

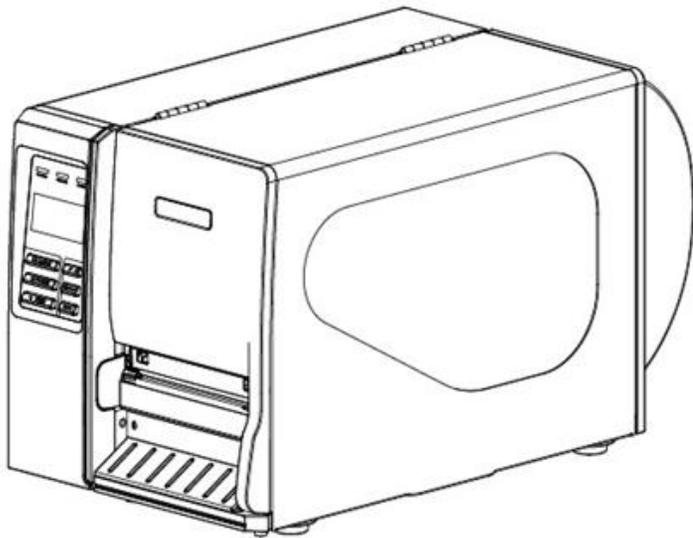


# **ISG S700 Series**

## **Thermal Transfer Barcode Printer**

### **User's Guide**

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## Copyright Declaration

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- CG Triumvirate Bold Condensed font is under license from the Monotype Corporation.
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## Regulatory Statement:



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.



UL 60950-1 (2<sup>nd</sup> Edition)  
CSA C22.2 No.60950-1-07 (2<sup>nd</sup> Edition)  
120VAC ~ 60Hz ~ 1.0A



CE CLASS A  
EN 55022:2006 +A1:2007  
EN 55024:1998 +A1:2001 +A2:2003  
EN 61000-4 SERIES REGULATIONS



EN 60950-1/A1:2010



IEC 60950-1/A1:2009  
IEC 60950-1:2005 (2<sup>nd</sup> Edition)

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## Operational safety



## CAUTION

- Refer to the product label (back of the printer) and verify your power source exactly meets those requirements.
- Do not use this product near heat or water.
- Mechanical and electrical repairs should be conducted by qualified service personnel.
- Unplug this product from the power outlet before cleaning.

## Cautions in setting up

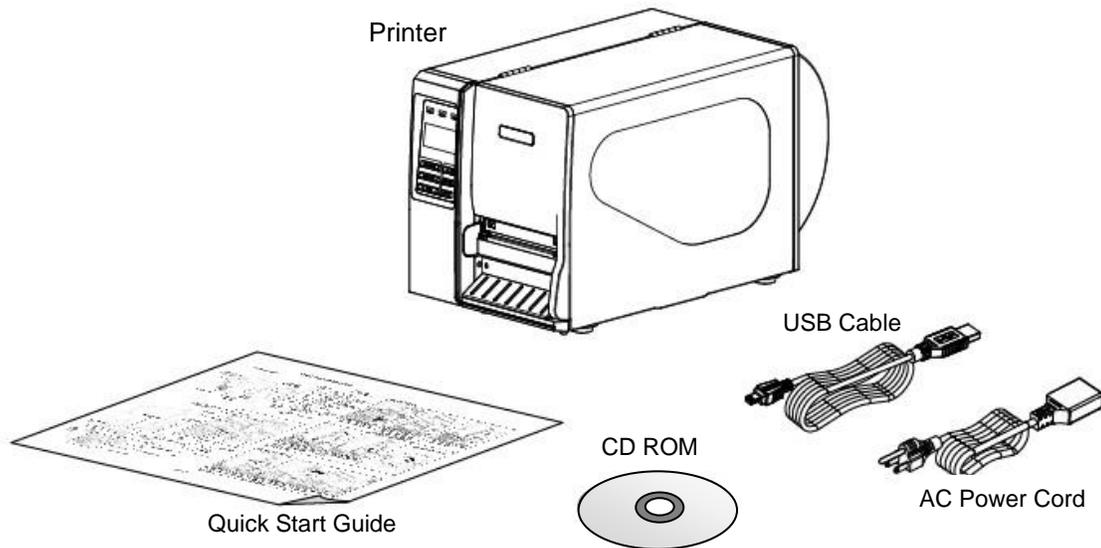


## CAUTION

- Unpack the printer. Make sure that the printer body and all accessories are included in the package and no parts are damaged.
- Do not use the printer in a location exposed to direct sunlight or close to a heater or other heat generating equipment.
- Do not use the printer in a dusty location or any location subject to sudden changes in temperature and humidity.
- Refer to print adjustments in this manual before attempting alignments.
- Do not turn off the printer during printing, as this may lead to a malfunction.
- Place the printer on a rigid, horizontal base in a location that is free of vibration.
- Before connecting or disconnecting the interface cable, be sure to turn off the printer.
- Do not connect the printer to a non-standard power source.
- If the case or cover becomes dirty, clean it with a soft cloth moistened with a small quantity of neutral detergent diluted with water. Never use a hard cloth or volatile solvent such as alcohol, thinner, or benzene.

# Packaging

## Unpacking the printer



## Removing protective material

1. Open the packing box, remove the printer. Open right cover and remove foam block from printhead assembly. Remove paper between printhead and platen.
2. If any parts are missing, please contact the Customer Service Department of your purchased reseller or distributor.
3. It is recommended to keep packaging materials for future use if needed.

# Introduction

## Product

Thank you very much for purchasing your bar code printer.

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

With back-lit graphic LCD display, printer status can be managed easier and operated more user friendly. The moveable sensor design can accept wide range of label media. All of the most frequently used bar code formats are included. Fonts and bar codes can be printed in any one of the four directions.

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!

- |                                  |                            |
|----------------------------------|----------------------------|
| ❖ Applications                   | ❖ Industrial-duty printing |
| ❖ Healthcare patient safety      | ❖ Compliance labeling      |
| ❖ Work in process                | ❖ Order fulfillment        |
| ❖ Distribution                   | ❖ Distribution             |
| ❖ Shipping/ receiving            | ❖ Ticketing                |
| ❖ Electronics & jewelry labeling |                            |

## Model configuration (Basic Differences)

- | <u>PLUS Model</u>           | <u>Standard Model</u>   |
|-----------------------------|-------------------------|
| ❖ Memory 8MB/32MB/SD Card   | ❖ Memory 4MB/8MB        |
| ❖ RS-232,Centronics,USB,PS2 | ❖ RS-232,Centronics,USB |
| ❖ Internal Ethernet         | ❖ 203 & 300dpi          |
| ❖ 203/300 & 600dpi          | ❖ 8ips max              |
| ❖ 12ips max                 | ❖ Print Length 90in     |
| ❖ Print Length 160in        |                         |

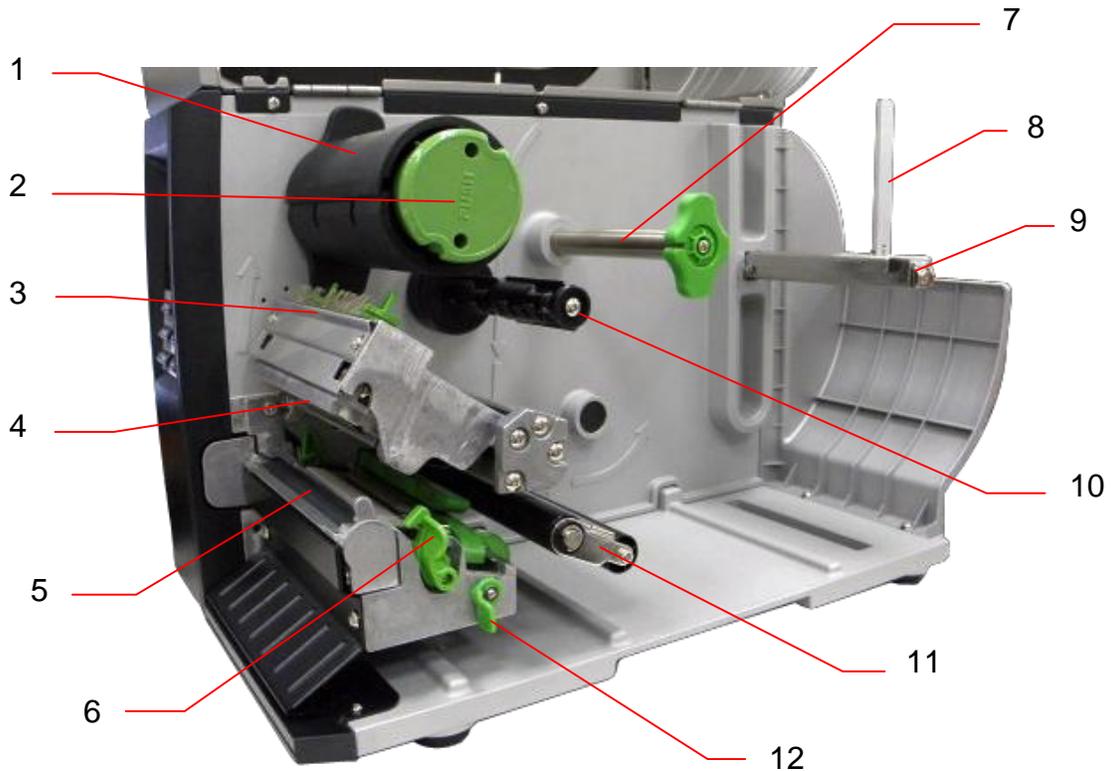
# Printer Overview

## Front view

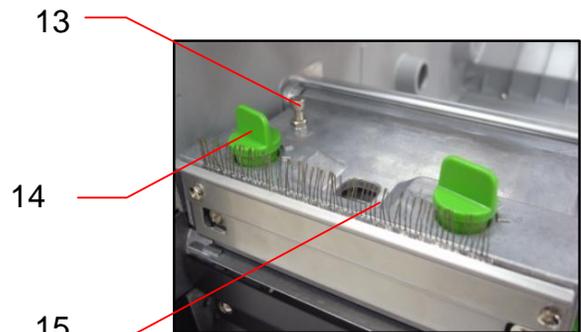


1. LED indicators
2. LCD display
3. Front panel buttons
4. Paper exit chute
5. Lower front cover
6. Printer right side cover

## Interior view

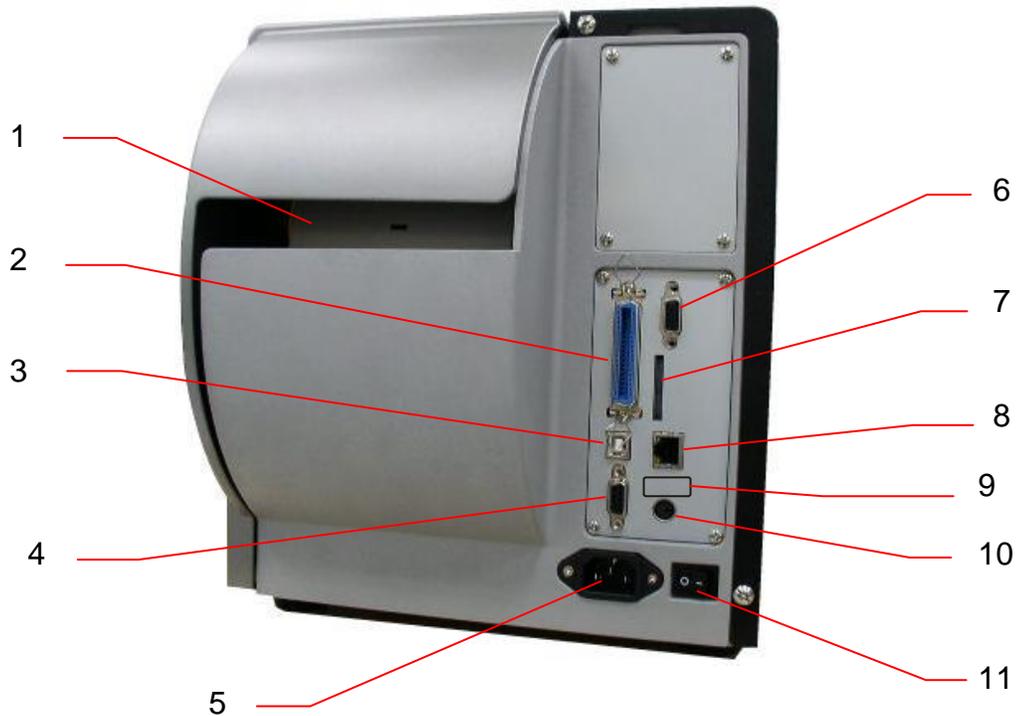


1. Ribbon rewind spindle
2. Ribbon release button
3. Ribbon guide plate
4. Print head
5. Platen roller
6. Print head release lever
7. Media guide bar
8. Label roll guard
9. Label supply spindle
10. Ribbon supply spindle
11. Damper
12. Media sensor lock lever
13. Z axis mechanism adjustment knob
14. Print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



17 18

## Rear view



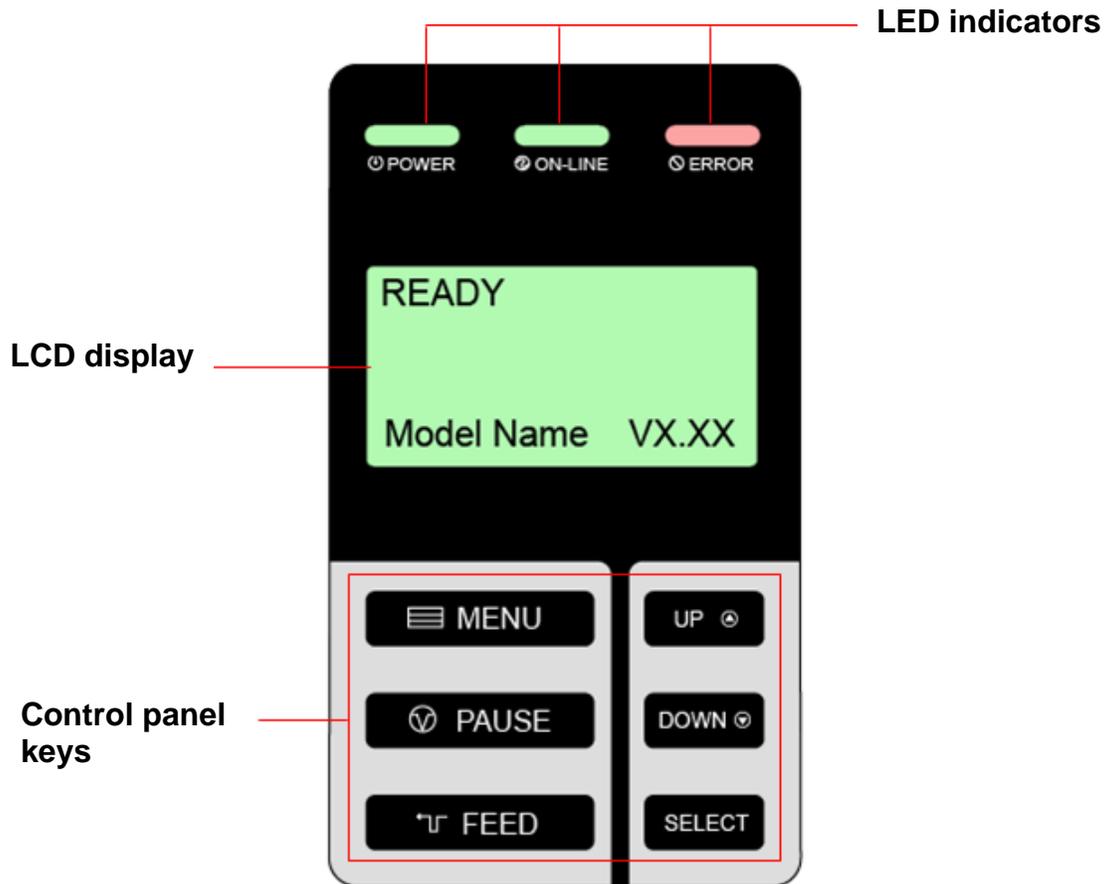
1. Fan-fold paper entrance chute
2. Centronics interface
3. USB interface
4. RS-232C interface
5. Power jack socket
6. GPIO interface (Optional)
7. SD card slot
8. Ethernet interface
9. USB host (Optional)
10. PS/2 interface
11. Power switch

### **Note:**

- ❖ The above interface picture is for reference only. Please refer to the product specification for the interfaces availability.
- ❖ SD card slot, Ethernet interface and PS/2 interface are standard interfaces for “PLUS” models, and optional for standard economy models.
- ❖ GPIO interface card includes SD card slot, Ethernet and PS/2 interfaces. GPIO interface is optional.

# Operator Controls

## Display panel



## 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"

## Key functions

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

# Installation

## 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.



Verify the printer power switch is in the OFF position before installing the power cord.

## Loading ribbon

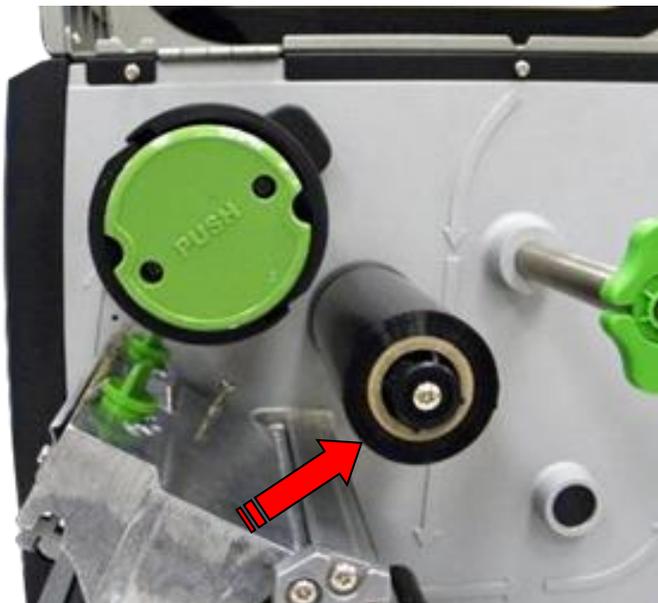
1. Open the printer right side cover.



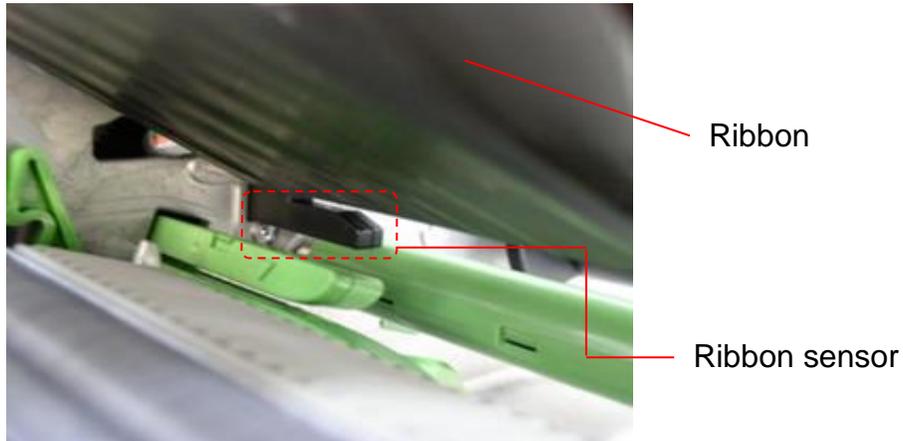
2. Push the printhead release lever to open the mechanism.



3. Install the ribbon onto the supply spindle.



4. Thread the ribbon through the sensor slot and then through the open space in between printhead and platen.

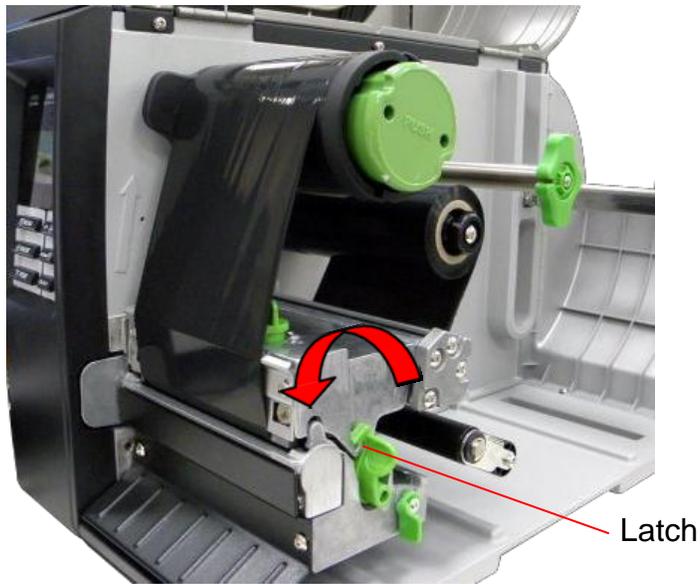


5. Wrap the ribbon onto the ribbon rewind spindle. Wind the ribbon clockwise about 3~5 complete turns onto the ribbon rewind spindle until it is smooth and properly stretched.

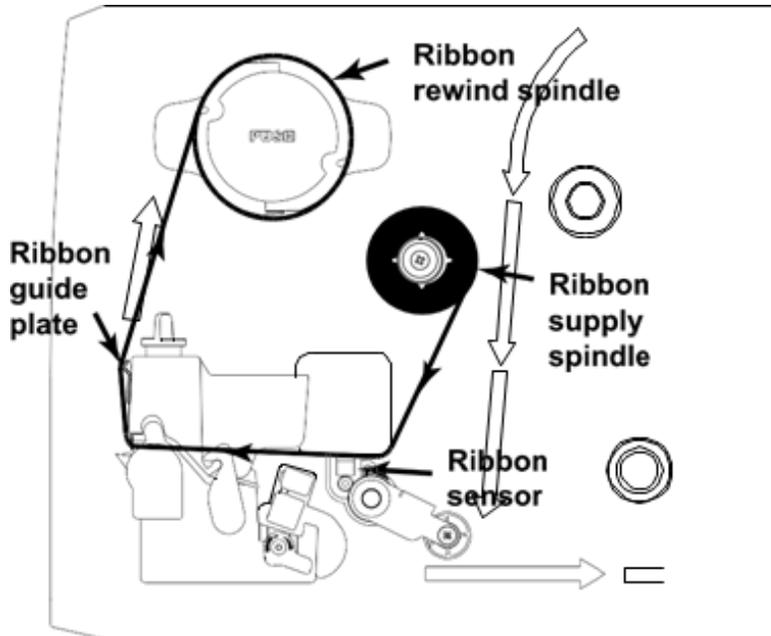


Please **DO NOT** push the ribbon release button when you are loading the ribbon. **The ribbon release button is used to remove the printed ribbon.**

6. Close the printhead mechanism and make sure the latch is engaged securely.

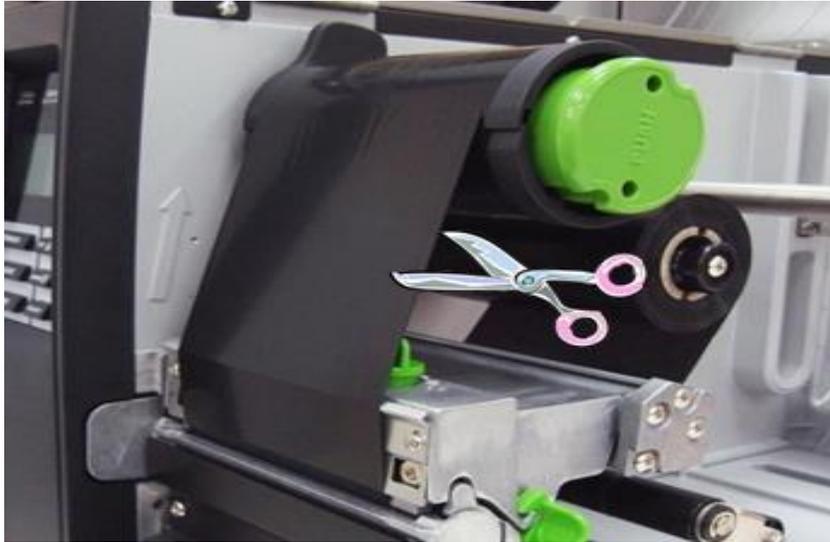


### Loading path for ribbon



## Remove used ribbon

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



2. Push the ribbon release button.



3. Slide/pull the used ribbon off the rewind spindle.



## Loading roll media

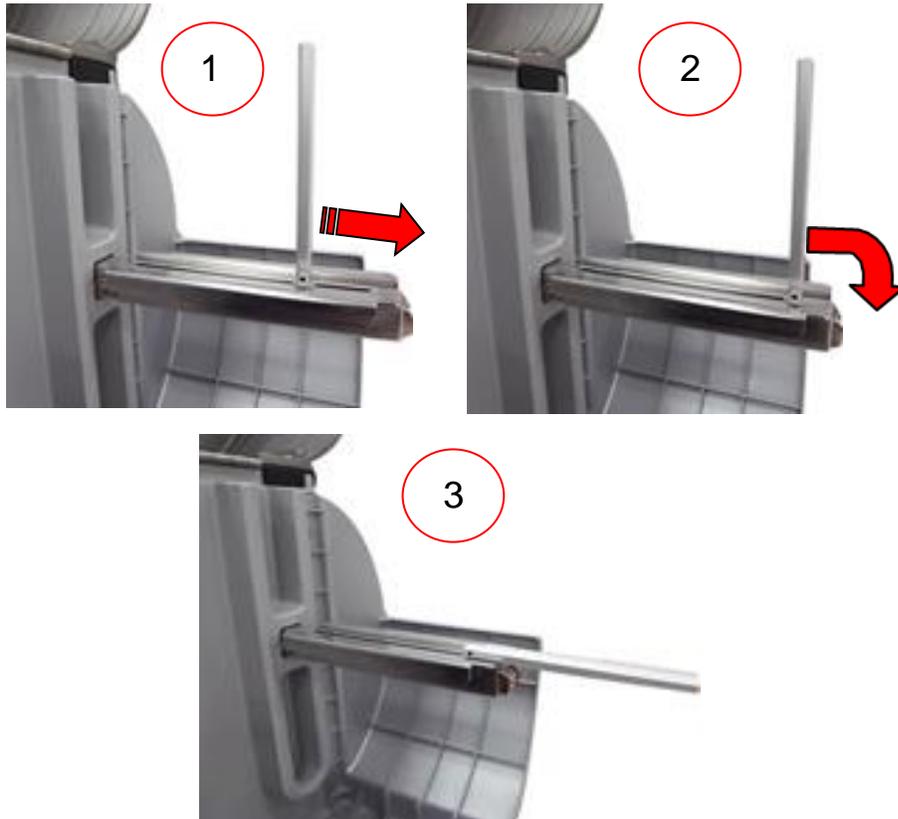
1. Open the printer right side cover.



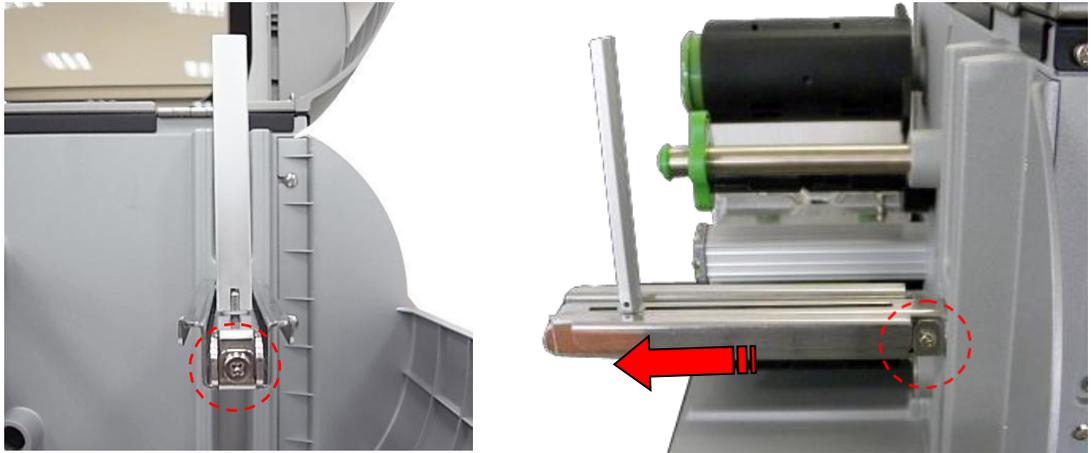
2. Push the printhead release lever to open the mechanism.



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



4. If necessary, reconfigure 3" label supply spindle to fit the 1" label core by removing two roll guard screws and support bracket.



 Store supply spindle parts for future use.

5. 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.

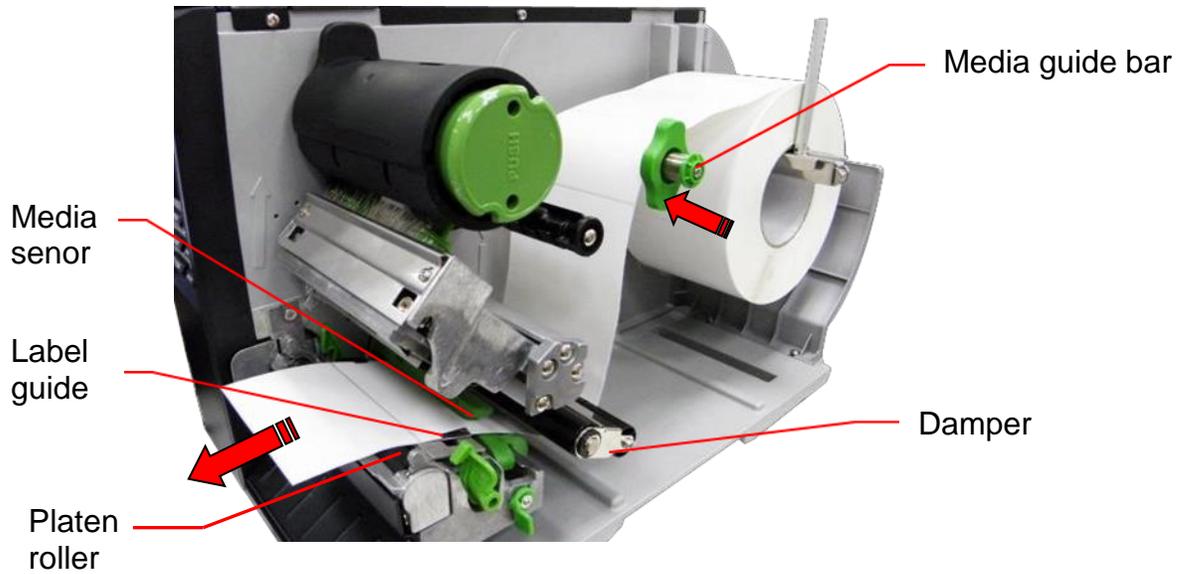


3-inch core

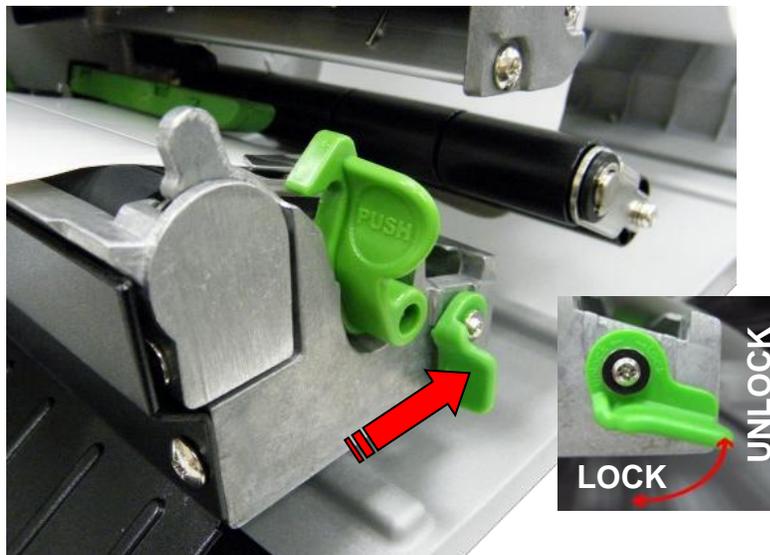


1-inch core

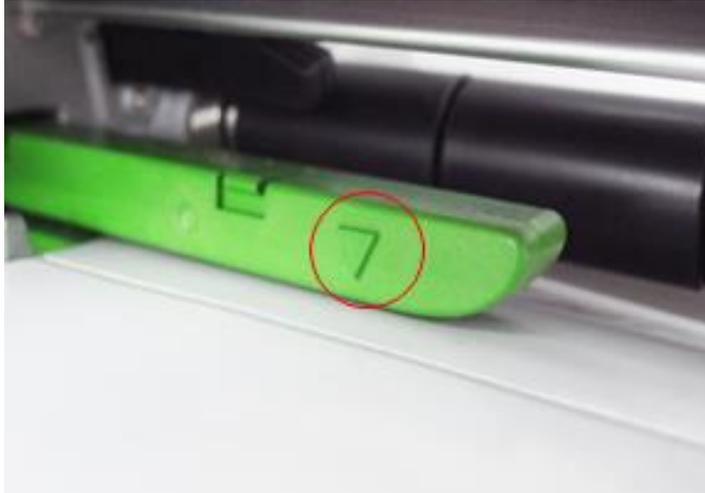
6. Pull label roll leading edge forward over the media guide bar, under the damper, through the media sensor, set label guide and place the label leading edge onto the platen roller.



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



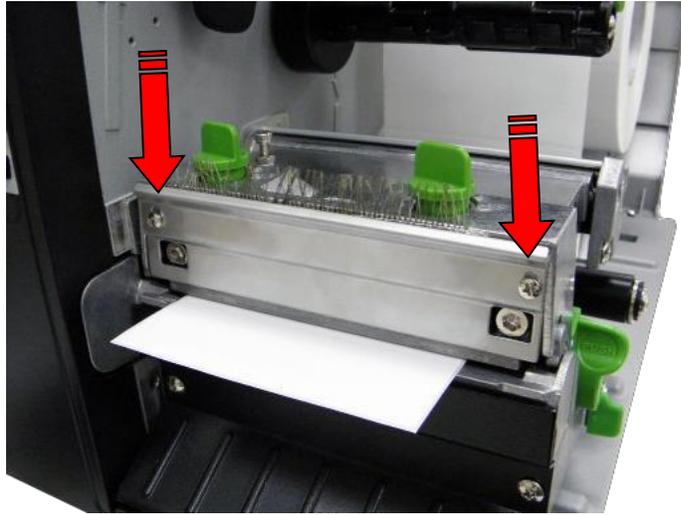
8. Adjust the media sensor with handle (right side). The sensor location is marked by triangle mark  on green housing. Align sensor with label carrier gap or black mark.



9. Insert label inside guides. Adjust right guide to fit the width of the label.

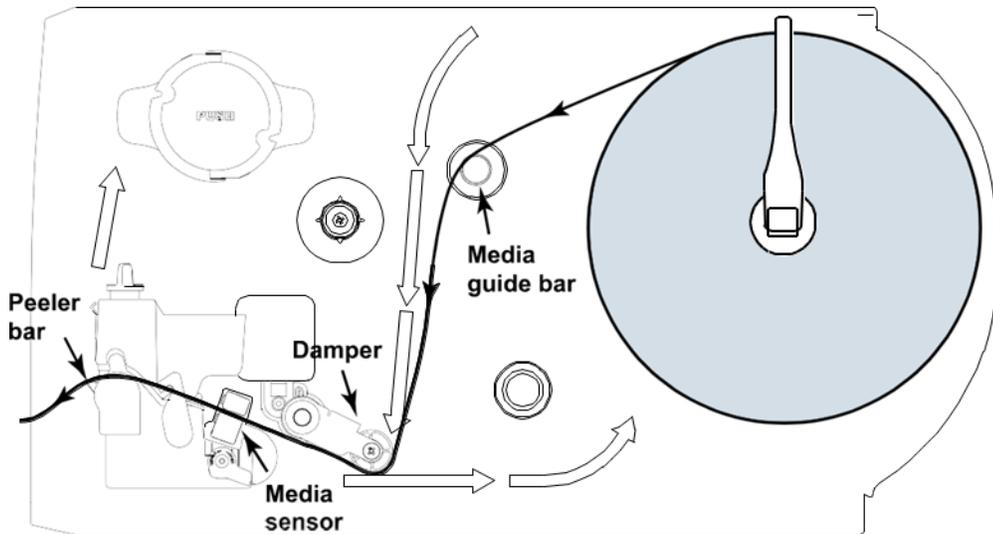


10. Close the print head mechanism. Make sure the latches are engaged securely.



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

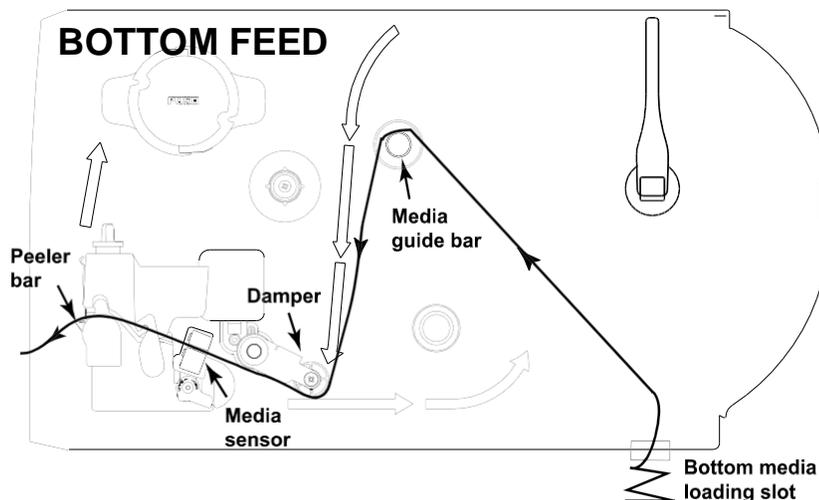
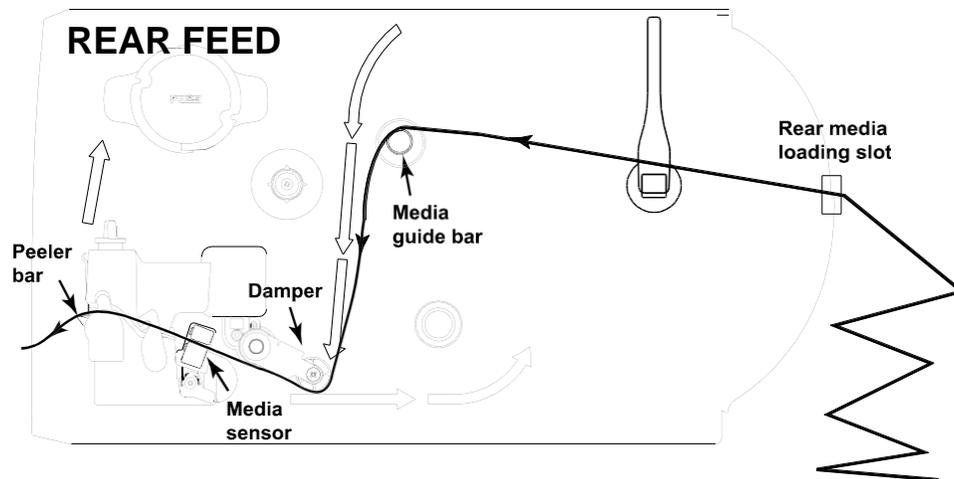
❖ **Loading path for roll labels**



 Media calibration is required when changing gap and black mark sensor type.

## Loading fan fold media

1. Open the printer right side cover. Push the printhead release lever to open the mechanism (refer to pages 17~22 for the following mechanism set up).
2. Insert the fan-fold media through the rear or bottom external label entrance chute.
3. Pull fan-fold label leading edge forward through the media guide bar, damper media sensor and place the label leading edge onto the platen roller.
4. Adjust the label guide by sliding to fit the paper width.
5. Close the print head mechanism. Make sure the latches are engaged securely.
6. Set the media sensor type and calibrate the selected sensor.

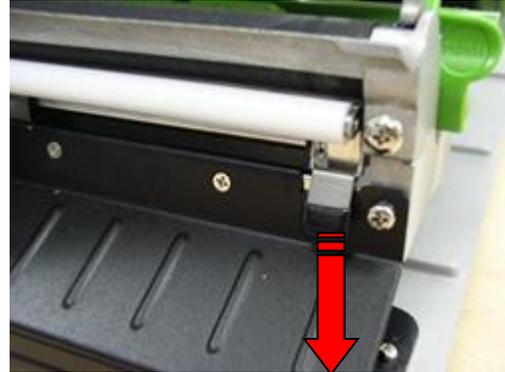


## Loading peel & present media

1. Open the printer right side cover. Push the printhead release lever to open the mechanism (refer to pages 17~21 for mechanism set up).
2. Pull approximately 2-feet of label through the front of the printer.
3. Push down the peel-off roller release lever.



Peel-off release lever



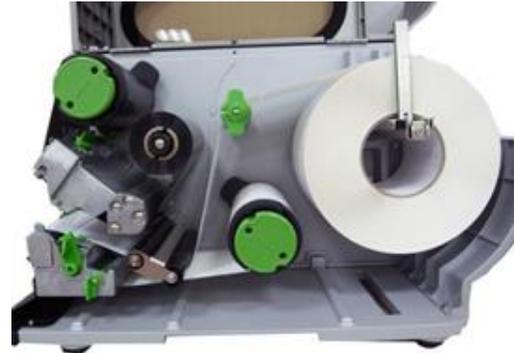
4. Feed the label between peel-off roller and platen roller.



Peel-off roller



5. Wrap the label onto the internal rewind spindle and wind the spindle counter-clockwise 3~5 revolutions until the label is properly stretched.
6. Rotate and the peel-off sensor toward the paper exit chute.



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

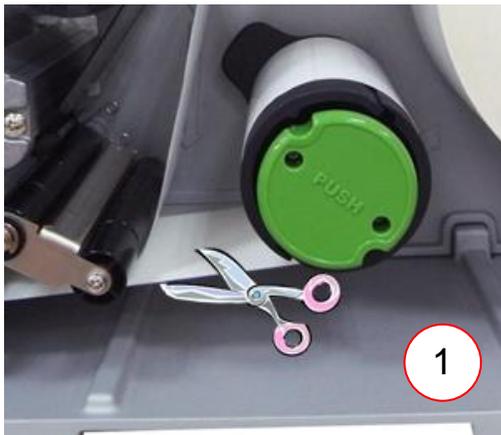


8. Peeling will automatically start. Press the FEED button to test.



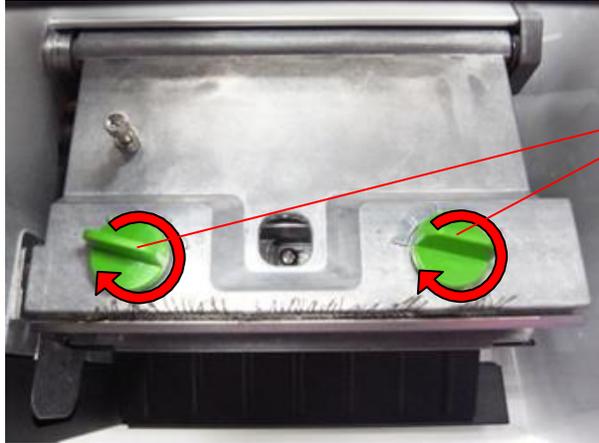
## Removing peel & present liner

1. Remove by cutting liner and pressing the release button to extract.



## Adjusting print head pressure

### 1. Pressure adjustment knobs:



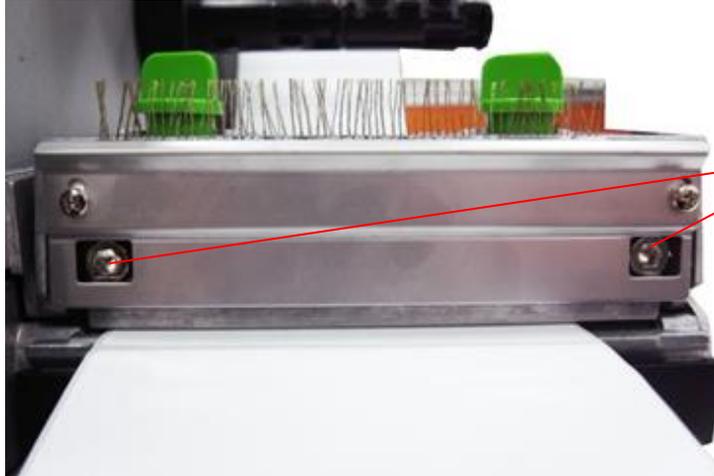
Print head pressure  
adjustment knobs

***Increase ~ clockwise***

***Decrease ~ counter clockwise***

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. Burn line adjustment screws:



Print head burn line  
adjustment screws

**Align toward:**  
***Trailing edge ~ clockwise***  
***Leading edge ~ counter  
clockwise***



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

The print head burn line adjustment screws 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. The print head burn line default is set for general purpose printing media (plain paper and paper thickness less than 0.008 inch).

Poor print quality when using paper thicker than 0.008 inch 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 screws 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.

## PS/2 keyboard interface

1. Turn off the printer power.
2. Plug in keyboard PS/2 interface cable into the printer port.
3. Turn ON printer.
4. Press keyboard **F1** key, the LCD will display the following:

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

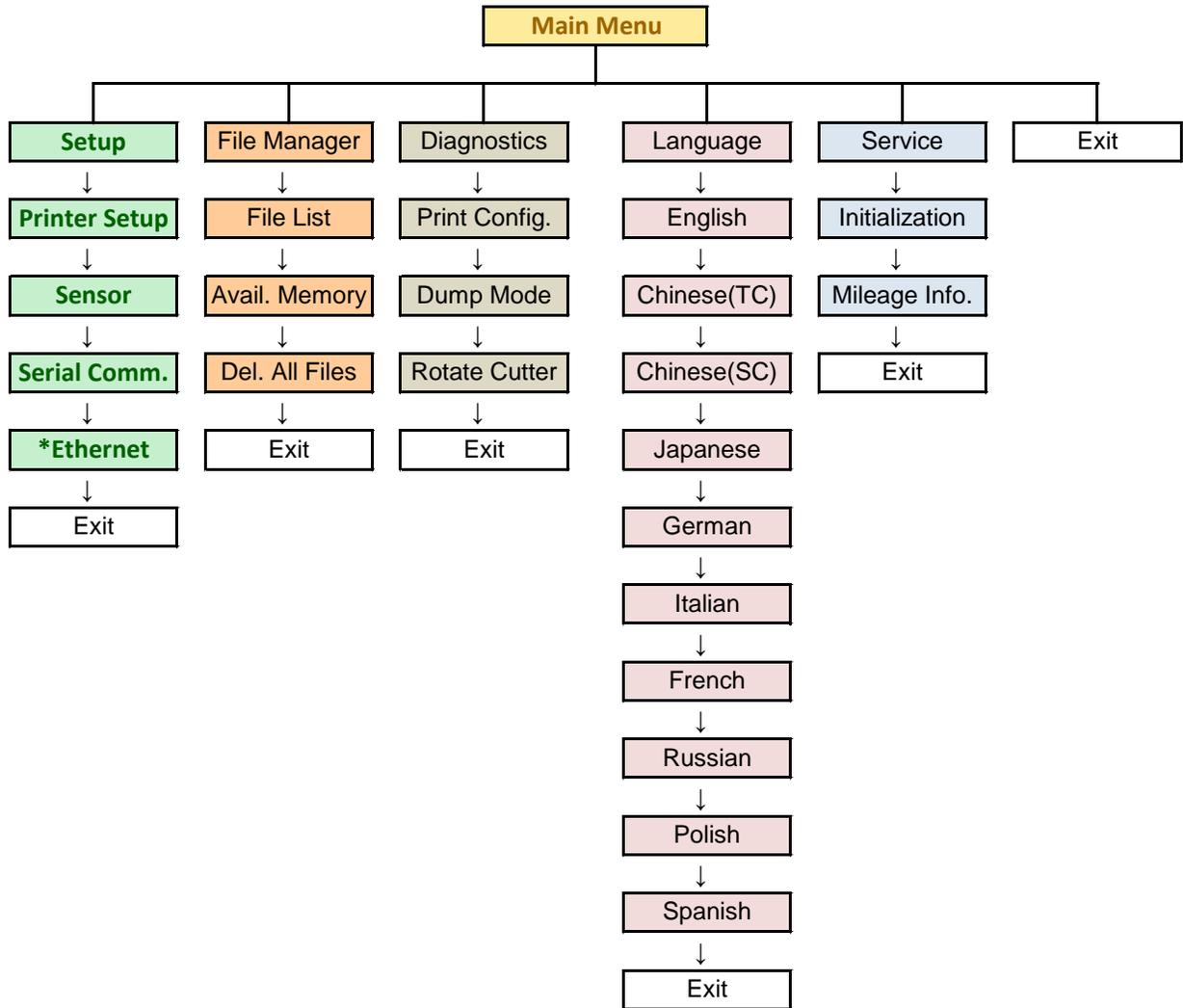
5. Press keyboard UP or DOWN arrow key to move cursor and select memory path where file is stored. Press **ENTER** key to select.

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

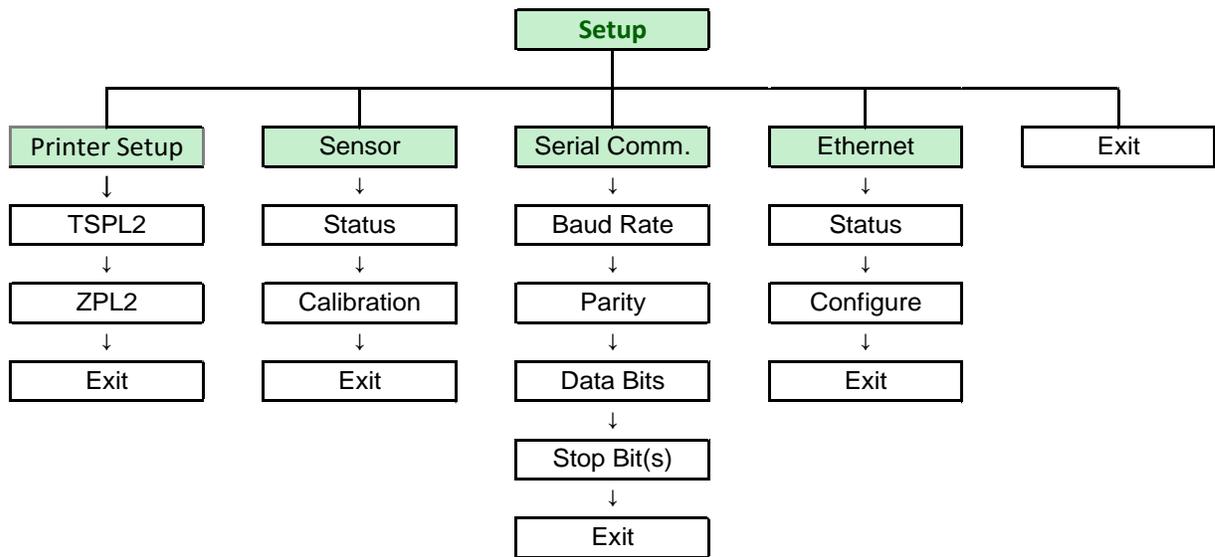
6. Press keyboard UP or DOWN arrow key to move cursor and select file name. Press **ENTER** key to select.
7. Enter data utilizing keyboard.
  - ❖ Press **F1** key to start function
  - ❖ Press UP or DOWN arrow key to move printer LCD cursor and select option
  - ❖ Press **ESC** key to return to previous menu
  - ❖ Press **ENTER** key to enter/execute option
  - ❖ Press **Ctrl + C** keys to restart printer and go back to READY state

# Control Panel

## Menu Function

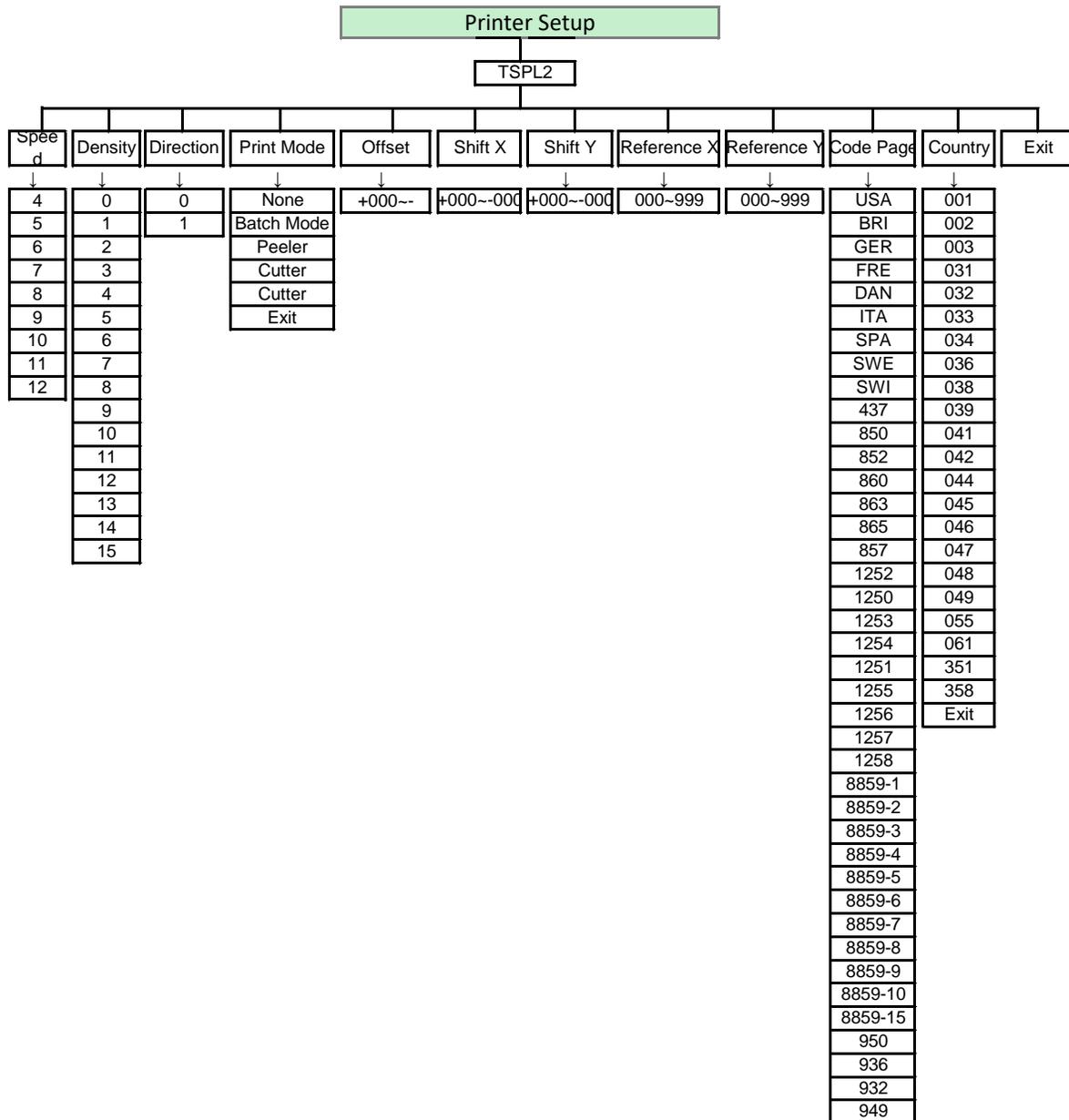


## Setup Menu Overview

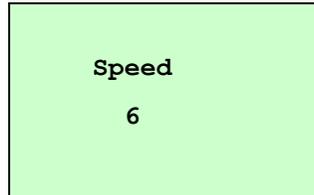
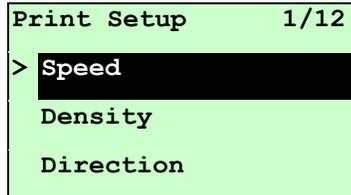


- ❖ The Ethernet function is available for the PLUS models, and optional for the standard economy series.
- ❖ Ethernet function is available on the LCD display when Ethernet card is installed.

# Printer Setup

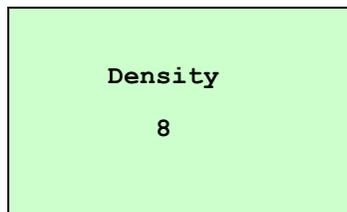
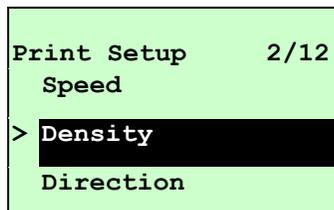


## 1. Speed:



Use this option to setup print speed. The available print speed is between 4~12ips and each increment/decrement is 1ips. The default print speed is 6ips. Press **UP** ⏴ key to raise the print speed, and press **DOWN** ⏵ key to decrease print speed. Press **SELECT** key to enable and save. Press **MENU** key to cancel the setting and return to the previous menu.

## 2. Density:

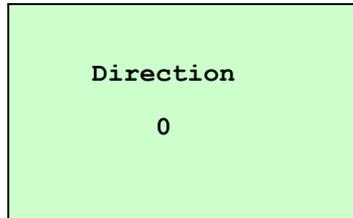
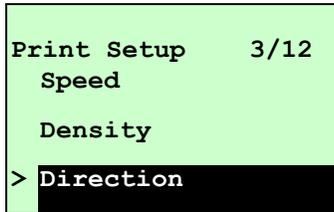


Use this option to setup printing darkness. The available setting is from 0 to 15. Printer default density is #8. You may need to adjust your density based on selected media and ribbon type. Press **UP** ⏴ and **DOWN** ⏵ to increase/decrease the printing darkness. Press **SELECT** key to enable and save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



Label printing software or network driver settings will take precedence and overwrite manual settings.

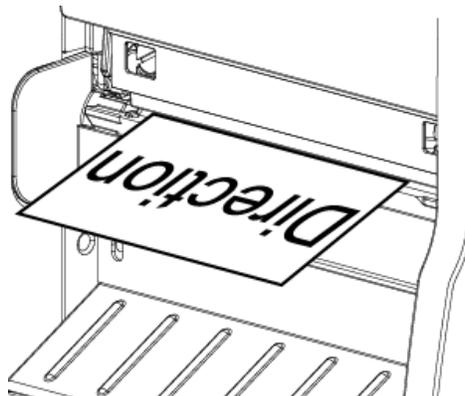
### 3. Direction:



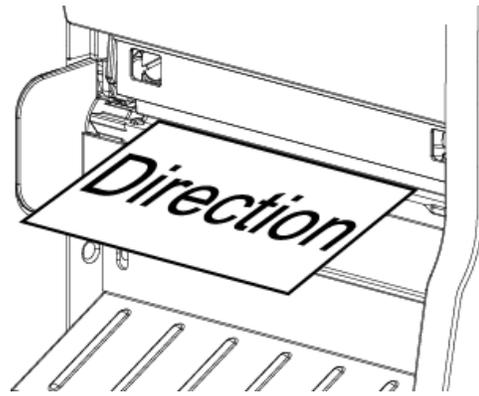
The direction setting value is either 1 or 0. Use this option to setup the printout direction. Printer default printout direction is DIRECTION 0. Press **UP**  key to set the direction as 1, and **DOWN**  to set it as 0, and **SELECT** key to enable and save the setting. Press  **MENU** key to cancel 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"**

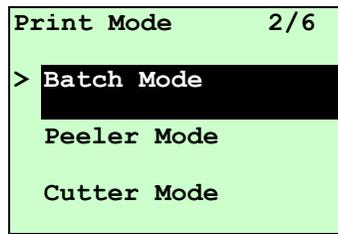
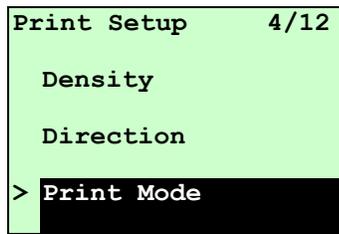


**DIRECTION "1"**



Label printing software or network driver settings will take precedence and overwrite manual settings.

## 4. Print mode:



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 modes and press the **SELECT** button to enable and save 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.



Label printing software or network driver settings will take precedence and overwrite manual settings.

## 5. Offset:

```
Print Setup    5/12
  Direction
  Print Mode
> Offset
```

```
Offset
+000
```

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 and save the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000.

## 6. Shift “X” and “Y”:

```
Print Setup    7/12
  Offset
  Shift X
> Shift Y
```

```
Shift Y
+000
```

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 and save the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is +000.



Label printing software or network driver settings will take precedence and overwrite manual settings.

## 7. Reference “X” and “Y”:

```
Print Setup 9/12
Shift Y
Reference X
> Reference Y
```

```
Reference Y
000
```

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 and save the value into printer. Press **MENU** key to cancel the setting and return to the previous menu. The default value is 000.

## 8. Code page:

```
Print Setup 10/12
Reference X
Reference Y
> Code Page
```

```
Code Page 11/41
> 850
852
860
```

Use this option to set the code page of international character set. For more information about code page, please refer to the programming manual. When entering the code page list, the code page on the right side of the “>” icon is the printer's current setting. Press the **UP** ⏵ and **DOWN** ⏴ to select the code page, and press the **SELECT** button to enable and save the setting. Press **MENU** key to cancel the setting and return to the previous menu.

***Refer to next page for code listings.***



Label printing software or network driver settings will take precedence and overwrite manual settings.

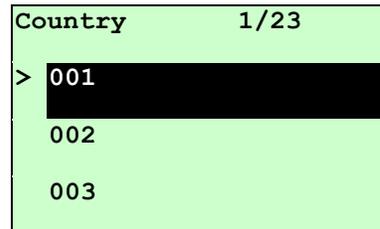
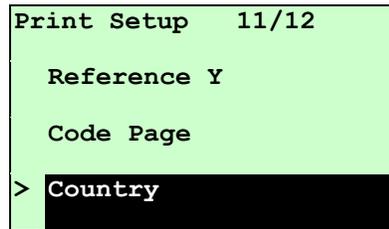
## Code Listings

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		

## 9. Country:



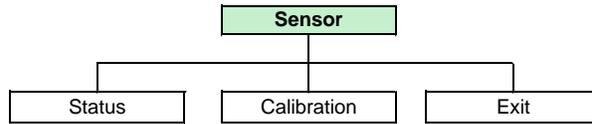
Use this option to set the country code for the LCD display. Press the **UP**  and **DOWN**  to select the country code, and press the **SELECT** button to set and save the value into printer. When entering this list, the country code on the right side of ">" icon is the current printer setting. Press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



Label printing software or network driver settings will take precedence and overwrite manual settings.

# Sensor

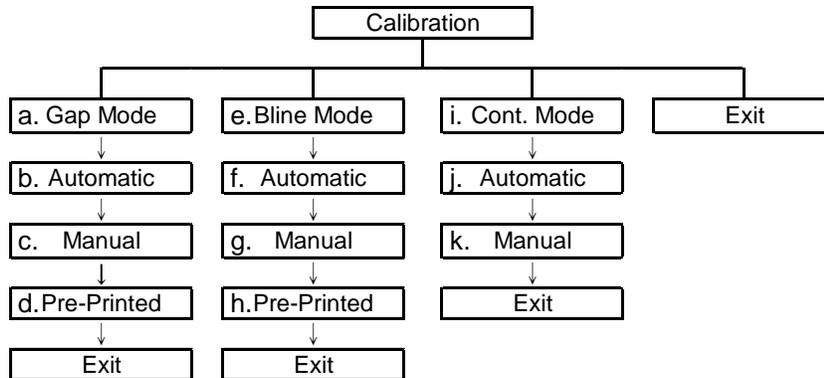


## 1. Status:

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
```

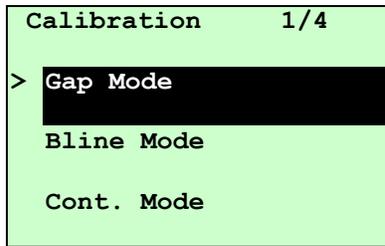
## 2. Calibration:



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

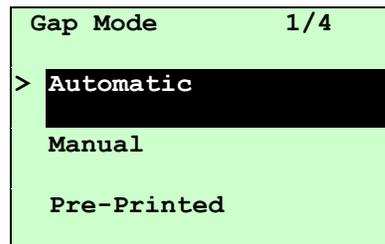
### a. Gap Mode:

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



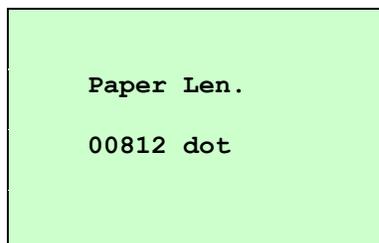
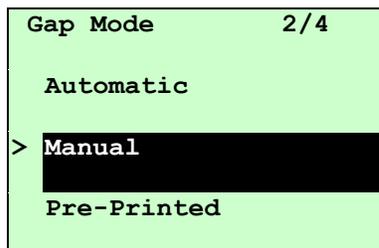
### b. Automatic:

When entering the [Automatic] option, the 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.

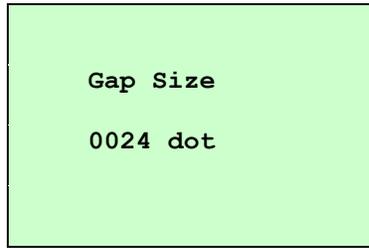


### c. Manual:

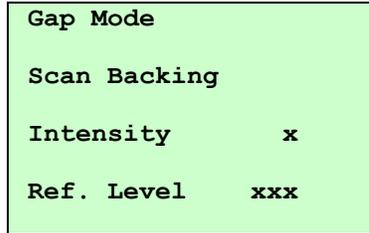
In case "Automatic" sensor calibration cannot detect the media, please use "Manual" function to calibrate the gap sensor. When entering [Manual] option, you will see following message. Please complete the following 5-steps.



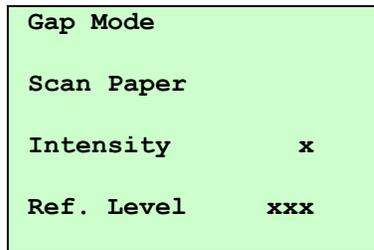
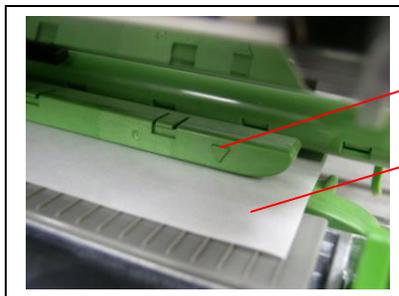
1. Press the **DOWN** ⏴ button to move the cursor from left to right digit, and press the **UP** ⏵ button to set the value from "0" to "9" and the "dot mm/ inch". Press the **SELECT** button to set the paper length into the printer.



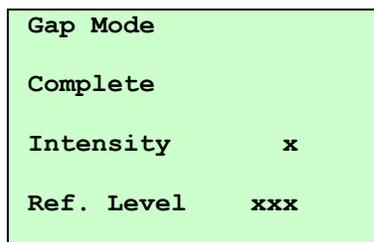
2. Press the **DOWN** ⏴ button to move the cursor from left to right digit, and press the **UP** ⏵ button to set the value from “0” to “9” and the “dot mm/ inch”. Press the **SELECT** button to set the gap size into the printer.



3. 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.



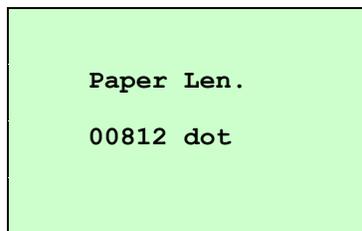
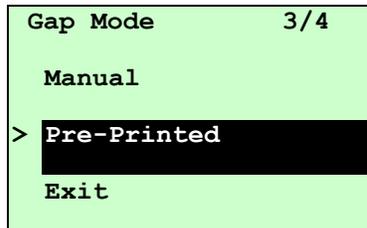
4. Place the label with liner under the Media sensor. Press the **SELECT** button to set the value into the printer.



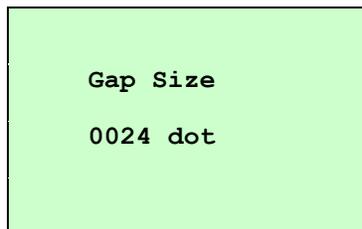
5. The gap sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

#### d. Pre-Printed:

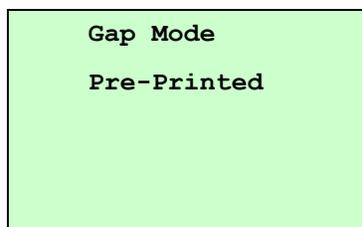
This function can set the paper length and gap size before auto-calibration of the sensor sensitivity. It may improve sensitivity accuracy. When entering [Pre-Printed] option, you will see following message. Please complete the following 3-steps.



1. Press the **DOWN** Ⓞ button to move the cursor from left 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 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.



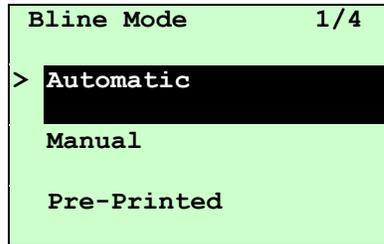
3. The printer will feed labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

**e. Bline Mode:**

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

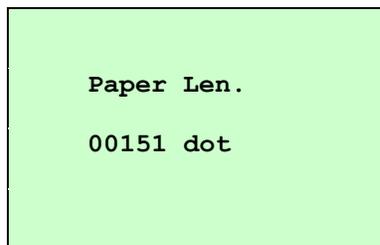
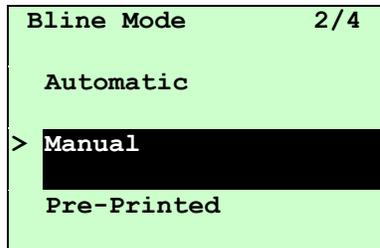
**f. Automatic:**

When entering the [Automatic] option, the printer will feed the black line/mark labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

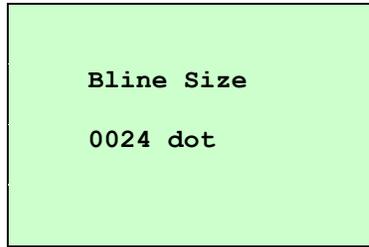


**g. Manual:**

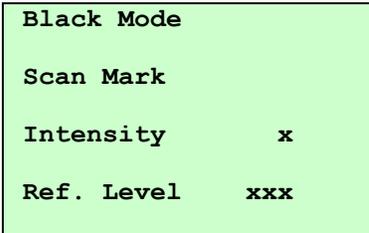
In case "Automatic" sensor calibration cannot detect the media, please use "Manual" function to calibrate the black line/mark sensor. When entering [Manual] option, you will see following message. Please complete the following 5-steps.



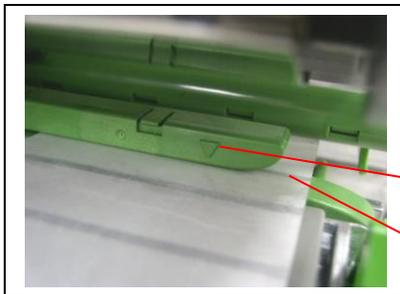
1. Press the **DOWN** ⤵ button to move the cursor from left to right digit, and press the **UP** ⤴ button to set the value from "0" to "9" and the "dot mm/ inch". Press the **SELECT** button to set the paper length into the printer.



2. Press the **DOWN** ⏴ button to move the cursor from left 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.

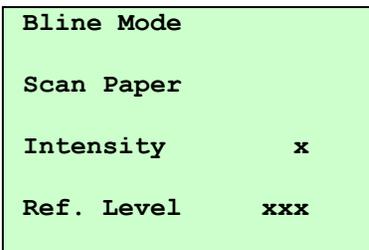


3. Open the print head mechanism, put the Label black line/mark under the media sensor. Press the **SELECT** button to set the value into the printer.



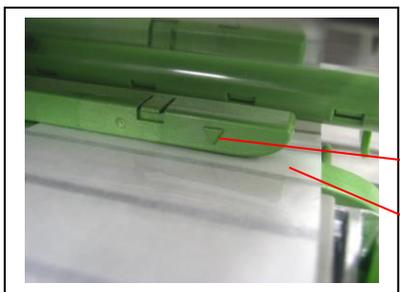
Media sensor

Black Line/Mark (bottom side)



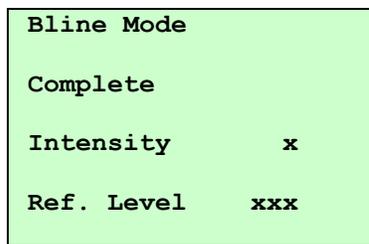
4. Place the white portion of the label (no black line/mark) under the Media sensor. Press the **SELECT** button to set the white value into the printer.

**Normally the "Ref. Level" for bline/mark should be larger than paper for over 128. If the media sensor fails to do so, manually adjust the intensity by pressing UP ⏵ and DOWN ⏴ to reach the above value.**



Media sensor

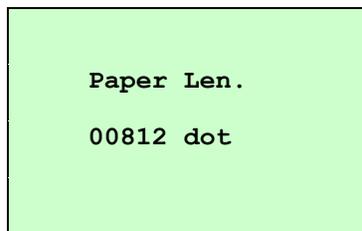
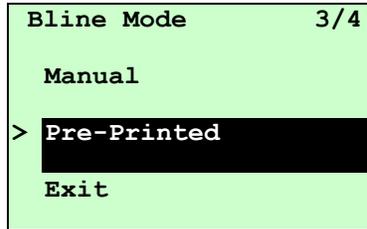
Label (white portion only)



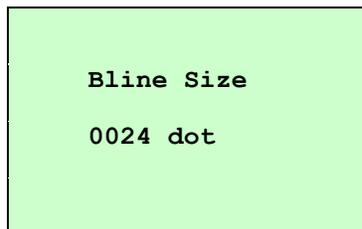
5. The bline sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

## h. Pre-Printed:

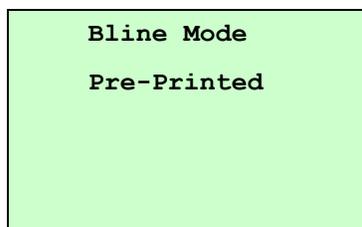
This function can set the paper length and gap size before auto-calibration of the sensor sensitivity. It may improve sensitivity accuracy. When entering [Pre-Printed] option, you will see following message. Please complete the following 3-steps.



1. Press the **DOWN** ⏴ button to move the cursor from left 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.



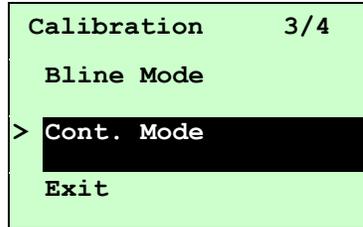
2. Press the **DOWN** ⏴ button to move the cursor from left to right digit, and press the **UP** ⏵ button to set the value from "0" to "9" and the "dot mm/inch". Press the **SELECT** button to set the bline size into the printer.



3. The printer will feed labels to calibrate the sensor sensitivity automatically. When calibration is completed, the LCD screen will return to the previous menu.

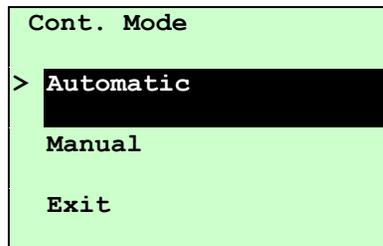
**i. Continuous Mode:**

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



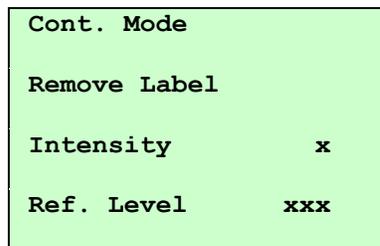
**j. Automatic:**

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



**k. Manual:**

In case "Automatic" sensor calibration cannot detect the media, please use "Manual" function to calibrate the sensor manually. When entering [Manual] option, you will see following message. Please complete the following 3-steps.



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.

```

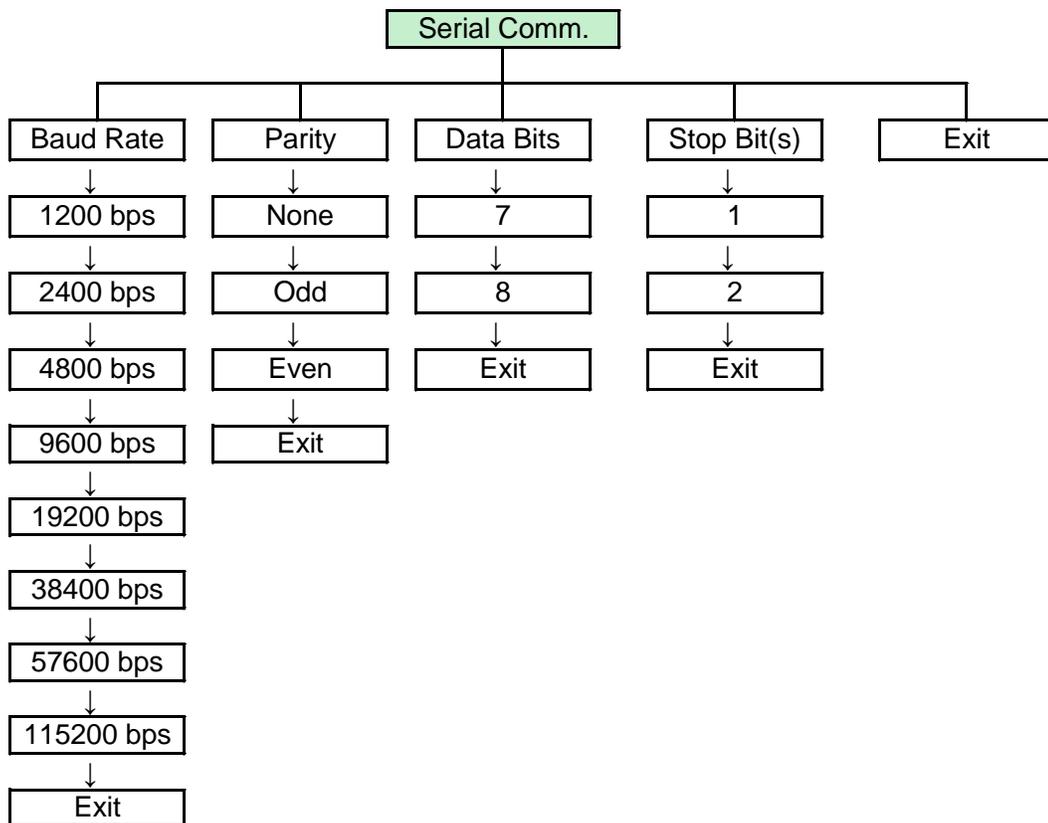
Cont. Mode

Complete

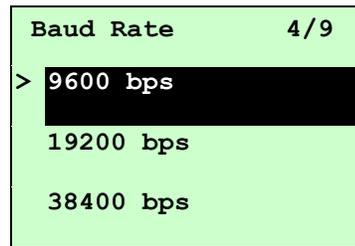
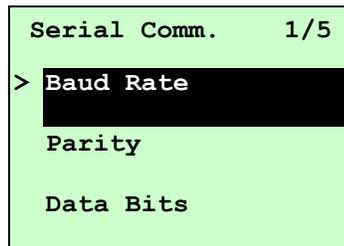
Intensity      x
Ref. Level    xxx
  
```

3. The sensor calibration is complete. Press the **SELECT** button the LCD screen will return to the previous menu.

## Serial Communication

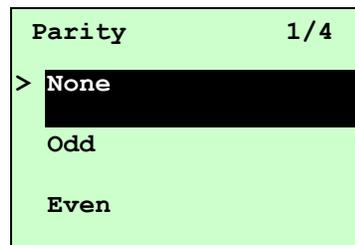
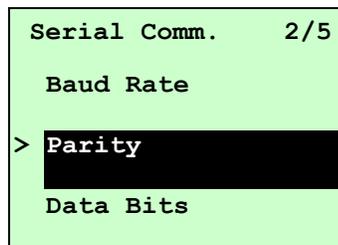


## 1. Baud Rate:



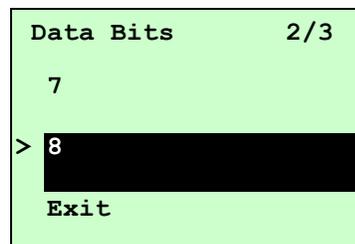
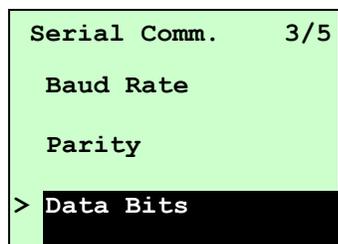
This option is used to set the RS-232 baud rate. The default setting is 9600 bps. Press **UP** and **DOWN** buttons to select the different baud rate and press **SELECT** button to set the value into printer. When you enter this list, the baud rate value shown right side of ">" icon is the current setting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

## 2. Parity:



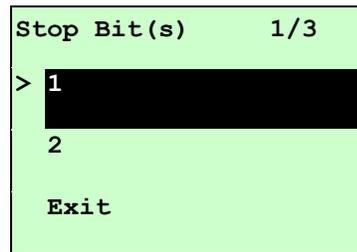
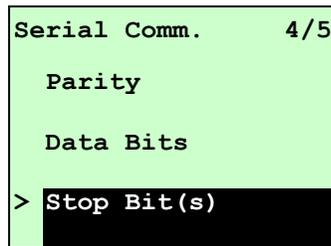
This option is used to set the RS-232 parity. The default setting is "None". Press **UP** and **DOWN** buttons to select the different parity and press **SELECT** button to set the value into printer. When you enter this list, the parity shown right side of ">" is the printer current setting. Press **MENU**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

## 3. Data Bits:



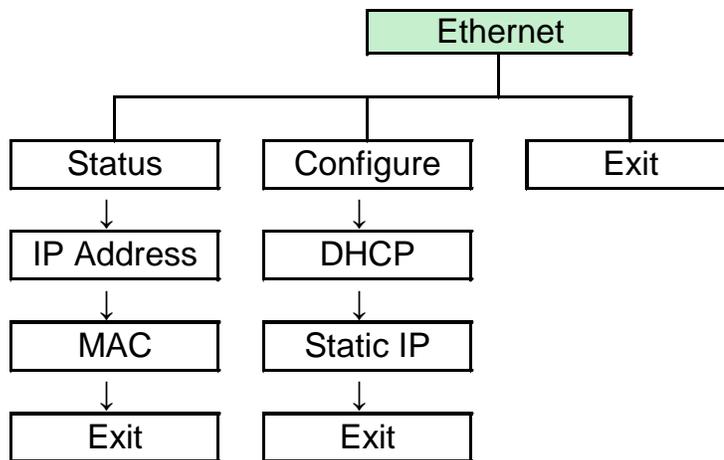
This option is used to set the RS-232 Data Bits. The default setting is "8" data bits. Press **UP** and **DOWN** buttons to select the different Data Bits and press **SELECT** button to set the value into printer. When you enter this list, the Data Bits shown right side of ">" icon is the printer current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

## 4. Stop Bits:



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

## Ethernet Communication



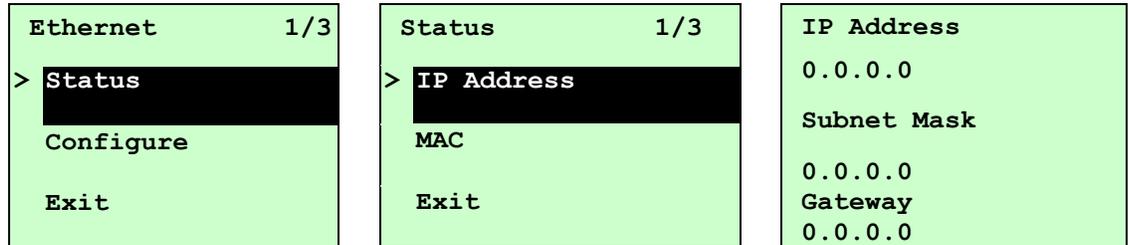
Use this menu to configure the internal Ethernet configuration, check the printer's Ethernet module status, and reset the Ethernet module. This function is available on the LCD display when an Ethernet card is installed. Press **UP** and **DOWN** buttons to select the different options, and press **SELECT** button to enter the option. Press **MENU** key to cancel the setting and return to the previous menu.

# 1. Status: (IP Address / MAC)

Use this menu to check the Ethernet setting status

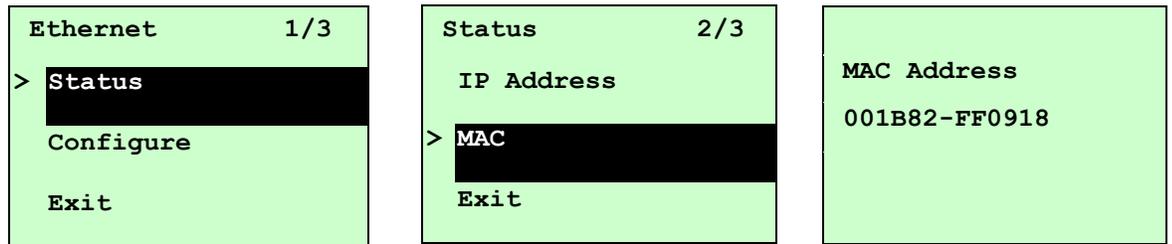
## a. IP Address:

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



## b. MAC Address:

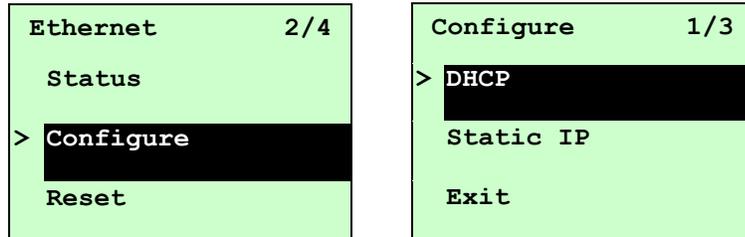
The MAC address information will be shown on the LCD display. Please press **SELECT** or  **MENU** button to return to the previous menu.



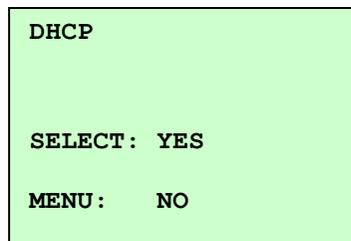
## 2. Configuration: (DHCP / Static)

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

### a. DHCP:



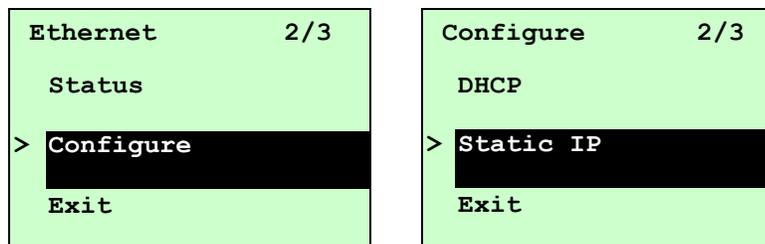
Press **UP** and **DOWN** buttons to select the DHCP function and press **SELECT** to enter. Press **MENU** key to cancel the setting and return to the previous menu.



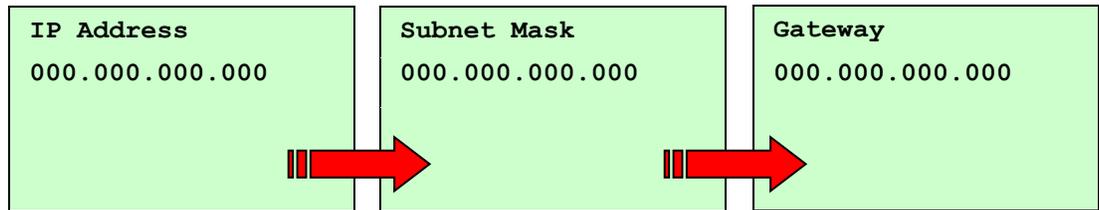
Press **SELECT** button the printer will set DHCP and restart to reset the setting. Press **MENU** button to return to the previous menu

### b. 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.

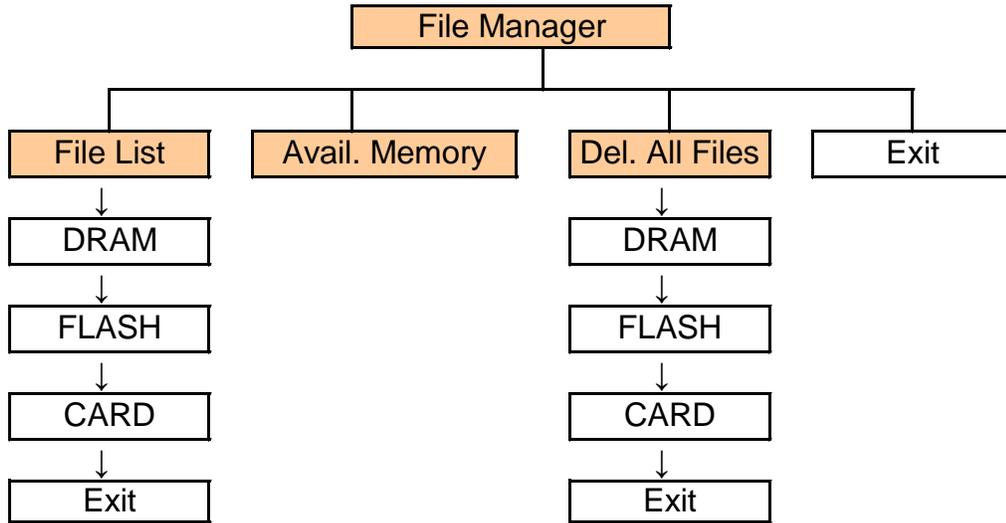
```
Static IP

SELECT: YES

MENU: NO
```

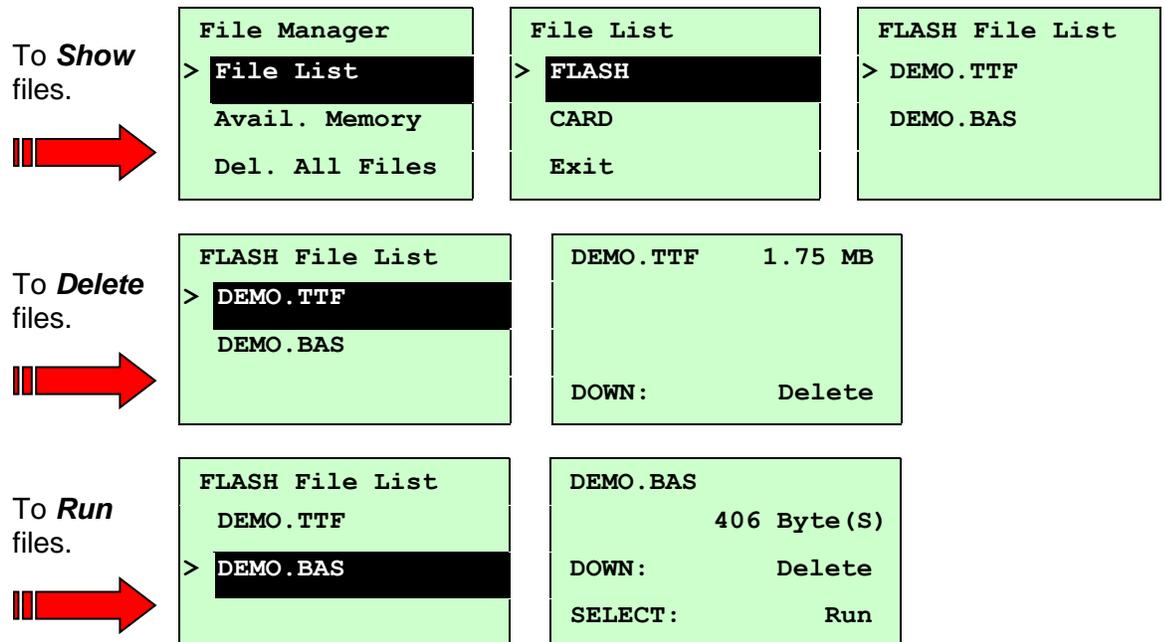
Press the **SELECT** button printer will restart to reset the Ethernet module setting. Press **MENU** key to cancel the setting.

# File Manager



## 1. File List

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



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.

## 2. Available Memory

Use this menu to show available memory space.

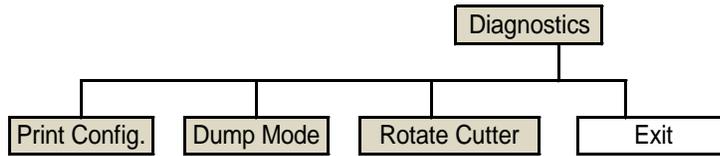
File Manager 2/4	Avail. Memory
File List	DRAM: 256 KB
> Avail. Memory	FALSH: 6656 KB
Del. All Files	CARD: 0 KB

## 3. Delete 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.

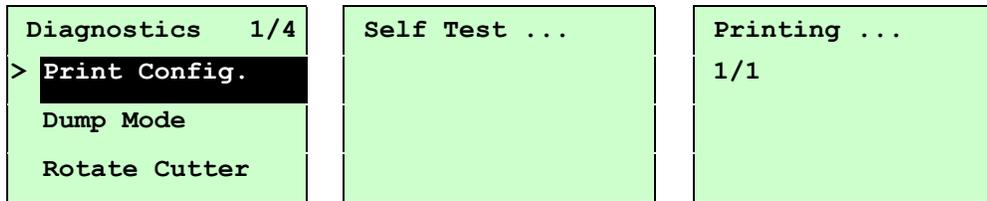
File Manager 3/4	File List 1/4	Del. All Files
File List	> DRAM	SELECT: YES
Avail. Memory	FALSH	MENU: NO
> Del. All File	CARD	

# Diagnostics



## 1. Print Configuration

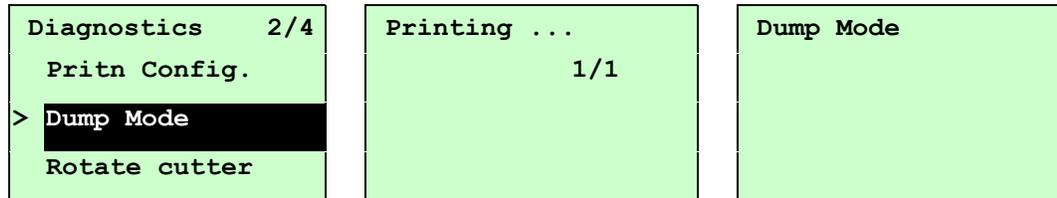
This feature is used to print current printer configuration to the label. On the printout, there is a print head test pattern, which is useful for checking if there is any dot damage on the print head heater element.



Self-test printout	
<pre> <b>PRINTER INFO.</b> xxxxx Version: x.xx EZ SERIAL NO.: xxxxxxxxxxxx MILAGE(m): 25 CHECKSUM: 07B575A3 SERIAL PORT: 9800,N,8,1 CODE PAGE: 850 COUNTRY CODE: 001 SPEED: 3 INCH DENSITY: 8.0 SIZE: 4.00 , 2.90 BLINE: 0.12 , 0.00 TRANSPARENCE: 2 HOST NAME: PS-60002 MAC ADDRESS: 00-1B-82-60-00-02 DHCP ENABLED: YES IP ADDRESS: 0.0.0.0 SUBNET MASK: 0.0.0.0 DEFAULT GATEWAY: 0.0.0.0 ***** FILE LIST: DRAM FILE:          0 FILE(S)  FLASH FILE:         0 FILE(S)  PHYSICAL DRAM:      xxxx KBYTES AVAILABLE DRAM:     xxx KBYTES FREE PHYSICAL FLASH:     xxxx KBYTES AVAILABLE FLASH:    xxxx KBYTES FREE END OF FILE LIST *****           </pre>	<ul style="list-style-type: none"> <li>Printer model name &amp; Main board firmware version</li> <li>Printer serial number</li> <li>Printed mileage</li> <li>Main board firmware checksum</li> <li>Serial port setting</li> <li>Code page</li> <li>Country code</li> <li>Print speed</li> <li>Print darkness</li> <li>Label size (width, height)</li> <li>Black mark or gap size (vertical gap, offset)</li> <li>Sensor sensitivity</li> </ul> <ul style="list-style-type: none"> <li>Ethernet settings information (option)</li> </ul> <ul style="list-style-type: none"> <li>File management information</li> </ul> <ul style="list-style-type: none"> <li>Printhead test pattern</li> </ul>

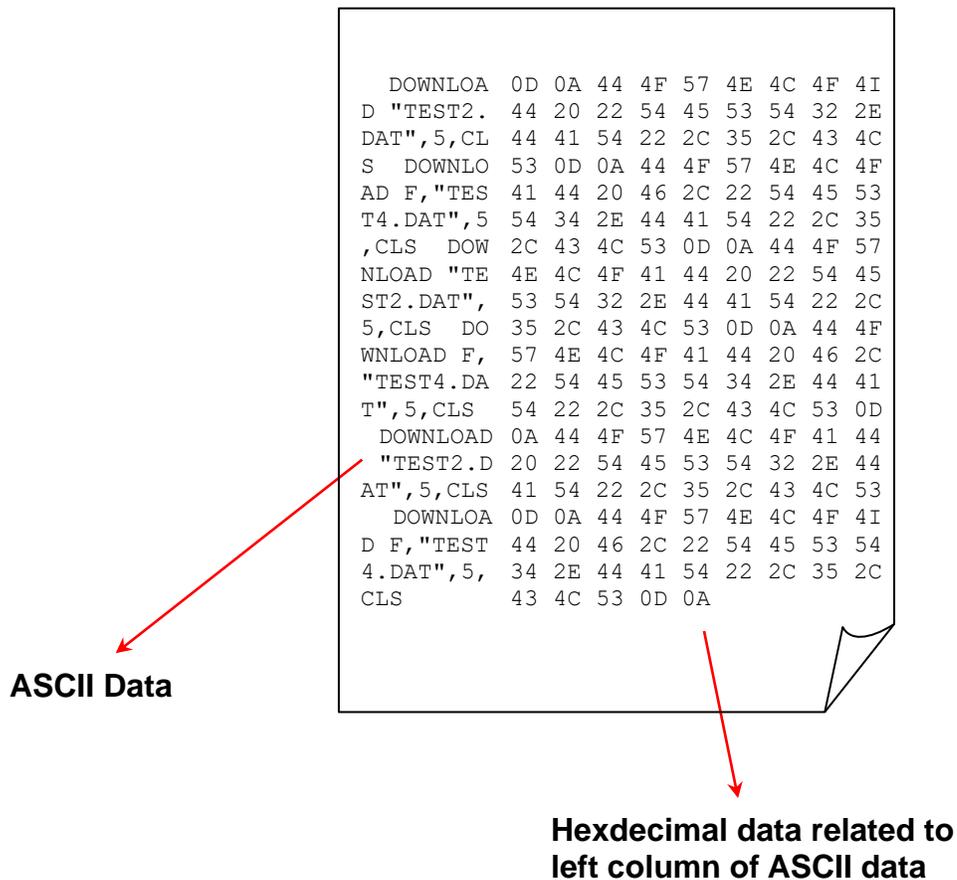
## 2. Dump Mode

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.



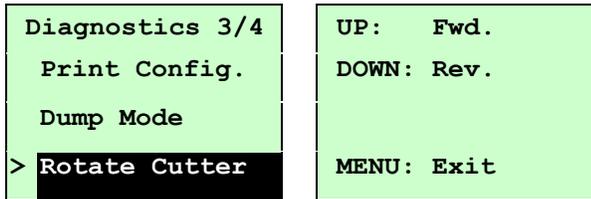
### Note:

- ❖ Dump mode requires 4" wide paper width.
- ❖ Turn off / on the power to resume printer for normal printing.
- ❖ Press FEED button to back to the previous menu

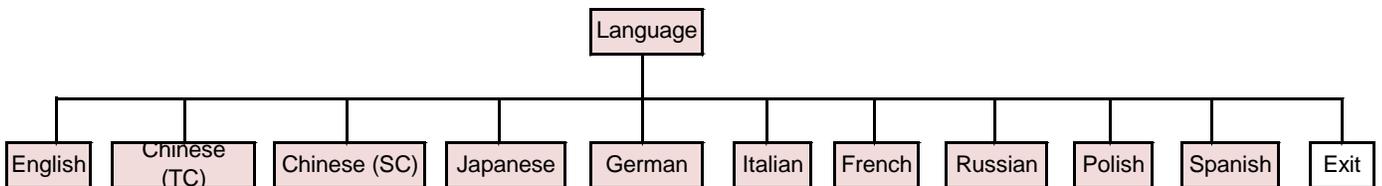


### 3. Rotate Cutter

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.

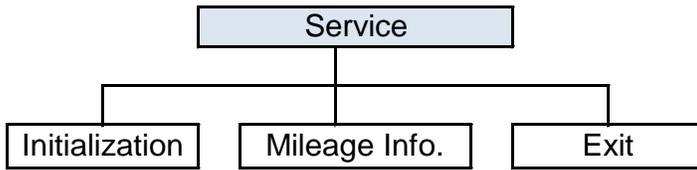


### Language



This option is used to setup the language on 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.

# Service



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

## 1. Initialization

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

```

Service      1/3
> Initialization
Mileage Info.
Exit
  
```

```

Initialization
SELECT YES
MENU NO
  
```

```

Initializing ...
  
```



***When printer initialization is done, please calibrate the gap or black mark sensor before printing precedence and overwrite manual settings.***

Parameter	Default Setting
<b>Speed</b>	PLUS Model: 6 IPS (152 mm/sec) Standard: 4 IPS (101.6 mm/sec) Upgrade (600dpi): 3 IPS (76.2 mm/sec)
<b>Density</b>	8
<b>Label width</b>	4.00"(101.6mm)
<b>Label height</b>	4.00"(101.6mm)
<b>Sensor type</b>	Gap sensor
<b>Gap setting</b>	0.12"(3.0mm)
<b>Print direction</b>	0
<b>Reference point</b>	0,0(upper left corner)
<b>Offset</b>	0
<b>Print mode</b>	Batch mode
<b>Serial port settings</b>	9600 bps, none parity, 8 data bits, 1 stop bit
<b>Code page</b>	850

Parameter Continued	Default Setting Continued
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)
Blind sensor sensitivity	2 (Will be reset. Need to re-calibrate the gap)
Language	English
IP address	DHCP

## 2. Mileage Information

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

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

# **PAL™ Print and Program Overview**

Printers featuring PAL™ Print and Program ability can be used in several ways in any given environment. This section describes 3 common ways this advanced capability is used. For help and assistance determining the best way to use this ability in your situation, please consult your sales representative.

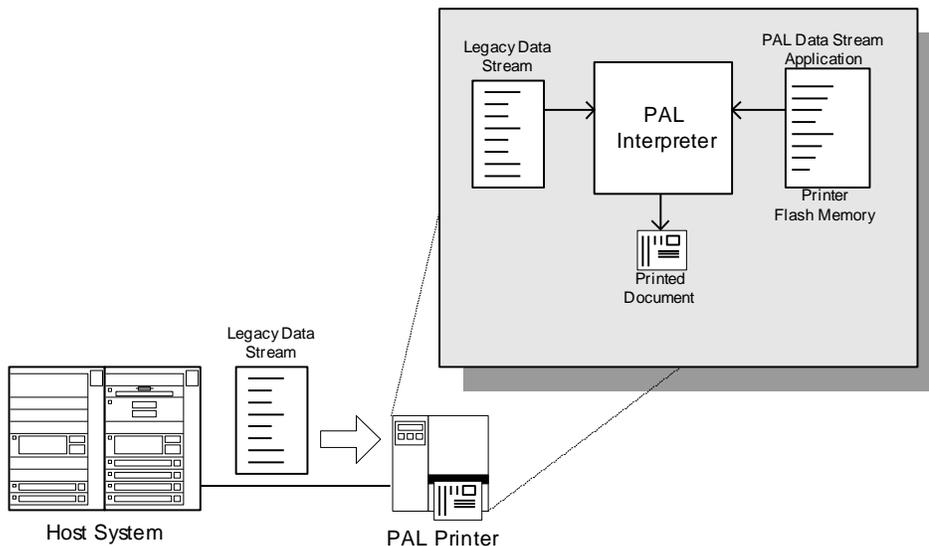
## **Traditional Printing**

This environment represents the most common use of printers. Generally a single print job (PAL™ print sequences) generates a single label. In this role the PAL™ Print and Program interpreter accepts the print job, performs the required operator processing and prints the; label, tag, or ticket. Using a Windows driver in conjunction with a Windows application program is a typical way to print in this environment. Alternatively, PAL™ print sequences may also be generated by any host application written to take advantage of this powerful language. When a PAL™ capable printer is used this way, no special “PAL™ program” must be loaded on the printer. Print sequences generated by a Windows driver or host program are simply sent to the printer resulting in print output just like traditional printers.

## **Legacy Data Stream Interpretation**

PAL™ Print and Program capable printers uniquely address applications where upgrading to modern cost effective technology is desired. Often cost-prohibitive software reprogramming to change a data stream prevents an organization from moving to new printing technologies.

Using a PAL™ Print and Program capable printer solves this problem. In this case a PAL™ program is written which interprets a data stream normally sent to the legacy device being replaced. This program is stored on the printer and is automatically executed each time the printer is powered on. This program is able to produce a new label format based on this legacy data. Even though the host computer is sending the exact same legacy data to the printer, the label format can be completely different. For example the new format may include bar codes, scaled and/or rotated fonts, lines, logo's etc. Even though the legacy device being replaced does not support these print abilities, the new label format can. For example, text only outputs such as produced by a dot-matrix printer or card embosser may now be presented in a more functional format. Information in the data stream can be reformatted into any size font in any rotation, or even printed as bar code. This example demonstrates how PAL™ Print and Program capable printer can replace a legacy print device with no host software changes required.



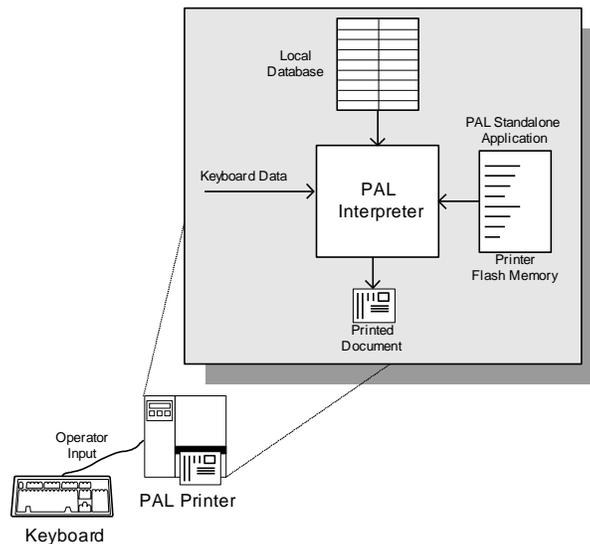
## Standalone/Downtime Applications

PAL™ Print and Program capable printers may be programmed to operate independent of a PC/host connection. This standalone ability may be used in cases where no PC/host connection is needed or as a fail-safe backup when the PC/host or network is unavailable. The Standalone Application program is stored in the printer memory and can accept input from a PS/2 keyboard, bar code scanner, or other serial devices such as an electronic scale. These programs may use the printer's LCD to prompt for user input and may also include databases. Unlike other bar code printers that allow basic static forms to be loaded in the printer, PAL™ Print and Program capable printers provide advanced abilities.

Examples of these advanced capabilities are:

- ❑ Ability to operate on line from host or off line in stand-alone mode
- ❑ Ability to range check user input
- ❑ Ability to combine data from multiple fields into a single bar code
- ❑ Ability to access database stored in printer
- ❑ Ability to perform math calculations (addition, subtraction, multiplication, division, etc.)
- ❑ Ability to perform logical calculations (equal to, less than, greater than, etc.)

Shown below is an example where a stand-alone PAL™ application and database is stored in the printer. Operator input combined with internal database information is used to create a label. For example, this application could request a part number and physical dimensions of a particular part by prompting for this information on the printer LCD. After the operator inputs the requested information on the PS/2 keyboard, the printer could calculate the volume, and then based on the part number lookup the part description in a database to produce a label.

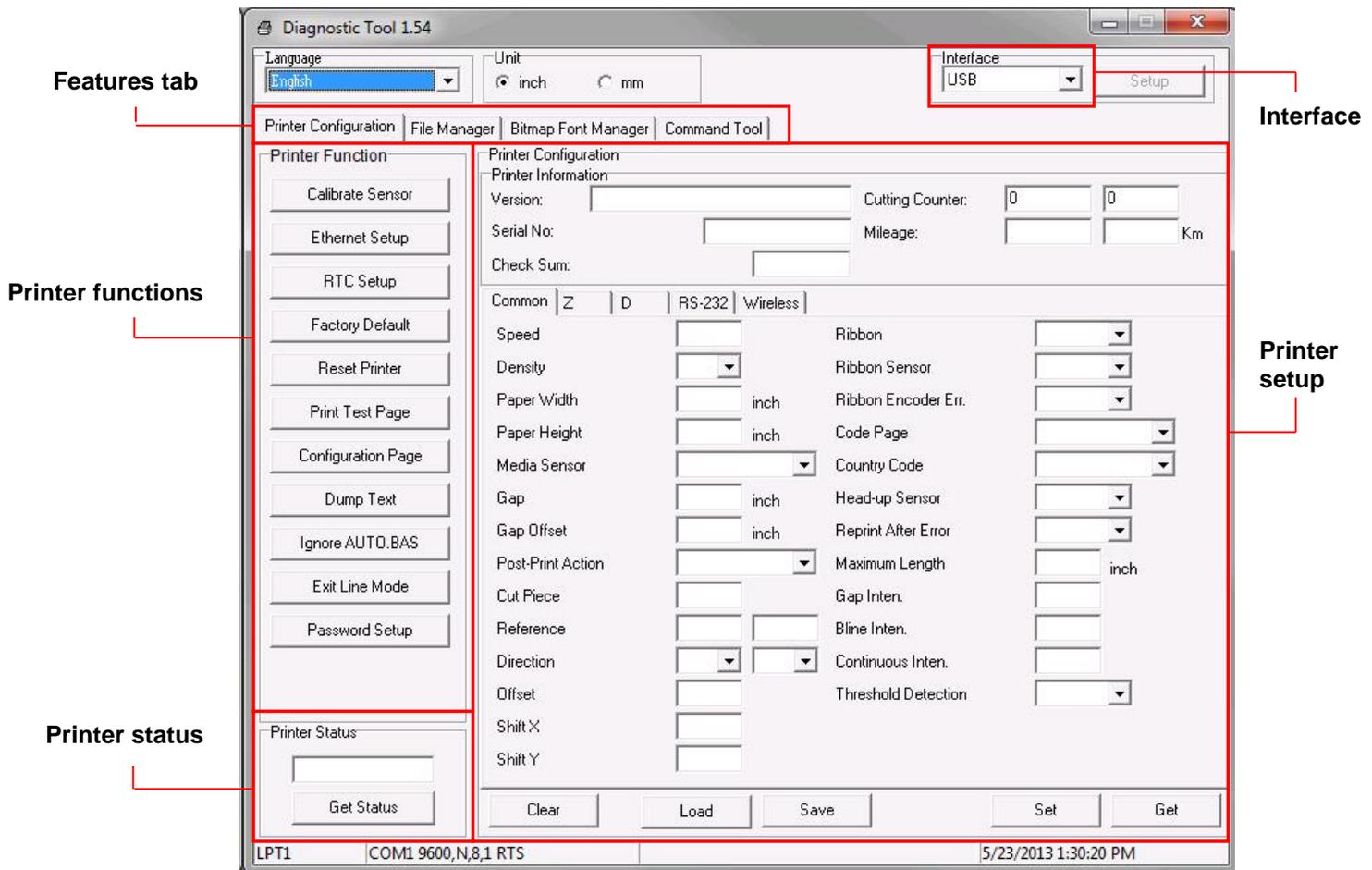


# Diagnostic Tool

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.

## Start 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.



## Printer Function (Calibrate sensor, Ethernet setup, RTC setup...)

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

	Function	Description
Printer Function		
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



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

## Setting Ethernet by Diagnostic Utility

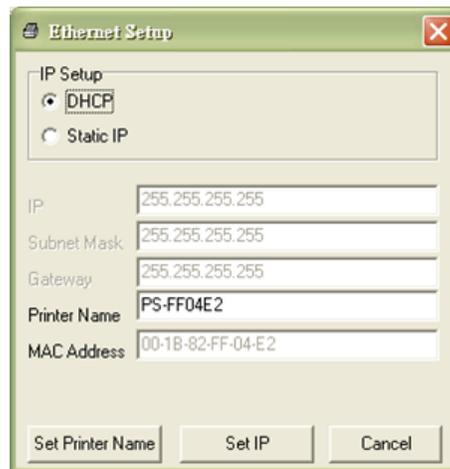
The Diagnostic Utility is enclosed in the CD disk \Diagnostic Utilities directory. Users can use Diagnostic Tool to setup the Ethernet by RS-232, USB and Ethernet interfaces. The following contents will instruct users how to configure the Ethernet by these three interfaces.

## 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  `DiagTool.exe` icon.
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.

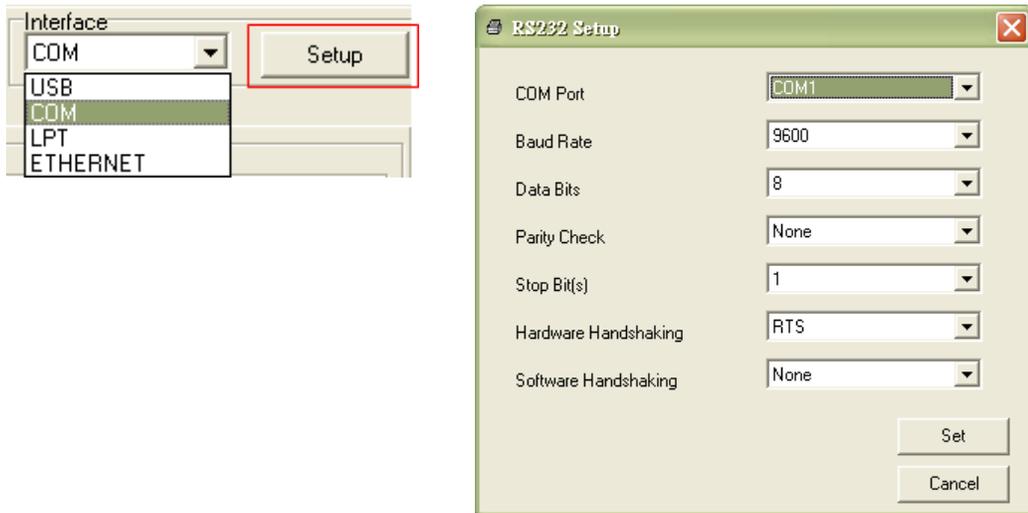


5. Click on the “Ethernet Setup” button from “Printer Function” group in Printer Configuration tab, select “Static IP” to setup the IP address, subnet mask and gateway for the on board Ethernet.

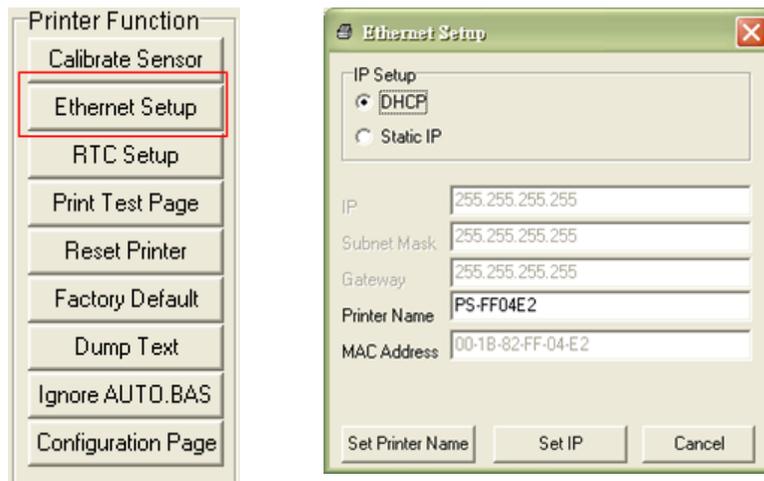


## Using RS-232 interface to setup Ethernet interface

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  `DiagTool.exe` icon.

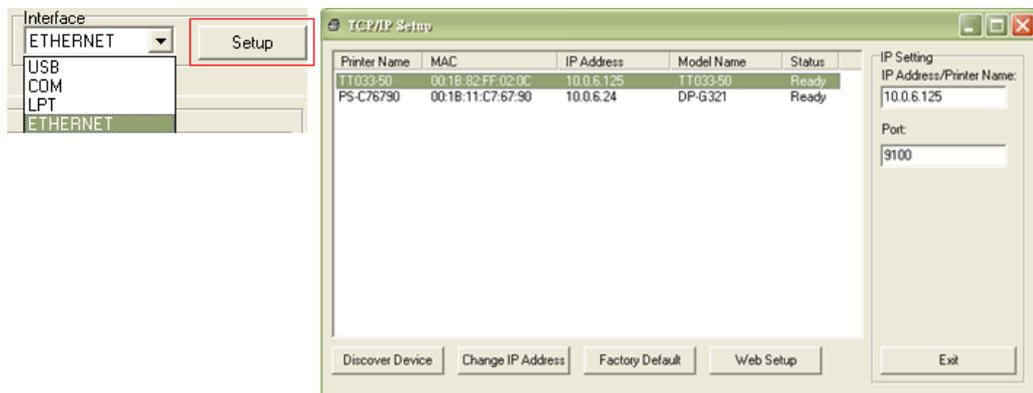


4. Click on the “Ethernet Setup” button from “Printer Function” group in Printer Configuration tab, select “Static IP” to setup the IP address, subnet mask and gateway for the on board Ethernet.

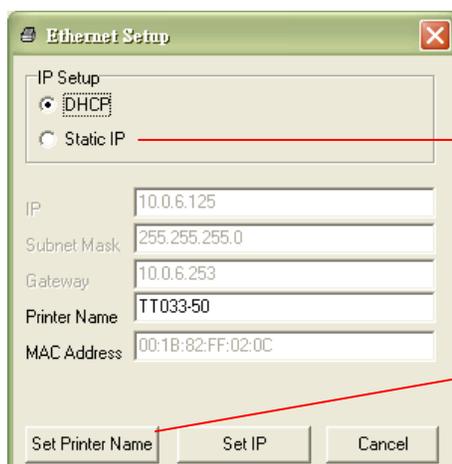


## Using Ethernet interface to setup Ethernet interface

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  **DiagTool.exe** icon.
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 correspondent 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” button to take effect and save settings.

Users can also change the “Printer Name” by another model name in this fields then click “Set Printer Name” to take effect this change.

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.

# Troubleshooting

## Common Problems

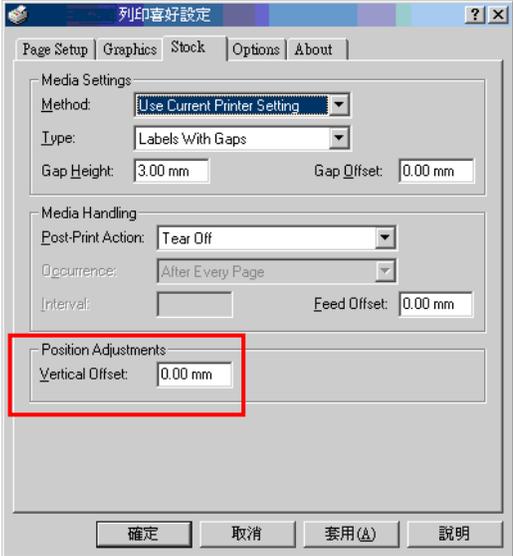
The following guide lists the most common problems that may be encountered when operating this bar code printer. If the printer still does not function after all suggested solutions have been invoked, please contact the Customer Service Department of your purchased reseller or distributor for assistance.

Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	<ul style="list-style-type: none"> <li>* The power cord is not properly connected.</li> </ul>	<ul style="list-style-type: none"> <li>* Plug the power cord in printer and outlet.</li> <li>* Switch the printer on.</li> </ul>
Carriage Open	<ul style="list-style-type: none"> <li>* The printer carriage is open.</li> </ul>	<ul style="list-style-type: none"> <li>* Please close the print carriage.</li> </ul>
No Ribbon	<ul style="list-style-type: none"> <li>* Running out of ribbon.</li> <li>* The ribbon is installed incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>* Supply a new ribbon roll.</li> <li>* Please refer to the steps in user's manual to reinstall the ribbon.</li> </ul>
No Paper	<ul style="list-style-type: none"> <li>* Running out of label.</li> <li>* The label is installed incorrectly.</li> <li>* Gap/black mark sensor is not calibrated.</li> </ul>	<ul style="list-style-type: none"> <li>* Supply a new label roll.</li> <li>* Please refer to the steps in user's manual to reinstall the label roll.</li> <li>* Calibrate the gap/black mark sensor.</li> </ul>
Paper Jam	<ul style="list-style-type: none"> <li>* Gap/black mark sensor is not set properly.</li> <li>* Make sure label size is set properly.</li> <li>* Labels may be stuck inside the printer mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>* Calibrate the gap/black mark sensor.</li> <li>* Set label size correctly.</li> </ul>
Take Label	<ul style="list-style-type: none"> <li>* Peel function is enabled.</li> </ul>	<ul style="list-style-type: none"> <li>* If the peeler module is installed, please remove the label.</li> <li>* If there is no peeler module in front of the printer, please switch off the printer and install it.</li> <li>* Check if the connector is plugging correctly.</li> </ul>

<p>UP: Fwd. DOWN: Rev. MENU: Exit</p>	<p>* Cutter jam. * There is no cutter installed on the printer. * Cutter PCB is damaged.</p>	<p>* If the cutter module is installed, please press UP or DOWN key to rotate the cutter up or down to make the knife back to the right position. * Remove the label. * Make sure the thickness of label is less than 200 g/m2 (for regular cutter) or 300 g/m2 (for heavy duty cutter). * Replace a cutter PCB.</p>
<p><b>Not Printing</b></p>	<p>* Cable is not well connected to serial or USB interface or parallel port. * The serial port cable pin configuration to pin connected.</p>	<p>* 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.</p>
<p><b>Memory full ( FLASH / DRAM )</b></p>	<p>* The space of FLASH/DRAM is full.</p>	<p>* Delete unused files in the FLASH/DRAM. * The max. numbers of file of DRAM is 50 files. * The max. user addressable memory space of DRAM is 128KB. * The max. numbers of file of FLASH is 256 files. * The max. user addressable memory space of FLASH is 2560 KB for standard models and 6656KB PLUS models.</p>

<p><b>SD card is unable to use</b></p>	<ul style="list-style-type: none"> <li>* SD card is damaged.</li> <li>* SD card doesn't insert correctly.</li> <li>* Use the non-approved SD card manufacturer.</li> </ul>	<ul style="list-style-type: none"> <li>* Use the supported capacity SD card.</li> <li>* Insert the SD card again.</li> <li>* The supported SD card spec. <ul style="list-style-type: none"> <li>- 128MB</li> <li>- 256MB</li> <li>- 512MB</li> <li>- 1GB</li> <li>- 4GB SDHC CLASS 6</li> </ul> </li> <li>* Approved SD card manufacturers; SanDisk, Transcend</li> </ul>
<p><b>PS/2 port does not work</b></p>	<ul style="list-style-type: none"> <li>* Did not turn off power prior to plug in the PS/2 keyboard.</li> <li>* PS/2 keyboard is damaged.</li> <li>* PS/2 keyboard doesn't plug-in correctly.</li> <li>* There is no BAS file in the printer.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn off printer power prior to plug in the PS/2 keyboard .</li> <li>* Plug the PS/2 keyboard again.</li> <li>* Make sure the keyboard is fine.</li> <li>* Make sure if there is any BAS file downloaded into printer.</li> </ul>
<p><b>Poor Print Quality</b></p>	<ul style="list-style-type: none"> <li>* Ribbon and media is loaded incorrectly</li> <li>* Dust or adhesive accumulation on the print head.</li> <li>* Print density is not set properly.</li> <li>* Printhead element is damaged.</li> <li>* Ribbon and media are incompatible.</li> <li>* The printhead pressure is not set properly.</li> </ul>	<ul style="list-style-type: none"> <li>* Reload the supply.</li> <li>* Clean the printhead.</li> <li>* Clean the platen roller.</li> <li>* Adjust the print density and print speed.</li> <li>* Run printer self-test and check the print head test pattern if there is dot missing in the pattern.</li> <li>* Change proper ribbon or proper label media.</li> <li>* Adjust the printhead pressure adjustment knob. <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> </ul> </li> <li>* 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.</li> <li>* The release lever does not latch the printhead properly.</li> </ul>
<p><b>LCD panel is dark and keys are not working</b></p>	<ul style="list-style-type: none"> <li>* The cable between main PCB and LCD panel is loose.</li> </ul>	<ul style="list-style-type: none"> <li>* Check if the cable between main PCB and LCD is secured or not.</li> </ul>

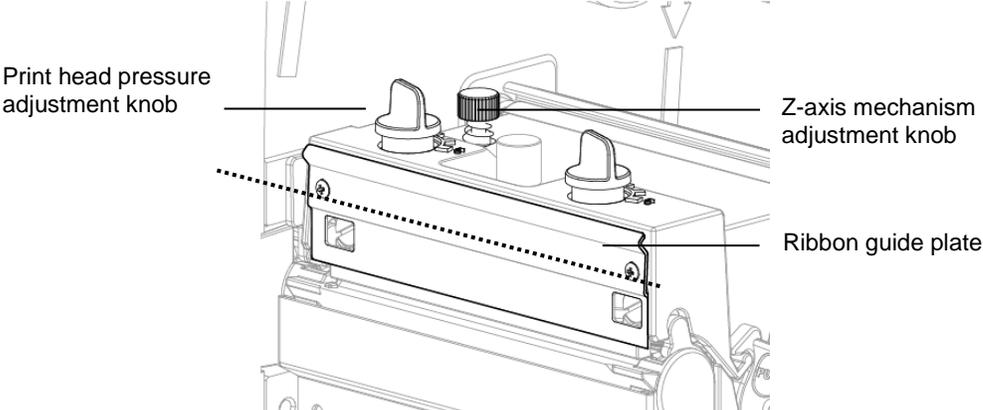
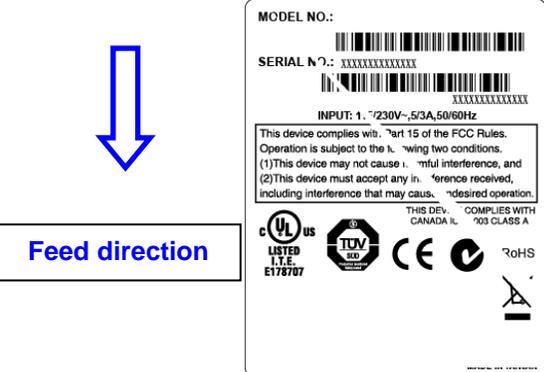
<p><b>LCD panel is dark but the LEDs are lit</b></p>	<p>* The printer initialization is unsuccessful.</p>	<p>* Turn OFF and ON the printer again. * Initialize the printer.</p>
<p><b>LCD panel is dark and LEDs are lit on, but The label is feeding forward</b></p>	<p>* The LCD panel harness connector is loose.</p>	<p>* The LCD panel harness connector is plugged upside down.</p>
<p><b>Ribbon encoder sensor doesn't work</b></p>	<p>* The ribbon encoder sensor connector is loose.</p>	<p>* Fasten the connector.</p>
<p><b>Ribbon end sensor doesn't work</b></p>	<p>* The connector is loose. * The ribbon sensor hole is covered with dust.</p>	<p>* Check the connector. * Clear the dust in the sensor hole by the blower.</p>
<p><b>Peel sensor is not working</b></p>	<p>* Peel sensor is not located on the correct position. * The connector is loose.</p>	<p>* Make sure that the media goes through the Peel sensor. * Plug the connect cable correctly.</p>
<p><b>Cutter is not working</b></p>	<p>* The connector is loose.</p>	<p>* Plug in the connect cable correctly.</p>

<p><b>Label feeding is not stable (skew) when printing</b></p>	<ul style="list-style-type: none"> <li>* The media guide does not touch the edge of the media.</li> </ul>	<ul style="list-style-type: none"> <li>* If the label is moving to the right side, please move the label guide to left.</li> <li>* If the label is moving to the left side, please move the label guide to right.</li> </ul>
<p><b>Skip labels when printing</b></p>	<ul style="list-style-type: none"> <li>* Label size is not specified properly.</li> <li>* Sensor sensitivity is not set properly.</li> <li>* The media sensor is covered with dust.</li> </ul>	<ul style="list-style-type: none"> <li>* Check if label size is setup correctly.</li> <li>* Calibrate the sensor by Auto Gap or Manual Gap options.</li> <li>* Clear the GAP/Black mark sensor by blower.</li> </ul>
<p><b>The printing position of small label is incorrect</b></p>	<ul style="list-style-type: none"> <li>* Media sensor sensitivity is not set properly.</li> <li>* Label size is incorrect.</li> <li>* The parameter Shift Y in the LCD menu is incorrect.</li> <li>* The vertical offset setting in the driver is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>* Calibrate the sensor sensitivity again.</li> <li>* Set the correct label size and gap size.</li> <li>* Press [MENU] → [SELECT] x3 → [DOWN]x6 → [SELECT] to fine tune the parameter of Shift Y.</li> <li>* If using the software BarTender, please set the vertical offset in the driver.</li> </ul>  <p>The screenshot shows a window titled '列印喜好設定' (Print Preference Setting) with tabs for Page Setup, Graphics, Stock, Options, and About. The 'Options' tab is active. Under 'Media Settings', 'Method' is 'Use Current Printer Setting' and 'Type' is 'Labels With Gaps'. 'Gap Height' is 3.00 mm and 'Gap Offset' is 0.00 mm. Under 'Media Handling', 'Post-Print Action' is 'Tear Off', 'Occurrence' is 'After Every Page', and 'Feed Offset' is 0.00 mm. The 'Position Adjustments' section at the bottom has 'Vertical Offset' set to 0.00 mm, which is highlighted with a red box.</p>

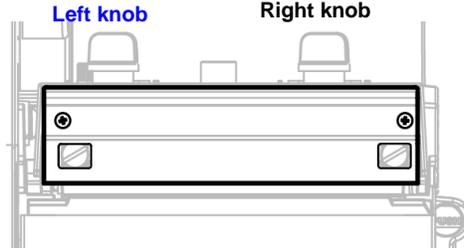
<b>The left side printout position is incorrect</b>	<ul style="list-style-type: none"> <li>* Wrong label size setup.</li> <li>* The parameter Shift X in LCD menu is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>* Set the correct label size.</li> <li>* Press [MENU] → [SELECT] x 3 → [DOWN] x 5 → [SELECT] to fine tune the parameter of Shift X.</li> </ul>
<b>Missing printing on the left or right side of label</b>	<ul style="list-style-type: none"> <li>* Wrong label size setup.</li> </ul>	<ul style="list-style-type: none"> <li>* Set the correct label size.</li> </ul>
<b>RTC time is incorrect when reboot the printer</b>	<ul style="list-style-type: none"> <li>* The battery has run down.</li> </ul>	<ul style="list-style-type: none"> <li>* Check if there is a battery on the main board.</li> </ul>
<b>Multi interface board doesn't work</b>	<ul style="list-style-type: none"> <li>* The installation is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>* Check if the board is plugged in the right connector.</li> </ul>
<b>Power and Error LEDs are blinking fast</b>	<ul style="list-style-type: none"> <li>* Power switch OFF and ON too fast.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn off the printer and wait all LEDs are dark, and turn on the printer again.</li> </ul>
<b>Wrinkle Problem</b>	<ul style="list-style-type: none"> <li>* Printhead pressure is incorrect.</li> <li>* Ribbon installation is incorrect.</li> <li>* Media installation is incorrect.</li> <li>* Print density is incorrect.</li> <li>* Media feeding is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>* Please refer to the 5.2 chapter.</li> <li>* Please set the suitable density to have good print quality.</li> <li>* Make sure the label guide touch the edge of the media guide.</li> </ul>
<b>Gray line on the blank label</b>	<ul style="list-style-type: none"> <li>* The printhead is dirty.</li> <li>* The platen roller is dirty.</li> </ul>	<ul style="list-style-type: none"> <li>* Clean the printhead.</li> <li>* Clean the platen roller.</li> </ul>
<b>Irregular printing</b>	<ul style="list-style-type: none"> <li>* The printer is in Hex Dump mode.</li> <li>* The RS-232 setting is incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn off and on the printer to skip the dump mode.</li> <li>* Re-set the Rs-232 setting.</li> </ul>

# Mechanism Fine Adjustment to Avoid Ribbon Wrinkles

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

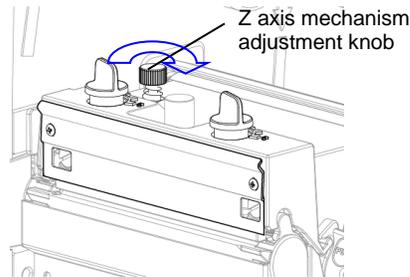
<p><b>Adjustable Printer Parts</b></p>		
<p><b>Symptom</b></p>	<p><b>1. Wrinkle happens from label lower left to upper right direction (" / ")</b></p>	<p><b>2. Wrinkle happens from label lower right to upper left direction (" \ ")</b></p>
<p><b>Wrinkle Example</b></p>		

### 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.

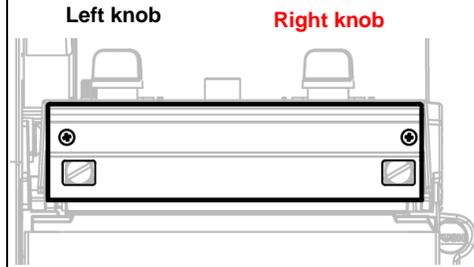
1. Decrease the right side print head pressure adjustment knob setting 1 level per each adjustment then print the label again to check if wrinkle is gone.
2. If the right side print head adjustment knob setting has been set to index 1 (the lowest pressure index), please increase the left side print head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

# Maintenance

## Tools and Methods

Printer	Method	Interval
<b>Print Head</b>	<ol style="list-style-type: none"> <li>1. Always turn off the printer before cleaning the print head.</li> <li>2. Allow the print head to cool for a minimum of one minute.</li> <li>3. Use a cotton swab (Head cleaner pen) and 100% ethanol to clean the print head surface.</li> </ol>	Clean the print head when changing a new label roll
<b>Platen Roller</b>	<ol style="list-style-type: none"> <li>1. Turn the power off.</li> <li>2. Rotate the platen roller and wipe it thoroughly with 100% ethanol and a cotton swab, or lint-free cloth.</li> </ol>	Clean the platen roller when Changing a new label roll
<b>Tear Bar /Peel Bar</b>	Use the lint-free cloth with 100% ethanol to wipe it.	As needed
<b>Sensor</b>	Compressed air or vacuum	Monthly
<b>Exterior</b>	Wipe it with water-dampened cloth	As needed
<b>Interior</b>	Brush or vacuum	As needed

**Note:**

- Do not touch printer head by hand. If you touch it careless, please use ethanol to clean it.
- Please use 100% 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



## About the ISG

The Identification Systems Group (ISG) is a nationwide network of local experts in identification, security, tracking and card personalization technologies, providing high quality, cost-effective solutions backed by local support and the strength of our Professional Services Certification program. Each member company works together to provide seamless support and collaboration in the identification and issuance industries across the USA and Canada.

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