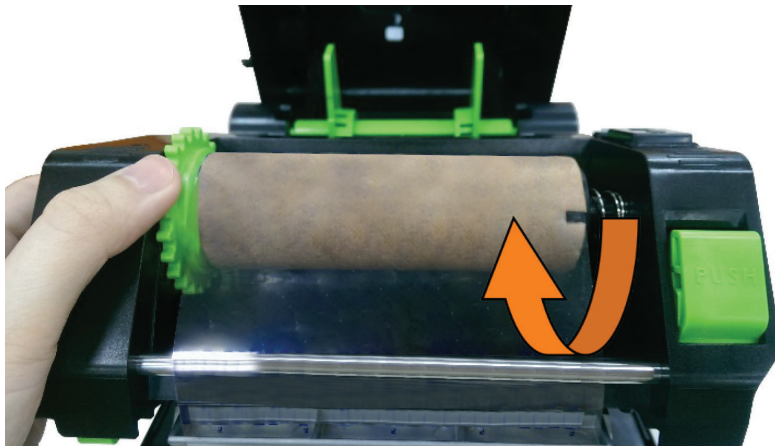


6. Insert the right side of ribbon supply spindle (marked "R") to the ribbon supply hub first. Then, insert the left side of ribbon supply spindle to the hole at the left side of ribbon supply hub (green).

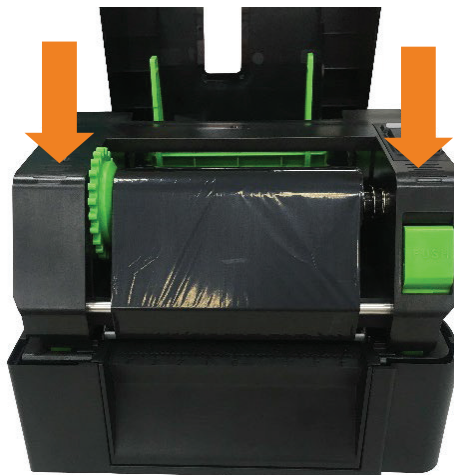


7. Pull the leader of the ribbon through the print head and stick the leader of the ribbon onto the ribbon rewind paper core.

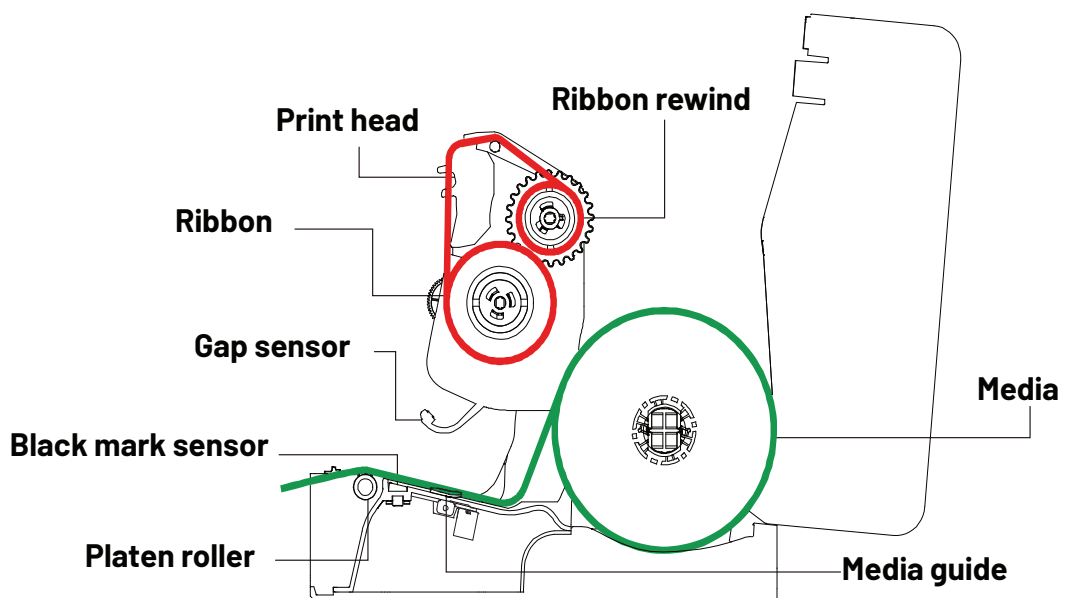
8. Turn the ribbon rewind hub until the ribbon plastic leader is thoroughly wound and the black section of the ribbon covers the print head.



9. Close the print head mechanism with both hands and make sure the latches are engaged securely.



Ribbon loading path



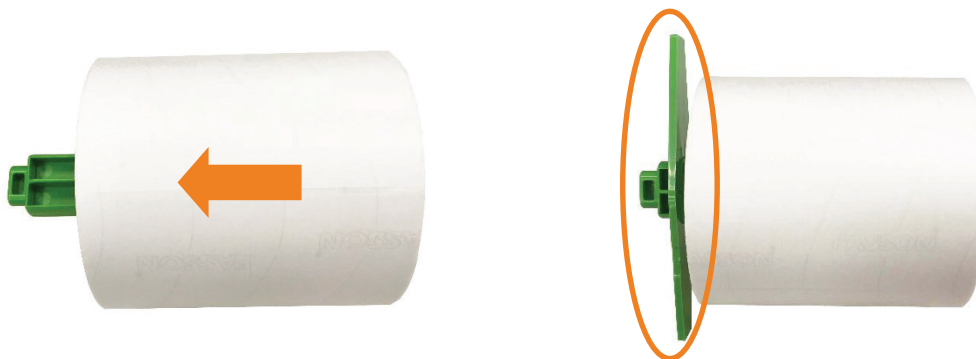
Loading the Media

Loading the Roll Labels

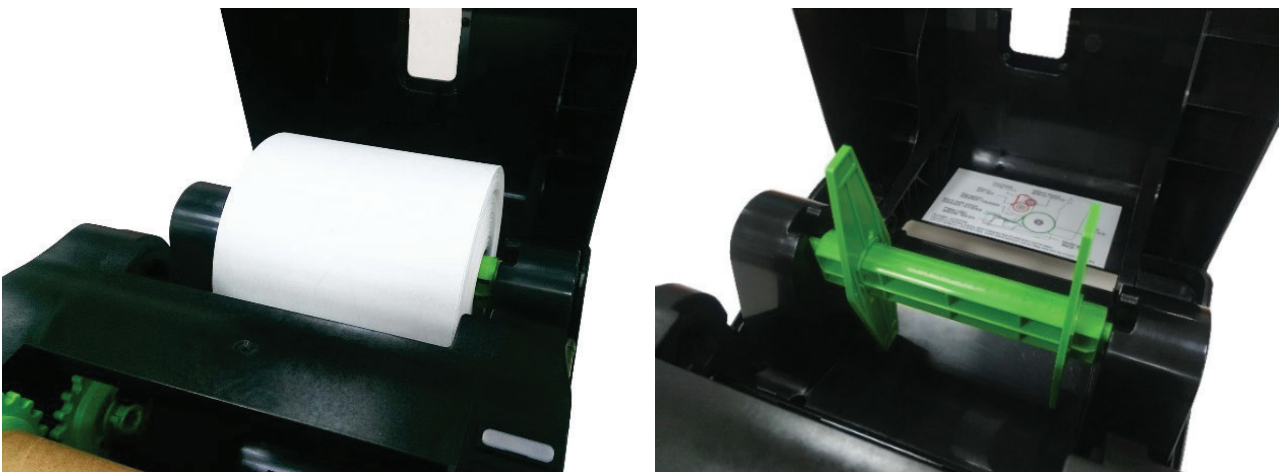
1. Open the printer top cover by pressing the top cover open tabs located on each side of the printer.



2. Insert the paper roll into the media supply spindle and use two fixing tabs to fix the paper roll onto the center of the spindle. (If your paper width is 4", you can remove the fixing tabs on both side of the media supply spindle.)

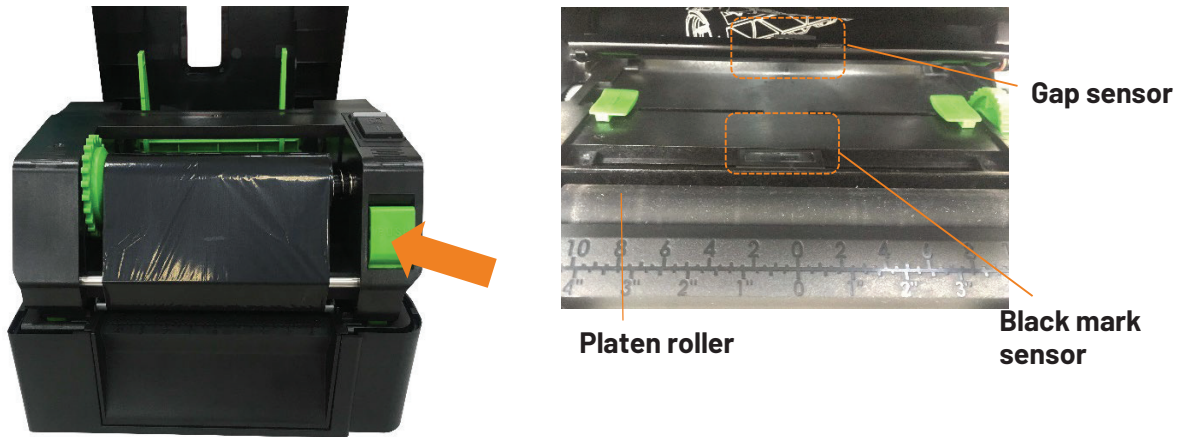


3. Place the paper roll onto the paper roll mount.



Media spindle attached with two fixing tabs and two 1.5" adapters.

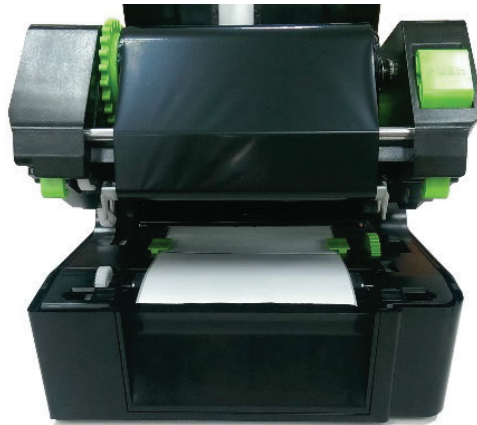
4. Push the print head release button to open the print head mechanism.



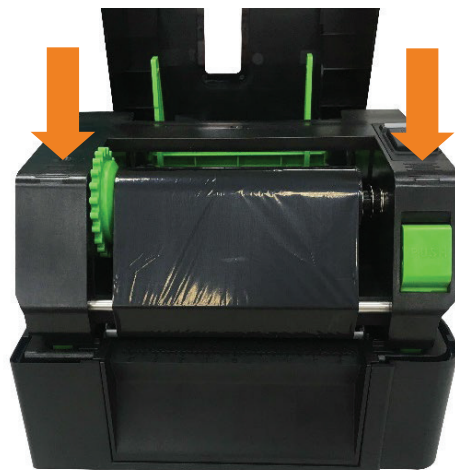
Note:

- The black mark sensor position is moveable and the gap sensor is fixed. Please make sure the gap or black mark is at the location where media gap/black mark will pass through for sensing.

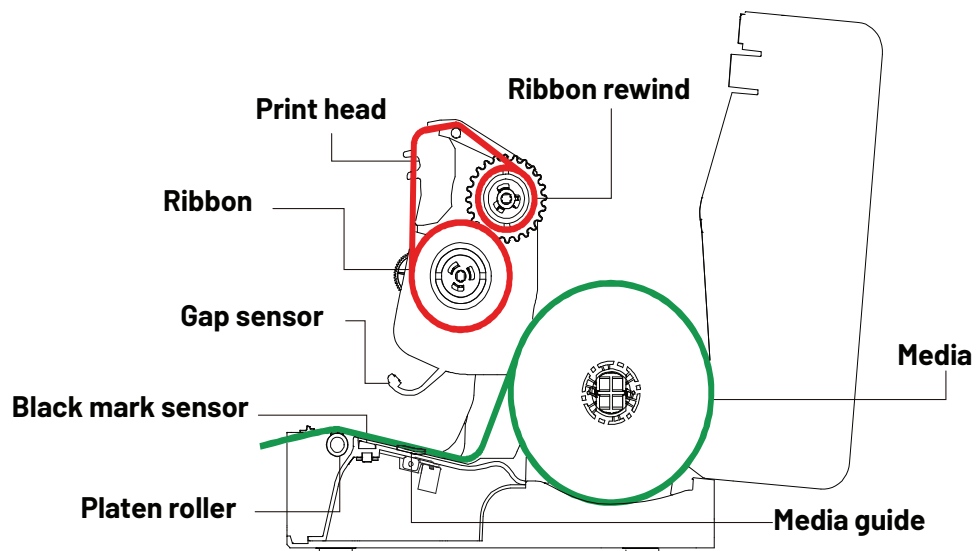
5. Feed the paper, printing side face up, through the media sensor and place the label leading edge onto the platen roller. Move the media guides to fit the label width.



5. Close the print head mechanism with both hands and make sure the latches are engaged securely.

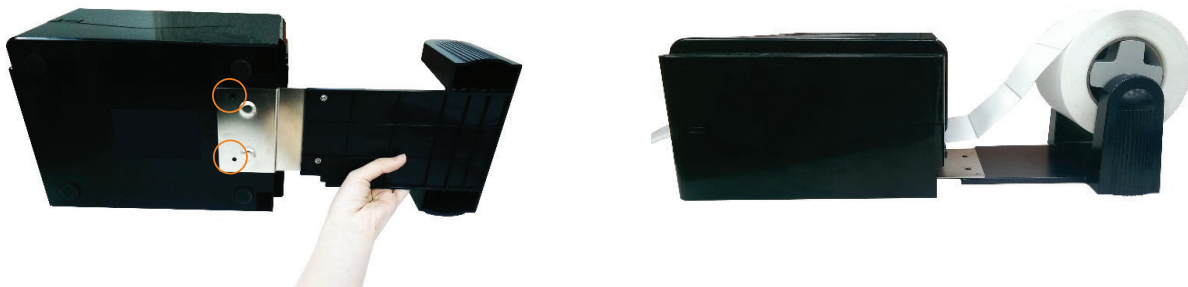


Media Loading path



External Label Roll Mount Installation (Option)

1. Attach the extended plate on the bottom of the printer.



2. Insert a 3" (or 1") label spindle into a paper roll. Then, install it on the external paper roll mount.



3. Feed the media through the rear external label entrance chute.



LED and Button Functions

This printer has one button and one three-color LED indicator. By indicating the LED with different color and pressing the button, printer can feed labels, pause the printing job, select and calibrate the media sensor, print printer self-test report, reset printer to defaults (initialization). Please refer to the button operation below for different functions.

LED Indicator

LED Color	Description
Green/Solid	This illuminates that the power is on and the device is ready to use.
Green/Flash	This illuminates that the system is downloading data from PC to memory or the printer is paused.
Amber	This illuminates that the system is clearing data from printer.
Red/Solid	This illuminates printer head open, cutter error.
Red/Flash	This illuminates a printing error, such as head open, paper empty, paper jam, ribbon empty, or memory error etc.

Regular Button Functions

1. Feed labels

When the printer is at ready states (Green/Solid), press the button to feed one label to the beginning of next.

2. Pause the printing job

When the printer is at printing states, press the button to pause a print job. When the printer is paused the LED will be green blinking. Press the button again to continue the printing job.

Power-on Utilities

There are six power-on utilities to set up and test printer hardware. These utilities are activated by pressing FEED button then turning on the printer power simultaneously and release the button at different color of LED.

Please follow the steps below for different power-on utilities.

1. Turn off the printer power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED indicates with different color for different functions.

Power on utilities	The LED color will be changed as following pattern:							
	LED color	Amber	Red (5 blinks)	Amber (5 blinks)	Green (5 blinks)	Green/ Amber (5 blinks)	Red/ Amber (5 blinks)	Solid green
1. Gap / black mark sensor calibration	Functions		Release					
2. Gap / black mark sensor calibration, Self-test and enter dump mode				Release				
3. Printer initialization					Release			
4. Set black mark sensor as media sensor and calibrate the black mark sensor						Release		
5. Set gap sensor as media sensor and calibrate the gap sensor							Release	
6. Skip AUTO.BAS								Release

Gap/Black Mark Sensor Calibration

Gap/black mark sensor sensitivity should be calibrated at the following conditions:

1. A brand new printer
2. Change label stock
3. Printer initialization

Please follow the steps below to calibrate the ribbon and gap/black mark sensor.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED becomes **red** and blinking. (Any red will do during the 5 blinks).

It will calibrate the ribbon sensor and gap/black mark sensor sensitivity.

The LED color will be changed as following order:

Amber → **red (5 blinks)** → amber (5 blinks) → green (5 blinks) → green/amber (5 blinks)
→ red/amber (5 blinks) → solid green

Note:

- **Please select gap or black mark sensor by sending GAP or BLINE command to printer prior to calibrate the sensor.**
- **For more information about GAP and BLINE command, please refer to TSPL/TSPL2 programming manual.**

Gap/Black Mark Calibration, Self-test and Dump Mode

While calibrate the gap/black mark sensor, printer will measure the label length, print the internal configuration (self-test) on label and then enter the dump mode. To calibrate gap or black mark sensor, depends on the sensor setting in the last print job.

Please follow the steps below to calibrate the sensor.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED becomes **amber** and blinking. (Any amber will do during the 5 blinks)

The LED color will be changed as following order.

Amber → red (5 blinks) → **amber (5 blinks)** → green (5 blinks) → green/amber (5 blinks)
→ red/amber (5 blinks) → solid green

4. It calibrates the sensor and measures the label length and prints internal settings then enter the dump mode.

Note:

- **Please select gap or black mark sensor by Diagnostic Tool or by GAP or BLINE command prior to calibrate the sensor.**
- **For more information about GAP and BLINE command, please refer to TSPL/TSPL2 programming manual.**

Maintenance

This session presents the clean tools and methods to maintain your printer.

1. Please use one of following material to clean the printer.

- Cotton swab
- Lint-free cloth
- Vacuum / Blower brush
- 100% ethanol

2. The cleaning process is described as following,

Printer Part	Method	Interval
Print Head	1. Always turn off the printer before cleaning the print head. 2. Allow the print head to cool for a minimum of one minute. 3. Use a cotton swab and 100% ethanol to clean the print head surface.	Clean the print head when changing a new label roll.
Platen Roller	1. Turn the power off. 2. Rotate the platen roller and wipe it thoroughly with 100% ethanol and a cotton swab, or lint-free cloth.	Clean the platen roller when changing a new label roll.
Tear Bar/Peel Bar	Use the lint-free cloth with 100% ethanol to wipe it.	As needed
Sensor	Compressed air or vacuum	Monthly
Exterior	Wipe it with water-dampened cloth	As needed
Interior	Brush or vacuum	As needed

Note:

- Do not touch printer head by hand. If you touch it careless, please use ethanol to clean it.
- Please use 100% Ethenol. DO NOT use medical alcohol, which may damage the printer head.
- Regularly clean the print head and supply sensors once change a new ribbon to keep printer performance and extend printer life.
- The maximum printing ratio per dot line is 15% for this printer. To print the full web black line, the maximum black line height is limited to 40 dots, which is 3.3mm for 300 DPI resolution printer.

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