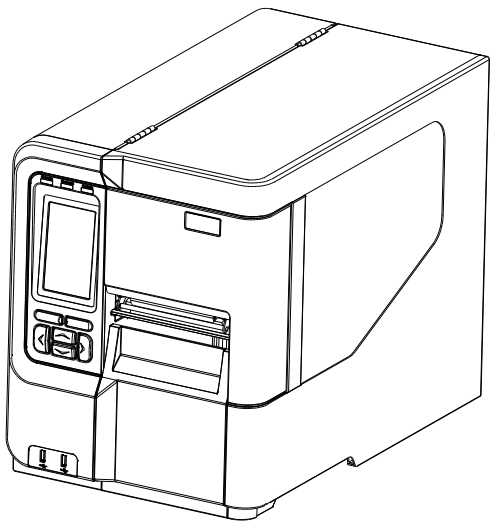
MX241P/ MX341P/ MX641P Series

THERMAL TRANSFER / DIRECT THERMAL BAR CODE PRINTER

USER'S MANUAL



Copyright Information

Agency Compliance and Approvals

CE	EN 55032: Class B EN 55035 EN 55024 EN 60950-1 EN 62368-1
FC	FCC part 15B, Class B ICES-003, Class B
	AS/NZS CISPR 32, Class B
c UL us LISTED I.T.E. E178707	UL 60950-1 (2nd Edition) CSA C22.2 No. 60950-1-07 (2nd Edition) UL 62368-1, 2nd Edition, 2014-12-01 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements)
Mexico CoC	UL 60950 UL 60950
TÜV SÜD Production monitored Safety tested	EN 62368-1:2014/A11:2017
KC	KN 32 KN 35 K60950-1(2011-12)
CCC	GB 4943.1 GB/T9254 GB 17625.1
energy ENERGY STAR	Energy Star for Imaging Equipment Version 3.0
	CNS 13438 CNS 14336-1

	CNS 15663
	TP TC 004 TP TC 020
	IS 13252(Part 1)/ IEC 60950-1

Note: There may have certification differences in the series models, please refer to product label for accuracy.

Important safety instructions:

1. Read all of these instructions and keep them for later use.

2. Follow all warnings and instructions on the product.
3. Disconnect the power from the AC inlet before cleaning or if fault happened.

Do not use liquid or aerosol cleaners. Using a damp cloth is suitable for cleaning.

4. The mains socket shall be installed near the equipment and easily accessible.
5. The unit must be protected against moisture.
6. Ensure the stability when installing the device, Tipping or dropping could cause damage.
7. Make sure to follow the correct power rating and power type indicated on marking label

provided by manufacture.

8. Please refer to user manual for maximum operation ambient temperature.

provided by manufacture.

8. Please refer to user manual for maximum operation ambient temperature.

WARNING:

ving parts. Keep finger or body away from moving parts.

CAUTION:

(For equipment with RTC (CR2032) battery or rechargeable battery pack)

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the Instructions as below.

1. DO NOT throw the battery in fire.
2. DO NOT short circuit the contacts.
3. DO NOT disassemble the battery.
4. DO NOT throw the battery in municipal waste.
5. The symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

aution: Hot surface for printhead.
Do not touch the printhead before it cooling.

WARNING:

Remove the power from AC inlet before opening the media cover for cleaning or repairing faults. After cleaning or fixing faults, media cover closing before power connecting to AC inlet.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

CE Statement:

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

All operational modes:

2.4GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)

5GHz: 802.11a,

The frequency, mode and the maximum transmitted power in EU are listed below:

2400 MHz – 2483.5 MHz: 19.88 dBm (EIRP)

5150 MHz – 5250 MHz: 17.51 dBm (EIRP)

5150-5350MHz for Only indoor use

5470-5725MHz for indoor/outdoor use

Restrictions In AZE

National restrictions information is provided below

Frequency Band	Country	Remark
5150-5350MHz	**Azerbaijan**	**No license needed if used indoor and power not exceeding 30mW**
5470-5725MHz		

Hereby, TSC Auto ID Technology Co., Ltd. declares that the radio equipment type [Wi-Fi] IEEE 802.11 a/b/g/n is in compliance with Directive 2014/53/EU

The full text of the EU declaration of conformity is available at the following internet address: http://www.tscprinters.com

RF exposure warning (Wi-Fi)

This equipment must be installed and operated in accordance with provided instructions and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be providing with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

SAR Value: 0.736 W/kg

RF exposure warning (For Bluetooth)

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada, Industry Canada (IC) Notices
This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information
The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate (“SAR”) limits when installed in specific host products operated in portable exposure conditions. **(For Wi-Fi)**

This device has also been evaluated and shown compliant with the IC RF Exposure limits under portable exposure conditions. (Antennas are less than 20 cm of a person's body). **(For Bluetooth)**

Canada, avis de l'Industry Canada (IC)
Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.
Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)
La puissance de sortie émise par l’appareil sans fil est inférieure à la limite d'exposition aux fréquences radio de l'Industry Canada (IC). Utilisez l’appareil sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) par l'IC lorsqu'il est connecté à des dispositifs hôtes spécifiques opérant dans des conditions d'utilisation mobile. **(Pour le Wi-Fi)**

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition radio-fréquence par l'IC pour des utilisations par des opérateurs mobiles (les antennes sont à moins de 20 cm du corps d'une personne). **(Pour le Bluetooth)**

NCC 警語:

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。(即低功率電波輻射性電機管理辦法第十二條)

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。(即低功率電波輻射性電機管理辦法第十四條)

Contents

1. Introduction

1.1 Product Introduction

Thank you very much for purchasing TSC bar code printer.

The new high performance MX241P Series was designed to deliver 24x7 high volume performance. It features a die-cast aluminum print mechanism housed in a very strong yet lightweight cabinet. This new design results in a more durable printer that is suited for your most heavy-duty demand cycles.

There are three models available with the MX241P Series. The MX241P prints at 203 dpi at speeds up to an amazing 18 inches per second, MX341P offers higher 300 dpi resolution at speeds up to 14 inches per second, and the MX641P features 600 dpi high resolution which makes it ideal for printing very small 2D barcodes, graphics, fine print and other ultra-high-resolution images.

The MX241P Series printers are loaded with standard features including a color touch display with new GUI design and six menu buttons to provide a great user experience, support for 600 meter ribbons, 8” OD media rolls, built-in Ethernet, two USB hosts for keyboard and scanner connections, and USB 2.0 and serial interfaces. Parallel and GPIO ports are available as an option.

This document provides an easy reference for operating the MX241P series. To print label formats, please refer to the instructions provided with your labeling software; if you need to write the custom programs, please refer to the TSPL/TSPL2 programming manual that can be found on the accessories CD-ROM or on TSC website at http://www.tscprinters.com.

- Applications
  - High volume printing
  - Work in process
  - Compliance labeling
  - Inventory management
  - Shipping/ receiving
  - Asset management
  - Electronics & Jewelry labeling

1.2 Product Specification and Features

Printer model	MX241P	MX341P	MX641P
Resolution	8 dots/mm (203 DPI)	12 dots/mm (300 DPI)	24 dots/mm (600 DPI)
Printing method	Thermal transfer and direct thermal		
Print speed	457mm (18")/second	356 mm (14")/second	152 mm (6")/second
Max. print width	104 mm(4.09")		
Max. print length	25,400 mm (1000")	11,430 mm (450")	2540 mm (100")
Enclosure	Die-cast print mechanism with large clear media view window		
Physical dimension	300 mm (W) x 393 mm (H) x 510 mm (D) 11.81" (W) x 15.47" (H) x 20.08" (D)		
Weight	18 kg (39.68 lbs)		
Label roll capacity	203.2 mm (8") O.D.		
Ribbon	600 meter long, max. OD 90 mm,1" core (ink coated outside/inside)		
Ribbon width	25.4 ~ 114.3 mm (1"~4.5")		
Processor	32-bit RISC CPU		
Memory	■ 512 MB Flash memory ■ 512 MB SDRAM ■ microSD Flash memory card reader for Flash memory expansion, up to 32 GB		
Interface	■ RS-232 ■ USB 2.0 ■ Internal Ethernet, 10/100 Mbps ■ USB host *2 (Front side), for scanner or PC keyboard ■ GPIO + Centronics (dealer option) ■ Internal Bluetooth MFi 5.0 (factory option) ■ 802.11 a/b/g/n/ac Wi-Fi + BT combo module (user option)		
Power	■ Internal universal switching power supply ■ • Input: AC 100-240V, 4-2A, 50-60Hz ■ • Output: DC 5V, 5A; DC 24V, 7A; DC 36V, 1.4A; Total 243W		
LCD	■ 16 bits Color, 480 x 272 pixel, with back light, Resistive Touch Screen		
Operation switch, button Select	1 power switch, 6 operation buttons (Menu, Pause, Feed, Up, Down, Select)		
Sensors	■ Gap transmissive sensor (position adjustable) ■ Black mark reflective sensor(Bottom or Top black mark sensor switchable and position adjustable)Ribbon end sensor (transmissive) ■ Head open sensor ■ Ribbon end sensor ■ Ribbon encode sensor ■ Media capacity sensor		
Real time clock	Standard		
Internal font	■ 8 alpha-numeric bitmap fonts ■ One Monotype Imaging® CG Triumvirate Bold Condensed scalable font ■ Built-in Monotype True Type Font engine		

Bar code	1D bar code Code 39, Code 93, Code128UCC, Code128 subsets A.B.C, Codabar, Interleave 2 of 5, EAN-8, EAN-13, EAN-128, UPC-A, UPC-E, EAN and UPC 2(5) digits add-on, MSI, PLESSEY, POSTNET, RSS-Stacked, GS1 DataBar, Code 11, China Post 2D bar code PDF-417, Maxicode, DataMatrix, QR code, Aztec		
Font & bar code rotation	0, 90, 180, 270 degree		
Printer language	TSPL-EZD (Compatible to EPL, ZPL, ZPL II, DPL)		
Media type	Continuous, die-cut, black mark (Bottom side or top side black mark), fan-fold, notch, perforated, tag, care label (outside wound)		
Media width	20 mm ~ 114 mm (0.78“ ~ 4.49“)		
Media thickness	0.076 ~ 0.305 mm (2.99 ~ 12.01 mil)		
Media core diameter	76.2 mm (3”)		
Label length	3 ~ 25,400 mm (0.1“ ~ 1,000“) ,	3 ~ 11,430 mm (0.1“ ~ 450“),	3 ~ 2,540 mm (0.1“ ~ 100“)
Environment condition	Operation: 0~ 40˚C (32 ~ 104˚F), 25~85% non-condensing Storage: -40 ~ 60 ˚C (-40 ~ 140˚F), 10~90% non-condensing		
Safety regulation	BIS、CB、CCC、CE Class B、EAC、FCC Class B、KC、TUV、UL、cUL、C-Tick Class B 、Energy Star		
Environmental concern	Comply with RoHS, WEEE		
Accessories	■ Windows labeling software CD disk ■ Quick start guide ■ USB port cable ■ Power cord		
Factory option	■ Internal full rewinding kit (Max. 8“ OD) ■ Internal Bluetooth 5.0 MFi		
Dealer option	■ Peel off module assembly ■ Regular guillotine cutter ■ Rotary heavy duty cutter ■ GPIO (DB15F)+ Parallel interface		
User option	■ KP-200 Plus keyboard display unit ■ 802.11 a/b/g/n/ac Wi-Fi + BT combo module ■ Universal cutter tray		

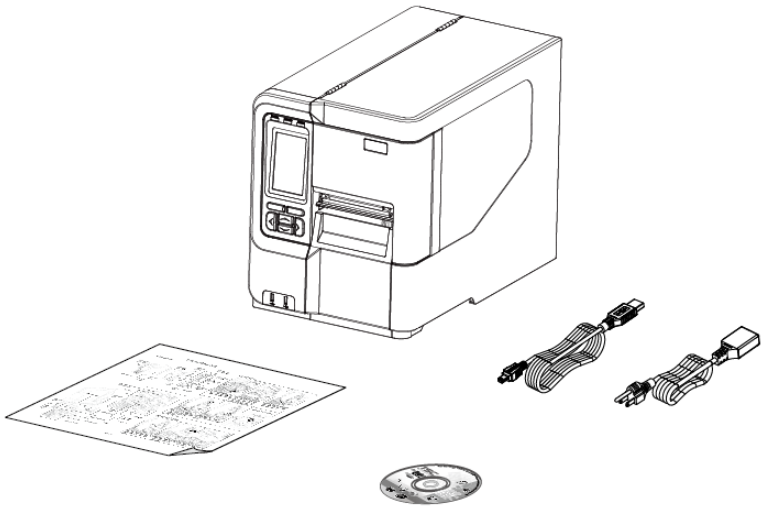
2. Operations Overview

2.1 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 Windows labeling software/Windows driver CD disk
- One quick installation guide
- One power cord
- One USB interface cable



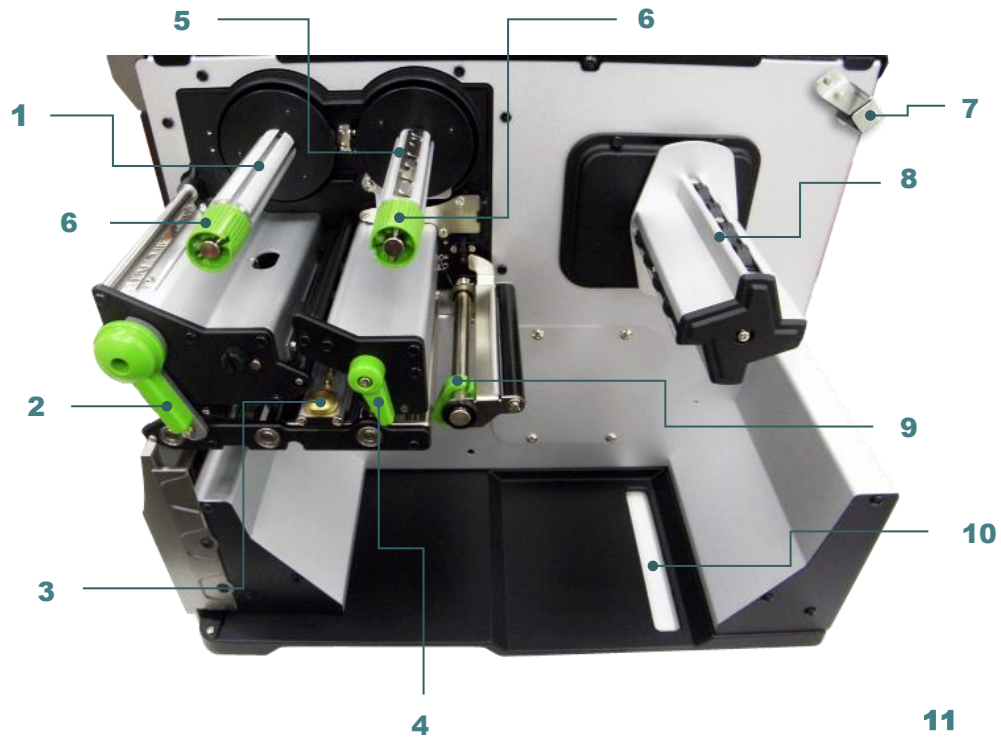
If any parts are missing, please contact the Customer Service Department of your purchased reseller or distributor.

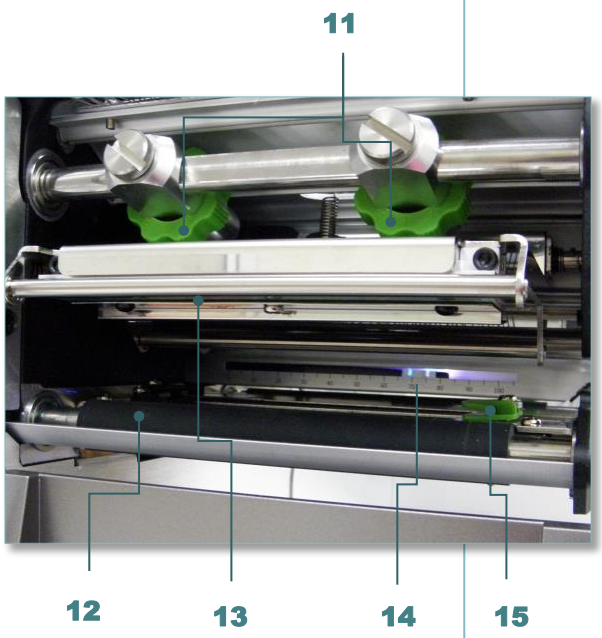
2.2 Printer Overview

2.2.1 Front View

1. LED indicators
2. LCD display
3. Front panel buttons
4. USB host x 2
5. Media view window
6. Paper exit chute
7. Printer cover

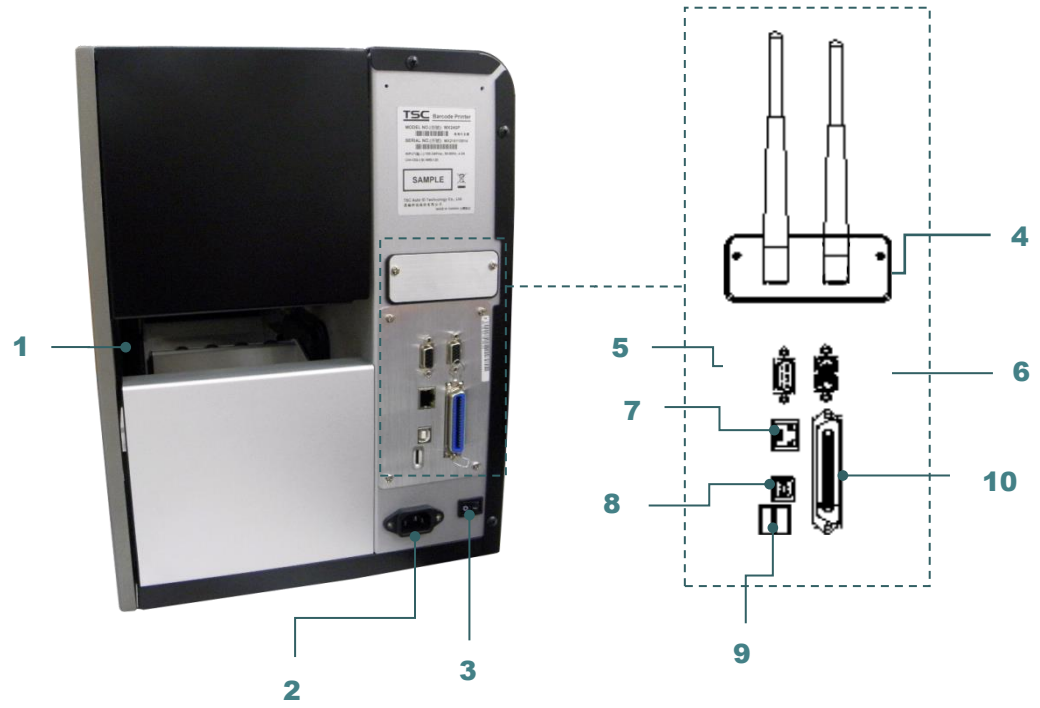
2.2.2 Interior view





1. Ribbon rewind spindle
2. Print head release lever
3. Media sensor position adjustment knob
4. Label guide bar release lever
5. Ribbon supply spindle
6. Ribbon tension adjustment knobs
7. Media capacity sensor
8. Label supply spindle
9. Rear label guide
10. External label entrance chute
11. Print head pressure adjustment knobs
12. Platen roller
13. Print head
14. Media sensor
15. Front label guide

2.2.3 Rear View



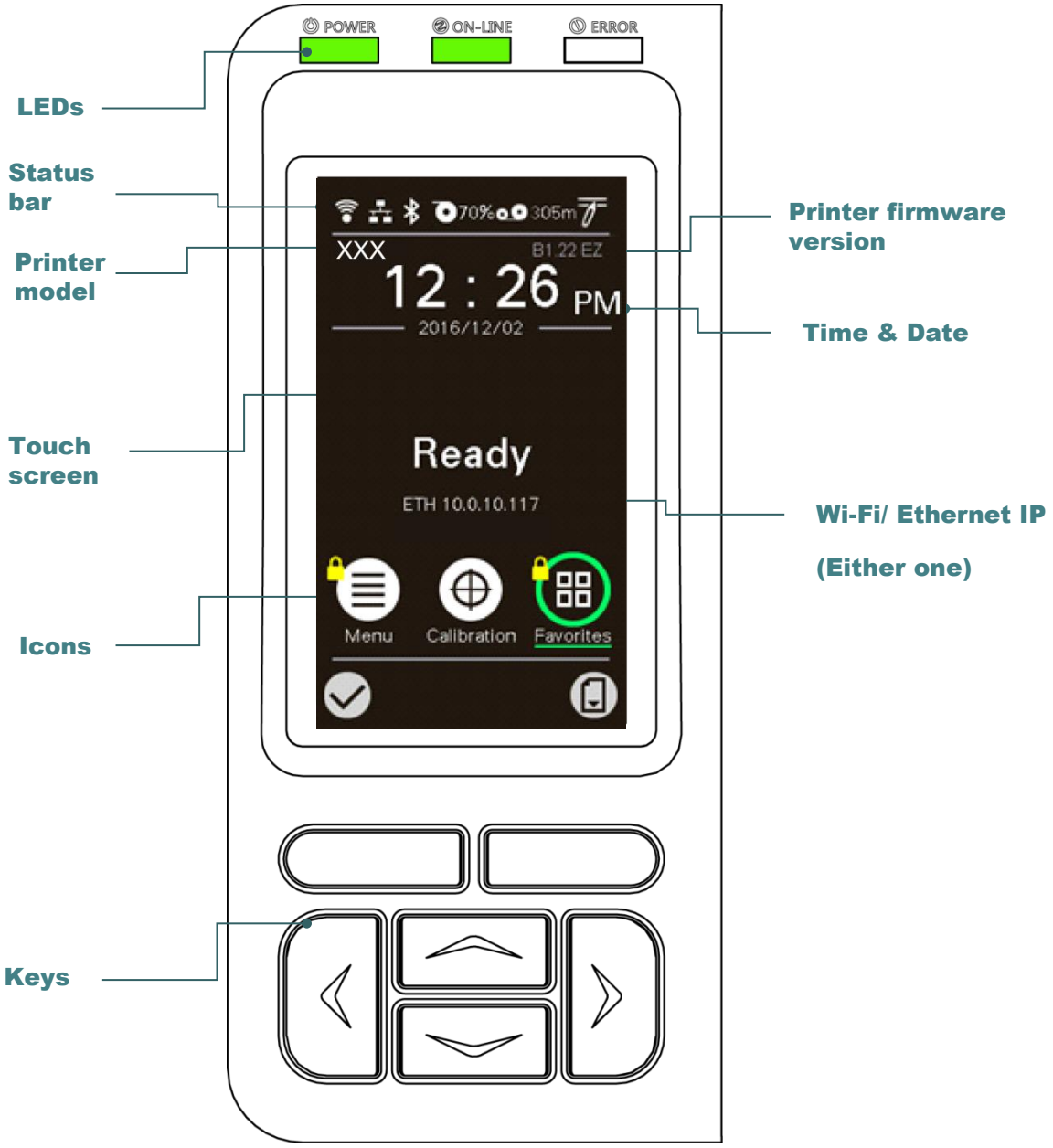
1. External label entrance chute
2. Power cord socket
3. Power switch
4. Slot-in Wi-Fi module (Option)
5. RS-232C interface
6. GPIO interface (Option)
7. Ethernet interface
8. USB interface
9. * Micro SD card socket
10. Centronics interface

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

*** Recommended SD card specification.**

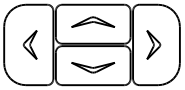
Type	SD card spec	SD card capacity	Approved SD card manufacturer
Micro SD	V2.0 Class 4	4G	Transcend
	V2.0 Class 4	8G	Transcend
	V3.0 Class 10 UHS-I	16G	Transcend
	V3.0 Class 10 UHS-I	32G	Transcend
	V3.0 Class 10	16G	Kingston
	V2.0 Class 4	16G	Scandisk
	V3.0 Class 10 UHS-I	16G	Scandisk
- The DOS FAT file system is supported for the SD card. - Folders/files stored in the SD card should be in the 8.3 filename format. - The miniSD/microSD card to SD card slot adapter is required.			

2.3 Operator Control



2.3.1 LED Indication and Keys

LED	Status	Indication
POWER	Off	Printer power off
	On	Printer power on
ON-LINE	On	Printer is ready
	Blinking	Printer is paused
		Printer is downloading data
ERROR	Off	Printer is ready
	On	Carriage open or cutter error
	Blinking	No paper, paper jam or no ribbon

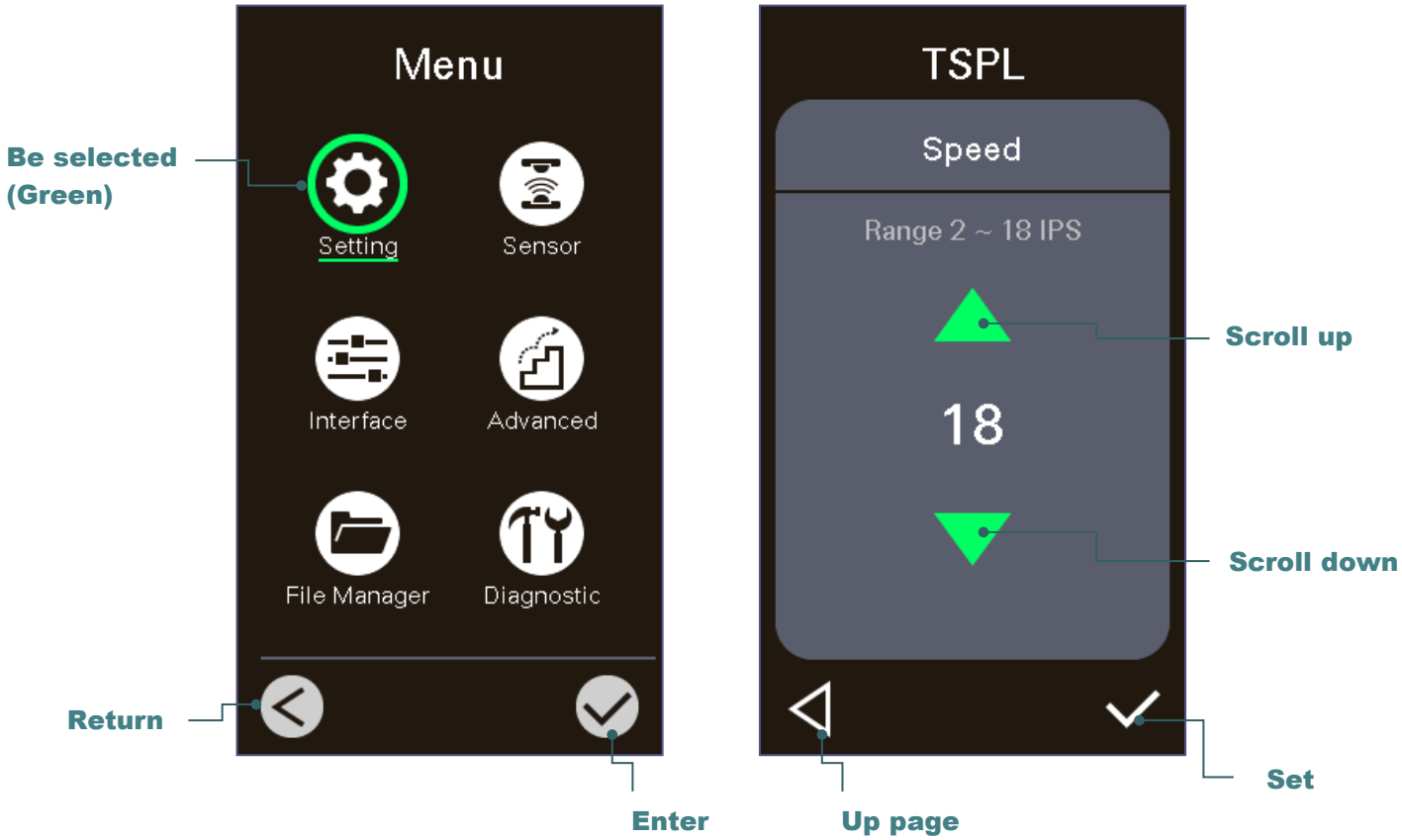
Keys	Function
Soft keys 	The labels on the footer of the UI will explain the function for left and right soft key. Check the labels on the footer of the UI screen. The meaning of the soft keys will vary.
Navigational keys 	Used to select icons, menu selection, and navigation in the UI.

2.3.2 Main page Icons

Indicated icon	Indication
	Wi-Fi device is ready (option)
	Ethernet is connected
	Bluetooth device is ready (option)
	Media capacity %
	Ribbon capacity m
	TPH cleaning
	Security lock
Icon button	**Function**
	Enter the menu
	Calibrate the media sensor
	Enter the “Favorites” option (please refer to section 0)
	Enter cursor (be marked in green) located option
	Feed button (advance one label)

2.3.3 Touch Screen

Tap an item to open/use it.



Note:
For LCD Menu panel, please refer to section 6 for more details.

3. Setup

3.1 Setting up the printer

1. Place the printer on a flat, secure surface.

2. Make sure the power switch is off.

3. Connect the printer to the computer with the provided USB cable.

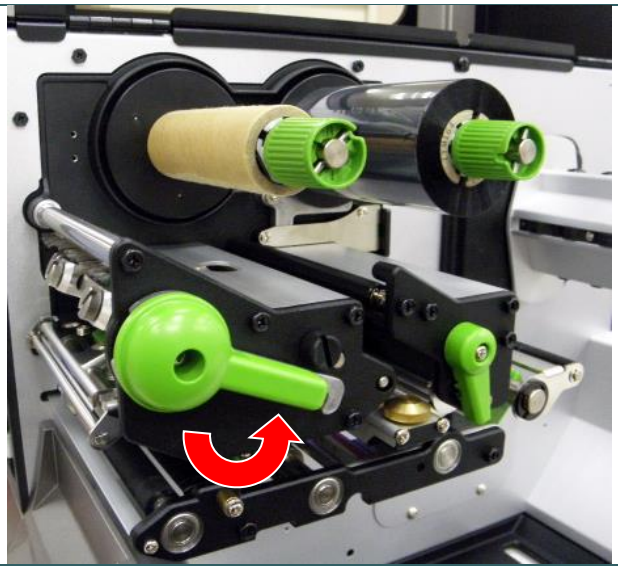
4. Plug the power cord into the AC power cord socket at the rear of the printer, and then plug the power cord into a properly grounded power outlet.

Note: Please switch OFF printer power switch prior to plug in the power cord to printer power jack.

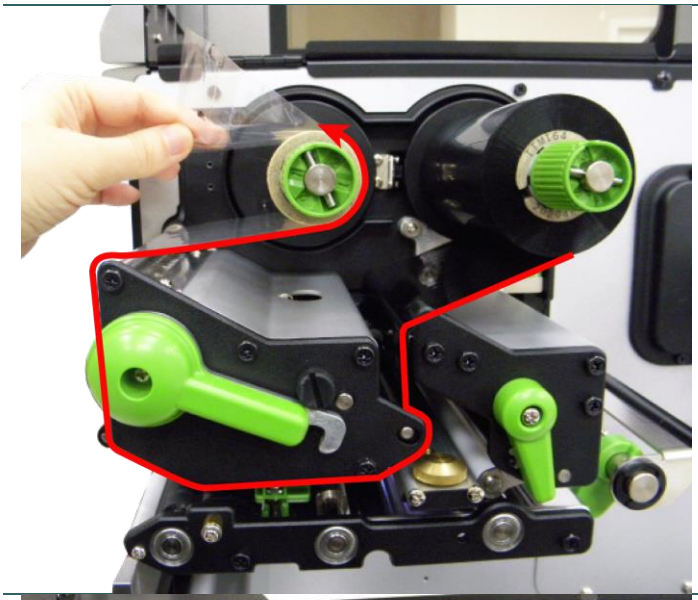
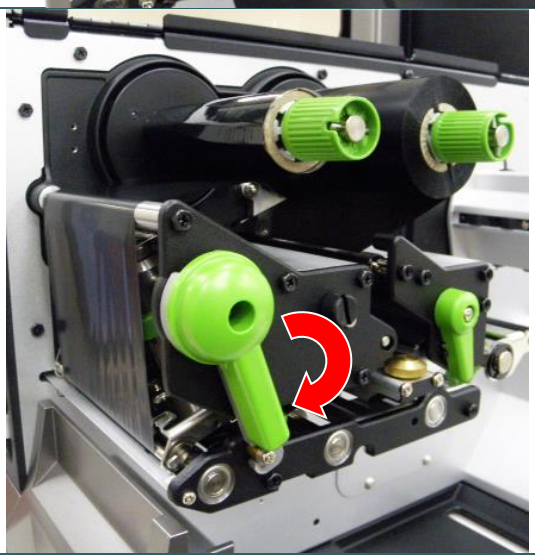
3.2 Loading the Ribbon

1. Open the printer right side cover.

2. Install the ribbon and paper core onto ribbon supply spindle and ribbon rewind spindle.

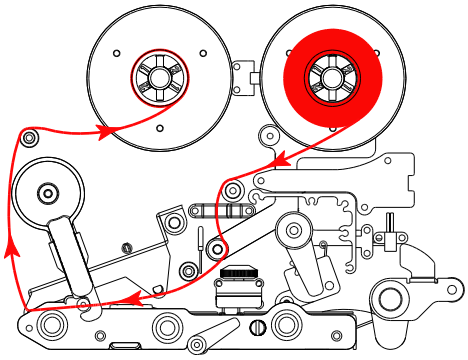


3. Push print head release lever to open print head mechanism.

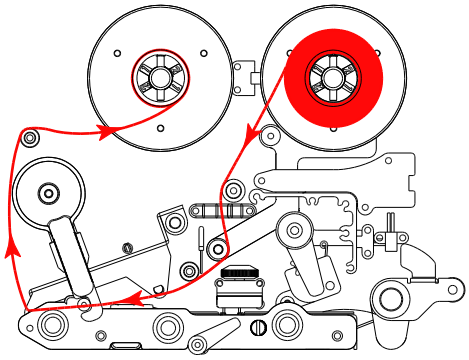
	4. Thread ribbon above the ribbon guide bar and through ribbon sensor slot. (Please refer to “Loading path for ribbon” as following fig.)
	5. Wind the ribbon rewind spindle counterclockwise roughly 3~5 circles until ribbon is smooth, properly stretched and wrinkle-free.
	6. Close the print head mechanism by pushing the print head release lever. **Note:** *** Please refer to video on TSC YouTube.**

Loading path for ribbon

*** Ink coated outside wound**



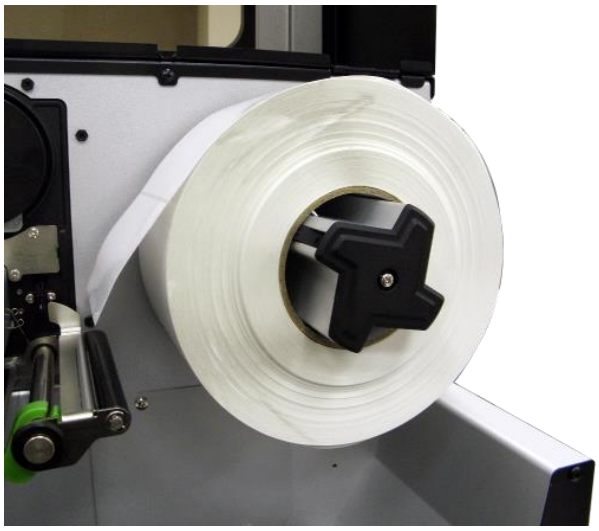
*** Ink coated inside wound**



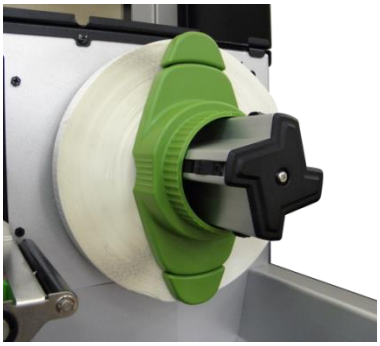
3.3 Loading the Media

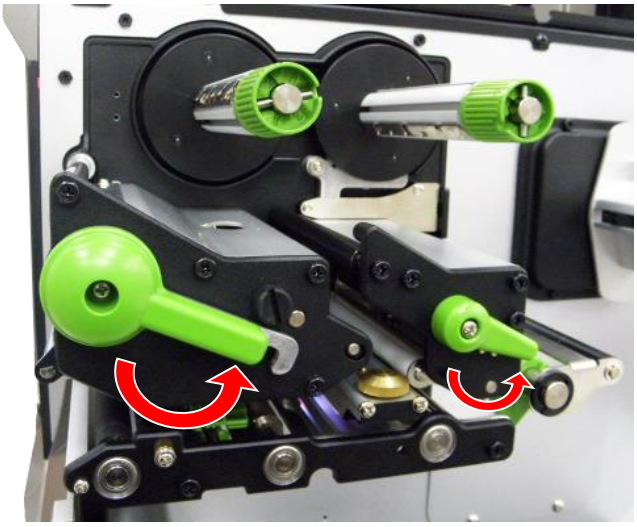
3.3.1 Loading the Media

1. Open the printer right side cover.



2. Place the roll of media on the label supply spindle.
   Note:
   For 1”~2.5” width media, please install label roll guard on the supply spindle to fix media.

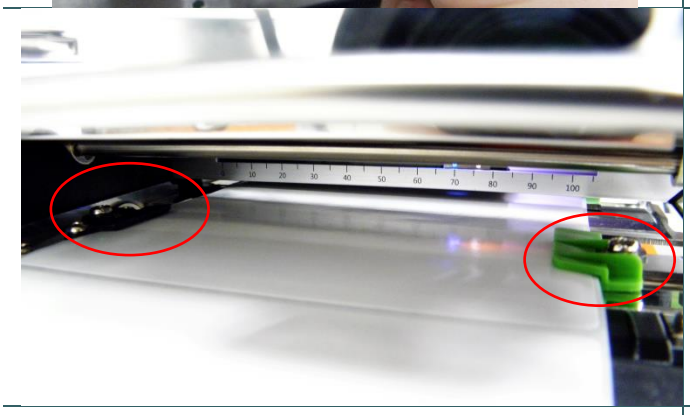




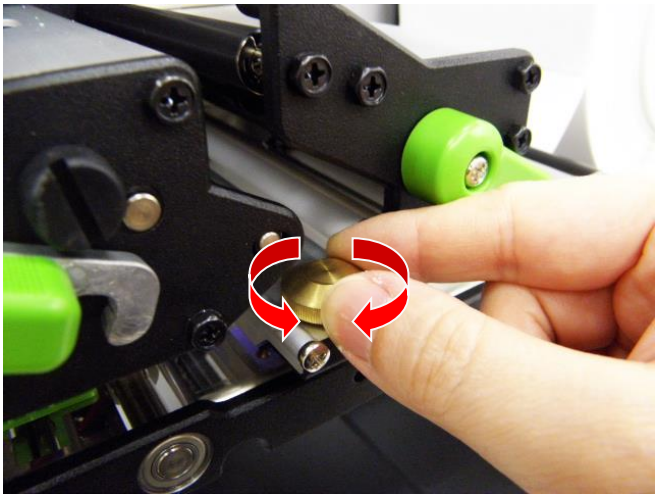
3. Push open the print head release lever and label guide bar release lever for loading media.

4. Pull the leading edge of the label forward through the media guide bar pass media sensor, and place the leading edge onto the platen roller.

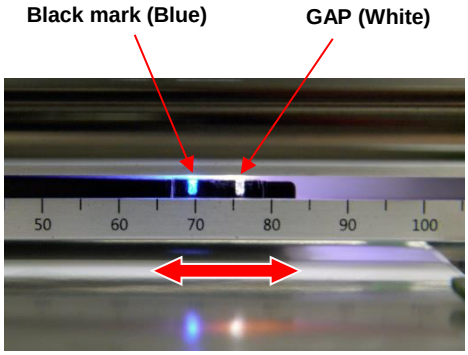
5. Adjust the rear label guide (green) to fit the label width.

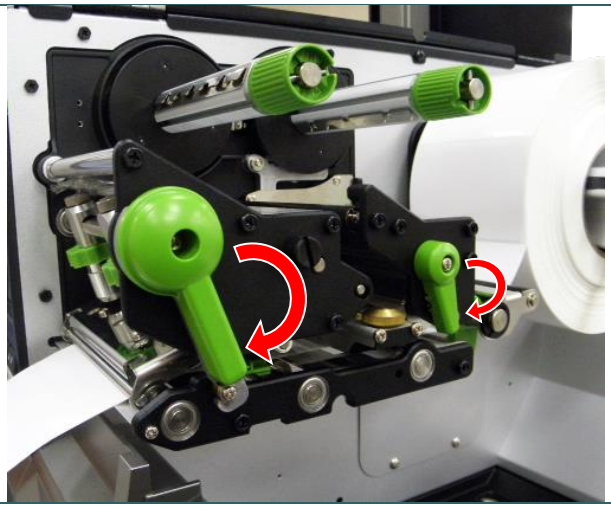


6. Adjust the front label guide (green) to fit the label width.



7. Move the media sensor by adjusting the media sensor position adjustment knob, make sure the gap or black mark sensor is at the location where media gap/black mark will pass through for sensing.

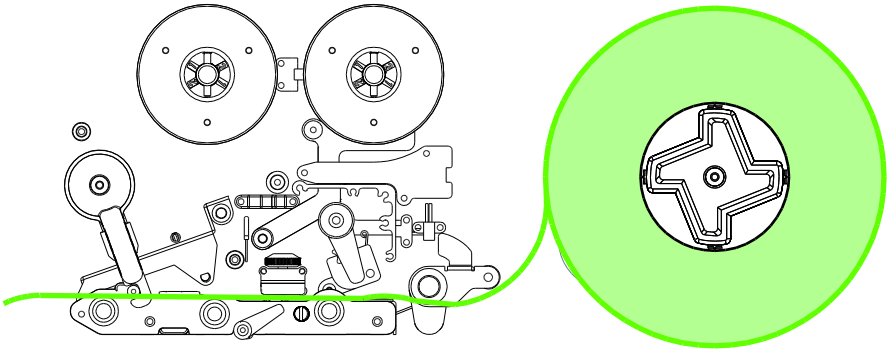




8. Close print head release lever and label guide bar release lever.
9. Set media sensor type and calibrate the selected sensor.

Note:
*** Please calibrate the gap/black mark sensor when changing media.**
*** Please refer to video on TSC YouTube or driver CD.**

Loading path for media

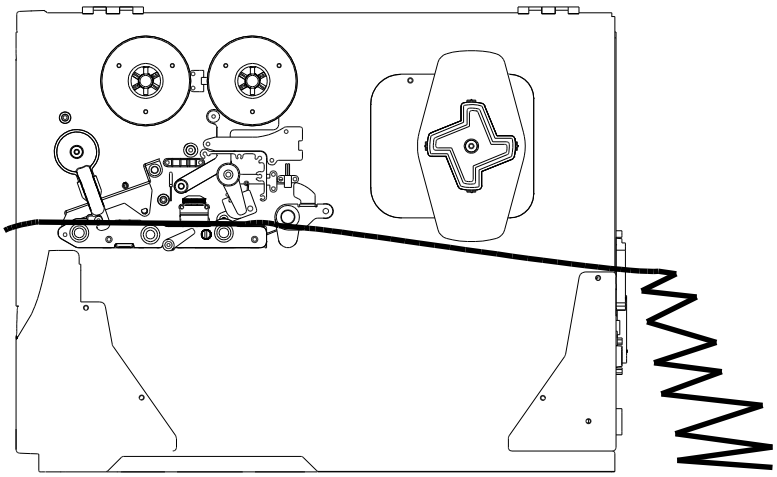


3.3.2 Loading the Fan-fold/External Media

1. Open the printer right side cover.
2. Insert the fan-fold media through the bottom or rear external label entrance chute.
3. Please refer to section 3.3.1 step 3~9 for loading media.

Note:
Please calibrate the gap/black mark sensor when changing media.

Loading path for fan-fold labels



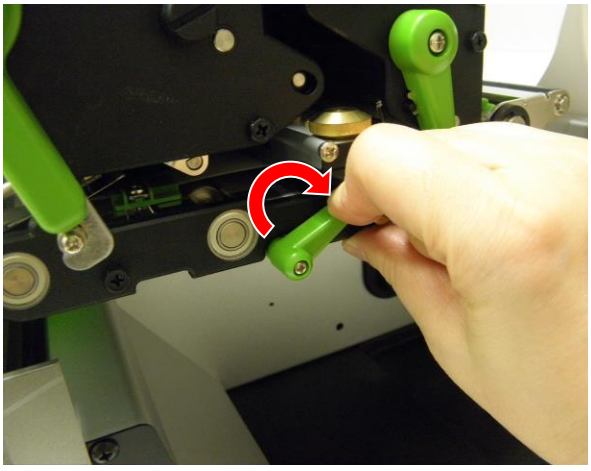
3.3.3 Loading Media in Peel-off Mode (Option)

1. Open the printer right side cover.
2. Please refer to section 3.3.1 step 3~9 for loading media.
3. Using the front display panel to do the calibration first and set the printer mode to peeler mode.

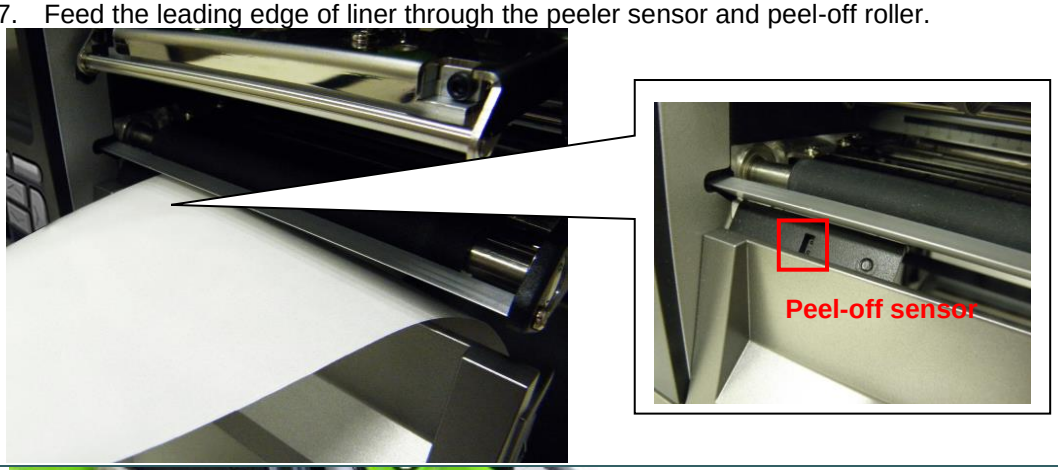
Note:
Please calibrate the gap/black mark sensor before loading media in peel-off mode to avoid paper jam.

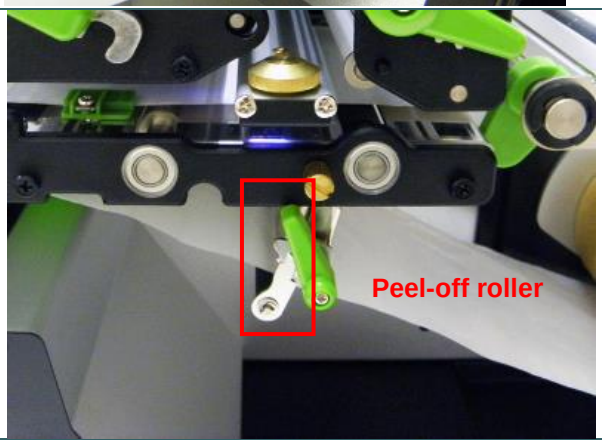
4. Open print head release lever and label guide bar release lever to pull approximately 650mm of label through the front of the printer.
5. Remove several labels to leave liner.

6. Install the paper core onto the liner rewind spindle. Open the peel-off roller release lever.

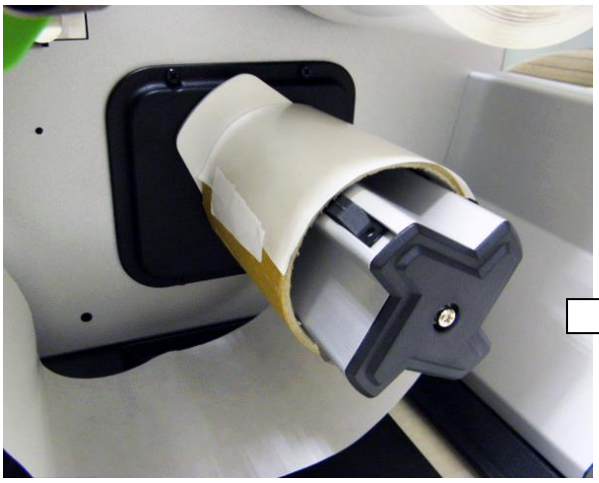


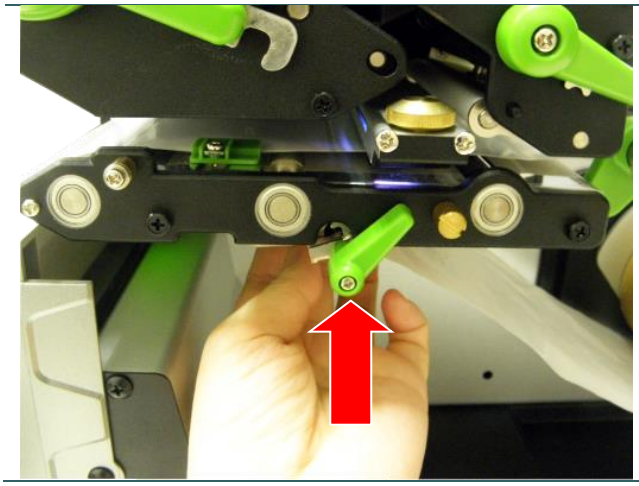
7. Feed the leading edge of liner through the peeler sensor and peel-off roller.



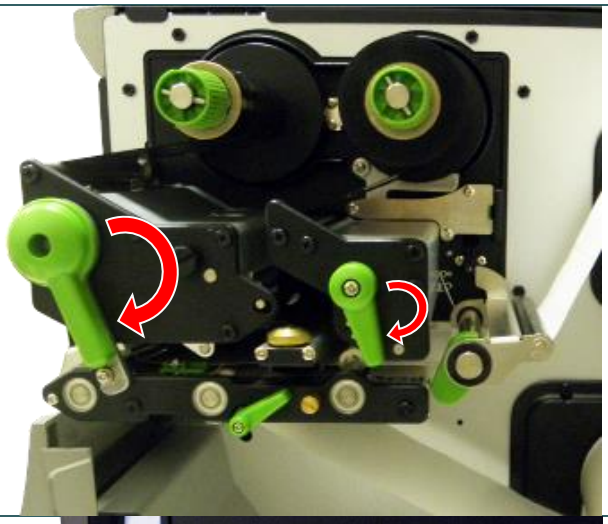


8. Wrap the liner onto the paper core and wind the spindle until the liner stretched properly.

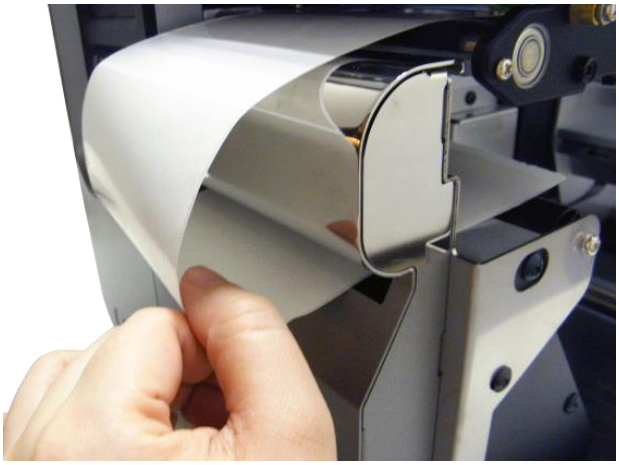


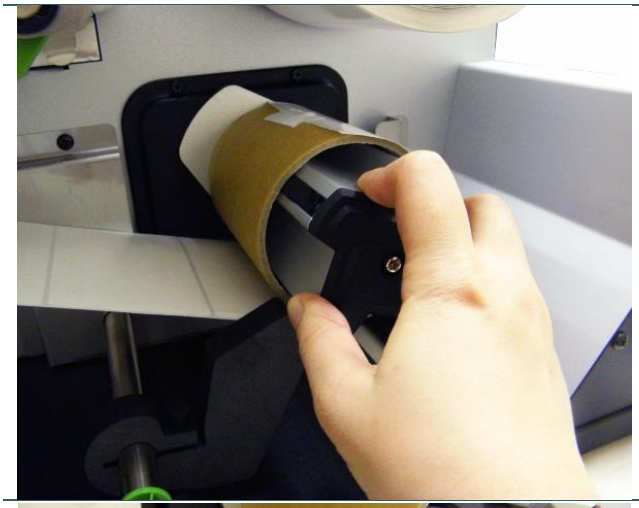
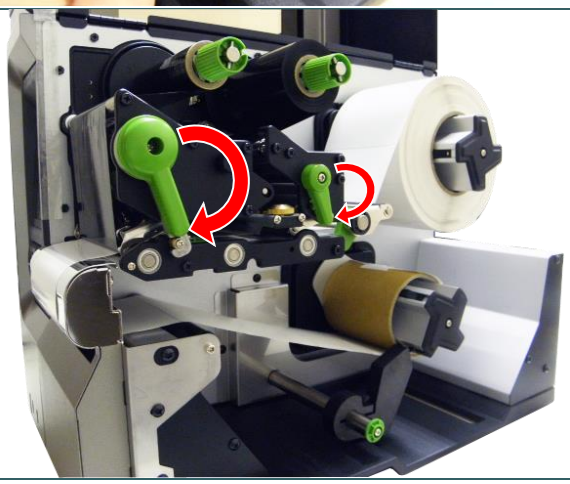


9. Press the middle of the peel-off roller to close the peel-off roller release lever.

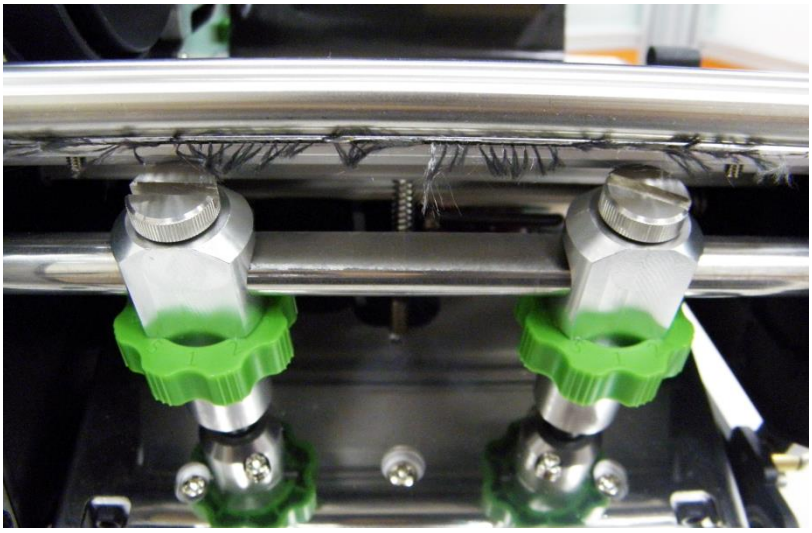
	10. Close print head release lever and label guide bar release lever.
	11. Press the FEED button to test.

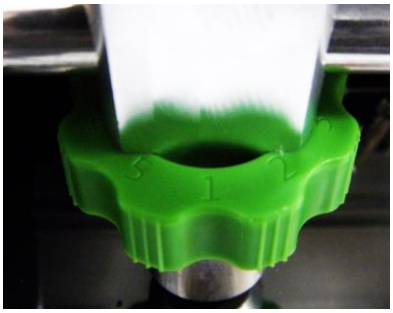
3.3.4 Loading Media in Rewind Mode (Option)

	1. Open the printer right side cover. 2. Please refer to section 3.3.1 step 3~9 for loading media. 3. Using the front display panel to do the calibration and set the printer mode to rewind mode.
	4. Install the paper core onto the rewind spindle.
	5. Open print head release lever and label guide bar release lever to pull approximately 650mm of label through the front of the printer. 6. Feed the leading edge of media through the redirect front panel as picture shown.

	7. Wrap the label onto the internal rewind spindle and stick the label onto the paper core. Wind the spindle until the label stretched properly.
	8. Adjust the supply holder guide to fit the supply width. Turn the screw to fix the supply holder guide.
	9. Close print head release lever and label guide bar release lever.

4. Moveable Print Head Pressure Adjustment Knob



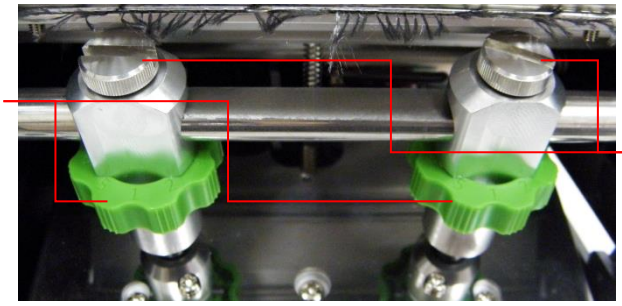


The moveable print head pressure adjustment knob has 5 levels of adjustment. Because the printer's paper alignment is to the left side of mechanism, different media widths require different pressure to print correctly. Therefore it may require to adjust the pressure knob to get your best print quality. For example, if the label width is 4", adjust both print head pressure adjustment knobs to the same level. If the label is less than 2" wide, increase the left side print head pressure by rotating the adjustment knob clockwise and decrease the right side pressure by rotating the adjustment knob counter-clockwise to level 1.

4.1 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

This printer has been fully tested before delivery. There should be no ribbon wrinkle presented on the media for general-purpose printing application. Ribbon wrinkle is related to the media thickness, print head pressure balance, ribbon film characteristics, print darkness setting…etc. In case the ribbon wrinkle happens, please follow the instructions below to adjust the printer parts.

<table>
<tr><td rowspan="3">Adjustable Printer Parts</td><td colspan="2">The print head pressure adjustment knob has 5 levels of settings. Clockwise direction adjustment is to increase the print head pressure. Counter Clockwise adjustment can decrease the print head pressure.

Print head pressure adjustment knobs
 
Fixing screws</td></tr>
<tr><td>Symptom</td><td>1. Wrinkle happens from label lower left to upper right direction (“ ´ ”)</td><td>2. Wrinkle happens from label lower right to upper left direction (“ ` ”)</td></tr>
<tr><td>Wrinkle Example</td><td> 

Feed direction
 
</td></tr>
<tr><td>If the wrinkle on the label starts from the lower left side to upper right side, please do following adjustment.

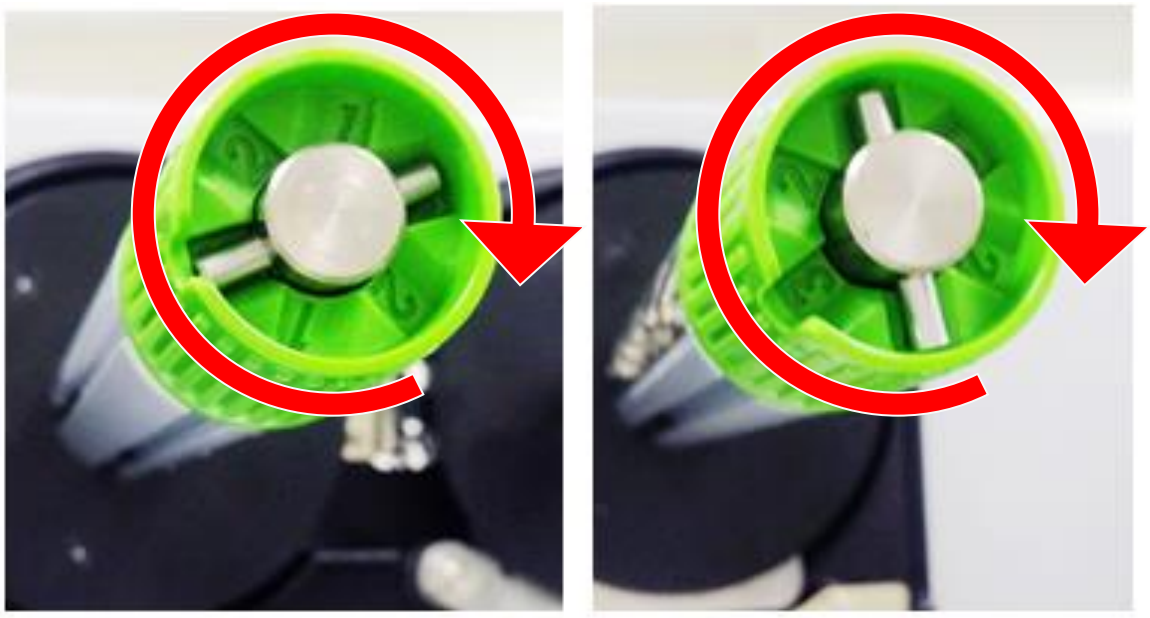
1. Decrease the right side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.

2. If the right side print head adjustment knob setting has been set to index 1 (the lowest pressure index), please increase the left side print head pressure.</td><td>If the wrinkle on the label starts from the lower right side to upper left side, please do following adjustment.

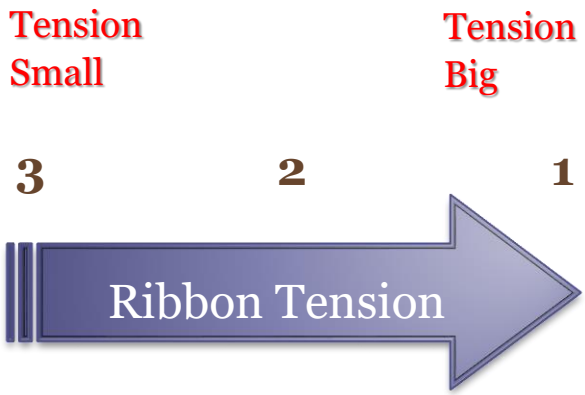
1. Decrease the left side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.

2. If the left side print head adjustment knob level has been set to index 1 (the lowest index), please increase the right side print head pressure.</td></tr>
</table>

5. Ribbon Tension Adjustment Knob



The ribbon tension adjustment knob has 3 levels of adjustment. Because the printer's ribbon alignment is to the left side of mechanism, different ribbon width require different tension to print correctly. Therefore, it may require to adjust the ribbon tension knob to get your best print quality. The biggest tension is #1. Adjust the tension by turning the knobs to suitable # (1, 2 or3) on both ribbon supply & rewind spindles, suggest the tension # to be the same on both spindles. Factory default tension is #1.

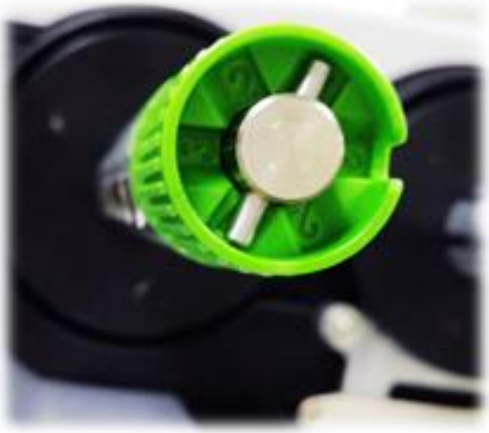


5.1 Suggestion of Ribbon Tension Adjustment

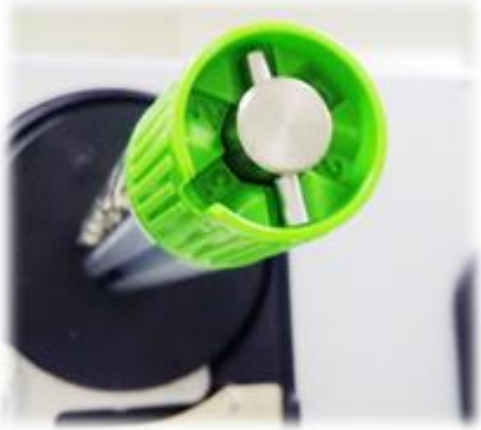
For 4” width ribbon

If the ribbon width is 4”, adjust both ribbon tension adjustment knobs to the #1 on ribbon supply & rewind spindles. (Factory default tension is #1)

Ribbon Rewind Spindle Tension # 1



Ribbon Supply Spindle Tension # 1



For 3” width ribbon

If the ribbon width is 3”, adjust both ribbon tension adjustment knobs to the #2 on ribbon supply & rewind spindles.

Ribbon Rewind Spindle Tension # 2

Ribbon Supply Spindle Tension # 2

For 2” width ribbon

If the ribbon width is 2”, adjust both ribbon tension adjustment knobs to the #3 on ribbon supply & rewind spindles.

Ribbon Rewind Spindle
Tension # 3

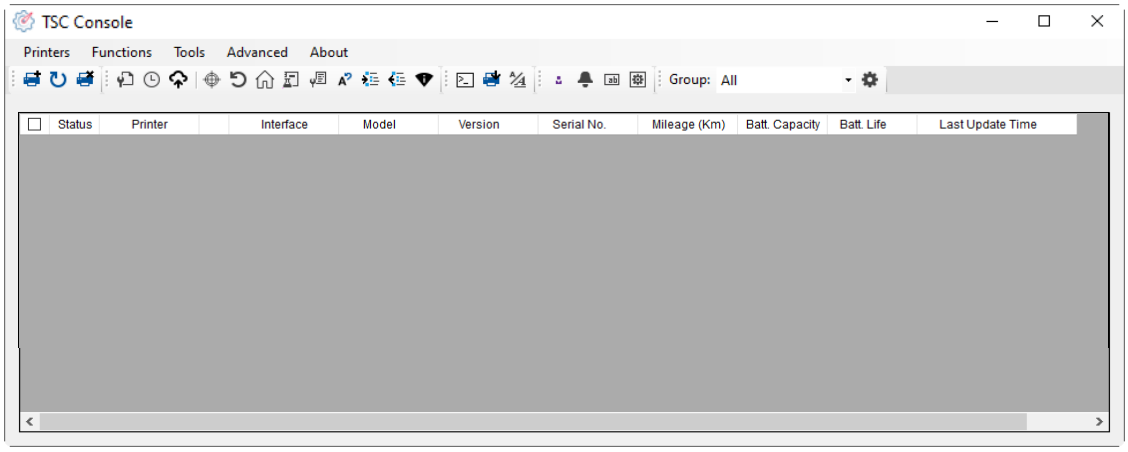
Ribbon Supply Spindle
Tension # 3

6. Printer Management Tool

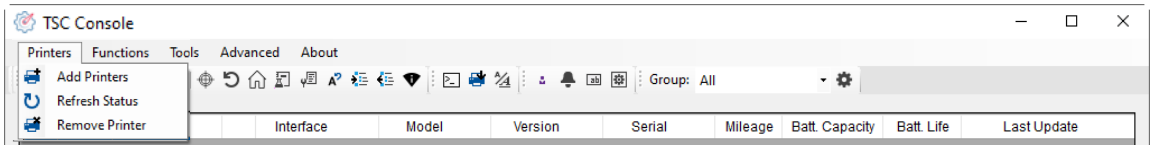
TSC Console combine the Printer Management, Diagnostic Tool, CommTool and Printer Webpage settings, which enables you to adjust printer's settings/status; change printers' settings; download graphics, fonts and firmware; create a printer bitmap font; and send additional commands to printers at the same time.

6.1 Start TSC Console

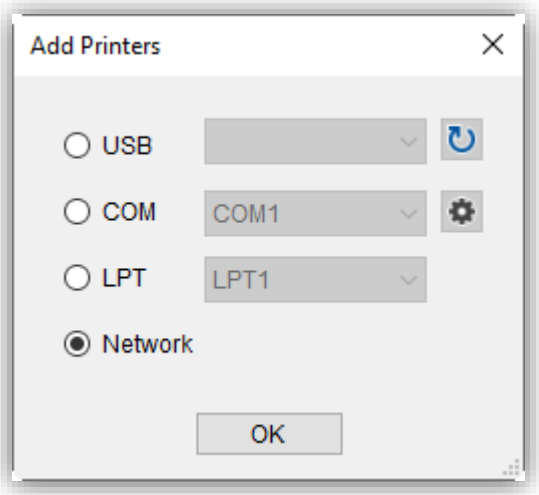
- Double click TSC Console icon to start the software.



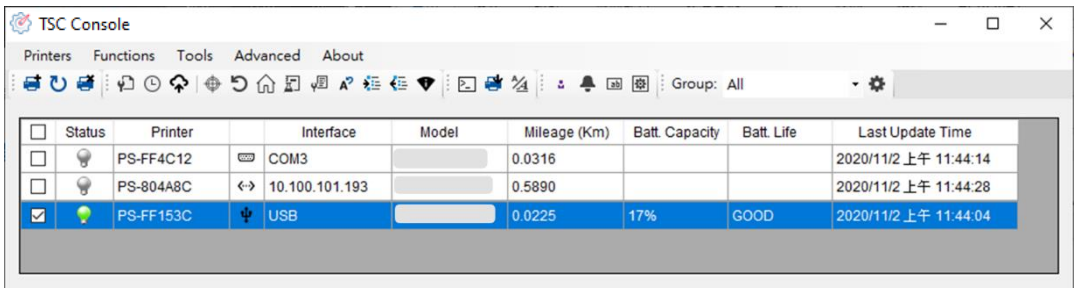
- Manually add the devices by clicking **Printer > Add Printers**.



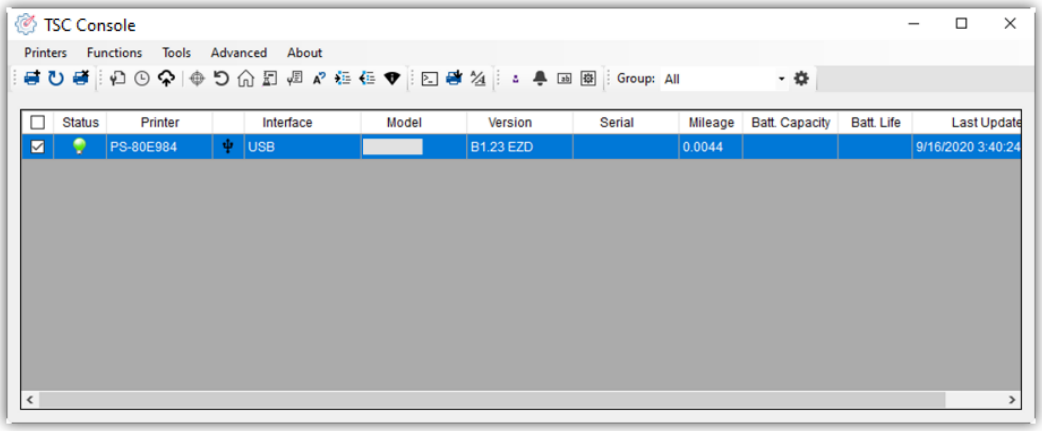
- Select the current interface of the printer.



- The printer will be added to **TSC Console**'s interface



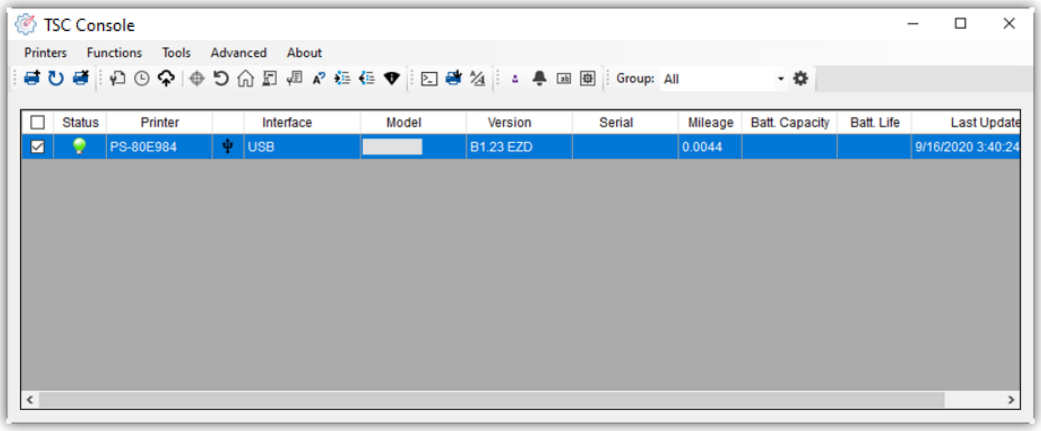
- Select the printer and set the settings.



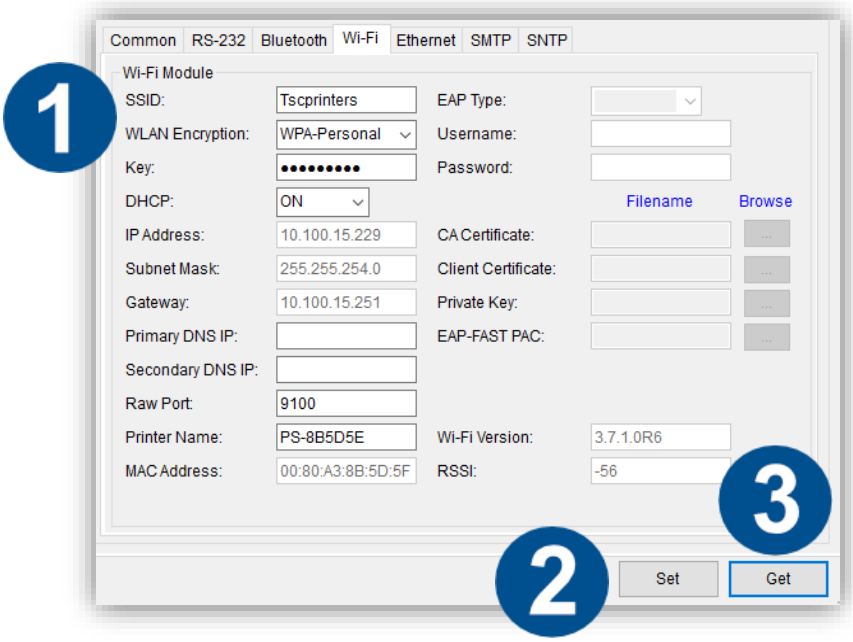
※ For more information, please refer to **TSC Console Users Manual**.

6.2 Set WiFi and Add to TSC Console Interface

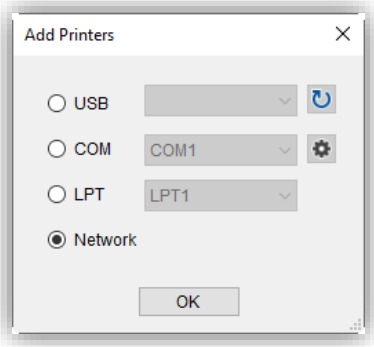
- Use **USB** or **COM Port** to set up the interface



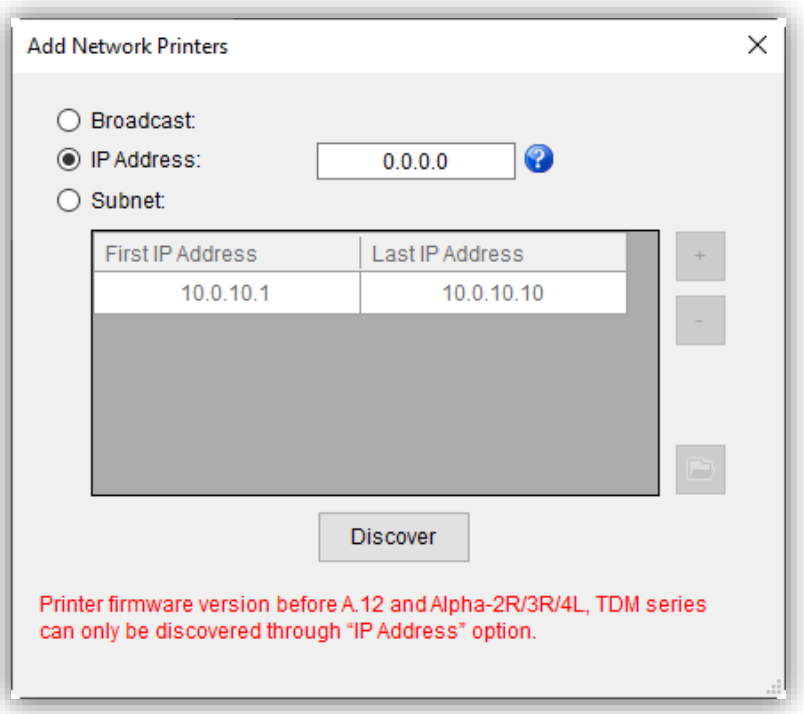
- Click **Get** to receive printer's info and finish WiFi setting by clicking **WiFi tab.**
- Click **Set** and the priter will reset.
- Click **Get** to ensure printer has connected to WiFi.



- Return to the **Add Printers** dialog box and click **Network.**



- Select the ways of searching WiFi devices.



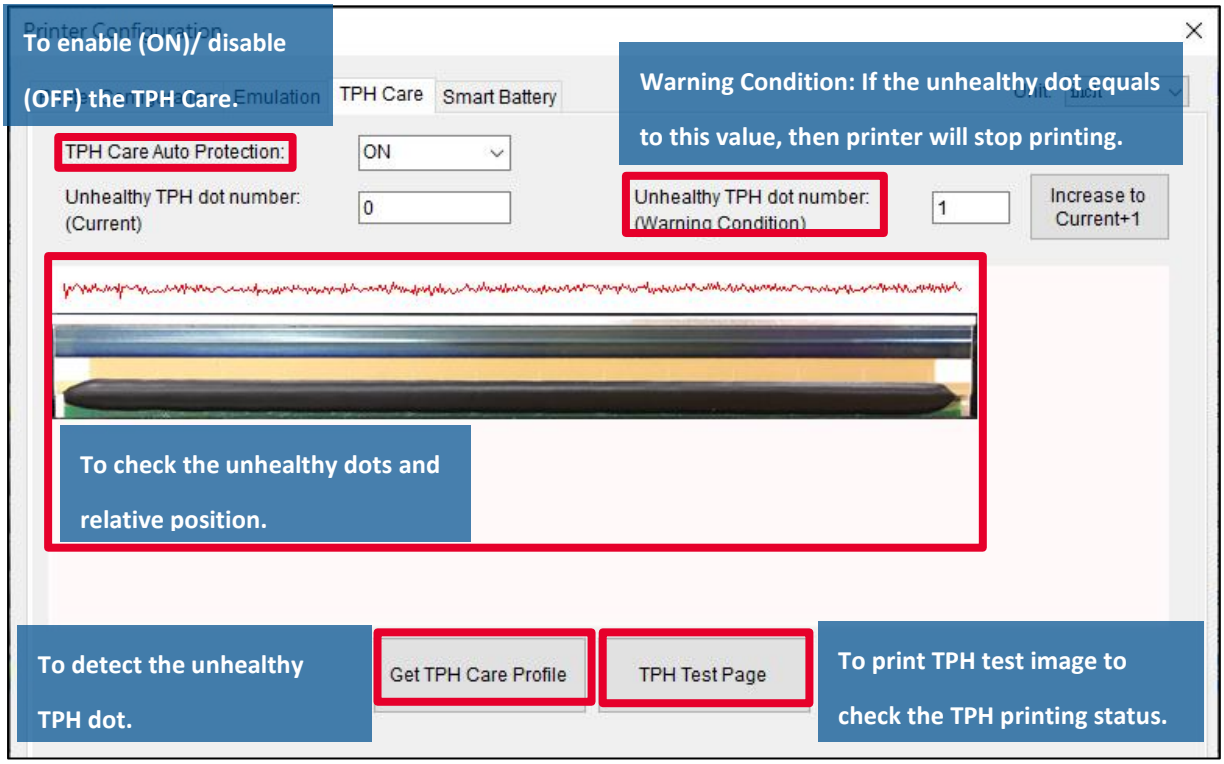
- Click **Discover** to find the printer.

※ **Printer firmware version before A.12 and Alpha-2R/3R/4L, TDM series can only be discovered through "IP Address" option.**

6.3 TPH Care

TPH Care could check condition of the print head. Set the failure dots threshold for indicating errors when the threshold is reached.

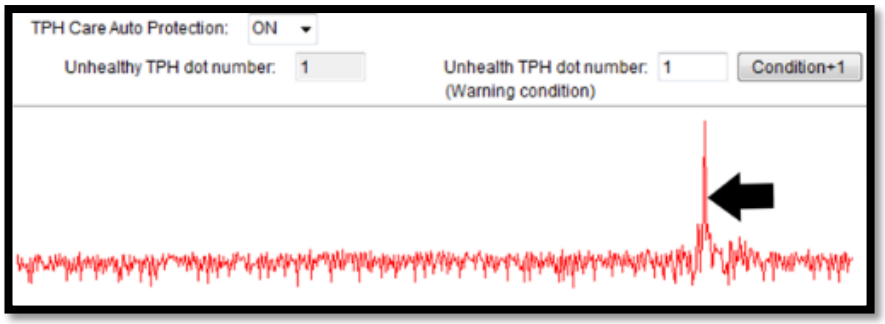
Note: If this option is gray, it means this printer does not support this function.



1. Enable the **TPH Care** function. (Note: Default is disabled/OFF.)
   Then click "**Get TPH care profile**" button and a diagram will show above.

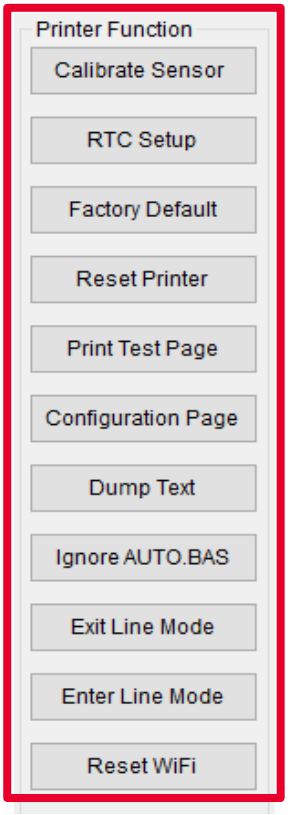
2. If the profile is flat, it means the print head is good. Check "**Unhealthy TPH dot number**". If the result is zero (0), it means the print head is good.

3. Bad dots are presented as a spike in the spectrum. The arrow below indicates the presence of potentially damaged dots and printer will stop printing.



6.5 Printer Function

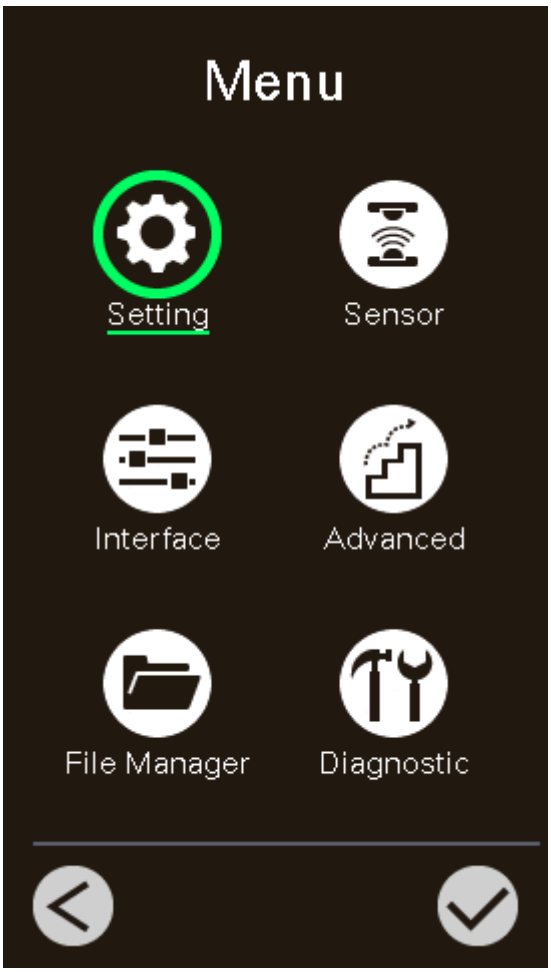
Printer Function could be found in **Printer Configuration**. "**Printer Function**" will be shown on the left side of the window.



Functions	Description
Calibrate Sensor	Detect media types and the size of the label
RTC Setup	Synchronize printer with Real Time Clock on PC
Factory Default	Initialize the printer to default settings
Reset Printer	Reboot printer
Print Test Page	Print test page according to the specified label size and sensor type.
Configuration Page	Print printer configurations
Dump Text	Activate the printer to dump mode
Ignore AUTO.BAS	Ignore AUTO.BAS file when printer boot up.
Exit Line Mode	Exit the line mode to page mode
Enter Line Mode	Leave page mode and enter line mode
Reset WiFi	Restore the WiFi settings to defaults.

7. LCD Menu Function

7.1 Enter the Menu



*** By touch display:**

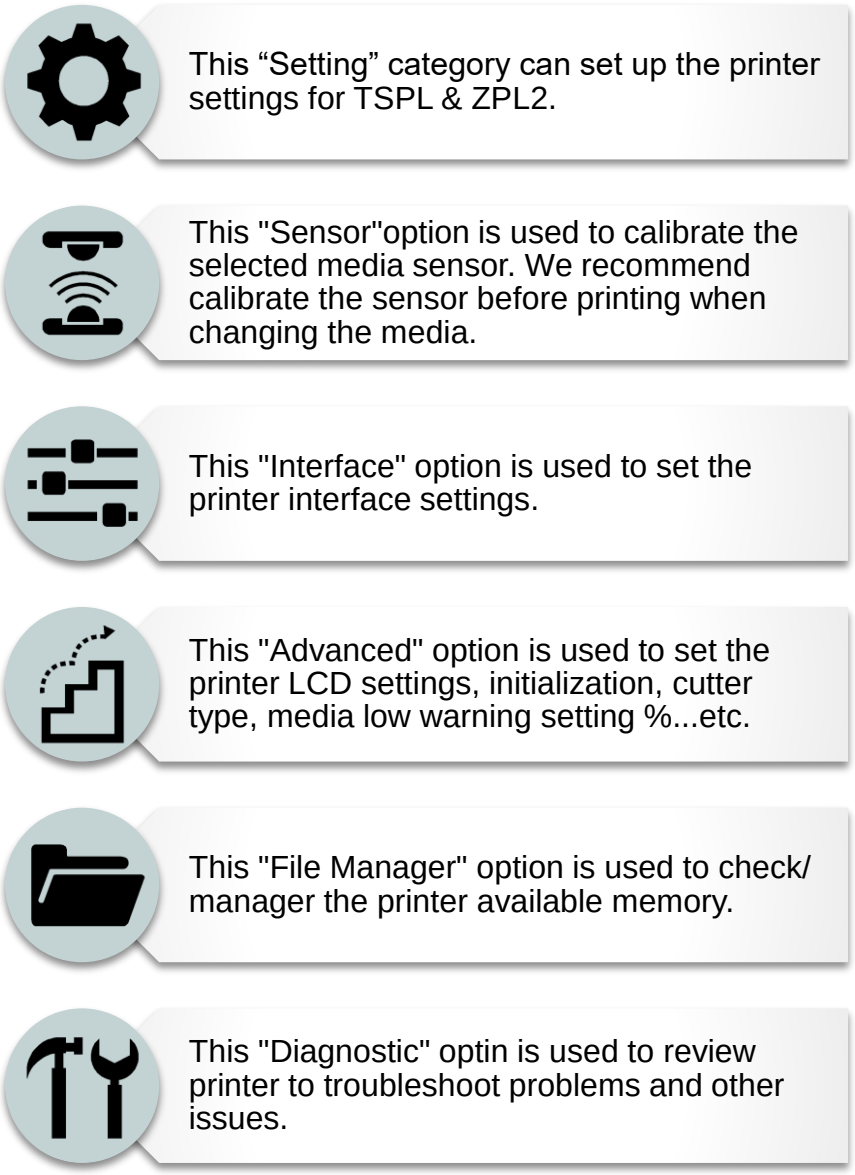
Tap the “Menu” icon on LCD main page to enter the menu.

*** By Keys:**

Use navigational keys to select the “Menu” icon (be marked in green) and press the left soft key button (means) to enter the menu.

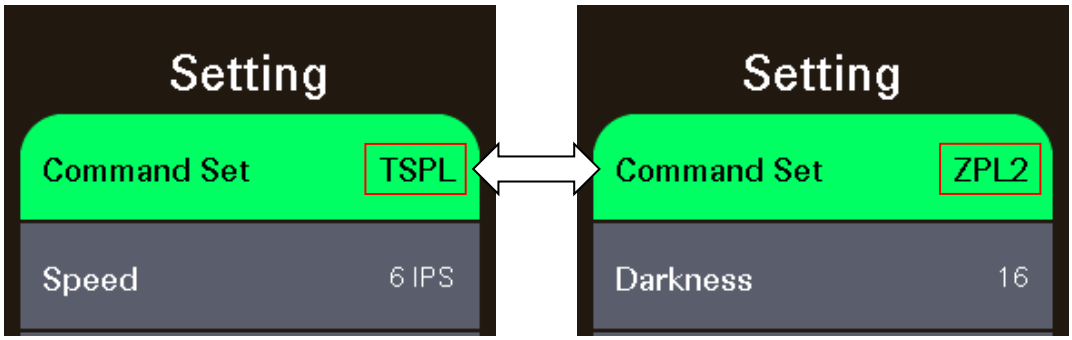
7.2 Menu Overview

There are 6 categories for the menu. You can easy to set the settings of printer without connecting the computer. Please refer to following sections for more details.



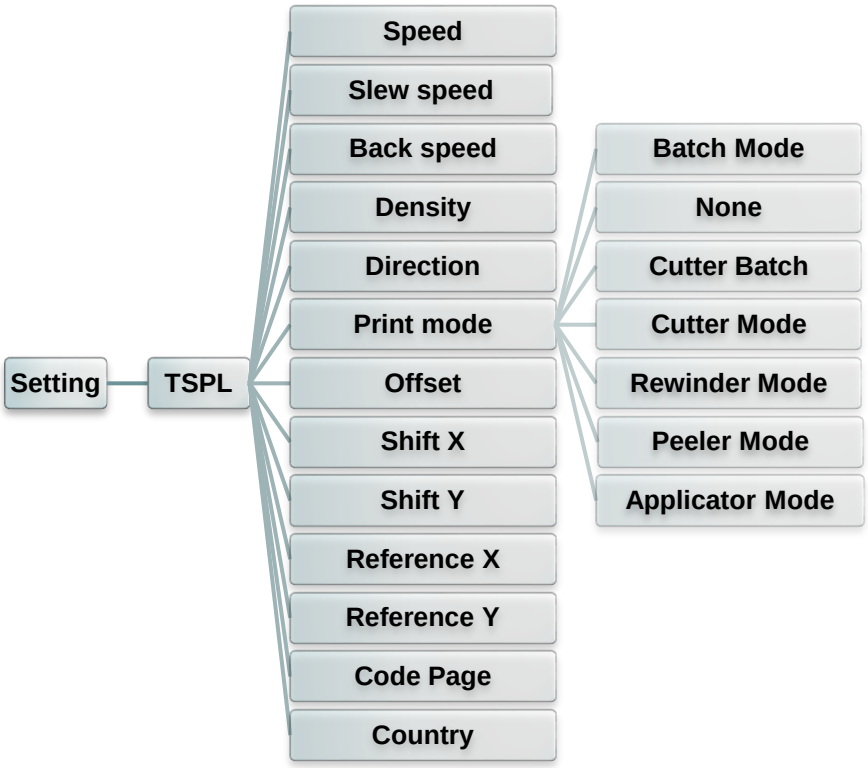
7.3 Setting

Tap the “Command Set” item on LCD to switch the TSPL and ZPL2. Or select the “Command Set” item by navigational key and press right soft key to switch the TSPL and ZPL2.

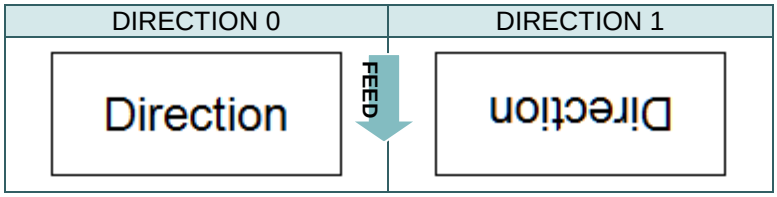


7.3.1 TSPL

This “TSPL” category can set up the printer settings for TSPL.



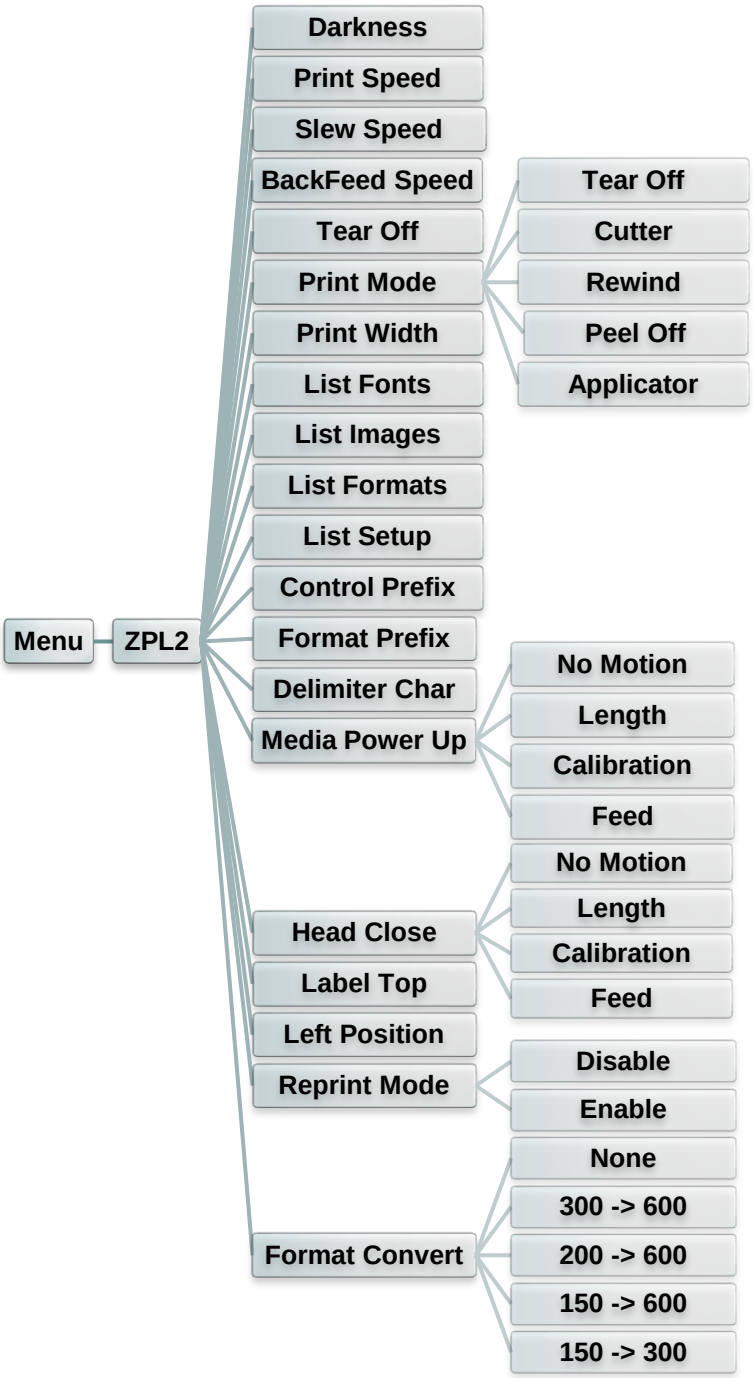
Item	Description	Default
Speed	Use this item to setup print speed. Available setting range is 2~14 for 203dpi, 2~12 for 300dpi and 1~6 for 600dpi.	**203 dpi: 6 300 dpi: 4 600 dpi: 3**
Slew Speed	Use this item to setup feed speed. Setting value is up to 8 ips.	**203 dpi: 6 ips**

<table>
<tr><td></td><td></td><td>300 dpi: 4 ips
600 dpi: 3 ips</td></tr>
<tr><td>Back Speed</td><td>Use this item to setup back feed speed. Setting value is up to 6 ips.</td><td>2 ips</td></tr>
<tr><td>Density</td><td>Use this option to setup printing darkness. The available setting range is from 0 to 15, and the step is 1. You may need to adjust your density based on selected media.</td><td>8</td></tr>
<tr><td>Direction</td><td>The direction setting value is either 1 or 0. Use this item to setup the printout direction.
 
</td><td>0</td></tr>
<tr><td>Print mode</td><td>This item is used to set the print mode. There are 6 modes as below,
<table>
<tr><th>Printer Mode</th><th>Description</th></tr>
<tr><td>None</td><td>Next label top of form is aligned to the print head burn line location. (Tear Off Mode)</td></tr>
<tr><td>Cutter Batch</td><td>Cut the label once at the end of the printing job.</td></tr>
<tr><td>Cutter Mode</td><td>Enable the label cutter mode.</td></tr>
<tr><td>Rewinder Mode</td><td>Enable the label rewinder mode.</td></tr>
<tr><td>Peeler Mode</td><td>Enable the label peel off mode.</td></tr>
<tr><td>Batch Mode</td><td>Once image is printed completely, label gap/black mark will be fed to the tear plate location for tear away.</td></tr>
<tr><td>Applicator Mode</td><td>Same as peeler mode but it doesn’t need peeler sensor, user could use this mode with GPIO.</td></tr>
</table></td><td>Batch Mode</td></tr>
<tr><td>Offset</td><td>This item is used to fine tune media stop location. Available setting value range is from -999 dots to 999 dots.</td><td>0 dot</td></tr>
<tr><td>Shift X</td><td rowspan="2">This item is used to fine tune print position. Available setting value range is from -999 dots to 999 dots.</td><td>0 dot</td></tr>
<tr><td>Shift Y</td><td>0 dot</td></tr>
<tr><td>Reference X</td><td rowspan="2">This item is used to set the origin of printer coordinate system horizontally and vertically. Available setting range is from 0 dot to 999 dots.</td><td>0 dot</td></tr>
<tr><td>Reference Y</td><td>0 dot</td></tr>
<tr><td>Code page</td><td>Use this item to set the code page of international character set.</td><td>950</td></tr>
<tr><td>Country</td><td>Use this option to set the country code. Available setting value range is from 1 to 358.</td><td>001</td></tr>
</table>

Note: If printing from enclosed software/driver, the software/driver will send out the commands, which will overwrite the settings set from the panel.

7.3.2 ZPL2

This “ZPL2” category can set up the printer settings for ZPL2.



<table>
<tr><th>Item</th><th>Description</th><th>Default</th></tr>
<tr><td>Density</td><td>Use this item to setup printing darkness. The available setting range is from 0 to 30. You may need to adjust your density based on selected media.</td><td>16</td></tr>
<tr><td>Print Speed</td><td>Use this item to setup print speed. Available setting range is 2~18 for 203dpi, 2~14 for 300dpi and 1.5 ~6 for 600dpi.</td><td>203 dpi: 6
300 dpi: 4
600 dpi: 3</td></tr>
<tr><td>Slew Speed</td><td>Use this item to setup feed speed. Setting value is up to 8 ips.</td><td>203 dpi: 6 ips
300 dpi: 4 ips
600 dpi: 3 ips</td></tr>
<tr><td>BackFeed Speed</td><td>Use this item to setup back feed speed. Setting value is up to 6 ips.</td><td>2 ips</td></tr>
<tr><td>Tear Off</td><td>This item is used to fine tune media stop location. Available setting value range is from -120~120 dots.</td><td>0 dot</td></tr>
<tr><td>Print mode</td><td>This item is used to set the print mode. There are 3 modes as below,

<table><tr><th>Printer Mode</th><th>Description</th></tr><tr><td>Tear Off</td><td>Next label top of form is aligned to the print head burn line location.</td></tr><tr><td>Peel Off</td><td>Enable the label peel off mode.</td></tr><tr><td>Cutter</td><td>Enable the label cutter mode</td></tr><tr><td>Rewind</td><td>Enable the label rewind mode</td></tr><tr><td>Applicator</td><td>The print engine prints a label when it receives a signal from the applicator.</td></tr></table></td><td>Tear Off</td></tr>
<tr><td>Print Width</td><td>This item is used to set print width. The available value range is 2 ~ 999 dots.</td><td>812</td></tr>
<tr><td>List Fonts</td><td>This feature is used to print current printer available fonts list to the label. The fonts stored in the printer’s DRAM, Flash or optional memory card.</td><td>N/A</td></tr>
<tr><td>List Images</td><td>This feature is used to print current printer available images list to the label. The images stored in the printer’s DRAM, Flash or optional memory card.</td><td>N/A</td></tr>
<tr><td>List Formats</td><td>This feature is used to print current printer available formats list to the label. The formats stored in the printer’s DRAM, Flash or optional memory card.</td><td>N/A</td></tr>
<tr><td>List Setup</td><td>This feature is used to print current printer configuration to the label.</td><td>N/A</td></tr>
<tr><td>Control Prefix</td><td>This feature is used to set control prefix character.</td><td>N/A</td></tr>
<tr><td>Format Prefix</td><td>This feature is used to set format prefix character.</td><td>N/A</td></tr>
<tr><td>Delimiter Char</td><td>This feature is used to set delimiter character.</td><td>N/A</td></tr>
</table>

<table>
<tr><td>Media Power Up</td><td>This option is used to set the action of the media when you turn on the printer.

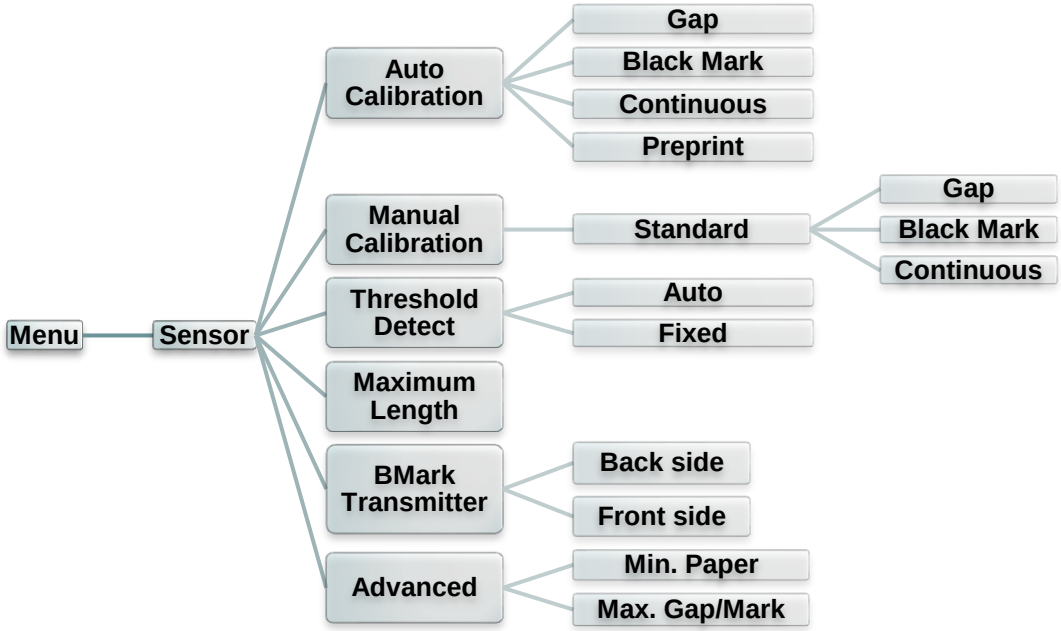
<table><tr><th>Selections</th><th>Description</th></tr><tr><td>Feed</td><td>Printer will advance one label</td></tr><tr><td>Calibration</td><td>Printer will calibration the sensor levels, determine length and feed label</td></tr><tr><td>Length</td><td>Printer determine length and feed label</td></tr><tr><td>No Motion</td><td>Printer will not move media</td></tr></table></td><td>No Motion</td></tr>
<tr><td>Head Close</td><td>This option is used to set the action of the media when you close the print head.

<table><tr><th>Selections</th><th>Description</th></tr><tr><td>Feed</td><td>Printer will advance one label</td></tr><tr><td>Calibration</td><td>Printer will calibration the sensor levels, determine length and feed label</td></tr><tr><td>Length</td><td>Printer determine length and feed label</td></tr><tr><td>No Motion</td><td>Printer will not move media</td></tr></table></td><td>No Motion</td></tr>
<tr><td>Label Top</td><td>This option is used to adjust print position vertically on the label. The range is -120 to +120 dots.</td><td>0</td></tr>
<tr><td>Left Position</td><td>This option is used to adjust print position horizontally on the label. The range is -9999 to +9999 dots.</td><td>0</td></tr>
<tr><td>Reprint Mode</td><td>When reprint mode is enabled, you can reprint the last label printer by pressing  button on printer’s control panel.</td><td>Disable</td></tr>
<tr><td>Format Convert</td><td>Selects the bitmap scaling factor. The first number is the original dots per inch (dpi) value; the second, the dpi to which you would like to scale.</td><td>None</td></tr>
</table>

Note: If printing from enclosed software/driver, the software/driver will send out the commands, which will overwrite the settings set from the panel.

7.4 Sensor

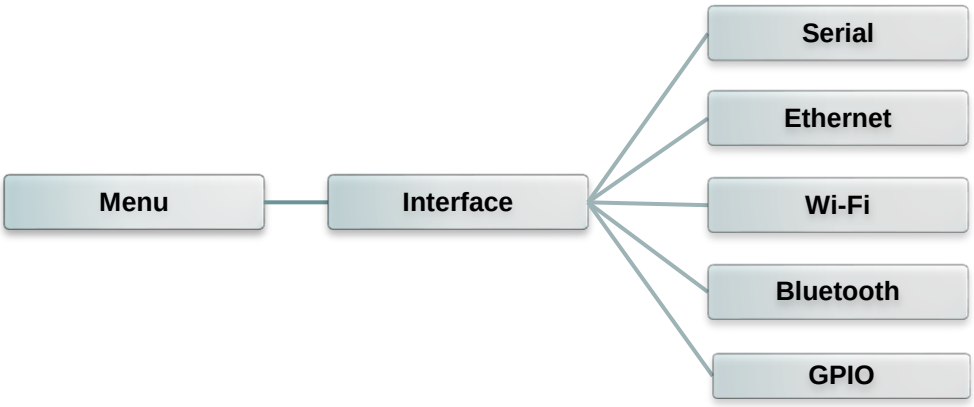
This option is used to calibrate the selected sensor. We recommend calibrate the sensor before printing when changing the media.



Item	Description	Default
Auto Calibration	This option is used to set the media sensor type and calibrate the selected sensor automatically. Printer will feed 2 to 3 gap labels to calibrate the sensor sensitivity automatically.	**N/A**
Manual setup	In case “Automatic” cannot apply to the media, please use “Manual” function to set the paper length and gap/bline size then scan the backing/mark to calibrate the sensor sensitivity. **Note: The “Media Capacity” item is used to calibrate the media capacity sensor %.**	**N/A**
Threshold Detect	This option is used to set sensor sensitivity in fixed or auto.	**Auto**
Maximum Length	This option is used to set the maximum length for label calibration.	**254 mm**
BMark Transmitter	Control black mark sensor’s light to face up or face down	**Back side**
Advanced	This function can set the minimum paper length and maximum gap/bline length for auto-calibrate the sensor sensitivity.	**0 mm**

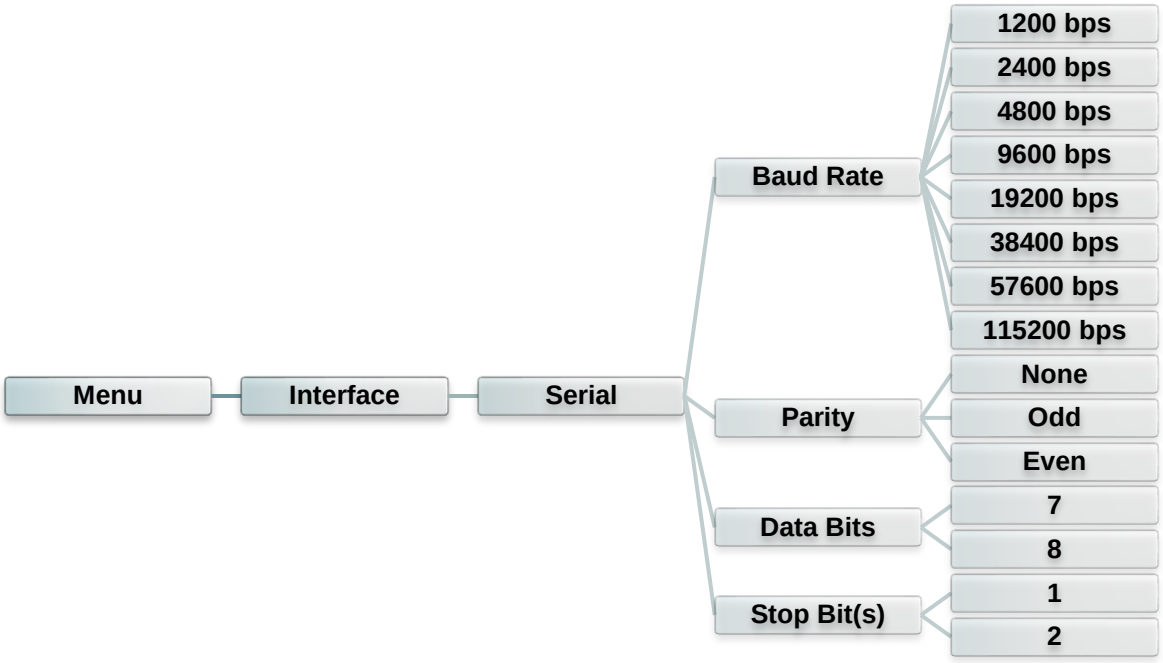
7.5 Interface

This option is used to set the printer interface settings.



7.5.1 Serial Comm.

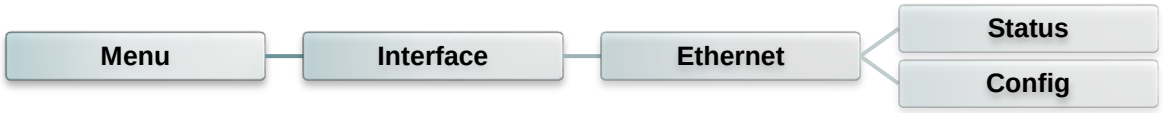
This option is used to set the printer RS-232 settings.



Item	Description	Default
Baud Rate	This item is used to set the RS-232 baud rate.	**9600**
Parity	This item is used to set the RS-232 parity.	**None**
Data Bits	This item is used to set the RS-232 Data Bits.	**8**
Stop Bit(s)	This item is used to set the RS-232 Stop Bits.	**1**

7.5.2 Ethernet

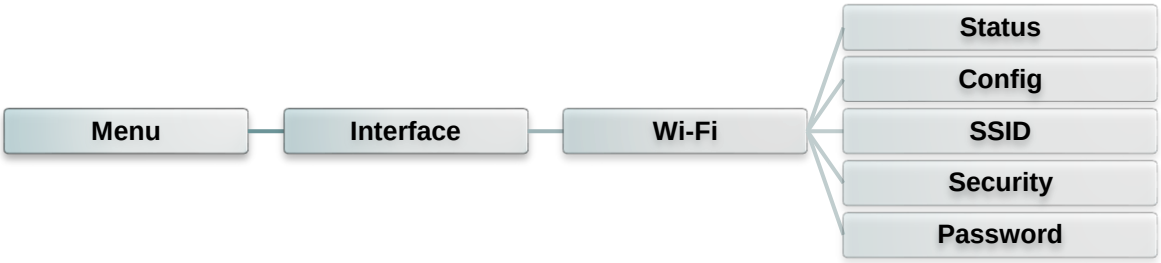
Use this menu to configure internal Ethernet configuration check the printer's Ethernet module status, and reset the Ethernet module.



Item	Description	Default
Status	Use this menu to check the Ethernet IP address and MAC setting status.	**N/A**
Config	**DHCP:** This item is used to ON or OFF the DHCP (Dynamic Host Configuration Protocol) network protocol. **Static IP:** Use this menu to set the printer's IP address, subnet mask and gateway.	**DHCP**

7.5.3 Wi-Fi

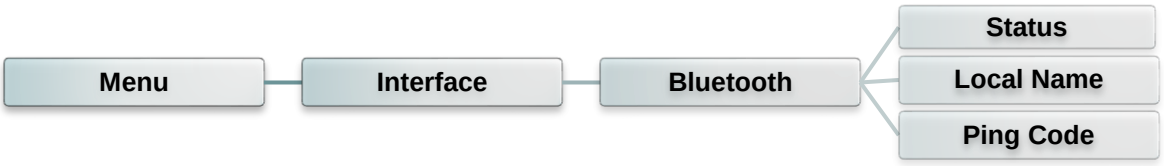
This option is used to set the printer Wi-Fi settings.



Item	Description	Default
Status	Use this menu to check the Wi-Fi IP address, MAC setting status….	**N/A**
Config	**DHCP:** This item is used to ON or OFF the DHCP (Dynamic Host Configuration Protocol) network protocol. **Static IP:** Use this menu to set the printer's IP address, subnet mask and gateway.	**DHCP**
SSID	Use this menu to set the Wi-Fi SSID	**N/A**
Security	Use this menu to set the Wi-Fi security	**Open**
Password	Use this menu to set the Wi-Fi password	**N/A**

7.5.4 Bluetooth

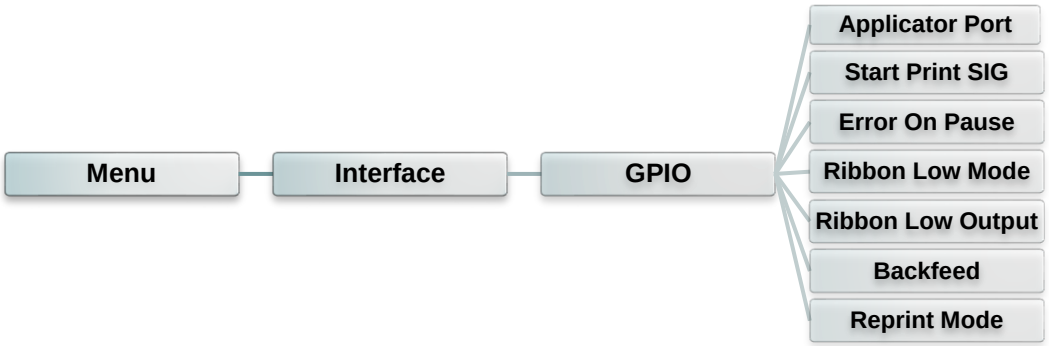
This option is used to set the printer Bluetooth settings.

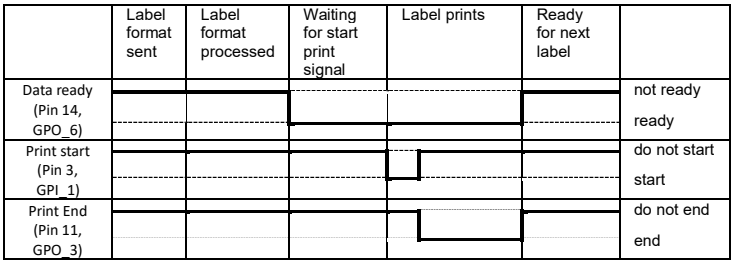
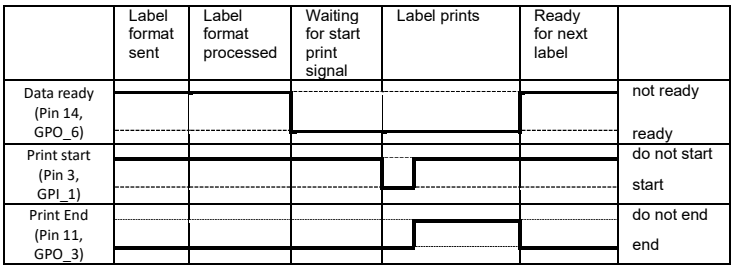
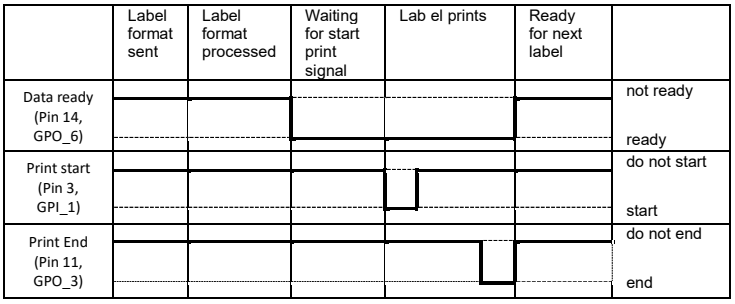
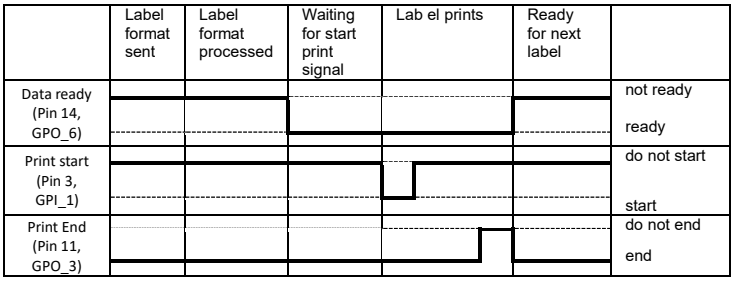


Item	Description	Default
Status	Use this menu to check the Bluetooth status.	**N/A**
Local Name	This item is used to set the local name for Bluetooth.	**RF-BHS**
Ping Code	This item is used to set the local ping code for Bluetooth.	**0000**

7.5.5 GPIO

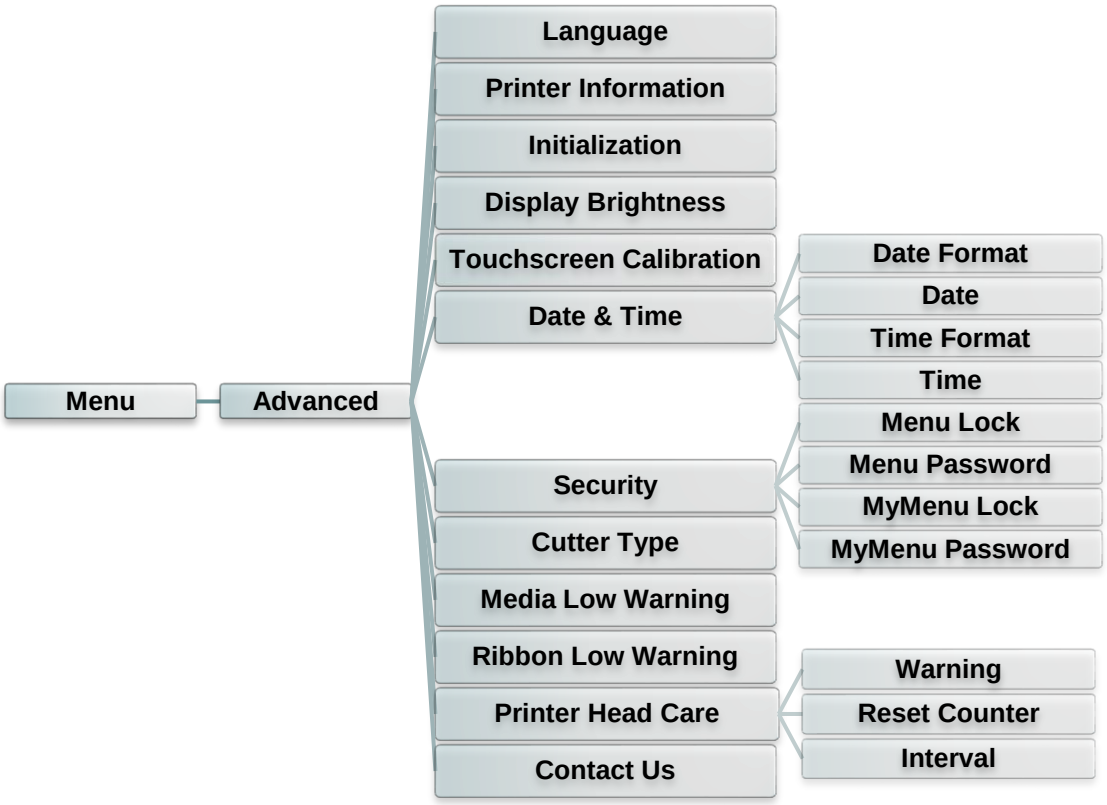
This option is used to set the print engine GPIO settings. (Applicator interface with DB15F connector +5V I/O)



<table>
<tr><th>Item</th><th>Description</th><th>Default</th></tr>
<tr><td>Applicator Port</td><td>
This option is used to set the GPO_3 signal when PRINT END.
<table>
<tr><th>Selections</th><th>Description</th></tr>
<tr><td>Off</td><td>The applicator port is off.</td></tr>
<tr><td>Mode 1</td><td> 
</td></tr>
<tr><td>Mode 2</td><td> 
</td></tr>
<tr><td>Mode 3</td><td> 
</td></tr>
<tr><td>Mode 4</td><td> 
</td></tr>
<tr><td>Customized</td><td>Use GPIO setting commands for customized settings. For GPIO command, please refer to TSPL/TSPL2 programming manual.</td></tr>
</table>
</td><td>Off</td></tr>
</table>

Start Print SIG	This determines the trigger conditions for the printer to control GPI 1 and GPI4.	**Level mode**
Error On Pause	When this option is enabled and the printer is paused, the error signal (GPO_2) is LOW.	**Enable**
Ribbon Low Mode	When this option is enabled and the printer is Low Ribbon (GPO_1), the printer will generate a warning.	**Enable**
Ribbon Low Output	When the Ribbon Low Mode feature is enabled, this parameter determines if the output signal on Pin 9 (GPO_1) is HIGH or LOW.	**Active High**
Backfeed	This determines the timing of pullback.	**Default**
Reprint Mode	When this option is disabled, the printer reprint function (GPI_4) will be invalid.	**Disable**

7.6 Advanced

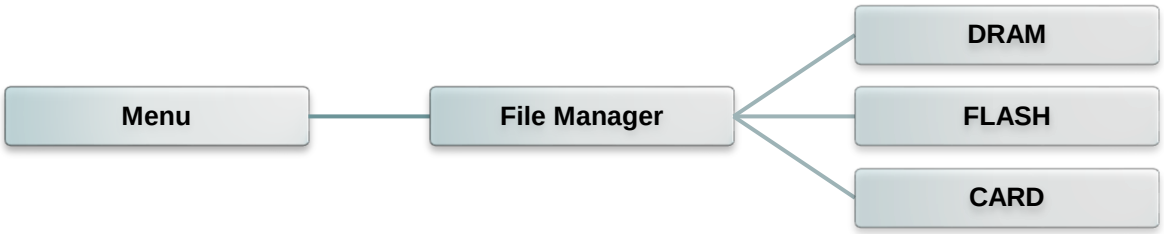


Item	Description	Default
Language	This item is used to setup the language on display.	**English**
Printer Information	This feature is used to check the printer serial number, printed mileage (m), printed labels (pcs) and cutting counter.	**N/A**
Initialization	This feature is used to restore printer settings to defaults.	**N/A**
Display Brightness	This item is used to setup the brightness for display. (Range 0~100)	**50**

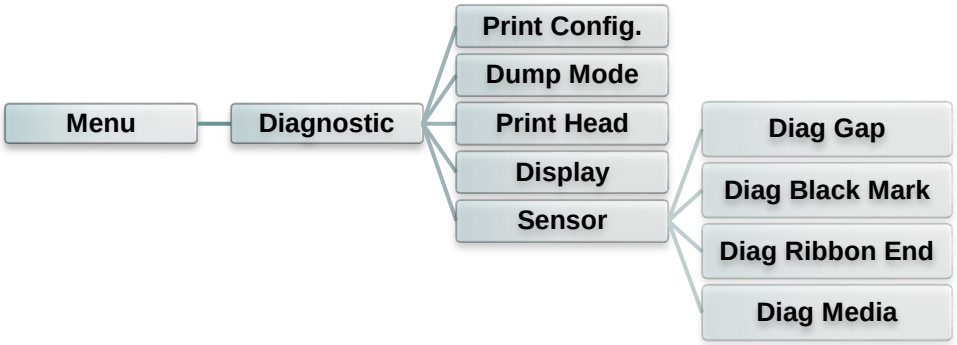
<table>
<tr><td>Touchscreen Calibration</td><td>This feature is used to calibrate the touchscreen for best result.</td><td>N/A</td></tr>
<tr><td>Date & Time</td><td>This item is used to setup the date and time on display.</td><td>N/A</td></tr>
<tr><td>Security</td><td>This feature is used to set the password for locking the menu or favorites. The default password is 8888.</td><td>Disable</td></tr>
<tr><td>Cutter Type</td><td>This item is used to set the cutter type.</td><td>Guillotine</td></tr>
<tr><td>Media Low Warning</td><td>This item is used to set the warning for media low %. For example, if setting value is 10%, when media capacity was lower than 10%, the % will be shown in red.</td><td>10%</td></tr>
<tr><td>Ribbon Low Warning</td><td>This item is used to set the warning for ribbon low. For example, if setting value is 30m, when ribbon capacity was lower than 30m, the will be shown in red.</td><td>30m</td></tr>
<tr><td>Printer Head Care</td><td>This item is used to check print head status and to set the settings for print head care.<table><tr><th>Item</th><th>Description</th></tr><tr><td>Warning</td><td>This item is used to enable/disable the print head clean warning. If enable this feature, once print head has been reached the setting mileage then the warning icon will be shown on printer UI for reminding user to clean the print head. The default setting is disable.</td></tr><tr><td>Reset Counter</td><td>This item is used to reset the print head clean warning mileage after cleaned print head.</td></tr><tr><td>Interval</td><td>This item is used to set the expected mileage for reminding user to clean the print head. You have to enable the “TPH warning lock” for use. The default setting is 1 km.</td></tr></table></td><td>N/A</td></tr>
<tr><td>Contact us</td><td>This feature is used to check the contact information for tech support service</td><td>N/A</td></tr>
</table>

7.7 File Manager

This feature is used to check the printer available memory, show the files list, delete the files or run the files that saved in the printer DRAM/Flash/Card memory.



7.8 Diagnostic



Item	Description
Print Config.	This feature is used to print current printer configuration to the label. On the configuration printout, there is a print head test pattern, which is useful for checking if there is any dot damage on the print head heater element.

Self-test printout

```
------------------------------
     SYSTEM INFORMATION
------------------------------
      MODEL: XXXXXX
   FIRMWARE: X.XX
   CHECKSUM: XXXXXXXX
        S/N: XXXXXXXXXXX
        TCF: NO
       DATE: 1970/01/01
       TIME: 00:04:18
 NON-RESET: 110      m (TPH)
      RESET: 110      m (TPH)
 NON-RESET: 0          (CUT)
      RESET: 0          (CUT)
------------------------------


------------------------------
     PRINTING SETTING
------------------------------
      SPEED: 5 IPS
    DENSITY: 8.0
      WIDTH: 4.00 INCH
     HEIGHT: 4.00 INCH
        GAP: 0.00 INCH
  INTENSION: 5
   CODEPAGE: 850
    COUNTRY: 001
------------------------------


------------------------------
        Z SETTING
------------------------------
   DARKNESS: 16.0
      SPEED: 4 IPS
      WIDTH: 4.00 INCH
      TILDE: 7EH  (~)

      CARET: 5EH  (^)
  DELIMITER: 2CH  (,)
   POWER UP: NO MOTION
 HEAD CLOSE: NO MOTION
------------------------------


------------------------------
       RS232 SETTING
------------------------------
       BAUD: 9600
     PARITY: NONE
   DATA BIT: 8
   STOP BIT: 1
------------------------------
```

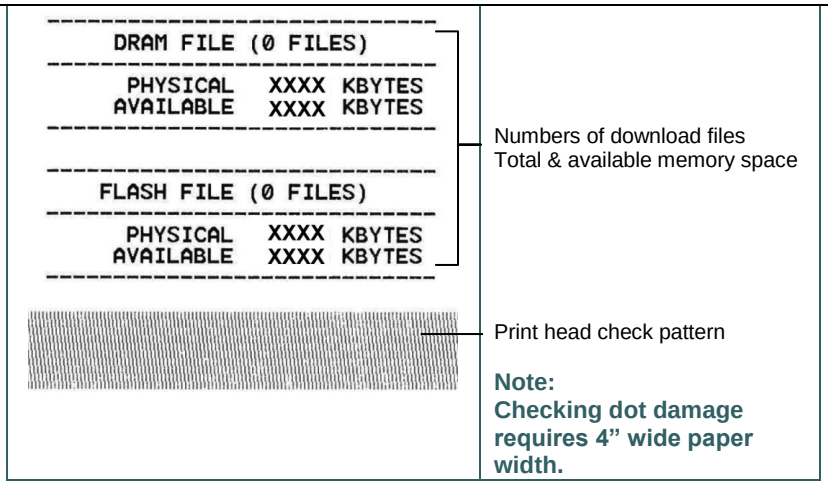
Model name
F/W version
Firmware checksum
Printer S/N
Configuration file
System date
System time
Printed mileage (meter)
Cutting counter

Print speed (inch/sec)
Print darkness
Label size (inch)
Gap distance (inch)
Gap/black mark sensor intension
Code page
Country code

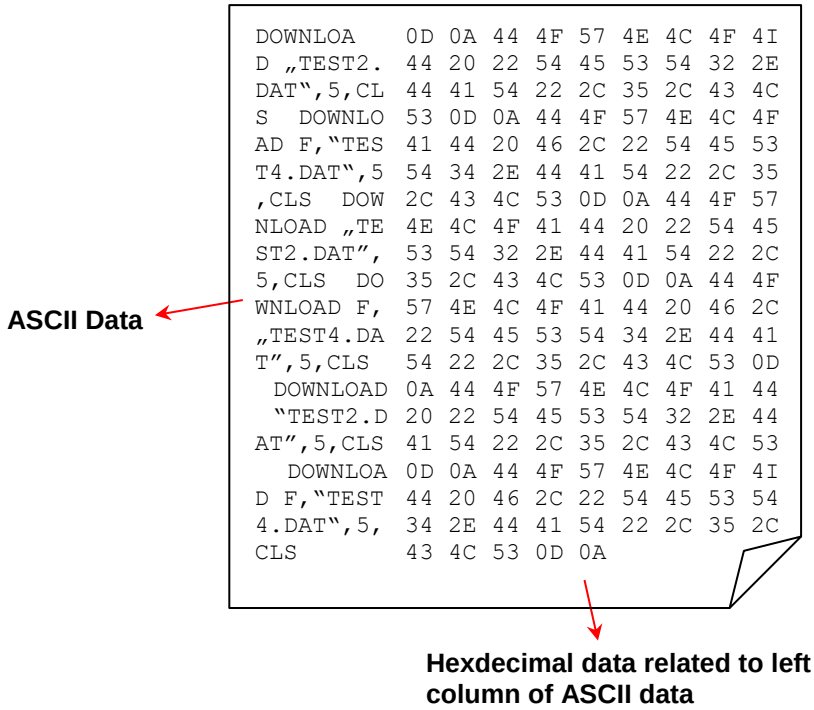
ZPL setting information
Print darkness
Print speed (inch/sec)
Label size
Control prefix
Format prefix
Delimiter prefix
Printer power up motion
Printer head close motion

Note:
ZPL is emulating for Zebra® language.

RS232 serial port configuration

<table>
<tr><td></td><td>


</td></tr>
<tr><td>Dump Mode</td><td>Captures the data from the communications port and prints out the data received by printer. In the dump mode, all characters will be printed in 2 columns. The left side characters are received from your system and right side data are the corresponding hexadecimal value of the characters. It allows users or engineers to verify and debug the program.



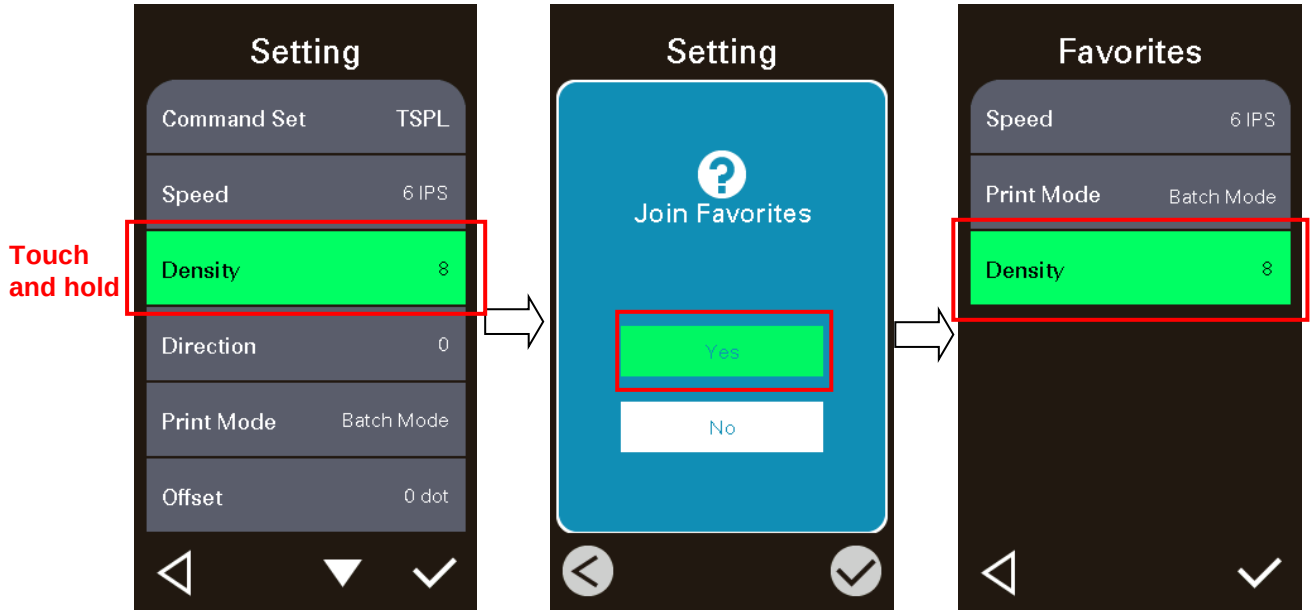
Note:
Dump mode requires 4” wide paper width.</td></tr>
<tr><td>Print Head</td><td>This feature is used to check print head’s temperature and bad dots.</td></tr>
<tr><td>Display</td><td>This feature is used to check LCD’s color state.</td></tr>
<tr><td>Sensor</td><td>This feature is used to check sensors intensity and reading state.</td></tr>
</table>

7.9 Favorites

This feature can create customized menu list. You can organize the commonly used setting options in “Favorites”.

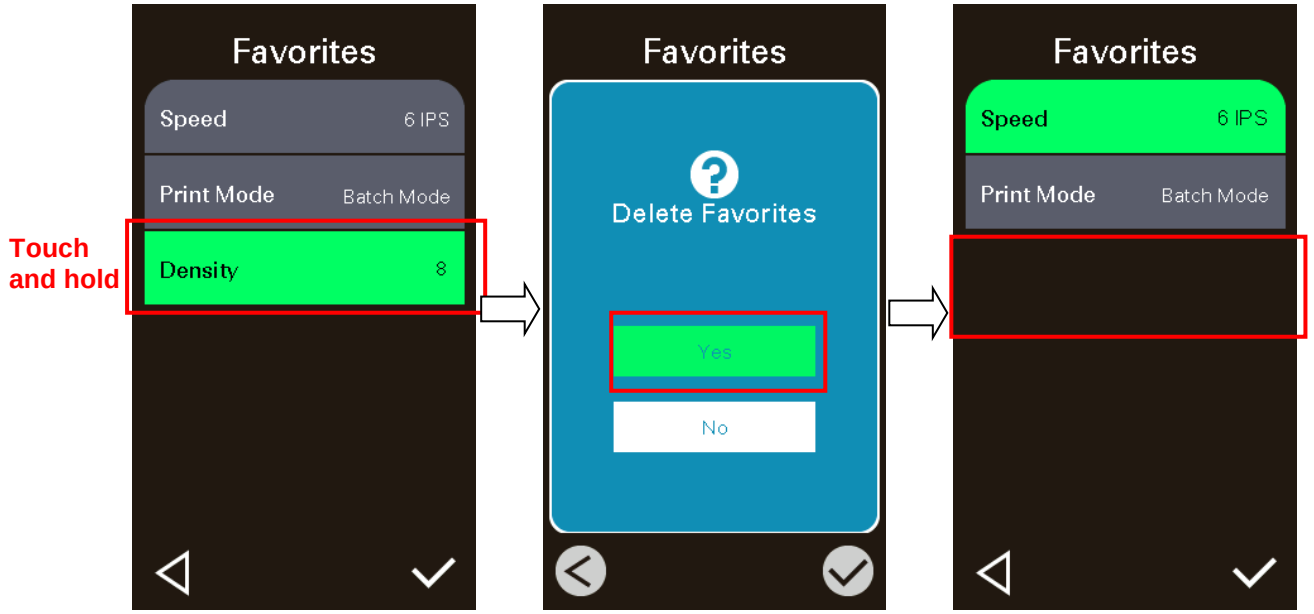
- **Get organized “Favorites” list**

  Touch and hold a favorite option item, unit “Join Favorites” setting screen pops up. Tap “Yes” to add this setting option item to “Favorites” list.



- **Delete option item**

  Touch and hold the option item, unit “Delete Favorites” setting screen pops up. Tap “Yes” to delete this setting option item on “Favorites” list.

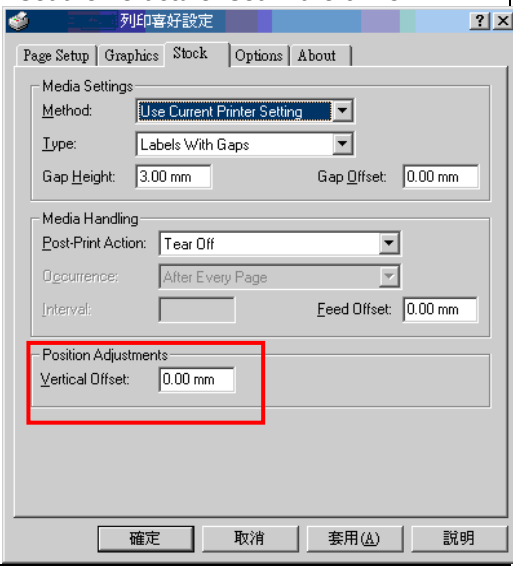


8 Troubleshooting

The following guide lists the most common problems that may be encountered when operating this bar code printer. If the printer still does not function after all suggested solutions have been invoked, please contact the Customer Service Department of your purchased reseller or distributor for assistance.

Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	* The power cord is not properly connected.	* Plug the power cord in printer and outlet. * Switch the printer on.
Carriage Open	* The printer carriages are open.	* Please close the print carriages.
Not Printing	* Check if interface cable is well connected to the interface connector. * Check if wireless or Bluetooth device is well connected between host and printer. * The port specified in the Windows driver is not correct.	* Re-connect cable to interface or chang a new cable. * Please reset the wireless device setting. * Select the correct printer port in the driver. * Clean the printhead. * Printhead's harness connector is not well connected with printheat. Turn off the printer and plug the connector again. * Check your program if there is a command PRINT at the end of the file and there must have CRLF at the end of each command line.
No print on the label	* Label or ribbon is loaded not correctly. * Use wrong type paper or ribbon	* Follow the instructions in loading the media and ribbon. * Ribbon and media are not compatible. * Verify the ribbon-inked side. * The print density setting is incorrect.
No Ribbon	* Running out of ribbon. * The ribbon is installed incorrectly.	* Supply a new ribbon roll. * Please refer to the steps in user's manual to reinstall the ribbon.
No Paper	* Running out of label. * The label is installed incorrectly. * Gap/black mark sensor is not calibrated.	* Supply a new label roll. * Please refer to the steps in user's manual to reinstall the label roll. * Calibrate the gap/black mark sensor.
Paper Jam	* Gap/black mark sensor is not set properly. * Make sure label size is set properly. * Labels may be stuck inside the printer mechanism.	* Calibrate the media sensor. * Set media size correctly. * Remove the stuck label inside the printer mechanism.
Take Label	* Peel function is enabled.	* If the peeler module is installed, please remove the label. * If there is no peeler module in front of the printer, please switch off the printer and install it. * Check if the connector is plugging correctly.

Can't downloading the file to memory (FLASH / DRAM/CARD)	* The space of memory is full.	* Delete unused files in the memory.
SD card is unable to use	* SD card is damaged. * SD card doesn't insert correctly. * Use the non-approved SD card manufacturer.	* Use the supported capacity SD card. * Insert the SD card again. * The supported SD card spec and the approved SD card manufacturers, please refer to section 2.2.3.
Poor Print Quality	* Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged. * Ribbon and media are incompatible. * The printhead pressure is not set properly.	* Reload the supply. * Clean the print head. * Clean the platen roller. * Adjust the print density and print speed. * Run printer self-test and check the print head test pattern if there is dot missing in the pattern. * Change proper ribbon or proper label media. * Adjust the printhead pressure adjustment knob. * The release lever does not latch the printhead properly.
Missing printing on the left or right side of label	* Wrong label size setup.	* Set the correct label size.
Gray line on the blank label	* The print head is dirty. * The platen roller is dirty.	* Clean the print head. * Clean the platen roller.
Irregular printing	* The printer is in Hex Dump mode. * The RS-232 setting is incorrect.	* Turn off and on the printer to skip the dump mode. * Re-set the Rs-232 setting.
Label feeding is not stable (skew) when printing	* The media guide does not touch the edge of the media.	* If the label is moving to the right side, please move the label guide to left. * If the label is moving to the left side, please move the label guide to right.
Skip labels when printing	* Label size is not specified properly. * Sensor sensitivity is not set properly. * The media sensor is covered with dust.	* Check if label size is setup correctly. * Calibrate the sensor by Auto Gap or Manual Gap options. * Clear the GAP/Black mark sensor by blower.
Wrinkle Problem	* Printhead pressure is incorrect. * Ribbon installation is incorrect. * Media installation is incorrect. * Print density is incorrect. * Media feeding is incorrect.	* Please refer to the next chapter. * Please set the suitable density to have good print quality. * Make sure the label guide touch the edge of the media guide.
RTC time is incorrect when reboot the printer	* The battery has run down.	* Check if there is a battery on the main board.
The left side printout position is incorrect	* Wrong label size setup. * The parameter Shift X in LCD menu is incorrect.	* Set the correct label size. * Press [MENU] → [SELECT] x 3 → [DOWN] x 5 → [SELECT] to fine tune the parameter of Shift X.

The printing position of small label is incorrect	* Media sensor sensitivity is not set properly. * Label size is incorrect. * The parameter Shift Y in the LCD menu is incorrect. * The vertical offset setting in the driver is incorrect.	* Calibrate the sensor sensitivity again. * Set the correct label size and gap size. * Press [MENU] → [SELECT] x3→[DOWN]x6 → [SELECT] to fine tune the parameter of Shift Y. * If using the software BarTender, please set the vertical offset in the driver. 

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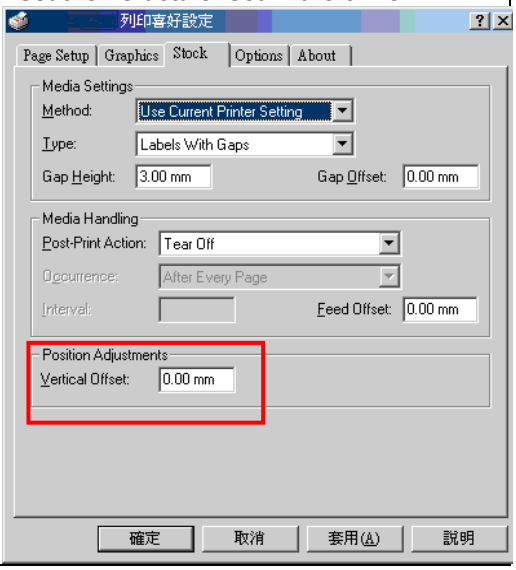
Not Printing	* Check if interface cable is well connected to the interface connector. * Check if wireless or Bluetooth device is well connected between host and printer. * The port specified in the Windows driver is not correct.	* Re-connect cable to interface or chang a new cable. * Please reset the wireless device setting. * Select the correct printer port in the driver. * Clean the printhead. * Printhead's harness connector is not well connected with printheat. Turn off the printer and plug the connector again. * Check your program if there is a command PRINT at the end of the file and there must have CRLF at the end of each command line.
No print on the label	* Label or ribbon is loaded not correctly. * Use wrong type paper or ribbon	* Follow the instructions in loading the media and ribbon. * Ribbon and media are not compatible. * Verify the ribbon-inked side. * The print density setting is incorrect.
No Ribbon	* Running out of ribbon. * The ribbon is installed incorrectly.	* Supply a new ribbon roll. * Please refer to the steps in user's manual to reinstall the ribbon.
No Paper	* Running out of label. * The label is installed incorrectly. * Gap/black mark sensor is not calibrated.	* Supply a new label roll. * Please refer to the steps in user's manual to reinstall the label roll. * Calibrate the gap/black mark sensor.
Paper Jam	* Gap/black mark sensor is not set properly. * Make sure label size is set properly. * Labels may be stuck inside the printer mechanism.	* Calibrate the media sensor. * Set media size correctly. * Remove the stuck label inside the printer mechanism.
Take Label	* Peel function is enabled.	* If the peeler module is installed, please remove the label. * If there is no peeler module in front of the printer, please switch off the printer and install it. * Check if the connector is plugging correctly.
Can't downloading the file to memory (FLASH / DRAM/CARD)	* The space of memory is full.	* Delete unused files in the memory.

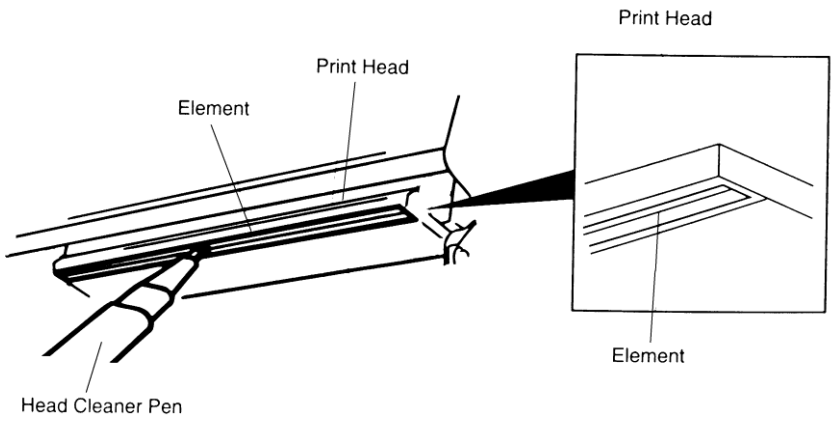
SD card is unable to use	* SD card is damaged. * SD card doesn't insert correctly. * Use the non-approved SD card manufacturer.	* Use the supported capacity SD card. * Insert the SD card again. * The supported SD card spec and the approved SD card manufacturers, please refer to section 2.2.3.
Poor Print Quality	* Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged. * Ribbon and media are incompatible. * The printhead pressure is not set properly.	* Reload the supply. * Clean the print head. * Clean the platen roller. * Adjust the print density and print speed. * Run printer self-test and check the print head test pattern if there is dot missing in the pattern. * Change proper ribbon or proper label media. * Adjust the printhead pressure adjustment knob. * The release lever does not latch the printhead properly.
Missing printing on the left or right side of label	* Wrong label size setup.	* Set the correct label size.
Gray line on the blank label	* The print head is dirty. * The platen roller is dirty.	* Clean the print head. * Clean the platen roller.
Irregular printing	* The printer is in Hex Dump mode. * The RS-232 setting is incorrect.	* Turn off and on the printer to skip the dump mode. * Re-set the Rs-232 setting.
Label feeding is not stable (skew) when printing	* The media guide does not touch the edge of the media.	* If the label is moving to the right side, please move the label guide to left. * If the label is moving to the left side, please move the label guide to right.
Skip labels when printing	* Label size is not specified properly. * Sensor sensitivity is not set properly. * The media sensor is covered with dust.	* Check if label size is setup correctly. * Calibrate the sensor by Auto Gap or Manual Gap options. * Clear the GAP/Black mark sensor by blower.
Wrinkle Problem	* Printhead pressure is incorrect. * Ribbon installation is incorrect. * Media installation is incorrect. * Print density is incorrect. * Media feeding is incorrect.	* Please refer to the next chapter. * Please set the suitable density to have good print quality. * Make sure the label guide touch the edge of the media guide.
RTC time is incorrect when reboot the printer	* The battery has run down.	* Check if there is a battery on the main board.
The left side printout position is incorrect	* Wrong label size setup. * The parameter Shift X in LCD menu is incorrect.	* Set the correct label size. * Press [MENU] → [SELECT] x 3 → [DOWN] x 5 → [SELECT] to fine tune the parameter of Shift X.

The printing position of small label is incorrect	* Media sensor sensitivity is not set properly. * Label size is incorrect. * The parameter Shift Y in the LCD menu is incorrect. * The vertical offset setting in the driver is incorrect.	* Calibrate the sensor sensitivity again. * Set the correct label size and gap size. * Press [MENU] → [SELECT] x3→[DOWN]x6 → [SELECT] to fine tune the parameter of Shift Y. * If using the software BarTender, please set the vertical offset in the driver. 

10 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 or Isopropyl Alcohol
2. The cleaning process is described as following,

<table>
<tr><th>Printer Part</th><th>Method</th><th>Interval</th></tr>
<tr><td rowspan="2">Print Head</td><td>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 or Isopropyl Alcohol to clean the print head surface.</td><td>Clean the print head when changing a new label roll.</td></tr>
<tr><td colspan="2"> 
</td></tr>
<tr><td>Platen Roller</td><td>1. Turn the power off.
2. Rotate the platen roller and wipe it thoroughly with water.</td><td>Clean the platen roller when changing a new label roll</td></tr>
<tr><td>Peel Bar</td><td>Use the lint-free cloth with 100% ethanol to wipe it.</td><td>As needed</td></tr>
<tr><td>Sensor</td><td>Compressed air or vacuum</td><td>Monthly</td></tr>
<tr><td>Exterior</td><td>Wipe it with water-dampened cloth</td><td>As needed</td></tr>
<tr><td>Interior</td><td>Brush or vacuum</td><td>As needed</td></tr>
</table>

Note:

- Do not touch printer head by hand. If you touch it careless, please use ethanol to clean it.
- Please use 100% Ethenol or Isopropyl Alcohol. DO NOT use medical alcohol, which may damage the printer head.
- Regularly clean the print head and supply sensors once change a new media to keep printer performance and extend printer life.

Revise History

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