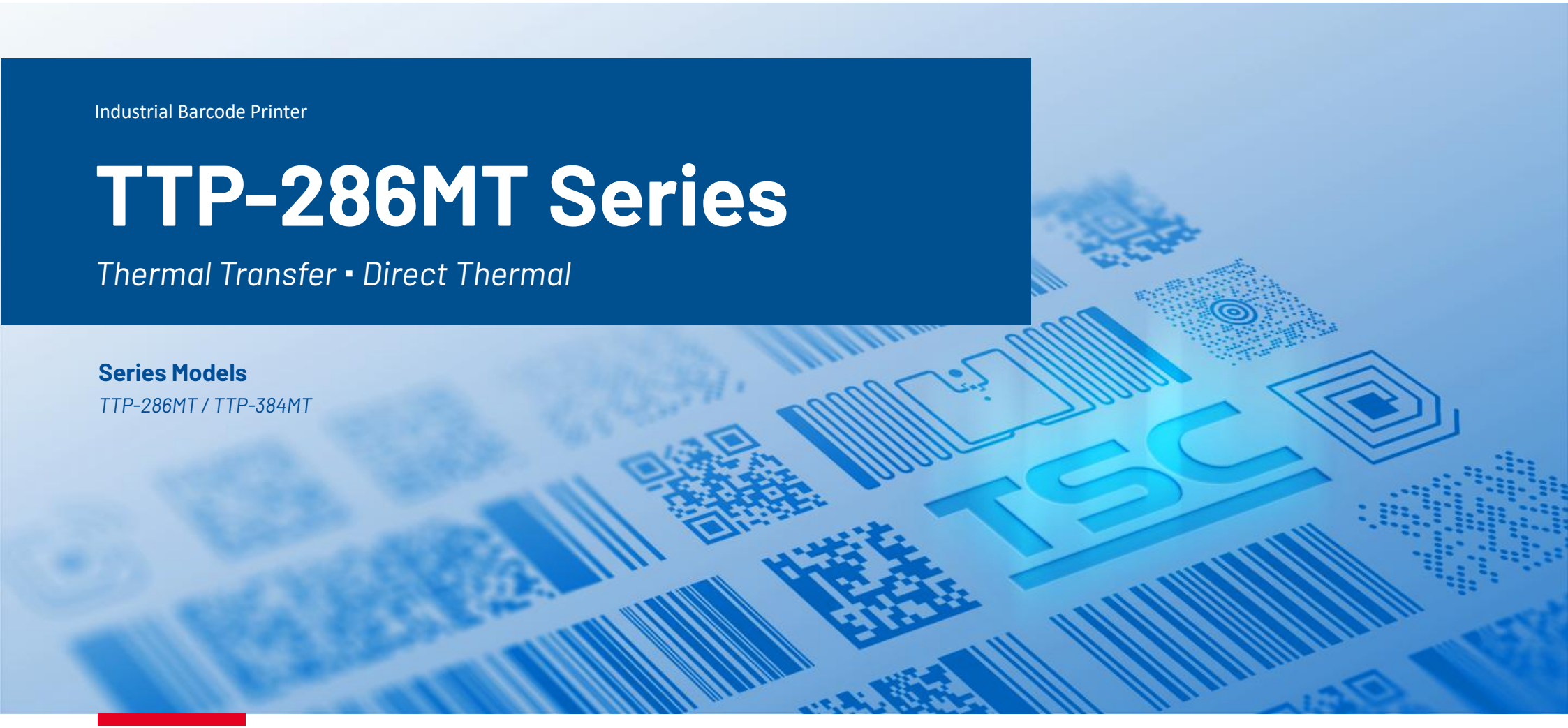
Industrial Barcode Printer

TTP-286MT Series

Thermal Transfer ▪ Direct Thermal

Series Models

TTP-286MT / TTP-384MT



User Manual

www.tscprinters.com

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Product Improvements and Updates

TSC Auto ID continuously strives to improve our products. All specifications, features, and designs are subject to change without notice as part of our ongoing product enhancement initiatives. It is recommended to regularly consult the latest documentation to ensure the most up-to-date information is being used. Product users should validate that any new specifications or feature updates for compatibility with their existing applications before implementation.

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Table of Contents

1. Introduction

Thank you very much for purchasing TSC bar code printer.

The TTP-286MT Series Printers are designed with die-casting aluminum chassis and print mechanism, metal cover with large clear media view window, which ensuring to work for the extreme and heavy duty industrial environment and applications.

With back-lit graphic LCD display, printer status can be managed easier and operated more user friendly. The moveable sensor design can accept wide range of label media. All of the most frequently used bar code formats are included. Fonts and bar codes can be printed in any one of the four directions. TTP-286MT Series are built-in the high quality, high performance MONOTYPE IMAGING® True Type font engine and one CG Triumvirate Bold Condensed smooth font. With flexible firmware design, user can also download the True Type Font from PC into printer memory for printing labels. It also provides a choice of five different sizes of alphanumeric bitmap font, OCR-A and OCR-B fonts. By integrating rich features.

This document provides an easy reference for operating the printer. TSC printers include the Windows labeling software for creating your label template. For system integration, the TSPL/TSPL2 printer programming manual or SDKs can be found on TSC website at: http://www.tscprinters.com.

1.1 Product Specification

Product standard feature	203 dpi models	300 dpi models
Thermal transfer/ or direct thermal	V	V
High quality die-cast aluminum design	V	V
Metal cover with large clear media view window	V	V
Transmissive gap sensor (position adjustable from 4”~8”)	V	V
Reflective black mark sensor position full web adjustable	V	V
Transmissive ribbon end sensor	V	V
Ribbon encoder sensor (Support color ribbon)	V	V
Head open sensor	V	V
Resistive Touch Screen, 16 bits Color, 480 x 272 pixels, with back lights	V	V
Control panel with 6 operation buttons	V	V
LED indicators	V	V
Real time clock	V	V
Internal Ethernet print server (10/100 Mbps) interface	V	V
USB 2.0 client (High speed mode)	V	V
Serial RS-232C (2400-115200 bps) interface	V	V
USB host interface, for scanner or PC keyboard	V	V
Centronics (SPP mode)	V	V
256 MB DDR2 SDRAM memory	V	V
512 MB FLASH memory	V	V
SD Flash memory card slot for Flash memory expansion, up to 32GB	V	V
32-bit RISC high performance processor(BGA 536MHz)	V	V
Standard industry emulations right out of the box including Eltron® and Zebra® language support	V	V

Internal 8 alpha-numeric bitmap fonts	**V**	**V**
Fonts and bar codes can be printed in any one of the four directions (0, 90,180, 270 degree)	**V**	**V**
Internal Monotype Imaging® true type font engine with one CG Triumvirate Bold Condensed scalable font	**V**	**V**
Downloadable fonts from PC to printer memory	**V**	**V**
Bar code, graphics/image printing 1D bar code: Code128 subsets A.B.C, Code128UCC, EAN128, Interleave 2 of 5, Code 39, Code 93, EAN-13, EAN-8, Codabar, POSTNET, UPC-A, UPC-E, EAN and UPC 2(5) digits, MSI, PLESSEY, China Post, ITF14, EAN14, Code 11, TELPEN, PLANET, Code 49, Deutsche Post Identcode, Deutsche Post Leitcode, LOGMARS 2D bar code: CODABLOCK F mode, DataMatrix, Maxicode, PDF-417, Aztec, MicroPDF417, QR code, RSS Barcode (GS1 Databar) Supported Image: BITMAP, BMP, PCX (Max. 256 colors graphics)	**V**	**V**

1.2 Printer Optional Features

The printer offers the following optional features.

Product option feature	User option	Dealer option	Factory option
Applicator I/O interface (GPIO)			V
Regular cutter module (full cut guillotine cutter) Max. media width: 215.9mm (8.5”) Max. media thickness: 0.12 ~ 0.25 mm Media type: receipt, tag, and label liner w/o glue	V		
Heavy duty cutter module (full cut guillotine cutter) Max. media width: 215.9mm (8.5”) Max. media thickness: 0.06 ~ 0.30 mm Media type: receipt, tag, and label liner w/o glue	V		
KP-200 Plus series keyboard	V		
Bluetooth module (serial interface)	V		

Note: Except for the linerless cutter, all regular/heavy duty/care label cutters DO NOT cut on media with glue.

1.3 General Specification

General Specifications	
Physical dimensions	440 mm (W) x 336 mm (H) x 514 mm (D) 17.32” (W) x 13.23” (H) x 19.84” (D)
Weight	23.7 kg
Power	Internal switching power supply Input: AC 100-240V, 3.0A, 50-60Hz Output: DC 24V, 8.33A, 200W
Environmental condition	Operation: 5 ~ 40˚C (41 ~ 104˚F), 20~85% non-condensing

	Storage: -40 ~ 60 ˚C (-40 ~ 140˚F), 10~90% non-condensing
Environmental concern	Comply with RoHS, WEEE

1.4 Print Specification

Print Specifications	203 dpi models	300 dpi models
Print head resolution (dots per inch/mm)	203 dots/inch (8 dots/mm)	300 dots/inch (12 dots/mm)
Printing method	Thermal transfer/ or direct thermal	
Dot size (width x length)	0.125 x 0.125 mm (1 mm = 8 dots)	0.084 x 0.084 mm (1 mm = 12 dots)
Print speed (inches per second)	Up to 6 ips	Up to 4 ips
Max. print width	216 mm	219.5 mm
Max. print length	11,430 mm (450”)	5,080 mm (200”)
Printout bias	Vertical: 1 mm max. Horizontal: 1 mm max.	

1.5 Ribbon Specification

Ribbon Specifications	
Ribbon outside diameter	Max. OD 90 mm
Ribbon length	600 meter
Ribbon core inside diameter	1” core (25.4 mm)
Ribbon width	110 mm ~ 254 mm (4.33”~10”)
Ribbon wound type	Ink coated inside/ outside
Note: Support color ribbon	

1.6 Media Specification

Media Specifications	203 dpi models	300 dpi models
Label roll capacity	208.3 mm (8.2”) OD	
Media alignment	Center bias	
Media type	Continuous, die-cut, black mark, fan-fold, notch	
Media wound type	Printing face outside wound	
Media width	101.6~241.3 mm (4" ~ 9.5")	
Media width (cutter mode)	101.6~215.9 mm (4”~8.5”) Cutter max. media width 225mm	
Media thickness	0.06 ~ 0.254 mm (2.36 ~ 10 mil)	
Media core diameter	76.2 mm (3”)	
Media length	25.4~1270 mm (1.0”~50”)	
Media length (cutter mode)	25.4~1270 mm (1.0”~50”)	
Gap height	Min. 2 mm	
Black mark height	Min. 2 mm	
Black mark width	Min. 8 mm (0.31”)	

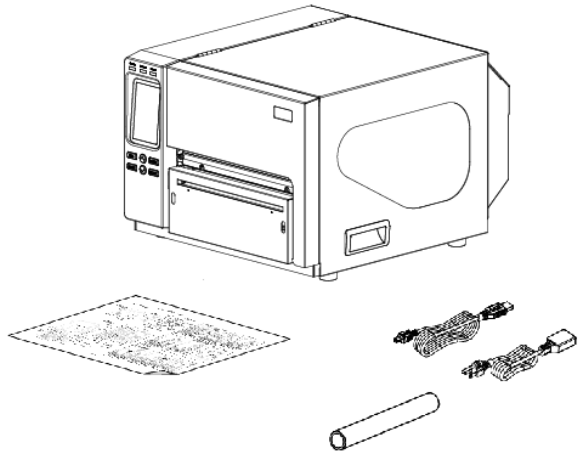
2. Operation Overview

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.

- 1 Printer unit
- 1 Quick installation guide
- 1 Power cord
- 1 USB interface cable
- 1 Paper core (for ribbon rewind)



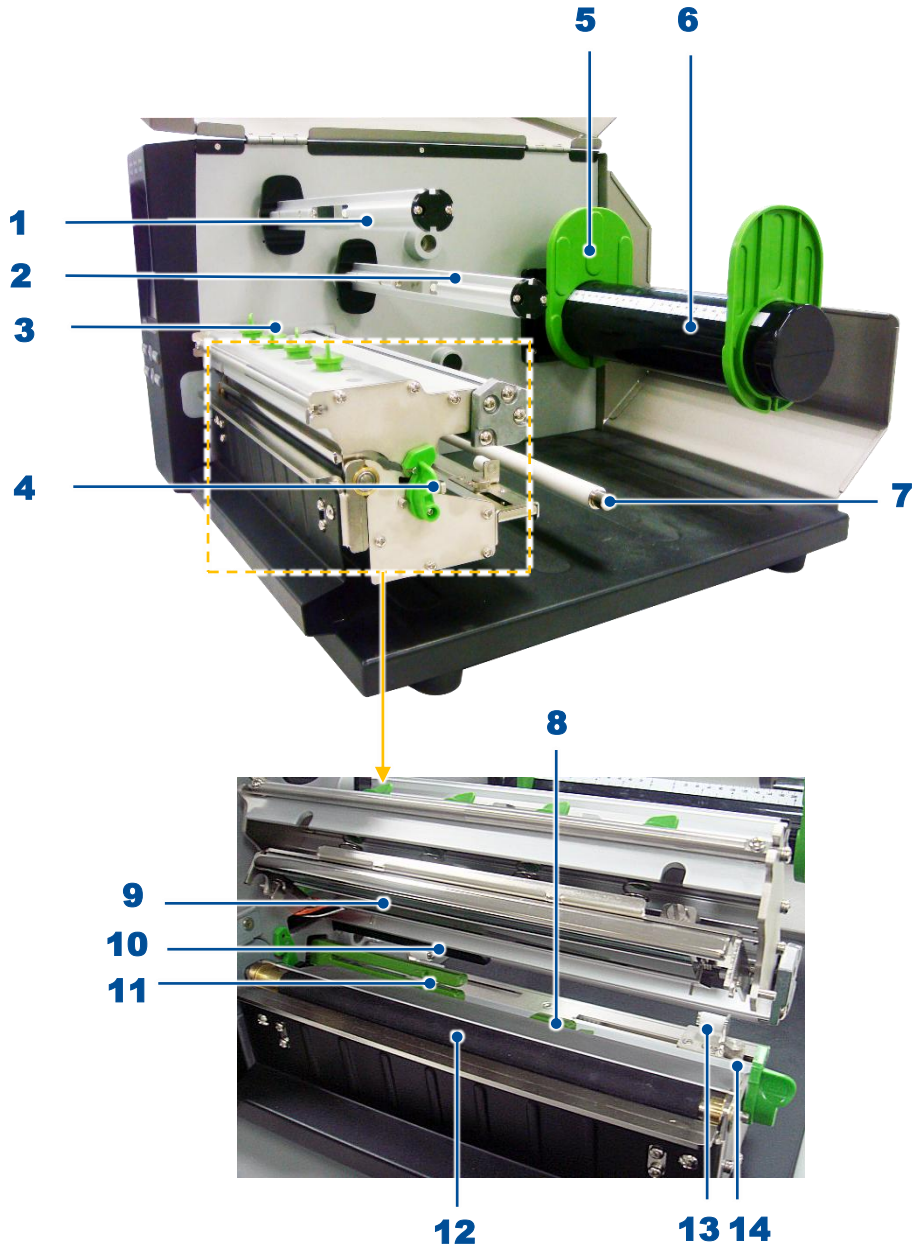
If any parts are missing, please contact the Customer Service Department of your purchased reseller or distributor.

2.2 Printer Overview

2.2.1 Front View

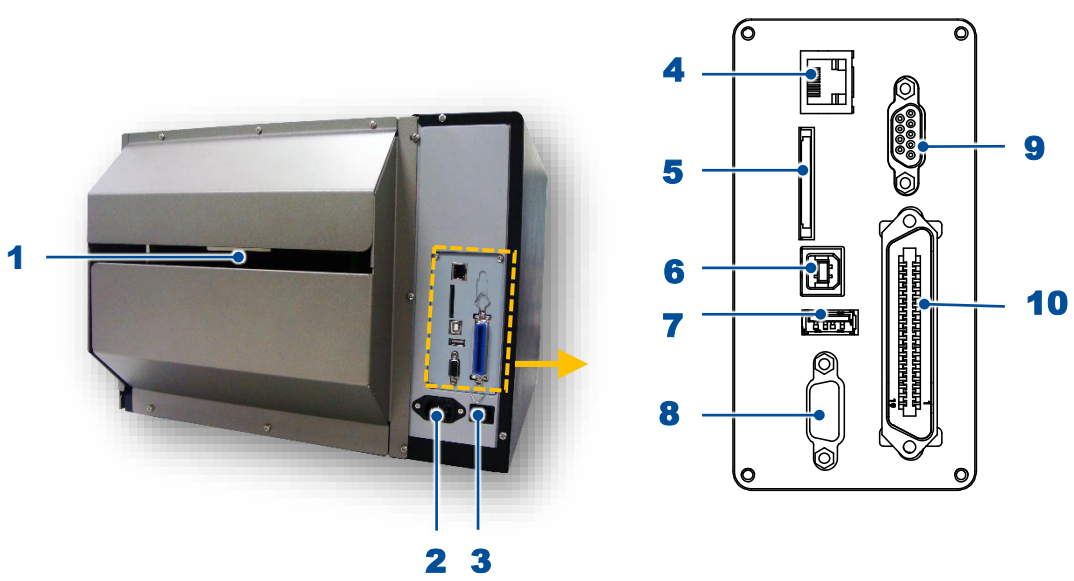
1. LED indicators
2. Touch screen
3. Operation buttons
4. Media viewer
5. Paper exit chute
6. Printer right side cover opener

2.2.2 Interior View



1. Ribbon rewind spindle
2. Ribbon supply spindle
3. Print head pressure adjustment knobs
4. Print head release lever
5. Label roll guards
6. Label supply spindle
7. Media guide bar
8. Black mark sensor
9. Print head
10. Ribbon sensor
11. Gap sensor
12. Platen roller
13. Label guide
14. Fixed screw

2.2.3 Rear View



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

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

2.3 Operator Control

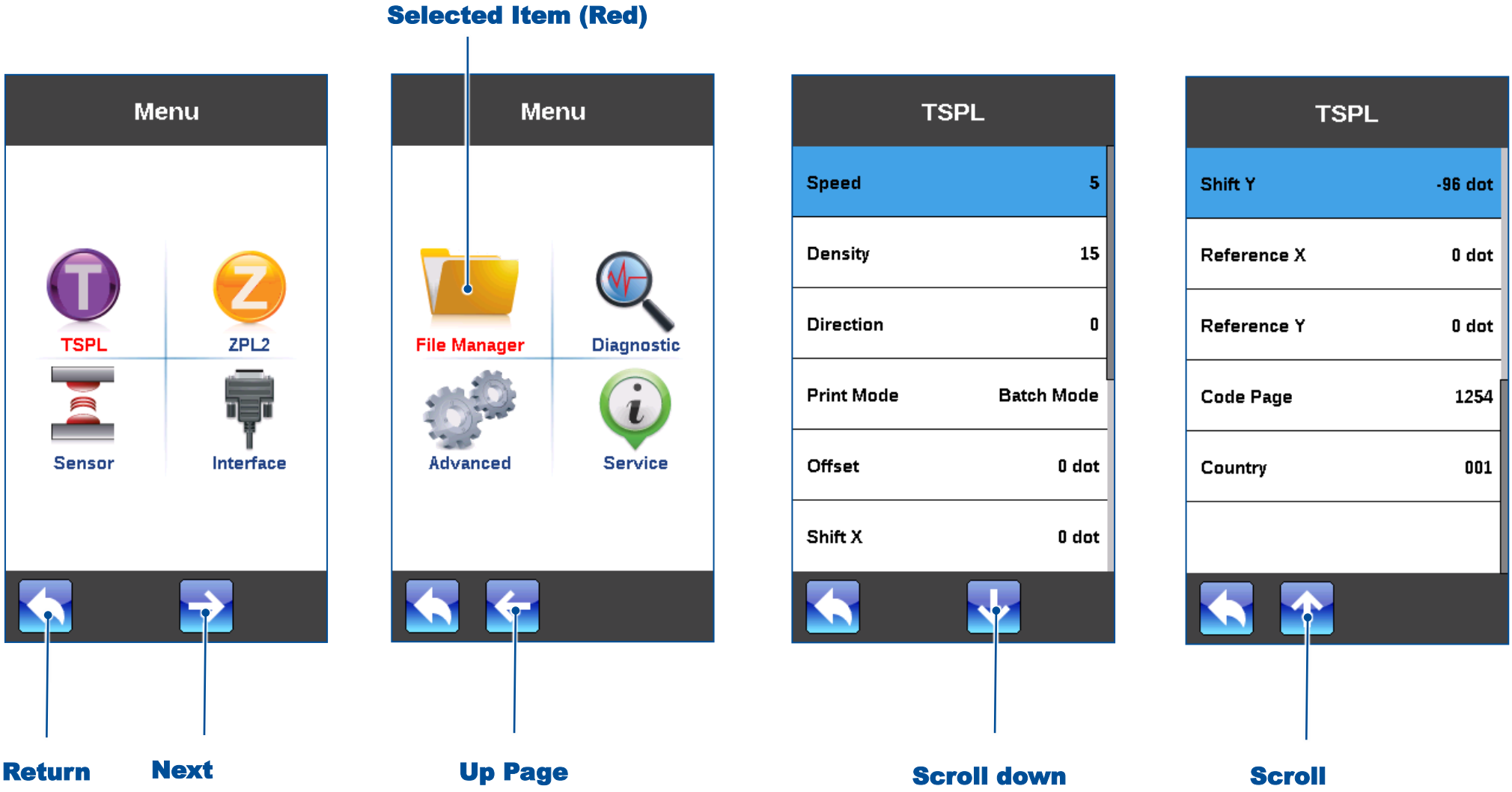
2.3.1 LED Indication and Keypads

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
PAUSE	Pause/Resume the printing process
MENU	1. Enter the menu 2. Exit from a menu or cancel a setting and return to the previous menu
FEED	Advances one label
UP	Scroll up the menu list
SELECT	Enter/Select cursor located option
DOWN	Scroll down the menu list

2.3.2 Touch Screen Manipulation

Tap an item to open/use it.



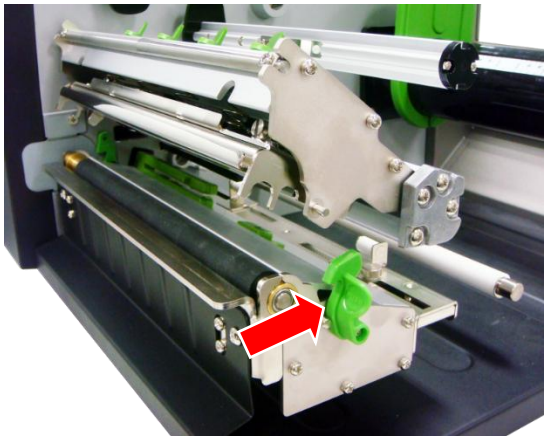
3. Setup

3.1 Setting up the printer

1. Place the printer on flat surface.
2. Make sure the printer is power off.
3. Connect the printer to the computer with the provided USB cable.
4. Plug in the power cord.

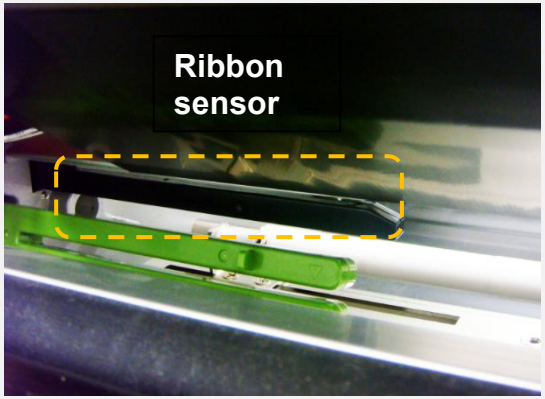
◆ **Note: Please switch OFF the printer before plugging in the power cord to printer power jack.**

3.2 Loading the Ribbon

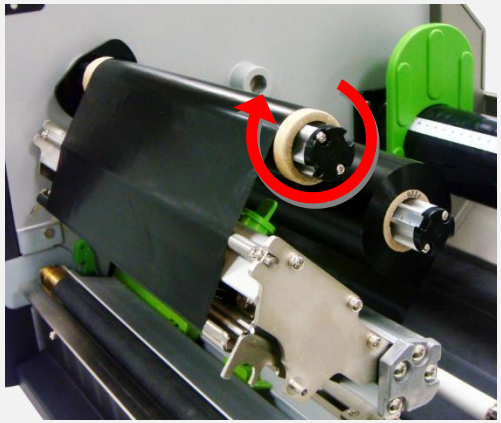


1. Lift the handle to open the printer right side cover. Push the print head release lever to open the print head mechanism.

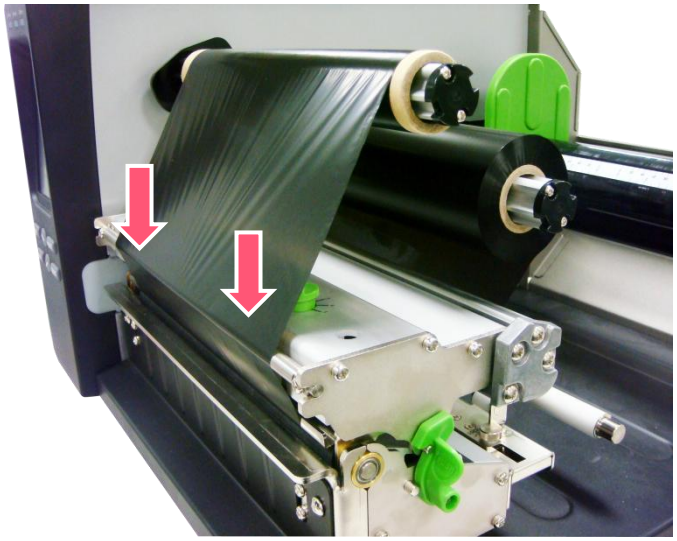
2. Install the ribbon and paper core onto the ribbon supply spindle and ribbon rewind spindle. Make sure the ribbon & paper core are set at the center of the spindle. (User can refer to the ruler on the spindles.)



3. Thread the ribbon through the ribbon sensor slot and then through the open space in between print head and platen roller.

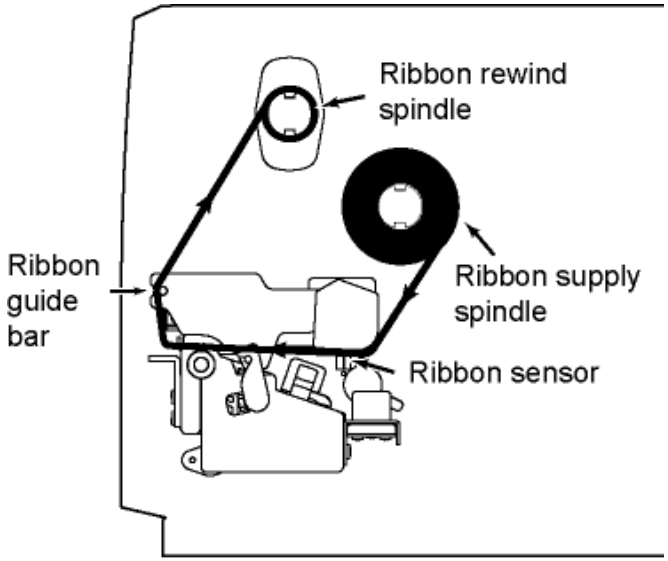


4. Stick the ribbon onto the paper core. Keep the ribbon flat and without wrinkle.
5. Wind the ribbon clockwise about 3~5 circles onto the ribbon rewind spindle until it is smooth and properly stretched.

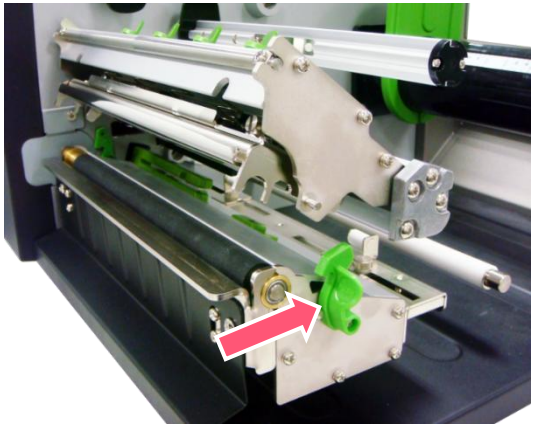


6. Close the print head mechanism making sure the latches are engaged securely.

Ribbon Loading Path

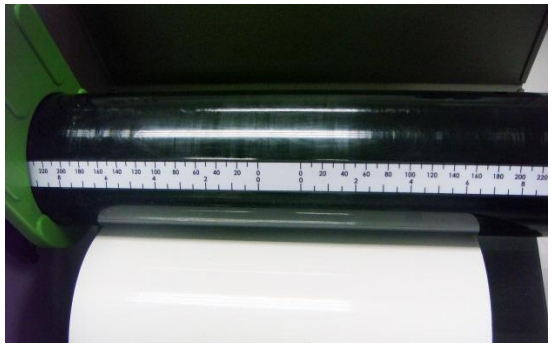


3.3 Loading the Media

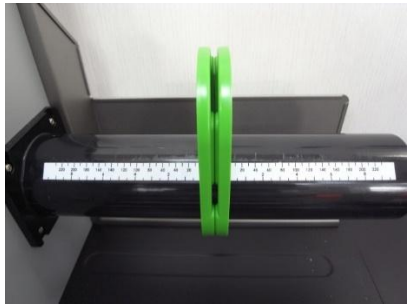


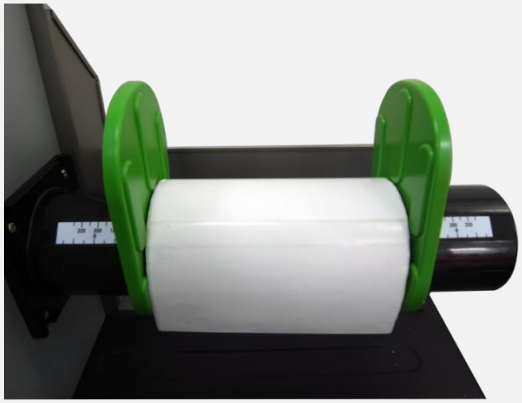
1. Lift the handle to open the printer right side cover. Push the print head release lever to open the print head mechanism.

2. Remove one label roll guard from the label spindle.

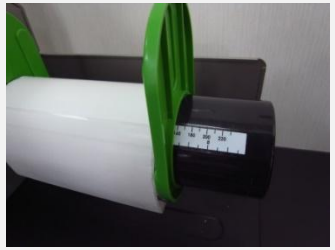


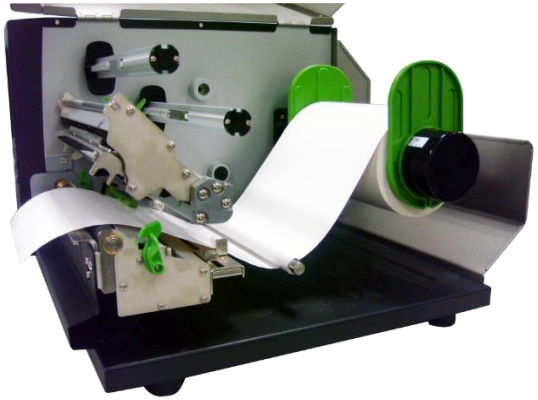
3. Make sure the width of the label. (You can refer to the ruler on the spindles.)



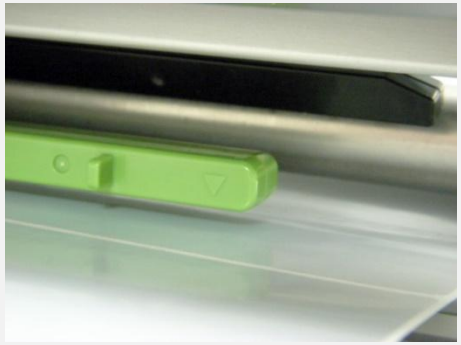


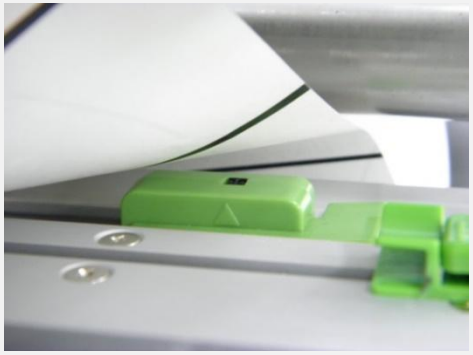
4. Place media roll on label supply spindle. Replace label roll guard. Make sure the label roll guard position of each sides are the same as the length of the label. Please check the outside edge scales are both close to the label width.





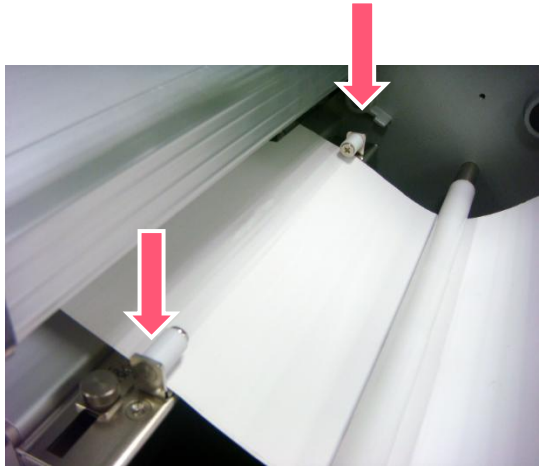
5. Pull label roll leading edge forward through the media guide bar, media sensor (green) and place the label leading edge onto the platen roller.



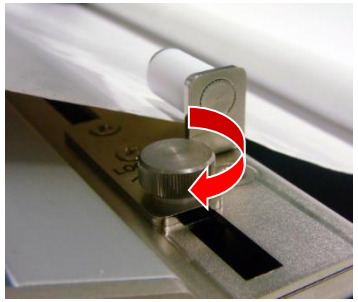


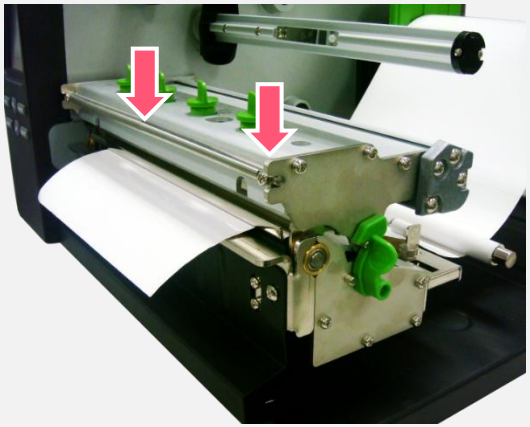
6. The media sensor position is moveable. Please make sure the gap or black mark is at the location where media gap/black mark will pass through for sensing.

Note:
*** The sensor location is marked by a triangle mark ▽ at the sensor housing.**



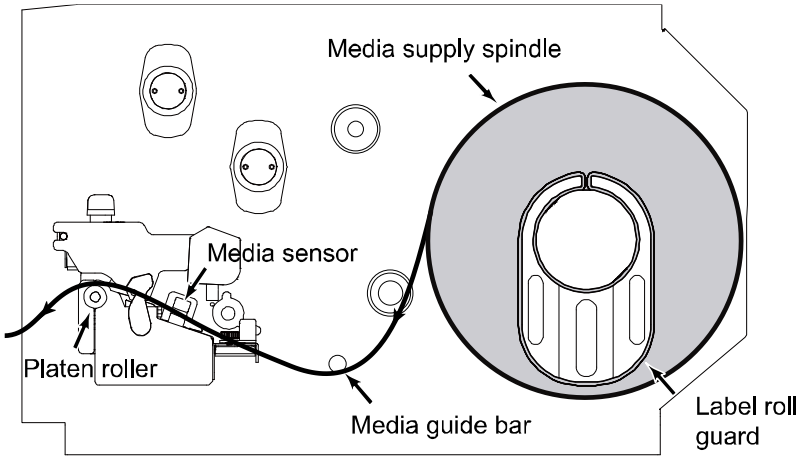
7. Loose the fixed screw to adjust the label guide to fit label width. Screw the fixed screw to lock the label guide.



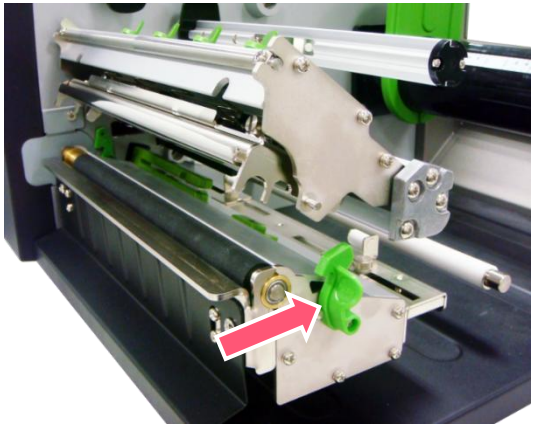


8. Close the print head mechanism. Make sure the latches are engaged securely.
9. Using the front display panel, set media sensor type and calibrate the selected sensor.

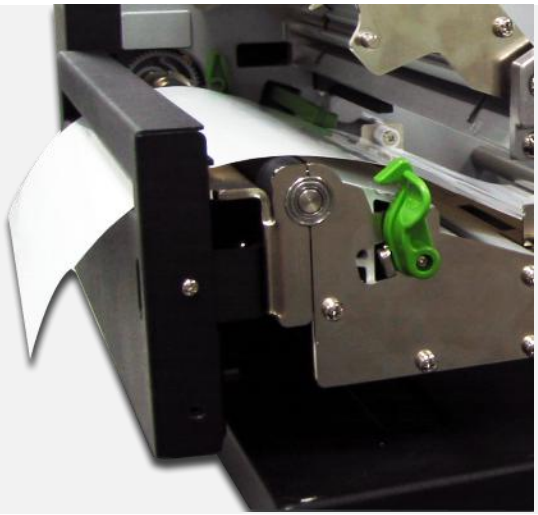
Loading path for media



3.4 Loading the Media in Cutter Mode (Option)



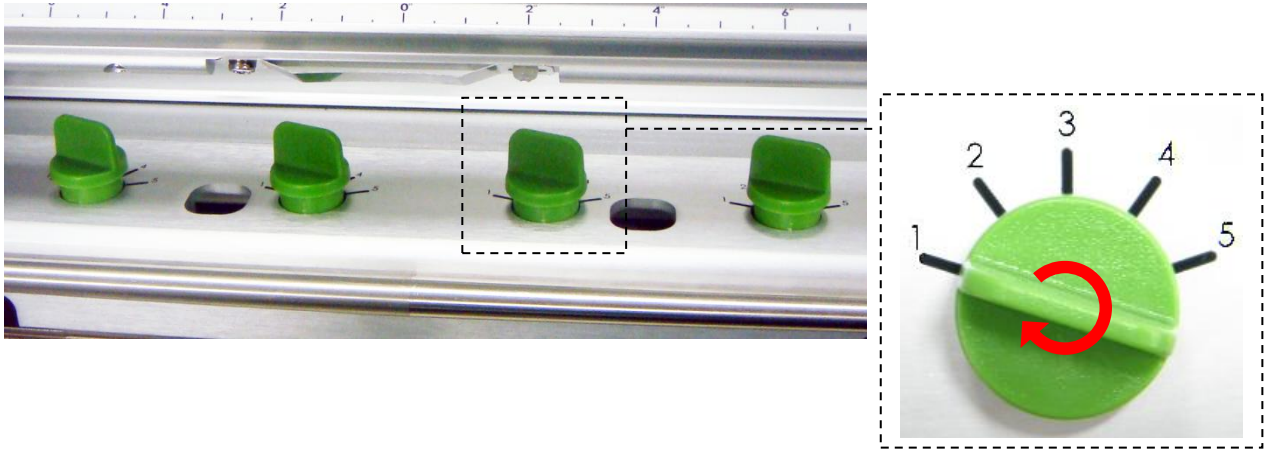
1. Lift the handle to open the printer right side cover. Push the print head release lever to open the print head mechanism. Please refer to section 3.3 to load media.



2. Lead the media through the cutter paper opening.
3. Adjust the label guide to fit the width of the label.
4. Close the print head mechanism making sure the latches are engaged properly.
5. Using the front display panel, set the printer setting to cutter mode. Press the FEED button to test.

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

4. Knob Adjustment



There are conditions that will need to adjust the print head pressure.

- Print with thick media
  If media thickness is larger than 0.19 mm, the larger pressure is required to get good quality printout.

- Ribbon wrinkle presented on the media

There are 5 levels of pressure for adjustment. Level 1 is the minimum pressure and level 5 is the maximum pressure. Please refer to next section for more information.

4.1 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

Ribbon wrinkle is related to the media width, 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.

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<td rowspan="2">Adjustable Printer Parts</td>
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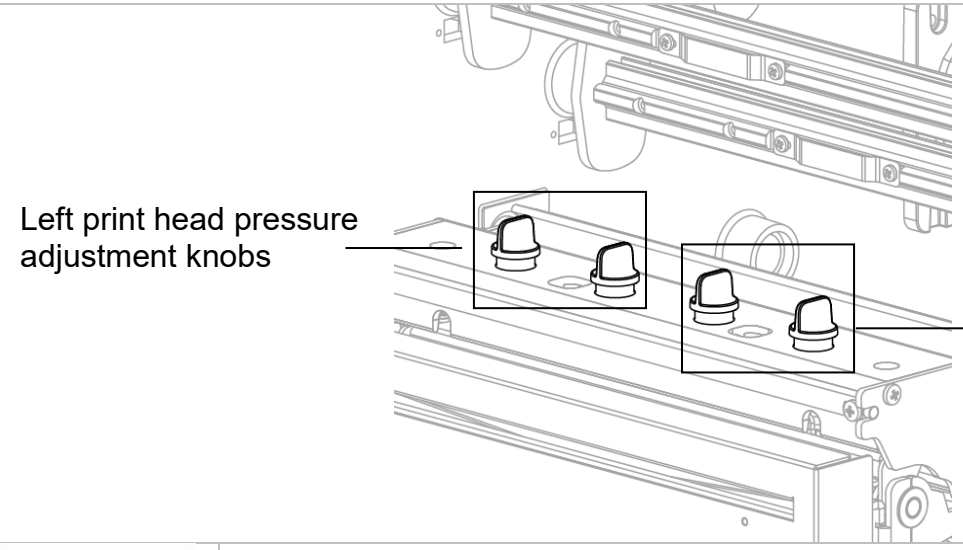

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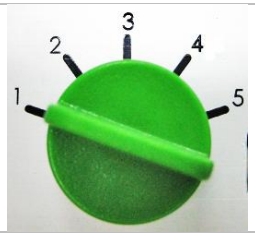
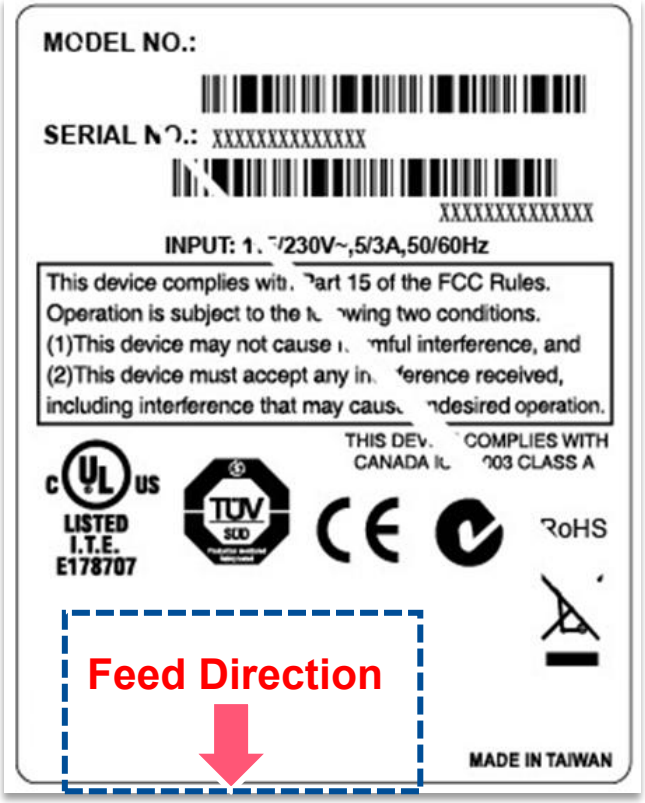
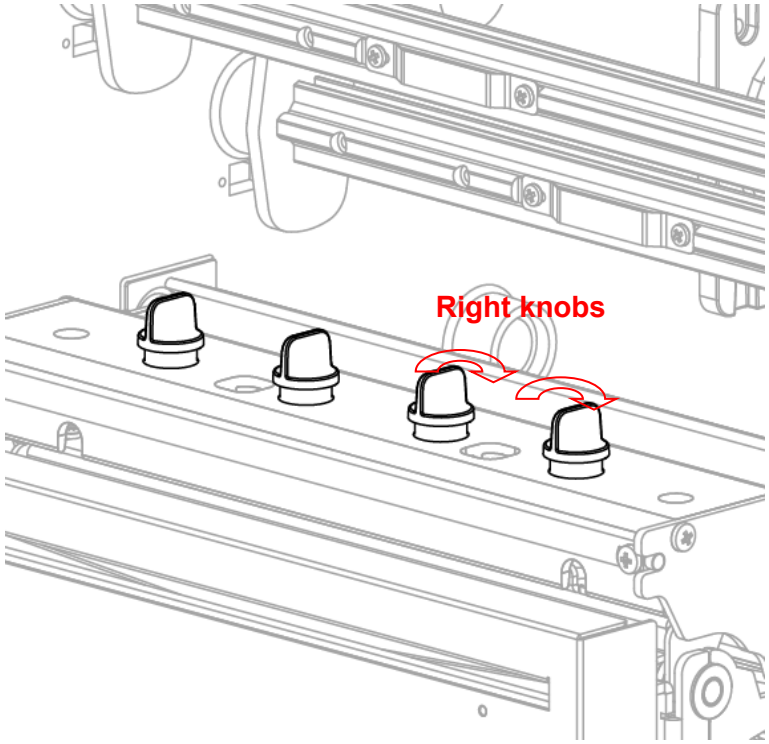
<td> 
</td>
<td>There are 5 levels of print head pressure adjustment knob settings. The lowest pressure index is 1 and the highest pressure index is 5.</td>
</tr>
</table>

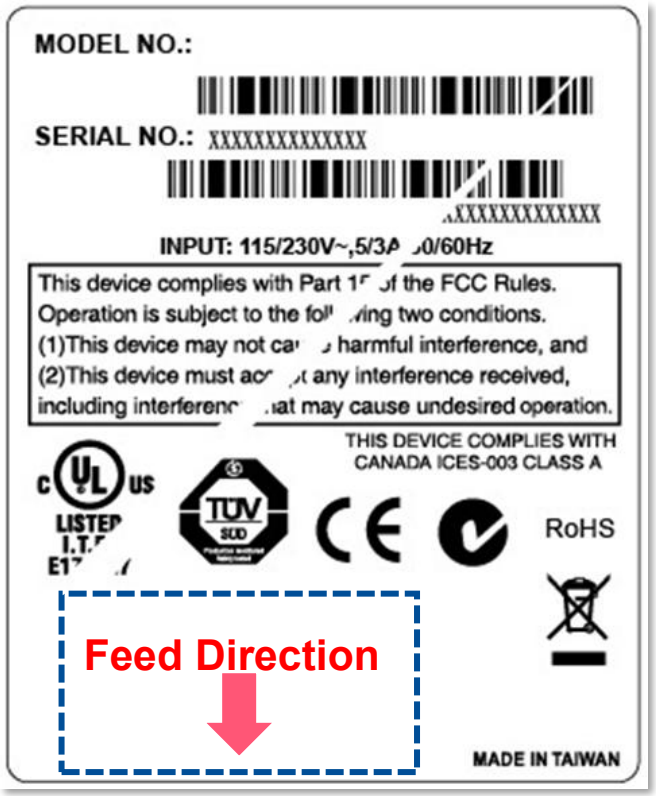
Wrinkle happens from label lower right to upper left direction

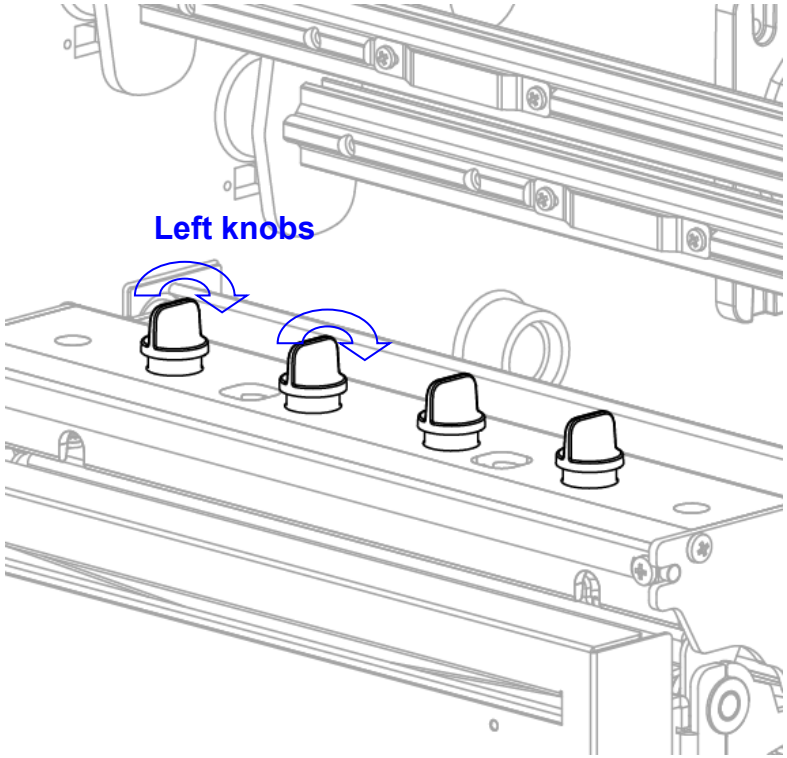




- Decrease the left side print head pressure adjustment knobs setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
- If the left side print head adjustment knobs level has been set to index 1 (the lowest index), please increase the right side print head pressure.

Wrinkles happen from label lower left to upper right direction





- Decrease the right side print head pressure adjustment knobs setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
- If the right side print head adjustment knobs setting has been set to index 1 (the lowest pressure index), please increase the left side print head pressure.

5. TSC Console Utility

TSC Console (PC Version) is an all-in-one management tool that integrates **Printer Management, Diagnostic Tool, CommTool**, and **Printer Settings**, designed specifically for a wide range of **TSC printers**.
It enables IT personnel to easily deploy, manage, monitor, and troubleshoot both wired and wireless connections for single or multiple printers. Users can adjust printer settings and status, download graphics, deploy fonts, images, and label templates, upgrade firmware, and send additional commands to multiple printers simultaneously.

With its intuitive Windows graphical interface, **TSC Console** simplifies printer setup and daily management, while its integrated management capabilities enhance system stability—ensuring printers remain operational, reliable, and easy to maintain.
Please visit TSC's official website to download this utility, and scan the QR code below to access the **TSC Console Manual** for detailed usage instructions.

6. LCD Menu Function

6.1 Enter the Menu

- **By touch display:**
  Tap the “Menu” icon on LCD to enter the main menu.

- **By Keys:**
  Press the “MENU” button and press the “SELECT” button to enter the main menu.

6.2 Menu Overview

There are 8 categories on the menu. Users can easily set the settings of the printer without connecting the computer. Please refer to following sections for more details.

TSPL : To set up the printer settings for TSPL

ZPL2 : To set up the printer settings ZPL2.

Sensor : To calibrate the selected media sensor.

Interface : To set the printer interface settings.

File Manager : To check and manage printer's memory storage.

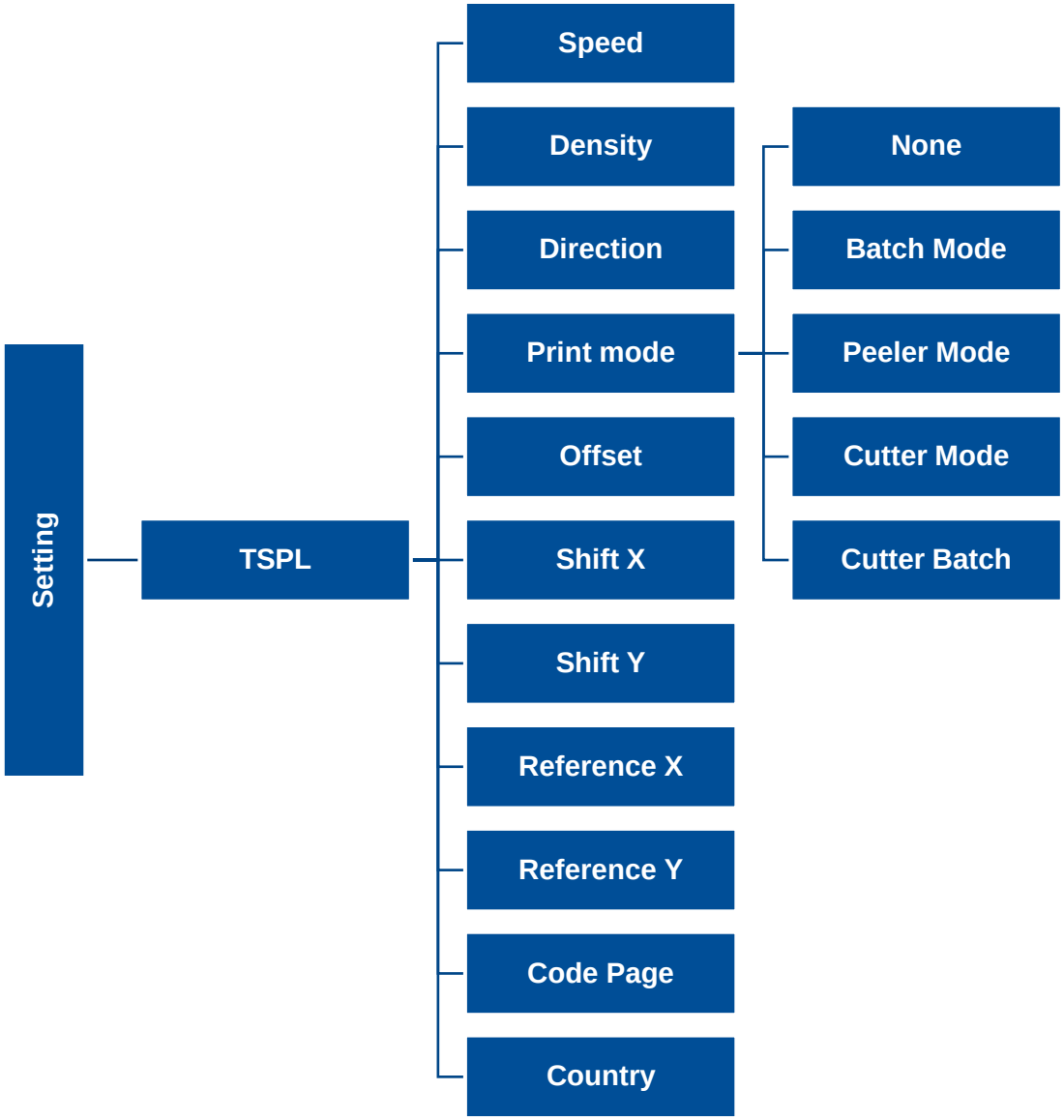
Diagnostic : To check printer and help users to troubleshoot the problems.

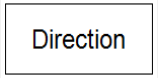
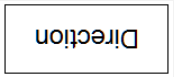
Advanced : To set LCD, initialization, cutter type,…etc.

Service : To restore printer settings to defaults and checking information for printer.

6.3 TSPL

TSPL category can set up the printer settings for TSPL.

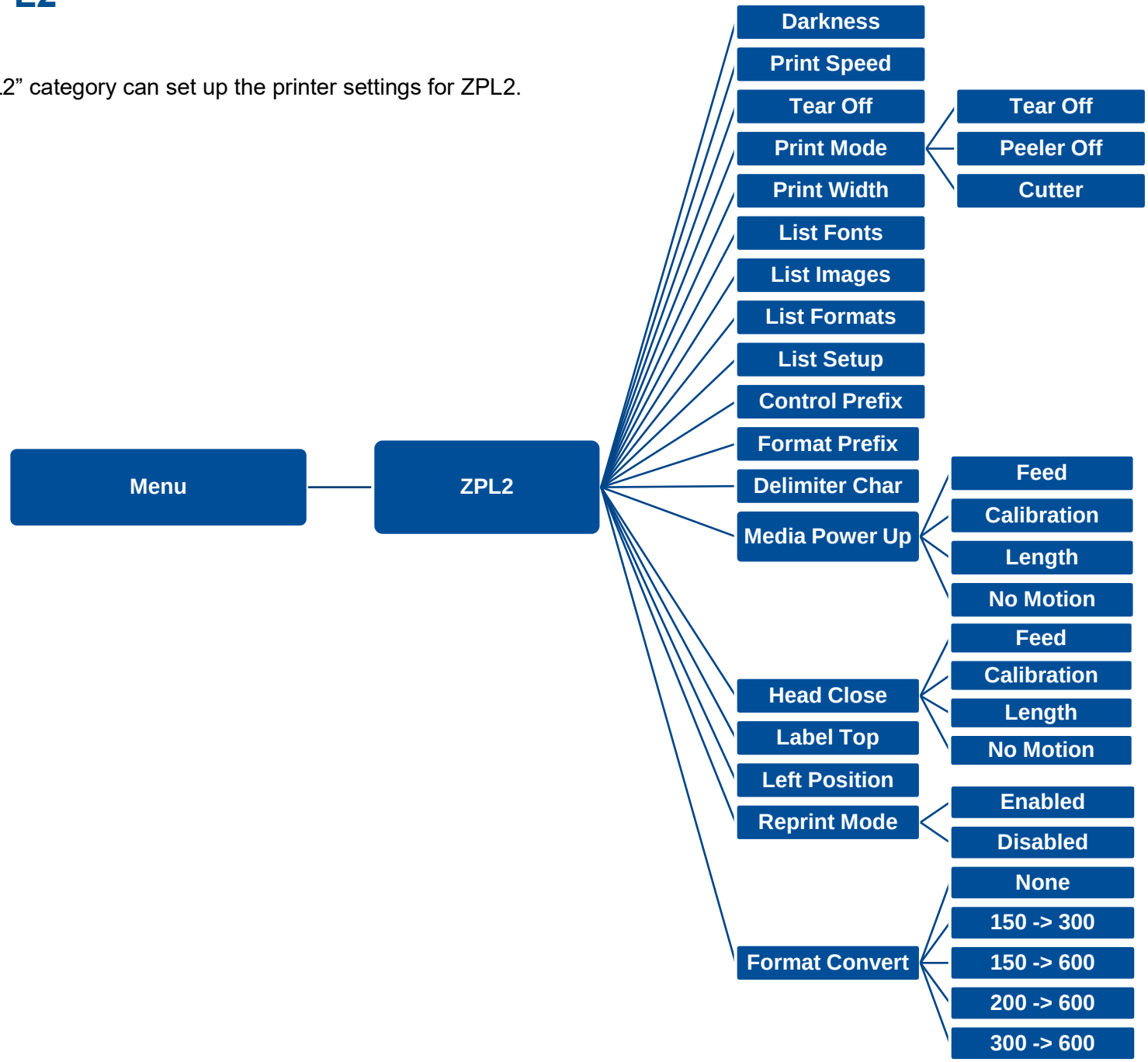


Item	Description	Default
Speed	Set the print speed. Setting range: 2~14 for 203dpi; 2~12 for 300dpi; 1~6 for 600dpi	**6**
Density	Set the printing darkness.	**8**
Direction	Set the printout direction. Setting Value: 0 and 1. Direction 0:  Direction 1: 	**0**
Print mode	Set the print mode. There are 5 modes in total: **None:** Next label top of form is aligned to the print head burn line location. (Tear Off Mode) **Batch Mode:** Once finishing the printing process, label will be fed to the tear plate location. **Peeler Mode:** Enable the label peel off mode. **Cutter Mode**: Enable the label cutter mode. **Cutter Batch:** Cut the label once at the end of the printing job.	**Batch Mode**
Offset	Adjust media stop location. Available value setting range: -999 dots to 999 dots.	**0 dot**
Shift X	Adjust print position. Available value setting range: -999 dots to 999 dots.	**0 dot**
Shift Y		**0 dot**
Reference X	Set the origin of printer coordinate system horizontally and vertically. Available setting range: 0 dot to 999 dots.	**0 dot**
Reference Y		**0 dot**
Code page	Set the code page of international character set.	**850**
Country	Set the country code. Available setting value range: 1 to 358.	**001**

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

6.4 ZPL2

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



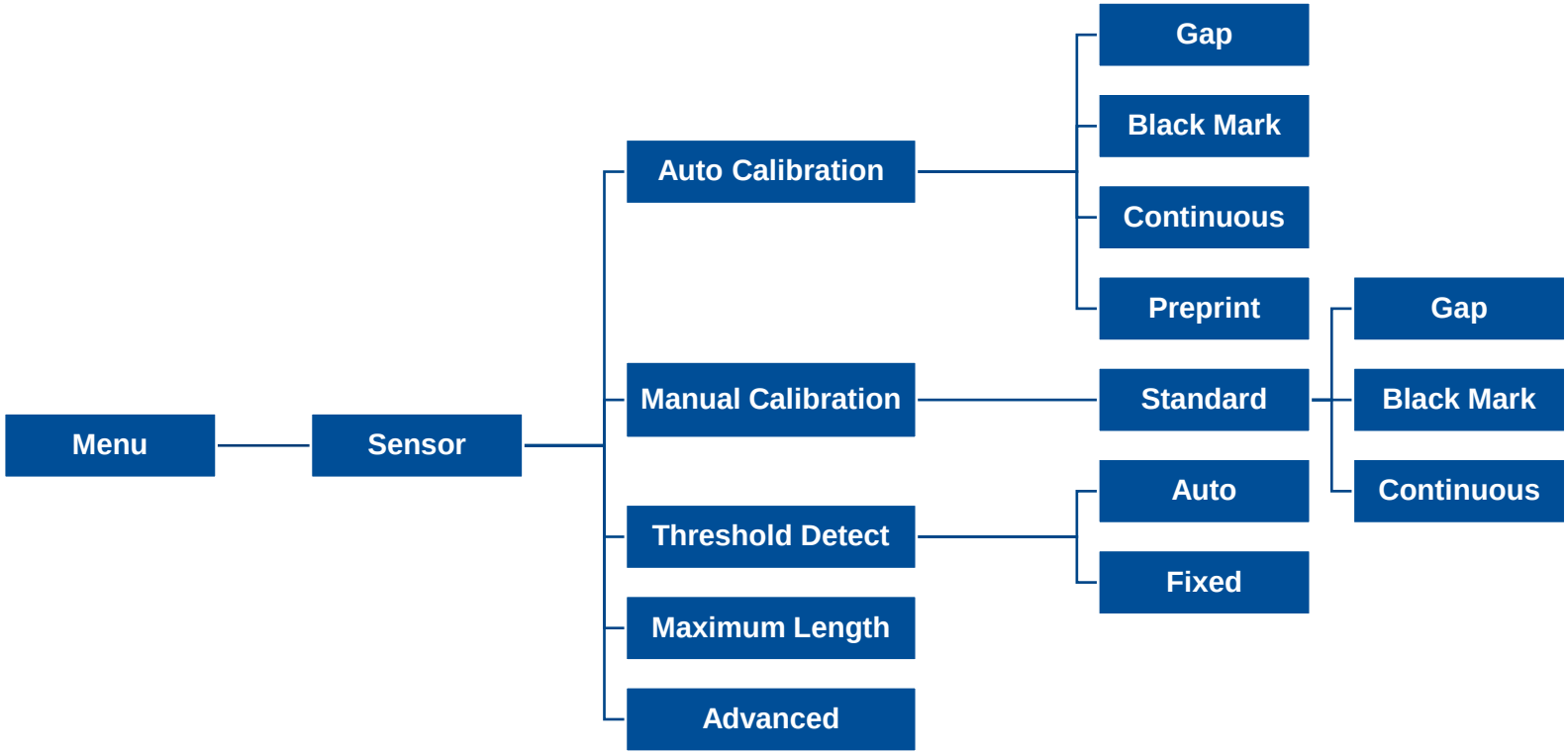
Item	Description	Default
Density	Set the printing darkness. Available setting range: 0 to 30.	**16**
Print Speed	Set the print speed. Available setting range is 2~18 for 203dpi and 2~14 for 300dpi; 1.5~6 for 300dpi..	**N/A**
Tear Off	Adjust media stop location. Available setting value range: -120~120 dots.	**0 dot**
Print mode	Set the print mode. There are 4 modes: **Tear Off:** Next label top of form is aligned to the print head heating line location. **Peeler Off**: Enable the label peel off mode. **Cutter**: Enable the label cutter mode	**Tear Off**
Print Width	Set the print width. Available setting range: 2 ~ 999 dots.	**812**
List Fonts	Print the current fonts list from the memory devices to the label.	**N/A**
List Images	Print current printer available images list stored at the memory device to the label.	**N/A**
List Formats	Print current printer available formats list from the memory devices to the label.	**N/A**
List Setup	Print current printer configuration to the label.	**N/A**
Control Prefix	Set control prefix character.	**N/A**
Format Prefix	Set format prefix character.	**N/A**
Delimiter Char	Set delimiter character.	**N/A**

Media Power Up	Set the action of the media when turning on the printer. **Feed:** Printer will advance one label. **Calibration:** Printer will make calibration. **Length:** Printer determine length and feed label. **No Motion:** Printer will not move media.	**No Motion**
Head Close	Set the action of the media when closing the print head. **Feed:** Printer will advance one label. **Calibration:** Printer will make calibration. **Length:** Printer determine length and feed label. **No Motion:** Printer will not move media.	**No Motion**
Label Top	Adjust print position vertically on the label. Value range: -120 to +120 dots.	**0**
Left Position	Adjust print position horizontally on the label. Value range:-9999 to +9999 dots.	**0**
Reprint Mode	Reprint the last label by pressing button on printer's control panel.	**Disabled**
Format Convert	Select the bitmap scaling factor. The first number is the original dots per inch (dpi) value; the second the dpi which you would like to scale.	**None**

Note: printing from other software/drive will overwrite the settings set from the panel.

6.5 Sensor

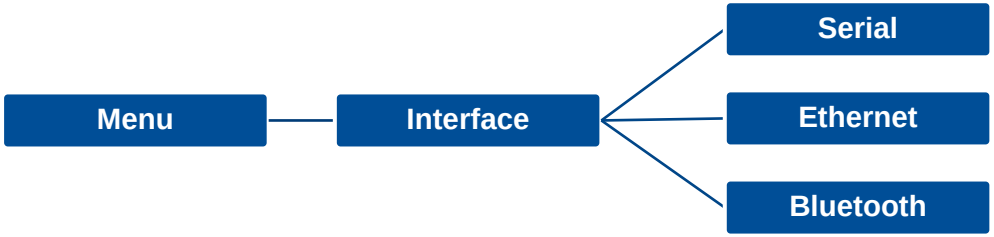
This option is used to calibrate the selected sensor. We recommend calibrate the sensor before printing when changing the media.



Item	Description	Default
Auto Calibration	Set the media sensor type and calibrate the selected sensor automatically.	**N/A**
Manual Calibration	In case Auto Calibration does not work, please use “Manual” function to set the paper length and gap/bline size to complete the calibration setting.	**N/A**
Threshold Detect	Set sensor sensitivity in fixed or auto.	**Auto**
Maximum Length	Set the maximum length for label calibration.	**254 mm**
Advanced	Set the minimum paper length and maximum gap/bline length for auto-calibration.	**N/A**

6.6 Interface

Interface can set the printer interface settings.



Note:

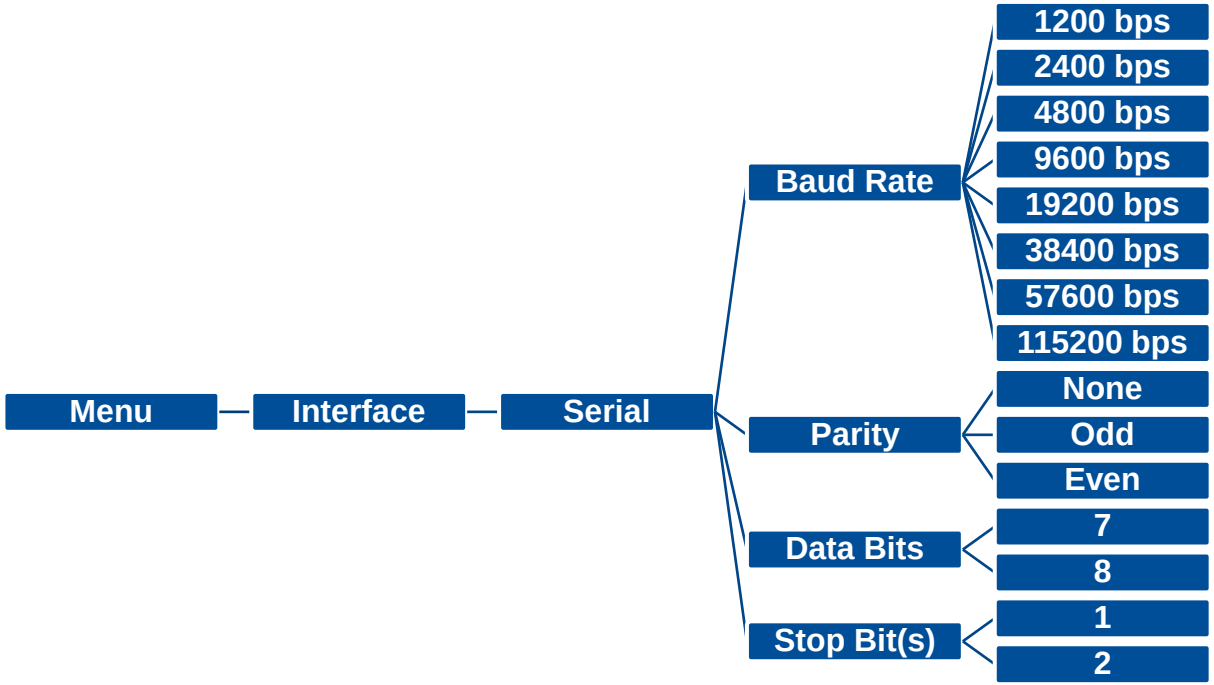
To comply with the new European RED (Radio Equipment Directive) requirements, the Network Block must be disabled before the printer's first network connection. To enable standard network functions, follow the steps below.

- **For USB setup (recommended in Europe):**
    1. Connect the printer via USB.
    2. Open **TSC Console** and go to **Functions > PRTSecure > Security Mode**.
    3. Set it to **"Standard"**.
- **For printers with LCD:**
    1. Go to **Menu > Advanced > PRTSecure**.
    2. Set Security Mode to **"Standard"**.

For detailed instructions, see the **TSC Console Utility** and **Advanced** sections.

6.6.1 Serial Comm

Serial comm can set the printer RS-232 settings.



Item	Description	Default
Baud Rate	Set the RS-232 baud rate.	**9600**
Parity	Set the RS-232 parity.	**None**
Data Bits	Set the RS-232 Data Bits.	**8**
Stop Bit(s)	Set RS-232 Stop Bits.	**1**

6.6.2 Ethernet

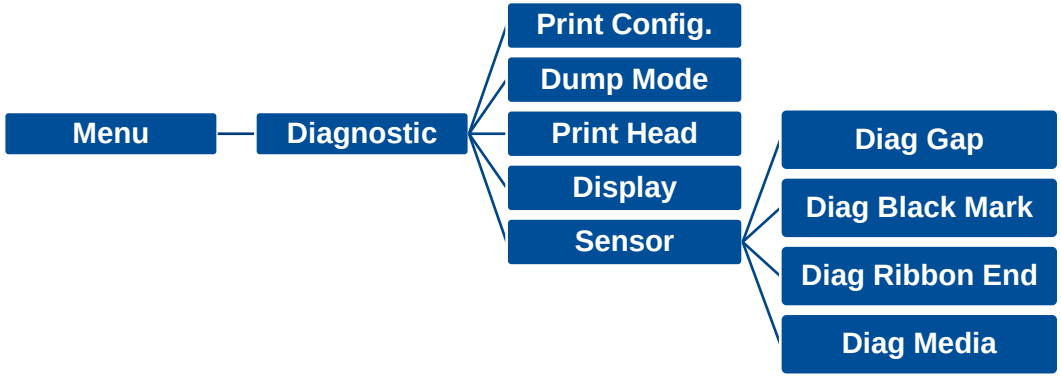
Ethernet configures internal Ethernet configuration and checks the printer's Ethernet module status, and reset the Ethernet module.

Item	Description	Default
Status	Check the Ethernet IP address and MAC setting status.	**N/A**
Config.	**DHCP:** 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**

6.7 File Manager

File Manager 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.

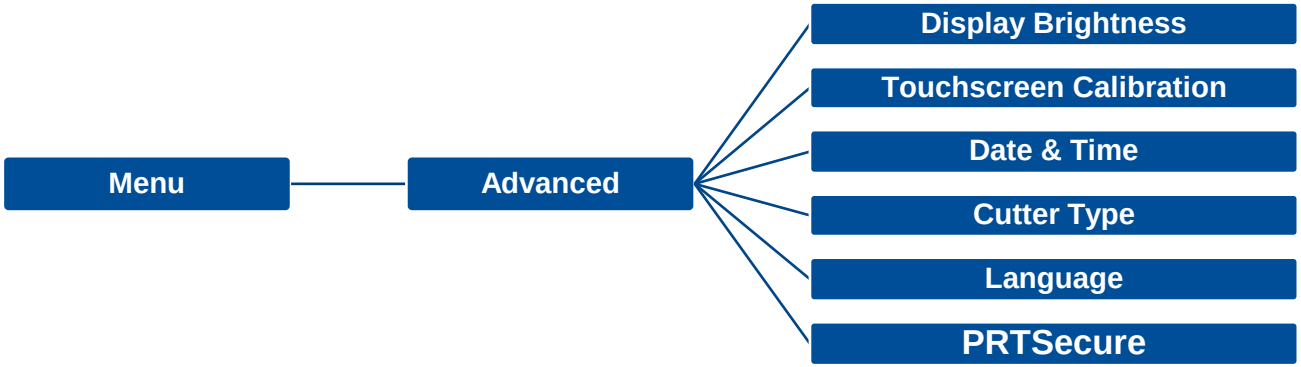
6.8 Diagnostic




```
DOWNLOA    0D 0A 44 4F 57 4E 4C 4F 4I
D „TEST2.  44 20 22 54 45 53 54 32 2E
DAT",5,CL  44 41 54 22 2C 35 2C 43 4C
S  DOWNLO  53 0D 0A 44 4F 57 4E 4C 4F
AD F,"TES  41 44 20 46 2C 22 54 45 53
T4.DAT",5  54 34 2E 44 41 54 22 2C 35
,CLS  DOW  2C 43 4C 53 0D 0A 44 4F 57
NLOAD „TE  4E 4C 4F 41 44 20 22 54 45
ST2.DAT",  53 54 32 2E 44 41 54 22 2C
5,CLS  DO  35 2C 43 4C 53 0D 0A 44 4F
WNLOAD F,  57 4E 4C 4F 41 44 20 46 2C
„TEST4.DA  22 54 45 53 54 34 2E 44 41
T",5,CLS   54 22 2C 35 2C 43 4C 53 0D
 DOWNLOAD  0A 44 4F 57 4E 4C 4F 41 44
 "TEST2.D  20 22 54 45 53 54 32 2E 44
AT",5,CLS  41 54 22 2C 35 2C 43 4C 53
  DOWNLOA  0D 0A 44 4F 57 4E 4C 4F 4I
D F,"TEST  44 20 46 2C 22 54 45 53 54
4.DAT",5,  34 2E 44 41 54 22 2C 35 2C
CLS        43 4C 53 0D 0A
```

Item	Description
Print Config.	Print current printer configuration to the label. The configuration printout contains print head test pattern, which is useful for checking the dot damage on the print head heater.
Dump Mode	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. **Dump mode requires 4" wide paper width.**
Print Head	Check print head's temperature and bad dots.
Display	Check LCD's color state.
Sensor	Check sensors intensity and reading state.

6.9 Advanced



Item	Description
Display Brightness	This item is used to setup the brightness for display.
Touchscreen Calibration	This item is used to calibrate the center of the cross for best result for touchscreen.
Date & Time	This item is used to setup the date and time on display.
Cutter Type	This item is used to set the cutter type.
Language	This item is used to setup the language on display.
PRTSecure	Set up the Printer Secure. • **Strict:** Enable this security setting - Network setup via network is blocked • **Standard:** Disable this security setting - Normal network setup allowed If you want to use **Strict Mode** to connect to the network, please refer to the **TSC Network Security Manual** for more details. Click the document link or scan the QR code below to access the manual. **Note: The default setting for the Europe unit is Strict (Network Block enabled).**

6.10 Service

This feature is used to restore printer settings to defaults and checking information for printer.

Item	Description
Initialization	This feature is used to restore printer settings to defaults.
Printer Information	This feature is used to check printer serial number, printed mileage(m), labels(pcs.) and cutting counter.
Contact us	This feature is used to check the contact information for tech support service

7. Troubleshooting

Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	■ The power cord is not properly connected. ■ The power switch is closed.	■ Plug the power cord in printer and outlet. ■ Switch the printer on.
Carriage Open	■ The printer carriage is open.	■ Close the print carriage.
Not Printing	■ Check if interface cable is well connected. ■ Check if wireless or Bluetooth device is well connected. ■ The port in the Windows driver is not correct.	■ Re-connect cable to interface or change a new cable. ■ 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 printhead. 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. ■ Refer to 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. ■ Refer to 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	■ Calibrate the media sensor. ■ Set media size correctly. ■ Remove the stuck label inside the printer mechanism.

	mechanism.	
Take Label	■ Peel function is enabled.	■ If 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.
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. ■ (Please refer to chapter 8)
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 chapter 4. ■ 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] →[Setting] → [Shift X] 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] →[Setting] → [Shift Y] → to fine tune the parameter of Shift Y. ■ Set the vertical offset in the driver if you're using BarTender.
LCD panel is dark and keys are not working	■ The cable between main PCB and LCD panel is loose.	■ Check if the cable between main PCB and LCD is secured or not.
LCD panel is dark but the LEDs are light	■ The printer initialization is unsuccessful.	■ Turn OFF and ON the printer again. ■ Initialize the printer.
Ribbon encoder sensor doesn't	■ The ribbon encoder sensor connector is loose.	■ Fasten the connector.

work		
Ribbon end sensor doesn’t work	■ The connector is loose. ■ The ribbon sensor hole is covered with dust.	■ Check the connector. ■ Clear the dust in the sensor hole by the blower.
Cutter is not working	■ The connector is loose.	■ Plug in the connect cable correctly.

8. Maintenance

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

- **For Cleaning**

  Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the print head and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

- **For Disinfecting**

  Sanitize your printer to protect yourself and others and can help prevent the spread of viruses.

- **Important**

  - Set the printer power switch to O (Off) prior to performing any cleaning or disinfecting tasks. Leave the power cord connected to keep the printer grounded and to reduce the risk of electrostatic damage.
  - Do not wear rings or other metallic objects while cleaning any interior area of the printer.
  - Use only the cleaning agents recommended in this document. Use of other agents may damage the printer and void its warranty.
  - Do not spray or drip liquid cleaning solutions directly into the printer. Apply the solution on a clean lint-free cloth and then apply the dampened cloth to the printer.
  - Do not use canned air in the interior of the printer as it can blow dust and debris onto sensors and other critical components.
  - Only use a vacuum cleaner with a nozzle and hose that are conductive and grounded to drain off static build up.
  - All reference in these procedures for use of isopropyl alcohol requires that a 99% or greater isopropyl alcohol content be used to reduce the risk of moisture corrosion to the printhead.
  - Do not touch printhead by hand. If you touch it careless, please use 99% Isopropyl alcohol to clean it.
  - Always taking personal precaution when using any cleaning agent.

Cleaning Tools

- Cotton swab
- Lint-free cloth
- Brush with soft non-metallic bristles
- Vacuum cleaner
- 75% Ethanol (for disinfecting)
- 99% Isopropyl alcohol (for printhead and platen roller cleaning)
- Genuine printhead cleaning pen
- Mild detergent (without chlorine)

Cleaning Process:

Printer Part	Method	Interval
Print Head	**I.** Always turn off the printer before cleaning the printhead. **II.** Allow the printhead to cool for at least one minute. **III.** Use a cotton swab and 99% Isopropyl Alcohol or genuine print head cleaning pen to clean the print head surface.	Clean the print head when changing a new label roll.
Platen Roller	**I.** Turn off the printer. **II.** Rotate the platen roller and wipe it thoroughly with the lint-free 99% Isopropyl Alcohol.	Clean the platen roller when changing a new label roll
Peel Bar	Use the lint-free cloth with 99% Isopropyl Alcohol to wipe it.	As needed
Sensor	Use brush with soft non-metallic bristles or a vacuum cleaner, to remove paper dust. Clean upper and lower media sensors to ensure reliable Top of Form and Paper Out sensing.	Monthly
Exterior	Clean the exterior surfaces with a clean, lint-free cloth (water-dampened cloth). If necessary, use a mild detergent or desktop cleaning solution then use the 75% Ethanol to wipe it.	As needed
Interior	Clean the interior of the printer by removing any dirt and lint with a vacuum cleaner, as described above, or use a brush with soft non-metallic bristles then use the 75% Ethanol to wipe it.	As needed

9. Agency Compliance and Approvals

EN 55022 (Class A)
EN 55024
EN 61000-3-2 / EN 61000-3-3
EN 60950-1

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC CFR Title 47 Part 15B, Class A
ICES-003, Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conform à la norme NMB-003 du Canada.

AS/NZS CISPR 22 (Class A)

GB-4943.1
GB9254 (Class A)
GB17625.1
此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰，在这种情况下，可能需要用户对干扰采取切实可行的措施。

UL 60950-1
CSA C22.2 No. 60950-1-07(2nd Edition)

EN 60950-1

Wichtige Sicherheits-Hinweise

1. Bitte lesen Sie diese Hinweis sorgfältig durch.
2. Heben Sie diese Anleitung fűr den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromentz zu trennen. Verwenden Sie keine Flüssig-oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschluß-Steckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schűtzen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Beschädigungen hervorrufen.
7. Beachten Sie beim Anschluß ans Stromnetz die Anschlußwerte.
8. Dieses Gerät kann bis zu einer Außentemperatur von maximal 40℃ betrieben werden.

CAUTION

Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the instructions.

“VORSICHT”

Explosionsgefahr bei unsachgemäßen Austaush der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angabren des Herstellers.

CAUTION:

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

CAUTION
1. HAZARDOUS MOVING PARTS IN CUTTER MODULE. KEEP FINGER AND OTHER BODY PARTS AWAY. 2. THE MAIN BOARD INCLUDES REAL TIME CLOCK FEATURE HAS LITHIUM BATTERY CR2032 INSTALLED. RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. 3. DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER INSTRUCTIONS.

ATTENTION
1. PIECES DANGEREUSES EN MOUVEMENT DANS LE MODULE DE COUPAGE. GARDER VOS DOIGTS ET AUTRES PARTIES DU CORPS À L'ÉCART DE CES ZONES. 2. LE CIRCUIT PRINCIPAL CONTIENT UNE HORLOGE EN TEMPS RÉEL AVEC UNE BATTERIE AU LITHIUM DE TYPE CR2032. RISQUE D'EXPLOSION SI LA PILE EST REMPLACÉE PAR UNE PILE D'UN AUTRE TYPE. 3. SUIVRE LES INSTRUCTIONS DU FABRICANT POUR LA MISE AU REBUT DES PILES USÉES.

CAUTION:

This equipment is not suitable for use in locations where children are likely to be present.

10. Revision History

Date	Content	Editor
2023/08/10	• Removed KU-007 Plus keyboard from the option list, page 4. • Removed CD disk from the packing list, page 7.	Peter Yao
2025/11/21	• Change the document layout. • Updated Trademark and Copyright Notice & Added liability statements • Add a note to Interface section (RED) • Update the TSC Console Utility section • Update the Advance section for adding PRTSecure item	Camille Pao

www.tscprinters.com