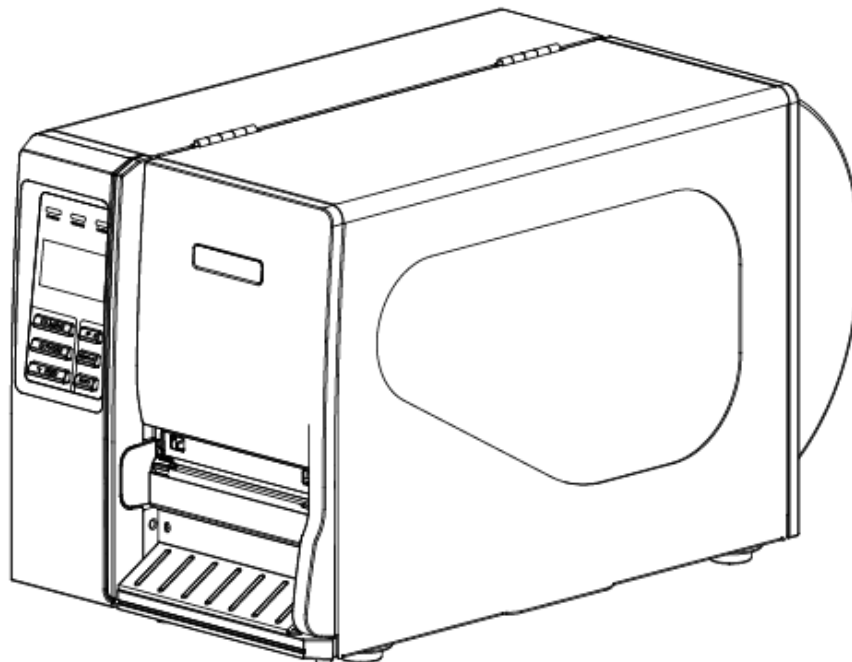


LabelStation *Industrial*

THERMAL TRANSFER / DIRECT THERMAL BAR CODE PRINTER

USER MANUAL



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1. Introduction

1.1 Product Introduction

This printer is designed with die-cast aluminum chassis and print mechanism, metal cover with large clear media view window, which ensuring to work for the extreme and heavy duty industrial environment and applications.

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

1.2 Compliances

CE Class A:

EN55022:1998+A1:2000+A2:2003:

EN55024:1998+A1:2001+A2:2003:

EN 61000-4 SERIES REGULATIONS

ETSI EN 301 489-17:V1.2.1(2002-08)

FCC:

CFR 47, Part 15/CISPR 22 3RD EDITION:1997, 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.**

ANSI C63.4:2003

CANADIAN ICES-003

C-Tick:

AS/NZS CISPR22 (Class A)

UL, CUL

UL 60950 3rd

TÜV/ Safety:

EN60950: 2000

CAUTION

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

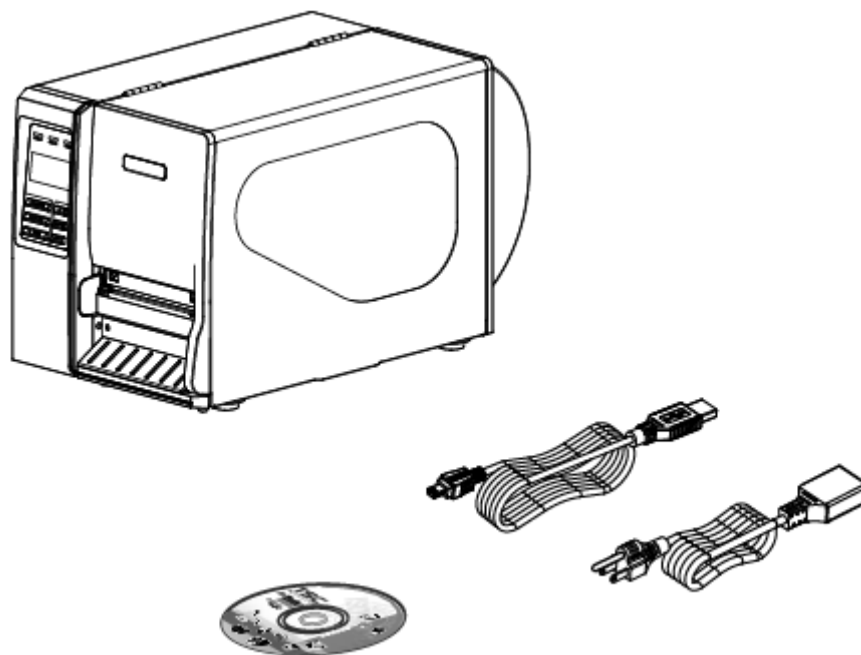
2. Operations Overview

2.1 Unpacking and Inspection

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

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

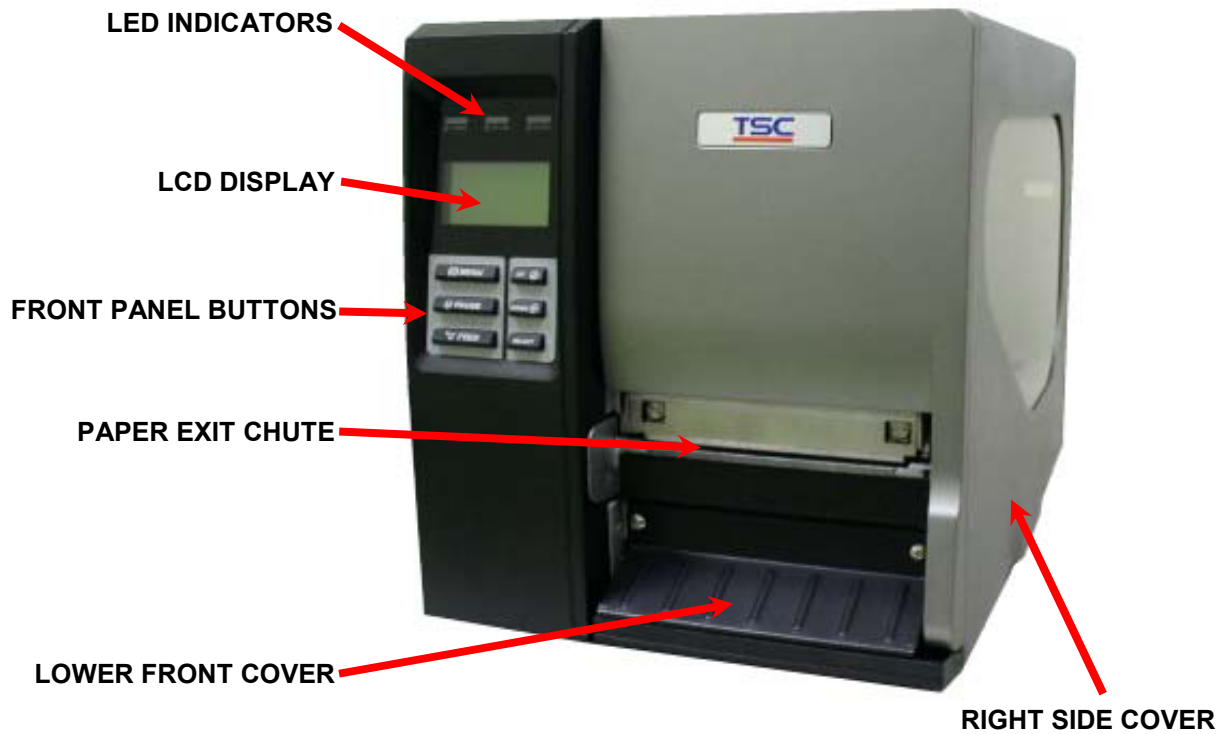
1. Printer
2. Windows labelling software/Windows driver and user manual on CD
3. Power cord
4. USB interface cable



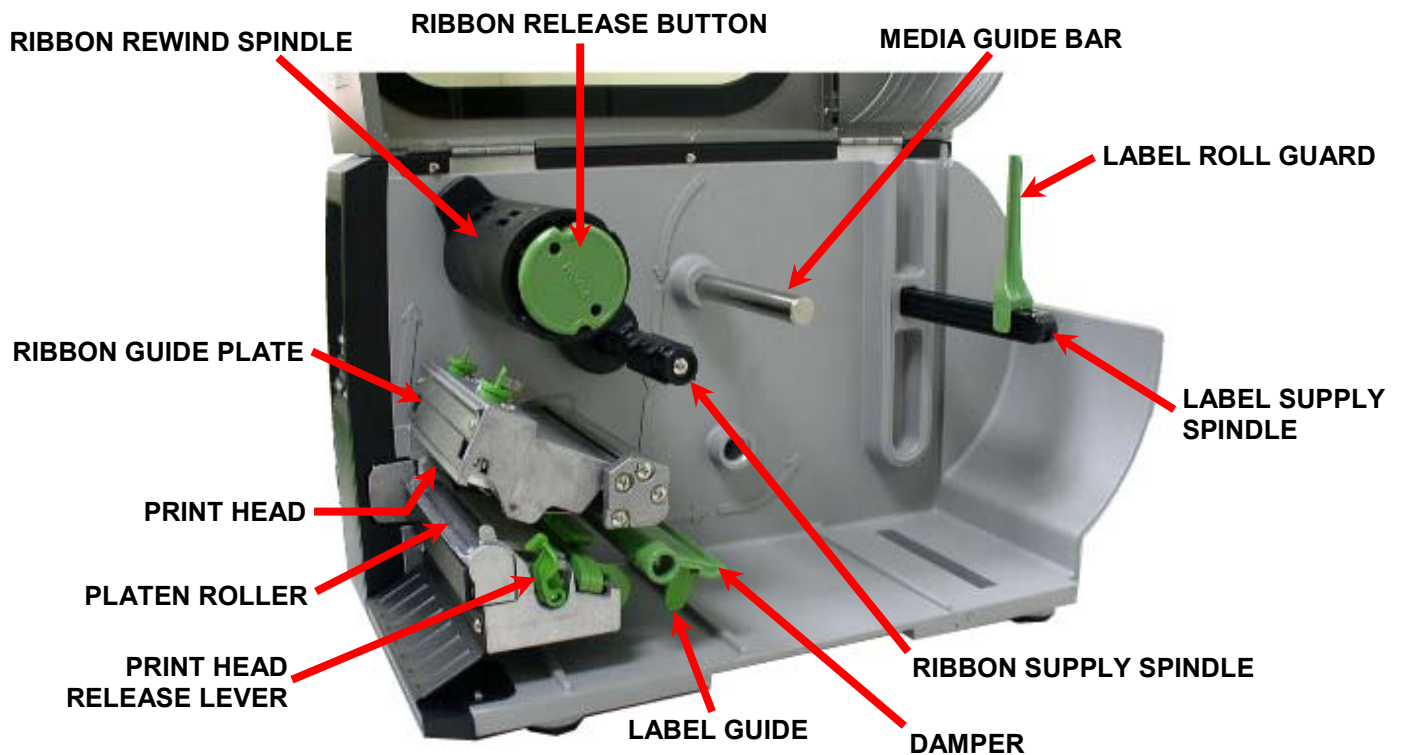
If any parts are missing, please contact Advanced Labelling Ltd.

2.2 Printer Overview

2.2.1 Front View



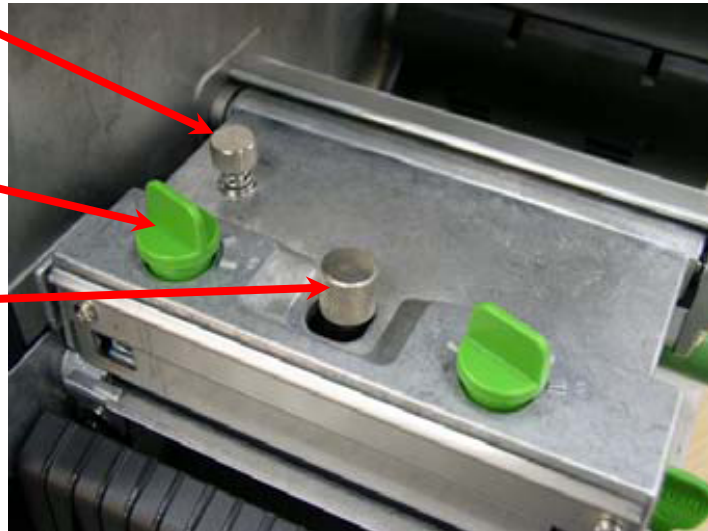
2.2.2 Interior views



**Z-AXIS MECHANISM
ADJUSTMENT KNOB**

**PRINT HEAD PRESSURE
ADJUSTMENT KNOB**

PRINT HEAD SECURE SCREW

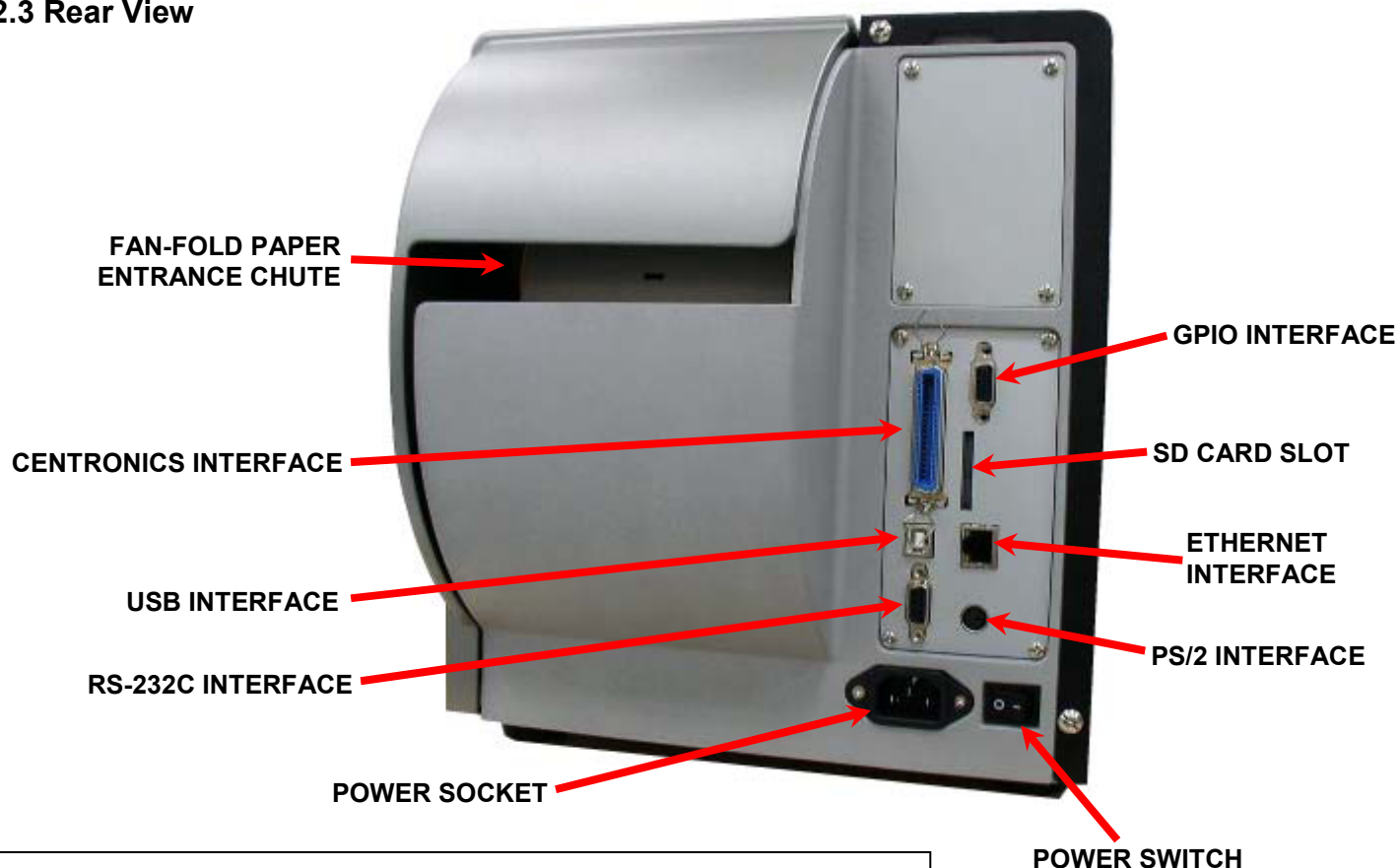


RIBBON SENSOR

**MEDIA (LABEL) SENSOR
LOCATION**



.2.3 Rear View



Note:

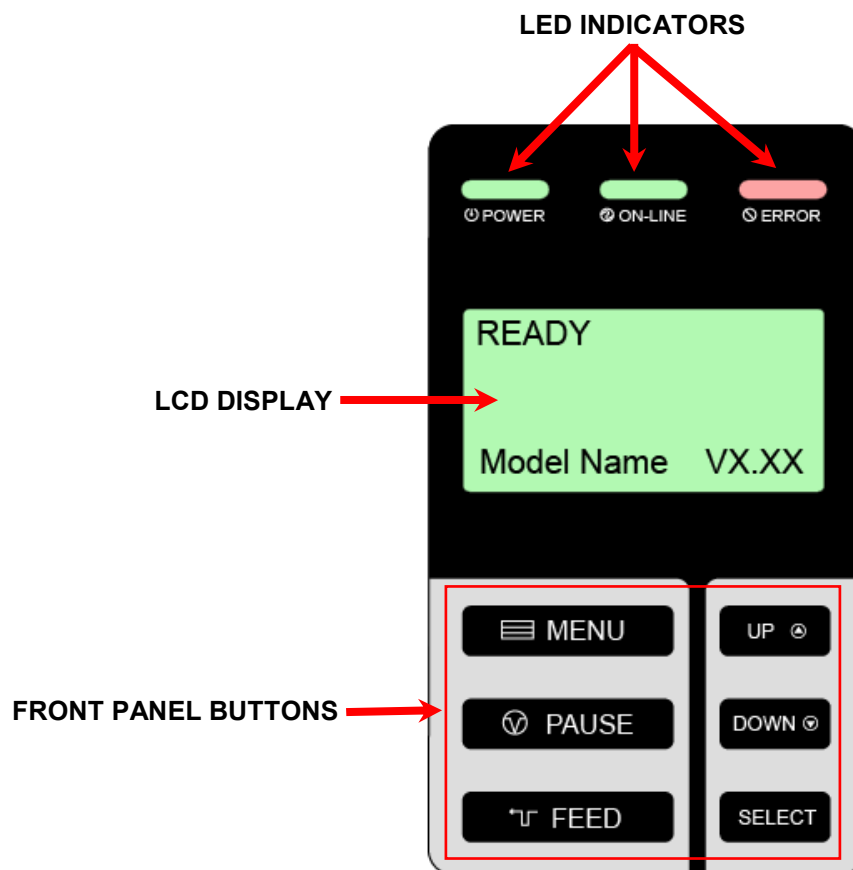
1. SD card slot, Ethernet interface and PS/2 interface are optional for the LabelStation Industrial model.
2. GPIO interface (also optional) includes SD card slot, Ethernet and PS/2

SD card spec	SD card capacity	Approved SD card manufacturer
V1.0, V1.1	128 MB	SanDisk, Transcend
V1.0, V1.1	256 MB	SanDisk, Transcend, Panasonic
V1.0, V1.1	512 MB	SanDisk, Transcend, Panasonic
V1.0, V1.1	1 GB	SanDisk, Transcend, Panasonic
V2.0 SDHC CLASS 4	4 GB	
V2.0 SDHC CLASS 6	4 GB	SanDisk, Transcend, Panasonic
V1.0, V1.1	microSD 128 MB	Transcend, Panasonic
V1.0, V1.1	microSD 256 MB	Transcend, Panasonic
V1.0, V1.1	microSD 512 MB	Panasonic
V1.0, V1.1	microSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 4	microSD 4 GB	Panasonic
V2.0 SDHC CLASS 6	microSD 4 GB	Transcend
V1.0, V1.1	miniSD 128 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 256 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 512 MB	Transcend, Panasonic
V1.0, V1.1	miniSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 4	miniSD 4 GB	Transcend
V2.0 SDHC CLASS 6	miniSD 4 GB	

- The DOS FAT file system is supported for the SD card.
- Folders/files stored in the SD card should be in the 8.3 filename format
- The miniSD/microSD card to SD card slot adapter is required.

2.3 Operator Controls

2.3.1 Front Panel Display



2.3.2 LED 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" or "NO RIBBON"

2.3.3 Front Panel Keys

Keys	Function
☰ MENU	1. Enter the menu 2. 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

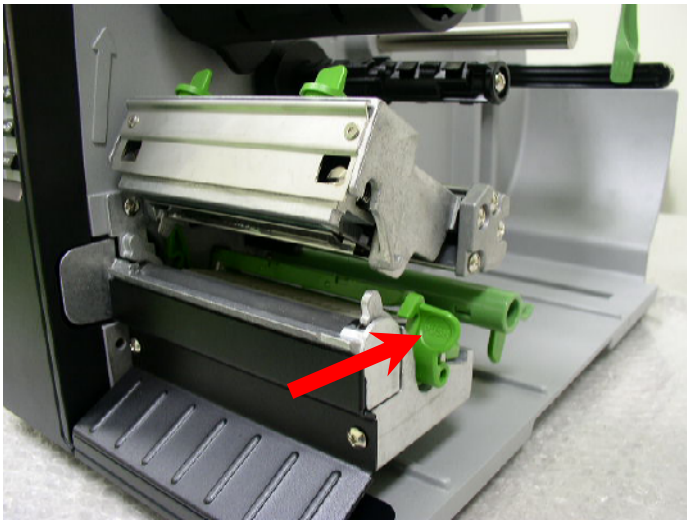
2.4 Setting Up the Printer

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

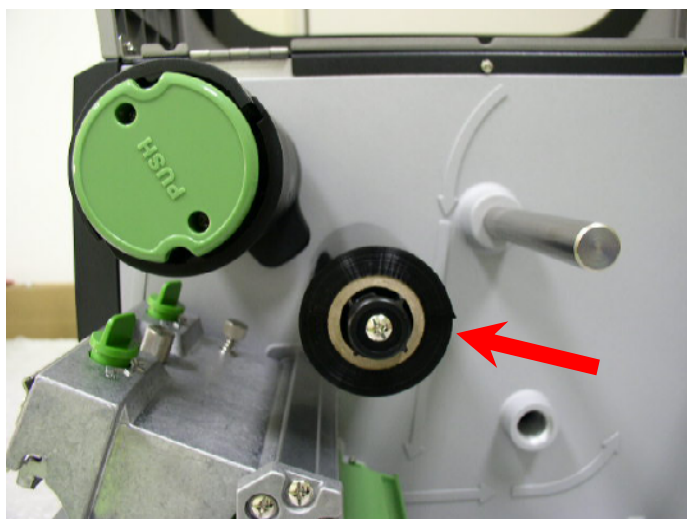
2.5 Installation of Ribbon

2.5.1 Loading Ribbon

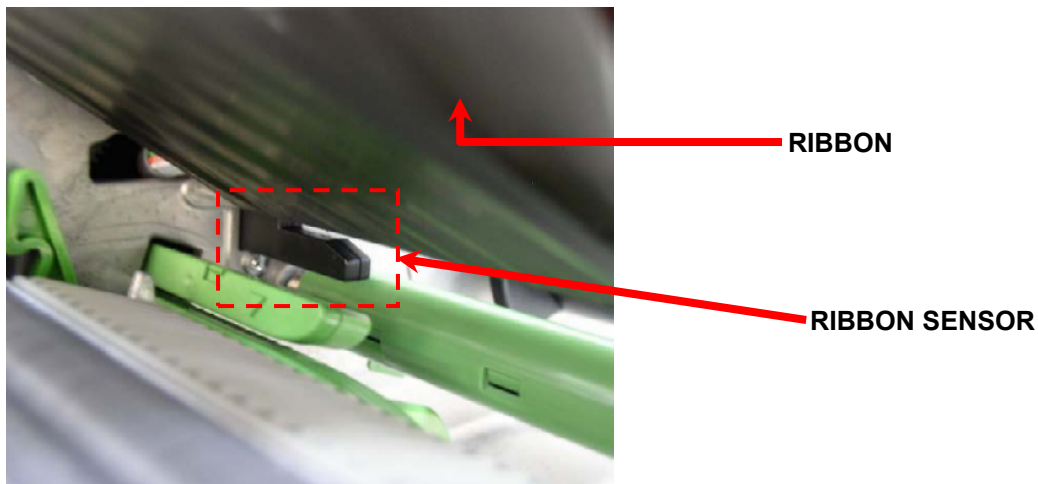
1. Lift open printer right side cover.
2. Push the print head release lever to open the print head mechanism.



3. Install the ribbon onto the ribbon supply spindle.

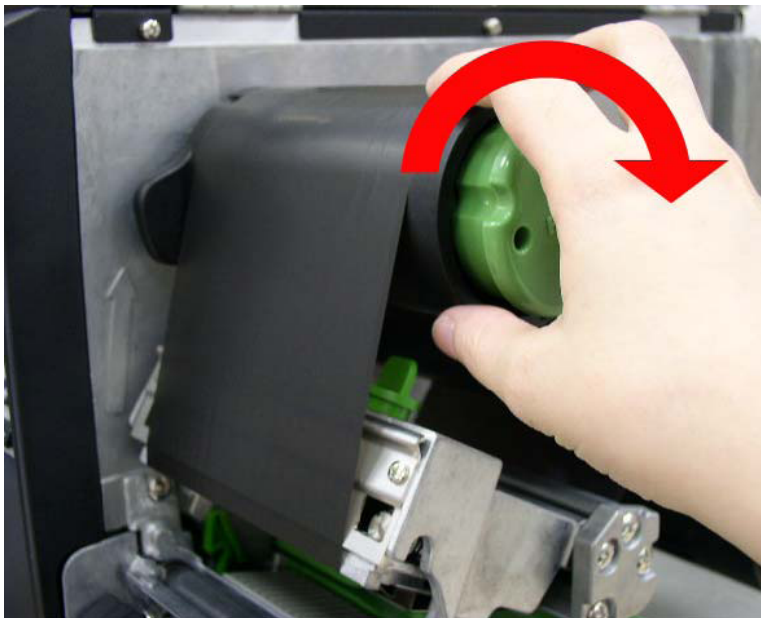


4. Thread the ribbon through the ribbon sensor slot and then through the open space between the print head and the platen.

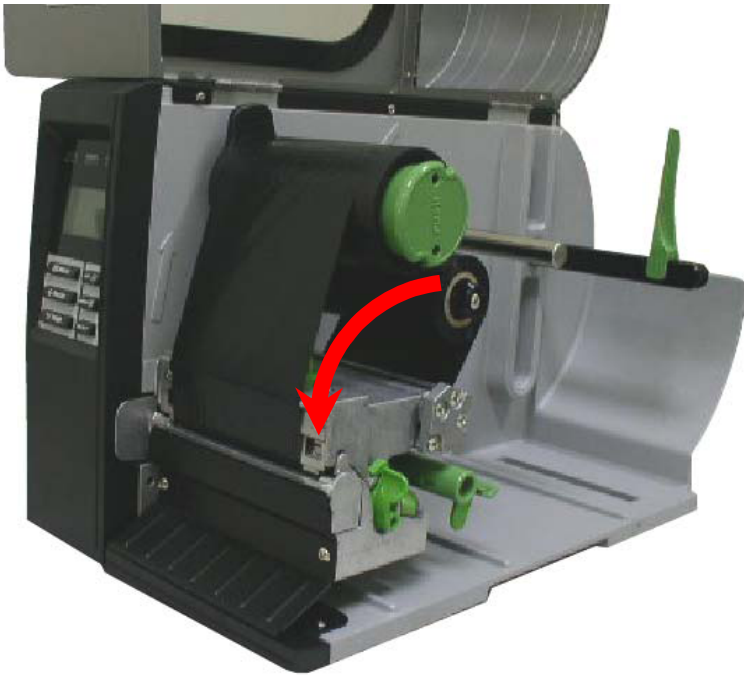


5. Wrap the ribbon onto the ribbon rewind spindle, keeping the ribbon flat and without wrinkles.

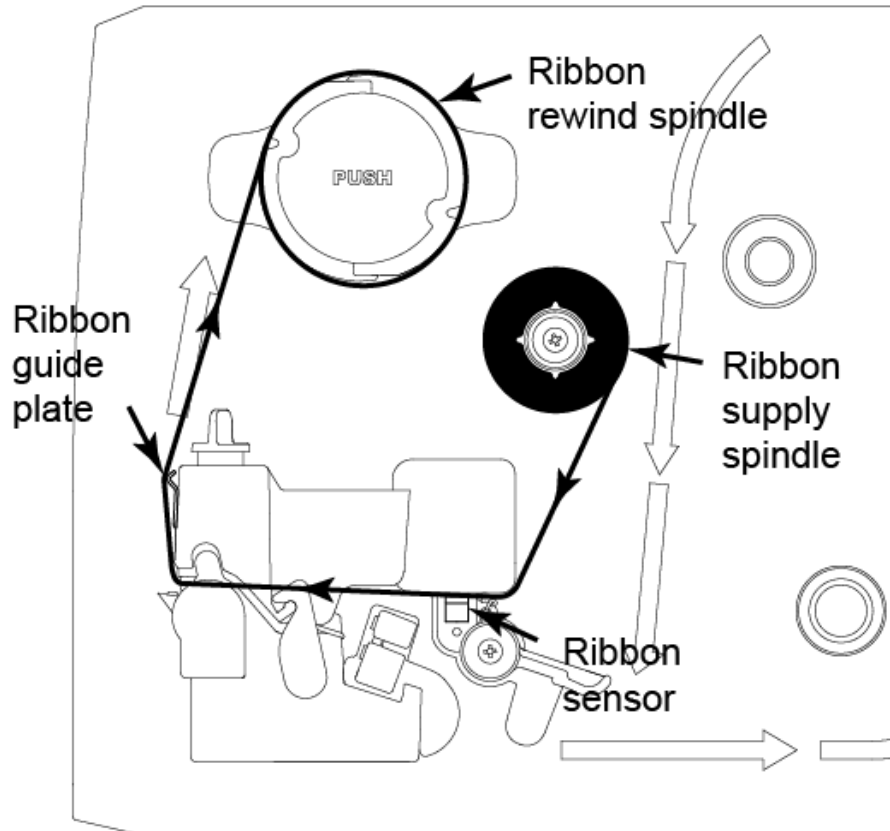
6. Wind the ribbon clockwise about 3~5 turns onto the ribbon rewind spindle until it is stretched smoothly.



7. Close the print head mechanism making sure the latches are engaged properly.

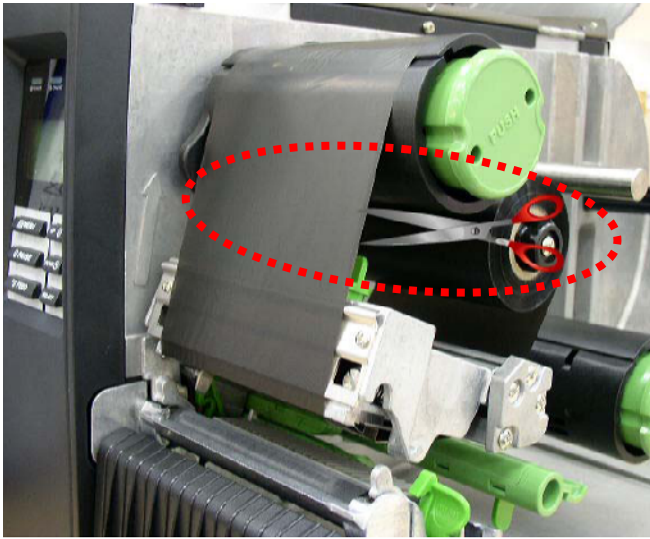


Loading path for ribbon



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.



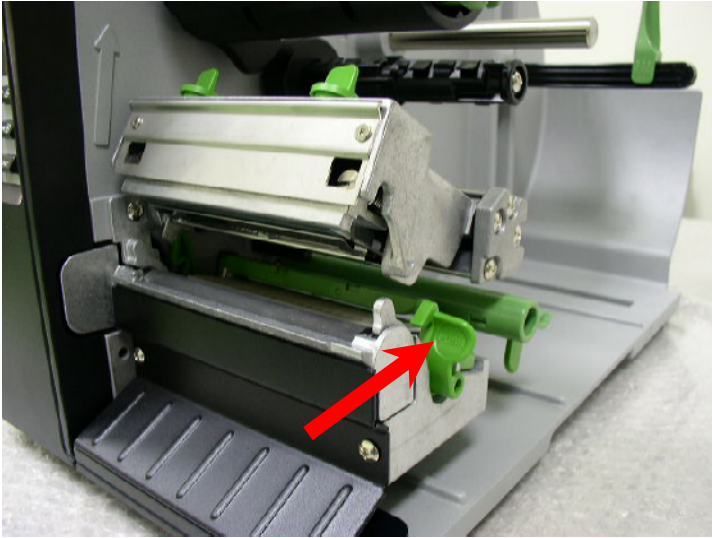
3. Slide off the ribbon from ribbon rewind spindle.



2.6 Installation of Media

2.6.1 Loading Roll Labels

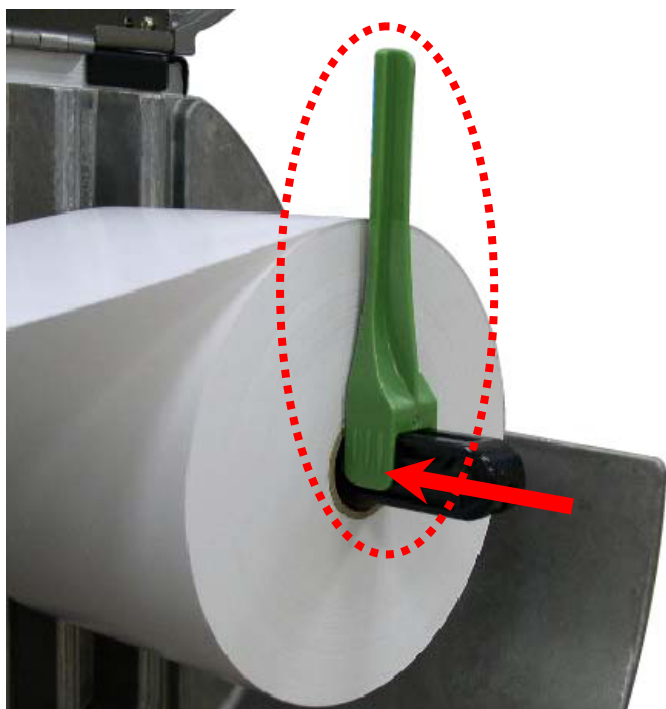
1. Lift open printer right side cover.
2. Push the print head release lever to open the print head mechanism.



3. Move the label roll guard horizontally to the end of label spindle then flip down the label roll guard.

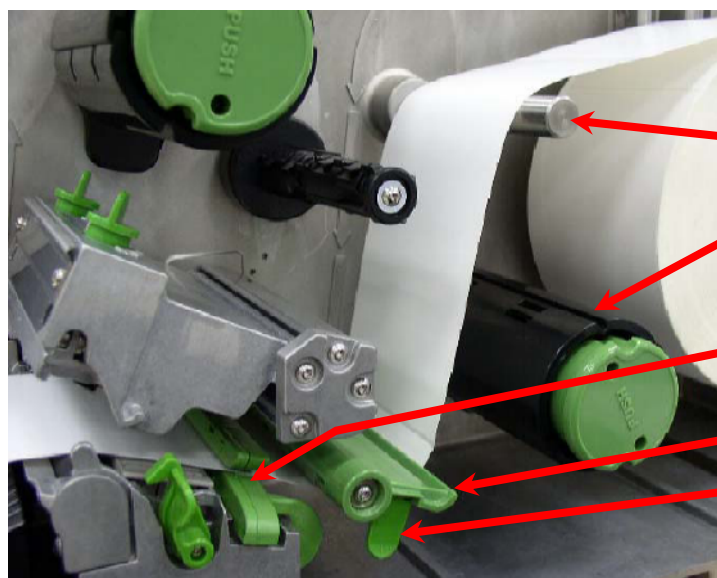
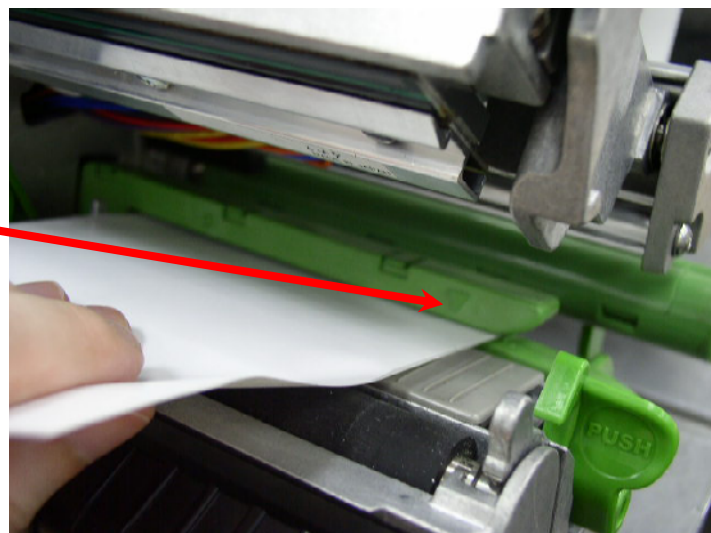


4. Place the roll of media on the label supply spindle. Flip up the label roll guard. Move the label roll guard horizontally to gently fit the width of label roll.



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

MEDIA (LABEL) SENSOR LOCATION



MEDIA GUIDE BAR

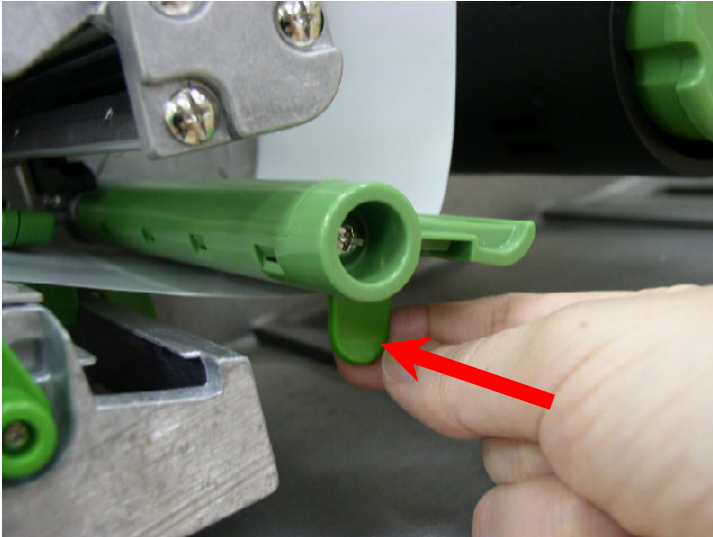
INTERNAL REWINDER (OPTIONAL)

MEDIA (LABEL) SENSOR

DAMPER

LABEL GUIDE

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

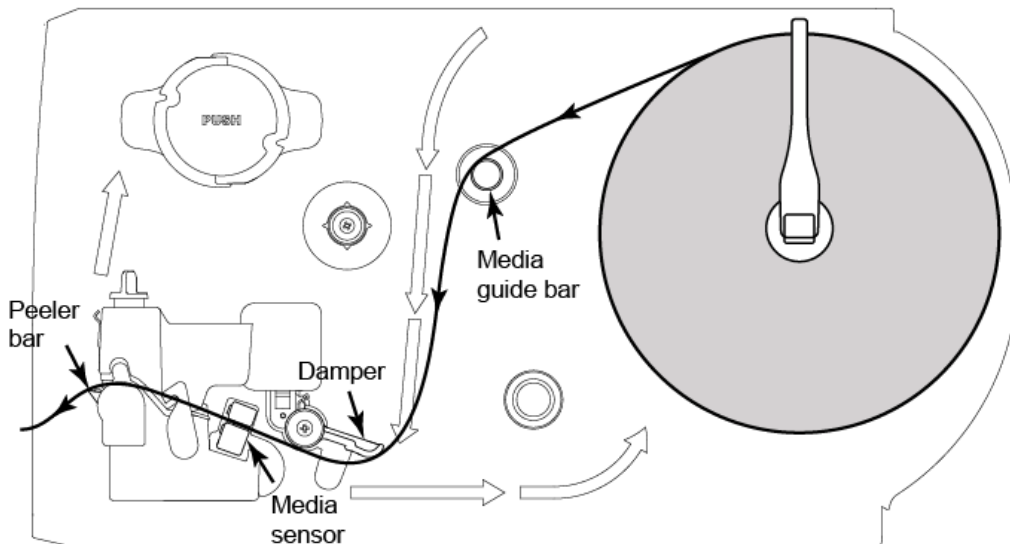


7. Close the print head mechanism making sure the latches are engaged properly.

8. Using the front display panel, set the media sensor type and calibrate the selected sensor.

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

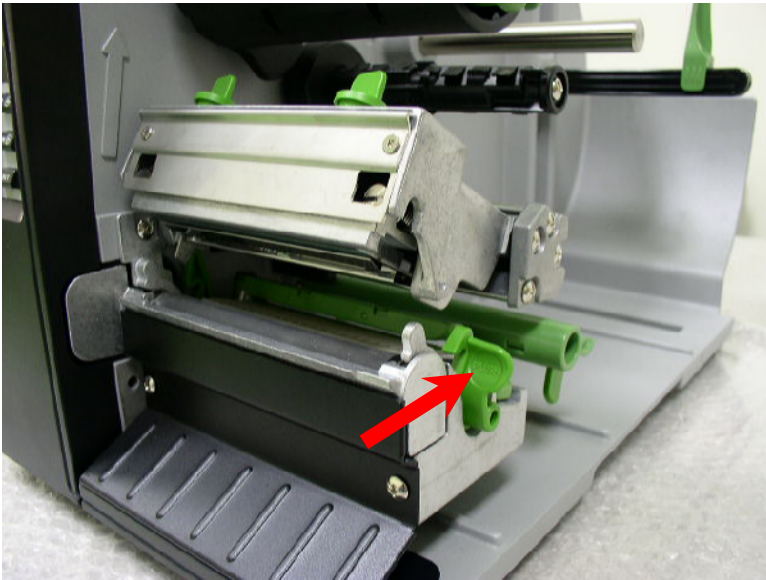
Loading path for roll labels



2.6.2 Loading Fan-fold Labels

Fan-fold media feeds through either the bottom or rear external label entrance chute.

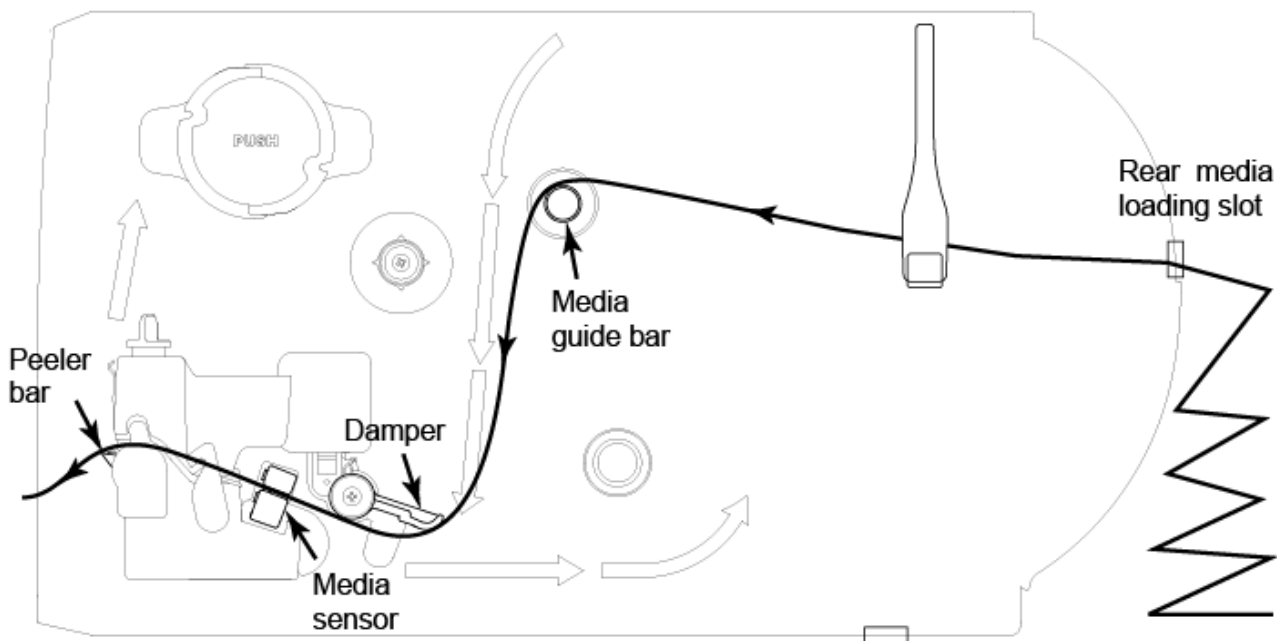
1. Lift open the printer right side cover.
2. Push the print head release lever to open the print head mechanism.

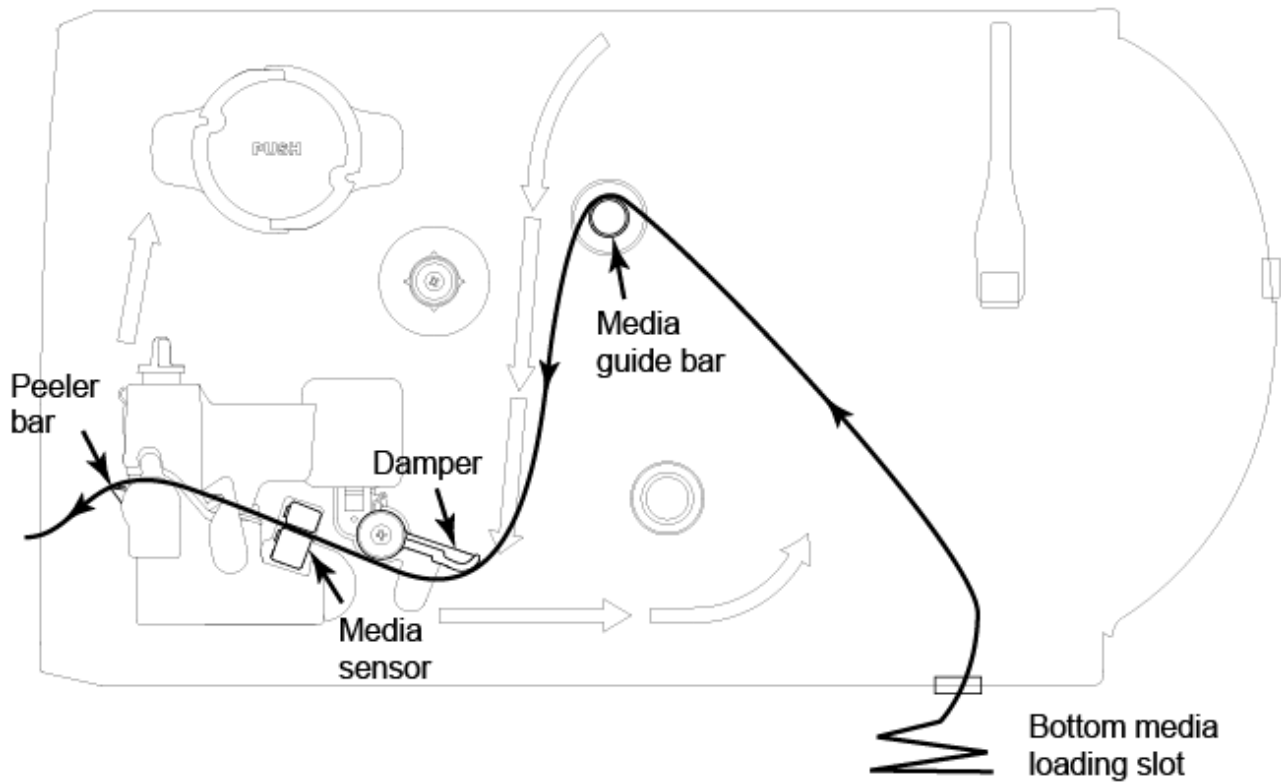


3. Insert the fan-fold media through the bottom or rear external label entrance chute.
4. Pull the fan-fold label leading edge forward through the media guide bar and damper media sensor, and place the label leading edge onto the platen roller.
5. Adjust the label guide by sliding it to fit the paper width.
6. Close the print head mechanism making sure the latches are engaged properly.
7. Set the media sensor type and calibrate the selected sensor.

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

Loading path for fan-fold labels





2.6.3 Loading Media in Peel-off Mode (Optional)

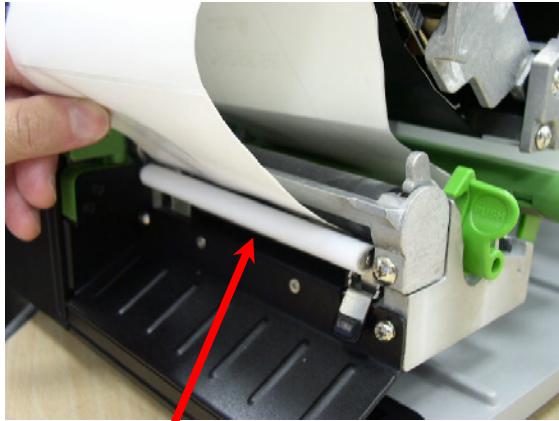
1. Lift open printer right side cover.
2. Push the print head release lever to open the print head mechanism.
3. Move the label roll guard horizontally to the end of the label spindle then flip down the label roll guard.
4. Place the roll of media on the label supply spindle. Flip up the label roll guard. Move the label roll guard horizontally to fit the width of label roll.
5. Pull the label roll leading edge forward through the media guide bar and damper media sensor, and place the label leading edge onto the platen roller.
6. Adjust the label guide to fit the width of the label.
7. Using the front display panel, set the media sensor type and calibrate the selected sensor.
8. Pull approximately 650mm of label through the front of the printer.
9. Push down the peel-off roller release lever.



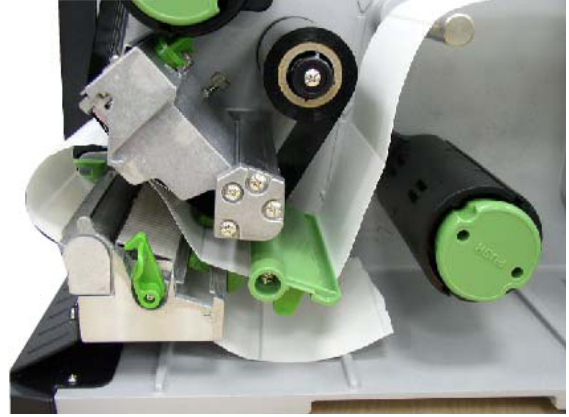
**PEEL-OFF ROLLER
RELEASE LEVER**



10. Feed the label between the peel-off roller and the platen roller.



PEEL-OFF ROLLER



11. Wrap the label onto the internal rewind spindle and wind the spindle counter-clockwise about 3~5 turns until the label is properly stretched.



12. Lift up the peel-off roller release lever and close the print head mechanism.

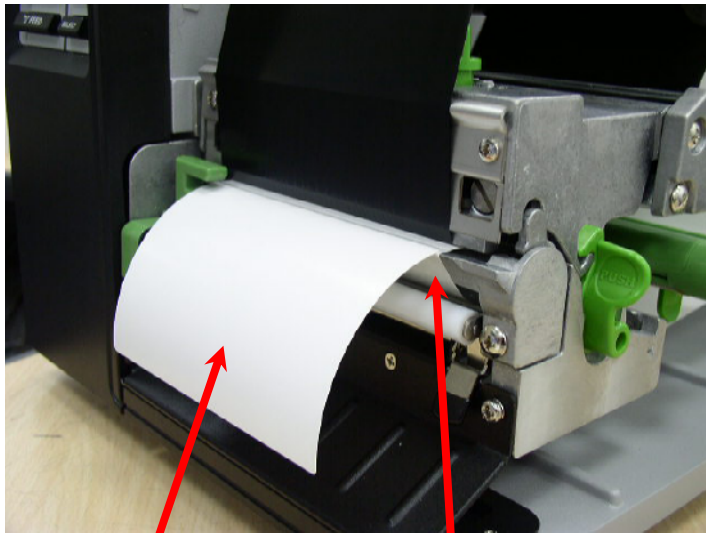
13. Move the peel-off sensor toward the paper exit chute.



PEEL-OFF SENSOR



14. Peeling will automatically start. Press the FEED button to test.



LABEL

LINER

Note:

Please recalibrate the gap/black mark sensor when changing media.

2.6.4 Remove Liner from Internal Rewind (Optional)

1. Break the liner between peel-off roller and the internal rewind spindle.



2. Push the liner release button to release the liner on the internal rewind spindle.



3. Slide off the liner from internal rewind spindle.



2.6.5 Loading Media in Rewind Liner with Label Mode (Optional)

This mode can rewind the media including liner and label on the rewind spindle.

1. Lift open printer right side cover.

2. For 1" core label roll, insert the supply holder guide and paper core into the internal rewind.

For 3" core label roll, insert the supply holder guide, 3" label core adaptor and paper core into the internal rewind.

1 INCH CORE LABEL ROLL

SUPPLY HOLDER
GUIDE

PAPER CORE



3 INCH CORE LABEL ROLL

PAPER CORE

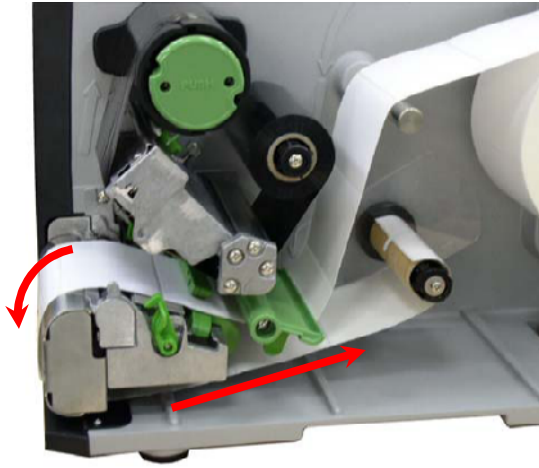
3 INCH LABEL
CORE ADAPTOR

SUPPLY HOLDER GUIDE

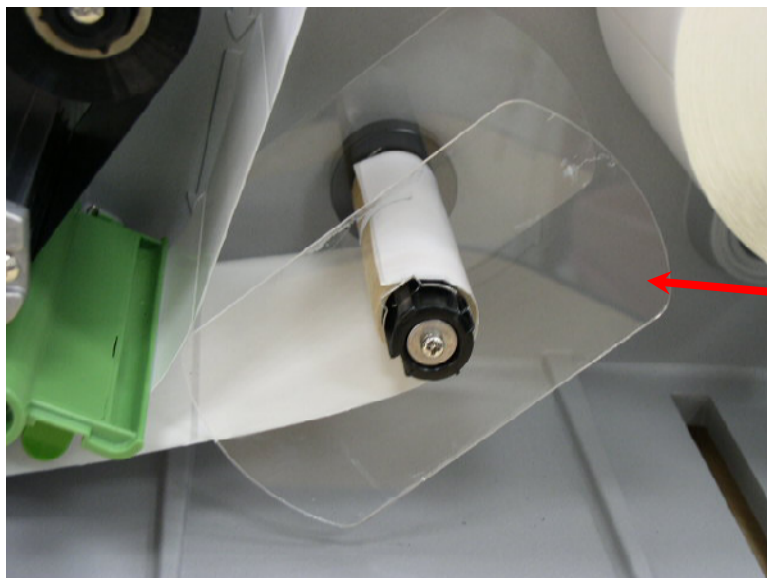


3. Insert the media into the printer label spindle. Pull the label roll leading edge forward

- through the media guide bar and damper media sensor, and place the label leading edge onto the platen roller.
4. Pull approximately 650mm of label through the label redirect front panel.
 5. Wrap the label onto the internal rewind spindle and stick the label onto the paper core.



6. Insert another supply holder guide into the internal rewind for 1" core label roll.



REWIND HOLDER GUIDE

7. Using the LCD panel set the media sensor type and re-calibrate the selected sensor.



Note:

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

2.6.6 Remove Labels from Internal Rewind (Optional)

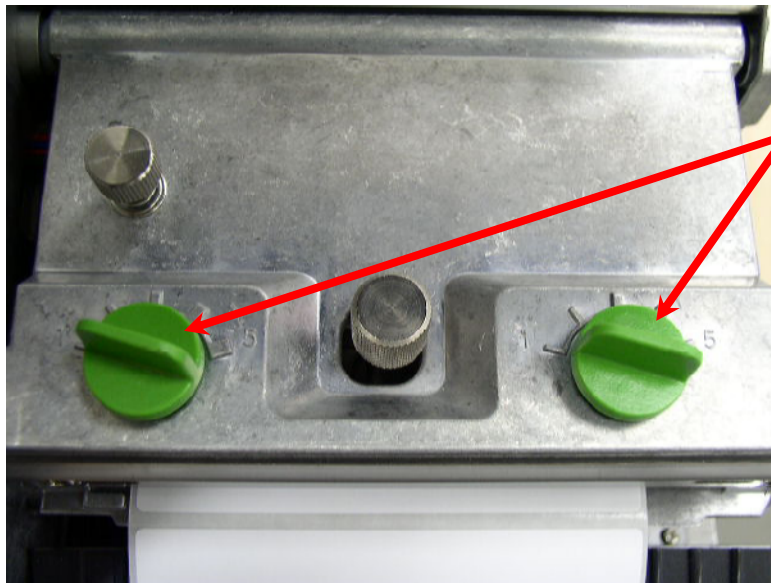
1. Slide off the labels with the rewind holder guides from the internal rewind spindle.



REWIND HOLDER GUIDES

2.7 Adjustment Knob

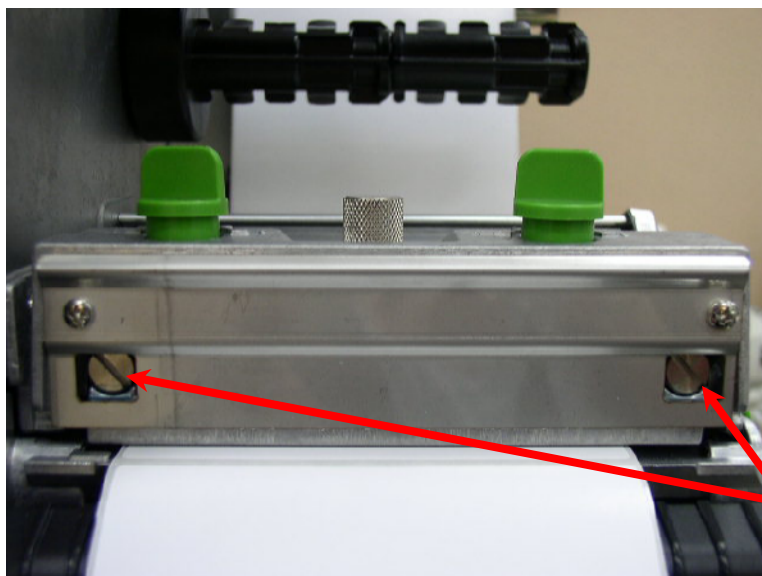
2.7.1 Print head Pressure Adjustment Knob



PRINT HEAD PRESSURE ADJUSTMENT KNOBS

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 be necessary to adjust the pressure knob to optimise print quality. For example, if the label width is 4", adjust both of the 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 SCREWS

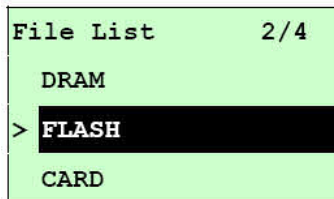
The print head burn line adjustment screws are used to fine tune the print quality in relation to the print head pressure adjustment knobs. These adjustments allow print quality optimisation with different thickness of media. Turning these screws adjusts the print head's burn line forward/backward in relation 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 (plain paper, thickness less than 0.20mm). Poor print quality when using paper thicker than 0.20mm may be due to the print head burn line not being readjusted. To improve the print quality, increase the head pressure or adjust the knobs counter-clockwise to move print head burn line towards the front of the printer. 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 (Optional for LabelStation Industrial)

1. Turn off the power to the printer.
2. Plug the keyboard's PS/2 interface cable into PS/2 connector on the rear of the printer.
3. Switch printer on.
4. Press the **F1** key on the keyboard. The LCD on the printer will display the following.



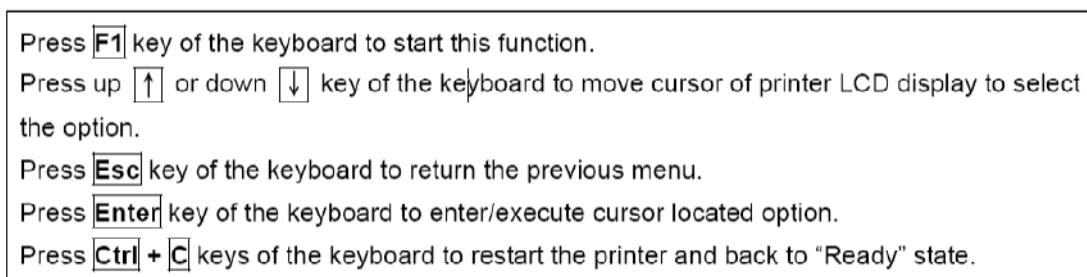
```
File List      2/4
  DRAM
> FLASH
  CARD
```

5. Use up ↑ or down ↓ key of the keyboard to move the “>” symbol (cursor) to select either DRAM, FLASH or CARD in which you have previously saved your label file, then press the **Enter** key on the keyboard to show the list of files available.
6. Select the appropriate label file and press the **Enter** key to execute the .BAS file (print the label).



```
FLASH File List
  TEST1.BAS
> TEST2.BAS
  TEST3.BAS
```

7. Use the keyboard to control the number of copies to be printed.



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.

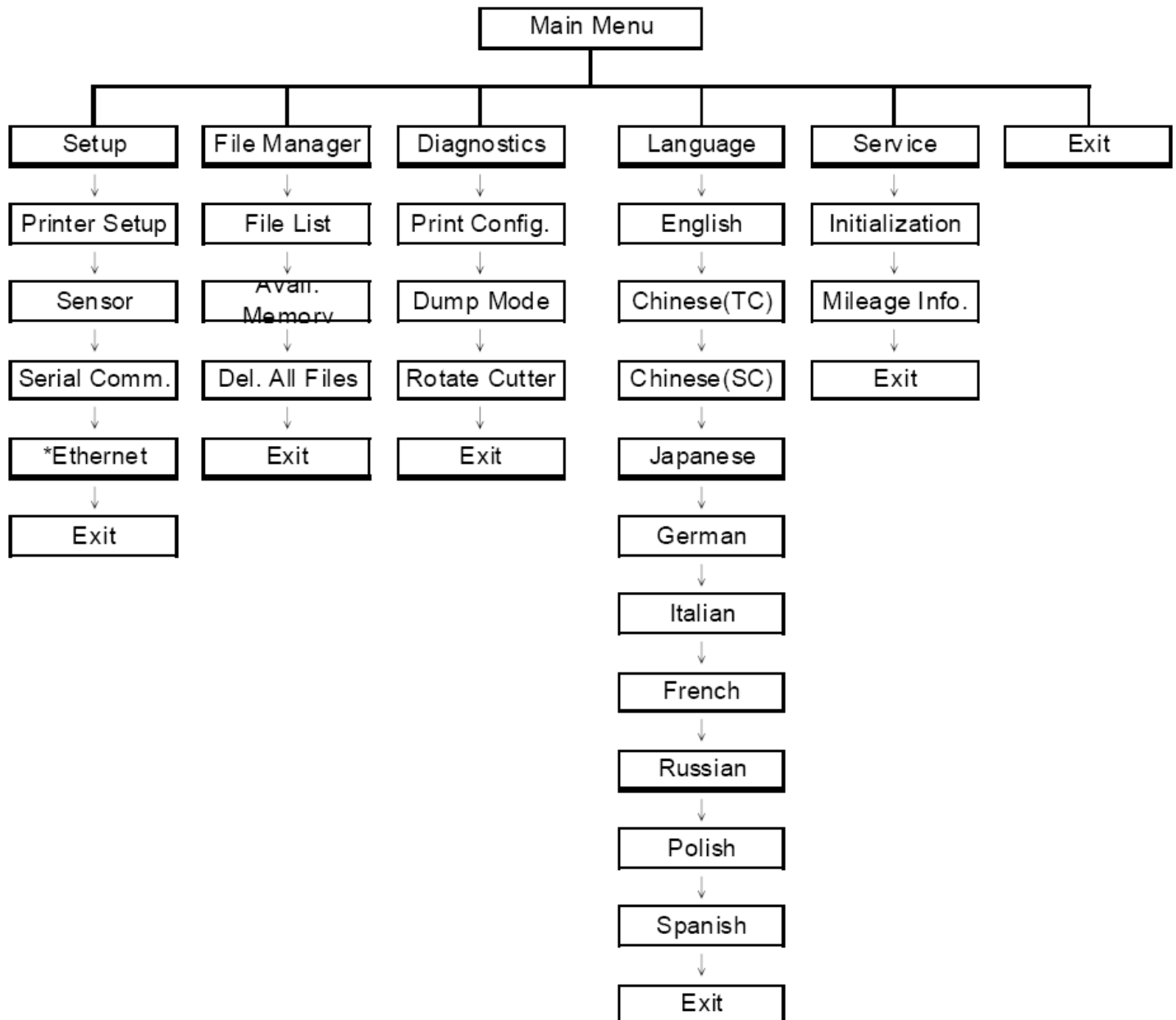
Press **Enter** key of the keyboard to enter/execute cursor located option.

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

Note: PS/2 interface is optional for the LabelStation Industrial printer.

3. Menu Function

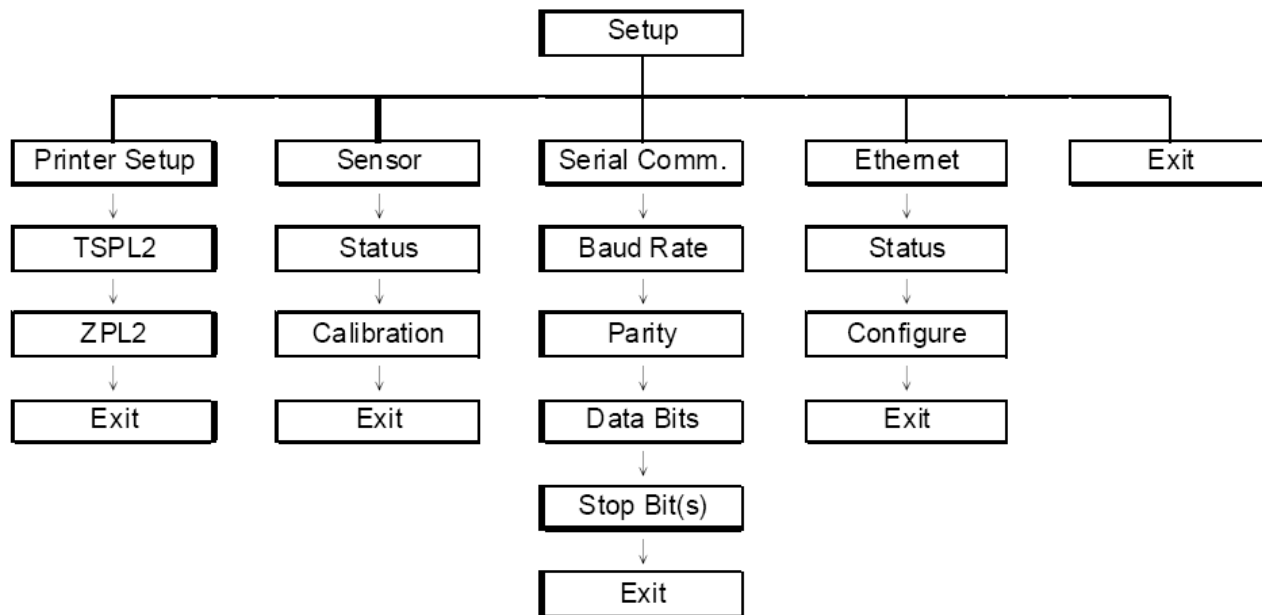
Main Menu Overview



Notice:

Ethernet card is optional for the LabelStation Industrial.

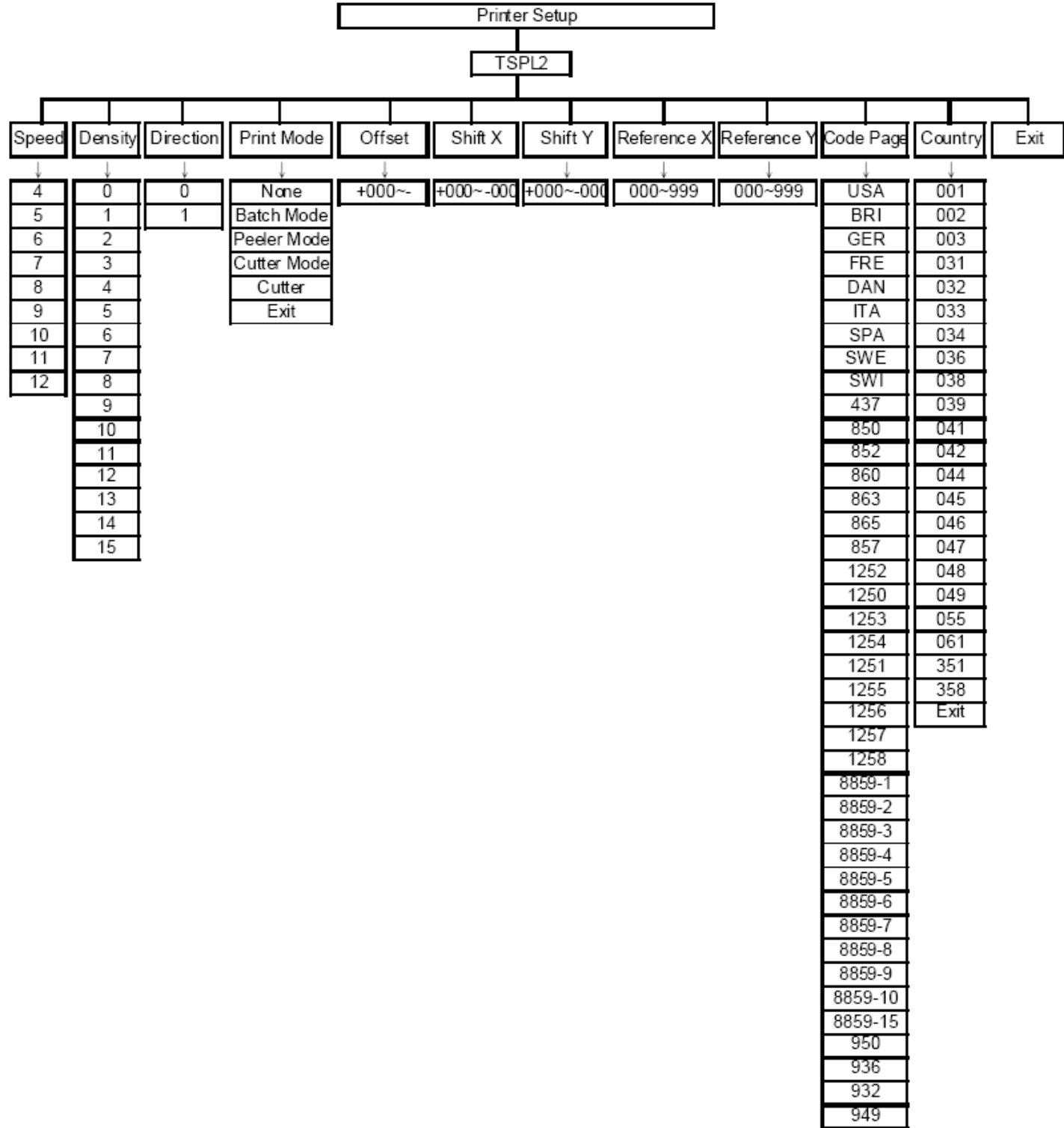
3.1 Setup Menu Overview



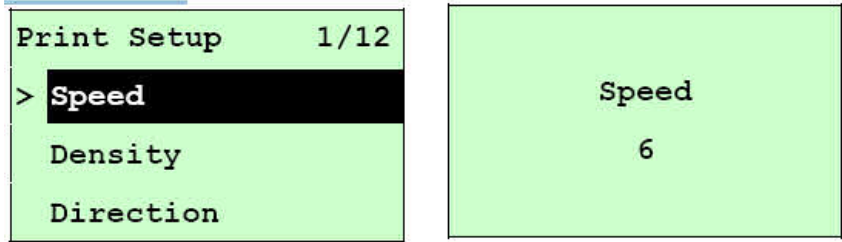
Notice:




Ethernet card is optional for the LabelStation Industrial.

3.1.1-1 Printer Setup (TSPL2)



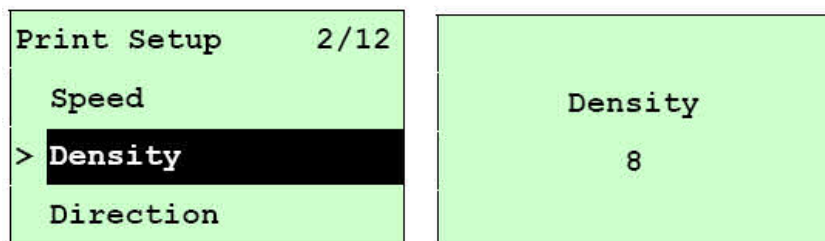
3.1.1-1.1 Speed:






Use this option to setup print speed. 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: The printer driver may send out the *SPEED* command which will overwrite the setting set from the front panel.

3.1.1-1.2 Density:

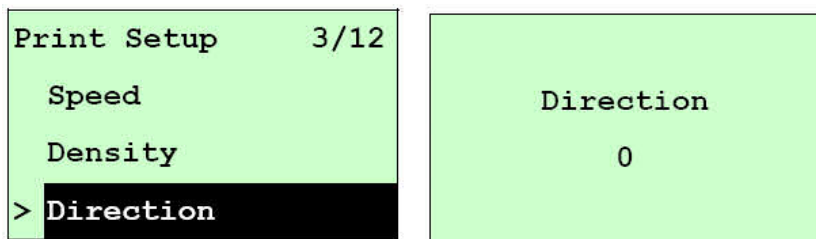


Use this option to setup printing darkness. The available setting is from 0 to 15, and the step is 1. Printer default density is 8. You may need to adjust your density dependent on the media in use.




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: The printer driver may send out the *DENSITY* command which will overwrite the setting set from the front panel.

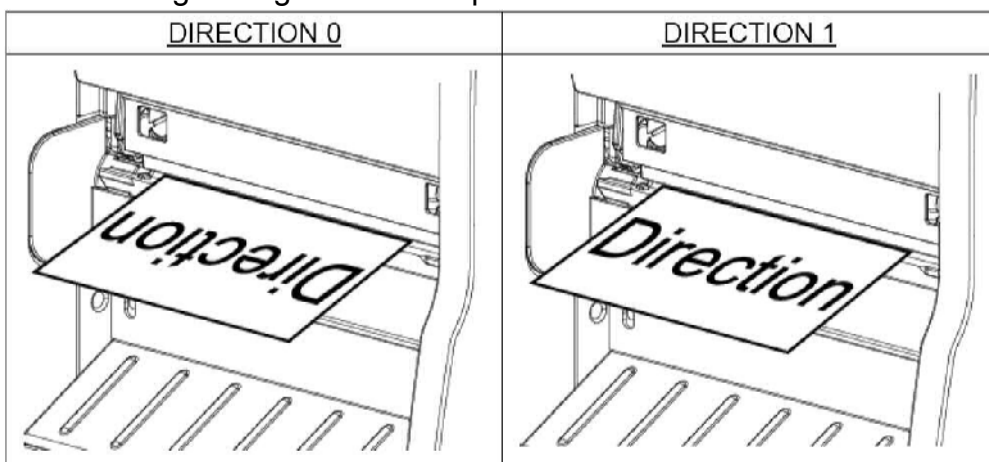
3.1.1-1.3 Direction:



The direction setting value is either 1 or 0. Use this option to setup the print-out direction. Printer default print-out direction is: DIRECTION 0.

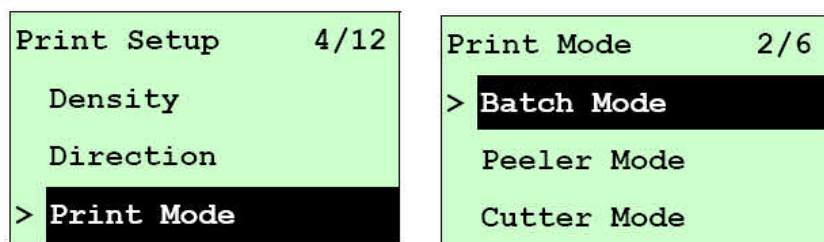
Press **UP**  key to set the direction as 1, and **DOWN**  to set it as 0, and **SELECT** key to enable the setting. Press  **MENU** key to cancel the setting and return to the previous menu.

The following two figures are the printouts of DIRECTION 0 and 1.



Note: The printer driver may overwrite the setting set from the front panel.

3.1.1-1.4 Print Mode: (None/Batch Mode/Peeler Mode/Cutter Mode/Cutter Batch)



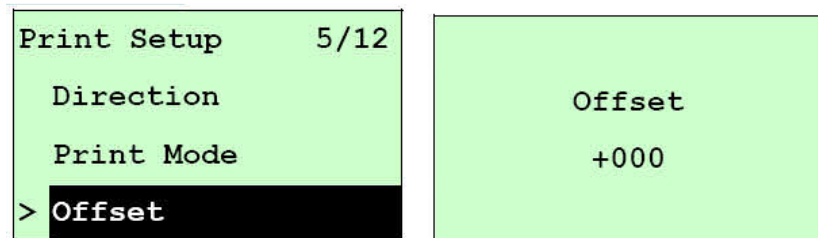
This option is used to set the print mode. Printer default setting is Batch Mode. When entering this list, the print mode to the right side of the ">" icon is the printer current setting.

Press **UP** ⬆ and **DOWN** ⬇ to select a 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	Enables the label peel off mode.
Cutter Mode	Enables the label cutter.
Cutter Batch	Cuts the label once only, at the end of the printing job.

Note: The printer driver may overwrite the setting set from the front panel.

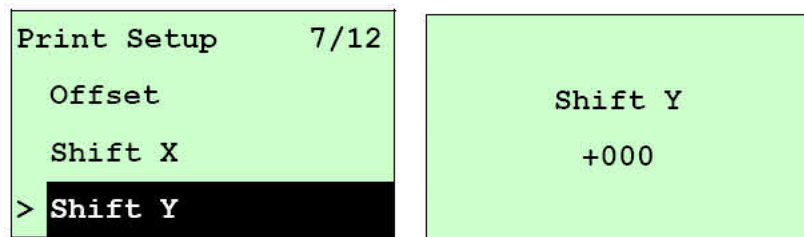
3.1.1-1.5 Offset:



This option is used to fine tune the 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: The printer driver may send out the OFFSET command which will overwrite the setting set from the front panel.

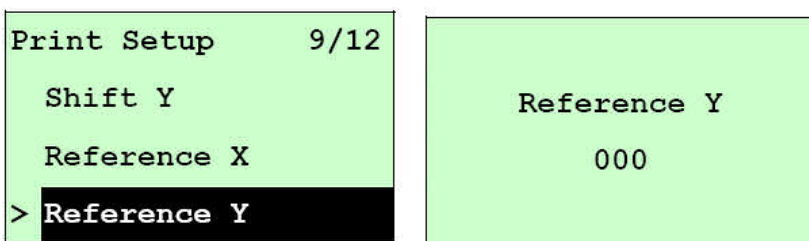
3.1.1-1.6 Shift X & Shift Y:



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: The printer driver may send out the *SHIFT* command which will overwrite the setting set from the front panel.

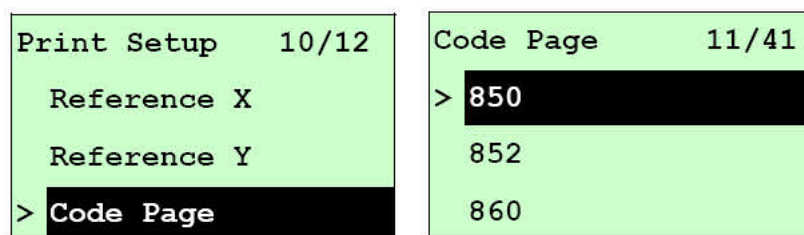
3.1.1-1.7 Reference X & Reference Y:



This option is used to set the origin of printer's horizontal and vertical coordinates system. 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: The printer driver may send out the *REFERENCE* command which will overwrite the setting set from the front panel.

3.1.1-1.8 Code Page:



Use this option to set the code page of the international character set. For more information about the code page, refer to the programming manual. When entering the code page list, the code page to the right side of ">" icon is the printer current 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: The printer driver may overwrite the setting set from the front panel.




7-bit		8-bit	
code page name	International Character Set	code page number	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 number	International Character Set	code page number	International Character Set
1252	Latin 1	950	Traditional Chinese Big5
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 number	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		

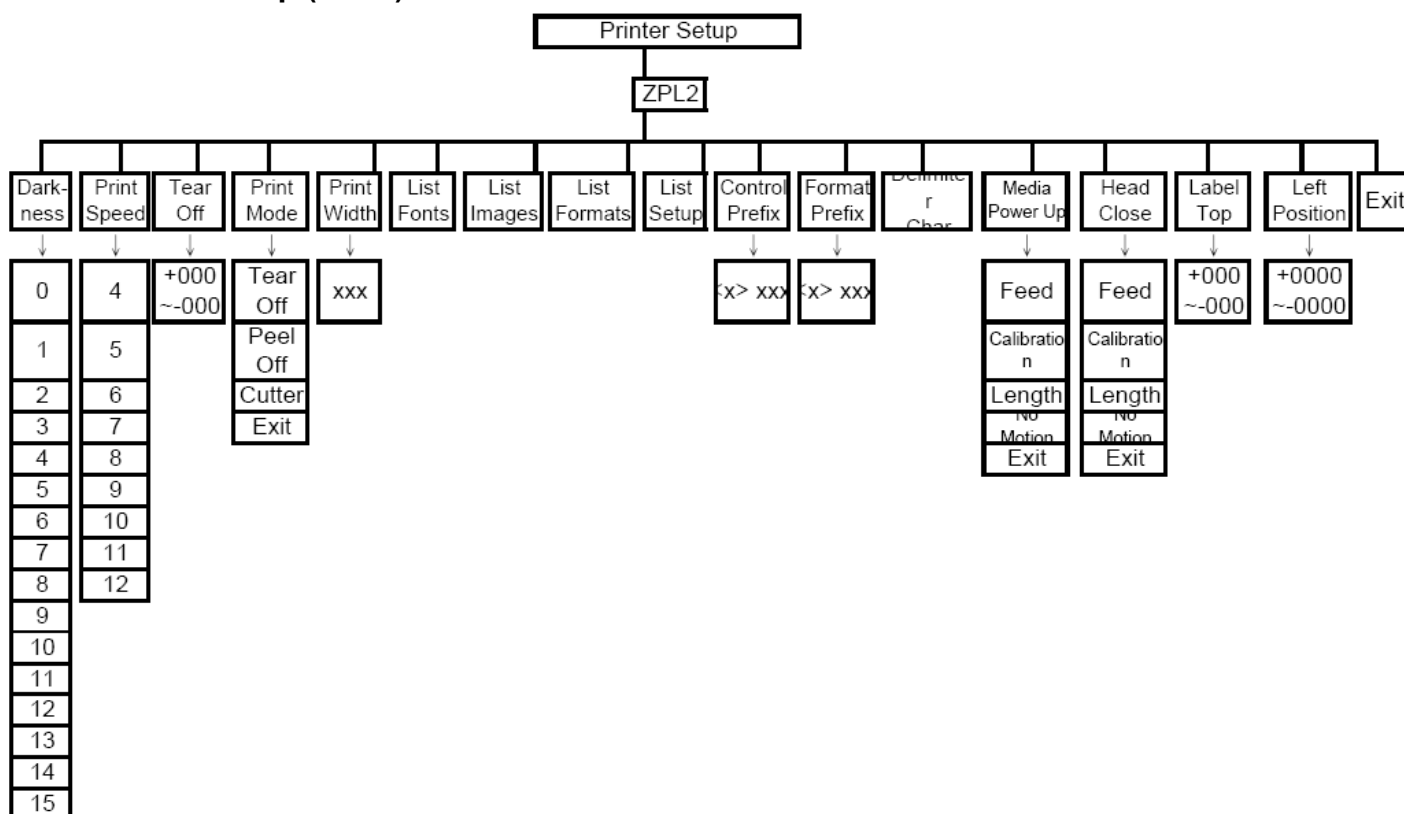
3.1.1-1.9 Country:

Print Setup 11/12	Country 1/23
Reference Y	> 001
Code Page	002
> Country	003

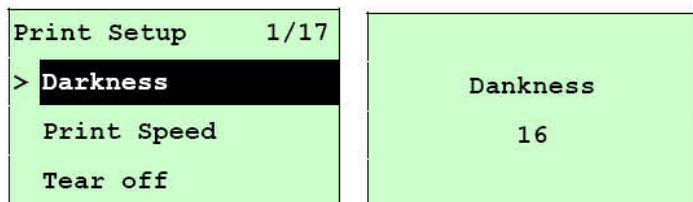
Use this option to set the country code for the LCD display. Press the **UP**  and **DOWN**  to select the country code, and press the **SELECT** button to set the value into printer. When entering this list, the country code to the right side of ">" icon is the printer current setting. Press  **MENU**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

3.1.1-2 Printer Setup (ZPL2)



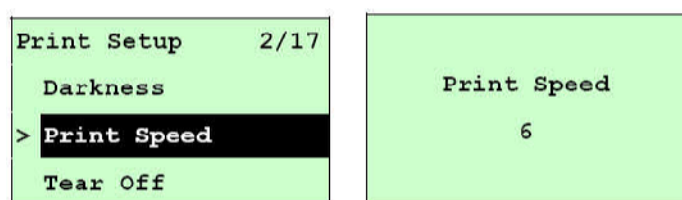
3.1.1-2.1 Darkness:



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 the density dependent on the media in use. 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: The printer driver may overwrite the setting set from the front panel.

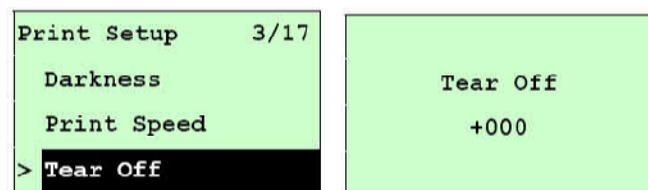
3.1.1-2.2 Print Speed:



Use this option to setup print speed. 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: The printer driver may overwrite the setting set from the front panel.

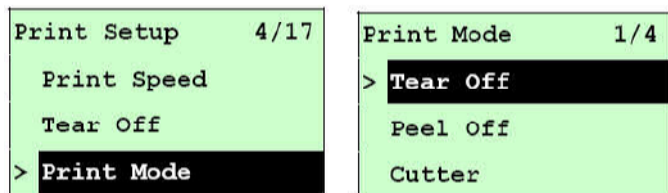
3.1.1-2.3 Tear Off:



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: The printer driver may overwrite the setting set from the front panel.

3.1.1-2.4 Print Mode: (Tear Off / Peel Off / Cutter)

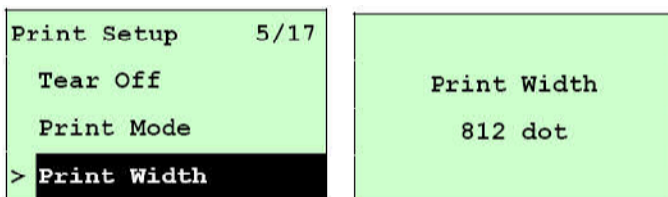


This option is used to set the print mode. Printer default setting is Tear Off. When entering this list, the print mode to the right side of ">" icon is the printer current setting. Press **UP** and **DOWN** to select the different print mode and press **SELECT** button to enable the setting. Press **MENU** 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 location.
Peel Off	Enable the label peel off mode.
Cutter	Enable the label cutter mode.

Note: The printer driver may overwrite the setting set from the front panel.

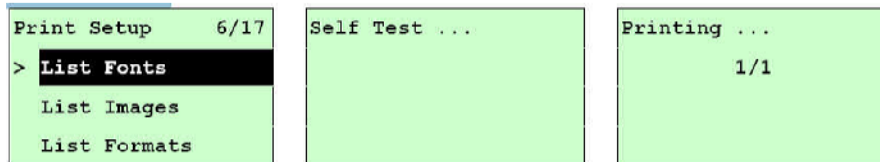
3.1.1-2.5 Print Width:



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.

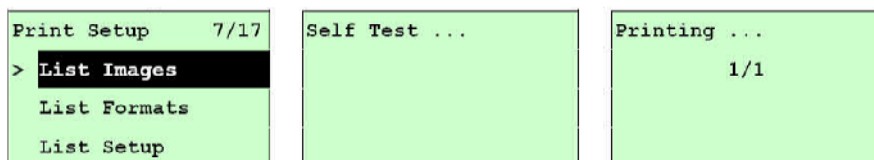
Note: The printer driver may overwrite the setting set from the front panel.

3.1.1-2.6 List Fonts



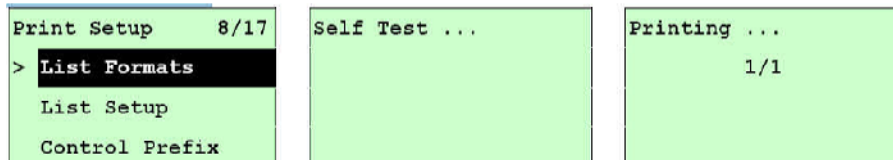
This feature is used to print the current printer available fonts list to the label. The fonts stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.1-2.7 List Images:



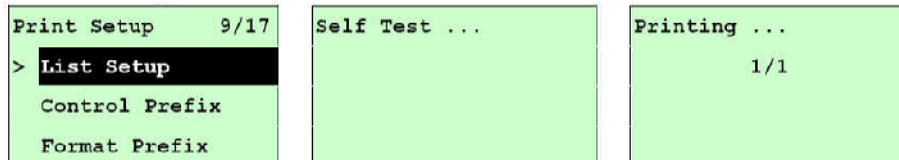
This feature is used to print current printer available images list to the label. The images stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.1-2.8 List Formats:



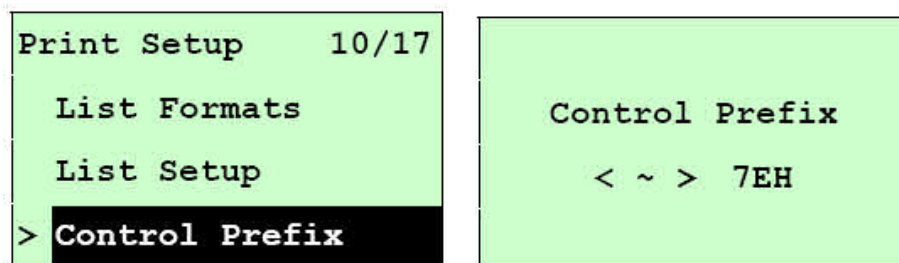
This feature is used to print current printer available formats list to the label. The formats stored in the printer's DRAM, Flash or optional memory card. Press **SELECT** button to print the list.

3.1.1-2.9 List Setup:

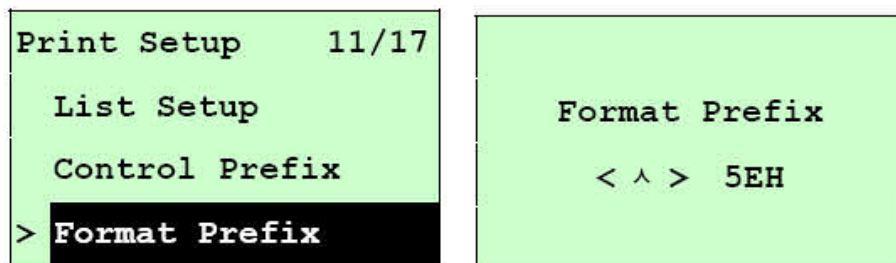


This feature is used to print current printer configuration to the label. Press **SELECT** button to print the list.

3.1.1-2.10 Control Prefix:

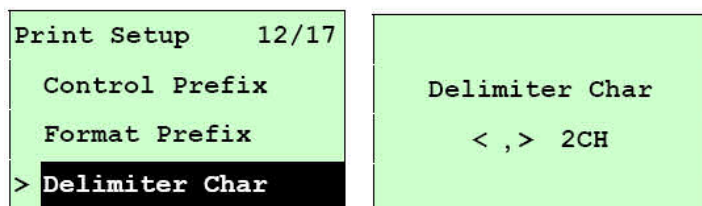


This option is used to set control prefix character. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "0" to "9" or "A" to "F". Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel the setting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



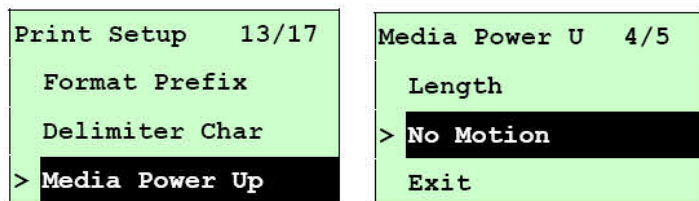
This option is used to set the format prefix character. Press the **DOWN** ⏴ button to move the cursor from left digit to right digit, and press the **UP** ⏵ button to set the value from “0” to “9” or “A” to “F”. Press the **SELECT** button to set the value into printer. Press **MENU** key to cancel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

3.1.1-2.12 Delimiter Char:



This option is used to set the 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.

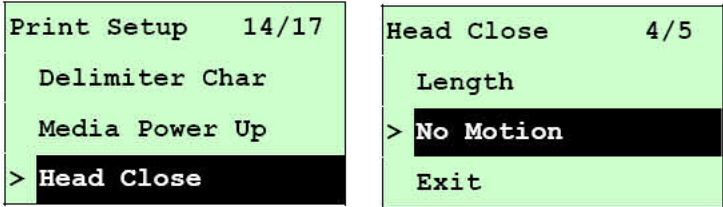
3.1.1-2.13 Media Power Up:



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 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.

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

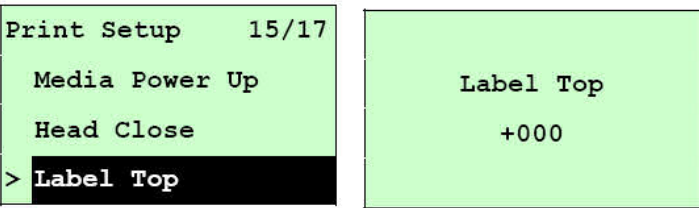
3.1.1-2.14 Head Close:



This option is used to set the action of the media when you close the print-head. Printer default setting is 'No Motion'. 'When entering this list, the print mode to 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.

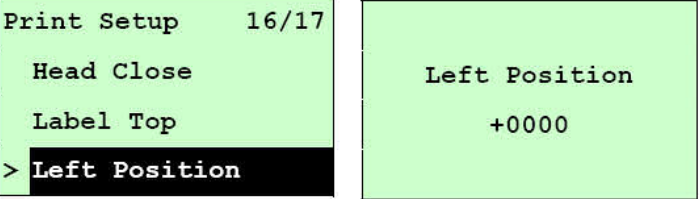
Selections	Description
Feed	Printer will advance one label
Calibration	Printer will calibration the sensor levels, determine length and feed label
Length	Printer determine length and feed label
No Motion	Printer will not move media

3.1.1-2.15 Label Top:



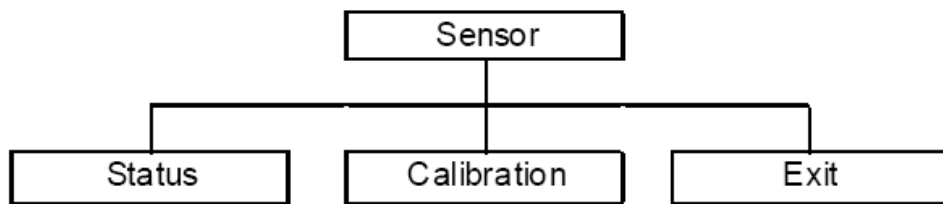
This option is used to adjust the print position vertically on the label. Press the **DOWN** button to move the cursor from left digit to right digit, and press the **UP** button to set the value from "+" to "-" or "0" to "1/2". Press the **SELECT** button to set the value into printer. Press **MENU**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

3.1.1-2.16 Left Position:



This option is used to adjust the 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.

3.1.2 Sensor



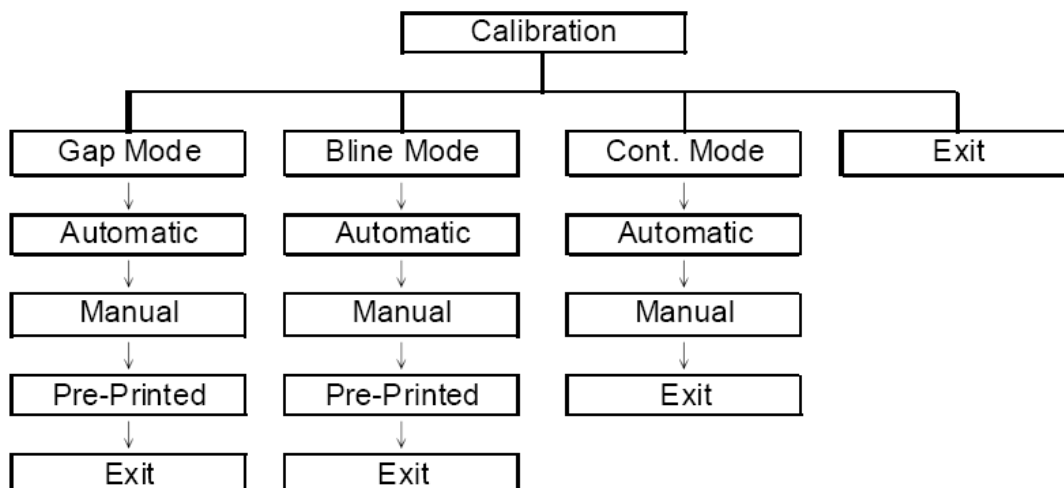
3.1.2.1 Status

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

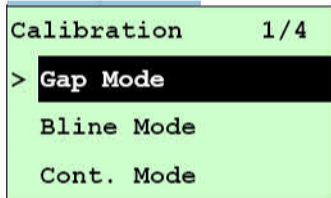
Paper Len.	812
Gap Size	24
Intensity	3
Ref. Level	512

3.1.2.2 Calibration

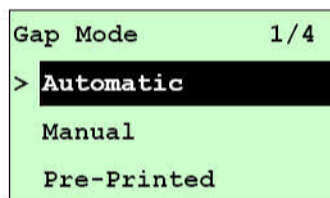
This option is used to set the media sensor type and calibrate the selected sensor. We recommend calibrating the sensor before printing after changing the media.





A. Gap Mode



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

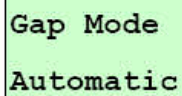


Gap Mode 1/4
> Automatic
Manual
Pre-Printed

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: *The printer driver may send out the GAP or BLINE command which will overwrite the sensor type setting set from the front panel. A-1 Automatic*

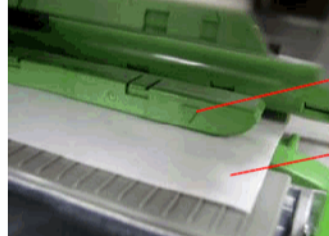
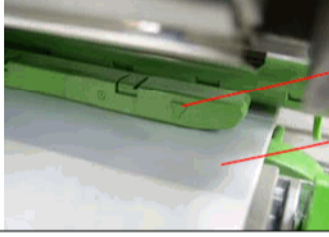
When enter the [Automatic] option, you will see following message, and the printer will feed 2 to 3 labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.



Gap Mode
Automatic

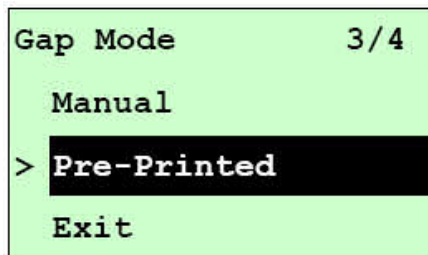
A-2 Manual

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

<p>Paper Len. 00812 dot</p>	<p>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.</p>
<p>Gap Size 0024 dot</p>	<p>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.</p>
<p>Gap Mode Scan Backing Intensity x Ref. Level xxx</p>	<p>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.</p>
	<p>Media sensor Label backing (liner)</p>
<p>Gap Mode Scan Paper Intensity x Ref. Level xxx</p>	<p>4. Then, Put the label with liner under the media sensor. Press the SELECT button to set the value into the printer.</p>
	<p>Media sensor Label with liner</p>
<p>Gap Mode Complete Intensity x Ref. Level xxx</p>	<p>5. The gap sensor calibration is complete. Press the SELECT button the LCD screen will return to the previous menu.</p>

A-3 Pre-Printed

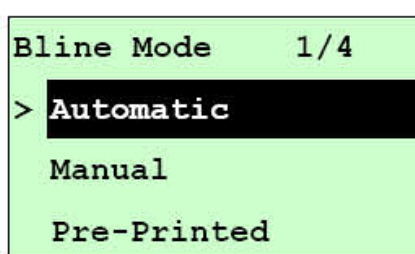
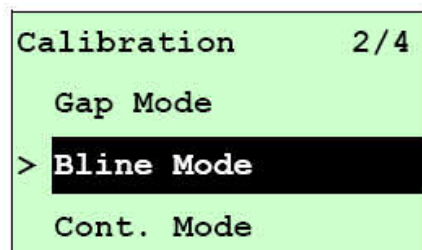
This function can set the paper length and gap size before auto-calibrating the sensor sensitivity. It can set the sensor sensitivity accurately.



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

	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.
	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.
	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 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 the following message and printer will feed the label to calibrate the sensor sensitivity automatically. When the calibration process is completed, the LCD screen will return to the previous menu.

Bline Mode

Automatic

B-2 Manual

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

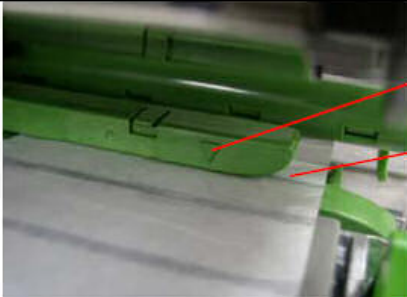
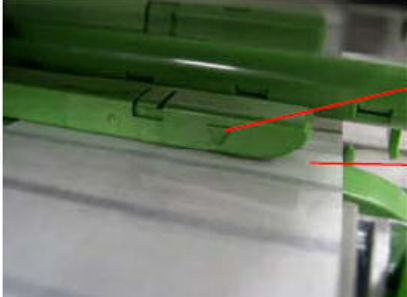
Bline Mode 2/4

Automatic

> Manual

Pre-Printed

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

<p>Paper Len. 00151 dot</p>	<p>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.</p>
<p>Bline Size 0024 dot</p>	<p>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.</p>
<p>Bline Mode Scan Mark Intensity x Ref. Level xxx</p>	<p>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.</p>
	<p>Media sensor Black mark</p>
<p>Bline Mode Scan Paper Intensity x Ref. Level xxx</p>	<p>4. Then, put the label without black mark under the media sensor. Press the SELECT button to set the value into the printer.</p>
	<p>Media sensor Label without black mark</p>
<p>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.</p> <p style="text-align: right;"><i>Continued</i></p>	

Bline Mode

Complete

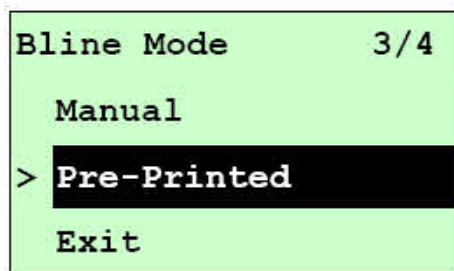
Intensity **x**

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

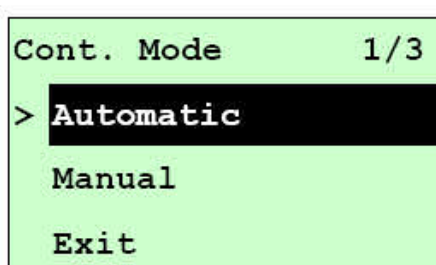
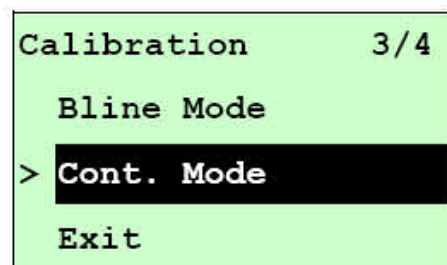
This function can set the paper length and gap size before auto-calibrating the sensor sensitivity. It can to set the sensor sensitivity accurately.



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

	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.
	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.
	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. 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.

C-1 Automatic

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

```

Cont. Mode
Automatic

```

C-2 Manual

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

```

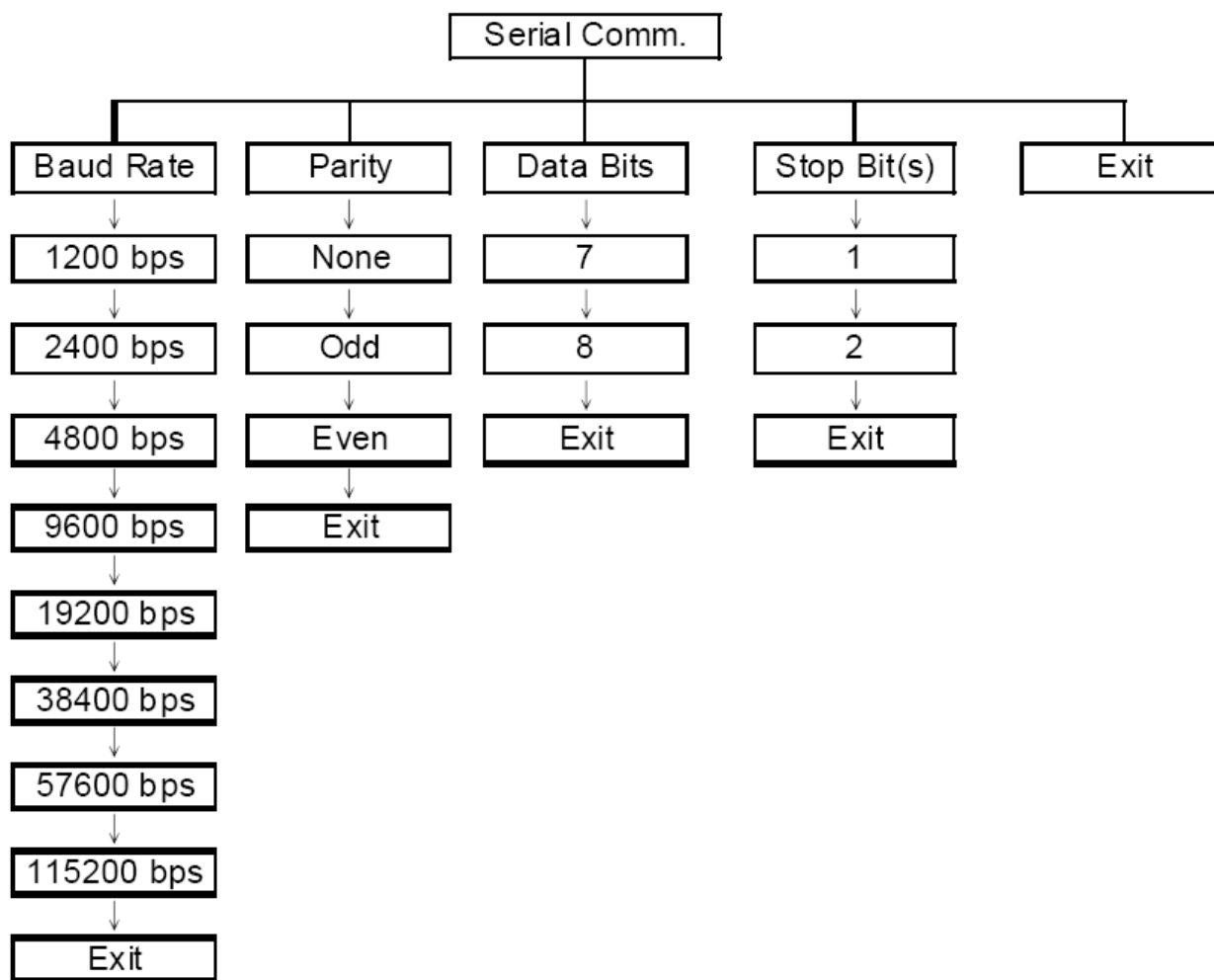
Cont. Mode      2/3
Automatic
> Manual
Exit

```

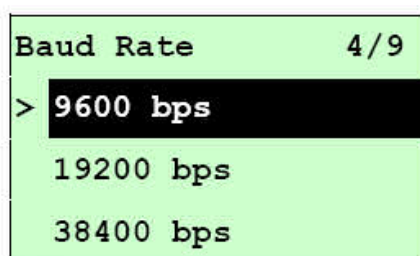
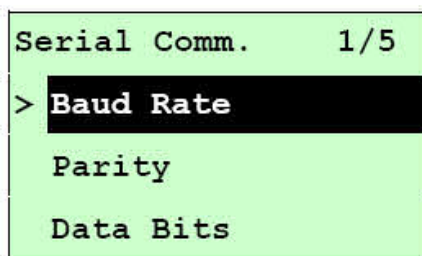
When entering [Manual] option, you will see following message. Please complete these steps :

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

3.1.3 Serial Comm.

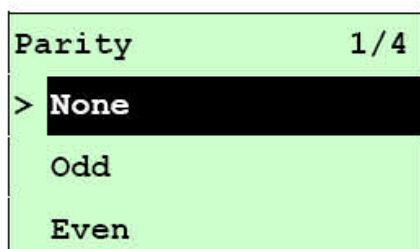


3.1.3.1 Baud Rate



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 to 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.

3.1.3.2 Parity



This option is used to set the RS-232 parity. The default setting is “None”. Press and buttons to select the different parity and press 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 key to cancel the setting and return to the previous menu.

3.1.3.3 Data Bits:

Serial Comm.	3/5	Data Bits	2/3
Baud Rate		7	
Parity		> 8	
> Data Bits		Exit	




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.

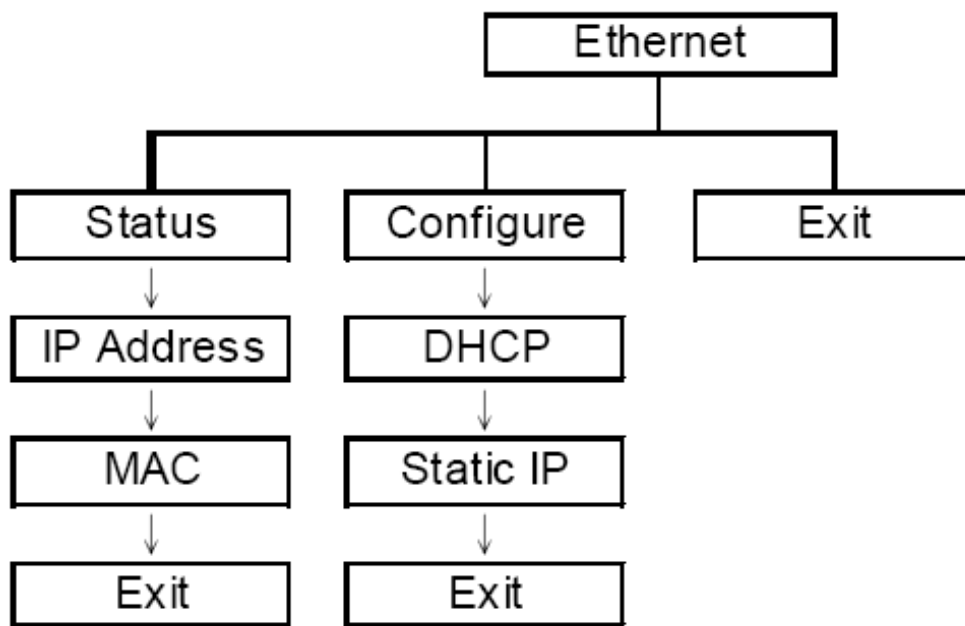
3.1.3.4 Stop Bit/Bits:

Serial Comm.	4/5	Stop Bit(s)	1/3
Parity		> 1	
Data Bits		2	
> Stop Bit(s)		Exit	

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 to the right side of ">" icon is the printer current setting. Press **MENU** to cancel the setting and return to the previous menu.

3.1.4 Ethernet

Use this menu to configure the internal Ethernet configuration, check the printer's Ethernet module status, and reset the Ethernet module. This function is available on the LCD display when the Ethernet card is installed. 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.



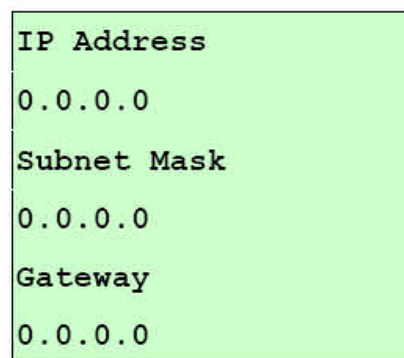
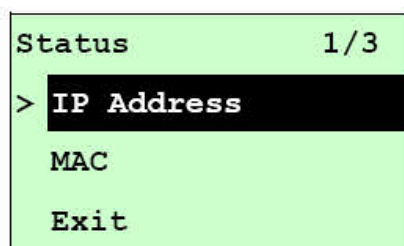
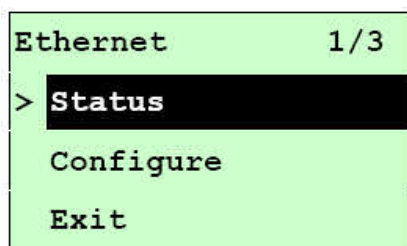
Note:


This function is optional for the LabelStation Industrial.

3.1.4.1 Status: (IP Address / MAC)

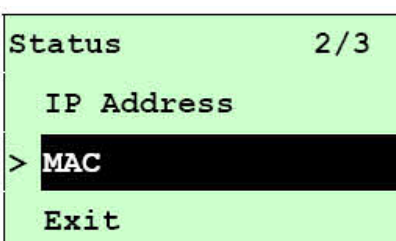
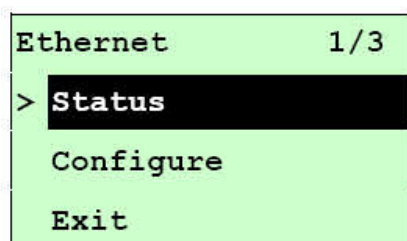
Use this menu to check the Ethernet setting status.


3.1.4.1.1 IP Address



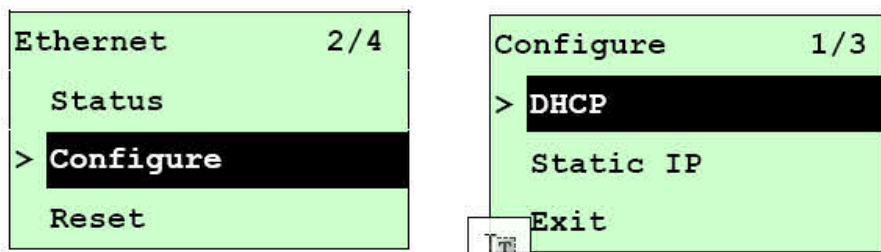
The IP address information will be shown on the LCD display. Press **SELECT** or  **MENU** button to return to the previous menu.




3.1.4.1.2 MAC

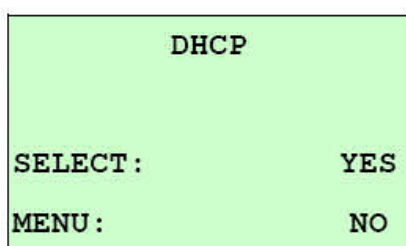



The MAC address information will be shown on the LCD display. Press **SELECT** or  **MENU** button to return to the previous menu. **3.1.4.2 Configure: (DHCP / Static IP)** Use this menu to set the printer's DHCP and Static IP.

3.1.4.2.1 DHCP



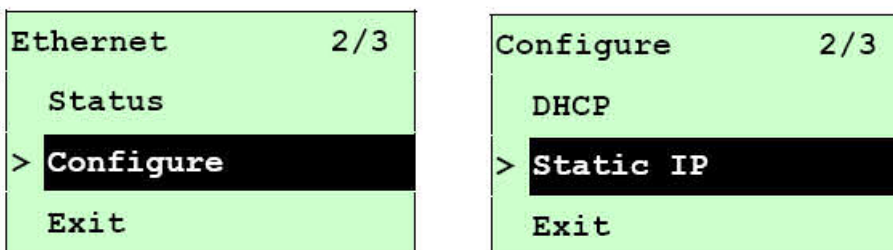
Press **UP**  and **DOWN**  buttons to select the DHCP function and press **SELECT** to enter. Press  **MENU** key to cancel the setting and return to the previous menu.






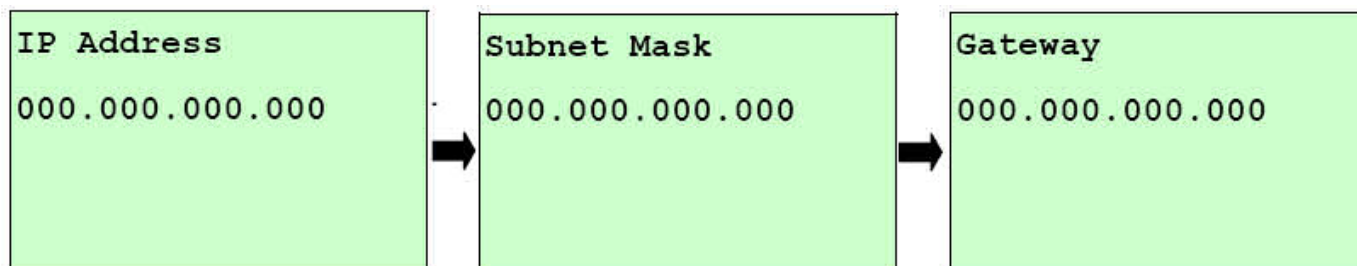
Press **SELECT** button the printer will set DHCP and restart to reset the setting. Press  **MENU** button to return to the previous menu.



3.1.4.2.2 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.



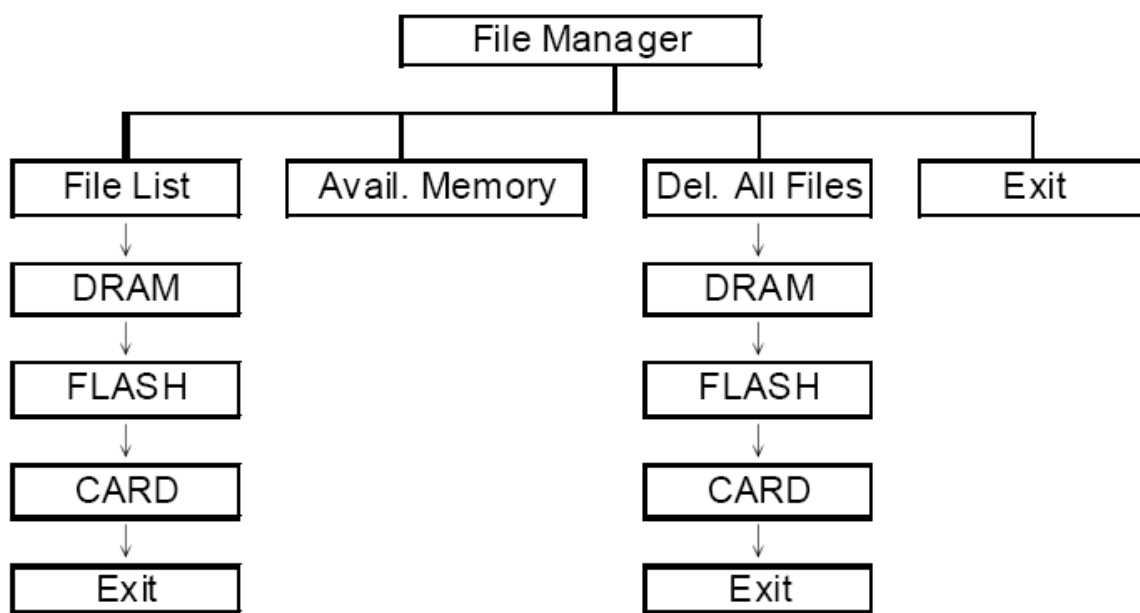
Press **DOWN**  button to move the cursor from left to right digits and press the **UP**  button to scroll the value from "0" to "9". Press **SELECT** button to next setting.

Static IP	
SELECT:	YES
MENU:	NO

Press the **SELECT** button and the printer will restart to reset the Ethernet module.
 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 the .BAS files (labels) 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

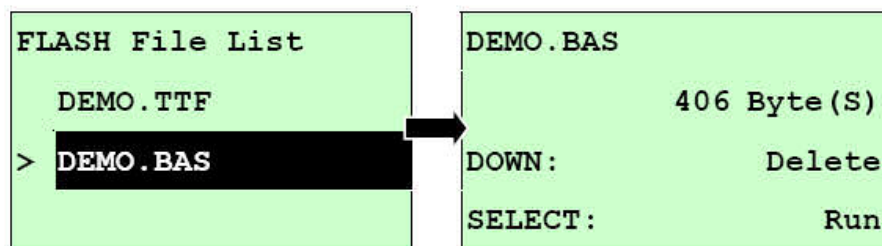
To delete the file: Please press buttons in the following order.

FLASH File List	
> DEMO.TTF	
DEMO.BAS	

➔

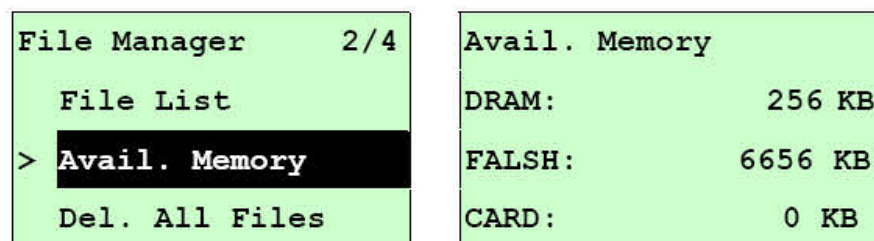
DEMO.TTF	1.75 MB
DOWN:	Delete

To run the .BAS file: Please press buttons in the following order.



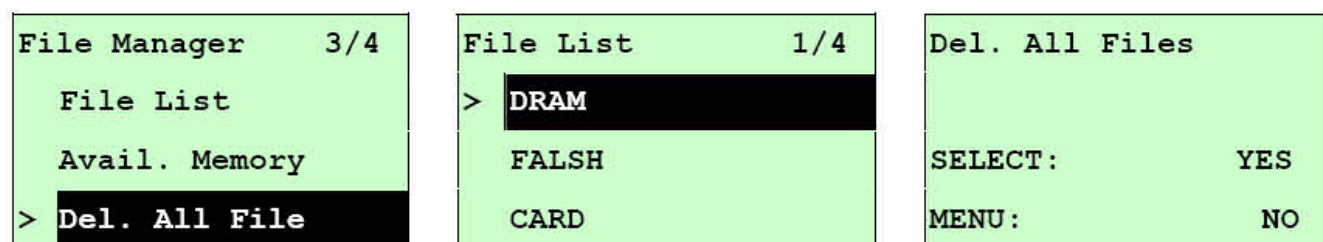
3.2.2 Avail. Memory

Use this menu to show available memory space.

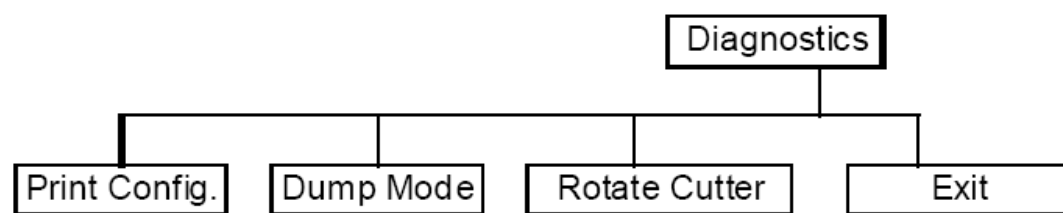


3.2.3 Del. All Files

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.

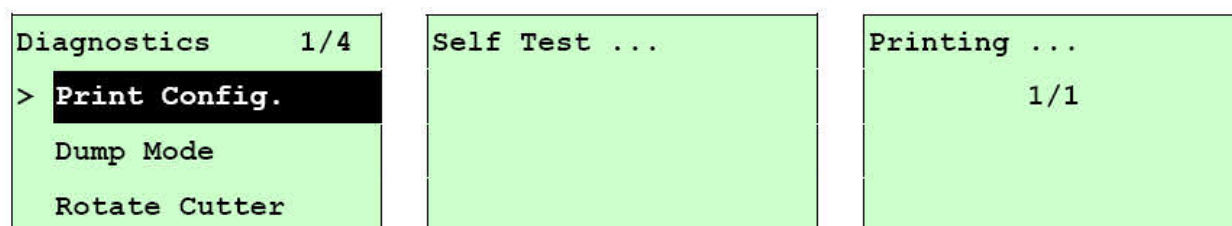


3.3 Diagnostics



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 pixel (dot) damage on the print head heater element.



Self-test printout

PRINTER INFO.



XXXXXXXXX Version: X.XX

MILAGE(m): 0

CHECKSUM: XXXXXXXX

SERIAL PORT: 9600,N,8,1

CODE PAGE: 850

COUNTRY CODE: 001

SPEED: X INCH

DENSITY: 8

SIZE: 4.00 , 4.00

GAP: 0.12 , 0.00

TRANSPARENCE: XX

FILE LIST:

DRAM FILE: 0 FILE(S)

FLASH FILE: 0 FILE(S)

PHYSICAL DRAM: XXXX KBYTES

AVAILABLE DRAM: XXXX KBYTES FREE

PHYSICAL FLASH: XXXX KBYTES

AVAILABLE FLASH: XXXX KBYTES FREE

END OF FILE LIST

Print head check pattern

Model name and F/W version

Printed mileage (meter)

Firmware checksum

Serial port configuration

Code page

Country code

Print speed (inch/sec)

Print darkness

Label size (inch)

Gap distance (inch)

Gap/black mark sensor sensitivity

Numbers of download files

Total & available memory space

3.3.2 Dump Mode

Captures the data from the communications port and prints out the data received by the 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.

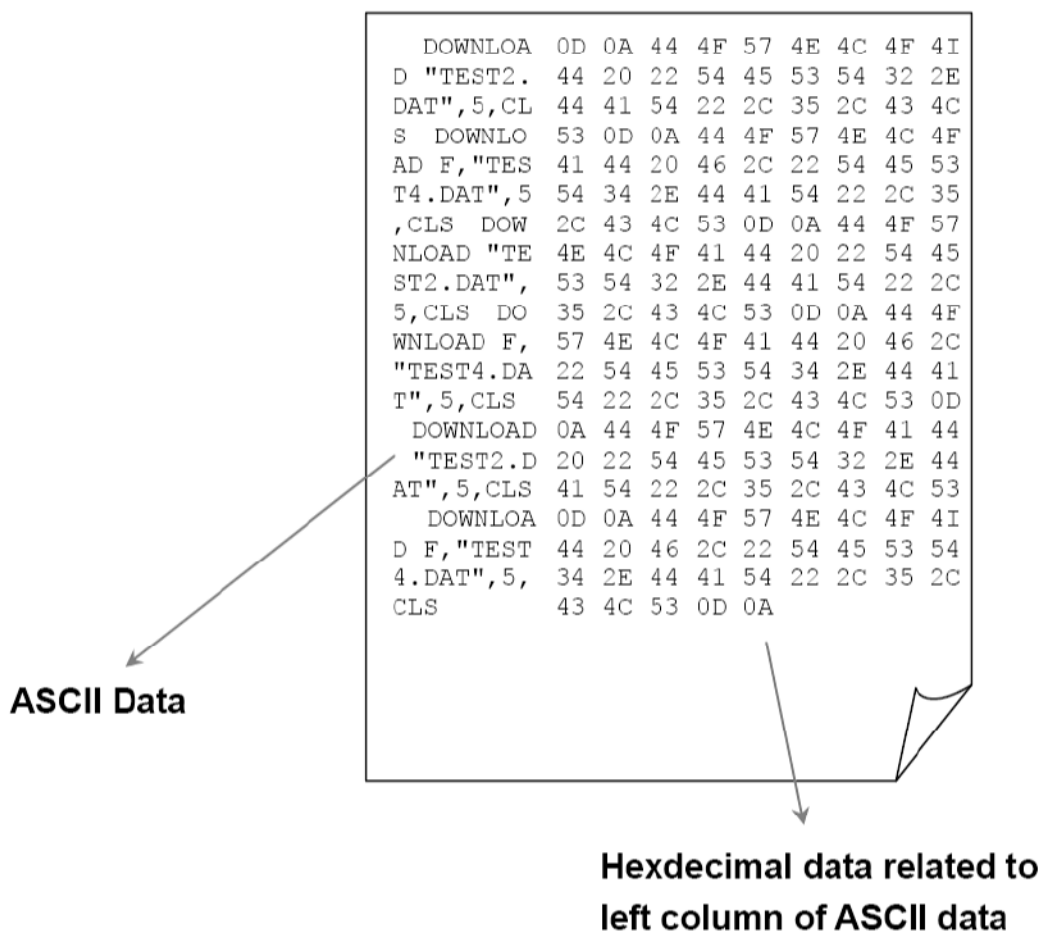
```
Diagnostics      2/4
  Prtn Config.
> Dump Mode
  Rotate cutter
```

```
Printing ...
          1/1
```

```
Dump Mode
```

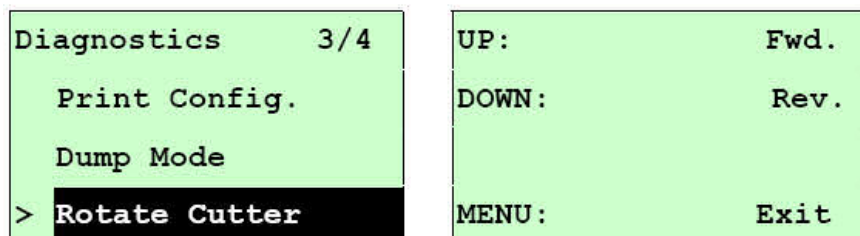
Note:

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 return to the previous menu.

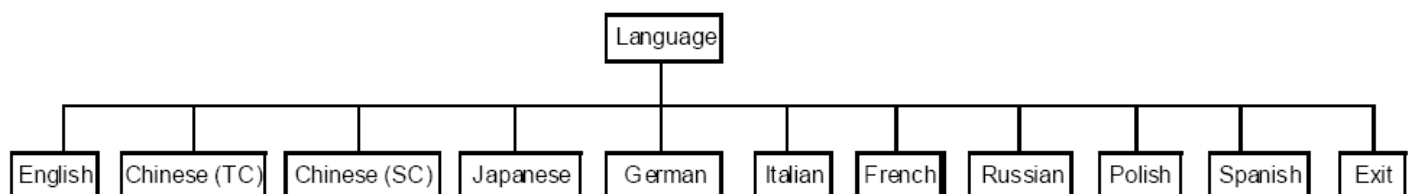


3.3.3 Rotate Cutter

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

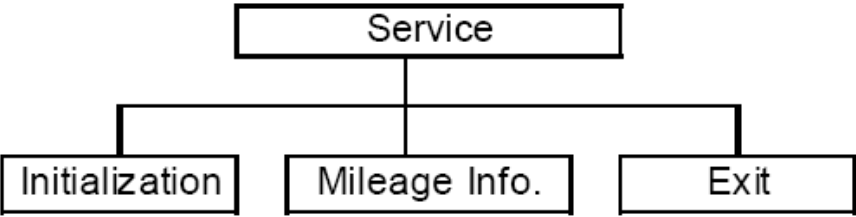


3.4 Language



This option is used to setup the language on the LCD display. Press **UP** ⬆ and **DOWN** ⬇ buttons to scroll the cursor 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

Service1/3

> Initialization

Mileage Info.

Exit

Initialization

SELECTYES

MENUNO

Initializing ...

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	LabelStation Industrial: 4 inches/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 metres).

Service 1/3	Mileage: (m)
Initialization	4016
> Mileage Info.	Labels: (pcs.)
Exit	51698

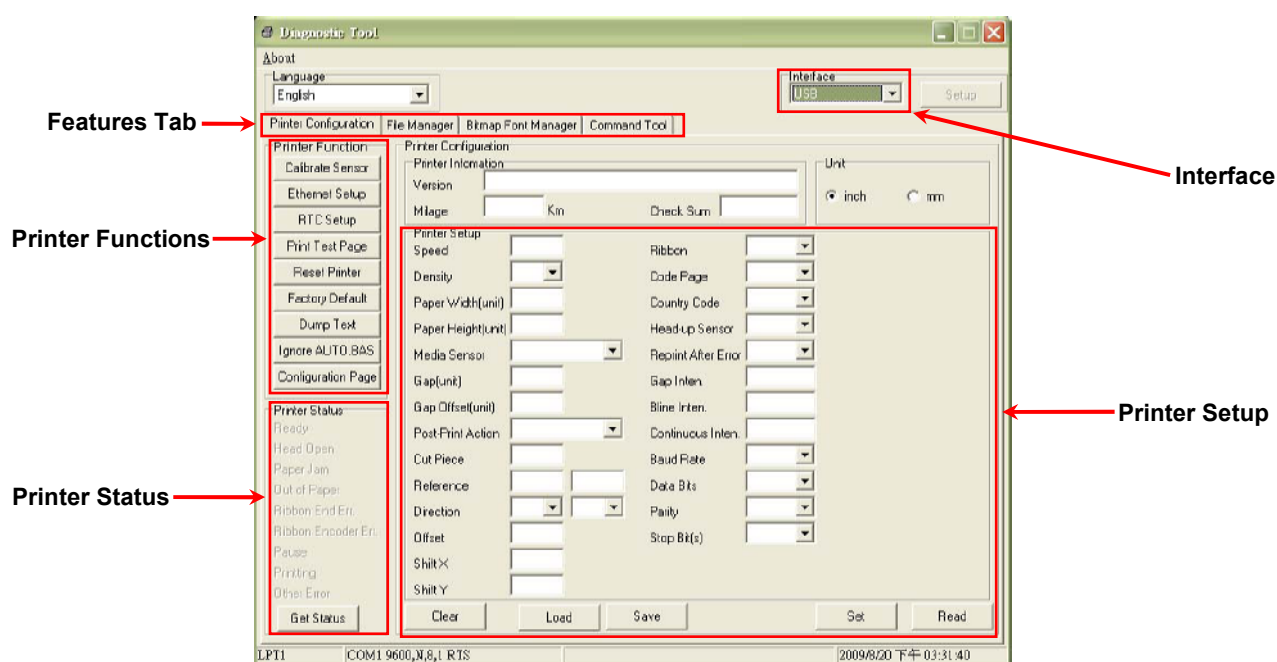
4. Diagnostic Tool

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.

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 to the printer.
2. Click the “Function” button to the required setting.
3. The detail functions in the Printer Function Group are listed as below.

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


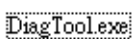
Note:

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

5 Setting Ethernet by Diagnostic Utility (Optional for LabelStation Industrial)

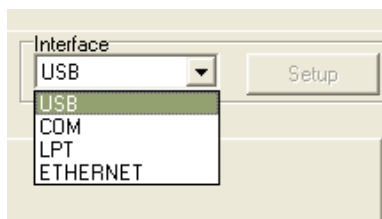
The Diagnostic Utility is found on the CD Support directory. Users can use the Diagnostic Tool to setup the Ethernet by RS-232, USB and Ethernet interfaces. The following contents will instruct users how to configure the Ethernet by these three interfaces.

5.1 Using USB interface to setup Ethernet interface

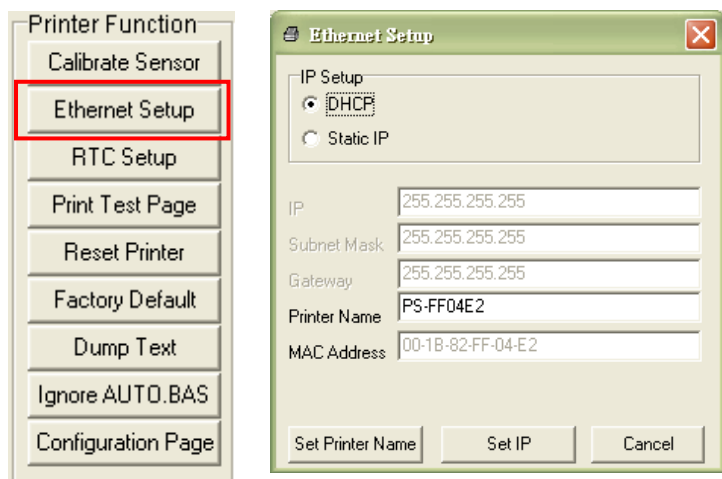
1. Connect the USB cable between the computer and the printer.
2. Turn on the printer power.
3. Start the Diagnostic Utility by double clicking on the   icon.

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


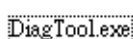
4. The Diagnostic Utility default interface setting is USB interface. If USB interface is connected with printer, no other settings need to be changed in the interface field.



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.

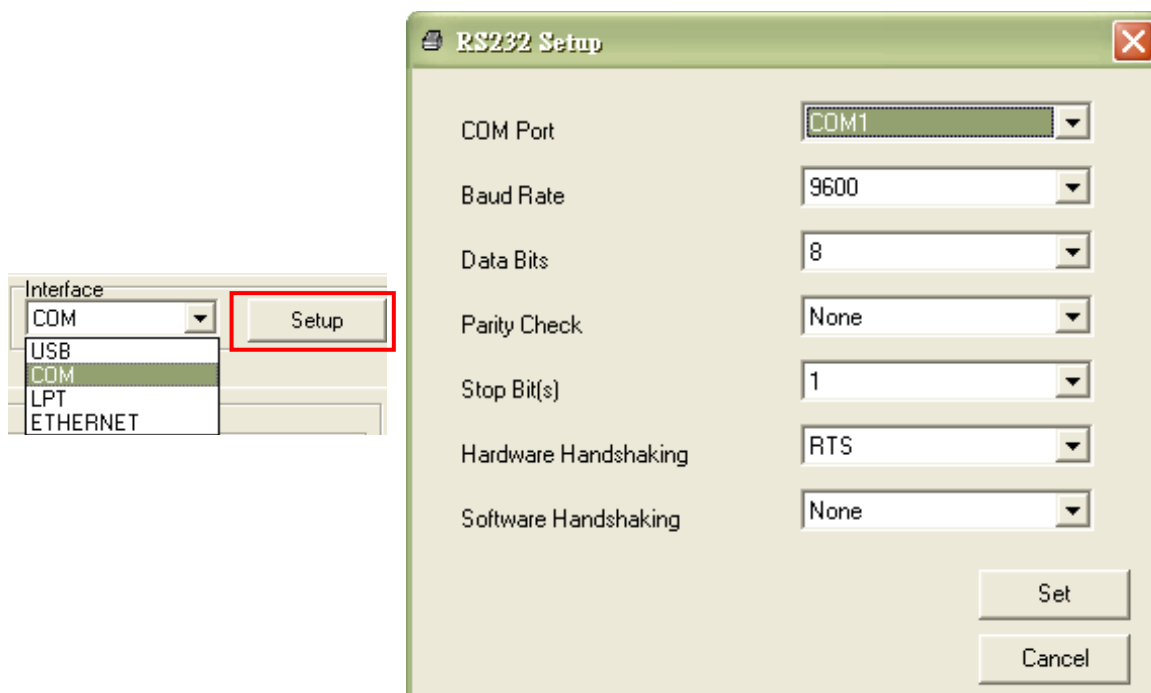


5.2 Using RS-232 interface to setup Ethernet interface

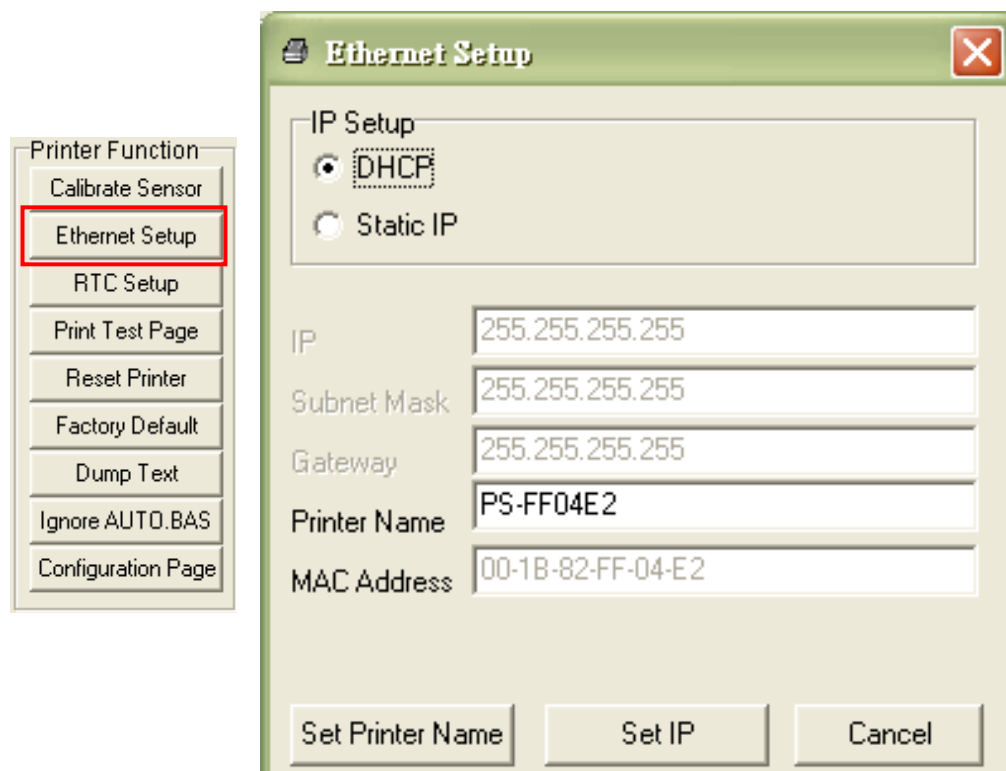
1. Connect the computer and the printer with a RS-232 cable.
2. Turn on the printer power.
3. Start the Diagnostic Utility by double clicks on the   icon.

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


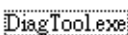
4. Select “COM” as interface then click on the “Setup” button to setup the serial port baud rate, parity check, data bits, stop bit and flow control parameters.



5. 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.

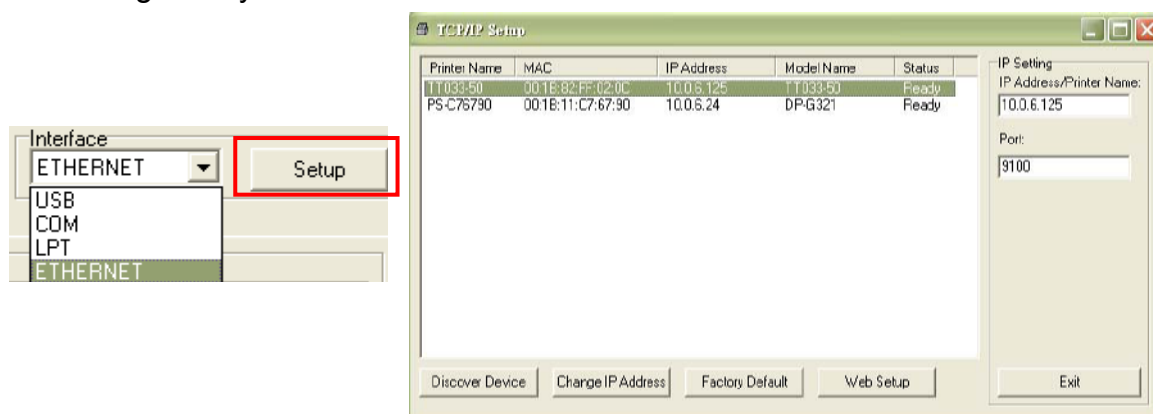


5.3 Using Ethernet interface to setup Ethernet interface

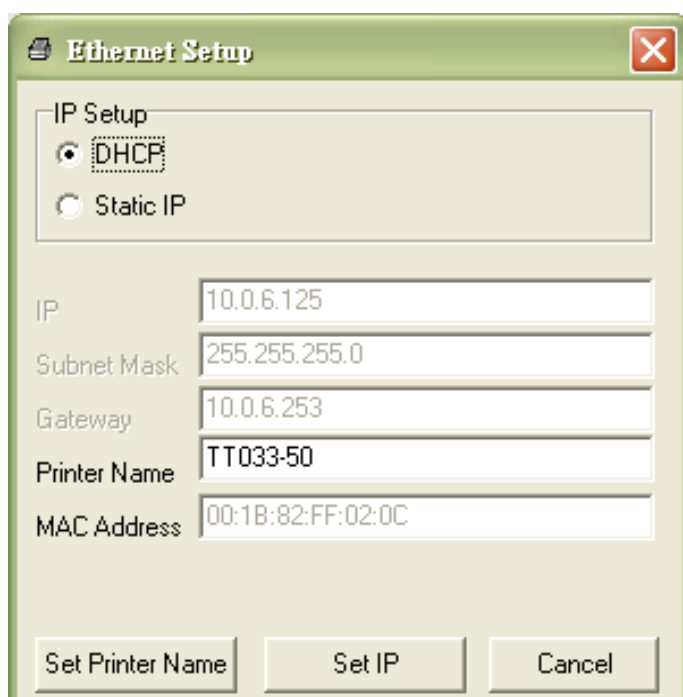
1. Connect the computer and the printer to the LAN.
2. Turn on the printer power.
3. Start the Diagnostic Utility by double clicks on the   icon.

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

4. 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.



5. Click the “Discover Device” button to explore the printers that exist on the network.
6. Select the printer in the left side of listed printers, the corresponding IP address will be shown in the right side “IP address/Printer Name” field.
7. 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 fields then click “Set Printer Name” to effect this change.

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

8. 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.

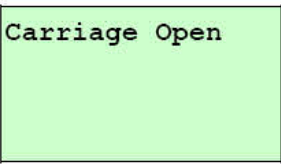
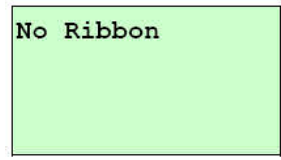
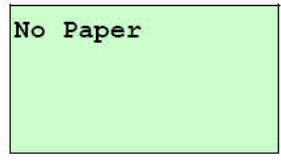
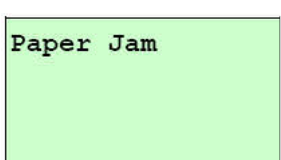
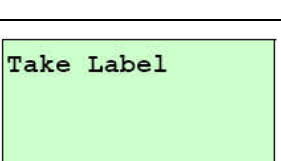
Web setup button

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

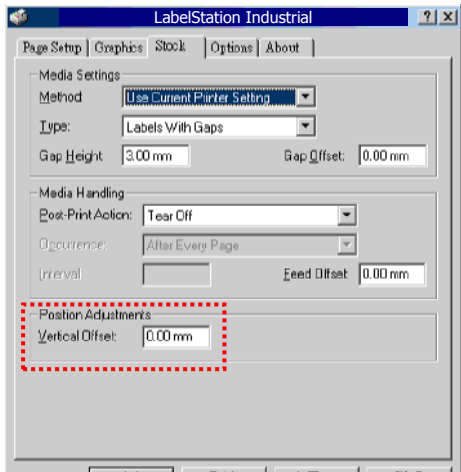
The following guide lists the most common problems that may be encountered when operating this bar code printer. If the printer still does not function after all suggested solutions have been invoked, please contact Advanced Labelling Ltd for assistance.

Problem	Possible Cause	Remedy
Power indicator does not illuminate	Power cord not properly connected.	Restore good connection.
	Printer carriage open.	Fully close printer carriage.
	Running out of ribbon. Ribbon installed incorrectly.	Load with new ribbon. Check ribbon path through printer.
	Running out of label. Label installed incorrectly. Gap/black mark sensor out of calibration.	Load with new label. Check label path through printer. Recalibrate gap/black mark sensor.
	Gap/black mark sensor out of calibration. Paper size does not match software setting. Label stuck inside printer mechanism.	Recalibrate gap/black mark sensor. Review measurements specified in labelling software. Inspect printer mechanism and clear blockage.
	Peel function enabled.	If peeler module installed, remove label. If no peeler module installed, disable peel function. Check connections to peeler module.

<div><div>UP:</div><div>Fwd.</div></div> <div><div>DOWN:</div><div>Rev.</div></div> <div><div>MENU:</div><div>Exit</div></div>	<div>Cutter jammed.</div> <div>No cutter installed.</div> <div>Cutter or cutter PCB damaged.</div>	<div>If cutter module installed, press Up or Down key to rotate cutter blade to correct position.</div> <div>Remove label. continued...</div> <div>Make sure thickness of label is less than 200 g/m² (for regular cutter) or 300 g/m² for heavy duty cutter).</div> <div>Replace cutter PCB.</div>
Not printing	<div>Interface cable (USB or parallel) not securely connected.</div> <div>Serial port cable not pin-for-pin compatible.</div> <div>Ribbon and media incompatible.</div> <div>Ribbon incorrectly loaded (inked side facing upwards instead of down).</div> <div>Print head contaminated.</div> <div>Print density set too low.</div> <div>Print-head harness cable and/or connector faulty.</div> <div>Stepping motor plugged into wrong connector.</div> <div>Printer command error.</div>	<div>Check security of interface cable.</div> <div>If using serial cable, replace with correct type.</div> <div>Check baud rate setting. The default baud rate of this printer is 9600,n,8,1.</div> <div>If using Ethernet cable, check following Ethernet RJ-45 connector LEDs</div> <div>Green – continuously on.</div> <div>Amber – blinking.</div> <div>Check printer gets IP address when using DHCP mode.</div> <div>Check IP address is correct when using static IP address.</div> <div>Wait a few seconds while printer establishes communication with server then re-check IP address.</div> <div>Replace cable.</div> <div>Re-install ribbon as described in this manual.</div> <div>Clean print-head.</div> <div>Increase print density setting.</div> <div>Re-seat print head cable connector (with power switched off).</div> <div>Check stepping motor connections.</div> <div>Check program command for PRINT at end of file and CRLF at end of each command line.</div>

Memory full (Flash/DRAM)	Flash or DRAM memory full.	Delete unused files in FLASH/DRAM. NOTES: Max. number of DRAM files is 50 (LabelStation Industrial) Max. user addressable DRAM space is 256KB (LabelStation Industrial) Max. number of Flash files is 256. Max. user addressable Flash space is 2560KB (LabelStation Industrial)
SD card unusable	SD card damaged or inserted incorrectly. Non-approved SD card.	Use supported SD card. Re-insert SD card correctly. For supported/approved SD cards, refer to relevant section in this manual.
PS/2 port not working	Did not turn off power prior to plugging in PS/2 keyboard. PS/2 keyboard damaged. PS/2 keyboard not plugged in correctly. No BAS file (label template) downloaded to printer.	Plug in PS/2 keyboard with printer switched off. Check keyboard is not damaged. Check required file has been downloaded to printer.

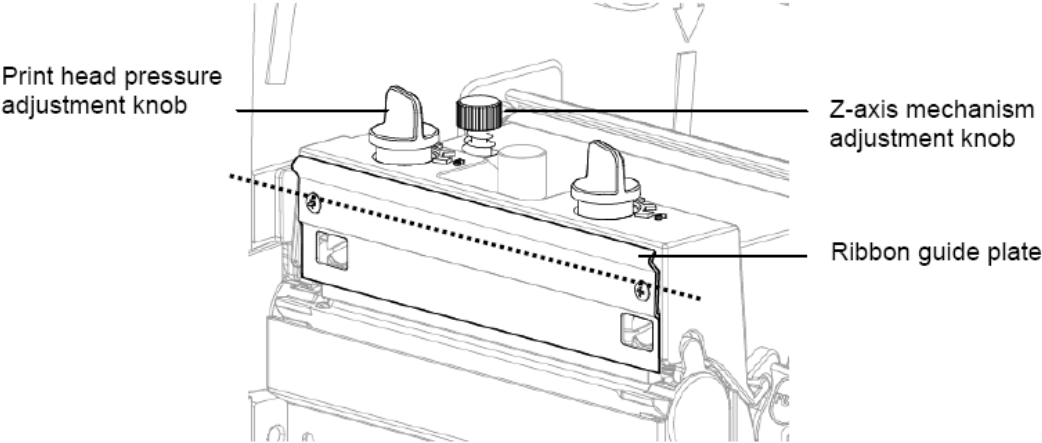
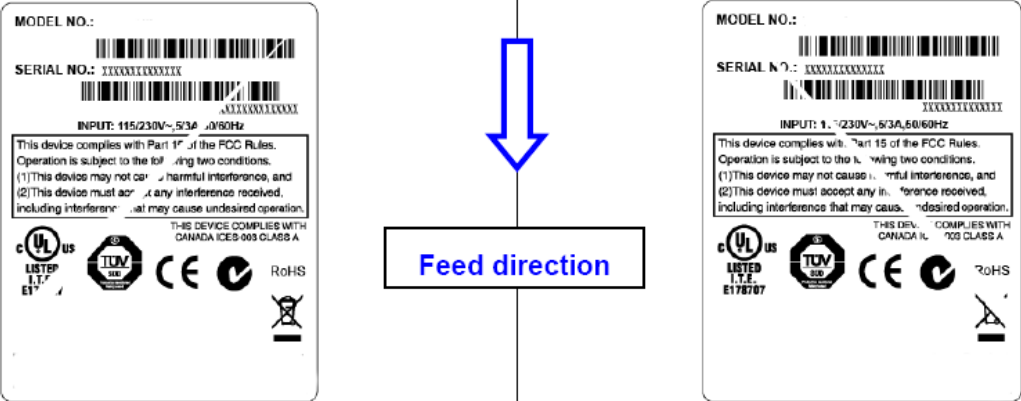
Poor print quality	<p>Ribbon and/or label media loaded incorrectly</p> <p>Print head contaminated.</p> <p>Print density not set appropriately.</p> <p>Print head elements damaged.</p> <p>Ribbon and label type incompatible.</p> <p>Print head pressure not set correctly.</p>	<p>Reload media in accordance with instructions.</p> <p>Clean print head.</p> <p>Clean platen roller.</p> <p>Adjust print density and speed.</p> <p>Run printer self-test to check for failed print head pixels.</p> <p>Change ribbon/label combination to compatible type.</p> <p>Adjust print head pressure as follows:</p> <p>Left side printout too light: set left side pressure adjustment knob to higher index (higher pressure). If pressure adjustment knob already set to '5' and poor print quality on left side persists, adjust pressure adjustment knob to '1' and rotate Z-axis adjustment knob to fine tune pressure.</p> <p>If right side printout too light: set right side pressure adjustment knob to higher index (higher pressure).</p> <p>If label thickness is more than 0.22mm then required print quality might never be achieved unless heater line adjustment screw is rotated counter clockwise.</p> <p>Release lever not latching print head.</p>
LCD dead and keys not working	Cable between main PCB and LCD loose.	Check security of cable.
LCD dead but LEDs working	Printer initialization unsuccessful.	Switch printer off and on again. Initialize printer.
LCD dead, LEDs working, but label feeding out	LCD panel cable/connector loose or plugged in upside down.	Reconnect cable.
Ribbon Encoder sensor not working	Ribbon Encoder sensor cable/connector loose.	Reconnect cable.
Ribbon End sensor not working	Connector loose. Ribbon sensor hole blocked.	Refit connector. Clear sensor hole of debris.
Peel sensor not working	Peel sensor not 'seeing' label media. Connector loose.	Reload media so that it passes through Peel sensor. Refit connector.
Cutter not working	Connector loose.	Refit connector.

Label skews during feed out	Media guide not engaged with media.	If label drifting to right side, move label guide left. If label drifting to left side, move label guide right.
Labels skipped when printing	Label size is not specified correctly in labelling software. Sensor sensitivity incorrect. Media sensor fouled with dust/debris.	Re-specify software settings or change label to match. Recalibrate sensor. Clear Gap/Black Mark sensor of blockage.
Vertical printing position of objects on small label incorrect	Media sensor sensitivity not set correctly. Label size does not match software settings. Shift Y parameter in LCD menu incorrect. Vertical offset setting in printer driver incorrect.	Re-calibrate sensor sensitivity. Set to correct label size and gap size in labelling software. Press [MENU] > [SELECT] x 3 > [DOWN] x 6 > [SELECT] to fine tune Shift Y. 
Horizontal printing position of objects on label incorrect	Wrong label size specified in labelling software. Shift X parameter in LCD menu incorrect	Set to correct label size and gap size in labelling software. Press [MENU] > [SELECT] x 3 > [DOWN] x 5 > [SELECT] to fine tune Shift X.
Missing print on left or right side of label	Wrong label size specified in labelling software.	Set to correct label size and gap size in labelling software.
RTC (real-time clock) incorrect after printer reboot	Backup battery expired.	Check presence and condition of battery on main PCB (main printed circuit board).
Multi interface board not working	Installation incorrect.	Check PCB plugged into right connector.
Power and Error LEDs blinking rapidly	Printer power switched off and on too quickly.	Switch off printer and wait until all LEDs are off before switching printer on again.
Label or ribbon wrinkling	Print head pressure incorrect. Ribbon installation incorrect. Label media installation incorrect. Print density incorrect. Media feeding incorrectly.	Set print density and speed for optimum print quality. Ensure label is engaging with media guide. All these settings are described throughout this manual.
Gray line throughout all Labels printed	Print head dirty. Platen roller dirty.	Clean printer parts as appropriate.

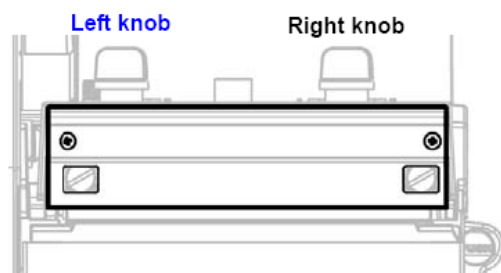
Irregular printing	Printer in Hex Dump mode. RS-232 setting incorrect.	Switch printer off and on to exit dump mode. Reset RS-232 setting.
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6.2 Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

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...etc. In case ribbon wrinkle occurs, please follow the instructions below to adjust the printer parts.

Adjustable Printer Parts		
Symptom	1. Wrinkle happens from label lower left to upper right direction (" / ")	2. Wrinkle happens from label lower right to upper left direction (" \ ")
Wrinkle Example		

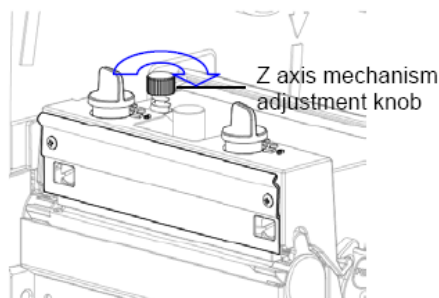
Adjust the print head pressure adjustment knob



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.

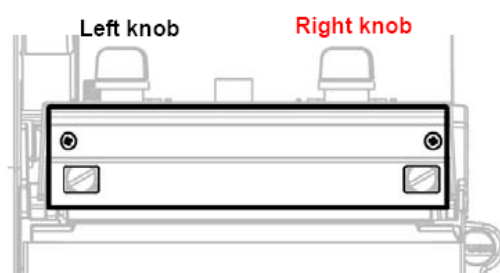
1. Decrease the right side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
2. If the right side print head adjustment knob setting has been set to index 1 (the lowest pressure index), please increase the left side print head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

Adjust the print head pressure adjustment knob



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 section presents the tools and methods required to maintain your printer.

1. Please use a combination of the following materials to clean the printer.

- Cotton swab or head cleaning pen (the latter is recommended)
- Lint-free cloth
- Vacuum / Blower brush
- Ethanol (100% pure)

2. The cleaning process is described as following:

Print Head

1. Turn printer off and allow print head to cool for one minute.
2. Remove the ribbon to expose the print head.
3. Use a cotton swab and ethanol (or head cleaning pen) to clean the print head surface.

Platen Roller

1. Turn printer off and allow print head to cool for one minute.
2. Remove the label stock to expose the roller.
3. Wipe the platen roller while manually rotating it. Use ethanol and lint-free cloth.

Tear Bar/Peel Bar

Use lint-free cloth with ethanol to wipe it as needed.

Sensor

Gently blast with compressed air periodically to remove fluff and dust.

Exterior

Wipe with damp cloth as necessary.

Interior

Brush or carefully vacuum clean as needed to prevent build-up of dust and debris.

Notes:

1. **Do not touch print head by hand. You will contaminate it and possibly burn yourself.**
2. **Always use 100% Ethanol. DO NOT use medical alcohol, which may damage the print head.**