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XP-TT424B/XP-TT434B Series

THERMAL TRANSFER/ DIRECT THERMAL BARCODE PRINTER

USER'S MANUAL

Please keep user manual for reference

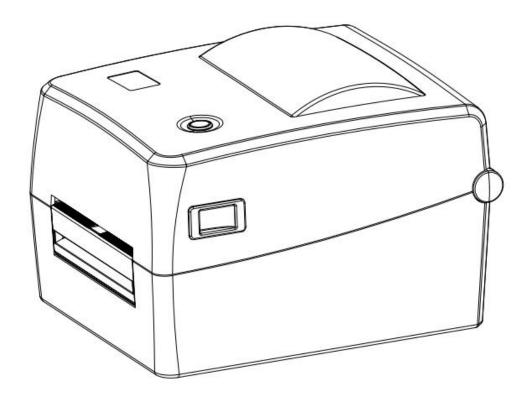
Content

1、	Printer brief introduction	1
	1.1 introduction	
	1.2 product parameter	2
	1.3 General specification	3
	1.4 ribbon specification	3
	1.5 printer paper specification	4
2、	Product introduction	5
	2.1 Unpacking and inventorying accessories	5
	2.2 Printer components	
3、	Installation	10
	3.1 install printer	10
	3.2 install ribbon	11
	3.3 install paper	14
4、	LED indicator and the function of button	18
	4.1 LED Indicator	18
	4.2 function of usual button	18
	4.3 power-on function	19
5、	Diagnostic Tool	25
	5.1 stat using diagnostic tool procedure	25
	5.2 printer setting	26
	5.3 use printer diagnostic tool correct paper sensor	27
6、	Trouble removal and common problem	28
7、	Easy maintenance of printer	31
	Update record	

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1. Printer brief introduction

1.1 Introduction

Thank you for purchasing our thermal transfer/thermal barcode printer

The slidable media sensor supports a wide range of paper types, including paper rolls, paper slicing and folding. In addition, other commonly used bar code papers can be used

This model has built in high-quality and efficient simulation font engine and font library. With a flexible firmware design, users can also download True Type Font fonts to the printer's memory. Besides scaled font, five different alphanumeric, OCR-A and OCR-B fonts are available. Combining such a powerful function, competitive price, high printing quality, this printer will be your best choice in the same level of thermal and thermal transfer printers

When printing the label format, please refer to the information provided by your label editing software. If you need to write your own program, it is just only for your reference

TSPL、ZPL、DPL、EPL Instruction Manual.

Scope of application:

- o Manufacturing & warehousing industry
- o Logistics industry
- o Medical industry
- o Retail industry

1.2 Product parameters

Product standard equipment			300 dpi XP-TT434B	203 dpi XP-TT424B
Thermal transfer printing			0	0
Thermal printing			0	0
ABS plastic HOUSING			0	0
Gap sensor / through-transmission			0	0
Adjustable black mark sensor / reflection-TYPE			0	0
Ribbon sensor			0	0
Head open sensor			0	0
USB 2.0(full speed) Communicati	on Interface		0	0
8 MB SDRAM			0	0
8 MB FLASH			0	0
Feed button and LED indicator			0	0
Supports (Eltron? and Zebra?) en	nulation		0	0
Contains 8 kinds of dot matrix type font			0	0
Fonts and bar codes can be rotate (0,90,180,270degree)	ed in four direction	าร	0	0
Including font			0	0
	 			
	an download indows font to use	e	0	0
can download firmware to update			0	0
Supports text, barcodes, photos. programmer's manual for available		PL,DPL,EPL	0	0
SUPPORT		Support image		
BARCODE 1D barcode	2D barcode	format		
Code 39, Code 93, Code128UCC,	PDF-417, Maxicode, DataMatrix, QR code,	BITMAP, BMP, PCX		
	Aztec, GS1 DataBar omposite code	(Max. 256 colors		
EAN-8, EAN-13, EAN-128, UPC-A, UPC-E, EANandUPC2(5)				
digits add-on, MSI, PLESSEY, POSTNET, China POST, GS1 DataBar, Code 11				

1.3 General Specification

General Specification	
Printer measurement	246mm(D)*199mm(W)*168mm(H)
Printer weight 1.6kg	
Power	
	Input:AC 100-240V Output: DC
	24V Output:2.5A,60W
Environmental conditions	
	Operating environment: temperature5-40°C(41-104°F), Humidity (non-condensing) 25-85%, Storage environment: -40-60°C temperature: 10-90%

1.4 Ribbon Specifications

Ribbon Specifications	Ribbon Specifications		
Ribbon external diameter	Max35mm		
Ribbon length	90 m		
Ribbon internal core diameter 12.7 mm (0.5")(Ink outside Coating)			
Ribbon width	Max.110 mm		
	Min.25.4mm		
Ribbon winding type Outer -roll type			

1.5 Media specifications

Printing resolution	203 DPI	300 DPI	
Printing head resolution ratio	8 dots/mm(203 DPI)	11.8 dots/mm(300 DPI)	
Print mode	Thermal transfer and direct thermal		
Dot size	0.125 x 0.125mm	0.084 x 0.084 mm	
(width x length)	(1mm= 8 dots)	(1mm= 8 dots)	
Printing speed (ips: inches per second	127 mm (5") / s	101 mm (4") / s	
Print width	25.4mm(1")-108 mm (4.25")	104 mm (4.09")	
Paper width (label + bottom paper)	Max 115 mm (4.5")	Max 115 mm (4.5")	
Dollom paper)	Min 25.4 mm (1.0")	Min 25.4 mm (1.0")	
Paper thickness (label	Max 0.25 mm	Max 0.25 mm	
+ bottom paper)	Min 0.06 mm	Min 0.06 mm	
Internal roll paper maximum capacity outside diameter	127 mm (5") OD	127 mm (5") OD	
Paper type	Continuous paper, gap paper, black label paper, folding paper, perforated paper		
Paper winding type External roll type/internal roll type			
Paper roller diameter	25.4 mm (1.0")	25.4 mm (1.0")	
label length	10mm ~1778mm(0.39"~70")	10mm ~889mm(0.39"~35")	

Remarks:

If you use a label length less than 25.4mm (1"), we suggest you use label which has a perforated line on the gap So that easy to tear off

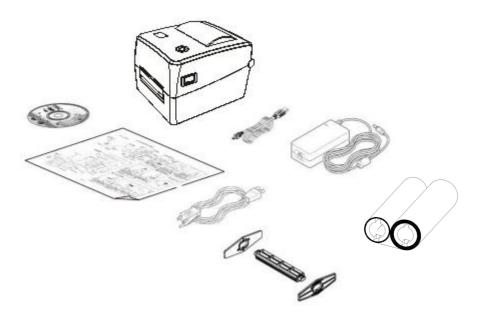
2. Product description

2.1 Unpacking and inventorying accessories

The printer is specially packed to resist the damage that may occur during transportation. However, in view of the fact that the printer may still be unexpectedly damaged while it is being transported, so that we suggest you check the packaging and printer setup carefully when receive the printer. If there is any obvious damage, please contact the dealer directly to indicate the nature and extent of the damage; please keep the packing material so that the printer can be mailed.

After you receive barcode printer, please put it on a clean, stable table and open the printer carefully. Check whether the following items are included in the inventory

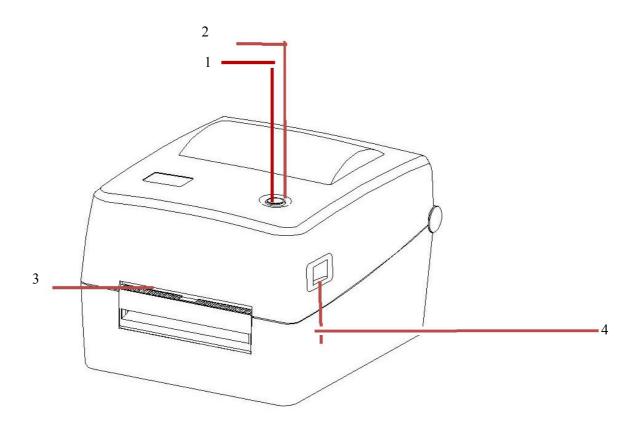
Bar code printer		x1
CD	x1	
Quick Start Guide	x1	
Power cable	x1	
Power supply kit		x1
USB communication cable	x1	
Paper supply kit		x1
Ribbon	x1	
Rribbon roller	x2	



Please keep the printer's packaging and materials properly for future transportation; if any of the above items is short or missing, please contact the customer service department where you purchased the product.

2.2 Printer components

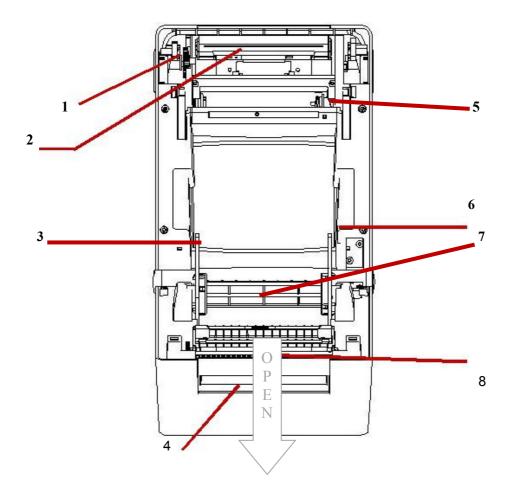
Appearance



1. Feed Button

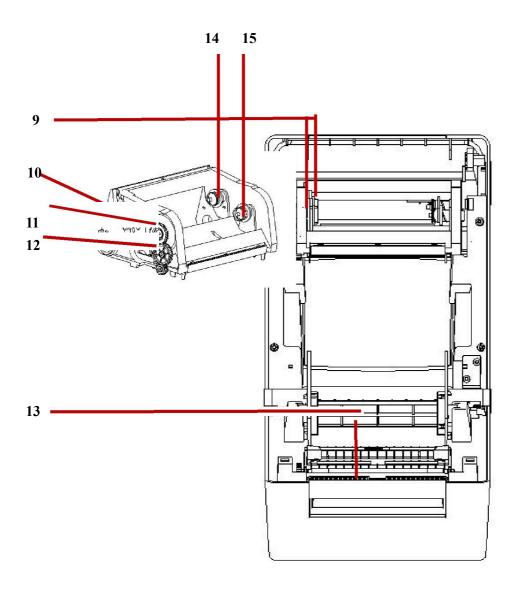
- 2. LED indicator light
- 3. Paper outlet
- 4. Cover open switch

Internal



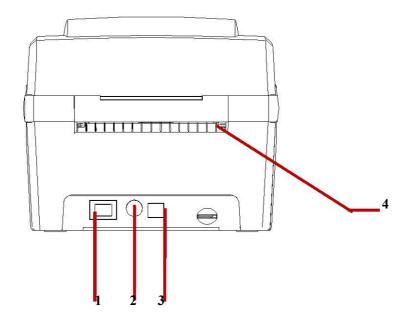
- 1.Ribbon gear
- 2.Printhead
- 3.Label guide
- 4.Front cover

- 5. Bracket lock
- 6. Cover support kit
- 7. Black mark sensor
- 8. Stripping sensor



- 9. Ribbon fixed kit
- 10. Grating wheel
- 11. Ribbon gear 3
- 12. Ribbon gear 2
- 13. Platen roller
- 14. Ribbon fixed fastener
- 15. Used ribbon fixed fastener

Back view



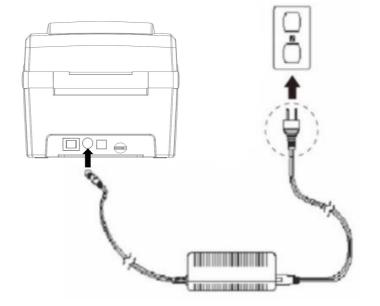
- 1.Power switch
- 2.Power jack
- 3. USB(USB2.0/Fullspeed mode)
- 4.Paper inlet

Attention:The transfer interface of the printer in the picture will difference according to the type of machine you are purchasing. actual transfer interface Please refer to the product specification.

3. Installation

3.1 Install printer

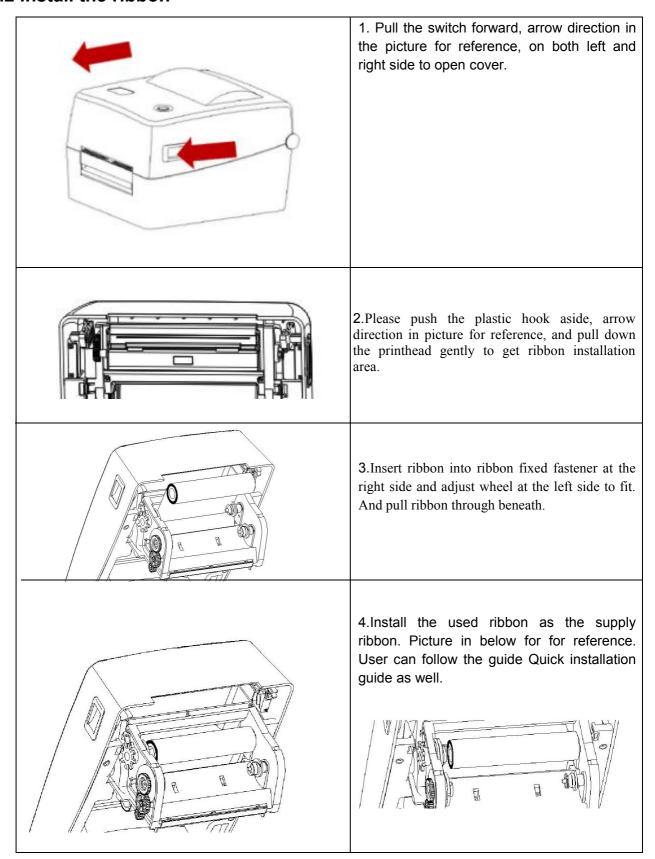
- 1. Put the printer on a stable surface.
- 2. Make sure the power is off.
- 3. Insert one end of the USB cable into the slot on the back of the printer, and then connect the other end of the cable to the appropriate slot on the computer.
- 4.Insert the power cord into the power jack on
- 5. The rear of the printer and plug the other end into an AC outlet.

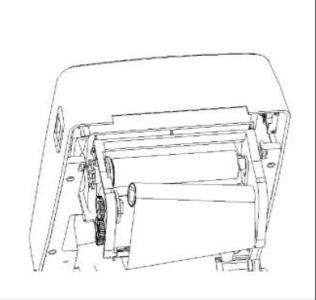


ATTENTION:

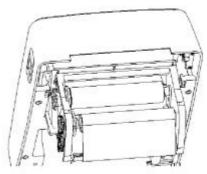
Turn off the printer's power switch and plug the power cord into the printer's power socket The transfer interface of the printer in the picture will difference according to the type of machine you are purchasing, actual transfer interface Please refer to the product specification

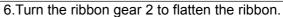
3.2 Install the ribbon

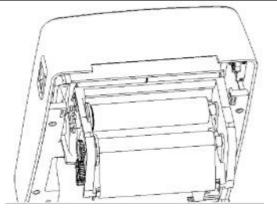


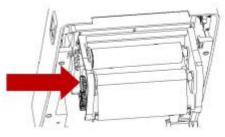


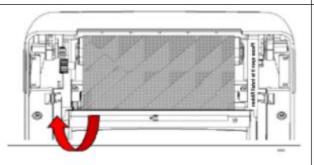
5. Pass the ribbon around the print head, and then the right side of the ribbon recovery shaft is stuck on the ribbon recycling axis. The left ribbon wheel 2 corresponds the position of the ribbon to the concave surface of the ribbon recovery axis and the concave surface of the axis.





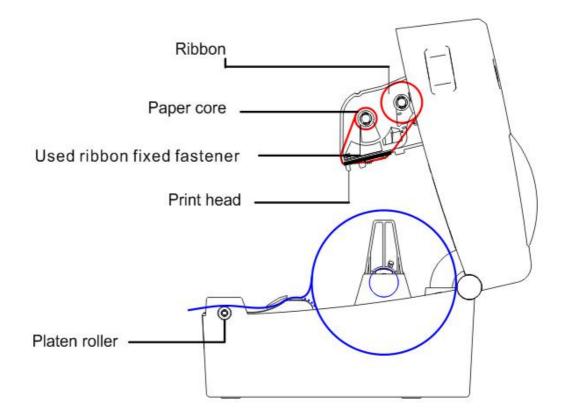






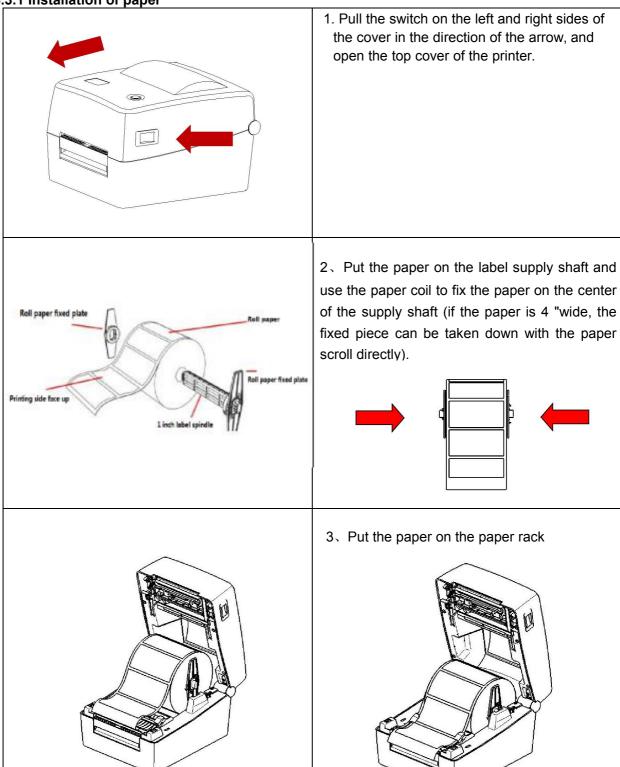
7. As shown in the left picture, both hands press upward at the arrow place, close the print head. Make sure the print head closed completely so that ensure the print quality

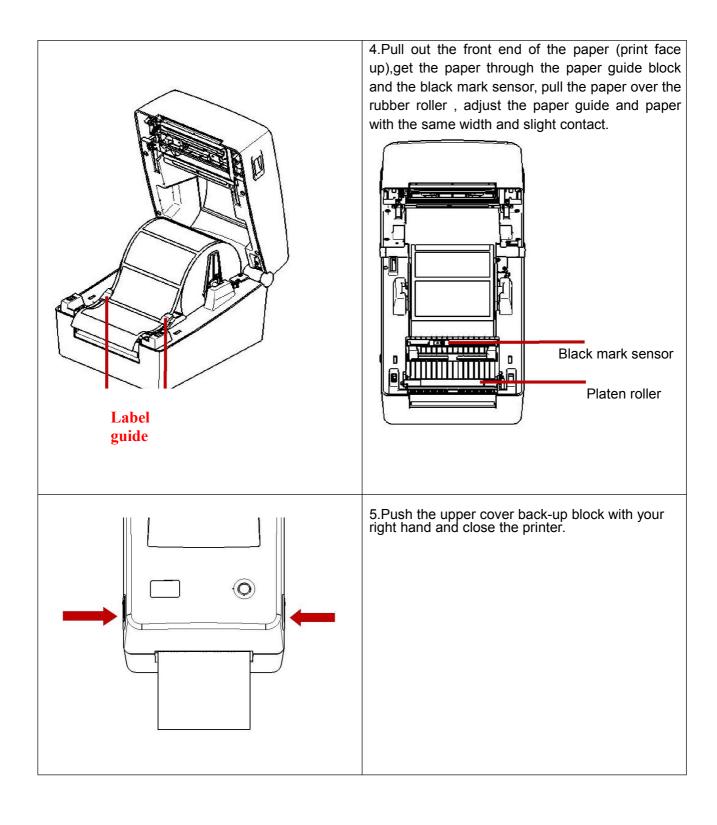
• Ribbon installation path

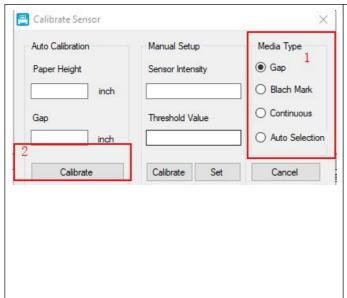


3.3 Installation of paper

3.3.1 Installation of paper



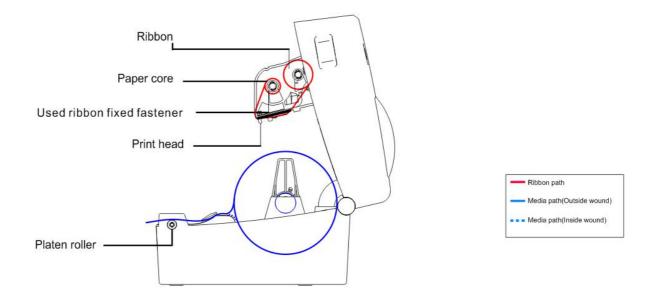




6. Please use the "Diagnostic Tool" to set the appropriate sensor type according to the paper category and correct the label sensor (open "Diagnostic tool", select the "printer settings" page ,press the "sensor correction" key), please refer to the 5.3 chapter.

Note: The label sensor of this series is removable. Please confirm that the gap (or black mark) of the aper is passed through the sensor. It is recommended that when you change the different types of label paper, please redo the sensor calibration.

Media loading path



4. LED indicator and the function of button

Printer designed with one set of gear motor, one Feed button and one LED indicator. According to the different LED display color, User can tell the status of printer.

4.1 LED indicator

LED indicator color	introduction		
Blue (fixed)	Power on, printer standby		
Blue (blinking) Printer is downloading data or in pause status.			
Purple	The printer is formatting the data		
Red (fixed)	Printer is in head opened or cutter error status.		
Red (blinking)	Printing errors, such as paper out, jam or memory errors,		
	etc.		

4.2 General button function

1.Paper feeding

When printer is standby(Blue LED fixed), the installed paper will move forward one unit if feed button is pressed once.

2.Pause mode

When the printer is printing, press feed button will cause the printing to pause. Then Blue LED indicator will display in blinking status.

4.3 Boot functions

The printer has six boot functions to be used to set or test printer hardware. You can start these functions by:

- 1. Turn off power of printer.
- 2. Keep pressing down the feed button then turn on printer.
- 3. Release the button according to the timing in the table below.

Boot functions	Light colo	r cycle m	node			
Light color	Purple	Blue	Red	Purple	Blue	Blue
Menu						
			Blink 5 times	Blink 5 times	Blink 5 times	Fixed blue
1.Gap/black mark sensor detection and calibrate paper.			Release the button			
Gap/black mark sensor detection, print self-test page and enter debug mode				Release the button		
Printer initialization (restore factory default)					Release the button	
4. Skip the AUTO. BAS procedure						Release the button

4.3.1 Gap/black label sensor detection

This detection is used to determine the sensitivity of label paper sensor after the printer starts up . When you changes new and different specifications of the paper roll or Initialize the printer to restore the value of the factory default, you need the sensor to redetect label paper clearance. And clearance detection or correction of black is set based on the value of reference for the last time. The default value of the printer sensors is set to clearance adjustment.

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

- 1. Hold on the button then turn on the power switch..
- 2. Release the button when LED becomes red and blinking. (Any red will do during the 5 blinks).
- 3.It will calibrate the ribbon sensor and gap/black mark sensor sensitivity. The LED color will be changed as following order:

Purple \rightarrow blue \rightarrow red (5 blinks) \rightarrow purple (5 blinks) \rightarrow blue (5 blinks) \rightarrow solid blue

Note:

Please select gap or black mark sensor by sending GAP or BLINE command to printer prior tocalibrate the sensor.

For more information about GAP and BLINE command, please refer to TSPL2 programming manual.

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 purple and blinking. (Any purple will do during the 5 blinks)

The LED color will be changed as following order.

Purple \rightarrow red (5 blinks) \rightarrow purple (5 blinks) \rightarrow blue (5 blinks) \rightarrow blue/purple (5 blinks) \rightarrow red/purple (5 blinks) \rightarrow solid blue

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

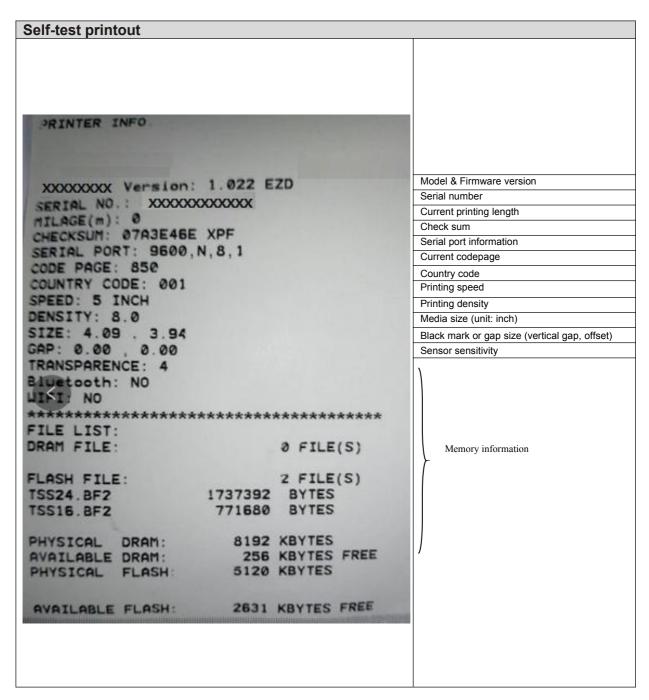
Note:

Please select gap or black mark sensor by Diagnostic Tool or by GAP or BLINE command prior to calibrate the sensor.

For more information about GAP and BLINE command, please refer to TSPL2 programming manual.

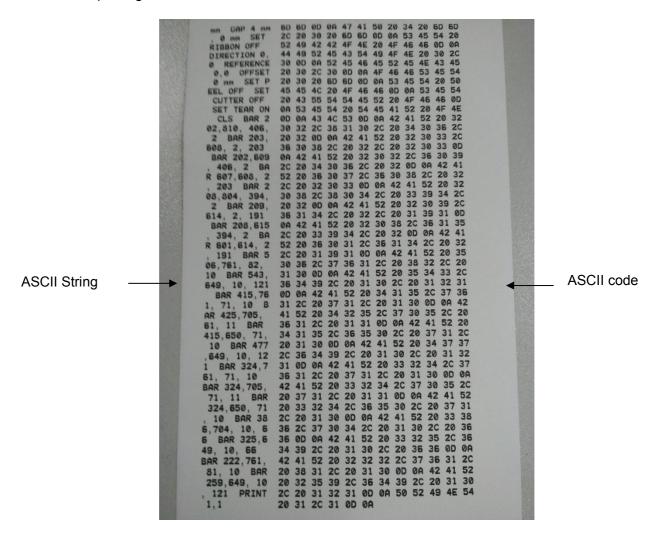
Self test page

The printer will print self test values after the sensor calibration is completed. Before you connect the printer to the computer, you can verify the printer to print properly by using the self-test function. The self-test values can be used to check the quality of the printer and show the setting of the printer internal state.



Debug mode

In debug mode, all volume label are printed out as machine code. On the left side of volume label is the ASCII string received data from the computer. And on the right of are data printed out in form of hexadecimal values according to the left ASCII string . This function provide user or engineer to debug program. After debugging, user need to restart the printer to resume printing mode.



Note:

1. Please using 4 inches label to get the complete debug information

4.3.3 Printer initialization

Printer initialization function is to format DRAM memory and change setting to factory default.

Printer initialization is activated by the following procedures.

- 3.1 Turn off the power switch.
- 3.2 Hold on the button then turn on the power switch.
- 3.3 Release the button when LED turns blue after 5 purple blinks. (Any blue will do during the 5 blinks).

The LED color will be changed as following:

Purple \rightarrow blue \rightarrow red (5 blinks) \rightarrow purple (5 blinks) \rightarrow blue (5 blinks) \rightarrow solid blue

Factory default value:

Parameter	The default value		
Speed	127 mm/sec (5 ") (203DPI)		
	101 mm/sec (4 ") (300DPI)		
Density	8		
Label width	4 " (100 mm)		
Label height	2.5 " (63.5 mm)		
Sensor type	Gap sensor		
Gap setting	0.08 " (2.0 mm)		
Direction	0		
Reference point	0,0 (upper left corner)		
Offset	0		
Tearing mode	On		
Peeling mode	Off		
Serial port Settings	9600 bps, none parity, 8 data bits, 1 stop		
Character set	850		
Country code	001		
Clearing Flash	No		
IP address	DHCP		

4.3.4 Skip the AUTO. BAS procedure

TSPL2 programming manual command language allows users to load a document automatically (AUTO. BAS) in flash memory. Printer will automatically perform according to the boot files loaded by users. When you want to skip AUTO. BAS procedure, you can use this function to ignore this automatically executable files.

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 blue.

The LED color will be changed as following:

Purple \rightarrow blue \rightarrow red (5 blinks) \rightarrow purple (5 blinks) \rightarrow blue (5 blinks) \rightarrow solid blue

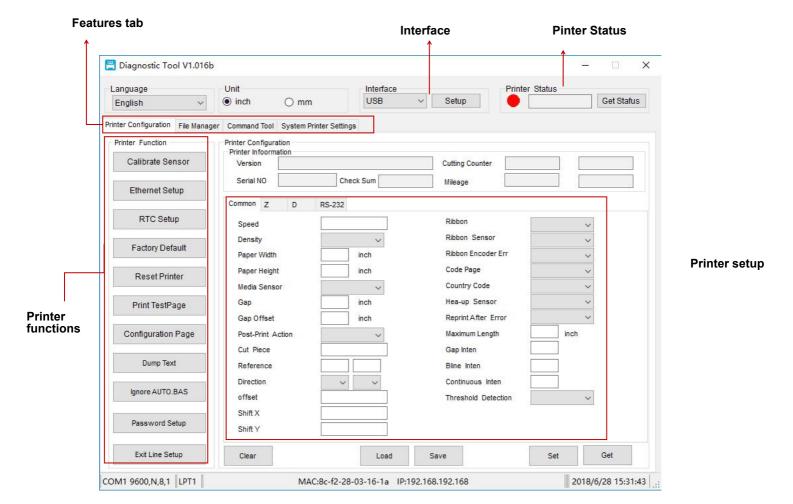
4. Printer will be interrupted to run the AUTO.BAS program.

5. Diagnostic Tool

Diagnostic Tool is a simple and easy-operated tool, which can check the printer information, file download and send emulation command.

5.1 Enable DiagnosticTool tool program

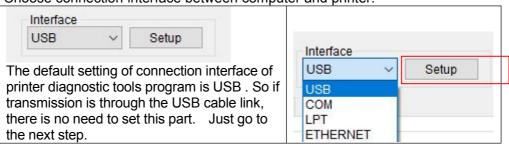
2. There are three administration pages (printer Settings, file management, communication tools) in main picture after the program starts.



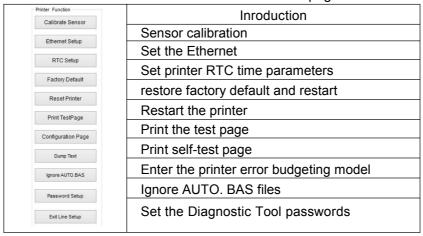
25

5.2 Printer Setting

1. Choose connection interface between computer and printer.



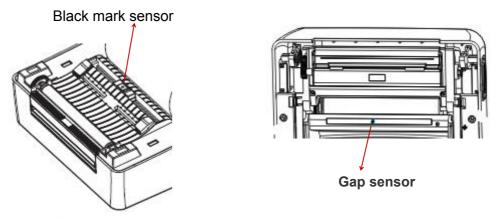
- 2. Click the needed function in function area.
- 3. Printer function introduction in the administration page of Printer Setting is as follows.



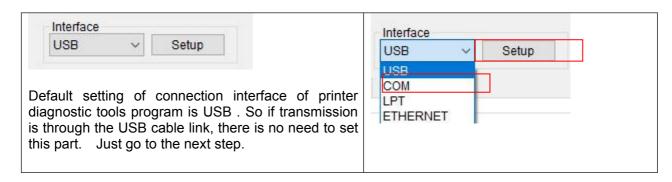
5.3 Printer Diagnostic Tool Program on paper sensor correction

5.3.1 Automatic correction

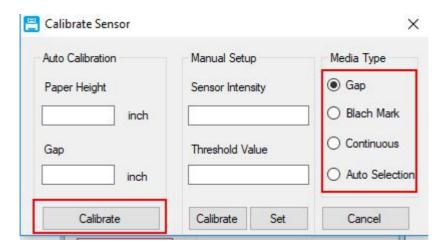
1.Please make sure the paper correctly installed and closed the printer head.



- 3.1 Turn on printer.
- 3.2 Select the communicate port according to the connected port.



- 4. Press the "sensor calibration" button.
- 5. Choose the paper type and press the "Calibrate" button



6. Troubleshooting

The contents of the table below are common problems and solutions in general operators; If you troubleshoot in the way we suggest, and printer is still not functioning, then please get in touch with manufacturer's customer service department to get more help.

Problems	possible factors	solution	
-The power indicator light is not light	* The ac plug socket and the power supply plug socket are not properly connected with the	*Check and make sure the ac plug socket and the power supply plug socket are correctly connected with the socket of the printer.	
	* The printer power switch is not on.	* Turn on the power switch.	
-Printer Diagnostic tools (the Diagnostic Tool) show" head opened "	r Cover goesh i close enilreiv - i	* Try to reclose cover harder once.	
	* Ribbon end		
Printer Diagnostic tools (the Diagnostic Tool) show "Ribbon nd" or "Ribbon speed error"	* Ribbon installed incorrectly	* Supply a new ribbon roll. * Please refer to the steps on section 3.2 tore-install the ribbon.	
	* Label paper end	* Install the new label paper	
-Printer Diagnostic tools (the Diagnostic Tool) shows "paper end"	* Paper installed incorrectly	* Correct the Sensor position	
	* Gap/black mark sensors error	* Recalibrate label sensor	
	* Clearance/black label sensors detect error	* Recalibrate volume label sensor	
Printer Diagnostic tools (the Diagnostic Tool) shows " Paper	* Volume label paper size is not correct	* Set the correct label size	
Jam "	* Maybe volume label paper gets stuck in internal structure of printer	* Clean the internal structure of printer	

Problems	Possible factors	Solution
		* Reconnect the transmission line.
		* Replace new transmission line.
		* Ribbon does not match label . * Please Confirm whether ink surface of Ribbon is installed correctly.
		* Reinstall the Ribbon.
	* Pin feet of Serial port	* Clean the print head.
-Not Printing		* Print density setting is not correct.
		* The connection line of the print head is not connected properly. Please turn off the printer's power supply and reconnect the connection line of the print head. * Please confirm that the connecting line of the stepping motor is connected correctly. * Please confirm that there is a PRINT instruction in the print program.
		In the end, and at the end of each line, there must be a CRLF.
		* Remove unnecessary files inside FLASH / DRAM.
		* DRAM can store up to 256 files at most
-The memory space is	*ELASH/DDAM momory	* The maximum storage capacity of the DRAM is 256KB.
		* FLASH can store up to 256 files at most
DRAM)		* 2560KBthe maximum storage capacity in FLASH is 2560KB.
	* Ribbon and label paper	* Reinstall the consumables.
	are not installed Correctly * There is dust or glue stacking on the print	* Clean print head.
		* Clean rubber roller.
		* Adjust the printer's printing density and printing speed.
	head * Print density setting is not correct * Print head damage	* Print out the self-test value to see if the print head is damaged. If the print head is damaged, replace the print head.
	* Ribbon does not match	* Replace a suitable ribbon or label paper.
•	* The pressure setting of the print head is not	* lif the thickness of the label exceeds 0.22 mm, the printing quality may not be good enough. Please increase the print head pressure first. * Confirm that the print head frame has been completely
	appropriate	closed.
	* The size of the label is not set or incompletely set	* Please confirm that the label size is set to be correct.
:	* Do not recalibrate the sensor after replacing tag	* Please recalibrate the label sensor.
	* label sensor is covered by dust, causing incorrect detection	* Clean the dust on the sensor with a gas brush.

problems	possible factors	solution
·	* Label sensor setting is	* Recalibrate label sensors
	incorrec	* Set the correct size of the volume label and
	* label size setting is	the clearance size of the volume label
	incorrect	*If BarTender software is used, set the
	* The vertical displacement	vertical offset (vertical offset) in the printer
	(vertical offset) in the printer driver's label style is not set	Page Setup Graphics Stock Options About
	correctly.	Media Settings Method: Direct Thermal
	correctly.	Method: Direct Thermal Type: Use Current Printer Setting
- Print position is incorrect when		
printing small volume label		Media Handling Post-Print Action: Tear Off
		Ogourence: After Every Page
		Interval: <u>F</u> eed Offset: 0.0 mm
		Position Adjustments
		✓ Use Current Printer Settings Vertical Offset:
		OK Cancel Apply Help
- Print content on the left and right	* Incorrect label size setting	* Set the correct label size
sides missing		1.5
- When the printer is restarted, the	* Battery run out of electricity	* Please replace the battery on the
RTC time is incorrect	* Draggura of print hand in	motherboard * Places go to the poyt chapter for the
	* Pressure of print head is uneven	* Please go to the next chapter for the adjustment of uneven pressure on the print
	* Ribbon is not installed	head.
	correctly	* Please set the suitable density to have good print
- Wrinkle problem	*The label paper is not	quality.
·	installed correctly	* Please adjust the label width adjuster to fit
	*Incorrect print density	the label width.
	* label paper feeds	
	incorrectly	
	* There is dirt on the print	* Clean print head
- Black label paper with gray lines	head	* Clean rubber roller
	* There is dirt on rubber roller	
	* The printer is in Hex Dump	* Turn the printer off again and jump out of
- Print unsteadily	mode	the dump mode
	* Serial line (RS-232) setting	*Reset the RS-232
	is incorrect	

7. Maintenance of the printer

To do simple maintenance of printer ,it will not only make sure the quality of printing ,but also can extend the printer's life . please find us some recommended maintenance method as below.

1.se use the tools listed below to clean and maintain your printer

- Cotton swab
- cotton
- air brush
- Medical alcohol

2. Cleaning and maintenance procedures

Cleaning	Procedures	Recommended cleaning	
part	1100044100	frequency	
	Please turn off the power let print head to cool for at least one minute The cotton swab dampened with alcohol and then Wipe the print head surface	Replacing a roll of new label paper	
Printing head	Clearance		
Rubber roller	 Turn the power off. Rotate the platen roller and wipe it thoroughly with Medical alcohol and a Cotton swab, or lint-free cloth. 	Clean the platen roller when changing anew label roll	
Stripp paper flake	Use the lint-free cloth with Medical alcohol to wipe it.	As needed	
transducer	Compressed air or vacuum	Monthly	
Outside of machine	Wipe it with water-dampened cloth	As needed	
inside of machine	Brush or vacuum	As needed	

NOTE:

◆ Do not touch the print head directly . If touched by accident, dampen cotton swab with medical alcohol to wipe the printing head .

- ◆ Please use medical alcohol. Do not use industrial alcohol. Industrial alcohol may damage the print head.
- ♦ If your printer has frequent error messages, clean your printer's transducer frequently
- Printer is suitable for tropical climates ,safe to use.
- This is Grade A level product. this product may cause radio interference in the living environment. In this case, users may need to take practical measures for radio interference.

Update record

Content	Editor
Release	



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