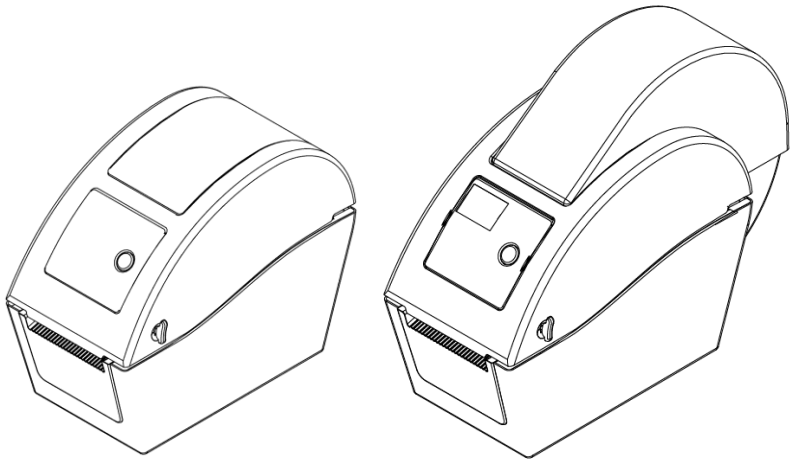
TDP-225/ TDP-225W/ TDP-324/ TDP-324W Series

DIRECT THERMAL BAR CODE PRINTER

USER'S MANUAL



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Copyright Declaration

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Agency Compliance and Approvals

EN 55032, Class B
EN 55024
EN 60950-1
EN 61000-3-2
EN 61000-3-3

FCC part 15B, Class B
ICES-003, Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/ TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

AS/NZS CISPR 32, Class B

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

EN 60950-1

	GB 4943.1 GB 9254, Class B GB 17625.1
	Energy Star for Imaging Equipment Version 2.0
	TP TC 004/2011 TP TC 020/2011
	IS 13252(Part 1)/ IEC 60950-1
	KN 22 KN 24

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

Important safety instructions:

1. Read all of these instructions and keep them for later use.
2. Follow all warnings and instructions on the product.
3. Disconnect the power plug from the AC outlet before cleaning or if fault happened.
   Do not use liquid or aerosol cleaners. Using a damp cloth is suitable for cleaning.
4. The mains socket shall be installed near the equipment and easily accessible.
5. The unit must be protected against moisture.
6. Ensure the stability when installing the device, Tipping or dropping could cause damage.
7. Make sure to follow the correct power rating and power type indicated on marking label provided by manufacture.
8. Please refer to user manual for maximum operation ambient temperature.

WARNING:

Hazardous moving parts, keep fingers and other body parts away.

CAUTION:

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

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

Dispose of used batteries according to the Instructions as below.

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

Caution: The printhead may be hot and could cause severe burns. Allow the printhead to cool.

CAUTION:

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

1. Introduction
1.1 Product Introduction

Thank you for purchasing TSC bar code printer. Although the printer has a small footprint, it delivers reliable, superior performance.

This printer provides direct thermal printing at user selectable speed of: 2.0, 3.0, 4.0 or 5.0 ips for 203 dpi; 2.0, 3.0 or 4.0 ips for 300 dpi. It accepts roll feed, die-cut, and fan-fold media with gap or black mark. All common bar codes formats are available. Fonts and bar codes can be printed in 4 directions, 8 different alphanumeric bitmap fonts and built-in scalable font capability. You will enjoy trouble free, high throughput for printing labels with this printer.

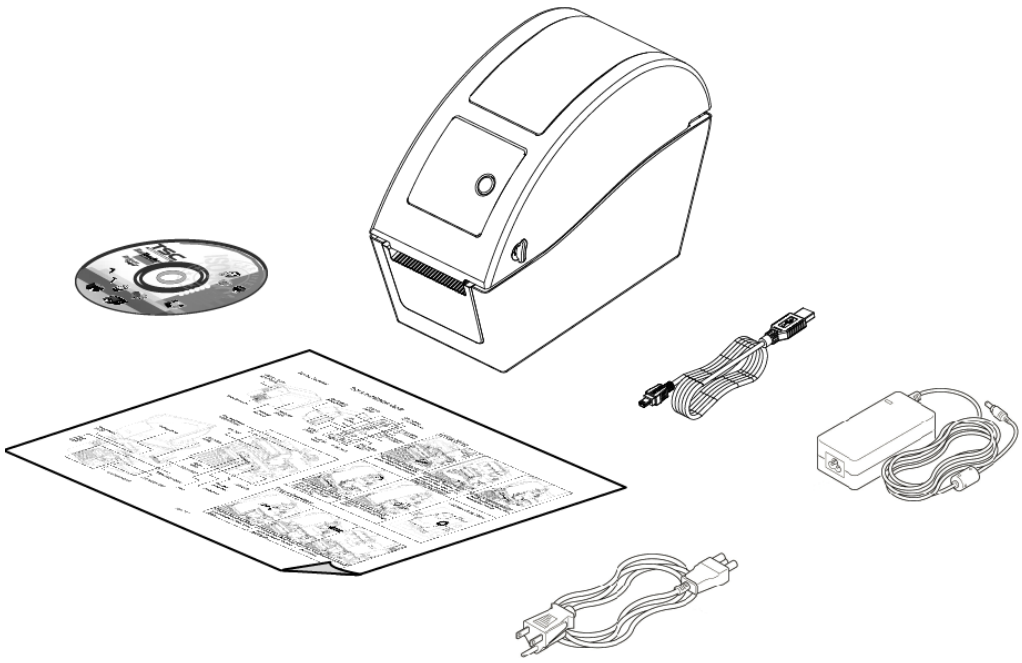
2. Operations Overview

2.1 Unpacking and Inspection

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

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

- One printer unit
- One Windows labeling software/Windows driver CD disk
- One quick installation guide
- One power cord
- One auto switching power supply
- One USB interface cable



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

2.2 Printer Overview

2.2.1 Front View

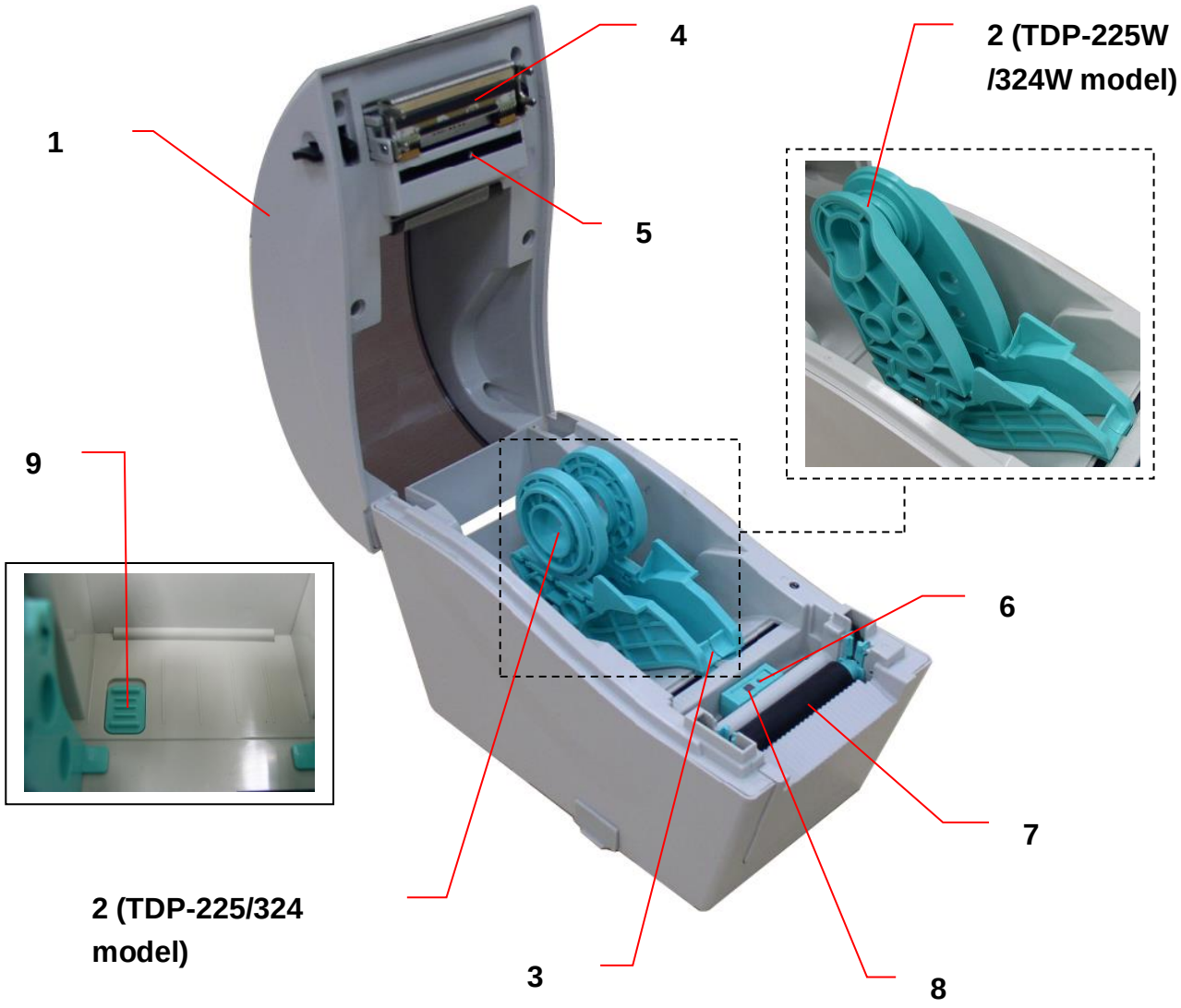
TDP-225/324 model	TDP-225W/324W model
	

1. Top cover open lever
2. MicroSD card socket
3. Media view window
4. LED indicator
5. Feed button
6. Paper exit chute
7. LCD display (Option for TDP-225/324 model)

* Recommended MicroSD card specification.

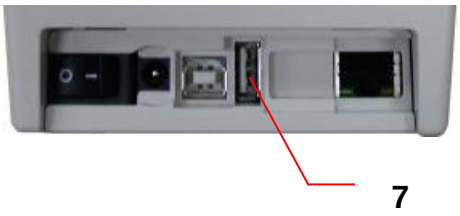
SD card spec	SD card capacity	Approved SD card manufacturer
V1.0, V1.1	MicroSD 128 MB	Transcend, Panasonic
V1.0, V1.1	MicroSD 256 MB	Transcend, Panasonic
V1.0, V1.1	MicroSD 512 MB	Transcend, Panasonic
V1.0, V1.1	MicroSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 6	MicroSD 4 GB	Transcend
- The DOS FAT file system is supported for the SD card. - Folders/files stored in the SD card should be in the 8.3 filename format		

2.2.2 Interior View



1. Top cover
2. Media holder
3. Media guide
4. Printhead
5. Gap sensor (receiver)
6. Gap sensor (transmitter)
7. Platen roller
8. Black mark sensor
9. Media holder lock switch

2.2.3 Rear View

TDP-225/324 model	TDP-225W/324W model
	
	

1. Power switch
2. Power jack socket
3. USB interface
4. RS-232C interface
5. Fan-fold paper entrance chute
6. Ethernet interface (Option for TDP-225/324 model)
7. USB host (Factory option for TDP-225W/324W model)

Note:

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

3. Setup

3.1 Setting Up the Printer

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

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

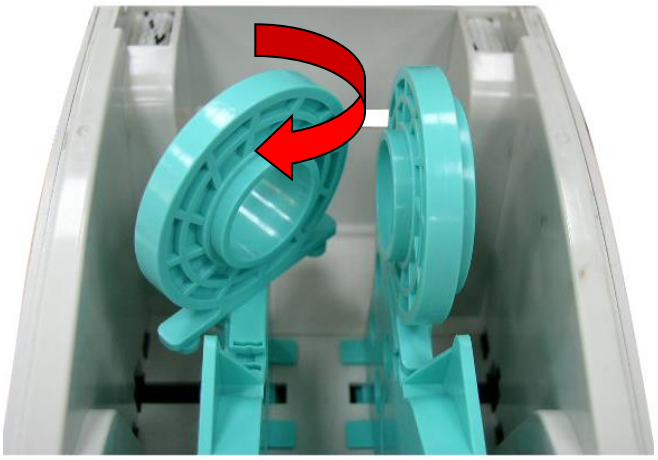
3.2 Loading the Media

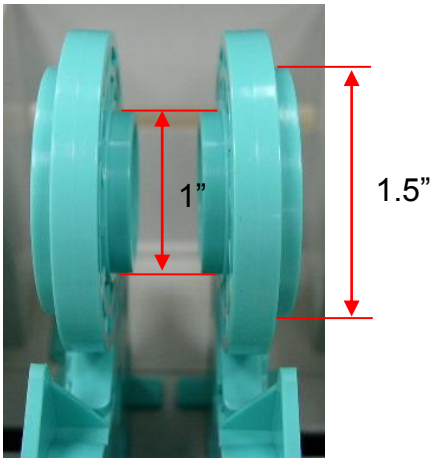
3.2.1 Loading the Media

1. Open the printer top cover by pulling the tabs located on each side towards the front of the printer, and then lift the top cover to the maximum open angle.

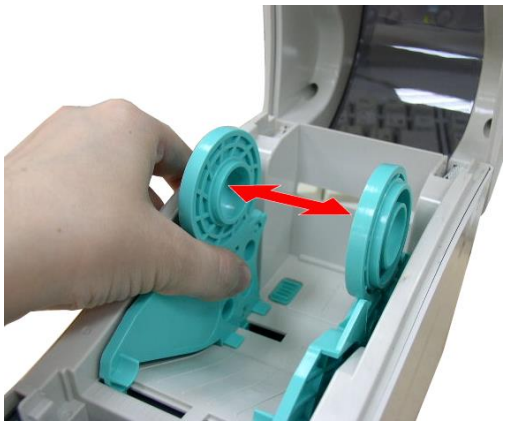
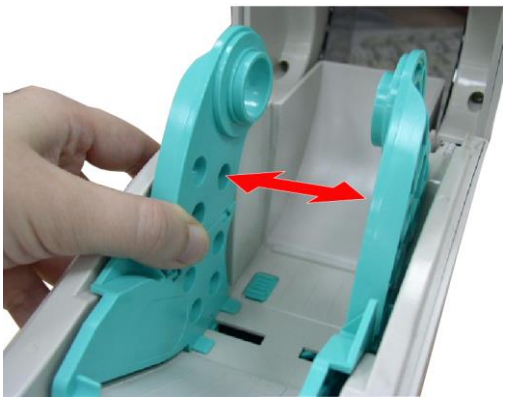


2. The media holder can be used for 1” and 1.5” media core by rotating the upper part of label holder 180 degrees clockwise. (For TDP-225/324 model only)

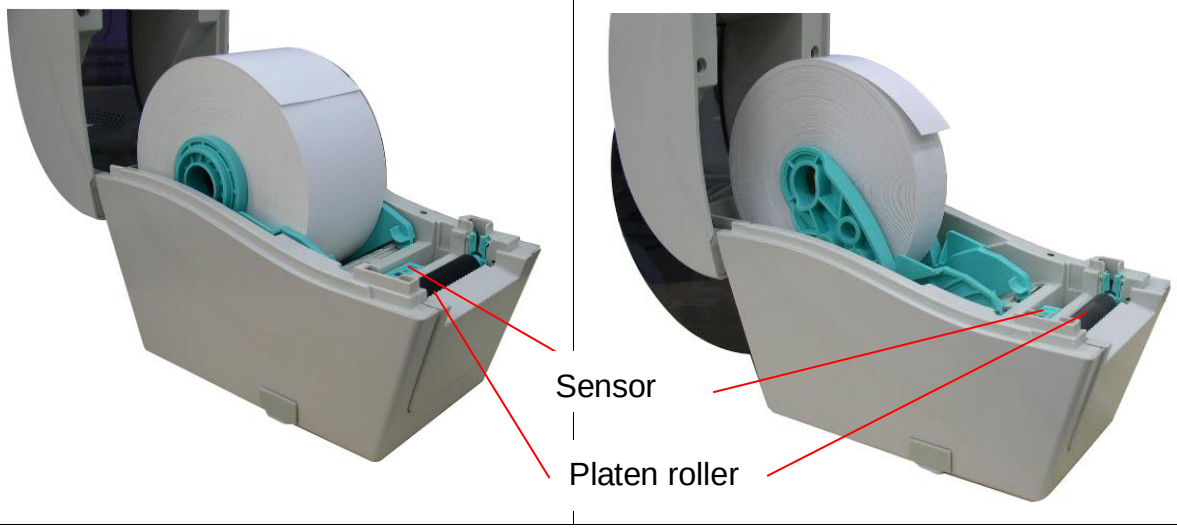




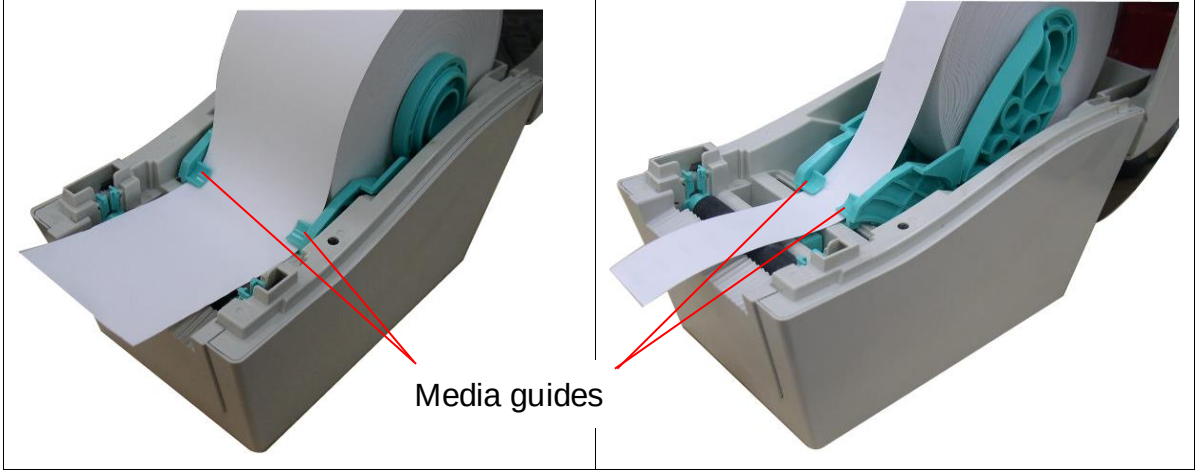
3. Separate the media holders to the label roll width.

TDP-225/324 model	TDP-225W/324W model
	

4. Place the roll between the holders and close them onto the core.

TDP-225/324 model	TDP-225W/324W model
	

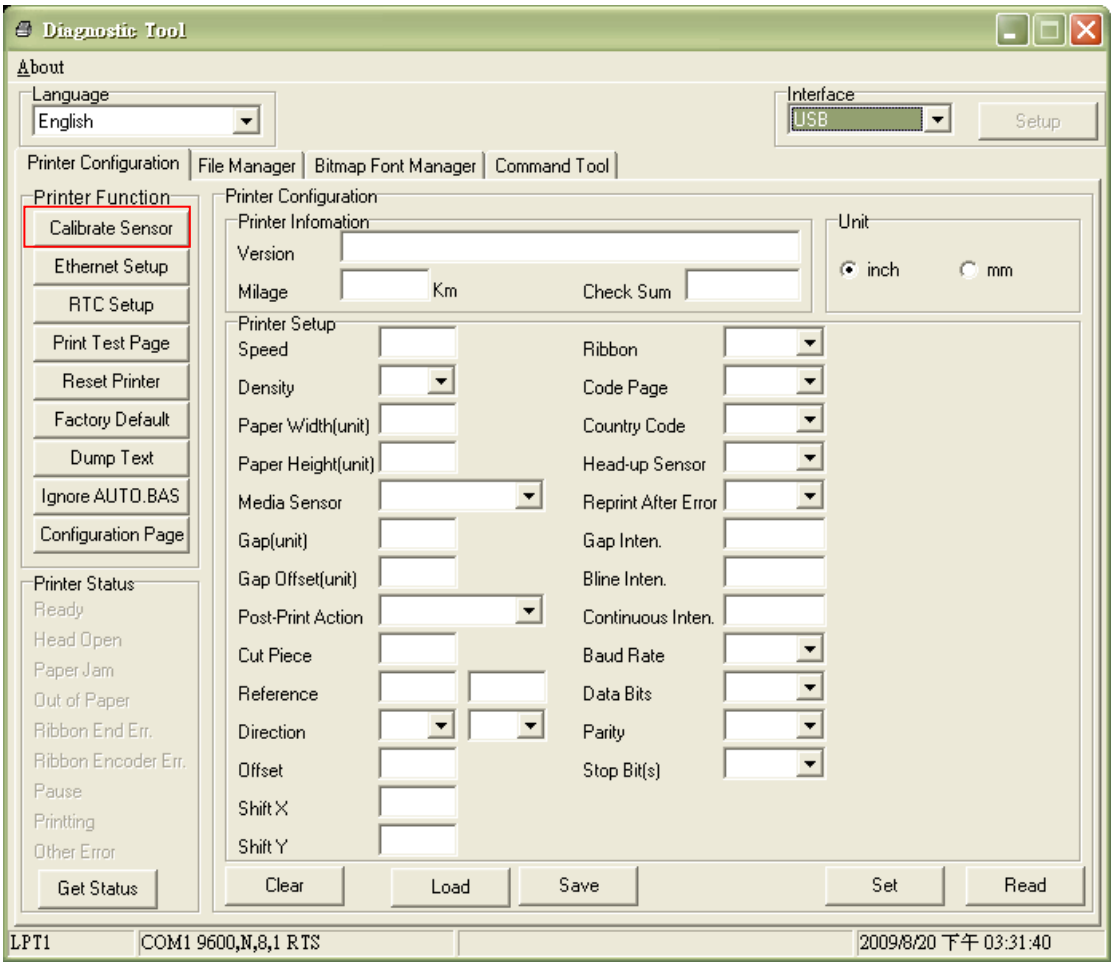
5. Place the paper, printing side face up, through the media guides, media sensor and place the label leading edge onto the platen roller.

TDP-225/324 model	TDP-225W324W model
	

6. Close the top cover gently and make sure the cover latches securely.

TDP-225/324 model	TDP-225W/324W model
	

7. Use “Diagnostic Tool” to set the media sensor type and calibrate the selected sensor. (Start the “Diagnostic tool” → Select the “Printer Configuration” tab → Click the “Calibrate Sensor” button)

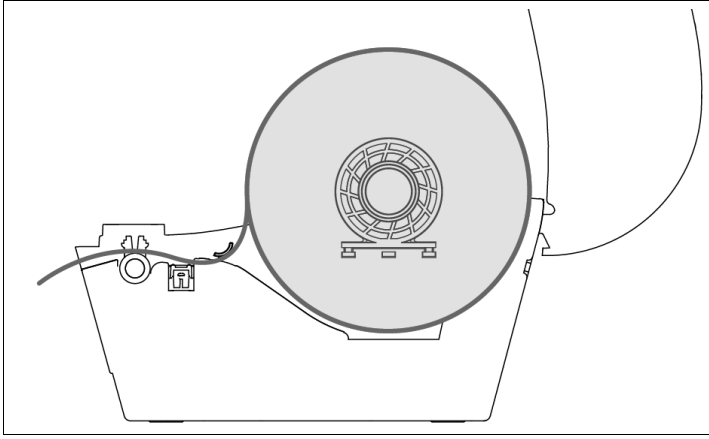
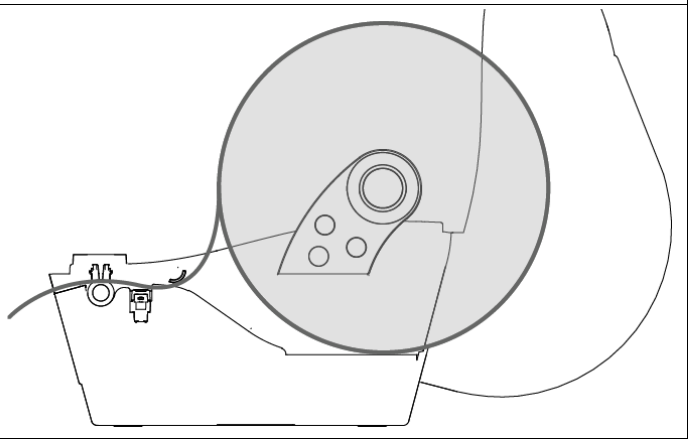


Note:

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

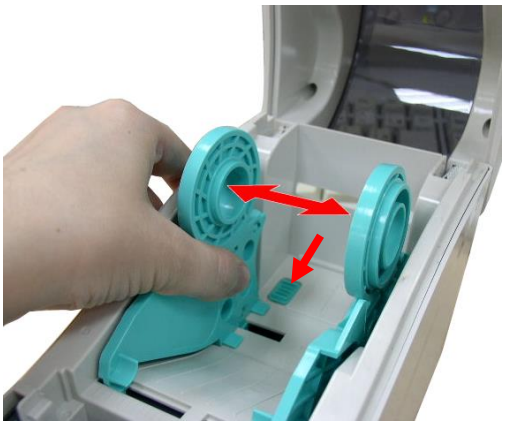
*** Please refer to videos on TSC YouTube or driver CD.**

- **Loading path for roll labels**

TDP-225/324 model	TDP-225W/324W model
	

3.2.2 Loading External Media (For TDP-225/324 model only)

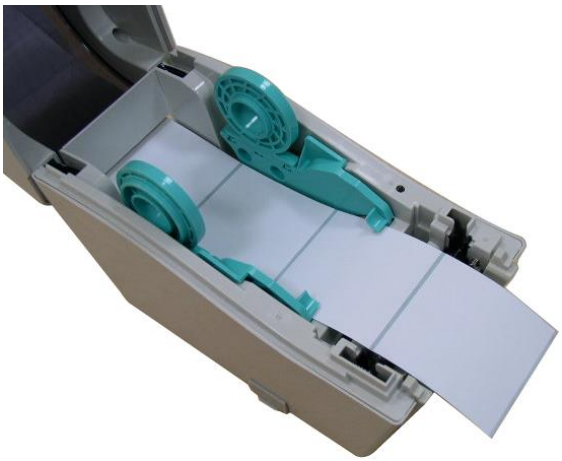
1. Open the printer's top cover and separate the media holders to fit the media width.
2. Press down the media holder lock switch to fix the media holder.



3. Feeds the media through the rear external label entrance chute. And place the paper, printing side face up, through the media guides, media sensor and place the label leading edge onto the platen roller.

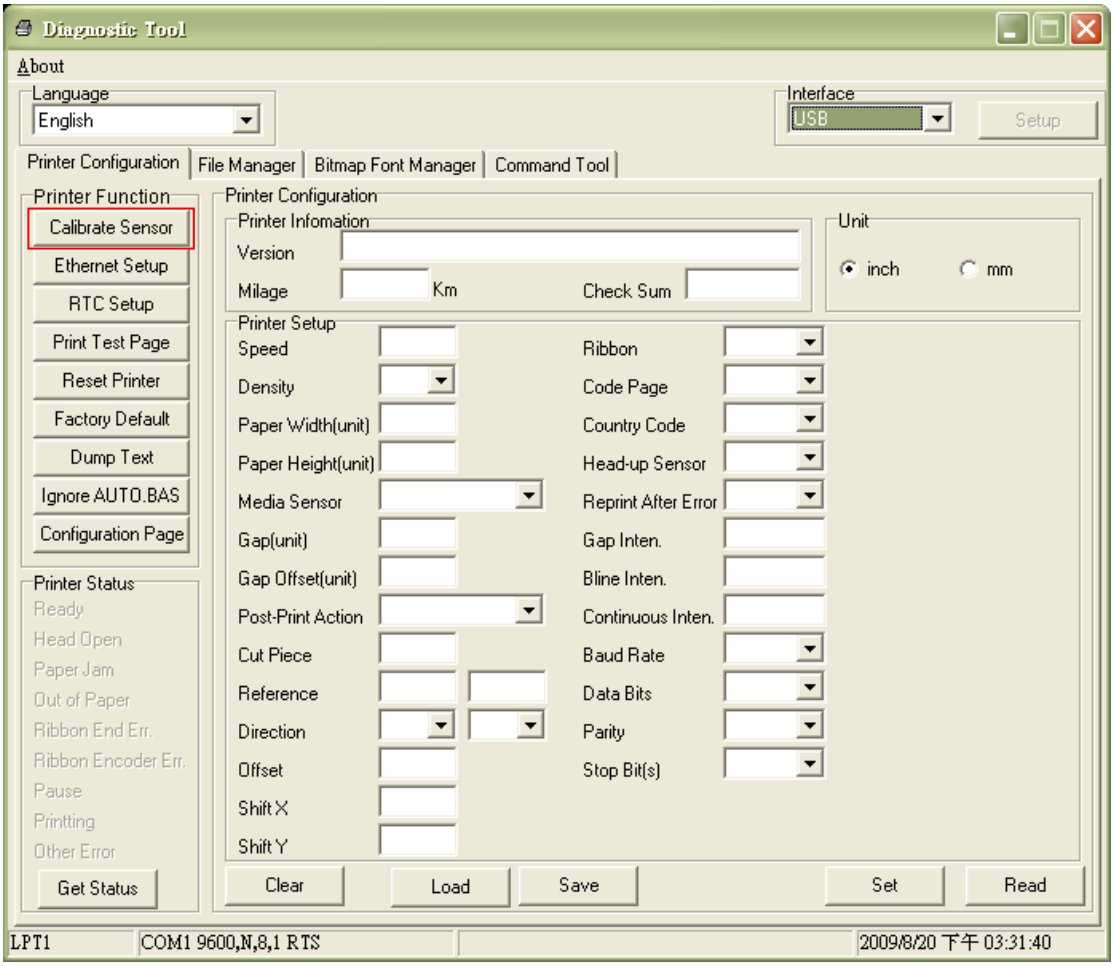
Rear external label entrance





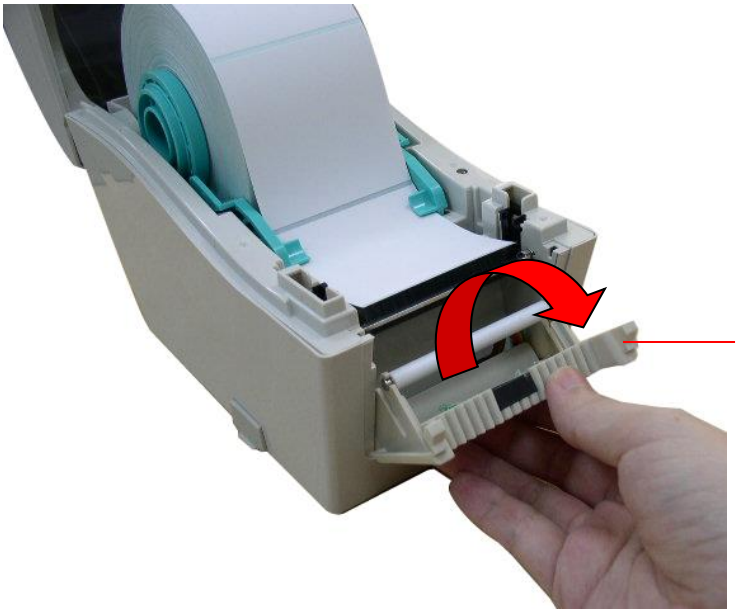
4. Close the top cover gently.
5. Use "Diagnostic Tool" to set the media sensor type and calibrate the selected sensor. (Start the "Diagnostic tool" → Select the "Printer Configuration" tab → Click the "Calibrate Sensor" button)

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

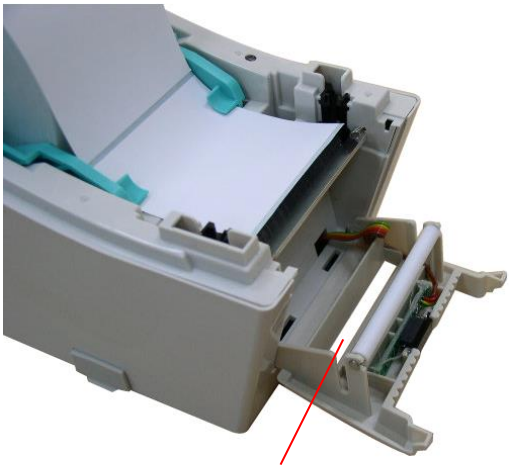

Diagnostic Tool
About
Language
English
Interface
USB
Setup
Printer Configuration
File Manager
Bitmap Font Manager
Command Tool
Printer Function
Calibrate Sensor
Ethernet Setup
RTC Setup
Print Test Page
Reset Printer
Factory Default
Dump Text
Ignore AUTO.BAS
Configuration Page
Printer Status
Ready
Head Open
Paper Jam
Out of Paper
Ribbon End Err.
Ribbon Encoder Err.
Pause
Printting
Other Error
Get Status
Printer Configuration
Printer Infomation
Version
Milage
Km
Check Sum
Unit
inch
mm
Printer Setup
Speed
Density
Paper Width(unit)
Paper Height(unit)
Media Sensor
Gap(unit)
Gap Offset(unit)
Post-Print Action
Cut Piece
Reference
Direction
Offset
Shift X
Shift Y
Ribbon
Code Page
Country Code
Head-up Sensor
Reprint After Error
Gap Inten.
Bline Inten.
Continuous Inten.
Baud Rate
Data Bits
Parity
Stop Bit(s)
Clear
Load
Save
Set
Read
LPT1
COM1 9600,N,8,1 RTS
2009/8/20 下午 03:31:40

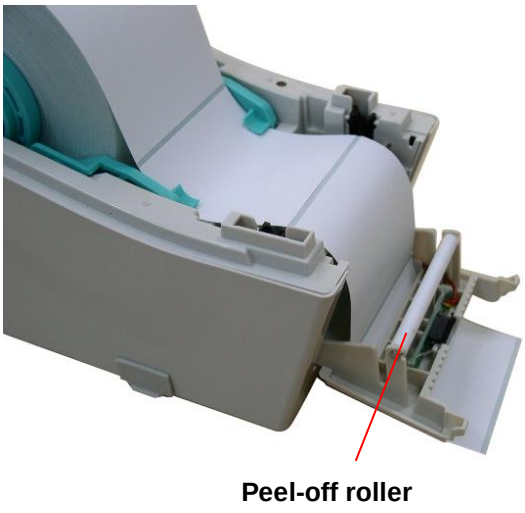
3.2.3 Loading Media in Peel-off Mode (Option)

1. Refer to section 3.2.1 to load the media.
2. Open the top cover and peel-off panel after calibrated the sensor.



3. Lead the media through the backing paper opening, beneath the peel-off roller.





4. Push the peel-off panel back to the printer.



5. Close the top cover gently.
6. Press the FEED button to test.

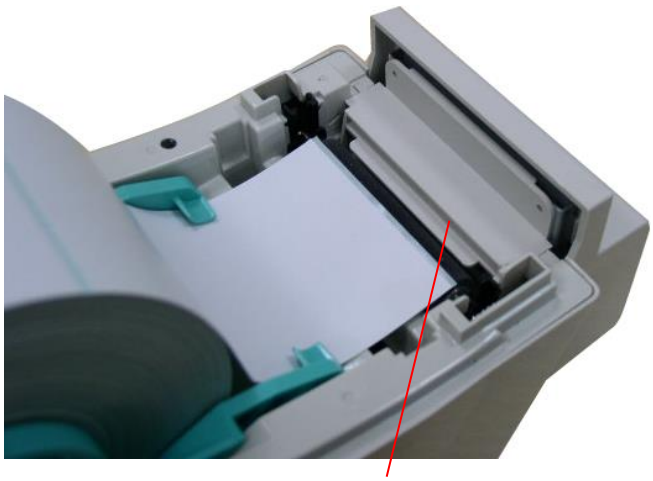


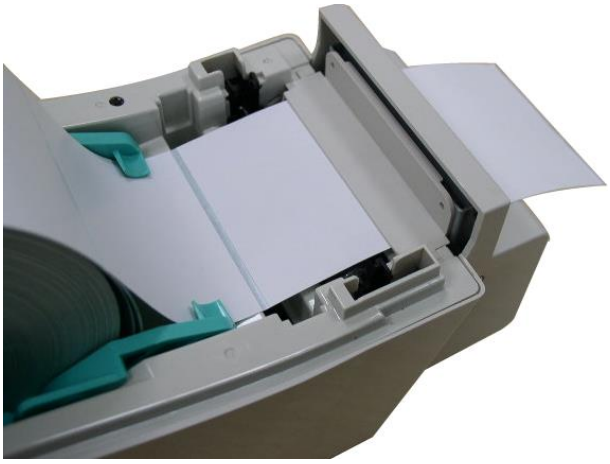
Note:

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

3.2.4 Loading Media in Cutter Mode (Option)

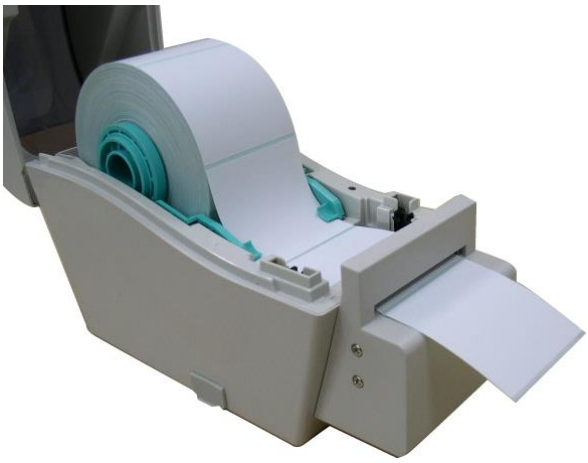
1. Refer to section 3.2.1 to load the media.
2. Lead the media through the cutter paper opening.





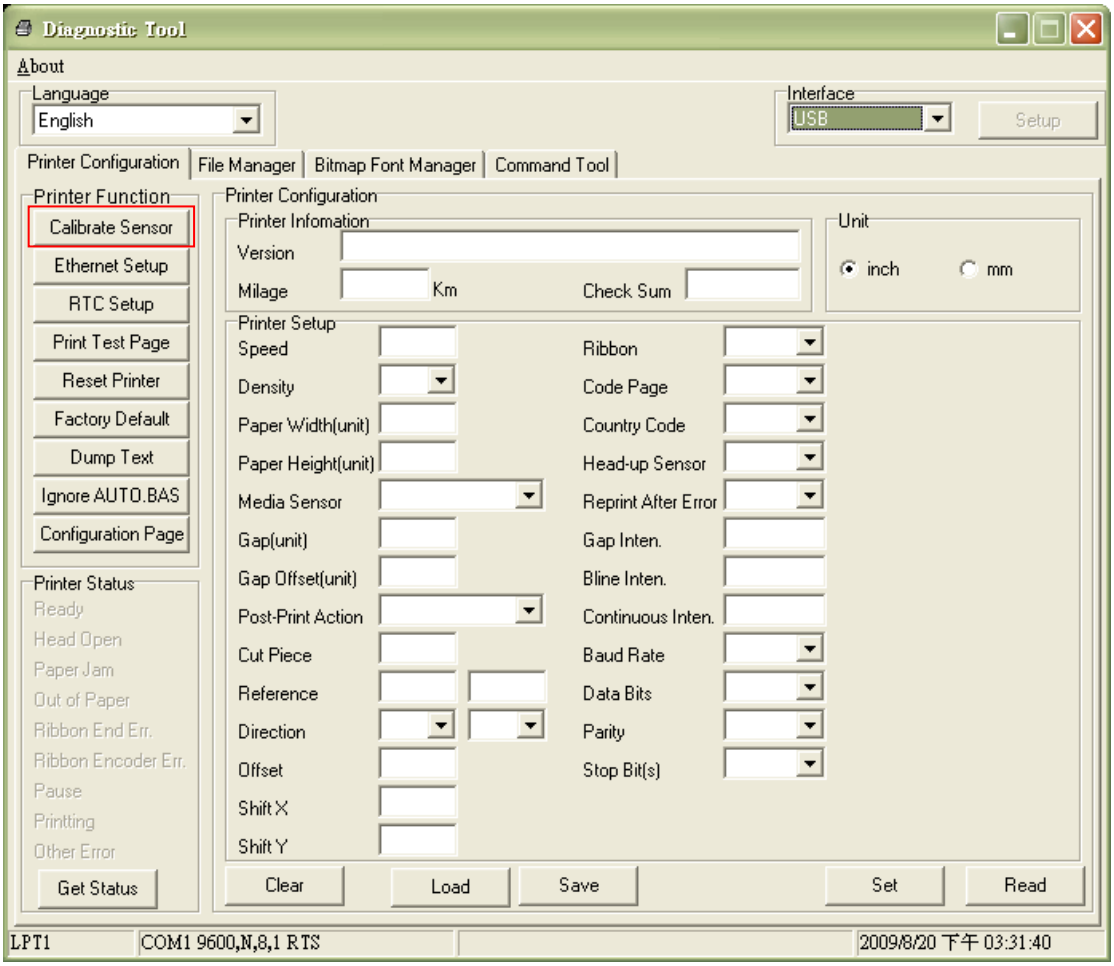
Cutter paper opening

3. Close the top cover gently.





4. Use “Diagnostic Tool” to set the media sensor type and calibrate the selected sensor. (Start the “Diagnostic tool” → Select the “Printer Configuration” tab → Click the “Calibrate Sensor” button)



Note:

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

*** Cutter module specification:**

Full cut: Paper thickness: 0.06 ~ 0.19 mm

Partial cut: Paper thickness: 0.06 ~ 0.12 mm

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

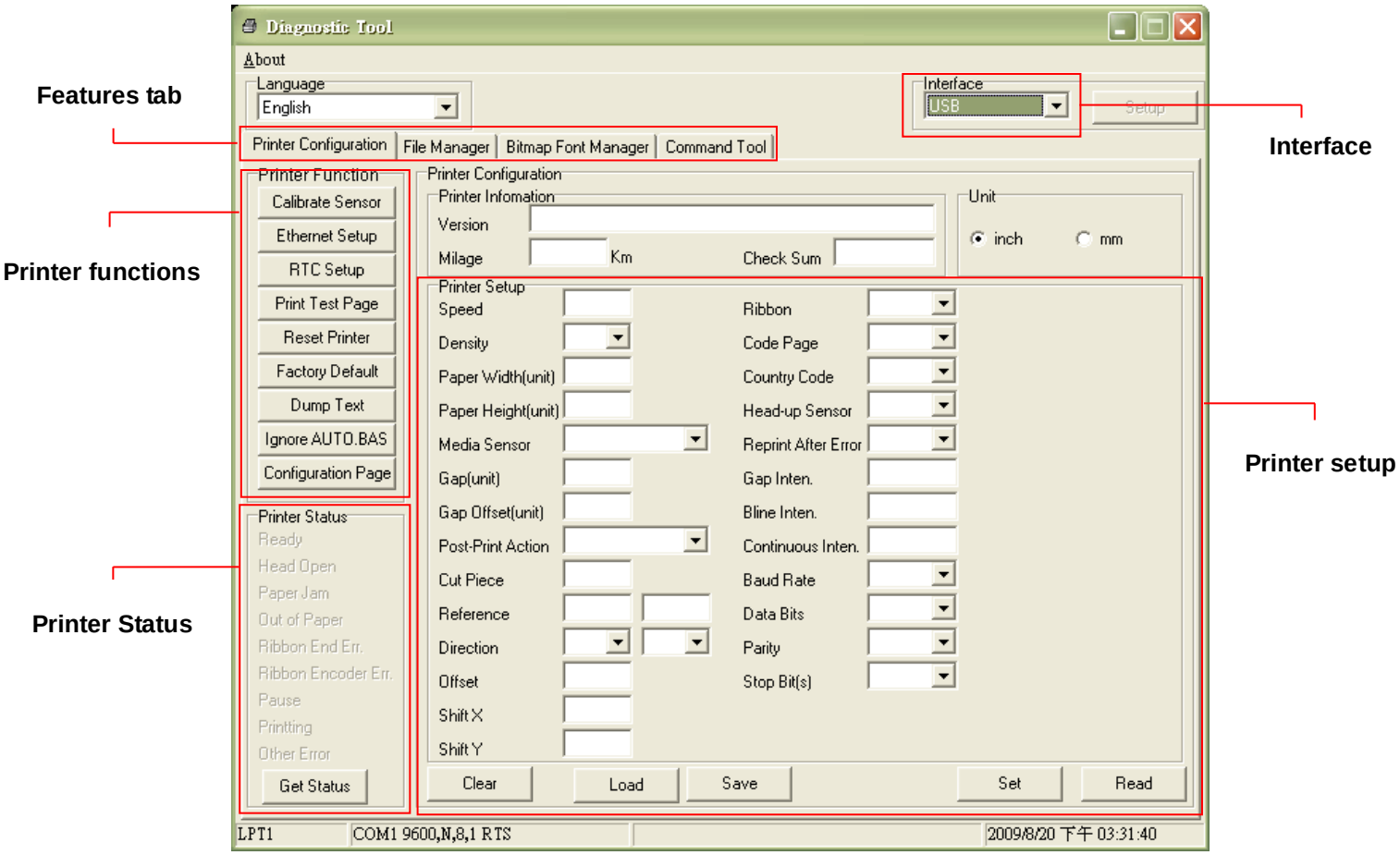
3.3 Diagnostic Tool

The Diagnostic Utility is enclosed in the CD disk \Utilities directory or can be downloaded from www.tscprinters.com website. 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.

3.3.1 Start the Diagnostic Tool

1. Double click on the Diagnostic tool icon   to start the software.
2. There are four features (Printer Configuration, File Manager, Bitmap Font Manager, Command Tool) included in the Diagnostic utility.



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

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



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

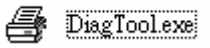
Note:

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

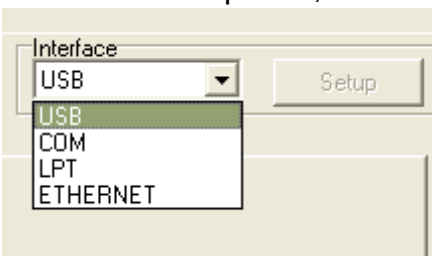
3.4 Setting Ethernet by Diagnostic Utility (Option for TDP-225/324 model)

The Diagnostic Utility is enclosed in the CD disk \Utilities directory or can be downloaded from www.tscprinters.com website. Users can use Diagnostic Tool to setup the Ethernet by USB and Ethernet interfaces. The following contents will instruct users how to configure the Ethernet by these interfaces.

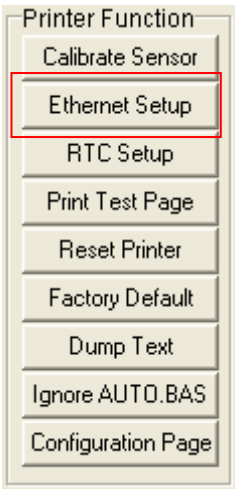
3.4.1 Using USB interface to setup Ethernet interface

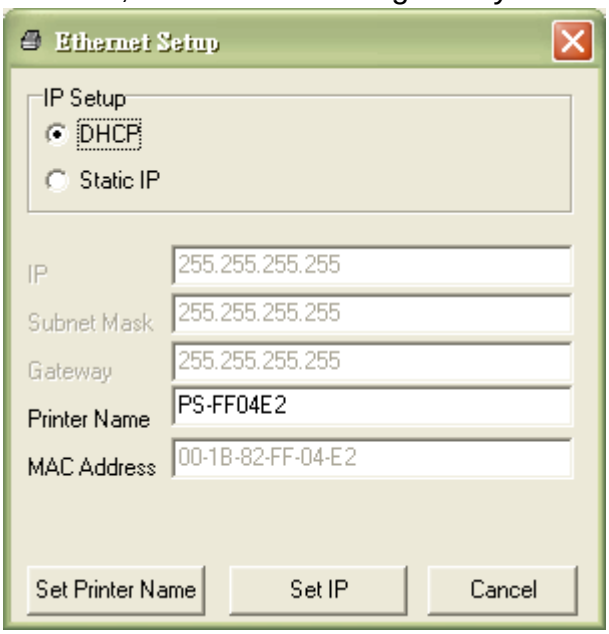
1. Connect the USB cable between the computer and the printer.
2. Turn on the printer power.
3. Start the Diagnostic Utility by double clicking on the 

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.

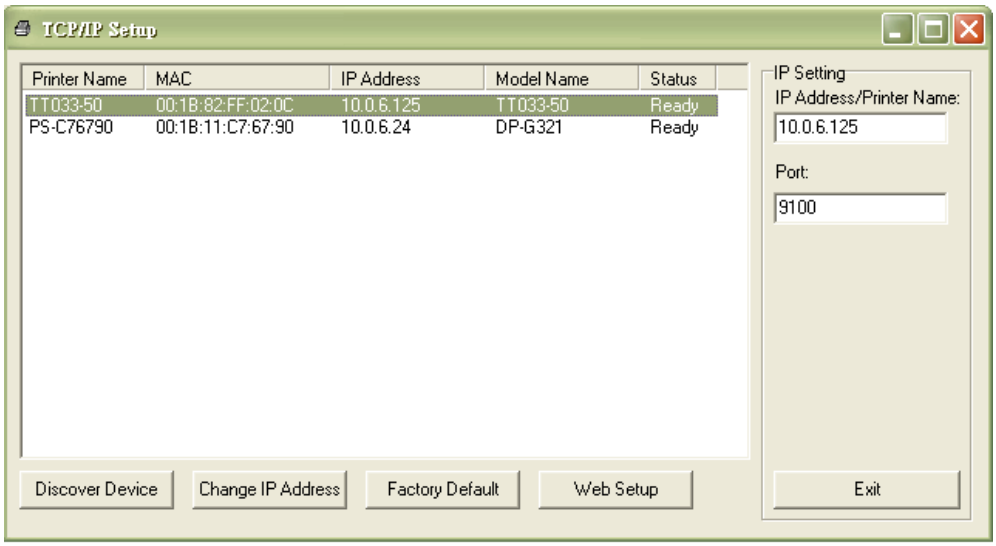




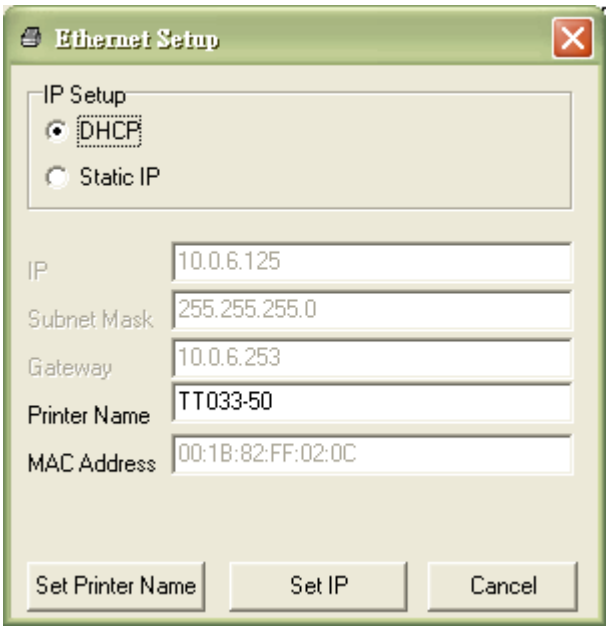
3.4.2 Using Ethernet interface to setup Ethernet interface

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.
   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 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” 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 take 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.

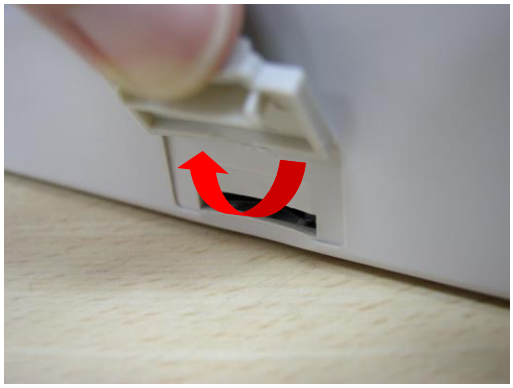
Web setup button

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.

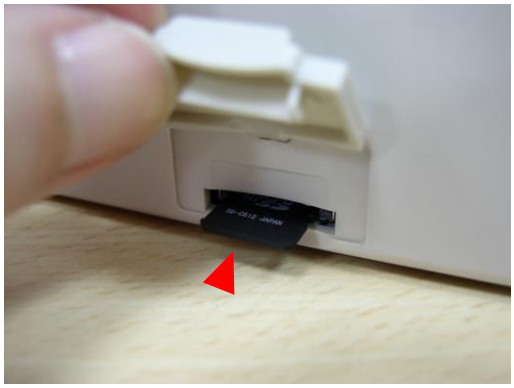
3.5 Install MicroSD Memory Card

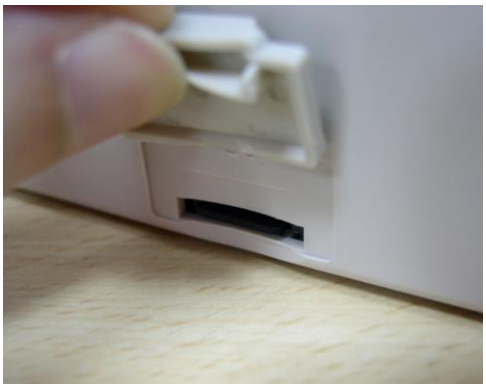
1. Open the SD memory card cover.





2. Insert the MicroSD card into the socket.





3. Close the memory card cover.



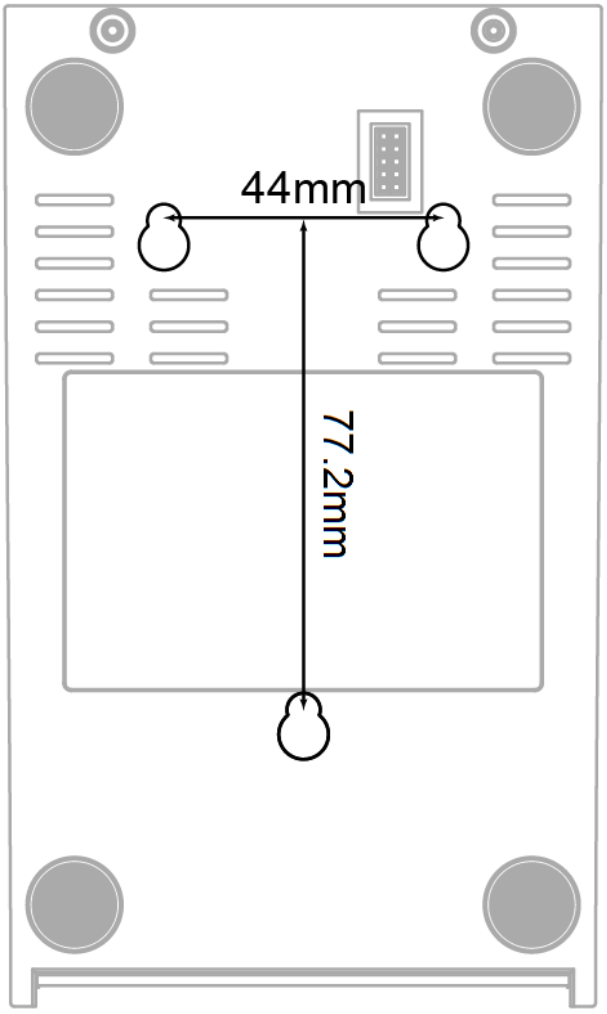
* Recommended SD card specification.

SD card spec	SD card capacity	Approved SD card manufacturer
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	Transcend, Panasonic
V1.0, V1.1	MicroSD 1 GB	Transcend, Panasonic
V2.0 SDHC CLASS 6	MicroSD 4 GB	Transcend
- 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

3.6 Mount the Printer on the Wall

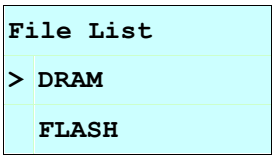
There are three holes in the bottom of printer. Printer can be mounted on the wall by the 3.0mm~3.5mm screw head screws.



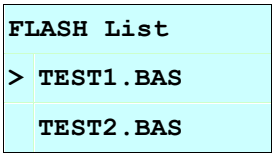
Note: Please hang properly to avoid fall down

3.7 Using the PC USB Keyboard with Printer USB Host Interface (Factory option for TDP-225W/324W model)

1. Turn off the printer power.
2. Plug in the PC USB keyboard into printer USB host interface.
3. Turn on the printer power.
4. After pressing the **F1** key of the keyboard, the printer LCD will display as following.



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



7. Then, you can enter the data from keyboard for stand-alone application.

Press PC keyboard **F1** key to start this function.
Press up ↑ or down ↓ key to move the cursor to the option.
Press **Esc** key to return to previous menu.
Press **Enter** key to enter/run cursor located option.
Press **Ctrl** + **C** keys to reset the printer and enter "Ready".

Note: USB host is a factory option interface for TDP-225W/324W model.

4. LED and Button Functions

This printer has one button and one three-color LED indicator. By indicating the LED with different color and pressing the button, printer can feed labels, pause the printing job, select and calibrate the media sensor, print printer self-test report, reset printer to defaults (initialization). Please refer to the button operation below for different functions.

4.1 LED Indicator

LED Color	Description
Green/ Solid	This illuminates that the power is on and the device is ready to use.
Green/ Flash	This illuminates that the system is downloading data from PC to memory or the printer is paused.
Amber	This illuminates that the system is clearing data from printer.
Red / Solid	This illuminates printer head open, cutter error.
Red / Flash	This illuminates a printing error, such as head open, paper empty, paper jam or memory error etc.

4.2 Regular Button Function

1. Feed labels

When the printer is ready, press the button to feed one label to the beginning of next label.

2. Pause the printing job

When the printer is printing, press the button to pause a printing job. When the printer is paused, the LED will be green blinking. Press the button again to continue the printing job.

4.3 Power on Utilities

There are six power-on utilities to set up and test printer hardware. These utilities are activated by pressing FEED button then turning on the printer power simultaneously and release the button at different color of LED.

Please follow the steps below for different power-on utilities.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED indicates with different color for different functions.

Power on utilities	**The LED color will be changed as following pattern:**						
LED color / ***Functions***	Amber	Red (5 blinks)	Amber (5 blinks)	Green (5 blinks)	Green/Amber (5 blinks)	Red/Amber (5 blinks)	Solid green
1. Gap / black mark sensor calibration		*Release*					
2. Gap / black mark sensor calibration, Self-test and enter dump mode			*Release*				
3. Printer initialization				*Release*			
4. Set black mark sensor as media sensor and calibrate the black mark sensor					*Release*		
5. Set gap sensor as media sensor and calibrate the gap sensor						*Release*	
6. Skip AUTO.BAS							*Release*

4.3.1 Gap/Black Mark Sensor Calibration

Gap/black mark sensor sensitivity should be calibrated at the following conditions:

1. A brand new printer
2. Change label stock.
3. Printer initialization.

Please follow the steps below to calibrate the gap/black mark sensor.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3 Release the button when LED becomes **red** and blinking. (Any red will do during the 5 blinks).

- It will calibrate the gap/black mark sensor sensitivity.
- The LED color will be changed as following order：
  Amber → **red (5 blinks)** → amber (5 blinks) → green (5 blinks) → green/amber (5 blinks) → red/amber (5 blinks) → solid green

Note:

1. Sensor calibration can be done by Diagnostic Tool or by power on utility. Please refer to "3.3 Diagnostic Tool" Section for more information.

2. Please select gap or black mark sensor type prior to calibrate the sensor.

4.3.2 Gap/Black Mark Calibration, Self-test and Dump Mode

While calibrate the gap/black mark sensor, printer will measure the label length, print the internal configuration (self-test) on label and then enter the dump mode. To calibrate gap or black mark sensor, depends on the sensor setting in the last print job.
Please follow the steps below to calibrate the sensor.

1.Turn off the power switch.

2. Hold on the button then turn on the power switch.

3. Release the button when LED becomes **amber** and blinking. (Any amber will do during the 5 blinks)

- The LED color will be changed as following order.
  Amber → red (5 blinks) → **amber (5 blinks)** → green (5 blinks) → green/amber (5 blinks) → red/amber (5 blinks) → solid green

4. It calibrates the sensor and measures the label length and prints internal settings then enter the dump mode.

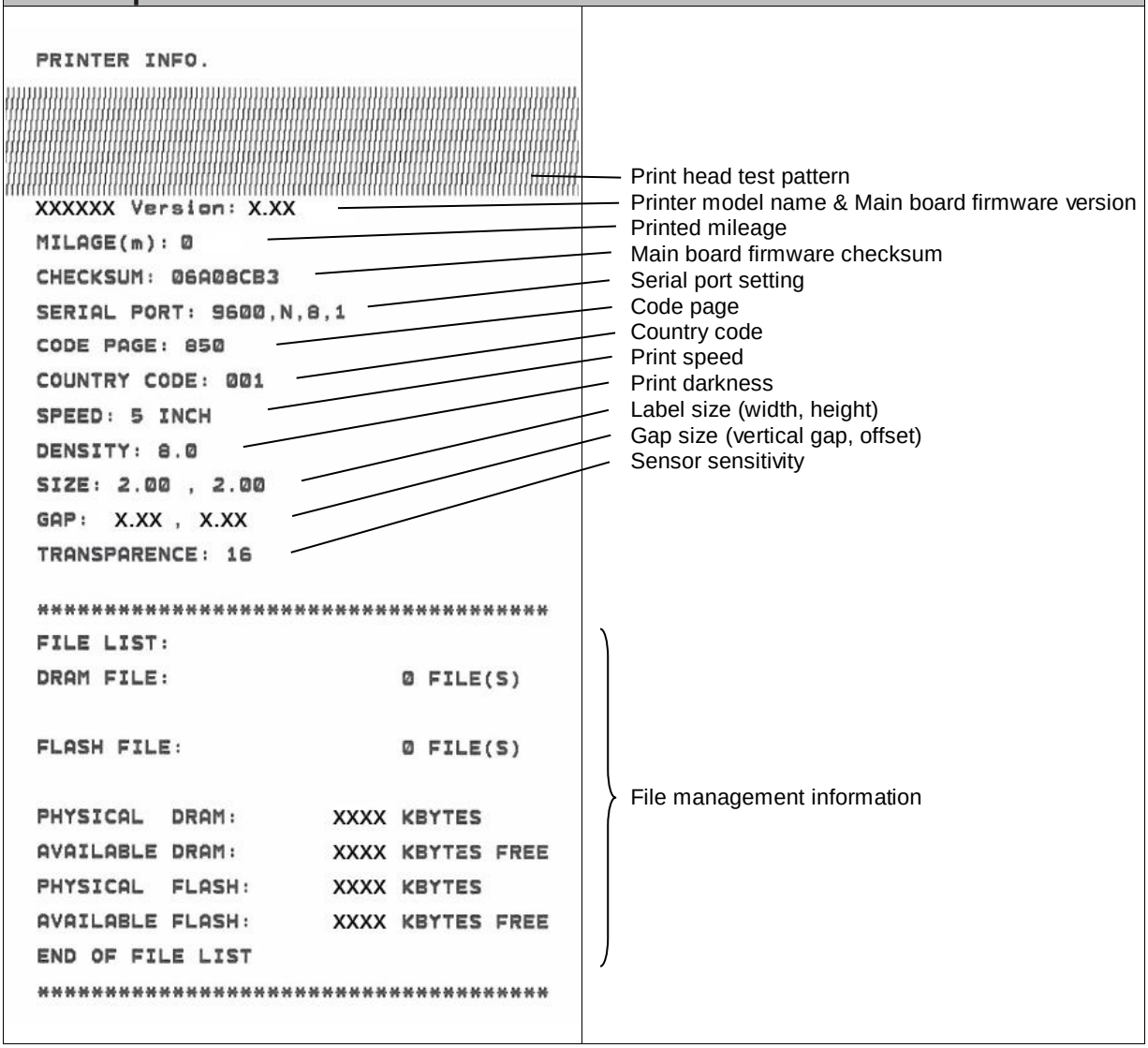
Note:

1. **Sensor calibration can be done by Diagnostic Tool or by power on utility. Please refer to "3.3 Diagnostic Tool" Section for more information.**
2. **Please select gap or black mark sensor type prior to calibrate the sensor.**

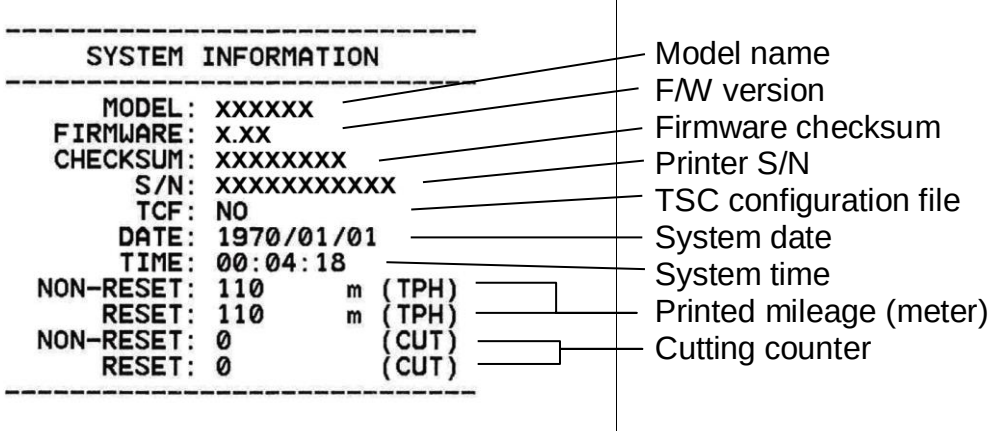
Self-test

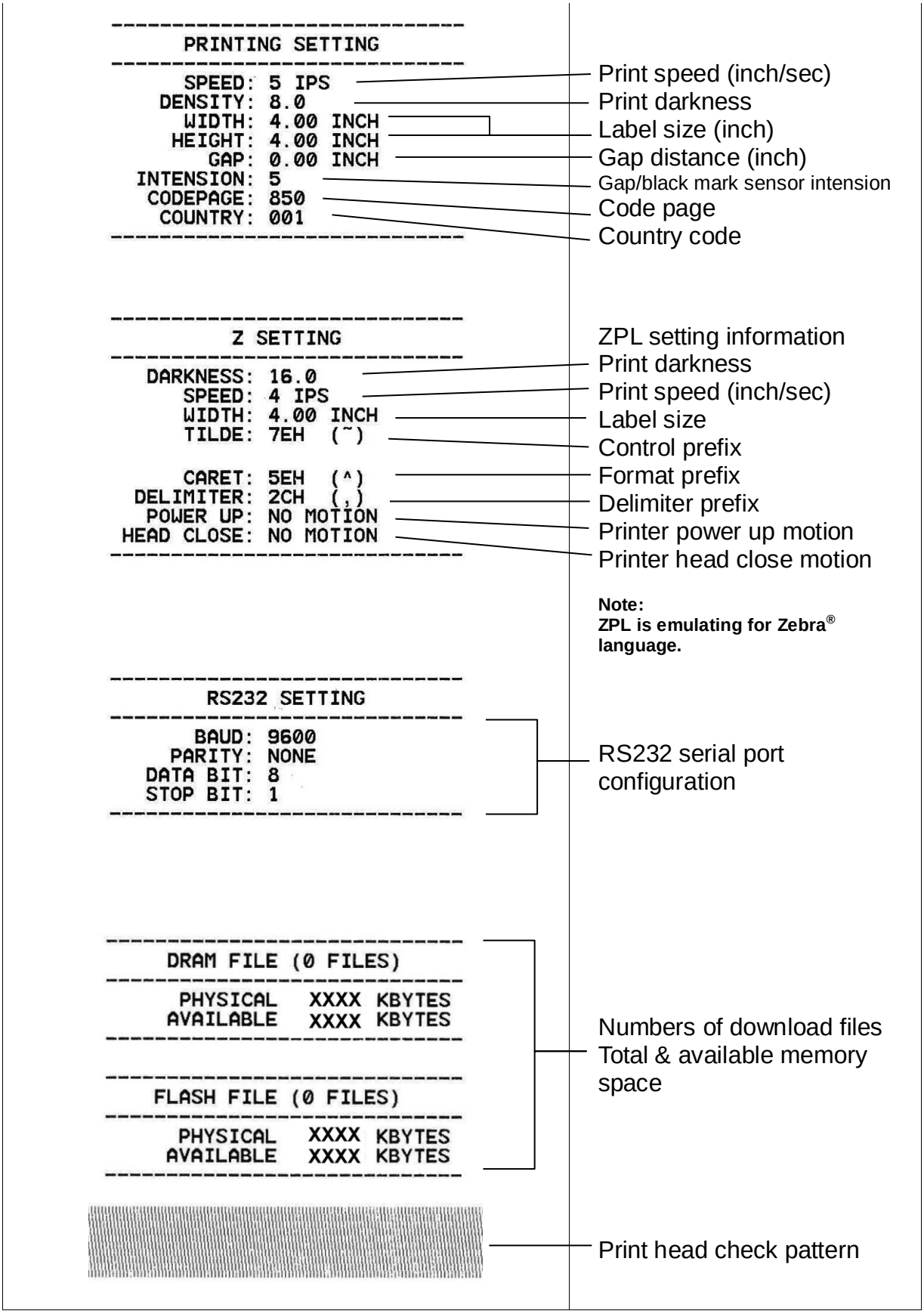
Printer will print the printer configuration after gap/black mark sensor calibration. Self-test printout can be used to check if there is any dot damage on the heater element, printer configurations and available memory space.

Self-test printout



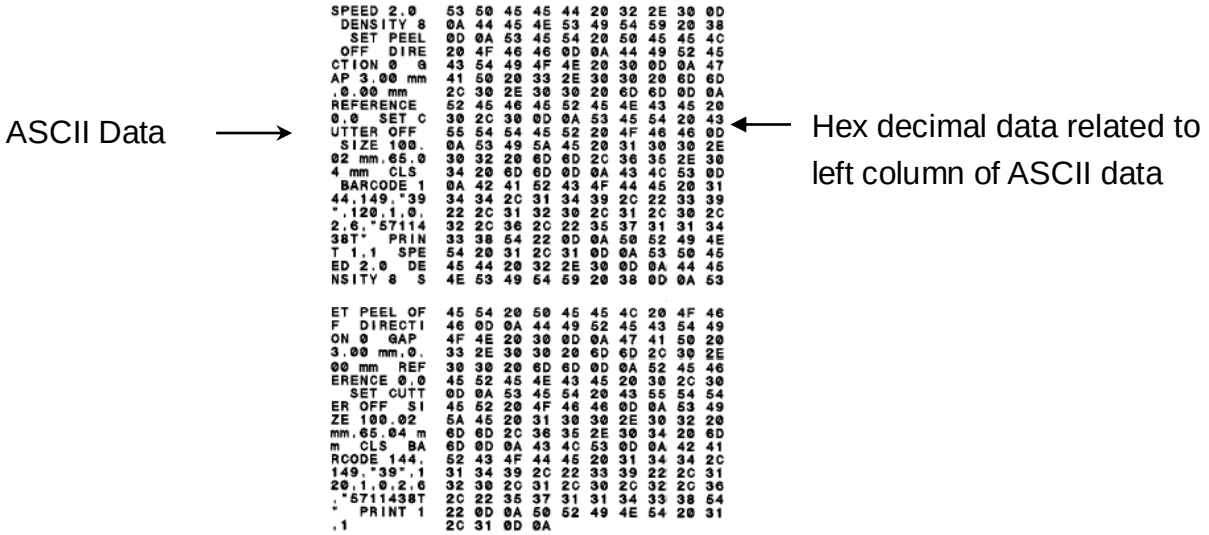
Self-test printout (with printer firmware V7.0 and later version)




PRINTING SETTING
SPEED: 5 IPS
DENSITY: 8.0
WIDTH: 4.00 INCH
HEIGHT: 4.00 INCH
GAP: 0.00 INCH
INTENSION: 5
CODEPAGE: 850
COUNTRY: 001
Print speed (inch/sec)
Print darkness
Label size (inch)
Gap distance (inch)
Gap/black mark sensor intension
Code page
Country code
Z SETTING
DARKNESS: 16.0
SPEED: 4 IPS
WIDTH: 4.00 INCH
TILDE: 7EH (~)
CARET: 5EH (^)
DELIMITER: 2CH (,)
POWER UP: NO MOTION
HEAD CLOSE: NO MOTION
ZPL setting information
Print darkness
Print speed (inch/sec)
Label size
Control prefix
Format prefix
Delimiter prefix
Printer power up motion
Printer head close motion
Note:
ZPL is emulating for Zebra® language.
RS232 SETTING
BAUD: 9600
PARITY: NONE
DATA BIT: 8
STOP BIT: 1
RS232 serial port configuration
DRAM FILE (0 FILES)
PHYSICAL XXXX KBYTES
AVAILABLE XXXX KBYTES
FLASH FILE (0 FILES)
PHYSICAL XXXX KBYTES
AVAILABLE XXXX KBYTES
Numbers of download files
Total & available memory space
Print head check pattern

■ Dump mode

Printer will enter dump mode after printing printer configuration. In the dump mode, all characters will be printed in 2 columns as following. The left side characters are received from your system and right side data are the corresponding hexadecimal value of the characters. It allows users or engineers to verify and debug the program.



Note:

1. Dump mode requires 2" wide paper width.

2. Turn off / on the power to resume printer for normal printing.

3. Press FEED button to back to the previous menu.

4.3.3 Printer Initialization

Printer initialization is used to clear DRAM and restore printer settings to defaults.
Printer initialization is activated by the following procedures.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED turns **green** after 5 amber blinks. (Any green will do during the 5 blinks).

■ The LED color will be changed as following:
Amber → red (5 blinks) → amber (5 blinks) → **green (5 blinks)** → green/amber (5 blinks) → red/amber (5 blinks) → solid green

Printer configuration will be restore to defaults as below after initialization.

Parameter	Default setting
Speed	127 mm/sec (5 ips) (203 DPI) 76.2 mm/sec (3 ips) (300 DPI)
Density	8
Label Width	2” (50.8 mm)
Label Height	4” (101.6 mm)
Sensor Type	Gap sensor
Gap Setting	0.12” (3.0 mm)
Print Direction	0
Reference Point	0,0 (upper left corner)
Offset	0
Tear Mode	On
Peel off Mode	Off
Cutter Mode	Off
Serial Port Settings	9600 bps, none parity, 8 data bits, 1 stop bit
Code Page	850
Country Code	001
Clear Flash Memory	No
IP Address	DHCP

4.3.4 Set Black Mark Sensor as Media Sensor and Calibrate the Black Mark Sensor

Please follow the steps as below.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED turns **green/amber** after 5 green blinks. (Any green/amber will do during the 5 blinks).

- The LED color will be changed as following:
  Amber → red (5 blinks) → amber (5 blinks) → green (5 blinks) → **green/amber (5 blinks)** → red/amber (5 blinks) → solid green

4.3.5 Set Gap Sensor as Media Sensor and Calibrate the Gap Sensor

Please follow the steps as below.

1. Turn off the power switch.
2. Hold on the button then turn on the power switch.
3. Release the button when LED turns **red/amber** after 5 green/amber blinks. (Any red/amber will do during the 5 blinks).

- The LED color will be changed as following:
  Amber → red (5 blinks) → amber (5 blinks) → green (5 blinks) → green/amber (5 blinks) → **red/amber (5 blinks)** → solid green

4.3.6 Skip AUTO.BAS

TSPL2 programming language allows user to download an auto execution file to flash memory. Printer will run the AUTO.BAS program immediately when turning on printer power. The AUTO.BAS program can be interrupted without running the program by the power-on utility.

Please follow the procedures below to skip an AUTO.BAS program.

1. Turn off printer power.
2. Press the FEED button and then turn on power.
3. Release the FEED button when LED becomes **solid green**.
   - The LED color will be changed as following:
     Amber → red (5 blinks) → amber (5 blinks) → green (5 blinks) → green/amber (5 blinks) → red/amber (5 blinks) → **solid green**
4. Printer will be interrupted to run the AUTO.BAS program.

5. Troubleshooting

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

5.1 LED Status

This section lists the common problems that according to the LED status and other problems you may encounter when operating the printer. Also, it provides solutions.

LED Status / Color	Printer Status	Possible Cause	Recovery Procedure
OFF	No response	No power	* Turn on the power switch. * Check if the green LED is lit on power supply. If it is not lit on, power supply is broken. * Check both power connections from the power cord to the power supply and from the power supply to the printer power jack if they are connected securely.
Solid Green	ON	The printer is ready to use	* No action necessary.
Green with blinking	Pause	The printer is paused	* Press the FEED button to resume for printing.
Red with blinking	Error	The out of label or the printer setting is not correct	1. Out of label * Load a roll of label and follow the instructions in loading the media then press the FEED button to resume for printing. 2. Printer setting is not correct * Initialize the printer by instructions in “Power on Utility” or “Diagnostic Tool”.

Note:

Printer status can be easily shown on the Diagnostic Tool. For more information about the Diagnostic Tool, please refer to the instruction in the software CD disk.

5.2 Print Problem

Problem	Possible Cause	Recovery Procedure
Not Printing	Check if interface cable is well connected to the interface connector.	Re-connect cable to interface.
	The serial port cable pin configuration is not pin to pin connected.	Please replace the cable with pin to pin connected.
	The serial port setting is not consistent between host and printer.	Please reset the serial port setting.
	The port specified in the Windows driver is not correct.	Select the correct printer port in the driver.
	The Ethernet IP, subnet mask, gateway is not configured properly.	Configure the IP, subnet mask and gateway.
No print on the label	Label loaded not correctly.	Follow the instructions in loading the media.
Continuous feeding labels	The printer setting may go wrong.	Please do the initialization and gap/black mark calibration.
Paper Jam	Gap/black mark sensor sensitivity is not set properly (sensor sensitivity is not enough)	Calibrate the gap/black mark sensor.
	Make sure label size is set properly.	Set label size exactly as installed paper in the labeling software or program.
	Labels may be stuck inside the printer mechanism near the sensor area.	Remove the stuck label.
Poor Print Quality	Top cover is not closed properly.	Close the top cover completely and make sure the right side and left side levers are latched properly.
	Wrong power supply is connected with printer.	Check if 24V DC output is supplied by the power supply.
	Check if supply is loaded correctly.	Reload the supply.
	Check if dust or adhesives are accumulated on the print head.	Clean the print head.
	Check if print density is set properly.	Adjust the print density and print speed.
	Check print head test pattern if head element is damaged.	Run printer self-test and check the print head test pattern if there is dot missing in the pattern.

5.3 LCD display (Option for TDP-225/324 model)

This section lists the LCD display messages that you may encounter when operating the printer. Also, it provides solutions.

Messages	Possible Cause	Recovery Procedure
Head Open	* The printer top cover is open.	* Please close the top cover.
No Paper	* Running out of label. * The label is installed incorrectly. * Gap/black mark sensor is not calibrated.	* Supply a new label roll. * Please refer to the steps in user's manual to reinstall the label roll. * Calibrate the gap/black mark sensor.
Paper Jam	* Gap/black mark sensor is not set properly. * Make sure label size is set properly. * Labels may be stuck inside the printer mechanism.	* Calibrate the gap/black mark sensor. * Set label size correctly.
Out of Mem	* The space of FLASH/DRAM or MicroSD card is full.	* Delete unused files in the FLASH/DRAM or MicroSD card.
Take Label	* Peel function is enabled. Waiting user to take label away to print the next label.	* Please take the label away to print the next label if peeler module is installed. * If peeler module is installed and label is been taken away, but the message remains. Please check if the peeler module connector is connected to main board properly. * If peeler module is not installed, please disable the peeler function.
Cutter Error	* Cutter jam. * There is no cutter installed on the printer. * Cutter or cutter driver circuit board is damaged.	* Remove the jammed label. * Make sure the media thickness is equal or less than 0.19mm. * Replace the cutter or cutter driver circuit board.

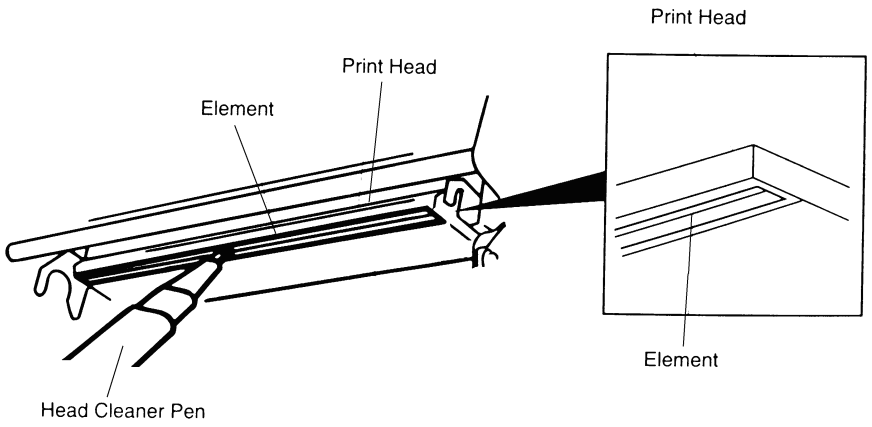
6. Maintenance

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

1. Please use one of following material to clean the printer.

- Cotton swab (Head cleaner pen)
- Lint-free cloth
- Vacuum / Blower brush
- 100% ethanol

2. The cleaning process is described as following:

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

Note:

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

- **Please use 100% Ethenol. DO NOT use medical alcohol, which may damage the printer head.**
- **Regularly clean the print head and supply sensors once change a new media to keep printer performance and extend printer life.**
- **The maximum printing ratio per dot line is 15% for this printer. To print the full web black line, the maximum black line height is limited to 40 dots, which is 5mm for 203 DPI resolution printer and 3.3mm for 300 DPI resolution printers..**

Revise History

Date	Content	Editor
2009/8/10	Revise section 2.2.2	Camille
2009/9/7	Revise section 3.3 (Diagnostic Tool)	Camille
2009/9/15	Add TDP-225W model	Camille
2009/9/16	Add section 3.4	Camille
2009/9/18	Add section 5.3	Camille
2009/12/28	Revise section 2.2.3 (Add USB host)	Camille
2010/3/3	Revise section 1.2	Camille
2010/3/12	*Add section 3.7 (Using the keyboard with USC host interface) *Revise section 3.1 & 2.2.3	Camille
2010/11/23	Revise section 1.2 and 2.2.3	Camille
2011/1/25	Modify TSC address	Camille
2013/4/2	Modify section 3.2.4 (cutter spec) Modify section 4.3.2 (V7.0 F/W self test) Add TSC YouTube web address	Camille
2014/1/27	Add TDP-324/324W models	Camille
2014/9/9	Modify section 3.6	Camille
2014/10/28	Modify section 2.2.3	Camille
2017/6/8	Delete Ch.1.2 Compliances Add the list of Agency Compliance and Approvals	Kate
2017/8/22	Modify section 3.2.4 (cutter spec)	Camille

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