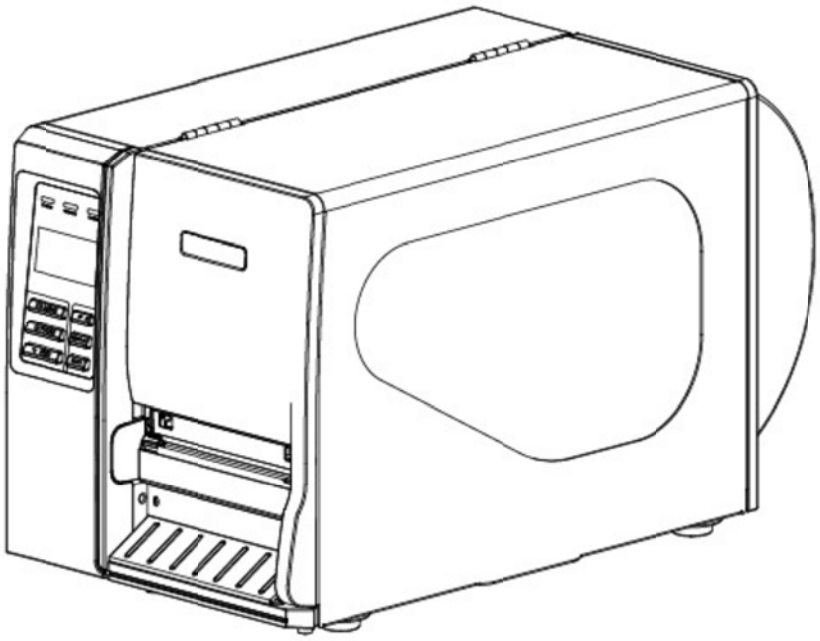
TDP43HE, TDP43HE/E, TDP46HE and TDP46HE/E Thermal Transfer Printer

USER MANUAL

B20730
Rev.: 01 8-2013



NOTE: In the interest of higher quality and value, Panduit products are continually being improved and updated. Consequently, pictures may vary from the enclosed product.

www.panduit.com

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Agency Compliance and Approvals

CE	**CE CLASS A** **EN 55022:2006+A1:2007** **EN 55024:1998+A1:2007+A2:2003** **EN 61000-4 SERIES REGULATIONS**
FC	**FCC CFR Title 47 Part 15 SubpartB:2010-Section 15.107 and 15.109** **ICES-003 Issue 4:2004 Class A**
	This device complies with Part 15 of the FCC Rules. **Operation is subject to the following two conditions.** **(1) This device may not cause harmful interference, and** **(2) This device must accept any interference received, including interference that may cause undesired operation.**
CCC S&E	**GB-4953-2001** **GB9254-2008 (CLASS A)** **GB17625.1-2003** **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。
c UL us LISTED I.T.E. E165747	**UL 60950-1 (2nd Edition)** **CSA C22.2 No. 60950-1-07 (2nd Edition)**
KC	**A**급 기기 **(**업무용 방송통신기자재**) Class A Equipment (Industrial Broadcasting & Communication Equipment)** 이 기기는 업무용**(A**급**)** 전자파적합기기로서 판 매자 또는 사용자는 이 점을 주의하시기 바라 며**,** 가정외의 지역에서 사용하는 것을 목적으로 합니다**.** **This equipment is Industrial (Class A) electromagnetic wave suitability equipment and seller or user should take notice of it, and this equipment is to be used in the places except for home.**

Specifications are subject to change without notice.

Safety Instructions

WARNING

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

CAUTION

- Danger of explosion if battery is incorrectly replaced.
- Replace only with the equivalent type recommended by the manufacture.
- Dispose of used batteries according to the manufacturer's instructions.

CAUTION

Electric Shock Hazard:

- Before you connect the equipment to the power outlet, please check the voltage of the power source.
- Disconnect the equipment from the voltage of the power source to prevent possible transient over voltage damage.
- Don't pour any liquid to the equipment to avoid electrical shock.

CAUTION

- Keep the equipment away from moisture and humidity.

CAUTION

* ONLY qualified service personnel for safety reasons, should open equipment.
* Don't repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.
* Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

Table of Contents

1. Introduction

1.1 Product Introduction

Thank you very much for purchasing a Panduit printer.

The TDP43HE and TDP46HE Thermal Transfer Desktop Printers produce high-quality printed labels for a wide range of labeling applications for OEM, MRO, construction, data centers, enterprise, and industrial automation. The rugged, high-speed printers are designed for dependable use in industrial, construction, and harsh environments. Using the included Easy-Mark™ Labeling Software, the printers provide simple setup and operation with all Panduit thermal transfer label media to create wire and cable markers, terminal block labels, equipment labels, marker plates, panel labels, network labels, and safety and facility labels. We recommend the use of Easy-Mark, version 3.7.24, or higher.

1.2 Product Features

The printer offers the following standard features.

Product standard feature	TDP43HE (300 dpi)	TDP46HE (600 dpi)
Thermal transfer printing	⬭	⬭
Direct thermal printing	⬭	⬭
High quality die-cast aluminum design	⬭	⬭
Metal cover with large clear media view window	⬭	⬭
Moveable gap sensor (position full web adjustable)	⬭	⬭
Moveable black mark sensor (position full web adjustable)	⬭	⬭
Ribbon end sensor	⬭	⬭
Head open sensor	⬭	⬭
LCD display (graphic type, 128x64 pixel) with back light	⬭	⬭
Control panel with 6 operation buttons	⬭	⬭
LED indicators	⬭	⬭
Real time clock	⬭	⬭
Internal Ethernet print server (10/100 Mbps) interface	⬭	⬭
USB 2.0 (full speed) interface	⬭	⬭
Serial RS-232C (2400-115200 bps) interface	⬭	⬭
Parallel Centronics (SPP mode) interface	⬭	⬭

PS/2 keyboard interface for stand-alone or data entry at print site	○	○
32 MB SDRAM memory	○	○
8 MB FLASH memory	○	○
SD FLASH card memory expands storage to 4 GB	○	○
Powerful 32 bit 200 MHz RISC processor	○	○
Standard industry emulations right out of the box including Eltron® and Zebra® language support	○	○

1.3 General Specification

General Specifications	
Physical dimensions	270 mm (W) x 308 mm (H) x 505 mm (D)
Weight	15 kg (33.1 lb.)
Electrical	Internal switching power supply Input: 100~240VAC, 50/60Hz Output: 24V, 8.33A, 200W
Environmental condition	Operation: 5 ~ 40˚C (41 ~ 104˚F), 25~85% non-condensing Storage: -40 ~ 60 ˚C (-40 ~ 140˚F), 5~90% non-condensing

1.4 Print Specifications

Print Specifications	TDP43HE (300 dpi)	TDP46HE (600 dpi)
Print head resolution	300 dots/inch (12 dots/mm)	600 dots/inch (24 dots/mm)
Printing method	Thermal transfer and direct thermal	
Dot size (width x length)	0.084 x 0.084 mm (1 mm = 12 dots)	0.042 x 0.042 mm (1 mm = 24 dots)
Print speed (inches per second)	2, 3, 4, 5, 6, 7, 8 ips selectable Up to 8 ips	2, 3, 4 ips selectable up to 4 ips
Max. print width	104 mm (4.09”)	
Max. print length	1854.2 mm (73”)	1016 mm (40”)
Printout bias	Vertical: 1 mm max. Horizontal: 1 mm max.	

1.5 Ribbon Specifications

Ribbon Specifications	
Ribbon outside diameter	90 mm max.
Ribbon length	600 meter max.
Ribbon core inside diameter	1 inch (25.4 mm)
Ribbon width	Max. 114.3 mm (4.5”)
	Min. 25.4 mm (1.0”)
Ribbon wound type	Ink coated inside wound
Ribbon end type	Transparency

1.6 Media Specifications

1.6.1 Industrial model

Media Specifications	TDP43HE (300 dpi)	TDP46HE (600 dpi)
Label roll capacity	208.3 mm (8.2”)	
Media alignment	Edge alignment	
Media type	Continuous, die-cut, black mark, fan-fold, notch	
Media wound type	Printing face outside wound	
Media width (label + liner)	Max. 118 mm (4.6”)	
	Min. 25.4 mm (1.0”)	
Media thickness (label + liner)	Max. 0.30 mm (11.8 mil)	
	Min. 0.06 mm (2.36 mil)	
Media core diameter	Max. 76.2 mm (3”)	
	Min. 25.4 mm (1”)	
Label length	Max. 1,854 mm (73”)	Max. 1016 mm (40”)
	Min. 5 mm (0.20”)	Min. 5 mm (0.20”)
Label length (peeler mode)	Max. 152.4 mm (6”)	
	Min. 25.4 mm (1”)	
Gap height	Min. 2 mm	
Black mark height	Min. 2 mm	
Black mark width	Min. 8 mm (0.31”)	

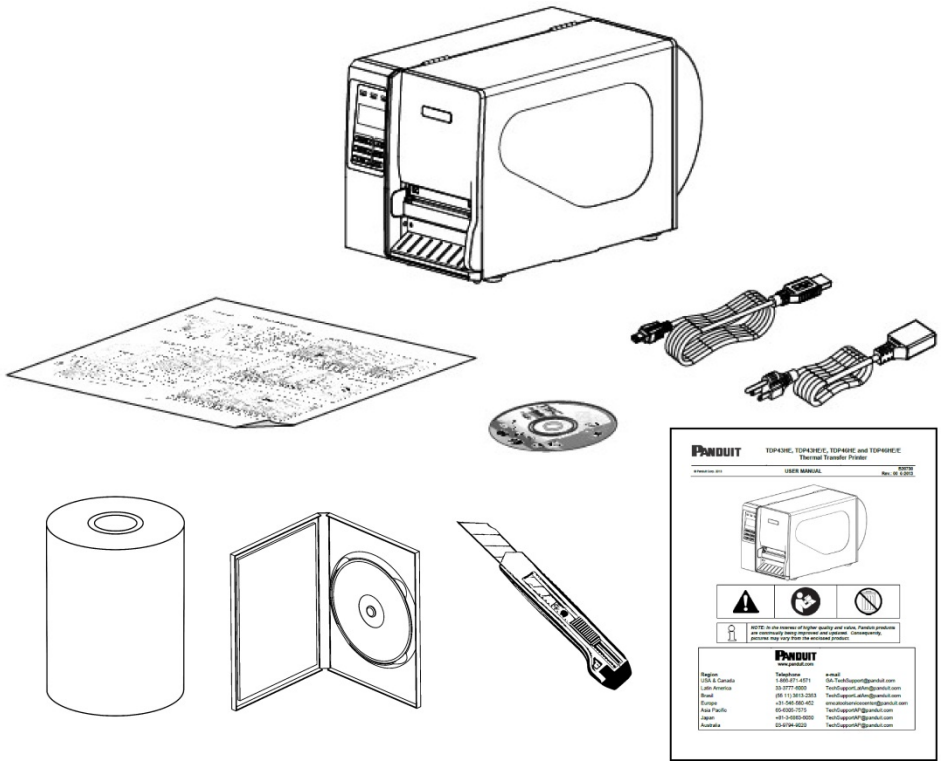
2. Operations Overview

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 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 Easy-Mark™ CD (Labeling Software)
- One quick installation guide
- Appropriate power cord(s)
- One USB interface cable
- One Windows driver disc, with user manuals
- One user manual (hard copy)
- One warranty card (not shown)
- One Ink Ribbon (Hybrid)
- One Utility Knife (*CAUTION, SHARP!*)



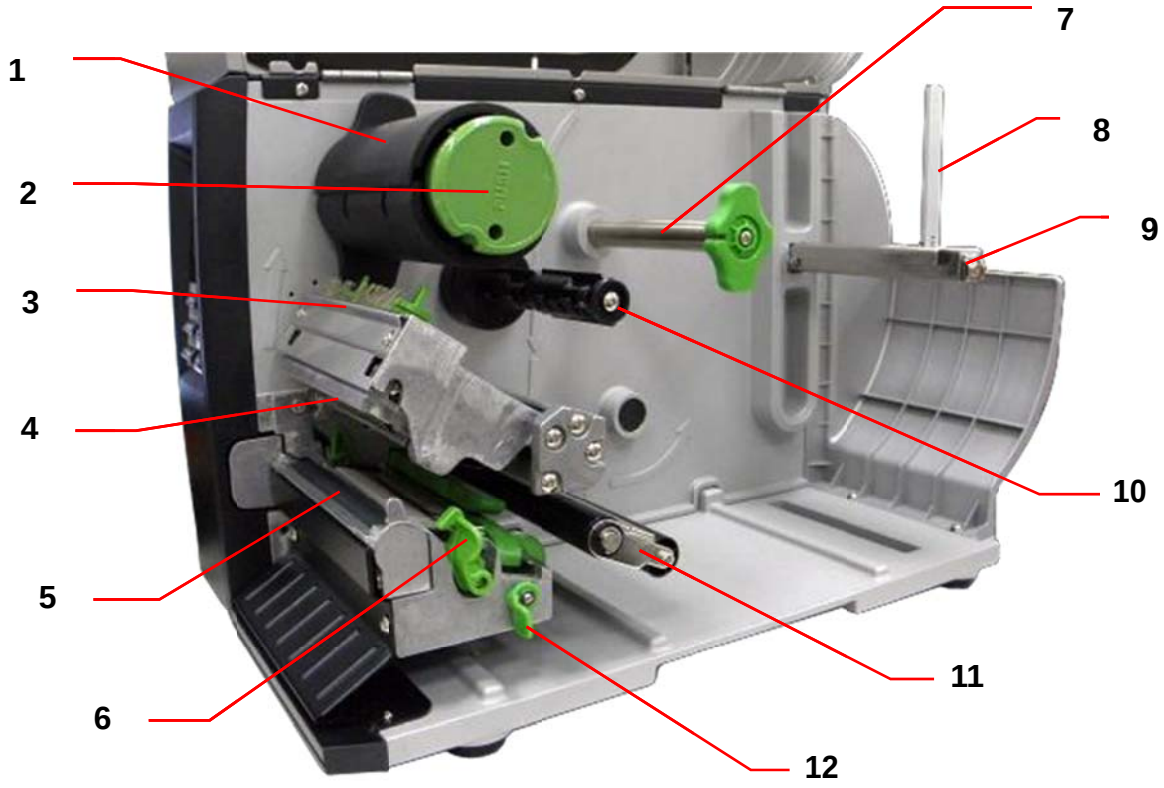
If any parts are missing, please contact Panduit Customer Service.

2.2 Printer Overview

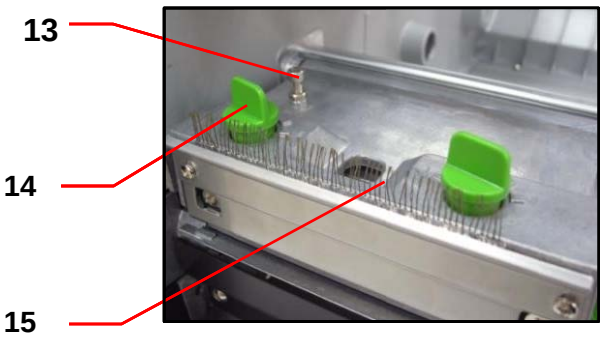
2.2.1 Front View

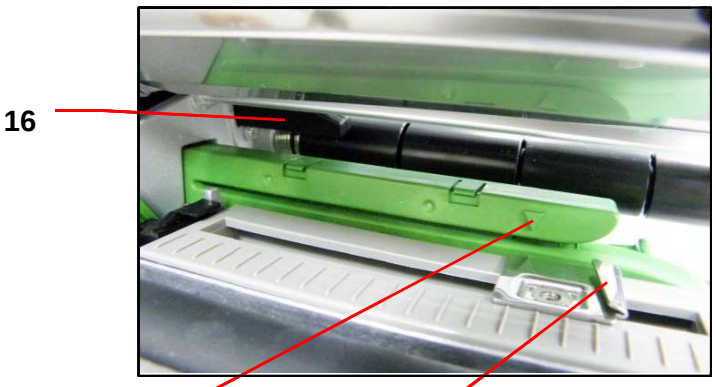
1. LED indicators
2. LCD display
3. Front panel buttons
4. Label exit chute
5. Lower front cover
6. Printer right side cover

2.2.2 Interior view



1. Ribbon rewind spindle
2. Ribbon release button
3. Ribbon guide plate
4. Print head
5. Platen roller
6. Print head release lever
7. Media guide bar
8. Label roll guard
9. Label supply spindle
10. Ribbon supply spindle
11. Damper
12. Media sensor lock lever
13. Z axis mechanism adjustment knob
14. Print head pressure adjustment knob
15. Anti-static brush
16. Ribbon sensor
17. Media sensor
18. Label guide



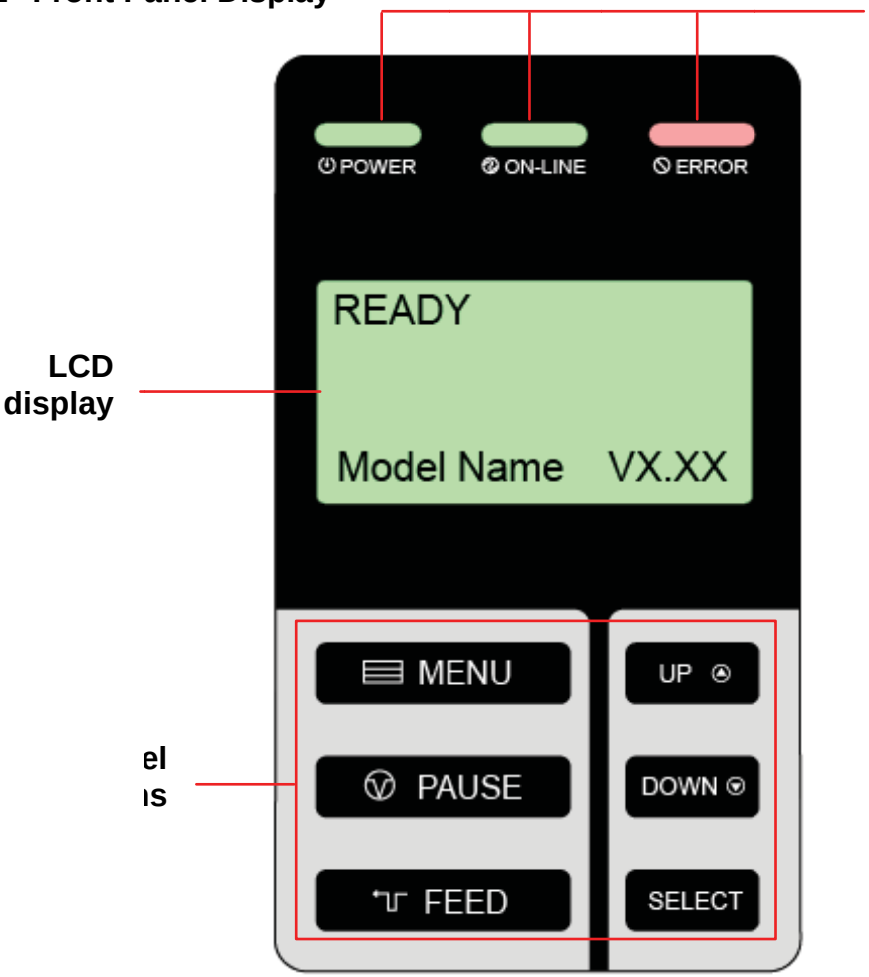


2.2.3 Rear View

1. Rear external label entrance chute
2. Parallel / Centronics interface
3. USB interface
4. Serial / RS-232C interface
5. Power cord socket
6. SD card slot
7. Ethernet interface
8. PS/2 interface
9. Power switch

2.3 Operator Controls

2.3.1 Front Panel Display



2.3.2 Indicators

LED	Status	Indication
POWER	Off	The printer power is turned off
	On	The printer power is turned on
ON-LINE	On	Printer is ready
	Blinking	Pause
		Downloading data into printer.
ERROR	Off	Printer is ready
	On	“CARRIAGE OPEN” or “CUTTER ERROR”
	Blinking	“NO PAPER”, “PAPER JAM”, “NO RIBBON” or “CLEAN DATA”

2.3.3 Front Panel Keys

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

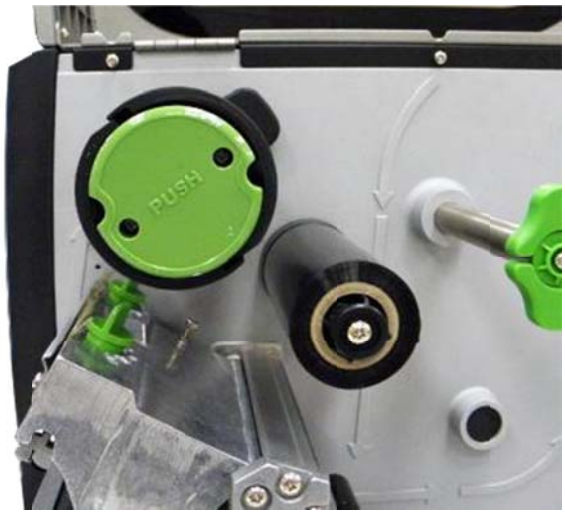
2.4 Setting up the Printer

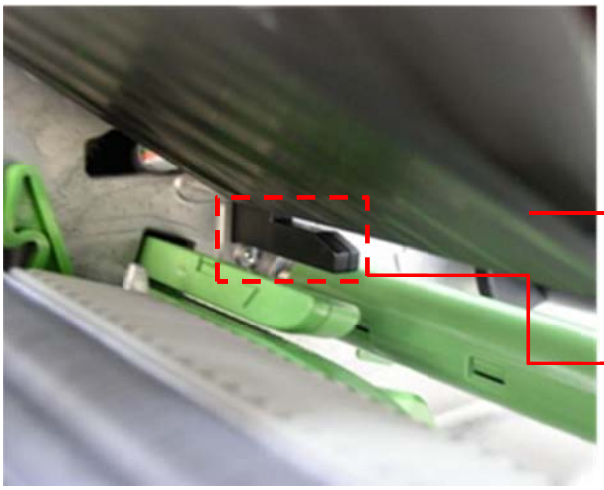
1. Place the printer on a flat, secure surface.
2. Make sure the power switch is off.
3. Connect the printer to the computer with the provided USB cable.
4. Plug the power cord into the AC power cord socket at the rear of the printer, and then plug the power cord into a properly grounded power outlet.

Note: Please switch printer power to OFF (O), before plugging the power cord into the power cord socket.

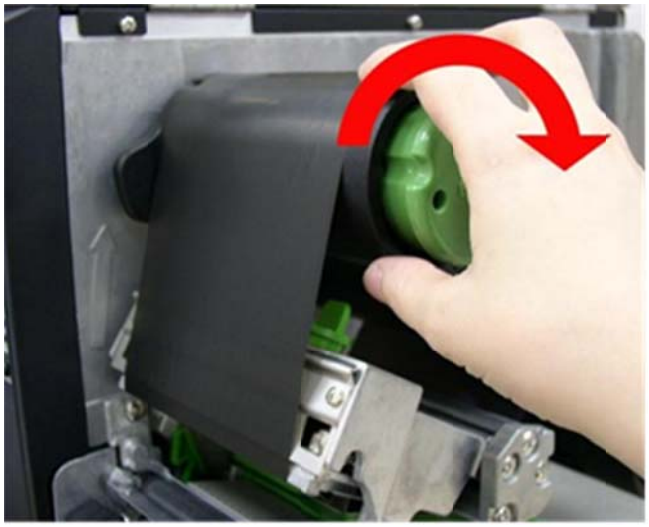
2.5 Loading Ribbon

2.5.1 Loading Ribbon

	1. Open the printer right side cover.
	2. Push the print head release lever to open the print head mechanism.
	3. Install the ribbon onto the ribbon supply spindle.



4. Thread the ribbon through the ribbon sensor slot and then through the open space in between print head and platen. (See path diagram on next page.)

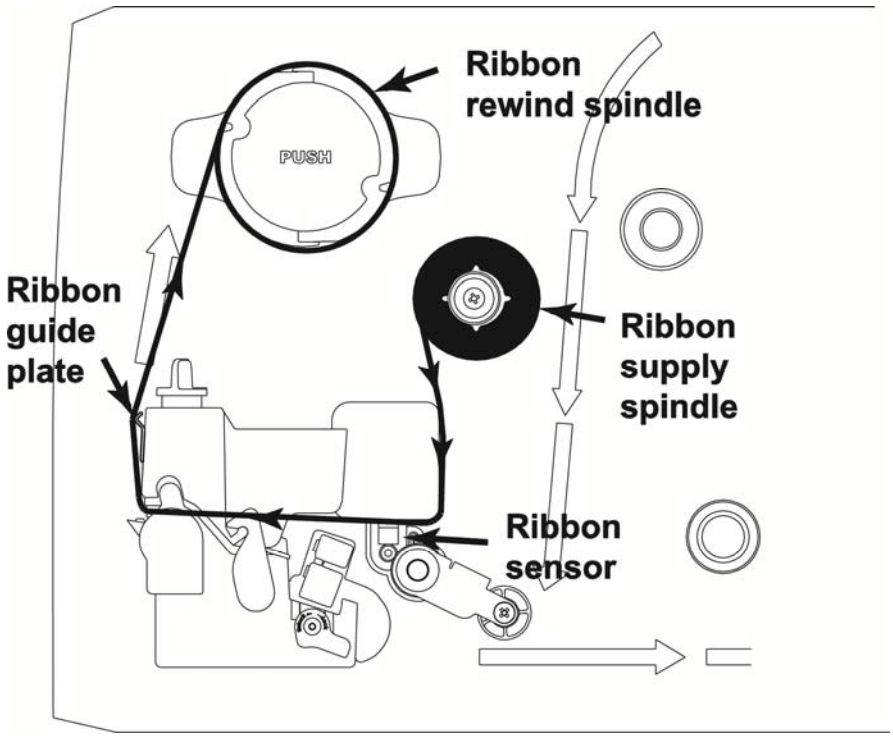


5. Tape the end of the ribbon to the Ribbon Rewind Spindle. Wind the Ribbon Rewind Spindle, clockwise, until the ribbon is smooth and properly stretched (about 3 to 5 rotations).

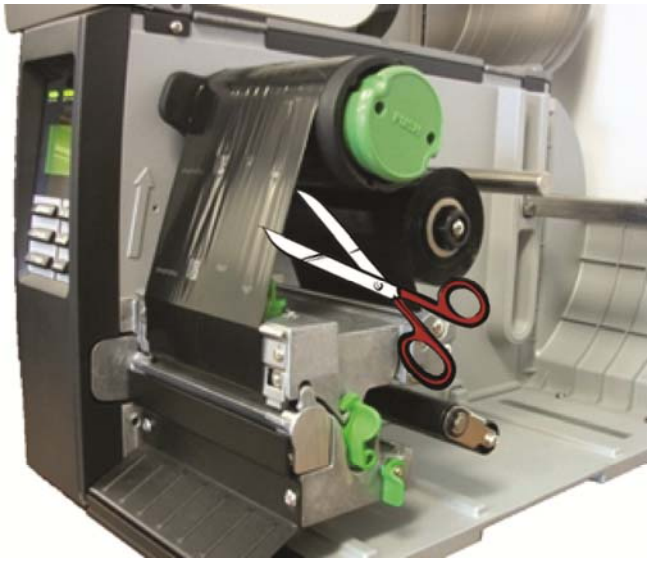
Note: Please DO NOT push the ribbon release button when you are loading the ribbon. The ribbon release button is used to remove the used ribbon. (For ribbon removal, refer to Section 2.5.2)

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

- **Loading path for ribbon**



2.5.2 Remove Used Ribbon

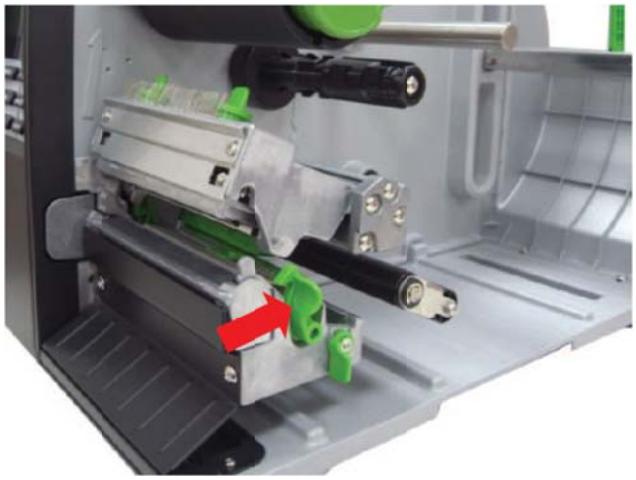
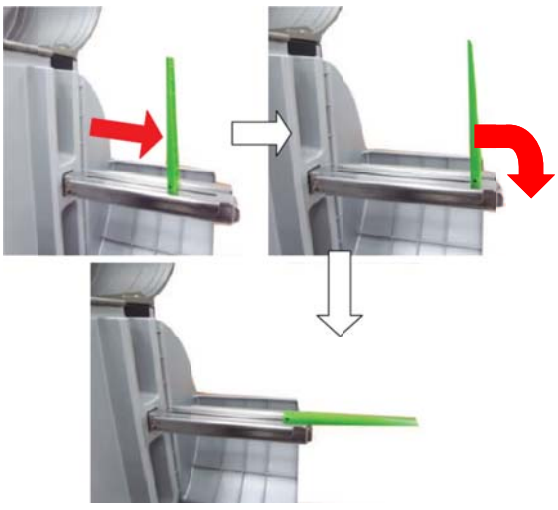


1. Break the ribbon between ribbon guide plate and the ribbon rewind spindle.

	2. Push the ribbon release button to release the ribbon on the ribbon rewind spindle.
	3. Then, slide off the ribbon from ribbon rewind spindle.

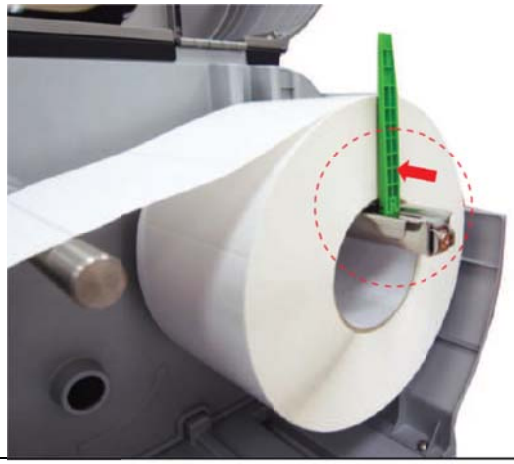
2.6 Loading the Media

2.6.1 Loading the Media

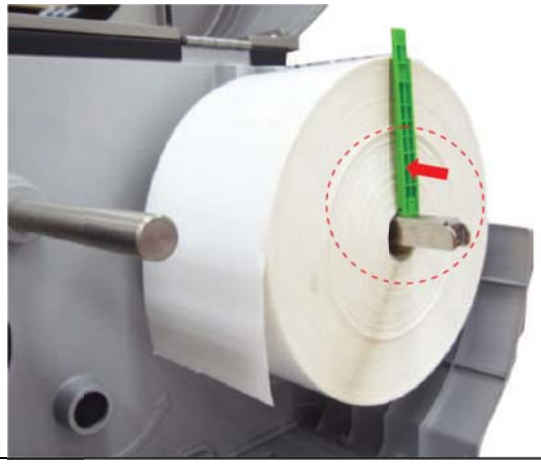
	1. Open the printer right side cover.
	2. Push the print head release lever to open the print head mechanism.
	3. Move the label roll guard horizontally to the end of label spindle then flip down the label roll guard.

4. Place the roll of media on the label supply spindle. Flip up the label roll guard. Move the label roll guard horizontally to gently fit the width of label roll.

3” Label spindle

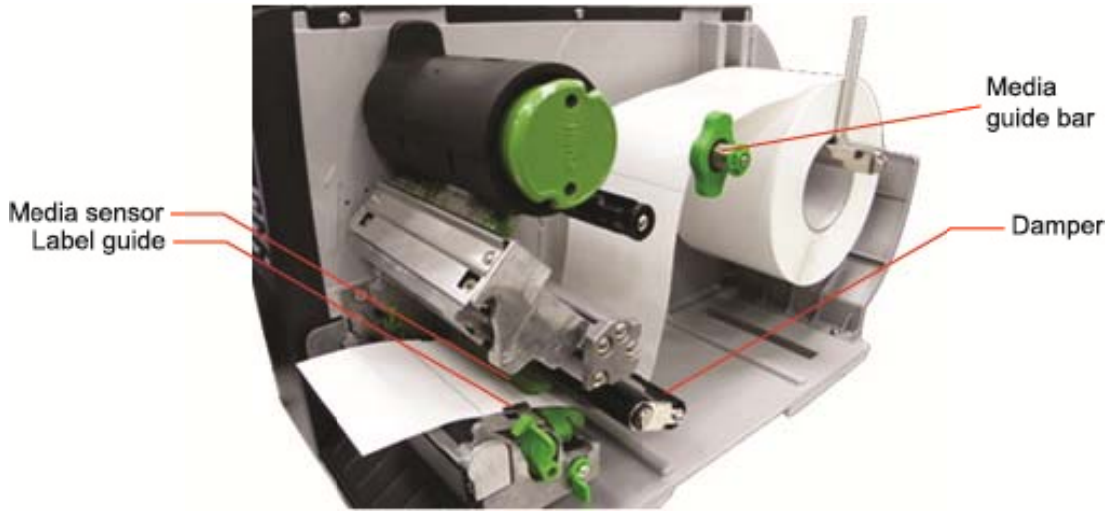


1” Label spindle

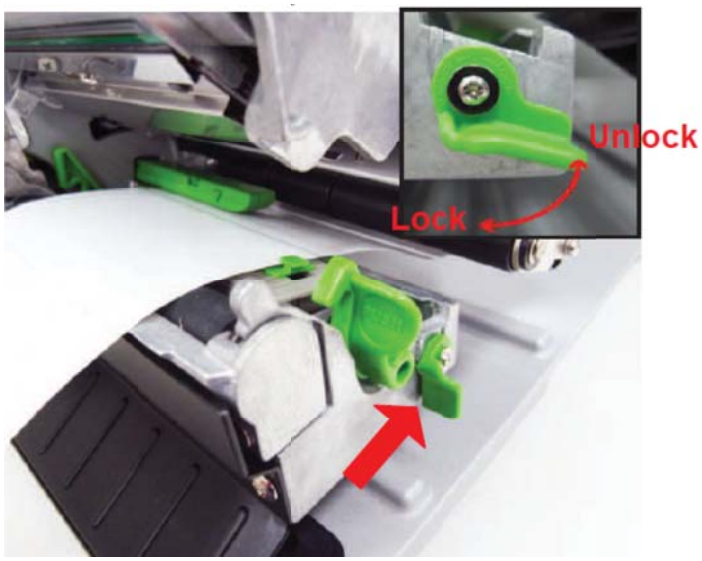


Note: When using Panduit labels on 1” cores, remove the label supply spindle cover, by removing the two screws shown in the image below. Be sure to store this cover for future use, with labels on 3” cores.

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



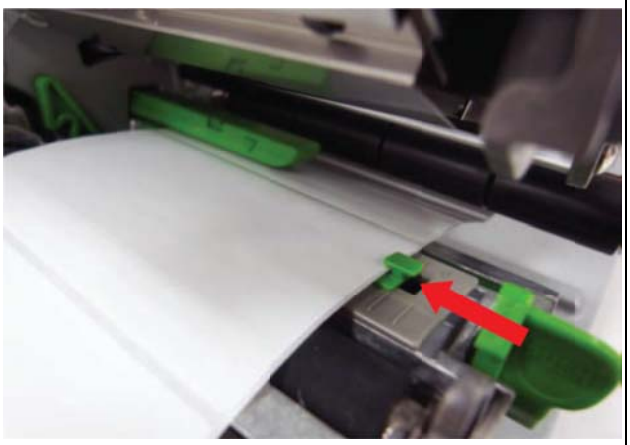
6. Unlock the media sensor lock lever to adjust the media sensor.



Gap Label Sensor	Black Mark Label Sensor
	

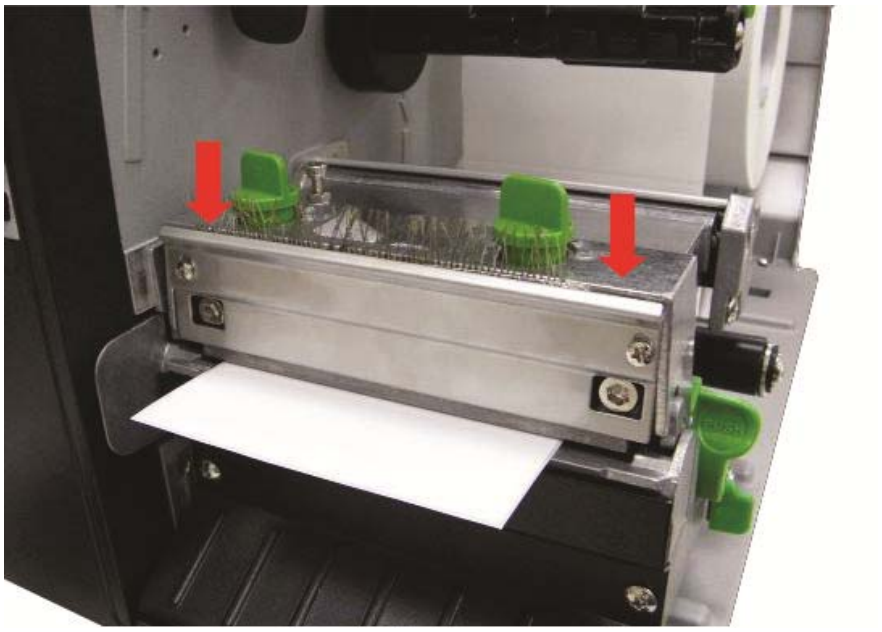
* **The sensor location is marked by a triangle mark ▽ at the sensor housing.**

* **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.**



7. Adjust the label guide to fit the width of the label.

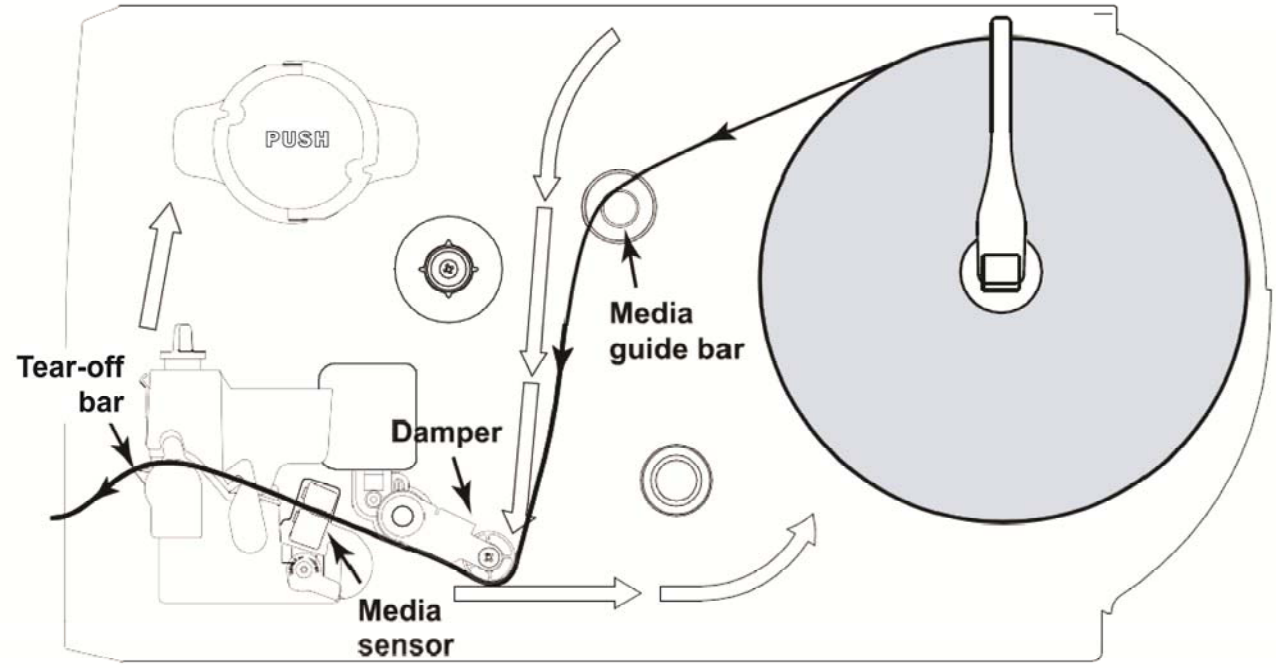
8. Close the print head mechanism. Make sure the latches are engaged securely.



9. Using the front display panel, set the media sensor type and calibrate the selected sensor. (Please refer to section 3.1.2)

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

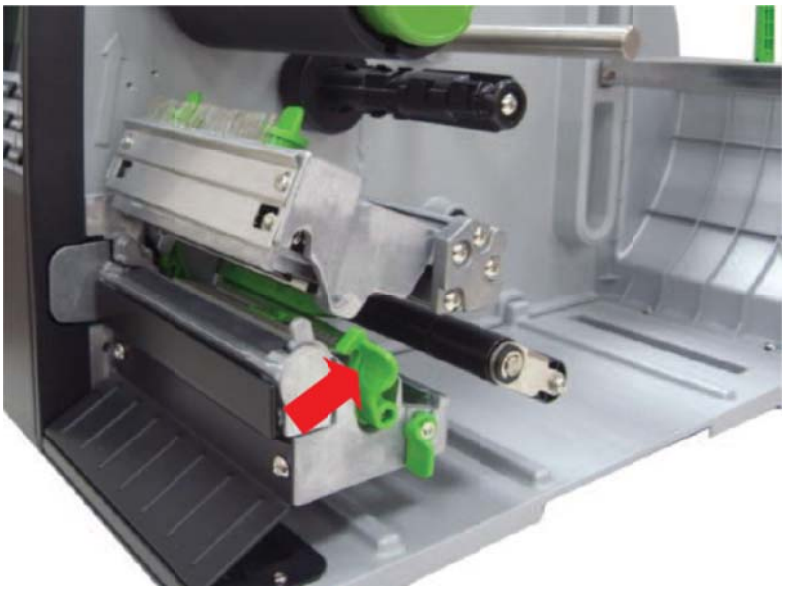
- **Loading path for roll labels (printable surface facing up)**



2.6.2 Loading External (Roll Stand, etc.) Media

External media feeds through either the bottom or rear external label entrance chute. (See path diagrams on next page.)

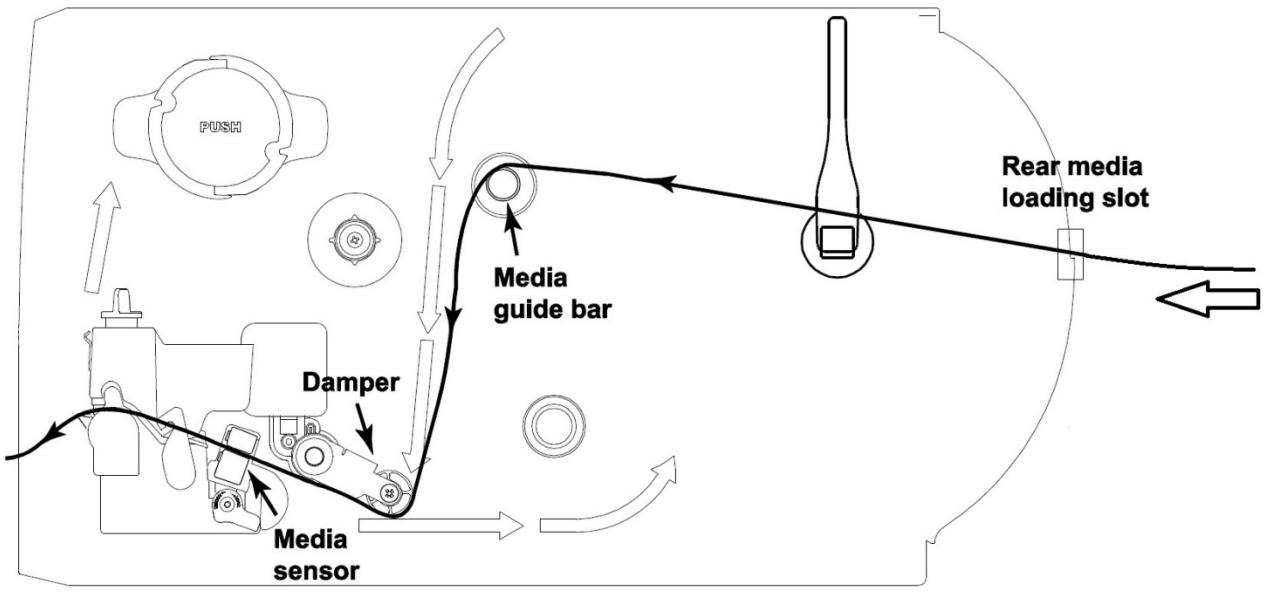
1. Open the printer right side cover.
2. Push the print head release lever to open the print head mechanism.

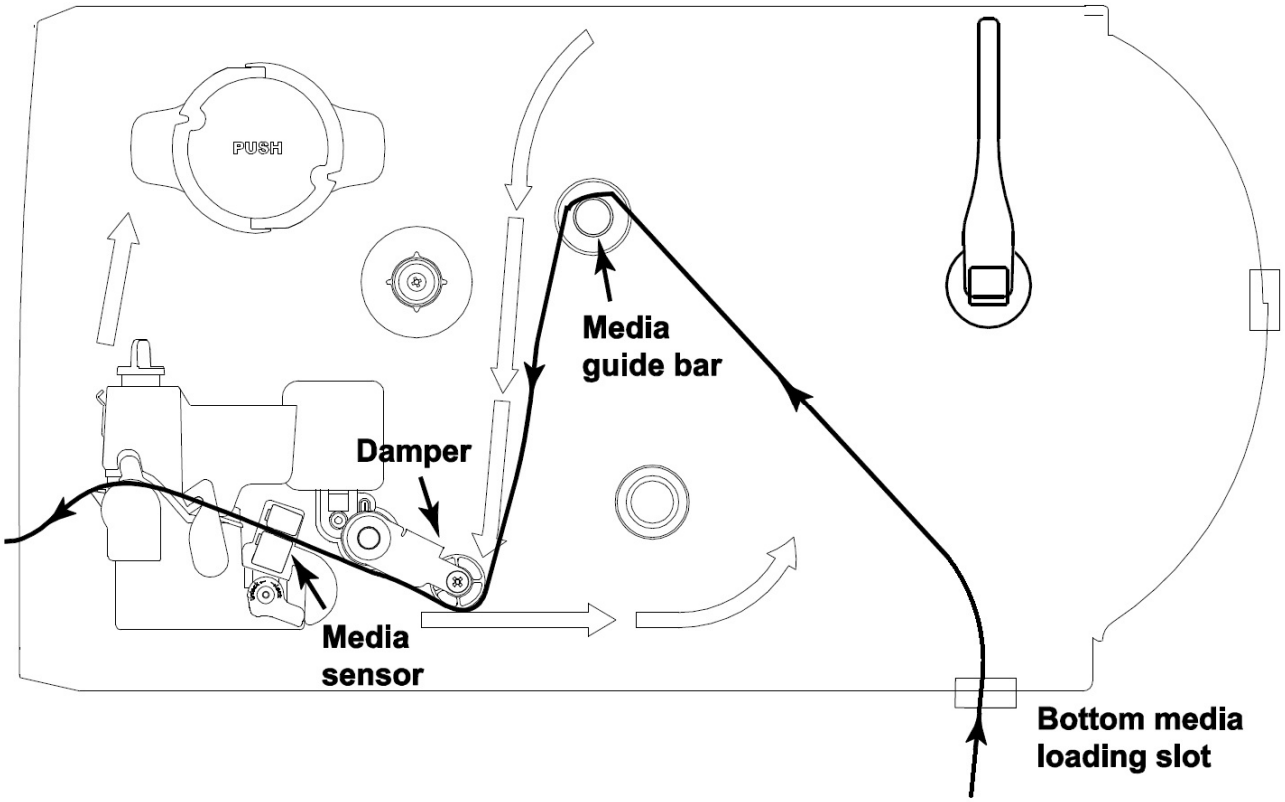


3. Insert the media through the bottom or rear external label entrance chute.
4. Pull the leading edge forward through the media guide bar, damper, media sensor, and place the label leading edge onto the platen roller.
5. Adjust the label guide by sliding to fit the paper width.
6. Close the print head mechanism. Make sure the latches are engaged securely.
7. Set the media sensor type and calibrate the selected sensor. (Please refer to section 3.1.3)

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

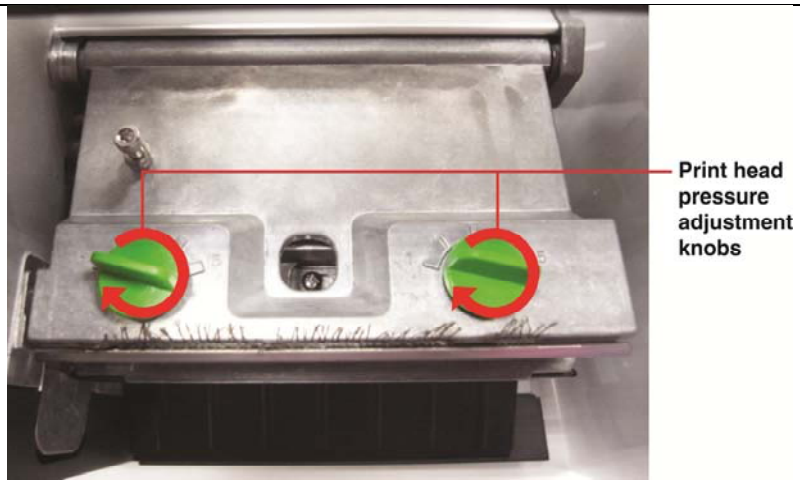
• Loading path for Roll Stand labels





2.7 Adjustment Knob

2.7.1 Print Head Pressure Adjustment Knob



The 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 adjusting 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.

2.7.2 Print Head Burn Line Adjustment Knob

Print head burn line adjustment knobs

The print head burn line adjustment knobs are used to fine tune the print quality for different thickness of media. Turning the knobs adjusts the print head's burn line forward or backward as it relates to the platen roller.

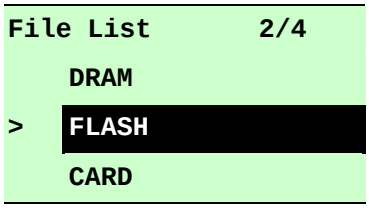
Caution: Incorrectly adjusting these knobs can lead to poor print quality and may cause damage to the printer. Proceed with caution.

The print head burn line default is set for general purpose printing media.

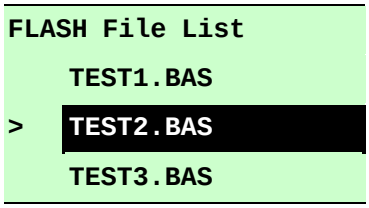
Poor print quality when using thicker media may be due to the print head burn line not being at the optimized position. To improve the print quality, increase the head pressure or adjust the knobs counter-clockwise to move print head burn line toward the paper out direction then print again. Continue to adjust the burn line position and test print as necessary until the printout image is clear.

2.8 Using the Keyboard with PS/2 Interface

1. Turn off the power of printer.
2. Plug the keyboard with PS/2 interface cable into PS/2 connector on the rear of the printer.
3. Turn on the printer.
4. After pressing the **F1** key of the keyboard, the LCD of printer will display as following.



5. Use up ↑ or down ↓ key of the keyboard to move ">" cursor and to select either DRAM, FLASH or CARD that you previously saved file in and press **Enter** key of the keyboard to list files.
6. Select the file and press **Enter** key to execute the .BAS file.



7. Then, you can type the words or the number of the copy from keyboard by your .BAS file program.

Press **F1** key of the keyboard to start this function.

Press up ↑ or down ↓ key of the keyboard to move cursor of printer LCD display to select the option.

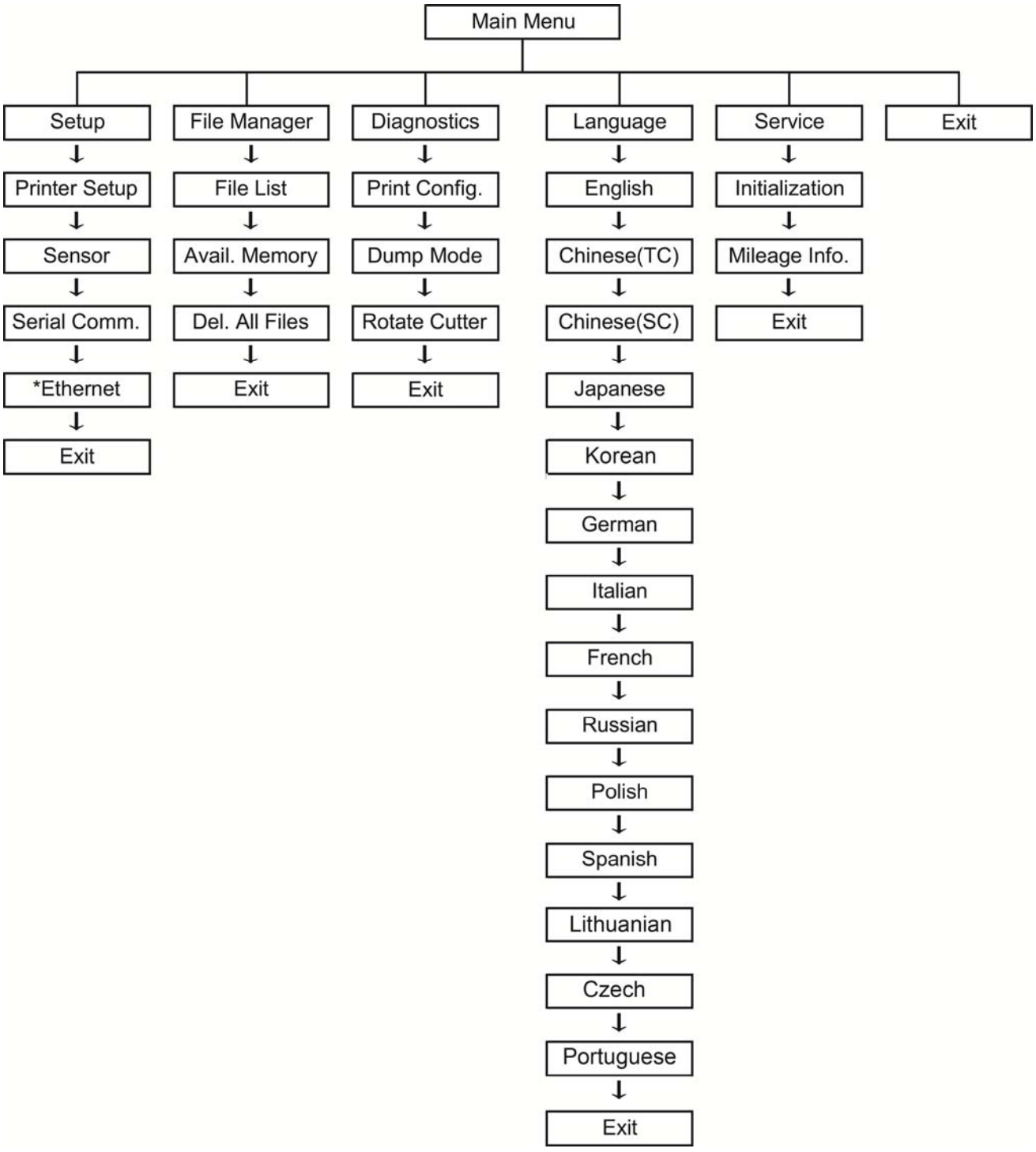
Press **Esc** key of the keyboard to return the previous menu.

Press **Enter** key of the keyboard to enter/execute cursor located option.

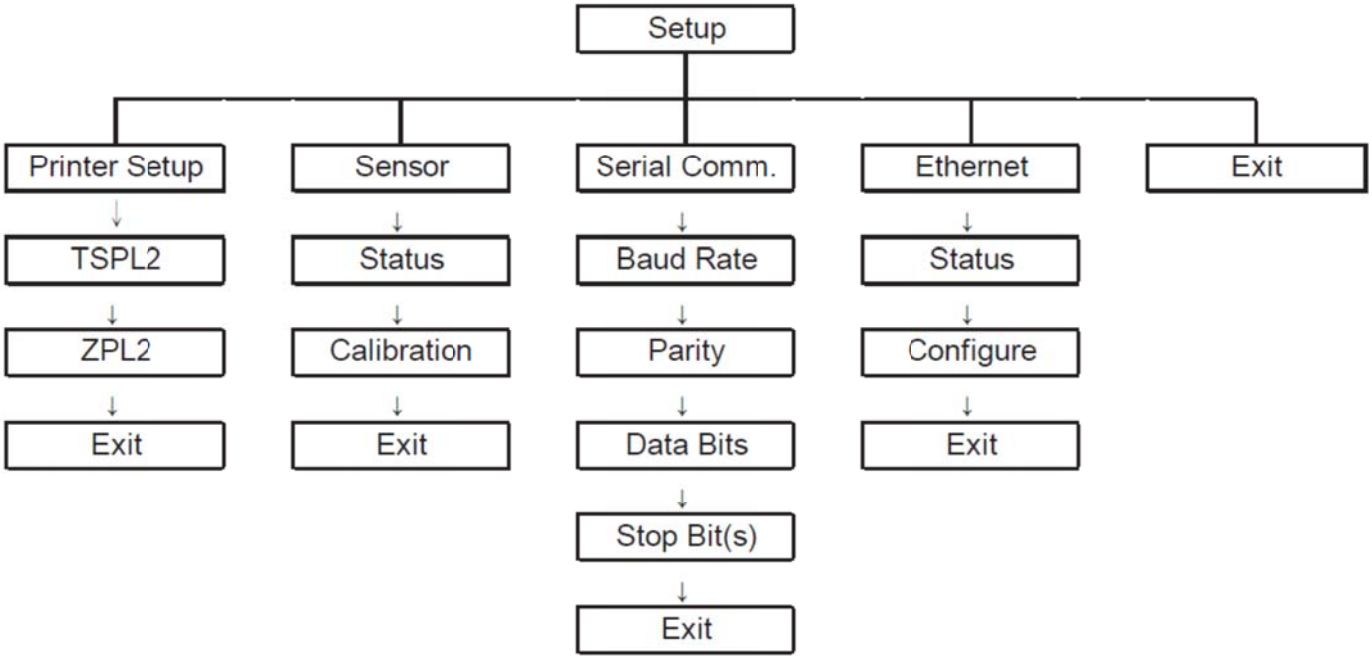
Press **Ctrl** + **C** keys of the keyboard to restart the printer and back to "Ready" state.

3. Menu Function

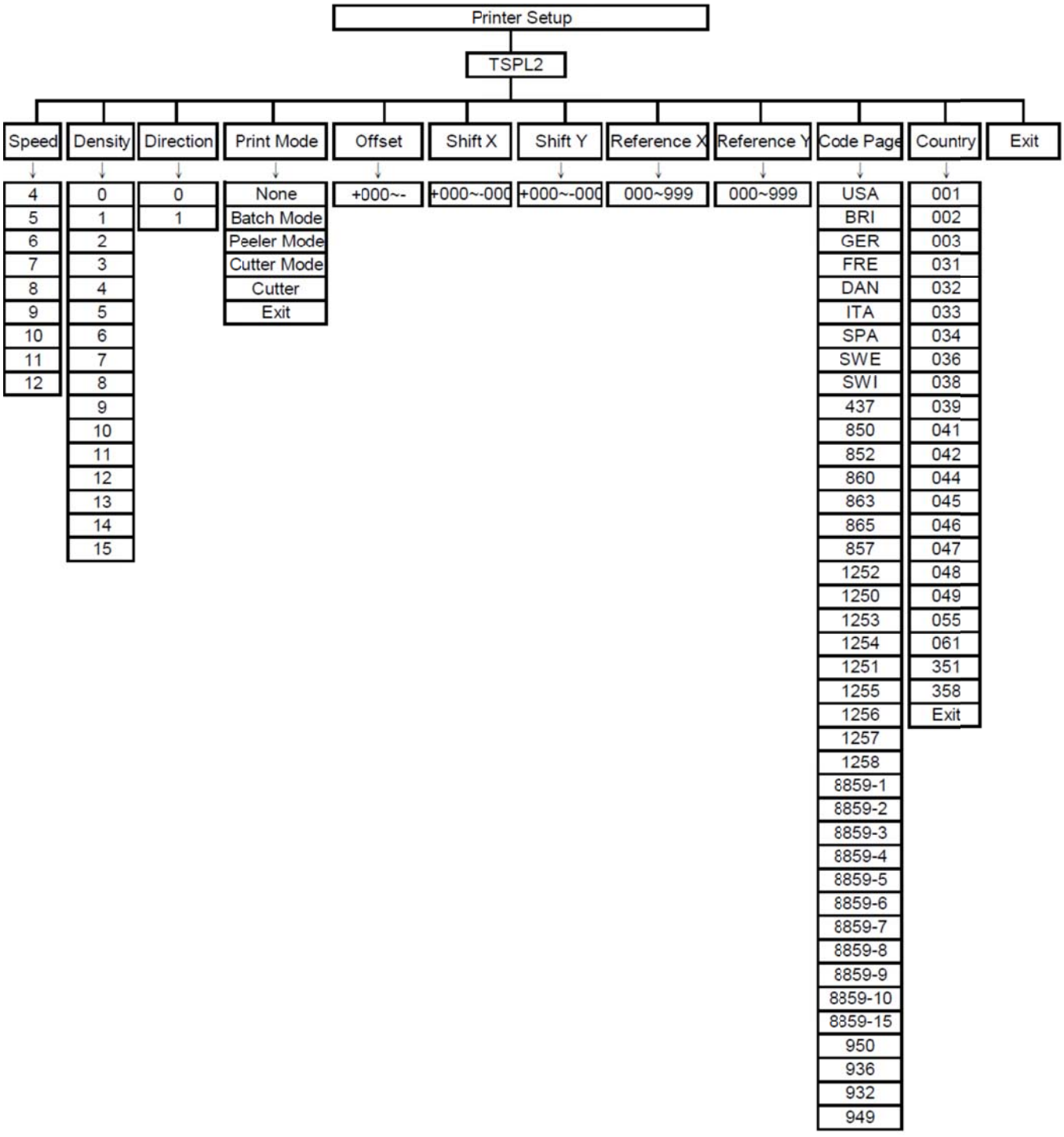
Main Menu Overview



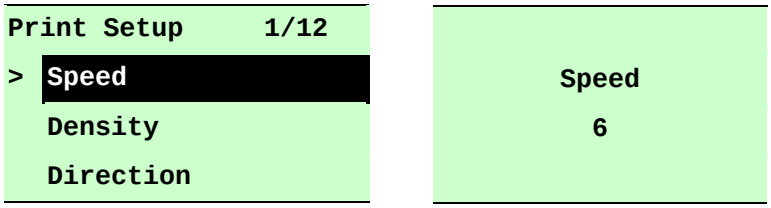
3.1 Setup Menu Overview



3.1.1 Printer Setup (TSPL2)



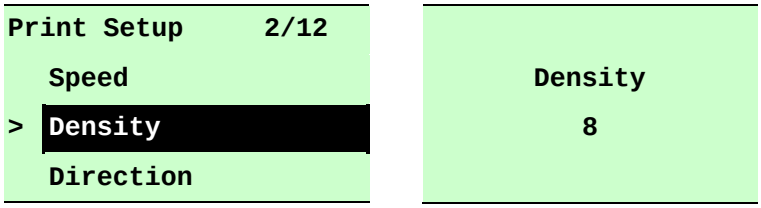
3.1.1-1 Speed:



Use this option to setup print speed. The increment/decrement is 1 ips. Press **UP** key to raise the print speed, and press **DOWN** key to decrease print speed. Press **SELECT** key to set it into printer. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the SPEED command, which will overwrite the setting set from the front panel.

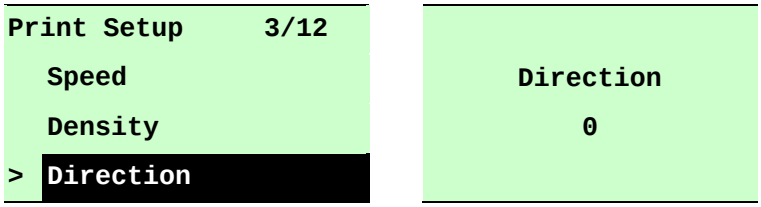
3.1.1-2 Density:



Use this option to setup printing darkness. The available setting is from 0 to 15, and the step is 1. Printer default density is 8.You may need to adjust your density based on selected media. Press **UP** and **DOWN** to increase/decrease the printing darkness. Press **SELECT** key to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the DENSITY command, which will overwrite the setting set from the front panel.

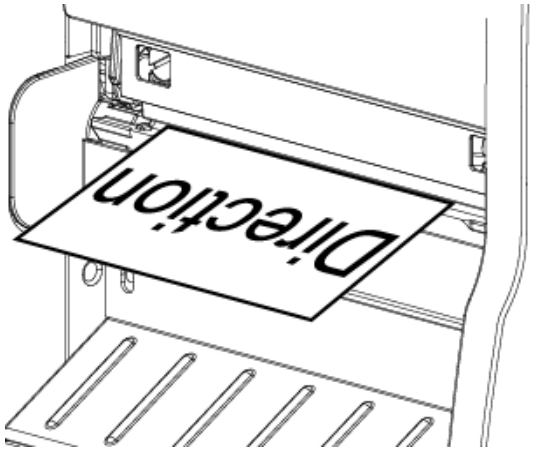
3.1.1-3 Direction:



The direction setting value is either 1 or 0. Use this option to setup the printout direction. Printer default printout direction is DIRECTION 0.

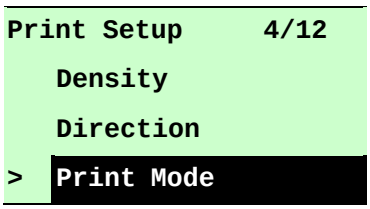
Press **UP** key to set the direction as 1, and **DOWN** to set it as 0, and **SELECT** key to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

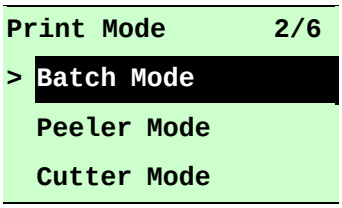
The following 2 figures are the printouts of DIRECTION 0 and 1 for your reference.

DIRECTION 0	DIRECTION 1
	

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.1-4 Print Mode: (None/Batch Mode/Peeler Mode/Cutter Mode/Cutter Batch)



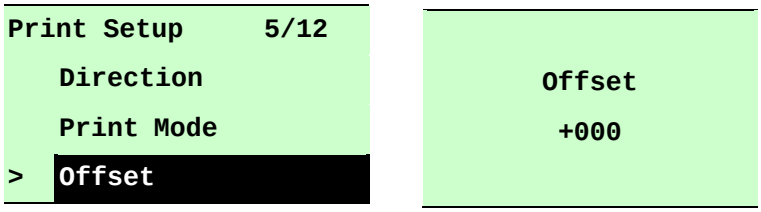


This option is used to set the print mode. Printer default setting is Batch Mode. When entering this list, the print mode on the right side of " **>**" icon is the current printer setting. Press **UP** and **DOWN** to select the different print mode and press **SELECT** button to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Printer Mode	Description
None	Next label top of form is aligned to the print head burn line location. (Tear Off Mode)
Batch Mode	Once image is printed completely, label gap/black mark will be fed to the tear plate location for tear away.
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.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

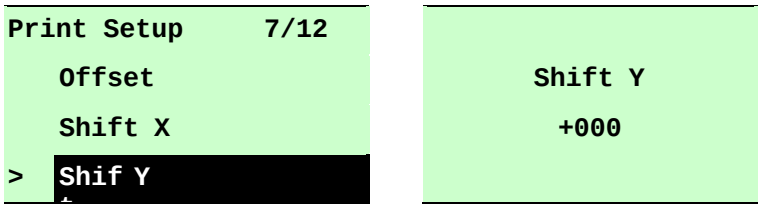
3.1.1-5 Offset:



This option is used to fine tune media stop location. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "9". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000.

Note: If printing from enclosed software/driver, the software/driver will send out the OFFSET command, which will overwrite the setting set from the front panel.

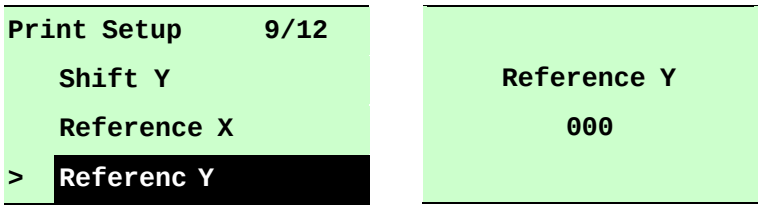
3.1.1-6 Shift X & Shift Y:



This option is used to fine tune print position. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "9". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000.

Note: If printing from enclosed software/driver, the software/driver will send out the SHIFT command, which will overwrite the setting set from the front panel.

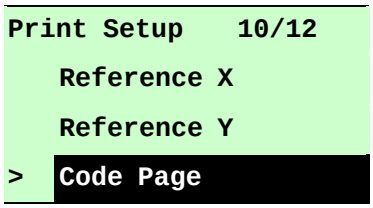
3.1.1-7 Reference X & Reference Y:

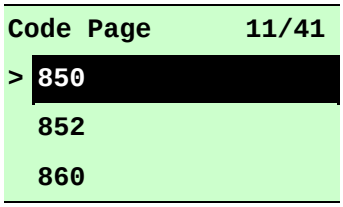


This option is used to set the origin of printer coordinate system horizontally and vertically. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "0" to "9". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is 000.

Note: If printing from enclosed software/driver, the software/driver will send out the REFERENCE command, which will overwrite the setting set from the front panel.

3.1.1-8 Code Page:





Use this option to set the code page of international character set. When entering this list, the code page on the right side of " **>**" icon is the current printer setting. Press the **UP** and **DOWN** to select the code page, and press the **SELECT** button to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front

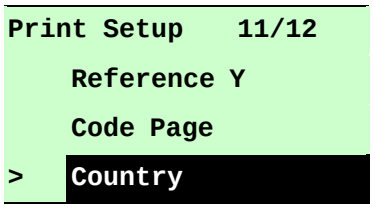
7-bit		8-bit	
code page name	**International Character Set**	**code page name**	**International Character Set**
USA	USA	437	United States
BRI	British	850	Multilingual
GER	German	852	Slavic
FRE	French	860	Portuguese
DAN	Danish	863	Canadian/French
ITA	Italian	865	Nordic
SPA	Spanish		
SWE	Swedish		
SWI	Swiss		

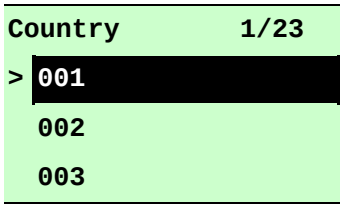
Windows Code Page (SBCS)		Windows Code Page (DBCS)	
code page name	**International Character Set**	**code page name**	**International Character Set**
1252	Latin 1	950	Traditional Chinese Big 5
1250	Central Europe	936	Simplified Chinese GBK
1253	Greek	932	Japanese Shift-JIS
1254	Turkish	949	Korean
1251	Cyrillic		
1255	Hebrew		
1256	Arabic		

1257	Baltic	
1258	Vietnam	

ISO Code Page		ISO Code Page	
code page name	International Character Set	code page name	International Character Set
8859-1	Latin 1	8859-7	Greek
8859-2	Latin 2	8859-9	Turkish
8859-3	Latin 3	8859-10	Latin 6
8859-4	Baltic	8859-15	Latin 9
8859-5	Cyrillic		

3.1.1-9 Country:

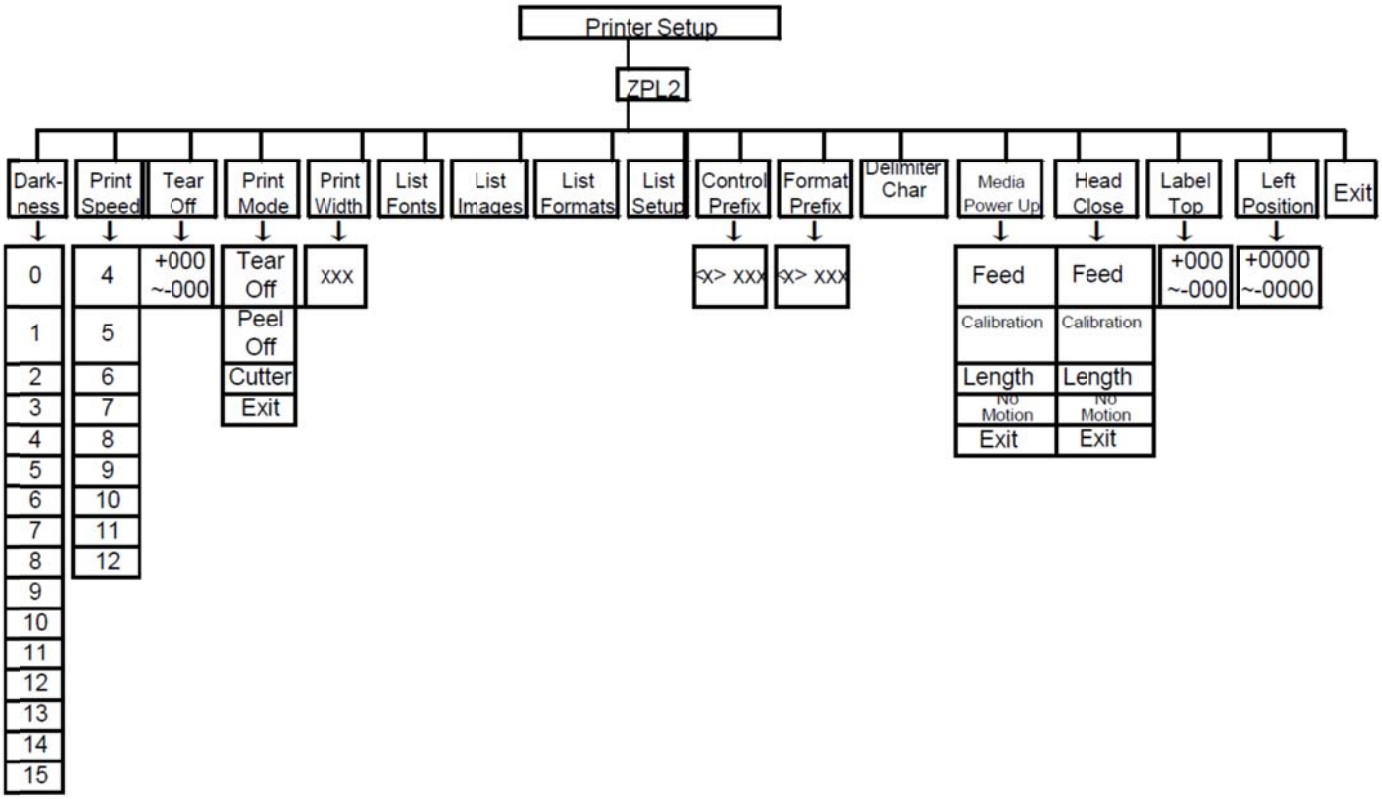




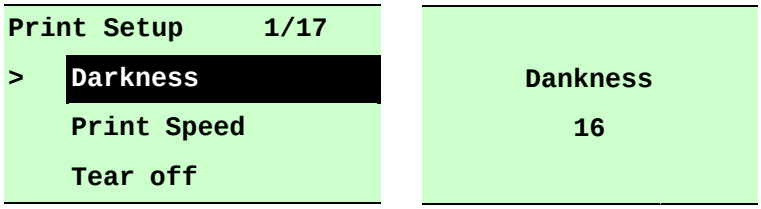
Use this option to set the country code for the LCD display. Press the **UP** and **DOWN** to select the country code, and press the **SELECT** button to set the value into printer. When entering this list, the country code on the right side of " **>**" icon is the current printer setting.. Press **MENU** key to cancel the setting and return to the previous menu.

Code	Country	Code	Country	Code	Country	Code	Country
001	USA	034	Spanish (Spain)	044	United Kingdom	055	Brazil
002	Canadian-French	036	Hungarian	045	Danish	061	English (International)
003	Spanish (Latin America)	038	Yugoslavian	046	Swedish	351	Portuguese
031	Dutch	039	Italian	047	Norwegian	358	Finnish
032	Belgian	041	Switzerland	048	Polish		
033	French (France)	042	Slovak	049	German		

3.1.2 Printer Setup (ZPL2)



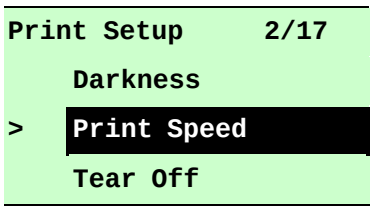
3.1.2-1 Darkness:

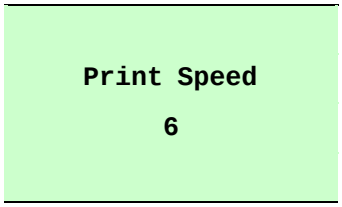


Use this option to setup printing darkness. The available setting is from 0 to 30, and the step is 1. Printer default density is 16.You may need to adjust your density based on selected media. Press **UP** and **DOWN** to increase/decrease the printing darkness. Press **SELECT** key to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.2-2 Print Speed:

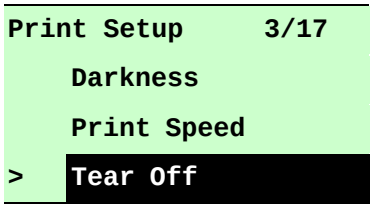


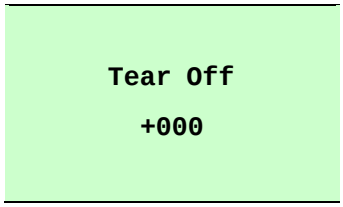


Use this option to setup print speed. The each increment/decrement is 1 ips. Press **UP** key to raise the print speed, and press **DOWN** key to decrease print speed. Press **SELECT** key to set it into printer. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.2-3 Tear Off:

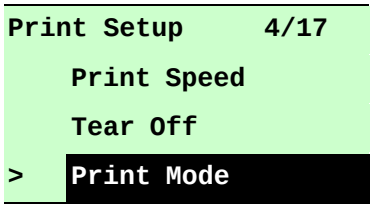


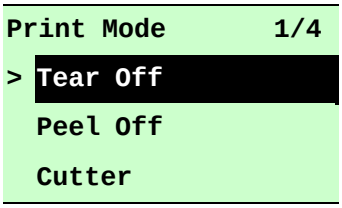


This option is used to fine tune media stop location. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "9". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.2-4 Print Mode: (Tear Off / Peel Off / Cutter)



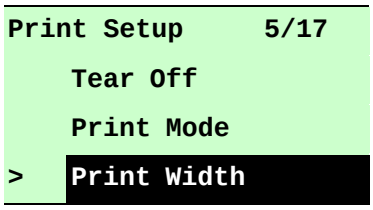


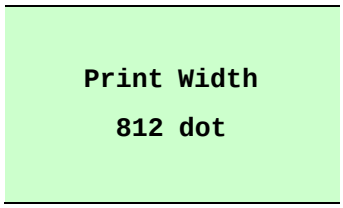
This option is used to set the print mode. Printer default setting is Tear Off. When enter this list, the print mode in the right side of " **>**" icon is the printer current setting. Press **UP** and **DOWN** to select the different print mode and press **SELECT** button to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Printer Mode	Description
Tear Off	Next label top of form is aligned to the print head burn line
Peel Off	Enable the label peel off mode.
Cutter	Enable the label cutter mode.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.2-5 Print Width:

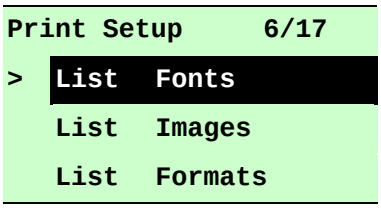


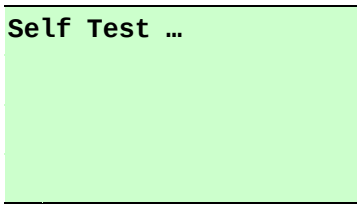


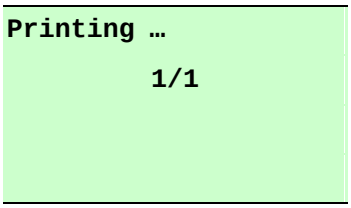
This option is used to set print width. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "0" to"9" or "dot" to "mm". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu.

Note: If printing from enclosed software/driver, the software/driver will send out the command, which will overwrite the setting set from the front panel.

3.1.2-6 List Fonts:

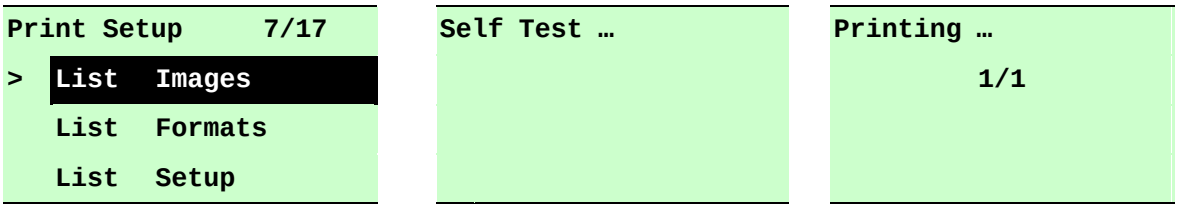






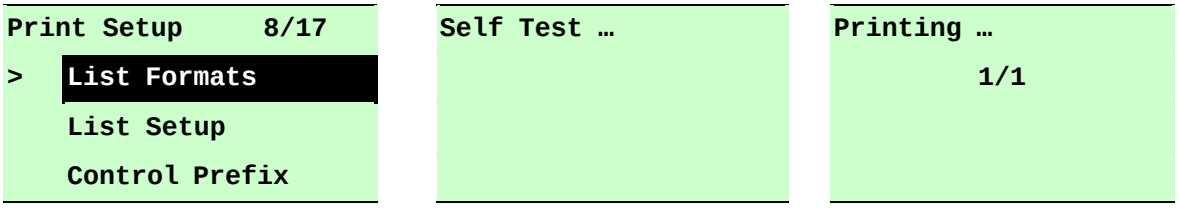
This feature is used to print current printer available fonts list to the label. The fonts are stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.2-7 List Images:



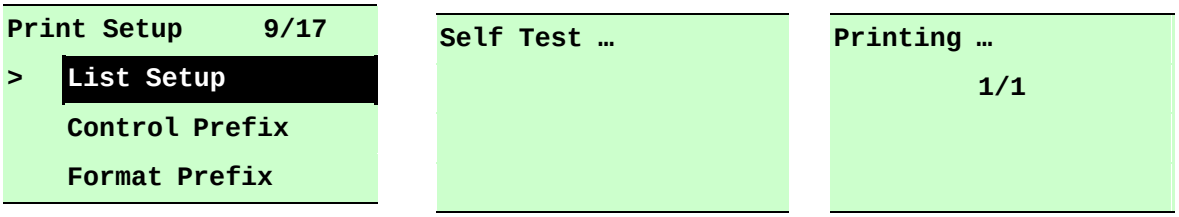
This feature is used to print current printer available images list to the label. The images are stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.2-8 List Formats:



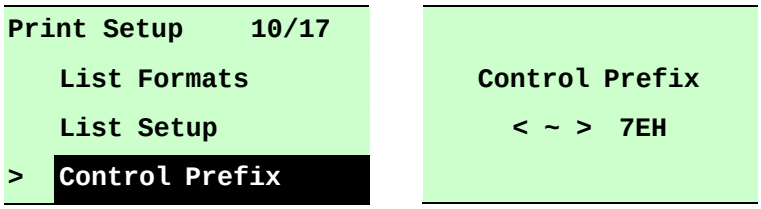
This feature is used to print current printer available formats list to the label. The formats are stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.2-9 List Setup:



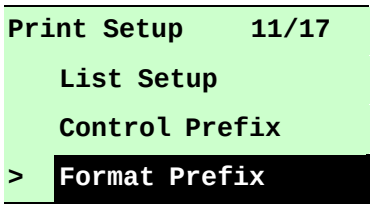
This feature is used to print current printer configuration to the label. Press **SELECT** button to print the list.

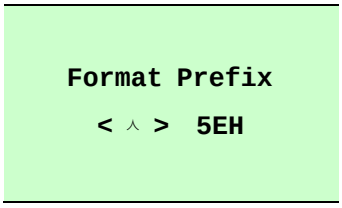
3.1.2-10 Control Prefix:



This option is used to set control prefix character. Press the **DOWN** ⊙ button to move the cursor from left digit to right digit, and press the **UP** ⊙ button to set the value from "0" to "9" or "A" to "F". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu.

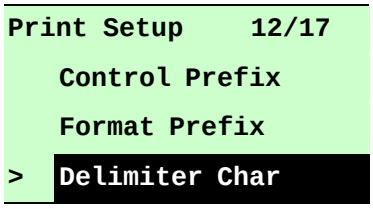
3.1.2-11 Format Prefix:

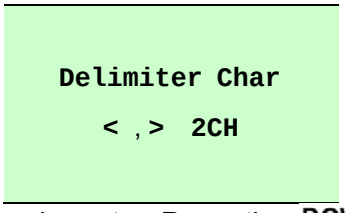




This option is used to set format prefix character. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "0" to "9" or "A" to "F". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu.

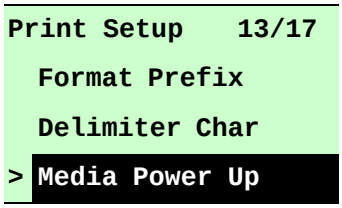
3.1.2-12 Delimiter Char:

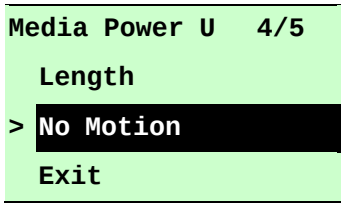




This option is used to set delimiter character. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "0" to "9" or "A" to "F". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu.

3.1.2-13 Media Power Up:



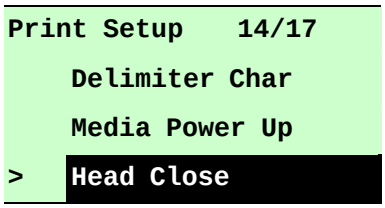


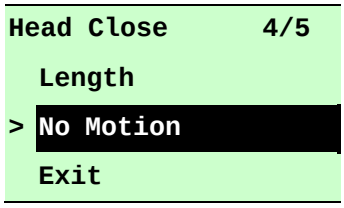
This option is used to set the action of the media when you turn on the printer. Printer default setting is No Motion. When entering this list, the mode on the right side of " **>**" icon is the current printer setting. Press **UP** and **DOWN** to select the different print mode and press **SELECT** button to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Selection	Description
Feed	Printer will advance one label
Calibration	Printer will calibration the sensor levels, determine length

Length	Printer determine length and feed label
No Motion	Printer will not move media

3.1.2-14 Head Close:

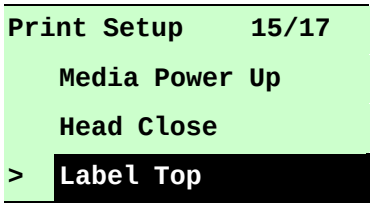




This option is used to set the action of the media when you close the printhead. Printer default setting is No Motion. When entering this list, the mode on the right side of " **>**" icon is the current printer setting. Press **UP** and **DOWN** to select the different print mode and press **SELECT** button to enable the setting. Press **MENU** key to cancel the setting and return to the previous menu.

Selection	Description
Feed	Printer will advance one label
Calibration	Printer will calibration the sensor levels, determine length
Length	Printer determine length and feed label
No Motion	Printer will not move media

3.1.2-15 Label Top:



This option is used to adjust print position vertically on the label. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "1/2". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000 and range is -120 to +120 dots.

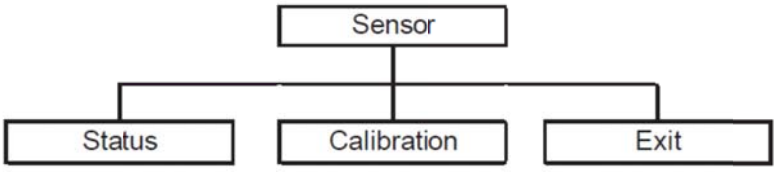
3.1.2-16 Left Position:

Print Setup 16/17
Head Close
Label Top
> Left Position

Left Position
+0000

This option is used to adjust print position horizontally on the label. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "9". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +0000 and range is -9999 to +9999 dots.

3.1.3 Sensor



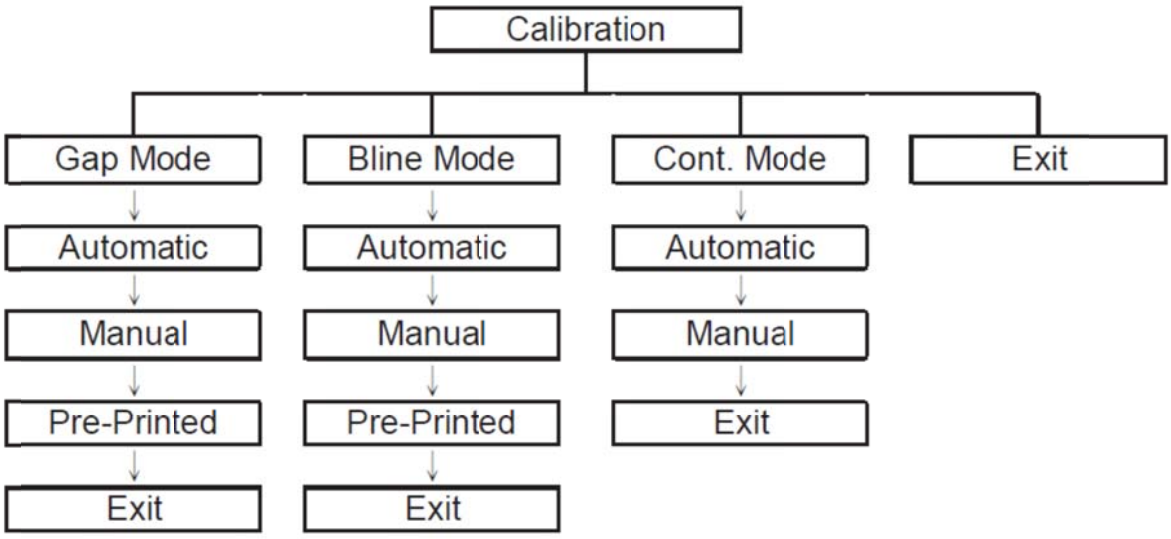
3.1.3-1 Status

This function is available to check the printer's sensor status. When entering the [Status] option, you will see following message.

Paper Len.	812
Gap Size	24
Intensity	3
Ref. Level	512

3.1.3-2 Calibration

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



A. Gap Mode

```
Calibration      1/4
>  Gap Mode
   Bline Mode
   Cont. Mode
```

```
Gap Mode         1/4
> Automatic
  Manual
  Pre-Printed
```

Press the **UP** ⊙ and **DOWN** ⊙ buttons to scroll the cursor to the media type and press the **SELECT** button to enter the sensor calibration mode.

Note: If printing from enclosed software/driver, the software/driver will send out the GAP or BLINE command, which will overwrite the sensor type setting set from the front panel.

A-1 Automatic

When entering the [Automatic] option, you will see following message, and printer will feed 2 to 3 gap labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

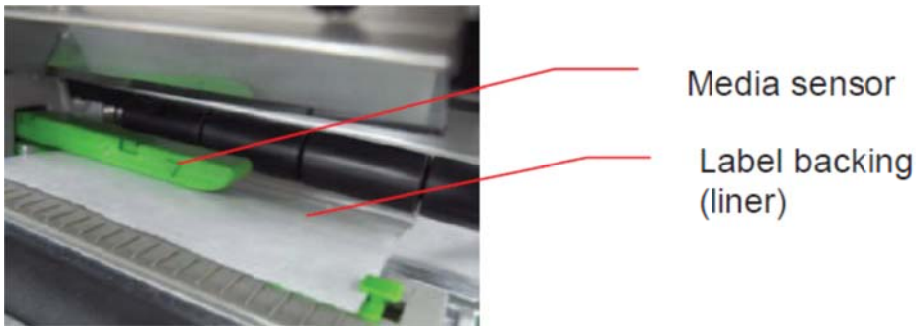
```
   Gap Mode
   Automatic
```

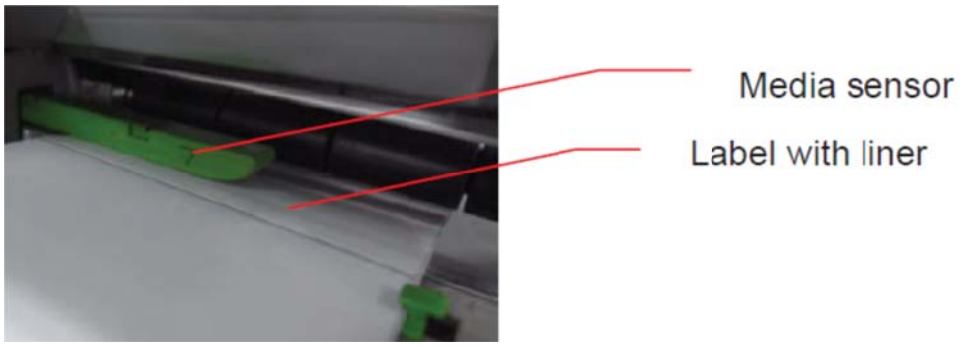
A-2 Manual

In case “Automatic” sensor calibration cannot apply to the media, please use “Manual” function to calibrate the gap sensor manually.

```
Gap Mode        2/4
     Automatic
>    Manual
     Pre-Printed
```

When entering [Manual] option, you will see following message. Please complete these steps：

Paper Len. 00812 dot	1. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the paper length into the printer.
Gap Size 0024 dot	2. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the gap size into the printer.
Gap Mode Scan Backing Intensity x Ref. Level xxx	3. Open the print head mechanism, put the label backing (liner) under the media sensor. Press the **SELECT** button to set the value into the printer.
	
Gap Mode Scan Paper Intensity x Ref. Level xxx	4. Then, Put the label with liner under the media sensor. Press the button to set the value into the printer.



Gap Mode Complete Intensity x Ref. Level xxx	5. The gap sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

A-3 Pre-Printed

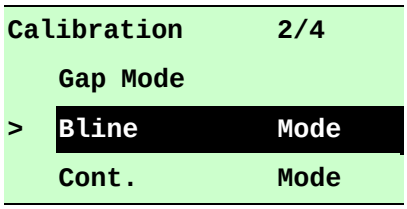
Using this function, a user can set the paper length and gap size, before auto-calibrating the sensor sensitivity. This can help to get the sensor sensitivity set, accurately.

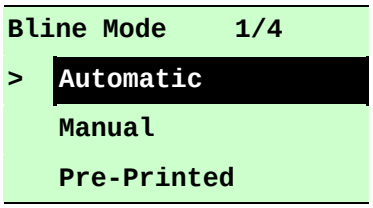
```
Gap Mode        3/4
   Manual
>  Pre-Printed
   Exit
```

When entering [Pre-Printed] option, you will see following message. Please complete these steps :

Paper Len. 00812 dot	1. Press the **DOWN** ⊙ button to move the cursor from left digit to right digit, and press the **UP** ⊙ button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the paper length into the printer.
Gap Size 0024 dot	2. Press the **DOWN** ⊙ button to move the cursor from left digit to right digit, and press the **UP** ⊙ button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the gap size into the printer.
Gap Mode Pre-Printed	3. Then, printer will feed labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

B. Bline (Black Line) Mode

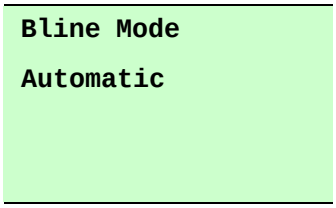




Press the **UP** ⊙ and **DOWN** ⊙ buttons to scroll the cursor to the sensor type. Press the **SELECT** button to enter the black-mark sensor calibration mode.

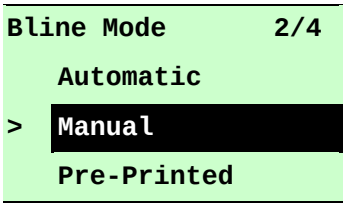
B-1 Automatic

When entering the [Automatic] option, you will see following message and printer will feed the black mark label to calibrate the sensor sensitivity automatically. When calibration process is completed, the LCD screen will return to the previous menu.



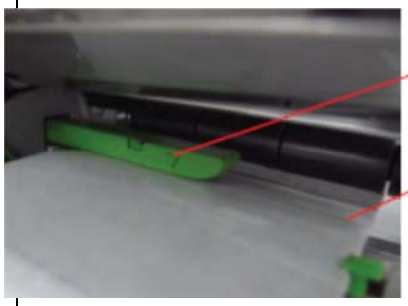
B-2 Manual

In case “Automatic” sensor calibration cannot apply to the media, please use “Manual” function to calibrate the bline sensor manually.



When entering [Manual] option, you will see following message. Please complete these steps :

Paper Len. 00151 dot	1. Press the **DOWN** ⊙ button to move the cursor from left digit to right digit, and press the **UP** ⊙ button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the paper length into the printer.

Bline Size **0024 dot**	2. Press the **DOWN** ⊙ button to move the cursor from left digit to right digit, and press the **UP** ⊙ button to set the value from "0" to "9" and the "dot/ mm/ inch". Press the **SELECT** button to set the bline size into the printer.
Bline Mode **Scan Mark** **Intensity x** **Ref. Level xxx**	3. Open the print head mechanism, put the black mark under the media sensor. Press the **SELECT** button to set the value into the printer.
	
Bline Mode **Scan Paper** **Intensity x** **Ref. Level xxx**	4. Then, put the label without black mark under the media sensor. Press the **SELECT** button to set the value into the printer.
	
Note: Normally, the value of "Ref. Level" for mark should be larger than paper for over 128. If the media sensor fails to do so, you have to manually change the Intensity by pressing **UP** ⊙ and **DOWN** ⊙ to reach the above value.	
Bline Mode **Complete** **Intensity x** **Ref Level xxx**	5. The bline sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

B-3 Pre-Printed

This function can set the paper length and gap size before auto-calibrate the sensor sensitivity. It can to get the sensor sensitivity accurately.

```
Bline Mode       3/4
    Manual
>   Pre-Printed
    Exit
```

When entering [Pre-Printed] option, you will see following message. Please complete these steps :

Paper Len. 00812 dot	1. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the paper length into the printer.
Bline Size **0024 dot**	2. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from “0” to “9” and the “dot/ mm/ inch”. Press the **SELECT** button to set the gap size into the printer.
Bline Mode **Pre-Printed**	3. Then, printer will feed labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

C. Cont. (Continuous media) Mode

```
Calibration      3/4
    Bline Mode
>   Cont. Mode
    Exit
```

```
Cont. Mode       1/3
>   Automatic
    Manual
    Exit
```

Press the **UP** and **DOWN** buttons to scroll the cursor to the sensor type. Press the **SELECT** button to enter the continuous media sensor calibration mode.

C-1 Automatic

When entering the [Automatic] option, you will see following message and printer will calibrate the sensor sensitivity automatically. When calibration process is completed, the LCD screen will return to the previous menu.

```
Cont. Mode
Automatic
```

C-2 Manual

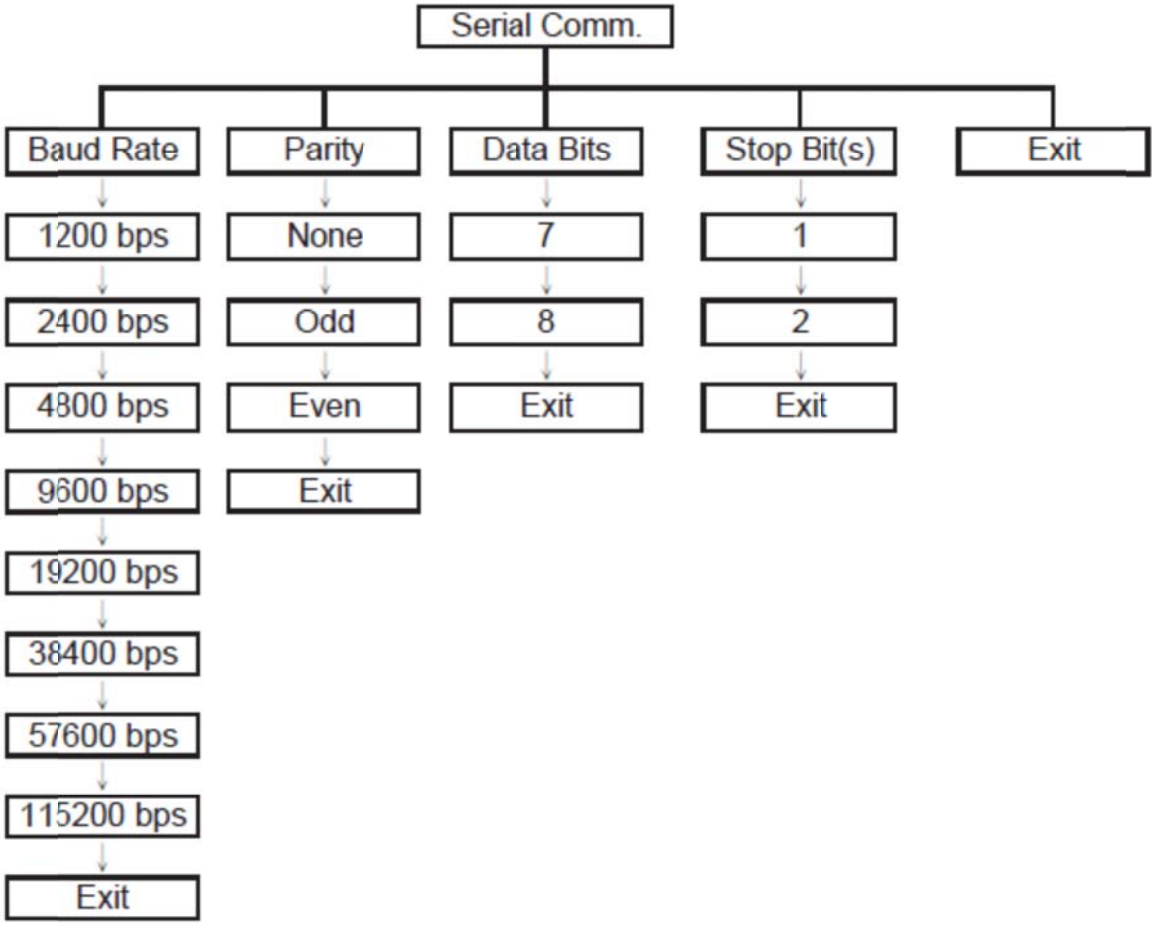
In case “Automatic” sensor calibration cannot apply to the media, please use “Manual” function to calibrate the sensor manually.

```
Cont. Mode       2/3
   Automatic
>  Manual
   Exit
```

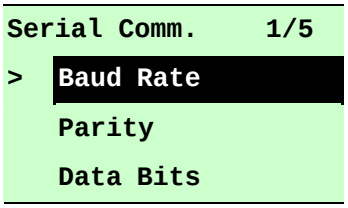
When entering [Manual] option, you will see following message. Please complete these steps :

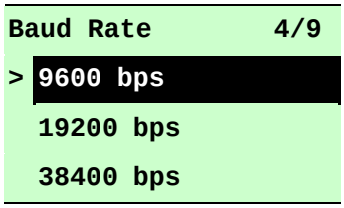
Cont. Mode Remove Label Intensity x Ref. Level xxx	1. Remove the continuous label. Press the **SELECT** button to set the value into the printer.
Cont. Mode Scan Paper Intensity x Ref. Level xxx	2. Then, put the continuous label under the media sensor. Press the **SELECT** button to set the value into the printer.
Cont. Mode Complete Intensity x Ref. Level xxx	3. The sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

3.1.4 Serial Comm.



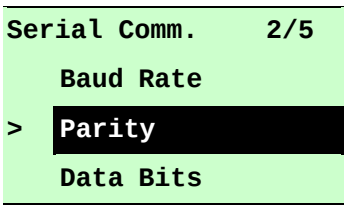
3.1.4.1 Baud Rate

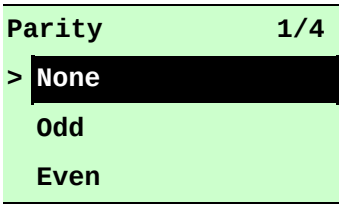




This option is used to set the RS-232 baud rate. The default setting is 9600 bps. Press **UP** ⊙ and **DOWN** ⊙ buttons to select the different baud rate and press **SELECT** button to set the value into printer. When you enter this list, the baud rate value in the right side of "**>**" icon is the current setting in the printer. Press ▤ **MENU** key to cancel the setting and return to the previous menu.

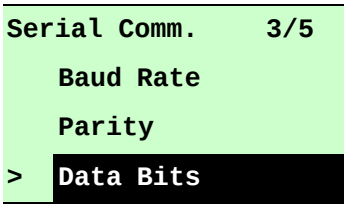
3.1.4-2 Parity

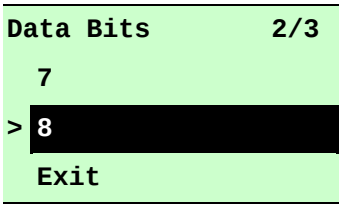




This option is used to set the RS-232 parity. The default setting is "None". Press **UP** and **DOWN** buttons to select the different parity and press **SELECT** button to set the value into printer. When you enter this list, the parity in the right side of "**>**" is the printer current setting. Press **MENU** key to cancel the setting and return to the previous menu.

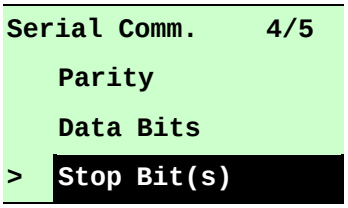
3.1.4-3 Data Bits

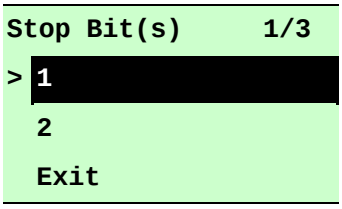




This option is used to set the RS-232 Data Bits. The default setting is "8" data bits. Press **UP** and **DOWN** buttons to select the different Data Bits and press **SELECT** button to set the value into printer. When you enter this list, the Data Bits in the right side of "**>**" icon is the printer current setting. Press **MENU** key to cancel the setting and return to the previous menu.

3.1.4-4 Stop Bit(s)

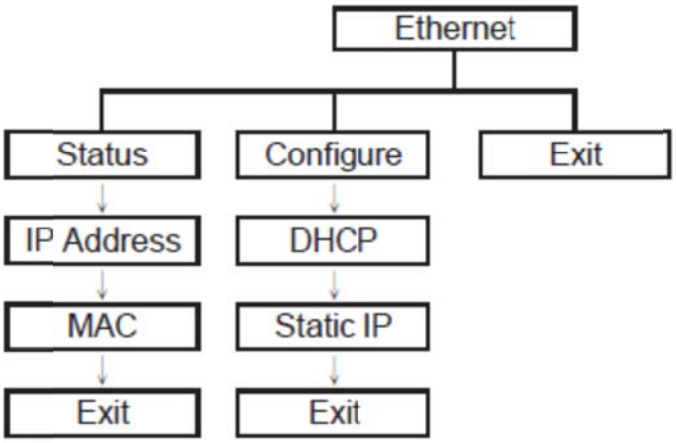




This option is used to set the RS-232 Stop Bits. The default setting is "1" stop bit. Press **UP** and **DOWN** buttons to select the different Stop Bits and press **SELECT** button to set the value into printer. When you enter this list, the option in the right side of "**>**" icon is the printer current setting. Press **MENU** key to cancel the setting and return to the previous menu.

3.1.5 Ethernet

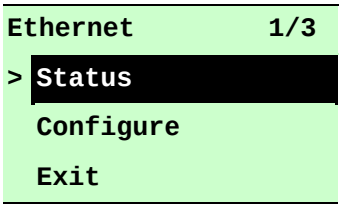
Use this menu to configure internal Ethernet settings, check the printer's Ethernet module status, and reset the Ethernet module. Press **UP** and **DOWN** buttons to select the different options and press **SELECT** button to enter the option. Press **MENU** key to cancel the setting and return to the previous menu.

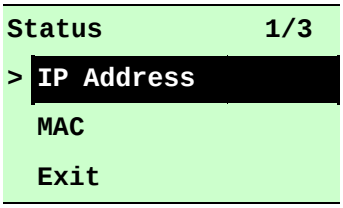


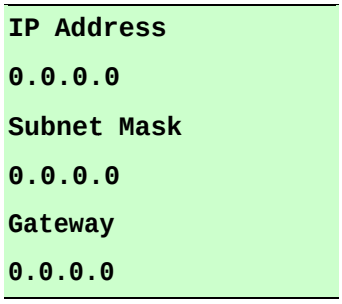
3.1.5-1 Status: (IP Address / MAC)

Use this menu to check the Ethernet setting status.

3.1.5-2 IP Address

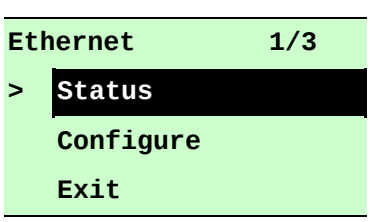


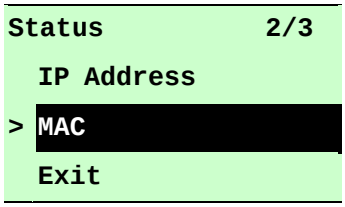


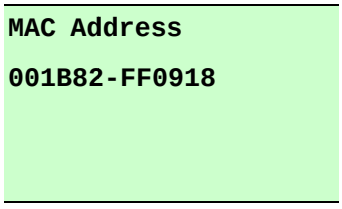


The IP address information will be shown on the LCD display. Please press **SELECT** or **MENU** button to return to the previous menu.

3.1.5-3 MAC





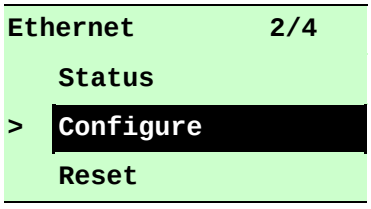


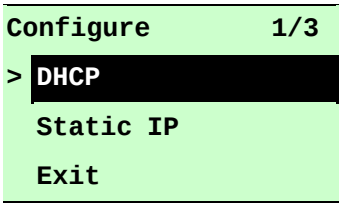
The MAC address information will be shown on the LCD display. Please press **SELECT** or **MENU** button to return to the previous menu.

3.1.5-4 Configure: (DHCP / Static IP)

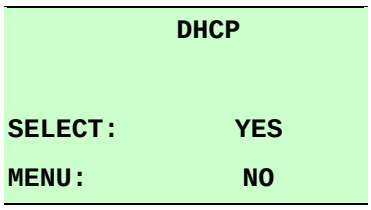
Use this menu to set the printer's DHCP and Static IP.

3.1.5-5 DHCP





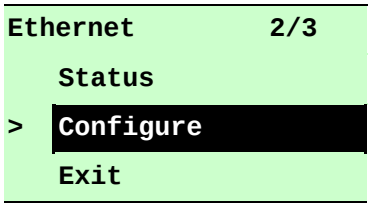
Press the **UP** ⏶ and **DOWN** ⏷ buttons to select the DHCP function and press **SELECT** to enter. Press ☰ **MENU** key to cancel the setting and return to the previous menu.

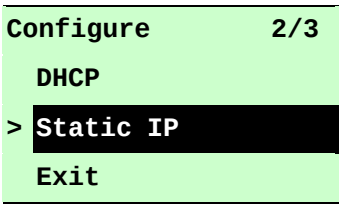


Press **SELECT** button the printer will set DHCP and restart to reset the setting.
Press ☰ **MENU** button to return to the previous menu.

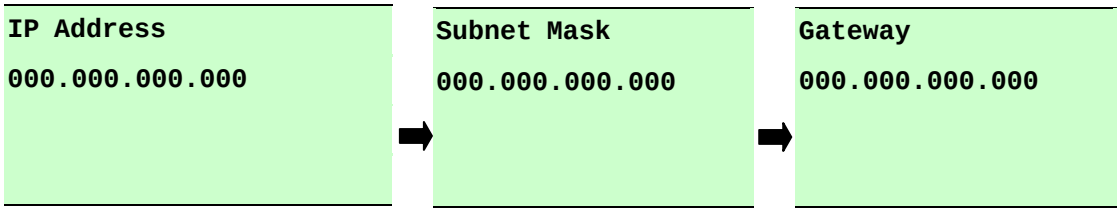
3.1.5-6 Static IP

Use this menu to set the printer's IP address, subnet mask and gateway.





Press **UP** ⏶ and **DOWN** ⏷ buttons to select the different options and press **SELECT** button to enter the option. Press ☰ **MENU** key to cancel the setting and return to the previous menu.



Press **DOWN** ⏷ button to move the cursor from left to right digits and press the **UP** ⏶ button to scroll the value from "0" to "9". Press **SELECT** button to next setting.

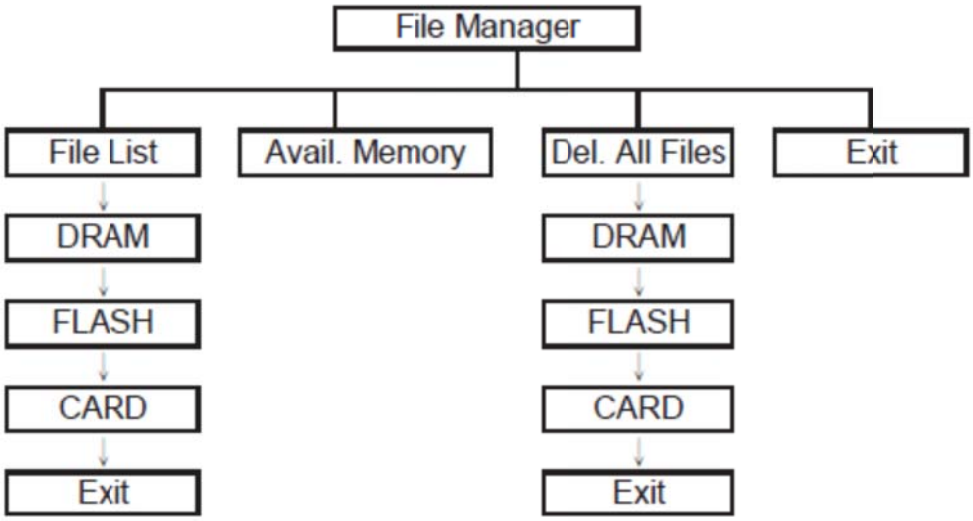
```
      Static IP

SELECT:        YES
MENU:           NO
```

Press the **SELECT** button printer will restart to reset the Ethernet module setting. Press **MENU** key to cancel the setting.

3.2 File Manager

This feature is used to check the printer available memory and file list.



3.2.1 File List

Use this menu to show, delete and run (.BAS) the files saved in the printer DRAM/Flash/Card memory.

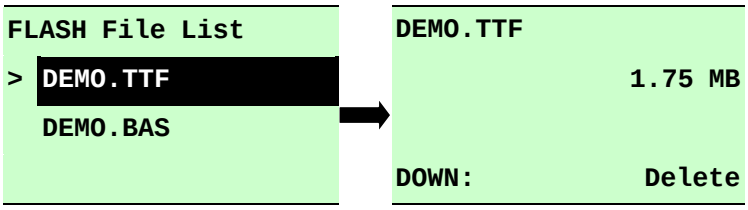
To show the files：

```
File Manager     1/4
> File List
  Avail. Memory
  Del. All Files
```

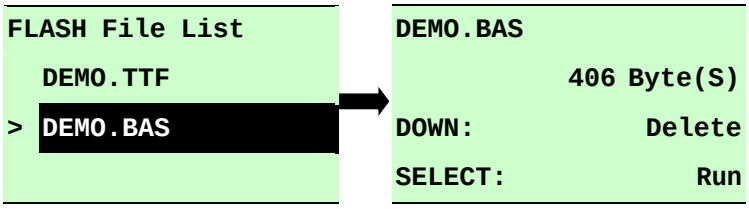
```
File List        2/4
> FLASH
  CARD
  Exit
```

```
FLASH File List
> DEMO.TTF
  DEMO.BAS
```

To delete the file：Please follow the order to press the DOWN button.

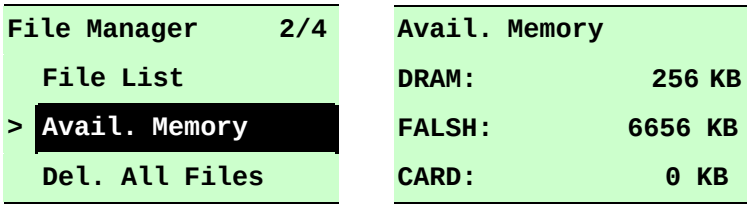


To run the file (.BAS)：Please follow the order to press the SELECT button.



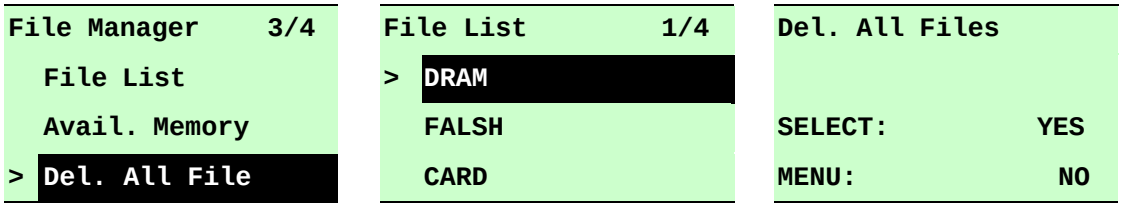
3.2.2 Avail. Memory

Use this menu to show available memory space.

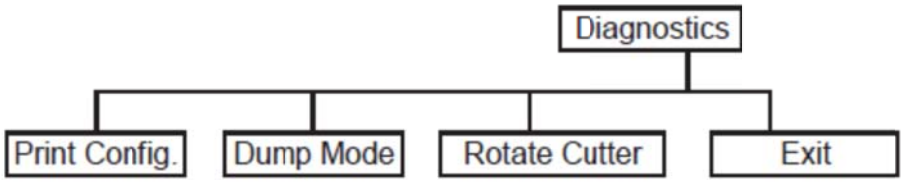


3.2.3 All Files

Use this menu to delete all files. Press SELECT button to delete all files in the device. Press MENU to cancel deleting files and go back to previous menu.

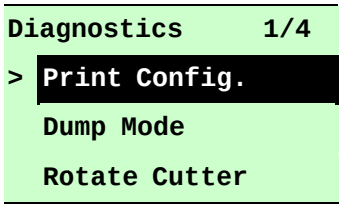


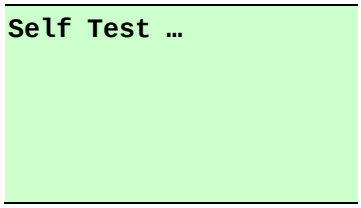
3.3 Diagnostics

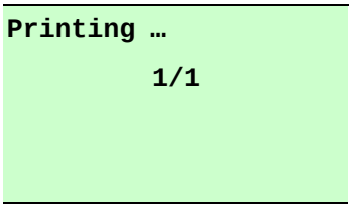


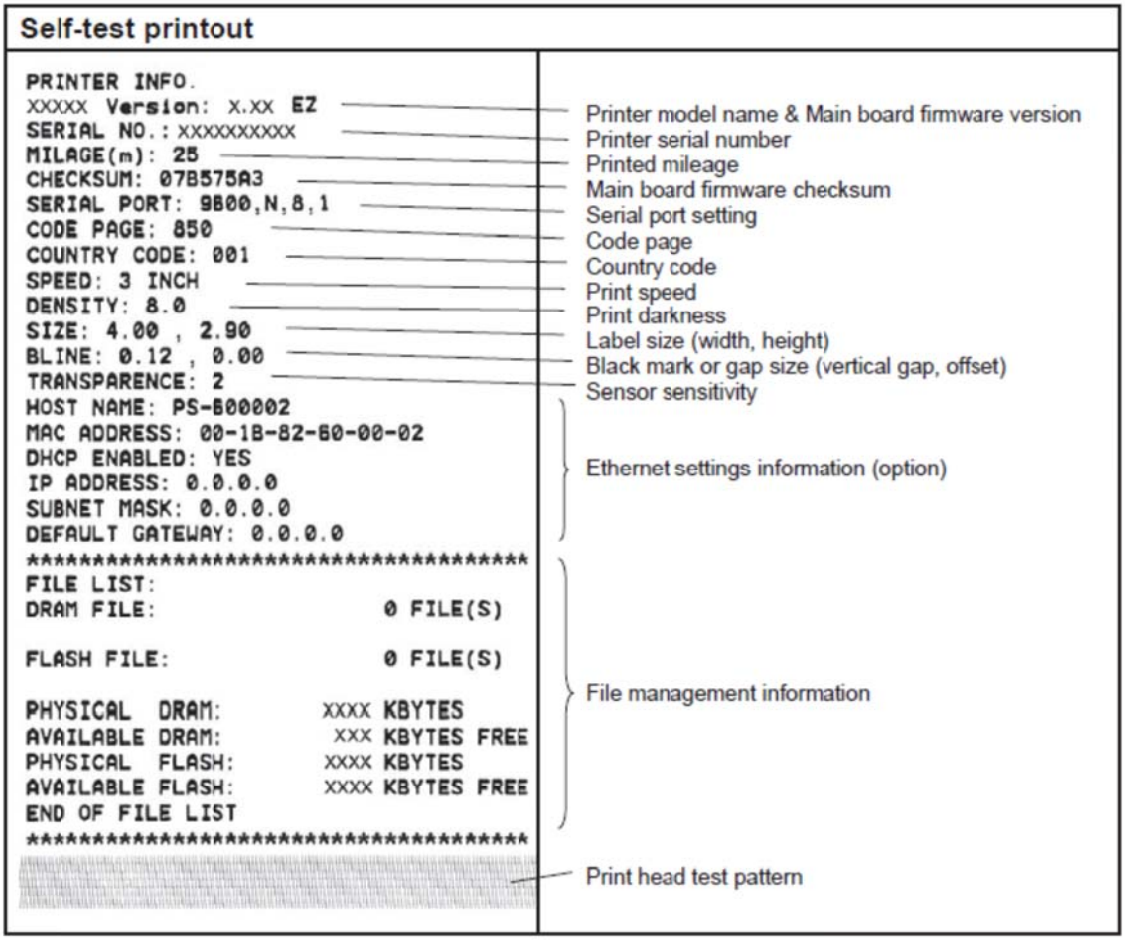
3.3.1 Print Config.

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.



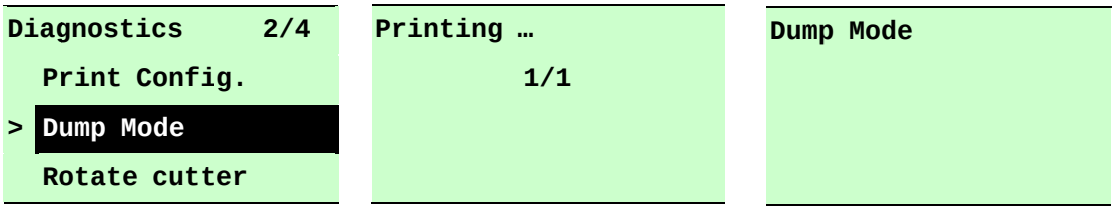






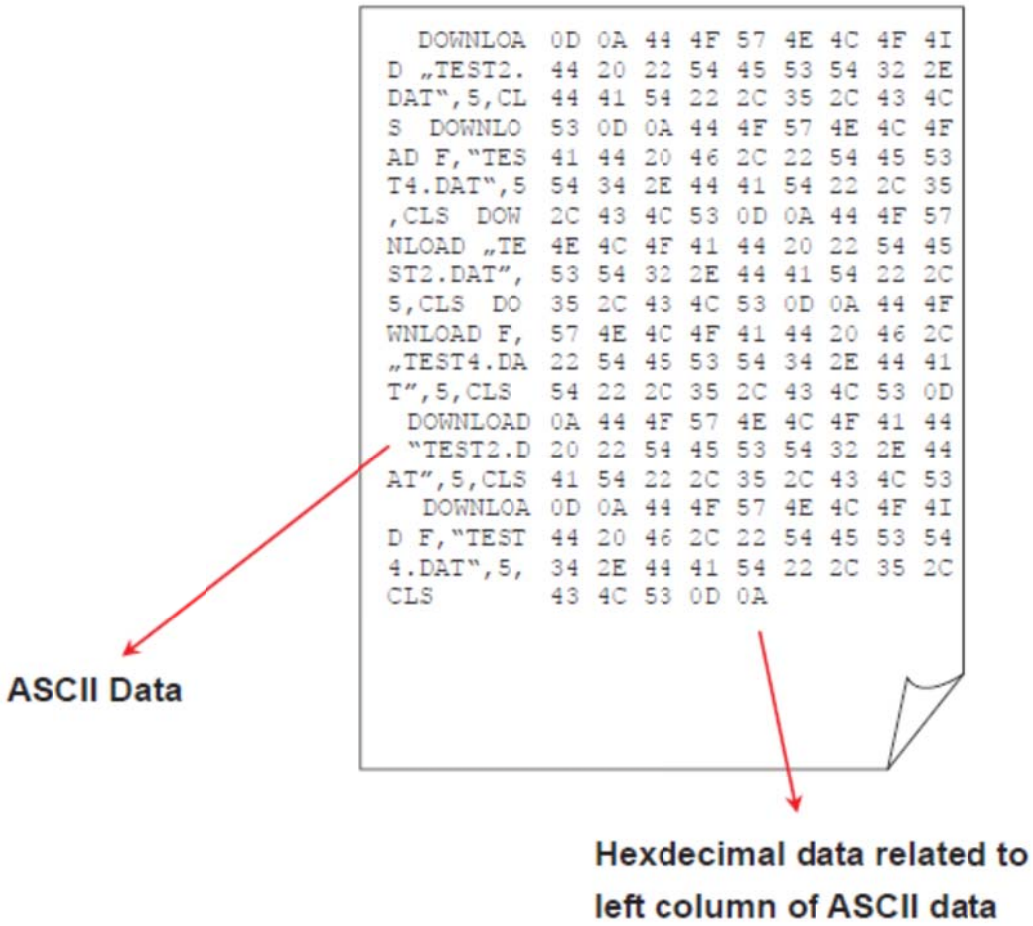
3.3.2 Dump Mode

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 as following. 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.



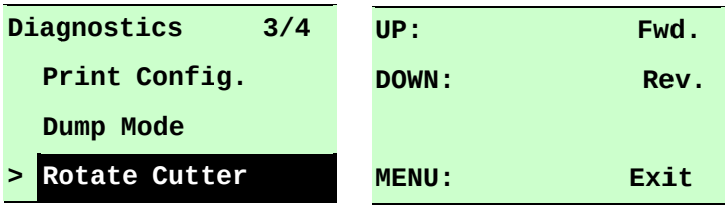
Note:

1. ***Dump mode requires 4" wide paper width.***
2. ***Turn off / on the power to resume printer for normal printing.***
3. ***Press FEED button to go back to the previous menu.***



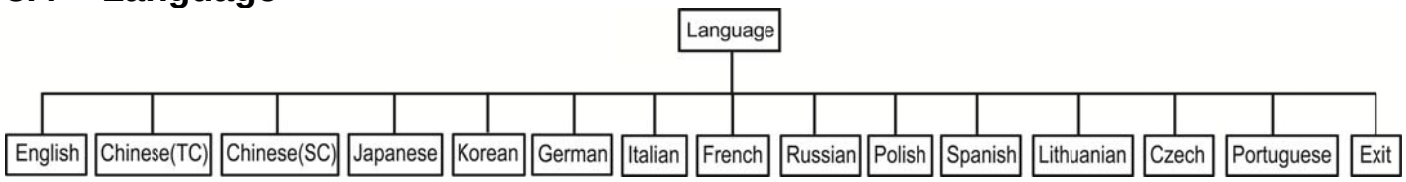
3.3.3 Rotate Cutter

In case paper is jammed in the cutter, this feature can rotate the cutter blade forward or reverse direction, which is helpful to remove the jammed paper easily from the cutter.



Note: Panduit does not currently offer a Cutter module.

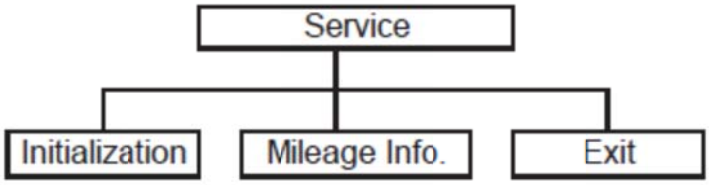
3.4 Language



This option is used to setup the language on LCD display.

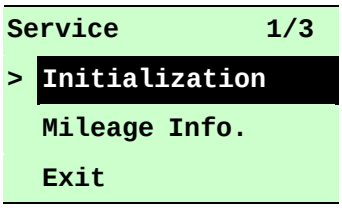
Press **UP** ⊙ and **DOWN** ⊙ buttons to scroll the curser to desire language and press **SELECT** button to select this option. Press ▤ **MENU** key to cancel the setting and return to the previous menu. The default language setting is English.

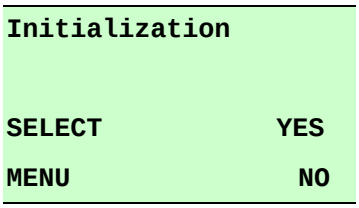
3.5 Service

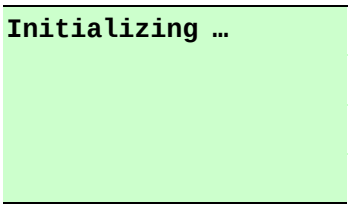


This feature is used to restore printer settings to defaults and display printer mileage information.

3.5.1 Initialization







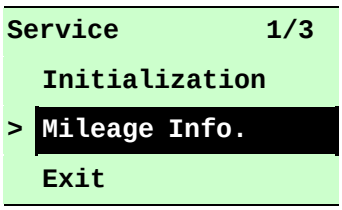
The printer settings are restored to defaults as below once printer is initialized.

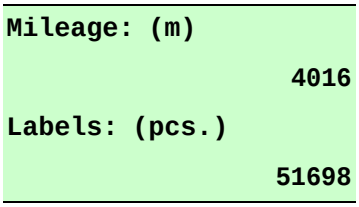
Note : When printer initialization is done, please calibrate the gap or black mark sensor before printing.

Parameter	Default setting
Speed	TDP43HE / TDP43HE/E : 4 IPS (101.6 mm/sec) TDP46HE / TDP46HE/E : 3 IPS (76.2 mm/sec)
Density	8
Label width	4.00”(101.6mm)
Label height	4.00”(101.6mm)
Sensor type	Gap sensor
Gap setting	0.12”(3.0mm)
Print direction	0
Reference point	0,0(upper left corner)
Offset	0
Print mode	Batch mode
Serial port settings	9600 bps, none parity, 8 data bits, 1 stop bit
Code page	850
Country code	001
Clear flash memory	No
Shift X	0
Shift Y	0
Gap sensor sensitivity	3 (Will be reset. Need to re-calibrate the gap)
Bline sensor sensitivity	2 (Will be reset. Need to re-calibrate the gap)
Language	English
IP address	DHCP

3.5.2 Mileage Info.

Use this option to check the printed mileage (displayed in meter).





4. Diagnostic Tool

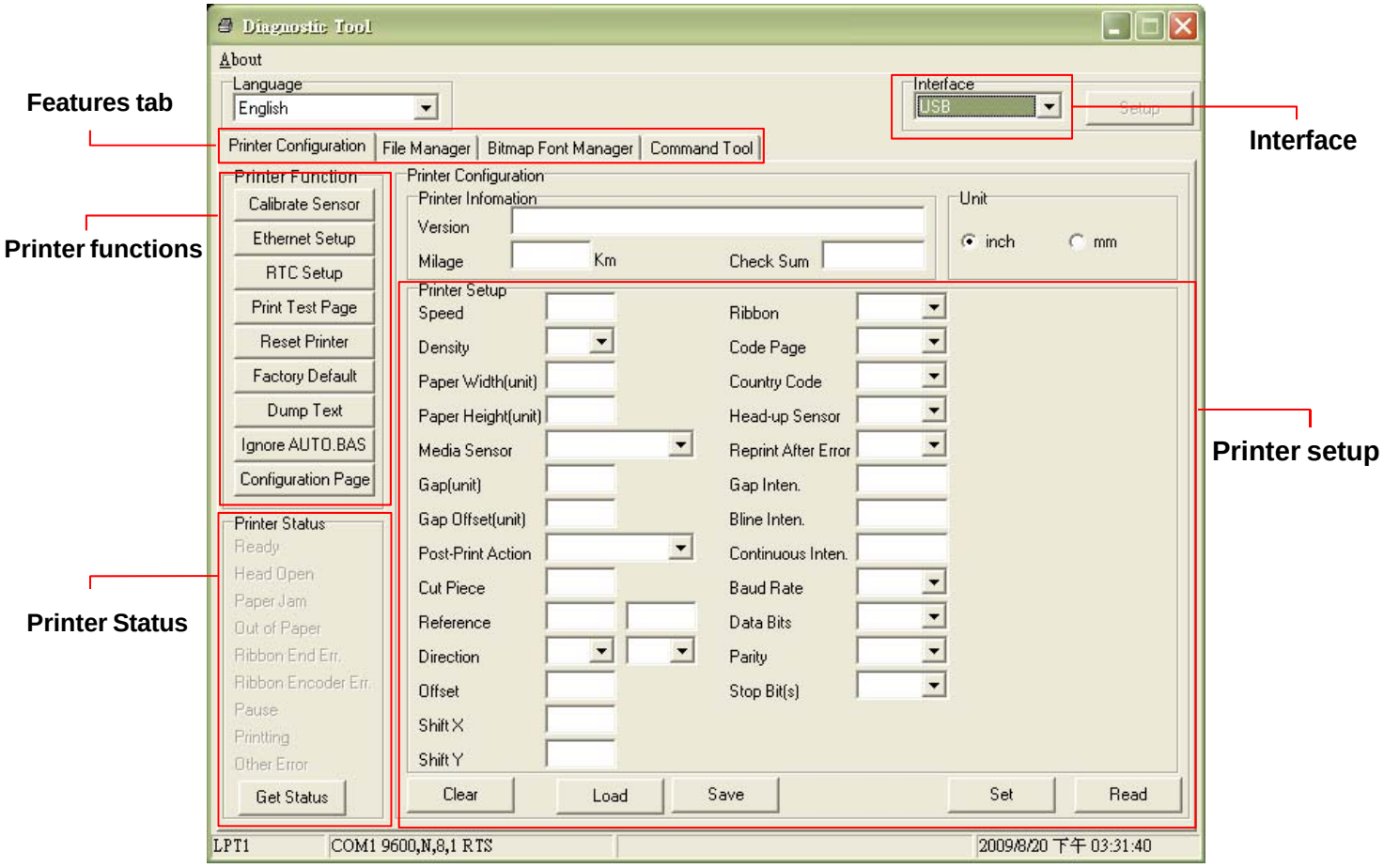
The Diagnostic Utility is a toolbox that allows users to explore the printer's settings and status; change printer settings; download graphics, fonts, and firmware; create printer bitmap fonts; and to send additional commands to the printer. Using this convenient tool, you can explore the printer status and settings and troubleshoot the printer. The Diagnostic Utility is located on the provided driver disc, in the "Utility" folder.

Note: This utility works with printer firmware V6.00 and later versions.

4.1 Start the Diagnostic Tool

1. Double click on the Diagnostic tool icon  DiagTool.exe to start the software.

2. There are four features (Printer Configuration, File Manager, Bitmap Font Manager, Command Tool) included in the Diagnostic utility.



4.2 Printer Function (Calibrate sensor, Ethernet setup, RTC setup……)

1. Select the PC interface connected with printer.
2. Click the “Function” button to setting.
3. The detail functions in the Printer Function Group are listed as below.

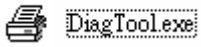
Function	Description
Calibrate Sensor	Calibrate the sensor specified in the Printer Setup group media sensor field
Ethernet Setup	Setup the IP address, subnet mask, gateway for the on board Ethernet (Please refer to next section)
RTC Time	Synchronize printer Real Time Clock with PC
Print Test Page	Print a test page
Reset Printer	Reboot printer
Factory Default	Initialize the printer and restore the settings to factory default.
Dump Text	To activate the printer dump mode.
Ignore AUTO.BAS	Ignore the downloaded AUTO.BAS program
Configuration Page	Print printer configuration

Note: For more information about Diagnostic Tool, please refer to the diagnostic utility quick start guide in the CD disk \ Utilities directory.

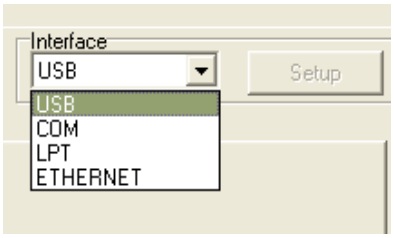
5. Setting Ethernet by Diagnostic Utility

The Diagnostic Utility is enclosed in the CD disk \Utilities directory. Users can use Diagnostic Tool to setup the Ethernet by RS-232, USB and Ethernet interfaces. The following contents will instruct users how to configure the Ethernet by these three interfaces.

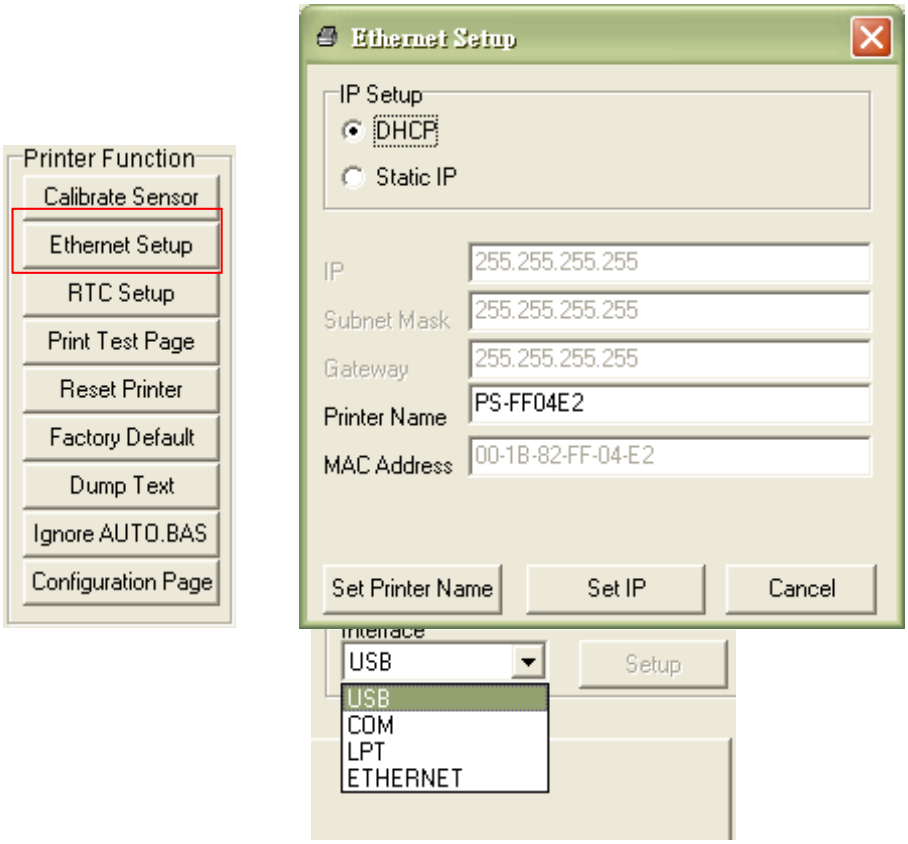
5.1 Using USB interface to setup Ethernet interface

1. Connect the USB cable between the computer and the printer.
2. Turn on the printer power.
3. Start the Diagnostic Utility by double clicking on the 

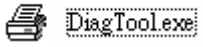
icon.
Note: This utility works with printer firmware V6.00 and later versions.
4. The Diagnostic Utility default interface setting is USB interface. If USB interface is connected with printer, no other settings need to be changed in the interface field.



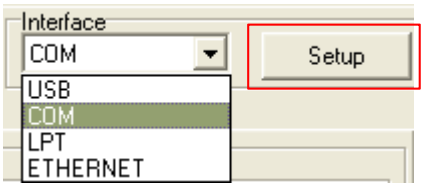
5. Click on the “Ethernet Setup” button from “Printer Function” group in Printer Configuration tab to setup the IP address, subnet mask and gateway for the on board Ethernet.

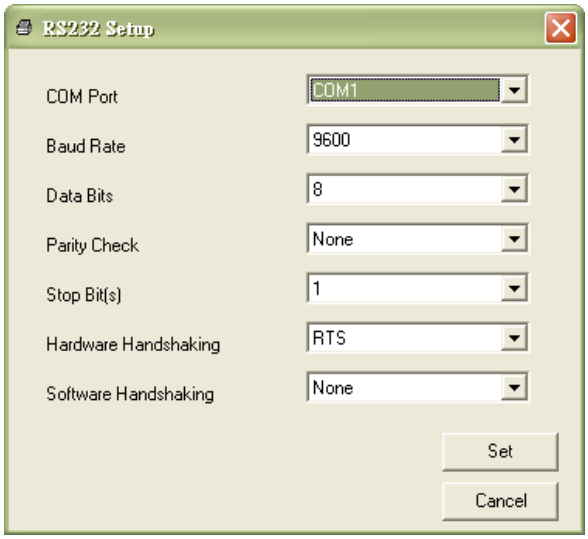


5.2 Using RS-232 interface to setup Ethernet interface

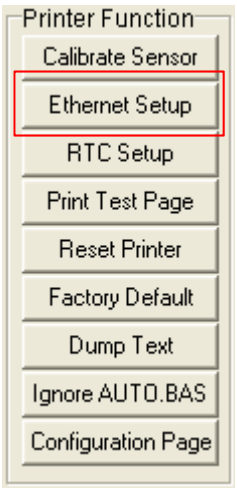
5. Connect the computer and the printer with a RS-232 cable.
6. Turn on the printer power.
7. Start the Diagnostic Utility by double clicks on the 

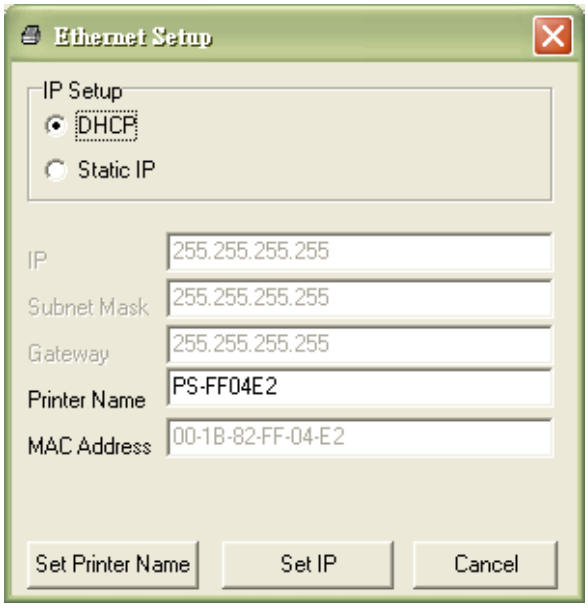
icon.
Note: This utility works with printer firmware V6.00 and later versions.
8. Select "COM" as interface then click on the "Setup" button to setup the serial port baud rate, parity check, data bits, stop bit and flow control parameters.



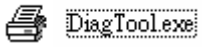


9. Click on the "Ethernet Setup" button from printer function of Printer Configuration tab to setup the IP address, subnet mask and the gateway for the on board Ethernet.



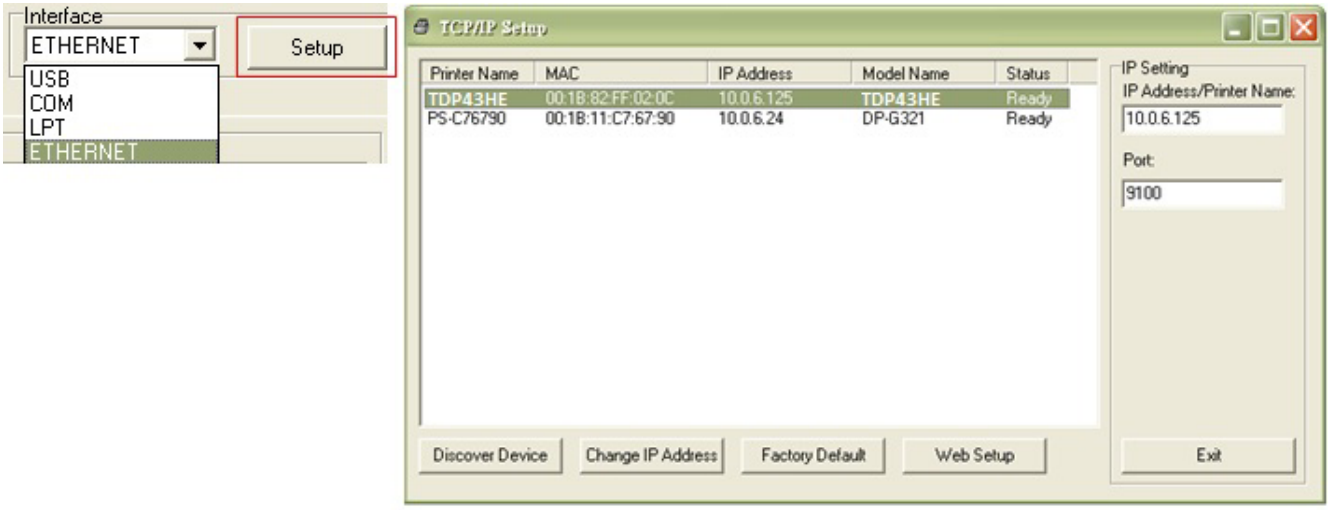


5.3 Using Ethernet interface to setup Ethernet interface

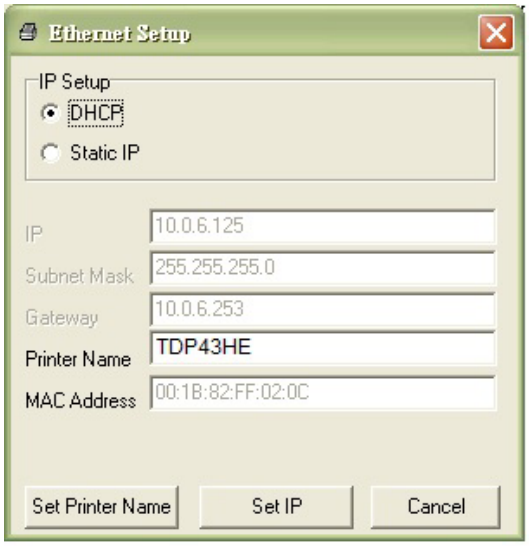
10. Connect the computer and the printer to the LAN.
11. Turn on the printer power.
12. Start the Diagnostic Utility by double clicks on the 

icon.

    Note: This utility works with printer firmware V6.00 and later versions.
13. Select “Ethernet” as the interface then click on the “Setup” button to setup the IP address, subnet mask and gateway for the on board Ethernet.



14. Click the “Discover Device” button to explore the printers that exist on the network.
15. Select the printer in the left side of listed printers, the correspondent IP address will be shown in the right side “IP address/Printer Name” field.
16. Click “Change IP Address” to configure the IP address obtained by DHCP or static.



The default IP address is obtained by DHCP. To change the setting to static IP address, click "Static IP" radio button then enter the IP address, subnet mask and gateway. Click "Set IP" to take effect the settings.

Users can also change the "Printer Name" by another model name in this field, then click "Set Printer Name" to take effect this change.

Note: After clicking the "Set Printer Name" or "Set IP" button, printer will reset to take effect the settings.

17. Click "Exit" button to exit the Ethernet interface setup and go back to Diagnostic Tool main screen.

Factory Default button

This function will reset the IP, subnet mask, gateway parameters obtained by DHCP and reset the printer name.

Web setup button

Except to use the Diagnostic Utility to setup the printer, you can also explore and configure the printer settings and status or update the firmware with the IE or Firefox web browser. This feature provides a user friendly setup interface and the capability to manage the printer remotely over a network.

6. Troubleshooting

6.1 Common Problems

The following guide lists the most common problems that may be encountered when operating this 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 carriage is open.	* Please close the print carriage.
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 gap/black mark sensor. * Set label size correctly.
Take Label	* Peel function is enabled.	* Panduit does not offer a Peeler module, at this time. * Change Print Mode to None or Batch
UP : DOWN : MENU :	* Cutter function is enabled.	* Panduit does not offer a Cutter module, at this time. * Change Print Mode to None or Batch

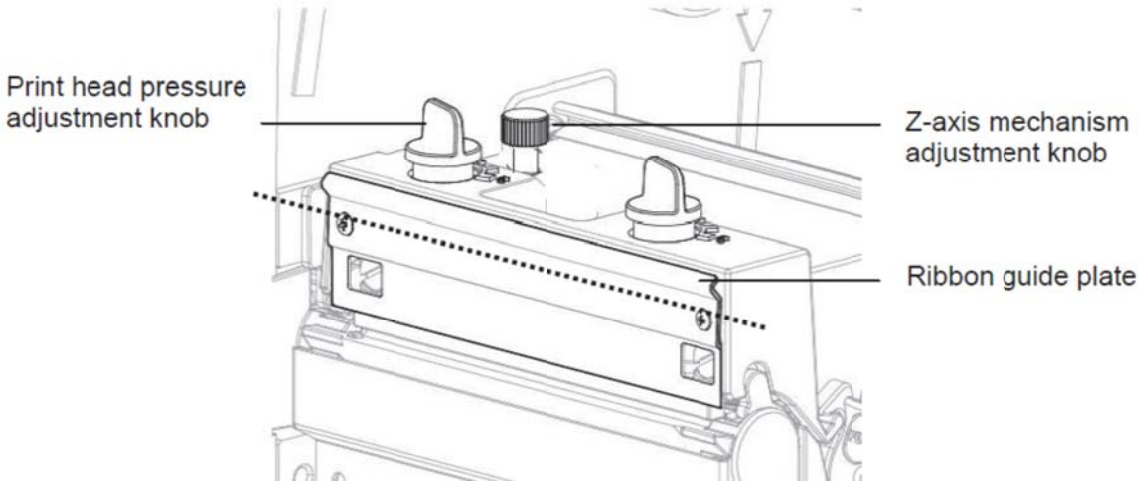
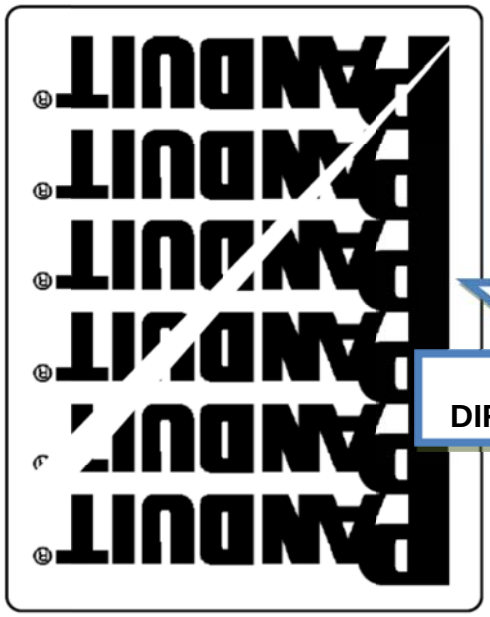
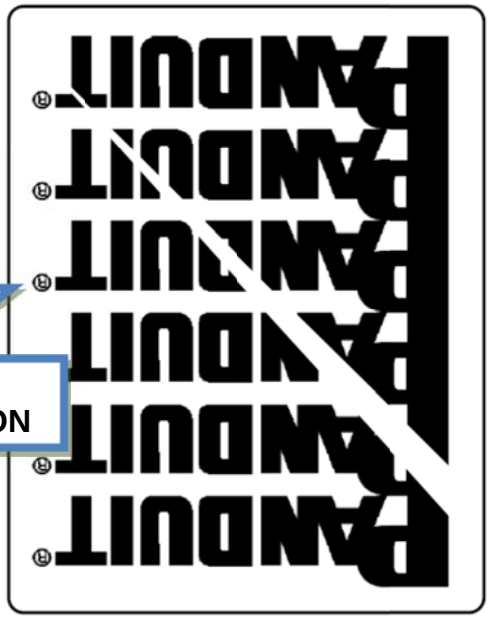
Not Printing	* Cable is not well connected to serial or USB interface or parallel port. * The serial port cable pin configuration is not pin to pin connected.	* Re-connect cable to interface. * If using serial cable, - Please replace the cable with pin to pin connected. - Check the baud rate setting. The default baud rate setting of printer is 9600,n,8,1. * If using the Ethernet cable, - Check if the Ethernet RJ-45 connector green LED is lit on.. - Check if the Ethernet RJ-45 connector amber LED is blinking. - Check if the printer gets the IP address when using DHCP mode. - Check if the IP address is correct when using the static IP address. - Wait a few seconds let the printer get the communication with the server then check the IP address setting again. * Chang a new cable. * Ribbon and media are not compatible. * Verify the ribbon-inked side. * Reload the ribbon again. * Clean the printhead. * The print density setting is incorrect. * Printhead's harness connector is not well connected with printhead. Turn off the printer and plug the connector again. * Check if the stepping motor is plugging in the right connector. * 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.
Memory full (FLASH / DRAM)	* The space of FLASH/DRAM is full.	* Delete unused files in the FLASH/DRAM. * The max. numbers of file of DRAM is 256 files. - The max. user addressable memory space of DRAM is 2048KB. * The max. numbers of file of FLASH is 256 files. - The max. user addressable memory space of FLASH is 6656 KB.
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.
PS/2 port does not work	* Did not turn off power prior to plug in * the PS/2 keyboard. * PS/2 keyboard is damaged. * PS/2 keyboard doesn't plug-in correctly. * There is no BAS file in the printer.	* Turn off printer power prior to plug in the PS/2 * keyboard. * Plug the PS/2 keyboard again. * Make sure the keyboard is fine. * Make sure if there is any BAS file downloaded into printer.

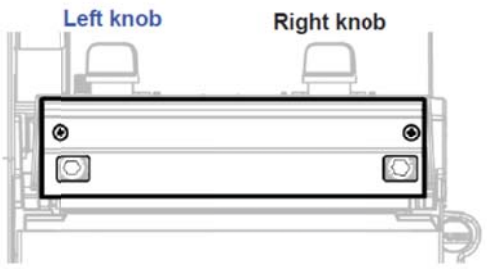
Poor Print Quality	* Ribbon and media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged. * Ribbon and media are incompatible. * The printhead pressure is not set properly.	* Reload the supply. * Clean the printhead. * 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. o If the left side printout is too light, please adjust the left side pressure adjustment knob to the higher index (higher pressure). If the pressure adjustment knob has been adjust to index "5" and the poor print quality is still at the left side of the printout, please adjust the pressure adjustment knob to index "1" and use the Z-axis adjustment knob to fine tune the pressure. o If the right side printout is too light, please adjust the right side pressure adjustment knob to the higher index (higher pressure) to improve the print quality. * If the label thickness is more than 0.22 mm, the print quality might be not good enough, please adjust the heater line adjustment screw counter clockwise to get the best print quality. * The release lever does not latch the printhead properly.
LCD panel is dark but the LEDs are "ON"	* The printer initialization is unsuccessful.	* Turn the printer "OFF" and "ON" again. * Initialize the printer.
LCD panel is dark and the LEDs are "ON", but the label is feeding forward	* The LCD panel harness connector is loose.	* The LCD panel harness connector is plugged upside down.
Ribbon end sensor doesn't work	* The ribbon sensor hole is covered with dust.	* Clear the dust in the sensor hole by the blower.
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.

The vertical printing position is incorrect	* Media sensor sensitivity is not set properly. * Label size is incorrect. * The vertical offset setting in the driver is incorrect.	* "Set the correct label size. * Adjust the Top Offset (Print → Features) or Label Offset (Print → Properties → Advanced Setup) parameters, within the “Print” windows.
The horizontal printing position is incorrect	* Wrong label size setup. * The parameter Shift X in LCD menu is incorrect. * The Left Offset setting, within “Features”, in incorrect.	* Set the correct label size. * Press [MENU] → [SELECT] x 3 → [DOWN] x 5 → [SELECT] to fine tune the parameter of Shift X. * Adjust “Left Offset” (Print → Features).
Missing printing on the left or right side of label	* Wrong label size setup.	* Set the correct label size.
Real Time Clock time is incorrect when rebooting the printer	* The battery has run down.	* Check if there is a battery on the main board.
Multi interface board doesn’t work	* The installation is incorrect.	* Check if the board is plugged in the right connector.
Power and Error LEDs are blinking fast	* Power switch OFF and ON too fast.	* Turn off the printer and wait all LEDs are dark, and turn on the printer again.
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.
Gray line on the blank label	* The printhead is dirty. * The platen roller is dirty.	* Clean the printhead when changing a new label roll * Clean the platen roller when changing a new label roll
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.

6.2 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 does wrinkle, please follow the instructions below to adjust the printer parts.

<table>
<tr><td>Adjustable Printer Parts</td><td colspan="2"> 
</td></tr>
<tr><td>Symptom</td><td>4. Wrinkle happens from label lower left to upper right direction (“´”)</td><td>5. Wrinkle happens from label lower right to upper left direction (“`”)</td></tr>
<tr><td>Wrinkle Example</td><td>  </td><td> 
</td></tr>
<tr><td></td><td>Adjust the print head pressure adjustment knob</td><td>Adjust the print head pressure adjustment knob</td></tr>
</table>

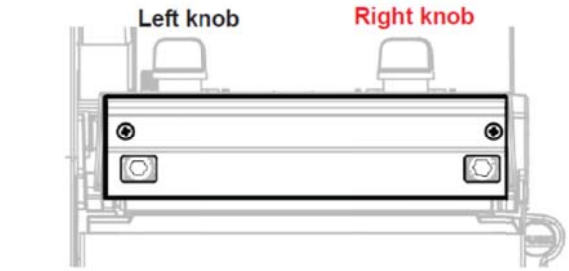


The print head pressure adjustment knob has 5 levels of settings. Clockwise direction adjustment is to increase the print head pressure. Counter Clockwise adjustment can decrease the print head pressure.
If the wrinkle on the label starts from the lower left side to upper right side, please do following 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.
3. If the left side print head adjustment knob setting has been set to 5 (the highest pressure index) the wrinkle can't be avoid, please rotate the both knobs back to setting 1 then rotate the Z-axis mechanism adjustment knob clockwise for a few degrees and print again for fine tune the print head pressure distribution.

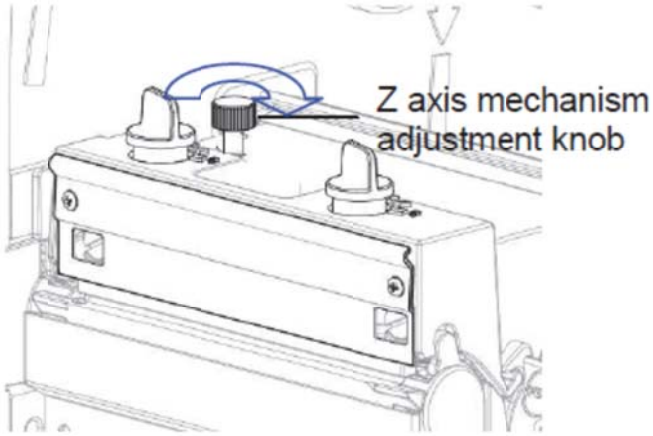
Note for step 3:
*Factory default setting, the Z-axis knob is rotated counter clockwise to the end of thread.
*Turn the Z-axis mechanism adjustment knob clockwise until you feel the knob touch the mechanism for the first adjustment.
  * If the wrinkle is still there, please turn the Z-axis mechanism adjustment knob clockwise about 1/4 circle each time for adjustment
  * If the winkled direction is change from "´" to "`" by adjusting the Z-axis mechanism

adjustment knob, please turn the Z axis mechanism adjustment knob counter clockwise to avoid the wrinkle.



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.
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.

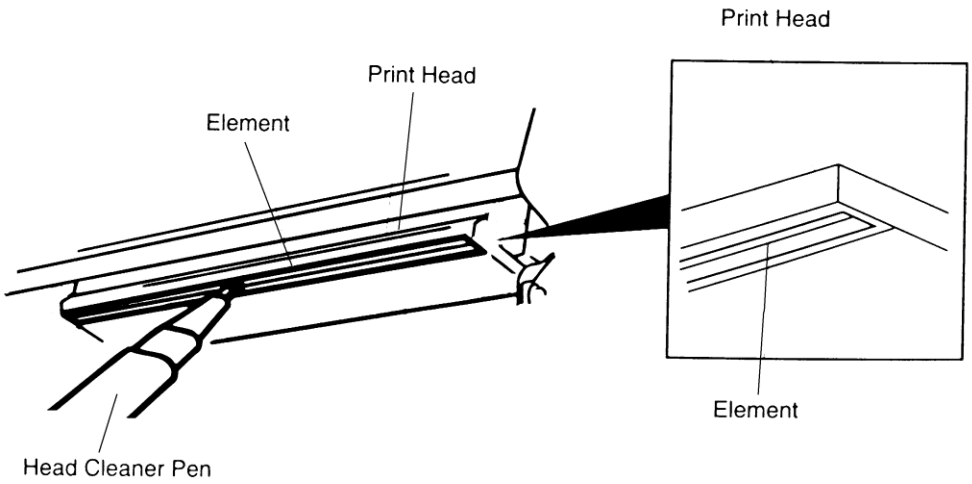


7. Maintenance

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

1. Please use one of following materials to clean the printer:
   - Cotton swab
   - Lint-free cloth
   - Vacuum / Blower brush
   - 100% ethanol
   - Panduit Cleaning Kit (PRT-CLN)

2. The cleaning process is described as follows:

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

Sensor	Compressed air or vacuum	Monthly
Exterior	Wipe it with water-dampened cloth	As needed
Interior	Brush or vacuum	As needed

Note:

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