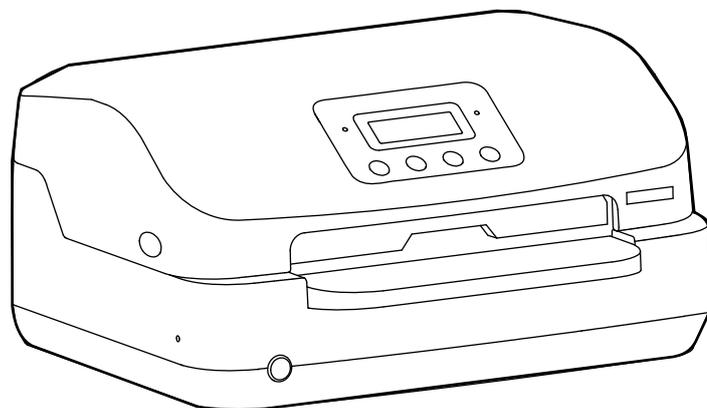


**Jolimark**

# User's Manual

**BP-900KII**

**Printer**



## Declare

### About Trademark

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## Important Safety Instructions

**Read all of these instructions carefully and thoroughly and save them for later reference. The unauthorized operation would lead to malfunction or accident. Manufacturers have no responsibilities for the problems which are led by misoperations.**

1. Follow all warnings and instructions in the manual as well as marked on the product.
2. Do not touch the print head if the printer has just been recently used as the print head may be hot.
3. Unplug this product from the power outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product where easy to get wet.
5. Slots and openings on the cabinet and the back or bottom are provided for air ventilation. To ensure reliable operation of the product and to protect it from overheating, do not block or cover these openings. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in crowded environment unless proper ventilation is provided.
6. Consider a proper position to place the printer before unpacking the package. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to you or the product. Make sure there is enough area for paper feeding.
7. Avoid using the same AC outlet with other electrical appliances which are high-power or easy cause voltage fluctuation.
8. This product should never be placed near the appliances which are easy to cause electromagnetic interference, such as the loudspeaker or the radio components.
9. Do not locate this product where the cable would be walked on. When the cable or the plug is mangled, please stop using and get a new one replaced.
10. Do not use in locations subject to high humidity or dust levels. Excessive humidity and dust may cause equipment damage or fire. Such as where is direct sunlight, near heater, dusty or much smoke.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage dots or short out parts.
12. Don't remove the printer's out-cover and repair the printer. When needed, call or take it to the professional.
13. To ensure safety, please unplug this product prior to leaving it unused for an extended period. The wall outlet you plan to connect to should be nearby and unobstructed.
14. This product belongs to the impact printer, it produces obviously noise during printing, so we suggest placing this printer in a relatively independent area.
15. When using the printer in room where ventilation is not good or printing a large amount of files, it is suggest that to change the air in time.
16. Unplug this product from the power outlet and leave servicing to qualified service personnel under the following conditions:

- A. When the power cable or plug is damaged or frayed.
- B. If liquid has been spilled into the product.
- C. If the product has been exposed to rain or water.
- D. If the product does not operate normally when the operating instructions are followed.
- E. If the product has been dropped or the cabinet has been damaged.
- F. If the product exhibits a distinct change in performance, it indicates a need for service.

**Notice: The contents of this manual are subject to change without notice.**

**\*All the parts of the printer can be recycled. When it is abandoned, we can call it back freely. Please contact us when you abandon it.**

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## Chapter 1 Product Features

Thank you for choosing this printer. It is a 24 pin and 94 columns high quality passbook printer, and it can fulfill your multifunctional printing requirement.

The printer has the specialties as follows:

- **Auto match the paper thickness**

Use floating flat platen which matches the paper thickness automatically, so that it makes the printing quality better. Its maximum thickness can reach 2.8 mm.

- **Auto Load/Eject and Auto skew adjustment**

Auto feed the cut sheet from the front of the printer and auto load to the printing position. Also, the printer has the function of Auto skew adjustment. If the paper skew angle is less than 25°, printer would adjust automatically.

- **Auto detect paper margin**

It can base on the position of the paper to determine the printing position, which avoids it printing out of the paper.

- **Full slot paper loading and printing**

Adopt professional design of auto-match paper insert. The printer can fulfill full slot paper loading and printing within the printable area.

- **Function of paper eject**

With this function the user can easy operate it by the control panel to eject the cut sheet and continuous paper from the printer.

- **Flat push mechanism which solve the problem of paper jam**

Innovative flat push mechanism which makes paper not skew and deforming, so that when it printing some special files (such as passbook, certificate, 1+n invoice, envelope and post card) would not jam.

- **Control panel with high definition LCD display**

You can know the current printing state of the printer and you can also fulfill all the function setting through the LCD display. Moreover, you can set the printer parameter through this LCD display.

- **Humanized safety design**

The printer installing a cover sensor which makes the printer stop printing and the print head move to the middle position whenever the upper cover does not be closed. Only when you close the cover will it continue printing again.

- **Function of auto select the data transmission interface**

The printer is configured with parallel interface, USB interface, serial interface or Ethernet interface. (Please take the specific interface as standard.) It can fulfill the data transmission with different interfaces. When the printer is connected with multi-interfaces, it would switch to the corresponding interface and print out the task.

- **High resolution of image printing**

Max. resolution of 360DPI (horizon) × 360DPI (perpendicular) and the image is most definitely.

- **Compatibility**

The command is compatible with OKI 5530SC, Epson ESC/PK2, Olivetti PR2 and IBM 2391 which are popular control commands in printer market.

- **Letter quality font**

There are Draft, Roman, Sans Serif, Courier, Prestige, Script, OCR-A&B, ORATOR, etc. characters which can compare with other band of printer.

- **Bar code memorizer**

Standard bar codes show as follows: EAN-13, EAN-8, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Code 39, Code 128 B, Code 128 C, and NW-7.

- **Electronic menu**

The printer menu parameter can be set and saved back into the memorizer of the printer.

- **Contain Bank system used character set**

It supports bank system used character set printing.

- **Contain break pin compensation function**

User can set the printer to print using the pin which is in good condition to compensate the break pin.

- **Pin switch printing mode**

User can set pins to switch while printing form transverse line in order to improve print head life.

## Chapter 2 Checking and Installing

### 2.1 Unpacking and Checking

Check the following items in the package, if any of these items is missing, please contact your dealer. (as Figure 2-1 shown)

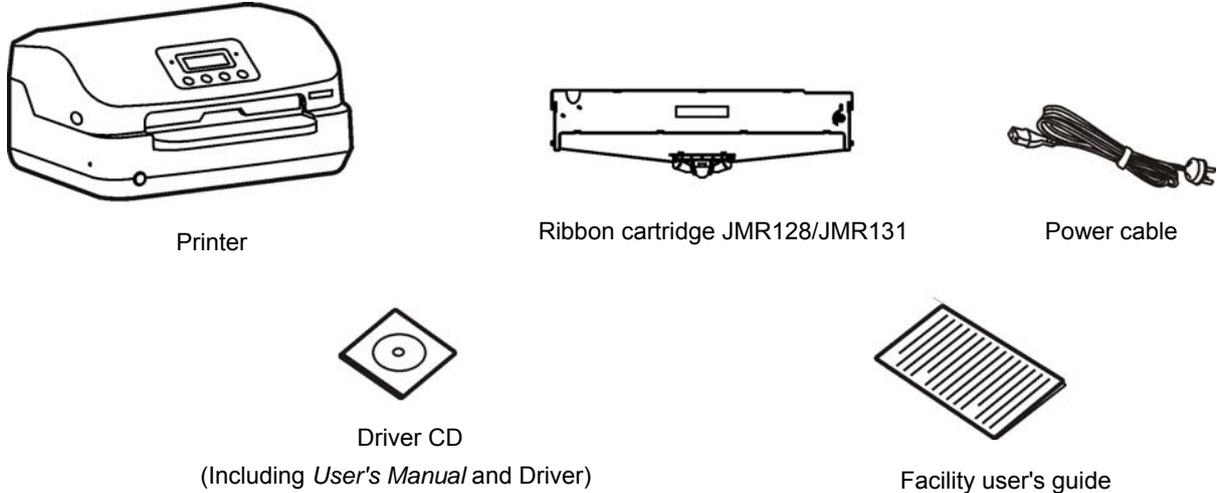


Figure 2-1 Items in the package

**Caution:** Please don't connect the printer to the power temporarily, or it may damage the printer seriously.

### 2.2 Removing the Protective Materials

1. Open the packing box, take out the printer.
2. Open the upper cover, and remove the protective materials in the printer.
3. Note that it is a good idea to keep the original box and all the packing materials just in case you need to pack the printer up again and send it somewhere at a later date.

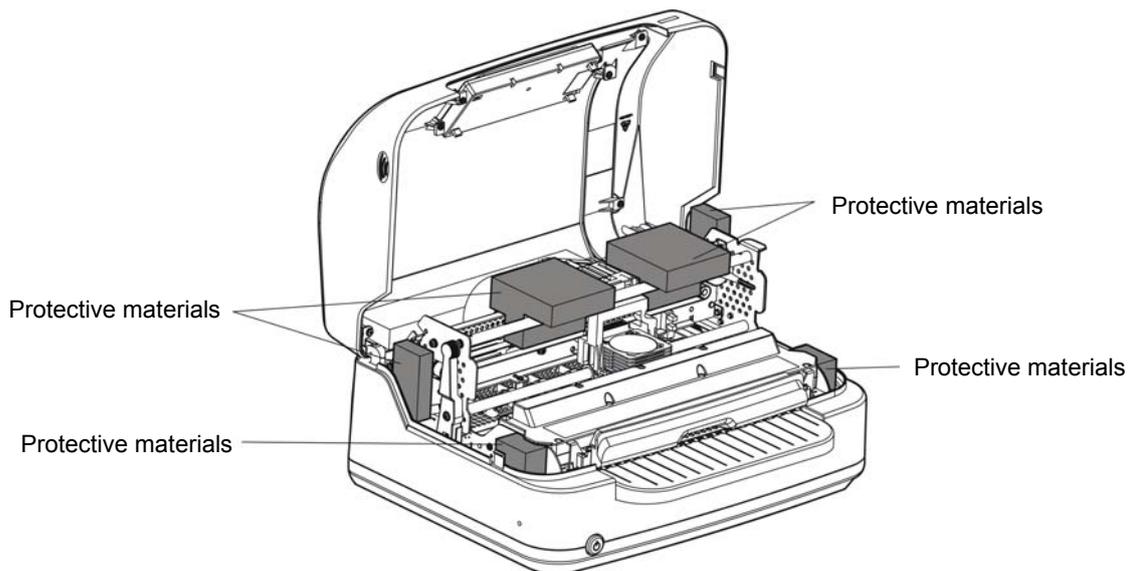


Figure 2-2 Removing the protective materials

## 2.3 Main Parts of the Printer

Figure 2-3 and Figure 2-4 show the main part names of printer.

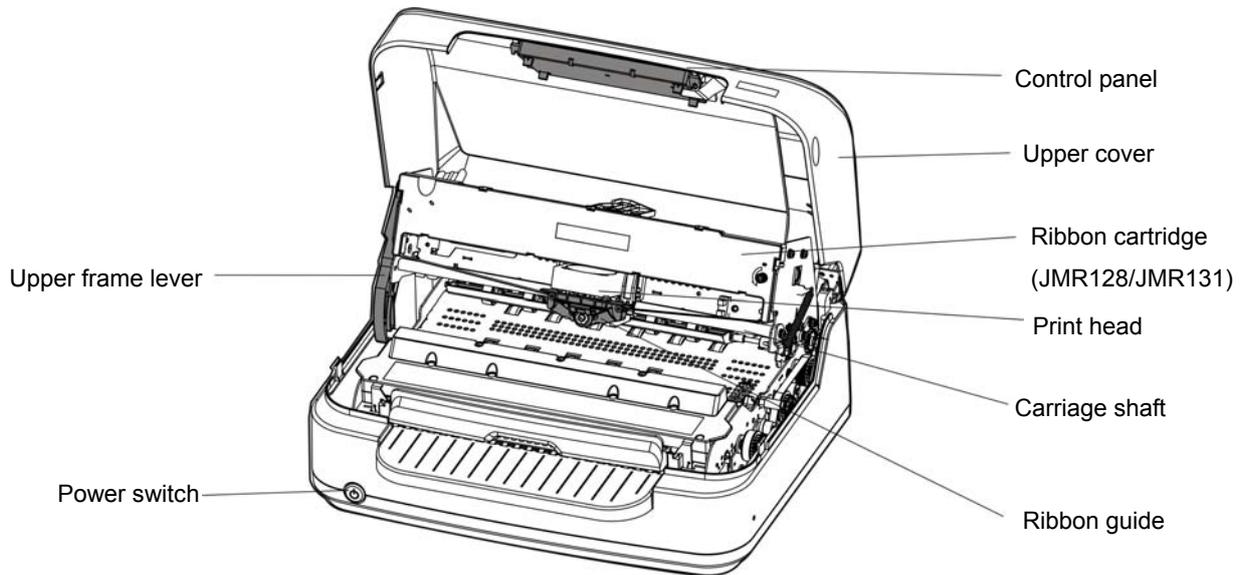


Figure 2-3 Main parts of the printer (Front view)

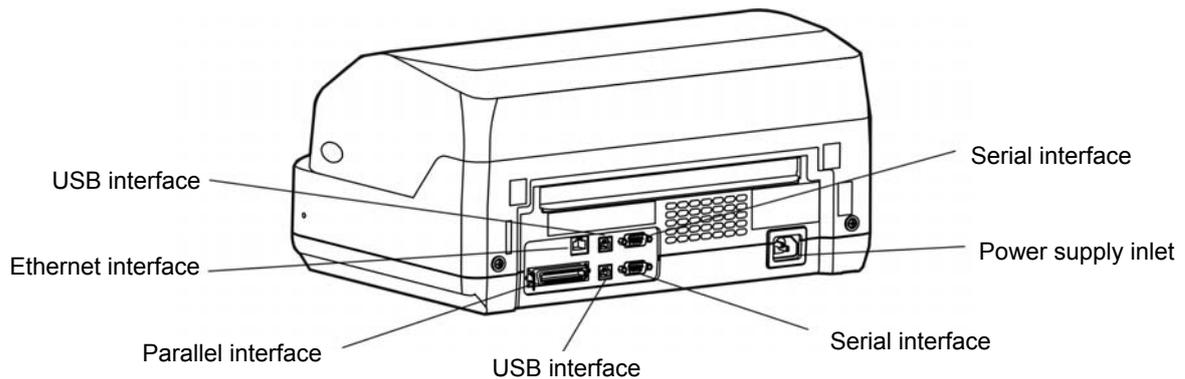


Figure 2-4 Main parts of the printer (rear view)

**Note: Please take the specific interface as standard.**

## 2.4 Installing the Printer

### 2.4.1 Choose Proper Installing Place

When choosing the installing place please consider following guide:

1. The laying place must be plane and fixing.
2. Keep it far from the device which has electric field disturb and voltage change are large, such as the duplicating machine or air condition, do not plug them in the same electrical outlet.
3. Do not use in locations subject to high humidity or dust levels. Or else, it may damage the operation components or lead to circuit malfunction.
4. Do not place the printer where overheating, shaking, humidity or direct sunlight.
5. Make sure the ventilation is good around the printer.

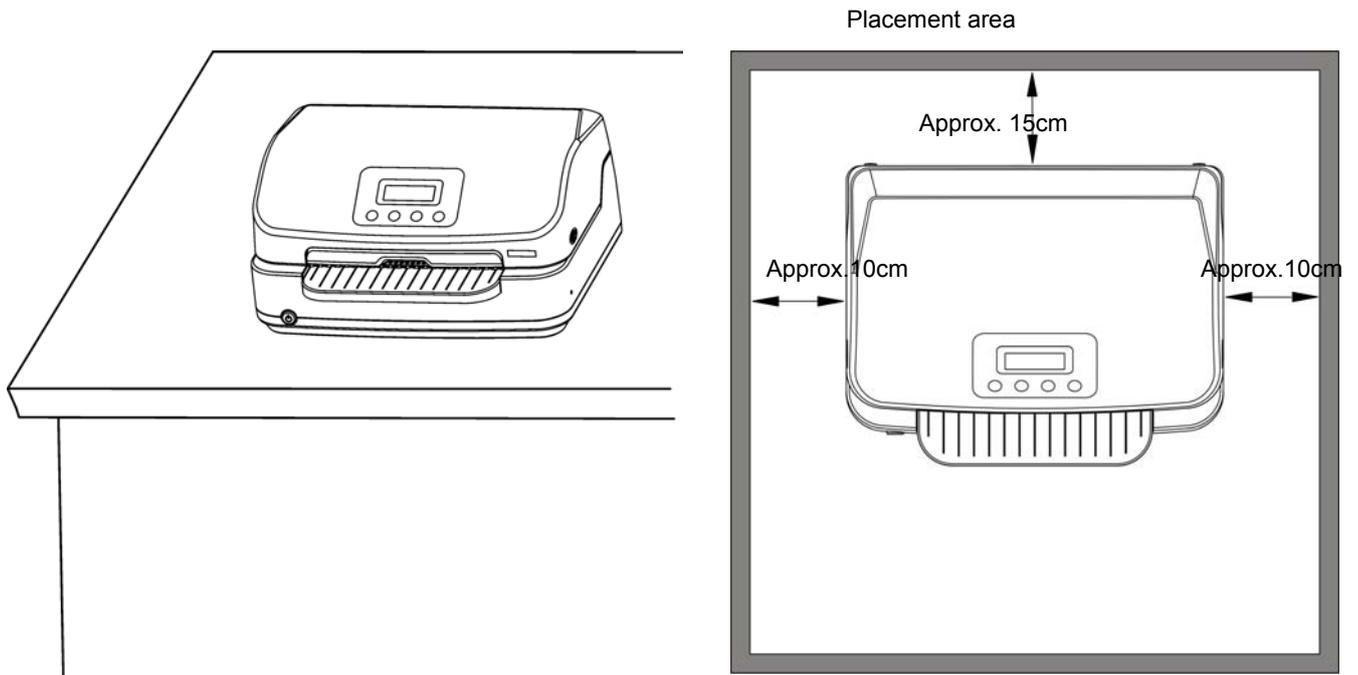


Figure 2-5 Printer placement

### 2.4.2 Upper Frame Lever

Use the lever to lift the upper frame up and down, so that it is easier to install or remove the ribbon cartridge and maintenance. Before lifting the upper frame up or down through the upper frame lever, please open the printer upper cover.

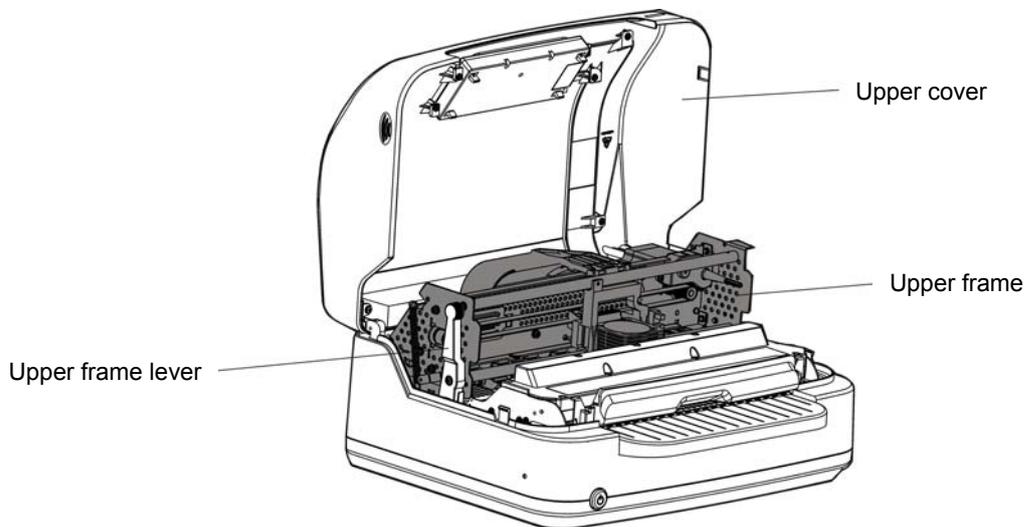


Figure 2-6 Upper frame

#### 1. Lift up the upper frame

Open the upper cover, hold the upper frame with your right hand, and the left hand hold the upper frame lever, push the upper frame lever towards the back of printer, and lift up the upper frame until the upper frame is in the highest position, and then push the lever towards the back of printer forcibly, lock the upper frame until the frame pole fix into the lever slot.

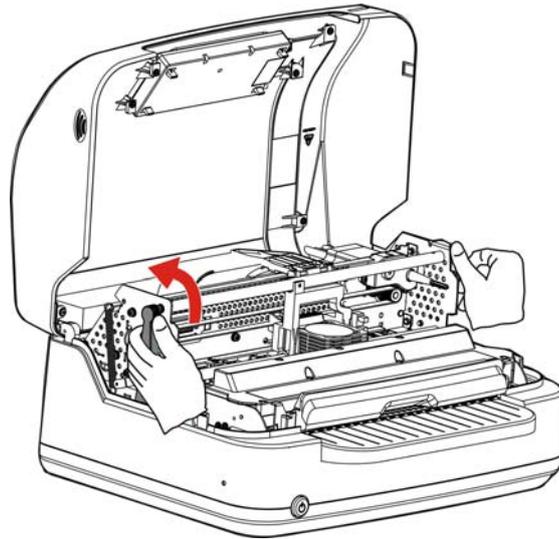


Figure 2-7 (1) Lift up the upper frame

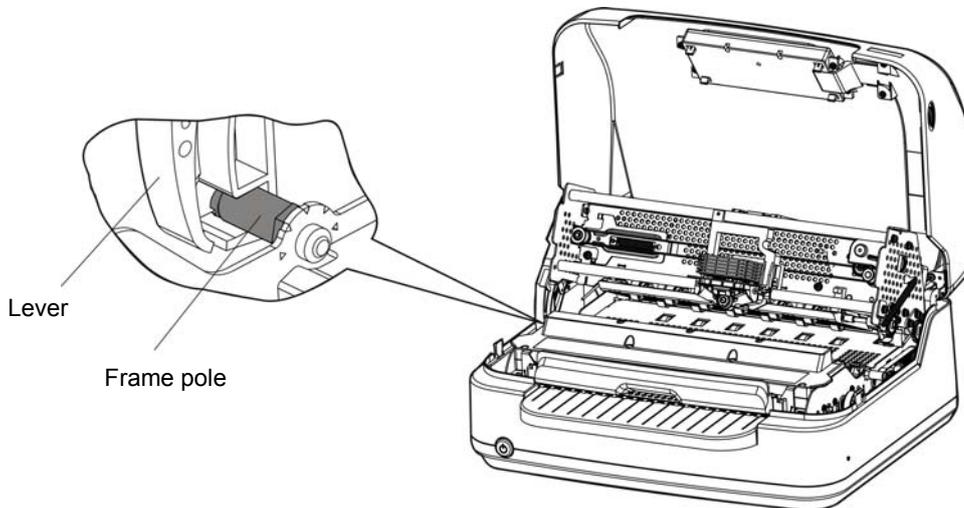


Figure 2-7 (2) Fix the frame pole into the lever slot

## 2. Press down the upper frame

Hold the lever with your left hand and pull the lever towards the front of printer to make the frame pole out of the lever slot, and then press the upper frame at the position which has a label "PUSH 压下", press the upper frame down until it lock in place.

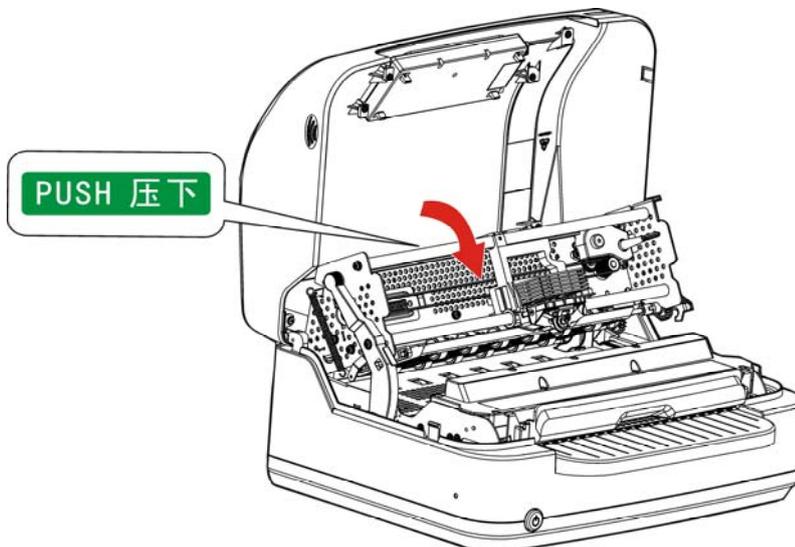


Figure 2-8 (1) Press down the upper frame

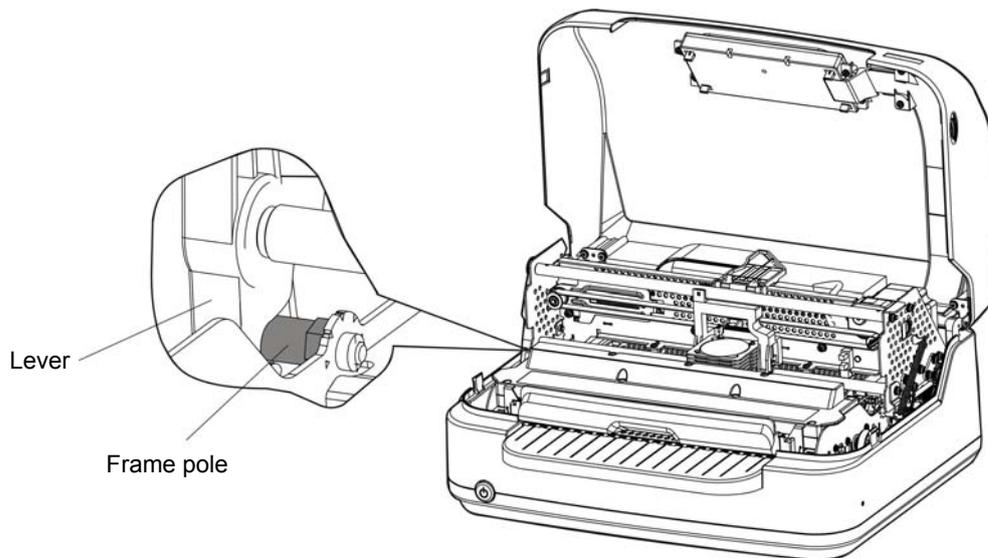


Figure 2-8 (2) Lock the upper frame

### 2.4.3 Installing the Ribbon Cartridge

1. Turn on the printer and open the upper cover. The print head would move to the middle position automatically and then turn off the printer.

**Note:** Don't replace the ribbon cartridge when the power is on, or else, it may hurt you when it suddenly starts to work.

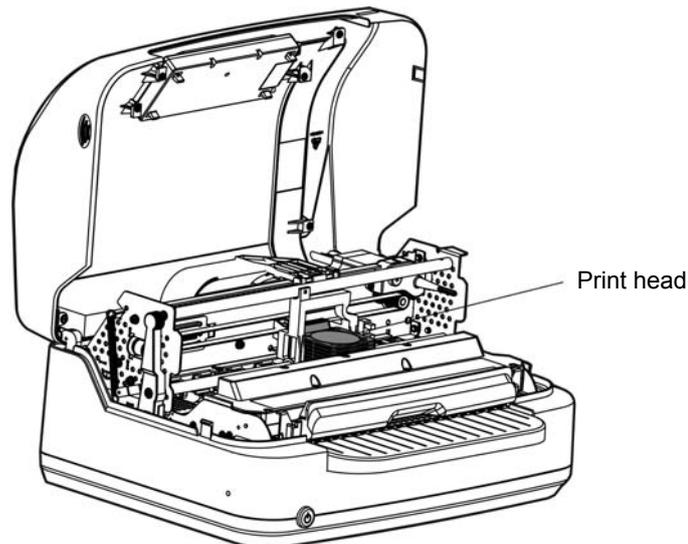


Figure 2-9 Move the print head to the middle position

2. Hold the upper frame with your right hand, and the left hand hold the upper frame lever, push the upper frame lever towards the back of printer, and lift up the upper frame slightly, until the upper frame is in the highest position, and then push the lever towards the back of printer forcibly, lock the upper frame until the frame pole fix into the lever slot.

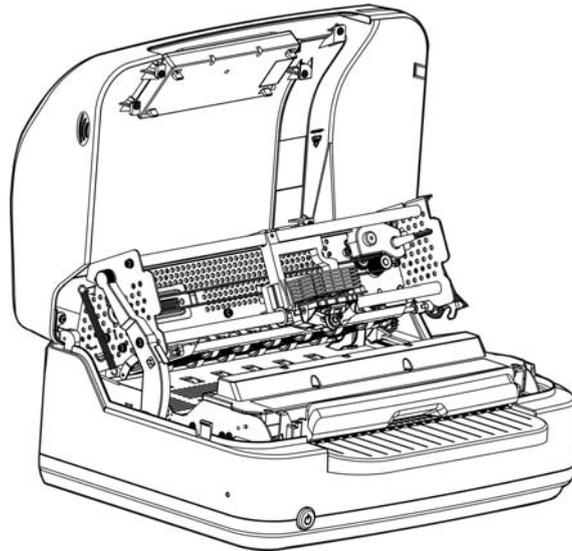


Figure 2-10 Lock the upper frame

3. Take out the ribbon from the package, push the ribbon guide backwards as the arrow shown to divide the ribbon cartridge from the ribbon guide. Place the ribbon with ribbon knob upwards, turn the ribbon knob as the arrow shown to tighten the ribbon, so that it is easier to install.

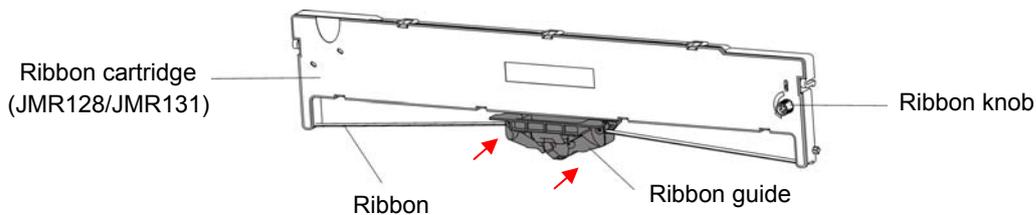


Figure 2-11 Ribbon cartridge

4. Aim the buckles on both sides of ribbon cartridge at the mounting slots of the upper frame, lock the bottom buckle into the mounting slot as arrow ① shown, and then lock the upper buckle into the mounting slot as arrow ② shown, make sure it is fix tightly.

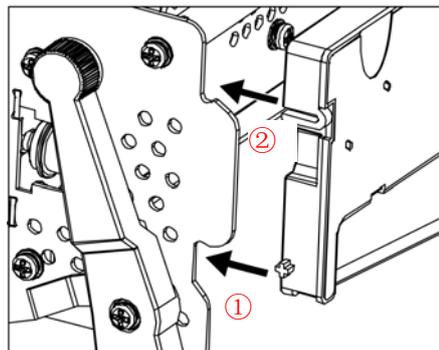


Figure 2-12 Installing the ribbon cartridge

**Note: If you meet resistance when pushing the cartridge, please turn the ribbon knob, and then push it to the proper position.**

5. Move the ribbon guide right below the print head, the two projections of ribbon guide should aim at the two mounting slot, and then lift up the ribbon guide upwards forcibly to lock the projections lock into the mounting slots of carriage. Make sure it is fixed tightly.

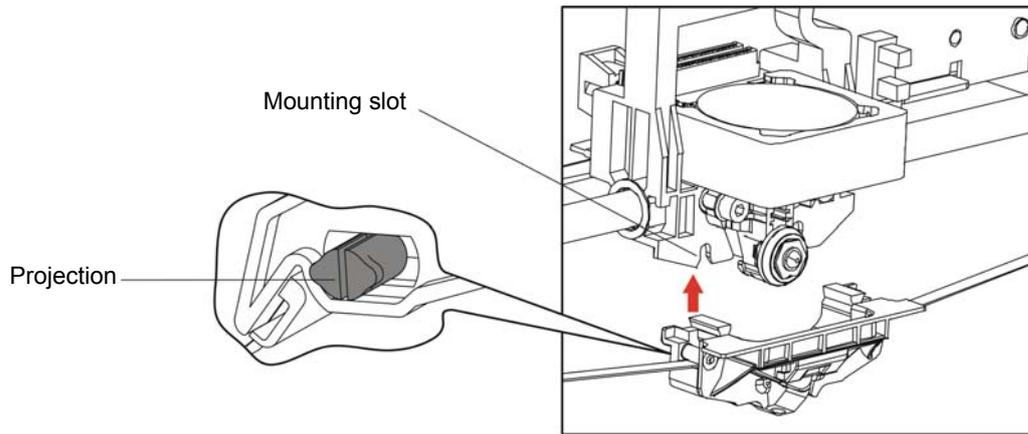


Figure 2-13 Aim the projections at the mounting

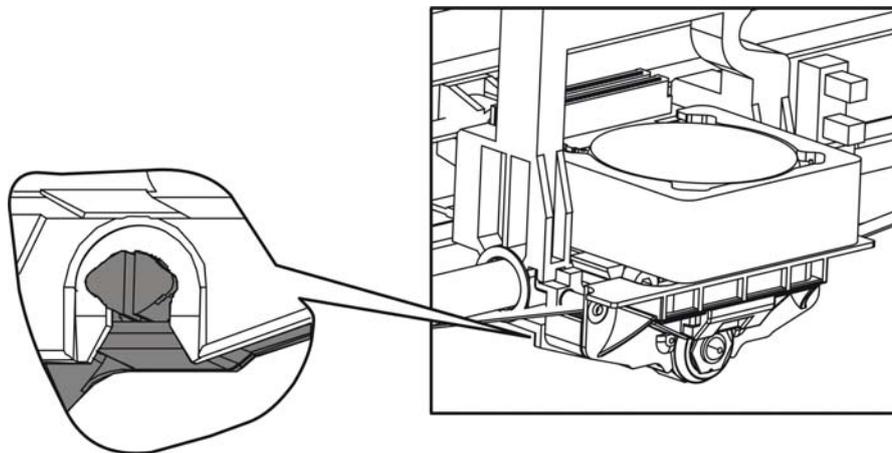


Figure 2-14 Fix the ribbon guide

6. Check whether the ribbon is fed through the ribbon guide from left to right and make sure the ribbon is flat. Turn the ribbon knob as the arrow shown to tighten the ribbon.
7. Hold the lever with your left hand and pull the lever towards the front of printer to make the frame pole out of the lever slot, and then press the “PUSH 压下” label on the upper frame, to press the upper frame down until it lock in place. And then close the upper cover.

**Caution:** 1. Don't move the print head when the printer is power on, or else, it may damage the printer. Moreover, don't touch the print head if the printer has just been recently used as the print head may be hot.

2. When closing the upper cover, please don't let it fall down freely, you should hold the upper cover and close it slowly, or it may hurt you or damage the printer.

**Note:** 1. When you remove the ribbon cartridge, please refer to the description above, and then operate in opposite steps.

2. When the print becomes faint, you need to replace the ribbon cartridge. Otherwise, the print quality would be affected and the print head may be damaged.

3. Please use the Jolimark JMR128/JMR131 ribbon cartridge only. Manufacturer will not honor warranty when using unauthorized ribbon cartridge.

4. Turn the ribbon knob as the arrow shown.

## 2.5 Connecting to Your Computer

The printer can be configured with parallel interface, USB interface, serial interface or Ethernet interface (Please take the specific interface as standard.). Please connect your computer and the printer with respective interface cable. (As Figure 2-15, 2-16, 2-17, 2-18 shown)

**Note: Before connecting the parallel interface or serial interface, please make sure the power of the printer is shut down. Only if you had tightened the cable you may turn on the power, or it would damage the printer.**

### 2.5.1 Connecting the Parallel Cable

1. Turn off both the computer and the printer. Plug the parallel cable connector securely into the printer's parallel interface. Squeeze the wire clips together until they lock in place on either side of the connector. (As shown in Figure 2-15)
2. Plug the other end of the cable into the computer's parallel interface; then tighten the screws on either side of the connector.

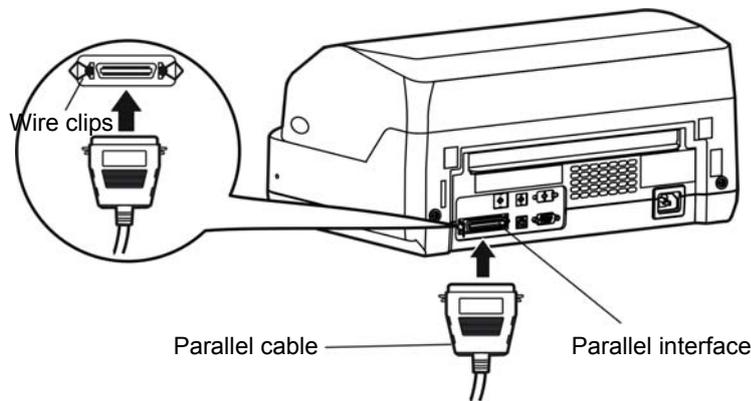


Figure 2-15 Connecting the parallel cable

### 2.5.2 Connecting the USB Cable

1. Plug the USB cable A end (flat shape) into the computer's USB interface.
2. Plug the USB cable B end (square shape) into the printer's USB interface. (As Figure 2-16 shown)

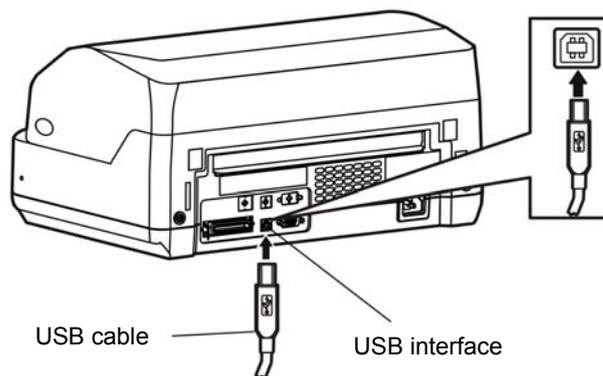


Figure 2-16 Connecting the USB cable

**Note: Please don't impact the USB interface cable after connecting it.**

### 2.5.3 Connecting the Serial Cable

1. Turn off both the computer and the printer. Plug the serial cable connector securely into the printer's serial interface. Then tighten the screws on either side of the connector. (As Figure 2-17 shown)
2. Plug the other end of the cable into the computer's serial interface; then tighten the screws on either side of the connector.

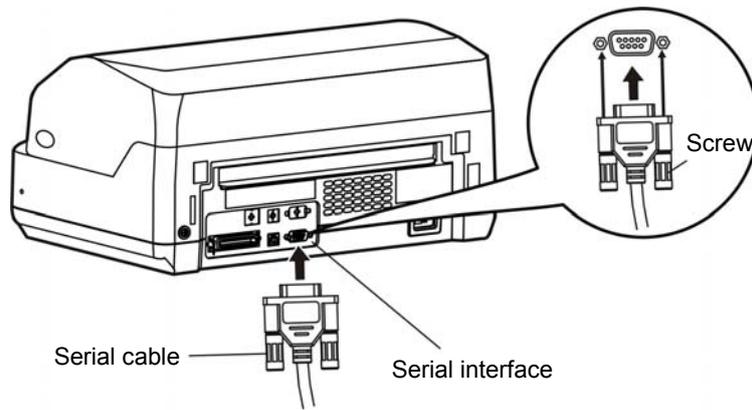


Figure 2-17 Connecting the serial cable

### 2.5.4 Connecting the Ethernet Cable

Plug the crystal end of the Ethernet cable (RJ-45) into the printer's Ethernet interface, and then plug the other end into the LAN's entrance as shown in Figure 2-18.

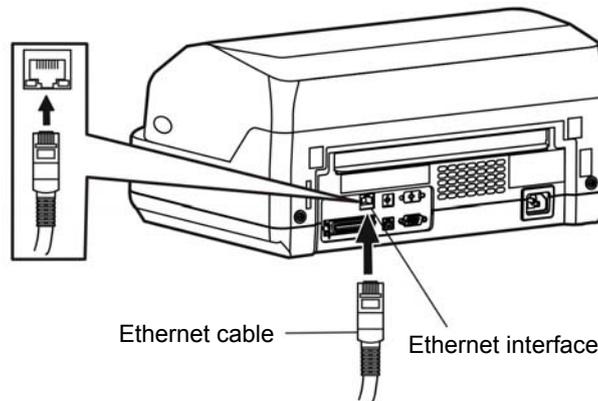


Figure 2-18 Connecting the Ethernet cable

**Note:** Please refer to the *user's manual* for the detailed instructions of internet settings.

### 2.6 Connecting the Power Cable

1. Make sure the printer's power is turned off.
2. Make sure the voltage required by the printer matches that of your electrical outlet.
3. If the power cable is not attached to the printer, connect it to the power supply inlet on the printer.
4. Plug the power cable into a well grounding electrical outlet. (Show as figure 2-19)

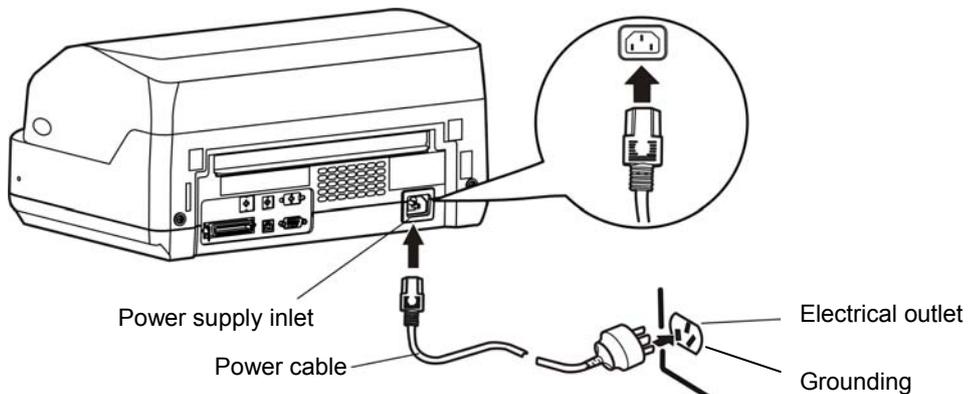


Figure 2-19 Connecting the power cable to the printer

- Note:**
- 1. If the rated voltage and your outlet voltage do not match, do not plug in the power cable, and contact your dealer for assistance.**
  - 2. Use the electrical outlet which connecting the ground properly.**

## 2.7 Installing the Driver

Please use the cable to connect computer with printer, then turn on the computer and the printer, put the driver CD into the CD-ROM. Install driver by the following ways:

### Auto-installing way

Double click the file "Setup.exe" in the driver disc, install driver by following the installation guide of the setup.exe file.

**Note: Auto-installing way needs the operating system of Windows 2000 or above.**

### Hand operated installing way

**Note: The hand-operated installing ways of serial interface and parallel interface are the same.**

#### 1) The installing steps of parallel interface for Windows 2000/XP/Vista are as follows:

1. Click "Start" → "Settings" → "Select Printers".
2. Click "Add Printer", then it pops up a window of "Add Printer Wizard", click "Next", then please read the select guide carefully, such as, select "Local printer" in the "Local or Network Printer" window, then click "next".
3. A window of "Select a Printer Port" pops up, select a usable port. Such as, select "LPT1: (Recommended Printer Port)" (If you need to use other ports, please select the respective port), click "Next".
4. A window of "Install Printer Software" pops up, click "Have Disk...", click "Next".
5. A window of "Install From Disk" pops up. Please according to the operating system environment, you should select the path as follow: CD-ROM → "Drivers" → "WIN2000 (XP-Vista-Win7)", click "Next" then click "OK" to return to the window of "Install Printer Software", click "Next".
6. Follow the guide click "Next" gradually till the installation is finished.

#### 2) The installing steps of parallel interface for Windows 7 are as follows:

1. Click "Start" → "Device and Printers".
2. Click "Add Printer", then it pops up a window of "Add Printer Wizard", click "Next", then please read the select guide carefully, such as, select "Local printer" in the "Local or Network Printer" window, then click "next".
3. A window of "Select a Printer Port" pops up, select a usable port. Such as, select "LPT1: (Recommended Printer Port)" (If you need to use other ports, please select the respective port), click "Next".
4. A window of "Install Printer Software" pops up, click "Have Disk...", click "Next".
5. A window of "Install From Disk" pops up. Please select the path as follow: CD-ROM → "Drivers" → "WIN2000 (XP-Vista-Win7)", click "Open", then click "OK" to return to the window of "Install Printer Software", click "Next".
6. Follow the guide click "Next" gradually till the installation is finished.

#### The USB interface installing steps for Windows 2000/XP/Vista/Win7 are as follows:

The following steps are used Windows XP as example. There are slight differences among different operating systems.

1. Connect the printer to computer with an USB cable and turn on the printer.
2. After the computer find out new hardware and finish searching, pop up a window of "Found New Hardware Wizard", choose "Install from a list or specific location (Advanced)", click "Next".
3. A window of "Found New Hardware Wizard" — "Please choose your search and installation options" pops up, choose "Don't search, I will choose the driver to install", click "Next".

4. A window of "Add Printer Wizard" pops up, click "Have Disk...", click "Browse".
5. A window of "Install From Disk" pops up. Please according to the operating system environment, you should select the path as follow: CD-ROM → "Drivers" → "WIN2000 (XP-Vista-Win7)", click "Open", then click "OK" to return to the window of "Add Printer Wizard", click "Next".
6. Follow the guide click "Next" gradually till the installation is finished.

**The installing steps for Windows 98 are as follows:**

**(1) The installing steps with a parallel cable or a serial cable:**

1. Click "Start" → "Settings" → "Printers".
2. Double click "Add Printer", then a window of "Add Printer Wizard" pops up, click "Next", then please read the select guide carefully, such as, select "Local printer" in the "Local or Network Printer" window, then click "Next".
3. A window of "Click the manufacturer and model of your printer" pops up, click "Have Disk...", please click "Browse", select the path as follow: CD-ROM → "Drivers" → "WIN98 (WINME)", then click "OK".
4. A window of "Install From Disk" pops up, click "OK", return to a window of "Add Printer", then click "Next".
5. A window of "Printer port" pops up, select "Available ports", such as, select "LPT1: Printer Port", click "Next", and then show the printer's name. If the system hadn't any other printer driver installed, then this printer driver will be set as the default one by the system. click "Finish". Otherwise according to prompt, choose the printer is default: "Yes", click "Next", choose "Yes-(recommended)", click "Finish". A window of "Printer test page completed" pops up, click "Yes".
6. The printer driver process is installed successfully.

**(2)The installing steps with an USB cable:**

- Note: 1. As the system of Windows 98/ME doesn't have integrated USB driver control, please install USB driver before using USB interface printing. Then install USB printer driver.**
- 2. If it has installed the USB driver, please install the USB printer driver directly as the following steps.**

**USB driver installing steps:**

1. Connect an USB cable and turn on the printer.
2. After the computer finds out new hardware and finishes searching, a window of "Add New Hardware Wizard" pops up, click "Next".
3. A window of "Add New Hardware Wizard" — "Windows operation" pops up, choose "Search the best driver for the device (recommended)", click "Next".
4. A window of "Search for new drivers" pops up, check "Specify a location", click "Browse", select the path as follows: CD-ROM → "Drivers" → "[WIN98 (WINME) \ USBdriver]", then click "OK".
5. Return to a window of "Search for new drivers", click "Next"; a window of "Windows driver file search for the device" pops up, click "Next".
6. After the system finishing installing the file automatically, a window of "USB Print Supported" pops up, click "Finish".
7. The printer USB driver process is installed successfully.

**USB printer driver installing steps:**

1. Click "Start" → "Settings" → "Printers".
2. Click "Add Printer", then a window of "Add Printer Wizard" pops up, click "Next".
3. A window of "Click the manufacturer and model of your printer" pops up, click "Have Disk...", please click "Browse", select the path as follow: CD-ROM → "Drivers" → "WIN98 (WINME)", then click "OK".
4. A window of "Install From Disk" pops up, click "OK", return to a window of "Add Printer", then click "Next".

5. A window of "Printer port" pops up, select "Available ports", select "JMUSB", click "Next", and then show the printer's name. If the system hadn't any other printer driver installed, then this printer driver will be set as the default one by the system. click "Finish". Otherwise according to prompt, choose the printer is default: "Yes", click "Next" choose "Yes-(recommended)", click "Finish". A window of "Printer test page completed" pops up, click "Yes".
6. The printer driver process is installed successfully.

## 2.8 Ethernet Settings

Please use Jolimark network setting software NetFinder to set the IP address for Jolimark Ethernet interface network printers, which can be found in the CD or downloaded from [www.jolimark.com](http://www.jolimark.com).

**Caution: The network printing function needs the operation system of Windows2000 or above.**

### 2.8.1 Connecting Printer

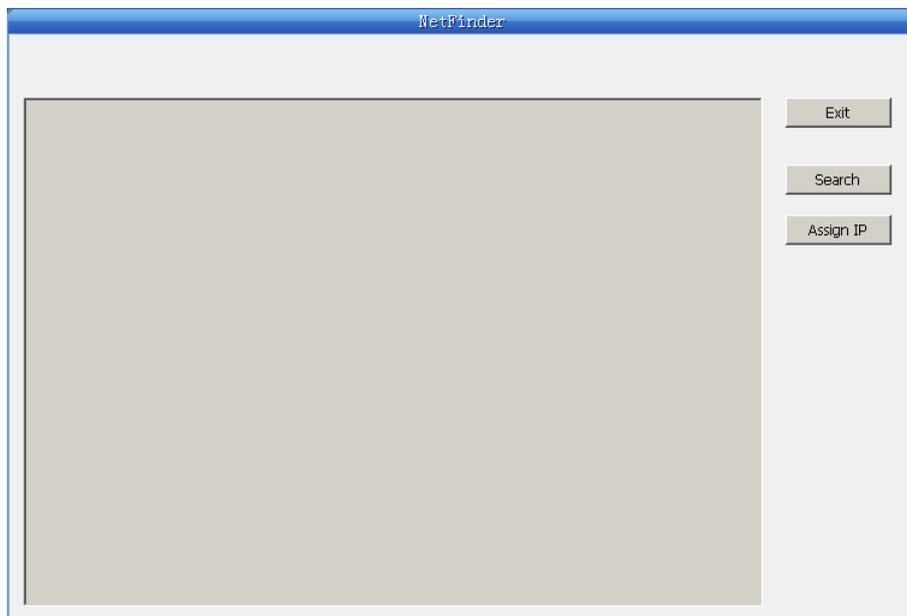
Power on the printer, connect with the Ethernet cable which has been connected to LAN, and look into the information of Ethernet LED light to ensure the printer has entered into the normal connection.

ORANGE LED	Green LED	Description
ON	Blink	Connecting to network
OFF	OFF	Not connecting to network

### 2.8.2 Setting IP Address

#### 1. Run NetFinder Software

Double click NetFinder.exe in the PC which connects the printer in the same LAN. The figure of the software is shown as follows:



Button description:

Exit — Exit from the software

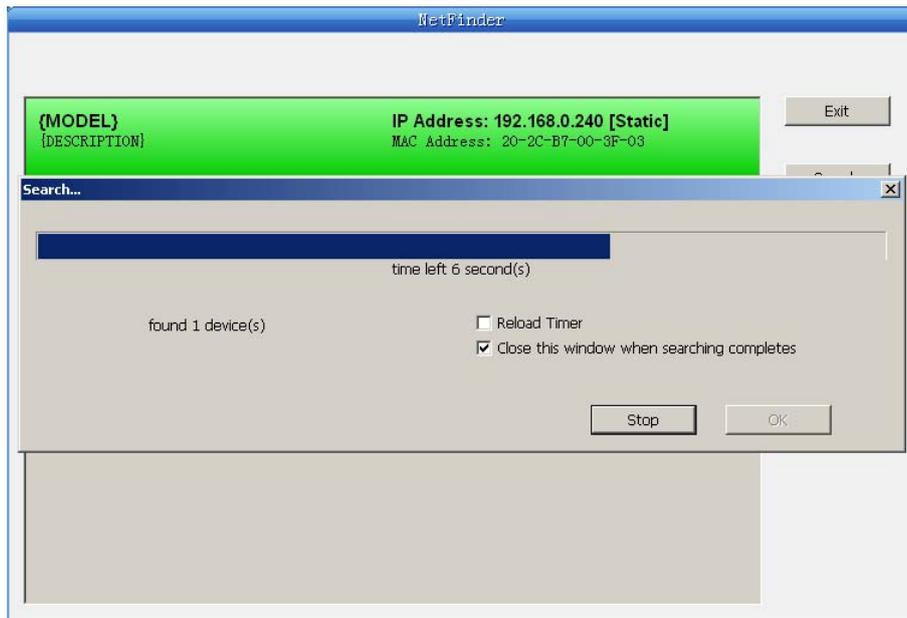
Search — Search printers in the same LAN

Assign IP — Modify the IP address and other settings for the specified printer.

#### 2. Search printer

Click "Search" button in the main interface, the dialog box appearing will begin searching automatically and show appearance, listing a printer in the main interface if found. The time is

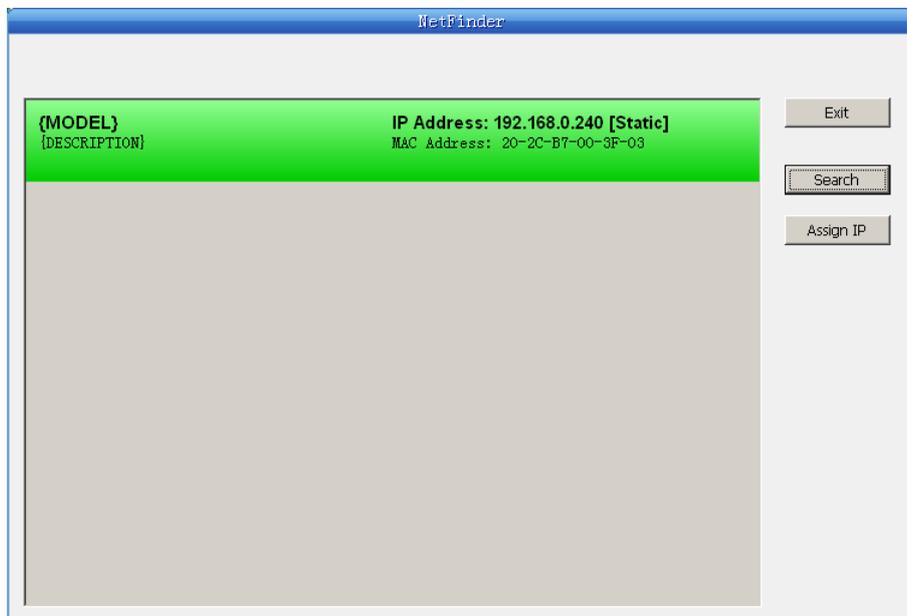
counting down in the progress bar (10s in total) and the search will finish as soon as the time is over. When going on searching, press “search” button again.



If the printer still can not be found out when the network connection is correct in the same network, please check whether the network fire wall on the PC opens or not. If there is fire wall, please close it temporarily, open again after finishing searching and setting a printer completely.

### 3. Setting printer's IP address

The printer's information is listed in the main interface, the left side of which is the model and description and the right are the IP address and MAC address. What's more, the assign mode (dynamic/static) is noted behind the IP address.



#### 1) Correlative description for IP address settings

In order to search and set printer's IP address conveniently for the first time, the factory default setting is DHCP mode which assigns IP address dynamically. If there is no DHCP server in the connected LAN and printer is set to DHCP mode as well, then it will use the internal pre-set address (IP: 10.0.0.1, Subnet Mask: 255.255.255.0) automatically.

It is suggested that printer's IP set to static in actual usage, which can cut down the time when initializing the Ethernet interface as the printer is turned on and prevent IP conflicts (The

dynamic address used in printer may conflict with another one). The network segment part of the IP address and Subnet Mask must be the same as those of PC connecting with a printer. For example, the address of working PC is 192.168.0.1/255.255.255.0 (IP/Subnet Mask), then which of printer should be set to 192.168.0.x/255.255.255.0 (x=2~254 and should avoid the IP in used. It is not restricted for NetFinder to search printers in the same network but different segment parts (can not stride gateway). Relative glossary of IP address may refer to corresponding information.

## 2) Setting IP address of printer

Select the printer information to be modified (black frame appears), click “Assign IP” button. Set the IP in the dialog box appearing.

Check the “Use DHCP” if need to assign dynamic address, the settings above will be disabled automatically. Please make sure there is a DHCP server in the network, or the printer can not receive an effective IP address.

When to specify static address, uncheck “Use DHCP” and fill in “IP address”, “Subnet Mask” and “Default Gateway”. If there is no gateway in the network, fill 255.255.255.255 in the “Default gateway”. “IP address” and “Subnet Mask” should obey the assigning rules of local LAN (Ethernet), please enquire the administrator of networks which the printer connects to for more details.

Click “OK” to send address setting information to the specified printer. The printer takes response after “Close this window on success” is checked, and then this dialog is closed automatically. Select “Reload Timer” then the software will wait for the printer’s response. Generally, printer will take response in a circle time if network connection is correct.

Click “Cancel” if you abandon the modification.

Click “Search” in the main interface again to update printer information after modifying the printer’s IP address.

## 3) Report IP address of printer

Report the printer’s IP address, which will be used in the section “Newly-install printer network driver” or “Upgrade-install printer network driver (setting driver’s network port)”.

### 2.8.3 Installing Printer Network Driver

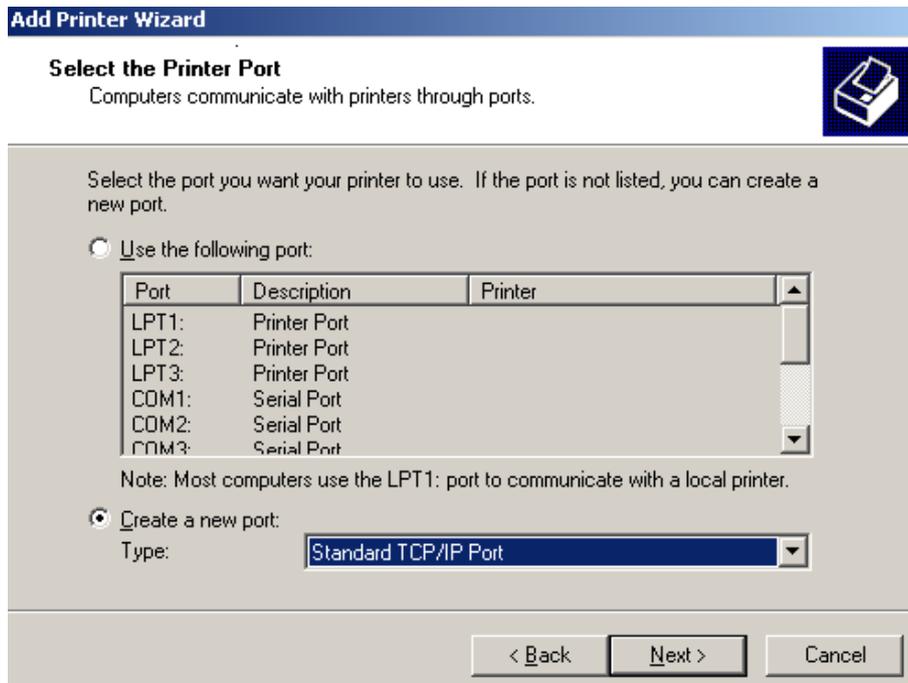
The ways of installing network driver are classified into Newly-install way and Upgrade-install way according to whether the PC installs the printer driver or not.

If the printer driver hasn’t been installed on the PC, adopt newly-install way whose steps are shown in “**Newly-install printer network driver**”.

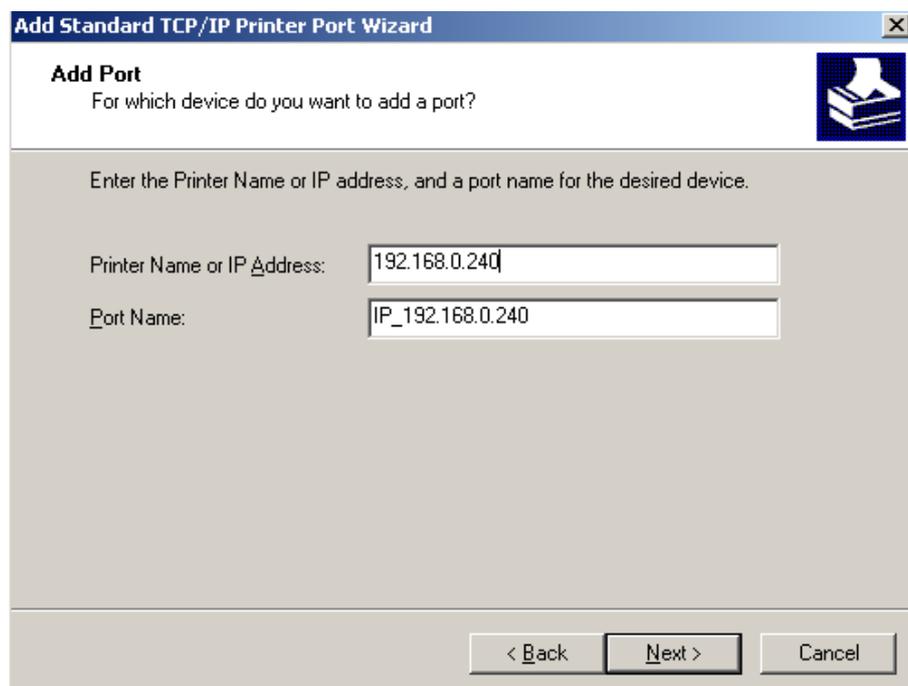
If the printer driver has been installed on the PC, adopt Upgrade-install way whose steps are shown in **“Upgrade-install printer network driver”**.

### 1. Newly-install printer network driver

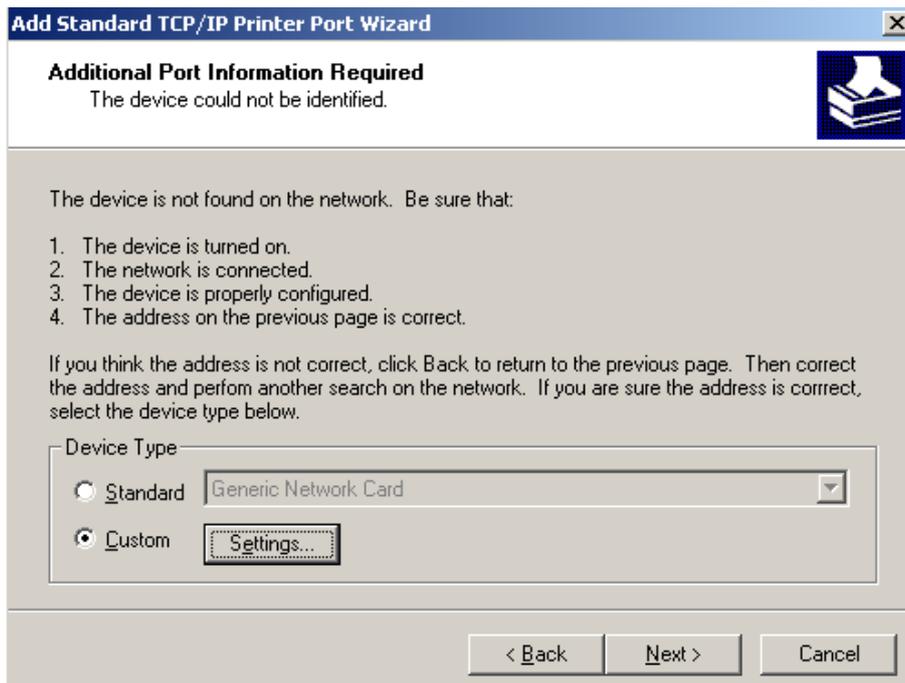
- 1) Click “Start” → “Settings” → “Select Printers”.
- 2) Click “Add printer”, then a window of “Add Printer Wizard” pops up, click “next”, then please read the select guide carefully. Such as, select “Local or Network Printer”, then click “next”.
- 3) A window of “Select the Printer port” pops up, select a port you want your printer to use. For example, select “Create a new port”, select “Standard TCP/IP Port” in the port, click “next”.



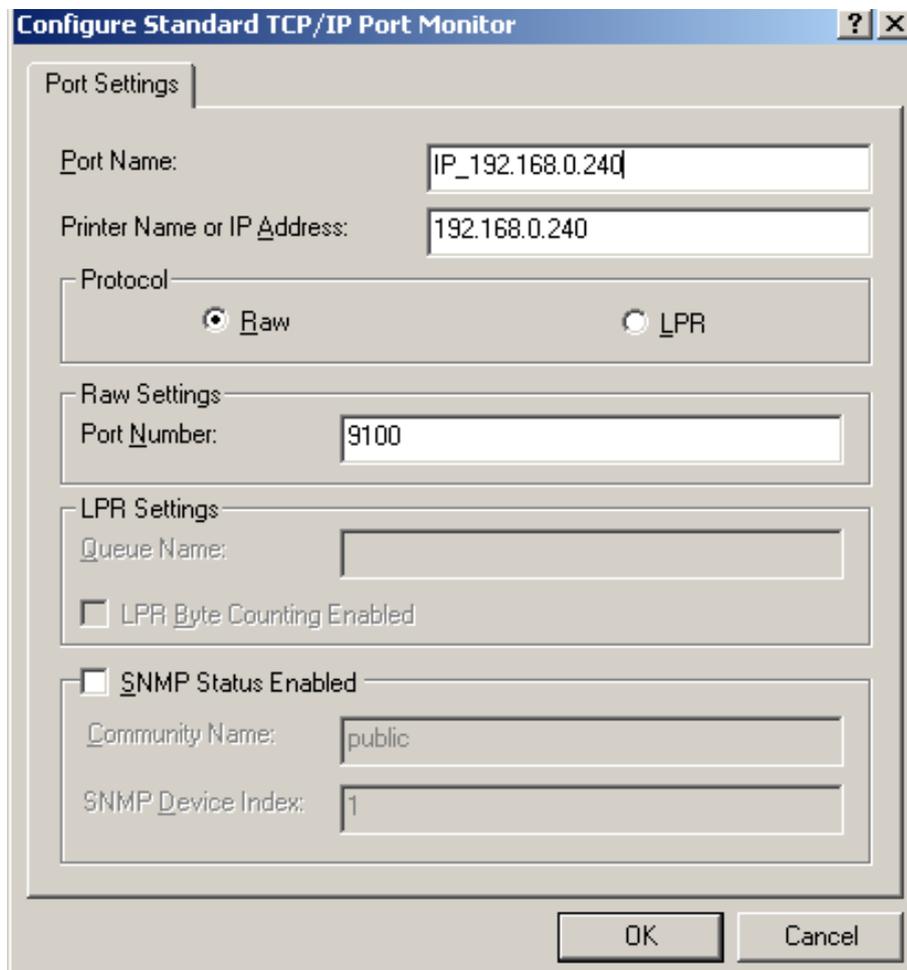
- 4) A window of “Add standard TCP/IP Printer Port Wizard”, click “Next”.
- 5) A window of “Add Port” pops up, enter the IP address reported by the “Setting printer’s IP address” in the “Printer Name or IP Address” column. Take IP address “192.168.0.240” for example. “Port Name” is created automatically after finishing filling in IP address.



- 6) A window of “Additional Port Information Required” pops up, select “Custom” in the “Device Type”, then click “Settings”.



- 7) A window of “Port Settings” pops up. Affirm that “Port name” and “Printer name or IP address” are correct, “Protocol” is “RAW” and “Port Number” is “9100”, click “OK”.

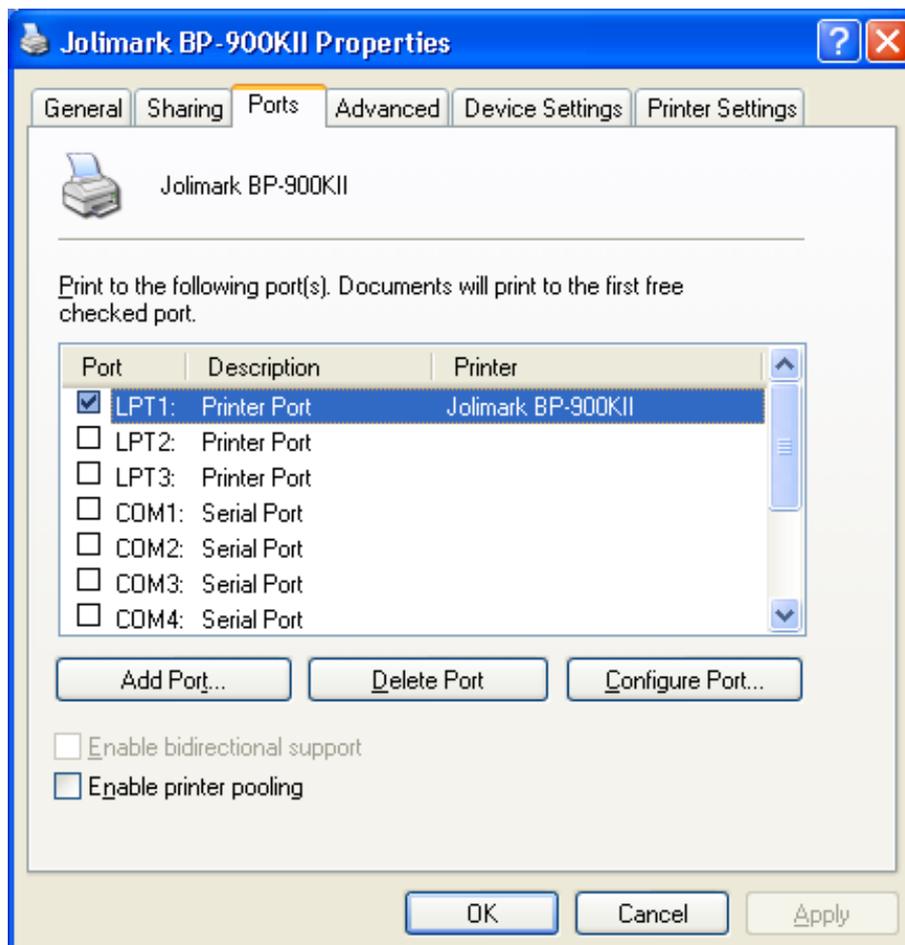


- 8) Return to "Additional Port Information Required", click "Next".
- 9) A window of "Completing the Add Standard TCP/IP Printer Port Wizard" pops up, click "Finish".
- 10) In the selection of "Manufacturers/Printers", click "Have Disk", and then click "Next".
- 11) A window of "Install From Disk" pops up. Please according to the operating system environment, such as Windows 2000/XP/Vista/Win7 operating system you should select the path as follows: CD-ROM → "Drivers" → "WIN2000 (XP-Vista-Win7)", click "open", then click "OK", then return to the window "install printer software", click "next".
- 12) Follow the direct click "next" gradually till the installation is finish. At this time, printer network driver is installed completely.

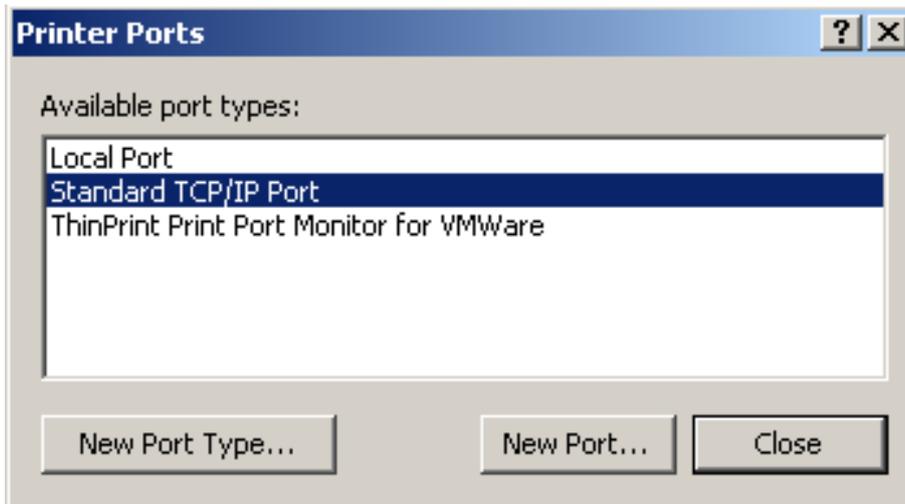
## 2. Upgrade-install printer network driver (setting driver's network port)

If PC has installed the printer's driver, set driver's network port to carry out network printing. The concrete steps are shown below:

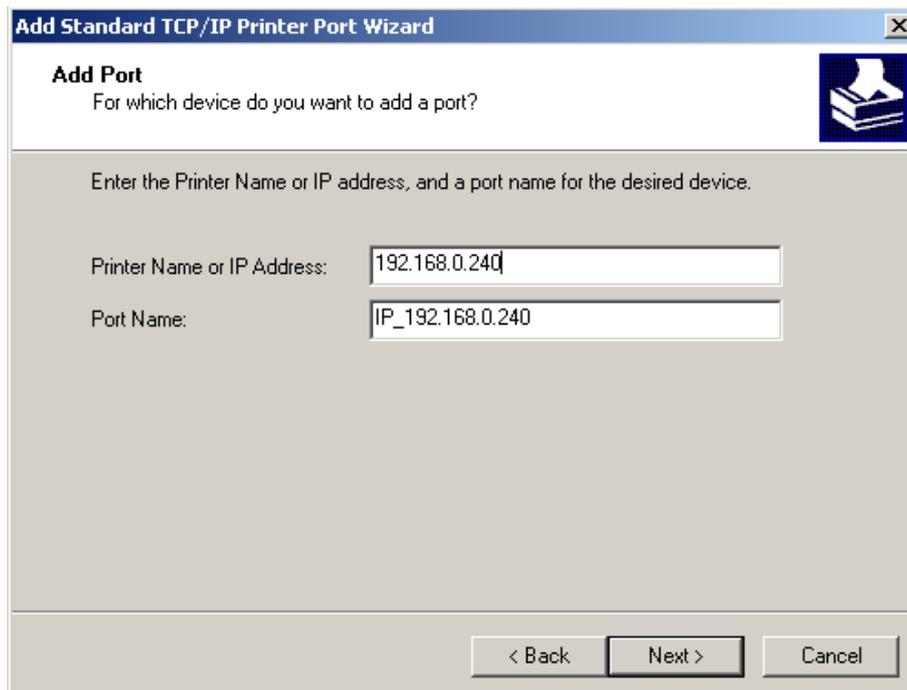
- 1) Click "Start" → "Settings" → "Select Printers".
- 2) Right click BP900KII driver, click "Properties" on the window popping up.
- 3) A window of "Properties" pops up, click "Ports" and "Add Ports".



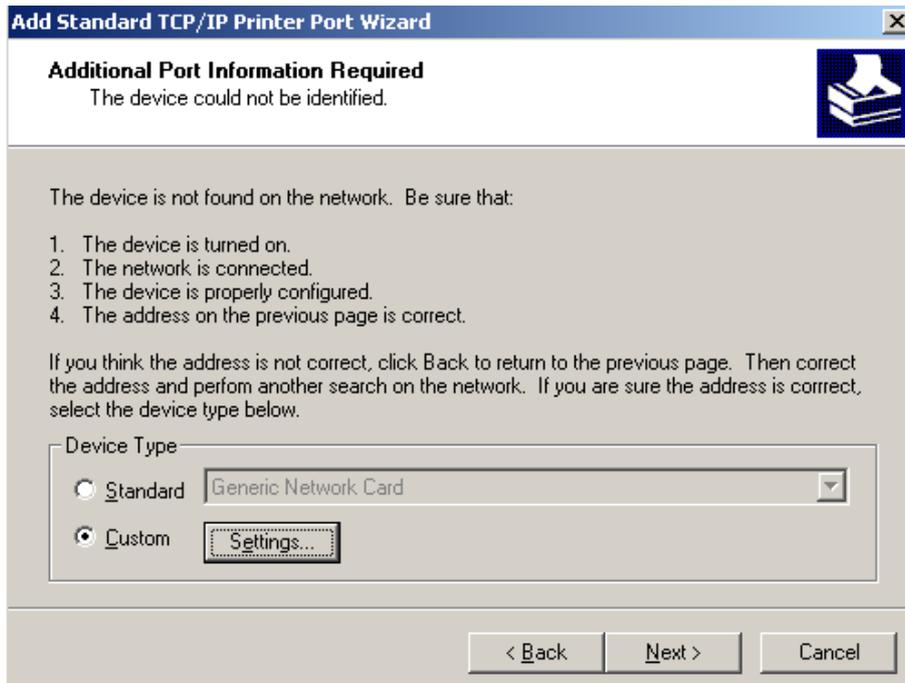
- 4) A window of "Printer port" pops up, select "Standard TCP/IP Port", click "New port".



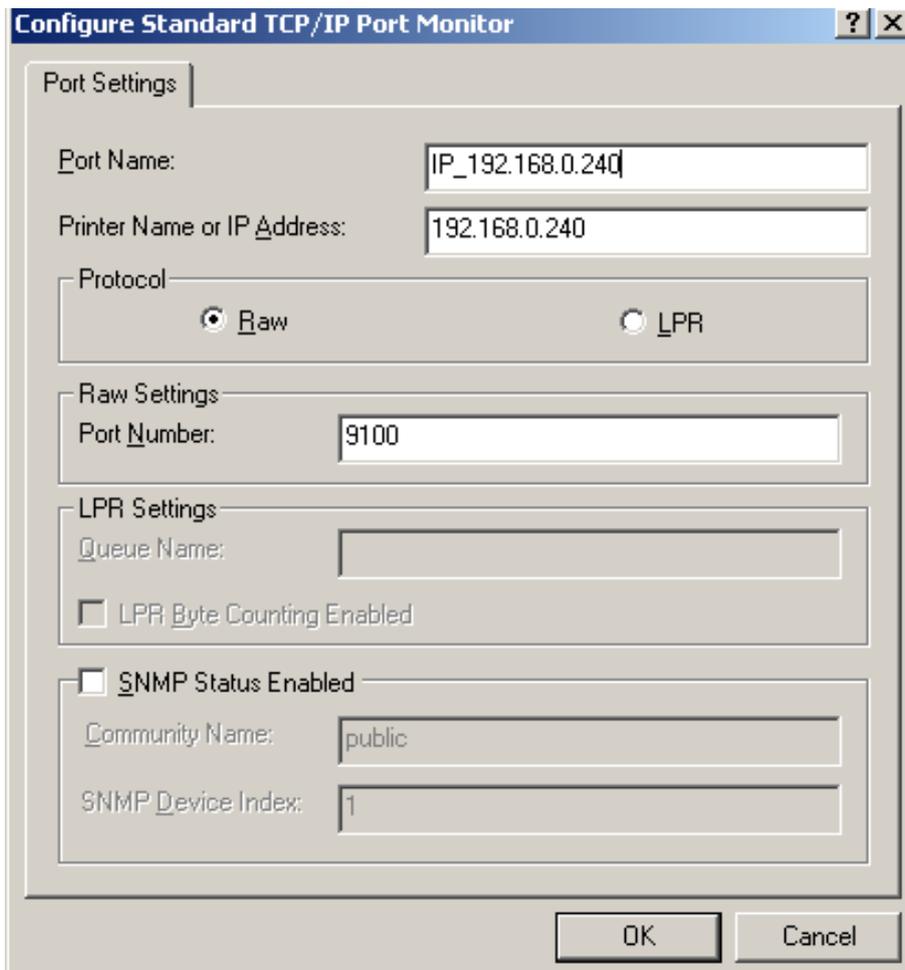
- 5) A window of “Add Standard TCP/IP Printer Port Wizard” pops up, click “Next”.
- 6) A window of “Add a port” pops up, import the IP address reported by the “Setting printer’s IP address” in the “Printer name or IP address” column. Take IP address “192.168.0.240” for example. “Port name” is created automatically after finishing filling in IP address. Click “Next”.



- 7) A window of “Additional Port Information Required” pops up, select “Custom” in the “Device Type”, then click “settings”.

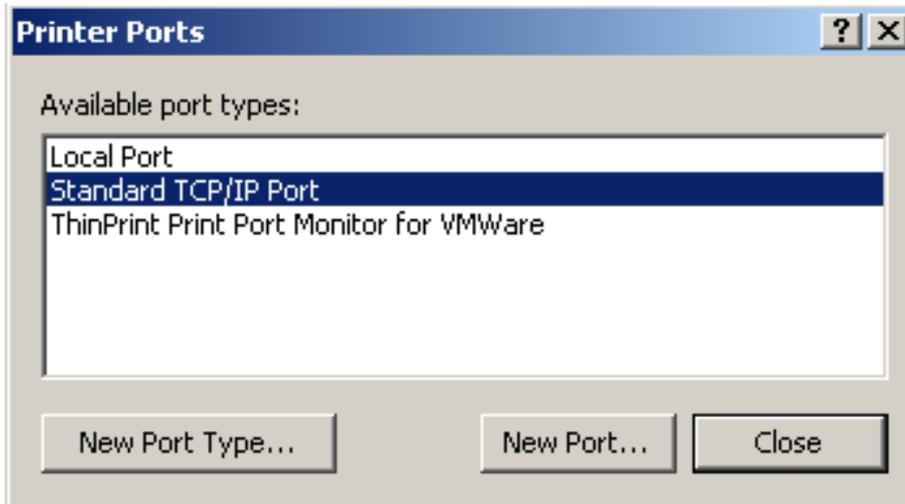


- 8) A window of “Port Settings” pops up. Affirm that “Port name” and “Printer name or IP address” are correct, “Protocol” is “RAW” and “Port Number” is “9100”, click “OK”.

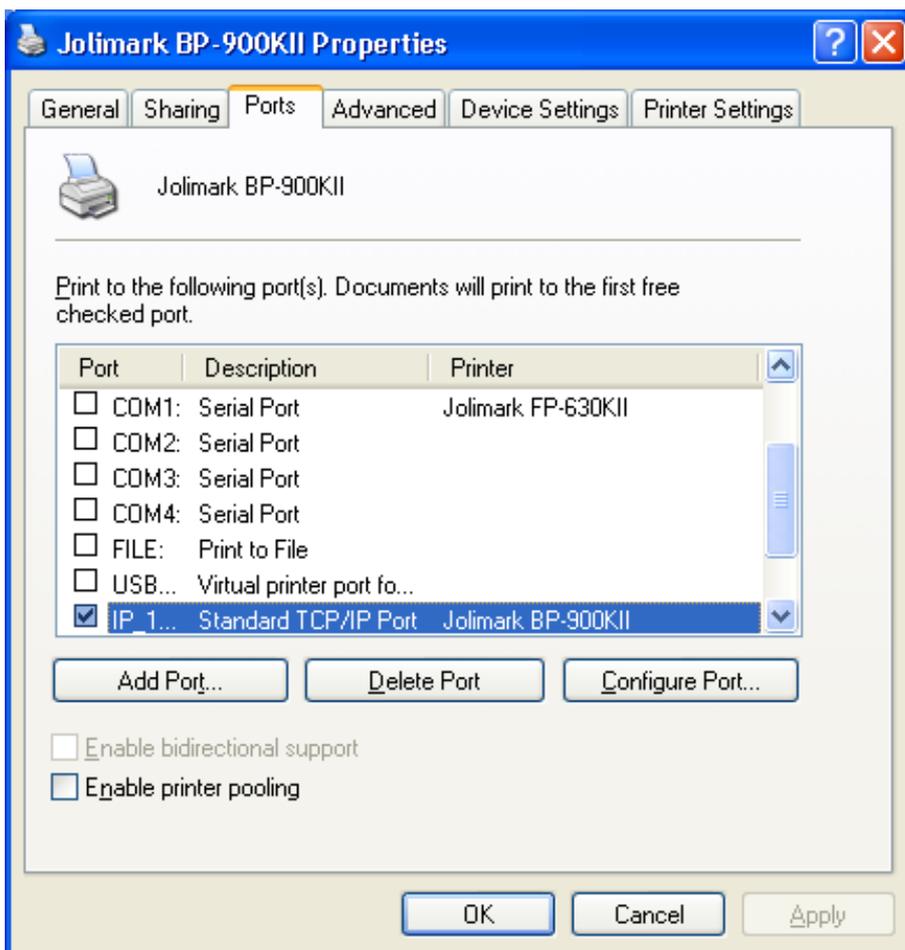


- 9) Return to “Additional Port Information Required”, click “Next”.

- 10) A window of “Completing the Add Standard TCP/IP Printer Port Wizard” pops up, click “Finish”.
- 11) Return to “Printer Ports”, click “Close”.



- 12) Return to “Properties”, make sure the network port is selected, click “Apply”, and then click “Close”. Thus, printer’s network port setting is finished.



## Chapter 3 Paper Process

### 3.1 Feeding the Cut Sheet (Cut sheet, Passbook, Certificate)

You can feed cut sheet and single copy paper (Max 1+6 copy). Follow the steps as below to feed cut sheet:

1. Turn on the printer.
2. Check whether the paper type shown on the LCD display is "cut sheet". If it shows "continuous paper", in Online mode, press **LF/FF** button and **High speed** button at the same time for 3 seconds, paper type will switch to "cut sheet" mode.
3. When feeding copy note, you should read the reference in the following table.

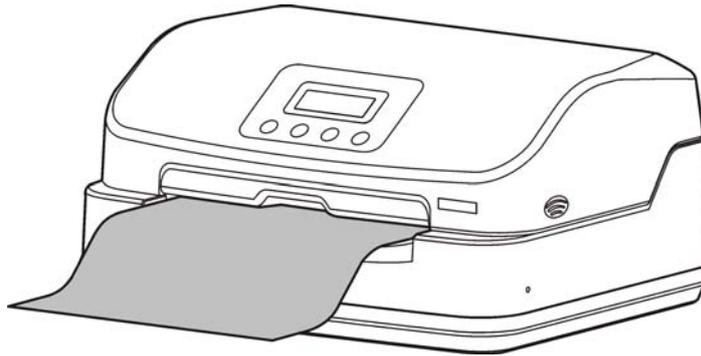


Figure 3-1 Feeding cut sheet

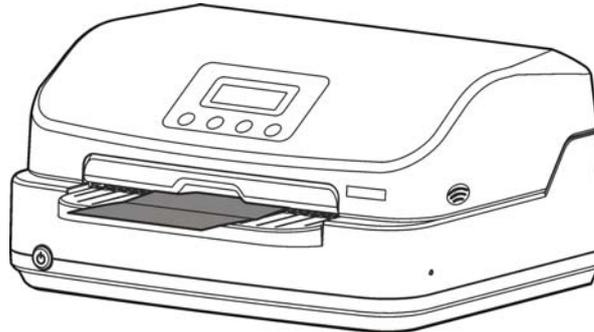


Figure 3-2 Feeding passbook or certificate

Table 3-1: Copy mode setting reference

Copy paper (Include original pattern)	Paper thickness (mm)	Copy mode setting through the control panel
1 ~ 4	0.06 ~ 0.242	Normal mode
5 ~ 7	0.3 ~ 0.45	Copy mode

- Note:**
1. The setting way of Copy mode refers to Chapter 4 control panel.
  2. Normal mode applies to thin paper, cut sheet, 2 ~ 4 plies tickets, certificate, passbook, registered permanent residence book, driving license and other licenses.
  3. Copy mode applies to 5 ~ 7 plies multipart paper.
  4. To avoid jamming or poor printing result, please check whether the paper or passbook is crimp or tear before using.
  5. Before using the new passbook, please fold the passbook at the binding, to make sure the passbook is flat during printing.

## 3.2 Feeding the continuous paper (Report form, single ply continuous paper, multiply continuous paper)

You can feed cut sheet and single copy paper (Max 1+6 copy). Follow the steps as below to feed cut sheet:

1. Turn on the printer.
2. Check whether the paper type shown on the LCD display is “continuous paper”. If it shows “cut sheet”, in Online mode, press **LF/FF** button and **High speed** button at the same time for 3 seconds, paper type will switch to “continuous paper” mode.
3. Pull the continuous paper along the paper platform, printer will adjust paper skew automatically and then feed paper to printing home position. Printer is ready to print after feeding paper.
4. When feeding copy note, you should read the reference in the following table.

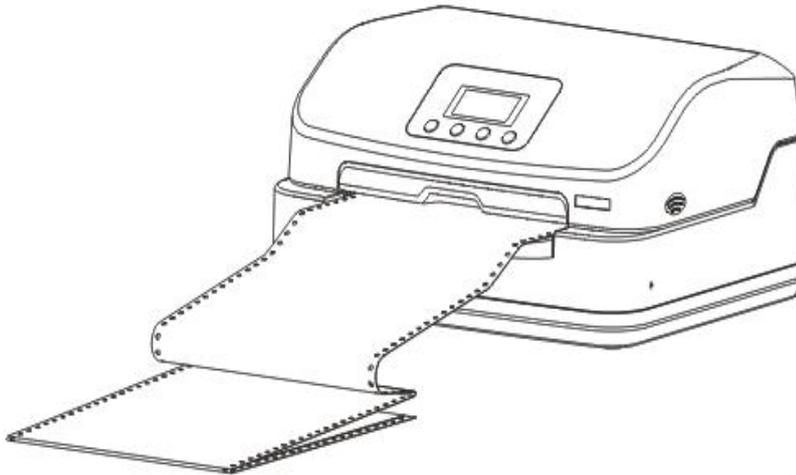


Figure 3-3 Feeding continuous paper

## Chapter 4 Control Panel

### 4.1 Button, LED Light and LCD Display on the Control Panel

There are four buttons, two LED lights and a LCD display on the control panel. (As shown in figure 4-1)

The LCD display is dot matrix display part (128×32 dots), the display size is 62.7mm\*17.6mm.

- ◆ The control panel is shown as follows:

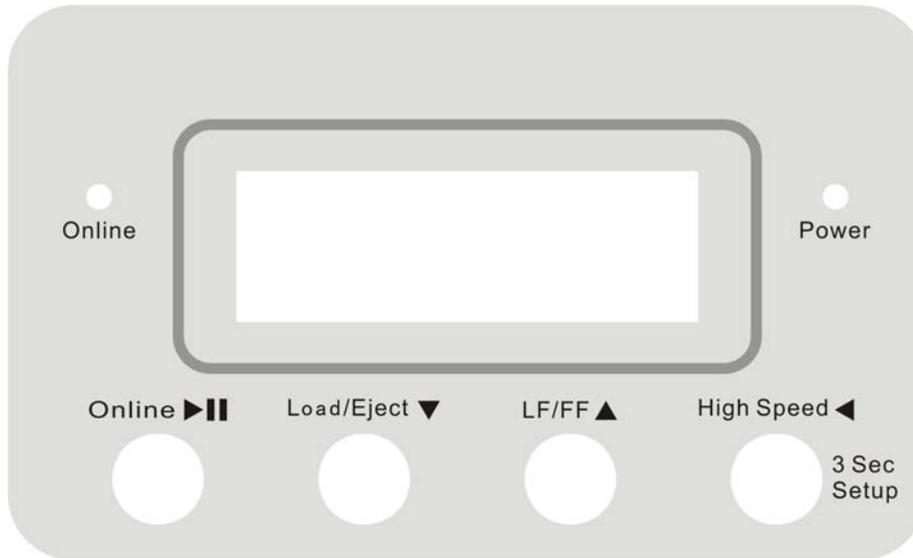


Figure 4-1 Control panel

- ◆ The meaning of LED light is shown as follows:

Table 4-1: The meaning of LED light on the control panel

LED light	Off	On	Blink
Power (red)	The power is off	The power is on	Paper out or malfunction occurs
Online (green)	The Printer is offline	The Printer is online	Malfunction occurs

### 4.2 Basic Operation of the Control Panel

There are four buttons on the control panel for using.

Button	Function
<b>Online ►  </b>	Press <b>Online</b> button, switch between Online and Offline modes.
<b>Load/Eject ▼</b>	When there is paper in the printer and it is in offline mode, press this button to eject paper. In online mode, press this button for about 3 seconds, the printer would detect the fiber sensor state.
<b>LF/FF ▲</b>	In the offline mode, press this button to feed the paper line by line. Alternatively, in the offline mode, hold this button down for about 3 seconds, the printer would eject the loaded paper; in the online mode, hold this button down for about 3 seconds, printer would enter printing home position adjustment.

<b>High Speed ◀</b>	<p>In offline mode, press this button to switch the speed modes among “NORMAL”, “HIGH1” and “HIGH 2”. At the same time, the LCD display would show the current printing speed.</p> <p>In online mode, hold down this button for about 3 seconds, the printer would enter menu setup mode.</p>
---------------------	---

**Note: Switch between Cut sheet and Continuous paper: In online mode, press LF/FF button and High speed button at the same time for about 3 seconds.**

### 4.3 The Information on the LCD Display

Printer would display the common state information on the LCD display, and the information roll leftwards as the following format:

paper information + speed information + copy information + [self test information]

**Paper information:** 1) CUT SHEETS 2) FRONT CONT.

**Speed information:** 1) NORMAL 2) HIGH1 3) HIGH 2

**Copy information:** 1) ON 2) OFF

**Self test information:** 1) ASCII test

**Note: When the printer detects abnormality or malfunction, it would give priority to the relative warning information.**

### 4.4 Use the Menu Setup System

#### 4.4.1 Change the Current Setting of Printer

The menu of BP-900KII is containing main menu and sub menu, and displays it on the LCD display. Users can easy setting all the basic functions of the printer.

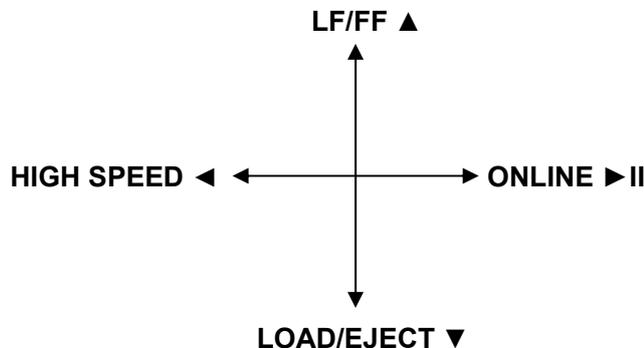
In online mode, hold down **HIGH SPEED** button for about 3 seconds, the printer would enter into menu setup mode.

Press **ONLINE** button to enter the sub menu.

Press **HIGH SPEED** button to go back to main menu, confirm the current menu or eject the menu setup mode.

Press **LF/FF** button to the select former menu item or menu parameter.

Press **LOAD/EJECT** button to select the later menu item or menu parameter.



Press **HIGH SPEED** button to go back to the main menu or eject menu setup mode, if it is in the main menu now, the printer would confirm the new setting and eject the menu setup mode.

Press **ONLINE** button to enter the submenu, or to modify the current item, after adjusting, press **HIGH SPEED** button to confirm and go back to the main menu. (The current parameter will be marked with

√.)

The detailed descriptions are as follows:

1) After entering menu setup mode, the information which shows in the LCD display as shown below.

MENU SETUP 1. PRN SPEED ▶
------------------------------

2) Press “**LF/FF▲**” button, “**LOAD/EJECT▼**” button to choose the option of the menu. (As shown below)

MENU SETUP 2. PRN QLTY ▶
-----------------------------

There are 37 options in the main menu of BP-900KII:

MENU TYPE	MAIN MENU	MENU TYPE	MAIN MENU
PRINT SETUP	1. PRN SPEED	SYSTEM SETUP	22. LANGUAGE
	2. PRN QLTY		23. QUIET MODE
	3. COPY		24. AUTO LF
	4. EMULATION		25. AUTO CR
	5. CHAR MODE		26. LOAD PAPER
	6. FONT		27. SKEW CORRECT
	7. COMPRESS		28. COVER OPEN
	8. AUTO COMP		29. EJECT
	9. PITCH		30. EDGE DETECT
	10. CN PITCH		SERIAL INTERFACE
	11. LINE SPACE	32. PARITY	
	12. FORM	33. DATA BIT	
	13. PAGE SKIP	34. STOP BIT	
	14. TEXT DIR	35. PROTOCOL	
	15. GRAPH DIR	HEAD PIN	36. HEAD PIN
	16. LEFT MARGIN		37. PIN SWITCH
	CHARACTER	17. HORZ ADJ	
18. SLASH ZERO			
19. CHAR SET			
20. INTL CHAR			
	21. CODE PAGE		

3) Press “**ONLINE▶**” to enter the sub menu.

For example, after choosing “PRN SPEED”, press “**ONLINE▶**” button to enter the detailed option about printing speed. (As shown below)



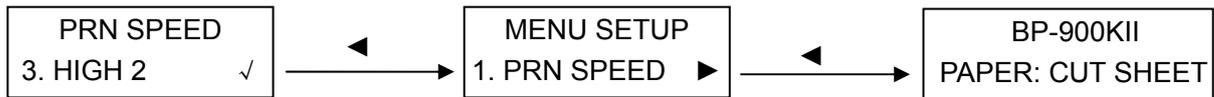
As the right picture shows, the option with a “√” is the current default setting of PRT-SPEED.

- 4) Press “▲” button, “▼” button to select the options up and down.

For example, if you need to change the speed to “High 2”, you can press “▲” and “▼” to choose, then press “▶||” to save your selection. The saved option would be marked with a “√”. (As shown below)



- 5) Press “HIGH SPEED ◀” button to go back to main menu, then press “HIGH SPEED ◀” button again to exit the menu setup mode and the new settings would take effect at the same time. (As shown below)



#### 4.4.2 Printing the Current Setting Report

If you need to know current setting, you can print the current setting report as the following steps:

1. Turn off the printer.
2. Hold down both **LOAD/EJECT** button and **LF/FF** button while turning on the printer. Load the paper, the printer would print out the current setting report as Figure 4-2 shown.

**Jolimark BP-900KII**

Current Setting Report

BP-900KII VX.X XXX XXXX/XX/XX SN:XXXXXXXXXXXXXXXXXXXXXX

**PRINT SETUP**

PRN SPEED	-----	NORMAL
PRN QLTY	-----	LQ
COPY	-----	OFF
EMULATION	-----	EPSON
CHAR MODE	-----	ASCII
FONT	-----	ROMAN
COMPRESS	-----	100%
AUTO COMP	-----	OFF
PITCH	-----	10 CPI
CN PITCH	-----	9.5 CPI
LINE SPACE	-----	9 LPI
FORM	-----	A4
PAGE SKIP	-----	OFF
TEXT DIR	-----	BI DIR
GRAPH DIR	-----	BI DIR
LEFT MARGIN	-----	0.1 INCH
HORZ ADJ	-----	0.9 INCH

**CHARACTER**

SLASH ZERO	-----	OFF
CHAR SET	-----	GRAPHICS
INTL CHAR	-----	Farsi
CODE PAGE	-----	Farsi

**SYSTEM SETUP**

LANGUAGE	-----	ENGLISH
QUIET MODE	-----	OFF
AUTO LF	-----	OFF
AUTO CR	-----	ON
LOAD PAPER	-----	0.1 SEC.
SKEW CORRECT	-----	ON
COVER OPEN	-----	ON
EJECT	-----	FRONT
EDGE DETECT	-----	ON

**SERIAL I/F**

BAUD RATE	-----	9600 BPS
PARITY	-----	NONE
DATA BIT	-----	8 BIT
STOP BIT	-----	1 BIT
PROTOCOL	-----	DTR

**HEAD PIN**

HEAD PIN	-----	LIVE
PIN SWITCH	-----	OFF

Figure 4-2 Printing current setting report

**Note: If the printer doesn't install Ethernet interface, the printer would not print out the Ethernet information of MAC, IP in menu setup mode.**

### 4.4.3 Menu Item Description

Table 4-2: Menu item description as follow:

Item	Description
PRN SPEED	Specify the print speed of printer. Printing resolution is lower while print speed is higher.
PRN QLTY	Set the printing quality.
COPY	According to customer's printing requirement, select the printing capability.
EMULATION	Specify printer's control commands.
CHAR MODE	Select ASCII or Chinese character mode to print when printer receives character printing task.
FONT	Specify a kind of ASCII fonts to print when printer receives character printing task. If the print data with font instruction, printer gives priority to print data instruction. (Only valid when CHAR MODE is choosing ASCII)
COMPRESS	After selecting this function on, printer would print out transverse compressed content according to the specified percentage.
AUTO COMP	When auto-compress mode is selected, printer would detect paper width automatically and choose the proper percentage to print.
PITCH	Specify the ASCII character spacing in characters per inch (dpi).
CN PITCH	Specify the Chinese character spacing in characters per inch (dpi).
LINE SPACE	Specify the line space of line feed to 1/6 inch (initial value) or 1/8 inch.
FORM	Specify the page length of the form, for both cut sheet and continuous paper. Printer feeds to next page according to the specified page length. If the print data with page length instruction, printer would give priority to print data instruction.
PAGE SKIP	After selecting this function on, printer would leave one inch (25.4mm) margin at the perforation of the continuous paper automatically. If the print data with page margin instruction, printer would give priority to print data instruction.
TEXT DIR	Set unidirectional or bi-directional printing for text. Bi-directional is faster while the unidirectional is slower which produces better printing quality.
GRAPH DIR	Set unidirectional or bi-directional printing for graphics. (Only compatible with EPSON)
LEFT MARGIN	Specify the distance between paper left margin and printing start position. (Only valid when EDGE DETECT function is on.)
HORZ ADJ	Micro-adjust the left margin.
SLASH ZERO	Select the printing character for zero with a slash(/) or without, to distinguish it from the letter O.
CHAR SET	Specify character set as Italic Character or Graphic Character.
INTL CHAR	Specify the printer internal character set according to different using circumstances of international characters.
CODE PAGE	Select the code page according to different national characters use circumstances.
LANGUAGE	Specify the printer menu language as English or Chinese.
QUIET MODE	Disable or enable the low noise function, when this function is on, print speed would be reduced.
AUTO LF	If this function is on, printer would advance the paper one line automatically after receiving every carriage return instruction.
AUTO CR	After selecting this function on, printer would feed the paper one line after receiving

	every line feed instruction. Print head would move to the printing home position automatically.
LOAD PAPER	Specify the wait time between cut sheet is put into the paper guide and it is fed into the printer.
SKEW CORRECT	After selecting this function on, printer would adjust the skew paper automatically when loading cut sheet. (Only valid when tilt angle is within 25°.)
COVER OPEN	After selecting this function on, if the upper cover is open, printer would stop printing with an alarm.
EJECT	Specify paper eject direction when loading paper from front.
EDGE DETECT	After selecting this function on, printer would detect the paper edge automatically after feeding paper, and start to print from the position according to the left margin setting.
BAUD RATE	Specify the printer serial data transfer rate.
PARITY	Specify the parity bit for serial data transfer.
DATA BIT	Specify the serial data bits.
STOP BIT	Specify the serial data transfer stop bit.
PROTOCOL	Specify the protocol of printer serial data transfer as software control (XON/XOFF) or hardware control (DTR).
HEAD PIN	Select the broken pin. Printer would automatically replace it with other pin to print.
PIN SWITCH	After selecting this function on, printer would switch different pins to print table line automatically.

#### 4.4.4 Online Intelligent Parameter Setting

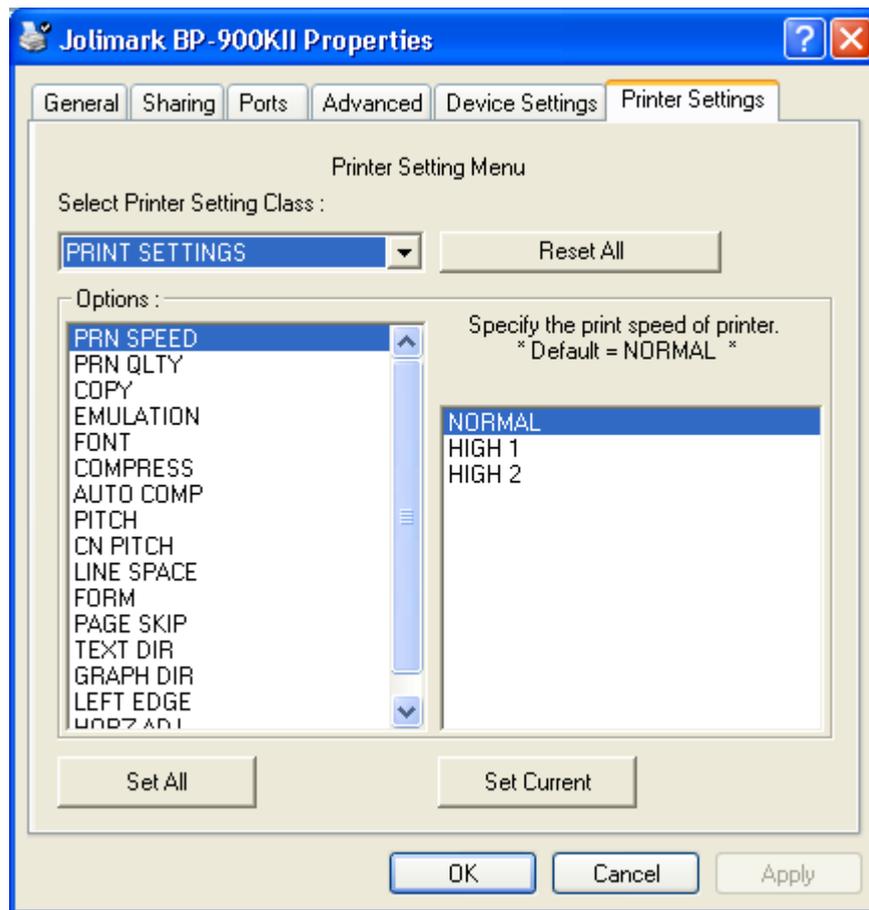
This printer supports online intelligent parameter setting. You can set the printer parameter in PC through using the Driver of this printer.

Setting method as follows:

1. Ensure the printer and the computer are connecting with USB interface cable. Turn on both the printer and the computer, and the printer is in online mode.
2. Under the operation system of WIN 2000/WIN XP/VISTA/WIN 7, click "Start" → "Setting" → "Printers", a window of "Printers" pops up.

Under the operation system of Windows 8, click "Desktop" in the main panel firstly, and then double click and enter into the window of "Control panel", click "Hardware and Sound" to find "Devices and printers", at last, open the window of "Devices and printers".

3. In the window of "Printers", select the Driver of this printer, right click it and click "Property" in the choose column.
4. Then a window of "Property" pops up, click "Printer setting".



5. Corresponding with the third submenu setting methods of printer menu system, in the window of "Printer settings", select main menu in the "Setting Class", select second submenu in "Options", at last, select setting parameter in current parameter item.
6. Click the button of "Reset All" to resume all the parameter to driver default setting and not change the printer parameter.
7. During setting parameter: You can click "Set Current" to save the current item after setting parameter each time. Also you can click "Set All" to save all the items after setting all parameters. Click both "Set Current" and "Set All", the program will send the parameter command to the printer.
8. The printer will change the parameter setting right after it receives the setting parameter command. It doesn't need to restart the printer.
9. After finish setting, click "OK" to exit "Property".

#### 4.4.5 Restoring Factory Printer Settings

You can restore to the factory printer settings without having to work through the Setup Menu System to reset the menus.

To restore to the factory settings:

1. Make sure that the printer is in online mode.
2. Press and hold down the **Online** and **High Speed** buttons on the control panel for 3 seconds.

The LEDs of the **Power** and **Online** on the control panel blink 2 times at the same time and the printer makes 3 beeps to confirm that the printer's factory settings have been restored.

## 4.5 TOF Adjustment

TOF is mean top of form position. When paper is loaded, the printer detects the top edge of the paper and determines the printing home position based on this top edge. That position is the top of the form.

When the printer in online mode, load paper and then press **▲ LF/FF** for 3 seconds, and the printer LEDs of the power and online on the control panel blink by turns.

Press **“LF/FF▲”**, **“LOAD/EJECT▼”** can change the setting of TOF (The max dimension of the changing of TOF is measure by the default setting under zero position):

**“LF/FF▲”** Press one time go forward 1/60 inch, max is 60/60 inch.

**“LOAD/EJECT▼”** Press one time go backward 1/60 inch, max is 30/60 inch.

After adjustment, press **ONLINE** button to save and exit TOP adjustment mode, the **power** light and the **online** light blink 3 times at the same time with two beeps.

## 4.6 The Self Test Functions

### 4.6.1 ASCII Self Test

Press **Online** button when turning on the printer. The printer would print out a piece of ASCII pattern.

If you press **Online** and **LOAD/EJECT** buttons at the same time when turning on the printer, it would print out the ASCII pattern continuously. Press **Online** button to pause it. If you want to exit now, you can turn off the power then turn on again.

```

ASCII SELF TEST MODE
9.0.KII v XXX XXXX/XX/XX SN:XXXXXXXXXXXXXXXXXXXXX
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
    
```

Figure 4-3 ASCII self test mode

### 4.6.2 Hex Mode

Press **LOAD/EJECT** button when turning on the printer to enter the Hex printing mode. After enter the Hex printing mode, the printer would print out the data in hex which send from the computer. Use the Hex printing mode we can check the trouble of interface. If you run the following program, you can get the printing result relatively.

For example, printer prints out the following hex codes:

```

***** HEXADECIMAL DUMP *****
(0000) 1B 3F 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E , 4ABCDEFGHIJKLMN
(0010) 4F 50 51 52 53 54 55 56 57 58 59 5A 0D 0A 1B 3D OPQRSTUVWXYZ,,, 5
(0020) 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 ABCDEFGHIJKLMN
(0030) 51 52 53 54 55 56 57 58 59 0D 0A QRSTUVWXYZ,
    
```

Figure 4-4 Hexadecimal mode

Here, one line of “A~Z” italic characters is printed out firstly, and then print out one line of “A~Z” characters.

The following is the printing result of normal mode:

*ABCDEFGHIJKLMN*  
 ABCDEFGHIJKLMN  
 ABCDEFGHIJKLMN

### 4.6.3 Head Pin Test

Press **High speed** button while turning on the power of the printer. The printer would print out a piece of “Head pin test” pattern.

24 pins print out 24 lines which are marked with 1~24. If the line after some number can not be printed out, it denotes that pin is broken. And you set the break pin number in the corresponding menu setup,

the printer would use break pin compensation function.

#### 4.6.4 Alignment Adjust Mode

In the online mode, press **online** + **LF/FF** buttons at the same time for about 3 seconds, so that the printer enters into the alignment adjust mode.

In the Bidirectional adjust mode, **online** light blinks. Press **LOAD/EJECT** button or **LF/FF** button to adjust.

**LF/FF** button: Press to move the odd line to the right (original parameter values increase)

**LOAD/EJECT** button: Press to move the odd line to the left (original parameter values decrease)

**High speed** button: Enter into the next adjustment. Long press it to switch between "COPY" or "UNCOPY" alignment adjust modes.

**Online** button: Save the current setting to EEPROM and then print out the current BI-D adjust result.

Turn off the printer to exit the adjusting mode.

**Note: BI-D adjust mode will affect the printing quality, think over before adjust it and strict to the instructions while adjusting.**

## Chapter 5 Maintenance and Troubleshooting

### 5.1 Cleaning the Printer

#### 5.1.1 Replacing the Ribbon Cartridge

When the printing is faint, please replace the ribbon cartridge in time, or it may affect the printing result and damage the print head. Please refer to chapter Installing the Ribbon Cartridge for detail information.

#### 5.1.2 Cleaning the Printer

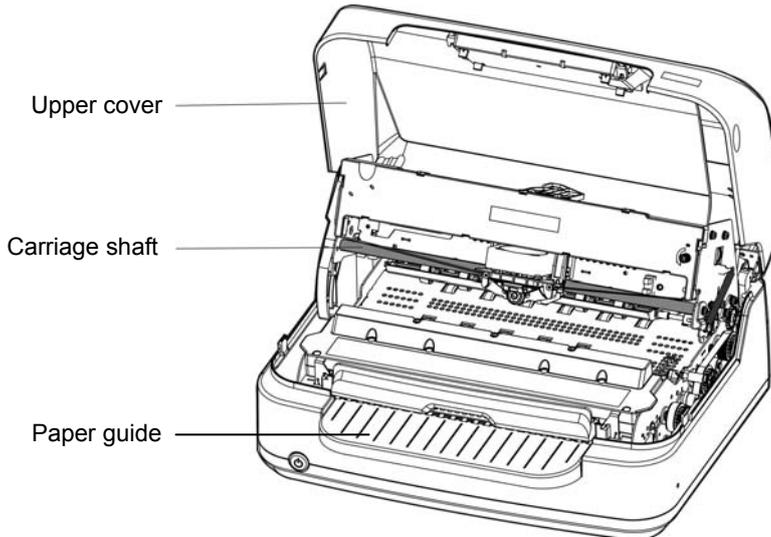


Figure 5-1 Cleaning the printer

#### ■ Cleaning periodically and the cleaning tool

Periodical cleaning: every three months or every 300 working hours once.

Cleaning tool: dry cloth (please use soft cloth to clean metal parts.)

#### ■ Clean the paper guide

Wipe off the wasted paper and clean the dirt and dust.

#### ■ Clean the carriage shaft

There is a layer of oil cover on the carriage shaft which guarantees the carriage can run smoothly. But the oil is easy to absorb dust, please clean it with soft cloth first, and then add appropriate high quality bearing lube (NYE180 lube of NYE Company is recommended), move print head back and forth to make lube scattered.

#### ■ Clean the platen

Wipe off the wasted paper and clean the dust on the platen.

#### ■ Clean the protect cover of photoelectric sensor

As the paper feed sensor is a correlation photoelectric sensor. You should clean the parts periodically.

- ◆ Clean the surface of the photoelectric sensor's protect cover every three months.

When the paper feed sensor can not detect the paper, please pull the buckles on both sides of the PF part sideward, then turn over the PF part and clean the jammed paper and dust in it. Also, use the cloth to clean the sensor protect cover on the front paper feed platform.

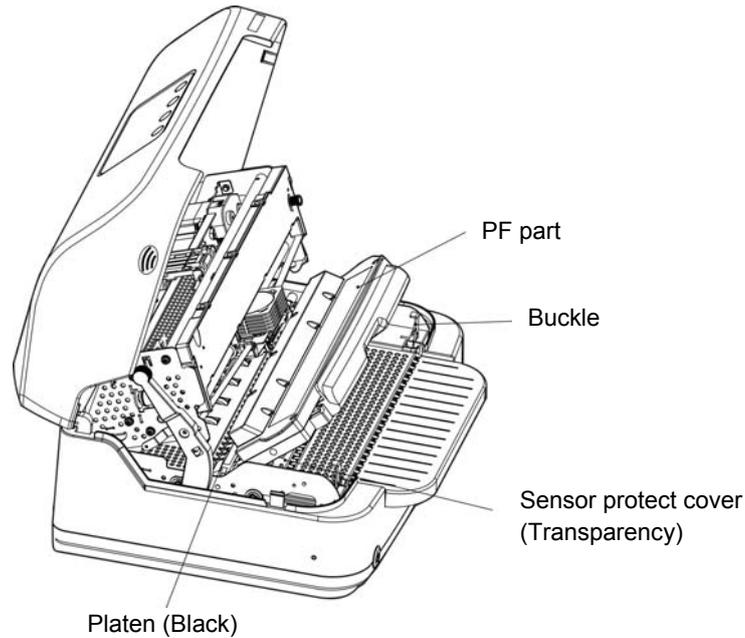


Figure 5-2 Turn over the PF part

**Note:** 1. Turn off printer and pull out the power cable before cleaning.

2. Being used under dust circumstance, the carriage shaft may stack much dust and affect the print quality, therefore, please shorten the cleaning period.
3. Do not touch the print head if the printer has just been recently used as the print head may be hot.
4. Don't use hard cloth or flammable solvent to clean the printer.
5. Do not let any water or other liquid go into the printer.

## 5.2 Problems and Solutions

When using the printer you may meet some problems as follow, please try the following solutions to settle them.

Malfunction	Solution	Remark
Printer is electrified, but can not run	<ol style="list-style-type: none"> <li>1. Check whether the printer is in offline mode, if yes, switch the printer into online mode.</li> <li>2. Check whether the printer cable is connecting tightly.</li> <li>3. Check whether the printer is set to offline in the driver.</li> <li>4. Check whether the driver port is correct and matching.</li> </ol>	
Print head does not move during printing	After long time using, print head temperature is high and goes into protective state. It will go on working after cooling off.	
Printer has no action and no display	Whether the power supply is normally <ol style="list-style-type: none"> <li>1. Please check whether the power cable connects correctly.</li> <li>2. Please try to replace the power cable and restart the printer.</li> </ol>	
Turn on the printer normally, but can not online printing	<ol style="list-style-type: none"> <li>1. Please make sure the printer interface cable connects with the computer correctly. Load paper and the online LED is on.</li> <li>2. Please replace the interface cable and try online printing again.</li> </ol>	

<p><b>Jamming during printing</b></p>	<ol style="list-style-type: none"> <li>1. Turn off the printer, and turn over the upper cover.</li> <li>2. Lift up the upper frame with the lever, and lock the lever to make sure the upper frame is fixed.</li> <li>3. Pull out the buckles on both sides of PF part, turn over the PF part, and then take out the jammed paper.</li> <li>4. After taking out the jammed paper, close the PF part and make sure the buckles on both sides are locked.</li> <li>5. Push the upper frame at the position which has the "PUSH" label, lock the upper frame with the lower frame, then close the upper cover. And then restart the printer.</li> </ol>	
<p><b>Printing is faint colors</b></p>	<ol style="list-style-type: none"> <li>1. If the belt color is faint, please replace the ribbon cartridge.</li> <li>2. Make sure the ribbon cartridge is installed correctly, and make sure the belt is installed between print head and the ribbon mask.</li> </ol>	
<p><b>Dots missing</b></p>	<ol style="list-style-type: none"> <li>1. Check whether the ribbon cartridge is installed correctly.</li> <li>2. Check the pin state with the PIN test, please refer to the PIN TEST chapter for detail information. If any print pin abnormality is occurs, please contact the dealer or service centre.</li> </ol>	
<p><b>Paper dirt</b></p>	<p>Belt is off the print head, please reinstall the belt.</p>	

**Paper jam**

The flat and straight paper path is specially design for your large quantities of document printing without trouble. The following reasons may lead to paper jam.

1. The paper feed channel blocks.
2. Paper with staple, clip or other paper.
3. Paper is crimp or abnormality.
4. Paper is too thick or too many plies.
5. Bad quality of multipart paper.

When paper jam, please do as following steps:

1. Shut down the power and open the upper cover of the printer.
2. Pull the upper frame lever on the left side backwards to lift up the upper frame. And then, lock the upper frame lever, and make sure the upper frame is locked.

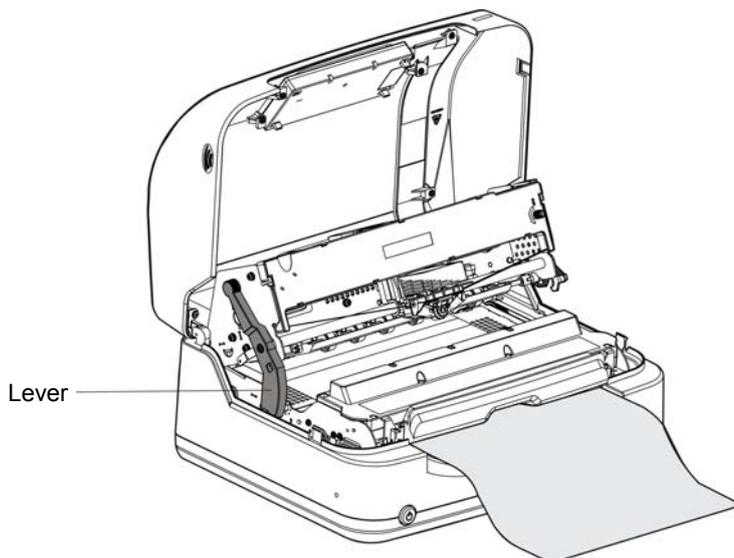


Figure 5-3 Lift up the upper frame

3. Pull the buckles on both sides of the PF part, then turn over the PF part and take out the jammed

paper.

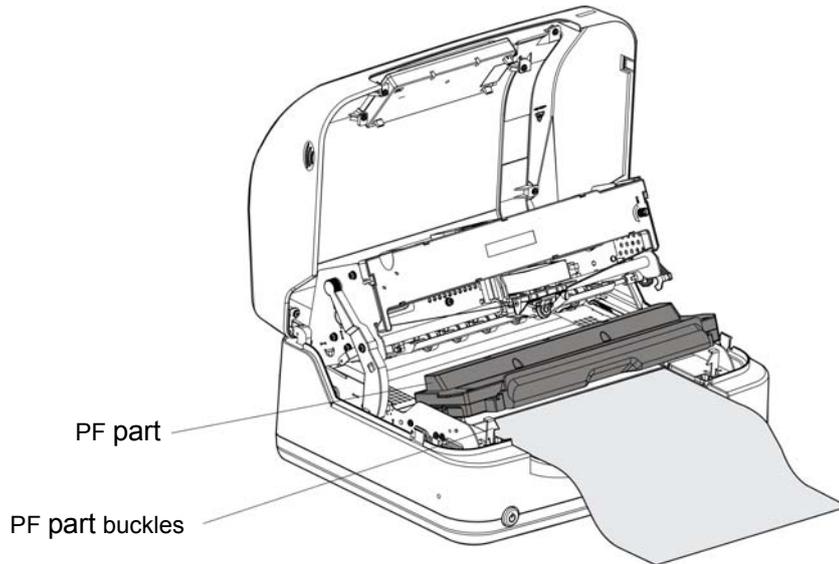


Figure 5-4 Take out the jammed paper

4. After taking out the jammed paper, please close the PF part and lock the buckles on both sides of the PF part.

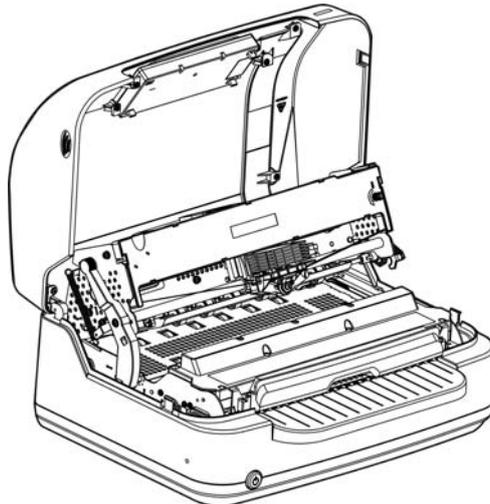


Figure 5-5 Lock the buckles on both sides of PF part

5. Unlock the upper frame by the frame lever and push it at the position which has the label "PUSH 压下", and lock the upper frame with the lower frame again. then close the upper cover. At last, restart the printer.

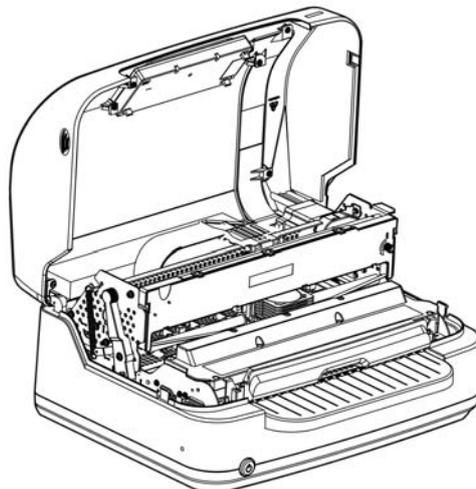


Figure 5-6 Lock the upper frame

### 5.3 Error Indication on the Display of Control Panel

When the printer in trouble, it would in offline state, and alarm by the LED blinking also with the error indications on the display as follow:

LED light	LCD display	Reason	Solution
Power LED blinks Online LED off	No paper, please load paper	Paper out	Please reload paper correctly
Power LED and Online LED blink quickly alternately	HP error, inspect paper jam, then press online key	Print head position incorrect.	Shut down the power, then inspect printer for jam, next switch on again, if the problem still exist, please clean the carriage guide.
Power LED and online LED blink alternately	Cover opened, please close it, and press the online key	The upper cover is not closed correctly.	Please check if the upper cover had been closed
Power LED on, online LED blink, at the same time the print head does not move.	Print head overheat, Please waits	Because the printer has working for a long time and the print head is overheating.	The print head does not move, and it will continue printing after cooling down.

### 5.4 Contact Your Technical Service Center

When there is malfunction occurs and you can not solve it even though you follows the solutions in chapter 5.2, when the printer components are damaged during using or when you want to purchase the materials, please contact the nearest dealer or technical service center for assistance.

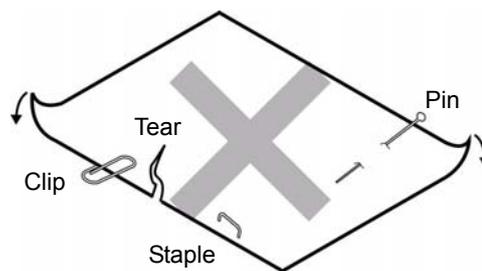
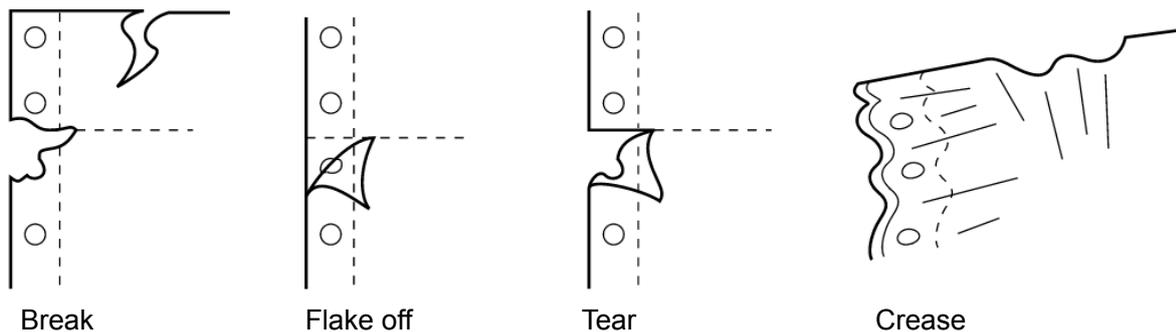
## Chapter 6 Paper Specification

### 6.1 Paper Specification and Printable Area

#### 6.1.1 The Notice Relates to Paper

Using the following paper will cause unstable paper feeding, paper jam or paper crease, even leads to break pin. So it is forbidden using.

- Too thin or too thick, or the thickness of which are uneven. (The paper which doesn't accord with paper specification)
- Too small or too large. (The paper which doesn't accord with paper specification)
- Paper being cut brokenly or has hole.
- Paper with metal such as pins, clips and staples.
- Paper with paste outside, or which is uneven or flake off.
- Rough paper
- Continuous paper has crease besides the cross-perforation.
- Paper corner breaks or creased.
- Postcard or envelope sticks with stamp or seal.



**Note: 1. The storage of the paper should be in the temperature between 10°C to 30°C and the relative humidity between 30% to 70%.**

**2. When there is difference between operating environment and storage environment, please put the sealed paper in the operating environment a period of time. Use it after the paper is adapted to the operating environment.**

### 6.1.2 Useable Paper Types and Guarantee Area

Useable papers are shown in the following table:

Paper type	Guarantee grade	Other conditions
Cut sheet	●	
Continuous paper	●	
Post card	●	
Deposit book	●	
Card	▲	
Envelope	▲	
Delivery order form	▲	
Label	×	
Reborn paper	●	

**Caution:** “Guarantee” here means the specifications which accord with print specification, noise specification and paper feed performance, etc.

The meanings of symbol in Guarantee grade column are shown as follows:

- : Guarantee
- ▲ : Can use in some conditions, not guarantee.
- × : Forbid using.

**Caution:** 1. To guarantee the print quality, please ensure the contents are all within printable area.

2. If the print contents are out of the printable area, it may cause the print head to break pins.

### 6.1.3 Cut Sheet

The detailed specification of cut sheet is shown in the following table.

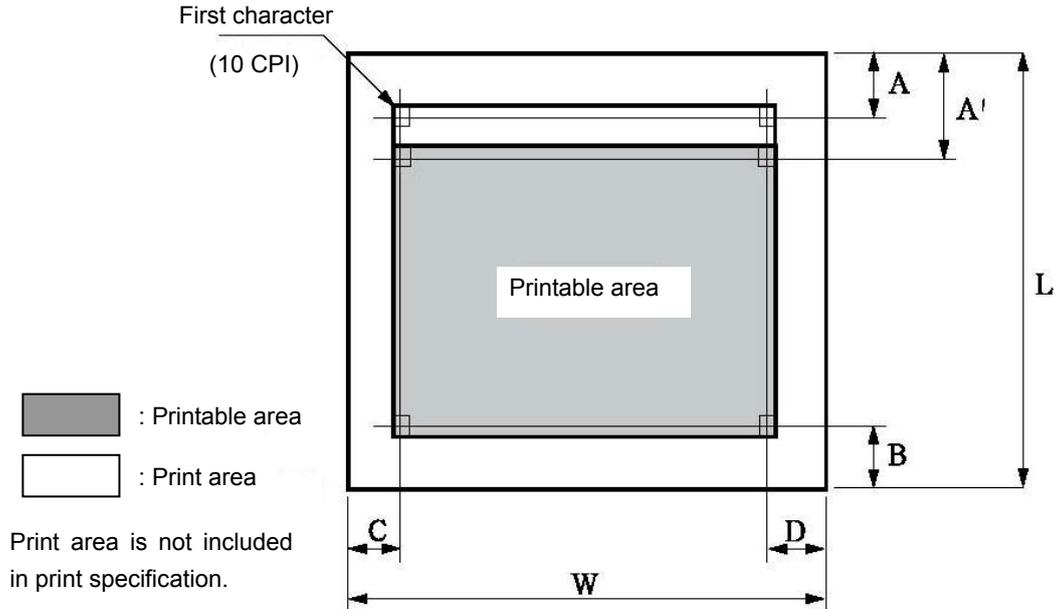
<b>Paper</b>	Single-ply paper	White paper, Copy paper
	Multi-ply paper	NCR paper
<b>Copy capability (Max.)</b>	7 copies (Original + 6 copies), paper weight bases on 40g/m <sup>2</sup> standard.	
<b>Weight</b>	Single-ply paper: 52 ~ 250 g/m <sup>2</sup>	
	Multi-ply paper (each sheet): 40 ~ 64 g/m <sup>2</sup> [Note: See details in the multi-ply paper (NCR paper) requirement table]	
<b>Total thickness</b>	Single-ply paper	≤0.8 mm (Note 1)
	Multi-ply paper	≤0.45 mm (Note 2)

**Note: 1. This thickness is added by multi single-ply papers, and it is only achieved when just printing on the upper paper. (No need to copy)**

**2. Refer to the requirement of the multi-ply paper (NCR paper), the mount paper can be thicker than other plies, but we can't guarantee the printing effect as it is influenced by paper difference.**

◆ Cut Sheet Dimension and Printable area

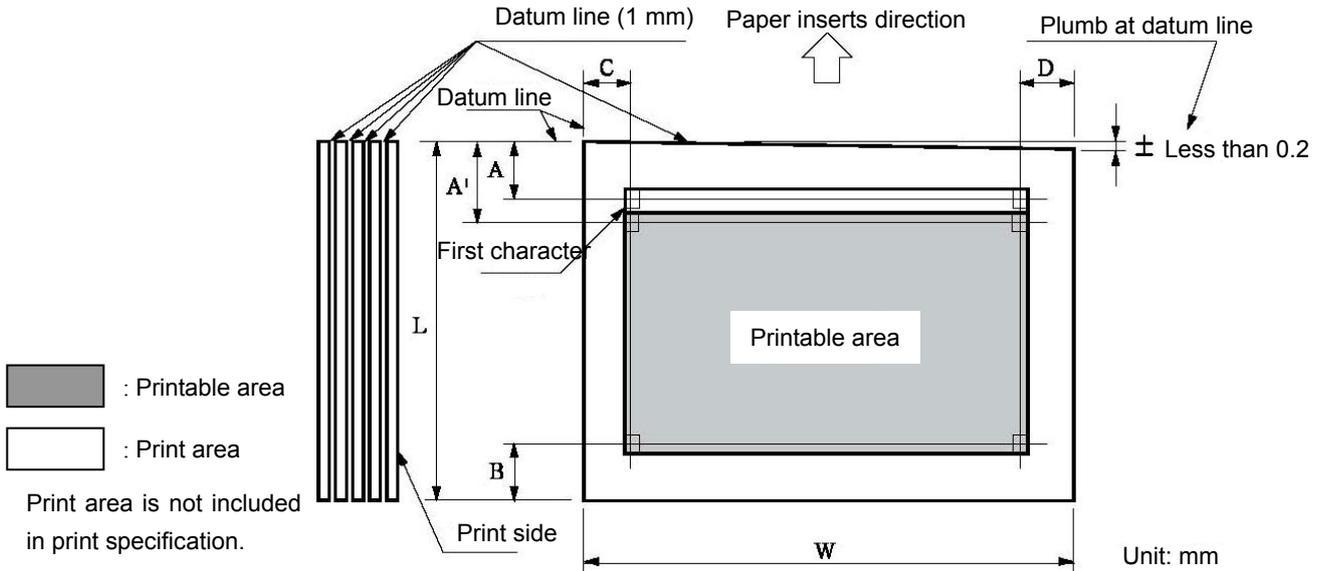
○ Single-ply paper



Mark	Name	Specification value
<b>W</b>	Paper width	60 ~ 245 mm
<b>L</b>	Paper length	67 ~ 558 mm ( <b>Note 1</b> )
<b>A</b>	Home position (top margin)	≥2 mm
<b>A'</b>	Top printing unguaranteed area (top margin)	≥2 mm
<b>B</b>	Bottom printing unguaranteed area (bottom margin)	≥6 mm
<b>C</b>	Left printing unguaranteed area (left margin)	≥ 2 mm
<b>D</b>	Right printing unguaranteed area (right margin)	≥ 2 mm

**Caution: 1. Paper less than 52 g/m<sup>2</sup> is worse in rigidity, so it is not in the guarantee list.**  
**2. Please use the paper with no crease or bend.**  
**3. Do not print beyond the printable area, or it may cause print head break pins and affect print head life.**

○ Multi-ply paper (NCR paper)



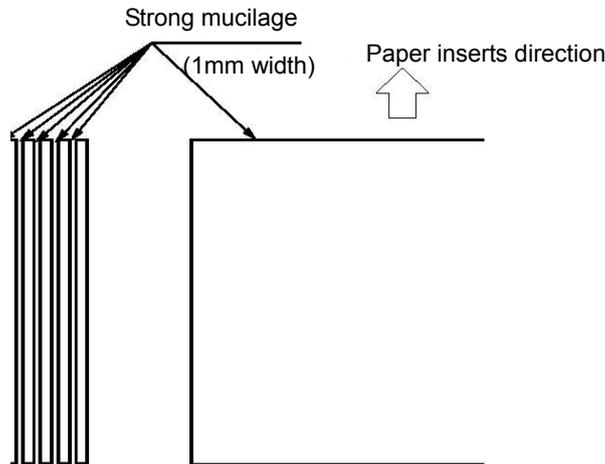
Mark	Name	Specification value
<b>W</b>	Paper width	60 ~ 245 mm
<b>L</b>	Paper length	67 ~ 558 ( <b>Note 1</b> )
<b>A</b>	Home position (top margin)	≥2 mm
<b>A'</b>	Top printing unguaranteed area (top margin)	≥2 mm
<b>B</b>	Bottom printing unguaranteed area (bottom margin)	≥6 mm
<b>C</b>	Left printing unguaranteed area (left margin)	≥ 2 mm
<b>D</b>	Right printing unguaranteed area (right margin)	≥ 2 mm

**Caution: 1. Please use paper with no crease or bend.**  
**2. Please sizing the top at the paper feed direction.**  
**3. Do not use the paper with binding holes.**

◆ The fixing requirements of multi-ply paper (NCR paper)

○ Fixing method:

- The fixation method of fanfold paper is to sizing on the 1 mm line which in the front of paper inserts direction.
- Sizing with strong mucilage and press it tightly to avoid cocking.
- Please not make the glue come out of paper edge.
- Sizing place can not have obvious creases or burr.



◆ The combination requirements of multi-ply paper (NCR paper)

We recommend using the perfect paper or which the quality is above. The low quality NCR paper will affect the copy effect and the printing life.

The papers which accord with the specification are shown as follows.

Pages	2 plies	3 plies	4 plies	5 plies	6 plies	7 plies
Page 1	40~64 g/m <sup>2</sup>	40~50 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 2	40~80 g/m <sup>2</sup>	40~50 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 3	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 4	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 5	----	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 6	----	----	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 7	----	----	----	----	----	40 g/m <sup>2</sup>

◆ Binding hole and clipped corner

It doesn't support the paper with binding holes and clipped corners.

**Note: 1. Do not use the paper with binding holes and clipped corners which are not included in the guarantee list.**

**2. When using this kind of paper, the device and capability can not be guaranteed.**

◆ The relative regulations of fold, bend and curliness

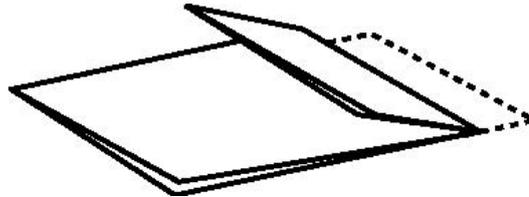
According to different storage conditions, paper would easily become fold, bend or curliness through manually disposal, transport and deposit. Therefore, they would affect paper feeding when using these papers. Thus, please use them after amending according to the following regulations. The papers which failed to come up to specifications would affect paper feeding seriously, please do not use them.

○ Fold (cut sheet, continuous paper)

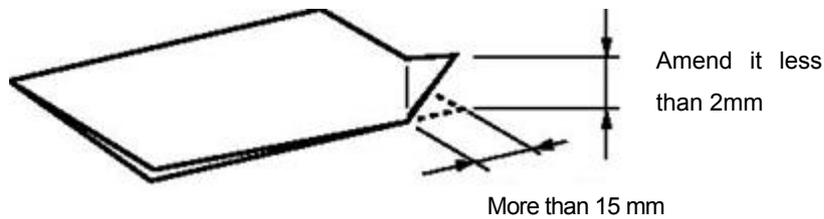
- The paper that the whole page has folded can not be used.

(As the paper strength has been changed even though after amending.)

- Please amend the fold of the corner for less than 2 mm.



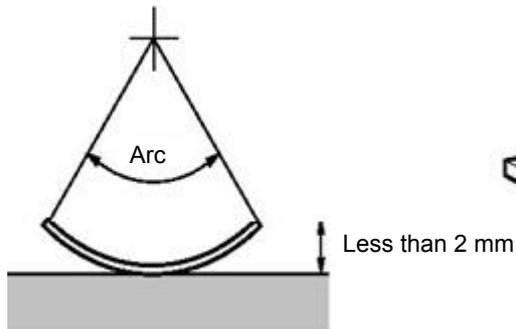
The paper that the whole page has folded can not be used.



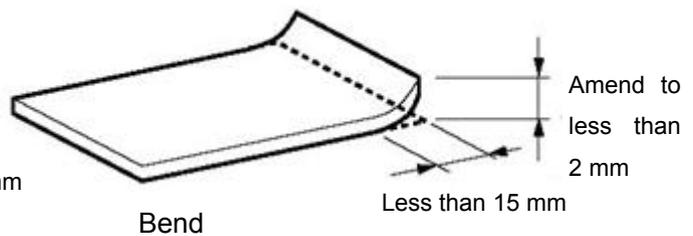
The fold of corner

○ Bend and curliness (cut sheet, continuous paper)

- The paper can be used when the bend of the whole page less than 2 mm.
- The bend length starts from the bend point should within 15mm. But when the bend height is over 2 mm, paper can not be used.



Whole page bend



Bend

### 6.1.4 Continuous Paper

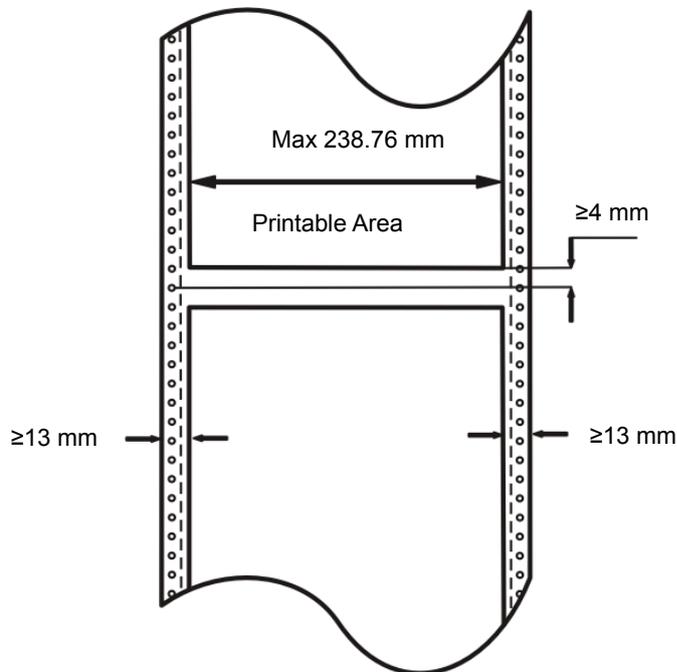
Continuous paper is the continuous paper which has tractor holes and the traverse perforations lines.

Refer to the following table for the requirement of continuous paper.

<b>Paper</b>	Single-ply paper	White paper
	Multi-ply paper	NCR paper
<b>Width</b>	60 ~ 245 mm	
<b>Length</b>	≥ 67 mm	
<b>Copy capability (Max.)</b>	7 copies (Original + 6 copies), paper weight bases on 40g/ m <sup>2</sup> standard.	
<b>Weight</b>	Single-ply paper: 52 ~ 128 g/m <sup>2</sup>	
	Multi-ply paper (each sheet): 40 ~ 64 g/m <sup>2</sup> <b>[Note: See details in the multi-ply paper (NCR paper) requirement table]</b>	
<b>Total thickness</b>	Single-ply paper	≤0.8 mm ( <b>Note 1</b> )
	Multi-ply paper	≤0.45 mm ( <b>Note 2</b> )

**Note: 1.** This thickness is added by multi single-ply papers, and it is only achieved when just printing on the upper paper. (No need to copy)

**2.** Refer to the requirement of the multi-ply paper (NCR paper), the mount paper can be thicker than other plies, but we can't guarantee the printing effect as it is influenced by paper difference.

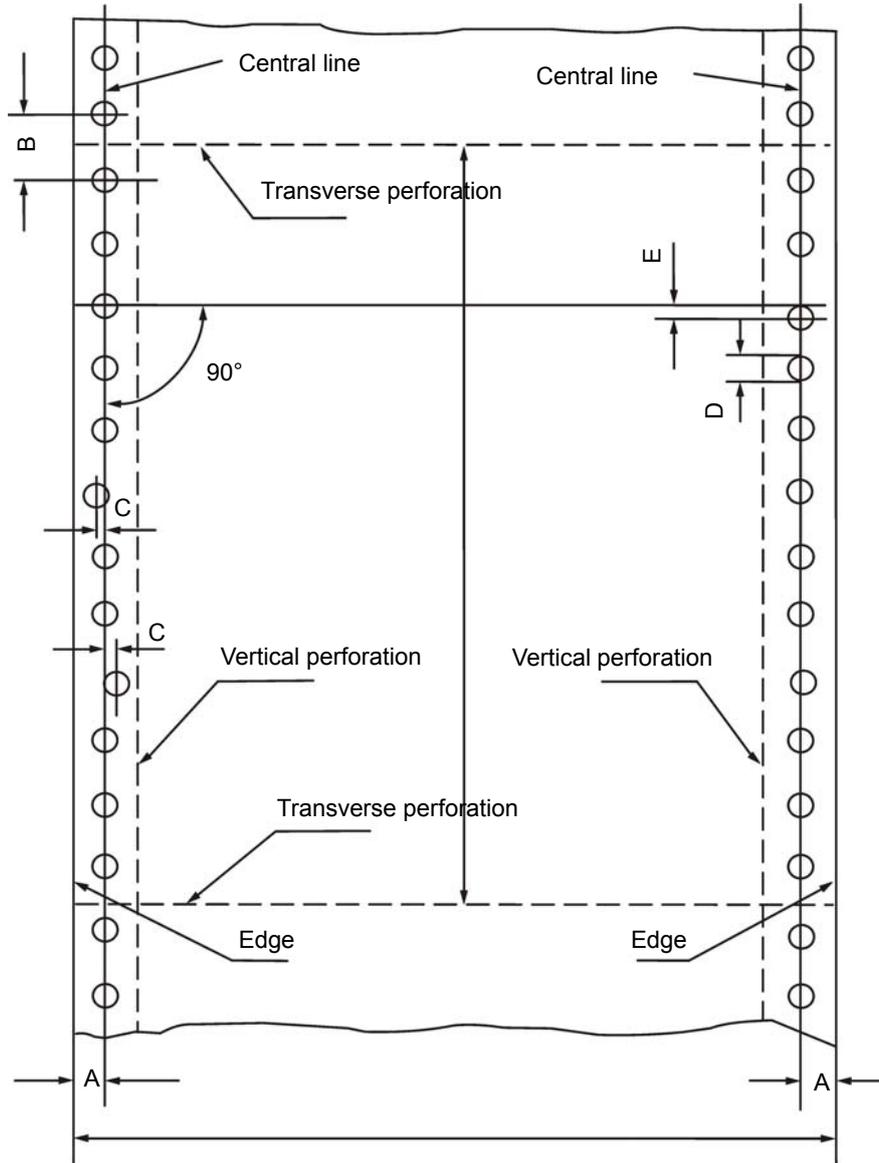


◆The position and size of tractor hole

The tractor hole of continuous paper should accord with the specification.

The positions and sizes of tractor hole are shown below. The central line here refers to the line between any two tractor hole centers which in the distance of 254mm in either side of the paper.

Figure of continuous paper specification and tractor hole



Item	Mark	Size (mm)	Function
Position of Central line	A	$6.0 \pm 0.7$	The distance from central line to the nearer edge. The standard distance is 6.35mm.
Diameter of tractor hole	D	$4.0 \pm 0.1$	It is the hole with tractor edge, its minimal diameter is the D value and its maximal diameter is 4.5mm. When using the multi-ply paper with tractor holes, it is allowed that the diameter of the tractor hole is bigger than 4.1mm.
Distance between tractor hole centers	B	$12.70 \pm 0.05$	Distance between nearby tractor hole centers in the same side.
Accumulative error of distance between tractor hole centers	-	Below $\pm 0.3$	The accumulative error along the central line of any two tractor holes which are 254mm apart.
Warp of tractor hole center	C	Below 0.1	The maximal warp of the tractor hole center in the same side.
Central warp of right and left tractor holes.	E	Below 0.15	The warp value of the beeline which perpendiculars to central line through any tractor hole in the left and the center of

			corresponding tractor hole in the right.
Lean of right and left central line	-	Below 0.15	The distance to other end when the parallel moved right and left central lines superposes with one end.

◆ Requirement of transverse perforation

The transverse perforation should not across the tractor hole, but it should at the center of two adjacent tractor holes, as well as, the wrap should not over 0.1mm.

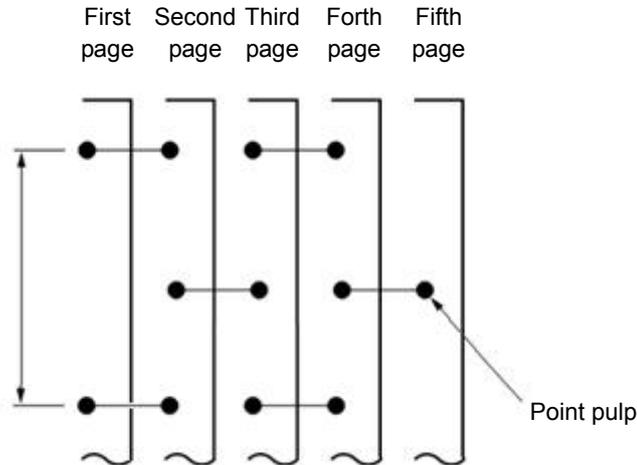
The edge of the transverse perforation should be straight, it should not be broken, and the crease should superpose with the transverse perforation.

◆ Requirement of Multi-ply paper

This printer support the multi-ply paper which the fixed method is point pulp, line pulp or paper binding. It is strictly prohibited to use the multi-ply paper which is fixed through metal staple.

○ Point Pulp

- Point pulp should be in both ends, it is not allow pointing pulp only in one end.
- The point pulp position should be the same. and the size is  $\Phi 3\sim\Phi 5\text{mm}$ .
- The position of point pulp should be pressed down tightly to avoid warping.
- There should not be any obvious crease on the point pulp position.
- Each page of the point pulp paper is interleaving. (Interleaving between each ply)
- The position of point pulp is shown as below.

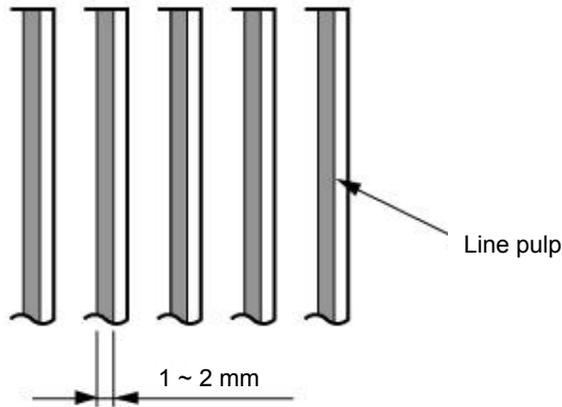


○ Line Pulp

- The line pulp position should be the same. and the width is 1 ~ 2mm.
- The position of line pulp should be pressed down tightly to avoid warping.
- Line pulp fixing should not use the paper which is obviously crease.
- Please don't bare the pulp at the edge of paper.

**Note: If the place with pulp is hard, as the result, the paper will not be fed precisely.**

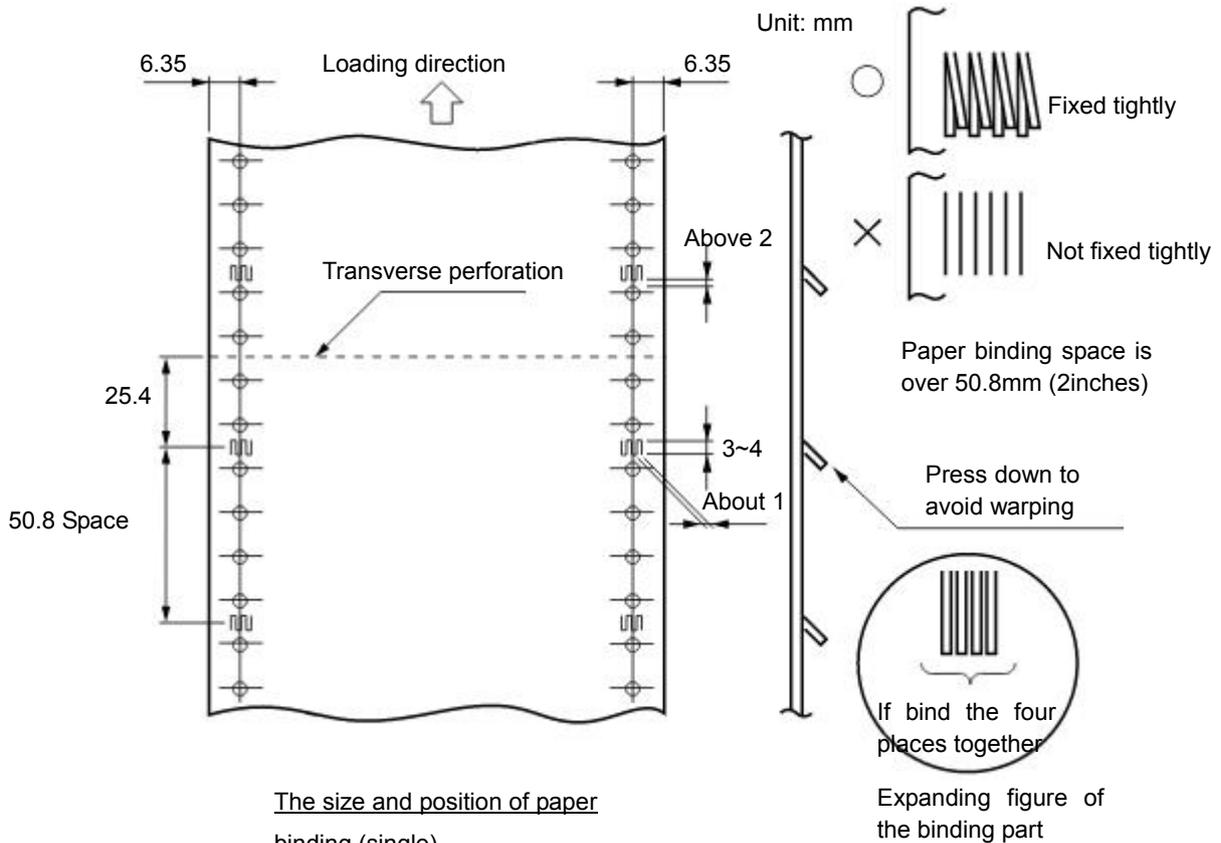
First page Second page Third page Forth page Fifth page

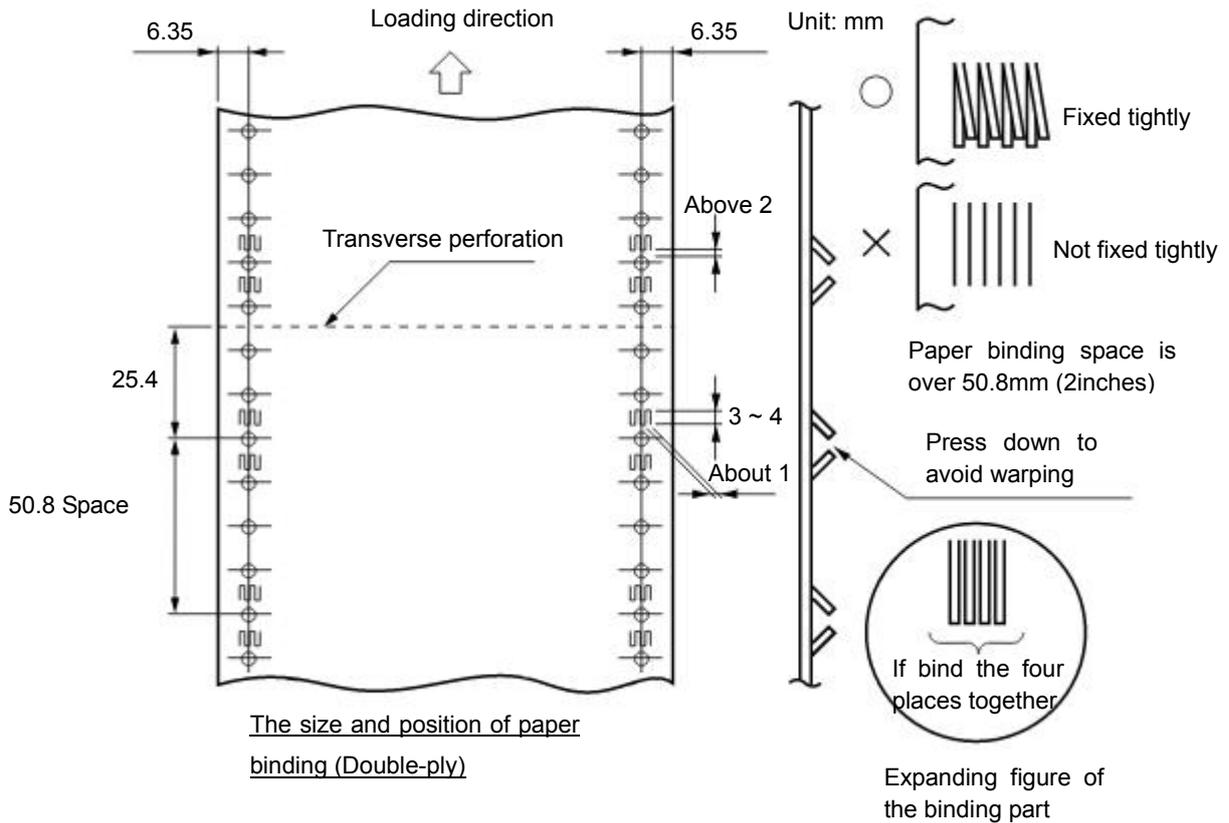


○ Paper Binding

- Paper binding should be in both ends, it is not allow paper binding only in one end.
- Paper binding should be in the paper side and the surface should be even.
- Please operate double-ply paper binding along the paper feeding direction.
- Make sure paper binding part is fixed tightly and does not wrap.
- Please press it down tightly after paper binding to avoid warping.

**Note: Use the paper which is not accordance with the paper binding requirement and the specification shown below, paper feeding precision may be affected and the printing performance can not be guaranteed.**





◆ Requirement of Multi-ply paper (NCR paper)

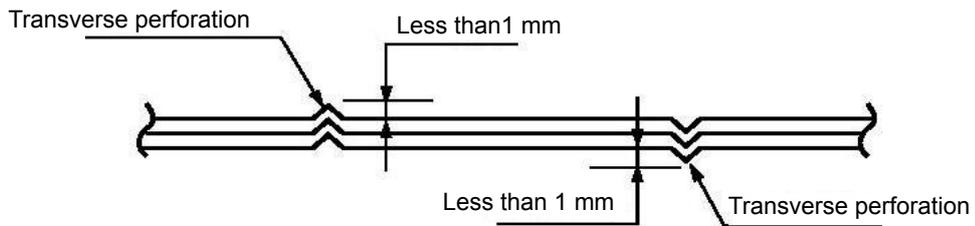
It is recommended to use the multi-ply paper which is first class or above. Low class NCR paper would affect the copy effect and printer life.

Specification of NCR multi-ply paper is shown below:

Pages	2-ply	3-ply	4-ply	5-ply	6-ply	7-ply
Page 1	40~64 g/m <sup>2</sup>	40~50 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 2	40~80 g/m <sup>2</sup>	40~50 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 3	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 4	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 5	----	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 6	----	----	----	----	40~80 g/m <sup>2</sup>	40 g/m <sup>2</sup>
Page 7	----	----	----	----	----	40 g/m <sup>2</sup>

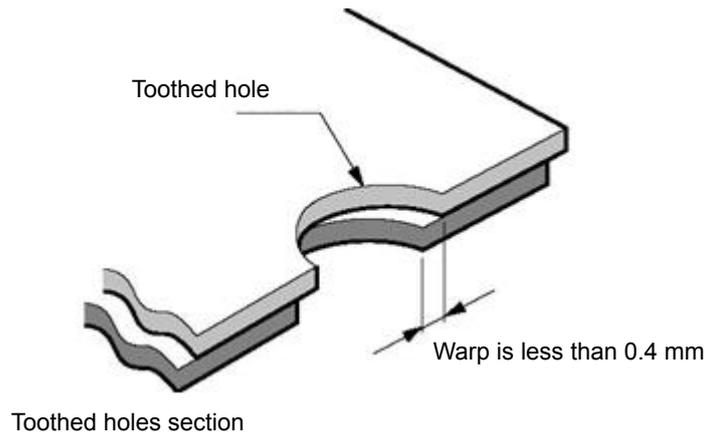
◆ The protuberance of transverse perforation

When the fanfold transverse perforation sticks up, it may cause print quality decrease, unstable paper feed or paper jam etc. Especially when the multi-ply paper with many pages, it will deeply affect the stable of paper feed. Please ensure the protuberance height less than 1 mm.



◆ Warp between toothed holes of each ply

Please use the paper which toothed holes warp between each ply (causes by the warp of multi-ply papers superposition) is less than 0.4 mm.



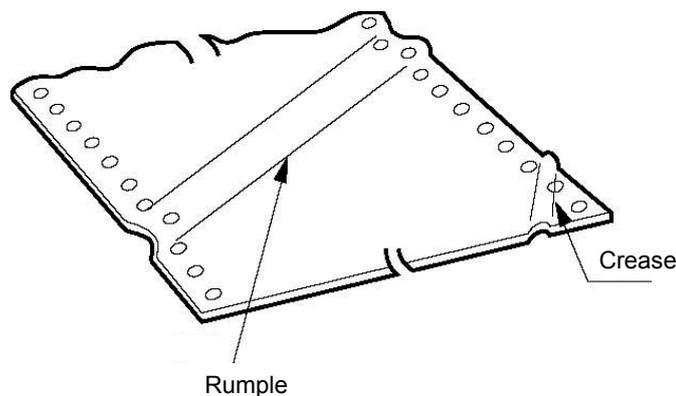
◆ Binding hole, Clipped corner

It is not support the paper which is with binding holes and clipped corners.

**Caution: Do not use the paper with clipped corner or binding hole which is not include in the guarantee list. It can not guarantee device's capability after using it.**

◆ Rurple, crease

The paper should not have creases or rumples, especially for new paper. The first and last pages are easy to have creases or rumples, so please do not use them.

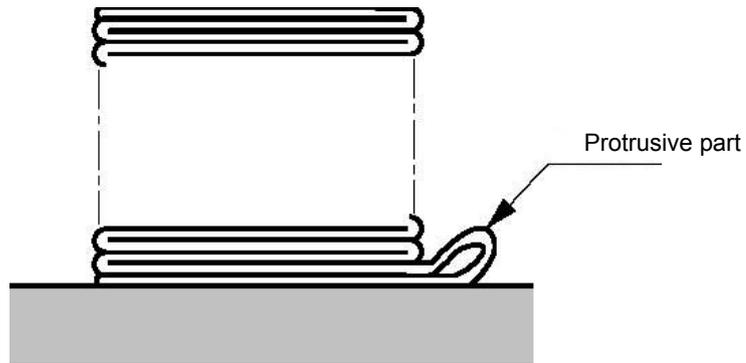


◆ The crease, crimp, fold and upturning of the paper top and bottom

Please do not use the paper which is crease, puckered, crimp and upturning in the top and bottom. Or it may cause cheap printing quality or paper jam. Especially for the new paper, if it is crease from the first few pages, please do not use it.

◆ Paper folding part

Please fold the paper base on the transverse perforation. It will affect paper feeding while the folding part sticks up as the following figure shown, please not use it.



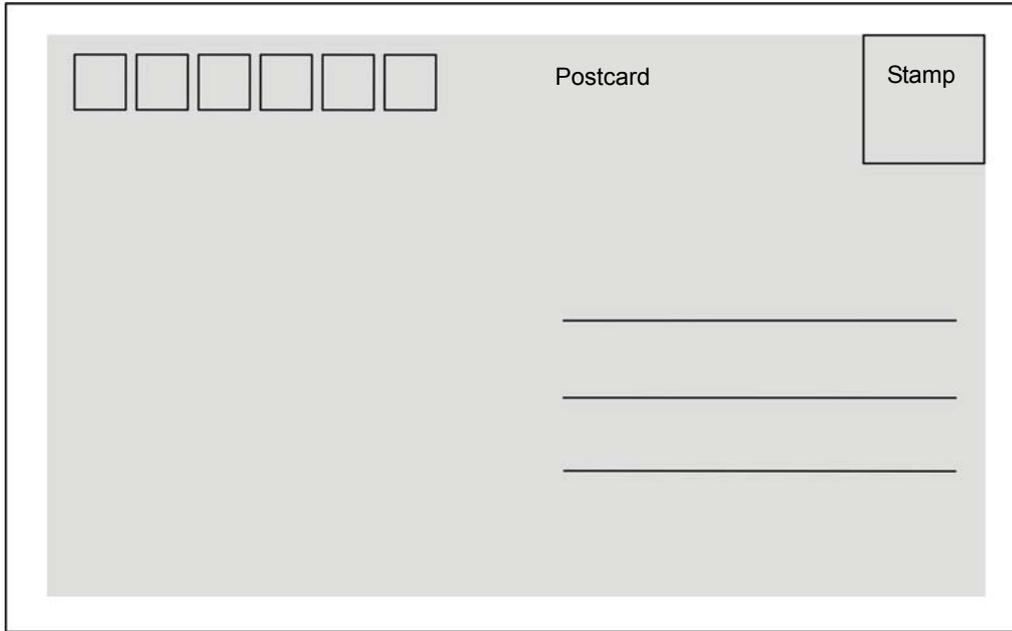
### 6.1.5 Postcard

The printer supports the postcards which the specifications are shown below.

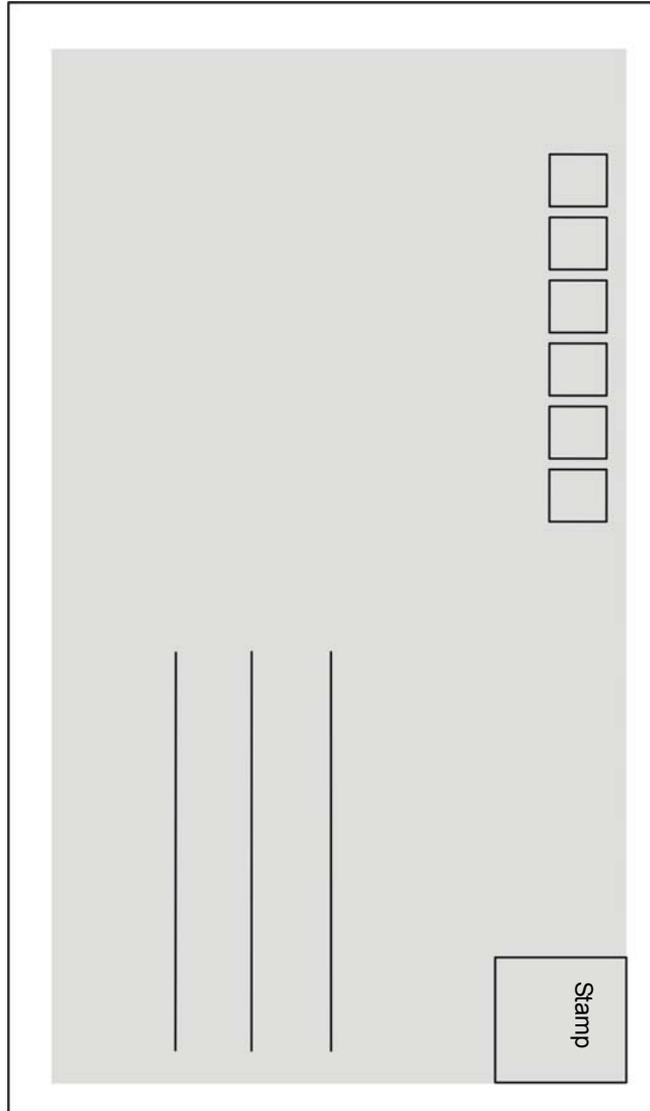
◆ Print size and the printable area

Size	No.	Length (mm)	Width (mm)
	1	165	102
	2	148	100
	3	125	78
Material	Ivory board or Coated paper which is B grade or above		
Weight	200 ~ 250 g/m <sup>2</sup>		
Camber	≤2 mm		
Non-guarantee Area	Top	2 mm	
	Bottom	6 mm	
	Left	3.2 mm	
	Right	3.2 mm	

Postcard print direction and printable area (transverse)



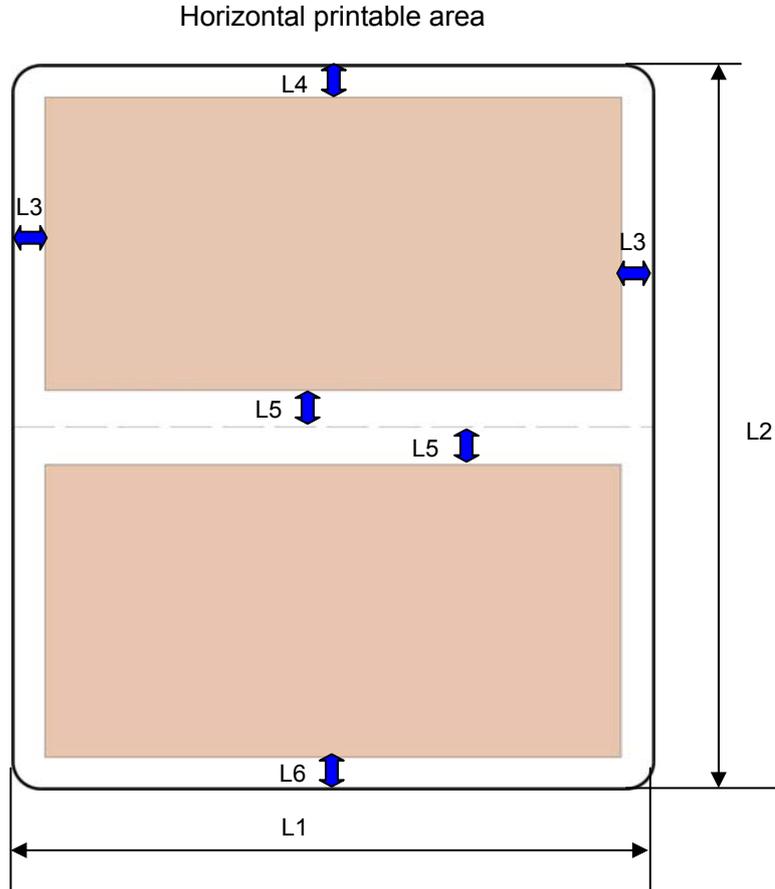
Postcard print direction and printable area (vertical)



## 6.1.6 Passbook/Certificate

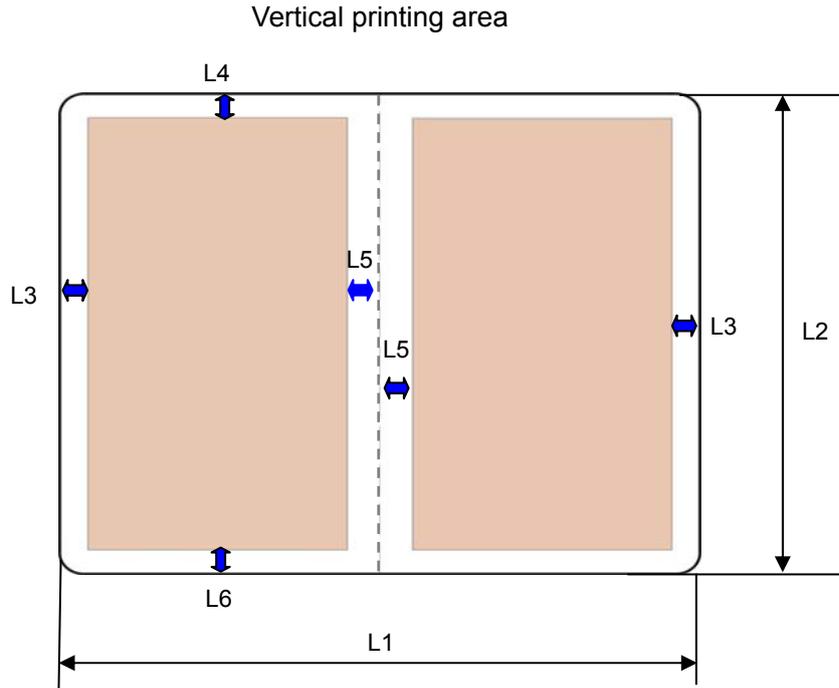
### 6.1.6.1 Horizontal Passbook

- The cover and inner of passbook should not crease, twist or broken.
- The passbook cover should have the same thickness.
- Open the passbook, fold it along the binding line to make it flat before printing.
- The binding line in the back of the passbook should not stick up over 0.5mm, or it may cause printing faint.



Size		Min.	Max.
L1	Passbook width	100 mm	245 mm
L2	Passbook length	75 mm	355 mm
L3	Left and right margins	3 mm	/
L4	Top margin	3 mm	/
L5	Centre binding margin	4 mm	/
L6	Bottom margin	6 mm	/
<b>Paper weight</b>		90 g/m <sup>2</sup>	100 g/m <sup>2</sup>
<b>Paper thickness</b>	Passbook thickness	/	2.8 mm
	Lay open thickness	/	2.5 mm
	Lay open thickness difference	/	1.5 mm
	One page passbook or ledger card	0.18 mm	0.28 mm
	Passbook cover	0.18 mm	0.8 mm

6.1.6.2 Vertical Passbook



Size		Min.	Max.
L1	Passbook width	100 mm	245 mm
L2	Passbook length	75 mm	355 mm
L3	Left and right margins	3 mm	/
L4	Top margin	3 mm	/
L5	Centre binding margin	5 mm	/
L6	Bottom margin	6 mm	/
<b>Paper weight</b>		90 g/m <sup>2</sup>	100 g/m <sup>2</sup>
<b>Paper thickness</b>	Passbook thickness	/	2.8 mm
	Lay open thickness	/	2.2 mm
	Lay open thickness difference	/	1.5 mm
	One page passbook or ledger card	0.18 mm	0.28 mm
	Passbook cover	0.18 mm	0.8 mm

6.1.7 Envelope

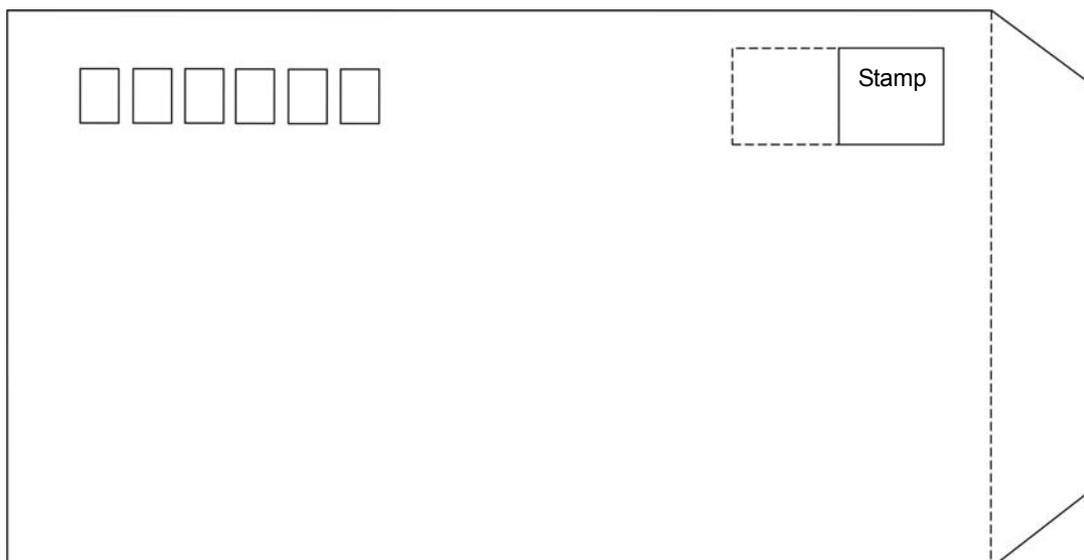
Envelope specification should accord with the following table. In this specification, some envelopes are beyond the support range because of shape, size and so on.

◆ Print Size and Printable Area

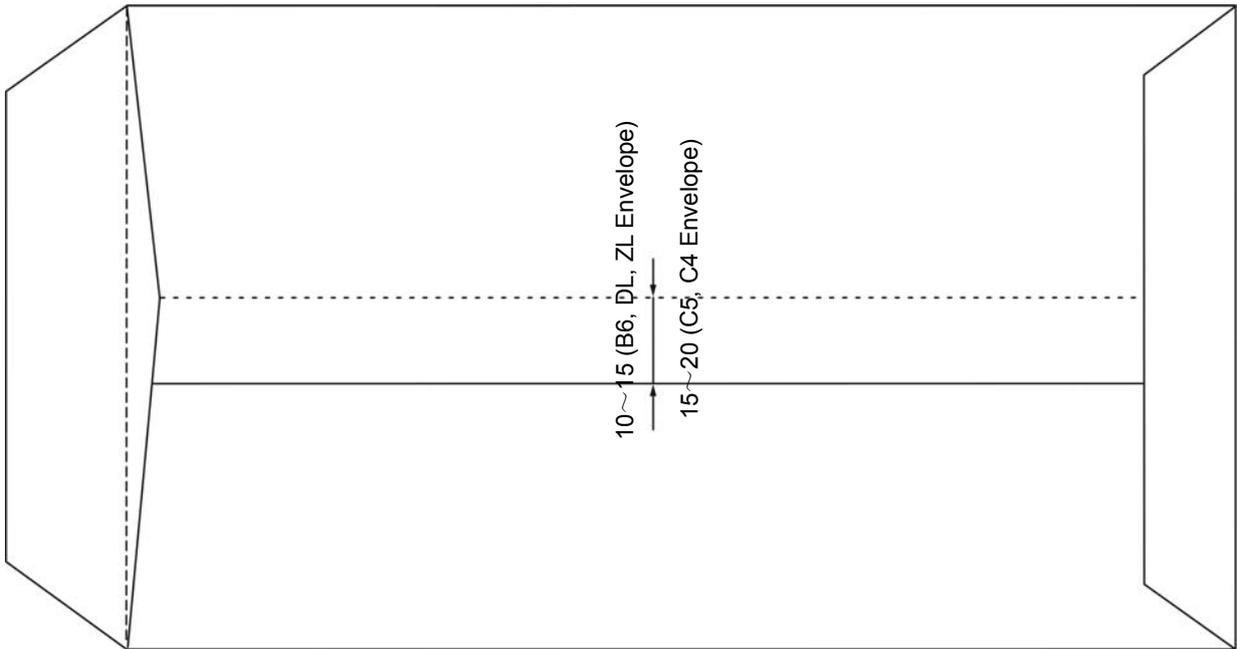
Envelope type	Code name	Length (mm)	Width (mm)	Support
<b>Sample 1 Envelope</b>	B6	176	125	Yes
	DL	220	110	Yes
	ZL	230	120	Yes
	C5	229	162	Yes <b>(Note 1)</b>
	C4	324	229	No
<b>Sample 2 Envelope</b>	C6	162	114	Yes <b>(Note 2)</b>
	DL	220	110	Yes
	C5	229	162	Yes
	C4	324	229	No
<b>Material</b>	Envelope which is Grade or above			
<b>Weight</b>	80 ~ 120 g/m <sup>2</sup>			
<b>Non-guarantee Area</b>	Top	6.25 mm		
	Bottom	6.25 mm		
	Left	6.25 mm		
	Right	12 mm <b>(Note 3)</b>		
	From pulp position	5 mm		

- Note: 1. Envelope should not with solid edge (the folding part in both sides and the bottom).**
- 2. Sample 2 Envelope need to be printed vertically.**
- 3. Right margin doesn't include seal lip, and the distance from printing content to the bottom sunken line is not less than 5mm.**

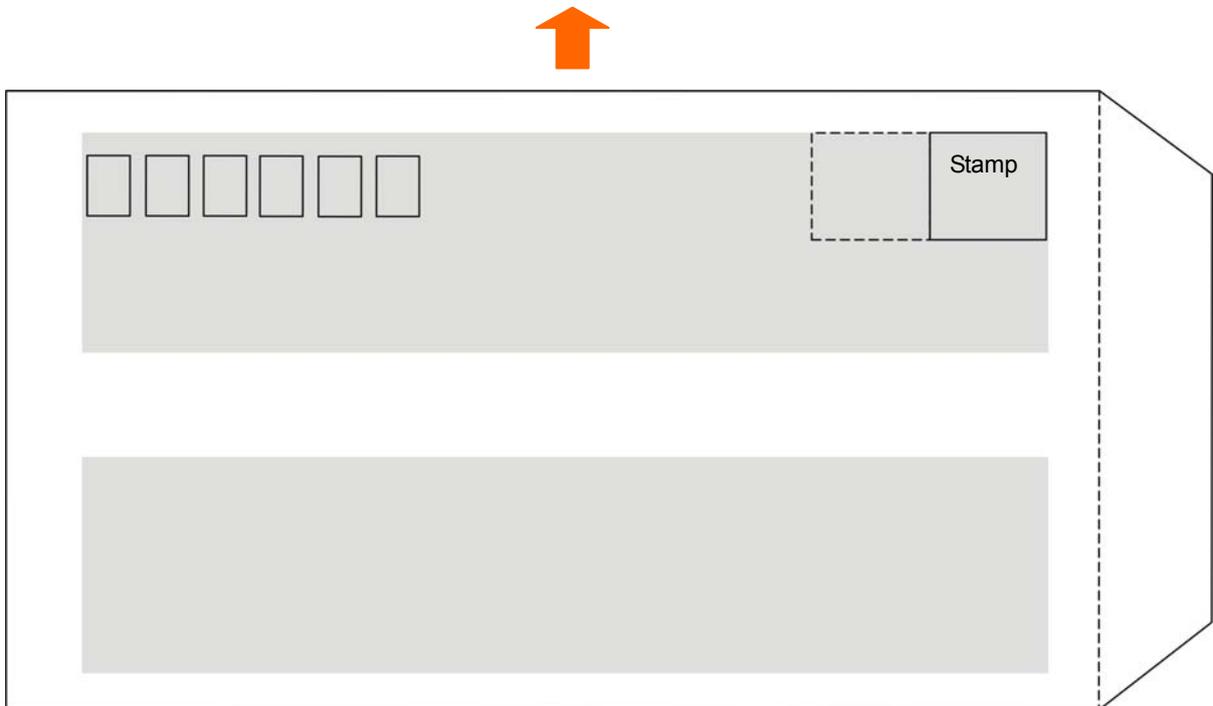
Sample 1 Envelope (Front view)



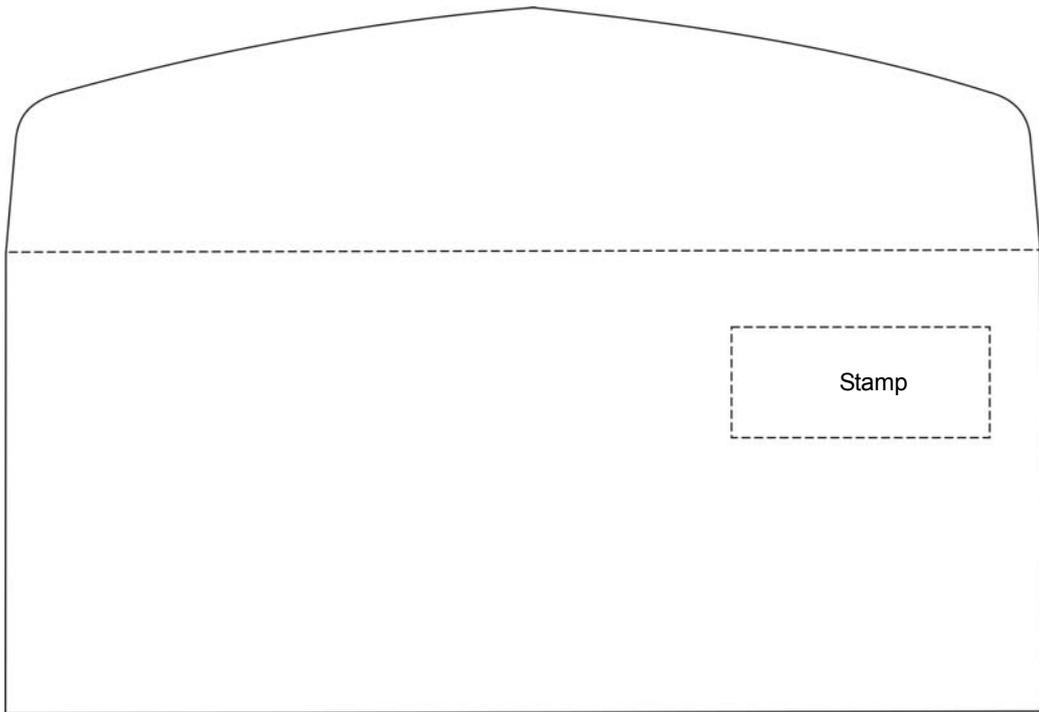
Sample 1 Envelope (Rear view)



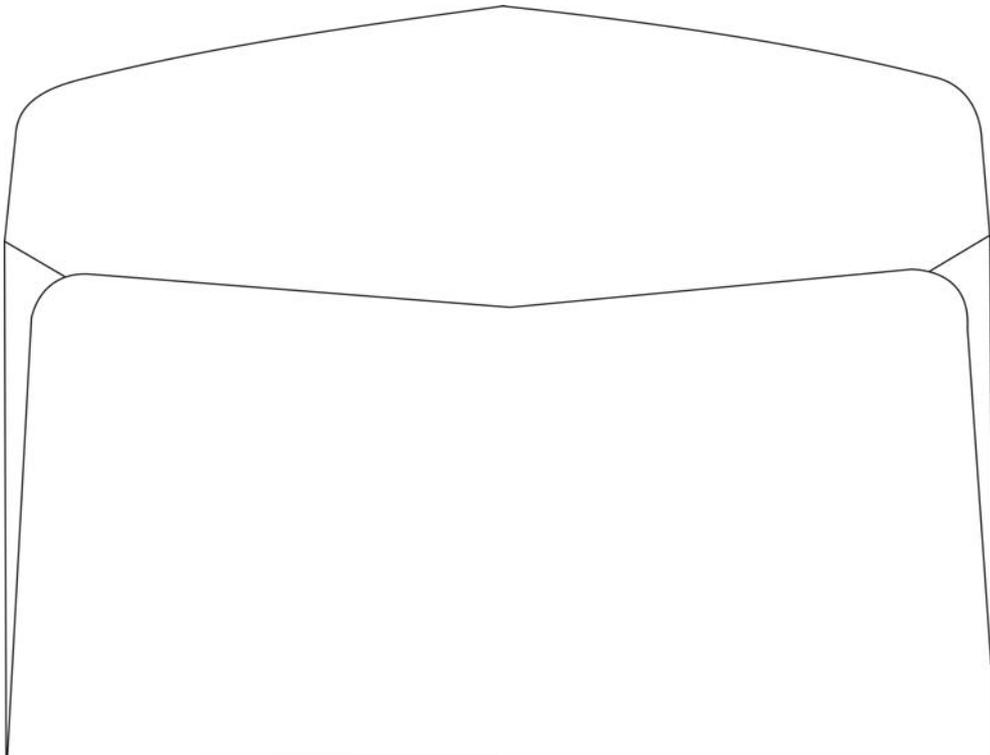
Sample 1 Envelope print direction and printable area



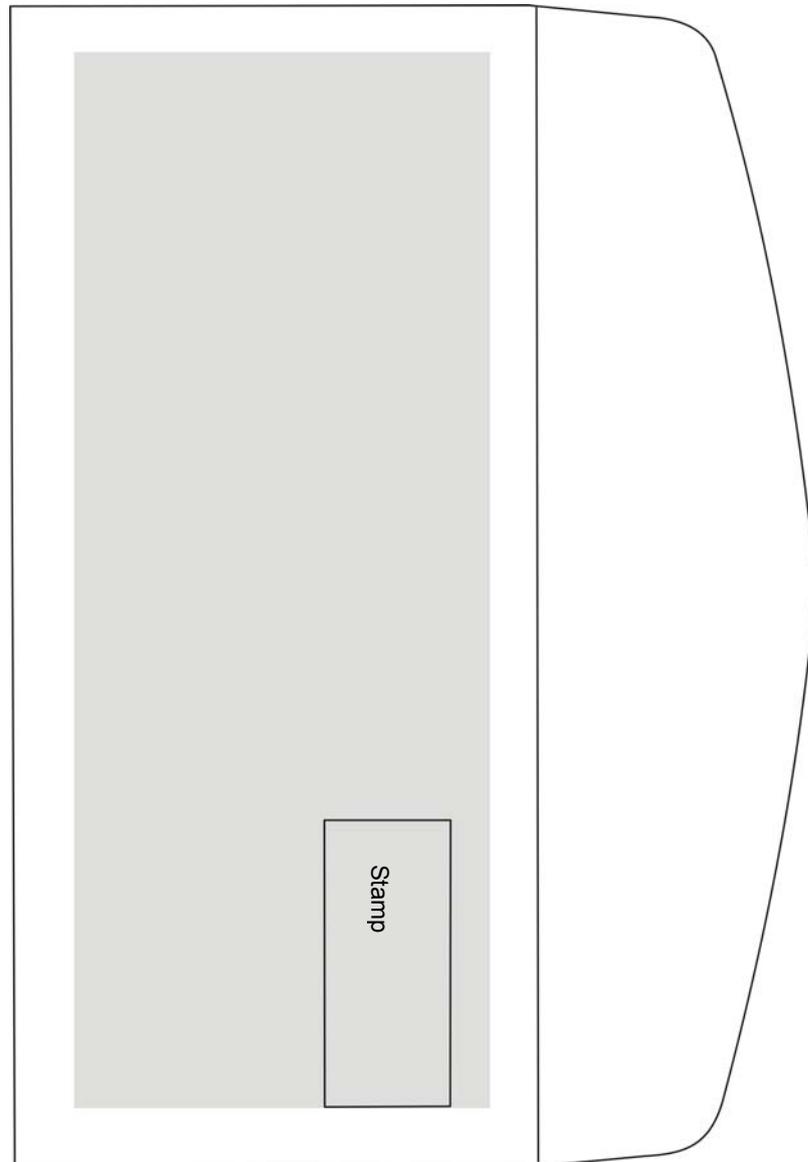
Sample 2 Envelope (Front view)



Sample 2 Envelope (Rear view)



Sample 2 Envelope print direction and printable area



- Note:**
- Envelope refers to single layer envelope. Printer doesn't support double layer envelope and the envelope should not with solid edge.
  - When the envelope pulp at the top or bottom, please don't print at that area with 5mm.
  - The sunken place in the bottom of the envelope belongs to the non-printable area. Please ensure the distance from the bottom sunken line to the printing area is not less than 5mm.
  - Do not use following envelopes:
    - Envelopes which with contents in it.
    - Envelopes with holes and which both sides are coherent in the middle.
    - Envelopes which seal lip parts are folded.
    - Envelopes which seal lip parts are pulped.
  - If you print near the pulped area, even thought it belongs to the printable area, it may also cause paper dirt because of the pulp (especially when the edge is folded or stuck up).

### 6.1.8 Delivery Note

Delivery notes here refers to the multi-ply papers (2-ply ~ 7-ply). Its paper size and printable area base on the specifications of continuous paper and cut sheet. Moreover, the copy capability and printing precision are not guaranteed because they are affected by paper thickness and inner paper quality (such as, thickness). In addition, do not use the paper which is not even to avoid paper dirt or printing slant.

### 6.1.9 Label

It does not guarantee the printing with labels.

<p><b>Note: 1. Label is not include in the guarantee list, please don't use it.</b></p> <p><b>2. Problem occurs when using labels, we will not guarantee the device and performance</b></p>
---

### 6.1.10 Reborn Paper

Due to the reborn papers are easily produce paper powder and affected by humidity, this printer does not guarantee the printing with reborn papers.

## Appendix A Technical Specification

### A.1 Specification

Item	Description																		
Printing method	24-Pin Flatbed Dot Matrix Impact Printer																		
Printing direction	Bi-directional logic seeking in the shortest distance																		
Printing width	94 column (10cpi) / 238.76 mm																		
Printing speed	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="text-align: center;">CPI</th> <th style="text-align: center;">ASCII</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Speed</td> <td></td> <td style="text-align: center;"><b>10 CPI</b></td> </tr> <tr> <td style="text-align: center;">LQ speed</td> <td></td> <td style="text-align: center;">117 CPS</td> </tr> <tr> <td style="text-align: center;">Normal speed</td> <td></td> <td style="text-align: center;">175 CPS</td> </tr> <tr> <td style="text-align: center;">High1 speed</td> <td></td> <td style="text-align: center;">350 CPS</td> </tr> <tr> <td style="text-align: center;">High2 speed</td> <td></td> <td style="text-align: center;">420 CPS</td> </tr> </tbody> </table>		CPI	ASCII	Speed		<b>10 CPI</b>	LQ speed		117 CPS	Normal speed		175 CPS	High1 speed		350 CPS	High2 speed		420 CPS
		CPI	ASCII																
	Speed		<b>10 CPI</b>																
	LQ speed		117 CPS																
	Normal speed		175 CPS																
High1 speed		350 CPS																	
High2 speed		420 CPS																	
Print head	Diameter of wire: 0.25 mm																		
Resolution	360 x 360 dpi (Max.)																		
Character set	ASCII: 18 international character sets (U.S.A, FRANCE, GERMANY, U.K , DENMARK1, SWEDEN, ITALY, SPAIN1, JAPAN, NORWAY, DEMARK2, SPAIN2, LATIN AM, KOREA, LEGAL, NETHERLANDS. TURKEY, FARSI)																		
Code Page	U.S.A, MULTI, PORTUGAL, CANADA, NORWAY, EAST EURO, CYRILLIC, RUSSIAN, HUNGARY, KAMENICKY, TURKEY, ICELAND, BULGARIA, MAZOVIA, GRK 437, GRK 851, GRK8859-7, GRK 1253, ARAB NLS, ARAB EXT, WIN LAT1, WIN LAT2, ISL LTN1, ISO LTN2, TUR8859-9, ISO LTN9, KBL, LATIN 7, FARSI																		
Fonts	ASCII: Draft, Roman, Sans Serif, Courier, Prestige, Script, OCR-A, OCR-B, Orator <b>Note: In high speed mode or super high speed mode, printer would automatically change the ASCII font to Draft when printing ASCII characters.</b>																		
Bar code	EAN-13, EAN-8, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Code 39, Code 128 B, Code 128 C, NW-7																		
Character pitch	ASCII: 10 CPI,12 CPI,15 CPI, proportional																		
Line space	1/6 inch, 1/8 inch, programmable in 1/360 inch increments																		
Paper feeding speed (Max.)	18 inch/s																		
Emulation	EPSON ESC/PK2, IBM 2391, OKI5530SC, Olivetti PR40/PR50/PR2																		
Interface	This printer can be equipped with the following interface types: Parallel interface: Centronics (IEEE1284 NIBBLE) USB 1 interface: 2.0 Full-Speed USB 2 interface: 2.0 Full-Speed Serial 1 interface: RS-232C Serial 2 interface: RS-232C Ethernet interface: 10/100Base-T <b>Note: Please take the specific interface as standard.</b>																		

Input Buffer	132 KB	
Ribbon	Model: JMR128; Life: 8 million characters (draft mode) (Standard)	
	Model: JMR131; Life: 12 million characters (draft mode) (Optional)	
Noise	Normal printing $\leq 55$ dB (A) (ISO7779 standard), Quiet mode $\leq 52$ dB (A)	
Control panel	4 buttons and 2 LED lights and a LCD display	
Paper type	cut sheet, multipart paper, continuous paper, passbook, certificate, card	
Paper feed type	cut sheet, multipart paper, passbook, certificate, card: Load/eject from the front / Load from front and eject from rear	
	Continuous paper	Load from front and eject from rear
		Load from rear and eject from front (with the optional rear continuous )
Upgrade process function	program, character set, parameter	
Paper specification	Cut sheet	Width: 60 ~ 245 mm
		Length: 67 ~ 558 mm
	Continuous paper	Width: 60 ~ 245 mm
		Length: $\geq 67$ mm
	Passbook thickness	Lay open thickness of transverse passbook / certificate: 2.5 mm
		Thickness of vertical passbook: 2.2 mm, Open up thickness difference of right and left sides $< 1.5$ mm
	Passbook	Length: 75 ~ 355 mm
		Width: 100 ~ 245 mm
Max paper thickness	2.8 mm	
Copy	Original + 6 copies	
Automatic function	Automatic document border detection, Automatic paper thickness detection, Full slot paper feeding), Automatic skew adjust (angle $\leq 25^\circ$ )	
Compress printing	Compression ratios are 50%、66%、75%、100%, support auto compress printing.	
Especially function	Pin Break Compensation, Pin Rotation Replacement, Automatic Emulation Match, Online Parameter Setting and printing	
Physical dimensions	397(Width) $\times$ 287.5(Depth) $\times$ 195 (Height)mm	
Weight	8.3 Kg	
Optional part	Dual-side scanner, tractor, MSR (magnetic stripe reader)	
Environmental conditions	Operating environment:	Temperature: 5 ~ 35°C
		Humidity: 25 ~ 80%RH (No condensation)
	Storage environment:	Temperature: -40 ~ 55°C
		Humidity: $\leq 93\%$ RH (40°, No condensation)
Power supply	Voltage range: 90 ~ 264 V (AC)	

	Frequency range: 50 ~ 60 Hz
Certificate	China Compulsory Certification, China Environmental Labelling, Energy Conservation Certification, China Energy Efficiency Index Level 1 (Low Energy)
	Accord with the new energy standard of USA

**Note: All the technical instructions in this user's manual are the laboratorial measurements which achieved under national standard store and work environment (room temperature), the measuring paper accords with the specification in this user's manual.**

## A.2 Parallel Interface

Signal level

Input High level: 2 to 5V, Low level: 0 to 0.8V

Output High level: 2.4 to 5V, Low level: 0 to 0.4V

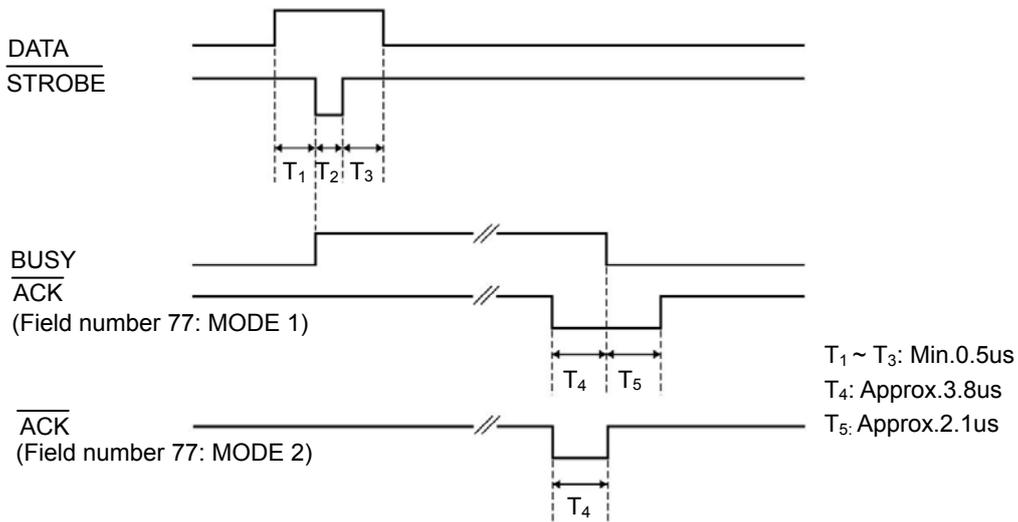


Figure A-1 Timing Figure

### Connector Pin Assignments

Signal Pin No.	Return Line Pin No.	Signal Name	Signal Direction
1	19	$\overline{\text{STROBE}}$	Printer ← Host
2 ~ 9	20 ~ 27	DATA	Printer ← Host
10	28	$\overline{\text{ACK}}$	Printer → Host
11	29	BUSY	Printer → Host
12	30	PE	Printer → Host
13	—	SELECT	Printer → Host
14	—	$\overline{\text{AUTO FEED}}$	Printer ← Host
15	—	NC	NC
16	—	SIGNAL GND	Printer ↔ Host
17	—	CHASSIS GND	Printer ↔ Host
18	—	+5V	Printer → Host
31	—	$\overline{\text{PRIME}}$	Printer ← Host

32	—	$\overline{\text{ERROR}}$	Printer → Host
33	—	SIGNAL GND	Printer ↔ Host
34	—	NC	Printer → Host
35	—	PULLED UP 5V	Printer → Host
36	—	$\overline{\text{SELECTIN}}$	Printer ← Host

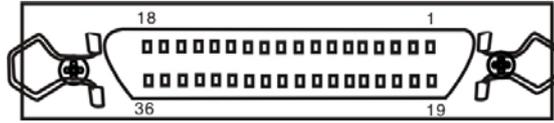


Figure A-2 Parallel interface connector pin number

### A.3 USB Interface

USB interface is 2.0 (Full Speed), the interface connector A and B signal assignments are shown below:

NO.	Name	Color
1	VBUS	red
2	D-	white
3	D+	green
4	GND	black

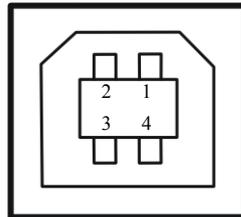


Figure A-3 USB-B type connector

### A.4 Serial Interface

Serial specification

Data input/output mode: 7-bit or 8-bit serial interface

Data input code: ASCII, JIS 7-bit or 8-bit, International character code, CG, Dot matrix graphic code based on graphic symbol code (8-bit)

Data buffer: 132K bytes most

Signal level: RS-232C:  $\pm 12V$

Data transit speed (baud rate) RS-232C: 4800bps, 9600bps, 19200bps

Data transmission protocol RS-232C: READY/BUSY (DTR) or X-ON/X-OFF

Synchronous system: Original bit: 1 bit      Stop bit: 1~2 bit

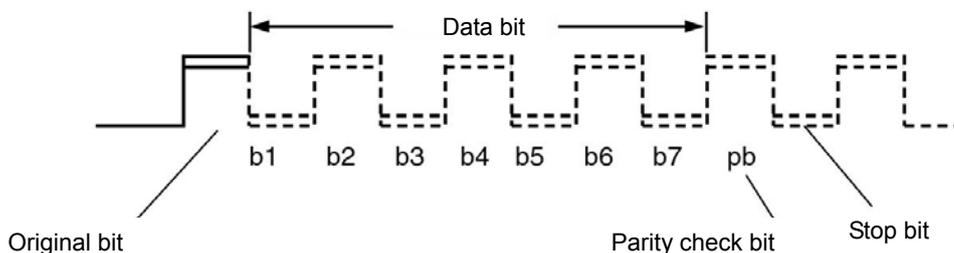


Figure A-4 Serial data format

Character length: 7 ~ 8 bits

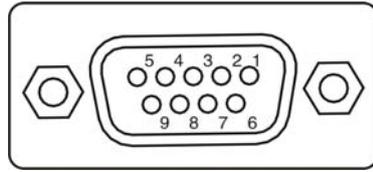


Figure A-5 Serial interface connector pin number

Connect figure of communicate cable:

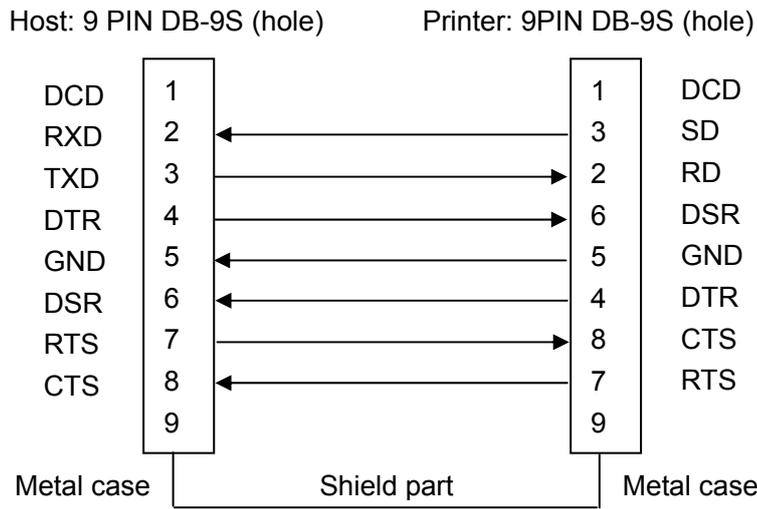


Figure A-6 Printer and host 9 PIN RS232C connect figure

## A.5 Ethernet Interface

Ethernet interface of 10/100 Base-T can be connected to 10/100M.

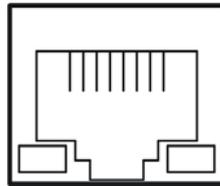


Figure A-7 Ethernet interface

## Appendix C Command Summary

This printer supports EPSON ESC/PK2 control commands shown as the follow table:

Classify	No	Command	Description
Printer control commands	1	ESC @	Initialize Printer
	2	CAN	Cancel Line
	3	DEL	Delete Character
	4	ESC #	Cancel MSB Control Sequence
	5	ESC >	Set MSB to 1
	6	ESC =	Reset MSB to 0
	7	BEL	Beeper
	8	BS	Backspace
	9	ESC U	Select Print Direction
	10	ESC <	Select character Unidirectional Mode (on one line)
	11	ESC s n	Select/Cancel Quiet Print Mode
	12	CR	Carriage Return
	13	LF	Line Feed
	14	FF	Form Feed
	15	ESC \$	Set Absolute Horizontal print position
	16	ESC \	Set Relative Horizontal print position
	17	ESC ( U	Define Unit
	18	ESC ( V	Set Absolute Vertical Print Position
	19	ESC ( v	Set Relative Vertical Print Position
	20	ESC J	n/180° Line Feed
	21	ESC j	n/180° Reverse Line Feed
	22	HT	Horizontal Tab
	23	VT	Vertical Tab
Image and color handling	24	ESC ? m n	Reassign Graphics Mode
	25	ESC *	Set Graphics Mode
	26	ESC ( G	Select Graphics Mode
	27	ESC .	Print Raster Graphics
	28	ESC K	8 dot Single-Density Graphics Mode
	29	ESC L	8 dot Double-Density Graphics Mode
	30	ESC Y	8 dot High-speed, Double-Density Graphics Mode
	31	ESC Z	8 dot Quadruple-Density Graphics Mode
	32	FS &	Set Chinese character mode
	33	FS ·	Cancel Chinese character mode
	34	FS SO	Select Double Width Mode (Chinese)

<b>Chinese character print command</b>	35	FS DC4	Cancel Double Width Mode
	36	FS W	Select/Cancel quadruple-size mode for Chinese character
	37	FS J	Select lengthways printing
	38	FS K	Select transverse printing
	39	FS D	Two character lengthways half-size mode paratactically printing
	40	FS -	Select/Cancel Underline Mode for Chinese character
	41	FS S	Select full-size mode pitch for Chinese character
	42	FS T	Select half-size mode pitch for Chinese character
	43	FS U	Select half-size mode pitch adjustment for character
	44	FS V	Cancel half-size mode pitch adjustment for character
	45	FS x	Select /Cancel high speed printing
	46	FS 2	Chinese character of user-defined
	47	FS SI	Select half-size mode for Chinese character
	48	FS DC2	Cancel half-size mode for Chinese character
	49	FS r	Select demisemi-size mode for Chinese character
	50	FS !	Select Chinese character print mode
	51	FS v	Select/Cancel form connect line
	52	FS k	Select Chinese font
	53	FS Y	Select Chinese character dot-matrix and width
	54	FS c	Set Chinese character HMI (Horizontal motion space)
55	FS b	Set Chinese character datum line	
56	ESC l	Select Chinese CC-DOS print mode	
<b>ASCII Character</b>	57	ESC k	Select Font Style
	58	ESC X	Select ASC II character width and height
	59	ESC P	Select 10CPI Mode
	60	ESC M	Select 12CPI Mode
	61	ESC g	Select 15CPI Mode
	62	ESC p	Select/Cancel Proportional Mode
	63	ESC x	Select Print Quality
	64	ESC 4	Select Italic Mode
	65	ESC 5	Cancel Italic Mode
	66	ESC E	Select Emphasized Mode
	67	ESC F	Cancel Emphasized Mode
	68	ESC ! n	Select Print Mode
	69	ESC q n	Select Character Style
	70	ESC t n	Select Character Table
	71	ESC ( t	Assign Character Table

	72	ESC R	Select International Character Set
	73	ESC &	Define Downloaded Characters
	74	ESC :	Copy ROM Characters Set into RAM
	75	ESC % n	Select/Deselect User-Defined Set
	76	ESC 6	Enable Character Set 2
	77	ESC 7	Cancel command ESC 6
<b>Font enhancement</b>	78	SI	Select Compressed Mode
	79	DC2	Cancel Compressed Mode
	80	SO	Select Double Width Mode
	81	DC4	Cancel Double Width Mode
	82	ESC W n	Select/Cancel Double Width Mode
	83	ESC w n	Select/Cancel Double height Mode
	84	ESC G	Select Double Strike Mode
	85	ESC H	Cancel Double Strike Mode
	86	ESC - n	Select/Cancel Underline Mode
	87	ESC ( -	Define and Apply a Style of Scoring
	88	ESC ( ^	Print Data as Characters
	89	ESC S n	Select Superscript/Subscript Mode
90	ESC T	Cancel Superscript/Subscript Mode	
<b>Format control</b>	91	ESC C	Set Form Length in Lines
	92	ESC C NUL	Set Form Length in Inches
	93	ESC ( C	Set Form Length in Defined Unit
	94	ESC ( c	Define Form Format
	95	ESC N n	Select Skip-Over-Perforation
	96	ESC O	Cancel Skip-Over-Perforation
	97	ESC I	Set Left Margin
	98	ESC Q	Set right Margin
	99	ESC D	Set Horizontal Tab Positions
	100	ESC B	Set Vertical Tab Positions
	101	ESC /	Select a VFU Channel
	102	ESC b	Select VFU Positions
	103	ESC 0	Select 1/8-inch Line Spacing
	104	ESC 2	Select 1/6-inch Line Spacing
	105	ESC 3	Select n/180-inch Line Spacing
	106	ESC A	Select n/60-inch Line Spacing
	107	ESC +	Select n/360-inch Line Spacing
	108	ESC SP	Set Character Space
	109	ESC a n	Select Justification Mode

**Jol**mark