

impact 1170 

Serial Dot Matrix Printer



Operator Manual

globalis
international

Safety Information

In order to prevent personnel injury, electronic shock, fire, machinery fault, etc, please read this guide and the instructions carefully, save them for later reference and follow all warnings and instructions marked on the printer. All the marks are listed and explained as below.



Warnings must be followed to avoid body injury.



Cautions must be observed to avoid damage to your equipment or cause personnel injury.



Notes contain important information and useful tips in the box.



Notice of Using Power

- Use the type of power source indicated on the printer's label. The power outlets must be properly grounded. (AC220V, 50/60Hz)
- Do not touch the printer with wet hands to avoid electric shock.
- Do not put the power cable in a crowded place nor in the aisle and do change the cable immediately once it is found broken to avoid fire.
- Make sure the ampere ratings of the power outlet and the power cable do not exceed their maximum limit, so as to prevent fire.
- Turn off the printer and pull out the plug while it is thundering.



Installation Notices

- Place the printer on a sturdy, horizontal and stable surface.
- Your printer must not be exposed to direct sunlight, extreme heat, humidity or dust.
- Don't plug the printer to the outlet that is on the same circuit as large motor or other high power consumption machines.
- Don't place the printer in a place with strong magnetic field or caustic gas.
- The whole computer system should be kept away from electromagnetic interference, such as loudspeaker or wireless telephone.



Notices of Using Printer:

- Make sure the printer power switch is in the off (O) position before inserting the power plug into the power outlet.
- Remove all the transportation protective materials according to the notice card before usage.
- When you switch off the printer, you should wait for 5 seconds, do NOT restart until all of operator panel indicators are turned off. Otherwise it may damage the printer.
- Don't touch the moving parts of printer while it is running, in order to prevent personnel injury or device damage.
- Touching the print head while it is running or just finishes printing may cause scald.
- Don't drop metal objects into the printer (such as pin, staple, drawing pin

and etc). Otherwise it may cause failure.

- Do not spill liquid on the printer.

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Setting up the printer

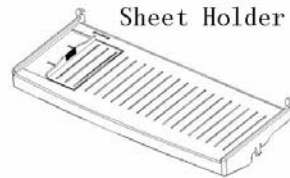
This chapter describes how to set up your printer. Unpacking the printer

Check the parts

Make sure your printer box includes the following items and that no damage has occurred to any of them.



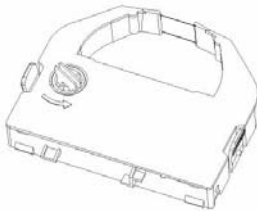
Printer



Sheet Holder



Knob



Ribbon Cartridge

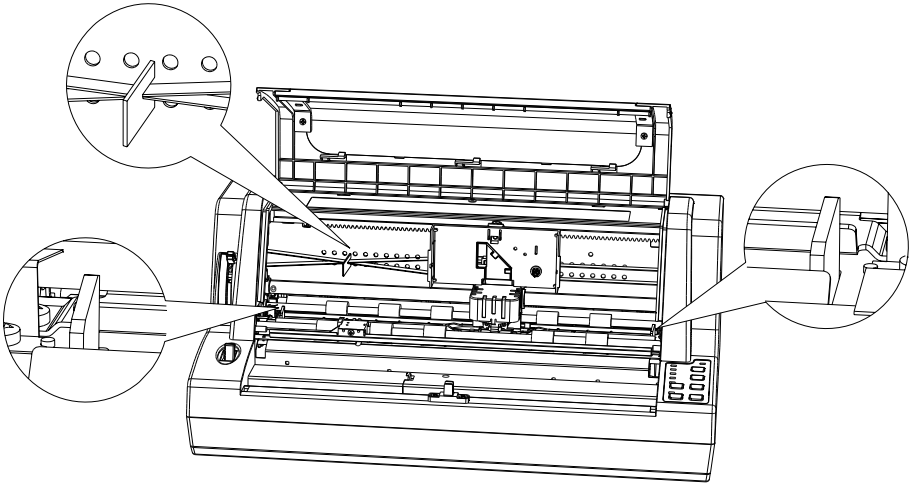


Power Cable

The contents enclosed may be different for different versions. Please refer to the Package List for details. Please save the packing materials properly for the next shipping.

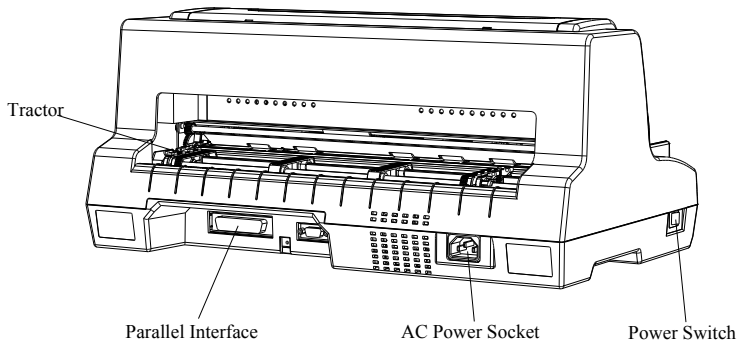
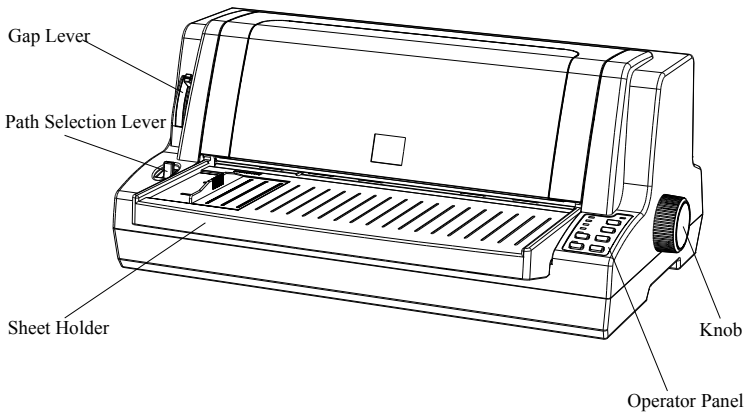
Remove the protective material

Please remove the following three protection material inside the printer before usage (refer to the figure below). This protection material is used to avoid possible damage during the transportation.



Please save the protection material properly for the next shipping.

Printer parts



Choose a suitable location

Consider the following points when you choose the location for your printer:

- Put the printer on a stable surface.
- The distance between the printer and the host computer must not exceed the length of the interface cable.
- Leave sufficient space around the printer for operation and

maintenance.

- Choose grounded power outlet.
- Don't use the power controlled by wall switch or auto-timer, for the sudden power-break may damage the information in the storage of computer and printer.
- Don't plug the printer, computer system, large motor or the other high power consumption machines in the same circuit, otherwise the voltage will not be stable.
- The whole computer system should be kept away from electromagnetic interference, such as loudspeaker or wireless telephone.



The printer must not be exposed to direct sunlight, extreme heat, humidity or dust.

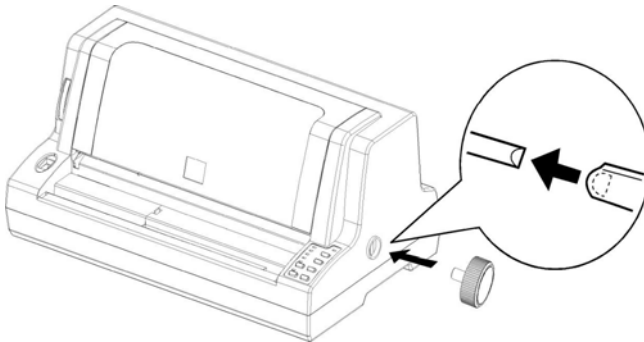
If the printer shelf is used, please follow the rules below:

- **The printer shelf can endure the double weights of the printer.**
- **The computer weight is about 9 kg.**
- **Remember the printer must be horizontal and the level must not exceed 15 degree.**
- **If the printer is under the shelf, make enough room between the shelf and the printing paper (about 1.2inch or 80mm) to avoid the interference between them. Besides, the shelf must adapt to all sizes of the printing paper.**
- **Don't let the power cable and interface cable to interfere the paper feeding. If possible, fix them to the shelf.**
- **Feed the continuous paper vertically and make the paper align with the sprocket of the tractor.**

Installing the printer

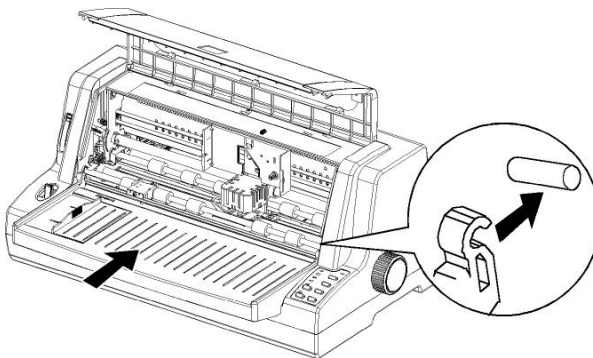
Installing the platen knob

Please insert the platen knob into the hole on the right side of the printer. Refer to the Figure below.



Installing the paper guide

1. Lift up the transparent cover part.
2. According to the Figure below, set the paper guide to the correct position by locking its plastic hooks to the fixing pins.

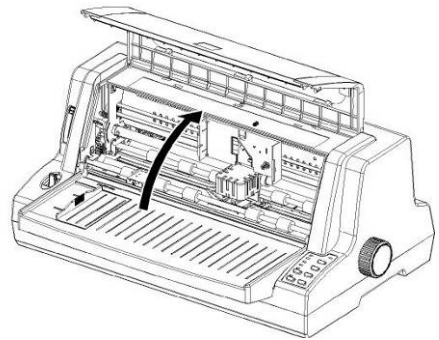
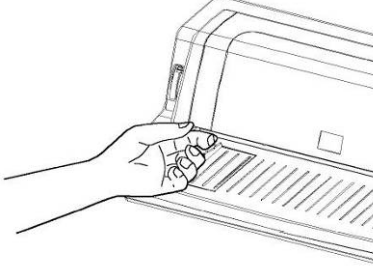


Installing the Ribbon Cartridge

Power off the printer before installing the ribbon cartridge.

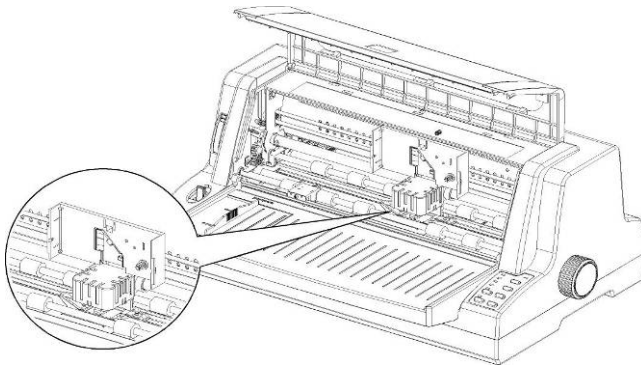
Take out the ribbon cartridge from the package, and follow the steps below to install it:

1. Lift up the transparent cover part and set the gap lever to the highest level.

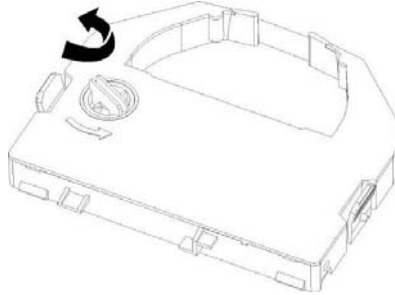


Don't move the printhead while it is power-on, otherwise it may cause device damage. The printhead may be hot while it just finishes printing. Wait until it cools down before restarting.

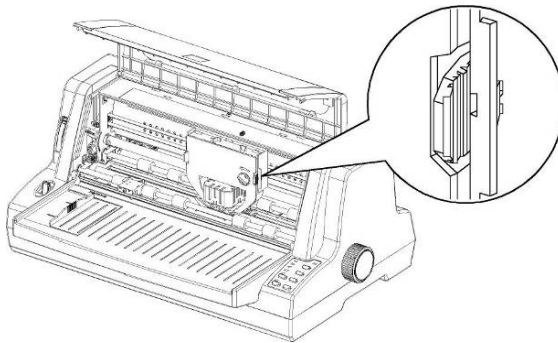
2. Refer to the figure below and move the print head to the middle (indicated by the gap on the metal board).



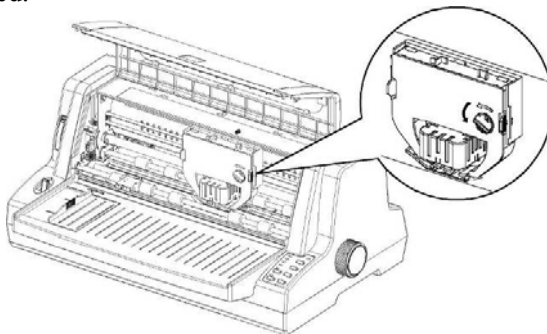
3. Tighten the ribbon according to the arrowhead so that the cartridge can be set easily.



4. According to the Figure below, set the ribbon between the print head and the platen and press the cartridge to the right position. Please make sure that it is fixed to the grooves firmly by its clips on both sides.



5. Tighten the ribbon again, and make sure that the ribbon is even and not overturned.



6. Lay down the transparent cover part and set the gap lever to the proper position.

Test the printer

Before connecting the printer to the host, please run the printer's self test to inspect whether the printer is able to work well.

Power connection

1. Make sure the printer is turned off.
2. Check the label on the back of the printer to make sure its voltage matches that of the electrical outlet. Also make sure that the plug on your printer's power cable matches your electrical outlet.



If the rated voltage and your outlet voltage do not match, contact your dealer for assistance. Do not plug in the power cable.

3. If the power cable is not attached to the printer, plug the appropriate end into the AC inlet on the back of the printer.
4. Plug the power cable into a properly grounded electrical outlet.

Running the self test

You can run the self-test using either cut sheet or continuous paper. The cut sheet can be fed from front by the front paper guide, while the continuous paper can be fed from the rear by the tractor. Next we will describe the process of running self-test by using cut sheet. Please refer to the Chapter 3 for the instructions of paper handling.

1. Turn off the printer, and push the path selection lever to the friction position.
2. Keep pressing the LF/FF button and turn on the printer. Wait until the printer beeps for several times, and then the paper empty indicator will lit.
3. Move the edge guide to be in line with the triangle label.

4. Insert a cut sheet paper along the edge guide until it meets resistance. About 0.5~1 second later, the paper will be loaded automatically and the self-test printing will begin.



The width of the printing paper for self-test must at least reach 280mm (11 inches). Otherwise the printer will print on the platen directly.

5. Press the Ready button to pause printing, press this button again to resume printing.
6. Press LOAD/EJECT button to eject the paper and then turn off the printer.

The sample of self-test is shown below:

F/W Version

```
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJK
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKL
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLM
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNO
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOP
!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNO P Q
```

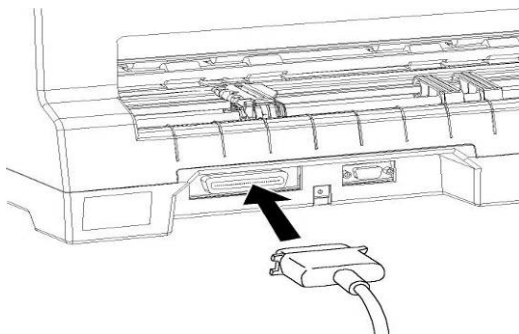
Connect to host

If the result of the self-test is correct, you can connect the printer to the host.

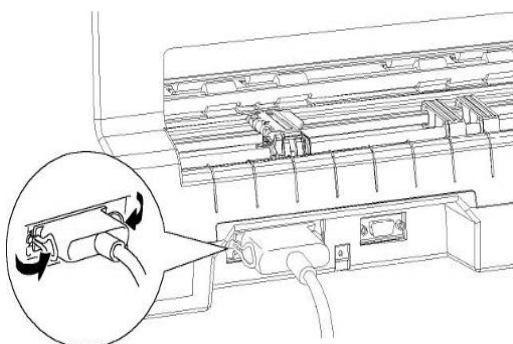
Parallel interface

Follow the steps below to connect the parallel cable:

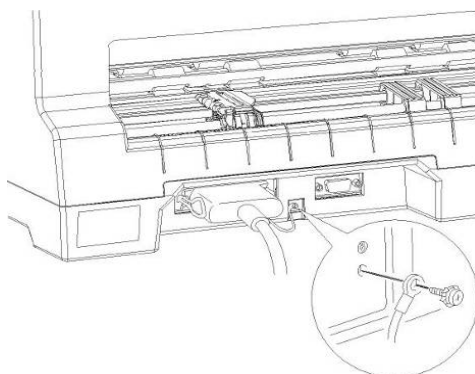
1. Make sure both the printer and computer are turned off.
2. Plug the cable connector into the printer's interface connector.



3. Fix the cable connector by locking the wire clips on the both sides of the printer's interface connector.



4. If the cable has a grounded lead, connect it to the grounded connector beside the printer's interface connector.

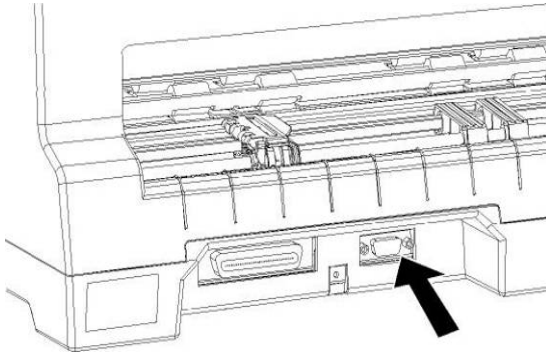


5. Plug the other end of the cable into the host. And connect the grounded lead (if there is) to the grounded connector on the back of the host.

Serial interface (option)

Follow the steps below to connect the serial cable:

1. Make sure both the printer and computer are turned off.
2. Plug the cable connector into the printer's interface connector.



3. Screw the nuts on both sides of the interface to fix the connector.
4. Plug the other end of the cable into the host.

USB interface (option)

Follow the steps below to connect the USB cable:

1. Make sure both the printer and computer are turned off.
2. Plug the cable connector into the printer's interface connector.
3. Plug the other end of the cable into the host.

Standard configuration: Parallel interface Option: Serial interface and USB interface
--

Install driver

At this point it is necessary to configure your printer for your application

package. The installation procedures depend upon the host environment: Follow the instructions in the read-me file you find on the CD-ROM. In a WINDOWS® 95/98 environment it is necessary to install the USB port driver if you connect the printer and host via USB port.

Using USB port

For WINDOWS 2000, XP and other higher operation system: the USB device driver can be installed automatically after the printer is connected to the PC via USB cable.

For WINDOWS 98, an additional device driver is needed. Please follow the steps below:

1. Connect USB interface. After finding the USB device, a dialog box prompting for the directory of the setup file appears.
2. The System will find the setup file and start the installation automatically according to the information specified in the point 1.
3. When the system finishes installing the USB device driver, it adds a USB port named "USB00x" to the port options in the printer's attribute page (x means the number of USB port drive that the current system has already installed).Appoint the newly added USB port in the attribute page, and then the printer can support the printing by USB port.

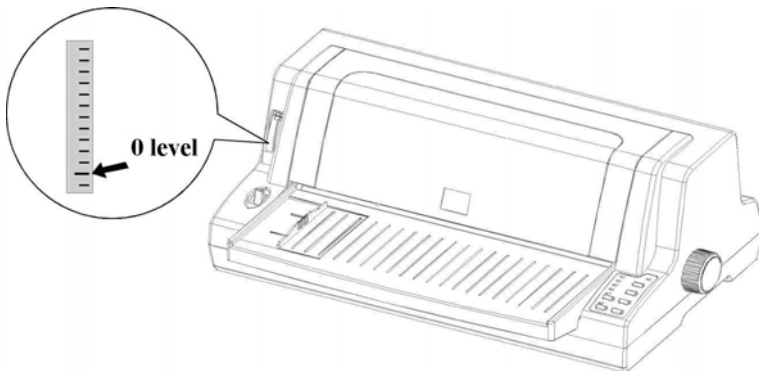
Paper handling

Choose paper feeding mode

The printer provides two ways to feed paper: friction and tractor. Change the paper feeding way by setting paper path selection lever. Friction feeding mode is used for cut sheet, tractor feeding mode is used for continuous paper.

Gap Lever

After setting the path selection lever, you should set the gap lever to the appropriate location according to the thickness of print paper.



The following table is reference of setting of the lever. Please choose the right position according to the actual thickness of paper.

Paper type	Gap lever position
Thin paper	-1,0
Ordinary paper(cut sheets or continuous paper)	0,1
Multipart forms	
2 sheets (original +1 copy)	1,2
3 sheets (original+2 copy)	2
4 sheets (original +3 copy)	3
5 sheets (original +4 copy)	4,5
6 sheets (original +5 copy)	6,7
7 sheets (original +6 copy)	7,8
Adhesive label	2 to 5
Envelope	2 to 5



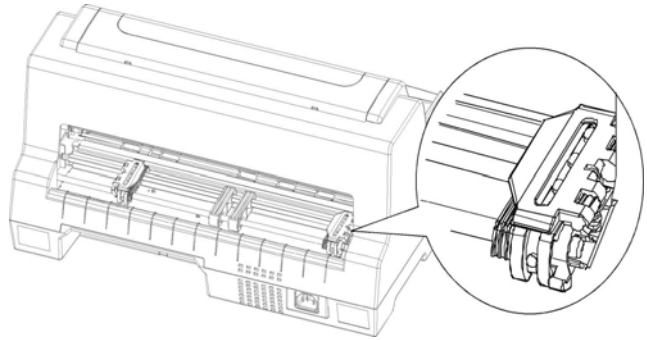
Adjust the gap lever to the right position to match the thickness of print paper.

Use single sheet

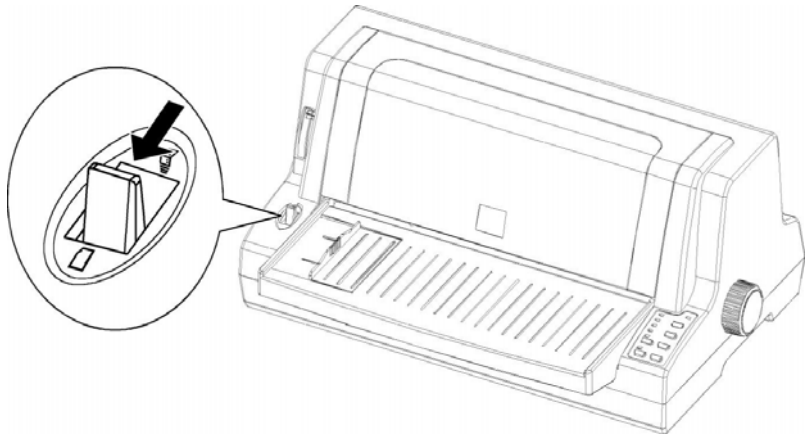
The printable width of single sheet paper is from 50 mm to 350mm(from 1.97 to 13.8 inch). Find details in the appendix.

Follow the steps below to load single sheet paper:

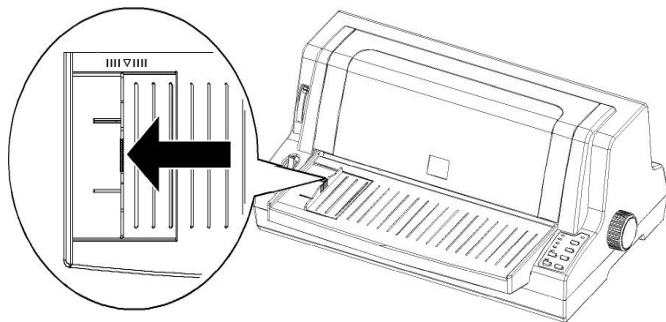
1. Make sure the printer is powered off and the paper guide is set well. Close the sprocket covers and lock the tractor tabs.



2. Set the path selection lever to position of single sheet, as shown below. If using ordinary paper, make sure the gap lever position is 0.

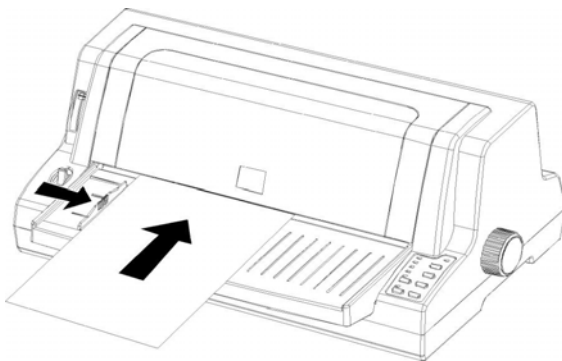


3. Turn on the power.
4. Move the edge guide to the proper position as shown below:



When the edge guide is moved to the position marked by the arrow, it will be locked slightly.

5. Slide the paper steadily along the edge guide until the paper meets resistance.



6. About 0.5-2 seconds later (according to the setting of AUTO-FEEDING TIME option in EDS SETTING), the paper will be fed to the top of form position automatically.

If the paper cannot be loaded while platen knob is rotating, please remove the paper and insert it again, as deep as possible.

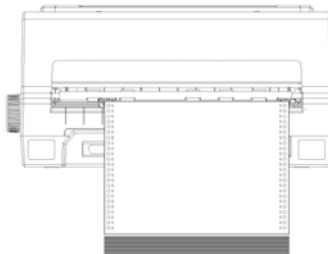
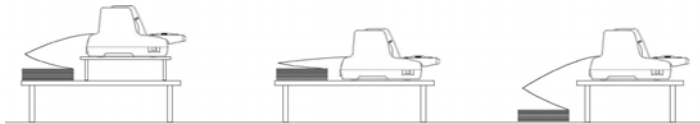
After finishing printing one sheet, the printer ejects it to the paper guide and the Paper empty indicator will be lit, while the Ready indicator will be unlit. Load the paper again, and the printer will resume printing.

If the printer doesn't eject the paper, press LOAD/EJECT button.

Use continuous paper

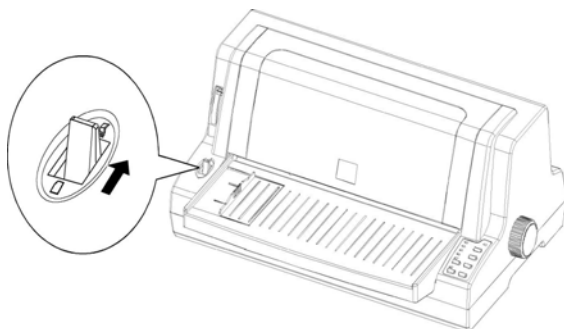
The printable width of continuous paper is from 64mm to 350mm(from 2.5 to 13.8inch). Details are shown in the appendix. Please Load continuous paper through the tractor.

Set the continuous paper as below:

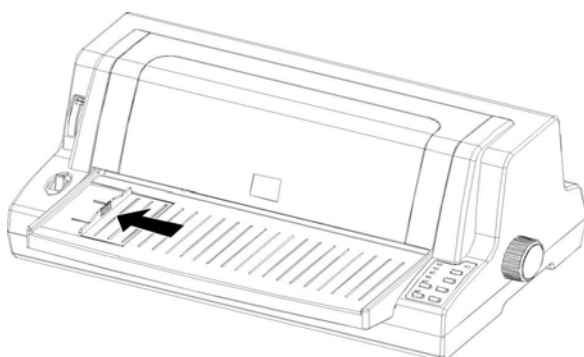


Follow the steps below to load continuous paper through tractor:

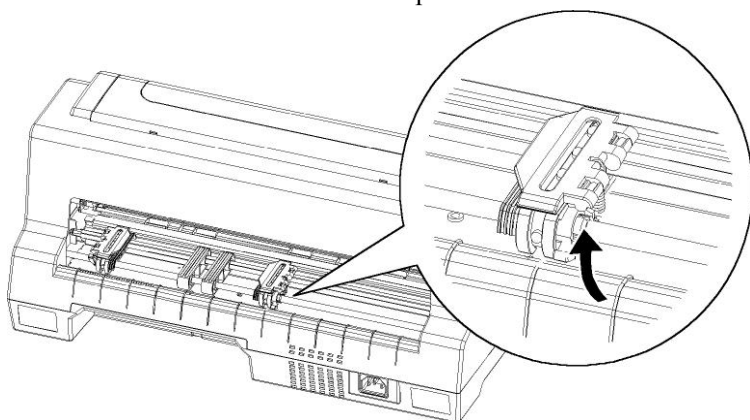
1. Make sure the printer is powered off, and path selection lever is set to tractor position, as shown below. If you use ordinary single countious sheet, please make sure the gap lever is set to position 0.



2. Move the edge guide to the left side to avoid blocking the paper path.

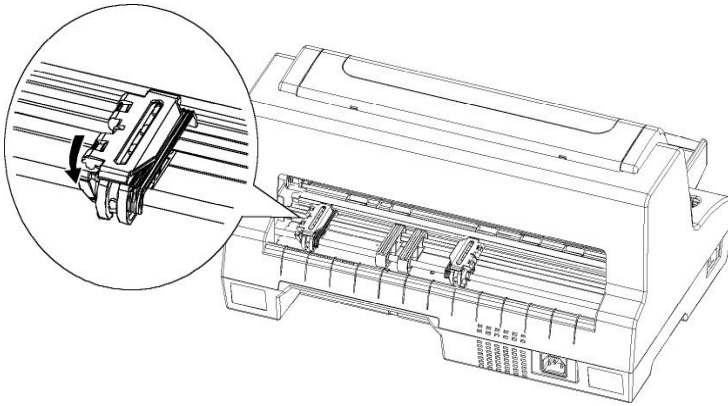


3. Lift the tractor lock tabs to release the sprocket wheel.

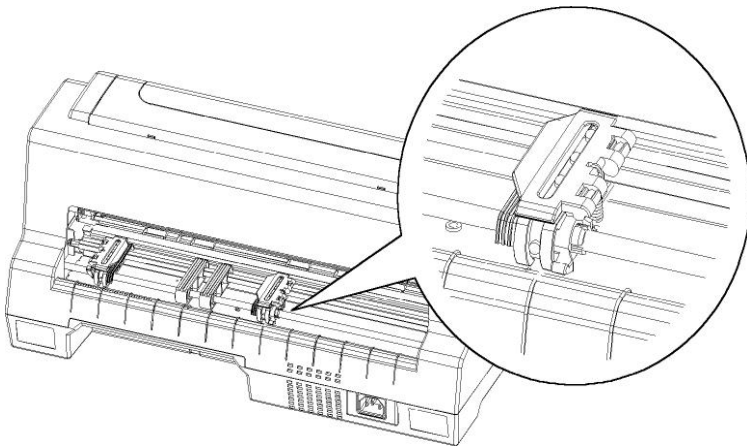


4. Move the left sprocket wheel to the position 0 marked by the arrow. Press

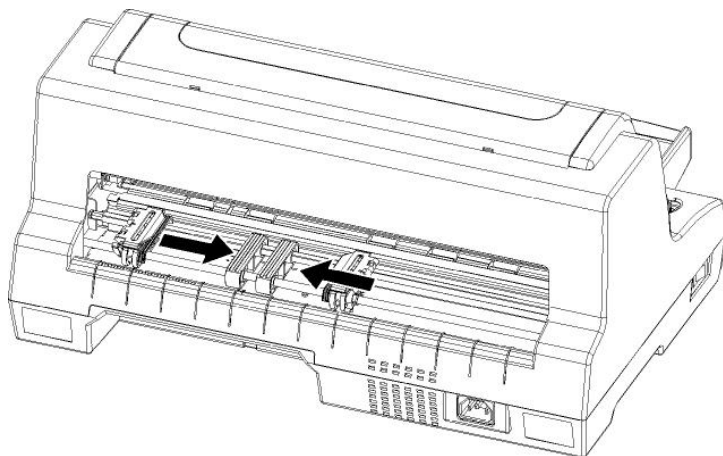
the tractor lock tab to lock it.



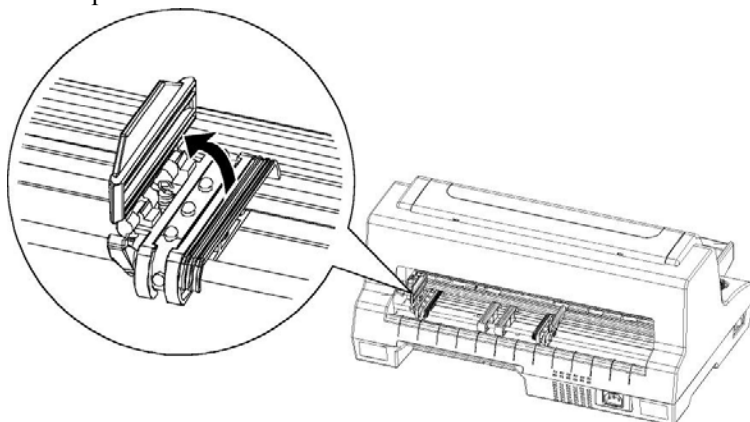
5. Move the right sprocket to match the width of the paper, but don't lock it.



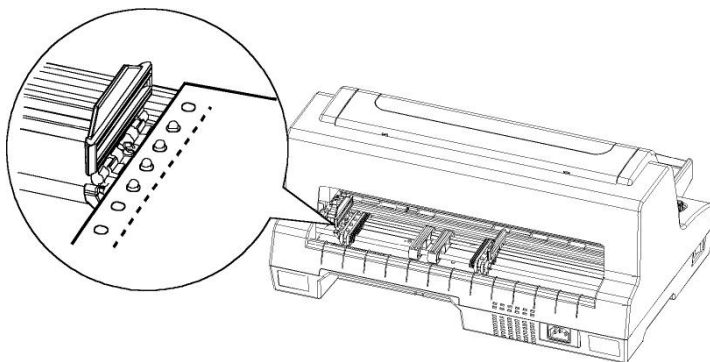
6. Move paper holders in tractor to the center of the two sprockets.



7. Open the sprocket covers.

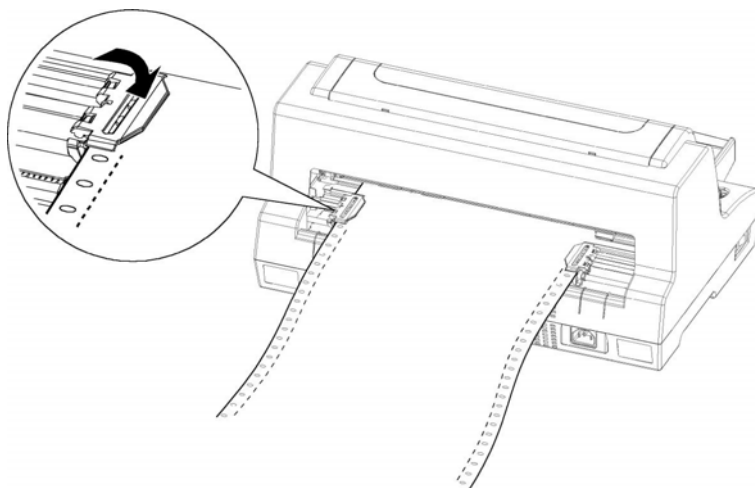


8. Make sure the printable side of the paper face upward and the holes of paper are fit into the sprocket pins.

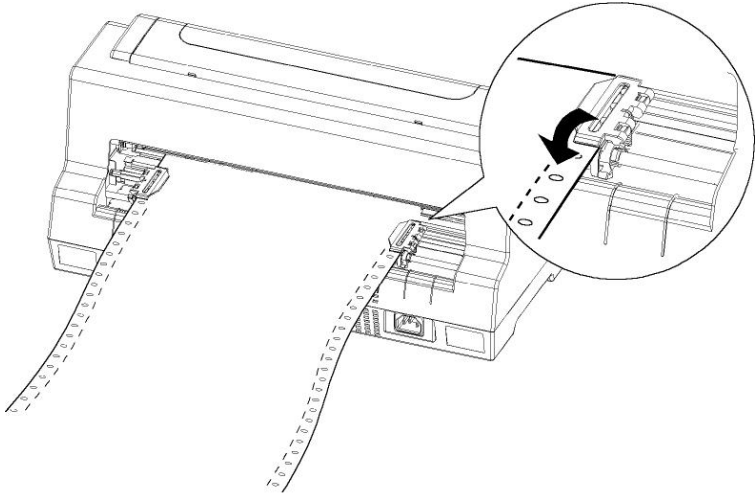


Make sure the brim of the continuous paper is straight, smooth, so that it can be fed smoothly.

9. Close sprocket covers. If necessary, you can relocate the left sprocket again and lock it when the holes of continuous paper aligned with the 0 position marked by arrow in printer.



10. Move the right sprocket to flat the paper, then lock the right sprocket.



11. Turn on the printer. Printer will load paper automatically after receiving data.

Load paper manually by pressing load/eject button.



Use the platen knob on the left of the printer only when the printer is turned off and the paper jams, otherwise the printer will be damaged or the position of the top of form will be changed.

Tear-off function

After printing, you can feed the perforation of the paper to the tear-off position by pressing “tear-off ”button. This function will make it easy for you to tear off printed paper. When printing resumes, printer feed paper automatically backward to the top of the form position.

Two ways to use tear-off function: auto tear-off mode (the waiting time for this mode is set by EDS setting), manual tear-off mode (implemented by pressing tear-ff button).

Tear-off function is only available for continuous paper. Don't load it backwards when printing adhesive labels for labels can be easily peeled off from the backing and jam the printer.

Auto tear-off mode

If the tear-off function is set to Auto, the printer will feed the continuous paper to the tear-off position automatically after finishing printing.

Only when the printer receives an entire page of data or a carriage return (CR) code and it doesn't receive any data again within 3 seconds, does the printer execute the tear-off function.

If the tear-off position is not in line with the perforation, use the micro adjustment function (refer to micro adjustment function for details).

When printing resumes, printer feed paper automatically backward to the top of the form position.

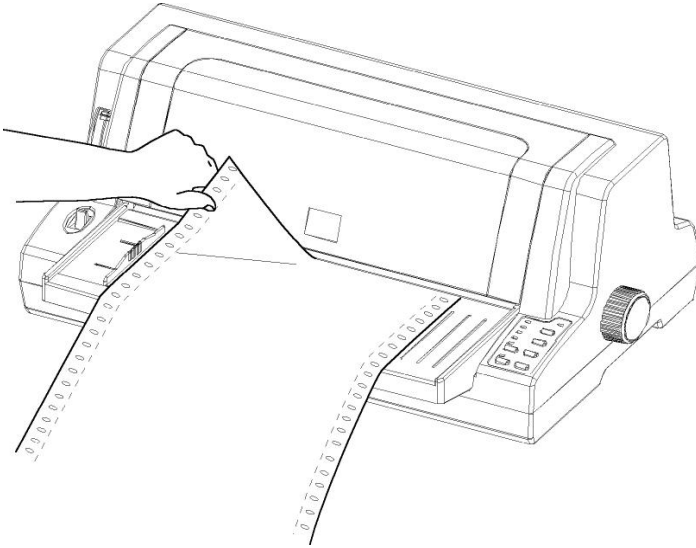
Tear-off function is not available when pathr slection lever is on sinle-sheet position.

Using the Tear-off Button

Even if the tear-off function is set to Auto, this function can still be executed using the tear-off button on the operator panel. Please follow the steps below:

1. Make sure that the printing has been finished, and press the tear-off button. The tear-off indicator will be lit and the printer will send the continuous paper to the tear-off position.

2. Tear off the printed continuous paper.



If the tear-off position is not in line with the perforation, use the micro adjustment function (refer to micro adjustment function for details).

3. When the printer resumes printing, it will feed the continuous paper backward to the top of form position automatically before printing. Pressing the tear-off button can also backward the continuous paper to the top of form position.

Multipart forms

The printer can print on up to 7-level multipart forms. Set the gap lever in right position according to the thickness of paper.

The same way can be used to load the multipart forms as ordinary paper except gap lever setting. See the related details in this chapter. Pay more attention to the top of form position setting.



Please use non-carbon paper and make sure the total thickness of the multipart form is not more than 0.58mm (0.0228inch).

Use adhesive labels

When printing on adhesive labels, always choose the type mounted on a continuous backing sheet with sprocket holes so that you can use the tractor. Do not try to print on adhesive labels as single sheets because the smooth backing sheet is easy to slip away while printing.

Load labels with the tractor in the same way as you load continuous paper; pay more attention to the setting of the gap lever.

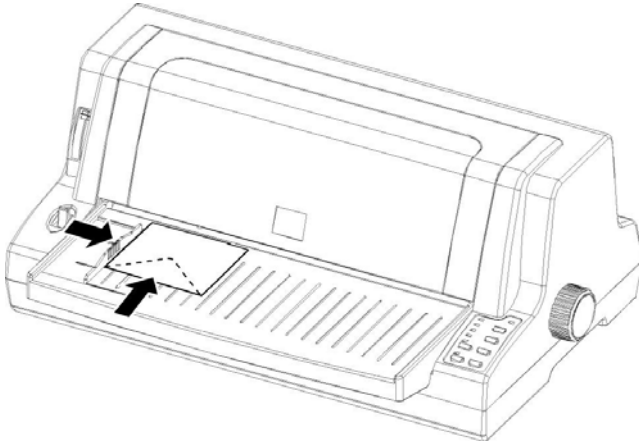


- Never feed labels backward with the Load/Eject button for labels, it can easily be peeled off from the backing and jam the printer.
- Since labels are especially sensitive to temperature and humidity, use them only under normal operating conditions.
- Do not leave labels loaded in the printer. They'll curl around the platen and jam when you resume printing.
- To remove labels from the paper path after you finish printing, first tear off the labels remaining before the paper slot. Then press the LF/FF button to advance the rest labels out of the printer.

Envelopes

Printer can print on kinds of envelopes. Load envelope from the paper guide in the same way as single sheet. See details in “use single sheet” in this chapter. Before loading envelope, please set the gap lever to the right position.

Please keep printable side of envelope upwards, and always feed an envelope steadily into the printer with the long edge until it meets resistance, then printer load the envelope automatically.

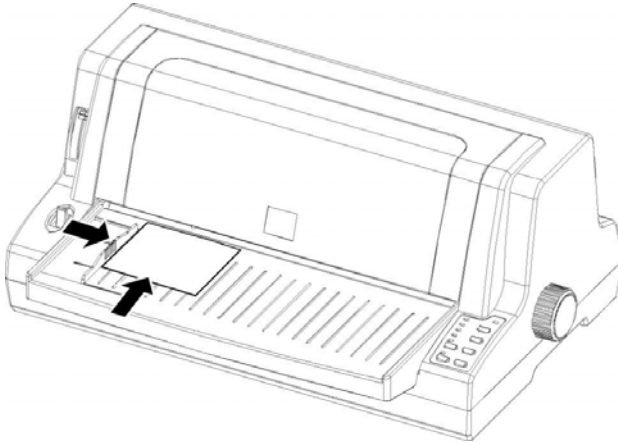


Make sure the printing stays entirely within the printable area of the envelope. Printing on the edge of the envelope can damage the print head.

Postcards

You can load postcards from the paper guide in the same way as single sheet. See details in “use single sheet” section in this chapter.

Please set gap lever to the position 2 and keep printable side of postcards upwards. Feed a postcard steadily into the printer until it meets resistance, and then printer loads the postcard automatically.



Make sure the printing stays entirely within the printable area of postcard. Printing on the edge of a postcard can damage the printhead.

Set the gap lever on the position of level 2 or above level when print on postcards.

Switch between continuous paper and single sheets

Even if continuous paper is still loaded on the tractor, you can use single sheets (including envelopes and postcards) to print, and there is no need to remove continuous paper from the tractors.

Switch to single sheets

Follow the steps below to switch from continuous paper to single sheets:

1. If any printed sheets remains in the printer, press the Tear off button to advance the paper to the tear-off position. Tear off the printed pages and press the Tear off button to feed the paper backward to the top of form position.



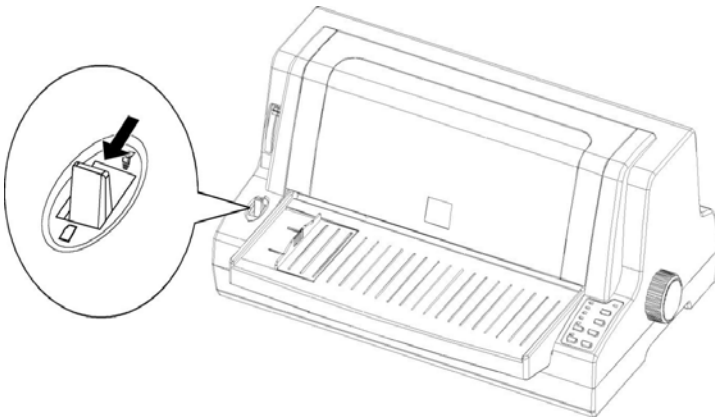
Always tear off paper before back-feeding paper, otherwise back-feeding too many sheets can cause a paper jam.

2. Press the Load/Eject button. The printer feeds the continuous paper backward to the standby position. The paper is still attached to the tractor but no longer occupy the paper path.



Never back-feed labels. Labels can easily come off from their backing and jam the printer.

3. Move the path selection lever to the single-sheet position.

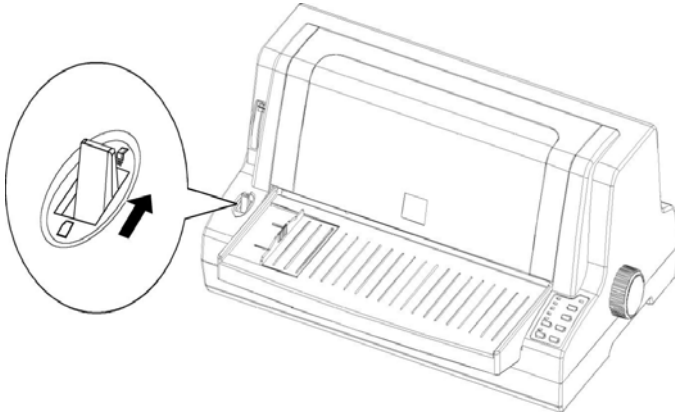


4. Now you can load single sheets from the paper guide as described in “Using Single Sheets” in this chapter.

Switch to continuous paper

Follow the steps below to switch from single sheet back to continuous paper:

1. If a single sheet is in the paper path, press the Load/Eject button to eject it.
2. Move the path selection lever to the push or pull tractor position.



3. The printer advances the continuous paper to the top of form position when it receives data and begins printing.

Micro adjustment function

The Micro Adjustment function allows you to feed paper forward or backward in 1/180 inch increments. You can use this function to adjust the top of form position and tear-off positions.

After adjusting the top of form position or tear-off position, the setting can be saved. Next time when you turn on printer, the printer will load paper or tear off printed paper according to the adjusted settings.

Using micro adjustment feature

Combination use of the buttons on the panel can accomplish micro adjustment. Follow the steps below please:

1. Make sure the printer has stopped printing before adjustment.
2. Hold down the Pause button while pressing LF/FF button, then printer feed paper forwards.
3. Hold down the Pause button while pressing load/eject button, then printer feed paper backwards.

Adjust the top of form position

The top of form position is where the printer begins printing after loading paper. You may adjust it when this position is too high or too low on the page. Following the steps below:

Some application programs may change this position and ignore your setting. If necessary, set the top of form position through program.

1. Make sure the printer is turned on. If necessary, open the front transparent cover to check paper position.
2. Load continuous paper or single sheets (press LOAD/EJECT button to load continuous paper).
3. While holding down “shift” button, press the “Load/Eject” button to adjust this position forward or press the “LF/FF” button to adjust this position backward. The printer can save this new position and next time when you turn on printer, the printer will load paper according to the adjusted settings.

There is a limit (maximum and minimum) for the top of form position. If you exceed the limitation during adjustment, the printer beeps and stops the adjustment.

During the adjustment, if the adjusted value meets the factory default value, the printer beeps and stops for a moment. Base your adjustment on the factory default value.

Adjust the Tear-off Position

If the tear-off position is not in line with the tear-off edge, follow the steps below to make adjustment.

1. Make sure that the paper has been set to the tear-off position and the tear off indicator is lit. Maybe you need to press the Tear off button.
2. Hold down the Shift button while pressing the LF/FF button to adjust the

position backward. Hold down the Shift button while pressing the LOAD/EJECT button to adjust the position forward.

Note: The newly set tear-off position is automatically saved.

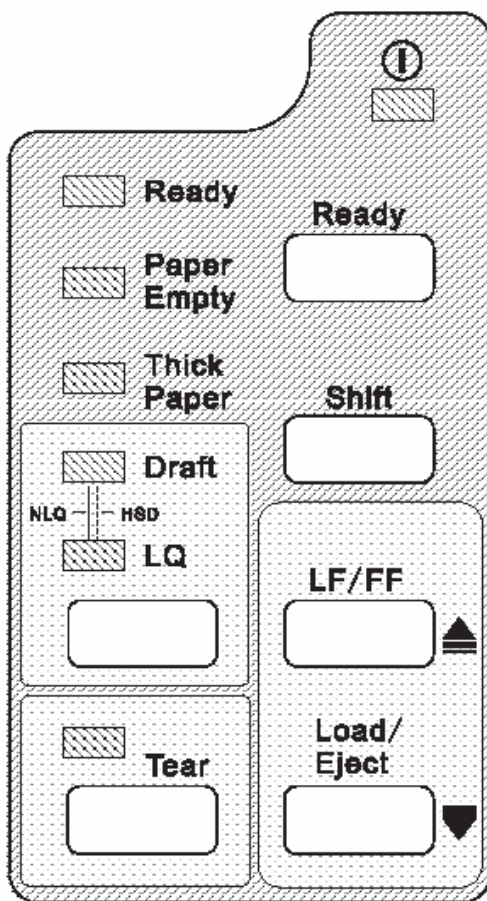
3. Tear off the printed continuous paper.
4. When the printer resumes printing, it will feed the continuous paper to the top of form position automatically before printing.

Operator panel

This section is about how to perform basic functions and advanced functions of the printer by the operator panel.

Basic functions

The operator panel includes two parts: indicators and buttons. Indicators indicate the current status of the printer, and buttons are used to control the working status of the printer.



Indicators

Power (green)

Lights up when the printer is powered on.

Ready (green)

Lit when printer is ready or press the Ready button.

Blinking when print head is overheated.

Paper Empty (red)

Lights up when there is no paper in the selected paper path.

Thick Paper (green)

Lights up when paper gap is set at level 2 or at higher level. And the impact force of the pins will be increased.

Draft (green)

It works with LQ indicator to indicate the speed. Refer to the table below:

Indicator printing quality	Draft	LQ
	On	Off
Draft	On	Off
LQ	Off	On
NLQ	On	On
HSD	Off	Off

LQ (green)

It works with Draft indicator to indicate the speed. Refer to the table above:

Tear (green)

Press the Tear off button, and after the printer has fed continuous paper to the tear-off position, it's on. Tear off the paper and press the Tear off button again to feed the paper backward the top-of-form position. It blinks while micro-adjusting the position of the top-of-form or the tear off position.

Buttons**Ready**

When the READY indicator is lit, pressing this button causes the temporary stop of the printing job at the end of the current line, the READY indicator is turned off.

When the printing is paused pressing this button will enable the printing and the READY indicator is turned on.

Shift

By holding down this button while pressing another button at the same time, the printer can accomplish the following functions:

Clear buffer (Shift + Ready button)

Clears up data in buffer, and initializes the printer.

Micro adjustment function:

Shift + LOAD/EJECT button

Feed paper forward in 1/180 inch increment.

Shift + LF/FF button

Feed paper forward in 1/180 inch increment.

Note: the functions above must be performed in off-line condition and there's no data in the buffer.

Speed control

It's just under the LQ indicator. Press this button to control the printing speed. You can also use the command to control the printing speed.

Tear off

When the continuous paper is selected, press this button to feed continuous paper forward to the tear-off position from the loading position. Press it again will cause the printer to feed the paper backward the top-of-form position.

LF/FF

Feed paper line by line when pressed shortly.

Eject a single sheet or advance continuous paper to the next top of form position when held down.

Load/Eject

Press this button to load paper. If paper has already been loaded, pressing this button will eject the paper. If the cut sheet is selected using path selection lever, the printer ejects the paper according to its ejection direction, otherwise if the continuous paper is selected, the printer ejects the paper backward to the standby position.

Advanced functions

To execute the following functions, hold down relevant button while turning the printer ON. Don't release the button until the print head starts to move.

Power-on self-test

Hold down LF/FF button while turning on the printer, the printer executes

self-test. This function can help you check if the printer operates correctly. Refer to the “Self-test of the printer” for the details.

Bi-directional adjustment

While holding down Shift button, LF/FF button and LOAD/EJECT button simultaneously, turn on the printer. The printer will enter into bi-directional adjustment mode. This function helps to correct printout alignment problems. Refer to chapter 6 “Using the bi-directional adjustment mode”.

Hex dump

To enter into hex dump mode, hold down both the LF/FF and Load/Eject buttons while you turn on the printer. This function can help the experienced customer to solve some problems. Refer to chapter 6 “Using the Hex dump mode”.

Resume factory default settings

Hold down Shift button, Speed button and Tear off button simultaneously, and turn on the printer. After a long beep, the printer resumes factory default settings.

EDS (Electronic Dip Switches) setting

While holding down Shift button and Speed button (or Shift+Tear off button) simultaneously, turn on the printer. The printer enters into EDS setting mode. Refer to the “Using EDS setting mode” below, and change the parameter settings of the printer.

Using EDS setting mode

The EDS setting can execute different functions by changing default power-on parameters. The EDS setting options can be selected through software, printer driver, or using the operator panel buttons.

The part below shows all the options of EDS in detail. Refer to the “How to change the EDS settings” for the alteration guidance about the EDS setting.

EDS Settings Options

The following table shows all the function options and relative parameter settings available in EDS setting mode. The factory default values are shown in Bold. (Note: There may be small differences among different versions for the factory default values.)

EDS1

Function option	Parameter settings
Reservation	
Reservation	
Line width	110 , 106, 80
Copy capability	Normal, Mode 1 , Mode 2, Mode 3
Reservation	
Print direction	Auto , Bi-D, Uni-D
Reservation	
Pin Broken	Ivalid , 1-12pin, 13-24pin
Reservation	
Single sheet loaded	.5S auto, .8S auto , 1S auto, 2S auto, manual
Tear off	Mnual, 0.5S auto , 1S auto, 1.5S auto
Single sheet ejected	Forward , Bckward
Line Spacing	1/6inch , 1/8inch, 2/15inch
Reservation	
Reservation	
Char pitch	10 , 12, 15, 17, 20, proportion
Page length	11 , 3, 3.5, 4, 5.5, 8.5, 11/4, 11/3, 70/6, 12(inch)

EDS2

Function option	Parameter settings
Interface	Parallel, Serial/USB, Auto
Buffer size	64k , 0k
Strobe timing	Normal , Special
Data length	8 , 7(bit)
Protocol	XON/XOFF , DTR/DSR
Baud rate	9600 , 600, 1200, 2400, 4800, 19200
Parity	Non , Odd, Even
Smooth paper	Auto , Narrow, Wide, Invalid
Skip-over-perforation	Invalid , 1/2, 2/3, 1(inch)
Reservation	
Reservation	
Zero style	Normal , Slashed
Auto LF	CR=CR , CR=CR+LF
Auto CR	LF=LF+CR , LF=LF
Font	Roman , Sanserif, Courier, Prestige, Script, OCR-B, OCR-A, Orator, Orator-S
Code Page	PC437 , Italic, PC850, PC860, PC863, PC865, PC858, PC864, DPFE, IRANSYS, MAINFRAME, MASKAN, PANIZ, POOYA, SADERAT, SAYEH, SINA, TARTAN, TEJARAT, USER1, USER2, USER3,
International Charaters set	U.S.A. , France, Germany, U.K., Denmark, Sweden, Italic, Spain

How to change the EDS settings

Follow the steps below to enter into EDS setting mode and change the

printer's default power-on parameters.

1. Make sure the paper is loaded, and the printer is switched off. Hold down the Shift button and Speed button simultaneously while turning on the printer, and release buttons after the print head moves. The printer enters into EDS1 setting mode and prints current EDS1 settings if the paper is loaded. Otherwise if the paper is not ready, load the paper to print the current EDS1 settings or set EDS directly. To change the EDS2 settings, please hold down the Shift button and Tear off button simultaneously.
2. Press Speed button to change setting options forward until the status of Ready indicator, Paper empty indicator and Thick paper indicator indicates the right function option.
3. Press Tear off button to change setting options backward until the status of Ready indicator, Paper empty indicator and Thick paper indicator indicates the right function option.
4. Press Shift button to change relative parameter setting until the status of Draft indicator, LQ indicator and Tear off indicator indicate the right parameter setting.
5. Repeat step 2, step 3 and step 4, and change the EDS setting to suit your need.
6. Press LF/FF button, and printer prints the parameter table of EDS1 and enters into EDS1 setting. Press Load/Eject button, and printer prints the parameter table of EDS2 and enters into EDS2 setting.
7. After finishing all the settings, turn off the printer to escape the EDS setting mode.

During the setting, Printer saves your current settings automatically.

Note: the status of Ready, Paper empty, and Thick paper indicators indicate the selected function option and the status of Draft, LQ, and Tear off indicators indicate the selected parameter setting of the relative function.

Status of indicator: □ on ■ off * flash.

The EDS parameter settings in the table with the grid indicate the current setting.

Maintenance and Transportation

Cleaning the Printer

In order to keep your printer in top condition, you should clean thoroughly several times every year.

1. Make sure that the printer has been turned off, and then remove the paper guide, printer cover and other installed options.
2. Use a soft brush to clean dust and dirt carefully.
3. If there is dust and dirt on outer shell or paper guide, you can use a neutral detergent or a piece of soft cloth to clean dust and dirt. Remember to close the printer cover to prevent water pouring into the printer.



Don't use alcohol to clean printer, chemical products will damage printer.

Don't use hard or abrasive brush.

Don't spray lubricant oil into the printer, because the improper oil will damage mechanical parts. In the event you need lubricant oil, please contact our agent or qualified maintenance employees.



Be careful not to spray water on printer mechanical or electronic parts.

Replacing the Ribbon

If the printing is fading, then you need to replace ribbon. As for the specific processes of replacing ribbon, please refer to “Ribbon Cartridge Installation” section of the first chapter.

Don't use the ribbon designed for 9-pin printer or the general long ribbon. It is advisable to use the original ribbon cartridge of the manufacturer.

Transportation of Printer

If the printer needs remote transportation, you should use the previous case and packing material to repack the printer. It says as follows:

1. Turn off the power switch of printer.
2. Remove the paper guide and other installed options.
3. Pull out the power line from power outlet, and remove the interface cable from the printer.
4. Remove ribbon cartridge.
5. If the tractor has been removed, please install the tractor again.
6. Use the previous packing material to pack printer, ribbon, paper guide and power line well, and encase into the previous case.

Trouble shooting

The mistake indication of the panel

Many failures of the printer can be confirmed through the indicator of panel, and the status of the indicators can also help to find the reasons of the failure. Where there exist errors, the printer head will give out a long beep, and then one of the following statuses appears:

Panel Indicator	Reason of the Failure
Ready light flashes	RAM test error.
Paper-empty light flashes	The temperature or voltage of the printer head exceeds the range.
Thick-paper light flashes	CR motor failure.
Draft light flashes	EEPROM read/write error.
LQ light flashes	Data from serial interface overflows.
Tear-off light flashes	Program execution error. Usually it is bus error (such as static electricity interference).

When the above errors occur, the printer won't move until it is powered off. When the printer head hasn't been installed or the cable of printer head hasn't been plugged in. The printer won't move nor alarm.

Running self-test

Running self-test can help you to make sure if the problem exists in the printer or in the computer.

- If the result of self-test is satisfactoring, it means the printer is normal and the problem is likely to exist on the drive program setting, the application program setting, the interface cable of printer or the computer. (Make sure

to use shielded interface cable).

- If the result of self-test is not satisfactoring, it means the problem lies on printer. Please refer to “Problems and Solution” section.

Note:

1. To execute self-test printing, please press LF/FF button until the printer head starts to move while turning on the printer.
2. You can use cut-sheet or continuous paper to run self-test. In this part, it only tells self-test with cut-sheet. As the installation of continuous paper please refer to “Paper Disposal” in chapter 3.
3. Please make sure the paper has been loaded and the position of the path selection lever has been matched with the paper type. Turn off the power.
4. If you want to pause self-test, please press the Ready button. Press it again to resume self-test printing. If you want to finish self-test, press Ready button to stop printing and then press load/eject to eject printing paper.



Wait at least 5 seconds to restart the printer, or it may damage your printer.

Use Hex dump mode

If you are an experienced user or programmer, you can use hex DUMP mode to find the communication mistake between the printer and computer. The printer will print the data from the computer in hex format.

To use hex DUMP mode, please follow the steps below:

1. Make sure A4(210×297 millimeter) paper or the wide paper (the same size as letter paper) has been loaded into the printer.
2. While pressing LF/FF button and Load/Eject button, turn on the printer.
3. Send printing data to the printer through PC, and then the printer will print in hex format. You can know what the printer has received by checking the

printed data. The printable character will be displayed by normal binary code. Others, such as the control sequence, will be displayed by dot.

4. If you want to quit hex DUMP mode, press Ready button to pause, and turn off the printer after ejecting paper.

Problems and Solution

Power

No power supply

Power indicator unlit:

- Check if the power line insert outlet correctly.
- If the power outlet is controlled by outer switch or automatic timer, please use another power outlet
- Use another electronic device to make sure if the power outlet works normally.
- Power indicator lights up for a while and then lights off, and the indicator is still unlit when you turn on the printer power again.
- Check whether the rating voltage of printer matches with the voltage on power outlet. If it is not, you should pull out the power plug of printer and contact with the agent immediately. Don't insert the power line into the outlet again.

Disposal of printing paper

The following content will introduce how to solve the problems that appear when you use cut-sheet and continuous paper.

Cut-sheet cannot be loaded correctly

While loading cut-sheet, the platen doesn't run, and the paper can't be fed:

- Check if the path selection lever is on the position of cut-sheet.
- Cut-sheet may be far away from the left side, please adjust the position of left edge guide, and make it align with the arrow.

While loading cut-sheet, the platen runs but the paper can't be fed:

- Load cut-sheet smoothly again.

Paper-feed slanting or paper-jam:

- Press the Load/Eject button to eject the paper.
- Turn off the printer power switch, and set the path selection lever to the position of pull tractor, remove cut-sheet and check the following two contents.
 - Make sure that the size of cut-sheet is within the specified range. Refer to chapter 7.
 - Make sure that the cut-sheet aligns with the edge guide.

Cut-Sheet is not ejected completely:

- Please use LOAD/EJECT button to eject cut sheet. Do not use LF/ FF button.
- It may be caused by too long cut-sheet, please use the standard-size cut-sheet.

The continuous paper cannot be loaded correctly

The platen can't run and the paper cannot be loaded:

- Ready light is unlit. Please press the Ready button.

The platen is running, but the paper cannot be loaded:

- Check if path selection lever is on the correct position.

Paper-feed is slanting or paper jam:

- Confirm whether the continuous paper is blocked by a cable or other objects. You should make sure that the continuous paper can be fed smoothly.
- Confirm if the distance between the continuous paper and printer is within one meter.
- The position of putting continuous paper may interfere with the vertical feeding of continuous paper.
- Check if both holes of continuous paper are parallel with each other, and whether the sprocket of tractor is locked and the cover is closed.
- Check if the position of the gap lever accords with the type of paper used, please refer to chapter 3.
- Check if the size of continuous paper is within the specified arrange, please refers to chapter 7.

The continuous paper cannot be ejected correctly:

- The page length is too long, please use the specified continuous paper.

Printing

Printer cannot print

Ready indicator is unlit:

- Press Ready Button

Ready indicator is lit, but the printer still doesn't print:

- Check if you install printing drive software correctly, and check the printer parameter setting of the printer.
- Check both sides of interface cable that connects printer and computer, and confirm if this interface cable satisfies the technical specification of printer and computer.

Paper-empty indicator is lit:

- Please load print paper.

It sounds the printer is printing, but in fact it doesn't print a character:

- Please check if the ribbon cartridge is installed correctly. As for the installation of ribbon cartridge, please refer to chapter 1.
- The ribbon may be old, so you can replace ribbon cartridge.
- Check the position of the gap lever.

The printer gives out strange noise and beeps, and the printer stops printing suddenly:

- First please turn off the printer switch, check if there is paper jam or other problems, and then turn on the power and retry printing. If the printer still doesn't print correctly, please contact an agent or qualified maintenance personnel.

Ready indicator flashes, but the printer cannot print or stops printing suddenly:

- The print head is too hot, wait for several minutes. After the print head is cooled down, the printer will resume printing.

Printing Fading or Abnormal

The bottom of printing characters is lost:

- Maybe because you didn't install the ribbon cartridge correctly, as for the installation of ribbon cartridge, please refer to chapter 1.

Printing fade:

- Maybe the ribbon is old, please replace ribbon cartridge.
- Check if the position of gap lever is suitable for the thickness of printing paper used.

Lose printing dots during printing characters or figures

Lose a line dot in the printout:

- The print head is damaged. Please stop printing and contact with agents or qualified maintenance personnel, and replace print head.

Lose printing dots at random position:

- The ribbon is loose, reinstall the ribbon cartridge.

The printing characters are not what you need

The printer does not print the font or character which the application software sets:

- Check if it installs application software correctly.

Print mistake character:

- Maybe you choose wrong printing mode or international character set. Check EDS setting, please refer to chapter 4.
- The data transportation between printer and computer is not correct. Please make sure the interface cable used meets the requirements of the communication protocol.

The printing position is not what you want:

The top of form position is too high or too low:

- Please adjust the top of form position set by the application software or use control panel to adjust the position of the top of form. You can refer to chapter 3 to adjust the load position of paper.

All the text is printed on the same line:

- Set Auto LF as “CR+LF” in EDS2 setting options, and the printer will insert a line feed code after every carriage return code automatically.

An unwanted blank line is added between every two lines of printed text:

- It sends out two line-feed codes continuously, you should set Auto CR/Auto LF as CR/LF.

The setting of page length doesn't match with continuous paper page length:

- Please use EDS setting to change the setting of page length.
- Check the page length setting of application software, and adjust the page length setting if necessary.

Regular intervals appear among the printout:

- Maybe the option of Skip-over-perforation is set valid in EDS2.

Option of Skip-over-perforation is set valid, but the perforation is not in the middle of the skipped area:

- Please adjust the top-of-form position according to the chapter 3.
- Set the correct length of the continuous paper by EDS. Refer to the chapter 4.
- If the top margin and bottom margin are set by application program, set the Skip-over-perforation invalid.

The top of form position is too low, or the lower half part of the page is printed on the beginning of the next page:

- Choose the correct printer from the menu in the application program.
- Please reduce or remove the top margin and reduce page length in application software.
- If possible, please specify cut-sheet in the application software.

If the printer still does not print correctly, use printer self-test function. If the self-test is correct, it means the printer works normally. The problem may come from computer, software or interface cable. If the self-test has errors, please contact an agent or qualified maintenance personal.

Use Bidirectional Adjustment Mode

If you find that the vertical direction of the text or table is not in line, please use bidirectional adjustment mode. The steps of bidirectional adjustment is as follows:

1. Load cut-sheet or continuous paper, and turn on the printer while pressing Shift button, LF/FF button and Feed/Eject button. The printer enters the bidirectional adjustment mode and then prints the initial adjusted value and four lines “|” to show the status of alignment.
2. Base your adjustment on the first line and the third line, if the second line and the fourth line lean to the left compared to the first and the third line, press Shift button and LF/FF button, printer will print a new adjusted value and four lines “|” to show the present status of alignment. And you may notice the value has been minused 1 at this time. If the second line and the fourth line lean to the right compared to the first line and third line, press Shift button+ Feed/eject button, printer will also print a new adjusted value and four lines “|” to show the present status of alignment. And you may notice the value has been added 1 at this time.
3. Repeat step 2 until the four lines “|” are in line vertically. And you have finished adjustment in high-speed mode.
4. Press Speed button, printer will switch among different speed modes, and then print the initial adjusted value and four lines “|” to show the status of alignment.
5. Repeat step 2, and you can make the adjustment for different speed.
6. Turn off the printer and exit the bidirectional adjustment mode.

Printer Specifications

Technical Specifications

Printing

Printing method	24-pin impact dot matrix	
Printing Speed	High-speed Draft	300 cps at 10 cpi
	Draft	275 cps at 10 cpi 330 cps at 12 cpi
	High-speed Quality	183 cps at 10 cpi 220 cps at 12 cpi
	Letter Quality	92 cps at 10 cpi 110 cps at 12 cpi
Printing Direction	Bidirectional logic seeking for test and graphics printing (Unidirectional test or graphics printing can be selected by EDS setting or software commands).	
Line spacing	1/6 inch, 1/8 inch, or programmable in 1/360-inch increments.	
Paper feed speed	Intermittent	56ms/line at 1/6-inch line spacing
	Continuous	56ms/line at 1/6-inch line spacing
Printable columns	110 columns (at 10 cpi)	

132 columns (at 12 cpi)
 165 columns (at 15 cpi)
 187 columns (at 17 cpi, condensed form of 10cpi)
 220 columns (at 20 cpi, condensed form of 10cpi)

Buffer 64KB or 0KB (Using EDS setting to choose)

Font

Font	Point	7 points	10.5 points		
	Character Width	15cpi	10 cpi	12 cpi	Proportional Character
Draft		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Roman		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sans Serif		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

You can also use software commands to choose other combination of the fonts /printing space.

Character table 96 standard ASCII characters
 14 kinds of International character sets
 One law character set
 5 kinds of figure character sets

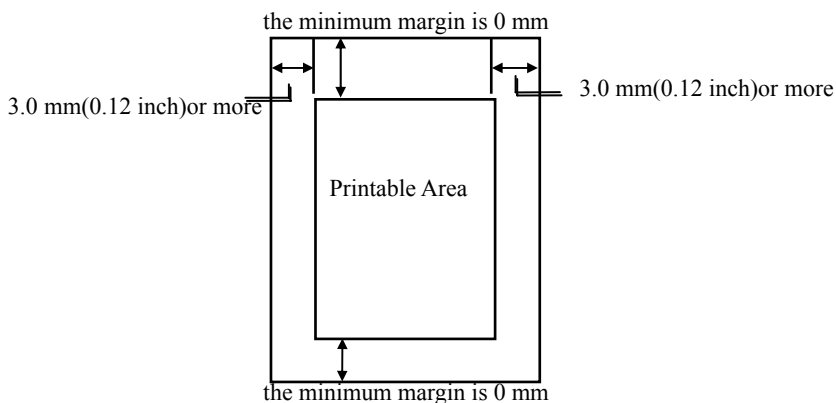
Printing Paper

The size of printing paper

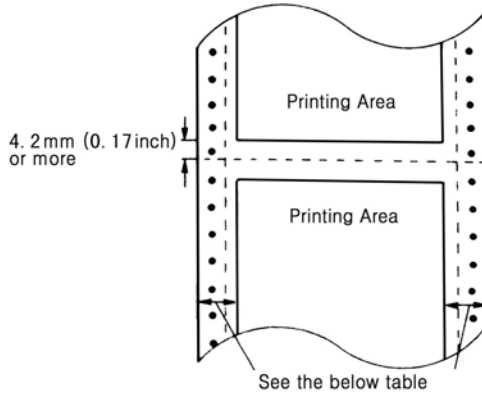
Printing Paper	Size
Cut-sheet	
Width	50-350 mm
Length	More than 59 mm (2.32 inch)
Continuous Paper	
Width	50-350 mm
Envelope	
Width*Length	166*92 mm or the No. 6 envelope 240*104 mm or the No. 10 envelope
Adhesive label	
Width*Length (Underlayer)	The minimum size is 64*100 mm

Printable Area

Cut-Sheet



Continuous paper



Printing paper width	The minimum left and right margin
64-350 mm (2.5-13.8 inch)	13mm (0.51 inch)

Printing paper thickness

0.065 to 0.58 mm

Printing Paper Weight

Cut-sheet	53 to 90g/m ²
Continuous Paper	53 to 82g/m ²
Multipart forms	40 to 58g/m ² per layer
Envelope	45 to 91g/m ²

Printing paper quality

Cut-sheet and continuous paper: the paper must be flat, and non-carbon multipart forms.

Envelope, bond paper, common paper and airmail letter

Copies

One original + 4 copies

Mechanism Parts

Paper-feed Manner	Friction feed Use paper guide for cut-sheet printing. Push tractor Use rear tractor for continuous paper.
Ribbon	Fabric black ribbon Lifespan: 5 million characters
MTBF	10,000 hours (when the use rate is 25%).
Print Head Life	250million strokes per wire (using genuine ribbon)
Size and Weight	
Length	475 mm
Width	350 mm
Height	215 mm
Weight	about 9 kg
Package size	
Length	540 mm
Width	470 mm
Height	330 mm

Electric Parts

Rating Voltage	AC220V
Input voltage range	AC165V ~ AC264V
Rating current	2.0A
Power consumption (for self-test printing)	About 47W
Rating frequency	50~60Hz
Input frequency range	49.5~60.5Hz
Electromagnetic compatibility	Accords with B grade standard

Using Environment

Temperature

Operating 5deg~35deg

Humidity

Operating 20%~80%RH without condensation

Interface Technological Specifications

The standard interface of this printer is centronics parallel interface.

Optional USB interface accords with USB 1.1 criterion.

Optional serial interface accords with EIA RS-232C criterion.

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