

USER'S MANUAL

Barcode Printer

Model: BTP-L42

Shandong New Beiyang Information Technology Co., Ltd.

Declaration

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Trademarks

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Warnings and Cautions in this manual



Warning: Must comply with warning to avoid bodily harm or damage to device.



Caution: Provides important information and prompts for printer operation.

Quality Certification



(DNV)ISO9001:2000

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General Safety Information

Before installing and using the printer, please read the following items carefully.

Safety Warning



Warning: The TPH is calorific and its temperature is high when printing or just after the operation. Therefore, please don't touch it and its peripherals for safety purpose.



Warning: Due to the static, please don't touch the surface of THP and connecting parts to keep it from damages.

Caution

- Install the printer on a flat and stable place.
- Reserve adequate space around the printer so that the operation and maintenance can be performed conveniently.
- Keep the printer far away from water source and do not expose the printer to direct sunlight, strong light and heater.
- Do not use or store the printer in a place exposed to heat of fire, moisture and serious pollution.
- Do not place the printer on a place exposed to vibration and impact.
- No dew condensation is allowed to the printer. In case of such condensation, do not turn on the power until it has completely gone away.
- Connect the AC adaptor to an appropriate earthing outlet. Avoid sharing the same one outlet with large power motors and other devices that may cause voltage fluctuation.
- Disconnect the AC adapter when the printer is deemed to spare for a long time.
- Avoid water or other electric materials entering into the printer. In case that this happens, turn off the power immediately.
- Do not allow the printer to printing without recording paper in, otherwise the TPH and platen roller will be damaged a lot.
- To ensure print quality and normal lifetime, use recommended paper and ribbon or the ones with same quality.
- Turn off the printer before connecting or disconnecting interfaces connectors to prevent control board from damages.
- Set the print darkness to a lower grade as long as the print quality is acceptable. This will help to keep the TPH durable.
- Do not disassemble the printer without permission of a technician for repairing purpose.
- Keep this manual carefully at hand for ready reference.

Product Introduction

1.1 Outline

BTP-L42 barcode printer has a smart appearance and high performance, which is an ideal label printer for office use. It can apply to many desktop office printing fields, such as medical treatment, retail, manufacture, logistics and asset management

It can be connected with the peripheral equipments via serial or other interfaces, at the same time it can provide common drivers for the operation systems as Windows 2000/XP/Server 2003/Vista.

Main characteristics of this printer:

- Thermal / thermal transfer printing
- Novelty and smart shape, friendly man-machine interface.
- Blocking and open ribbon module, easy operation and maintenance.
- Support BPLA and BPLB programming language.
- Brand new control mechanism and automatic identify paper type.
- Mobile sensor with reflect and transmission sensor together, adaptive for several types paper.

1.2 Package content

Unpacking the printer carton and refer to the packing list to check whether the parts is short or damaged. If there is, please contact with our distributor. (Different parts are attached because of different product configuration, which are subject to the packing list).

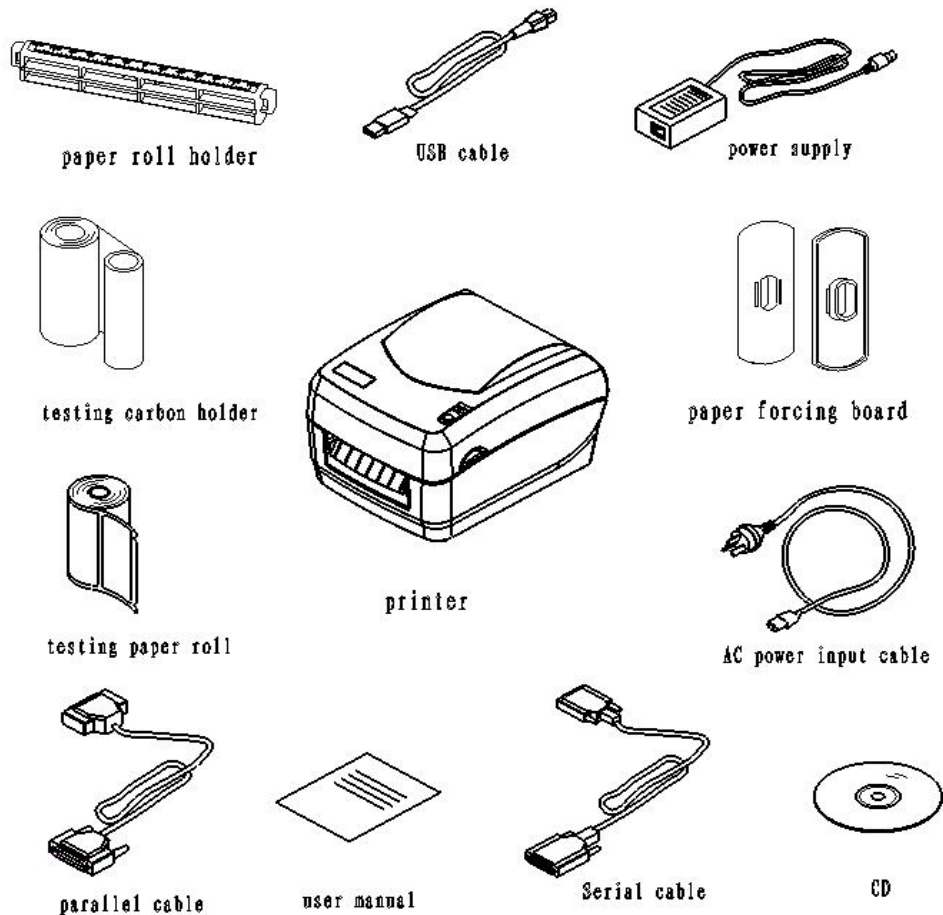


Figure 1.2.1

1.3 Printer mount

The printer should be placed on the flat table surface where water, moisture or dust should be prevented. When mounting it, the slanting extent shall not exceed 15°.

1.4 Connect with power adapter

- 1) Be sure that printer power switch is off.
- 2) See figure 1.4, Connect one end of AC power cable to power adapter, and then put another end into 220V power socket.

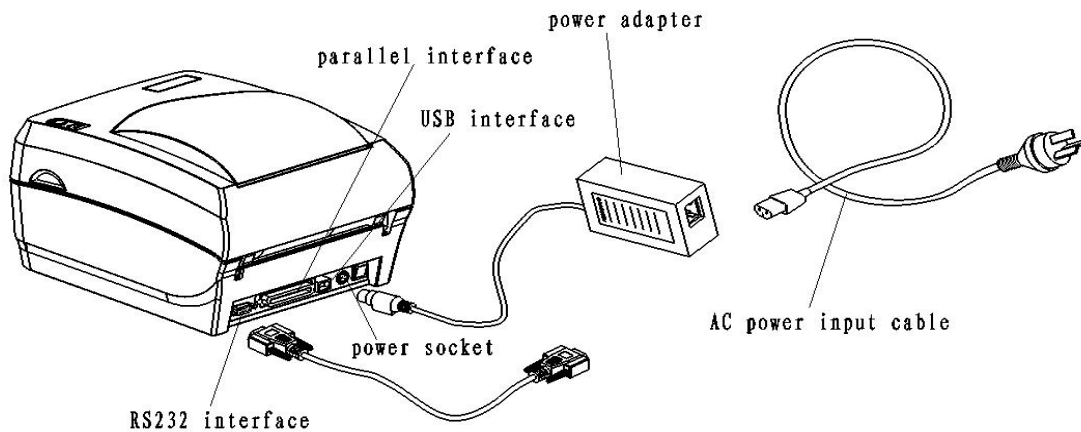


Figure 1.4.1

- 3) Insert another end of power adapter into power adapter socket at the back of the printer.

⚠ Notice : If the printer is idle for a long period, please disconnect the power!

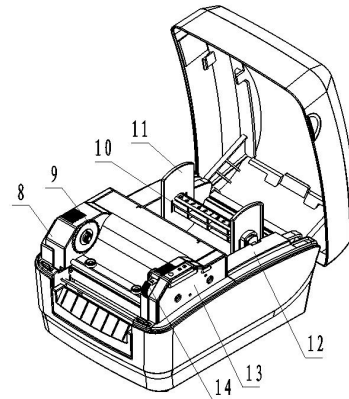
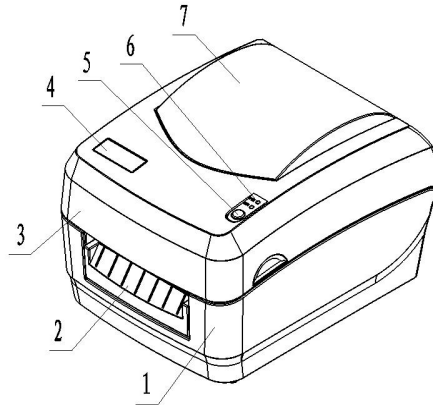
1.5 Connect communication cable

- 1) Be sure the printer power switch is off.
- 2) See figure 1.4, put communication cable into matched interface and fix it in using clip spring or screw of the plug.
- 3) Connect another end of communication cable to the host.

⚠ Notice : Please do not connect or disconnect Serial and Parallel cable with power on!

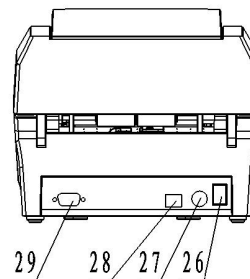
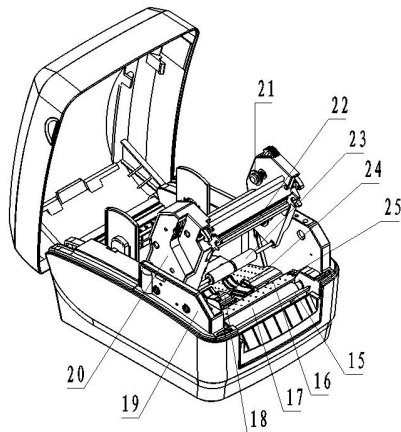
1 Printer operations

2.1 Appearance and parts



- 1—Bottom cover
- 3—Top cover
- 5—Key
- 7—Window
- 9—Ribbon thumbwheel
- 11—Paper guide
- 13—the right board of mechanism

- 2—Faceplate
- 4—LOGO board
- 6—LED
- 8—Ribbon bracket
- 10—Paper roll holder
- 12—Paper room
- 14—Open wrench



- 15—Manual Cutter
- 17—Print rubber roll
- 19—left side board of mechanism
- 21—Ribbon baffle
- 23—Transmission roller
- 25—THP micro-switch
- 27—Power adaptor interface
- 29—Serial interface

- 16—Master bracket
- 18—Left paper guide block
- 20—Ribbon protective cover board
- 22—TPH
- 24—Right paper guide block
- 26—Power switch
- 28—USB Interface or Parallel interface

2.2 Main module

- 1) Key (5)/LED (6):Indicate the printer status and execute its print functions.
- 2) Paper roll holder (10)/Paper guide (11):Hold paper roll and prevent it sliding in paper outlet
- 3) Paper guide block (18、24):
 - Prevent paper sliding in paper outlet.
 - There is installed sensor in the left paper guide block(18), whose function is do checking, inspection and positioning for the media.
- 4) THP micro-switch(25) : Check THP lifted or depressed status。
- 5) Power switch(26): Turn off the power when pressing “O”, and turn on the power when pressing “—”.

2.3 LED and key functions

LED functions

1) Status Explanation

LED name	status	Explanation
Power LED (Green)	Always on	Printer is in standby status
	Flash quickly	Printer is busy (process commands)
Error LED (Red)	Always Off	Printer is in standby status
	Always on	Printer enters pause status
		Wait and confirm label is taken away in tear-off/peel off mode
	Flash	Printer has error

Table 2.3.1

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2) Printer error information, and LEDs flashing comparison table







Error information	LEDs flashing
THP lift-up	
Wrong command functions	
Paper end	
Serial communication error	
Paper checkout error	
THP voltage / temperature abnormal	
Ribbon is used out	
System error	

Table 2.3.2

- Key function explanation

Key	Function	Explanation
Feed	BPLB instruction set Press key and the offline print mode steps out	When the printer is in the offline print mode, press "Feed" button while restarting and then loose it after the power LED flashes one time. And the offline print mode steps out.
	Press key to feed paper	Press "Feed" button at standby mode, only one label enters for discontinuous paper. for continuous paper, the label height stored in printer bottom determines the entering.
	Print self test paper	Press "Feed" button at standby mode, loose it when power LED flash one time. And then the printer begins to print self test paper.
	Check paper	Press "Feed" button at standby mode, loose it when power LED flash twice. And then the printer begins to check paper.
	Restore default baud rate	Press "Feed" button at standby mode, loose it when power LED flash three times. And then default communications are restored (9600, N, 8, 1, hard handle, no automatic feed) and it is unsaved while shut down.
	Restore factory settings	Press "Feed" button at standby mode, loose it when power LED flash four times. And then factory settings are restored.
	Print sensor waveform	Press "Feed" button at standby mode, loose it when power LED flash five times. And then the paper enters and the printer begins to check and print the sensor waveform.
	Make sure the label has been taken off	There is no existing sensor in tear mode. The error LED is on when one label is finished printing. The user presses "Feed" button to make sure the label has been taken off. At last the printer spits out the label and begins to print next one.
	Cancel pause	Press the feed button to cancel pause while the error LED (red) keeps light.
	Debugging	Press the button for debugging and restore the printer to standby mode

Table 2.3.3

2.4 Loading paper

- 1) Push up the top cover with two hands according to the arrows in figure 2.4.1 and open it.
- 2) Press down the open up spanner according to the arrow in figure 2.4.2. After ribbon holder is lift, turn it at the angle shown as below.

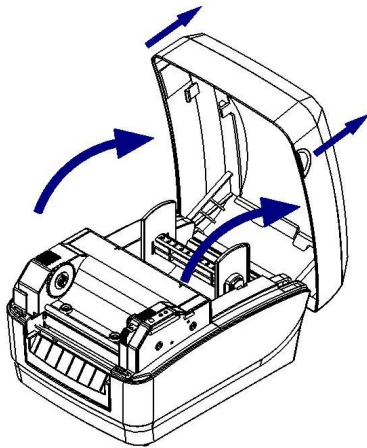


Figure 2.4.1

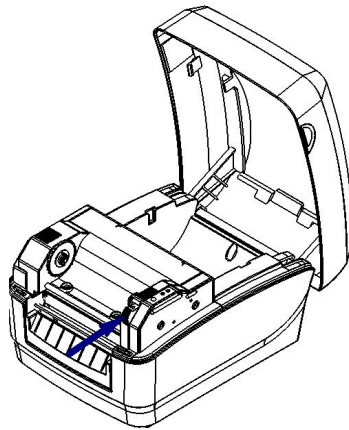


Figure 2.4.2

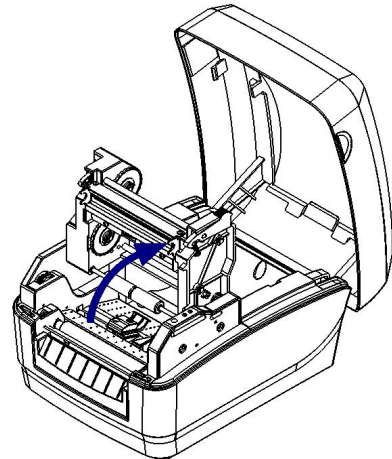


Figure 2.4.3

- 3) Load a paper roll on paper roll holder and add one paper roll guide on each side of paper roll, see figure 2.4.4.

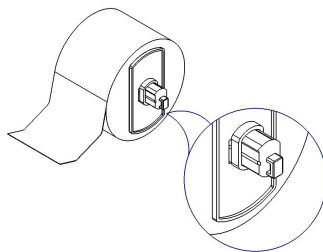


Figure 2.4.4

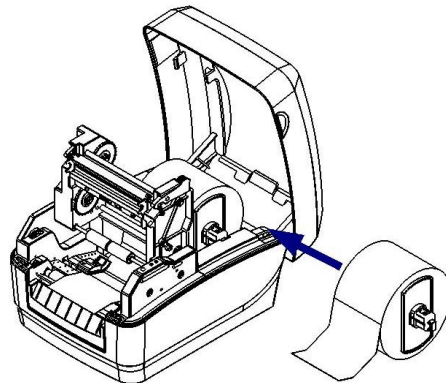


Figure 2.4.5

- 4) Drop paper roll on the paper holder to the paper room, then pull out the front end of the paper and put it in the print path flatly, and also release the paper guide to hold it. (See figure 2.4.5)

Notice:

- Pressing the top cover heavily while opening it is prohibited. The right way is open it upwards.
- The print side should be upside. If it is the marked paper, please put black mark downwards.
- The front end of paper roll should be in the middle of the platen as possible as it can.

2.5 Assembling the ribbon

- 1) See figure 2.5.1, revolve and open the ribbon bracket to the position in figure 1. Insert one end of ribbon in accordance with the way in figure 2 to the ribbon end cap. Insert the other end of ribbon in accordance with the way in figure 3 to the ribbon thumb wheel. Pull the ribbon slightly to the outside, the issue ribbon is ready if there is elastic recovery. (See figure 2.5.1)

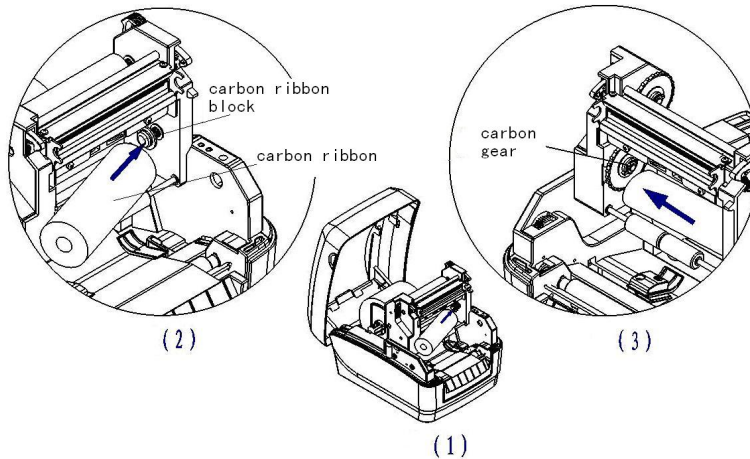


Figure 2.5.1

- 2) Put the front-end of ribbon around the bottom of TPH module and rewind it on the ribbon retraction shaft.
- 3) Install the ribbon retraction shaft to the ribbon holder according to the way in the term of 1)
- 4) Toggle the ribbon thumb wheel to make sure the ribbon is tight. (See figure 2.5.2 for the mounted paper roll and ribbon)

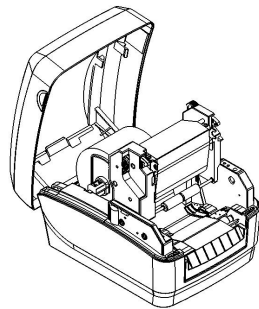


Figure 2.5.2

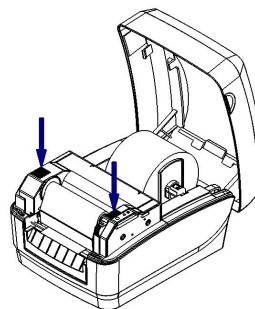


Figure 2.5.3

- 5) Press down the ribbon holder to clamp status and then close the top cover. (See figure 2.5.3)



Notice:

- Select the print mode: To select thermal transfer mode, ribbon is needed to mount. To select thermal mode, ribbon is not needed.
- In normal condition, ribbon width should be bigger than the paper width.
- During this mount, the ribbon should not be cockled or damaged.

2.6 Starting the printer

Turn on the printer and self-test.

- 1) Be sure that power adapter and communication cable are connected, then turn on the printer power switch.
- 2) The printer starts self-test. After the self-test, the power indicator is on and the error light goes out.



Notice:

- If the printer cannot start or work normally, please contact with our distributors in time.
- Print a self-test page

The self-test page includes the printer configuration sample and TPH test sample.

- 3) Load the media and turn on the printer power. The printer will go to standby after the self-check is finished. And then hold down “Feed” key and don’t release it until the power light flash one time. At last, the printer shall feed paper and print a self-test page. (Self-test page sees appendix 1).
- 4) TPH test page can show the current settings information of the printer and whether the TPH status is in good or not.

Set Paper Type

Before the print, set the paper type in driver correctly. Select paper type according to the table as below:

Paper type in the driver	Actual paper type
Continuous paper	Continuous strip paper
Black mark paper	Non-continuous marked paper
	Non-continuous Perforated paper
	Non-continuous edge-gap paper
Label	Non-continuous label paper

Table2.6.1

Checkout mark

- 1) Load the media properly and then turn on the printer power.
- 2) The printer will go to standby after the self-check is finished. And then hold down “Feed” key and don’t release it until the power light flash twice. At last, the printer shall feed paper and start the checkout.
- 3) If checkout is successful, the printer enters standby status. If it fails, the

printer shall alert, and then please check whether media is loaded correctly
In the following cases, the media needs to be verified before the print:

- It is the first time to mount and use the printer or first time to use it after cleaning the sensor.
- The printer is used again after a long idle time or new type of paper roll replaces the old one.
- Fails to identify marks in effect during the print.
- Operation environment of the printer is changed greatly.



Notice:

- After following the steps above and cleaning the sensor, it still fails to find out the failure reason of printer checkout, please contact with the maintenance people!

2 Software Setup

The SNBC driver, EUROPLUS driver and label software installer are stored in the disk packed with printer. You also can download the driver from our website www.newbeiyang.com.cn.

3.1 Install SNBC Driver

The drive supports the operation system as Windows 2000/ Windows XP/Windows server 2003/WindowsVista.

Install Parallel/Serial interface Driver

- 1) Run "Setup.exe" in the driver package and read the license agreement carefully. If you accept all the clauses in this Agreement, please click "I Accept" and then click "Next" button.



- 2) Choose the type and name of printer to be installed. If you want to set this printer as the default printer, please select "setting the printer as default printer" button, and then click "next".



- 3) Choose the method of installation, then click "next" button.
- 4) Choose the current system type, then click "next" button.
- 5) Set the printer port, then the system defaults interfaces as "LPT1". User

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can execute the installation depending on the current port. Please choose "BYCOMx" for the Serial drive ("x" equals to "1,2,3,4,5,6,7 or 8"), then click "Finish" to end the installation.



Install USB Driver

- 1) Insert the USB connecting line of printer to the USB interface of host computer. The system will identify the new hardware automatically and popup the driver installation guide. Click "Next" button.



- 2) Choose "Install from list or assigned position(high grade)" and click "Next" button.
- 3) Choose "Search best driver in these positions", click "browse" to select the catalog where the driver is or input driver is and click "Next" button.



- 4) Click "Continue" button.
- 5) Click "Finish" to end the installation.



Notice: If you want to update the driver, please run "Uninstall.exe" in the driver package to uninstall original driver first.

3.2 Install EUROPLUS Driver

EUROPLUS driver supports the operation system as Windows 2000/Windows XP / Windows server 2003 / Windows Vista / Windows Vista 64 bit.

Install Parallel/Serial interface driver

- 1) Run "PrnInst.exe" in the driver package and then click "Next" button.



- 2) Please read the license agreement carefully. If you accept all the clauses in this Agreement, please click "I Accept clauses in this Agreement" and then click "Next" button.
- 3) Choose BTP-L42 in the printer list and click "Next" button.

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- 4) Choose one parallel interface or serial interface and click “Finish” button to end the installation.



Install USB Interface Driver

- 1) The first three steps are same as “Install Parallel/Serial interface driver”.
- 2) In the fourth step (see below figure), choose USB interface and click “Finish” button.



3.3 Installation Label Software

The label software supports the operation system as Windows 2000/ Windows

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XP/Windows Server 2003/WindowsVista

- 1) Run Setup.exe and start the installation of label software. The first step: choose install language.



- 2) Choose "Next" to continue installing.
- 3) Please read the license agreement carefully. If you accept all the clauses in this Agreement, please click "I Accept this Agreement" and then click "Next" button.
- 4) Please select the installation directory and click "Next" button.
- 5) Choose the created shortcut name and then click "Next" button.



- 6) Choose whether to create desktop icon and then click "Next" button to end installation.

3 Printer Adjustment

4.1 Sensor Position Adjustment

Assemble the sensor in the paper-pressing module, which can be moved around by the paper-pressing (see figure 4.1). While assembling the media, adjust the paper-pressing to make sure the space between paper-pressing module is little wider than the sensor breadth. To ensure the sensor inside the paper-pressing can detect the media, this width margin should be about 0.5mm. The standard for applied media should be accordance with the media specification requirements in appendix 1.3.

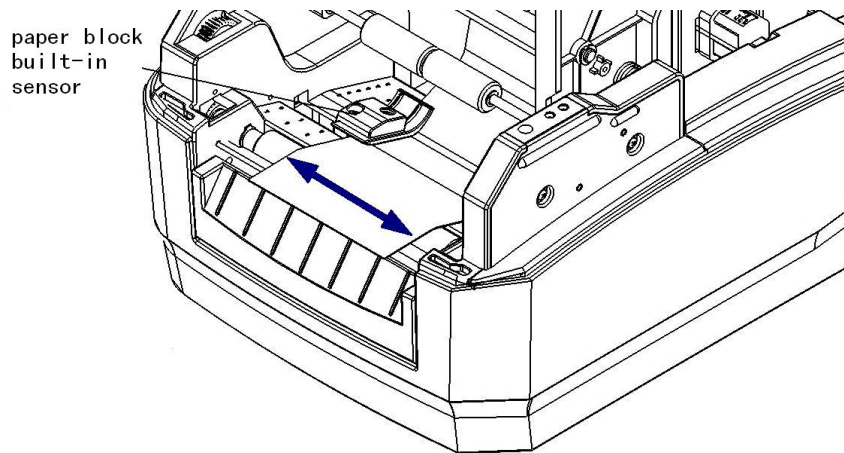


Figure4.1.1

4.2 Printer common parameter adjustment

Printer common parameter adjustment and range

Parameter	Range settings	Remarks
Print darkness	00—30	Under the condition that the printout meets with the requirement, set the print darkness as low as possible to avoid TPH's lifetime effected.
Vertical position	-99—99 dots	Adjust the printout in vertical direction with 1 dot as a motion unit.
Horizontal position	-99—99 dots	Adjust the printout in horizontal direction with 8 dots as a motion unit. Print pattern hall not move when it is less than 4 dots, or the print pattern shall move based on 8 dots when it is between 4 dots and 8 dots.
Tear-off position	-99—99 dots	Adjust the tear-off position in vertical direction with one dot as a motion unit.

Table4.2.1

⚠ Notice:

- 1 mm equals to 8 dots.

- The parameters above have been adjusted to high point when out of factory. Please do not change them.

Print pattern on ticket (x, y) and adjusting direction

1) Vertical print position adjustment

When print ticket happens as Figure A or Figure B, adjust the vertical print position to Figure C.



Figure4.2.2

! Notice:

- Figure A shows the print position is upward and should be adjusted in negative direction.
- Figure B shows the print position is downward and should be adjusted in positive direction.

2) Horizontal print position adjustment

When print ticket happens as Figure D or Figure E, adjust the horizontal print position to Figure F.



Figure4.2.3

! Notice:

- Figure D shows the print position towards left, which should be adjusted in positive direction.
- Figure E shows the print position towards right, which should be adjusted in negative direction.

3) Tear-off position adjustment

When print ticket torn off happens as Figure G or Figure H, adjust the tear-off position to Figure J.

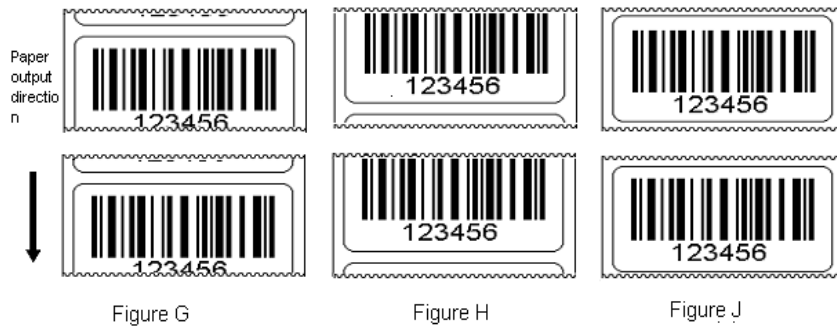


Figure4.2.4

Notice:

- Figure G shows the tear-off position upwards, which should be adjusted in negative direction.
- Figure H shows the tear-off position downwards, which should be adjusted in positive direction.

4 Routine maintenance of the printer

Follow the steps as below to clean the TPH, platen and sensor monthly. If the operation environment is bad, you can increase routine maintenance times for the printer.

5.1 Cleaning TPH

When the TPH happens in any case as below, should clean it.

- Printout is not clear.
- Noise in paper feed or retraction is high.
- Dusts stick on the TPH.

The steps for cleaning the TPH are as below:

- 1) Turn off the printer and open the top cover.
- 2) Lift up ribbon holder and find the TPH. If the print finishes just now, please wait for the TPH cool down completely.
- 3) Clean away dusts or dirt on the TPH with alcohol tampon (should twisted).
- 4) Wait for 5 to 10 minutes until alcohol volatilizes completely, then press down ribbon holder and close top cover.

5.2 Cleaning sensors

When the printer occurs in any case as below after manual check, you should clean marked paper sensor:

- During the print, the printer sometimes report paper end error
- The printer doesn't alarm while paper out.
- Fails to identify marks effectively.
- Clean marked paper sensor as the steps below:
 - 1) Turn off the printer and open top cover.
 - 2) Lift up ribbon holder and pull paper-pressing module.
 - 3) Clean away dusts or dirt on the sensor with alcohol tampon (should twisted)
 - 4) Wait for 5 to 10 minutes until alcohol volatilizes completely, then press down ribbon holder and close top cover.

5.3 Cleaning the platen

In the following cases, the platen should be cleaned

- The printout is not clear.
- Noise in paper feed or retraction is high.
- Dusts stick on the platen.

Clean the platen as the steps mentioned below:

- 1) Turn off the printer and open top cover.
- 2) Lift up ribbon holder and find the platen. If the print just finishes, you should wait for the platen cool down completely.

- 3) Clean away dusts or dirt on it with alcohol tampon (should be twisted) while turning the platen slightly.
- 4) Wait for 5 to 10 minutes until alcohol volatilizes completely, then press down ribbon holder and close top cover

**Notice:**

- Must be sure that the power is off during routine maintenance.
- Don't allow to touch the TPH with hand and metal, or scratch the surface of the TPH, platen and sensor with forceps.
- Do not use organic solvent such as gasoline and acetone to clean the TPH and platen.
- After cleaning sensor, the checkout should be preceded again.
- Don't turn the power to go on print until the alcohol volatilize completely.

5 Troubleshooting

When the printer has error, refer this section to settle it. If the problem still cannot be removed, please contact with our distributor.

6.1 LEDs status

When the printer has error or works in abnormal status, error LED flash. Then the print job stops, the host fails to communicate with the printer. Please check flash times of LED and refer to the table as below to settle it

Error LED status	Reasons	Settlement
Two flashes	TPH is lifted up	Please press down the TPH
	Micro-switch fault	Contact with maintenance people
Three flashes	Without doing manual checkout after changing the different media	The printer will enter into the pause status after debugging by keypad. And then press the feed button to cancel pause and manual checkout will be done.
	Paper roll is end or no paper roll is loaded	Load paper roll
	Paper jam	Remove paper jam
	Paper roll surface is dirty or damaged	Please cross over dirty or damaged part
	Paper roll is away from marked paper sensor	Load paper roll again
	The surface of marked paper sensor is dirty	Clean marked paper sensor surface
	Paper roll type doesn't match with Marked paper sensor	Set paper type in the printer driver is same with actual paper type
Four flashes	Communication cable connection is not firm	Make communication cable connection firmly
	The communication settings between the printer and host is not consistent	Set the communication interface of the print consisting with that of PC (Such as: handshake, baud rate, digital bit, stop bit or checkout bit)
Five flashes	Fail in manual checkout sensor	Make sure the media is installed properly while doing manual checkout.
	Print darkness is too high	Reduce the print darkness
	Operation environment temperature is too high, the TPH is overheated.	Please improve ventilation condition. The printer can recover normally after the temperature is down
	Paper is jammed in the path and result the TPH overheated	Remove paper jam. Check the TPH test page is normal until its temperature is down. If it is normal the Printer can continue to work, otherwise please replace the TPH (test page is referred to Appendix 1)

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Six flashes	Ribbon is used out	Load new ribbon
	Ribbon is jammed	Remove the jam
	Ribbon sensor error	Replace ribbon sensor
Always light	System error	Please contact with our distributor

Table6.1.1

6.2 The printout quality issue

Trouble	Reason	Settlement
Printout is not clear or with dirt	TPH or platen is dirty	Clean TPH or platen
	Paper doesn't match with ribbon	Use recommended paper and ribbon
	Print darkness is low	Increase print darkness
	Ribbon crinkles	Load ribbon and paper roll correctly.

Table6.2.1

Appendix

Appendix 1 Technical specifications

Appendix 1.1 Main technical specifications

ITEM		BTP-L42	BTP-L43
Print	Resolution	203DPI	300DPI
	Print mode	Thermal/thermal transfer	
	Print width (Max)	104mm	106mm
	Print speed (Max)	75mm/s	50mm/s
	CPU	32bit RISC micro-processor	
	Memory	SDRAM: 2MB FLASH: 1MB Expend FLASH: Non(Can expend to 8MB)	
	TPH temperature detection	Thermistor	
	TPH position detection	Micro-switch	
	Paper mark detection	Optical sensor	
	Ribbon existent detection	Optical sensor	
	Communication interface	Standard configuration: RS-232 Serial CENTRONICS, USB and Ethernet (optional)	
Media	Paper type	Continuous paper, label, marked paper, perforated paper	
	Paper roll O/D (Max)	127mm(5inch)	
	Paper roll width (Max)	110mm	
	Paper roll I/D	25mm(1inch) /38mm(1.5inch)	
	Paper thickness	0.06mm-0.20mm	
	Ribbon length (Max)	91m	
	Ribbon O/D	12.5mm	
	Paper ejection mode	Rewinding, tear-off or peel-off (optional)	
Character Barcode Image	Font Enlarge/ Rotation	Can enlarge 1—8 times in vertical and horizontal direction Rotation print (0 ⁰ , 90 ⁰ , 180 ⁰ , 270 ⁰)	
	Character set	BPLA instruction set: Common single-byte font: FONT0 to FONT8,6 kinds of ASD smooth font,8 kinds of Courier font BPLB instruction set: kinds of raster font, 20 kinds of codepage	

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		Self-defined font: users can define the font and download to FLASH or SDRAM
	Image	Plain bit image in binary system, HEX, PCX, BMP and IMG file can be downloaded to FLASH or RAM
	Barcode	1 dimensional barcode: Code 39, UPCA, UPCE, Interleaved 2 of 5, code 128, EAN13, EAN8, HBIC (39 code with checkout), Codabar, industry Interleaved 2 of 5, storage and transportation Code,UPC2, UPC5, Code 93, Postnet 25 (China), UCC/EAN, matrix 25,POSTNET code, etc. 2 dimensional barcode: PDF417, MAXICODE, QR code etc
Operation interface	Buttons and LEDs	1 button, 2 LEDs
Power adaptor	Input	AC 110~240V, 50/60Hz
	Output	DC 24V, 1.5A
Environment	Operation environment	+5℃~45℃, 20%~90%(40℃)
	Storage environment	-40℃~60℃, 20%~93%(40℃)
Physical characteristics	Overall size	278mm(L) ×218mm(W)×185mm(H)
	Weight	About 2.3 Kg

Appendix-Table1.1.1

Appendix 1.2 Ribbon specification

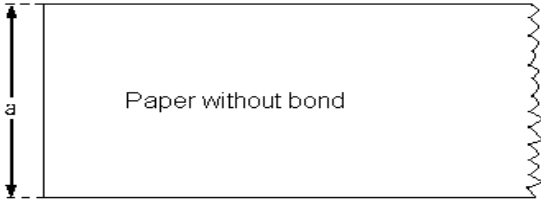
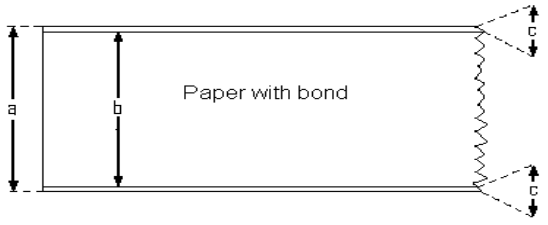
Item	Specification
Ribbon size	See Appendix -Table1.1
Ribbon rewinding mode	External
Ribbon type	Wax base: Suitable for common thermal transfer paper (copperplate paper, hectograph paper)
	Half-wax and half-resin: Suitable for hi-light paper (mirror copperplate), compound material (as PET, PVC, PE, etc)
	Resin: Suitable for wash label or compound material (as PET, POLYIMIDE)

Appendix-Table1.2.1

Appendix 1.3 Paper specification

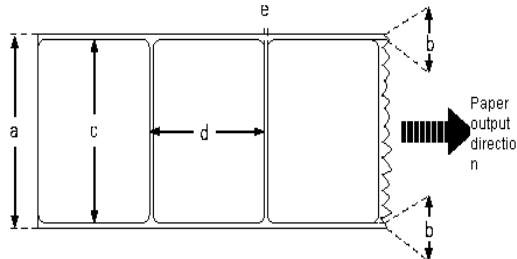
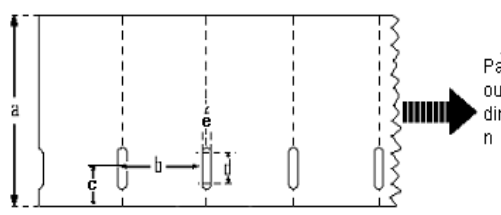
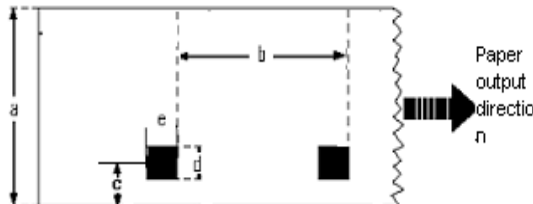
Paper height (Max) is depended on the memory size of the printer.

1) Continuous Paper Specification (Unit: mm)

Type	Figure	Parameter
Continuous strip paper without bond		Print Paper width: $25 \leq a \leq 110$
Continuous strip paper with bond		Bottom Paper Width: $25 \leq a \leq 110$ Print paper width: $25 \leq b \leq 110$ Paper side gap width: $c \leq 1$

Appendix-Table1.3.1

2) Non-Continuous Paper Specification (Unit: mm)

Type	Figure	Parameter
Non-continuous marked paper with bond		Bottom paper width : $25 \leq a \leq 110$ Paper side gap width: $b \leq 1$ Label width: $25 \leq c \leq 110$ Label height: $d \geq 10$ Gap width: $e \geq 2$
Non-continuous perforated paper without bond		Perforated paper width: $25 \leq a \leq 110$ Perforated paper height: $b \geq 10$ Detection port position: $c \leq 4$ Detection port width: $d \geq 5$ Detection port height: $e \geq 2$
Non-continuous marked paper without bond		Marked paper width: $25 \leq a \leq 110$ Marked paper height: $b \geq 10$ Marked paper position: $c \leq 1.5$ Mark width: $d \geq 10$ Mark height: $e \geq 4$

Appendix-Table 1.3.2

**Notice**

- Choose suitable ribbon according the media type and use.
- It is recommended to use the recommended ribbon by the paper suppliers.

Appendix 2 Self-test page

The self-test page includes the printer configuration information, the internal font and the TPH test information. The configuration information and internal font presents the current settings of the printer. The TPH test information shows the TPH status.

1) Printer configuration information

Version.....BTP-L42 203DPI
 BOOT version number.....FV*.***
 Version number.....FV*.*** (BPLA)
 Print mode.....non-continuous paper/rewinding mode
 Print type.....thermal transfer
 Print buffering.....double buffering
 Serial test.....disabled
 Serial setting.....38400,N,8,1,H
 Paper sensor.....trasmission/127/193
 Flash space.....not installed
 Memory space.....2048K
 Available memory.....0462K
 Auto. paper load.....disabled
 Auto. Back Status.....disabled
 Real-time command.....enabled
 Test by commands.....disabled
 Measure unit.....millimeter
 System buffer.....032K
 Label height.....041mm
 Print buffering width.....104byte
 TPH width.....104mm (08dot/mm)
 撕离位置调整.....00dot

2) Internal configuring font

The printer is configured with 9 kinds of internal dot-matrix font and 6 kinds of ASD font:

ASD Smooth (18 pointh)-012345

ASD Smooth (14 pointh)-0123456789 ABC

ASD Smooth (12 pointh)-0123456789 ABCabcXyz

ASD Smooth (10 pointh)-0123456789 ABCabcXyz

ASD Smooth (8 pointh)-0123456789 ABCabcXyz

ASD Smooth (6 pointh)-0123456789 ABCabcXyz

0123456789 CENSTXZ <+>|

This is font 7. OCR-A ABC abc

THIS IS FONT 6. 012345

THIS IS FONT 5. 0123456789 ABCXYZ

THIS IS FONT 4. 0123456789 ABC

THIS IS FONT 3. 0123456789 ABCXYZ

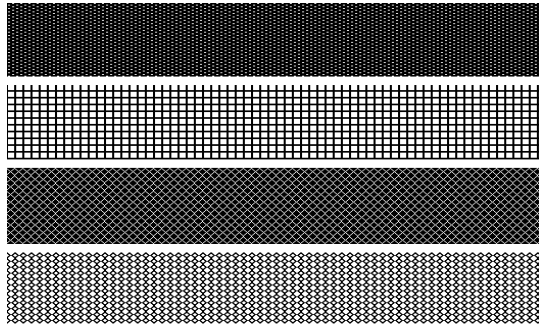
This is font 2. 0123456789 ABCabcXyz

This is font 1. 0123456789 ABCabcxyz

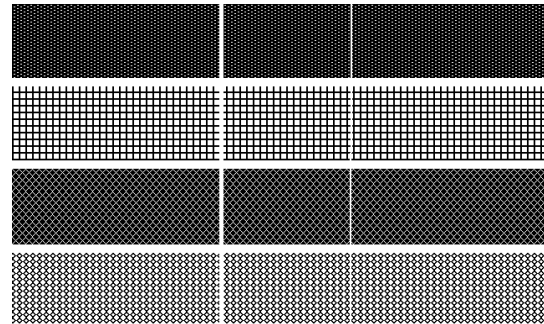
This is font 0. 0123456789 ABCabcxyz

3) TPH test information

The TPH test pattern can be used to check if the TPH status is normal or not. Appendix-figure 1.2.3.1 is a test pattern printed by the TPH in normal status. Appendix-figure 1.2.3.2 is the pattern printed by the TPH in bad status caused by the solid granule or damaged TPH. If this TPH still fails to work properly after cleaning, please contact with our distributor.

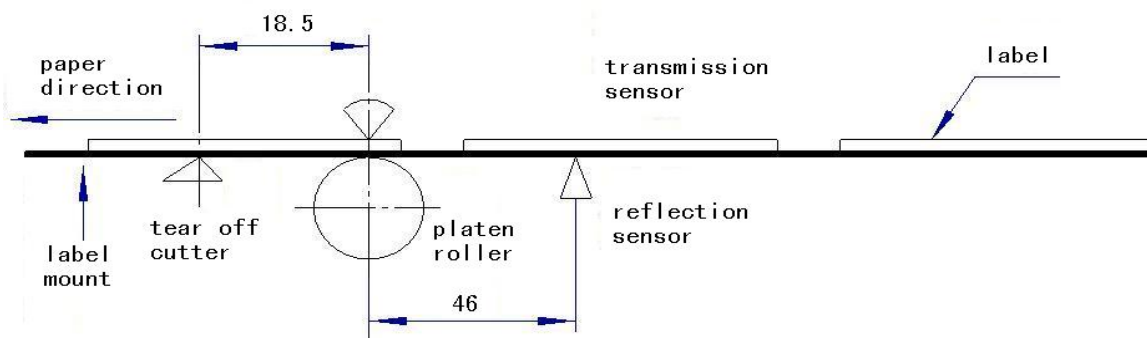


Appendix-Figure 2.1



Appendix-Figure 2.2

Appendix 3 Print and paper out position



Appendix-Figure 3.1

⚠ Notice

- The figure above takes the marked paper as an example to show the print and paper out position.
- Non-continuous paper is positioned based on the front edge of marks.
- The position adjustment of the print and paper out refer to Figure 3.3.2.

Appendix 4 Communication interface

Appendix 4.1 Serial interface

1) Interface signal

Pin	Signal name	Signal direction	Functions
1	No		
2	RXD	Input	Data input end
3	TXD	Output	Data output end
4	DTR	Output	Data terminal ready
5	SG	—	Signal grounding
6	DSR	Input	Data device ready

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7	RTS	Output	Ask to transmit
8	CTS	Input	Allow to send
9	FG	—	Case grounding

Appendix-Table4.1.1 Printer signal and status

2) Connector explanation

PC Printer


TXD-----RXD

RXD-----TXD

CTS-----RTS

RTS-----CTS

SG -----SG

 **Notice** :The connection mode only with three lines can be used as below, which is suitable for small data amount or under XON/XOFF flow control.

PC Printer

TXD-----RXD

RXD-----TXD

SG -----SG

Appendix 4.2 Parallel interface

Parallel interface works in IEEE1284 compatible mode.

Pin	Definition	Description	Pin	Definition	Description
1	Input	/STROBE	13	Output	SELECT
2	Input	Data1	14,15	No use	NC
3	Input	Data2	16	-	Ground
4	Input	Data3	17	-	Ground
5	Input	Data4	18		Vcc
6	Input	Data5	19 ~ 30	-	Ground
7	Input	Data6	31		Vcc
8	Input	Data7	32	Output	/Fault
9	Input	Data8	33		Ground
10	Input	/ACK	34 ~ 35	No use	/NC
11	Input	BUSY	36	-	Vcc
12	Input	PError			

Appendix-Table 4.2.1 Parallel interface signal list

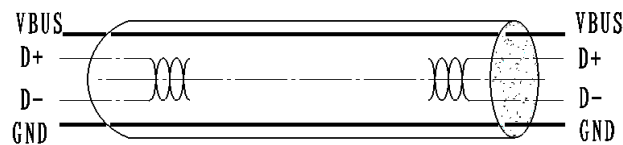
Notice

- When data is transmitted, the host should not ignore Busy signal, otherwise it could cause the print data lost.
- Parallel interface signal uses TTL level. When using it, ensure that up and down time of host signal is less than $0.5\mu\text{s}$.

Appendix 4.3 USB interface

USB interface meets with USB1.1 protocol (optional)

USB interface transmits signal with power via a four-wire cable as shown below:



Appendix-Figure 4.3.1 USB cable

D+ and D- in figure 4.3-1 is used to transmit signal and VBUS is +5V. in Appendix-Figure 4.3.